Development Review Staff Report

Agenda Item 1

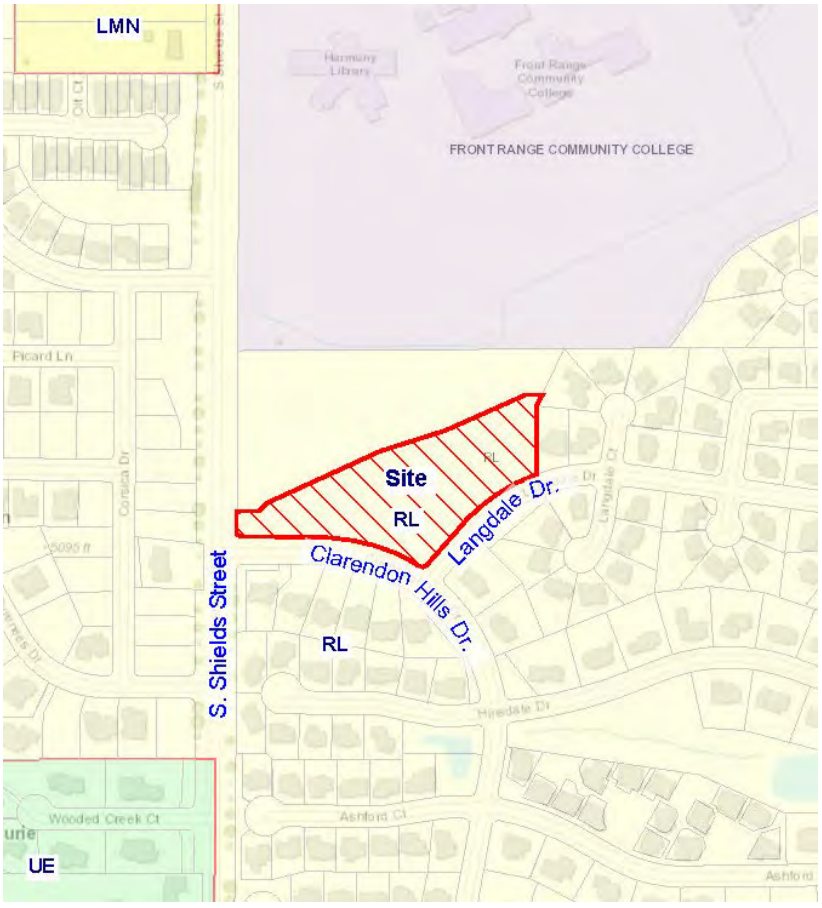
Administrative Hearing: December 10, 2020

Homestead at Clarendon Hills PDP190007

Summary of Request

This is a request for a Project Development Plan (PDP) to develop the vacant 3.28 acre parcel at the northwest corner of S Shields St and Clarendon Hills Dr (Larimer County Parcel #9602200039). The project will include subdividing the parcel into 8 single-family detached lots. The Smith Lateral irrigation ditch is located along the northern portion of the property. A habitat buffer zone is provided along the irrigation ditch and a pedestrian trail connection is provided along the east side of the property. The proposed project is within the Low Density Residential (RL) zone district.

Zoning Map



Next Steps

If approved by the decision maker, the applicant will be eligible to submit a Final Development Plan.

Site Location

Located near the northwest corner of S. Shields St. and Clarendon Hills Dr. (parcel #9602200039).

Zoning

Low Density Residential (R-L)

Property Owner

Mosaic Land Development Services, LLC
1021 Nightingale Dr
Fort Collins, CO 80525

Applicant/Representative

Kristin Turner
TB Group
444 Mountain Ave
Fort Collins, CO 80528

Staff

Jason Holland, City Planner

Contents

Staff Recommendation

Approval of the Project Development Plan, with Conditions

1. Project Introduction

A. PROJECT DESCRIPTION

- This is a request for a Project Development Plan (PDP) to develop 8 single-family detached lots. The proposed project is within the Low Density Residential (RL) zone district and single family lots are permitted subject to a Type 1 review. The property is approximately 3.28 acres.
- The Smith Lateral irrigation ditch is located along the northern portion of the property. A Natural Habitat Buffer Zone is provided along the irrigation ditch.
- A pedestrian trail connection is provided along the east side of the property within a pedestrian public access easement.
- Access to the new lots is provided from Clarendon Hills Drive, Langdale Drive and a shared driveway easement. A stormwater detention area is provided to the south along the shared driveway at the street intersection.
- Four conditions of approval are recommended as follows:

  1) The privacy fence and retaining wall along the east side of Lot 8 will both be placed within Lot 8, and not within Tract A east of lot 8.

  2) The privacy fence shall be placed in front of the retaining wall, facing Tract A, and the fence shall not be more than six feet in maximum height from the finish grade of the east property line between Tract A and Lot 8.

  3) The proposed soft surface trail shall be replaced with a concrete sidewalk along the extent of Lot 8, a minimum of four feet in width, with the sidewalk located at least five feet away from east property line of Tract A.

  4) The development shall provide pedestrian bollards at the south perimeter of the Tract A pedestrian public access easement in order to control vehicular access into Tract A.

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B. SITE CHARACTERISTICS

1. Development Status/Background

The property is currently undeveloped and borders the Clarendon Hills residential subdivision to the east and south. The Clarendon Hills subdivision was planned and constructed in the 1990's under the prior Land Use Code. Initial plans for the Homestead parcel envisioned offices, multifamily or a church. None of these uses were constructed, and a portion of the property was sold to Front Range Community College which borders the property to the north.

2. Surrounding Zoning and Land Use

	North	South	East	West
Zoning	N/A	Low Density Residential (R-L)	Low Density Residential (R-L)	Low Density Residential (R-L)
Land Use	Front Range Community College	Clarendon Hills single family detached lots	Clarendon Hills single family detached lots	Le Gardin single family detached lots

C. OVERVIEW OF MAIN CONSIDERATIONS

The primary considerations with the proposal include pedestrian cross access, ditch owner access, storm drainage and habitat buffering.

A natural habitat buffer zone is required along the Smith Lateral. The lateral also requires maintenance access. The east side of the property is currently used as both the vehicular access point for ditch maintenance and as a pedestrian route to access trails on the Front Range Community College property to the north. The development plans propose to formalize these access functions, with shared access provided along the east side of Lot 8, within Tract A. This area is 12 feet wide at the narrowest portion directly east of Lot 8. This 12-foot wide access area is intended to be used by both pedestrians and as the primary access for routine ditch maintenance. Additional ditch access is provided within Tract A east of Lot 1.

Stormwater drainage and water quality are also a consideration, with Tract B provided at the intersection of Clarendon Hills Drive and Langdale Drive to meet city stormwater requirements.

2. Public Outreach

A. NEIGHBORHOOD MEETING

Pursuant to *Section 2.2.2 – Step 2: Neighborhood Meetings*, a neighborhood meeting is not required for Administrative (Type 1) projects. Therefore, a City neighborhood meeting was not held for this project.

B. PUBLIC COMMENTS:

Any communication received between the public notice period and hearing will be forwarded to the Hearing Officer to be considered when making a decision on the project.

Resident comments communicated to staff relate to safety concerns along the trail access east side of the property because the access is shared by ditch maintenance vehicles. Concerns received from ditch owners include a request that the primary maintenance access to be located on the east side of the development using the same access point as the pedestrian access. Ditch owners and operators have also expressed concerns that the development will negatively affect the function of the ditch by releasing additional stormwater into the ditch. A preference to have the ditch piped has also been expressed. Additionally, the property owner has expressed concerns that the narrowest portion of the east access, which is 12 feet in

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width, cannot be wider because it will negatively impact the size of Lot 8. Residents would prefer that this area be 22 feet in width and have provided an assessment of this area which is attached to this staff report.

3. Article 2 – Applicable Standards

1. Conceptual Review - CDR190012

A conceptual review meeting was held on February 7, 2019.

2. First Submittal - PDP190006

This project was submitted on April 14, 2019.

3. Neighborhood Meeting

Not applicable pursuant to *2.2.2 – Step 2: Neighborhood Meetings.*

4. Notice (Posted, Written and Published)

Posted Notice: March 27, 2019, Sign # 495

Written Hearing Notice: November 25, 2020, 295 addresses mailed.

Published Hearing Notice: November 25, 2020, Coloradoan Confirmation #0004484050

4. Article 3 - Applicable Standards

A. DIVISION 3.2 - SITE PLANNING AND DESIGN STANDARDS

Applicable Code Standard	Summary of Code Requirement and Analysis	Staff Findings
3.2.1 – Landscaping and Tree Protection	This Code Section requires a fully developed landscape plan that addresses relationships of landscaping to the circulation system and parking, the building, abutting properties, and users of the site in a manner appropriate to the neighborhood context. • Section 3.2.1(D)(2) Street trees. Street trees are provided at approximately 40-foot intervals along Clarendon Hills Drive and Langdale Drive, in accordance with the standards of this section. Per Section 3.2.1(N), the applicant proposes Alternative Compliance for 3 of the street trees for lots 1, 2, and 3, to place trees in the front yard of each of these lots. The applicant's alternative compliance request is attached to this staff report. Staff finds that the alternative plan meets the alternative compliance criteria, in that the proposed alternative landscape plan maximizes tree canopy cover and enhances neighborhood continuity. The proposed pattern of street trees is not incongruent with the varied pattern of tree placement within the surrounding neighborhood, and the establishment of additional tree canopy is not affected by the alternative. • Section 3.2.1(D)(3) Minimum Species Diversity. The project provides not more than 15% of any one tree species in compliance with this standard. • A landscaped stormwater detention area is provided at the Clarendon/Langdale Drive intersection which provides visual interest, habitat, and water quality treatment. • Three existing trees are proposed to be removed. Tree mitigation requirements are met, with one mitigation tree provided per City Forestry requirements.	Complies, with Alternative Compliance requested

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3.2.2 – Access, Circulation and Parking	In conformance with the Purpose, General Standard, and Development Standards described in this section, the access and circulation system provided with the project is adequately designed with regard to safety, efficiency and convenience for vehicles, bicycles and pedestrians, both within the development and to and from surrounding areas, with conditions. *Subsection 3.2.2(C)(6) -- Direct On-Site Access to Pedestrian and Bicycle Destinations.* This section reads as follows: *"The on-site pedestrian and bicycle circulation system must be designed to provide, or allow for, direct connections to major pedestrian and bicycle destinations including, but not limited to, trails, parks, schools, Neighborhood Centers, Neighborhood Commercial Districts and transit stops that are located either within the development or adjacent to the development as required, to the maximum extent feasible. The on-site pedestrian and bicycle circulation system must also provide, or allow for, on-site connections to existing or planned off-site pedestrian and bicycle facilities at points necessary to provide direct and convenient pedestrian and bicycle travel from the development to major pedestrian destinations located within the neighborhood. In order to provide direct pedestrian connections to these destinations, additional sidewalks or walkways not associated with a street, or the extension of street sidewalks, such as from the end of a cul-de-sac, or other walkways within the development, to another street or walkway, may be required as necessary to provide for safety, efficiency and convenience for bicycles and pedestrians both within the development and to and from surrounding areas."* To meet this standard, a pedestrian path is maintained on the east side of the development within Tract A. This area has been used informally by area residents to gain access to trails within the Front Range Community College property. This access is also used by the Smith Lateral ditch owners for maintenance access. Because the applicant's development plan narrows this access area to 12 feet, and there appears to be no viable option to separate these functions, conditions of approval are recommended to further address safety and maintenance of this area. This includes providing pedestrian bollards at the south access of the trail connection and changing the soft surface trail to concrete along Lot 8.	Complies, with conditions
3.2.2(K)(1)(c) Parking Requirements	Each residential lot is more than 50 feet wide and is required to provide at least one off-street parking space. Minimum off-street parking quantities required for the project are satisfied through two garage spaces provided on each lot, for a total of 16 off-street parking spaces.	Complies

B. DIVISION 3.3 – ENGINEERING STANDARDS

Applicable Code Standard	Summary of Code Requirement and Analysis	Staff Findings
3.3.1(C) – Public Sites, Reservations and Dedications	The applicant is required to dedicate rights-of-way for public streets, drainage easements and utility easements as needed to serve the area being developed. The project will dedicate both onsite and offsite easements prior to final recordation and as required by the City's Engineering Services department. This primarily includes the Smith Lateral ditch access easement, which is indicated on the proposed plat, utility easements, 2.9 feet of right-of-way along Langdale Drive, and a pedestrian public access easement along the east side of Tract A.	Complies

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C. 3.4 ENVIRONMENTAL, NATURAL AREA, RECREATIONAL AND CULTURAL RESOURCE PROTECTION STANDARDS

The purpose of this Section is to ensure that when property is developed consistent with its zoning designation, the way in which the proposed physical elements of the development plan are designed and arranged on the site will protect the natural habitats and features both on the site and in the vicinity of the site.

Applicable Code Standard	Summary of Code Requirement and Analysis	Staff Findings
3.4.1 – Natural Habitats	The General Standard requires, to the maximum extent feasible, the development plan be designed and arranged to be compatible with and to protect natural habitats and features and the plants and animals that inhabit them and integrate them within the developed landscape of the community by: (1) directing development away from sensitive resources; (2) minimizing impacts and disturbance through the use of buffer zones; (3) enhancing existing conditions; or (4) restoring or replacing the resource value lost to the community when a development will result in the disturbance of natural habitats or features. Section 3.4.1(E)(1)(a-i) Buffer Zone Performance Standards allows the decision maker [Hearing Officer] to determine buffer zones that may be multiple and noncontiguous. The general buffer zone distance for each natural habitat or feature is established in the quantitative buffer zone table, but the Hearing Officer may reduce or enlarge any portion of the general buffer zone distance in order to ensure qualitative performance standards are achieved. Background: The location and condition of natural habitats and features are informed by an Ecological Characterization Study (ECS). The ECS was completed by Blue Mountain Environmental Consulting on April 9, 2019 and identifies an irrigation ditch, wetlands and mature trees as the natural features requiring protection or mitigation. The irrigation ditch, which serves as a wildlife corridor, contains narrow wetlands on both sides and is dominated by Reed Canarygrass, Three Square and Nebraska Sedge. Lining the ditch edges are mature Plains Cottonwoods, Peachleaf Willow, Chokecherry, Common Juniper and Ponderosa Pine. The transition to upland status is marked by a shift in understory dominance from Canarygrass to Smooth Brome. Wetland boundaries were determined through field surveys using U.S. Army Corps standards (vegetation, hydrology and soils). The total wetland area measures 10,084 square feet in size, with an unvegetated channel measuring 2,982 square feet and vegetated banks measuring 7,102 square feet. Wetlands are considered non-jurisdictional (not regulated by the US Army Corps of Engineers). According to the Land Use Code Section 3.4.1(E), the standard quantitative buffer for an irrigation ditch is 50 feet (measured from the top of bank), and 50 feet for wetlands less than 1/3 acre in size. Whichever buffer is greater prevails. In this instance, the 50-foot buffer from the top of bank applies. Development Proposal: The Homestead at Clarendon Hills development proposes eight single-family homes that back to the irrigation canal. Three trees are being removed: one plains cottonwood and two Siberian elm. The cottonwood is being mitigated by City Forestry while the Siberian elms are being mitigated by City Environmental Planning. Wetlands will not be impacted, however, the proposed development encroaches into the general 50-foot setback. Performance Standards: Where the proposed development encroaches into the general 50-foot buffer zone standard setback, the natural habitat buffer zone expands elsewhere to offset the encroached areas. Because the site is constrained to the north, east and west by adjacent development, the buffer is expanded to include an enhanced natural stormwater detention pond south of the proposed homes. As such, the applicant proposes meeting LUC 3.4.1 (E) natural habitat buffer zone performance standards, which are as follows:	Complies

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(a) The project shall be designed to preserve or enhance the ecological character or function and wildlife use of the natural habitat or feature and to minimize or adequately mitigate the foreseeable impacts of development.

Existing vegetation throughout the site is of low to moderate quality as the understory is dominated by smooth brome, a non-native species. Restoration and weed mitigation will enhance the current degraded understory condition and provide improved quality habitat. Additionally, the triangular stormwater detention area is designed as a pollinator garden with low-water, flowering plants and a stacked boulder wall for a natural aesthetic. The resultant buffer zone will balance habitat enhancement with an aesthetically pleasing entrance appropriate to a residential subdivision.

(b) The project, including, by way of example and not by way of limitation, its fencing, pedestrian/bicycle paths and roadways, shall be designed to preserve or enhance the existence of wildlife movement corridors between natural habitats and features, both within and adjacent to the site.

The proposed pedestrian trail aligns with the Nature in the City Strategic Plan by providing residents with appropriate access to nature. Sidewalks allow pedestrians close contact with the pollinator garden. Three rail fencing with wire mesh will protect wildlife from backyard pets adjacent to the corridor.

(c) The project shall be designed to preserve existing trees and vegetation that contribute to the site's ecological, shade, canopy, aesthetic, habitat and cooling value. Notwithstanding the requirements of Section 3.2.1(F), all trees and vegetation within the Limits of Development must be preserved or, if necessary, mitigated based on the values established by the Ecological Characterization Study or the City Environmental Planner. Such mitigation, if necessary, shall include trees, shrubs, grasses, or any combination thereof, and must be planted within the buffer zone.

Vegetation within open areas will be improved through weed mitigation and enhancement plantings of structural and species diversity. The landscaping emphasizes native plants, flowering perennials and a diverse vegetation structure to enhance opportunities for pollinators and species' nesting and breeding. Site design has been modified to minimize encroachment into the ditch buffer and enlarge the buffer zone.

(d) The project shall be designed to protect from adverse impact to species utilizing special habitat features such as key raptor habitat features, including nest sites, night roosts and key feeding areas as identified by the Colorado Parks and Wildlife Division ("CPW") or the Fort Collins Natural Areas Department ("NAD"); key production areas, wintering areas and migratory feeding areas for waterfowl; heron rookeries; key use areas for wading birds and shorebirds; key use areas for migrant songbirds; key nesting areas for grassland birds; fox and coyote dens; mule deer winter concentration areas as identified by the CPW or NAD; prairie dog colonies one (1) acre or greater in size; key areas for rare, migrant or resident butterflies as identified by the NAD; areas of high terrestrial or aquatic insect diversity as identified by the NAD; remnant native prairie habitat; mixed foothill shrubland; foothill ponderosa pine forest; plains cottonwood riparian woodlands; and wetlands of any size.

While no raptors nests have been identified on the property additional bird surveys will be performed prior to the issuance of the Construction Permit.

(e) The project shall be designed so that the character of the proposed development in terms of use, density, traffic generation, quality of runoff water, noise, lighting and similar potential development impacts shall minimize the degradation of the ecological character or wildlife use of the affected natural habitats or features.

The project is proposing a large pollinator garden with a natural stacked boulder wall to maintain a natural aesthetic. The ditch corridor will be enhanced through shrubs, trees, grasses and forbs. Both areas encourage the use of different wildlife species for nourishment and cover.

(f) The project shall be designed to integrate with and otherwise preserve existing site topography, including, but not limited to, such characteristics as steepness of slopes,

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	existing drainage features, rock outcroppings, river and stream terraces, valley walls, ridgelines and scenic topographic features. The project preserves the existing site topography and emulates existing conditions in disturbed areas along the ditch corridor. (g) The project shall be designed to enhance the natural ecological characteristics of the site. If existing landscaping within the buffer zone is determined by the decision maker to be incompatible with the purposes of the buffer zone, then the applicant shall undertake restoration and mitigation measures such as regrading and/or the replanting of native vegetation. All buffers will be restored to native vegetation (with the exception of some trees in the riparian forest and flowering perennials in the detention area, for improved habitat). Additionally, weed mitigation and enhancement plantings will be incorporated to improve the natural ecological characteristics of the site. (h) The project may be designed to provide appropriate human access to natural habitats and features and their associated buffer zones in order to serve recreation purposes, provided that such access is compatible with the ecological character or wildlife use of the natural habitat or feature. The proposed pedestrian trail within the buffer zone align with the Nature in the City Strategic Plan by providing residents with appropriate access to nature. (i) Fencing associated with the project shall be designed to be compatible with the ecological character and wildlife use of the natural habitat or feature. The proposed fencing will not inhibit wildlife movement near the ditch. Summary: The mitigation results in 1.57 acres of Natural Habitat Buffer Zone (NHBZ), above the 1.48 acre requirement. Emphasis is placed on enhancing the low-quality open areas through weed mitigation, native grass and forb seed mixes, and native plantings. Also included is an enhanced stormwater detention pond at the front of the development, featuring a pollinator garden comprised of flowering low-water plant species. Wetlands will be avoided, and the majority of trees protected.	

D. 3.5.1 – BUILDING AND PROJECT COMPATIBILITY

The purpose of this Section is to ensure that the physical and operational characteristics of proposed buildings and uses are compatible when considered within the context of the surrounding area.

Applicable Code Standard	**Summary of Code Requirement and Analysis**	**Staff Findings**
3.5.1(J) Operational and Physical Compatibility Standards	The purpose of this Section is to ensure that the physical and operational characteristics of proposed buildings and uses are compatible when considered within the context of the surrounding area. Conditions may be imposed upon the approval of development applications to ensure that new development will be compatible with existing neighborhoods and uses. Such conditions may include, but need not be limited to, restrictions on or requirements for: (1) hours of operation and deliveries; (2) location on a site of activities that generate potential adverse impacts on adjacent uses such as noise and glare; (3) placement of trash receptacles; (4) location of loading and delivery zones;	Complies

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	(5) light intensity and hours of full illumination; (6) placement and illumination of outdoor vending machines; (7) location and number of off-street parking spaces. In order to address this standard, four conditions of approval are recommended. The first condition requires removable bollards at the Langdale Drive trail access east of Lot 8. This area is also the primary access point for vehicles used to maintain the Smith Irrigation Lateral. In order to mitigate conflicts between pedestrians and maintenance vehicles, bollards that can be removed for ditch maintenance are recommended. The second condition requires that the proposed walkway be moved west to provide additional separation from the existing residence to the east. Two additional conditions are recommended which address the fencing and wall placement along the east side of Lot 8.	

E. 3.6 TRANSPORTATION AND CIRCULATION

This Section is intended to ensure that the transportation network of streets, alleys, roadways and trails is in conformance with adopted transportation plans and policies established by the City.

Applicable Code Standard	Summary of Code Requirement and Analysis	Staff Findings
3.6.4 – Transportation Level of Service Requirements	The City Traffic Operations Department has reviewed the proposal to add eight single-family residential lots and determined that due to the relatively low anticipated traffic to be generated by this proposal -- per Larimer County Urban Area Street Standards (LCUASS) section 4.2.2.E the requirement for a Traffic Impact Study is waived.	Complies
3.6.6 – Emergency Access	This Section is intended to ensure that emergency vehicles can gain access to, and maneuver within, the project so that emergency personnel can provide fire protection and emergency services without delays. The project has been reviewed by Poudre Fire Authority and provides the necessary emergency access easements per their recommendations.	Complies

F. 3.8 SUPPLEMENTARY REGULATIONS

The purpose of this Section is to provide standards to implement the model standards outlined in the "Development Standards for the I-25 Corridor" and the "Fort Collins I-25 Corridor Subarea Plan."

Applicable Code Standard	Summary of Code Requirement and Analysis	Staff Findings
3.8.11 - Fences and Walls	This standard regulates fences and walls, and the following requirements apply to the proposed fences and walls which shall be: (1) no more than 4 feet high between the front building line and front property line (2) no more than 4 feet high if located in the front yard, or within any required side yard setback area in the front yard, except if required for demonstrated unique security purposes (3) no more than 6 feet high if located within any required rear yard setback area or within any side yard setback area in a rear yard	Complies, with conditions

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	Additionally, the height of a fence or wall shall be the distance from the top of the fence or wall to the finished grade of the lot directly under the fence or wall as such grade existed at the time the fence or wall was constructed. Any berm, wall or similar feature that is constructed for the purpose of increasing the height of a fence or wall shall be considered to be a part of the fence or wall. • The project complies with these fencing and wall standards, with the exception of the proposed 6-foot fence along the east side lot line of Lot 8, which appears to be located on top of a proposed retaining wall. The proposed wall appears to have a maximum height of approximately 3 feet and the face of the wall abuts the Lot 8 side property line. • In order to address the issue of the proposed 6-foot fence on top of the 3-foot wall, and also address the location of the fence and ensure that the 12 foot pedestrian access area is not further constricted, conditions of approval are recommended.	

5. Article 4 – Applicable Standards:

A. DIVISION 4.4 – LOW DENSITY RESIDENTIAL DISTRICT (R-L)

The R-L Low Density Residential District designation is intended for predominately single-family residential areas located throughout the City which were existing at the time of adoption of this Code. New residential projects on undeveloped land in the R-L zone district are uncommon.

Applicable Code Standard	Summary of Code Requirement and Analysis	Staff Findings
4.4(B)(2)(a)(1) -- Permitted Uses	Single-family detached dwellings on new lots are permitted in the R-L zone subject to a Type 1 review.	Complies
4.4(D) -- Land Use Standards	All eight proposed lots comply with the density and dimensional standards described in the section. • Residential Density in the Low Density Residential District shall have a minimum lot area the equivalent of 3 times the total floor area of the building but not less than 6,000 square feet. • Each lot complies with the minimum lot width which is 60 feet for a single-family dwelling. • Each lot demonstrates compliance with the minimum building setback requirements: o 20’ front o 15’ rear o 5’ side	Complies

6. Findings of Fact/Conclusion

In evaluating the request for the Homestead at Clarendon Hills Project Development Plan, PDP190007, staff makes the following findings of fact:

- The Project Development Plan complies with process located in Division 2.2 – Common Development Review Procedures for Development Applications of Article 2 – Administration.

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- The Project Development Plan complies with relevant standards located in Article 3 – General Development Standards, with conditions.
- The Project Development Plan complies with relevant standards located in Division 4.4, Low Density Residential (R-L) of Article 4.

7. Recommendation

Staff recommends approval of Homestead at Clarendon Hills Project Development Plan, PDP190007 based on the aforementioned Findings of Fact, with the following conditions:

1) The privacy fence and retaining wall along the east side of Lot 8 will both be placed within Lot 8, and not within Tract A east of lot 8.

2) The privacy fence shall be placed in front of the retaining wall, facing Tract A, and the fence shall not be more than six feet in maximum height from the finish grade of the east property line between Tract A and Lot 8.

3) The proposed soft surface trail shall be replaced with a concrete sidewalk along the extent of Lot 8, a minimum of four feet in width, with the sidewalk located at least five feet away from east property line of Tract A.

4) The development shall provide pedestrian bollards at the south perimeter of the Tract A pedestrian public access easement in order to control vehicular access into Tract A.

8. Attachments

1. Vicinity & Zoning Map
2. Hearing Mailed Notice
3. Hearing Notice – Coloradoan
4. Site & Landscape Plan
5. Utility Plans
6. Plat
7. Drainage Report
8. Applicant's Design Narrative
9. Alternative Compliance – Street Tree Placement
10. Environmental Characterization Study
11. Letter of Intent -- Brookwood at Mail Creek
12. Letter of Intent -- Parks Department
13. Letter of Intent -- FRCC
14. Resident Comments – Clarendon Hills HOA
15. Resident Comments – Pedestrian Path Study
16. Brookwood Statement of Authority
17. Intersection Site Distance

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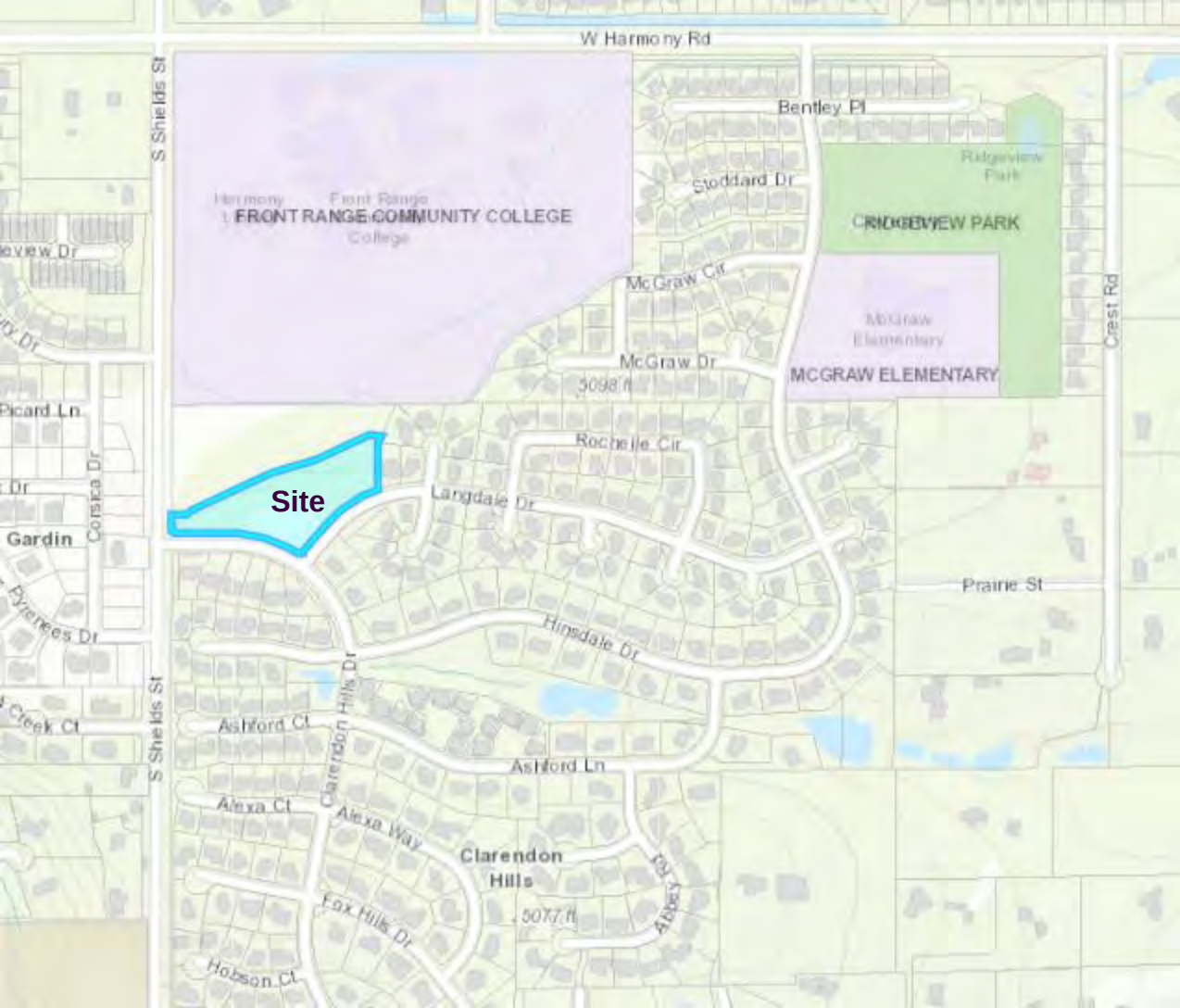
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S Shields St
Bentley Pl
Stoddard Dr
Ridgeview Park
RIDGEVIEW PARK
Harmony
Front Range
College
FRONT RANGE COMMUNITY COLLEGE
McGraw Cir
McGraw
Elementary
McGraw Dr
5098 ft
MCGRAW ELEMENTARY
Crest Rd
Picard Ln
Rochelle Cir
Site
Langdale Dr
Corsica Dr
Gardin
Prairie St
Pyrenees Dr
Hinsdale Dr
Clarendon Hills Dr
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Ashford Ln
Alexa Ct
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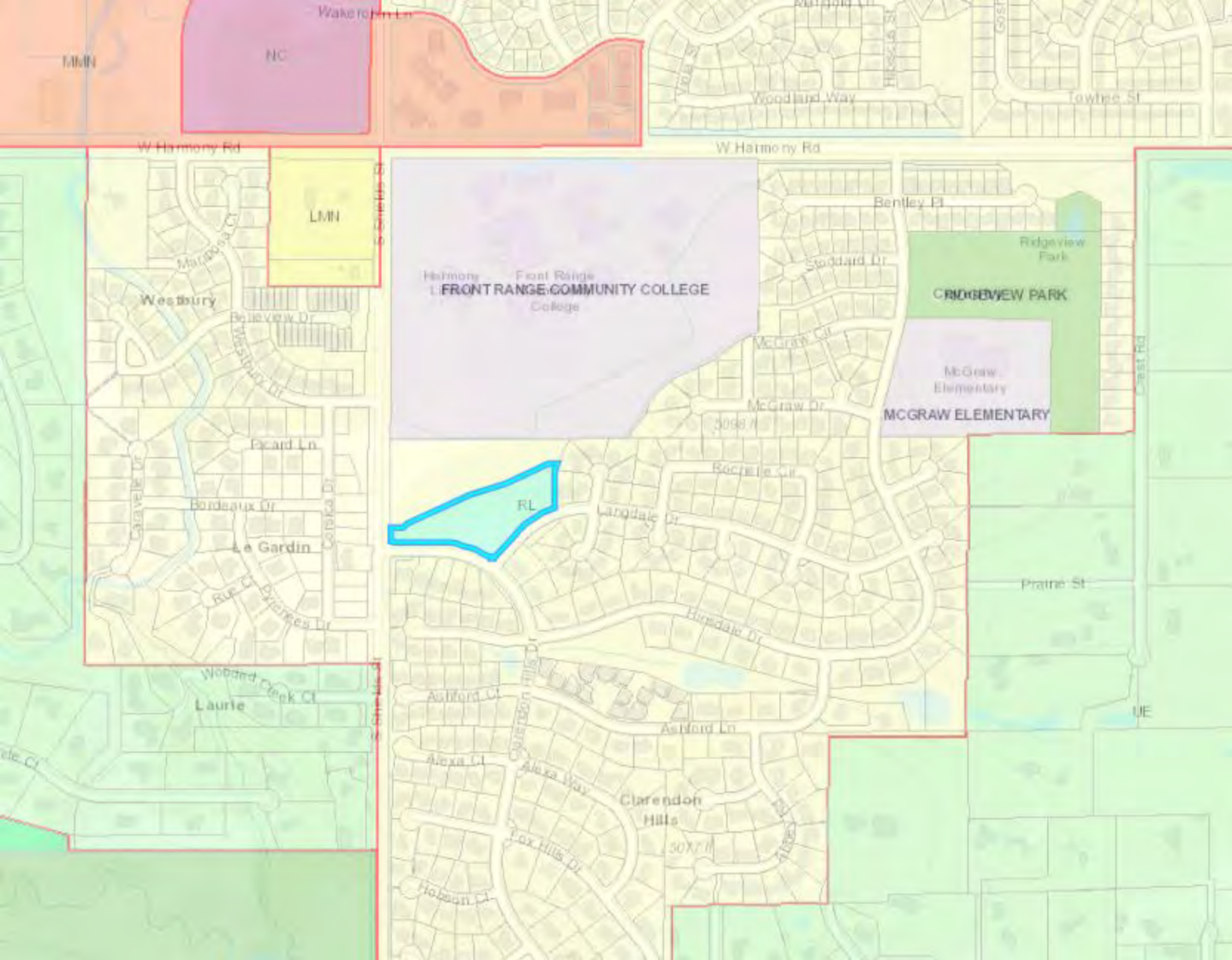
Clarendon
Hills
5077 ft
Fox Hills Dr
Abbey Rd
Hobson Ct


MMN
NC
Wakefield Ln
W Harmony Rd
Woodland Way
Towhee St
LMN
Bentley Ct
Ridgeview Park
RIDGEVIEW PARK
Stoddard Dr
Front Range College
FRONT RANGE COMMUNITY COLLEGE
McGraw Dr
McGraw Elementary
MCGRAW ELEMENTARY
Westbury
Belieview Dr
Westbury Dr
Picard Ln
Bordeaux Dr
Le Gardin
Rue Cr Empress Dr
Cerise Ct
Corsica Dr
RL
Larodale Dr
Rochelle Cir
Prairie St
Hinsdale Dr
Wooded Creek Ct
Laurie
Ashford Ct
Ashford Ln
Clarendon Hills Dr
Alexa Ct
Alexa Way
Clarendon Hills
Fox Hills Dr
Hobson Ct
UE

Development Review Center
281 North College Avenue
PO Box 580
Fort Collins, CO 80522-0580
970-221-6689
fcgov.com/DevelopmentReview

«Name»
«Name1»
«Address»
«City», «State» «Zipcode»
100.803100.549110

NOTICE OF VIRTUAL PUBLIC HEARING

November 25, 2020

Dear Property Owner or Resident:

This letter is to inform you a **virtual public hearing on December 10th** has been scheduled to consider a development proposal near your property. Specific information about this development proposal is to the right and on the back of this letter. A decision regarding the approval or denial of the proposal will be made by an administrative hearing officer following the hearing.

City Council has authorized the use of remote technology for select hearings. You can participate over the phone, on the internet, or through the Zoom app on a smartphone, iPad, or computer. **Virtual participation information will be available at fcgov.com/developmentreview/proposals at least 48 hours in advance of the meeting.** You do not need a paid Zoom account to participate. If you do not have access to the internet or need assistance, call 970-224-6076.

You received this notice because records from the Larimer County Assessor's Office indicate you own property near the proposed development site. Because of the lag time in recordkeeping, or because of rental situations, some neighbors may be missed. Please feel free to notify your neighbors of the public hearing so they can attend. If you own or manage an apartment building, please post this notice in a common area so your residents can participate.

Please contact me, or Alyssa Stephens at devreviewcomments@fcgov.com or 970-224-6076 if you are unable to attend the meeting or would like to provide comments in advance. We welcome and encourage your participation, as your input is an important part of the development review process.

Sincerely,

Jason Holland, City Planner
970.224.6126 | jholland@fcgov.com

HEARING TIME

Thursday, December 10, 2020
5:30 P.M.
Remote/Virtual Meeting

Meeting information will be posted at fcgov.com/developmentreview/proposals 48 hours prior to the meeting.

PROPOSAL NAME & LOCATION

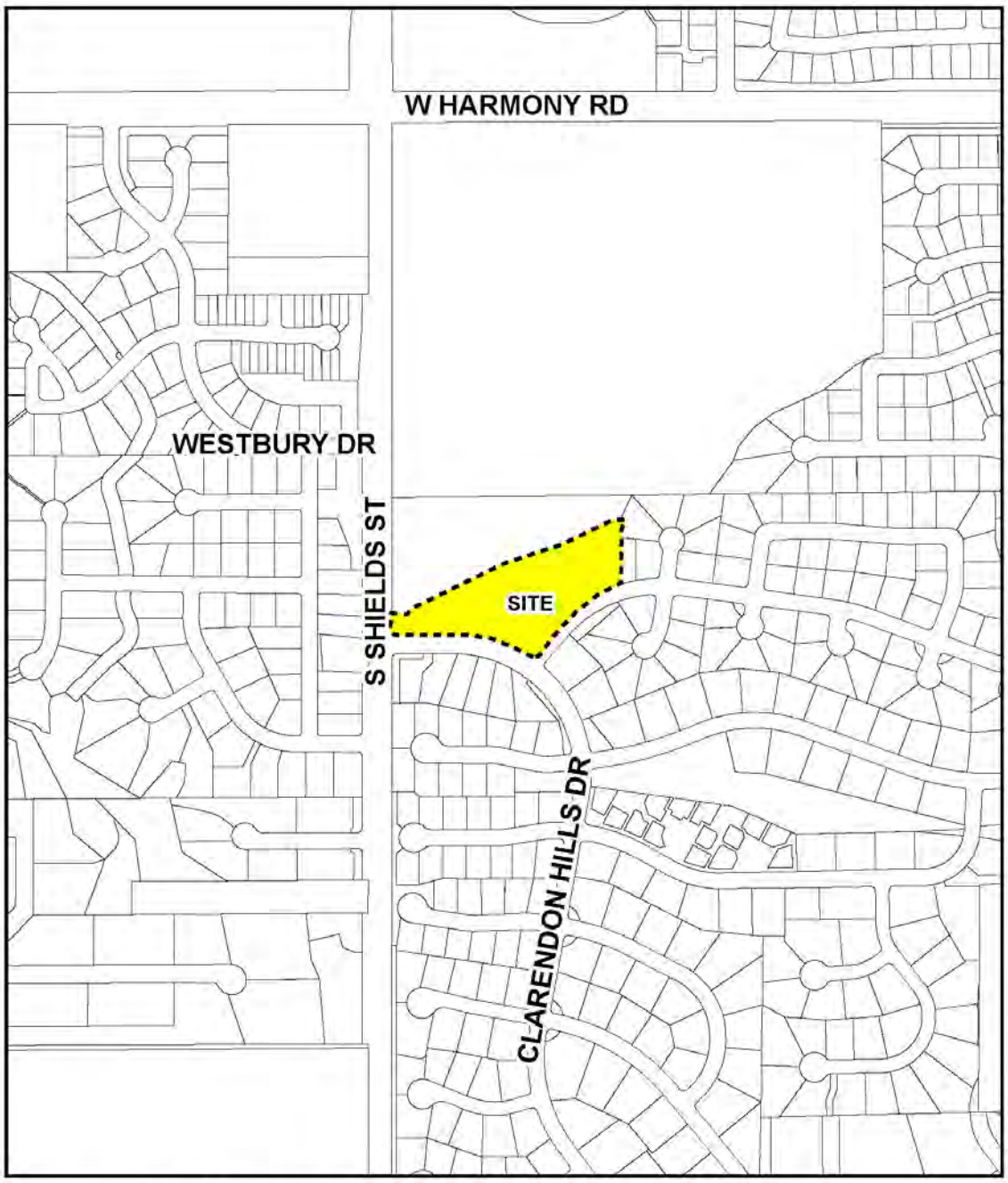
Homestead at Clarendon Hills
PDP190007
Northwest corner of S Shields St and Clarendon Hills Dr
(location map on reverse).
Sign #495, Parcel #9602200039.

PROPOSAL DESCRIPTION

- Project Development Plan (PDP) to develop the vacant 3.28-acre parcel at the northwest corner of S Shields St and Clarendon Hills Dr.
- The proposal includes subdividing the parcel into 8 single-family detached lots.
- The project is within the Low Density Residential (RL) Zone District. The proposal is a permitted use in this district, subject to a "Type 1" review process which includes an Administrative Hearing.

HELPFUL RESOURCES

- Hearing Notice, Plans, and Staff Report: fcgov.com/developmentreview/proposals *(will be available on December 4)*
- Information About the Review Process: fcgov.com/CitizenReview



HOMESTEAD AT CLARENDON HILLS
LOCATION MAP

The City of Fort Collins will make reasonable accommodations for access to City services, programs, and activities and will make special communication arrangements for persons with disabilities. Auxiliary aids and services are available for persons with disabilities. V/TDD: Dial 711 for Relay Colorado.

Esta es una notificación sobre la reunión de su vecindario o sobre una audiencia pública sobre el desarrollo o proyecto en la propiedad cerca de donde usted es el dueño de propiedad. Si usted desea que esta notificación sea traducida al español sin costo alguno, favor enviar un correo electrónico en español a la siguiente dirección electrónica: translate@fcgov.com.

CONFIRMATION

FORT·COLLINS COLORADOAN

1300 Riverside Ave.
Fort Collins, CO 80524

CITY OF FC-PLANNING-LEGAL ADS
281 N COLLEGE AVE
FORT COLLINS CO 80524-

Account	AD#	Ordered by:	PO#	Total Amount	Payment Method	Payment Amount	Amount Due
FTC-003425	0004484050	Leslie Spencer	Hearing 12/10	$27.09	Invoice	$0.00	$27.09

Sales Rep: mweber **Order Taker:** mweber **Order Created** 11/24/2020

Product	# Ins	Start Date	End Date
FTC-Coloradoan.com	1	11/25/2020	11/25/2020
FTC-The Coloradoan	1	11/25/2020	11/25/2020

*** ALL TRANSACTIONS CONSIDERED PAID IN FULL UPON CLEARANCE OF FINANCIAL INSTITUTION**

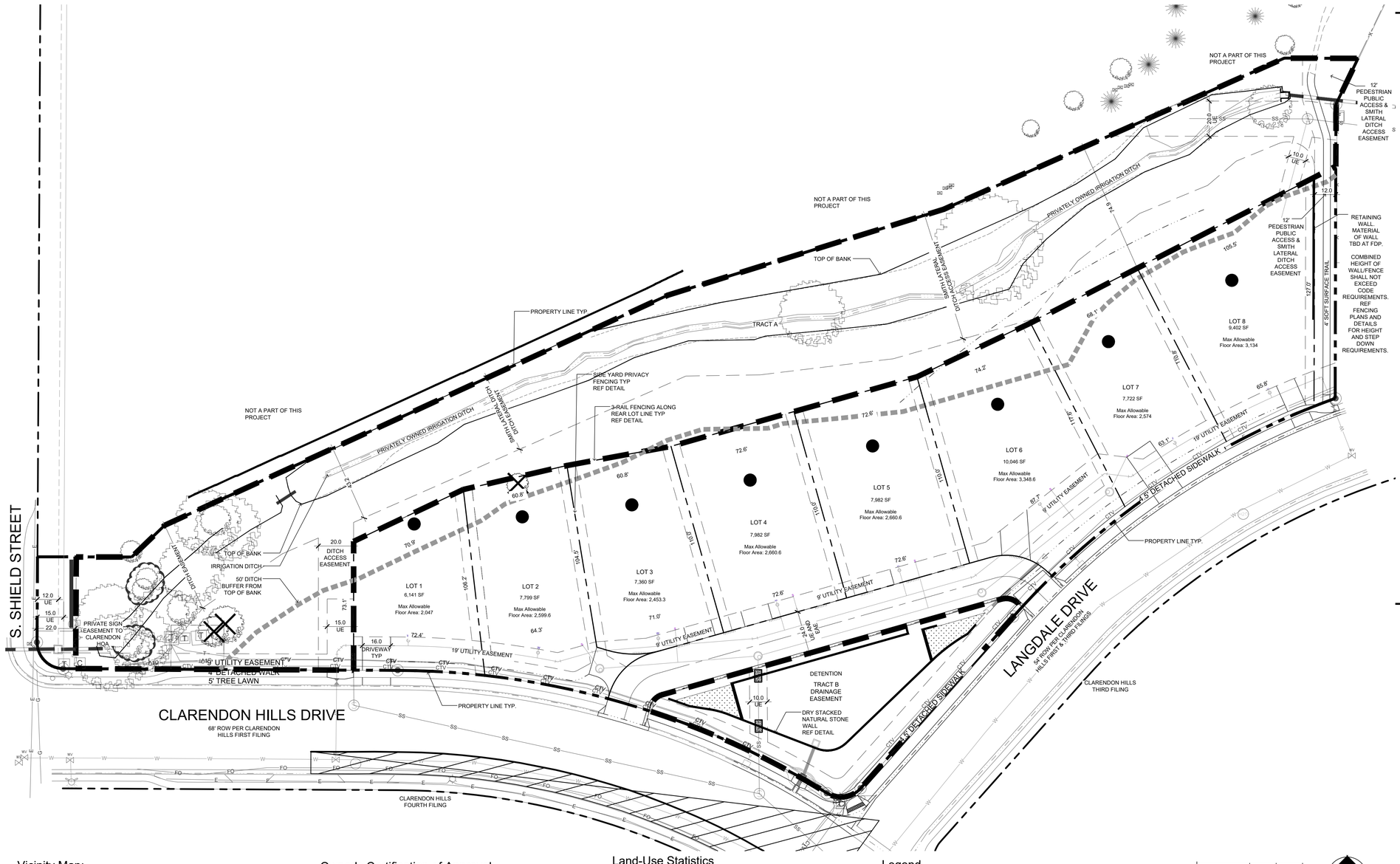
Text of Ad: 11/24/2020

NOTICE OF HEARING

Notice is hereby given that on Thursday, December 10, 2020, at 5:30 P.M., as a Remote/Virtual Meeting, a Hearing Officer for the City of Fort Collins will conduct an Administrative Public Hearing to consider a development proposal.

Virtual participation information will be available at the link at the bottom of this notice at least 48 hours in advance of the meeting. If you do not have access to the internet or need assistance, call 970-224-6076.

GENERAL DESCRIPTION
The project is referred to as Homestead at Clarendon Hills, file # PDP190007. This is a request for a Project Development Plan (PDP) to develop the vacant 3.28-acre parcel at the NW corner of S Shields St and Clarendon Hills Dr. (Parcel #9602200039). The proposal includes subdividing the parcel into 8 single-family detached lots. The site is in the Low Density Residential (RL) Zone District. Administrative Hearing Notice, Plans, and Staff Report can be found online at: fcgov.com/developmentreview/proposals. Information about the review process can be found online at: fcgov.com/CitizenReview.
0004484050
Coloradoan
November 25, 2020



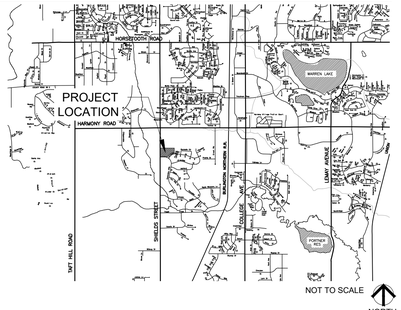
Site Plan Notes:

1. THE PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FINAL PLANS. AMENDMENTS TO THE PLANS MUST BE REVIEWED AND APPROVED BY THE CITY PRIOR TO THE IMPLEMENTATION OF ANY CHANGES TO THE PLANS.
2. REFER TO FINAL UTILITY PLANS FOR EXACT LOCATIONS AND CONSTRUCTION INFORMATION FOR STORM DRAINAGE STRUCTURES, UTILITY MAINS AND SERVICES.
3. REFER TO THE FINAL CIVIL ENGINEERING PLANS FOR DETAILED INFORMATION REGARDING PROPOSED TOPOGRAPHY, UTILITY MAINS AND SERVICES, PROPOSED TOPOGRAPHY AND STREET IMPROVEMENTS.
4. REFER TO THE SUBDIVISION PLAT AND UTILITY PLANS FOR EXACT LOCATIONS, AREAS AND DIMENSIONS OF ALL EASEMENTS, LOTS, TRACTS, STREETS, WALKS AND OTHER SURVEY INFORMATION.
5. ALL CONSTRUCTION WITH THIS DEVELOPMENT PLAN MUST BE COMPLETED IN ONE PHASE UNLESS A PHASING PLAN IS SHOWN WITH THESE PLANS.
6. ALL CONSTRUCTION WITHIN THIS DEVELOPMENT PLAN MUST BE COMPLETED IN ONE PHASE UNLESS A PHASING PLAN IS SHOWN WITH THESE PLANS.
7. ALL SINGLE FAMILY DETACHED HOMES SHALL MEET OR EXCEED THE GARAGE DOOR STANDARDS AS OUTLINED IN 3.5.2(E) OF THE LAND USE CODE.
8. ALL EXTERIOR LIGHTING PROVIDED WITH THE DEVELOPMENT SHALL COMPLY WITH THE FOOT-CANDLE REQUIREMENTS IN SECTION 3.2.4 OF THE LAND USE CODE AND SHALL USE A CONCEALED, FULLY SHIELDED LIGHT SOURCE WITH SHARP CUT-OFF CAPABILITY SO AS TO MINIMIZE UP-LIGHT, GLARE AND UNNECESSARY DIFFUSION.
9. SIGNAGE AND ADDRESSING ARE NOT PERMITTED WITH THIS PLANNING DOCUMENT AND MUST BE APPROVED BY SEPARATE CITY PERMIT PRIOR TO CONSTRUCTION. SIGNS MUST COMPLY WITH CITY SIGN CODE UNLESS A SPECIFIC VARIANCE IS GRANTED BY THE CITY.
10. FIRE HYDRANTS MUST MEET OR EXCEED POUDRE FIRE AUTHORITY STANDARDS. ALL BUILDINGS MUST PROVIDE AN APPROVED FIRE EXTINGUISHING SYSTEM.
11. ALL SIDEWALKS AND RAMPS MUST CONFORM TO CITY STANDARDS. ACCESSIBLE RAMPS MUST BE PROVIDED AT ALL STREET AND DRIVE INTERSECTIONS AND AT ALL DESIGNATED ACCESSIBLE PARKING SPACES. ACCESSIBLE PARKING SPACES MUST SLOPE NO MORE THAN 1:48 IN ANY DIRECTION. ALL ACCESSIBLE ROUTES MUST SLOPE NO MORE THAN 1:20 IN DIRECTION OF TRAVEL AND WITH NO MORE THAN 1:48 CROSS SLOPE.
12. COMMON OPEN SPACE AREAS AND LANDSCAPING WITHIN RIGHT OF WAYS, STREET MEDIANS, AND TRAFFIC CIRCLES ADJACENT TO COMMON OPEN SPACE AREAS ARE REQUIRED TO BE MAINTAINED BY A PROPERTY OWNERS' ASSOCIATION. THE PROPERTY OWNERS' ASSOCIATION IS RESPONSIBLE FOR SNOW REMOVAL ON ALL ADJACENT STREET SIDEWALKS AND SIDEWALKS IN COMMON OPEN SPACE AREAS.
13. THE PROPERTY OWNER FOR EACH RESIDENTIAL LOT IS RESPONSIBLE FOR SNOW REMOVAL ON ALL STREET SIDEWALKS ADJACENT TO EACH RESIDENTIAL LOT.
14. PRIVATE CONDITIONS, COVENANTS, AND RESTRICTIONS (CC&R'S), OR ANY OTHER PRIVATE RESTRICTIVE COVENANT IMPOSED ON LANDOWNERS WITHIN THE DEVELOPMENT, MAY NOT BE CREATED OR ENFORCED HAVING THE EFFECT OF PROHIBITING OR LIMITING THE INSTALLATION OF XERISCAPE LANDSCAPING, SOLAR/PHOTO-VOLTAIC COLLECTORS (IF MOUNTED FLUSH UPON ANY ESTABLISHED ROOF LINE), CLOTHES LINES (IF LOCATED IN BACK YARDS), ODOR-CONTROLLED COMPOST BINS, OR WHICH HAVE THE EFFECT OF REQUIRING THAT A PORTION OF ANY INDIVIDUAL LOT BE PLANTED IN TURF GRASS.
15. ANY DAMAGED CURB, GUTTER AND SIDEWALK EXISTING PRIOR TO CONSTRUCTION, AS WELL AS STREETS, SIDEWALKS, CURBS AND GUTTERS, DESTROYED, DAMAGED OR REMOVED DUE TO CONSTRUCTION OF THIS PROJECT, SHALL BE REPLACED OR RESTORED TO CITY OF FORT COLLINS STANDARDS AT THE DEVELOPER'S EXPENSE PRIOR TO THE ACCEPTANCE OF COMPLETED IMPROVEMENTS AND/OR PRIOR TO THE ISSUANCE OF THE FIRST CERTIFICATE OF OCCUPANCY.
16. FIRE LANE MARKING: A FIRE LANE MARKING PLAN MUST BE REVIEWED AND APPROVED BY THE FIRE OFFICIAL PRIOR TO ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY. WHERE REQUIRED BY THE FIRE CODE OFFICIAL, APPROVED SIGNS OR OTHER APPROVED NOTICES THAT INCLUDE THE WORDS NO PARKING FIRE LAND SHALL BE PROVIDED FOR FIRE APPARATUS ACCESS ROADS TO IDENTIFY SUCH ROADS OR PROHIBIT THE OBSTRUCTION THEREOF. THE MEANS BY WHICH FIRE LANDS ARE DESIGNATED SHALL BE MAINTAINED IN A CLEAN AND LEGIBLE CONDITION AT ALL TIMES AND BE REPLACED OR REPAIRED WHEN NECESSARY TO PROVIDE ADEQUATE VISIBILITY.
17. PREMISE IDENTIFICATION: AN ADDRESSING PLAN IS REQUIRED TO BE REVIEWED AND APPROVED BY THE CITY AND POUDRE FIRE AUTHORITY PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY. UNLESS THE PRIVATE DRIVE IS NAMED, MONUMENT SIGNAGE MAY BE REQUIRED TO ALLOW WAY-FINDING. ALL BUILDING IDENTIFICATION PLACED IN A POSITION THAT IS PLAINLY LEGIBLE, WITH A MINIMUM OF SIX-INCH NUMERALS ON A CONTRASTING BACKGROUND. WHERE ACCESS IS BY MEANS OF A PRIVATE ROAD AND THE BUILDING CANNOT BE VIEWED FROM THE PUBLIC WAY, A MONUMENT, A POLE OR OTHER SIGN OR MEANS SHALL BE USED TO IDENTIFY THE STRUCTURE.
18. THE EXISTING CLARENDON HILLS SIGN SHALL BE MAINTAINED BY THE CLARENDON HILLS HOMEOWNERS ASSOCIATION.
19. THIS IRRIGATION DITCH IS OWNED BY NUMEROUS INDIVIDUAL OWNERS AS WELL AS THE CITY OF FORT COLLINS (THROUGH THE PARKS DEPARTMENT) WHO USE THE DITCH TO CONVEY IRRIGATION WATER. APPROVAL FROM THE IRRIGATION DITCH OWNERS IS REQUIRED PRIOR TO ANY WORK ON THE DITCH OR IN ITS EASEMENT, AS WELL AS BEFORE ANY STORMWATER CAN BE DISCHARGED, OR PLANNED TO BE DISCHARGED INTO THE DITCH. PLEASE CONTACT JILL WUERTZ (970_416_2062), 413 S. BRYAN AVE, FORT COLLINS, CO 80521 REGARDING THE PARKS' DEPARTMENT'S INTEREST.

Legal Description:

A TRACT OF LAND LOCATED IN THE WEST HALF OF SECTION 2, TOWNSHIP 6 NORTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO

Vicinity Map:



NOT TO SCALE

NORTH

Owner's Certification of Approval:

THE UNDERSIGNED DOES/DO HEREBY CERTIFY THAT I/WE ARE THE LAWFUL OWNERS OF REAL PROPERTY DESCRIBED ON THIS SITE PLAN AND DO HEREBY CERTIFY THAT I/WE ACCEPT THE CONDITIONS AND RESTRICTIONS SET FORTH ON SAID SITE PLAN.

IN WITNESS WHEREOF, WE HAVE HEREUNTO SET OUR HANDS AND SEALS THIS THE _____ DAY OF _____, 20_____.

_____

NOTARIAL CERTIFICATE

STATE OF COLORADO)

COUNTY OF _____)

THE FOREGOING INSTRUMENT WAS ACKNOWLEDGED BEFORE ME BY (PRINTED NAME) THIS _____ DAY OF _____, 20_____.

MY COMMISSION EXPIRES:_____ _____
NOTARY PUBLIC

(SEAL)

Planning Approval:

BY THE DIRECTOR OF COMMUNITY DEVELOPMENT AND NEIGHBORHOOD SERVICES OF THE CITY OF FORT COLLINS, COLORADO THIS_____DAY OF _____A.D., 20_____.

_____
DIRECTOR OF COMMUNITY DEVELOPMENT AND NEIGHBORHOOD SERVICES

Land-Use Statistics

EXISTING ZONING:	RL	
GROSS LAND AREA :	161,583 S.F.	3.709 AC
NUMBER OF SINGLE FAMILY DETACHED:	8	
LAND USE:	SINGLE FAMILY DETACHED	
TOTAL STORIES:	2	
GROSS DENSITY	2.2/DU AC	
NET DENSITY	2.2/DU AC	
SOLAR ORIENTATION COMPLIANCE:	100%	
REQUIRED OFF-STREET PARKING:	16 SPACES	
PROVIDED OFF-STREET PARKING:	16 SPACES	
MINIMUM LOT SIZE REQUIRED/PROVIDED	60' REQUIRED/ 63.1' PROVIDED	

GROSS AREA COVERAGE

	SQUARE FEET	ACRES	% OF
PRIVATE RESIDENCE	64,689	1.485	45.31%
RIGHT-OF-WAY	1,066	0.024	0.66%
LANDSCAPE AREA	77,101	1.768	53.31%
TOTAL AREA:	161,583	3.277	100%

Legend

PROPERTY BOUNDARY
EASEMENT
NATURAL HABITAT BUFFER ZONE (NHBZ)
EXISTING TREES
SOLAR ORIENTED LOT
STOP SIGN
STREET LIGHT

THE NATURAL HABITAT BUFFER ZONE IS INTENDED TO BE MAINTAINED IN A NATIVE LANDSCAPE. PLEASE SEE SECTION 3.4.1 OF THE LAND USE CODE FOR ALLOWABLE USES WITHIN THE NATURAL HABITAT BUFFER ZONE.

0 30' 45' 60'

SCALE 1" = 30'-0"

NORTH

Sheet Index

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SEAL

PROJECT TITLE

HOMESTEAD AT CLARENDON HILLS

Project Development Plan

Ft Collins, Colorado

PREPARED FOR

MOSAIC LAND DEVELOPMENT SERVICES, LLC

1021 NIGHTINGALE DRIVE
FORT COLLINS, CO. 80525

CONTACT: KEN MITCHELL

NOT FOR CONSTRUCTION FOR REVIEW ONLY

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
Know what's below. Call before you dig.
CALL 3 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

REVISIONS DATE

Staff Comments	2.7.2020
Staff Comments	8.5.2020
Staff Comments	9.30.2020
Staff Comments	10.30.2020

DATE

APRIL 10, 2019

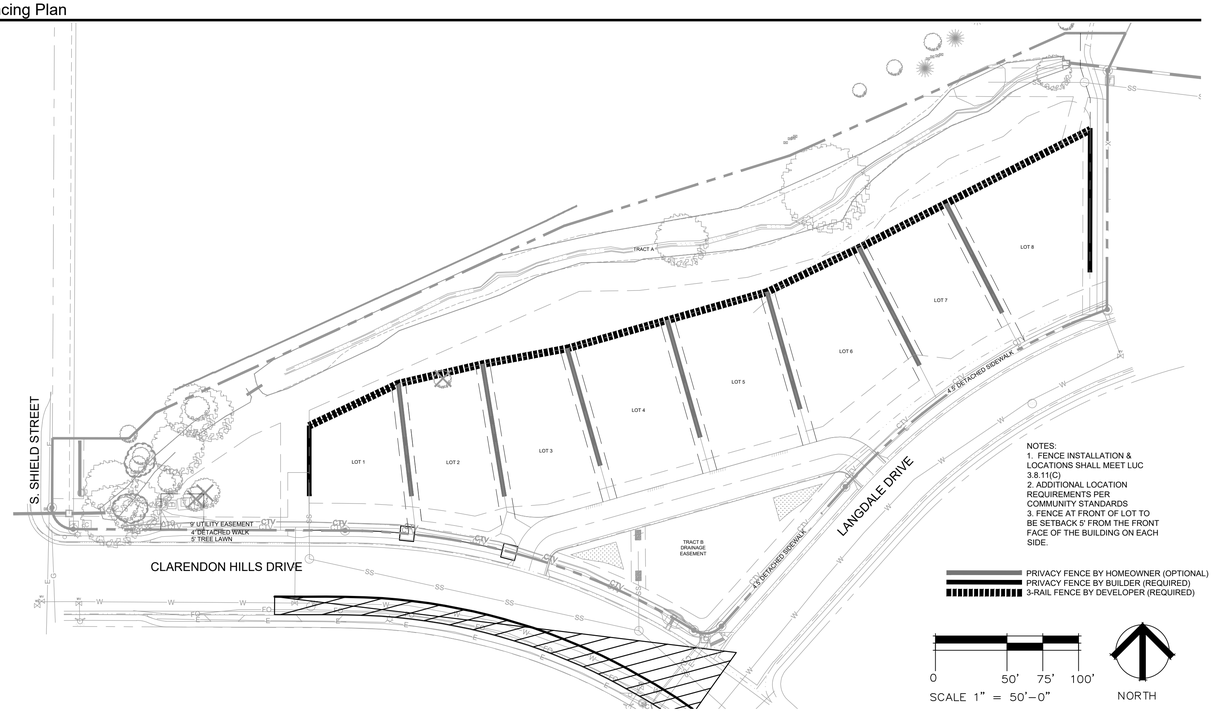
SHEET TITLE

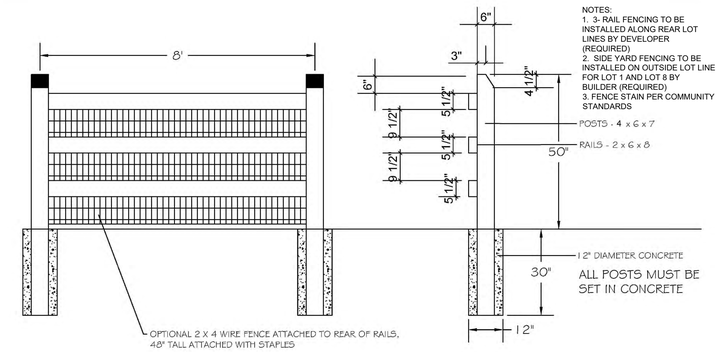
Site Plan

SHEET INFORMATION

SHEET 1

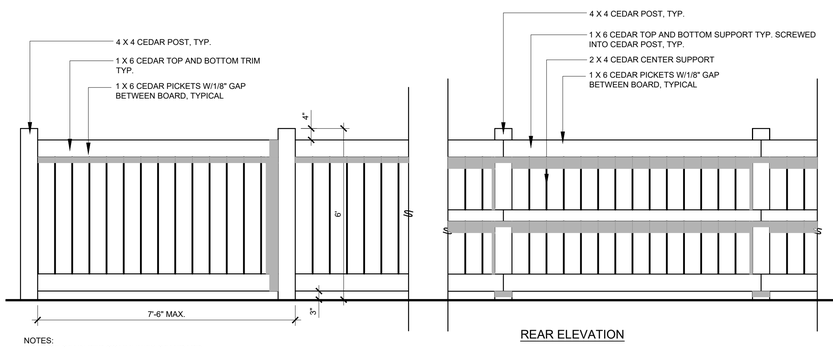
Fencing Plan

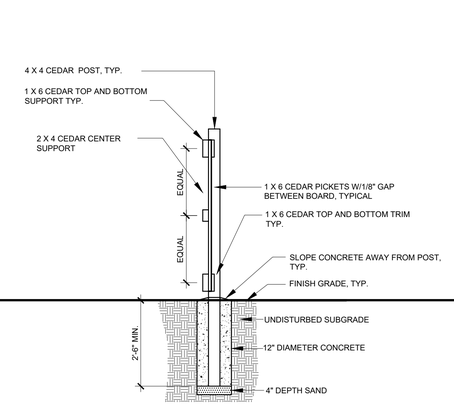




3-Rail Fencing

NOT TO SCALE

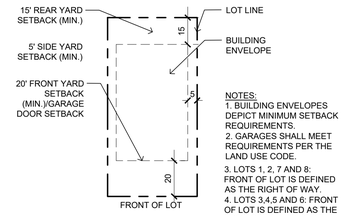




Privacy Fencing

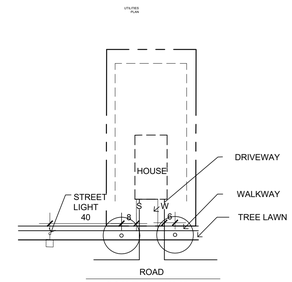
NOT TO SCALE

Typical Lot Setbacks: Single Family Detached



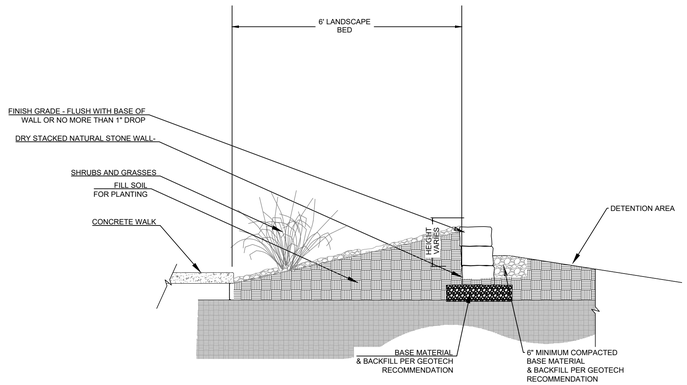
SCALE 1" = 40'-0"

Typical Utility Layout



SCALE 1" = 40'-0"

Retaining Wall Detail



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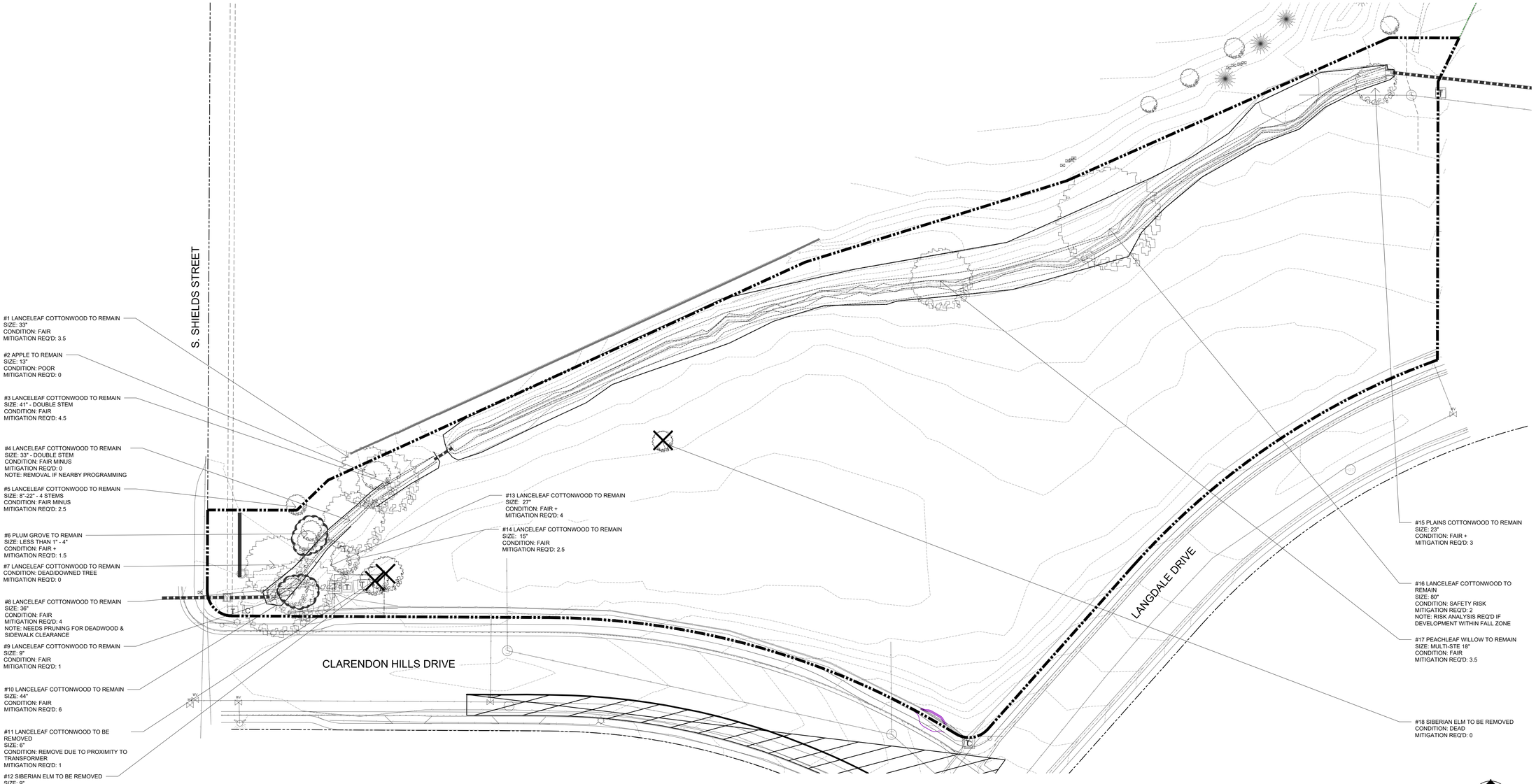
APRIL 10, 2019

SHEET TITLE

Site Details

SHEET INFORMATION

SHEET 2



Existing Tree Schedule

	COMMON NAME	SIZE	CONDITION	TO BE REMOVED	MITIGATION REQUIRED	REASON FOR REMOVAL
1.	LANCELEAF COTTONWOOD	33"	FAIR	NO	NO - 3.5	N/A
2.	APPLE	13"	POOR	NO	NO - 0	N/A
3.	LANCELEAF COTTONWOOD	41" - DOUBLE STEM	FAIR	NO	NO - 4.5	N/A
4.	LANCELEAF COTTONWOOD	33" - DOUBLE STEM	FAIR MINUS	NO	NO - 0	REMOVAL IF NEARBY PROGRAMMING
5.	LANCELEAF COTTONWOOD	8"-22" - 4 STEMS	FAIR MINUS	NO	NO - 2.5	N/A
6.	PLUM GROVE	LESS THAN 1"-4"	FAIR PLUS	NO	NO - 1.5	N/A
7.	LANCELEAF COTTONWOOD	DEAD/DOWNED	DEAD/DOWNED TREE	NO	NO - 0	N/A
8.	LANCELEAF COTTONWOOD	36"	FAIR	NO	NO - 4	N/A
9.	LANCELEAF COTTONWOOD	9"	FAIR	NO	NO - 1	N/A
10.	LANCELEAF COTTONWOOD	44"	FAIR	NO	NO - 6	N/A
11.	LANCELEAF COTTONWOOD	6"	FAIR	YES	YES - 1	DUE TO PROXIMITY TO TRANSFORMER
12.	SIBERIAN ELM	9"	DEAD	YES	YES - 0	DEAD
13.	LANCELEAF COTTONWOOD	27"	FAIR PLUS	NO	NO - 4	N/A
14.	LANCELEAF COTTONWOOD	15"	FAIR	NO	NO - 2.5	N/A
15.	PLAINS COTTONWOOD	23"	FAIR PLUS	NO	NO - 3	N/A
16.	LANCELEAF COTTONWOOD	80"	SAFETY RISK	NO	NO - 2	RISK ANALYSIS REQ'D IF DEVELOPMENT WITHIN FALL ZONE
17.	PEACHLEAF WILLOW	MULTI-STEM 18"	FAIR	NO	NO - 3.5	N/A
18.	SIBERIAN ELM	DEAD	DEAD	YES	YES - 0	DEAD

TOTAL MITIGATION 1 TREE
6 SHRUBS

0 30' 45' 60'
SCALE 1" = 30'-0"

NORTH
NOT TO SCALE

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APRIL 10, 2019

SHEET TITLE

Existing Tree Inventory & Mitigation Plan

SHEET INFORMATION

SHEET 3

Plant List

DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME
	3	Catalpa speciosa Western Catalpa
	3	Celtis occidentalis Common Hackberry
	2	Gymnocladus dioica `Espresso` Seedless Kentucky Coffeetree
	3	Platanus x acerifolia `Exclamation` Exclamation Planetree
	2	Populus x acuminata Lanceleaf Cottonwood
	3	Quercus robur English Oak

DECIDUOUS SHRUBS	QTY	BOTANICAL / COMMON NAME
	8	Amelanchier alnifolia Saskatoon Serviceberry
	7	Arctostaphylos x `Panchito` Panchito Manzanita
	8	Physocarpus monogynus Mountain Ninebark
	8	Physocarpus opulifolius `Little Devil` TM Little Devil Ninebark
	4	Rhus aromatica `Gro-Low` Gro-Low Fragrant Sumac
	5	Ribes aureum Golden Currant
	18	Spiraea japonica `Anthony Waterer` Anthony Waterer Spirea

EVERGREEN SHRUBS	QTY	BOTANICAL / COMMON NAME
	11	Picea pungens `St. Mary`s Broom` St. Mary`s Broom Colorado Spruce

PERENNIALS	QTY	BOTANICAL / COMMON NAME
	33	Achillea millefolium `Apricot Delight` Tutti Frutti Apricot Delight Common Yarrow
	34	Asclepias tuberosa Butterfly Milkweed
	32	Monarda fistulosa fistulosa menthifolia Mintleaf Bergamot
	28	Oenothera biennis Biennual Evening Primrose
	34	Papaver orientale `Brilliant` Brilliant Oriental Poppy

GROUND COVERS	QTY	BOTANICAL / COMMON NAME
	30	Anaphalis margaritacea Pearly Everlasting
	69	Coreopsis tinctoria Plains Coreopsis
	67	Penstemon angustifolius Narrowleaf Penstemon
	72	Penstemon pinifolius Threadleaf Beardtongue

GRASSES	QTY	BOTANICAL / COMMON NAME
	32	Bouteloua gracilis `Blonde Ambition` Blonde Ambition Blue Grama
	45	Chasmanthium latifolium Northern Sea Oats Grass
	40	Schizachyrium scoparium `Standing Ovation` Standing Ovation Little Bluestem Grass

A PERMIT MUST BE OBTAINED FROM THE CITY FORESTER BEFORE ANY TREES OR SHRUBS AS NOTED ON THIS PLAN ARE PLANTED, PRUNED OR REMOVED IN THE PUBLIC RIGHT-OF-WAY. THIS INCLUDES ZONES BETWEEN THE SIDEWALK AND CURB, MEDIANS, AND OTHER CITY PROPERTY. THIS PERMIT SHALL APPROVE THE LOCATION AND SPECIES TO BE PLANTED. FAILURE TO OBTAIN THIS PERMIT IS A VIOLATION OF THE C ITY OF FORT COLLINS CODE SUBJECT TO CITATION (SECTION 27-31) AND MAY ALSO RESULT IN REPLAC ING OR RELOCATING TREES AND A HOLD ON CERTIFICATE OF OCCUPANCY.

Landscape Legend

	TURF	3,071 sf
	NATIVE SEED MIX SEE LANDSCAPE NOTES FOR APPROVED MIX	62,782 sf
	DRY CREEK BED EQUAL MIX OF 3/4", 1-1/2" AND 3"-6" COBBLE ROCK *ALL PERENNIALS & ORNAMENTAL GRASSES SHALL HAVE A 18" MULCH RING AROUND BASE OF PLANT	7,918 sf
	PROPOSED NATURAL HABITAT BUFFER BOUNDARY	
	ALTA BOUNDARY	
	STEEL EDGER, ROUNDED TOP	
	EXISTING TREES	
	TREE TO BE REMOVED	
	LANDSCAPE BOULDERS SIZE VARIES/SELECTION BY DEVELOPER	

Hydrozone Table

ZONE	AREA		WATER USE	GALLONS
HIGH	3,071	SF	18 GAL/SF	55,278 GAL
MODERATE	3,959	SF	10 GAL/SF	39,590 GAL
LOW	3,959	SF	3 GAL/SF	11,877 GAL
VERY LOW	64,228	SF	0 GAL/SF	0 GAL
TOTAL / AVERAGE	75,217	SF	106,745 GAL	1.42 GAL/SF

0 30' 45' 60'

SCALE 1" = 30'-0"

NORTH

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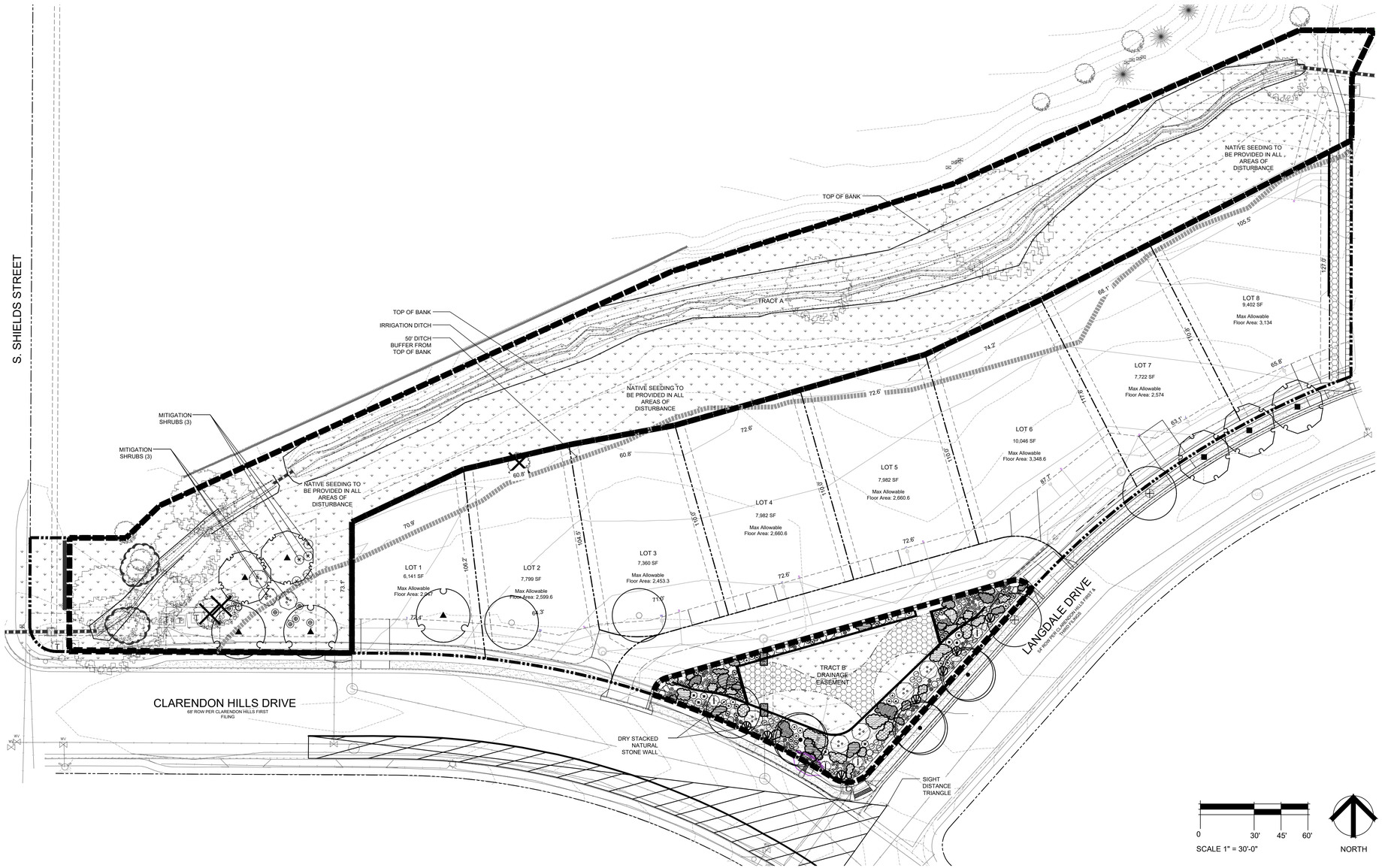
APRIL 10, 2019

SHEET TITLE

Landscape Plan

SHEET INFORMATION

SHEET 4



Plant List

DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME
	3	Catalpa speciosa Western Catalpa
	3	Celtis occidentalis Common Hackberry
	2	Gymnocladus dioica `Espresso` Seedless Kentucky Coffeetree
	3	Platanus x acerifolia `Exclamation` Exclamation Planetree
	2	Populus x acuminata Lanceleaf Cottonwood
	3	Quercus robur English Oak

DECIDUOUS SHRUBS	QTY	BOTANICAL / COMMON NAME
	8	Amelanchier alnifolia Saskatoon Serviceberry
	7	Arctostaphylos x `Panchito` Panchito Manzanita
	8	Physocarpus monogynus Mountain Ninebark
	8	Physocarpus opulifolius `Little Devil` TM Little Devil Ninebark
	4	Rhus aromatica `Gro-Low` Gro-Low Fragrant Sumac
	5	Ribes aureum Golden Currant
	18	Spiraea japonica `Anthony Waterer` Anthony Waterer Spirea

EVERGREEN SHRUBS	QTY	BOTANICAL / COMMON NAME
	11	Picea pungens `St. Mary`s Broom` St. Mary`s Broom Colorado Spruce

PERENNIALS	QTY	BOTANICAL / COMMON NAME
	33	Achillea millefolium `Apricot Delight` Tutti Frutti Apricot Delight Common Yarrow
	34	Asclepias tuberosa Butterfly Milkweed
	32	Monarda fistulosa fistulosa menthifolia Mintleaf Bergamot
	28	Oenothera biennis Biennual Evening Primrose
	34	Papaver orientale `Brilliant` Brilliant Oriental Poppy

GROUND COVERS	QTY	BOTANICAL / COMMON NAME
	30	Anaphalis margaritacea Pearly Everlasting
	69	Coreopsis tinctoria Plains Coreopsis
	67	Penstemon angustifolius Narrowleaf Penstemon
	72	Penstemon pinifolius Threadleaf Beardtongue

GRASSES	QTY	BOTANICAL / COMMON NAME
	32	Bouteloua gracilis `Blonde Ambition` Blonde Ambition Blue Grama
	45	Chasmanthium latifolium Northern Sea Oats Grass
	40	Schizachyrium scoparium `Standing Ovation` Standing Ovation Little Bluestem Grass

Natural Habitat Buffer Zone Statistics

WETLAND	15,077 SF	0.35 AC
IRRIGATION DITCH (EXCLUDING WETLANDS) 50' OFFSET =	49,363 SF	1.13 AC
TOTAL NHBZ	**64,440 SF**	**1.48 AC**

THE 50' OFFSET IS THE AREA THAT WOULD TYPICALLY BE THE REQUIRED BUFFER FROM THE TOP OF BANK.

	TBD SF	TBD AC
PROPOSED HABITAT BUFFER =	**68,788 SF**	**1.57 AC**

MINIMUM WIDTH OF BUFFER FROM WETLANDS = APPROXIMATELY 6'
MAXIMUM WIDTH OF BUFFER FROM WETLANDS = APPROXIMATELY 57'
AVERAGE WIDTH OF BUFFER FROM WETLANDS = APPROXIMATELY 26'

THE HABITAT BUFFER IS INTENDED TO REPLACE THE AREA DEFINED BY THE 50' OFFSET. THE PROPOSED BUFFER AREA WILL BE EVALUATED BASED ON PERFORMANCE STANDARDS.

NOTES:
1. PROPOSED WETLANDS BUFFER EXCLUDES ALL AREAS OF ENCROACHMENT INCLUDING BUILDINGS, TRASH ENCLOSURES AND PARKING LOTS .
2. PLEASE SEE SECTION 3.4.1 OF THE LAND USE CODE FOR ALLOWABLE USES WITHIN THE NATURAL HABITAT BUFFER ZONE.
3. THE WETLANDS ARE LOCATED WITHIN THE IRRIGATION DITCH AND HAVE BEEN EXCLUDED FROM THE 50' OFFSET CALCULATION SO AS NOT TO DUPLICATE QUANTITIES.

Natural Habitat Buffer Zone Weed Control Plan

THIS GUIDANCE DOCUMENT PRESENTS THE BASIS FOR DEVELOPMENT OF THE WEED CONTROL PLAN FOR THE HOMESTEAD AT CLARENDON NATURAL HABITAT BUFFER ZONE (PROJECT AREA), IF WEEDS ARE DEEMED TO BE DETRIMENTAL TO PLANT ESTABLISHMENT SUCCESS OR ERADICATION IS REQUIRED AS PER LOCAL OR STATE REGULATIONS. AS GENERAL GUIDANCE, IT IS RECOMMENDED THAT NO MORE THAN 10 PERCENT OF TOTAL PLANT COVER BE COMPRISED OF WEEDS ("WEED" DEFINITION IN LAST PARAGRAPH) IN THE PROJECT AREA AT THE END OF EACH GROWING SEASON. THE PROJECT AREA WILL BE EVALUATED TWICE PER YEAR FOR WEED ESTABLISHMENT, ONCE IN MID-GROWING SEASON AND ONCE AT THE END OF EACH GROWING SEASON FOR A PERIOD OF THREE YEARS FOLLOWING CONSTRUCTION AND PLANTING. THE COMPLETED PLAN WILL BE SUBMITTED TO THE CITY OF FORT COLLINS ENVIRONMENTAL PLANNER, AS REQUIRED FOR REVIEW AND APPROVAL.

A LICENSED COMMERCIAL PESTICIDE APPLICATOR (LCPA) WILL PREPARE THE WEED CONTROL PLAN. ALL SUBSEQUENT WEED CONTROL ACTIVITIES WILL ALSO BE CONDUCTED BY AN LCPA. THE PLAN WILL BE IN THE FORM OF AN INTEGRATED PEST MANAGEMENT PLAN (IPM) THAT WILL CONSIDER ALL METHODS OF CONTROL THAT COULD BE APPLICABLE TO THE PROJECT AREA. THESE METHODS INCLUDE MECHANICAL, CHEMICAL, CULTURAL, AND BIOLOGICAL TECHNIQUES. PRIOR TO PLAN PREPARATION, A VISIT TO THE PROJECT AREA WILL BE CONDUCTED AT THE END OF THE FIRST GROWING SEASON BY THE LCPA ACCOMPANIED BY REPRESENTATIVES OF THE CITY OF FORT COLLINS AND THE HOMESTEAD AT CLARENDON DEVELOPMENT TEAM, AS APPROPRIATE. THE OBJECTIVE OF THIS SITE VISIT WILL BE TO ASSESS SITE CONDITIONS, ROUTES OF ACCESS, WEEDY SPECIES PRESENT, THE PROXIMITY OF WETLANDS TO THE PROPOSED TREATMENT AREAS, POTENTIAL SOURCES OF RUN-ON AND RUN-OFF, AND ANY OTHER FACTORS RELEVANT TO THE WEED CONTROL PLANNING PROCESS. SITE VISITS WILL CONTINUE UNTIL THE CITY OF FORT COLLINS ENVIRONMENTAL PLANNER APPROVES HABITAT CONDITIONS WITHIN THE NATURAL HABITAT BUFFER ZONE.

PLANT SPECIES TO BE CONSIDERED AS WEEDS AND CONTROLLED AND/OR ERADICATED AT THIS PROJECT SITE, AS PER CITY CODE, ARE THOSE LISTED BY THE LARIMER COUNTY WEED CONTROL DISTRICT AND THOSE LISTED AS NOXIOUS BY THE COLORADO WEED LAW. CURRENTLY MUCH OF THE SURFACE OF THE DEVELOPMENT SITE IS DOMINATED BY REMNANT CONCRETE BUILDING FOUNDATIONS AND HARD-PACKED SOIL MIXED WITH SAND AND GRAVEL THAT SUPPORT NO VEGETATION COVER, WEEDY OR NON-WEEDY. HOWEVER, MORE NATURAL (LESS HARD-PACKED) SOIL CONDITIONS AROUND THE REMNANT HOUSE/BASEMENT FOUNDATION SUPPORT STANDS OF WEEDY SPECIES INCLUDING: KOCHIA (BASSSIA SCOPARIA), PRICKLY LETTUCE (LACTUCA SERRIOLA), CANADA THISTLE (CIRSIUM ARVENSE), CHEATGRASS (BROUMUS TECTORUM), CURLY DOCK (RUMEX CRISPUS), FLIXWEED (DESCURAINIA SOPHIA), YELLOW SWEETCLOVER (MELILOTUS OFFICINALIS), AND COMMON DANDELION (TARAXACUM OFFICINALE). OF THESE CANADA THISTLE IS THE PRIMARY NOXIOUS WEED THAT MAY NEED CONTROL, ALTHOUGH OTHER TARGET WEED SPECIES MAY BE IDENTIFIED FOR CONTROL AT THE END OF THE FIRST GROWING SEASON.

Natural Habitat Buffer Zone Notes

1. THE NATURAL HABITAT BUFFER ZONE IS INTENDED TO BE MAINTAINED IN A NATIVE LANDSCAPE. PLEASE SEE SECTION 3.4.1 OF THE LAND USE CODE FOR ALLOWABLE USES WITHIN THE NATURAL HABITAT BUFFER ZONE.

NO TREES SHALL BE REMOVED DURING THE SONGBIRD NESTING SEASON (FEBRUARY 1 TO JULY 31) WITHOUT FIRST HAVING A PROFESSIONAL ECOLOGIST OR WILDLIFE BIOLOGIST COMPLETE A NESTING SURVEY TO IDENTIFY ANY ACTIVE NESTS EXISTING ON THE PROJECT SITE. THE SURVEY SHALL BE SENT TO THE CITY ENVIRONMENTAL PLANNER. IF ACTIVE NESTS ARE FOUND, THE CITY WILL COORDINATE WITH RELEVANT STATE AND FEDERAL REPRESENTATIVES TO DETERMINE WHETHER ADDITIONAL RESTRICTIONS ON TREE REMOVAL AND CONSTRUCTION APPLY.

2. SEE SECTION 3.4.1 OF THE LAND USE CODE FOR ALLOWABLE USES WITHIN THE BUFFER ZONE.

3. CONSTRUCTION SHALL BE ORGANIZED AND TIMED TO MINIMIZE THE DISTURBANCE OF SENSITIVE SPECIES OCCUPYING OR USING ON-SITE AND ADJACENT NATURAL HABITATS OR FEATURES.

Landscape Legend

	TURF	3,071 sf
	NATIVE SEED MIX SEE LANDSCAPE NOTES FOR APPROVED MIX	62,782 sf
	DRY CREEK BED EQUAL MIX OF 3/4", 1-1/2" AND 3"-6" COBBLE ROCK *ALL PERENNIALS & ORNAMENTAL GRASSES SHALL HAVE A 18" MULCH RING AROUND BASE OF PLANT	7,918 sf
	PROPOSED NATURAL HABITAT BUFFER BOUNDARY	
	ALTA BOUNDARY	
	STEEL EDGER, ROUNDED TOP	
	EXISTING TREES	
	TREE TO BE REMOVED	
	LANDSCAPE BOULDERS SIZE VARIES/SELECTION BY DEVELOPER	

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SEAL

PROJECT TITLE

HOMESTEAD AT CLARENDON HILLS

Project Development Plan

Ft Collins, Colorado

PREPARED FOR

MOSAIC LAND DEVELOPMENT SERVICES, LLC

1021 NIGHTINGALE DRIVE
FORT COLLINS, CO. 80525

CONTACT: KEN MITCHELL

NOT FOR CONSTRUCTION FOR REVIEW ONLY

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
Know what's below.
Call before you dig.
CALL 3 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

REVISIONS	DATE
Staff Comments	2.7.2020
Staff Comments	8.5.2020
Staff Comments	9.30.2020
Staff Comments	10.30.2020

DATE

APRIL 10, 2019

SHEET TITLE

Natural Habitat Buffer Plan & Notes

SHEET INFORMATION

SHEET 5

General Landscape Notes

1. PLANT QUALITY: ALL PLANT MATERIAL SHALL BE A-GRADE OR NO. 1 GRADE - FREE OF ANY DEFECTS, OF NORMAL HEALTH, HEIGHT, LEAF DENSITY AND SPREAD APPROPRIATE TO THE SPECIES AS DEFINED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN) STANDARDS. ALL TREES SHALL BE BALL AND BURLAP OR EQUIVALENT.
2. IRRIGATION: ALL LANDSCAPE AREAS WITHIN THE SITE INCLUDING TURF, SHRUB BEDS AND TREE AREAS SHALL BE IRRIGATED WITH AN AUTOMATIC IRRIGATION SYSTEM. THE IRRIGATION PLAN MUST BE REVIEWED AND APPROVED BY THE CITY OF FORT COLLINS WATER UTILITIES DEPARTMENT PRIOR TO THE ISSUANCE OF A BUILDING PERMIT. ALL TURF AREAS SHALL BE IRRIGATED WITH AN AUTOMATIC POP-UP IRRIGATION SYSTEM. ALL SHRUB BEDS AND TREES, INCLUDING IN NATIVE SEED AREAS, SHALL BE IRRIGATED WITH AN AUTOMATIC DRIP (TRICKLE) IRRIGATION SYSTEM, OR WITH AN ACCEPTABLE ALTERNATIVE APPROVED BY THE CITY WITH THE IRRIGATION PLANS. THE IRRIGATION SYSTEM SHALL BE ADJUSTED TO MEET THE WATER REQUIREMENTS OF THE INDIVIDUAL PLANT MATERIAL.
3. TOPSOIL: TO THE MAXIMUM EXTENT FEASIBLE, TOPSOIL THAT IS REMOVED DURING CONSTRUCTION ACTIVITY SHALL BE CONSERVED FOR LATER USE ON AREAS REQUIRING REVEGETATION AND LANDSCAPING.
4. SOIL AMENDMENTS: SOIL AMENDMENTS SHALL BE PROVIDED AND DOCUMENTED IN ACCORDANCE WITH CITY CODE SECTION 12-132. THE SOIL IN ALL LANDSCAPE AREAS, INCLUDING PARKWAYS AND MEDIANS, SHALL BE THOROUGHLY LOOSENED TO A DEPTH OF NOT LESS THAN EIGHT(8) INCHES AND SOIL AMENDMENT SHALL BE THOROUGHLY INCORPORATED INTO THE SOIL OF ALL LANDSCAPE AREAS TO A DEPTH OF AT LEAST SIX(6) INCHES BY TILLING, DISCING OR OTHER SUITABLE METHOD, AT A RATE OF AT LEAST THREE (3) CUBIC YARDS OF SOIL AMENDMENT PER ONE THOUSAND (1,000) SQUARE FEET OF LANDSCAPE AREA. PRIOR TO THE ISSUANCE OF ANY CERTIFICATE OF OCCUPANCY, A WRITTEN CERTIFICATION MUST BE SUBMITTED TO THE CITY THAT ALL PLANTED AREAS, OR AREAS TO BE PLANTED, HAVE BEEN THOROUGHLY LOOSENED AND THE SOIL AMENDED, CONSISTENT WITH THE REQUIREMENTS SET FORTH IN SECTION 12-132.
5. INSTALLATION AND GUARANTEE: ALL LANDSCAPING SHALL BE INSTALLED ACCORDING TO SOUND HORTICULTURAL PRACTICES IN A MANNER DESIGNED TO ENCOURAGE QUICK ESTABLISHMENT AND HEALTHY GROWTH. ALL LANDSCAPING FOR EACH PHASE MUST BE EITHER INSTALLED OR THE INSTALLATION MUST BE SECURED WITH AN IRREVOCABLE LETTER OF CREDIT, PERFORMANCE BOND, OR ESCROW ACCOUNT FOR 125% OF THE VALUATION OF THE MATERIALS AND LABOR PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY FOR ANY BUILDING IN SUCH PHASE.
6. MAINTENANCE: TREES AND VEGETATION, IRRIGATION SYSTEMS, FENCES, WALLS AND OTHER LANDSCAPE ELEMENTS WITH THESE FINAL PLANS SHALL BE CONSIDERED AS ELEMENTS OF THE PROJECT IN THE SAME MANNER AS PARKING, BUILDING MATERIALS AND OTHER SITE DETAILS. THE APPLICANT, LANDOWNER OR SUCCESSORS IN INTEREST SHALL BE JOINTLY AND SEVERALLY RESPONSIBLE FOR THE REGULAR MAINTENANCE OF ALL LANDSCAPING ELEMENTS IN GOOD CONDITION. ALL LANDSCAPING SHALL BE MAINTAINED FREE FROM DISEASE, PESTS, WEEDS AND LITTER, AND ALL LANDSCAPE STRUCTURES SUCH AS FENCES AND WALLS SHALL BE REPAIRED AND REPLACED PERIODICALLY TO MAINTAIN A STRUCTURALLY SOUND CONDITION.
7. REPLACEMENT: ANY LANDSCAPE ELEMENT THAT DIES, OR IS OTHERWISE REMOVED, SHALL BE PROMPTLY REPLACED IN ACCORDANCE WITH THE REQUIREMENTS OF THESE PLANS.
8. THE FOLLOWING SEPARATIONS SHALL BE PROVIDED BETWEEN TREES/SHRUBS AND UTILITIES:

   40 FEET BETWEEN CANOPY TREES AND STREET LIGHTS
   15 FEET BETWEEN ORNAMENTAL TREES AND STREETLIGHTS
   10 FEET BETWEEN TREES AND PUBLIC WATER, SANITARY AND STORM SEWER MAIN LINES
   6 FEET BETWEEN TREES AND PUBLIC WATER, SANITARY AND STORM SEWER SERVICE LINES.
   4 FEET BETWEEN SHRUBS AND PUBLIC WATER AND SANITARY AND STORM SEWER LINES
   4 FEET BETWEEN TREES AND GAS LINES

9. ALL STREET TREES SHALL BE PLACED A MINIMUM EIGHT (8) FEET AWAY FROM THE EDGES OF DRIVEWAYS AND ALLEYS PER LUC 3.2.1(D)(2)(a).
10. PLACEMENT OF ALL LANDSCAPING SHALL BE IN ACCORDANCE WITH THE SIGHT DISTANCE CRITERIA AS SPECIFIED BY THE CITY OF FORT COLLINS. NO STRUCTURES OR LANDSCAPE ELEMENTS GREATER THAN 24" SHALL BE ALLOWED WITHIN THE SIGHT DISTANCE TRIANGLE OR EASEMENTS WITH THE EXCEPTION OF DECIDUOUS TREES PROVIDED THAT THE LOWEST BRANCH IS AT LEAST 6' FROM GRADE. ANY FENCES WITHIN THE SIGHT DISTANCE TRIANGLE OR EASEMENT MUST BE NOT MORE THAN 42" IN HEIGHT AND OF AN OPEN DESIGN.
11. THE FINAL LANDSCAPE PLAN SHALL BE COORDINATED WITH ALL OTHER FINAL PLAN ELEMENTS SO THAT THE PROPOSED GRADING, STORM DRAINAGE, AND OTHER DEVELOPMENT IMPROVEMENTS DO NOT CONFLICT WITH NOR PRECLUDE INSTALLATION AND MAINTENANCE OF LANDSCAPE ELEMENTS ON THIS PLAN.
12. MINOR CHANGES IN SPECIES AND PLANT LOCATIONS MAY BE MADE DURING CONSTRUCTION -- AS REQUIRED BY SITE CONDITIONS OR PLANT AVAILABILITY. OVERALL QUANTITY, QUALITY, AND DESIGN CONCEPT MUST BE CONSISTENT WITH THE APPROVED PLANS. IN THE EVENT OF CONFLICT WITH THE QUANTITIES INCLUDED IN THE PLANT LIST, SPECIES AND QUANTITIES ILLUSTRATED SHALL BE PROVIDED. ALL CHANGES OF PLANT SPECIES AND LOCATION MUST HAVE WRITTEN APPROVAL BY THE CITY PRIOR TO INSTALLATION.
13. ALL PLANTING BEDS SHALL BE MULCHED TO A MINIMUM DEPTH OF THREE INCHES.
14. THE COMMON AREAS (TRACT A) AT THE HOMESTEAD AT CLARENDON HILLS WILL BE MAINTAINED BY THE HOMESTEAD AT CLARENDON HILLS HOA. THIS AREA WILL FUNCTION AS A NATIVE AREA.
15. DEVELOPER SHALL BE RESPONSIBLE FOR PLANTING ALL STREET TREES. THE HOMESTEAD AT CLARENDON HILLS HOA SHALL BE RESPONSIBLE FOR MAINTAINING ALL STREET TREES.
16. NATIVE SEEDING TO BE PROVIDED IN ALL AREAS OF DISTURBANCE.
17. IN LIEU OF STREET TREES ALONG CLARENDON HILLS DR., THE DEVELOPER IS REQUIRED TO PLANT ONE TREE PER LOT ON LOTS 1-3. THESE TREES SHALL BE LOCATED AS CLOSE TO THE BACK SIDE OF THE UTILITY EASEMENT AS POSSIBLE.
18. TREES LOCATED ON LOTS 1-3 WILL REQUIRE CITY OF FORT COLLINS STREET TREE PERMITS PRIOR TO INSTALLATION.

Tree Protection Notes

1. ALL EXISTING TREES WITHIN THE LIMITS OF THE DEVELOPMENT AND WITHIN ANY NATURAL AREA BUFFER ZONES SHALL REMAIN AND BE PROTECTED UNLESS NOTED ON THESE PLANS FOR REMOVAL.
2. WITHIN THE DRIP LINE OF ANY PROTECTED EXISTING TREE, THERE SHALL BE NO CUT OR FILL OVER A FOUR-INCH DEPTH UNLESS A QUALIFIED ARBORIST OR FORESTER HAS EVALUATED AND APPROVED THE DISTURBANCE.
3. ALL PROTECTED EXISTING TREES SHALL BE PRUNED TO THE CITY OF FORT COLLINS FORESTRY STANDARDS. TREE PRUNING AND REMOVAL SHALL BE PERFORMED BY A BUSINESS THAT HOLDS A CURRENT CITY OF FORT COLLINS ARBORIST LICENSE WHERE REQUIRED BY CODE.
4. PRIOR TO AND DURING CONSTRUCTION, BARRIERS SHALL BE ERECTED AROUND ALL PROTECTED EXISTING TREES WITH SUCH BARRIERS TO BE OF ORANGE FENCING A MINIMUM OF FOUR (4) FEET IN HEIGHT, SECURED WITH METAL T-POSTS, NO CLOSER THAN SIX (6) FEET FROM THE TRUNK OR ONE-HALF (½) OF THE DRIP LINE, WHICHEVER IS GREATER. THERE SHALL BE NO STORAGE OR MOVEMENT OF EQUIPMENT, MATERIAL, DEBRIS OR FILL WITHIN THE FENCED TREE PROTECTION ZONE.
5. DURING THE CONSTRUCTION STAGE OF DEVELOPMENT, THE APPLICANT SHALL PREVENT THE CLEANING OF EQUIPMENT OR MATERIAL OR THE STORAGE AND DISPOSAL OF WASTE MATERIAL SUCH AS PAINTS, OILS, SOLVENTS, ASPHALT, CONCRETE, MOTOR OIL OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF A TREE WITHIN THE DRIP LINE OF ANY PROTECTED TREE OR GROUP OF TREES.
6. NO DAMAGING ATTACHMENT, WIRES, SIGNS OR PERMITS MAY BE FASTENED TO ANY PROTECTED TREE.
7. LARGE PROPERTY AREAS CONTAINING PROTECTED TREES AND SEPARATED FROM CONSTRUCTION OR LAND CLEARING AREAS, ROAD RIGHTS-OF-WAY AND UTILITY EASEMENTS MAY BE "RIBBONED OFF," RATHER THAN ERECTING PROTECTIVE FENCING AROUND EACH TREE AS REQUIRED IN SUBSECTION (G)(3) ABOVE. THIS MAY BE ACCOMPLISHED BY PLACING METAL T-POST STAKES A MAXIMUM OF FIFTY (50) FEET APART AND TYING RIBBON OR ROPE FROM STAKE-TO-STAKE ALONG THE OUTSIDE PERIMETERS OF SUCH AREAS BEING CLEARED.
8. THE INSTALLATION OF UTILITIES, IRRIGATION LINES OR ANY UNDERGROUND FIXTURE REQUIRING EXCAVATION DEEPER THAN SIX (6) INCHES SHALL BE ACCOMPLISHED BY BORING UNDER THE ROOT SYSTEM OF PROTECTED EXISTING TREES AT A MINIMUM DEPTH OF TWENTY-FOUR (24) INCHES. THE AUGER DISTANCE IS ESTABLISHED FROM THE FACE OF THE TREE (OUTER BARK) AND IS SCALED FROM TREE DIAMETER AT BREAST HEIGHT AS DESCRIBED IN THE CHART BELOW:

TREE DIAMETER AT BREAST HEIGHT (INCHES)	AUGER DISTANCE FROM FACE OF TREE (FEET)
0-2	1
3-4	2
5-9	5
10-14	10
15-19	12
OVER 19	15

9. NO TREES SHALL BE REMOVED DURING THE SONGBIRD NESTING SEASON (FEBRUARY 1 TO JULY 31) WITHOUT FIRST HAVING A PROFESSIONAL ECOLOGIST OR WILDLIFE BIOLOGIST COMPLETE A NESTING SURVEY TO IDENTIFY ANY ACTIVE NESTS EXISTING ON THE PROJECT SITE. THE SURVEY SHALL BE SENT TO THE CITY ENVIRONMENTAL PLANNER. IF ACTIVE NESTS ARE FOUND, THE CITY WILL COORDINATE WITH RELEVANT STATE AND FEDERAL REPRESENTATIVES TO DETERMINE WHETHER ADDITIONAL RESTRICTIONS ON TREE REMOVAL AND CONSTRUCTION APPLY."

Street Tree Notes

1. A PERMIT MUST BE OBTAINED FROM THE CITY FORESTER BEFORE ANY TREES OR SHRUBS AS NOTED ON THIS PLAN ARE PLANTED, PRUNED OR REMOVED IN THE PUBLIC RIGHT-OF-WAY. THIS INCLUDES ZONES BETWEEN THE SIDEWALK AND CURB, MEDIANS AND OTHER CITY PROPERTY. THIS PERMIT SHALL APPROVE THE LOCATION AND SPECIES TO BE PLANTED. FAILURE TO OBTAIN THIS PERMIT IS A VIOLATION OF THE CITY OF FORT COLLINS CODE SUBJECT TO CITATION (SECTION 27-31) AND MAY ALSO RESULT IN REPLACING OR RELOCATING TREES AND A HOLD ON CERTIFICATE OF OCCUPANCY.
2. CONTACT THE CITY FORESTER TO INSPECT ALL STREET TREE PLANTINGS AT THE COMPLETION OF EACH PHASE OF THE DEVELOPMENT. ALL MUST BE INSTALLED AS SHOWN ON THE LANDSCAPE PLAN. APPROVAL OF STREET TREE PLANTING IS REQUIRED BEFORE FINAL APPROVAL OF EACH PHASE.
3. STREET LANDSCAPING, INCLUDING STREET TREES, SHALL BE SELECTED IN ACCORDANCE WITH ALL CITY CODES AND POLICIES. ALL TREE PRUNING AND REMOVAL WORKS SHALL BE PERFORMED BY A CITY OF FORT COLLINS LICENSED ARBORS WHERE REQUIRED BY CODE.STREET TREES SHALL BE SUPPLIED AND PLANTED BY THE DEVELOPER USING A QUALIFIED LANDSCAPE CONTRACTOR.
4. THE DEVELOPER SHALL REPLACE DEAD OR DYING STREET TREES AFTER PLANTING UNTIL FINAL MAINTENANCE INSPECTION AND ACCEPTANCE BY THE CITY OF FORT COLLINS FORESTRY DIVISION. ALL STREET TREES IN THE PROJECT MUST BE ESTABLISHED, WITH AN APPROVED SPECIES AND OF ACCEPTABLE CONDITION PRIOR TO ACCEPTANCE.
5. SUBJECT TO APPROVAL BY THE CITY FORESTER – STREET TREE LOCATIONS MAY BE ADJUSTED TO ACCOMMODATE DRIVEWAY LOCATIONS, UTILITY SEPARATIONS BETWEEN TREES, STREET SIGNS AND STREET LIGHTS. STREET TREES TO BE CENTERED IN THE MIDDLE OF THE LOT TO THE EXTENT FEASIBLE. QUANTITIES SHOWN ON PLAN MUST BE INSTALLED UNLESS A REDUCTION IS APPROVED BY THE CITY TO MEET SEPARATION STANDARDS.

Native Grass Seed Mix

NATIVE GRASS - UPLAND CITY OF FORT COLLINS MIX:

1. SEED SHALL BE AS MANUFACTURED BY ARKANSAS VALLEY SEED SOLUTIONS, 4625 COLORADO BOULEVARD, DENVER, CO 80216, (877) 957-3337.
2. SEED SHALL BE A MIXTURE THAT MATCHES THE FOLLOWING:

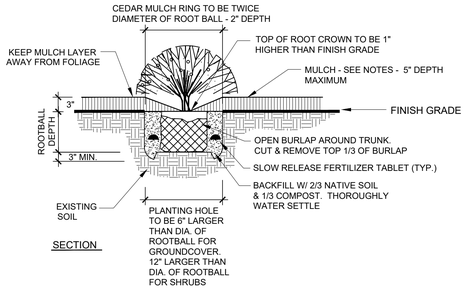
NON-IRRIGATED UPLAND MIX

COMMON NAME	SCIENTIFIC NAME	SEEDING RATE (PLS LBS/ACRE-DRILL RATE)
BEEPLANT	CLEOME SEEULATA	1.08
HAIRY GOLDENASTER	HETEROTHECA VILLOSA	0.36
PURPLE PRAIRIE CLOVER	DALEA PURPUREA	0.41
WALLFLOWER	ERYSIMUM ASPERUM	0.11
ANNUAL SUNFLOWER	HELIANTHUS ANNUUS	2.07
DOTTED GAYFEATHER	LIATRIS PUNCTATA	0.73
BLUE FLAX	LINUM LEWSII	0.41
PRAIRIE ASTER	MACHAERANTHERA TANACETIFLIA	0.25
MEXICAN HAT	RATIBIDA COLUMNIFERA	0.10
AMERICAN VETCH	VICIA AMERICANA	6.10
SIDEOATS GRAMA	BOUTELOUA CURTIPENDULA	0.96
BUFFALOGRASS	BOUTELOUA DACTYLOIDES	3.27
BLUE GRAMA	BOUTELOUA GRACILIS	0.22
PRAIRIE SANDREED	CALAMOVILFA LONGIFOLIA	0.67
PRAIRIE JUNEGRASS	KOELERIA MACRANTHA	0.08
NEEDLE AND THREAD	HESPEROSTIPA COMATA	1.59
SWITCH GRASS	PANICUM VIRGATUM	0.47
WESTERN WHEATGRASS	PASCOPYRUM SMITHII	1.66
SAND DROPSEED	SPOROBOLUS CRYPTANDRUS	0.04
SIX WEEKS FESCUE	VULPIA OCTOFLORA	0.19
	TOTAL LBS/ACRE	**20.77**

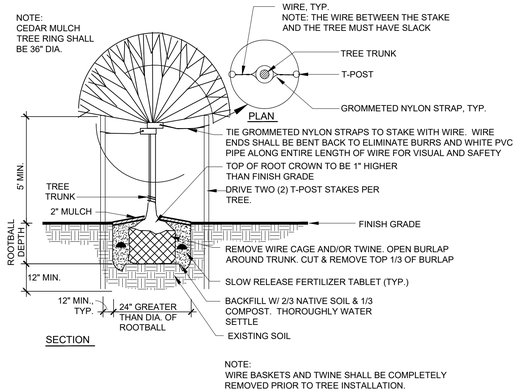
3. NATIVE SEED AREAS: ADEQUATE TEMPORARY IRRIGATION WILL BE PROVIDED FOR THE ESTABLISHMENT AND MAINTENANCE FOR THESE SEEDED AREAS, AND THAT NATIVE GRASSES SHALL BE MAINTAINED IN A CONDITION OF ACCEPTABLE HEIGHT, FREE OF WEEDS, TRASH AND DEBRIS, AND SHALL NOT REPRESENT A FIRE HAZARD NOR BECOME A NUISANCE SITE FOR WATER OR WIND EROSION.
4. PREPARE SOIL AS NECESSARY AND APPROPRIATE FOR NATIVE SEED MIX SPECIES THROUGH AERATION AND ADDITION OF AMENDMENDMENTS IF NECESSARY THEN SEED IN TWO DIRECTIONS TO DISTRIBUTE SEED EVENTLY OVER ENTIRE AREA.
5. IF CHANGES ARE TO BE MADE TO SEED MIX BASED ON SITE CONDITIONS THEN APPROVAL MUST BE PROVIDED BY CITY ENVIRONMENTAL PLANNER.
6. APPROPRIATE NATIVE SEEDING EQUIPMENT WILL BE USED (STANDARD TURF SEEDING EQUIPMENT OR AGRICULTURE EQUIPMENT SHALL NOT BE USED).
7. DRILL SEED APPLICATION RECOMMENDED PER SPECIFIED APPLICATION RATE TO NO MORE THAN ½ INCH DEPTH. FOR BROADCAST SEEDING INSTEAD OF DRILL SEEDING METHOD - DOUBLE SPECIFICIED APPLICATION REFER TO NATIVE SEED MIX TABLE FOR SPECIES, PERCENTAGES AND APPLICATION RATES.
8. TREAT NATIVE SEED MIX AREA PRIOR TO INSTALLATION OF SEED WITH APPROPRIATE HERBICIDE TO PROACTIVELY MITIGATE HERBACEOUS WEED SPECIES GROWTH DURING ESTABLISHMENT PERIOD THEN AFTER APPROPRIATE TIME PERIOD APPLY NATIVE SEED AS CALLED FOR ON APPROVED PLANS.
9. AFTER SEEDING THE AREA SHALL BE COVERED WITH CRIMPED STRAW OR OTHER APPROPRIATE METHODS AND PROVIDED TEMPORARY IRRIGATION UNTIL SEED IS ESTABLISHED.
10. CONTRACTOR SHALL MONITOR SEEDED AREA FOR PROPER IRRIGATION, EROSION CONTROL, GERMINATION AND RESEEDING AS NEEDED TO ESTABLISH COVER.
11. THE APPROVED SEED MIX AREA IS INTENDED TO BE MAINTAINED IN A NATURAL-LIKE LANDSCAPE AESTHETIC. IF AND WHEN MOWING OCCURS IN NATIVE GRASS SEED MIX AREAS DO NOT MOW LOWER THAN 6-8 INCHES IN HEIGHT TO AVOID INHIBITING NATIVE PLANT GROWTH.
12. NATIVE SEED AREA WILL BE CONSIDERED ESTABLISHED WHEN SEVENTY-PERCENT TOTAL COVER IS REACHED WITH NO LARGER THAN ONE FOOT SQUARE BARE SPOTS AND/OR UNTIL DEEMED ESTABLISHED BY CITY PLANNING SERVICES.

MULCH IN ALL NATIVE SEED AREAS:

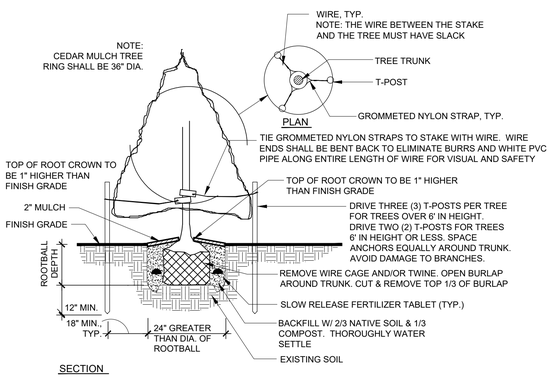
1. IMMEDIATELY FOLLOWING THE RAKING OPERATION, ADD STRAW MULCH TO THE SEEDED AREAS.
2. APPLY STRAW MULCH AT A MINIMUM OF 1.5 TONS PER ACRE OF AIR DRY MATERIAL. SPREAD STRAW MULCH UNIFORMLY OVER THE AREA WITH MECHANICAL MULCH SPREADER / CRIMPER. DO NOT MULCH WHEN WIND VELOCITY EXCEEDS 10 MPH.
3. WHEREVER THE USE OF CRIMPING EQUIPMENT IS PRACTICAL, PLACE MULCH IN THE MANNER NOTED ABOVE AND ANCHOR IT INTO THE SOIL. USE A DISC SUCH AS A MULCH TILLER, WITH A FLAT SERRATED DISC AT LEAS ¼ INCH IN THICKNESS, HAVING DULL EDGES, AND SPACE NO MORE THAN 9 INCHES APART, WITH DISCS OF SUFFICIENT DIAMETER TO PREVENT THE FRAME OF THE EQUIPMENT FROM DRAGGING THE MULCH. ANCHOR MULCH A MINIMUM DEPTH OF 2 INCHES AND ACROSS THE SLOPE WHERE PRACTICAL WITH NO MORE THAN TWO PASSES OF THE ANCHORING EQUIPMENT.
4. IMMEDIATELY UPON COMPLETION OF THE MULCHING AND BINDING OPERATION, THE SEEDED AREAS SHALL BE IRRIGATED, KEEPING THE TOP 2 INCHES OF SOIL EVENLY MOIST UNTIL SEED HAS UNIFORMLY GERMINATED AND GROWN TO A HEIGHT OF 2-INCHES.
5. WATERING APPLICATION SHALL BE DONE IN A MANNER WHICH WILL PROVIDE UNIFORM COVERAGE BUT WHICH WILL NOT CAUSE EROSION, MOVEMENT, OR DAMAGE TO THE FINISHED SURFACE.



GROUND COVER & SHRUB PLANTING DETAIL



DECIDUOUS TREE PLANTING DETAIL



CONIFER TREE PLANTING DETAIL

A PERMIT MUST BE OBTAINED FROM THE CITY FORESTER BEFORE ANY TREES OR SHRUBS AS NOTED ON THIS PLAN ARE PLANTED, PRUNED OR REMOVED IN THE PUBLIC RIGHT-OF-WAY. THIS INCLUDES ZONES BETWEEN THE SIDEWALK AND CURB, MEDIANS AND OTHER CITY PROPERTY. THIS PERMIT SHALL APPROVE THE LOCATION AND SPECIES TO BE PLANTED. FAILURE TO OBTAIN THIS PERMIT IS A VIOLATION OF THE CITY OF FORT COLLINS CODE SUBJECT TO CITATION (SECTION 27-31) AND MAY ALSO RESULT IN REPLACING OR RELOCATING TREES AND A HOLD ON CERTIFICATE OF OCCUPANCY.

Plant List

DECIDUOUS TREES	QTY	BOTANICAL / COMMON NAME	SIZE	HEIGHT	WIDTH	BIODIVERSITY	REMARKS
	3	Catalpa speciosa Western Catalpa	2.0" cal. BB	50`	40`	19%	WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	3	Celtis occidentalis Common Hackberry	2.0" cal. BB	50`	40`		WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	2	Gymnocladus dioica `Espresso` Seedless Kentucky Coffeetree	2.0" cal. BB	50`	40`		WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	3	Platanus x acerifolia `Exclamation` Exclamation Planetree	2.0" cal. BB	60`	30`		WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	2	Populus x acuminata Lanceleaf Cottonwood	2.0" cal. BB	60`	40`		WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER
	3	Quercus robur English Oak	2.0" cal. BB	60`	40`		WELL BRANCHED W/ STRAIGHT TRUNK & CENTRAL LEADER

DECIDUOUS SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	HEIGHT	WIDTH	REMARKS
	8	Amelanchier alnifolia Saskatoon Serviceberry	5 gal.	10`	10`	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	7	Arctostaphylos x `Panchito` Panchito Manzanita	5 gal.	2`	4`	8" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	8	Physocarpus monogynus Mountain Ninebark	5 gal.	4`	4`	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	8	Physocarpus opulifolius `Little Devil` TM Little Devil Ninebark	5 gal.	4`	4`	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	4	Rhus aromatica `Gro-Low` Gro-Low Fragrant Sumac	5 gal.	1.5`	6`	8" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	5	Ribes aureum Golden Currant	5 gal.	5`	5`	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED
	18	Spiraea japonica `Anthony Waterer` Anthony Waterer Spirea	5 gal.	3`	3`	24" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED

EVERGREEN SHRUBS	QTY	BOTANICAL / COMMON NAME	SIZE	HEIGHT	WIDTH	REMARKS
	11	Picea pungens `St. Mary`s Broom` St. Mary`s Broom Colorado Spruce	5 gal.	3`	4`	12" (h) FULL SPECIMEN, EVENLY AND WELL BRANCHED

PERENNIALS	QTY	BOTANICAL / COMMON NAME	SIZE	HEIGHT	WIDTH	REMARKS
	33	Achillea millefolium `Apricot Delight` Tutti Frutti Apricot Delight Common Yarrow	1 gal.	2`	2`	WELL ROOTED AND ESTABLISHED
	34	Asclepias tuberosa Butterfly Milkweed	1 gal.	3`	2`	WELL ROOTED AND ESTABLISHED
	32	Monarda fistulosa fistulosa menthifolia Mintleaf Bergamot	1 gal.	4`	3`	WELL ROOTED AND ESTABLISHED
	28	Oenothera biennis Biennual Evening Primrose	1 gal.	4`	3`	WELL ROOTED AND ESTABLISHED
	34	Papaver orientale `Brilliant` Brilliant Oriental Poppy	1 gal.	3`	2`	WELL ROOTED AND ESTABLISHED

GROUND COVERS	QTY	BOTANICAL / COMMON NAME	SIZE	SPACING	REMARKS
	30	Anaphalis margaritacea Pearly Everlasting	1 gal.	30" o.c.	WELL ROOTED AND ESTABLISHED
	69	Coreopsis tinctoria Plains Coreopsis	1 gal.	24" o.c.	WELL ROOTED AND ESTABLISHED
	67	Penstemon angustifolius Narrowleaf Penstemon	1 gal.	20" o.c.	WELL ROOTED AND ESTABLISHED
	72	Penstemon pinifolius Threadleaf Beardtongue	1 gal.	18" o.c.	WELL ROOTED AND ESTABLISHED

GRASSES	QTY	BOTANICAL / COMMON NAME	SIZE	SPACING	REMARKS
	32	Bouteloua gracilis `Blonde Ambition` Blonde Ambition Blue Grama	1 gal.	30" o.c.	WELL ROOTED AND ESTABLISHED
	45	Chasmanthium latifolium Northern Sea Oats Grass	1 gal.	30" o.c.	WELL ROOTED AND ESTABLISHED
	40	Schizachyrium scoparium `Standing Ovation` Standing Ovation Little Bluestem Grass	1 gal.	30" o.c.	WELL ROOTED AND ESTABLISHED

TB GROUP
landscape architecture | planning | illustration
444 Mountain Ave, Berthoud,CO 80513
TEL 970.532.5891
WEB TBGroup.us

SEAL

PROJECT TITLE

HOMESTEAD AT CLARENDON HILLS

Project Development Plan

Ft Collins, Colorado

PREPARED FOR

MOSAIC LAND DEVELOPMENT SERVICES, LLC

1021 NIGHTINGALE DRIVE FORT COLLINS, CO. 80525

CONTACT: KEN MITCHELL

NOT FOR CONSTRUCTION FOR REVIEW ONLY

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
Know what's below. Call before you dig.
CALL 3 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

REVISIONS

	DATE
Staff Comments	2.7.2020
Staff Comments	8.5.2020
Staff Comments	9.30.2020
Staff Comments	10.30.2020

DATE

APRIL 10, 2019

SHEET TITLE

Landscape Notes, Details & Schedules

SHEET INFORMATION

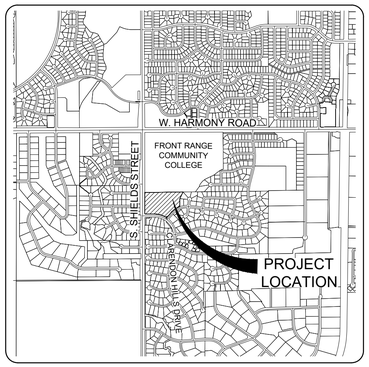
SHEET 6

PRELIMINARY UTILITY PLANS FOR

HOMESTEAD AT CLARENDON HILLS

A TRACT OF LAND LOCATED IN THE WEST HALF OF SECTION 2, TOWNSHIP 6 NORTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO

SEPTEMBER 2020



NORTH

VICINITY MAP

1"=1500'

PROJECT BENCHMARKS:

PROJECT DATUM: NAVD88

City of Fort Collins Benchmark 5-02
1/2 mile south of Harmony Road, approximately 200 feet north of Wooded Creek Court, on the west side of Shields Street, on the northwest corner of a storm inlet.
ELEV.= 5089.11

City of Fort Collins Benchmark 8-13
Southeast corner of Harmony Rd. and Shields St. on the northeast corner of a concrete traffic signal base.
ELEV.= 5086.71

Please Note: This plan set is using NAVD88 for a vertical datum. Surrounding developments have used NGVD29 Unadjusted (Prior City of Fort Collins Datum) for their vertical datums.

If NGVD29 Unadjusted Datum (Prior City of Fort Collins Datum) is required for any purpose, the following equation should be used:
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Basis of Bearings
The Basis of Bearings is the West line of Section 2-6-69 as bearing North 00° 17' 10" East (assumed bearing).

ORIGINAL FIELD SURVEY BY:

Northern Engineering Services, Inc.
Project No. 1013-008
Date: November 2018

DISCLAIMER STATEMENT:

These plans have been reviewed by the City of Fort Collins for concept only. The review does not imply responsibility by the reviewing department, the City of Fort Collins Engineer, or the City of Fort Collins for accuracy and correctness of the calculations. Furthermore, the review does not imply that quantities of items on the plans are the final quantities required. The review shall not be construed for any reason as acceptance of financial responsibility by the City of Fort Collins for additional quantities of items shown that may be required during the construction phase.

CERTIFICATION STATEMENT:

I hereby affirm that these final construction plans were prepared under my direct supervision, in accordance with all applicable City of Fort Collins and State of Colorado standards and statutes, respectively, and that I am fully responsible for the accuracy of all design, revisions, and record conditions that I have noted on these plans.

CONTACT INFORMATION

PROJECT TEAM:

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Mosaic Real Estate LLC
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Fort Collins, Colorado. 80525
970 685 1575

PLANNER/ LANDSCAPE ARCHITECT
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TB Group
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Fort Collins, Colorado 80521
(970) 221-4158

SITE ENGINEER
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GEOTECHNICAL ENGINEER
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Michael J. Coley, PE
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Windsor, Colorado 80550
(970) 545-3908

ENVIRONMENTAL
Blue Mountain Environmental Consulting, LLC
Matt Tobler
937 Mallard Drive
Fort Collins, Colorado 80521
(970) 224-0851

UTILITY CONTACT LIST: *

UTILITY COMPANY		PHONE NUMBER
GAS	Xcel Energy – Pat Kreager	(970) 225-7840
ELECTRIC	City of Fort Collins Light & Power – Rob Irish	(970) 224-6167
CABLE	Comcast – Don Kapperman	(970) 567-0425
TELECOM.	CenturyLink – William Johnson	(970) 377-6401
WATER	Fort Collins-Loveland Water District – Chris Pletcher	(970) 226-3104
WASTEWATER	South Fort Collins Sanitation District – Chris Pletcher	(970) 226-3104
STORMWATER	City of Fort Collins Utilities – Shane Boyle	(970) 221-6339

* This list is provided as a courtesy reference only. Northern Engineering Services assumes no responsibility for the accuracy or completeness of this list. In no way shall this list relinquish the Contractor's responsibility for locating all utilities prior to commencing any construction activity. Please contact the Utility Notification Center of Colorado (UNCC) at 811 for additional information.

SHEET INDEX

FORT COLLINS - LOVELAND WATER DISTRICT
SOUTH FORT COLLINS SANITATION DISTRICT

District Engineer ____ Date

All changes, addendums, additions, deletions and modifications to these drawings must be approved, in writing, by the Fort Collins-Loveland Water District and the South Fort Collins Sanitation District.

City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED: City Engineer ____ Date
CHECKED BY: Water & Wastewater Utility ____ Date
CHECKED BY: Stormwater Utility ____ Date
CHECKED BY: Parks & Recreation ____ Date
CHECKED BY: Traffic Engineer ____ Date
CHECKED BY: Environmental Planner ____ Date

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

Revisions:
No. | Date:
REVIEW SET NOT FOR CONSTRUCTION 09/30/20

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

DATE: 09/30/20
SCALE: N/A
P. MANAGER: A. Reese
PROJECT: 1013-008
DESIGNED BY: F. Weigert
DRAWN BY: B. Ruch

HOMESTEAD AT CLARENDON HILLS

COVER SHEET

Sheet
CS1
1 of 15

DRAWING FILENAME: P:\1013-008\Dwg\1013-008_COVR.dwg LAYOUT NAME: CS1 DATE: Sep 29, 2020 - 3:09pm CAD OPERATOR: brad
LIST OF XREFS: [NOT-Active]

A. GENERAL NOTES

1. All materials, workmanship, and construction of public improvements shall meet or exceed the standards and specifications set forth in the Larimer County Urban Area Street Standards and applicable state and federal regulations. Where there is conflict between these plans and the specifications, or any applicable standards, the most restrictive standard shall apply. All work shall be inspected and approved by the City of Fort Collins.

2. All references to any published standards shall refer to the latest revision of said standard, unless specifically stated otherwise.

3. These public improvement construction plans shall be valid for a period of three years from the date of approval by the City of Fort Collins Engineer. Use of these plans after the expiration date will require a new review and approval process by the City of Fort Collins prior to commencement of any work shown in these plans.

4. The engineer who has prepared these plans, by execution and/or seal hereof, does hereby affirm responsibility to the City of Fort Collins, as beneficiary of said engineer's work, for any errors and omissions contained in these plans, and approval of these plans by the City of Fort Collins Engineer shall not relieve the engineer who has prepared these plans of all such responsibility. Further, to the extent permitted by law, the engineer hereby agrees to hold harmless and indemnify the City of Fort Collins, and its officers and employees, from and against all liabilities, claims, and demands which may arise from any errors and omissions contained in these plans.

5. All storm sewer construction, as well as power and other "dry" utility installations, shall conform to the City of Fort Collins standards and specifications current at the date of approval of the plans by the City of Fort Collins Engineer.

6. The type, size, location and number of all known underground utilities are approximate when shown on the drawings. It shall be the responsibility of the Developer to verify the existence and location of all underground utilities along the route of the work before commencing new construction. The Developer shall be responsible for unknown underground utilities.

7. The Developer shall contact the Utility Notification Center of Colorado (UNCC) at 1-800-922-1987, at least 2 working days prior to beginning excavation or grading, to have all registered utility locations marked. Other unregistered utility entities (i.e. ditch / irrigation company) are to be located by contacting the respective representative. Utility service laterals are also to be located prior to beginning excavation or grading. It shall be the responsibility of the Developer to relocate all existing utilities that conflict with the proposed improvements shown on these plans.

8. The Developer shall be responsible for protecting all utilities during construction and for coordinating with the appropriate utility company for any utility crossings required.

9. If a conflict exists between existing and proposed utilities and/or a design modification is required, the Developer shall coordinate with the engineer to modify the design. Design modification(s) must be approved by the City of Fort Collins prior to beginning construction.

10. The Developer shall coordinate and cooperate with the City of Fort Collins, and all utility companies involved, to assure that the work is accomplished in a timely fashion and with a minimum disruption of service. The Developer shall be responsible for contacting, in advance, all parties affected by any disruption of any utility service as well as the utility companies.

11. No work may commence within any public storm water, sanitary sewer or potable water system until the Developer notifies the utility provider. Notification shall be a minimum of 2 working days prior to commencement of any work. At the discretion of the water utility provider, a pre-construction meeting may be required prior to commencement of any work.

12. The Developer shall sequence installation of utilities in such a manner as to minimize potential utility conflicts. In general, storm sewer and sanitary sewer should be constructed prior to installation of the water lines and dry utilities.

13. The minimum cover over water lines is 4.5 feet and the maximum cover is 5.5 feet unless otherwise noted in the plans and approved by the Water Utility.

14. A State Construction Dewatering Wastewater Discharge Permit is required if dewatering is required in order to install utilities or if water is discharged into a storm sewer, channel, irrigation ditch or any waters of the United States.

15. The Developer shall comply with all terms and conditions of the Colorado Permit for Storm Water Discharge (Contact Colorado Department of Health, Water Quality Control Division, (303) 692-3590), the Storm Water Management Plan, and the Erosion Control Plan.

16. The City of Fort Collins shall not be responsible for the maintenance of storm drainage facilities located on private property. Maintenance of onsite drainage facilities shall be the responsibility of the property owner(s).

17. Prior to final inspection and acceptance by the City of Fort Collins, certification of the drainage facilities, by a registered engineer, must be submitted to and approved by the Stormwater Utility Department. Certification shall be submitted to the Stormwater Utility Department at least two weeks prior to the release of a certificate of occupancy for single family units. For commercial properties, certification shall be submitted to the Stormwater Utility Department at least two weeks prior to the release of any building permits in excess of those allowed prior to certification per the Development Agreement.

18. The City of Fort Collins shall not be responsible for any damages or injuries sustained in this Development as a result of groundwater seepage, whether resulting from groundwater flooding, structural damage or other damage unless such damage or injuries are sustained as a result of the City of Fort Collins failure to properly maintain its water, wastewater, and/or storm drainage facilities in the development.

19. All recommendations of the Preliminary Drainage Letter for Homestead at Clarendon Hills, dated September 30, 2020 by Northern Engineering shall be followed and implemented.

20. Temporary erosion control during construction shall be provided as shown on the Erosion Control Plan. All erosion control measures shall be maintained in good repair by the Developer, until such time as the entire disturbed areas is stabilized with hard surface or landscaping.

21. The Developer shall be responsible for insuring that no mud or debris shall be tracked onto the existing public street system. Mud and debris must be removed within 24 hours by an appropriate mechanical method (i.e. machine broom sweep, light duty front-end loader, etc.) or as approved by the the City of Fort Collins street inspector.

22. No work may commence within any improved or unimproved public Right-of-Way until a Right-of-Way Permit or Development Construction Permit is obtained, if applicable.

23. The Developer shall be responsible for obtaining all necessary permits for all applicable agencies prior to commencement of construction. The Developer shall notify the the City of Fort Collins Inspector (Fort Collins - 221-6605) and the City of Fort Collins Erosion Control Inspector (Fort Collins - 221-6700) at least 2 working days prior to the start of any earth disturbing activity, or construction on any and all public improvements. If the City of Fort Collins Engineer is not available after proper notice of construction activity has been provided, the Developer may commence work in the Engineer absence. However, the City of Fort Collins reserves the right not to accept the improvement if subsequent testing reveals an improper installation.

24. The Developer shall be responsible for obtaining soils tests within the Public Right-of-Way after right of way grading and all utility trench work is complete and prior to the placement of curb, gutter, sidewalk and pavement. If the final soils/pavement design report does not correspond with the results of the original geotechnical report, the Developer shall be responsible for a re-design of the subject pavement section or, the Developer may use the City of Fort Collins' default pavement thickness section(s). Regardless of the option used, all final soils/pavement design reports shall be prepared by a licensed Professional Engineer. The final report shall be submitted to the Inspector a minimum of 10 working days prior to placement of base and asphalt. Placement of curb, gutter, sidewalk, base and asphalt shall not occur until the City of Fort Collins Engineer approves the final report.

25. The contractor shall hire a licensed engineer or land surveyor to survey the constructed elevations of the street subgrade and the gutter flowline at all intersections, inlets, and other locations requested by the the City of Fort Collins inspector. The engineer or surveyor must certify in a letter to the City of Fort Collins that these elevations conform to the approved plans and specifications. Any deviations shall be noted in the letter and then resolved with the City of Fort Collins before installation of base course or asphalt will be allowed on the streets.

26. All utility installations within or across the roadbed of new residential roads must be completed prior to the final stages of road construction. For the purposes of these standards, any work except c/g above the subgrade is considered final stage work. All service lines must be stubbed to the property lines and marked so as to reduce the excavation necessary for building connections.

27. Portions of Larimer County are within overlay districts. The Larimer County Flood Plain Resolution should be referred to for additional criteria for roads within these districts.

28. All road construction in areas designated as Wild Fire Hazard Areas shall be done in accordance with the construction criteria as established in the Wild Fire Hazard Area Mitigation Regulations in force at the time of final plat approval.

29. Prior to the commencement of any construction, the contractor shall contact the Local Entity Forester to schedule a site inspection for any tree removal requiring a permit.

30. The Developer shall be responsible for all aspects of safety including, but not limited to, excavation, trenching, shoring, traffic control, and security. Refer to OSHA Publication 2226, Excavating and Trenching.

31. The Developer shall submit a Construction Traffic Control Plan, in accordance with MUTCD, to the appropriate Right-of-Way authority. (The City of Fort Collins, Larimer County, Colorado), for approval, prior to any construction activities within, or affecting, the Right-of-Way. The Developer shall be responsible for providing any and all traffic control devices as may be required by the construction activities.

32. Prior to the commencement of any construction that will affect traffic signs of any type, the contractor shall contact the City of Fort Collins Traffic Operations Department, who will temporarily remove or relocate the sign at no cost to the contractor, however, if the contractor moves the traffic sign then the contractor will be charged for the labor, materials and equipment to reinstall the sign as needed.

33. The Developer is responsible for all costs for the initial installation of traffic signing and striping for the Development related to the Development's local street operations. In addition, the Developer is responsible for all costs for traffic signing and striping related to directing traffic access to and from the Development.

34. There shall be no site construction activities on Saturdays, unless specifically approved by the City of Fort Collins Engineer, and no site construction activities on Sundays or holidays, unless there is prior written approval by City of Fort Collins.

35. The Developer is responsible for providing all labor and materials necessary for the completion of the intended improvements, shown on these drawings, or designated to be provided, installed, or constructed, unless specifically noted otherwise.

36. Dimensions for layout and construction are not to be scaled from any drawing. If pertinent dimensions are not shown, contact the Designer for clarification, and annotate the dimension on the as-built record drawings.

37. The Developer shall have, onsite at all times, one (1) signed copy of the approved plans, one (1) copy of the appropriate standards and specifications, and a copy of any permits and extension agreements needed for the job.

38. If, during the construction process, conditions are encountered which could indicate a situation that is not identified in the plans or specifications, the Developer shall contact the Designer and the City of Fort Collins Engineer immediately.

39. The Developer shall be responsible for recording as-built information on a set of record drawings kept on the construction site, and available to the Larimer County's Inspector at all times. Upon completion of the work, the contractor(s) shall submit record drawings to the City of Fort Collins Engineer.

40. The Designer shall provide, in this location on the plan, the location and description of the nearest survey benchmarks (2) for the project as well as the basis of bearings. The information shall be as follows:

    PROJECT DATUM: NAVD88

    City of Fort Collins Benchmark 5-02
    1/2 mile south of Harmony Road, approximately 200 feet north of Wooded Creek Court, on the west side of Shields Street, on the northwest corner of a storm inlet.
    Elev. = 5089.11

    City of Fort Collins Benchmark 8-13
    Southeast corner of Harmony Rd. and Shields St. on the northeast corner of a concrete traffic signal base.
    Elev. = 5086.71

    Please Note: This plan set is using NAVD88 for a vertical datum. Surrounding developments have used NGVD29 Unadjusted (Prior City of Fort Collins Datum) for their vertical datums.

    If NGVD29 Unadjusted Datum (Prior City of Fort Collins Datum) is required for any purpose, the following equation should be used:
    NGVD29 Unadjusted (Prior City of Fort Collins Datum) = NAVD88 - 3.20'

    Basis of Bearings
    The Basis of Bearings is the West line of Section 2-6-69 as bearing North 00° 17' 10" East (assumed bearing).

41. All stationing is based on centerline of roadways unless otherwise noted.

42. Damaged curb, gutter and sidewalk existing prior to construction, as well as existing fences, trees, streets, sidewalks, curbs and gutters, landscaping, structures, and improvements destroyed, damaged or removed due to construction of this project, shall be replaced or restored in like kind at the Developer's expense, unless otherwise indicated on these plans, prior to the acceptance of completed improvements and/or prior to the issuance of the first Certificate of Occupancy.

43. When an existing asphalt street must be cut, the street must be restored to a condition equal to or better than its original condition. The existing street condition shall be documented by the City of Fort Collins Construction Inspector before any cuts are made. Patching shall be done in accordance with the City of Fort Collins Street Repair Standards. The finished patch shall blend in smoothly into the existing surface. All large patches shall be paved with an asphalt lay-down machine. In streets where more than one cut is made, an overlay of the entire street width, including the patched area, may be required. The determination of need for a complete overlay shall be made by the Larimer County Engineer and/or the City of Fort Collins Inspector at the time the cuts are made.

44. Upon completion of construction, the site shall be cleaned and restored to a condition equal to, or better than, that which existed before construction, or to the grades and condition as required by these plans.

45. Standard Handicap ramps are to be constructed at all curb returns and at all "T" intersections.

46. After acceptance by the City of Fort Collins, public improvements depicted in these plans shall be guaranteed to be free from material and workmanship defects for a minimum period of two years from the date of acceptance.

47. The City of Fort Collins shall not be responsible for the maintenance of roadway and appurtenant improvements, including storm drainage structures and pipes, for the following private streets: N.A.

48. Approved Variances are listed as follows:
    1) Water quality treatment for entire site (Stormwater)
    2) Level of Service (Transportation)

CONSTRUCTION NOTES

A. Grading and Erosion Control Notes

1. The erosion control inspector must be notified at least twenty-four (24) hours prior to any construction on this site.

2. There shall be no earth-disturbing activity outside the limits designated on the accepted plans.

3. All required perimeter silt and construction fencing shall be installed prior to any land disturbing activity (stockpiling, stripping, grading, etc). All other required erosion control measures shall be installed at the appropriate time in the construction sequence as indicated in the approved project schedule, construction plans, and erosion control report.

4. At all times during construction, the Developer shall be responsible for preventing and controlling on-site erosion including keeping the property sufficiently watered so as to minimize wind blown sediment. The Developer shall also be responsible for installing and maintaining all erosion control facilities shown herein.

5. Pre-disturbance vegetation shall be protected and retained wherever possible. Removal or disturbance of existing vegetation shall be limited to the area(s) required for immediate construction operations, and for the shortest practical period of time.

6. All soils exposed during land disturbing activity (stripping, grading, utility installations, stockpiling, filling, etc.) shall be kept in a roughened condition by ripping or disking along land contours until mulch, vegetation, or other permanent erosion control BMPs are installed. No soils in areas outside project street rights-of-way shall remain exposed by land disturbing activity for more than thirty (30) days before required temporary or permanent erosion control (e.g. seed/mulch, landscaping, etc.) is installed, unless otherwise approved by the City/County.

7. In order to minimize erosion potential, all temporary (structural) erosion control measures shall:

    a. Be inspected at a minimum of once every two (2) weeks and after each significant storm event and repaired or reconstructed as necessary in order to ensure the continued performance of their intended function.
    b. Remain in place until such time as all the surrounding disturbed areas are sufficiently stabilized as determined by the erosion control inspector.
    c. Be removed after the site has been sufficiently stabilized as determined by the erosion control inspector.

8. When temporary erosion control measures are removed, the Developer shall be responsible for the clean up and removal of all sediment and debris from all drainage infrastructure and other public facilities.

9. The contractor shall immediately clean up any construction materials inadvertently deposited on existing streets, sidewalks, or other public rights of way, and make sure streets and walkways are cleaned at the end of each working day.

10. All retained sediments, particularly those on paved roadway surfaces, shall be removed and disposed of in a manner and location so as not to cause their release into any waters of the United States.

11. No soil stockpile shall exceed ten (10) feet in height. All soil stockpiles shall be protected from sediment transport by surface roughening, watering, and perimeter silt fencing. Any soil stockpile remaining after thirty (30) days shall be seeded and mulched.

12. The stormwater volume capacity of detention ponds will be restored and storm sewer lines will be cleaned upon completion of the project and before turning the maintenance over to the City/County or Homeowners Association (HOA).

13. City Ordinance and Colorado Discharge Permit System (CDPS) requirements make it unlawful to discharge or allow the discharge of any pollutant or contaminated water from construction sites. Pollutants include, but are not limited to discarded building materials, concrete truck washout, chemicals, oil and gas products, litter, and sanitary waste. The developer shall at all times take whatever measures are necessary to assure the proper containment and disposal of pollutants on the site in accordance with any and all applicable local, state, and federal regulations.

14. A designated area shall be provided on site for concrete truck chute washout. The area shall be constructed so as to contain washout material and located at least fifty (50) feet away from any waterway during construction. Upon completion of construction activities the concrete washout material will be removed and properly disposed of prior to the area being restored.

15. Conditions in the field may warrant erosion control measures in addition to what is shown on these plans. The Developer shall implement whatever measures are determined necessary, as directed by the City.

16. For additional information see separate Stormwater Management Plan / Erosion Control Report for Homestead at Clarendon Hills.

B. Street Improvement Notes

1. All street construction is subject to the General Notes on the cover sheet of these plans as well as the Street Improvements Notes listed here.

2. A paving section design, signed and stamped by a Colorado licensed Engineer, must be submitted to the City of Fort Collins Engineer for approval, prior to any street construction activity, (full depth asphalt sections are not permitted at a depth greater than 8 inches of asphalt). The job mix shall be submitted for approval prior to placement of any asphalt.

3. Where proposed paving adjoins existing asphalt, the existing asphalt shall be saw cut, a minimum distance of 12 inches from the existing edge, to create a clean construction joint. The Developer shall be required to remove existing pavement to a distance where a clean construction joint can be made. Wheel cuts shall not be allowed unless approved by the City of Fort Collins Engineer in Fort Collins.

4. Street subgrades shall be scarified the top 12 inches and re-compacted prior to subbase installation. No base material shall be laid until the subgrade has been inspected and approved by the City of Fort Collins Engineer.

5. Ft. Collins only. Valve boxes and manholes are to be brought up to grade at the time of pavement placement or overlay. Valve box adjusting rings are not allowed.

6. When an existing asphalt street must be cut, the street must be restored to a condition equal to or better than its original condition. The existing street condition shall be documented by the Inspector before any cuts are made. Cutting and patching shall be done in conformance with Chapter 25, Reconstruction and Repair. The finished patch shall blend smoothly into the existing surface. The determination of need for a complete overlay shall be made by the City of Fort Collins Engineer. All overlay work shall be coordinated with adjacent landowners such that future projects do not cut the new asphalt overlay work.

7. All traffic control devices shall be in conformance with these plans or as otherwise specified in M.U.T.C.D. (including Colorado supplement) and as per the Right-of-Way Work Permit traffic control plan.

8. The Developer is required to perform a gutter water flow test in the presence of the City of Fort Collins Inspector and prior to installation of asphalt. Gutters that hold more than 1/4 inch deep or 5 feet longitudinally, of water, shall be completely removed and reconstructed to drain properly.

9. Prior to placement of H.B.P. or concrete within the street and after moisture/density tests have been taken on the subgrade material (when a full depth section is proposed) or on the subgrade and base material (when a composite section is proposed), a mechanical "proof roll" will be required. The entire subgrade and/or base material shall be rolled with a heavily loaded vehicle having a total GVW of not less than 50,000 lbs. and a single axle weight of at least 18,000 lbs. with pneumatic tires inflated to not less that 90 p.s.i.g. "Proof roll" vehicles shall not travel at speeds greater than 3 m.p.h. Any portion of the subgrade or base material which exhibits excessive pumping or deformation, as determined by the City of Fort Collins Engineer, shall be reworked, replaced or otherwise modified to form a smooth, non-yielding surface. The City of Fort Collins Engineer shall be notified at least 24 hours prior to the "proof roll." All "proof rolls" shall be preformed in the presence of an Inspector.

C. Traffic Signing and Pavement Marking Construction Notes

1. All signage and marking is subject to the General Notes on the cover sheet of these plans, as well as the Traffic Signing and Marking Construction Notes listed here.

2. All symbols, including arrows, ONLYS, crosswalks, stop bars, etc. shall be pre-formed thermo-plastic.

3. All signage shall be per the City of Fort Collins Standards and these plans or as otherwise specified in MUTCD.

4. All lane lines for asphalt pavement shall receive two coats of latex paint with glass beads.

5. All lane lines for concrete pavement should be epoxy paint.

6. Prior to permanent installation of traffic striping and symbols, the Developer shall place temporary tabs or tape depicting alignment and placement of the same. Their placement shall be approved by the City of Fort Collins Traffic Engineer prior to permanent installation of striping and symbols.

7. Pre-formed thermo-plastic applications shall be as specified in these Plans and/or these Standards.

8. Epoxy applications shall be applied as specified in CDOT Standard Specifications for Road and Bridge Construction.

9. All surfaces shall be thoroughly cleaned prior to installation of striping or markings.

10. All sign posts shall utilize break-away assemblies and fasteners per the Standards.

11. A field inspection of location and installation of all signs shall be performed by the City of Fort Collins Traffic Engineer. All discrepancies identified during the field inspection must be corrected before the 2-year warranty period will begin.

12. The Developer installing signs shall be responsible for locating and protecting all underground utilities.

13. Special care shall be taken in sign location to ensure an unobstructed view of each sign.

14. Signage and striping has been determined by information available at the time of review. Prior to initiation of the warranty period,the City of Fort Collins Traffic Engineer reserves the right to require additional signage and/or striping if the City of Fort Collins Traffic Engineer determines that an unforeseen condition warrants such signage according to the MUTCD or the CDOT M and S Standards. All signage and striping shall fall under the requirements of the 2-year warranty period for new construction (except fair wear on traffic markings).

15. Sleeves for sign posts shall be required for use in islands/medians. Refer to Chapter 14, Traffic Control Devices, for additional detail.

D. Storm Drainage Notes

1. The City of Fort Collins shall not be responsible for the maintenance of storm drainage facilities located on private property. Maintenance of onsite drainage facilities shall be the responsibility of the property owner(s).

2. All recommendations of the Preliminary Drainage Letter for Homestead at Clarendon Hills, dated September 30, 2020 by Northern Engineering shall be followed and implemented.

3. Prior to final inspection and acceptance by the City of Fort Collins, certification of the drainage facilities, by a registered engineer, must by submitted to and approved by the Stormwater Utility Department. Certification shall be submitted to the Stormwater Utility Department at least two weeks prior to the release of a certificate of occupancy for single family units. For commercial properties, certification shall by submitted to the Stormwater Utility Department at least two weeks prior to the release of any building permits in excess of those allowed prior to certification per the Development Agreement.

E. Utility Notes

1. All water and sanitary sewer construction shall be performed according to the Fort Collins-Loveland Water District and the South Fort Collins Sanitation District standards and specifications.

2. Construction of water and sewer facilities require a pre-construction meeting with district operations staff prior to construction.

3. Contractor shall notify district inspectors prior to starting work.

4. Contractor shall contact the Sanitation District for sewer inspection 48 hours prior to connecting to existing sewer stubs.

5. All commercial domestic services require a reduced pressure backflow prevention device.

6. All water lines shall be a minimum of (5) five feet and a maximum of (6) six feet below final grade.

7. All district valves shall only be operated by district operations staff.

8. Pipe pressure and vacuum testing shall be witnessed by district inspectors. waterline bacteria tests shall also be taken by district inspectors.

9. Once the system is operational and all tests have passed, contractor shall request substantial completion with a letter to the district that includes the dollar value of the water and sewer improvements listed separately.

10. As-builts shall be submitted in pdf and dwg to the district for final approval.

11. If groundwater is encountered within depth of sewer construction, manholes must be water-proofed.

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City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED: _____ City Engineer _____ Date

CHECKED BY: _____ Water & Wastewater Utility _____ Date

CHECKED BY: _____ Stormwater Utility _____ Date

CHECKED BY: _____ Parks & Recreation _____ Date

CHECKED BY: _____ Traffic Engineer _____ Date

CHECKED BY: _____ Environmental Planner _____ Date

Revisions: No. — Date:

FOR REVIEW SET
NOT FOR CONSTRUCTION
09/30/20

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

DATE: 09/30/20
SCALE: N/A
P. MANAGER: A. Reese
PROJECT: 1013-008
DESIGNED BY: F. Weigert
DRAWN BY: B. Ruch

HOMESTEAD AT CLARENDON HILLS

GENERAL & CONSTRUCTION NOTES

Sheet
CS2
2 of 15

DRAWING FILENAME: P:\1013-008\Dwg\1013-008_COVR.dwg LAYOUT NAME: CS2 DATE: Sep 29, 2020 - 3:09pm CAD OPERATOR: fred
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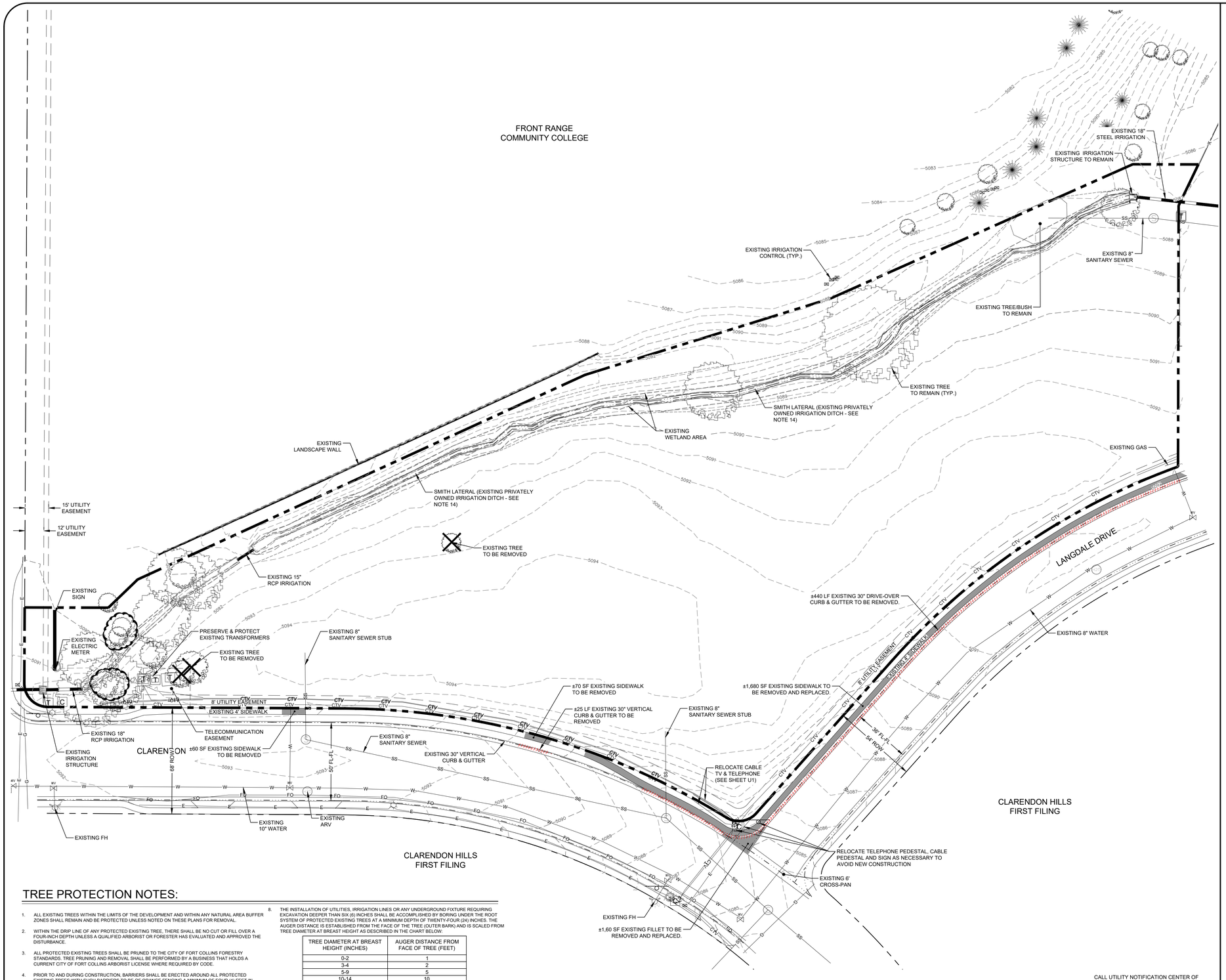

NORTH

30 0 30 60 90 Feet

(IN FEET)
1 inch = 30 ft.

LEGEND:

- PROPERTY BOUNDARY
- EXISTING RIGHT-OF-WAY
- EASEMENT
- EXISTING MAJOR CONTOUR (5015)
- EXISTING MINOR CONTOUR (5013)
- EXISTING STORM DRAIN
- EXISTING SANITARY SEWER (SS)
- EXISTING WATER (W)
- EXISTING GASLINE (G)
- EXISTING CABLE (CTV)
- EXISTING ELECTRIC (E)
- EXISTING FIBER OPTIC (FO)
- CURB AND GUTTER TO BE REMOVED
- EXISTING WATER MANHOLE
- EXISTING FIRE HYDRANT
- EXISTING VALVE
- EXISTING CABLE PEDESTAL (C)
- EXISTING TELEPHONE PEDESTAL (T)
- EXISTING IRRIGATION CONTROL
- EXISTING ELECTRIC METER (E)
- EXISTING TREES (TO REMAIN)
- EXISTING TREES (TO BE REMOVED)
- EXISTING SIDEWALK (TO BE REMOVED)

FIELD SURVEY BY:

NORTHERN ENGINEERING SERVICES, INC.
PROJECT NO. 1013-008
DATE: NOVEMBER 2018

NOTES:

1. THE SIZE, TYPE AND LOCATION OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THESE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE OF ALL UNDERGROUND UTILITIES IN THE AREA OF THE WORK. BEFORE COMMENCING NEW CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR ALL UNKNOWN UNDERGROUND UTILITIES.
2. ALL SYMBOLS ARE ONLY GRAPHICALLY REPRESENTED AND ARE NOT TO SCALE.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING DEMOLITION, REMOVAL, REPLACEMENT, AND DISPOSAL OF ALL FACILITIES AND MATERIAL.
4. CONTRACTOR IS ENCOURAGED TO PERFORM DEMOLITION IN A MANNER THAT MAXIMIZES SALVAGE, RE-USE, AND RECYCLING OF MATERIALS. THIS INCLUDES APPROPRIATE SORTING AND STORING. IN PARTICULAR, DEMOLISHED CONCRETE, ASPHALT, AND BASE COURSE SHOULD BE RECYCLED IF POSSIBLE. THE CITY OF FORT COLLINS STREET DEPARTMENT OPERATES A CRUSHING OPERATION THAT WILL ACCEPT CONCRETE MATERIAL AT NO COST FOR CRUSHING AND RE-USE AS RECYCLED AGGREGATE. THIS OPERATION IS LOCATED AT 1380 HOFFMAN MILL ROAD AND CAN BE REACHED AT (970) 482-1249.
5. NO DEMOLITION MAY OCCUR ONSITE UNTIL THE APPROPRIATE PERMITS AND APPROVALS HAVE BEEN ISSUED BY THE CITY. THIS INCLUDES, BUT IS NOT LIMITED, TO THE DEMOLITION OF STRUCTURES AND THE REMOVAL OF TREES.
6. CURB GUTTER, AND SIDEWALK SHALL BE REMOVED TO THE NEAREST JOINT.
7. LIMITS OF STREET CUT ARE APPROXIMATE. FINAL LIMITS ARE TO BE DETERMINED IN THE FIELD BY THE CITY ENGINEERING INSPECTOR. ALL REPAIRS TO BE IN ACCORDANCE WITH CITY STREET REPAIR STANDARDS.
8. CONTRACTOR SHALL COORDINATE ALL UTILITY DEMOLITION AND/OR RELOCATION ITEMS WITH THE APPROPRIATE UTILITY PROVIDER PRIOR TO BEGINNING ANY ONSITE DEMOLITION.
9. CONTRACTOR SHALL COORDINATE WITH FORT COLLINS UTILITY FIELD OPERATIONS DEPARTMENT AT (970) 221-6700 FOR WATER AND SEWER SERVICE ABANDONMENT.
10. CONTACT THE PROJECT SURVEYOR FOR ANY INQUIRIES RELATED TO THE EXISTING SITE SURVEY.
11. ADDITIONAL TREES NOT SHOWN ON THESE PLANS MAY EXIST AND MAY REQUIRE REMOVAL. COORDINATION WITH CITY FORESTER. WHICH TREES ARE TO REMAIN AND WHICH ARE TO BE REMOVED SHOULD BE COORDINATED WITH THE CITY FORESTER. REFER TO LANDSCAPE PLANS AND TREE MITIGATION PLAN FOR ADDITIONAL INFORMATION.
12. NO TREES SHALL BE REMOVED DURING THE SONGBIRD NESTING SEASON (FEBRUARY 1-JULY 31) WITHOUT FIRST HAVING A PROFESSIONAL ECOLOGIST OR WILDLIFE BIOLOGIST COMPLETE A NESTING SURVEY TO IDENTIFY ANY ACTIVE NESTS EXISTING ON THE PROJECT SITE. THE SURVEY SHALL BE SENT TO THE CITY ENVIRONMENTAL PLANNER. IF ACTIVE NESTS ARE FOUND, THE CITY WILL COORDINATE WITH RELEVANT STATE AND FEDERAL REPRESENTATIVES TO DETERMINE WHETHER ADDITIONAL RESTRICTIONS ON TREE REMOVAL AND CONSTRUCTION APPLY.
13. THE NATURAL HABITAT BUFFER ZONE IS INTENDED TO BE MAINTAINED IN A NATIVE LANDSCAPE. PLEASE SEE SECTION 3.4.1 OF THE LAND USE CODE FOR ALLOWABLE USES WITHIN THE NATURAL HABITAT BUFFER ZONE.
14. THE SMITH LATERAL IS OWNED BY NUMEROUS INDIVIDUAL OWNERS AS WELL AS THE CITY OF FORT COLLINS (THROUGH THE PARKS DEPARTMENT) WHO USE THE DITCH TO CONVEY IRRIGATION WATER. APPROVAL FROM THE IRRIGATION DITCH OWNERS IS REQUIRED PRIOR TO ANY WORK ON THE DITCH OR IN ITS EASEMENT, AS WELL AS BEFORE ANY STORMWATER CAN BE DISCHARGED, OR PLANNED TO BE DISCHARGED INTO THE DITCH. PLEASE CONTACT JILL WUERTZ (970-416-2062), 413 S. BRYAN AVE, FORT COLLINS, CO 80521 REGARDING THE PARKS' DEPARTMENT'S INTEREST.

TREE PROTECTION NOTES:

1. ALL EXISTING TREES WITHIN THE LIMITS OF THE DEVELOPMENT AND WITHIN ANY NATURAL AREA BUFFER ZONES SHALL REMAIN AND BE PROTECTED UNLESS NOTED ON THESE PLANS FOR REMOVAL.
2. WITHIN THE DRIP LINE OF ANY PROTECTED EXISTING TREE, THERE SHALL BE NO CUT OR FILL OVER A FOUR-INCH DEPTH UNLESS A QUALIFIED ARBORIST OR FORESTER HAS EVALUATED AND APPROVED THE DISTURBANCE.
3. ALL PROTECTED EXISTING TREES SHALL BE PRUNED TO THE CITY OF FORT COLLINS FORESTRY STANDARDS. TREE PRUNING AND REMOVAL SHALL BE PERFORMED BY A BUSINESS THAT HOLDS A CURRENT CITY OF FORT COLLINS ARBORIST LICENSE WHERE REQUIRED BY CODE.
4. PRIOR TO AND DURING CONSTRUCTION, BARRIERS SHALL BE ERECTED AROUND ALL PROTECTED EXISTING TREES WITH SUCH BARRIERS TO BE OF ORANGE FENCING A MINIMUM OF FOUR (4) FEET IN HEIGHT, SECURED WITH METAL T-POSTS, NO CLOSER THAN SIX (6) FEET FROM THE TRUNK OR ONE-HALF (½) OF THE DRIP LINE, WHICHEVER IS GREATER. THERE SHALL BE NO STORAGE OR MOVEMENT OF EQUIPMENT, MATERIAL, DEBRIS OR FILL WITHIN THE FENCED TREE PROTECTION ZONE.
5. DURING THE CONSTRUCTION STAGE OF DEVELOPMENT, THE APPLICANT SHALL PREVENT THE CLEANING OF EQUIPMENT OR MATERIAL OR THE STORAGE AND DISPOSAL OF WASTE MATERIAL SUCH AS PAINTS, OILS, SOLVENTS, ASPHALT, CONCRETE, MOTOR OIL OR ANY OTHER MATERIAL HARMFUL TO THE LIFE OF A TREE WITHIN THE DRIP LINE OF ANY PROTECTED TREE OR GROUP OF TREES.
6. NO DAMAGING ATTACHMENT, WIRES, SIGNS OR PERMITS MAY BE FASTENED TO ANY PROTECTED TREE.
7. LARGE PROPERTY AREAS CONTAINING PROTECTED TREES AND SEPARATED FROM CONSTRUCTION OR LAND CLEARING AREAS, ROAD RIGHTS-OF-WAY AND UTILITY EASEMENTS MAY BE "RIBBONED OFF," RATHER THAN ERECTING PROTECTIVE FENCING AROUND EACH TREE AS REQUIRED IN SUBSECTION (G)(3) ABOVE. THIS MAY BE ACCOMPLISHED BY PLACING METAL T-POST STAKES A MAXIMUM OF FIFTY (50) FEET APART AND TYING RIBBON OR ROPE FROM STAKE-TO-STAKE ALONG THE OUTSIDE PERIMETERS OF SUCH AREAS BEING CLEARED
8. THE INSTALLATION OF UTILITIES, IRRIGATION LINES OR ANY UNDERGROUND FIXTURE REQUIRING EXCAVATION DEEPER THAN SIX (6) INCHES SHALL BE ACCOMPLISHED BY BORING UNDER THE ROOT SYSTEM OF PROTECTED EXISTING TREES AT A MINIMUM DEPTH OF TWENTY-FOUR (24) INCHES. THE AUGER DISTANCE IS ESTABLISHED FROM THE FACE OF THE TREE (OUTER BARK) AND IS SCALED FROM TREE DIAMETER AT BREAST HEIGHT AS DESCRIBED IN THE CHART BELOW:

TREE DIAMETER AT BREAST HEIGHT (INCHES)	AUGER DISTANCE FROM FACE OF TREE (FEET)
0-2	1
3-4	2
5-9	5
10-14	10
15-19	12
OVER 19	15

9. NO TREES SHALL BE REMOVED DURING THE SONGBIRD NESTING SEASON (FEBRUARY 1-JULY 31) WITHOUT FIRST HAVING A PROFESSIONAL ECOLOGIST OR WILDLIFE BIOLOGIST COMPLETE A NESTING SURVEY TO IDENTIFY ANY ACTIVE NESTS EXISTING ON THE PROJECT SITE. IF ACTIVE NESTS ARE FOUND, THE CITY ENVIRONMENTAL PLANNER WILL DETERMINE WHETHER ADDITIONAL RESTRICTIONS ON TREE REMOVAL AND CONSTRUCTION APPLY.
10. REFER TO LANDSCAPE AND IRRIGATION PLANS FOR ADDITIONAL TREE PROTECTION MEASURES.

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CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED: _____ City Engineer _____ Date

CHECKED BY: _____ Water & Wastewater Utility _____ Date

CHECKED BY: _____ Stormwater Utility _____ Date

CHECKED BY: _____ Parks & Recreation _____ Date

CHECKED BY: _____ Traffic Engineer _____ Date

CHECKED BY: _____ Environmental Planner _____ Date

Revisions: No. —

Date: REVIEW SET NOT FOR CONSTRUCTION 09/30/20

NORTHERN ENGINEERING
970.221.4158
northernengineering.com
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631

DATE: 09/30/20
SCALE: 1" = 30'
P. MANAGER: A. Reese
PROJECT: 1013-008
DESIGNED BY: F. Weigert
DRAWN BY: M. Kuehnel

HOMESTEAD AT CLARENDON HILLS

EXISTING CONDITIONS & DEMOLITION PLAN

Sheet
EX1
3 of 15

DRAWING FILENAME: P:\1013-008\Dwg\Civil\1013-008_ECON.dwg LAYOUT NAME: EX1 DATE: Sep 29, 2020 - 3:09pm CAD OPERATOR: fred
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NORTH

30 0 30 60 90 Feet

(IN FEET)
1 inch = 30 ft.

LEGEND:

- PROPERTY BOUNDARY
- EXISTING LOT LINE
- EXISTING FENCE
- PROPOSED CURB & GUTTER
- EXISTING LIGHT POLE
- EXISTING SIGN
- EXISTING UTILITY POLE
- 50' WETLANDS BUFFER

FIELD SURVEY BY:

NORTHERN ENGINEERING SERVICES, INC.
PROJECT NO. 1013-008
DATE: NOVEMBER 2018

NOTES:

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2. REFER TO APPROVED SITE ELECTRICAL PLANS FOR ALL SITE LIGHTING AS SHOWN ON THIS DRAWING.
3. ALL DIMENSIONS, LINE AND CURVE INFORMATION ARE MEASURED TO CURB FLOW LINE OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
4. CONTRACTOR SHALL REFER TO AND COORDINATE WITH THE LANDSCAPE DRAWINGS FOR ALL LANDSCAPE AND SITE FEATURES SUCH AS RETAINING WALLS, LANDSCAPE ROCK, TREES, LANDSCAPING, MULCH, FENCING, ETC.
5. CONCRETE SIDEWALKS SHALL BE 6-INCH MINIMUM THICKNESS UNLESS NOTED OTHERWISE.
6. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ITEMS IMPACTING ADJACENT PROPERTIES WITH THE PROPERTY OWNERS PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITIES.
7. ALL SYMBOLS ARE ONLY GRAPHICALLY REPRESENTED AND ARE NOT TO SCALE.
8. CONTACT THE PROJECT SURVEYOR FOR ANY INQUIRIES RELATED TO THE EXISTING SITE SURVEY.
9. THE SMITH LATERAL IS OWNED BY NUMEROUS INDIVIDUAL OWNERS AS WELL AS THE CITY OF FORT COLLINS (THROUGH THE PARKS DEPARTMENT) WHO USE THE DITCH TO CONVEY IRRIGATION WATER. APPROVAL FROM THE IRRIGATION DITCH OWNERS IS REQUIRED PRIOR TO ANY WORK ON THE DITCH OR IN ITS EASEMENT, AS WELL AS BEFORE ANY STORMWATER CAN BE DISCHARGED, OR PLANNED TO BE DISCHARGED INTO THE DITCH. PLEASE CONTACT JILL WUERTZ (970-416-2062), 413 S. BRYAN AVE, FORT COLLINS, CO 80521 REGARDING THE PARKS' DEPARTMENT'S INTEREST.
10. ALL HANDICAP RAMPS (PRIVATE AND PUBLIC) SHALL BE INSTALLED WITH TRUNCATED DOME WARNING DETECTION SYSTEMS PER LARIMER COUNTY URBAN AREA STREET STANDARD DETAILS.
11. ALL SIGNAGE SHALL BE PER CITY OF FORT COLLINS STANDARDS AND THESE PLANS OR AS OTHERWISE SPECIFIED IN MUTCD. (REF. LCUASS SECTION 22.6.2)
12. THE CONTRACTOR INSTALLING SIGNS SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND UTILITIES.
13. SPECIAL CARE SHALL BE TAKEN IN SIGN LOCATION TO ENSURE AN UNOBSTRUCTED VIEW OF EACH SIGN.

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Revisions:

No.	Date:
1	REVIEW SET NOT FOR CONSTRUCTION 09/30/20

NORTHERN ENGINEERING
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northernengineering.com
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
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DATE: 09/30/20
SCALE: 1" = 30'
P. MANAGER: A. Reese
PROJECT: 1013-008
DESIGNED BY: F. Weigert
DRAWN BY: M. Kuehnel

HOMESTEAD AT CLARENDON HILLS

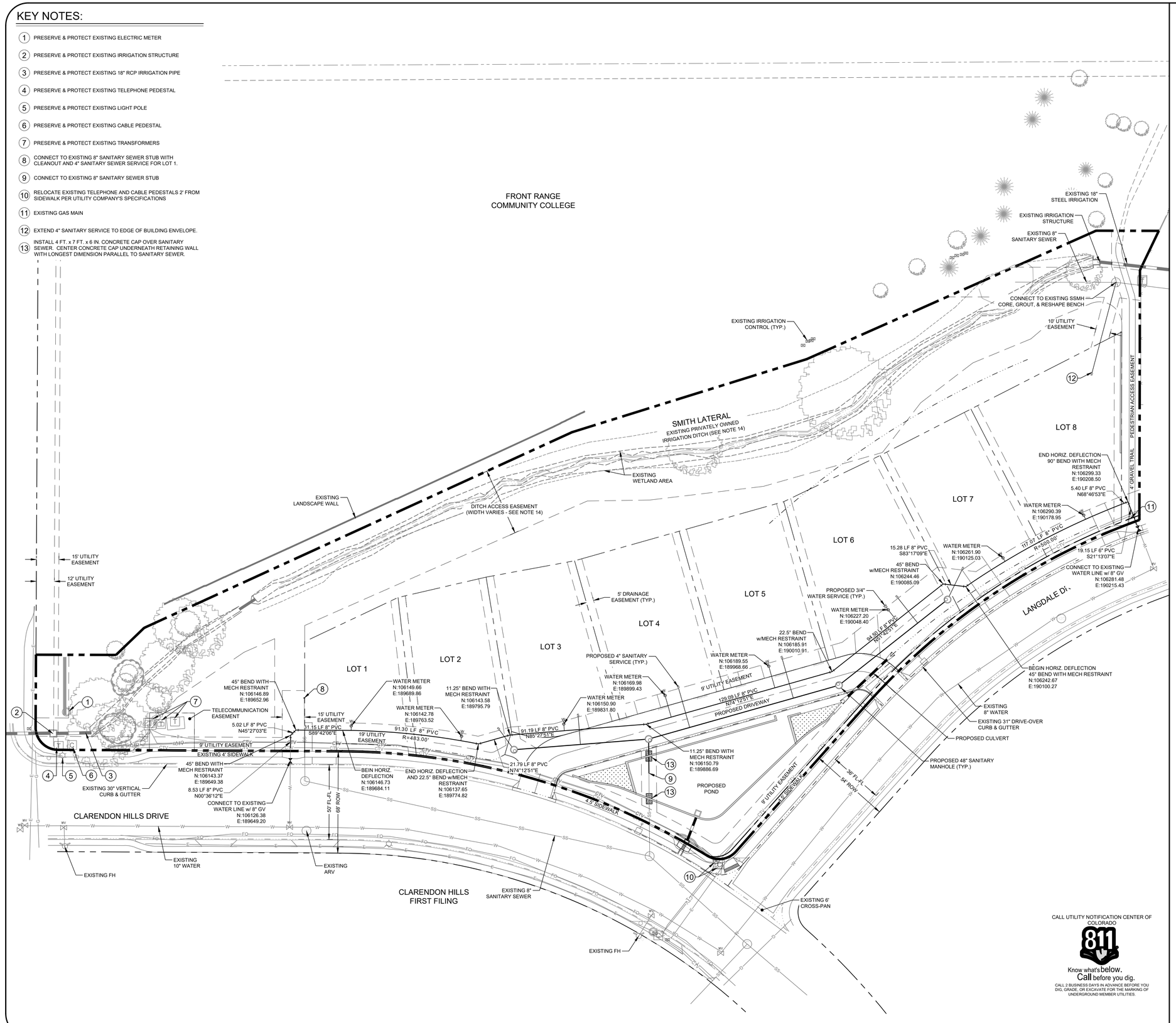
HORIZONTAL CONTROL PLAN

Sheet
HC1

DRAWING FILENAME: P:\1013-008\Dwg\Site\1013-008_HC02.dwg [LAYOUT NAME: Layout1 DATE: Sep 30, 2020 - 3:09pm CAD OPERATOR: fred
LIST OF XREFS: [1013-008_ACAD] [1013-008_GRID] [NES-Xborder]

KEY NOTES:

1. PRESERVE & PROTECT EXISTING ELECTRIC METER
2. PRESERVE & PROTECT EXISTING IRRIGATION STRUCTURE
3. PRESERVE & PROTECT EXISTING 18" RCP IRRIGATION PIPE
4. PRESERVE & PROTECT EXISTING TELEPHONE PEDESTAL
5. PRESERVE & PROTECT EXISTING LIGHT POLE
6. PRESERVE & PROTECT EXISTING CABLE PEDESTAL
7. PRESERVE & PROTECT EXISTING TRANSFORMERS
8. CONNECT TO EXISTING 8" SANITARY SEWER STUB WITH CLEANOUT AND 4" SANITARY SEWER SERVICE FOR LOT 1.
9. CONNECT TO EXISTING 8" SANITARY SEWER STUB
10. RELOCATE EXISTING TELEPHONE AND CABLE PEDESTALS 2' FROM SIDEWALK PER UTILITY COMPANY'S SPECIFICATIONS
11. EXISTING GAS MAIN
12. EXTEND 4" SANITARY SERVICE TO EDGE OF BUILDING ENVELOPE.
13. INSTALL 4 FT. x 7 FT. x 6 IN. CONCRETE CAP OVER SANITARY SEWER. CENTER CONCRETE CAP UNDERNEATH RETAINING WALL WITH LONGEST DIMENSION PARALLEL TO SANITARY SEWER.



LEGEND:

- EXISTING WATER MAIN
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER
- PROPOSED WATER SERVICE
- PROPOSED SANITARY SERVICE
- EXISTING STORM DRAIN / IRRIGATION
- PROPOSED STORM DRAIN / IRRIGATION
- EXISTING GASLINE
- EXISTING CABLE
- EXISTING ELECTRIC
- EXISTING FIBER OPTIC
- PROPOSED CURB & GUTTER
- PROPERTY BOUNDARY
- PROPOSED LOTLINE
- EASEMENT
- EXISTING FIRE HYDRANT
- EXISTING WATER MANHOLE
- EXISTING CABLE PEDESTAL
- EXISTING TELEPHONE PEDESTAL
- EXISTING IRRIGATION CONTROL
- EXISTING ELECTRIC METER
- EXISTING LIGHT POLE

NOTES:

1. THE SIZE, TYPE AND LOCATION OF ALL KNOWN UNDERGROUND UTILITIES ARE APPROXIMATE WHEN SHOWN ON THESE DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE OF ALL UNDERGROUND UTILITIES IN THE AREA OF THE WORK. BEFORE COMMENCING NEW CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR ALL UNKNOWN UNDERGROUND UTILITIES.
2. ALL WATER FITTINGS AND VALVES ARE ONLY GRAPHICALLY REPRESENTED AND ARE NOT TO SCALE.
3. UTILITY SERVICES ARE SHOWN IN A SCHEMATIC FASHION ONLY. EXACT LOCATIONS SHALL BE PER THE REQUIREMENTS OF THE RESPECTIVE UTILITY PROVIDERS, AND ARE SUBJECT TO CHANGE IN THE FIELD.
4. REFER TO THE PLAT FOR LOT AREAS, TRACT SIZES, EASEMENTS, LOT DIMENSIONS, UTILITY EASEMENTS, OTHER EASEMENTS, AND OTHER SURVEY INFORMATION.
5. LIMITS OF STREET CUT ARE APPROXIMATE. FINAL LIMITS ARE TO BE DETERMINED IN THE FIELD BY THE CITY ENGINEERING INSPECTOR. ALL REPAIRS TO BE IN ACCORDANCE WITH CITY STREET REPAIR STANDARDS.
6. ANY DAMAGED CURB, GUTTER AND SIDEWALK EXISTING PRIOR TO CONSTRUCTION, AS WELL AS STREETS, SIDEWALKS, CURBS AND GUTTERS, DESTROYED, DAMAGED OR REMOVED DUE TO CONSTRUCTION OF THIS PROJECT, SHALL BE REPLACED OR RESTORED TO CITY OR FORT COLLINS STANDARDS AT THE DEVELOPERS EXPENSE PRIOR TO THE ACCEPTANCE OF COMPLETED IMPROVEMENTS AND/OR PRIOR TO THE ISSUANCE OF CERTIFICATE OF OCCUPANCY.
7. PIPE LENGTHS ARE CALCULATED FROM THE CENTER OF MANHOLES AND INLET BOX STRUCTURES. SPECIFIED LENGTH OF PIPE INCLUDES THE LAYING LENGTH OF FLARED END SECTIONS.
8. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY NECESSARY FIELD LOCATES AND POTHOLING OF SUBSURFACE UTILITIES. ENGINEER AND CITY SHALL BE NOTIFIED OF ANY POTENTIAL CONFLICTS.
9. CONTRACTOR SHALL COORDINATE ANY NECESSARY TELEPHONE, CABLE, FIBER, GAS, AND ELECTRIC LOWERINGS (OR RE-ROUTING) WITH THE RESPECTIVE UTILITY PROVIDERS.
10. CONTRACTOR TO COORDINATE FINAL LOCATION OF ALL GAS AND ELECTRIC METERS WITH ARCHITECT AND UTILITY PROVIDERS.
11. ALL IRRIGATION INFRASTRUCTURE IS TO BE PRIVATELY OWNED AND MAINTAINED.
12. THE NATURAL HABITAT BUFFER ZONE IS INTENDED TO BE MAINTAINED IN A NATIVE LANDSCAPE. PLEASE SEE SECTION 3.4.1 OF THE LAND USE CODE FOR ALLOWABLE USES WITHIN THE NATURAL HABITAT BUFFER ZONE.
13. ALL BENDS, TEES, CROSSES, AND DEAD ENDS SHALL BE MECHANICALLY RESTRAINED PER FORT COLLINS-LOVELAND WATER DISTRICT REGULATIONS.
14. THE SMITH LATERAL IS OWNED BY NUMEROUS INDIVIDUAL OWNERS AS WELL AS THE CITY OF FORT COLLINS (THROUGH THE PARKS DEPARTMENT) WHO USE THE DITCH TO CONVEY IRRIGATION WATER. APPROVAL FROM THE IRRIGATION DITCH OWNERS IS REQUIRED PRIOR TO ANY WORK ON THE DITCH OR IN ITS EASEMENT, AS WELL AS BEFORE ANY STORMWATER CAN BE DISCHARGED, OR PLANNED TO BE DISCHARGED INTO THE DITCH. PLEASE CONTACT JILL WUERTZ (970-416-2062), 413 S. BRYAN AVE, FORT COLLINS, CO 80521 REGARDING THE PARKS' DEPARTMENT'S INTEREST.
15. BUILDING CONTRACTOR WILL BE REQUIRED TO INSTALL THE ELECTRIC METER SOCKET(S) ON THE SAME SIDE AS THE ELECTRIC SERVICE STUB.
16. BUILDING CONTRACTOR IS ENCOURAGED TO INSTALL THE NATURAL GAS METER(S) ON THE OPPOSITE SIDE OF THE HOUSE FROM THE ELECTRIC SERVICE.
17. THE ELECTRIC SERVICE TRENCH MUST BE A MINIMUM OF 3 FEET FROM THE NATURAL GAS SERVICE TRENCH, AND THE ELECTRIC AND GAS SERVICES SHALL NOT CROSS EACH OTHER.

FORT COLLINS - LOVELAND WATER DISTRICT

SOUTH FORT COLLINS SANITATION DISTRICT

District Engineer — Date

All changes, addendums, additions, deletions and modifications to these drawings must be approved, in writing, by the Fort Collins-Loveland Water District and the South Fort Collins Sanitation District.

City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED: City Engineer — Date
CHECKED BY: Water & Wastewater Utility — Date
CHECKED BY: Stormwater Utility — Date
CHECKED BY: Parks & Recreation — Date
CHECKED BY: Traffic Engineer — Date
CHECKED BY: Environmental Planner — Date

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

Revisions:

No.	Date:
	FOR REVIEW SET NOT FOR CONSTRUCTION 09/30/20

NORTHERN ENGINEERING
970.221.4158
northernengineering.com
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631

DATE: 09/30/20
SCALE: #########
P. MANAGER: A. Reese
PROJECT: 1013-008
DESIGNED BY: F. Weget
DRAWN BY: M. Kuehnel

HOMESTEAD AT CLARENDON HILLS

UTILITY PLAN

Sheet
U1
5 of 15

DRAWING FILENAME: P:\1013-008\Dwg\Ush\1013-008_UTL.dwg LAYOUT NAME: U1 DATE: Sep 29, 2020 - 3:09pm CAD OPERATOR: fred
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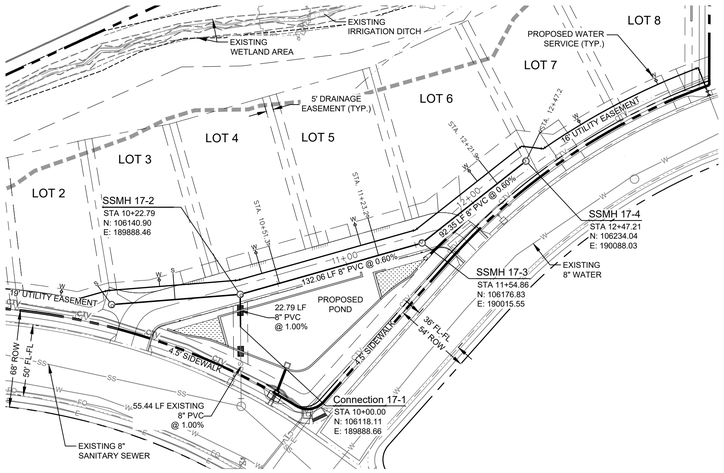

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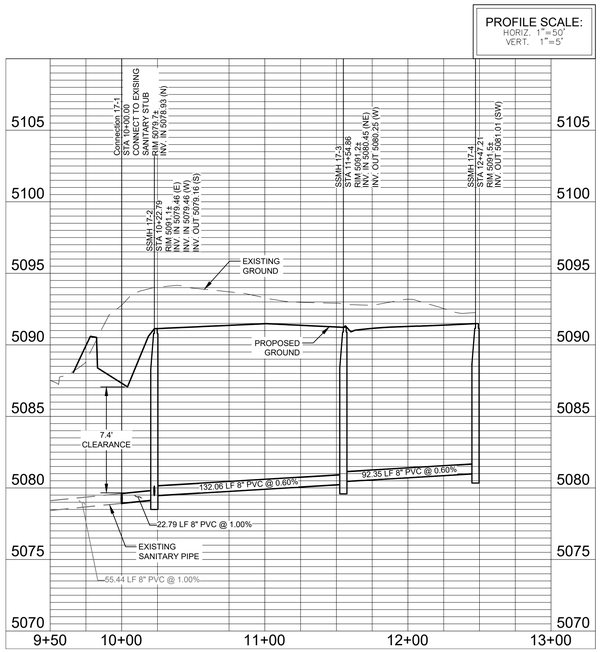

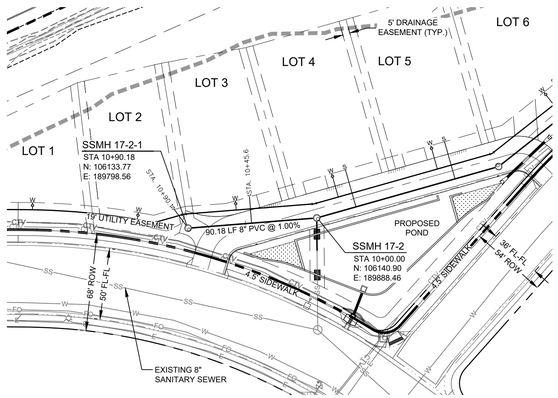

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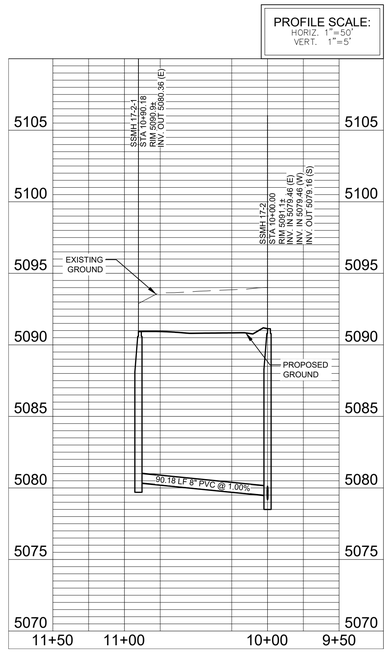

LEGEND:

- EXISTING WATER MAIN — W
- PROPOSED WATER MAIN
- PROPOSED SANITARY SEWER
- EXISTING SANITARY SEWER — SS
- PROPOSED WATER SERVICE — W
- PROPOSED SANITARY SERVICE — S
- PROPOSED STORM DRAIN / IRRIGATION
- EXISTING CABLE — CTV
- EXISTING ELECTRIC — E
- EXISTING FIBER OPTIC — FO
- PROPOSED CURB & GUTTER
- PROPERTY BOUNDARY
- PROPOSED LOTLINE
- EASEMENT
- EXISTING FIRE HYDRANT
- EXISTING WATER MANHOLE
- EXISTING WATER VALVE
- EXISTING CABLE PEDESTAL — C
- EXISTING TELEPHONE PEDESTAL — T
- EXISTING ELECTRIC METER — E
- EXISTING LIGHT POLE

NOTES:

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9. CONTRACTOR SHALL VERIFY THE INVERT AND SLOPE OF EXISTING SANITARY STUBS PRIOR TO CONSTRUCTION.

CALL UTILITY NOTIFICATION CENTER OF COLORADO

811 Know what's below. Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

FORT COLLINS - LOVELAND WATER DISTRICT

SOUTH FORT COLLINS SANITATION DISTRICT

District Engineer _____ Date

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City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED: _____ City Engineer _____ Date

CHECKED BY: _____ Water & Wastewater Utility _____ Date

CHECKED BY: _____ Stormwater Utility _____ Date

CHECKED BY: _____ Parks & Recreation _____ Date

CHECKED BY: _____ Traffic Engineer _____ Date

CHECKED BY: _____ Environmental Planner _____ Date

Revisions: No. Date:
1 REVIEW SET NOT FOR CONSTRUCTION 09/30/20

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

PROJECT: 1013-008
DESIGNED BY: F. Weigert
DRAWN BY: M. Kuehnel
DATE: 09/30/20
SCALE: 1" = 50'
P. MANAGER: A. Reese

HOMESTEAD AT CLARENDON HILLS

SANITARY LINES #17-1 & #17-2 PLAN & PROFILE

Sheet SS1

6 of 15

DRAWING FILENAME: P:\1013-008\Dwg\Util\1013-008_SN4 #17-1 & #17-2.dwg LAYOUT NAME: SS1 DATE: Sep 29, 2020 - 3:09pm CAD OPERATOR: fred
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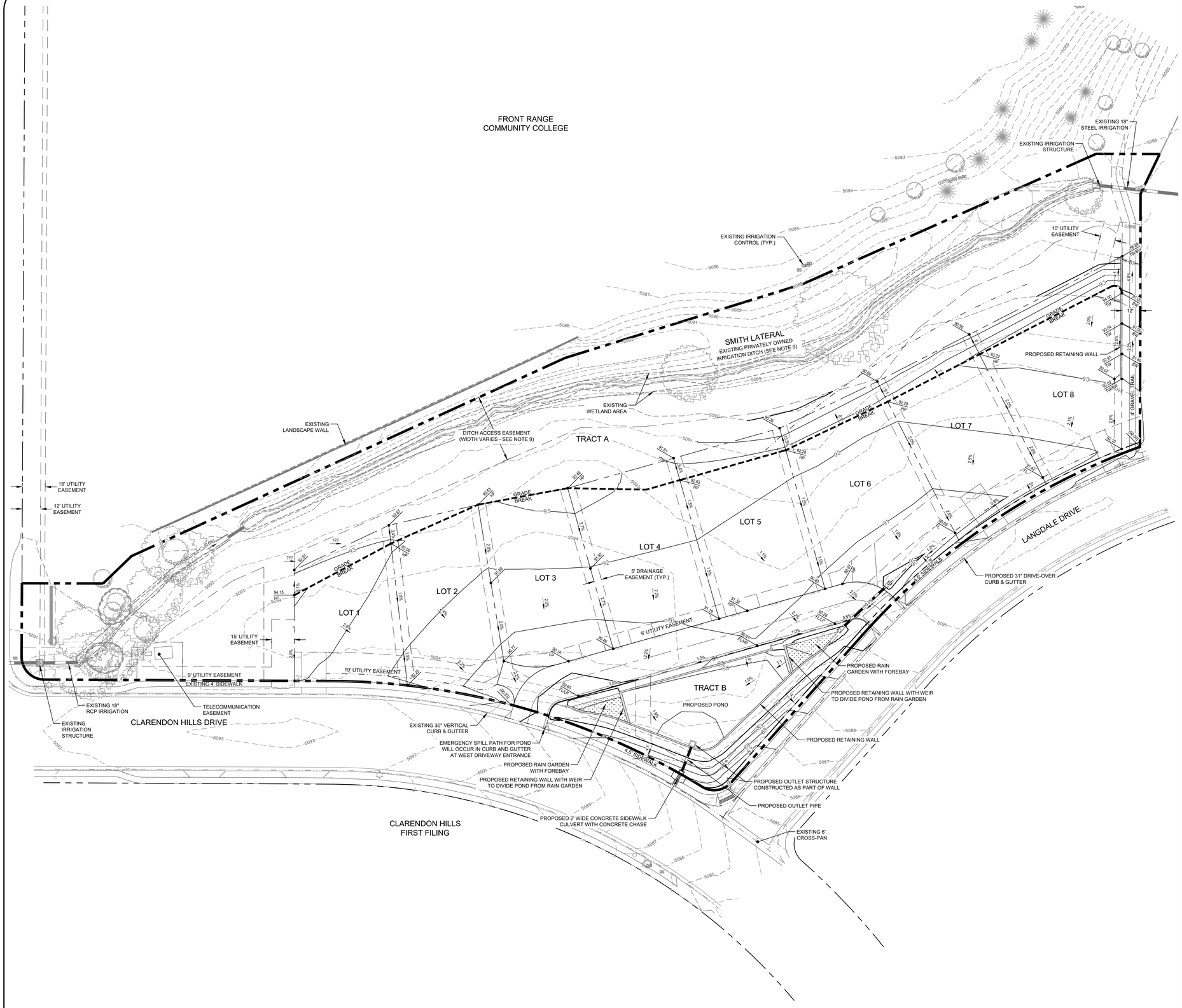

NORTH

30 0 30 60 90 Feet

(IN FEET)
1 inch = 30 ft.

LEGEND:

- PROPOSED CONTOUR — 93
- EXISTING CONTOUR — 5013
- PROPOSED STORM DRAIN / IRRIGATION
- EXISTING CURB AND GUTTER
- PROPOSED SWALE
- PROPERTY BOUNDARY
- PROPOSED LOT LINE
- EASEMENT
- PROPOSED SPOT ELEVATION — 33.43
- EXISTING SPOT ELEVATION — (47.45)
- PROPOSED SLOPES — 2.0%

NOTES:

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City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED: _____ City Engineer _____ Date
CHECKED BY: _____ Water & Wastewater Utility _____ Date
CHECKED BY: _____ Stormwater Utility _____ Date
CHECKED BY: _____ Parks & Recreation _____ Date
CHECKED BY: _____ Traffic Engineer _____ Date
CHECKED BY: _____ Environmental Planner _____ Date

Revisions:

No.	Date:
	REVIEW SET NOT FOR CONSTRUCTION 09/30/20

NORTHERN ENGINEERING
970.221.4158
northernengineering.com
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631

PROJECT: 1013-008
DESIGNED BY: F. Wegert
DRAWN BY: F. Wegert
DATE: 09/30/20
SCALE: 1" = 30'
P. MANAGER: A. Reese

HOMESTEAD AT CLARENDON HILLS

GRADING PLAN

Sheet
G1
7 of 15

DRAWING FILENAME: P:\1013-008\Dwg\Grad\1013-008_GRAD.dwg LAYOUT NAME: G1 DATE: Sep 29, 2020 - 3:09pm CAD OPERATOR: fred
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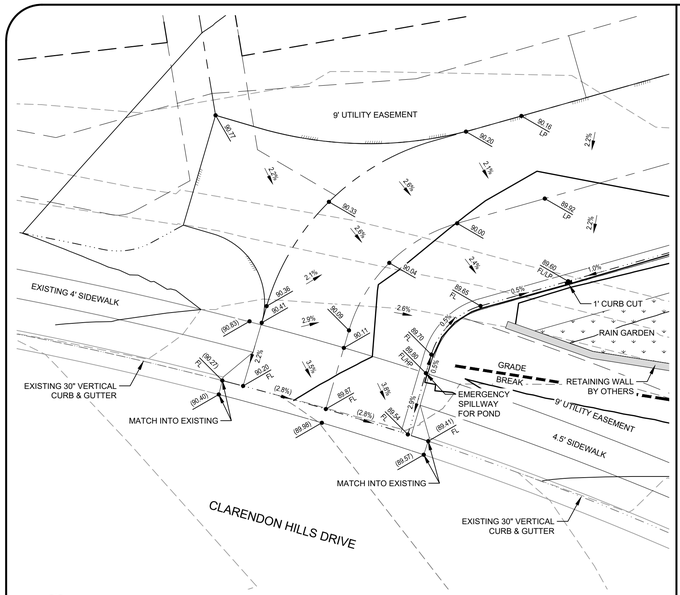
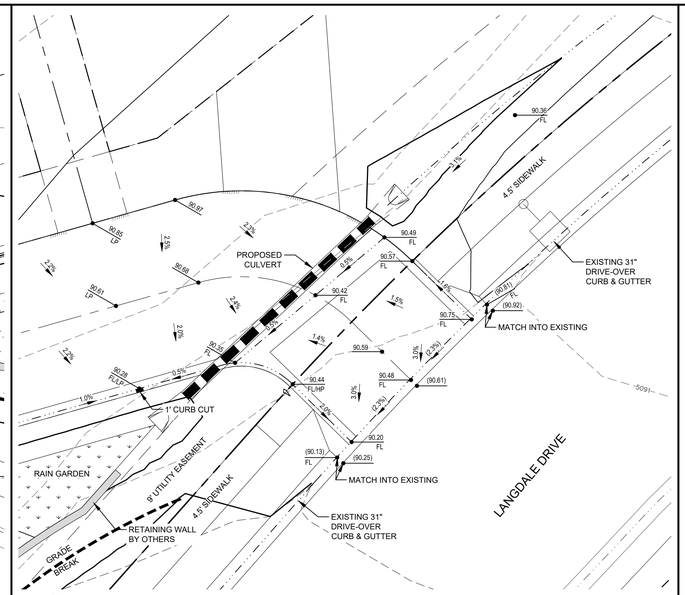
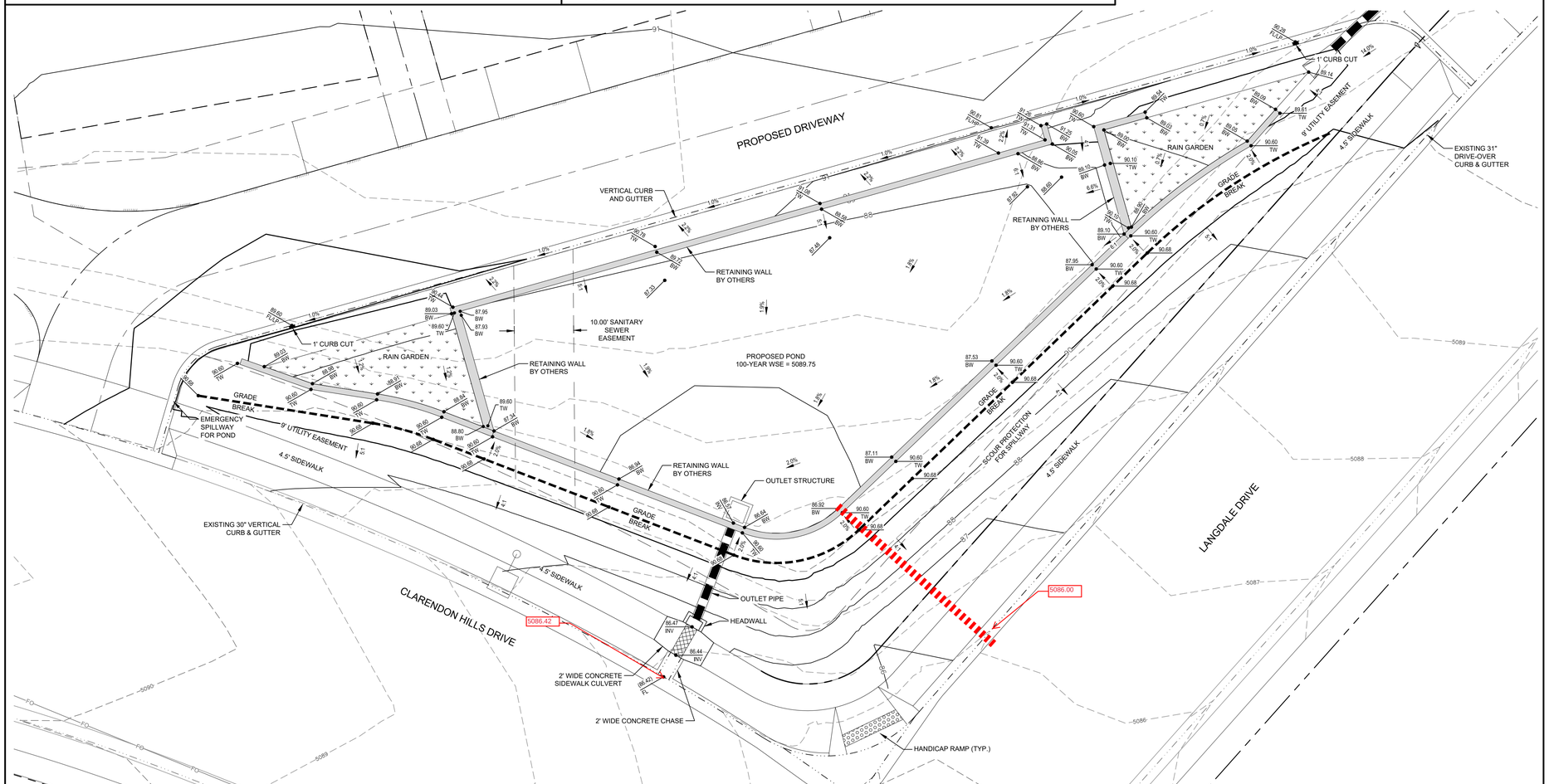


A CLARENDON HILLS DRIVE ENTRANCE 1" = 10'



B LANGDALE DRIVE ENTRANCE 1" = 10'



C DETENTION POND AND RAIN GARDENS 1" = 10'

NORTH

10 0 10 20 30

(IN FEET)
1 INCH = 10 FEET

LEGEND:

- PROPOSED CONTOUR — 93
- EXISTING CONTOUR — 5013
- PROPOSED STORM DRAIN / IRRIGATION
- EXISTING CURB AND GUTTER
- PROPOSED SWALE
- PROPERTY BOUNDARY
- PROPOSED LOT LINE
- EASEMENT
- PROPOSED SPOT ELEVATION — 33.43
  - HP = HIGH POINT
  - LP = LOW POINT
  - FL = FLOWLINE
  - INV = INVERT
  - TW = FINISH GROUND AT TOP OF WALL
  - BW = FINISH GROUND AT BOTTOM OF WALL
- EXISTING SPOT ELEVATION — (47.45)
- PROPOSED SLOPES — 2.0%

NOTES:

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City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED:	City Engineer	Date
CHECKED BY:	Water & Wastewater Utility	Date
CHECKED BY:	Stormwater Utility	Date
CHECKED BY:	Parks & Recreation	Date
CHECKED BY:	Traffic Engineer	Date
CHECKED BY:	Environmental Planner	Date

Revisions: No. Date:
REVIEW SET NOT FOR CONSTRUCTION 09/30/20

NORTHERN ENGINEERING
970.221.4158
northernengineering.com
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631

PROJECT: 1013-008
DESIGNED BY: F. Wegert
DRAWN BY: F. Wegert
DATE: 09/30/20
SCALE: As Noted
P. MANAGER: A. Reese

HOMESTEAD AT CLARENDON HILLS

GRADING DETAILS

Sheet G2

8 of 15

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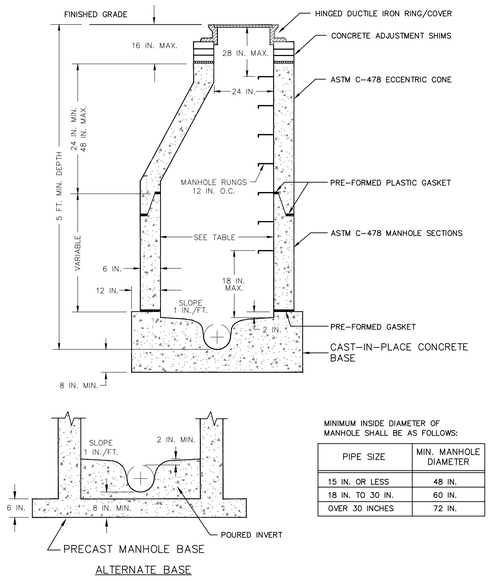


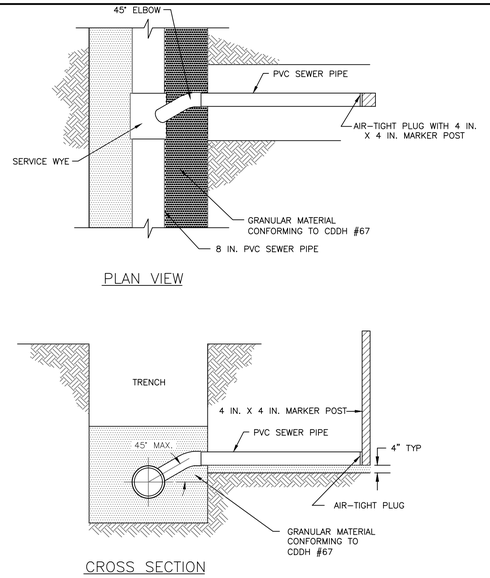
MINIMUM INSIDE DIAMETER OF MANHOLE SHALL BE AS FOLLOWS:

PIPE SIZE	MIN. MANHOLE DIAMETER
15 IN. OR LESS	48 IN.
18 IN. TO 30 IN.	60 IN.
OVER 30 INCHES	72 IN.

TYPICAL MANHOLE

SOUTH FORT COLLINS SANITATION DISTRICT
OFFICE (970) 226-3104 FAX (970) 226-0186
APPROVED:
DATE: 12-15-2010
SCALE: NTS

100 / D1 TYPICAL MANHOLE NOT TO SCALE

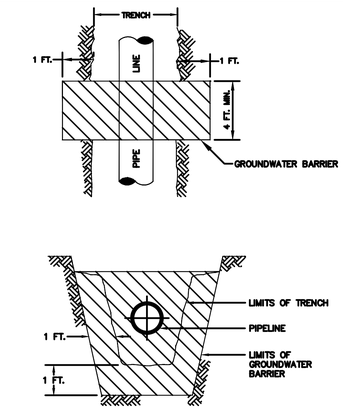


NOTE: WYE CONNECTION NOT ALLOWED ON VCP

TYPICAL SANITARY SEWER SERVICE CONNECTION

SOUTH FORT COLLINS SANITATION DISTRICT
Office (970) 226-3104 Fax (970) 226-0186
APPROVED:
DATE: 12-15-2010
SCALE: NTS

101 / D1 TYPICAL SANITARY SEWER SERVICE CONNECTION NOT TO SCALE



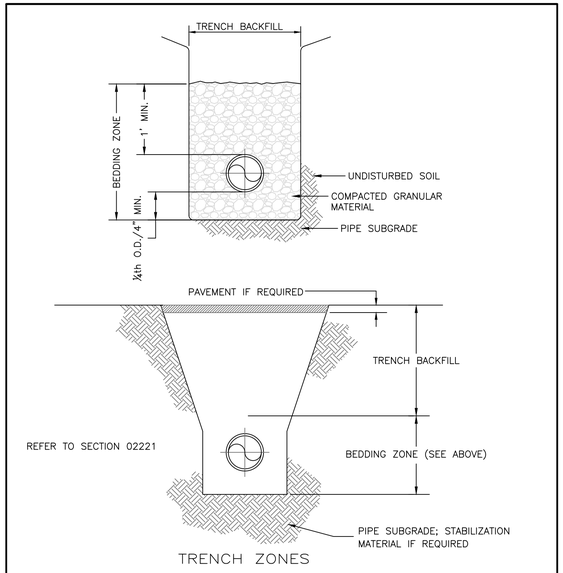
NOTES:

1. **WALL EXTENDS A MINIMUM OF 12" INTO UNDISTURBED SOIL ON EACH SIDE AND ON BOTTOM OF TRENCH.**
2. **SPACE GROUNDWATER BARRIERS A MAXIMUM OF 400 FEET APART. BARRIERS ARE TYPICALLY LOCATED UPSTREAM OF MANHOLES.**
3. **THE GROUNDWATER BARRIER SHALL EXTEND TO A POINT TWO FEET ABOVE THE GROUNDWATER LEVEL AS SHOWN IN THE APPROVED PROJECT GEOTECHNICAL INVESTIGATION REPORT.**
4. **REFER TO SECTION 02221.**

TYPICAL GROUNDWATER BARRIER

SOUTH FORT COLLINS SANITATION DISTRICT
Office (970) 226-3104 Fax (970) 226-0186
APPROVED:
DATE: 12-15-2010
SCALE: NTS

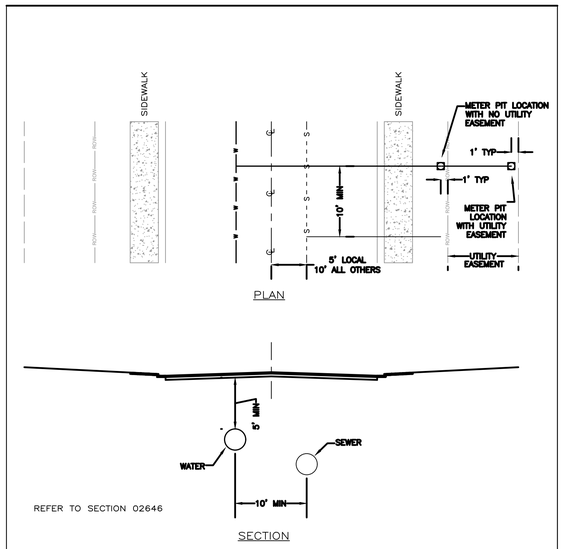
102 / D1 TYPICAL GROUNDWATER BARRIER NOT TO SCALE



TRENCH AND BEDDING TYPICAL

SOUTH FORT COLLINS SANITATION DISTRICT
Office (970) 226-3104 Fax (970) 226-0186
APPROVED:
DATE: 12-15-2010
SCALE: NTS

103 / D1 TRENCH AND BEDDING TYPICAL NOT TO SCALE



TYPICAL UTILILTY SERVICE LOCATION

SOUTH FORT COLLINS SANITATION DISTRICT
Office (970) 226-3104 Fax (970) 226-0186
APPROVED:
DATE: 12-15-2010
SCALE: NTS

104 / D1 TYPICAL UTILITY SERVICE LOCATION NOT TO SCALE

CALL UTILITY NOTIFICATION CENTER OF COLORADO

811

Know what's **below.**
Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

FORT COLLINS - LOVELAND WATER DISTRICT

SOUTH FORT COLLINS SANITATION DISTRICT

District Engineer Date

All changes, addendums, additions, deletions and modifications to these drawings must be approved, in writing, by the Fort Collins-Loveland Water District and the South Fort Collins Sanitation District.

Revisions: No. Date:
REVIEW SET NOT FOR CONSTRUCTION 09/30/20

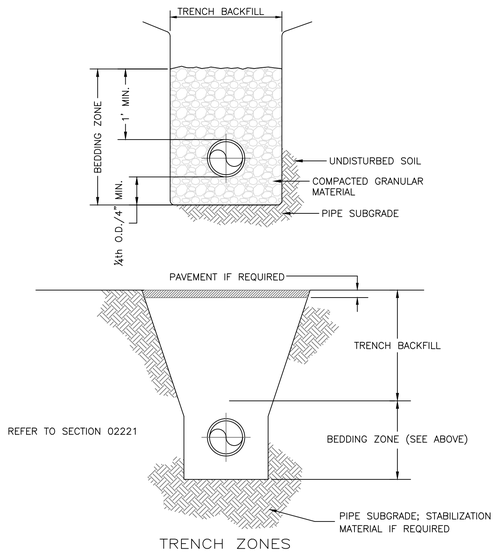
NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

PROJECT: 1013-008
DESIGNED BY: F. Weigert
DRAWN BY: M. Kuehnel
DATE: 09/30/20
SCALE: N/A
P. MANAGER: A. Reese

HOMESTEAD AT CLARENDON HILLS

SANITARY DETAILS

Sheet D1
9 of 15



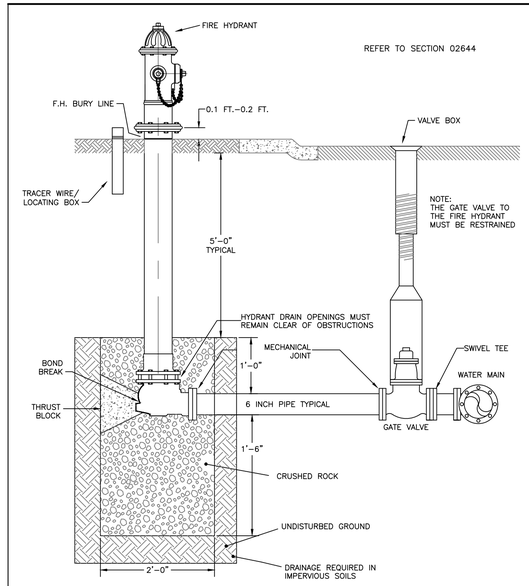
TRENCH AND BEDDING TYPICAL

FORT COLLINS – LOVELAND WATER DISTRICT
Office (970) 226-3104 Fax (970) 226-0186

APPROVED:
DATE: 6-18-2010

SCALE: NTS

200 D2 — TRENCH AND BEDDING TYPICAL — NOT TO SCALE



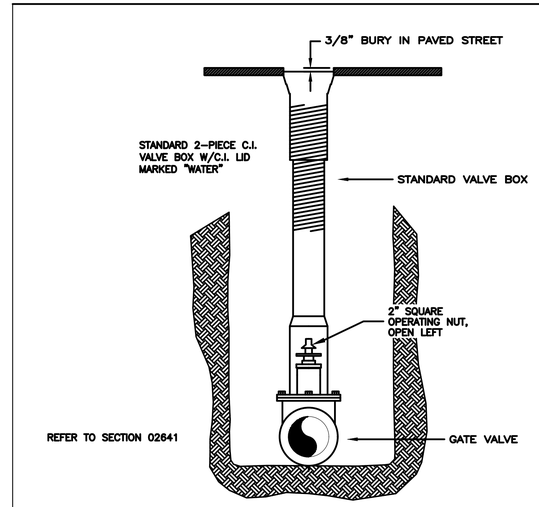
TYPICAL FIRE HYDRANT INSTALLATION

FORT COLLINS – LOVELAND WATER DISTRICT
Office (970) 226-3104 Fax (970) 226-0186

APPROVED:
DATE: 6-18-2010

SCALE: NTS

201 D2 — TYPICAL FIRE HYDRANT INSTALLATION — NOT TO SCALE



NOTE:
VALVE BOX SHALL BE CENTERED AND PLUMB OVER THE OPERATING NUT.

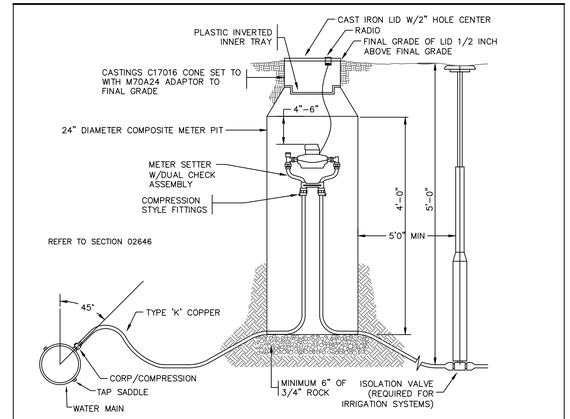
TYPICAL GATE VALVE INSTALLATION

FORT COLLINS – LOVELAND WATER DISTRICT
Office (970) 226-3104 Fax (970) 226-0186

APPROVED:
DATE: 6-18-2010

SCALE: NTS

202 D2 — TYPICAL GATE VALVE INSTALLATION — NOT TO SCALE



GENERAL NOTES:

1. METER PITS ARE TO BE INSTALLED AT CENTER OF LOT UNLESS OTHERWISE APPROVED BY THE DISTRICT. METER PITS SHALL NOT BE LOCATED IN AREAS SUBJECT TO TRAFFIC OF PEDESTRIAN WALKWAYS.

2. NO LANDSCAPING (TREES, SHRUBS, BOULDERS, ETC.) IS TO BE WITHIN 5 FEET OF METER PIT.

3. GROUND SURROUNDING METER PIT SHALL SLOPE AWAY FROM LID.

4. NO PLUMBING CONNECTIONS ARE TO BE MADE IN METER PIT.

5. LAWN SPRINKLER CONNECTIONS ARE TO BE AT LEAST 5 FEET FROM METER PIT ON THE OUTLET SIDE.

6. IRRIGATION SYSTEMS REQUIRE AN ISOLATION VALVE DOWNSTREAM OF THE PIT, MINIMUM OF 5 FEET.

7. VALVES TO BE OPERATED BY DISTRICT PERSONNEL ONLY, WITH EXCEPTION TO THE IRRIGATION ISOLATION VALVES.

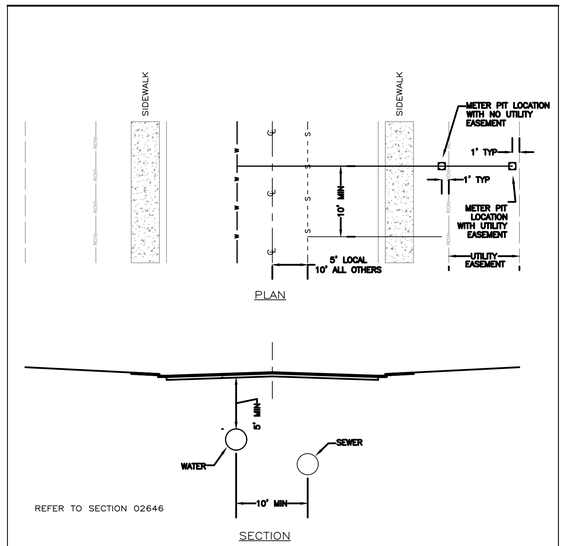
TYPICAL METER PIT INSTALLATION

FORT COLLINS – LOVELAND WATER DISTRICT
Office (970) 226-3104 Fax (970) 226-0186

APPROVED:
DATE: 9/25/2017

SCALE: NTS

203 D2 — TYPICAL METER PIT INSTALLATION — NOT TO SCALE



TYPICAL UTILILTY SERVICE LOCATION

FORT COLLINS – LOVELAND WATER DISTRICT
Office (970) 226-3104 Fax (970) 226-0186

APPROVED:
DATE: 6-18-2010

SCALE: NTS

204 D2 — TYPICAL UTILITY SERVICE LOCATION — NOT TO SCALE

CALL UTILITY NOTIFICATION CENTER OF COLORADO

811

Know what's **below.**
Call before you dig.

CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

FORT COLLINS - LOVELAND WATER DISTRICT

SOUTH FORT COLLINS SANITATION DISTRICT

District Engineer Date

All changes, addendums, additions, deletions and modifications to these drawings must be approved, in writing, by the Fort Collins-Loveland Water District and the South Fort Collins Sanitation District.

Revisions: No. Date:
REVIEW SET NOT FOR CONSTRUCTION 09/30/20

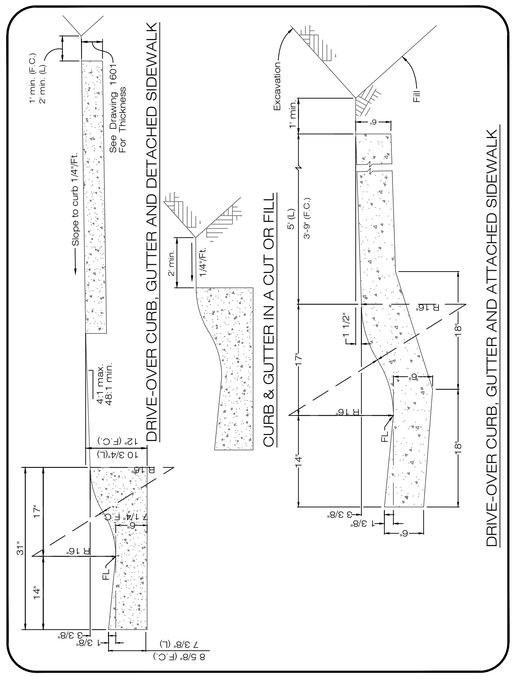
NORTHERN ENGINEERING
970.221.4158
northernengineering.com
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631

DATE: 09/30/20
SCALE: N/A
P. MANAGER: A. Reese
PROJECT: 1013-008
DESIGNED BY: F. Weigel
DRAWN BY: M. Kuehnel

HOMESTEAD AT CLARENDON HILLS

WATER DETAILS

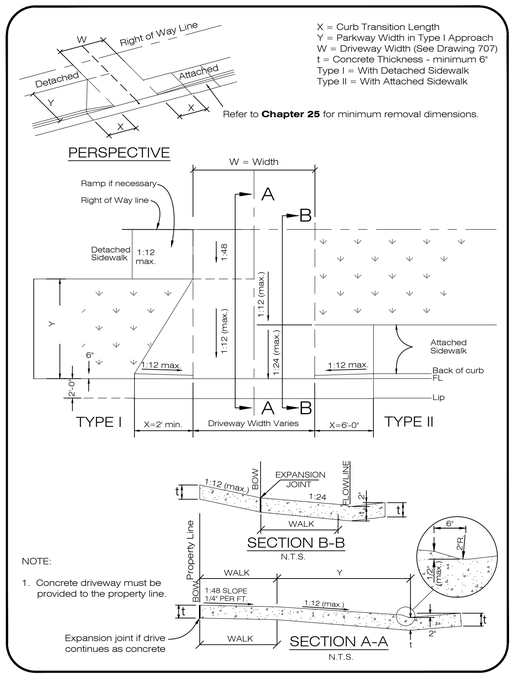
Sheet D2



CURB AND GUTTER/SIDEWALK

LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 1	DRAWING
		DATE: 03/01/02	702

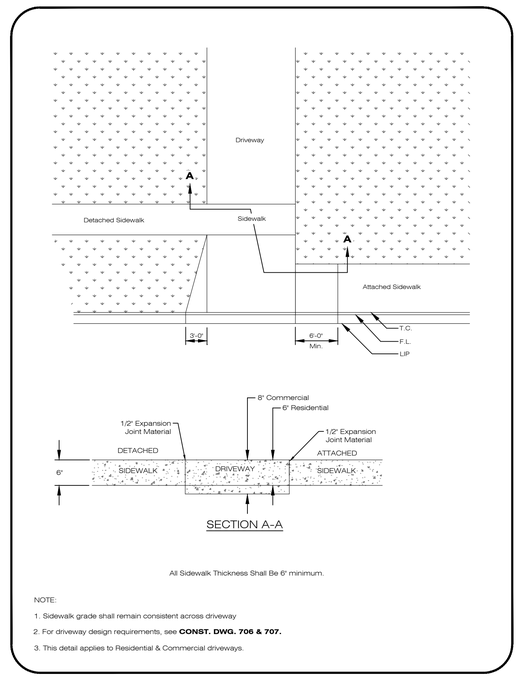
300 D3 — CURB AND GUTTER / SIDEWALK — NOT TO SCALE



STANDARD DRIVEWAY APPROACH (TYPES I & II)

LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 2	DRAWING
		DATE: 04/01/07	706

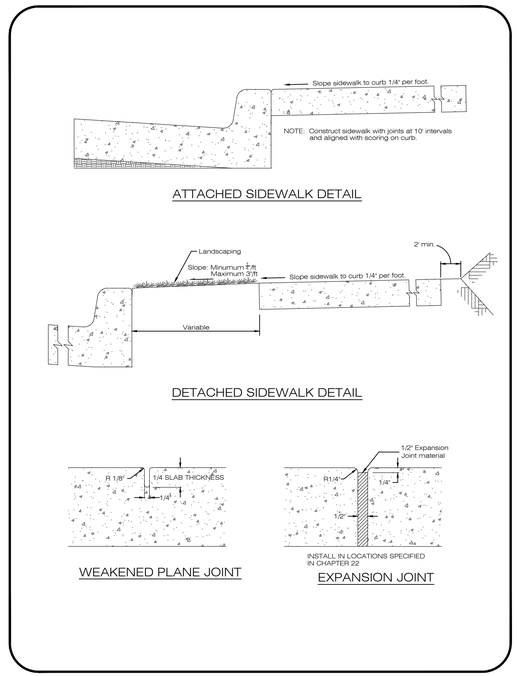
301 D3 — STANDARD DRIVEWAY APPROACH — NOT TO SCALE



STANDARD SIDEWALK

LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 1	DRAWING
		DATE: 04/01/07	1601

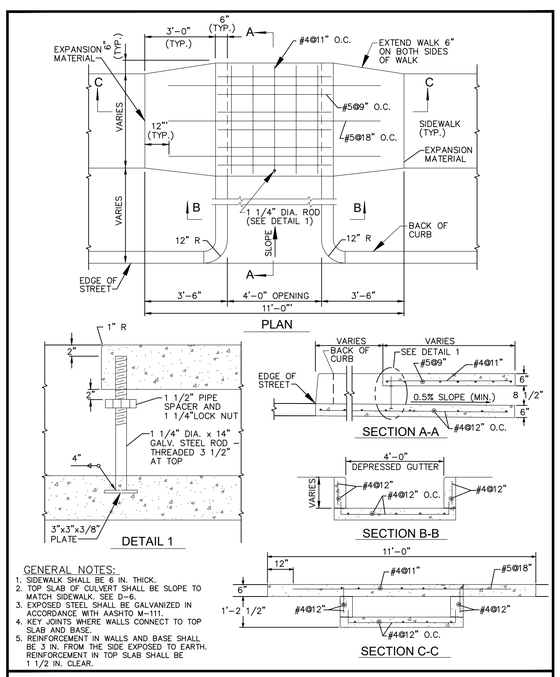
302 D3 — STANDARD SIDEWALK — NOT TO SCALE



SIDEWALK DETAIL

LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 2	DRAWING
		DATE: 04/01/07	1602

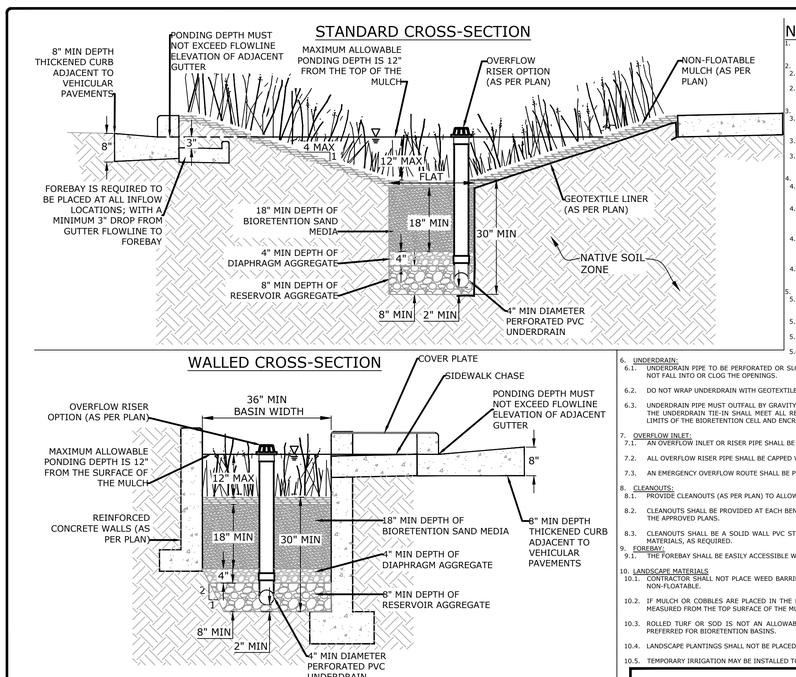
303 D3 — SIDEWALK DETAIL — NOT TO SCALE



CONCRETE SIDEWALK CULVERT FOR DETACHED SIDEWALK

City of Fort Collins	CITY OF FORT COLLINS UTILITIES FORT COLLINS, CO. (970) 221-6700	STORMWATER CONSTRUCTION DETAILS	APPROVED:	DETAIL
			DATE: 1-20-09	D-12B
			DRAWN BY: TDC	

304 D3 — SIDEWALK CULVERT — NOT TO SCALE



NOTES:

1. CONTRACTOR SHALL INSTALL BIORETENTION BASINS ACCORDING TO THE APPROVED PLANS AND/OR CONSTRUCTION SPECIFICATIONS.

2. PRE-CONSTRUCTION
2.1. CONTRACTOR SHALL AVOID COMPACTION OF THE BIORETENTION BASIN AREA TO PRESERVE EXISTING INFILTRATION RATES.
2.2. CONTRACTOR SHALL CALL FOR CITY INSPECTIONS AT THE INTERVALS STIPULATED IN THE "DURING CONSTRUCTION INSPECTION CHECKLISTS".

3. DURING CONSTRUCTION:
3.1. CONTRACTOR SHALL PROVIDE CONSTRUCTION OBSERVATION DURING CONSTRUCTION OF THE BIORETENTION BASIN TO ENSURE COMPLIANCE WITH THE APPROVED PLANS AND DESIGN SPECIFICATIONS.
3.2. LOOSE MATERIALS SHALL NOT BE STORED ON THE BIORETENTION AREA.
3.3. THE CONTRACTOR SHALL, AT ALL TIMES DURING AND AFTER SYSTEM INSTALLATION, PREVENT SEDIMENT, DEBRIS AND DIRT FROM ANY SOURCE FROM ENTERING THE BIORETENTION SYSTEM.

4. GEOTEXTILE LINERS:
4.1. WHERE USED, GEOTEXTILE LINERS (PERMEABLE OR IMPERMEABLE AS PER PLAN) SHALL BE INSTALLED ALONG PERIMETER OF CROSS-SECTION OF THE BIORETENTION CELL.
4.2. WHERE USED, GEOTEXTILE LINERS SHALL BE PLACED IN ACCORDANCE WITH MANUFACTURER'S STANDARDS AND RECOMMENDATIONS. ALL SEAMS AND OPENINGS IN THE LINER SHALL BE SEALED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
4.3. WHERE USED, IMPERMEABLE GEOMEMBRANE SHEET / LINER SHALL BE 40 MIL THICK, HIGH-DENSITY POLYETHYLENE DESIGNED SPECIFICALLY FOR FLEXIBLE GEOMEMBRANE APPLICATIONS. ADJACENT STRIPS OF IMPERMEABLE LINER SHALL OVERLAP A MINIMUM OF 18", OR PER MANUFACTURER'S SPECIFICATION.
4.4. WHERE USED, CONTRACTOR TO PLACE LINER IN A WAY THAT ENSURES ENOUGH SLACK IN THE LINER TO ALLOW FOR BACKFILL AND SETTLING WITHOUT TEARING THE LINER.

5. AGGREGATES AND BSM:
5.1. ALL AGGREGATES SHALL BE ANGULAR, CRUSHED, WASHED ROCK, CLEAN OF DEBRIS AND WITH NO MORE THAN 1% FINES.
5.2. RESERVOIR AGGREGATE SHALL BE GRADATION ASTM #57 OR #67.
5.3. DIAPHRAGM AGGREGATE SHALL BE "PEA GRAVEL", WITH GRADATION ASTM #8, #89 OR #9.
5.4. THE BIORETENTION SOIL SHALL MEET THE CITY BIORETENTION SAND MEDIA ("BSM") SPECIFICATION FOUND AT:https://www.fcgov.com/utilities/business/builders-and-developers/development-forms-guidelines-regulations/

6. UNDERDRAIN:
6.1. UNDERDRAIN PIPE TO BE PERFORATED OR SLOTTED. PERFORATIONS OR SLOTS TO BE SMALLER THAN SURROUNDING AGGREGATE TO ENSURE AGGREGATE DOES NOT FALL INTO OR CLOG THE OPENINGS.
6.2. DO NOT WRAP UNDERDRAIN WITH GEOTEXTILE OR SOCK.
6.3. UNDERDRAIN PIPE MUST OUTFALL BY GRAVITY AND MUST TIE INTO A STORMWATER PIPE, INLET OR SYSTEM AND THE LOCATION MUST BE APPROVED BY THE CITY. THE UNDERDRAIN TIE-IN SHALL MEET ALL REQUIRED PIPE SIZE, TYPES, AND COVER REQUIREMENTS THAT MAY APPLY TO PIPING THAT EXTENDS BEYOND THE LIMITS OF THE BIORETENTION CELL AND ENCROACHES INTO PUBLIC RIGHT-OF-WAY OR OTHER PROPERTY.

7. OVERFLOW INLET:
7.1. AN OVERFLOW INLET OR RISER PIPE SHALL BE PROVIDED.
7.2. ALL OVERFLOW RISER PIPE SHALL BE CAPPED WITH A DOME-SHAPED GRATE.
7.3. AN EMERGENCY OVERFLOW ROUTE SHALL BE PROVIDED AND THE LOCATION SHALL BE IDENTIFIED ON THE PLANS.

8. CLEANOUTS:
8.1. PROVIDE CLEANOUTS (AS PER PLAN) TO ALLOW INSPECTION (BY CAMERA) OF THE UNDERDRAIN SYSTEM DURING AND AFTER CONSTRUCTION.
8.2. CLEANOUTS SHALL BE PROVIDED AT EACH BEND GREATER THAN OR EQUAL TO 90° AND EVERY 100' ALONG A STRAIGHT RUN. CLEANOUT SHALL BE INSTALLED PER THE APPROVED PLANS.
8.3. CLEANOUTS SHALL BE A SOLID WALL PVC STRUCTURE FOR ALL VERTICAL SECTIONS WITH FITTINGS TO CONNECT TO DISTRIBUTION AND UNDERDRAIN PIPING MATERIALS, AS REQUIRED.

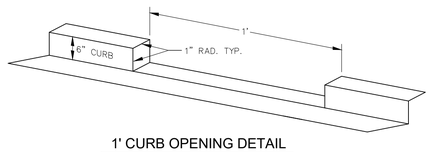
9. FOREBAY:
9.1. THE FOREBAY SHALL BE EASILY ACCESSIBLE WITH A HARD SURFACED BOTTOM FOR MAINTENANCE PURPOSES.

10. LANDSCAPE MATERIALS
10.1. CONTRACTOR SHALL NOT PLACE WEED BARRIER ANYWHERE WITHIN THE BIORETENTION BASIN. IF MULCH IS PLACED IN THE BIORETENTION BASIN, IT MUST BE NON-FLOATABLE.
10.2. IF MULCH OR COBBLES ARE PLACED IN THE BIORETENTION BASIN, THE MAXIMUM ALLOWABLE WATER DEPTH OF 12" AND REQUIRED BASIN VOLUME MUST BE MEASURED FROM THE TOP SURFACE OF THE MULCH OR COBBLE.
10.3. ROLLED TURF OR SOD IS NOT AN ALLOWABLE LANDSCAPE MATERIAL FOR BIORETENTION BASINS. LOW WATER CONSUMPTION LANDSCAPE PLANTINGS ARE PREFERRED FOR BIORETENTION BASINS.
10.4. LANDSCAPE PLANTINGS SHALL NOT BE PLACED TO IMPEDE DRAINAGE INTO OR OUT OF THE BIORETENTION BASIN.
10.5. TEMPORARY IRRIGATION MAY BE INSTALLED TO ESTABLISH LANDSCAPING OR SEED IN THE BIORETENTION BASIN.

BIORETENTION

City of Fort Collins	CITY OF FORT COLLINS UTILITIES P.O. BOX 580 FORT COLLINS, CO. 80522 (970) 221-6700	STORMWATER CONSTRUCTION DETAILS	APPROVED:	DETAIL
			DATE REVISED: DECEMBER 2018	D-53
			DRAWN BY: HEM	

305 D3 — RAIN GARDEN DETAIL — NOT TO SCALE



306 306 — 1' CURB CUT DETAIL — NOT TO SCALE

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

Revisions: No. Date:
REVIEW SET NOT FOR CONSTRUCTION 09/30/20

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

DATE: 09/30/20
SCALE: N/A
P. MANAGER: A. Reese
PROJECT: 1013-008
DESIGNED BY: F. Weigert
DRAWN BY: M. Kuehnel

HOMESTEAD AT CLARENDON HILLS

SITE & DRAINAGE DETAILS

Sheet D3
11 of 15

DRAWING FILENAME: P:\1013-008\Dwg\Details\1013-008_DET1-SITE.dwg LAYOUT NAME: D3 DATE: Sep 29, 2020 - 3:18pm CAD OPERATOR: fred
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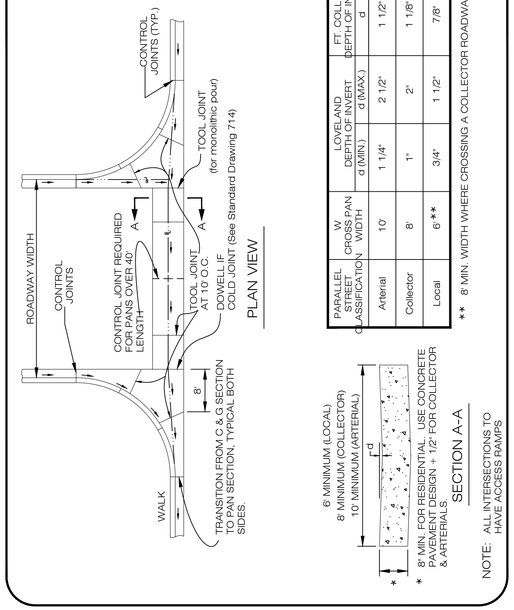


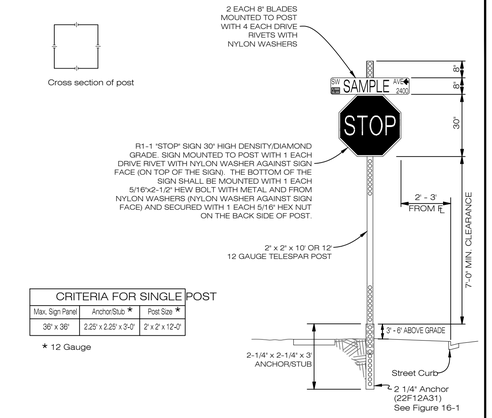
PARALLEL STREET CLASSIFICATION	W CROSS PAN WIDTH	LOVELAND DEPTH OF INVERT d (MIN.)	LOVELAND DEPTH OF INVERT d (MAX.)	FT. COLLINS DEPTH OF INVERT d
Arterial	10'	1 1/4"	2 1/2"	1 1/2"
Collector	8'	1"	2"	1 1/8"
Local	6'**	3/4"	1 1/2"	7/8"

** 8' MIN. WIDTH WHERE CROSSING A COLLECTOR ROADWAY.

STREET INTERSECTION CROSSPAN

LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 2	DRAWING
		DATE: 04/01/07	708

307 D4 — STREET INTERSECTION CROSSPAN — NOT TO SCALE



CRITERIA FOR SINGLE POST		
Max. Sign Panel	Anchor/Stub ★	Post Size ★
36" x 36"	2.25' x 2.25' x 3'-0"	2' x 2' x 12'-0"

★ 12 Gauge

NOTES:

1. Attach the sign panels tightly to the post and use oversized washers to keep the sign from breaking loose from the post when hit by a vehicle.
2. Sign panels should be mounted a minimum of 7 feet above the pavement or ground.
3. Signs larger than 36 inches in length or width require wind bracing and special post design.
4. Anchor Stub and post are square steel tube (perforated).
5. All "No Parking" signs shall be installed at 45° from Flow Line.

SIGN POST

LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 1	DRAWING
		DATE: 04/01/07	1401

308 D4 — SIGN POST DETAIL — NOT TO SCALE

STANDARD FIRE LANE SIGN DETAIL (FORT COLLINS ONLY)

UNIVERSAL FIRE LANE SIGN DETAIL

COLOR SCHEDULE	
LEGEND, CIRCLE DIAGONAL, BORDER, "ARROW", "FIRE LANE"	RED
BACKGROUND	WHITE
"P"	BLACK

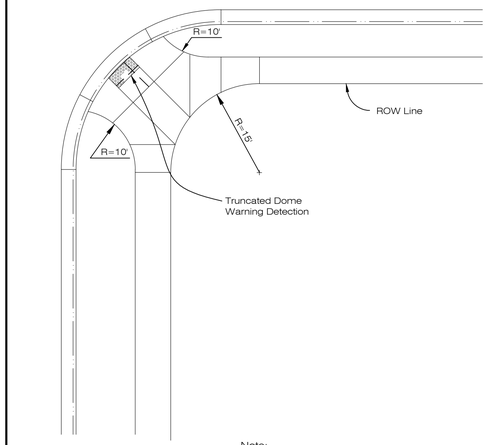
NOTES:

1. THE SIGN PLATE SHALL BE A MINIMUM OF 12"X18" WITH A THICKNESS OF .080 ALUMINUM CONSTRUCTION.
2. THE SIGN FACE SHALL HAVE A WHITE REFLECTIVE BACKGROUND WITH A RED LEGEND. USE THE STANDARD 3M SCOTCHLITE SIGN FACE NUMBER R7-32 OR EQUIVALENT, WITH RED LETTERING AS SHOWN ABOVE.
3. ARROWS MAY BE NEEDED (LEFT, RIGHT OR DOUBLE), TO DESIGNATE BEGIN AND END OF NO PARKING AREA.

FIRE ACCESS ROAD SIGNS

LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 2	DRAWING
		DATE: 04/01/07	1418

309 D4 — FIRE ACCESS ROAD SIGNS — NOT TO SCALE



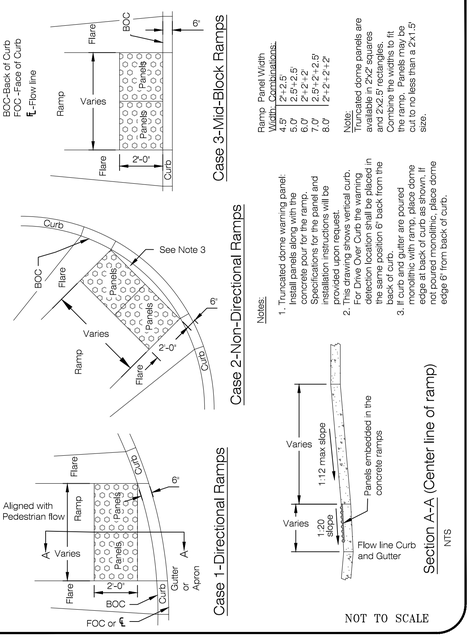
Note:
Use of this detail requires special approval in

DETACHED WALK / INTERSECTION DETAIL

LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 2	DRAWING
		DATE: 04/01/07	1605

310 D4 — DETACHED WALK / INTERSECTION DETAIL — NOT TO SCALE

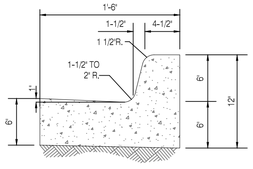
FORT COLLINS ONLY



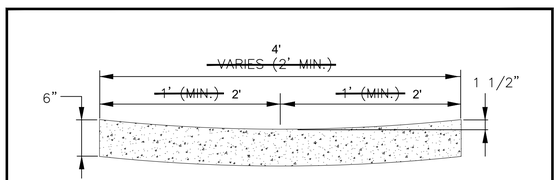
TRUNCATED DOME WARNING FOR ACCESS RAMPS

LARIMER COUNTY URBAN AREA STREET STANDARDS	CONSTRUCTION DRAWINGS	REVISION NO: 3	DRAWING
		DATE: 02/17/15	1607

311 D4 — TRUNCATED DOME FOR ACCESS RAMPS — NOT TO SCALE

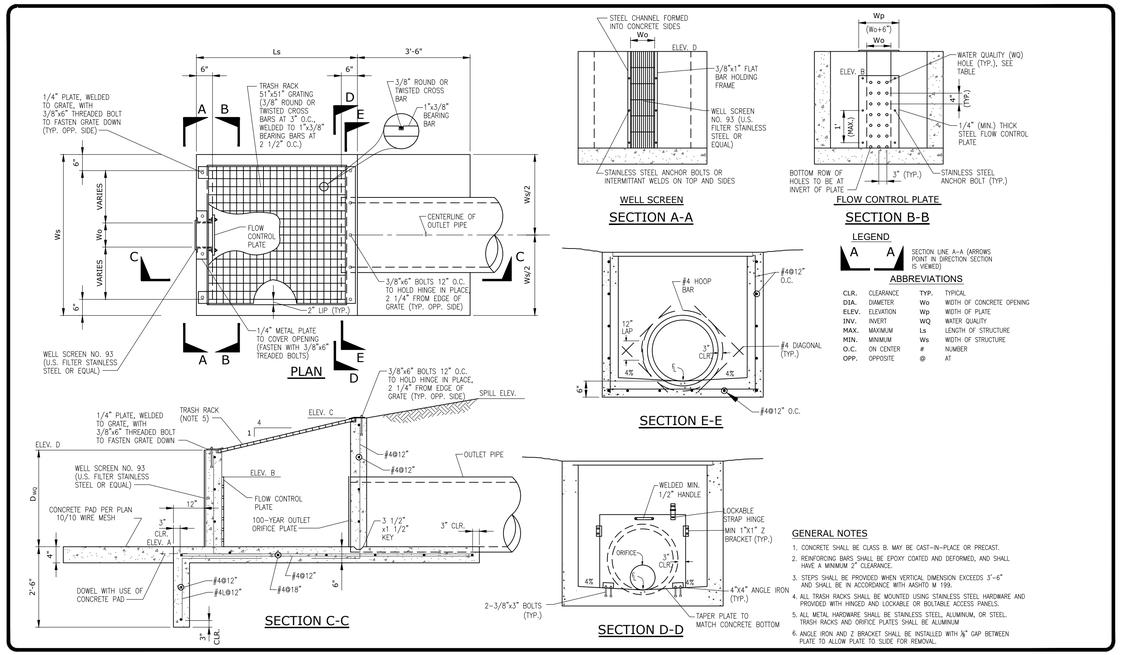


312 D4 — PRIVATE VERTICAL CURB AND GUTTER DETAIL — NOT TO SCALE



CONCRETE TRICKLE PAN			
City of Fort Collins — CITY OF FORT COLLINS UTILITIES FORT COLLINS, CO. (970) 221-6700	STORMWATER CONSTRUCTION DETAILS	APPROVED: DATE: 12-25-00 DRAWN BY: NBJ	DETAIL D-20B

313 D4 — 4' CROSS PAN DETAIL — NOT TO SCALE



314 D4 — POND OUTLET STRUCTURE DETAIL — NOT TO SCALE

Revisions: No. — Date:
REVIEW SET NOT FOR CONSTRUCTION 09/30/20

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

PROJECT: 1013-008 | DATE: 09/30/20
DESIGNED BY: F. Weigert | SCALE: N/A
DRAWN BY: M. Kuehnel | P. MANAGER: A. Reese

HOMESTEAD AT CLARENDON HILLS

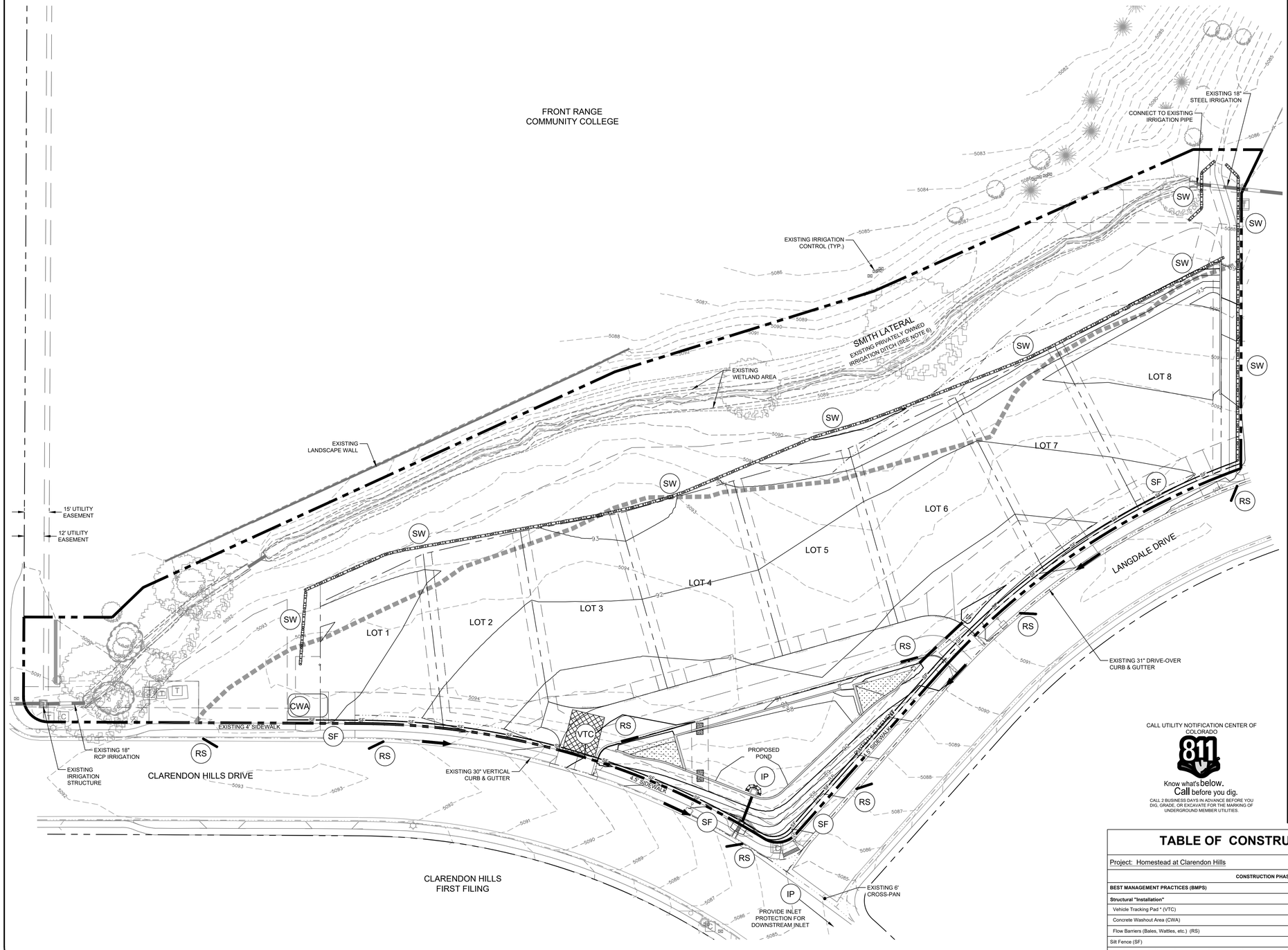
SITE & DRAINAGE DETAILS

Sheet D4
12 of 15

DRAWING FILENAME: P:\1013-008\Eng\Detail\1013-008_DET1-SITE.dwg LAYOUT NAME: D4 DATE: Sep 29, 2020 - 3:15pm CAD OPERATOR: fred
LIST OF XREFS [NES-Border]

EROSION CONTROL NOTES:

1. IT SHOULD BE NOTED THAT ANY EROSION CONTROL PLAN SERVES ONLY AS A GUIDELINE TO THE CONTRACTOR. STAGING AND/OR PHASING OF BEST MANAGEMENT PRACTICES (BMPs) IS EXPECTED. ADDITIONAL AND/OR DIFFERENT BMPs FROM THOSE ORIGINALLY DEPICTED MAY BE NECESSARY DURING CONSTRUCTION DUE TO CHANGING SITE CONDITIONS OR AS REQUIRED BY LOCAL AUTHORITIES.
2. THIS EROSION CONTROL PLAN IS SCHEMATIC IN NATURE. AS SUCH, GRAPHICAL SYMBOLS MAY NOT BE TO SCALE, NOR ARE THEY NECESSARILY SHOWN IN THEIR EXACT LOCATION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PERMITTING (CITY, STATE DISCHARGE PERMIT, ETC.) AND COMPLIANCE WITH GOVERNING AUTHORITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR (OR PERMIT HOLDER) TO ENSURE EROSION CONTROL MEASURES ARE PROPERLY MAINTAINED AND FOLLOWED.
4. CONTRACTOR SHALL IMPLEMENT THE APPROPRIATE EROSION CONTROL MEASURES ACCORDING THE THE CONSTRUCTION SEQUENCING AND LEVEL OF SITE STABILIZATION.
5. CONTRACTOR SHALL IMPLEMENT APPROPRIATE INLET PROTECTION FOR ALL STORM DRAINS, SWALES, PONDS AND RAIN GARDENS UNTIL SITE IS FULLY STABILIZED.
6. CONTRACTOR SHALL IMPLEMENT APPROPRIATE INLET PROTECTION FOR DOWNSPOUT CONNECTIONS, TO THE STORM DRAIN SYSTEM, UNTIL CONNECTION IS ESTABLISHED WITH DOWNSPOUT.
7. INLET PROTECTION SHALL BE ADAPTED, AS NECESSARY, TO THE SURROUNDING SURFACE TYPE AND CONDITION (i.e., STAKE-DRIVEN WATTLES FOR BARE SOIL, GRAVEL SOCKS FOR PAVEMENT, ETC.)
8. CONTRACTOR IS RESPONSIBLE FOR STABILIZING ALL SLOPES, PARTICULARLY THOSE STEEPER THAN 6:1. CRIMP MULCHING, HYDRO MULCHING, EROSION MATS, TEMPORARY IRRIGATION, AND ADDITIONAL WATTLES OR SILT FENCING MAY BE NECESSARY TO ESTABLISH VEGETATIVE COVER AND STABILIZE THE SLOPE.
9. CONTRACTOR IS RESPONSIBLE FOR PREVENTING SEDIMENT FROM UNSTABILIZED LANDSCAPE AREAS FROM MIGRATING ONTO AND ENTERING THE PERMEABLE PAVER SYSTEMS UNTIL UPGRADIENT TRIBUTARY AREAS ARE FULLY STABILIZED.
10. ADDITIONAL WATTLES, SILT FENCE, OR OTHER MEASURES, MAY BE NECESSARY TO ENSURE THAT EACH BUILDING PAD IS STABILIZED THROUGHOUT CONSTRUCTION. WATTLES SHALL BE PROVIDED AROUND BUILDING PAD SIDES TO ENSURE AT NO TIME SHALL SEDIMENT BE ALLOWED TO CROSS THE PUBLIC SIDEWALKS.
11. CONTRACTOR SHALL IMPLEMENT APPROPRIATE PERIMETER PROTECTION FOR AREAS DIRECTING DRAINAGE OFFSITE. PERIMETER PROTECTION SHALL BE ADAPTED, AS NECESSARY, TO THE SURROUNDING SURFACE TYPE AND CONDITION (i.e., STAKE-DRIVEN SEDIMENT CONTROL LOGS OR SILT FENCE FOR BARE SOIL, GRAVEL SOCKS FOR PAVEMENT, ETC.)
12. FUELING FACILITIES SHALL BE LOCATED AT LEAST ONE HUNDRED (100) FEET FROM NATURAL BODY OF WATER, WETLAND, NATURAL DRAINAGE WAY OR MANMADE DRAINAGE WAY. THE FUEL TANKS AND FUELING AREA MUST BE SET IN A CONTAINMENT AREA THAT WILL NOT ALLOW A FUEL SPILL TO DIRECTLY FLOW, SEEP, RUN OFF, OR BE WASHED INTO A BODY OF WATER, WETLAND OR DRAINAGE WAY.
13. CONSTRUCTION WASTE STORAGE (DUMPSTERS) AND PORTABLE SANITATION UNITS (CONSTRUCTION TOILETS) SHALL BE LOCATED AT LEAST FIFTY (50) FEET FROM ANY STORMWATER INLET, WETLAND, OR DRAINAGE WAY. SAID FACILITIES MUST BE SET IN A CONTAINMENT AREA THAT WILL NOT ALLOW POLLUTANTS TO DIRECTLY FLOW, SEEP, RUN OFF, OR BE WASHED INTO A BODY OF WATER, WETLAND OR DRAINAGE WAY. DUMPSTERS SHALL BE LOCATED ON FLAT, STABLE GROUND, AND CONSTRUCTION TOILETS SHALL BE STAKED DOWN.
14. THE CONTRACTOR AND ALL SUBCONTRACTORS WILL COOPERATE WITH THE CITY'S CONSTRUCTION INSPECTORS BY CEASING OPERATIONS WHEN WINDS ARE OF SUFFICIENT VELOCITY TO CREATE BLOWING DUST WHICH, IN THE INSPECTOR'S OPINION, IS HAZARDOUS TO THE PUBLIC HEALTH AND WELFARE.
15. WHERE SEASONAL CONSTRAINTS (E.G., DURING SUMMER AND WINTER MONTHS) INHIBIT PERMANENT SEEDING OPERATIONS, DISTURBED AREAS WILL BE TREATED WITH MULCH AND MULCH TACKIFIER OR OTHER MATERIALS APPROVED BY EROSION CONTROL STAFF TO PREVENT EROSION.
16. CONTRACTOR SHALL EXERCISE CAUTION TO PROTECT RAIN GARDENS AND MODIFIED RAIN GARDEN FROM SEDIMENTATION. THIS INCLUDES EDUCATING SUBCONTRACTORS ON-SITE.
17. SEE LANDSCAPE PLANS FOR ADDITIONAL INFORMATION ON PLANTING, REVEGETATION, HARDSCAPE AND OTHER PERMANENT SITE STABILIZATION METHODS.
18. DIRT AND DEBRIS FROM CONSTRUCTION ACTIVITIES TRACKED ON CITY STREETS SHALL BE KEPT TO A MINIMUM AND CLEANED NIGHTLY OR AT THE SUGGESTION OF THE CITY'S EROSION CONTROL INSPECTOR.
19. CONTRACTOR SHALL KEEP CONSTRUCTION VEHICLES ENTERING AND EXITING SITE TO A MINIMUM.
20. THE CONTRACTOR SHALL, AT ALL TIMES DURING AND AFTER SYSTEM INSTALLATION, PREVENT SEDIMENT, DEBRIS, AND DIRT FROM ANY SOURCE FROM ENTERING THE PERMEABLE PAVEMENT SYSTEM. LOOSE MATERIALS SHALL NOT BE STORED ON THE PERMEABLE PAVEMENT AREA. MUD AND SEDIMENT-LADEN RUNOFF SHOULD BE KEPT AWAY FROM THE PAVEMENT AREA. TEMPORARILY DIVERT RUNOFF OR INSTALL SEDIMENT CONTROL MEASURES AS NECESSARY TO REDUCE THE AMOUNT OF SEDIMENT RUN-ON TO THE PAVEMENT. SURFACE PROTECTION COULD INCLUDE COVERING AREAS OF THE PAVEMENT, PROVIDING ALTERNATIVE CONSTRUCTION VEHICLE ACCESS, AND PROVIDING EDUCATION TO ALL PARTIES WORKING ONSITE.



NORTH

30 0 30 60 90 Feet

(IN FEET)
1 inch = 30 ft.

LEGEND:

- PROPOSED STORM SEWER / IRRIGATION
- PROPOSED CONTOUR — 93
- EXISTING CONTOUR — 4953
- EXISTING CURB & GUTTER
- PROPERTY BOUNDARY
- SILT FENCE — SF
- VEHICLE TRACKING CONTROL PAD — VTC
- ROCK SOCK — RS
- INLET PROTECTION — IP
- STRAW WATTLE — SW
- CONCRETE WASHOUT — CWA

BENCHMARK

PROJECT DATUM: NAVD88

CITY OF FORT COLLINS BENCHMARK 5-02
1/2 MILE SOUTH OF HARMONY ROAD, APPROXIMATELY 200 FEET NORTH OF WOODED CREEK COURT, ON THE WEST SIDE OF SHIELDS STREET, ON THE NORTHWEST CORNER OF A STORM INLET.
ELEV. = 5089.11

CITY OF FORT COLLINS BENCHMARK 8-13
SOUTHEAST CORNER OF HARMONY RD. AND SHIELDS ON THE NORTHEAST CORNER OF A CONCRETE TRAFFIC SIGNAL BASE.
ELEV. = 5086.71

PLEASE NOTE: THIS PLAN SET IS USING NAVD88 FOR A VERTICAL DATUM. SURROUNDING DEVELOPMENTS HAVE USED NGVD29 UNADJUSTED (PRIOR CITY OF FORT COLLINS DATUM) FOR THEIR VERTICAL DATUMS.

IF NGVD29 UNADJUSTED DATUM (PRIOR CITY OF FORT COLLINS DATUM) IS REQUIRED FOR ANY PURPOSE, THE FOLLOWING EQUATION SHOULD BE USED:
NGVD29 UNADJUSTED (PRIOR CITY OF FORT COLLINS DATUM) = NAVD88 - 3.20'

BASIS OF BEARINGS
THE BASIS OF BEARINGS IS THE WEST LINE OF SECTION 2-6-69 AS BEARING NORTH 00° 17' 10" EAST (ASSUMED BEARING).

GENERAL NOTES:

1. CONTRACTOR SHALL IMMEDIATELY STABILIZE ALL DISTURBED SLOPES BY CRIMP MULCHING OR SIMILAR METHODS.
2. TOTAL DISTURBED AREA = 2.63 ACRES
3. SWMP ADMINISTRATOR:
   Contact _____
   Company _____
   Address _____
   Phone _____
4. CONTRACTOR TO PROVIDE VEHICLE TRACKING CONTROL FOR CONCRETE WASHOUT AREA IF ACCESS IS OFF PAVEMENT.
5. REFER TO THE PRELIMINARY DRAINAGE LETTER FOR HOMESTEAD AT CLARENDON HILLS, BY NORTHERN ENGINEERING, FOR ADDITIONAL INFORMATION.
6. THE SMITH LATERAL IS OWNED BY NUMEROUS INDIVIDUAL OWNERS AS WELL AS THE CITY OF FORT COLLINS (THROUGH THE PARKS DEPARTMENT) WHO USE THE DITCH TO CONVEY IRRIGATION WATER. APPROVAL FROM THE IRRIGATION DITCH OWNERS IS REQUIRED PRIOR TO ANY WORK ON THE DITCH OR IN ITS EASEMENT, AS WELL AS BEFORE ANY STORMWATER CAN BE DISCHARGED, OR PLANNED TO BE DISCHARGED INTO THE DITCH. PLEASE CONTACT JILL WUERTZ (970-416-2062), 413 S. BRYAN AVE, FORT COLLINS, CO 80521 REGARDING THE PARKS' DEPARTMENT'S INTEREST.

NOTE:
ALL BMPS SHOWN ON THIS PLAN ARE GRAPHIC REPRESENTATIONS ONLY. FINAL DETERMINATION OF SIZE AND LOCATION SHALL BE DETERMINED BY THE CONTRACTOR AND DOCUMENTED ON THE DYNAMIC SITE PLAN.

City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED:	City Engineer	Date
CHECKED BY:	Water & Wastewater Utility	Date
CHECKED BY:	Stormwater Utility	Date
CHECKED BY:	Parks & Recreation	Date
CHECKED BY:	Traffic Engineer	Date
CHECKED BY:	Environmental Planner	Date

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811
Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

TABLE OF CONSTRUCTION SEQUENCE AND BMP APPLICATION

Project: Homestead at Clarendon Hills

CONSTRUCTION PHASE	MOBILIZATION	DEMOLITION	GRADING	UTILITIES INSTALLATION	FLAT WORK INSTALLATION	VERTICAL INSTALLATION	LANDSCAPE	DEMOBILIZATION
BEST MANAGEMENT PRACTICES (BMPS)								
Structural "Installation"								
Vehicle Tracking Pad * (VTC)	■	■	■	■				
Concrete Washout Area (CWA)					■	■		
Flow Barriers (Bales, Wattles, etc.) (RS)	■	■	■	■	■	■	■	■
Silt Fence (SF)	■	■	■	■	■	■	■	
* All Temporary BMPs to be Removed once Construction is Complete								

Revisions:

No.	Date:
	REVIEW SET NOT FOR CONSTRUCTION 09/30/20

These drawings are instruments of service provided by Northern Engineering Services, Inc. and are not to be used for any work unless signed and sealed by a Professional Engineer in the employ of Northern Engineering Services, Inc.

NORTHERN ENGINEERING
970.221.4158
northernengineering.com
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631

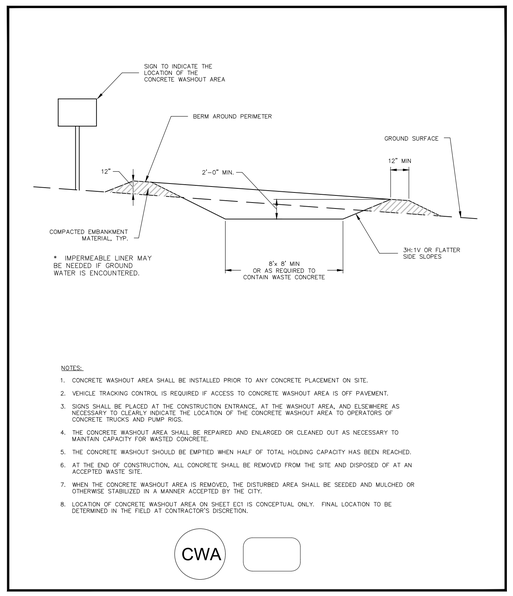
DATE: 09/30/20
SCALE: 1" = 30'
P. MANAGER: A. Reese
PROJECT: 1013-008
DESIGNED BY: F. Wegert
DRAWN BY: B. Ruch

HOMESTEAD AT CLARENDON HILLS

EROSION CONTROL PLAN

Sheet
ER1
12 of 15

DRAWING FILENAME: P:\1013-008\Dwg\1013-008_EROS.dwg LAYOUT NAME: ER1 DATE: Sep 30, 2020 - 3:15pm CAD OPERATOR: fred
LIST OF XREFS: [1013-008_xATR][1013-008_xCIS][1013-008_xGRAD][1013-008_xTOPO][NES-Xbrdrw][1013-008_SITE]

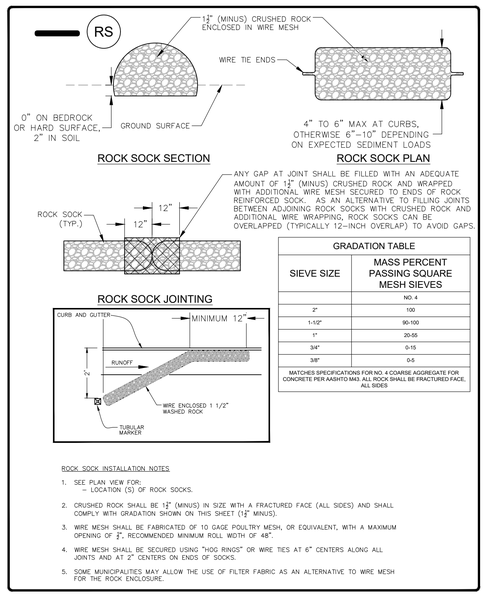


NOTES:

1. CONCRETE WASHOUT AREA SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
2. VEHICLE TRACKING CONTROL IS REQUIRED IF ACCESS TO CONCRETE WASHOUT AREA IS OFF PAVEMENT.
3. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE WASHOUT AREA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CONCRETE WASHOUT AREA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
4. THE CONCRETE WASHOUT AREA SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
5. THE CONCRETE WASHOUT SHOULD BE EMPTIED WHEN HALF OF TOTAL HOLDING CAPACITY HAS BEEN REACHED.
6. AT THE END OF CONSTRUCTION, ALL CONCRETE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF AT AN ACCEPTED WASTE SITE.
7. WHEN THE CONCRETE WASHOUT AREA IS REMOVED, THE DISTURBED AREA SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER ACCEPTED BY THE CITY.
8. LOCATION OF CONCRETE WASHOUT AREA ON SHEET EC1 IS CONCEPTUAL ONLY. FINAL LOCATION TO BE DETERMINED IN THE FIELD AT CONTRACTOR'S DISCRETION.

CWA

001 ER2 — CONCRETE WASHOUT AREA — NOT TO SCALE



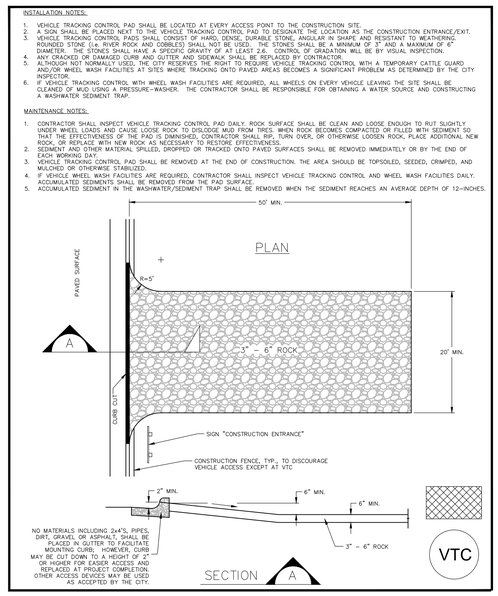
GRADATION TABLE	
SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
	NO. 4
2"	100
1-1/2"	90-100
1"	20-55
3/4"	0-15
3/8"	0-5

MATCHES SPECIFICATIONS FOR NO. 4 COARSE AGGREGATE FOR CONCRETE PER AASHTO M43. ALL ROCK SHALL BE FRACTURED FACE, ALL SIDES

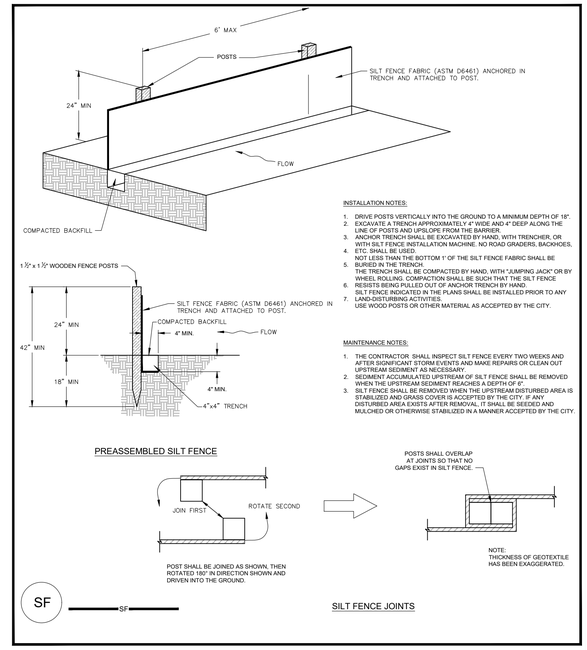
ROCK SOCK INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
   – LOCATION (S) OF ROCK SOCKS.
2. CRUSHED ROCK SHALL BE 1½" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1½" MINUS).
3. WIRE MESH SHALL BE FABRICATED OF 10 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF ½", RECOMMENDED MINIMUM ROLL WIDTH OF 48".
4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.
5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE.

002 ER2 — ROCK SOCK — NOT TO SCALE



003 ER2 — VEHICLE TRACKING PAD — NOT TO SCALE



INSTALLATION NOTES:

1. DRIVE POSTS VERTICALLY INTO THE GROUND TO A MINIMUM DEPTH OF 18".
2. EXCAVATE A TRENCH APPROXIMATELY 4" WIDE AND 4" DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
3. ANCHOR TRENCH SHALL BE EXCAVATED BY HAND, WITH TRENCHER, OR WITH SILT FENCE INSTALLATION MACHINE. NO ROAD GRADERS, BACKHOES, OR DOZERS SHALL BE USED.
4. NOT LESS THAN THE BOTTOM 1' OF THE SILT FENCE FABRIC SHALL BE BURIED IN THE TRENCH.
   THE TRENCH SHALL BE COMPACTED BY HAND, WITH "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT THE SILT FENCE
6. RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
   SILT FENCE INDICATED IN THE PLANS SHALL BE INSTALLED PRIOR TO ANY
7. LAND-DISTURBING ACTIVITIES.
   USE WOOD POSTS OR OTHER MATERIAL AS ACCEPTED BY THE CITY.

MAINTENANCE NOTES:

1. THE CONTRACTOR SHALL INSPECT SILT FENCE EVERY TWO WEEKS AND AFTER SIGNIFICANT STORM EVENTS AND MAKE REPAIRS OR CLEAN OUT UPSTREAM SEDIMENT AS NECESSARY.
2. SEDIMENT ACCUMULATED UPSTREAM OF SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM SEDIMENT REACHES A DEPTH OF 6".
3. SILT FENCE SHALL BE REMOVED WHEN THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE CITY. IF ANY DISTURBED AREA EXISTS AFTER REMOVAL, IT SHALL BE SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER ACCEPTED BY THE CITY.

PREASSEMBLED SILT FENCE

SF — SILT FENCE JOINTS

004 ER2 — SILT FENCE — NOT TO SCALE

ON SLOPES, WATTLES SHOULD BE INSTALLED ON CONTOUR WITH A SLIGHT DOWNWARD ANGLE AT THE END OF THE ROW IN ORDER TO PREVENT PONDING AT THE MID–SECTION.

RUNNING LENGTHS OF WATTLES SHOULD BE ABUTTED FINALY TO ENSURE NO LEAKAGE AT THE ABUTMENTS.

SPACING – DOWNSLOPE:
VERTICAL SPACING FOR SLOPE INSTALLATIONS SHOULD BE DETERMINED BY SITE CONDITIONS: SLOPE GRADIENT AND SOIL TYPE ARE THE MAIN FACTORS. A GOOD RULE–OF–THUMB IS:

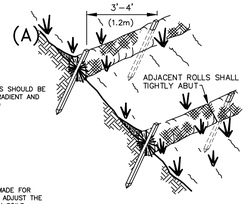
1:1 SLOPES = 10 FEET APART

2:1 SLOPES = 20 FEET APART

3:1 SLOPES = 30 FEET APART

4:1 SLOPES = 40 FEET APART, ETC.

HOWEVER, ADJUSTMENTS MAY HAVE TO BE MADE FOR THE SOIL TYPE: FOR SOFT, LOAMY SOILS – ADJUST THE ROWS CLOSER TOGETHER; FOR HARD, ROCKY SOILS – ADJUST THE ROWS FURTHER APART.



INSTALLATION:
(A) WHEN INSTALLING RUNNING LENGTHS OF WATTLES, BUTT THE SECOND WATTLE TIGHTLY AGAINST THE FIRST. DO NOT OVERLAP THE ENDS. STAKE THE WATTLES AT EACH END AND FOUR FOOT ON CENTER. FOR EXAMPLE:

A 25 FOOT WATTLE USES 6 STAKES

A 20 FOOT WATTLE USES 5 STAKES

A 12 FOOT WATTLE USES 4 STAKES

STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE WATTLE, LEAVING 2 – 3 INCHES OF THE STAKE PROTRUDING ABOVE THE WATTLE. A HEAVY SEDIMENT LOAD WILL TEND TO PICK THEWATTLE UP AND COULD PULL IT OFF THE STAKES IF THEY ARE DRIVEN DOWN TOO LOW. IT MAY BE NECESSARY TO MAKE A HOLE IN THE WATTLE WITH THE PICK END OF YOUR MADDOX IN ORDER TO GET THE STAKE THROUGH THE STRAW. WHEN STRAW WATTLES ARE USED FOR FLAT GROUND APPLICATIONS, DRIVE THE STAKES STRAIGHT DOWN; WHEN INSTALLING WATTLES ON SLOPES, DRIVE THE STAKES PERPENDICULAR TO THE SLOPE.

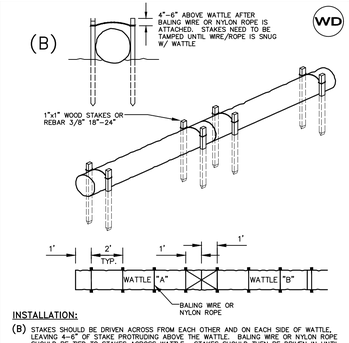
DRIVE THE FIRST END STAKE OF THE SECOND WATTLE AT AN ANGLE TOWARD THE FIRST WATTLE IN ORDER TO HELP ABUT THEM TIGHTLY TOGETHER. IF YOU HAVE DIFFICULTY DRIVING THE STAKE INTO EXTREMELY HARD OR ROCKY SLOPES, A PILOT BAR MAY BE NEEDED TO BEGIN THE STAKE HOLE.

STAKING:
WE RECOMMEND USING WOOD STAKES, OR 1/2" TO 5/8" REBAR, TO SECURE THE WATTLES. BE SURE TO USE A STAKE THAT IS LONG ENOUGH TO PROTRUDE SEVERAL INCHES ABOVE THE WATTLE: 18" IS A GOOD LENGTH FOR HARD, ROCKY SOIL. FOR SOFT, LOAMY SOIL USE A 24" STAKE FOR GREATER SECURITY. THE DIAMETER OF THE STAKE SHOULD BE APPROXIMATELY 1" FOR EASE OF DRIVING THROUGH THE WATTLE.

WATTLES

CONTRACTORS TO INSTALL WATTLES PER MANUFACTURERS SPECIFICATIONS

WD



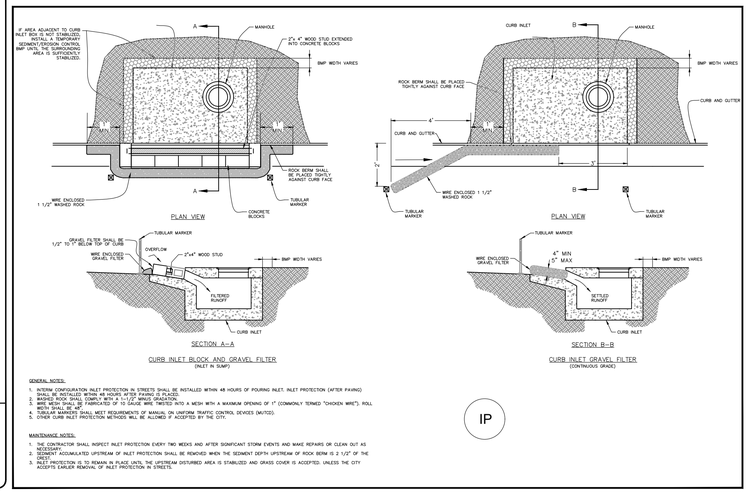
INSTALLATION:
(B) STAKES SHOULD BE DRIVEN ACROSS FROM EACH OTHER AND ON EACH SIDE OF WATTLE, LEAVING 4–6" OF STAKE PROTRUDING ABOVE THE WATTLE. BALING WIRE OR NYLON ROPE SHOULD BE TIED TO STAKES ACROSS WATTLE. STAKES SHOULD THEN BE DRIVEN IN UNTIL BALING WIRE OR NYLON ROPE IS SUFFICIENTLY SNUG TO THE WATTLE.

WHEN INSTALLING RUNNING LENGTHS OF WATTLES, TO PREVENT SHIFTING, BUTT THE SECOND WATTLE TIGHTLY AGAINST THE FIRST. DO NOT OVERLAP THE ENDS. STAKES SHOULD BE DRIVEN 1 FT. FROM END, ACROSS FROM AND ON EACH SIDE OF WATTLE LEAVING 4"–6" OF STAKE PROTRUDING ABOVE THE WATTLE. BALING WIRE OR NYLON ROPE SHOULD BE TIED TO STAKES IN AN HOUR GLASS FORMATION (FRONT TO BACK OF WATTLE "A" ACROSS TO FRONT OF WATTLE "B", ACROSS TO BACK AND BACK TO FRONT OF WATTLE "A"). STAKES SHOULD THE BE DRIVEN IN UNTIL BALING WIRE OR NYLON ROPE IS SUFFICIENTLY SNUG TO THE WATTLE.

STAKING:
WE RECOMMEND USING WOOD STAKES, OR 1/2" TO 5/8" REBAR, TO SECURE THE WATTLES. BE SURE TO USE A STAKE THAT IS LONG ENOUGH TO PROTRUDE SEVERAL INCHES ABOVE THE WATTLE: 18" IS A GOOD LENGTH FOR HARD, ROCKY SOIL. FOR SOFT, LOAMY SOIL USE A 24" STAKE FOR GREATER SECURITY. THE DIAMETER OF THE STAKE SHOULD BE APPROXIMATELY 1" FOR EASE OF DRIVING THROUGH THE WATTLE.

SW

005 ER2 — STRAW WATTLE — NOT TO SCALE



GENERAL NOTES:

1. INTERIM CONFIGURATION INLET PROTECTION IN STREETS SHALL BE INSTALLED WITHIN 48 HOURS OF POURING INLET. INLET PROTECTION (AFTER PAVING) SHALL BE INSTALLED WITHIN 48 HOURS AFTER PAVING IS PLACED.
2. WASHED ROCK SHALL COMPLY WITH A 1-1/2" MINUS GRADATION.
3. WIRE MESH SHALL BE FABRICATED OF 10 GAUGE WIRE TWISTED INTO A MESH WITH A MAXIMUM OPENING OF 1" (COMMONLY TERMED "CHICKEN WIRE"). ROLL WIDTH SHALL BE 48".
4. TUBULAR MARKERS SHALL MEET REQUIREMENTS OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
5. OTHER CURB INLET PROTECTION METHODS WILL BE ALLOWED IF ACCEPTED BY THE CITY.

MAINTENANCE NOTES:

1. THE CONTRACTOR SHALL INSPECT INLET PROTECTION EVERY TWO WEEKS AND AFTER SIGNIFICANT STORM EVENTS AND MAKE REPAIRS OR CLEAN OUT AS NECESSARY.
2. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED WHEN THE SEDIMENT DEPTH UPSTREAM OF ROCK BERM IS 2 1/2" OF THE BERM.
3. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED. UNLESS THE CITY ACCEPTS EARLIER REMOVAL OF INLET PROTECTION IN STREETS.

IP

006 ER2 — CURB INLET PROTECTION — NOT TO SCALE

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CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED: _____ City Engineer _____ Date

CHECKED BY: _____ Water & Wastewater Utility _____ Date

CHECKED BY: _____ Stormwater Utility _____ Date

CHECKED BY: _____ Parks & Recreation _____ Date

CHECKED BY: _____ Traffic Engineer _____ Date

CHECKED BY: _____ Environmental Planner _____ Date

Revisions:

No.	Date:
	FOR REVIEW SET NOT FOR CONSTRUCTION 09/30/20

These drawings are provided by Northern Engineering Services, Inc. and are not to be used for any purpose whatsoever unless signed and sealed by a Professional Engineer in the employ of Northern Engineering Services, Inc.

NORTHERN ENGINEERING
970.221.4158
northernengineering.com
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631

PROJECT: 1013–008 | DESIGNED BY: F. Weigert | DRAWN BY: B. Ruch | DATE: 09/30/20 | SCALE: N/A | P. MANAGER: A. Reese

HOMESTEAD AT CLARENDON HILLS

EROSION CONTROL DETAILS

Sheet ER2
13 of 15

DRAWING FILENAME: P:\1013-008\Eng\Dwg\1013-008_ER05.dwg LAYOUT NAME: ER2 DATE: Sep 29, 2020 – 3:10pm CAD OPERATOR: fred
LST OF XREFS: [1013-008_ATT] [1013-008_ER3ST] [1013-008_GRAD] [1013-008_HYDR] [NES-standard] [1013-008_UTIL]

NORTH

30 0 30 60 90 Feet

(IN FEET)
1 inch = 30 ft.

LEGEND:

- PROPOSED CONTOUR — 93
- EXISTING CONTOUR — 5013
- PROPOSED STORM DRAIN / IRRIGATION
- EXISTING CURB AND GUTTER
- PROPOSED SWALE
- PROPERTY BOUNDARY
- PROPOSED LOT LINE
- EASEMENT
- DESIGN POINT (A)
- FLOW ARROW
- DRAINAGE BASIN LABEL (BASIN DESIGNATION: C; 0.60 ac: BASIN AREA (AC))
- EXISTING DRAINAGE BASIN BOUNDARY

NOTES:

1. REFER TO THE PRELIMINARY DRAINAGE LETTER FOR HOMESTEAD AT CLARENDON HILLS FOR ADDITIONAL INFORMATION.
2. THE SMITH LATERAL IS OWNED BY NUMEROUS INDIVIDUAL OWNERS AS WELL AS THE CITY OF FORT COLLINS (THROUGH THE PARKS DEPARTMENT) WHO USE THE DITCH TO CONVEY IRRIGATION WATER. APPROVAL FROM THE IRRIGATION DITCH OWNERS IS REQUIRED PRIOR TO ANY WORK ON THE DITCH OR IN ITS EASEMENT, AS WELL AS BEFORE ANY STORMWATER CAN BE DISCHARGED, OR PLANNED TO BE DISCHARGED INTO THE DITCH. PLEASE CONTACT JILL WUERTZ (970-416-2062), 413 S. BRYAN AVE, FORT COLLINS, CO 80521 REGARDING THE PARKS' DEPARTMENT'S INTEREST.

BENCHMARK

PROJECT DATUM: NAVD88

CITY OF FORT COLLINS BENCHMARK 5-02
1/2 MILE SOUTH OF HARMONY ROAD, APPROXIMATELY 200 FEET NORTH OF WOODED CREEK COURT, ON THE WEST SIDE OF SHIELDS STREET, ON THE NORTHWEST CORNER OF A STORM INLET.
ELEV. = 5089.11

CITY OF FORT COLLINS BENCHMARK 8-13
SOUTHEAST CORNER OF HARMONY RD. AND SHIELDS ON THE NORTHEAST CORNER OF A CONCRETE TRAFFIC SIGNAL BASE.
ELEV. = 5086.71

PLEASE NOTE: THIS PLAN SET IS USING NAVD88 FOR A VERTICAL DATUM. SURROUNDING DEVELOPMENTS HAVE USED NGVD29 UNADJUSTED (PRIOR CITY OF FORT COLLINS DATUM) FOR THEIR VERTICAL DATUMS.

IF NGVD29 UNADJUSTED DATUM (PRIOR CITY OF FORT COLLINS DATUM) IS REQUIRED FOR ANY PURPOSE, THE FOLLOWING EQUATION SHOULD BE USED:
NGVD29 UNADJUSTED (PRIOR CITY OF FORT COLLINS DATUM) = NAVD88 - 3.20'

BASIS OF BEARINGS
THE BASIS OF BEARINGS IS THE WEST LINE OF SECTION 2-6-69 AS BEARING NORTH 00° 17' 10" EAST (ASSUMED BEARING).

EXISTING DRAINAGE SUMMARY

Design Point	Basin ID	Total Area (acres)	C2	C100	2-Yr Tc (min)	100-Yr Tc (min)	Q2 (cfs)	Q100 (cfs)
ex a	EX A	2.382	0.25	0.31	14.06	14.06	1.14	5.00
b	EX B	0.684	0.25	0.31	12.06	12.06	0.35	1.53
b	EX OS1	0.147	0.25	0.31	11.08	11.08	0.08	0.34
b	EX OS2	0.064	0.25	0.31	5.42	5.42	0.05	0.20

FOR DRAINAGE REVIEW ONLY
NOT FOR CONSTRUCTION

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811
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City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED: _____ City Engineer _____ Date
CHECKED BY: _____ Water & Wastewater Utility _____ Date
CHECKED BY: _____ Stormwater Utility _____ Date
CHECKED BY: _____ Parks & Recreation _____ Date
CHECKED BY: _____ Traffic Engineer _____ Date
CHECKED BY: _____ Environmental Planner _____ Date

Revisions:

No.	Date:
	REVIEW SET NOT FOR CONSTRUCTION 09/30/20

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

PROJECT: 1013-008
DESIGNED BY: F. Wegert
DRAWN BY: F. Wegert
DATE: 09/30/20
SCALE: 1"=30'
P. MANAGER: A. Reese

HOMESTEAD AT CLARENDON HILLS

HISTORIC DRAINAGE EXHIBIT

Sheet
DR1
14 of 15

DRAWING FILENAME: P:\1013-008\Dwg\1013-008_DR02.dwg LAYOUT NAME: Historic DATE: Sep 29, 2020 - 3:17pm CAD OPERATOR: fred
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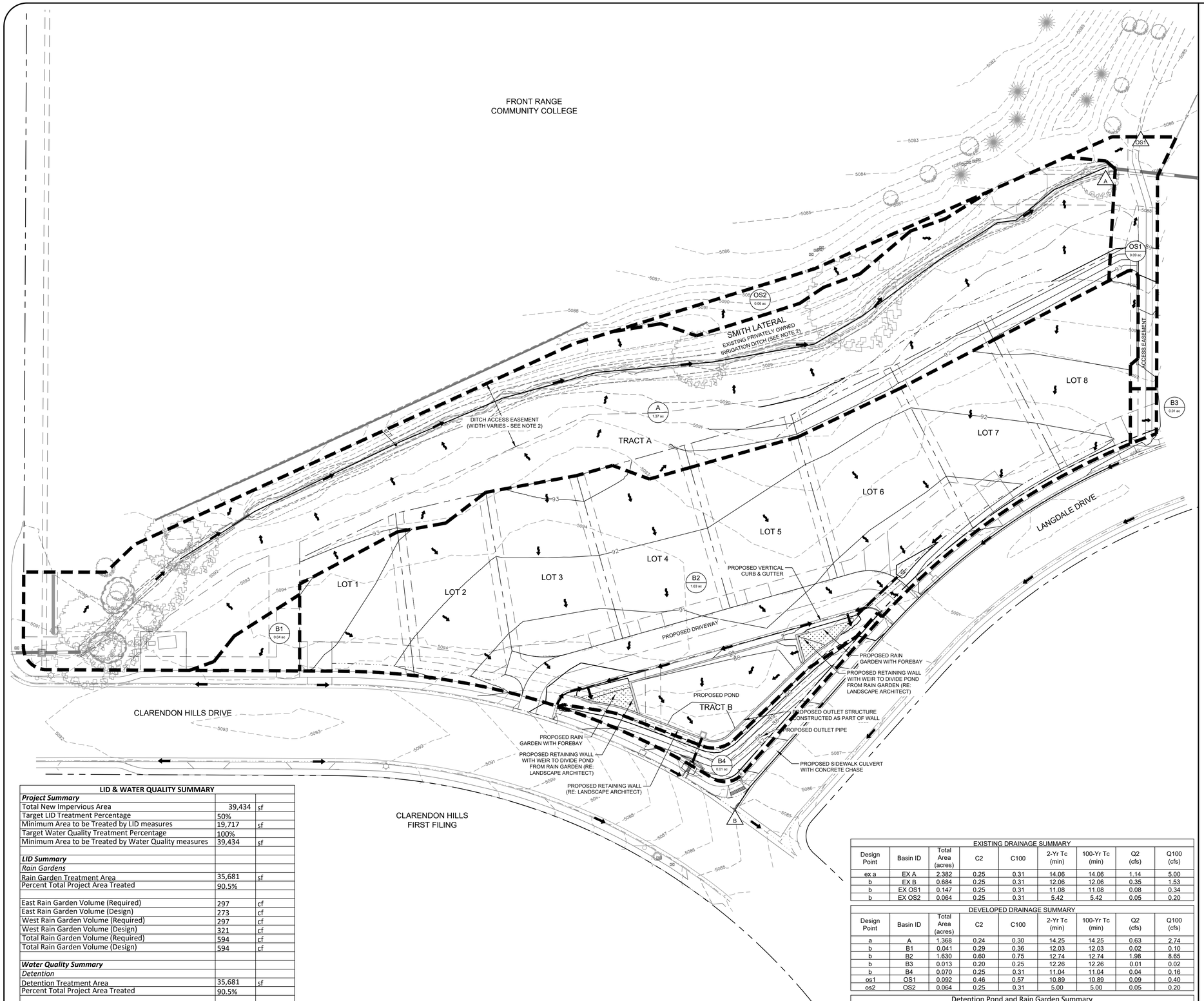

NORTH

30 0 30 60 90 Feet

(IN FEET)
1 inch = 30 ft.

LEGEND:

- PROPOSED CONTOUR — 93
- EXISTING CONTOUR — 5013
- PROPOSED STORM DRAIN / IRRIGATION
- EXISTING CURB AND GUTTER
- PROPOSED SWALE
- PROPERTY BOUNDARY
- PROPOSED LOT LINE
- EASEMENT
- DESIGN POINT (A)
- FLOW ARROW (A)
- DRAINAGE BASIN LABEL (BASIN DESIGNATION: C; 0.60 ac: BASIN AREA (AC))
- PROPOSED DRAINAGE BASIN BOUNDARY
- 50' WETLANDS BUFFER

NOTES:

1. REFER TO THE PRELIMINARY DRAINAGE LETTER FOR HOMESTEAD AT CLARENDON HILLS FOR ADDITIONAL INFORMATION.
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BENCHMARK

PROJECT DATUM: NAVD88

CITY OF FORT COLLINS BENCHMARK 5-02
1/2 MILE SOUTH OF HARMONY ROAD, APPROXIMATELY 200 FEET NORTH OF WOODED CREEK COURT, ON THE WEST SIDE OF SHIELDS STREET, ON THE NORTHWEST CORNER OF A STORM INLET.
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PLEASE NOTE: THIS PLAN SET IS USING NAVD88 FOR A VERTICAL DATUM. SURROUNDING DEVELOPMENTS HAVE USED NGVD29 UNADJUSTED (PRIOR CITY OF FORT COLLINS DATUM) FOR THEIR VERTICAL DATUMS.

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BASIS OF BEARINGS
THE BASIS OF BEARINGS IS THE WEST LINE OF SECTION 2-6-69 AS BEARING NORTH 00° 17' 10" EAST (ASSUMED BEARING).

LID & WATER QUALITY SUMMARY		
Project Summary		
Total New Impervious Area	39,434	sf
Target LID Treatment Percentage	50%	
Minimum Area to be Treated by LID measures	19,717	sf
Target Water Quality Treatment Percentage	100%	
Minimum Area to be Treated by Water Quality measures	39,434	sf
LID Summary		
Rain Gardens		
Rain Garden Treatment Area	35,681	sf
Percent Total Project Area Treated	90.5%	
East Rain Garden Volume (Required)	297	cf
East Rain Garden Volume (Design)	273	cf
West Rain Garden Volume (Required)	297	cf
West Rain Garden Volume (Design)	321	cf
Total Rain Garden Volume (Required)	594	cf
Total Rain Garden Volume (Design)	594	cf
Water Quality Summary		
Detention		
Detention Treatment Area	35,681	sf
Percent Total Project Area Treated	90.5%	
Water Quality Volume (Required)	1,187	cf
Storage Volume (Required)	8,288	cf
Total Detention Volume (Required)	9,475	cf
	0.22	ac.-ft.
Total Detention Volume (Design)	9,807	cf
	0.23	ac.-ft.

EXISTING DRAINAGE SUMMARY

Design Point	Basin ID	Total Area (acres)	C2	C100	2-Yr Tc (min)	100-Yr Tc (min)	Q2 (cfs)	Q100 (cfs)
ex a	EX A	2.382	0.25	0.31	14.06	14.06	1.14	5.00
b	EX B	0.684	0.25	0.31	12.06	12.06	0.35	1.53
b	EX OS1	0.147	0.25	0.31	11.08	11.08	0.08	0.34
b	EX OS2	0.064	0.25	0.31	5.42	5.42	0.05	0.20

DEVELOPED DRAINAGE SUMMARY

Design Point	Basin ID	Total Area (acres)	C2	C100	2-Yr Tc (min)	100-Yr Tc (min)	Q2 (cfs)	Q100 (cfs)
a	A	1.368	0.24	0.30	14.25	14.25	0.63	2.74
b	B1	0.041	0.29	0.36	12.03	12.03	0.02	0.10
b	B2	1.630	0.60	0.75	12.74	12.74	1.98	8.65
b	B3	0.013	0.20	0.25	12.26	12.26	0.01	0.02
b	B4	0.070	0.25	0.31	11.04	11.04	0.04	0.16
os1	OS1	0.092	0.46	0.57	10.89	10.89	0.09	0.40
os2	OS2	0.064	0.25	0.31	5.00	5.00	0.05	0.20

Detention Pond and Rain Garden Summary

Description	Required Volume (cu. ft.)	Design Volume (cu. ft.)	Release Rate (cfs)	Crest of Pond Elev.	Water Surface Elev.	Freeboard (ft)
Detention Pond	9,475	9,807	1.2	5090.6	5089.75	0.85
East Rain Garden	297	297	n/a	5090.6	5089.9	0.7
West Rain Garden	297	297	n/a	5090.6	5089.7	0.9

FOR DRAINAGE REVIEW ONLY
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CHECKED BY: _____ Traffic Engineer _____ Date
CHECKED BY: _____ Environmental Planner _____ Date

Revisions:

No.	Date:
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970.221.4158
northernengineering.com

DATE: 09/30/20
SCALE: 1" = 30'
P. MANAGER: A. Reese
PROJECT: 1013-008
DESIGNED BY: F. Wegert
DRAWN BY: F. Wegert

HOMESTEAD AT CLARENDON HILLS

PROPOSED DRAINAGE EXHIBIT

Sheet
DR2
15 of 15

DRAWING FILENAME: P:\1013-008\Dwg\1013-008_DRNG.dwg LAYOUT NAME: Developed DATE: Sep 29, 2020 - 3:11pm CAD OPERATOR: fred
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HOMESTEAD AT CLARENDON HILLS

A TRACT OF LAND LOCATED IN THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 6 NORTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO

STATEMENT OF OWNERSHIP AND SUBDIVISION:

Know all persons by these presents, that the undersigned owner(s) of the following described land:

A tract of land located in the Northwest Quarter of Section 2, Township 6 North, Range 69 West of the 6th P.M., City of Fort Collins, County of Larimer, State of Colorado, and being more particularly described as follows:

Considering the West line of Section 2 as bearing North 00° 17' 10" East and with all bearings contained herein relative thereto;

COMMENCING at the West Quarter corner of Section 2; thence along the West line of Section 2, North 00° 17' 10" East, 894.74 feet; thence, South 89° 42' 50" East, 50.00 feet to a point on the East right-of-way line of South Shields Street, said point being the **POINT OF BEGINNING**; thence along said East line, North 00° 17' 10" East, 48.44 feet to a point on the Southerly line of that tract of land described in Special Warranty Deed recorded at Reception No. 20130093010; thence along said Southerly line the following 6 courses and distances: South 89° 50' 43" East, 53.45 feet; thence, North 46° 07' 33" East, 26.06 feet; thence, North 65° 25' 29" East, 314.22 feet; thence, North 72° 42' 42" East, 164.00 feet; thence, North 66° 03' 57" East, 211.50 feet; thence, South 89° 50' 43" East, 41.85 feet to a point on the Westerly line of Clarendon Hills Third Filing; thence along said Westerly line the following 2 courses and distances: South 25° 38' 23" West, 29.07 feet; thence, South 00° 08' 23" West, 166.83 feet to the Northwesterly right of way line of Langdale Drive; thence along said Northwesterly line the following 3 courses and distances: along a curve concave to the Southeast having a central angle of 28° 24' 39" with a radius of 450.00 feet, an arc length of 223.14 feet and the chord of which bears South 55° 50' 43" West, 220.86 feet; thence, South 41° 38' 23" West, 130.35 feet; thence along a curve concave to the North having a central angle of 80° 01' 54" with a radius of 15.00 feet, an arc length of 20.95 feet and the chord of which bears South 81° 38' 33" West, 19.29 feet to the North right-of-way line of Clarendon Hills Drive; thence along said North line the following 2 courses and distances: along a curve concave to the Southwest having a central angle of 31° 20' 51" with a radius of 469.00 feet, an arc length of 256.60 feet and the chord of which bears North 74° 01' 42" West, 253.41 feet; thence, North 89° 42' 06" West, 190.00 feet; thence along a curve concave to the Northeast having a central angle of 89° 58' 58" with a radius of 15.00 feet, an arc length of 23.56 feet and the chord of which bears North 44° 42' 06" West, 21.21 feet to the **POINT OF BEGINNING**, containing 142,765 square feet or 3.277 acres, more or less.

For themselves and their successors in interest (collectively "Owner") have caused the above described land to be surveyed and subdivided into lots, tracts and streets as shown on this Plat to be known as HOMESTEAD AT CLARENDON HILLS (the "Development"), subject to all easements and rights-of-way now of record or existing or indicated on this Plat. The rights and obligations of this Plat shall run with the land.

CERTIFICATE OF DEDICATION:

The Owner does hereby dedicate and convey to the City of Fort Collins, Colorado (hereafter "City"), for public use, forever, a permanent right-of-way for street purposes and the "Easements" as laid out and designated on this Plat; provided, however, that (1) acceptance by the City of this dedication of Easements does not impose upon the City a duty to maintain the Easements so dedicated, and (2) acceptance by the City of this dedication of streets does not impose upon the City a duty to maintain streets so dedicated until such time as the provisions of the Maintenance Guarantee have been fully satisfied. The streets dedicated on this Plat are the fee property of the City as provided in Section 31-23-107 C.R.S. The City's rights under the Easements include the right to install, operate, access, maintain, repair, reconstruct, remove and replace within the Easements public improvements consistent with the intended purpose of the Easements; the right to install, maintain and use gates in any fences that cross the Easements; the right to mark the location of the Easements with suitable markers; and the right to permit other public utilities to exercise these same rights. Owner reserves the right to use the Easements for purposes that do not interfere with the full enjoyment of the rights hereby granted. The City is responsible for maintenance of its own improvements and for repairing any damage caused by its activities in the Easements, but by acceptance of this dedication, the City does not accept the duty of maintenance of the Easements, or of improvements in the Easements that are not owned by the City. Owner will maintain the surface of the Easements in a sanitary condition in compliance with any applicable weed, nuisance or other legal requirements.

Except as expressly permitted in an approved plan of development or other written agreement with the City, Owner will not install on the Easements, or permit the installation on the Easements, of any building, structure, improvement, fence, retaining wall, sidewalk, tree or other landscaping (other than usual and customary grasses and other ground cover). In the event such obstacles are installed in the Easements, the City has the right to require the Owner to remove such obstacles from the Easements. If Owner does not remove such obstacles, the City may remove such obstacles without any liability or obligation for repair and replacement thereof, and charge the Owner the City's costs for such removal. If the City chooses not to remove the obstacles, the City will not be liable for any damage to the obstacles or any other property to which they are attached.

The rights granted to the City by this Plat inure to the benefit of the City's agents, licensees, permittees and assigns.

OWNER:

BY: _____

STATE OF COLORADO)
)ss.
COUNTY OF LARIMER)

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by

_____, as _____ of _____.

Witness my hand and official seal

My commission expires: _____

_____
Notary Public

LIENHOLDER:

BY: _____

STATE OF COLORADO)
)ss.
COUNTY OF LARIMER)

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by

_____, as _____ of _____.

Witness my hand and official seal

My commission expires: _____

_____
Notary Public

MAINTENANCE GUARANTEE:

The Owner hereby warrants and guarantees to the City, for a period of two (2) years from the date of completion and first acceptance by the City of the improvements warranted hereunder, the full and complete maintenance and repair of the improvements to be constructed in connection with the Development which is the subject of this Plat. This warranty and guarantee is made in accordance with the City Land Use Code and/or the Transitional Land Use Regulations, as applicable. This guarantee applies to the streets and all other appurtenant structures and amenities lying within the rights-of-way, Easements and other public properties, including, without limitation, all curbing, sidewalks, bike paths, drainage pipes, culverts, catch basins, drainage ditches and landscaping. Any maintenance and/or repair required on utilities shall be coordinated with the owning utility company or department.

The Owner shall maintain said improvements in a manner that will assure compliance on a consistent basis with all construction standards, safety requirements and environmental protection requirements of the City. The Owner shall also correct and repair, or cause to be corrected and repaired, all damages to said improvements resulting from development-related or building-related activities. In the event the Owner fails to correct any damages within thirty (30) days after written notice thereof, then said damages may be corrected by the City and all costs and charges billed to and paid by the Owner. The City shall also have any other remedies available to it as authorized by law. Any damages which occurred prior to the end of said two (2) year period and which are unrepaired at the termination of said period shall remain the responsibility of the Owner.

REPAIR GUARANTEE:

In consideration of the approval of this final Plat and other valuable consideration, the Owner does hereby agree to hold the City harmless for a five (5) year period, commencing upon the date of completion and first acceptance by the City of the improvements to be constructed in connection with the development which is the subject of this Plat, from any and all claims, damages, or demands arising on account of the design and construction of public improvements of the property shown herein; and the Owner furthermore commits to make necessary repairs to said public improvements, to include, without limitation, the roads, streets, fills, embankments, ditches, cross pans, sub-drains, culverts, walls and bridges within the right-of-way, Easements and other public properties, resulting from failures caused by design and/or construction defects. This agreement to hold the City harmless includes defects in materials and workmanship, as well as defects caused by or consisting of settling trenches, fills or excavations.

Further, the Owner warrants that he/she owns fee simple title to the property shown hereon and agrees that the City shall not be liable to the Owner or his/her successors in interest during the warranty period, for any claim of damages resulting from negligence in exercising engineering techniques and due caution in the construction of cross drains, drives, structures or buildings, the changing of courses of streams and rivers, flooding from natural creeks and rivers, and any other matter whatsoever on private property. Any and all monetary liability occurring under this paragraph shall be the liability of the Owner. I further warrant that I have the right to convey said land according to this Plat.

NOTICE OF OTHER DOCUMENTS:

All persons take notice that the Owner has executed certain documents pertaining to this Development which create certain rights and obligations of the Development, the Owner and/or subsequent Owners of all or portions of the Development site, many of which obligations constitute promises and covenants that, along with the obligations under this Plat, run with the land. The said documents may also be amended from time to time and may include, without limitation, the Development Agreement, Site And Landscape Covenants, Final Site Plan, Final Landscape Plan, and Architectural Elevations, which documents are on file in the office of the Clerk of the City and should be closely examined by all persons interested in purchasing any portion of the Development site.

ATTORNEY'S CERTIFICATION

I hereby certify that this Subdivision Plat has been duly executed as required pursuant to Section 2.2.3(C)(3)(a) through (e) inclusive of the Land Use Code of the City of Fort Collins and that all persons signing this Subdivision Plat on behalf of a corporation or other entity are duly authorized signatories under the laws of the State of Colorado. This Certification is based upon the records of the Clerk and Recorder of Larimer County, Colorado as of the date of execution of the Plat and other information discovered by me through reasonable inquiry and is limited as authorized by Section 2.2.3(C)(3)(f) of the Land Use Code.

Attorney:

Address:

Registration No.:_____

APPROVED AS TO FORM, CITY ENGINEER

By the City Engineer of the City of Fort Collins, Colorado this _____day of _____ A.D., 20_____.

_____
City Engineer

PLANNING APPROVAL

By the Director of Community Development and Neighborhood Services of the City of Fort Collins, Colorado this _____ day of _____ A.D., 20_____.

_____
Director of Community Development and Neighborhood Services

NOTES AT THE REQUEST OF THE CITY OF FORT COLLINS:

1. There shall be no private conditions, covenants or restrictions that prohibit or limit the installation of resource conserving equipment or landscaping that are allowed by Sections 12-120 - 12-122 of the City code.

SMITH LATERAL DITCH APPROVAL

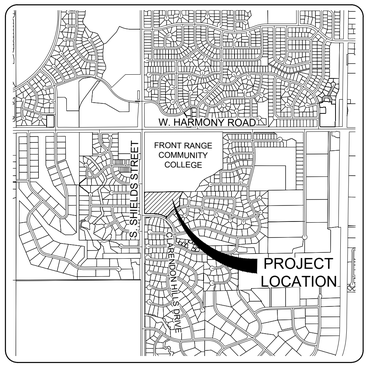
EASEMENTS SHOWN HEREON ARE ADEQUATE AND HEREBY ACCEPTED

_____ _____
BY: DATE

_____ _____
BY: DATE

NOTICE

ALL RESPONSIBILITIES AND COSTS OF OPERATION, MAINTENANCE AND RECONSTRUCTION OF THE PRIVATE STREETS AND/OR DRIVES LOCATED ON THE PRIVATE PROPERTY THAT IS THE SUBJECT OF THIS PLAT SHALL BE BORNE BY THE OWNERS OF SAID PROPERTY, EITHER INDIVIDUALLY, OR COLLECTIVELY, THROUGH A PROPERTY OWNERS' ASSOCIATION, IF APPLICABLE. THE CITY OF FORT COLLINS SHALL HAVE NO OBLIGATION OF OPERATION, MAINTENANCE OR RECONSTRUCTION OF SUCH PRIVATE STREETS AND/OR DRIVES NOR SHALL THE CITY HAVE ANY OBLIGATION TO ACCEPT SUCH STREETS AND/OR DRIVES AS PUBLIC STREETS OR DRIVES.



NORTH

VICINITY MAP
1"=1500'

DEVELOPER/APPLICANT
Kenneth R. Mitchell
Mosaic Real Estate LLC
1021 Nightingale Drive
Fort Collins, Colorado. 80525
970 685 1575

SITE ENGINEER
Northern Engineering Services, Inc.
Frederick Wegert
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521
(970) 221-4158

PLANNER/ LANDSCAPE ARCHITECT
Kristin Turner
TB Group
444 Mountain Avenue
Berthoud, Colorado 80513
(970) 532-5891

SITE SURVEYOR
Northern Engineering Services, Inc.
Robert C. Tessely, PLS
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521
(970) 221-4158

SURVEYOR NOTES:

1. The Basis of Bearings is the West line of the Northwest Quarter of Section 2-6-69 as bearing North 00° 17' 10" East (assumed bearing), and monumented as shown on drawing.

2. All information regarding easements, rights-of-way or Title of Record, Northern Engineering relied upon Order No. F0622444-383-BA1, prepared by Fidelity National Title Company, dated February 18, 2020.

3. The lineal unit of measurement for this plat is U. S. Survey Feet.

4. For easements created by separate document and shown hereon refer to recorded document for specific terms.

5. A copy of the title commitment and the documents contained therein were provided to the owner, client and attorney listed hereon for their use and review.

6. Not all documents listed in the title commitment are plottable or definable by their terms. All easements that are definable by their descriptions are shown hereon with sufficient data to establish their position. Owner, Client and others should refer to the title commitment and those documents listed therein for a true understanding of all rights of way, easements, encumbrances, interests and title of record concerning the subject property.

7. Easements and other record documents shown or noted hereon were examined as to location and purpose and were not examined as to restrictions, exclusions, conditions, obligations, terms, or as to the right to grant the same.

8. Northern Engineering or the Professional Land Surveyor listed hereon, does not have the expertise to address mineral rights, and recommends the owner retain an expert to address these matters. Northern Engineering or the Professional Land Surveyor listed heron assumes no responsibility for the mineral rights upon the subject property.

9. Adjacent property owner information per the Larimer County Land information Locator.

10. Current Zoning: RL - Low Density Residential

11. Zoning information per the City of Fort Collins GIS FCMaps Zoning Portal.

12. Per CRS 38-51-105 (3)(a), (3)(b), (4)(b), (4)(c), & 5, the Developer/Owner of the subdivision plat has the requirement of providing monumentation of the interior corners created by this platting procedure within one year of the effective date of a sales contract. The Surveyor of record of said subdivision plat has only the required responsibility of providing for the on the ground monumentation of the external boundary of the subdivision plat.

SURVEYOR'S STATEMENT

I, Robert C. Tessely, a Colorado Registered Professional Land Surveyor do hereby state that this Subdivision Plat was prepared from an actual survey under my personal supervision, that the monumentations as indicated hereon were found or set as shown, and that the foregoing plat is an accurate representation thereof, all this to the best of my knowledge, information and belief.

DRAFT
9-30-20
PRELIMINARY - NOT FOR CONSTRUCTION, RECORDING PURPOSES OR IMPLEMENTATION

For and on Behalf of Northern Engineering
Robert C. Tessely
Colorado Registered Professional
Land Surveyor No. 38470

NOTICE:
According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years after the date of the certificate shown hereon.

SECTION: 2
TOWNSHIP: 6
RANGE: 69 W of the 6th PM

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

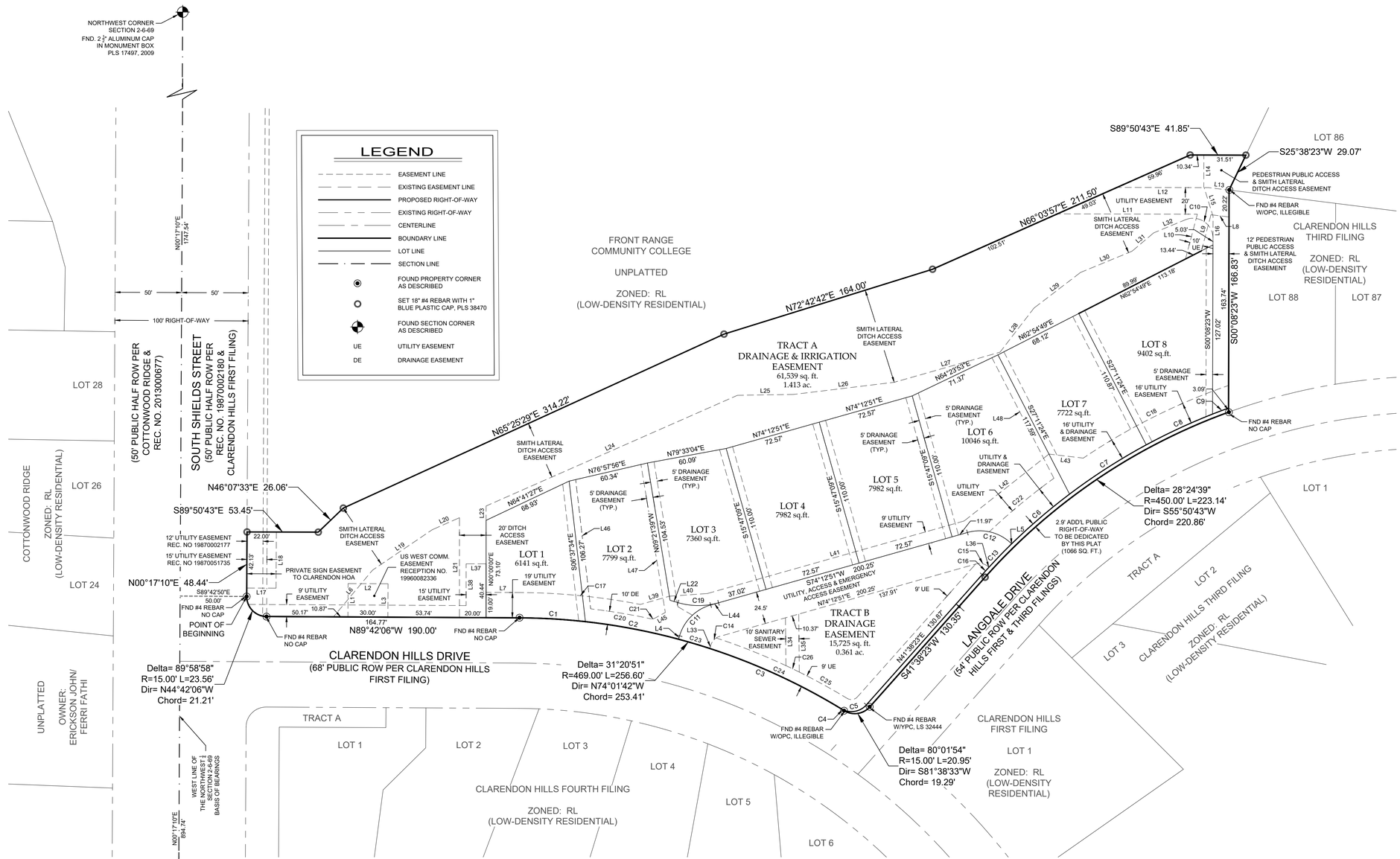
DATE: 9/30/20
SCALE: As shown
REVIEWED BY: R. Tessely
PROJECT: 1013-008
CLIENT: Mosaic Real Estate
DRAWN BY: L. Smith

HOMESTEAD AT CLARENDON HILLS
CITY OF FORT COLLINS
STATE OF COLORADO

Sheet 1
Of 2 Sheets

HOMESTEAD AT CLARENDON HILLS

A TRACT OF LAND LOCATED IN THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 6 NORTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO



CURVE TABLE					
CURVE	DELTA	RADIUS	LENGTH	BEARING	CHORD
C1	6°02'30"	469.00'	49.45'	N86°40'53"W	49.43'
C2	8°41'59"	469.00'	71.21'	N79°18'39"W	71.14'
C3	16°15'28"	469.00'	133.08'	N66°49'55"W	132.63'
C4	0°20'54"	469.00'	2.85'	N58°31'44"W	2.85'
C5	79°39'26"	15.00'	20.85'	N81°28'06"E	19.21'
C6	7°15'35"	452.90'	57.38'	N49°18'56"E	57.35'
C7	8°39'57"	452.90'	68.50'	N57°16'42"E	68.43'
C8	6°57'00"	452.90'	54.94'	N65°05'10"E	54.90'
C9	1°37'25"	452.90'	12.83'	S69°22'23"W	12.83'
C10	112°39'09"	15.00'	29.49'	N56°11'12"W	24.97'
C11	57°48'32"	34.00'	34.30'	S45°18'35"W	32.87'
C12	60°11'56"	34.00'	35.72'	N75°41'11"W	34.10'
C13	4°02'46"	452.90'	31.98'	S43°39'46"W	31.98'
C14	57°48'32"	9.50'	9.59'	N45°18'35"E	9.18'
C15	60°11'56"	9.50'	9.98'	S75°41'11"E	9.53'
C16	0°56'46"	452.90'	7.48'	S42°06'46"W	7.48'
C17	10°41'22"	488.01'	91.05'	N84°21'25"W	90.92'
C18	14°57'01"	468.90'	122.35'	S63°25'05"W	122.00'
C19	32°07'40"	55.00'	30.84'	S89°43'19"E	30.44'
C20	5°26'45"	479.00'	45.53'	N80°35'57"W	45.51'
C21	40°46'54"	5.00'	3.56'	S81°43'59"W	3.48'
C22	7°26'50"	485.28'	63.08'	S50°21'16"W	63.03'
C23	2°59'36"	469.00'	24.50'	N73°27'51"W	24.50'
C24	13°15'52"	469.00'	108.58'	N65°20'07"W	108.34'
C25	4°55'45"	478.00'	41.12'	N61°10'03"W	41.11'
C26	1°20'10"	478.00'	11.15'	N64°18'00"W	11.15'

LINE TABLE		
LINE	LENGTH	BEARING
L1	25.07'	S00° 17' 54"W
L2	30.00'	S89° 42' 06"E
L3	25.07'	S00° 17' 54"W
L4	2.67'	S16° 24' 19"W
L5	0.16'	N45° 35' 13"W
L6	45.75'	N39° 55' 20"E
L7	25.33'	N89° 42' 06"W
L8	13.65'	S82° 57' 42"E
L9	28.07'	S14° 49' 34"W
L10	34.80'	S14° 49' 34"W
L11	105.06'	S89° 51' 36"E
L12	68.69'	S89° 51' 36"E
L13	15.51'	S82° 57' 42"E
L14	23.66'	S00° 08' 23"W
L15	23.35'	S17° 18' 05"E
L16	21.58'	S00° 08' 16"W
L17	22.00'	N89° 42' 50"W
L18	42.13'	S00° 17' 10"W
L19	54.08'	N55° 51' 44"E
L20	22.39'	N66° 13' 10"E
L21	74.95'	S00° 00' 00"E
L22	6.20'	S73° 39' 29"E
L23	10.77'	S00° 00' 00"E
L24	206.16'	S66° 13' 10"W

LINE TABLE		
LINE	LENGTH	BEARING
L25	41.96'	S89° 05' 52"W
L26	76.30'	S83° 07' 43"W
L27	82.55'	S74° 06' 46"W
L28	41.85'	S37° 34' 25"W
L29	43.96'	S52° 34' 25"W
L30	41.85'	S67° 34' 25"W
L31	21.29'	S49° 42' 44"W
L32	25.73'	S67° 29' 14"W
L33	2.73'	N16° 24' 19"E
L34	35.92'	N00° 30' 18"W
L35	43.57'	N00° 30' 18"W
L36	0.28'	S45° 35' 13"E
L37	15.00'	N90° 00' 00"W
L38	31.36'	S00° 00' 00"E
L39	22.65'	S74° 12' 51"W
L40	28.63'	S85° 52' 49"W
L41	200.25'	S74° 12' 51"W
L42	81.09'	S51° 42' 51"W
L43	26.01'	N83° 17' 09"W
L44	6.11'	S74° 12' 51"W
L45	8.78'	S61° 20' 31"W
L46	97.73'	N06° 37' 34"W
L47	112.89'	S09° 21' 39"E
L48	101.78'	N27° 11' 24"W

LAND USE TABLE						
PARCEL	DESCRIPTION	DEDICATION	AREA		PERCENT	INTENDED OWNERSHIP/ MAINTAINANCE BY
TRACT A	Open Space	Drainage & Irrigation Easement	61,539 S.F.	1.413 AC.	43.11%	Homestead at Clarendon Hills HOA
TRACT B	Open Space	Drainage Easement	15,725 S.F.	0.361 AC.	11.01%	Homestead at Clarendon Hills HOA
ROW	Right-of-Way		1,066 S.F.	0.024 AC.	0.75%	City of Fort Collins
LOTS (8)	Private Residence		64,435 S.F.	1.479 AC.	45.13%	Property Owner
TOTAL			**142,765 S.F.**	**3.277 AC.**	**100.00%**	

PRELIMINARY

Robert C. Tessely
Registered Professional Land Surveyor
Colorado Registration No. 38470
For and on behalf of Northern Engineering Services, Inc.

NOTICE:
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SECTION: 2
TOWNSHIP: 6
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NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

DATE: 9/30/20
SCALE: 1"=40'
REVIEWED BY: R. Tessely
PROJECT: 1013-008
CLIENT: Mosaic Real Estate
DRAWN BY: L. Smith

HOMESTEAD AT CLARENDON HILLS
CITY OF FORT COLLINS
STATE OF COLORADO

Sheet
2
Of 2 Sheets

NORTHERN ENGINEERING

September 30, 2020

DRAINAGE LETTER AND LID REPORT

HOMESTEAD AT CLARENDON HILLS

Fort Collins, Colorado

Prepared for:
Kenneth R. Mitchell
Mosaic Real Estate LLC
1021 Nightingale Drive
Fort Collins, Colorado. 80525

Prepared by:

NORTHERN ENGINEERING
301 North Mason Street, Suite 100
Fort Collins, Colorado 80524
Phone: 970.221.4158
www.northernengineering.com

Project Number: 1013-008

NORTHERN ENGINEERING

Drainage Letter and LID Report – Homestead at Clarendon Hills

Date: September 30, 2020

Project: Homestead at Clarendon Hills
Preliminary Development Plan (PDP)
Fort Collins, Colorado

Project No. 1013-008

Attn: City of Fort Collins Stormwater Utility
700 Wood Street
Fort Collins, Colorado 80521

To whom it may concern:

This letter serves to address the stormwater impacts of the proposed project known as "Homestead at Clarendon Hills". The site is located in southwest Fort Collins bounded to the north by Front Range Community College, to the east by existing Clarendon Hills Subdivision, to the south by Clarendon Hills Drive and Langdale Drive, and to the west by South Shields Street. The project is part of the Drainage Report for Clarendon Hills by Stuart and Associates written in 1986. The proposed development consists of 8 low-density single-family lots and a detention area. The project site also contains an existing irrigation ditch along the north property line.

The project was included in the drainage report for Clarendon Hills Subdivision. Therefore, this letter intends to show conformance with the approved drainage design, including general drainage patterns and imperviousness. This letter also documents how the project meets new Low Impact Development requirements implemented City of Fort Collins since the approval of the original project.

Original Drainage Patterns

The original Clarendon Hill drainage design divided the subdivision into 3 basins. The current project site is split by two of these basins - Drainage Basin A draining to the north, and Drainage Basin B draining to the south. Drainage Basin B flows into Clarendon Hills Drive and Langdale Drive and travels via gutter and pan flow south along Clarendon Hills Drive. The flow is then collected by inlets at Clarendon Hills Drive and Hinsdale Drive and conveyed to a series of existing detention ponds. Drainage Basin A generally flows to the northeast to an existing irrigation ditch on the property. A small undisturbed area north of the irrigation ditch will flow into the Front Range Community College drainage system. From there, it flows through existing drainage ways east to Mail Creek, and eventually to Fossil Creek. An Existing Drainage Exhibit and excerpts from the original report are provided in the appendices for reference.

Proposed Drainage Patterns

The Homestead at Clarendon Hills project was divided into seven proposed drainage basins that essentially follow the established drainage patterns, as well as the drainage patterns approved with the Drainage Report for Clarendon Hills.

Basin A encompasses the rear of the lots and open space between the rear lot lines and the existing irrigation ditch. The only proposed improvements with Basin A are landscaping in the rear of the lots. Flows from the basin will drain north into the irrigation ditch. Basin A is consistent with Basin A from the Drainage Report for Clarendon Hills.

Basin B will roughly match the existing area draining south to the existing Clarendon Hills ponds. Proposed improvements will include single-family homes, the front and side of the lots, driveways, walks, and detention area. Basin B is further subdivided into Basins B1, B2, B3, and B4. Basins B1 and B3 consists of the open space at the west and east ends that will discharge into the Clarendon Hills and Langdon Drives curb and gutter. Basins B2 consists of Lots 1 through 8 building envelopes, driveways and detention pond. The project was graded to allow the building envelopes to drain to south, and small swales and curb and gutter in the shared driveway will convey drainage towards the detention pond. Basin B4 consists of the landscaping along the front of the pond that is incapable of draining into the detention pond. The release rate from the detention pond is reduced to accommodate the undetained releases from Basins B1, B3, and B4. An exhibit calculating the release rate is included in the appendices.

The percent impervious for the lots was developed by assuming a typical building footprint of 3,250 square feet. The building footprint was placed along the rear building envelope to maximize the length of the driveway. This resulted in 49% imperviousness on a 7,982 sq. ft. lot. The area of the driveway was adjusted on the other lots to maintain a 49% imperviousness on the other lots. Along with the shared driveway, this resulted in a percent imperviousness of 51% in Basin B3. An exhibit is included in the appendices.

Additionally, Basin OS1 and OS2 are on the east and the north sides of the site to quantify flows to the Front Range Community College campus. Basin OS1 consists of the side and rear of Lot 8 and adjacent open space. Basin OS2 is a small sliver of open space on the north side of the irrigation ditch that drains directly to the Front Range Community College campus.

Development of Existing Runoff Coefficient

The drainage for Clarendon Hills Subdivision was originally analyzed in the *Drainage Report: Clarendon Hills: Fort Collins, Colorado* prepared by Stuart and Associates in 1986 as part of the approval process for Clarendon Hills 1st Filing. Homestead for Clarendon Hills is in the northwest corner of the original drainage master plan for Clarendon Hills 1st Filing. In the approved original drainage report for Clarendon Hills (1st Filing), the project site was planned as office and multi-family with a developed runoff coefficient of C=0.50.

According to the approved drainage report for Clarendon Hills 4th Filing, prepared by Land Development Services and dated April 9, 1991, a church site of 8.27 acres in the middle of the Clarendon Hills 4th Filing was assumed to be an offsite undeveloped drainage basin with a developed

runoff coefficient of C=0.25. According to the approved drainage report for Clarendon Hills 6th Filing, prepared by Land Development Services and dated January 8, 1992, the original developer of Clarendon Hills swapped the northwest corner of Clarendon Hills (including Homestead for Clarendon Hills) for the church site in Clarendon Hills 4th Filing. The old church site was then developed as Clarendon Hills 6th Filing with runoff coefficients from 0.28 to 0.70.

Because of the subsequent drainage studies and land swaps, we assumed an existing runoff coefficient of C=0.25 for Homestead at Clarendon Hills. A runoff coefficient of 0.25 is consistent with the following design considerations:

- The Fort Collins Stormwater Criteria Manual for lawns with clayey soil and an average slope of 2% to 7% requires a runoff coefficient of C = 0.25. The existing slopes throughout the site is between 2% to 7% with clayey soil.
- The drainage report for Clarendon Hills 4th Filing assumed a runoff coefficient C=0.25 for the church site, and the church site was subsequently part of a land swap for the northwest corner of the Clarendon Hills Subdivision.

Detention

Per the Clarendon Hills 1st Filing Drainage Report, "The ponds were designed using a mass diagram that required 10.46 acre-feet to detain the 100-year developed storm and release at a 2-year historic rate…". Assuming a historic runoff coefficient of 0.25, detention from Basin B was provided as long as the overall flow at Design Point B does not exceed 1.9 cfs. Because of the increased impervious area within Basin B, detention is required within Basin B2 to reduce the post-developed flow rates at Design Point B to equal or less than 1.9 cfs. Since Basins B1, B3, and B4 will be released into the surrounding curb and gutter undetained, the detention pond in Basin B2 is designed to release the 100-year event at 0.3 cfs. A release rate of 1.2 cfs is required to maintain a 100-year flow rate of 1.9 cfs at Design Point B. (See the included flowrate calculations included in the appendices.)

Inlets

By limiting the 100-year flowrate at Design Point B, the flowrate at the existing inlets will match or decrease from the projected flowrates in the previously approved Clarendon Hills drainage reports. This results in matching or decreasing runoff to the existing inlets that were designed and approved with the earlier project, so no additional inlet calculations have been provided as a part of this report.

Water Quality/LID Conformance

According to Section 6.0 of the City of Fort Collins Stormwater Manual, "*50% site treated with 'standard' water quality plus 50% site treated with LID (including pavers) equals 100% of site-treated (requirements met), or 25% site treated with 'standard' water quality plus 75% treated with LID equals 100% of site treated (requirements met)*", (page 14). This project proposes to treat 90.5% of the new impervious areas through two rain gardens as LID treatment. The detention pond will provide an additional 1,187 cubic feet of water quality treatment for 90.5% of new impervious area. However, due to grading constraints along the east side of the project and requirements to provide a maintenance access for the ditch company, a gravel pedestrian path (3,754 sq. ft. of new impervious area) will not be treated by either the rain gardens or the detention pond. An exhibit showing the area of LID treatment is included in the appendices.

Although exact impervious area is unavailable at this preliminary stage, the building envelopes will drain towards the rain gardens and the detention pond. The high point along each lot line is set at the rear of the building envelopes to maximize as much of the lot draining towards the south. Space limitations on the detention pond and rain gardens, natural buffer offsets from the ditch, and fire accessibility requirements restrict the drainage towards the front. Even with the grading restrictions, the proposed flowrate into the Mail Creek Basin is 2.2 cfs less than the existing flowrate.

Erosion and Sediment Control

During construction, the Contractor will follow the appropriate and applicable City of Fort Collins standards for erosion and sediment control. Since more than 10,000 sf will be disturbed as a part of this project, a comprehensive Stormwater Management Plan will be prepared for this project at final design. Post construction water quality and erosion control will be achieved by a fully established and stabilized site. All areas disturbed during construction will receive permanent hardscape, landscape, or building structure.

Floodplains

There are no regulatory floodplains associated with the project.

Conclusions

The proposed grading concept matches the original drainage patterns. The site matches the designed imperviousness draining to the existing Clarendon Hills curb and gutter. Onsite detention will be provided for the increased imperviousness of the area draining to towards the existing Clarendon Hills ponds, and onsite detention will be required to maintain historic flow rates within Clarendon Hills. Stormwater quality has been provided and meets the city requirements for Low Impact Development treatment. Therefore, it is my professional opinion that Homestead at Clarendon Hills satisfies all applicable stormwater criteria and will effectively limit potential damage associated with its stormwater runoff.

Please do not hesitate to contact me if you have questions or require additional information.

Sincerely,

Frederick S. Wegert, PE
Project Engineer

NORTHERN ENGINEERING

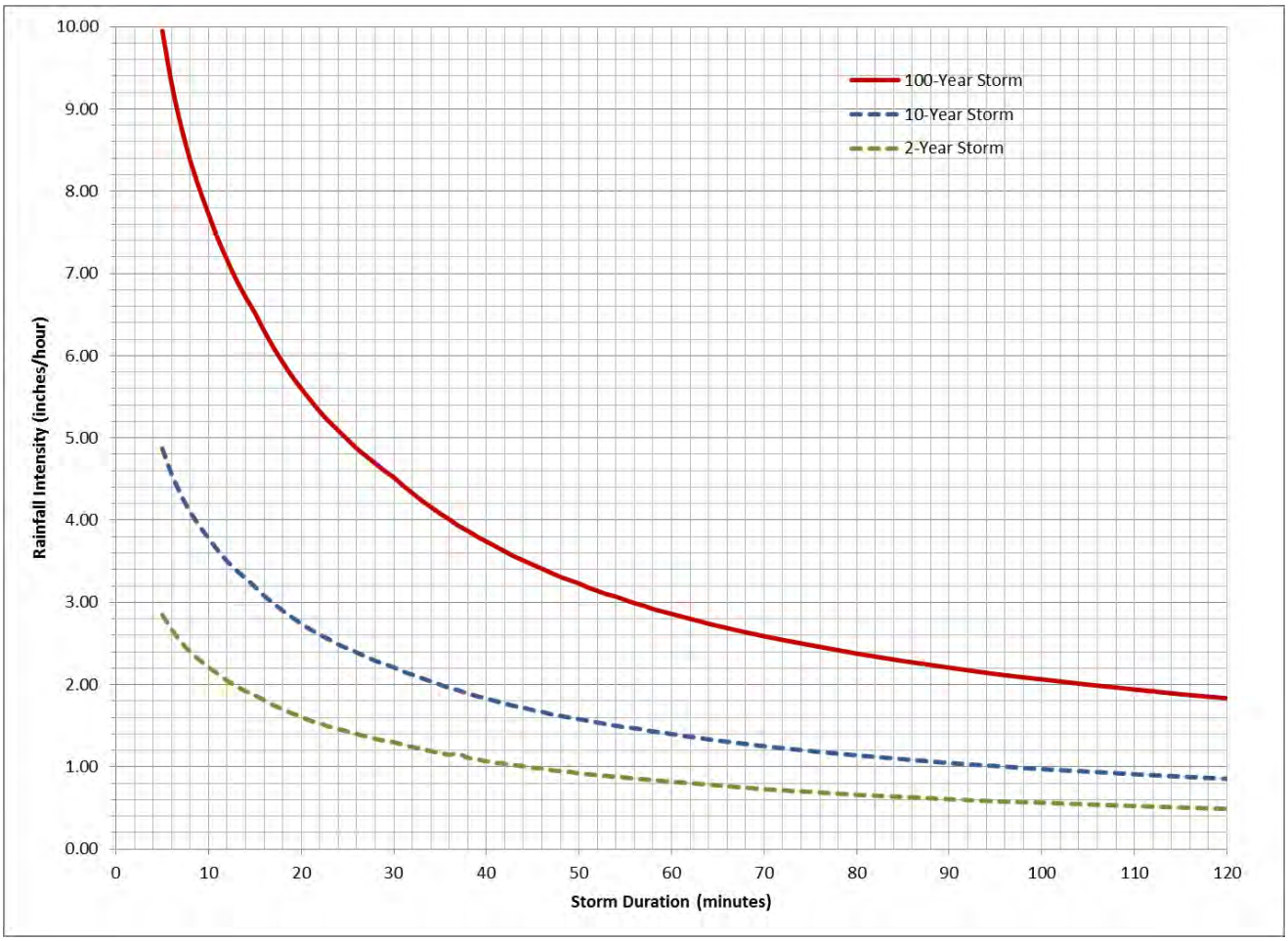
ATTACHMENT 1

HYDROLOGIC CALCULATIONS
TYPICAL LOT IMPERVIOUSNESS EXHIBIT

Table 3.4-1. IDF Table for Rational Method

Duration (min)	Intensity 2-year (in/hr)	Intensity 10-year (in/hr)	Intensity 100-year (in/hr)
5	2.85	4.87	9.95
6	2.67	4.56	9.31
7	2.52	4.31	8.80
8	2.40	4.10	8.38
9	2.30	3.93	8.03
10	2.21	3.78	7.72
11	2.13	3.63	7.42
12	2.05	3.50	7.16
13	1.98	3.39	6.92
14	1.92	3.29	6.71
15	1.87	3.19	6.52
16	1.81	3.08	6.30
17	1.75	2.99	6.10
18	1.70	2.90	5.92
19	1.65	2.82	5.75
20	1.61	2.74	5.60
21	1.56	2.67	5.46
22	1.53	2.61	5.32
23	1.49	2.55	5.20
24	1.46	2.49	5.09
25	1.43	2.44	4.98
26	1.4	2.39	4.87
27	1.37	2.34	4.78
28	1.34	2.29	4.69
29	1.32	2.25	4.60
30	1.30	2.21	4.52
31	1.27	2.16	4.42
32	1.24	2.12	4.33
33	1.22	2.08	4.24
34	1.19	2.04	4.16
35	1.17	2.00	4.08
36	1.15	1.96	4.01
37	1.16	1.93	3.93
38	1.11	1.89	3.87
39	1.09	1.86	3.8
40	1.07	1.83	3.74
41	1.05	1.80	3.68
42	1.04	1.77	3.62
43	1.02	1.74	3.56
44	1.01	1.72	3.51
45	0.99	1.69	3.46
46	0.98	1.67	3.41
47	0.96	1.64	3.36
48	0.95	1.62	3.31
49	0.94	1.6	3.27
50	0.92	1.58	3.23
51	0.91	1.56	3.18
52	0.9	1.54	3.14
53	0.89	1.52	3.10
54	0.88	1.50	3.07
55	0.87	1.48	3.03
56	0.86	1.47	2.99
57	0.85	1.45	2.96
58	0.84	1.43	2.92
59	0.83	1.42	2.89
60	0.82	1.4	2.86
65	0.78	1.32	2.71
70	0.73	1.25	2.59
75	0.70	1.19	2.48
80	0.66	1.14	2.38
85	0.64	1.09	2.29
90	0.61	1.05	2.21
95	0.58	1.01	2.13
100	0.56	0.97	2.06
105	0.54	0.94	2.00
110	0.52	0.91	1.94
115	0.51	0.88	1.88
120	0.49	0.86	1.84

Figure 3.4-1. Rainfall IDF Curve – Fort Collins



NORTHERN ENGINEERING

EXISTING RUNOFF COEFFICIENT CALCULATIONS

Character of Surface	Runoff Coefficient[1]	Percent Impervious[1]
Streets, Parking Lots, Roofs, Alleys, and Drives:		
Asphalt, Concrete	0.95	100%
Rooftop	0.95	90%
Gravel	0.50	40%
Residential: Low Density	0.55	50%
Lawns and Landscaping:		
Undeveloped: Greenbelts, Agriculture	0.20	2%
Lawns, Clayey Soil, Flat Slope < 2%	0.20	2%
USDA SOIL TYPE: C		

1) Runoff coefficients per Tables 3.2-1 & 3.2 of the FCSM. Percent impervious per Tables 4.1-2 & 4.1-3 of the FCSM.

Project: Homestead at Clarendon

Calculations By: F. Wegert

Date: September 30, 2020

Composite Runoff Coefficient[2]

2) Composite Runoff Coefficient adjusted per Table 3.2-3 of the Fort Collins Stormwater Manual (FCSM).

Basin ID	Basin Area (sq.ft.)	Basin Area (acres)	Asphalt, Concrete (acres)	Rooftop (acres)	Gravel (acres)	Residential: Low Density (acres)	Undeveloped: Greenbelts, Agriculture (acres)	Lawns, Clayey Soil, Flat Slope < 2% (acres)	Percent Impervious	C_2*C_f C_f = 1.00	C_5*C_f Cf = 1.00	$C_{10}*C_f$ Cf = 1.00	$C_{100}*C_f$ Cf = 1.25
EX A	103,769	2.382	Per Clarendon Hills 4th Filing Drainage Report: C = 0.25, Percent Impervious = 2%						2%	0.25	0.25	0.25	0.31
EX B	29,782	0.684	Per Clarendon Hills 4th Filing Drainage Report: C = 0.25, Percent Impervious = 2%						2%	0.25	0.25	0.25	0.31
EX OS1	6,418	0.147	Per Clarendon Hills 4th Filing Drainage Report: C = 0.25, Percent Impervious = 2%						2%	0.25	0.25	0.25	0.31
EX OS2	2,806	0.064	Per Clarendon Hills 4th Filing Drainage Report: C = 0.25, Percent Impervious = 2%						2%	0.25	0.25	0.25	0.31
Combined Basins													
North	112,993	2.594	0.000	0.000	0.000	0.000	0.000	0.000	2%	0.25	0.25	0.25	0.31

NORTHERN ENGINEERING

EXISTING TIME OF CONCENTRATION COMPUTATIONS

Overland Flow, Time of Concentration:

$$T_i = \frac{1.87(1.1 - C * Cf)\sqrt{L}}{S^{1/3}}$$ (Equation 3.3-2 per Fort Collins Stormwater Manual)

Maximum Tc:

$$Tc = \frac{L}{180} + 10$$ (Equation 3.3-5 per Fort Collins Stormwater Manual)

Channelized Flow, Velocity:

$$V = \frac{1.49}{n} * R^{2/3} * \sqrt{S}$$ (Equation 5-4 per Fort Collins Stormwater Manual)

Channelized Flow, Time of Concentration:

$$Tt = \frac{L}{V * 60}$$ (Equation 5-5 per Fort Collins Stormwater Manual)

Where: V = Velocity (ft/sec)
n = Roughness Coefficient
R = Hydraulic Radius (feet)
S = Longitudinal Slope, feet/feet

Project: Homestead at Clarendon
Calculations By: F. Wegert
Date: September 30, 2020

Notes:
1) Add 4900 to all elevations.
2) Per Fort Collins Stormwater Manual, minimum Tc = 5 min.

Design Point	Basin	Overland Flow							Channelized Flow										Time of Concentration						
		Length (ft)	Elev Up	Elev Down	Slope (%)	T_i 2-Yr (min)	T_i 10-Yr (min)	T_i 100-Yr (min)	Length (ft)	Elev Up	Elev Down	Slope (%)	Roughness (n)	Flow Area (sq.ft.)	W_P (ft)	Hydraulic Radius (ft)	Velocity (ft/s)	T_t (min)	Max. T_c (min)	Comp. $T_{c\ 2\text{-}Yr}$ (min)	T_c 2-Yr (min)	Comp. $T_{c\ 10\text{-}Yr}$ (min)	T_c 10-Yr (min)	Comp. $T_{c\ 100\text{-}Yr}$ (min)	T_c 100-Yr (min)
ex a	EX A	65	93.83	88.55	8.12%	6.4	6.4	5.9	665	88.55	85.49	0.46%	0.030	3.063	6.56	0.467	0.20	54.66	14.06	61.03	14.06	61.03	14.06	60.57	14.06
b	EX B	30	93.00	91.75	4.17%	5.4	5.4	5.0	340	91.75	84.93	2.01%	0.013	0.313	4.54	0.069	0.27	20.76	12.06	26.17	12.06	26.17	12.06	25.77	12.06
b	EX OS1	195	93.00	86.13	3.52%	14.6	14.6	13.5				N/A				N/A	N/A	0.00	11.08	14.59	11.08	14.59	11.08	13.51	11.08
b	EX OS2	45	92.23	88.81	7.60%	5.4	5.4	5.0				N/A				N/A	N/A	0.00	10.25	5.42	5.42	5.42	5.42	5.02	5.02
Combined Basins																									
ex a	North	60	92.89	89.01	6.47%	6.6	6.6	6.1	665	88.55	85.49	0.46%	0.030	3.063	5.56	0.551	0.23	48.95	14.03	55.56	14.03	55.56	14.03	55.08	14.03

NORTHERN ENGINEERING

EXISTING DIRECT RUNOFF COMPUTATIONS

Project: Homestead at Clarendon
Calculations By: F. Wegert
Date: September 30, 2020

Intensity, I from Fig. 3.4.1 Fort Collins Stormwater Manual
Rational Equation: Q = CiA (Equation 6-1 per MHFD)

Design Point	Basin	Area (acres)	T_c (Min)			Runoff C			Intensity			Flow		
			T_{c2}	T_{c10}	T_{c100}	C_2	C_{10}	C_{100}	I_2 (in/hr)	I_{10} (in/hr)	I_{100} (in/hr)	Q_2 (cfs)	Q_{10} (cfs)	Q_{100} (cfs)
ex a	EX A	2.382	14.06	14.06	14.06	0.25	0.25	0.31	1.92	3.29	6.71	1.1	2.0	5.0
b	EX B	0.684	12.06	12.06	12.06	0.25	0.25	0.31	2.05	3.50	7.16	0.4	0.6	1.5
b	EX OS1	0.147	11.08	11.08	11.08	0.25	0.25	0.31	2.13	3.63	7.42	0.1	0.1	0.3
b	EX OS2	0.064	5.42	5.42	5.02	0.25	0.25	0.31	2.85	4.87	9.95	0.0	0.1	0.2
Combined Basins														
ex a	North	2.594	14.03	14.03	14.03	0.25	0.25	0.31	1.92	3.29	6.71	1.2	2.1	5.4

NORTHERN ENGINEERING

DEVELOPED RUNOFF COEFFICIENT CALCULATIONS

Character of Surface	Runoff Coefficient[1]	Percent Impervious[1]
Streets, Parking Lots, Roofs, Alleys, and Drives:		
Asphalt, Concrete	0.95	100%
Rooftop	0.95	90%
Gravel	0.50	40%
Residential: Low Density	0.55	50%
Lawns and Landscaping:		
Undeveloped: Greenbelts, Agriculture	0.20	2%
Lawns, Clayey Soil, Flat Slope < 2%	0.20	2%
USDA SOIL TYPE: C		

1) Runoff coefficients per Tables 3.2-1 & 3.2 of the FCSM. Percent impervious per Tables 4.1-2 & 4.1-3 of the FCSM.

Project: Homestead at Clarendon

Calculations By: F. Wegert

Date: September 30, 2020

Composite Runoff Coefficient[2]

2) Composite Runoff Coefficient adjusted per Table 3.2-3 of the Fort Collins Stormwater Manual (FCSM).

Basin ID	Basin Area (sq.ft.)	Basin Area (acres)	Asphalt, Concrete (acres)	Rooftop (acres)	Gravel (acres)	Residential: Low Density (acres)	Undeveloped: Greenbelts, Agriculture (acres)	Lawns, Clayey Soil, Flat Slope < 2% (acres)	Percent Impervious	C_2*C_f C_f = 1.00	C_5*C_f Cf = 1.00	$C_{10}*C_f$ Cf = 1.00	$C_{100}*C_f$ Cf = 1.25
A	59,611	1.368	0.000	0.000	0.176	0.000	1.193	0.000	7%	0.24	0.24	0.24	0.30
B1	1,772	0.041	0.000	0.000	0.012	0.000	0.000	0.029	13%	0.29	0.29	0.29	0.36
B2	70,997	1.630	0.302	0.574	0.000	0.000	0.000	0.753	51%	0.60	0.60	0.60	0.75
B3	552	0.013	0.000	0.000	0.000	0.000	0.000	0.013	2%	0.20	0.20	0.20	0.25
B4	3,034	0.070	Lawns, Clayey Soil > 7%: C = 0.35, Percent Impervious = 2%						2%	0.25	0.25	0.25	0.31
OS1	4,023	0.092	0.000	0.000	0.028	0.044	0.020	0.000	36%	0.46	0.46	0.46	0.57
OS2	2,806	0.064	Lawns, Clayey Soil > 7%: C = 0.35, Percent Impervious = 2%						2%	0.25	0.25	0.25	0.31
Combined Basins													
North	66,440	1.525	0.000	0.000	0.203	0.044	1.277	0.000	8%	0.25	0.25	0.25	0.31
South	76,355	1.753	0.302	0.574	0.012	0.000	0.000	0.864	48%	0.58	0.58	0.58	0.72

NORTHERN ENGINEERING

DEVELOPED TIME OF CONCENTRATION COMPUTATIONS

Overland Flow, Time of Concentration:

$$T_i = \frac{1.87(1.1 - C * Cf)\sqrt{L}}{S^{1/3}}$$ (Equation 3.3-2 per Fort Collins Stormwater Manual)

Channelized Flow, Velocity:

$$V = \frac{1.49}{n} * R^{2/3} * \sqrt{S}$$ (Equation 5-4 per Fort Collins Stormwater Manual)

Where: V = Velocity (ft/sec)
n = Roughness Coefficient
R = Hydraulic Radius (feet)
S = Longitudinal Slope, feet/feet

Maximum Tc:

$$Tc = \frac{L}{180} + 10$$ (Equation 3.3-5 per Fort Collins Stormwater Manual)

Channelized Flow, Time of Concentration:

$$Tt = \frac{L}{V * 60}$$ (Equation 5-5 per Fort Collins Stormwater Manual)

Project: Homestead at Clarendon
Calculations By: F. Wegert
Date: September 30, 2020

Notes:
1) Add 4900 to all elevations.
2) Per Fort Collins Stormwater Manual, minimum Tc = 5 min.

Design Point	Basin	Overland Flow							Channelized Flow										Time of Concentration						
		Length (ft)	Elev Up	Elev Down	Slope (%)	T_i 2-Yr (min)	T_i 10-Yr (min)	T_i 100-Yr (min)	Length (ft)	Elev Up	Elev Down	Slope (%)	Roughness (n)	Flow Area (sq.ft.)	W_P (ft)	Hydraulic Radius (ft)	Velocity (ft/s)	T_t (min)	Max. T_c (min)	Comp. $T_{c\ 2\text{-}Yr}$ (min)	T_c 2-Yr (min)	Comp. $T_{c\ 10\text{-}Yr}$ (min)	T_c 10-Yr (min)	Comp. $T_{c\ 100\text{-}Yr}$ (min)	T_c 100-Yr (min)
a	A	60	92.89	89.01	6.47%	6.7	6.7	6.2	705	89.01	85.49	0.50%	0.030	2.636	6.11	0.431	0.20	58.64	14.25	65.34	14.25	65.34	14.25	64.87	14.25
b	B1	40	93.97	92.33	4.10%	6.0	6.0	5.5	326	92.33	84.93	2.27%	0.013	0.037	1.03	0.036	0.19	28.90	12.03	34.90	12.03	34.90	12.03	34.37	12.03
b	B2	120	94.10	91.77	1.94%	8.2	8.2	5.7	150	91.77	89.52	1.50%	0.030	3.028	10.53	0.288	0.27	9.43	12.74	29.64	12.74	29.64	12.74	27.16	12.74
b	B2								48	89.52	89.29	0.48%	0.013	1.702	3.86	0.441	0.46	1.74							
b	B2								175	89.29	84.93	2.49%	0.030	6.600	30.44	0.217	0.28	10.31							
b	B3	40	92.18	91.54	1.60%	9.1	9.1	8.6	366	91.54	84.93	1.81%	0.013	0.011	0.56	0.020	0.11	54.40	12.26	63.50	12.26	63.50	12.26	62.99	12.26
b	B4	20	91.89	90.41	7.40%	3.6	3.6	3.4	167	90.41	84.93	3.28%	0.013	0.053	1.23	0.043	0.26	10.91	11.04	14.55	11.04	14.55	11.04	14.29	11.04
os1	OS1	160	93.83	93.10	0.46%	19.7	19.7	16.2				N/A				N/A	N/A	0.00	10.89	19.73	10.89	19.73	10.89	16.21	10.89
os2	OS2	25	92.23	90.55	6.72%	4.2	4.2	3.9				N/A				N/A	N/A	0.00	10.14	4.21	5.00	4.21	5.00	3.90	5.00
Combined Basins																									
a	North	60	92.89	89.01	6.47%	6.6	6.6	6.1	705	89.01	85.49	0.50%	0.030	2.636	6.11	0.431	0.20	58.64	14.25	65.25	14.25	65.25	14.25	64.76	14.25
b	South	120	94.10	91.77	1.94%	8.6	8.6	6.2	150	91.77	89.52	1.50%	0.030	3.028	10.53	0.288	0.27	9.43	12.74	30.07	12.74	30.07	12.74	27.70	12.74
b	South								48	89.52	89.29	0.48%	0.013	1.702	3.86	0.441	0.46	1.74							
b	South								175	89.29	84.93	2.49%	0.030	6.600	30.44	0.217	0.28	10.31							

NORTHERN ENGINEERING

DEVELOPED DIRECT RUNOFF COMPUTATIONS

Project: Homestead at Clarendon
Calculations By: F. Wegert
Date: September 30, 2020

Intensity, I from Fig. 3.4.1 Fort Collins Stormwater Manual
Rational Equation: Q = CiA (Equation 6-1 per MHFD)

Design Point	Basin	Area (acres)	T_c (Min)			Runoff C			Intensity			Flow		
			T_{c2}	T_{c10}	T_{c100}	C_2	C_{10}	C_{100}	I_2 (in/hr)	I_{10} (in/hr)	I_{100} (in/hr)	Q_2 (cfs)	Q_{10} (cfs)	Q_{100} (cfs)
a	A	1.368	14.25	14.25	14.25	0.24	0.24	0.30	1.92	3.29	6.71	0.6	1.1	2.7
b	B1	0.041	12.03	12.03	12.03	0.29	0.29	0.36	2.05	3.50	7.16	0.0	0.0	0.1
b	B2	1.630	12.74	12.74	12.74	0.60	0.60	0.75	2.02	3.45	7.04	2.0	3.4	8.7
b	B3	0.013	12.26	12.26	12.26	0.20	0.20	0.25	2.05	3.50	7.16	0.0	0.0	0.0
b	B4	0.070	11.04	11.04	11.04	0.25	0.25	0.31	2.13	3.63	7.42	0.0	0.1	0.2
os1	OS1	0.092	10.89	10.89	10.89	0.46	0.46	0.57	2.17	3.71	7.57	0.1	0.2	0.4
os2	OS2	0.064	5.00	5.00	5.00	0.25	0.25	0.31	2.85	4.87	9.95	0.0	0.1	0.2
Combined Basins														
a	North	1.525	14.25	14.25	14.25	0.25	0.25	0.31	1.92	3.29	6.71	0.7	1.3	3.2
b	South	1.753	12.74	12.74	12.74	0.58	0.58	0.72	2.02	3.45	7.04	2.0	3.5	8.9

LEGEND

ROOF		3,250 SQ. FT.
DRIVEWAY		701 SQ. FT.
PERVIOUS		4,031 SQ. FT.

LOT SIZE = 7,982 SQ. FT.

PERCENT IMPERVIOUS = 49%

HOMESTEAD AT CLARENDON

FORT COLLINS, CO

9.23.2020

NORTHERN ENGINEERING

FIGURE 1

Typical Lot for Impervious Areas

P:\1013-008\DWG\EXHIBITS\1013-008_DRAINAGE_TYPLOT.DWG

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ATTACHMENT 2

DETENTION POND CALCULATIONS
WATER QUALITY CALCULATIONS
LID CALCULATIONS AND EXHIBIT

HISTORIC VS. DEVELOPED FLOWRATES

Project Number:	1013-008
Project Name:	Homestead at Clarendon
Project Location:	Fort Collins, Colorado

Historic vs. Developed Flowrates to the North

Basin	Q_{100}		Notes
Historic Basin EX A	5.0	cfs	
Historic Basin EX OS1	0.3	cfs	
Historic Basin EX OS2	0.2	cfs	
Total Q_{100} to the North	5.5	cfs	
Proposed Basin A	2.7	cfs	
Proposed Basin OS1	0.4	cfs	
Proposed Basin OS2	0.2	cfs	
Total Q_{100} to the North	3.3	cfs	
Change in Q_{100} to the North	2.2	cfs	Results in a decrease for the 100-year storm.

Historic vs. Developed Flowrates to the South

Basin	Q_{100}		Notes
Historic Basin EX B	1.5	cfs	
Total Q_{100} to the South	1.5	cfs	
Proposed Basin B1	0.1	cfs	
Proposed Basin B3	0.0	cfs	
Proposed Basin B4	0.2	cfs	
Detention Pond Release Rate	1.2	cfs	Pond release rate determined by subtracting Basin B1, B3, and B4 from Basin EX B.
Total Q_{100} to the South	1.5	cfs	
Change in Q_{100} to the South	0.0	cfs	No change for the 100-year storm.

NORTHERN ENGINEERING

DETENTION POND CALCULATION; MODIFIED FAA METHOD w/ Ft Collins IDF

Project Number :	**1013-008**
Project Name :	**Homestead at Clarendon**
Project Location :	**Fort Collins, Colorado**
Pond No :	**Detention Pond**

Input Variables			**Results**		
Design Point	B2				
Design Storm	100-yr		**Required Detention Volume**		
C =	0.75				
Tc =	12.74	min	Storage	**8288**	**ft^3**
A =	1.63	acres	Water Quality	**1187**	**ft^3**
Max Release Rate =	1.20	cfs		**0.22**	**ac-ft**

Time (min)	Ft Collins 100-yr Intensity (in/hr)	Inflow Volume (ft^3)	*Outflow Adjustment Factor*	Q_{av} (cfs)	Outflow Volume (ft^3)	Storage Volume (ft^3)
5	9.950	3649	1.00	1.20	360	3289
10	7.720	5663	1.00	1.20	720	4943
15	6.520	7174	1.00	1.20	1080	6094
20	5.600	8215	1.00	1.20	1440	6775
25	4.980	9132	1.00	1.20	1800	7332
30	4.520	9946	1.00	1.20	2160	7786
35	4.080	10474	1.00	1.20	2520	7954
40	3.740	10973	1.00	1.20	2880	8093
45	3.460	11421	1.00	1.20	3240	8181
50	3.230	11846	1.00	1.20	3600	8246
55	3.030	12224	1.00	1.20	3960	8264
60	2.860	12587	1.00	1.20	4320	8267
65	2.720	12968	1.00	1.20	4680	8288
70	2.590	13298	1.00	1.20	5040	8258
75	2.480	13643	1.00	1.20	5400	8243
80	2.380	13966	1.00	1.20	5760	8206
85	2.290	14278	1.00	1.20	6120	8158
90	2.210	14589	1.00	1.20	6480	8109
95	2.130	14842	1.00	1.20	6840	8002
100	2.060	15110	1.00	1.20	7200	7910
105	2.000	15404	1.00	1.20	7560	7844
110	1.940	15653	1.00	1.20	7920	7733
115	1.890	15943	1.00	1.20	8280	7663
120	1.840	16196	1.00	1.20	8640	7556

*Note: Using the method described in Urban Storm Drainage Criteria Manual Volume 2.

NORTHERN ENGINEERING

Detention Pond Stage Storage Curve

Project Number:	1013-008	**Project:**	Homestead at Clarendon
Project Location:	Fort Collins, Colorado		
Calculations By:	F. Wegert	**Date:**	9/30/2020
Pond No.:	B2		

Pond Outlet and Volume Data

Outlet Elevation:	5086.57		**Design Volume:**	0.22 ac. ft.
Grate Elevation:	5089.8		**Volume at Grate:**	0.23 ac. ft.
Crest of Pond Elev.:	5090.6		**Elev at Design Volume:**	5089.75
Freeboard.:	0.9	ft		

Pond Stage Storage Curve

Contour		Contour Surface Area (ft^2)	Depth	Incremental Volume		Cummalitive Volume	
Maximum Elevation	Minimum Elevation			cu. ft.	acre ft	cu. ft.	acre ft
5086.6	N/A	0.0	0	0.0	0.00	0.0	0.00
5087.0	5086.6	740.1	0.4	159.1	0.00	159.1	0.00
5087.5	5087.0	2,758.0	0.5	874.5	0.02	1,033.6	0.02
5088.0	5087.5	3,636.2	0.5	1,598.5	0.04	2,632.2	0.06
5088.5	5088.0	3,891.3	0.5	1,881.9	0.04	4,514.0	0.10
5089.0	5088.5	4,058.6	0.5	1,987.5	0.05	6,501.5	0.15
5089.5	5089.0	4,146.9	0.5	2,051.4	0.05	8,552.9	0.20
5090.0	5089.5	4,212.6	0.5	2,089.9	0.05	10,642.7	0.24
5090.6	5090.0	4,288.8	0.6	2,550.4	0.06	13,193.2	0.30

WATER QUALITY POND DESIGN CALCULATIONS
Primary Pond

Project: Homestead at Clarendon
Calc. By: F. Wegert
Date: September 30, 2020

Required Storage & Outlet Works

Basin Area =	1.630	<-- INPUT from impervious calcs
Basin Percent Imperviousness =	51.00	<-- INPUT from impervious calcs
Basin Imperviousness Ratio =	0.5100	<-- CALCULATED
Drain Time =	12 hours	<-- from MHFD Vol. 3 Table 3-2
Drain Time Coefficient =	0.8	<-- from MHFD Vol. 3 Table 3-2
WQCV (watershed inches) =	0.167	<-- MHFD Vol. 3 Equation 3-1
WQCV (ac-ft) =	0.027	<-- MHFD Vol. 3 Equation 3-3
WQCV (ft^3) =	1187	<-- MHFD Vol. 3 Equation 3-3
WQ Depth (ft) =	**	<-- INPUT from stage-storage table
Area Required Per Row, a (in^2) =	**	<-- CALCULATED from Figure EDB-3

Circular Perforation Sizing

dia (in) =	**	<-- INPUT from Figure 5
n =	**	<-- INPUT from Figure 5
t (in) =	**	<-- INPUT from Figure 5
number of rows =	**	<-- from WQ Depth and row spacing

**To be completed at final design

NORTHERN ENGINEERING

Rain Garden Stage Storage Curve

Project Number:	1013-008	**Project:**	Homestead at Clarendon
Project Location:	Fort Collins, Colorado		
Calculations By:	F. Wegert	**Date:**	9/30/2020
Pond No.:	East Rain Garden		

Pond Outlet and Volume Data

Bottom Elevation:	5088.9		**Design Volume:**	297	ft^3
Overflow Elevation:	5089.8		**Volume at Overflow:**	273	ft^3
Crest of Pond Elev.:	5090.6		**Elev at Design Volume:**	5089.9	
Freeboard.:	0.7	ft	**Water Depth:**	1.0	ft

Pond Stage Storage Curve

Contour		Contour Surface Area (ft^2)	Depth	Incremental Volume		Cummalitive Volume	
Maximum Elevation	Minimum Elevation			cu. ft.	acre ft	cu. ft.	acre ft
5088.9	N/A	0.0	0	0.0	0.00	0.0	0.00
5089.0	5088.9	127.4	0.1	6.4	0.00	6.4	0.00
5089.5	5089.0	399.7	0.5	131.8	0.00	138.1	0.00
5090.0	5089.5	498.8	0.5	224.6	0.01	362.8	0.01
5090.6	5090.0	659.3	0.6	347.4	0.01	710.2	0.02

NORTHERN ENGINEERING

West Rain Garden Stage Storage Curve

Project Number:	1013-008	**Project:**	Homestead at Clarendon
Project Location:	Fort Collins, Colorado		
Calculations By:	F. Wegert	**Date:**	9/30/2020
Pond No.:	West Rain Garden		

Pond Outlet and Volume Data

Bottom Elevation:	5088.8		**Design Volume:**	297	ft^3
Overflow Elevation:	5089.8		**Volume at Overflow:**	321	ft^3
Crest of Pond Elev.:	5090.0		**Elev at Design Volume:**	5089.7	
Freeboard.:	0.3	ft	**Water Depth:**	0.9	ft

Pond Stage Storage Curve

Contour		Contour Surface Area (ft^2)	Depth	Incremental Volume		Cummalitive Volume	
Maximum Elevation	Minimum Elevation			cu. ft.	acre ft	cu. ft.	acre ft
5088.8	N/A	0.0	0	0.0	0.00	0.0	0.00
5089.0	5088.8	237.3	0.2	23.7	0.00	23.7	0.00
5089.5	5089.0	405.5	0.5	160.7	0.00	184.4	0.00
5090.0	5089.5	501.7	0.5	226.8	0.01	411.2	0.01

NORTHERN ENGINEERING

Onsite Impervious Areas

Project: Homestead at Clarendon
Location: Fort Collins, Colorado
Calc. By: F. Wegert
Date: 09/30/20

Onsite Impervious Area

Existing

	Surface Area (SF)	% Imperv.	Imperv. Area (SF)
Rooftop	0	100%	0
Concrete	0	100%	0
Asphalt	0	100%	0
Gravel	0	40%	0
Landscaping	142,798	0%	0
Total	142,798		0

Developed

	Surface Area (SF)	% Imperv.	Imperv. Area (SF)
Rooftop	25,025	90%	22,523
Concrete	0	100%	0
Asphalt	13,158	100%	13,158
Gravel	9,384	40%	3,754
Landscaping	95,231	0%	0
Total	142,798		39,434

Additional Impervious Area (SF)	39,434

Developed Imperv. Area with WQ Treatment

Extended Detention

	Surface Area (SF)	% Imperv.	Imperv. Area (SF)
Rooftop	25,025	90%	22,523
Concrete	0	100%	0
Asphalt	13,158	100%	13,158
Gravel	0	40%	0
Landscaping	0	0%	0
Total			35,681

Developed Imperv. Area with LID Treatment

Rain Gardens

	Surface Area (SF)	% Imperv.	Imperv. Area (SF)
Rooftop	25,025	90%	22,523
Concrete	0	100%	0
Asphalt	13,158	100%	13,158
Gravel	0	40%	0
Landscaping	0	0%	0
Total			35,681

LID & Water Quality Summary

Project:	Homestead at Clarendon	**Calc. By:**	F. Wegert
Location:	Fort Collins, Colorado	**Date:**	09/30/20

Project Summary

Total New Impervious Area	39,434	sf
Target LID Treatment Percentage	50%	
Minimum Area to be Treated by LID measures	19,717	sf
Target Water Quality Treatment Percentage	100%	
Minimum Area to be Treated by Water Quality measures	39,434	sf

LID Summary

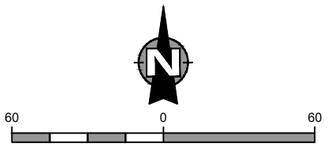
Rain Gardens

Rain Garden Treatment Area	35,681	sf
Percent Total Project Area Treated	90.5%	
East Rain Garden Volume (Required)	297	cf
East Rain Garden Volume (Design)	273	cf
West Rain Garden Volume (Required)	297	cf
West Rain Garden Volume (Design)	321	cf
Total Rain Garden Volume (Required)	594	cf
Total Rain Garden Volume (Design)	594	cf

Water Quality Summary

Detention

Detention Treatment Area	35,681	sf
Percent Total Project Area Treated	90.5%	
Water Quality Volume (Required)	1,187	cf
Storage Volume (Required)	8,288	cf
Total Detention Volume (Required)	9,475	cf
	0.22	ac.-ft.
Total Detention Volume (Design)	9,807	cf
	0.23	ac.-ft.



Homestead at Clarendon LID Summary		
Project Summary		
Total New Impervious Area	39,434	sf
Target Treatment Percentage	50%	
Minimum Area to be Treated by LID measures	***19,717***	**sf**
Rain Gardens		
Total Rain Garden Treatment Area	26,137	sf
Total Treatment Area	**26,137**	**sf**
Percent Total Project Area Treated	**66.3%**	

NOTES:
1. UNTREATED AREA CONSISTS OF LANDSCAPING AND LAWNS.
2. RAIN GARDEN TREATMENT AREA CONSISTS OF APPROXIMATELY SOUTH 3/4 OF LOTS (1 - 8), ROOFS, DRIVEWAYS, AND SHARED DRIVEWAY FOR LOTS 2 - 7.

NORTHERN ENGINEERING
301 N. Howes Street, Suite 100
Fort Collins, Colorado 80521
PHONE: 970.221.4158
www.northernengineering.com

DRAWING REFERENCE:

LID TREATMENT EXHIBIT

HOMESTEAD AT CLARENDON HILLS

DRAWN BY: F. Wegert	SHEET NO:
SCALE: 1 in = 60 ft	LID-1
ISSUED: September 30, 2020	

P:\10\13-028\DWG\DENG\10132-028_LID.DWG

ATTACHMENT 3

PREVIOUS REPORT EXCERPTS

Excerpts from Clarendon Hills
1st Filing Drainage Report

DRAINAGE REPORT
CLARENDON HILLS
FORT COLLINS, COLORADO

James H. Stewart and Associates, Inc.

Clarendon Hills is a proposed single family residential subdivision situated in the West 1/2 of Section 2, Township 6 North, Range 69 West of the Sixth P.M.. It contains 161 acres and borders South Shields Street from the South line of the Larimer County Vo-Tech School South to Fossil Creek Drive. The overall density of the subdivision is 2.1 units per acre. The entire subdivision is located in the Fossil Creek Drainage Basin which has a Master Drainageway Planning Study by Simons, Li & Associates dated August 1982.

The subdivision is broken down into three subbasins. Drainage Basin "A" contains 10.1 acres and is situate in the Northwest corner of Clarendon Hills and drains Northeasterly to an existing drainageway in the Larimer County Vo-Tech School property. That drainageway flows Easterly along Harmony Road to Mail Creek at the Burlington Northern Railroad. It continues Easterly as Mail Creek to its confluence with Fossil Creek West of Lemay Avenue. All of Drainage Basin "A" is located in future filings and will have onsite detention designed at the time the final plat is made. The amount of detention required is 94,176 cubic feet and the allowable outlet rate is 2.57 cubic feet per second. The three drainage basins are depicted on the enclosed drainage plans. The drainage plans show existing contours, two year developed runoff quantities, direction of flows and discharge points.

Drainage Basin "B" contains 82.3 acres and is generally the South 1/2 of the Northwest 1/4 of said Section 2. It drains Easterly in an existing thalweg thru Brookwood Subdivision, across the Burlington Northern Railroad, thru Cameron Park and enters Fossil Creek on the West side of South College Avenue. Drainage Basin "B" will have 10.58 acre feet of detention in a series of five ponds located in Tracts "B", "D" and "E" of Clarendon Hills, First Filing. The ponds were designed using a mass diagram that required 10.46 acre feet of detention to detain the 100 year developed storm and release at a two year historic rate which is 14.3 cubic feet per second. Two of the ponds and perhaps a third one will be overexcavated to provide a permanent pool of water. The detention capacity will be above the permanent pool There will be a provision for irrigation water to supplement the permanent pool and thereby alleviate any stagnation. Some ground water surfaces in this thalweg presently and feeds several existing ponds downstream.

Drainage Basin "C" contains 68.6 acres and is located in the West 1/2 of the Southwest 1/4 of said Section 2. Fossil Creek traverses Easterly along the Southerly portion of Clarendon Hills. The Burns Tributary of Fossil Creek enters Fossil Creek in this area. Because of the close proximity to the Fossil Creek and Burns Tributary it was determined that no onsite detention would be required.

The Fossil Creek Drainage Basin Master Drainageway Planning Study also states that no detention is required.

A drainage easement that encompases the 100 year flood plain limits with future basin conditions was dedicated on the plat to prohibit any improvements being built in the flood plain. The rear lot lines of the lots backing onto the creeks follow the centerline of the creeks. The steep banks along the creeks are going to be flattened and reseeded by the developer prior to sale of any lots. The slope of the banks will not exceed a 3:1 slope and will be reseeded with the mix shown on the drainage plan. The seeding is to be drilled and crimp mulched to ensure no washing during the start of the growth. The flattening of the banks will widen the flood plain boundaries but will not encroach on the 100 foot wide area we have designated on the subdivision plat. The maximum depth, in this reach, from the stream bed to the 100 year flood elevation is 9.6 feet at the confluence of Fossil Creek and Burns Tributary. The average depth is approximately 4 feet. The capacity of the creek will not be affected because the tops of the banks are higher than the 100 year flood elevation. The velocities and the water surface elevation will be decreasing.

The runoff quantities were calculated using the Rational Method. The storm drain inlets were sized to take the two year storm. The runoff is to be carried in the streets based on the criteria of the two year storm not topping the top of curb. Inlets and storm drains will be provided where the runoff cannot be carried in the street.

The drainage calculations and mass diagram are enclosed and two year developed runoff quantities are shown on the drainage plan.

Richard A. Rutherford

Richard A. Rutherford, P.E. & L.S.

COMPUTATIONS

James H. Stewart & Associates, Inc. 214 N. Howes St. Ft. Collins, CO 80521 (303) 482-9331

By: RAR Date 4/29/86 Client: MITCHELL & Co. Sheet No. _____ of _____

Chkd By: _____ Date _____ Project: CLARENDON HILLS Job No. _____

Subject STORM DRAINAGE

DRAINAGE BASIN "A" - AREA = 10.1 ACRES ±

DRAINAGE BASIN "B" - AREA = 82.3 ACRES ±

DRAINAGE BASIN "C" - AREA = 68.6 ACRES ±

DRAINAGE BASIN B - C = 0.50

HIST. $T_c = \frac{1.87(1.1-0.2)}{2.4^{1/3}} 2700^{1/2} = 65$ MIN.

HIST. $Q_{2yr} = 0.20 \times 0.87 \times 82.3 = 14.3$ C.F.S. unimproved

DEV. $T_c = \frac{1.87(1.1-0.5)}{2.4^{1/3}} 2700^{1/2} = 45$ MIN.

DEV. $Q_{2yr} = 0.50 \times 1.1 \times 82.3 = 45.3$ C.F.S. Improved 2y

$T_c = 35$ MIN. DEV. $Q_{100yr} = 0.50 \times 1.25 \times 1.3 \times 82.3 = 66.9$ C.F.S. " 100yr

COMPUTATIONS

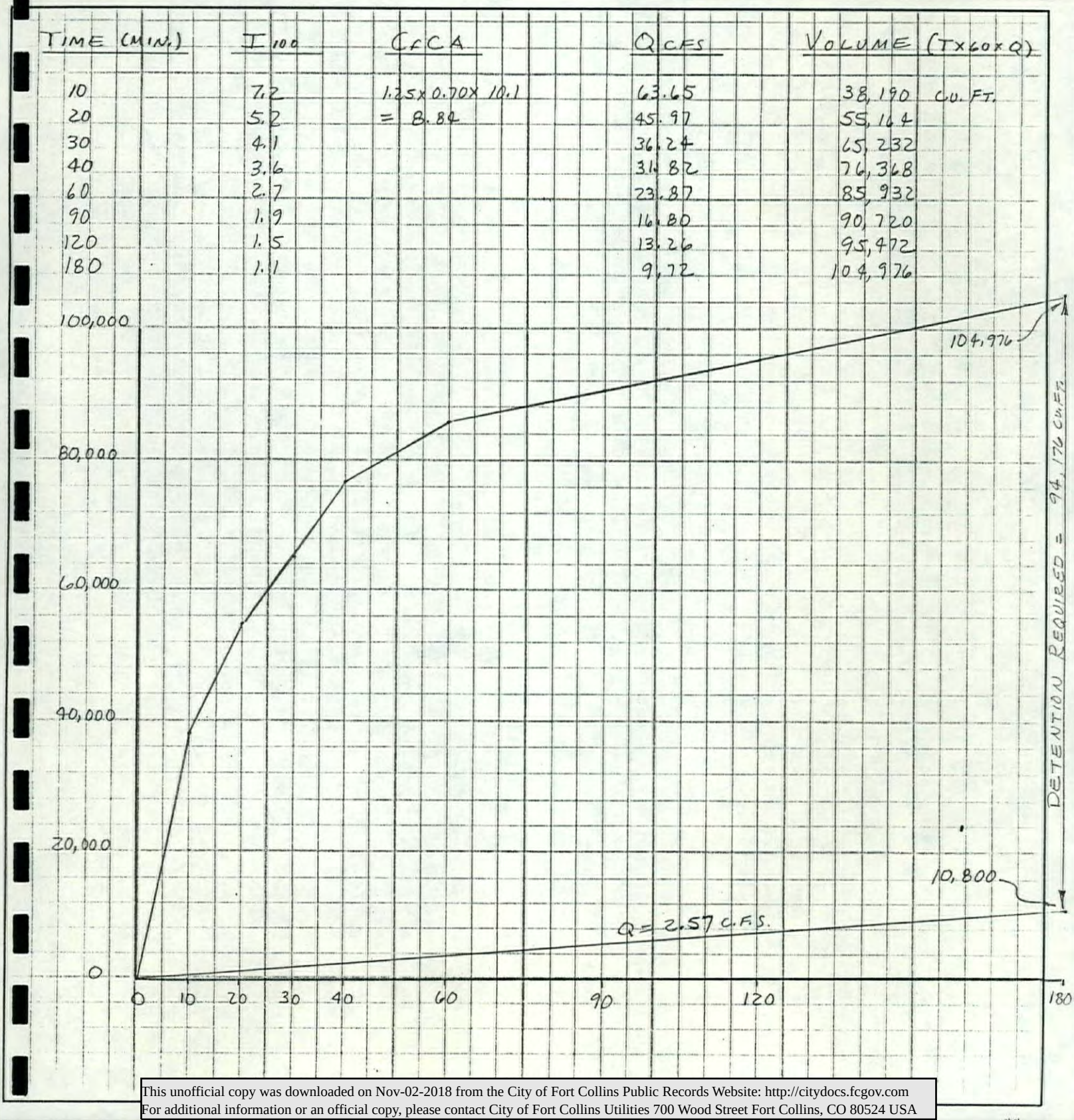
James H. Stewart & Associates, Inc. 214 N. Howes St. Ft. Collins, CO 80521 (303) 482-9331

By: R.A.R. Date 6/11/86 Client: MITCHELL & Co. Sheet No. ____ of ____

Chkd By: ____ Date ____ Project: CLARENDON HILLS Job No. ____

Subject MASS DIAGRAM - BASIN "A"

TIME (MIN.)	I_{100}	$C_f CA$	Q CFS	VOLUME (T x 60 x Q)
10	7.2	1.25 x 0.70 x 10.1	63.65	38,190 CU. FT.
20	5.2	= 8.84	45.97	55,164
30	4.1		36.24	65,232
40	3.6		31.82	76,368
60	2.7		23.87	85,932
90	1.9		16.80	90,720
120	1.5		13.26	95,472
180	1.1		9.72	104,976



COMPUTATIONS

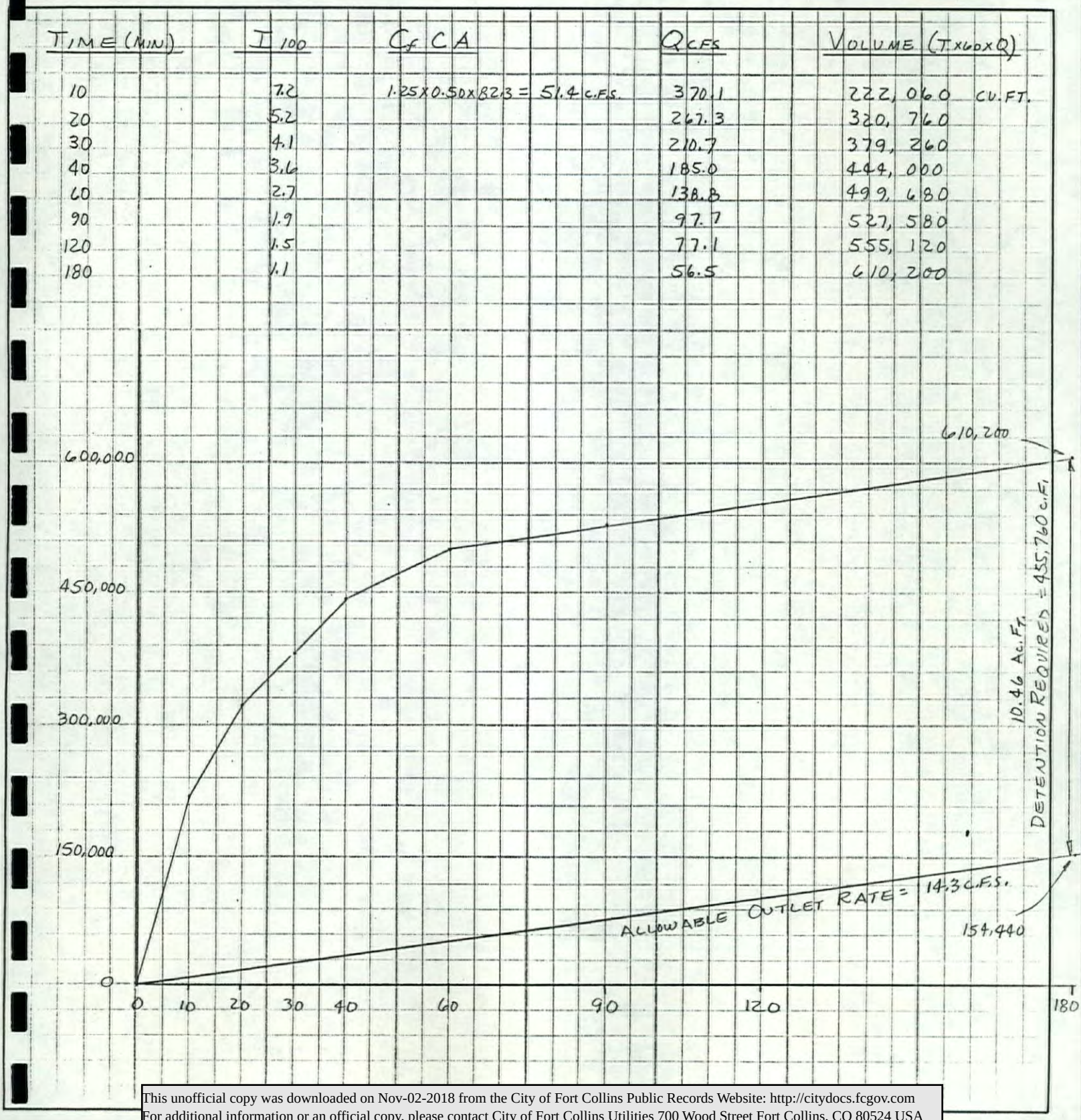
James H. Stewart & Associates, Inc. 214 N. Howes St. Ft. Collins, CO 80521 (303) 482-9331

By: RAR Date 4/29/86 Client: MITCHELL & Co. Sheet No. ____ of ____

Chkd By: ____ Date ____ Project: CLARENDON HILLS Job No. ____

Subject MASS DIAGRAM - BASIN "B"

TIME (MIN.)	I_{100}	$C_f CA$	Q_{CFS}	VOLUME (T x 60 x Q)
10	7.2	1.25 x 0.50 x 8.23 = 51.4 C.F.S.	370.1	222,060 CU. FT.
20	5.2		267.3	320,760
30	4.1		210.7	379,260
40	3.6		185.0	444,000
60	2.7		138.8	499,680
90	1.9		97.7	527,580
120	1.5		77.1	555,120
180	1.1		56.5	610,200



HINSDALE DRIVE

CLARENDON HILLS DRIVE

TRACT 'B'

DETENTION 'A'
H.W.L.= 58

DETENTION 'B'
H.W.L.= 56

POND 'C'
H.W.L.= 44

H.W.L.= 49

DETENTION 'D'
H.W.L.= 41

TRACT 'D'

MATCH LINE
ASHFORD LANE

TRACT 'E'

POND 'E'
H.W.L.= 55

H.W.L.= 58

F.F.= 60.5 ±

F.F.= 62.0 ±

F.F.= 58.0

F.F.= 56.0 ±

F.F.= 55.0 ±

F.F.= 51.5 ±

F.F.= 47.0 ±

F.F.= 53.0 ±

F.F.= 50.5 ±

F.F.= 47.0 ±

F.F.= 55.0 ±

F.F.= 53.0 ±

F.F.= 50.5 ±

F.F.= 47.0 ±

F.F.= 48.5 ±

F.F.= 51.5 ±

0 50' 100'

NO.	DATE	BY	REMARKS

REVISIONS

APPROVED FOR CONSTRUCTION:

JAMES M. STEWART & ASSOCIATES
CONSULTING ENGINEERS
FORT COLLINS, COLORADO • 80521

ENGINEER: | DESIGNED: | DATE: | CHECKED: | DATE: | DRAWN: | DATE: | SURVEY: | SCALE: 1"=50'

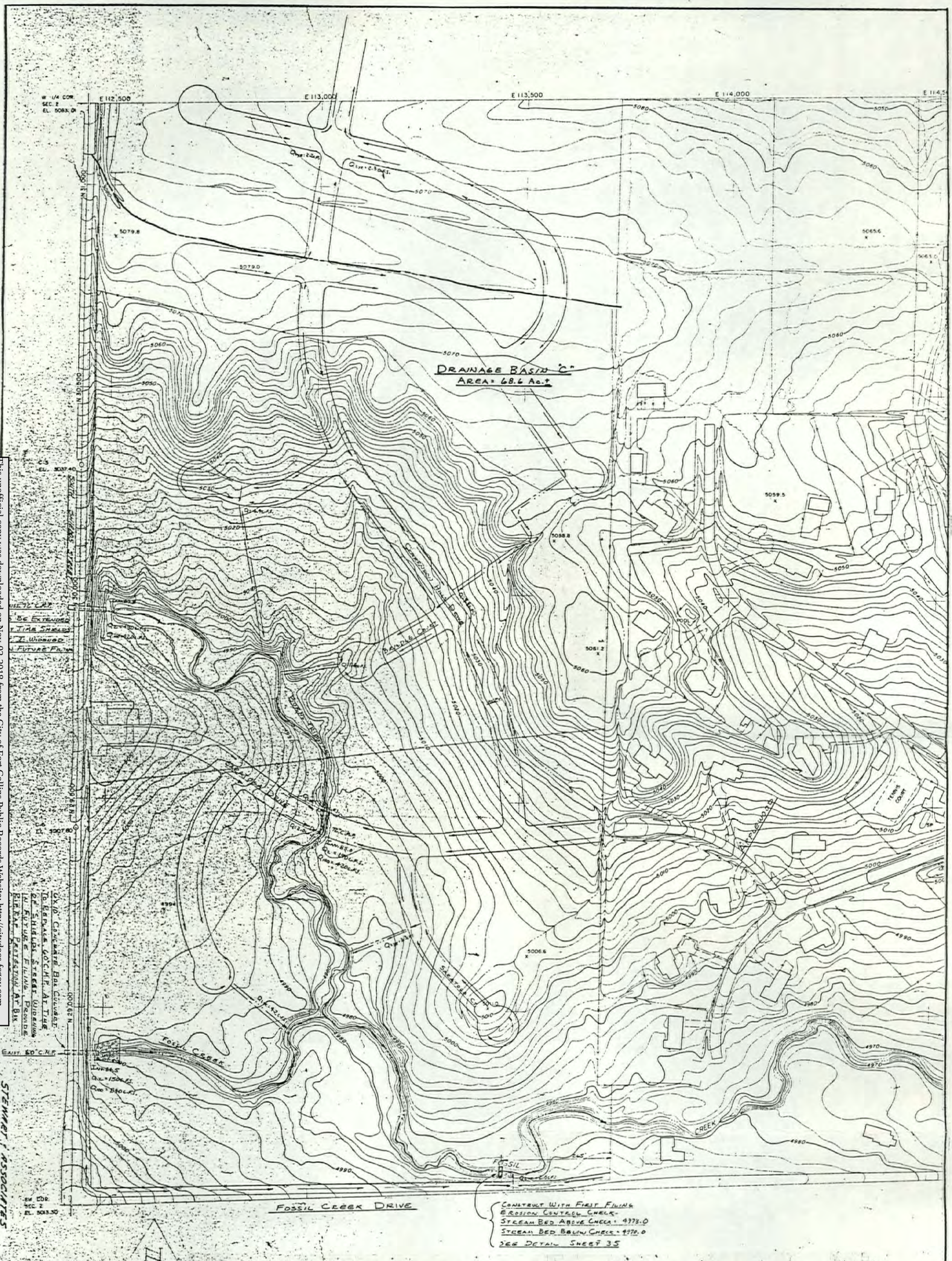
CLIENT:

PROJECT: MITCHELL CO
CLARENDON HILLS FIRST FILING

UNIT: DETENTION POND

JOB NUMBERS
J.M.S.A. | CLIENT

SHEET NUMBER
31 of 36



NON-IRRIGATED DROUGHT-TOLERANT TURF MIX

Common Name	Lbs/Acre	% Purity	% Germination
1. Crested Wheatgrass	9.0 (30%)	98.0	87
2. Lincoln Smooth Brome	7.5 (25%)	93.3	87
3. Intermediate Wheatgrass	6.0 (20%)	96.5	88
4. Perennial Rye Grass, tetraploid	3.0 (10%)	99.5	94
5. Slender Wheatgrass	1.5 (5%)	93.3	85
6. Western Wheatgrass	1.5 (5%)	85.3	90
7. Russian Wild Rye	2.5 (5%)	99.5	93

30 lbs/acre total application

SOIL PREPARATION

Areas of 3:1 or flatter slope shall be uniformly tilled to a minimum depth of 6 inches. Rocks and other extraneous material shall be removed prior to tillage. Spread 5 cubic yards per 1000 square feet of well rotted steer manure and mix into the top 4 inches of soil by discing.

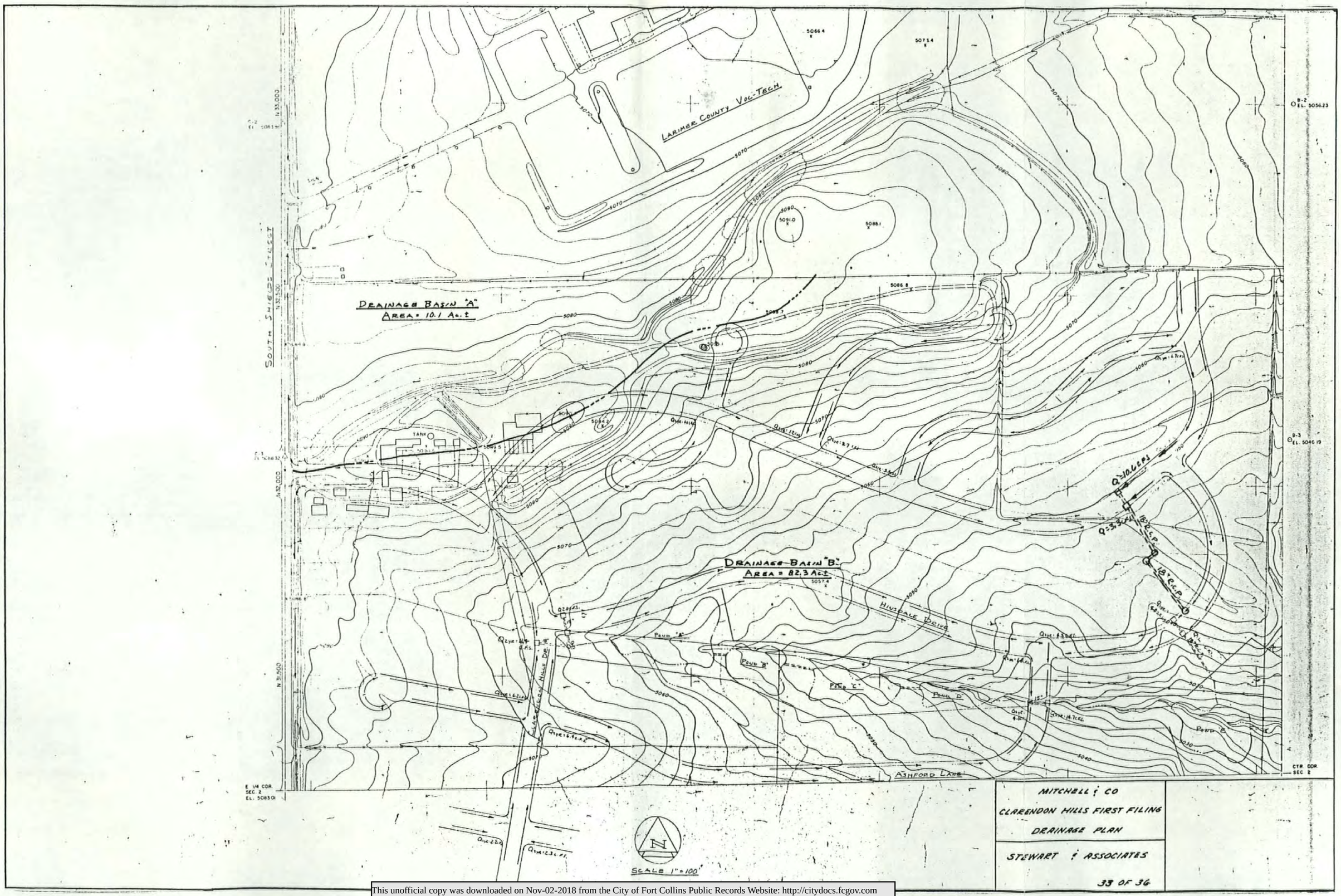
SEEDING

Rangeland Drill application shall be planted to a depth of 1/2 inch to 1 inch. The drill shall be capable of uniformly applying the specified seed mix.

MULCHING

Straw or hay shall be uniformly applied over the seed area at the rate of 1 1/2 tons per acre. The mulch shall be anchored into the soil with a blunt-bladed disc or crimper, upon the contour if practical.

CLARENDON HILLS FIRST FILING
DRAINAGE PLAN
32 OF 36
MITCHELL & CO



MITCHELL & CO

CLARENDON HILLS FIRST FILING

DRAINAGE PLAN

STEWART & ASSOCIATES

33 OF 36

CLARENDON HILLS FOURTH FILING
FINAL STORM DRAINAGE REPORT

I. GENERAL INFORMATION

Clarendon Hills Fourth Filing (Filing 4) is a proposed single family subdivision in the City of Fort Collins, Colorado. The fourth filing - as well as the remainder of the Clarendon Hills Subdivision - is located in the West 1/2 of Section 2, T6N, R69W, Sixth Principal Meridian, Larimer County, Colorado.

Generally, the Clarendon Hills Subdivision is located in southern Fort Collins on the east side of South Shields Street from about one-quarter mile to one mile south of Harmony Road. The subdivision is mainly for residential housing on larger than normal lots. The size of the subdivision, as originally submitted in 1986, was 160 acres.

In 1989-90, 12 acres of property adjacent to the Clarendon Hills Subdivision was annexed into the subdivision, thereby increasing the subdivision size to about 172 acres. The 12 acre "Orchard at Clarendon Hills" was the fourth area developed, but it was platted as the "Orchard" rather than the "fourth filing".

Filing 4 is a part of the original Clarendon Hills Subdivision of 160 acres of land, which has previously been through the Master Subdivision Plan, the final subdivision processing, and the infrastructure development for three previous filings (1, 2 & 3) in the City of Fort Collins.

During the Master Plan stage, the storm drainage for the original 160 acres of Clarendon Hills was studied and reported by Stewart and Associates. Their investigation determined that there are three major storm drainage basins (A, B & C) within the 160 acres of land. See Exhibit A for a copy of the master drainage report.

The fourth filing will contain a total of 54 single family lots between Shields Street on the west and Clarendon Hills Drive on the east side. This density is consistent with the number of units approved for the Subdivision. No appreciable change to the drainage plan set forth at the time of the Master Plan is anticipated as a result of development of the fourth filing.

The fourth filing is located in portions of both Drainage Basins B and C, as designated in the master drainage study. Drainage Basin B (total area of 82.3 acres) and Drainage Basin C (68.6 acres) both contribute storm drainage to the "Fossil Creek Drainage Basin", as designated in the City of Fort Collins.

As stated above, the fourth filing is located on the west side of the subdivision adja ent to Shields Street. It contains only about 22.3 acres. A church site separating the residential lots in the northerly and southerly sections of the fourth filing was originally included as a part of the fourth filing platting documents.

The church has since chosen not to participate in the process of platting. As a result, their property ("Tract") of land has been removed from the plat. This revised study report now treats the church site as an existing, undeveloped off-site drainage sub basin.

The 6.2 acres of land in the northerly portion of the fourth filing (Lots 1 through 18), as well as the off-site church property and the back lot areas of Lots 19 through 23 south of the church site, contribute storm runoff easterly as a part of Drainage Basin B. The northerly sloping 6 acres of the 12 acre Orchard at Clarendon Hills also contributes storm drainage to Drainage Basin B. See Exhibit B for the church site and other off-site sub basin locations.

This office completed the storm drainage study and report for the Orchard at Clarendon Hills. The land added by the annexation of the Orchard property has had an impact on the storm drainage system requirements for the fourth filing. The solution for that impact is discussed below.

About 15.7 acres of land in the southerly portion of the fourth filing (the fronts of Lots 19 through 23 and all of Lots 24 through 54) contribute storm runoff southerly to Drainage Basin C. Additionally, an off-site sub basin contributes storm drainage to Drainage Basin C in the fourth filing at Hazel Court.

The Hazel Court off-site sub basin is a portion of the first and second filings, which have already been developed. Storm drainage facilities in and downstream of Hazel Court to Burns Tributary are to be provided with the fourth filing. See Exhibit B for the Hazel Court off-site sub basin, as well as an overall master plan for the development.

For the Fossil Creek Drainage Basin, storm drainage "detention" requirements were determined at the time the City established the Fossil Creek "Master" Storm Drainage Basin. The Fossil Creek Basin was identified as to hydrologic conditions, floodplain characteristics, required basin improvements, and resulting storm drainage fees to be collected by the City at the time of building permits.

The floodplain, and other related characteristics, for Burns Tributary upstream of Fossil Creek and adjacent to the fourth filing were re-evaluated on behalf of the City and Developer in further detail by Lidstone and Anderson, Inc. during the platting process for the fourth and fifth filings of Clarendon Hills. Additional references to this recent re-evaluation will be included in this report.

Neither the original, nor the new study, identify any storm drainage detention facilities that will be required for the Fossil Creek Storm Drainage Basin in the area of Clarendon Hills

CLARENDON HILLS FOURTH FILING

TABLE 1

HYDROLOGIC CHARACTERISTICS AND ESTIMATE OF STORM WATER RUNOFF FROM SUB-BASINS IN DRAINAGE BASIN B - DEVELOPED CONDITION.

SUB-BASIN	C-VALUE	AREA (ac)	LENGTH (ft)	DELTA (ft)	SLOPE (%)	Tc2 (min)	Tc100 (min)	i2 (in/hr)	i100 (in/hr)	Q2 (cfs)	Q100 (cfs)	
1	0.9	0.36	360	9	2.5	10.0	10.0	2.5	7.2	0.8	2.9	D.P.
2	0.4	0.57	320	9.5	3.0	16.3	13.9	2.0	6.2	0.5	1.8	
3	0.4	3.23	820	23	2.8	26.6	22.8	1.6	4.9	2.1	7.9	
4	0.85	0.36	350	16	4.6	10.0	10.0	2.57	7.2	0.8	2.8	
5	0.6	0.87	600	21	3.5	15.1	10.6	2.1	7.0	1.1	4.6	
6	0.4	0.83	600	18	3.0	22.2	19.1	1.7	5.3	0.6	2.2	
1&2	0.59	0.93	360	9	2.5	13.3	10.0	2.26	7.2	1.2	4.9	A
1,2&4	0.67	1.29	710	25	3.5	10.5	10.0	2.5	7.2	2.2	7.8	B
1-4	0.50	4.52	820	23	2.8	22.8	18.1	1.7	5.4	3.8	15.3	C
1-5	0.50	5.39	820	23	2.8	22.8	18.1	1.7	5.4	4.6	18.2	D
1-6	0.50	6.22	820	23	2.8	22.8	18.1	1.7	5.4	5.3	21.0	
off-site	0.25	8.27	940	12	1.3	44.7	41.5	1.1	3.4	2.3	8.8	
off-site & 1-6	0.36	14.49	940	12	1.3	38.9	34.1	1.2	3.8	6.3	24.8	E

Notes: Off-Site Basin is in an Undeveloped Condition
D.P. = Design Point (100yr.)
$Q = CC_f iA$: $C_f = 1.25$

$$Tc = \frac{1.87\ (1.1 - CC_f)\ L^{1/2}}{S^{1/3}}$$

CLARENDON HILLS SIXTH FILING
PRELIMINARY AND FINAL STORM DRAINAGE REPORT

I. GENERAL INFORMATION

Clarendon Hills Sixth Filing (Filing 6) is a proposed single family subdivision in the City of Fort Collins, Colorado. The sixth filing - as well as the remainder of the Clarendon Hills Subdivision - is located in the West 1/2 of Section 2, T6N, R69W, Sixth Principal Meridian, Larimer County, Colorado.

Generally, Clarendon Hills is located in Southwest Fort Collins on the east side of South Shields Street from about one-quarter mile to one mile south of Harmony Road. Originally, the subdivision area was 160 acres.

During the Master Plan stage, the storm drainage for the 160 acres was reported by Stewart and Associates. Their investigation determined that there are three (3) major storm drainage basins (A, B, & C) within the 160 acres of land. See Exhibit A for a copy of the master drainage report.

In 1989-90, 12 acres of property adjacent to the Clarendon Hills Subdivision was annexed into the subdivision, thereby increasing the subdivision size to about 172 acres. The 12 acre "Orchard at Clarendon Hills" was the fourth area developed in the subdivision, but it was platted and the storm drainage report was made under the Orchard name - rather than the fourth filing.

Filing 6 is part of the original Clarendon Hills Subdivision of 160 acres of land, which has been through not only the Master Plan phase but also the final subdivision processing phase for five previous filings (1st through 5th) in the City of Fort Collins.

The fourth filing was developed in the summer of 1991. The fifth filing has not yet been developed, but is scheduled for development in 1992. The sixth filing is also scheduled for development in 1992.

The sixth filing will contain a total of 24 single family lots. The sixth filing is located in Drainage Basin B, as designated in the master drainage study. Drainage Basin B (total area of 82.3 acres) contributes storm drainage to the "Fossil Creek Drainage Basin", as designated in the City of Fort Collins.

The sixth filing is located on the west side of the Clarendon Hills subdivision adjacent to Shields Street. It contains only about 7 acres. The sixth filing was previously planned as a church site. The revised study and report for the fourth filing treated the church site as an existing, undeveloped off-site drainage sub basin.

However, during 1991 the church site, which is now being platted as the sixth filing, was traded to the developer for vacant land in the northwest corner of Clarendon Hills. That property was originally planned for office and multi-family housing uses.

The sixth filing, the 6.2 acres of land in the northerly portion of the fourth filing (Lots 1 through 18), and the back lot areas of Lots 19 through 23 in the fourth filing south of the sixth filing all contribute storm runoff to the southwest corner of the street intersection of Hinsdale Drive and Clarendon Hills Drive.

As was identified in the master plan and fourth filing drainage reports, there are extensive detention facilities downstream of Hinsdale Drive and Clarendon Hills Drive. To handle runoff and detention storage requirements resulting from development of the Orchard project, the spillway at the east end of Drainage Basin B in Clarendon Hills (at Pond A) is to be raised by 0.5 feet.

The raising of the spillway is scheduled to occur early this year, and will have to be certified by a registered engineer when complete. This improvement, however, does not allow the sixth filing to be developed without providing additional detention facilities. Accordingly, the detention facility design at the southwest corner of Hinsdale and Clarendon Hills Drive is included in this report.

There is one active irrigation ditch that affects the sixth filing. This irrigation ditch exists from 15 to 20 feet north of the south end of the sixth filing. The ditch provides irrigation water to the Applewood Subdivision and property owners east of the Orchard at Clarendon Hills.

The open ditch irrigation system was replaced in the second filing of Clarendon Hills and the Orchard at Clarendon Hills by a series of 18 and 15 inch PVC culverts, diversion structures and associated improvements. The improvements seem to be working adequately in the field.

The ditch will be replaced in the sixth filing with a pipe culvert extending from Shields Street to Clarendon Hills Drive. The pipe has tentatively been identified by the Applewood Irrigation Associations' representative as a heavy guage 14 inch plastic pipe. The pipe will be owned and maintained by the AIA.

The new streets in the sixth filing are to be constructed at or below existing grade. According to the soils investigation and report, existing bedrock will be more than 30 inches below the new street subgrade elevation. Therefore, street subdrains will not be required for Filing 6.

INTERMILL LAND SURVEYING, INC.
1301 North Cleveland Avenue
LOVELAND, COLORADO 80537
(303) 669-0516

JOB CLARENDON HILLS 6TH FILING
SHEET NO. 1 OF 3
CALCULATED BY DLD DATE 11-29-91
CHECKED BY DATE
SCALE

HYDROLOGIC CHARACTERISTICS - TABLE 1

SUB-BASINS 6-1 THRU 6-8

SUB-BASIN	"C" VALUE	AREA (AC)	LENGTH (FT)	ΔH (FT)	S (%)	T_{C_2} (MIN)	$T_{C_{100}}$ (MIN)	i_2 (IN/HR)	i_{100} (IN/HR)	Q_2 (CFS)	Q_{100} (cfs)
6-1	0.2	0.17	110	4.0	3.6	10.2	9.3	{ OVERLAND FLOW @=AVG.VE.			
	0.3	0.68	410	9.4	2.2	13.7@0.5	6.8@1.0	{ CONCENTRATED FLOW			
	0.28	0.85		TOTAL TIME		23.9	16.1	1.65	5.8	0.4	1.7
6-2	0.2	0.09	80	1.5	1.9	12.2	11.5				
	0.6	0.92	470	13.7	2.9	3.9@2.0	3.1@2.5				
	0.56	1.01				16.1	14.6	2.05	6.1	1.2	4.3
6-3	0.2	0.09	85	1.8	2.1	12.1	11.4				
	0.6	0.92	470	14.0	3.0	3.9@2.0	3.1@2.5				
	0.56	1.01				16.0	14.5	2.05	6.1	1.2	4.3
6-4	0.2	0.15	85.	2.8	3.3	10.4	9.8				
	0.3	0.95	340	11.0	3.2	11.3@0.5	5.7@1.0				
	0.29	1.10				21.7	15.5	1.75	5.95	0.6	2.4
6-5	0.2	0.20	110	2.3	2.1	13.8	11.5				
	0.6	1.02	460	11.5	2.5	3.8@2.0	3.1@2.5				
	0.53	1.22				17.6	14.6	1.95	6.1	1.3	4.9
6-6	0.3	0.39	170	3.0	1.8	16.0	14.5				
	0.5	1.73	330	8.5	2.6	2.0@2.8	1.5@3.7				
	0.46	2.12				18.0	16.0	1.95	5.85	1.9	7.1
6-7	0.9	0.17	240	7.0	2.9	10.0	10.0	2.5	7.2	0.4	1.4
6-8	0.7	0.57	360	4.0	1.1	10.0	10.0	2.5	7.2	1.0	3.6

NOTES: 1. CONCENTRATED FLOW VELOCITIES ARE THE AVERAGE OF FLOW VELOCITIES AT UP AND DOWN-STREAM POINTS OF CONCENTRATION (BY RATING GRASSY SWALES AND USING FIGURE 4-1 FOR GUTTER FLOWS).

2. OVERLAND FLOW $T_C = \dfrac{1.87(1.1-CC_f)\,D^{1/2}}{S^{1/3}}$

ks, which are OK

ATTACHMENT 4

USDA NRCS SOILS REPORT

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 Larimer County Area, Colorado

Homestead at Clarendon Hills

April 5, 2019

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

alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

Contents

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

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 Scale: 1:1,260 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

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: Larimer County Area, Colorado
Survey Area Data: Version 13, Sep 10, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 20, 2015—Oct 21, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
4	Altvan-Satanta loams, 3 to 9 percent slopes	0.4	10.5%
56	Kim-Thedalund loams, 3 to 15 percent slopes	3.4	89.2%
74	Nunn clay loam, 1 to 3 percent slopes	0.0	0.2%
Totals for Area of Interest		**3.8**	**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.

Larimer County Area, Colorado

4—Altvan-Satanta loams, 3 to 9 percent slopes

Map Unit Setting

National map unit symbol: jpwf
Elevation: 5,200 to 6,200 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 135 to 150 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Altvan and similar soils: 55 percent
Satanta and similar soils: 35 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Altvan

Setting

Landform: Fans, benches, terraces
Landform position (three-dimensional): Base slope, side slope, tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Typical profile

H1 - 0 to 9 inches: loam
H2 - 9 to 16 inches: clay loam, loam, sandy clay loam
H2 - 9 to 16 inches: loam, fine sandy loam, silt loam
H2 - 9 to 16 inches: gravelly sand, gravelly coarse sand, coarse sand
H3 - 16 to 31 inches:
H3 - 16 to 31 inches:
H3 - 16 to 31 inches:
H4 - 31 to 60 inches:
H4 - 31 to 60 inches:
H4 - 31 to 60 inches:

Properties and qualities

Slope: 6 to 9 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 10 percent
Available water storage in profile: Very high (about 13.7 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: B
Hydric soil rating: No

Description of Satanta

Setting

Landform: Terraces, structural benches
Landform position (three-dimensional): Side slope, tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium and/or eolian deposits

Typical profile

H1 - 0 to 9 inches: loam
H2 - 9 to 14 inches: loam, clay loam, sandy clay loam
H2 - 9 to 14 inches: loam, clay loam, fine sandy loam
H2 - 9 to 14 inches:
H3 - 14 to 60 inches:
H3 - 14 to 60 inches:
H3 - 14 to 60 inches:

Properties and qualities

Slope: 3 to 6 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 10 percent
Available water storage in profile: Very high (about 27.4 inches)

Interpretive groups

Land capability classification (irrigated): 2e
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Hydric soil rating: No

Minor Components

Nunn

Percent of map unit: 6 percent
Hydric soil rating: No

Larimer

Percent of map unit: 4 percent
Hydric soil rating: No

56—Kim-Thedalund loams, 3 to 15 percent slopes

Map Unit Setting

National map unit symbol: jpx0
Elevation: 4,800 to 5,600 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 48 to 50 degrees F
Frost-free period: 135 to 150 days
Farmland classification: Not prime farmland

Map Unit Composition

Kim and similar soils: 45 percent
Thedalund and similar soils: 35 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kim

Setting

Landform: Valley sides, fans
Landform position (three-dimensional): Side slope, base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Mixed alluvium

Typical profile

H1 - 0 to 7 inches: loam
H2 - 7 to 60 inches: loam, clay loam, sandy clay loam
H2 - 7 to 60 inches:
H2 - 7 to 60 inches:

Properties and qualities

Slope: 3 to 7 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Salinity, maximum in profile: Nonsaline to slightly saline (0.0 to 4.0 mmhos/cm)
Available water storage in profile: Very high (about 26.5 inches)

Interpretive groups

Land capability classification (irrigated): 3e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B

Ecological site: Loamy Plains (R067XY002CO)
Hydric soil rating: No

Description of Thedalund

Setting

Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Material weathered from sandstone and shale

Typical profile

H1 - 0 to 4 inches: loam
H2 - 4 to 33 inches: clay loam, loam, sandy clay loam
H2 - 4 to 33 inches: weathered bedrock
H2 - 4 to 33 inches:
H3 - 33 to 37 inches:

Properties and qualities

Slope: 7 to 15 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.06 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 15 percent
Salinity, maximum in profile: Nonsaline to moderately saline (0.0 to 8.0 mmhos/cm)
Available water storage in profile: Very high (about 15.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: Loamy Plains (R067XY002CO)
Hydric soil rating: No

Minor Components

Renohill

Percent of map unit: 10 percent
Hydric soil rating: No

Midway

Percent of map unit: 9 percent
Hydric soil rating: No

Aquic haplustolls

Percent of map unit: 1 percent
Landform: Swales
Hydric soil rating: Yes

74—Nunn clay loam, 1 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tlpl
Elevation: 3,900 to 5,840 feet
Mean annual precipitation: 13 to 17 inches
Mean annual air temperature: 50 to 54 degrees F
Frost-free period: 135 to 160 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Nunn and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Nunn

Setting

Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Pleistocene aged alluvium and/or eolian deposits

Typical profile

Ap - 0 to 9 inches: clay loam
Bt - 9 to 13 inches: clay loam
Btk - 13 to 25 inches: clay loam
Bk1 - 25 to 38 inches: clay loam
Bk2 - 38 to 80 inches: clay loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Natural drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum in profile: 7 percent
Salinity, maximum in profile: Nonsaline to very slightly saline (0.1 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum in profile: 0.5
Available water storage in profile: High (about 9.9 inches)

Interpretive groups

Land capability classification (irrigated): 2e

Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: C
Ecological site: Clayey Plains (R067BY042CO)
Hydric soil rating: No

Minor Components

Heldt

Percent of map unit: 10 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Clayey Plains (R067BY042CO)
Hydric soil rating: No

Satanta

Percent of map unit: 5 percent
Landform: Terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: Loamy Plains (R067BY002CO)
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 Erosion Factors

Soil Erosion Factors are soil properties and interpretations used in evaluating the soil for potential erosion. Example soil erosion factors can include K factor for the whole soil or on a rock free basis, T factor, wind erodibility group and wind erodibility index.

Wind Erodibility Index

The wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Map Scale: 1:1,260 if printed on A landscape (11" x 8.5") sheet.

N

Meters
0 15 30 60 90

Feet
0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)

Area of Interest (AOI)

Soils

Soil Rating Polygons

0
38
48
56
86
134
160
180
220
250
310
Not rated or not available

Soil Rating Lines

0
38
48
56
86
134
160
180
220
250
310
Not rated or not available

Soil Rating Points

0
38
48
56
86
134
160
180
220
250
310
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: Larimer County Area, Colorado
Survey Area Data: Version 13, Sep 10, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 20, 2015—Oct 21, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Wind Erodibility Index

Map unit symbol	Map unit name	Rating (tons per acre per year)	Acres in AOI	Percent of AOI
4	Altvan-Satanta loams, 3 to 9 percent slopes	56	0.4	10.5%
56	Kim-Thedalund loams, 3 to 15 percent slopes	86	3.4	89.2%
74	Nunn clay loam, 1 to 3 percent slopes	48	0.0	0.2%
Totals for Area of Interest			**3.8**	**100.0%**

Rating Options—Wind Erodibility Index

Units of Measure: tons per acre per year

Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

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:

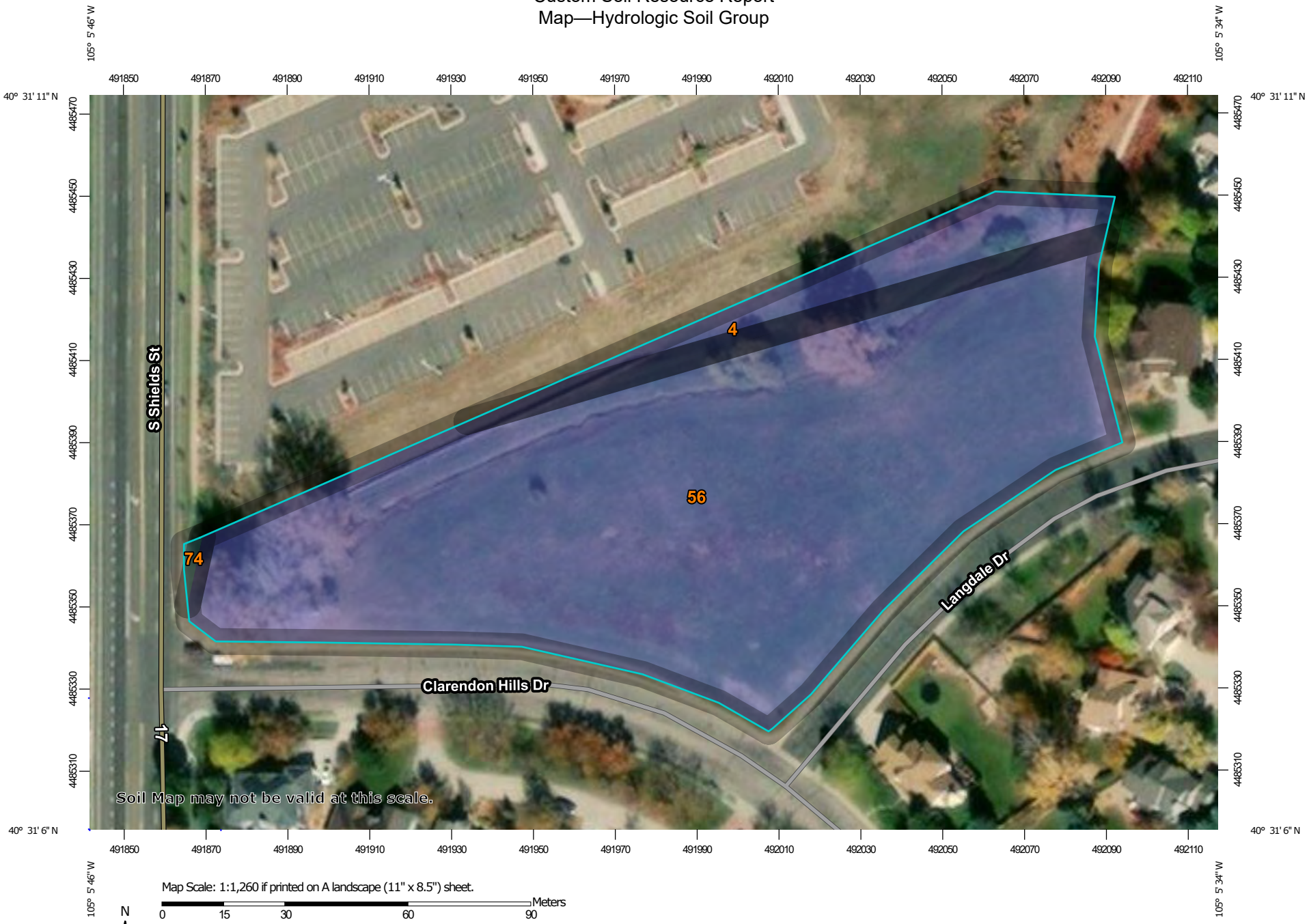
Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

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.

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.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105° 5' 34" W
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491870
491890
491910
491930
491950
491970
491990
492010
492030
492050
492070
492090
492110
40° 31' 11" N
40° 31' 6" N
4485470
4485450
4485430
4485410
4485390
4485370
4485350
4485330
4485310
S Shields St
17
Clarendon Hills Dr
Langdale Dr
4
56
74
Soil Map may not be valid at this scale.
Map Scale: 1:1,260 if printed on A landscape (11" x 8.5") sheet.
N
Meters
0 15 30 60 90
Feet
0 50 100 200 300
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)

- Area of Interest (AOI)

Soils

Soil 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: Larimer County Area, Colorado
Survey Area Data: Version 13, Sep 10, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Sep 20, 2015—Oct 21, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Table—Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
4	Altvan-Satanta loams, 3 to 9 percent slopes	B	0.4	10.5%
56	Kim-Thedalund loams, 3 to 15 percent slopes	B	3.4	89.2%
74	Nunn clay loam, 1 to 3 percent slopes	C	0.0	0.2%
Totals for Area of Interest			**3.8**	**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.

American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.

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Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.

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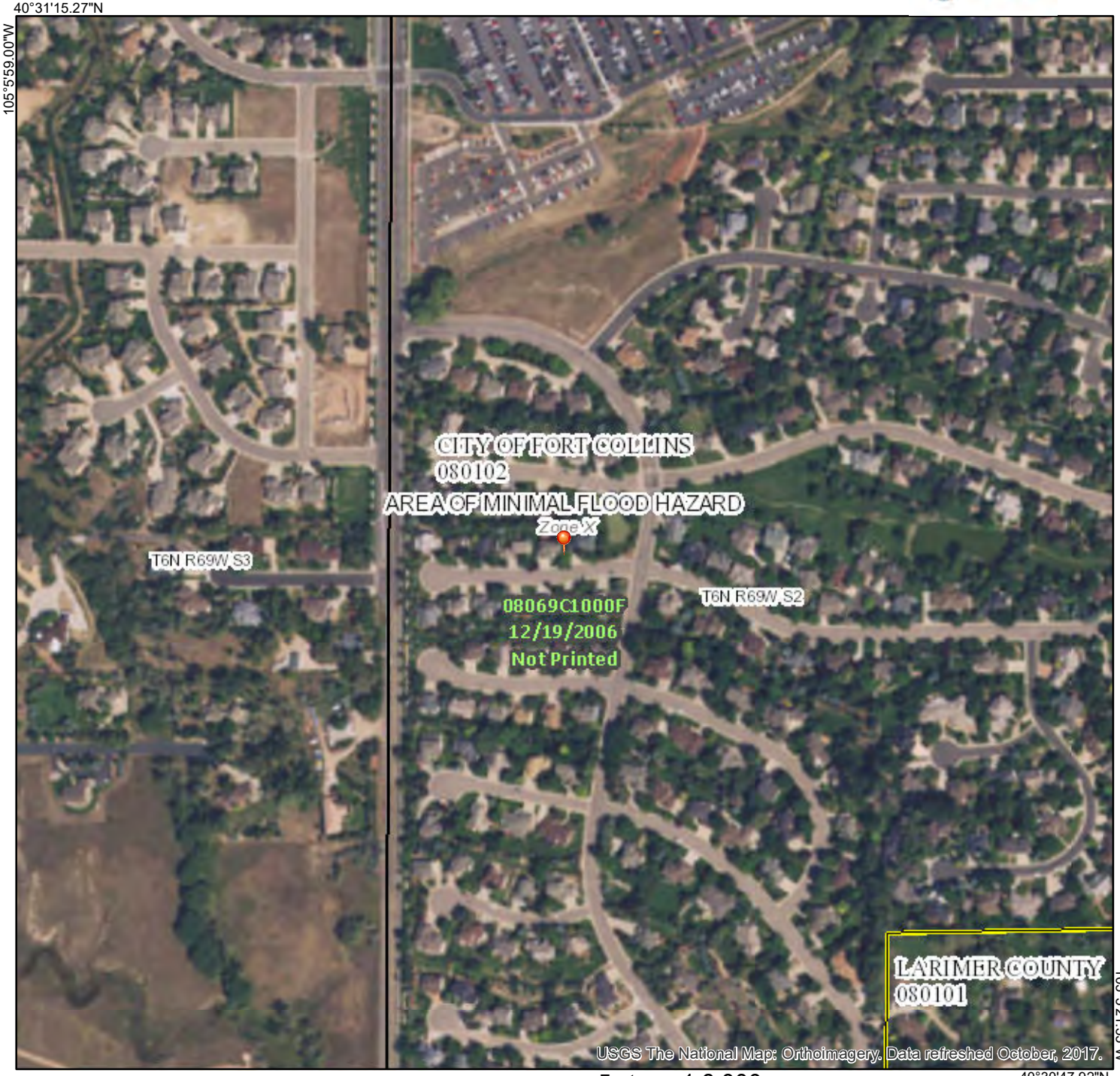
ATTACHMENT 5

DRAINAGE EXHIBITS

National Flood Hazard Layer FIRMette

FEMA



Feet 1:6,000

0 250 500 1,000 1,500 2,000

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 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 *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 4/5/2019 at 2:25:52 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

NORTH

30 0 30 60 90 Feet

(IN FEET)
1 inch = 30 ft.

LEGEND:

- PROPOSED CONTOUR — 93 —
- EXISTING CONTOUR — 5013 —
- PROPOSED STORM DRAIN / IRRIGATION
- EXISTING CURB AND GUTTER
- PROPOSED SWALE
- PROPERTY BOUNDARY
- PROPOSED LOT LINE
- EASEMENT
- DESIGN POINT (A)
- FLOW ARROW
- DRAINAGE BASIN LABEL (BASIN DESIGNATION: C; 0.60 ac: BASIN AREA (AC))
- EXISTING DRAINAGE BASIN BOUNDARY

NOTES:

1. REFER TO THE PRELIMINARY DRAINAGE LETTER FOR HOMESTEAD AT CLARENDON HILLS FOR ADDITIONAL INFORMATION.
2. THE SMITH LATERAL IS OWNED BY NUMEROUS INDIVIDUAL OWNERS AS WELL AS THE CITY OF FORT COLLINS (THROUGH THE PARKS DEPARTMENT) WHO USE THE DITCH TO CONVEY IRRIGATION WATER. APPROVAL FROM THE IRRIGATION DITCH OWNERS IS REQUIRED PRIOR TO ANY WORK ON THE DITCH OR IN ITS EASEMENT, AS WELL AS BEFORE ANY STORMWATER CAN BE DISCHARGED, OR PLANNED TO BE DISCHARGED INTO THE DITCH. PLEASE CONTACT JILL WUERTZ (970-416-2062), 413 S. BRYAN AVE, FORT COLLINS, CO 80521 REGARDING THE PARKS' DEPARTMENT'S INTEREST.

BENCHMARK

PROJECT DATUM: NAVD88

CITY OF FORT COLLINS BENCHMARK 5-02
1/2 MILE SOUTH OF HARMONY ROAD, APPROXIMATELY 200 FEET NORTH OF WOODED CREEK COURT, ON THE WEST SIDE OF SHIELDS STREET, ON THE NORTHWEST CORNER OF A STORM INLET.
ELEV. = 5089.11

CITY OF FORT COLLINS BENCHMARK 8-13
SOUTHEAST CORNER OF HARMONY RD. AND SHIELDS ON THE NORTHEAST CORNER OF A CONCRETE TRAFFIC SIGNAL BASE.
ELEV. = 5086.71

PLEASE NOTE: THIS PLAN SET IS USING NAVD88 FOR A VERTICAL DATUM. SURROUNDING DEVELOPMENTS HAVE USED NGVD29 UNADJUSTED (PRIOR CITY OF FORT COLLINS DATUM) FOR THEIR VERTICAL DATUMS.

IF NGVD29 UNADJUSTED DATUM (PRIOR CITY OF FORT COLLINS DATUM) IS REQUIRED FOR ANY PURPOSE, THE FOLLOWING EQUATION SHOULD BE USED:
NGVD29 UNADJUSTED (PRIOR CITY OF FORT COLLINS DATUM) = NAVD88 - 3.20'

BASIS OF BEARINGS
THE BASIS OF BEARINGS IS THE WEST LINE OF SECTION 2-6-69 AS BEARING NORTH 00° 17' 10" EAST (ASSUMED BEARING).

EXISTING DRAINAGE SUMMARY

Design Point	Basin ID	Total Area (acres)	C2	C100	2-Yr Tc (min)	100-Yr Tc (min)	Q2 (cfs)	Q100 (cfs)
ex a	EX A	2.382	0.25	0.31	14.06	14.06	1.14	5.00
b	EX B	0.684	0.25	0.31	12.06	12.06	0.35	1.53
b	EX OS1	0.147	0.25	0.31	11.08	11.08	0.08	0.34
b	EX OS2	0.064	0.25	0.31	5.42	5.42	0.05	0.20

FOR DRAINAGE REVIEW ONLY
NOT FOR CONSTRUCTION

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
Know what's below.
Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED: _____ City Engineer _____ Date
CHECKED BY: _____ Water & Wastewater Utility _____ Date
CHECKED BY: _____ Stormwater Utility _____ Date
CHECKED BY: _____ Parks & Recreation _____ Date
CHECKED BY: _____ Traffic Engineer _____ Date
CHECKED BY: _____ Environmental Planner _____ Date

Revisions:

No.	Date:
	REVIEW SET NOT FOR CONSTRUCTION 09/30/20

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

PROJECT: 1013-008
DESIGNED BY: F. Wegert
DRAWN BY: F. Wegert
DATE: 09/30/20
SCALE: 1"=30'
P. MANAGER: A. Reese

HOMESTEAD AT CLARENDON HILLS

HISTORIC DRAINAGE EXHIBIT

Sheet
DR1
14 of 15

DRAWING FILENAME: P:\1013-008\Dwg\1013-008_DR02.dwg LAYOUT NAME: Historic DATE: Sep 29, 2020 - 2:27pm CAD OPERATOR: fred
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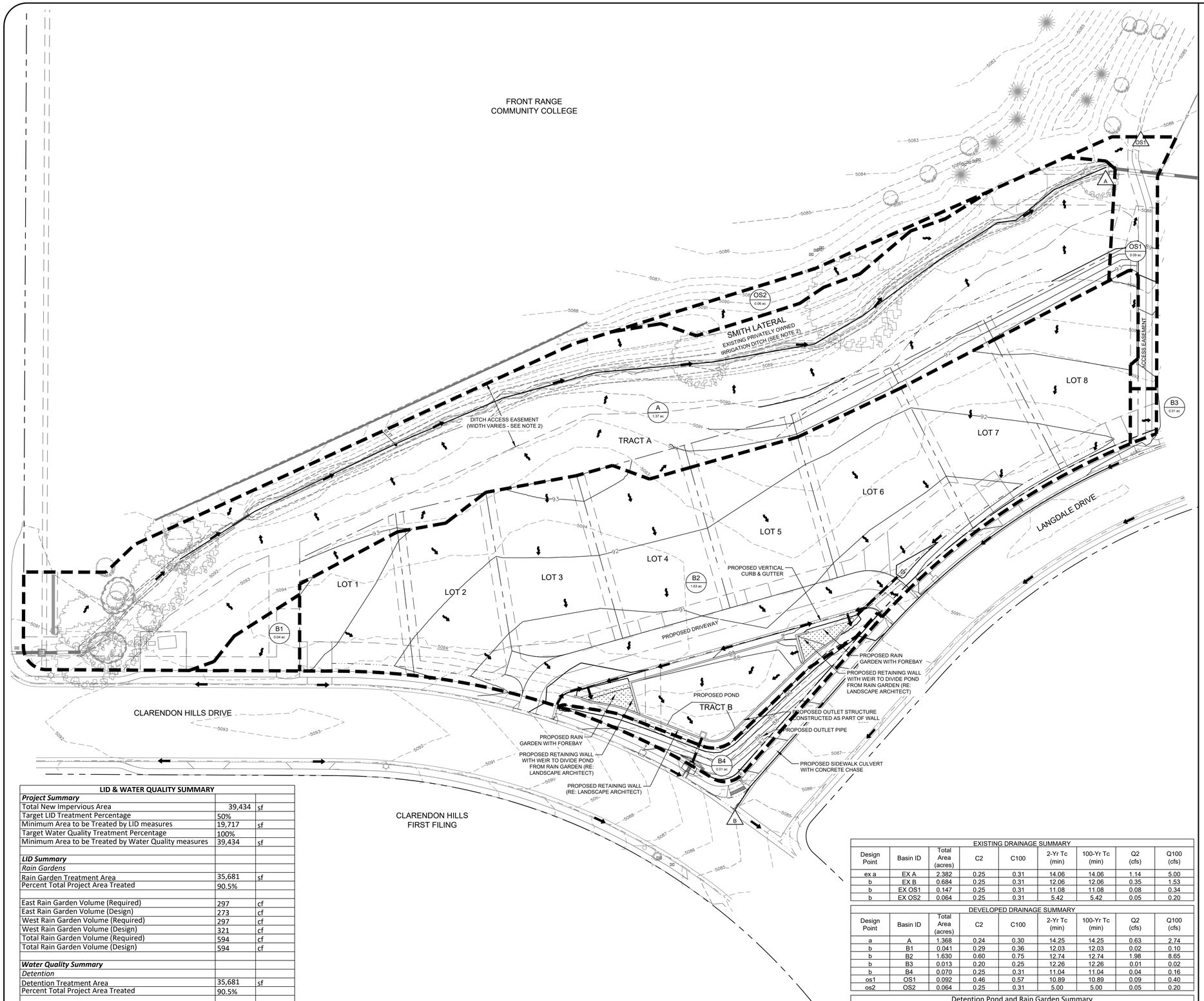

NORTH

30 0 30 60 90 Feet

(IN FEET)
1 inch = 30 ft.

LEGEND:

- PROPOSED CONTOUR — 93
- EXISTING CONTOUR — 5013
- PROPOSED STORM DRAIN / IRRIGATION
- EXISTING CURB AND GUTTER
- PROPOSED SWALE
- PROPERTY BOUNDARY
- PROPOSED LOT LINE
- EASEMENT
- DESIGN POINT (A)
- FLOW ARROW
- DRAINAGE BASIN LABEL (BASIN DESIGNATION: C; 0.60 ac: BASIN AREA (AC))
- PROPOSED DRAINAGE BASIN BOUNDARY
- 50' WETLANDS BUFFER

NOTES:

1. REFER TO THE PRELIMINARY DRAINAGE LETTER FOR HOMESTEAD AT CLARENDON HILLS FOR ADDITIONAL INFORMATION.
2. THE SMITH LATERAL IS OWNED BY NUMEROUS INDIVIDUAL OWNERS AS WELL AS THE CITY OF FORT COLLINS (THROUGH THE PARKS DEPARTMENT) WHO USE THE DITCH TO CONVEY IRRIGATION WATER. APPROVAL FROM THE IRRIGATION DITCH OWNERS IS REQUIRED PRIOR TO ANY WORK ON THE DITCH OR IN ITS EASEMENT, AS WELL AS BEFORE ANY STORMWATER CAN BE DISCHARGED, OR PLANNED TO BE DISCHARGED INTO THE DITCH. PLEASE CONTACT JILL WUERTZ (970-416-2062), 413 S. BRYAN AVE, FORT COLLINS, CO 80521 REGARDING THE PARKS' DEPARTMENT'S INTEREST.

BENCHMARK

PROJECT DATUM: NAVD88

CITY OF FORT COLLINS BENCHMARK 5-02
1/2 MILE SOUTH OF HARMONY ROAD, APPROXIMATELY 200 FEET NORTH OF WOODED CREEK COURT, ON THE WEST SIDE OF SHIELDS STREET, ON THE NORTHWEST CORNER OF A STORM INLET.
ELEV. = 5089.11

CITY OF FORT COLLINS BENCHMARK 8-13
SOUTHEAST CORNER OF HARMONY RD. AND SHIELDS ON THE NORTHEAST CORNER OF A CONCRETE TRAFFIC SIGNAL BASE.
ELEV. = 5086.71

PLEASE NOTE: THIS PLAN SET IS USING NAVD88 FOR A VERTICAL DATUM. SURROUNDING DEVELOPMENTS HAVE USED NGVD29 UNADJUSTED (PRIOR CITY OF FORT COLLINS DATUM) FOR THEIR VERTICAL DATUMS.

IF NGVD29 UNADJUSTED DATUM (PRIOR CITY OF FORT COLLINS DATUM) IS REQUIRED FOR ANY PURPOSE, THE FOLLOWING EQUATION SHOULD BE USED:
NGVD29 UNADJUSTED (PRIOR CITY OF FORT COLLINS DATUM) = NAVD88 - 3.20'

BASIS OF BEARINGS
THE BASIS OF BEARINGS IS THE WEST LINE OF SECTION 2-6-69 AS BEARING NORTH 00° 17' 10" EAST (ASSUMED BEARING).

LID & WATER QUALITY SUMMARY		
Project Summary		
Total New Impervious Area	39,434	sf
Target LID Treatment Percentage	50%	
Minimum Area to be Treated by LID measures	19,717	sf
Target Water Quality Treatment Percentage	100%	
Minimum Area to be Treated by Water Quality measures	39,434	sf
LID Summary		
Rain Gardens		
Rain Garden Treatment Area	35,681	sf
Percent Total Project Area Treated	90.5%	
East Rain Garden Volume (Required)	297	cf
East Rain Garden Volume (Design)	273	cf
West Rain Garden Volume (Required)	297	cf
West Rain Garden Volume (Design)	321	cf
Total Rain Garden Volume (Required)	594	cf
Total Rain Garden Volume (Design)	594	cf
Water Quality Summary		
Detention		
Detention Treatment Area	35,681	sf
Percent Total Project Area Treated	90.5%	
Water Quality Volume (Required)	1,187	cf
Storage Volume (Required)	8,288	cf
Total Detention Volume (Required)	9,475	cf
	0.22	ac.-ft.
Total Detention Volume (Design)	9,807	cf
	0.23	ac.-ft.

EXISTING DRAINAGE SUMMARY

Design Point	Basin ID	Total Area (acres)	C2	C100	2-Yr Tc (min)	100-Yr Tc (min)	Q2 (cfs)	Q100 (cfs)
ex a	EX A	2.382	0.25	0.31	14.06	14.06	1.14	5.00
b	EX B	0.684	0.25	0.31	12.06	12.06	0.35	1.53
b	EX OS1	0.147	0.25	0.31	11.08	11.08	0.08	0.34
b	EX OS2	0.064	0.25	0.31	5.42	5.42	0.05	0.20

DEVELOPED DRAINAGE SUMMARY

Design Point	Basin ID	Total Area (acres)	C2	C100	2-Yr Tc (min)	100-Yr Tc (min)	Q2 (cfs)	Q100 (cfs)
a	A	1.368	0.24	0.30	14.25	14.25	0.63	2.74
b	B1	0.041	0.29	0.36	12.03	12.03	0.02	0.10
b	B2	1.630	0.60	0.75	12.74	12.74	1.98	8.65
b	B3	0.013	0.20	0.25	12.26	12.26	0.01	0.02
b	B4	0.070	0.25	0.31	11.04	11.04	0.04	0.16
os1	OS1	0.092	0.46	0.57	10.89	10.89	0.09	0.40
os2	OS2	0.064	0.25	0.31	5.00	5.00	0.05	0.20

Detention Pond and Rain Garden Summary

Description	Required Volume (cu. ft.)	Design Volume (cu. ft.)	Release Rate (cfs)	Crest of Pond Elev.	Water Surface Elev.	Freeboard (ft)
Detention Pond	9,475	9,807	1.2	5090.6	5089.75	0.85
East Rain Garden	297	297	n/a	5090.6	5089.9	0.7
West Rain Garden	297	297	n/a	5090.6	5089.7	0.9

FOR DRAINAGE REVIEW ONLY
NOT FOR CONSTRUCTION

CALL UTILITY NOTIFICATION CENTER OF COLORADO
811
Know what's below. Call before you dig.
CALL 2 BUSINESS DAYS IN ADVANCE BEFORE YOU DIG, GRADE, OR EXCAVATE FOR THE MARKING OF UNDERGROUND MEMBER UTILITIES.

City of Fort Collins, Colorado
UTILITY PLAN APPROVAL

APPROVED: _____ City Engineer _____ Date
CHECKED BY: _____ Water & Wastewater Utility _____ Date
CHECKED BY: _____ Stormwater Utility _____ Date
CHECKED BY: _____ Parks & Recreation _____ Date
CHECKED BY: _____ Traffic Engineer _____ Date
CHECKED BY: _____ Environmental Planner _____ Date

Revisions:

No.	Date:
	REVIEW SET NOT FOR CONSTRUCTION 09/30/20

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 820 8th Street, 80631
970.221.4158
northernengineering.com

PROJECT: 1013-008
DESIGNED BY: F. Wegert
DRAWN BY: F. Wegert
DATE: 09/30/20
SCALE: 1" = 30'
P. MANAGER: A. Reese

HOMESTEAD AT CLARENDON HILLS

PROPOSED DRAINAGE EXHIBIT

Sheet
DR2
15 of 15

DRAWING FILENAME: P:\1013-008\Dwg\1013-008_DRNG.dwg LAYOUT NAME: Developed DATE: Sep 29, 2020 - 2:30pm CAD OPERATOR: fred
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TB GROUP
landscape architecture | planning | illustration

April 10, 2019

Homestead at Clarendon Hills
Design Narrative

Project Title: Homestead at Clarendon Hills

Past Meeting Dates: Conceptual Review October 29, 2018

Zoning: Low Density Residential (RL)

Hearing Type: Type I

General Information: The site is approximately 3.27 AC with residential uses proposed (single family detached). The zone district is Low Density Residential (RL) which is primarily intended for single family detached housing. This small undeveloped parcel within the existing single-family subdivision will include eight (8) lots, open space, a historical plaque and a trail connection.

Clarendon Hills Drive and Langdale Drive are existing neighborhood streets that the proposed lots will take their access from. There is an existing detached walk along Clarendon Hills Drive which transitions to an attached walk along Langdale Drive. A six-foot soft surface trail is proposed along the eastern property boundary which will provide a connection from the neighborhood, through Front Range Community College (FRCC) and beyond to other City trails.

A soft surface loop is proposed along the western edge near the grove of Cottonwood trees. Natural stone benches are planned as well as a historical plaque describing the history of the site. The natural features on-site will be preserved and areas of disturbance will be restored with native grasses. This open space area will also serve as a buffer between the rear lot lines and the FRCC parking lot located on the north side of the property.

Uses surrounding the property consist of the following:

South: Existing Clarendon Hills subdivision
West: Shields Street
North: Front Range Community College
East: Existing Clarendon Hills subdivision

The project will be designed to be compatible with the surrounding neighborhoods as required by the City Code. Architectural compatibility will be achieved by incorporating design elements from the surrounding neighborhood such as building materials, horizontal elements, fenestration and roof lines.

Existing Owners: Mosaic Land Development Services, LLC

444 Mountain Ave.
Berthoud, CO 80513
TEL 970.532.5891
WEB TBGroup.us

TB GROUP
landscape architecture | planning | illustration

August 5, 2020

Jason Holland
Current Planning Department
281 North College Ave.
Fort Collins, CO 80524

Re: Homestead at Clarendon Alternative Compliance

Please accept this request for Alternative Compliance to **Section 3.2.1 (B)** of the Land Use Code.

Background

The proposed Homestead at Clarendon project is a 2.2-acre development, bounded by Clarendon Hills Drive on the south, Shields Street on the west, Langdale Drive on the east and Front Range Community College property to the north. The intent of this PDP application is to plat 8 single family detached lots. The project has an existing parkway that was constructed prior to the current parkway standards.

This Alternative Compliance request is in accordance with the review procedures set forth in Section 3.2.1 (B) of the Land Use Code as follows:

Alternative Compliance to Section 3.2.1(B):

Code Language: *3.2.1 (B) – Landscaping and Tree Protection*

(B) Purpose. The intent of this Section is to require preparation of landscape and tree protection plans that ensure significant canopy cover is created, diversified and maintained so that all associated social and environmental benefits are maximized to the extent reasonably feasible. These benefits include reduced erosion and stormwater runoff, improved water conservation, air pollution mitigation, reduced glare and heat build-up, increased aesthetics, and improved continuity within and between developments. Trees planted in appropriate spaces also provide screening and may mitigate potential conflicts between activity areas and other site elements while enhancing outdoor spaces, all of which add to a more resilient urban forest.

The Request: Homestead at Clarendon proposes an alternative plan that would provide right-of-way trees behind the public sidewalk and/or located on private property.

444 Mountain Ave. | TEL 970.532.5891
Berthoud, CO 80513 | WEB TBGroup.us

Justification

- There is an existing, established parkeway along Clarendon Hills Drive. It is located outside of the limits of disturbance for the proposed development therefore there is not a proposal to remove and replace it with a wider parkway. We believe it unnessary and undesirable to remove and replace curb, gutter, parkway and sidewalk along Clarendon Avenue when the existing improvements are in excellent condition.

- There is a utility easement that runs along the front of all the lots. This location is prohibited for tree placement due to the separation requirements from utilities. This is to ensure that utility lines are not damaged by tree roots as well to provide safe access to City workers if/when future repairs are required.

- Trees have been placed in five different areas to meet the right-of way requirement and spacing.
  - #1: Deciduous trees are included in informal clusters to the west of Lot 1.
  - #2: Deciduous trees are located just behind the sidewalk along Clarendon to generally mirror the location they would have been placed if located within the parkway.
  - #3: Deciduous trees are located within the landscaped pond area along the streetscape frontage.
  - #4: Deciduous trees are located in the ROW parkway along Langdale Drive.
  - #5: Deciduous trees are located on private property, directly behind the utility easement on lots in specific locations to ensure a generalized distribution of canopy along the streetscape.

- In order to meet the intention of the parkway tree planting requirements, we have included 18 deciduous or ornamental trees along the street frontage which exceeds the number of street trees that would have been required in traditional tree lawns with the previous plan.

- The proposed landscape improvements along Clarendon Hills Drive is consistent with the character of the existing parkway on the south side of Clarendon Drive, which does not include street trees (all trees are located behind the sidewalk).

- The proposed landscape improvements provides more landscape than the existing streetscape in the Clarendon subdivision which has attached walks, no parkway and trees located on private property.

Review Criteria

The proposed alternative plan accomplishes the purpose of the Landscaping and Tree Protection Standards equally well or better than would a plan which complies with the standard.

- The alternative plan proposes more trees than required in a traditional parkway.

- Significant canopy cover is proposed.

- Canopy cover is distributed along the streetscape to create consistent coverage.
- Trees are located in close proximity to the street.
- The alternative plan enhances landscape neighborhood continuity.

BLUE MOUNTAIN
Environmental Consulting LLC

April 9, 2019

Ken Mitchell
1021 Nightingale Drive
Fort Collins, CO. 80525

RE: Homestead at Clarendon Ecological Characterization Study

Mr. Mitchell:

This report is submitted to satisfy the requirements of Section 3.4.1 (D) (1) of the Land Use Code of the City of Fort Collins regarding the preparation of an Ecological Characterization Study (ECS). This report is required by the City of Fort Collins Community Development and Neighborhood Services Department due to the presence of wetlands along an irrigation ditch near the northern property boundary of your project, Homestead at Clarendon.

The site was visited by Matt Tobler with Blue Mountain Environmental Consulting on October 24, 2018. A wetland that is associated with an irrigation ditch occurs near the northern property boundary. The wetland was sampled in accordance with Army Corps of Engineer's methodologies and approximate boundaries are indicated on the attached project map. Please note that the wetland boundary should be surveyed and incorporated into subsequent versions of the site plan.

Feel free to contact me with any questions you may have.

Sincerely,
Matt Tobler

Natural Resource Specialist, Certified Ecologist
Blue Mountain Environmental Consulting, LLC

1.0 Project Background

The development proposal will entail the construction of eight residential lots situated east of South Shields Street and south of the Front Range Community College campus in Fort Collins, Colorado. Site conditions are illustrated in a preliminary lot plan prepared by TB Group in November of 2018 (here incorporated by reference). The property is surrounded by neighborhood roadways to the south and west, South Shields to the west and Front Range Community College to the north. The property may be the original site for the Henry and Caroline Franz log cabin, which dates from 1882. The cabin is now located at Heritage Courtyard in Fort Collins.

2.0 Ecological Characterization

The elements of the Ecological Characterization Study are summarized in this section in the order listed in Section 3.4.1 (D) (1) of the Land Use Code. Site maps are provided in Appendix A; site photos are provided in Appendix B. Photo points are indicated on the Natural Features and Habitats Map in Appendix A.

2.1 Wildlife

Due to the property's suburban location and human disturbance level, wildlife value is moderate. The property consists primarily of an open field (recently mowed at time of the site visit), an irrigation ditch that extends from southwest to northeast along the northern property boundary and numerous mature trees that are clustered near the northwestern property corner and along the irrigation ditch. Most wildlife use is expected to be transitional as animals travel to other small, isolated open tracts in the neighborhood. Seasonal and/or year-round use can be expected by a number of avifauna including American robin (*Turdus migratorius*), northern flicker (*Colaptes auratus*), mourning dove (*Zenaidura macroura*), western kingbird (*Tyrannus verticalis*), magpie (*Pica pica*), crow (*Corvus brachyrhynchos*) and raven (*Corvus corax*). Raptors would probably utilize the site primarily for hunting rodents and small birds. Numerous nest cavities were observed in mature cottonwood trees but stick nests were not observed. Mammals such as mice, voles, fox squirrel (*Sciurus niger*), eastern cottontail rabbit (*Sylvilagus floridanus*) and raccoon (*Procyon lotor*) could utilize the property year round.

2.2 Wetlands

A narrow wetland occurs on each side of the irrigation ditch. The wetland on the southern side of the ditch was delineated with orange pin flags in accordance with the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Great Plains Region (Version 2.0). There was no water in the irrigation ditch at the time of sampling.

Wetland vegetation was demonstrated with the Dominance Test. Dominant hydrophytic species include reed canarygrass *(Phlaris arundinaceae*), three square (*Schenoplectus pugens*) and Nebraska sedge (*Carex nebrascensis*). Hydric soils were demonstrated via Depleted Matrix (F3) and hydrology was demonstrated by Saturation (A3). The transition to upland status was marked by a shift in dominance to smooth brome (*Bromus inermis*) and other upland species. Wetland data forms are available upon request.

The total wetland area is 10,084 square feet. This figure is comprised of the unvegetated irrigation ditch channel which is 2,982 square feet (considered a Water of the United States by the Army Corps of Engineers) and the vegetated banks on either side of the ditch which are 7,102 square feet. Wetland disturbances are proposed for the western end of the ditch totaling 2,830 square feet as indicated on the Disturbed Wetland Area Map in Appendix A. We believe that the wetlands will not be considered jurisdictional by the Army Corps of Engineers because the ditch terminates in uplands not far from the project site. (It should be noted that only the Corps can determine jurisdiction. A wetland delineation report is currently being prepared for submission to the Corps for jurisdictional determination.) The 50 foot wetland buffer is measured from the wetland boundary.

The wetlands are not identified by the U.S. Fish and Wildlife Service National Wetlands Inventory (NWI). The approximate location of the southern boundary of this wetland is indicated on the Natural Features Map provided in Appendix A.

2.3 Prominent Views

The property occupies the foreground when traveling along Clarendon Hills Drive or Langdale Drive and frames mid-ground views of the Front Range, including Horsetooth Rock when looking to the north and west. Other surrounding views are primarily of residential neighborhoods, the Front Range Community College campus and small tracts of undeveloped land.

2.4 Native Trees and Vegetation

Trees, shrubs and wetland vegetation are comprised predominantly of native species. Native trees include plains cottonwood (*Populus deltoides*), peachleaf willow (*Salix amygdaloides*), dogwood (*Cornus* sp.), choke cherry (*Prunus virginiana*), common juniper (*Juniperus communis*), apple (*Malus* sp.) and ponderosa pine (*Pinus ponderosae*). Native shrubs include cinquefoil (*Potentilla fruticosa*), yucca (*Yucca glauca*) and raspberry (*Rubus* sp.) Native forb species include milkweed (*Asclepias* sp.), asparagus (*Asparagus officinalis*), ragweed (*Ambrosia* sp.), beggars tick (*Bidens frondosa*) and curly doc (*Rumex crispus*). Native grasses were not abundant. Observed species include blue gramma (*Bouteloua gracilis*), Kentucky bluegrass (*Poa pratensis*), three square (Schoenoplectus pungens), reed canarygrass (*Phalaris arundinacea*) and Nebraska sedge (*Carex nebrascensis*).

2.5 Non-native Trees and Vegetation

Non-native trees are not abundant. Observed species include Siberian elm (*Ulmus pumila*). Non-native forb species include prickly lettuce (*Lactuca serriola*), kochia (*Kochia scoparia*) and common mallow (*Malva neglecta*). Several species on the Colorado Noxious Weeds list were identified on the property and include Canada thistle (*Cirsium arvense*), field bindweed (*Convolvulus arvensis*), common mullein (*Verbascum thapsus*) and houndstongue (*Cynoglossum offcinale*). Noxious species were most abundant in or near wetland areas. Smooth brome (*Bromus inermis*), alfalfa (*Medicago sativa*) and kochia are most abundant within the mowed areas of the property.

2.6 Bank, Shoreline and High Water Mark of Perennial Water

According to the City of Fort Collins Floodplain Maps and Documents (https://gisweb.fcgov.com/HTML5Viewer/Index.html?Viewer=FCMaps&LayerTheme=Floodplains, accessed on November 5, 2018), the property is located on FEMA Map Panel 08069C1000F. The property does not occur within a floodplain designated by the Federal Emergency Management Agency or the City of Fort Collins. A top-of-bank feature is defined by the extent of riparian vegetation, which is the same as the wetland delineation line.

2.7 Sensitive and Specially Valued Species

The property does not have potential habitat for Preble's meadow jumping mouse (*Zapus hudsonius preblei*). The property has no potential habitat (weltands, floodplains) for Ute lady's tresses orchid (*Spiranthes diluvialis*) or Colorado butterfly plant (*Gaura neomexicana* ssp. *Coloradensis*). There are no known occurrences of these three species on or near the property. No old or active prairie dog colonies are located on the property. No raptors or stick nests were observed on the property.

2.8 Special Habitat Features

Special habitat features include the approximately 750-foot reach of the riparian/wetland area and numerous mature cottonwood trees located along the ditch. Benefit to most wildlife would mostly be transitory habitat to all but smaller wildlife species and cavity-nesting birds. The City of Fort Collins Natural Habitats and Features database did not indicate any features on or near the property.

2.9 Wildlife Migration Corridors

The property is not connected to any significant wildlife migration corridors.

2.10 General Ecological Functions

The majority of the property is an open, mowed field. An irrigation ditch extends along the northern property boundary which supports a narrow riparian corridor comprised of herbaceous vegetation, shrubs and a few mature cottonwood trees. A small area near the western boundary is landscaped with ornamental grasses and shrubs. General ecological functions include water conveyance, groundwater recharge and wildlife habitat. Flowing water can be found in the irrigation ditch during the growing season; trees and the open field may accommodate forage, escape and thermal cover needs for small mammals. Mature trees provide vertical structure, thermal cover, nesting, roosting and forage habitat for a variety of avian species. Ecological function is limited by the property's location and local habitat fragmentation.

2.11 Timing of Development in Relation to Ecological Character

The primary concern for the timing of development is protection of migratory birds. Under the Migratory Bird Treaty Act of 1918, it is unlawful for anyone to take, possess, import, export, transport, sell, purchase, barter or offer for sale, purchase or barter, any migratory bird or the parts, nests or eggs. Avoid removing trees between April 1 and August 15.

2.12 Mitigation Measures

Blue Mountain Environmental Consulting recommends the following mitigation:

- Retain all native trees and shrubs.
- If tree removal is necessary, include the following note on the tree mitigation plan and/or landscape plan, as appropriate: "NO TREES SHALL BE REMOVED DURING THE SONGBIRD NESTING SEASON (FEBRUARY 1 TO JULY 31) WITHOUT FIRST HAVING A PROFESSIONAL ECOLOGIST OR WILDLIFE BIOLOGIST COMPLETE A NESTING SURVEY TO IDENTIFY ANY ACTIVE NESTS EXISTING ON THE PROJECT SITE. THE SURVEY SHALL BE SENT TO THE CITY ENVIRONMENTAL PLANNER. IF ACTIVE NESTS ARE FOUND, THE CITY WILL COORDINATE WITH RELEVANT STATE AND FEDERAL REPRESENTATIVES TO DETERMINE WHETHER ADDITIONAL RESTRICTIONS ON TREE REMOVAL AND CONSTRUCTION APPLY."
- Re-seed disturbed soils and landscape with native xeric cool- and warm-season grasses and forbs to reduce water consumption and create pollinator habitat.
- Manage noxious species that proliferate as a result of site disturbance with mechanical, cultural or chemical means.
- Maintain a 50 foot buffer on the wetland per City Land Use Code 3.4.1(E) or pursue mitigation as required by the City of Fort Collins. (Army Corps of Engineers compliance is required if disturbance to the wetland is proposed.)

3.0 Conclusions and Recommendations

The team at Blue Mountain Environmental Consulting believes that no significant ecological resources will be adversely impacted by development because the proposed site plan will maintain mature trees and a wetland buffer along the irrigation ditch.

References

City of Fort Collins Floodplain Maps and Documents. http://www.fcgov.com/utilities/what-we-do/stormwater/flooding/floodplain-maps-documents

Colorado Parks and Wildlife Recommended Buffer Zones and Seasonal Restrictions for Raptors. http://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/RaptorBufferGuidelines2008.pdf

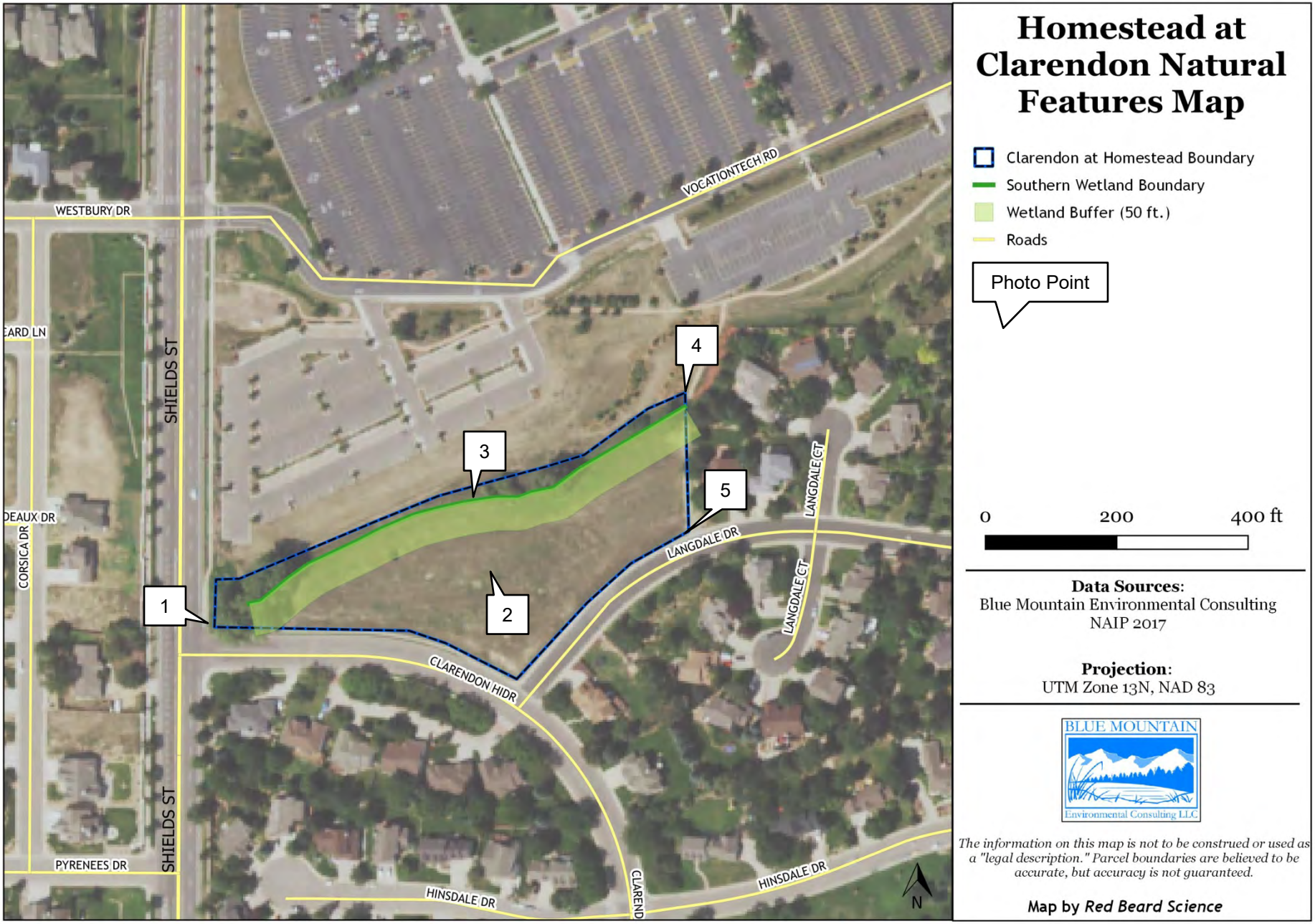
National Wetland Inventory Mapper. Accessed on November 5, 2018. http://www.fws.gov/wetlands/Data/Mapper.html

Recommended Buffer Zones and Seasonal Restrictions for Colorado Raptors (https://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/RaptorBufferGuidelines2008.pdf).

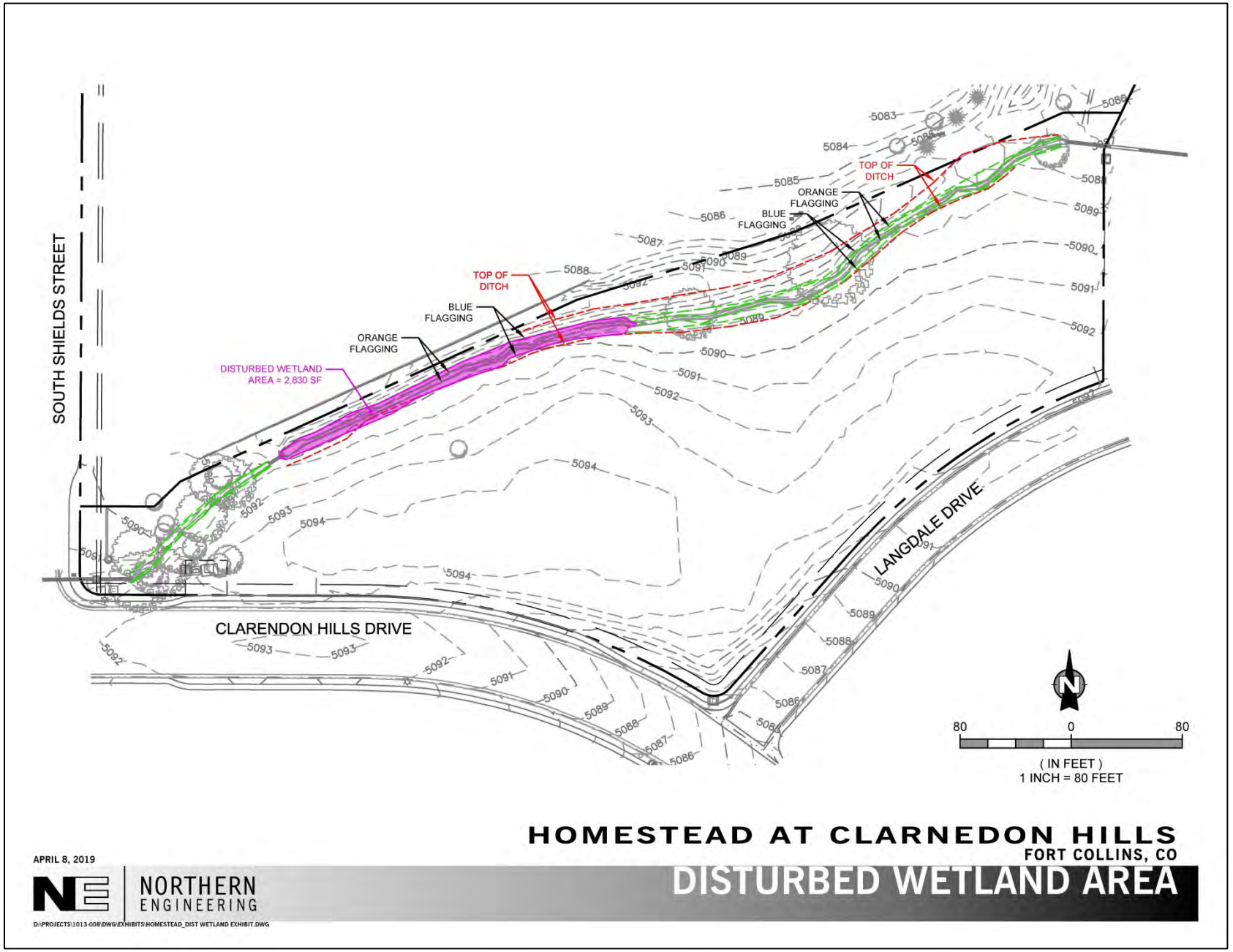
Wildlife Management Guidelines, City of Fort Collins. http://www.fcgov.com/naturalareas/pdf/wildlife-management-guidelines.pdf

Appendix A: Project Maps

Natural Features and Habitats Map



Disturbed Wetland Area Map



Appendix B: Site Photos

Map Number:	
1	
Photo Direction:	
North	
Looking north along South Shields Street which forms the western property boundary.	

Map Number:	
1	
Photo Direction:	
East	
Looking east from the southwest property corner; note the mature cottonwood trees.	

Map Number:	
2	
Photo Direction:	
North	
Looking north across the irrigation ditch, towards Front Range Community College from a high point near the center of the property.	

Map Number:	
2	
Photo Direction:	
East	
Looking east towards an adjoining neighborhood.	

Map Number:	
2	
Photo Direction:	
South	
Looking south towards Clarendon Hills Drive.	

Map Number:	
2	
Photo Direction:	
West	
Looking west at the Front Range; the cottonwood trees at center occur on the property near the southwestern property corner.	

Map Number:	
3	
Photo Direction:	
East	
Looking east along the irrigation ditch (red arrow).	

Map Number:	
4	
Photo Direction:	
South	
Looking south along the eastern property boundary.	

Map Number:	
4	
Photo Direction:	
SW	
Looking southwest along the irrigation ditch (right) and the northern property boundary.	

Map Number:	
5	
Photo Direction:	
North	
Looking north along the eastern boundary.	

Map Number:	
5	
Photo Direction:	
SW	

Looking southwest along Langdale Drive and a portion of the southern property boundary.

BROOKWOOD AT MAIL CREEK HOA
Rick Reider
5029 Crest Road
Fort Collins, CO 80526
rickreider@gmail.com

September 30, 2020

To: Allen Massey
Claire Havelda, Assistant City Attorney
Fort Collins City Planning Department

Re: Letter of support – Homestead at Clarendon Hills, PDP190007

Brookwood at Mail Creek HOA, ("Brookwood") through its authorized representative Rick Reider, by way of a Statement of Authority, offers the following support for the above captioned development.

Background
Brookwood is the owner of the Smith Lateral along with Front Range Community College, and the City of Fort Collins Parks department. For many decades Brookwood has maintained and used the Smith Lateral to water farm and pastureland in its subdivision. Brookwood expressed three areas of concern:

1. That the Smith Lateral be recognized as an easement on the plat providing access to lateral users for operations and maintenance.
2. That storm water is not added to the Smith Lateral beyond historical levels, given that the terminus of the water in the lateral is Brookwood lands, (the irrigation does not benefit any lands beyond Brookwood).
3. Access in the form of a 12-foot easement is added to other proposed access points on the final plat between Homesteads proposed lot 8 and Clarendon Hills existing lot 88; in a south to north direction.

I reviewed and commented in a Zoom meeting on the proposed plat dated April 10, 2019 with comments attached by City Staff dated on or about September 10, 2020.

Support for Developer
It is Brookwood's understanding that the above three items are being met by the developer and it therefor offers this letter in support of the developer's proposed Homestead at Clarendon Hills.

When available please provide me with a copy of the final plat. Should you have any questions please email me at the above address. Thank you.

Rick Reider, Secretary/Treasurer
On behalf of Brookwood at Mail Creek HOA

September 8, 2020

Kristin Turner
TB Group
444 Mountain Ave.
Fort Collins, CO. 80528

RE: Letter of Intent – Homestead at Clarendon Hills, PDP190007

Based on the plan dated: August 24, 2020, the City of Fort Collins Parks Department (Parks) acknowledge that Homestead at Clarendon Hills (development) will require modifications to the Smith Lateral Ditch (ditch), which is owned and operated by Parks and numerous other private citizens.

Parks staff will work with the development and intends to coordinate with other owners to ensure that their interests are being addressed. The intent of Parks staff to work with the development on the ditch modifications in no way guarantees or obligates City Council to approve the proposed modifications. Furthermore, staff cannot guarantee participation by the other owners. With that said, staff is committed to working with the development through this process.

Sincerely,

DocuSigned by:
Mike Calhoon
9D2C8259E4F1413...

MICHAEL G CALHOON
Director of Parks
City of Fort Collins
970-416-2079 office

City of Fort Collins Parks Department
413 S. Bryan Ave,
Fort Collins, CO 80521

FRONT RANGE
COMMUNITY COLLEGE
WESTMINSTER CAMPUS

3645 West 112th Avenue
Westminster, CO 80031
www.frontrange.edu

November 6, 2020

To: Allen Massey
Claire Havelda, Assistant Attorney General
Fort Collins City Planning Department

To whom it may concern:

The State of Colorado, acting by and through the Department of Higher Education, by the State Board for Community Colleges and Occupational Education, for the use and benefit of Front Range Community College ("College") hereby offers support for the Homestead at Clarendon Hills, PDP190007, as shown in the attached Plat.

Additionally, in accordance with the *Development Agreement* executed on December 16, 2013 between Clarendon Hills Homeowners' Association and the College, the College retains the right to expand the south parking lot which is adjacent to the proposed Plat. The College will continue to operate the parking lot and any future expansion(s) in the manner outlined in the *Agreement*.

Should you have any questions, please contact Derek Brown, the College's Associate Vice President of Facilities Planning and Management, at Derek.Brown@frontrange.edu or 303-404-5492.

Sincerely,

DocuSigned by:
Andrew Dorsey
AD5158A3008749F...

Andrew R. Dorsey
President
Front Range Community College

DEVELOPMENT AGREEMENT

THIS DEVELOPMENT AGREEMENT (this "Agreement") is made and entered into this 16th day of August, 2013, by and between THE STATE OF COLORADO, DEPARTMENT OF HIGHER EDUCATION, BY THE STATE BOARD FOR COMMUNITY COLLEGES AND OCCUPATIONAL EDUCATION, FOR THE USE AND BENEFIT OF FRONT RANGE COMMUNITY COLLEGE ("FRCC") and CLARENDON HILLS HOMEOWNERS' ASSOCIATION, a Colorado nonprofit corporation (the "HOA"). FRCC and the HOA may be referred to individually as "Party" or collectively as the "Parties."

RECITALS

WHEREAS, FRCC's approved Master Plan (the "Master Plan") has identified limited sites for construction of new buildings and parking for their Larimer Campus in Fort Collins (the "Larimer Campus").

WHEREAS, FRCC has entered into a contract to purchase approximately 4.22 acres of land contiguous to the southern boundary of the Larimer Campus (the "Property") which is presently owned by Peak Community Church, Inc. aka First Church of God in Fort Collins (the "Church"). The Property is depicted on Exhibit A attached hereto and incorporated herein by reference. FRCC intends to utilize the Property for the benefit of FRCC. The Property is part of a larger parcel of land owned by the Church consisting of a total of approximately 7.6 acres and legally described in that certain Warranty Deed dated October 7, 1991 and recorded October 7, 1991at reception number 91049273 of the Larimer County, Colorado records (the "Church Property").

WHEREAS, an existing irrigation ditch (the "Irrigation Ditch") owned by the Pleasant Valley and Lake Canal Company (the "Ditch Company") runs through the Church Property. The Property which FRCC will purchase is that portion of the Church Property consisting of approximately 4.22 acres located north of a line that is parallel with and 10 feet to the north of the north bank of the Irrigation Ditch, and will be referred to as the "North Parcel." The remainder of the Church Property consisting of approximately 3.4 acres will be referred to as the "South Parcel."

WHEREAS, FRCC seeks to gain approval of a parking project proposed on the North Parcel as depicted on Exhibit B (the "Parking Project") through the City of Fort Collins, Colorado (the "City") Site Plan Advisory Review Process (the "SPAR Process"). The term "Parking Lot(s)" will mean that portion of the North Parcel that is to be improved with asphalt and/or concrete for the parking of motor vehicles, including the appurtenant curbs, gutters, sidewalks and landscaping.

WHEREAS, FRCC seeks to gain approval of the Parking Project through the HOA's Architectural Control Committee (the "ACC").

WHEREAS, FRCC seeks to begin construction of the first phase of the Parking Project as depicted on Exhibit C for 256 parking spaces ("Phase I") in a timely manner, and to build the second phase of the Parking Project as depicted on Exhibit D for 148 parking spaces ("Phase II") without having to seek additional approvals from the HOA.

WHEREAS, the HOA exists to maintain the lifestyle and property values of the Clarendon Hills Homeowners, and the ACC has authority under the restrictions contained in that certain Warranty Deed dated October 7, 1991 and recorded October 7, 1991at reception number 91049273 of the Larimer County, Colorado records (the "Deed Restriction") to review plans for the Church Property to insure compatibility with existing buildings located on and/or proposed for Clarendon Hills Subdivision following the procedures set forth in the Declaration of Covenants, Conditions, Easements and Restrictions for Clarendon Hills recorded September 28, 2008 at reception number 87056096 of the Larimer County, Colorado records, as amended from time to time (the "Covenants").

WHEREAS, FRCC submitted to the ACC on October 18th, 2013 and updated on November 11th, 2013, a site plan and such additional documents and information as the ACC has required for the ACC to review the Parking Project for compliance with the Deed Restriction (the "Parking Project Plans").

WHEREAS, the Parking Project Plans address the following design criteria:

- Grading to utilize as much of the existing contours and grade change as feasible with the goal of limiting impact of light and noise on the adjacent neighbors.
- Parking designed to maintain a 100 foot setback from any parking on the North Parcel to any adjacent homeowners' property line.
- Providing an extended walking path in the landscaped setback as noted on Exhibit B.
- Constructing and maintaining a landscape berm at least 6 feet high incorporating evergreen or other opaque planting materials to screen the parking lot from Clarendon Hills homeowners per the approved plans.
- Parking lot lighting as specified in the project submittal documents will be shielded, including back shields along the edges facing the homeowners to the east and the South Parcel.

WHEREAS, the parties hereto reasonably believe the Parking Project Plans meet the ACC criteria in the Deed Restriction and the ACC will approve the Parking Project Plans within thirty (30) days after a complete submittal was made by FRCC on

November 11, 2013. The Parking Project Plans as approved by the ACC shall be referred to as the "Approved Plans."

WHEREAS, FRCC reasonably believes the Parking Project Plans will meet City requirements identified in the SPAR process and will be approved by the City Planning and Zoning Board at its hearing to be held on November 21, 2013.

WHEREAS, this Agreement is intended to ensure long term predictability of and durability of entitlements, protect the interests of each Party, and clearly identify the responsibilities of each Party. This Agreement is intended to create a mutual understanding of the Parties to permit FRCC to move forward expediently, and in good faith, to implement the Parking Project Plans.

NOW THEREFORE, contingent upon and for and in consideration of the granting of approval of the Parking Project Plans by the ACC, the mutual promises and covenants herein contained and other good and valuable consideration, the receipt and adequacy of which are hereby confessed and acknowledged, the Parties agree to the following:

1. The foregoing Recitals are incorporated herein by reference as if fully set forth herein. This Agreement and the obligations of the parties hereunder are expressly conditional and contingent on approval of the Parking Project Plans on or before December 11, 2013. If the Parking Project Plans are not approved by the ACC on or before December 11, 2013, this Agreement shall be null and void and of no further force or effect and both parties shall be released from all obligations hereunder.

2. FRCC will not acquire any interest in, or any right to use or possess of, all or any portion of the South Parcel prior to January 1, 2024 without approval of the HOA Board, whether such interest is legal or equitable, present or future, direct or indirect through an affiliate of FRCC, acquired with or without consideration by deed, lease, contract, option, right of first refusal, right of first offer, easement, right of way, license, foreclosure of a lien, operation of law, or otherwise. Any transfer or conveyance of any interest in the South Parcel to FRCC or any of its affiliates prior to January 1, 2024 without the approval of the HOA Board, shall be null and void. In consideration of the restrictions, covenants, conditions and agreements contained in this Paragraph 2, the members of the Board of Directors of the HOA, the members of the ACC, and the members of the informal volunteer neighborhood advisory group agree not to impede or interfere with the FRCC obtaining approval by the City for the Integrated Technology Building or the new Allied Health building as submitted to the Community College System Board in September 2013 [49,000 square foot building to be located in the northwest corner of the FRCC campus] as such projects are the basis for FRCC agreeing to modify the Parking Project and entering into this Agreement. Furthermore, the HOA Board will communicate its endorsement of the Parking Project Plans to the ACC. The restrictions, covenants, conditions and agreements contained in this Paragraph 2 represent

the primary consideration for execution of this Agreement by the HOA and FRCC and the HOA and FRCC would not have entered into this Agreement but for the inclusion of the restrictions, covenants, conditions and agreements contained in this Paragraph 2.

3. This Agreement is between FRCC and HOA only. Neither Party may assign this Agreement or any rights hereunder nor delegate their obligations under this Agreement without the written consent of the other Party. Except as so restricted the terms, covenants, conditions and provisions of this Agreement will run with the land and will be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns. Nothing contained in this Agreement will be construed to amend, modify, remove, restate or terminate any of the terms, covenants, conditions or restrictions contained in the Deed Restriction which shall remain in full force and effect and shall continue to run with the land and will continue to be binding upon and continue to inure to the benefit of the Parties and their respective successors and assigns.

4. FRCC will ensure the Parking Project Plans will be reviewed through the City SPAR Process.

5. Upon execution of this agreement by both parties and approval of the Parking Project Plans by the ACC, FRCC will have the right to begin construction of Phase I of the Parking Project immediately upon completion of the SPAR process, so long as FRCC makes no changes to the Approved Plans (excluding any updates due to code requirements or minor modifications required to meet engineering requirements for storm water detention or drainage, soil bearing, or similar technical design criteria). FRCC will notify the HOA of FRCC's intention to commence construction of Phase II of the Parking Project not less than 90 days prior to the commencement of construction of Phase II.

6. The Approval by the ACC satisfies the Deed Restriction for ACC approval of the Parking Project.

7. FRCC will not alter the improvements from the Approved Plans without the consent of the HOA other than for necessary maintenance and repairs of the Parking Project.

8. The Parking Project will not exceed a total of 404 parking spaces. Phase I of the Parking Project will include approximately 256 parking spaces built in conformance with the Approved Plans, which will include all grading and all landscaping amenities necessary to screen both Phase I and Phase II of the Parking Project from the residential properties to the east of the North Parcel. Phase II of the Parking Project is anticipated to be constructed in 4 to 5 years and will complete the Parking Project by adding approximately 148 spaces.

9. Phase II will also be completed in conformance with the Approved Plans.

10. FRCC will allow access to the Parking Lots only from Starflower Drive other than what may be required by the State, City or Poudre Fire Authority for emergency access. Emergency access roads will have bollards or other appropriate means to allow only emergency vehicle access onto adjacent residential streets.

11. FRCC will provide its standard gates at the entrance to the Parking Lots and will limit use of the Parking Lots by closing and locking the gates to the Parking Lots during times when the Parking Lots are not in use such as on weekends and during breaks to reduce impact on neighbors. The Parking Lots will be used only for FRCC student, faculty, staff and visitor parking and for general operations of the FRCC Larimer campus and for no other purpose. Use of the Parking Lots for "general operations of the FRCC Larimer campus" shall not be construed to permit the construction or location of any buildings on the North Parcel, whether temporary, permanent, or modular without HOA approval. FRCC will not lease the Parking Lots to external groups for other uses.

12. Site Lighting:

a. All Lights in the Parking Lots on the North Parcel will only be operated during normal school hours.

b. When gates to the Parking Lots on the North Parcel are closed, lighting will be turned off.

13. FRCC will complete all maintenance of the Parking Lots, pervious pavers, etc., during normal business hours of 8 a.m. to 5 p.m. Monday thru Friday, with the exception for snow removal operations and major maintenance such as seal coating and striping.

14. FRCC will not utilize any internally illuminated signage on the North Parcel.

15. FRCC will not construct or install, temporarily or permanently, any towers or other telecommunication facilities or equipment on the North Parcel.

16. FRCC will maintain landscaping on the North Parcel where improved. FRCC will provide irrigation systems to plantings as necessary to maintain them. FRCC will maintain the North Parcel clear of trash and debris. FRCC will replace dead, dying,

and diseased plantings within one growing season. FRCC will maintain the number and density of plantings noted on the Approved Plans.

17. FRCC will provide an open space corridor in the area between the Parking Lots and the south boundary of the North Parcel as depicted on the Exhibit E to serve as an open space buffer. The open space buffer has been noted by FRCC on the Approved Plans.

18. FRCC will construct and maintain a community path as detailed in the Approved Plans on the east side of the North Parcel (the "Community Path"). The Community Path will be completed with Phase I.

19. All construction activities on the North Parcel will conform to the following:

a. Location of construction trailers, traffic, materials storage, etc., will be more than 100 feet from Clarendon Hills property lines.

b. Hours of construction operations on the North Parcel shall be limited to the following:

i. M-F: 7:30 a.m. to sunset.
ii. Sat: 8:a.m. to 5:30 p.m.
iii. Sun: Closed.

c. Hazardous materials will be stored in a safe manner within defined laydown area.

d. Construction site will be kept in a safe and clean condition at all times.

e. The North Parcel may not be used for staging or storage for any construction project other than the Parking Project without HOA approval.

20. This Agreement may only be extended or modified by the mutual agreement of the Parties in writing. This Agreement constitutes the entire understanding between the Parties and supersedes all prior negotiations. If any provision of this Agreement is determined by a Court of competent jurisdiction to be invalid or unenforceable to any extent, then the other provisions of this Agreement will continue in full force and effect. Each Party represents that it has the authority to execute this Agreement and bind their respective entities.

21. The Parties are independent contractors and this Agreement will not be construed to create an employer/employee relationship or a joint venture relationship

between FRCC and the HOA. No person or entity will be deemed to be a third party beneficiary hereof and nothing in this Agreement confers upon any person or entity other than the Parties, any rights, remedies, obligations or liability under this Agreement.

22. To the extent this Agreement obligates FRCC to expend funds in satisfaction of its obligations under this Agreement any such expenditure of FRCC funds is subject to the review and approval of the FRCC controller and the availability of sufficient budget and appropriation. If FRCC is notified that funding is not sufficient, FRCC will notify the HOA in writing. FRCC will describe the impacts and the expected time for recovery/completion. Further, if any part of the approved plan in Phase 1 is not completed due to funding constraints or other reasons, all of the Phase I improvements shown on the Approved Plans will be completed before construction of any improvements in Phase II begins.

23. Each Party will be responsible for its own wrongful or negligent acts or omissions, or those of its officers, agents, or employees to the full extent allowed by law. Liability of FRCC is strictly limited and controlled by the provisions of the Colorado Governmental Immunity Act, C.R.S. 24-10-101 et seq. as now or hereafter amended. Nothing in this Agreement will be construed as a waiver of the protections of said Act. Each Party will maintain comprehensive general liability insurance and all coverage required by law sufficient for the purpose of carrying out the duties and obligations arising under this Agreement.

24. This Agreement may be executed in two or more counterparts, each of which will be deemed an original and all of which, when taken together, will constitute one and the same document. Signatures transmitted electronically will be accepted the same as originals.

25. This Agreement is being delivered in, and will be construed and governed according to the laws of the State of Colorado.

26. In the event of default in the performance of any of the terms or provisions of this Agreement, the non-defaulting Party will have the right to an action for specific performance or damages or both. In the event of any litigation arising out of this Agreement, the Court shall award to the Party that substantially prevails in such litigation all costs and expenses incurred in such litigation including reasonable attorney's fees. Prior to commencing any litigation to enforce this Agreement, the non-defaulting party will give written notice to the defaulting party specifying the default and giving the defaulting Party not less than thirty (30) days to cure such default. If it is not reasonably practical to cure the default within thirty (30) days, the defaulting Party will not be considered in default so long as the defaulting party commences correction of the default within said thirty (30) days and proceeds in a commercially reasonable manner to cure the default as soon as reasonably possible thereafter. If either party requests a temporary, preliminary, permanent or mandatory injunction or other equitable relief, any bond or

other security required by the Court shall not exceed $5,000.00. Jurisdiction and venue shall be proper in the Larimer County, Colorado courts. All obligations of FRCC under this Agreement are subject to the provisions of paragraph 20 of this Agreement.

27. Any notice required or desired to be given by the parties hereto will be in writing and may be personally delivered; mailed, certified mail, return receipt requested; sent by telephone facsimile with a hard copy sent by regular mail; sent by a nationally recognized receipted overnight delivery service for earliest delivery the next business day; or sent by electronic mail with a hard copy sent by regular mail. Any such notice will be deemed given when personally delivered; if mailed, three (3) delivery days after deposit in the United States mail, postage prepaid; if sent by telephone facsimile or electronic mail, on the day sent if sent on a business day during regular business hours (9 a.m. to 5 p.m.) of the recipient, otherwise on the next business day; or if sent by overnight delivery service, one (1) business day after deposit in the custody of the delivery service. The addresses, telephone numbers, and electronic mail addresses for the mailing, transmitting, or delivering of notices will be as follows:

(a) If to FRCC, to:
Andrew R. Dorsey, President
Front Range Community College
3645 W. 112th Avenue
Westminster, CO 80031
303-404-531

(b) If to the HOA, to:

Faith Property Management
300 E. Boardwalk Drive
Building B-6
Fort Collins, CO 80525
(970) 377-1626

Notice of a change of address of either party will be given in the same manner as all other notices as hereinabove provided.

[The remainder of this page has been left blank intentionally.]

IN WITNESS WHEREOF, the Parties have duly executed this Agreement as of the date first above written.

FRCC:

STATE OF COLORADO,
JOHN W. HICKENLOOPER, GOVERNOR
Department of Higher Education

By: The State Board of Community College and Occupational Education for the use and benefit of FRONT RANGE COMMUNITY COLLEGE

Dated: 12/11/13

By: _____
Andrew R. Dorsey, President

HOA:

CLARENDON HILLS HOMEOWNERS' ASSOCIATION,
a Colorado nonprofit corporation

Date: 12/16/13

By: _____
Name: Edward H. King
Title: President

EXHIBIT "A"

LOCATED IN THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 6 NORTH,
RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN,
CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO
SHEET 1 OF 2

A PARCEL OF LAND, LOCATED IN THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 6 NORTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

CONSIDERING THE WEST LINE OF SAID SECTION 2 TO BEAR NORTH 00°07'53" EAST, A DISTANCE OF 2642.17 FEET BETWEEN A FOUND 2 1/2" IRON PIPE IN RANGE BOX AT THE WEST QUARTER CORNER OF SAID SECTION 2 AND A FOUND 2 1/2" ALUMINUM CAP IN RANGE BOX AT THE NORTHWEST CORNER OF SAID SECTION 2, WITH ALL BEARINGS CONTAINED HEREIN RELATIVE THERETO.

COMMENCING AT SAID WEST QUARTER CORNER OF SECTION 2; THENCE ALONG THE WEST LINE OF SAID SECTION 2, NORTH 00°07'53" EAST, A DISTANCE OF 943.00 FEET; THENCE DEPARTING SAID WEST LINE, SOUTH 89°52'07" EAST, A DISTANCE OF 50.00 FEET TO THE EAST RIGHT-OF-WAY OF SOUTH SHIELDS STREET, AND THE POINT OF BEGINNING:

THENCE ALONG SAID RIGHT-OF-WAY, NORTH 00°07'53" EAST, A DISTANCE OF 392.74 FEET;
THENCE DEPARTING SAID RIGHT-OF-WAY, NORTH 89°33'51" EAST, A DISTANCE OF 802.32 FEET, TO THE NORTHWEST CORNER OF CLARENDON HILLS THIRD FILING AS DESCRIBED IN THE RECORDS OF LARIMER COUNTY AT RECEPTION NUMBER 89006975;
THENCE ALONG A NORTHWESTERLY LINE OF SAID CLARENDON HILLS THIRD FILING, SOUTH 25°25'42" WEST, A DISTANCE OF 126.00 FEET;
THENCE DEPARTING SAID NORTHWESTERLY LINE, THENCE NORTH 90°00'00" WEST, A DISTANCE OF 41.98 FEET;
THENCE SOUTH 65°54'40" WEST, A DISTANCE OF 211.50 FEET;
THENCE SOUTH 72°33'25" WEST, A DISTANCE OF 164.00 FEET;
THENCE SOUTH 65°16'12" WEST, A DISTANCE OF 314.22 FEET;
THENCE SOUTH 45°58'16" WEST, A DISTANCE OF 26.06 FEET;
THENCE NORTH 90°00'00" WEST, A DISTANCE OF 53.45 FEET TO THE POINT OF BEGINNING.

SAID PARCEL CONTAINING 189,206 Sq. Ft. OR 4.34 ACRES, MORE OR LESS.

I, JOHN B. GUYTON, A LAND SURVEYOR LICENSED IN THE STATE OF COLORADO, DO HEREBY STATE FOR AND ON BEHALF OF FLATIRONS, INC., THAT THIS PARCEL DESCRIPTION AND ATTACHED EXHIBIT, BEING MADE A PART THEREOF, WERE PREPARED BY ME OR UNDER MY RESPONSIBLE CHARGE AT THE REQUEST OF THE CLIENT AND IS NOT INTENDED TO REPRESENT A MONUMENTED LAND SURVEY OR SUBDIVIDE LAND IN VIOLATION OF STATE STATUTE.

COLORADO LICENSED JOHN BRUCE GUYTON 16406 PROFESSIONAL LAND SURVEYOR

12/6/13

JOHN B. GUYTON
COLORADO P.L.S. #16406
CHAIRMAN/CEO, FLATIRONS, INC.

SI JOB NO. 13-61,557

JOB NUMBER: 13-61,557 (N-1)
DRAWN BY: B. LUND
DATE: DECEMBER 6, 2013

THIS IS NOT A "LAND SURVEY PLAT" OR "IMPROVEMENT SURVEY PLAT" AND THIS EXHIBIT IS NOT INTENDED FOR PURPOSES OF TRANSFER OF TITLE OR SUBDIVISIONS OF LAND. RECORD INFORMATION SHOWN HEREON IS BASED ON INFORMATION PROVIDED BY CLIENT.

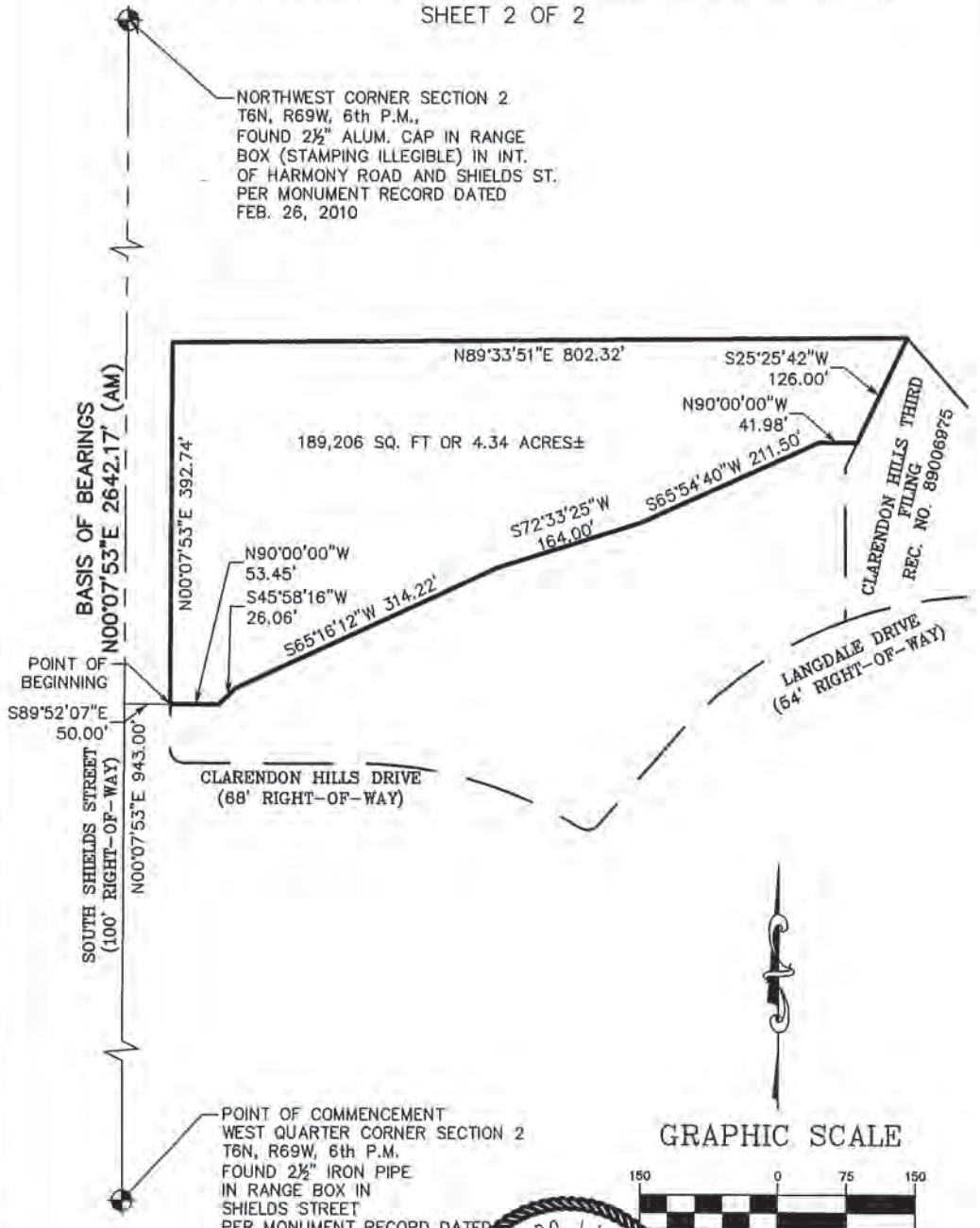
Flatirons, Inc.
Surveying, Engineering & Geomatics
3825 IRIS AVE, STE 395
BOULDER, CO 80301
PH: (303) 443-7001
FAX: (303) 443-9830
www.FlatironsInc.com

BY:BLUND FILE:61557-DESC-R1.DWG DATE:12/6/2013 12:15 PM

EXHIBIT "A"

LOCATED IN THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 6 NORTH,
RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN,
CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO

SHEET 2 OF 2



GRAPHIC SCALE

150 0 75 150

(IN FEET)

1 inch = 150 ft.

COLORADO LICENSED
JOHN BRUCE GUYTON
16406
PROFESSIONAL LAND SURVEYOR
12/6/13

JOB NUMBER: 13-61,557 (N-1)
DRAWN BY: B. LUND
DATE: DECEMBER 6, 2013

THIS IS NOT A "LAND SURVEY PLAT" OR "IMPROVEMENT SURVEY PLAT" AND THIS EXHIBIT IS NOT INTENDED FOR PURPOSES OF TRANSFER OF TITLE OR SUBDIVISIONS OF LAND. RECORD INFORMATION SHOWN HEREON IS BASED ON INFORMATION PROVIDED BY CLIENT.

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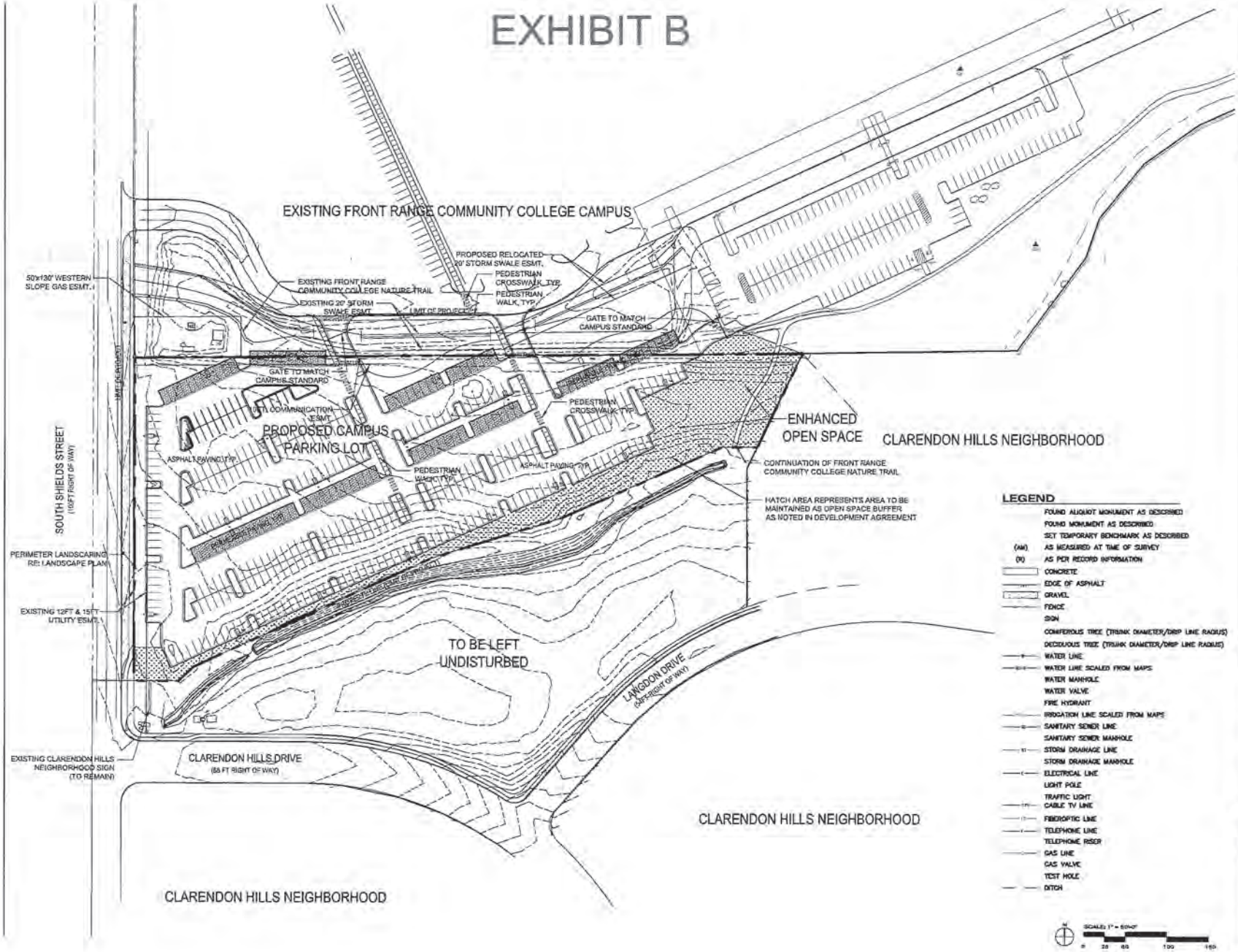
BY:BLUND FILE:61557-DESC-R1.DWG DATE:12/6/2013 12:15 PM

EXHIBIT B



OZ ARCHITECTURE
3003 LARIMER STREET
DENVER, CO 80205
PHONE 303.861.5704
www.ozarch.com

FRCC-SOUTH PARKING LOT
4616 SOUTH SHIELDS ST. FT.
COLLINS, CO 80526

PROJ. NO: 812011.00
DRAWN: pS
CHECKED: CG
APPROVED: RG
DATE: 11/04/13
REVISIONS 12/11/13

TECHNOLOGY BLDG.

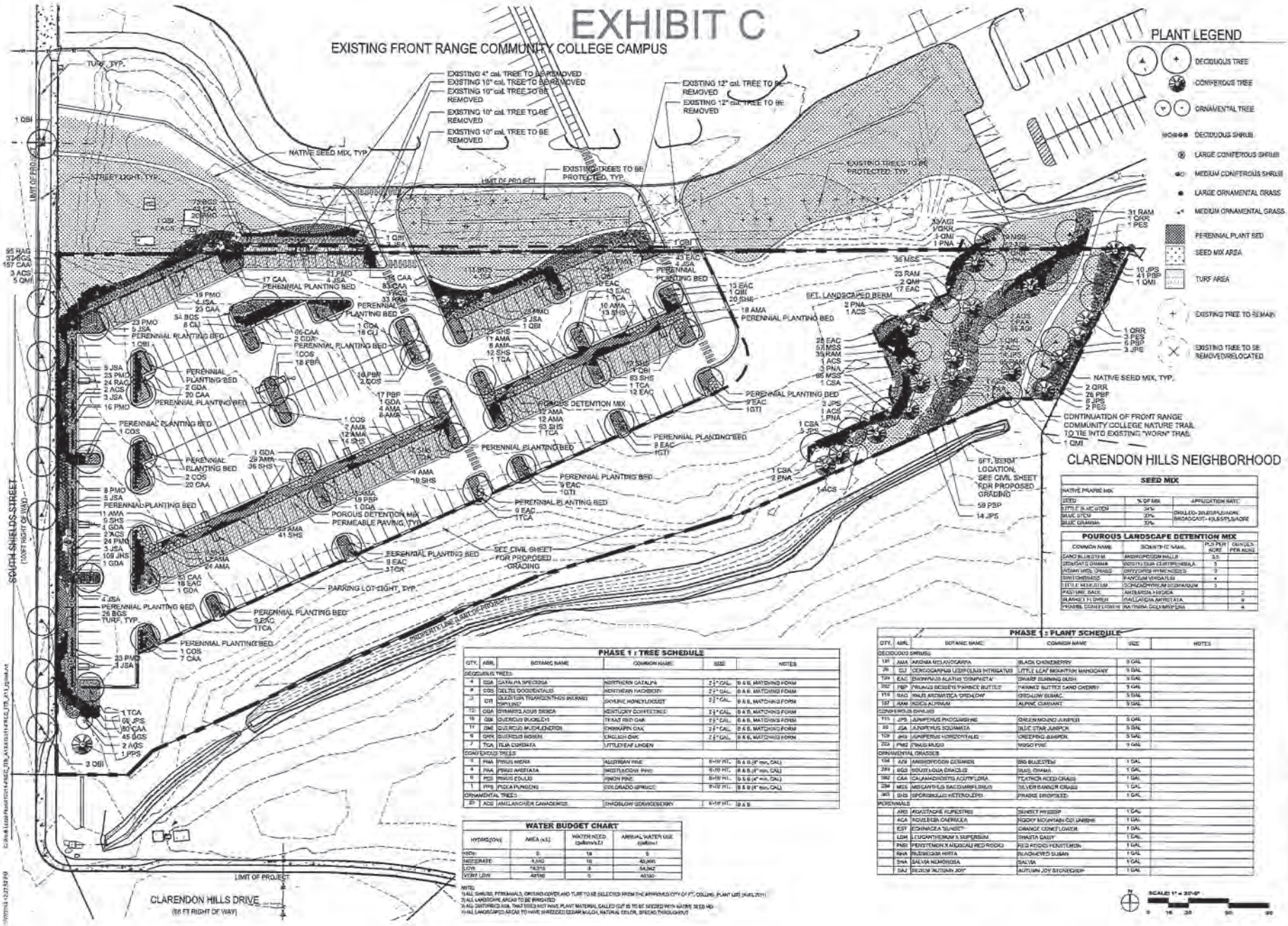
ISSUED FOR:
ACC SUBMITTAL
REVISIONS

SHEET TITLE:
Site Plan

SCALE:
SHEET NUMBER
SP1.2

EXHIBIT C

EXISTING FRONT RANGE COMMUNITY COLLEGE CAMPUS



PLANT LEGEND

- DECIDUOUS TREE
- CONIFEROUS TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- LARGE CONIFEROUS SHRUB
- MEDIUM CONIFEROUS SHRUB
- LARGE ORNAMENTAL GRASS
- MEDIUM ORNAMENTAL GRASS
- PERENNIAL PLANT BED
- SEED MIX AREA
- TURF AREA
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED/RELOCATED

CLARENDON HILLS NEIGHBORHOOD

SEED MIX

NATIVE PRAIRIE MIX		
SEED	% OF MIX	APPLICATION RATE
LITTLE BLUESTEM	34%	DRILLED: 20LBS/PLS/ACRE BROADCAST: 40LBS/PLS/ACRE
BLUE GRAMA	33%	

POUROUS LANDSCAPE DETENTION MIX

COMMON NAME	SCIENTIFIC NAME	PLS PER ACRE	OUNCES PER ACRE
SAND BLUESTEM	ANDROPOGON HALLII	3.5	
SIDEOATS GRAMA	BOUTELOUA CURTIPENDULA	5	
INDIAN GRASS	SORGASTRUM NUTANS	3	
SWITCHGRASS	PANICUM VIRGATUM	4	
LITTLE BLUESTEM	SCHIZACHYRIUM SCOPARIUM	3	
PASTURE SAGE	ARTEMISIA FRIGIDA		2
BLANKET FLOWER	GAILLARDIA ARISTATA		8
PRAIRIE CONEFLOWER	RATIBIDA COLUMNIFERA		4

PHASE 1 : TREE SCHEDULE

QTY.	ABB.	BOTANIC NAME	COMMON NAME	SIZE	NOTES
DECIDUOUS TREES					
4	CGA	CATALPA SPECIOSA	NORTHERN CATALPA	2 1/2" CAL.	B & B, MATCHING FORM
8	CDS	CELTIS OCCIDENTALIS	NORTHERN HACKBERRY	2 1/2" CAL.	B & B, MATCHING FORM
3	GTI	GLEDITSIA TRIACANTHOS INERMIS 'SKYLINE'	SKYLINE HONEYLOCUST	2 1/2" CAL.	B & B, MATCHING FORM
12	GDA	GYMNOCLADUS DIOICA	KENTUCKY COFFEETREE	2 1/2" CAL.	B & B, MATCHING FORM
18	QM	QUERCUS BUCKLEYI	TEXAS RED OAK	2 1/2" CAL.	B & B, MATCHING FORM
11	QME	QUERCUS MUEHLENBERGII	CHINKAPIN OAK	2 1/2" CAL.	B & B, MATCHING FORM
6	QRK	QUERCUS ROBUR	ENGLISH OAK	2 1/2" CAL.	B & B, MATCHING FORM
7	TCA	TILIA CORDATA	LITTLELEAF LINDEN		
CONIFEROUS TREES					
5	PNA	PINUS NIGRA	AUSTRIAN PINE	6-10' HT.	B & B (6' min. CAL)
4	PAA	PINUS ARISTATA	BRISTLECONE PINE	6-10' HT.	B & B (6' min. CAL)
9	PSS	PINUS SYLVIS	SCOTCH PINE	6-10' HT.	B & B (6' min. CAL)
1	PPS	PICEA PUNGENS	COLORADO SPRUCE	6-10' HT.	B & B (6' min. CAL)
ORNAMENTAL TREES					
20	ACE	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	6-10' HT.	B & B

PHASE 1 : PLANT SCHEDULE

QTY.	ABB.	BOTANIC NAME	COMMON NAME	SIZE	NOTES
DECIDUOUS SHRUBS					
191	AMA	ARONIA MELANOCARPA	BLACK CHOKEBERRY	5 GAL	
26	CJ	CERCOCARPUS LEDIFOLIUS INTRICATUS	LITTLE LEAF MOUNTAIN MAHOGANY	5 GAL	
139	EAC	EHONYMUS ALATUS 'COMPACTA'	DWARF BURNING BUSH	5 GAL	
262	PBP	PRUNUS BESSEYI 'PAWNEE BUTTES'	PAWNEE BUTTES SAND CHERRY	5 GAL	
116	RAC	RHUS AROMATICA 'GRO-LOW'	GRO-LOW SUMAC	5 GAL	
187	RAM	RIBES ALPINUM	ALPINE CURRANT	5 GAL	
CONIFEROUS SHRUBS					
115	JPS	JUNIPERUS PROCUMBENS	GREEN MOUND JUNIPER	5 GAL	
22	JSA	JUNIPERUS SQUAMATA	BLUE STAR JUNIPER	5 GAL	
109	JHG	JUNIPERUS HORIZONTALIS	CREEPING JUNIPER	5 GAL	
229	PMG	PINUS MUGO	MUGO PINE	5 GAL	
ORNAMENTAL GRASSES					
194	AG	ANDROPOGON GERARDII	BIG BLUESTEM	1 GAL	
289	BGD	BOUTELOUA GRACILIS	BLUE GRAMA	1 GAL	
382	CAA	CALAMAGROSTIS ACUTIFLORA	'KARL FOERSTER' FEATHER REED GRASS	1 GAL	
284	MCS	MISCANTHUS SACCHARIFLORUS	SILVER BANNER GRASS	1 GAL	
365	SHS	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	1 GAL	
PERENNIALS					
	ARD	AGASTACHE RUPESTRIS	SUNSET HYSSOP	1 GAL	
	ACA	AQUILEGIA CAERULEA	ROCKY MOUNTAIN COLUMBINE	1 GAL	
	EST	ECHINACEA 'SUNSET'	ORANGE CONEFLOWER	1 GAL	
	LSM	LEUCANTHEMUM X SUPERBUM	SHASTA DAISY	1 GAL	
	PNR	PENSTEMON X MEXICALI RED ROCKS	RED ROCKS PENSTEMON	1 GAL	
	RHA	RUDBECKIA HIRTA	BLACKEYED SUSAN	1 GAL	
	SNA	SALVIA NEMOROSA	SALVIA	1 GAL	
	SAJ	SEDUM 'AUTUMN JOY'	AUTUMN JOY STONECROP	1 GAL	

WATER BUDGET CHART

HYDROZONE	AREA (s.f.)	WATER NEED (gallons/s.f.)	ANNUAL WATER USE (gallons)
HIGH	0	18	0
MODERATE	4,350	10	43,500
LOW	78,315	8	54,042
VERY LOW	48740	0	48740

NOTES:
1) ALL SHRUBS, PERENNIALS, GROUND COVER AND TURF TO BE SELECTED FROM THE APPROVED CITY OF FT. COLLINS PLANT LIST (MAY 2011)
2) ALL LANDSCAPE AREAS TO BE IRRIGATED
3) ALL DISTURBED AREA THAT DOES NOT HAVE PLANT MATERIAL CALLED OUT IS TO BE SEEDED WITH NATIVE SEED MIX
4) ALL LANDSCAPED AREAS TO HAVE SHREDDED CEDAR MULCH, NATURAL COLOR, SPREAD THROUGHOUT

SCALED 1" = 30'-0"

OZ ARCHITECTURE
3003 LARIMER STREET
DENVER, CO 80205
PHONE 303.861.5704
www.ozarch.com

FRCC-SOUTH PARKING LOT

4616 SOUTH SHIELDS ST. FT.
COLLINS, CO 80526

PROJ. NO: .812011.00
DRAWN: ps
CHECKED: CG
APPROVED: RO
DATE: 11/04/13
REVISIONS 12/11/13

TECHNOLOGY BLDG.

ISSUED FOR:
ACC SUBMITTAL
REVISIONS

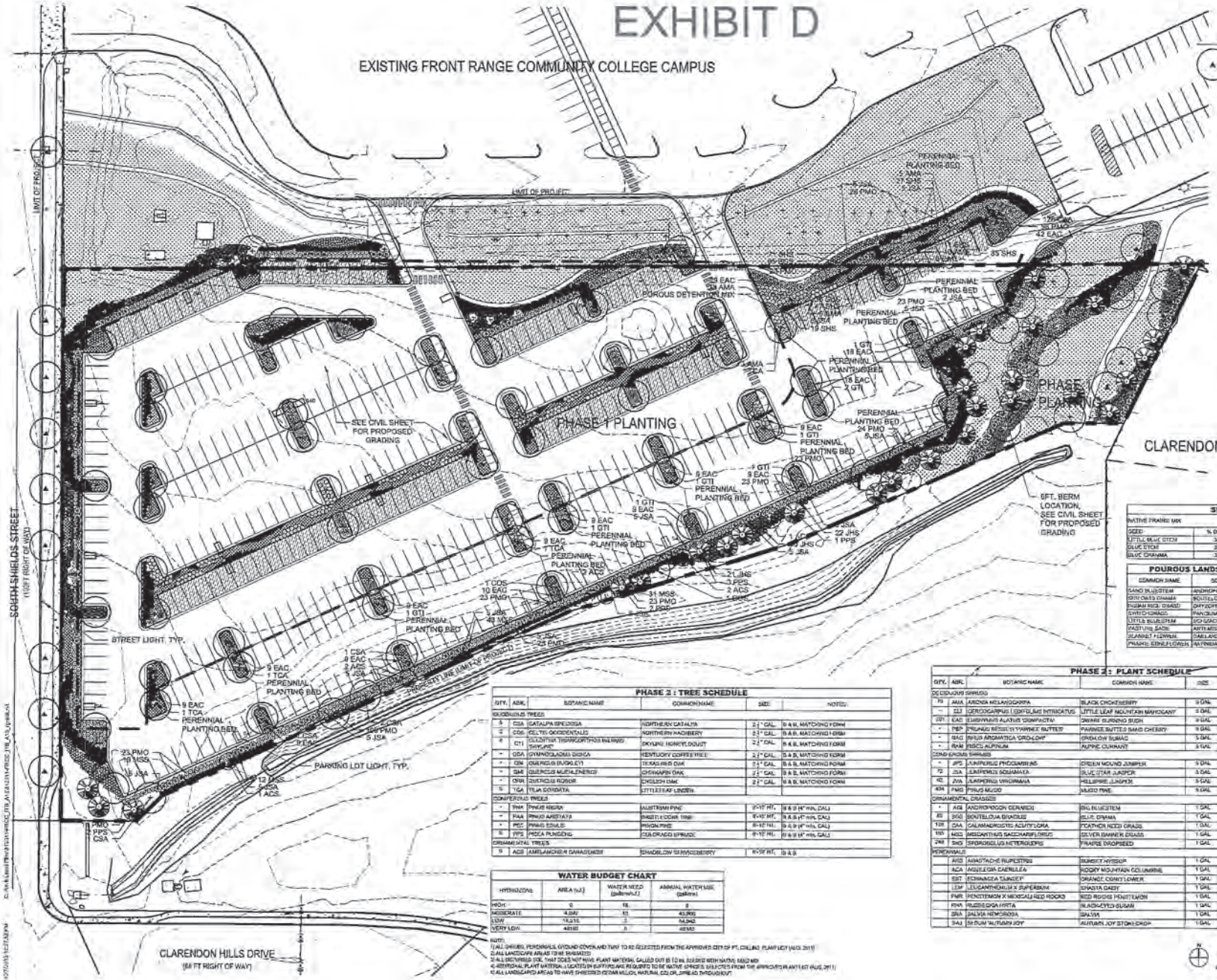
SHEET TITLE:
Phase 1
Landscape Plan

SCALE:
SHEET NUMBER

LP1.11

EXHIBIT D

EXISTING FRONT RANGE COMMUNITY COLLEGE CAMPUS



PLANT LEGEND

- DECIDUOUS TREE
- CONIFEROUS TREE
- ORNAMENTAL TREE
- DECIDUOUS SHRUB
- LARGE CONIFEROUS SHRUB
- MEDIUM CONIFEROUS SHRUB
- LARGE ORNAMENTAL GRASS
- MEDIUM ORNAMENTAL GRASS
- PERENNIAL PLANT BED
- SEED MIX AREA
- TURF AREA
- EXISTING TREE TO REMAIN
- EXISTING TREE TO BE REMOVED/RELOCATED

SEED MIX

NATIVE PRAIRIE MIX		
SEED	% OF MIX	APPLICATION RATE
LITTLE BLUE STEM	34%	DRILLED- 20LBS/PLS/ACRE; BROADCAST- 40LBS/PLS/ACRE
BLUE STEM	33%	
BLUE GRAMMA	33%	

POUROUS LANDSCAPE DETENTION MIX

COMMON NAME	SCIENTIFIC NAME	PLS PER ACRE	BUNDLES PER ACRE
SAND BLUESTEM	ANDROPOGON HALLII	3.5	
SIDE OATS GRAMA	BOUTELOUA CURTIPENDULA	3	
INDIAN RICE GRASS	ORYZOPSIS HYMENOIDES	3	
SWITCHGRASS	PANICUM VIRGATUM	4	
LITTLE BLUESTEM	SCHIZACHYRIUM SCOPARIUM	3	
PASTURE SAGE	ARTEMISIA FRIGIDA		2
SUNNET FLOWER	GAILLARDIA ARISTATA		5
PRAIRIE CONEFLOWER	RATIBIDA COLUMNIFERA		4

PHASE 2 : TREE SCHEDULE

QTY.	ABR.	BOTANIC NAME	COMMON NAME	SIZE	NOTES:
DECIDUOUS TREES					
5	CSA	CATALPA SPECIOSA	NORTHERN CATALPA	2.5" CAL.	B & B, MATCHING FORM
9	CDS	CELTIS OCCIDENTALIS	NORTHERN HACKBERRY	2.5" CAL.	B & B, MATCHING FORM
8	GTI	GLEDITSIA TRIANCORTHOS INERMIS 'SKYLINE'	SKYLINE HONEYLOCUST	2.5" CAL.	B & B, MATCHING FORM
-	GDA	GYMNOCLADUS DIOICA	KENTUCKY COFFEE TREE	2.5" CAL.	B & B, MATCHING FORM
-	QSN	QUERCUS BUCKLEYI	TEXAS RED OAK	2.5" CAL.	B & B, MATCHING FORM
-	QMI	QUERCUS MUEHLENBECKII	CHINKAPIN OAK	2.5" CAL.	B & B, MATCHING FORM
-	QRR	QUERCUS ROBUR	ENGLISH OAK	2.5" CAL.	B & B, MATCHING FORM
5	TCA	TILIA CORDATA	LITTLELEAF LINDEN		
CONIFEROUS TREES					
-	PNA	PINUS NIGRA	AUSTRIAN PINE	6'-10' HT.	B & B (4" min. CAL)
-	PAA	PINUS ARISTATA	BRISTLECONE PINE	6'-10' HT.	B & B (4" min. CAL)
-	PSY	PINUS SYLVESTRIS	SCOTCH PINE	6'-10' HT.	B & B (4" min. CAL)
5	PPS	PICEA PUNGENS	COLORADO SPRUCE	6'-10' HT.	B & B (4" min. CAL)
ORNAMENTAL TREES					
9	ACE	AMELANCHIER X GRANDIFLORA	APPLE SERVICEBERRY	6'-10' HT.	B & B

PHASE 2 : PLANT SCHEDULE

QTY.	ABR.	BOTANIC NAME	COMMON NAME	SIZE	NOTES
DECIDUOUS SHRUBS					
70	AAA	ARONIA MELANOCARPA	BLACK CHOKEBERRY	5 GAL	
-	CLI	CERCOCARPUS LEDIFOLIUS INTRICATUS	LITTLE LEAF MOUNTAIN MAHOGANY	5 GAL	
201	EAC	EHRHARTA ALATUS 'COMPACTA'	DWARF BURNING BUSH	5 GAL	
-	PBP	PRUNUS BESSEYI 'PAWNEE BUTTES'	PAWNEE BUTTES SAND CHERRY	5 GAL	
-	RAG	RHUS AROMATICA 'GRO-LOW'	GRO-LOW SUMAC	5 GAL	
-	RAN	RIBES ALPINUM	ALPINE CURRANT	5 GAL	
COMPACTED SHRUBS					
-	JPS	JUNIPERUS PROCUMBENS	DREN MOUND JUNIPER	5 GAL	
72	JSA	JUNIPERUS SQUAMATA	BLUE STAR JUNIPER	5 GAL	
45	JVA	JUNIPERUS VIRGINIANA	HILLSPIRE JUNIPER	5 GAL	
434	PMO	PINUS MUGO	MUGO PINE	5 GAL	
ORNAMENTAL GRASSES					
-	AGE	ANDROPOGON GERARDII	BIG BLUESTEM	1 GAL	
60	BGD	BOUTELOUA GRACILIS	BLUE GRAMA	1 GAL	
108	CAA	CALAMAGROSTIS ACUTIFLORA	FEATHER REED GRASS	1 GAL	
165	MSS	MISCANTHUS SACCHARIFLORUS	SILVER BANNER GRASS	1 GAL	
240	SHO	SPOROBOLUS HETEROLEPIS	PRAIRIE DROPSEED	1 GAL	
PERENNIALS					
	AHS	AMAPTACHE SUPERSTRS	SUNSET HYSSOP	1 GAL	
	ACA	AQUILEGIA CAERULEA	ROCKY MOUNTAIN COLUMBINE	1 GAL	
	EST	ECHINACEA 'SUNSET'	ORANGE CONEFLOWER	1 GAL	
	LSM	LEUCANTHEMUM X SUPERBUM	SHASTA DAISY	1 GAL	
	PNR	PENSTEMON X MEXICALI RED ROCKS	RED ROCKS PENSTEMON	1 GAL	
	RHA	RUDBECKIA HIRTA	BLACKEYED SUSAN	1 GAL	
	SNA	SALVIA NEMOROSA	SPLVA	1 GAL	
	SAU	SEDUM 'AUTUMN JOY'	AUTUMN JOY STONECROP	1 GAL	

WATER BUDGET CHART

HYDROZONE	AREA (sq.)	WATER NEED (gallons/sq.)	ANNUAL WATER USE (gallons)
HIGH	0	55	0
MODERATE	4,000	15	45,000
LOW	19,315	3	54,945
VERY LOW	48160	1	48160

NOTE:
1) ALL SHRUBS, PERENNIALS, GROUND COVER AND TURF TO BE SELECTED FROM THE APPROVED CITY OF FT. COLLINS PLANT LIST (AUG. 2011)
2) ALL LANDSCAPE AREAS TO BE IRRIGATED
3) ALL DISTURBED SOIL THAT DOES NOT HAVE PLANT MATERIAL CALLED OUT BY TO BE SEEDED WITH NATIVE SEED MIX
4) ADDITIONAL PLANT MATERIAL LOCATED IN BUFFER AREAS IS SUBSTITUTED TO BE NATIVE SPECIES SELECTED FROM THE APPROVED PLANT LIST (AUG. 2011)
5) ALL LANDSCAPED AREAS TO HAVE SHREDDED CEDAR MULCH, NATURAL COLOR, SPREAD THROUGHOUT

SCALE 1" = 30'-0"

OZ ARCHITECTURE
3003 LARIMER STREET
DENVER, CO 80205
PHONE 303.861.5704
www.ozarch.com

FRCC-SOUTH PARKING LOT

4616 SOUTH SHIELDS ST. FT.
COLLINS, CO 80526

PROJ. NO. 812011.00
DRAWN: BS
CHECKED: CG
APPROVED: RG
DATE: 11/08/13
REVISIONS 12/11/13

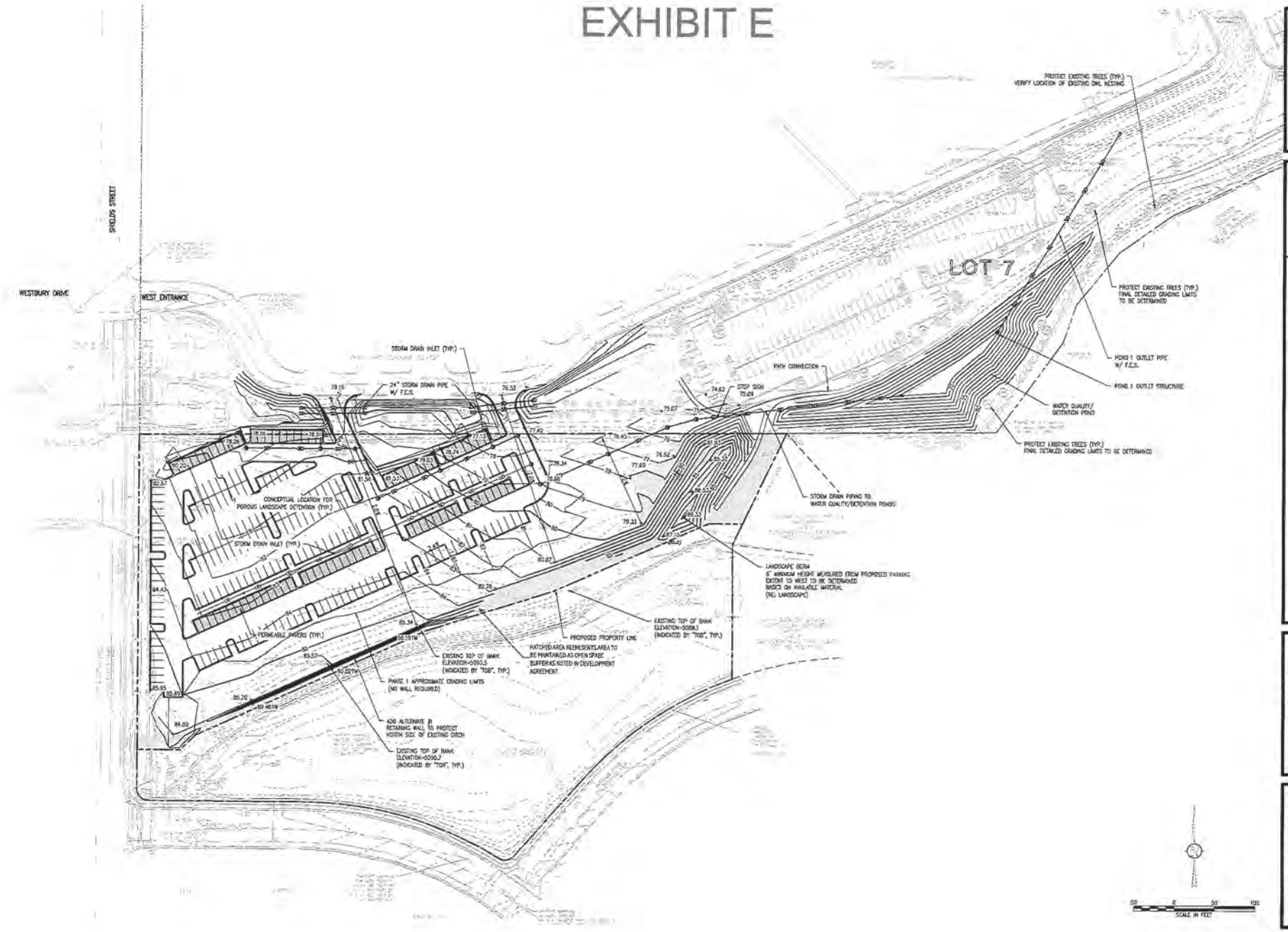
TECHNOLOGY BLDG.

ISSUED FOR:
ACC SUBMITTAL
REVISIONS

SHEET TITLE:
Phase 2
Landscape Plan

SCALE:
SHEET NUMBER
LP1.12

EXHIBIT E



OZ ARCHITECTURE
3003 LARIMER STREET
DENVER, CO 80205
PHONE 303.861.5704
www.ozarch.com

JVA

FRCC-SOUTH PARKING LOT
4616 SOUTH SHIELDS ST.
FORT COLLINS, CO 80526

PROJ NO: 812011.00
DRAWN: RAB
CHECKED: JTC
APPROVED: CRH
DATE: 11/13/13
REVISIONS: 12/10/13

SOUTH PARKING LOT

ISSUED FOR:
ACC SUBMITTAL
REVISIONS

SHEET TITLE:
GRADING & DRAINAGE PLAN

SCALE: 1" = 50'

SHEET NUMBER
C1.2

FAITH
property management

300 e. boardwalk,
building 6b
fort collins, colorado
80525
970.377.1626
fax 377.1628

Monday, December 16th 2013

Derek Brown
AVP-Facilities Planning and Management
Finance and Administration
Front Range Community College

RE: Development Agreement

Dear Mr. Brown
This letter acknowledges that the Front Range Community College and the Clarendon Hills HOA have an approved Development Agreement for the Southwest Parking Lot Project. This letter also acknowledges that the FRCC has provided a complete submittal package for the proposed Southwest Parking Lot Project. The Clarendon Hills Architectural Control Committee has approved the FRCC Southwest parking lot project as submitted.

Sincerely;

Dan Smith- Clarendon Hills ACC Member

Bob Price- Clarendon Hills ACC Member

FRONT RANGE
COMMUNITY COLLEGE

3645 West 112th Avenue
Westminster, CO 80031
303.404.5000 Tel
www.frontrange.edu

September 28, 2015

Mr. Mark Layman
HOA Liaison

Mrs. Trudy Haines
HOA Liaison to the Architectural Control Committee (ACC)
Clarendon Hills Homeowners Association

Members of the ACC

Clarendon Hills HOA
c/o Kellison Corp
2601 S. Lemay, Suite 7-424
Fort Collins, CO
80525

Dear Trudy, Mark, Members of the ACC,

Please accept this package which documents subtle changes in the landscaping materials that were planted as part of the parking lot project (i.e. changes to the tree species required by the City) as well as the specific request to approve the final landscape work in the area east of the berm.

Attached you will find a PDF graphics package titled 'Landscape ACC Update'. This document will illustrate subtle changes that were made between the landscape plan approved in the Development Agreement dated December 16, 2013, and the final as-built configuration. In this package it is important to note that the juniper trees which show as being planted on the east side of the parking lot have since been removed.

While the College had good intentions of reusing trees that would have otherwise been cut down, it became apparent that a different solution was desired by the adjacent homeowners. The College has worked with the adjacent owners (the Layman's and the Farver's) to identify a different grouping of materials. The Attachment titled New Proposed Landscaping along Nature Path indicates the new proposed planting for this area. The noted species were selected from a group that has been previously approved as part of the parking lot project. Those species are noted in the attachment titled 'HOA Planting Ideas'.

Once approved, FRCC will endeavor to plant the tree and shrubs referenced within a two week timeframe.

It is therefore requested that the HOA Architectural Control Committee:

(1) Acknowledge the noted changes between the landscape plan as approved in the Development Agreement and the as built as noted in the attached graphics.
(2) Approve the proposed plantings in the east side of the parking lot between the nature path and the homeowner's fences, as noted on the attached graphic.

We look forward to a quick vote by the ACC so that we can proceed with wrapping up this effort.

Please don't hesitate to call or email if you have any questions about the submittal documents.

Regards,

Derek Brown

Derek Brown
AVP, Facilities Planning and Management

Cc Jean Runyon, VP for Larimer Campus
Dennis DeRemer, Director of Facilities for Larimer Campus

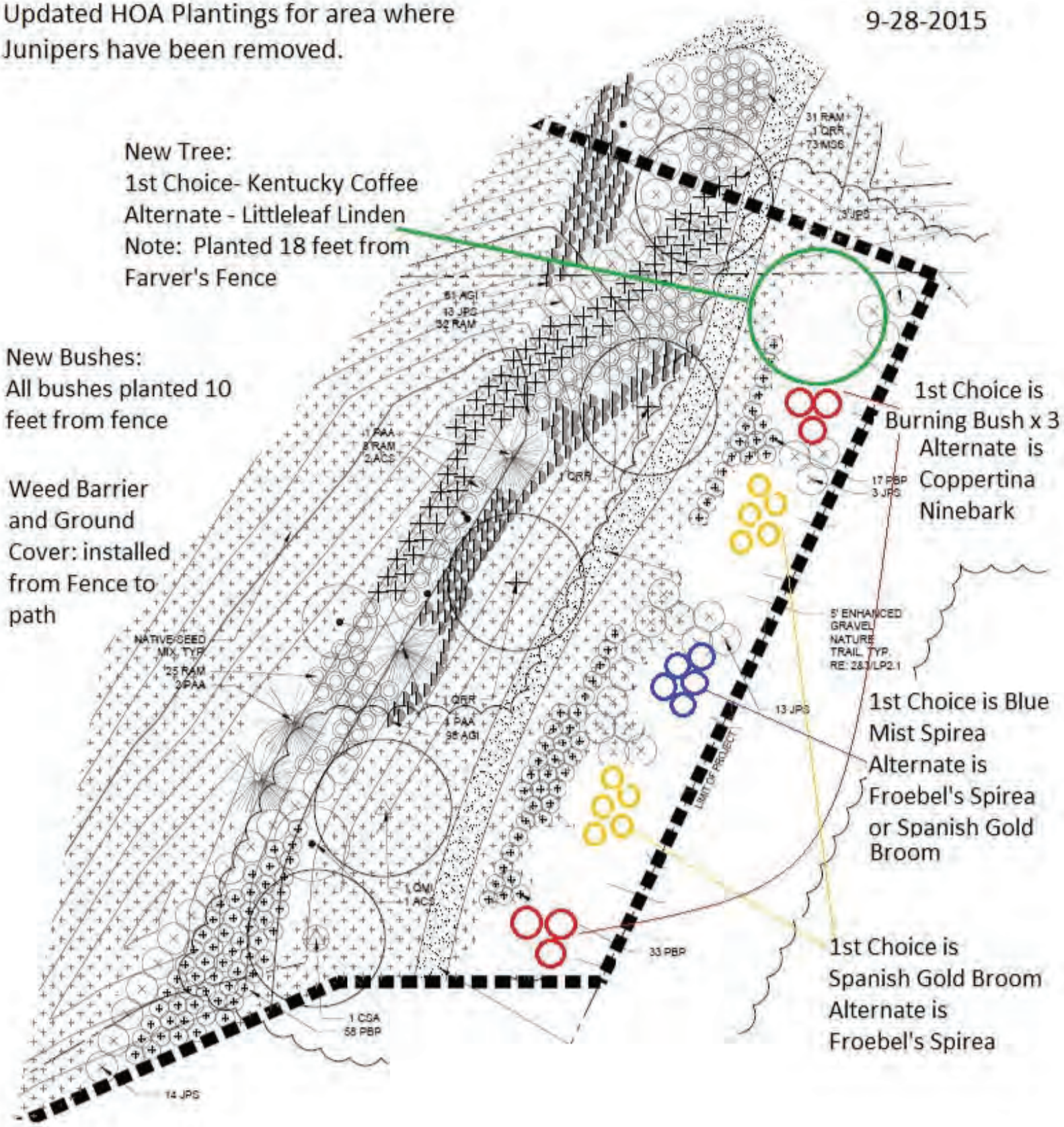
Updated HOA Plantings for area where Junipers have been removed.

9-28-2015

New Tree:
1st Choice- Kentucky Coffee
Alternate - Littleleaf Linden
Note: Planted 18 feet from Farver's Fence

New Bushes:
All bushes planted 10 feet from fence

Weed Barrier and Ground Cover: installed from Fence to path



1st Choice is Burning Bush x 3
Alternate is Coppertina Ninebark

1st Choice is Blue Mist Spirea
Alternate is Froebel's Spirea or Spanish Gold Broom

1st Choice is Spanish Gold Broom
Alternate is Froebel's Spirea

KELLISON CORP.
Association Management

Clarendon Hills
Architectural Review
Clarendon Hills Homeowner's Association

Unit #: Sent Via: email
Sent for approval to: ACC

Name: Derek Brown for FRCC
Subject: FRCC South Parking Lot Final Landscape Plan
Address: FRCC South Parking Lot--4616 S. Shields St.
Phone: 303-404-5492
Mailing Address: 4616 S. Shields St., Fort Collins, CO, 80526

Date received at Kellison Corp.:	**9/30/2015**
Date sent out to Review Committee by Kellison Corp.:	**9/30/2015**
Date received by Kellison Corp. from Committee:	10/2/15
Date this doc was sent back to owner:	10/2/15

Common areas cannot be used by anyone for landscape projects. If a company or an owner causes any sort of damage (even tire tracks) to the common area, the property owner will be charged for all expenses associated with repairs.

Please be sure to check with your city or county agency regarding building permits.

X Approved as Submitted:

☐ **Approved with the following conditions:**

☐ **Not-Approved:**

Landscaping:

2601 South Lemay, Suite 7-424 Fort Collins, CO 80525 • Phone:970-494-0609 • Fax:970-494-0608

Outbuildings:

Fencing:

Misc.

Any approval by the Architectural Control Committee is subject to the provisions of all applicable recorded covenants. Approval by the Architectural Control Committee does not constitute a building permit or otherwise indicate a homeowner has complied with applicable governmental requirements. **Homeowners and builders are responsible for complying with all such governmental requirements, including city permit requirements.** No action taken by the Architectural Control Committee (or any member or agent of the committee) entitles any person to rely on that action with respect to compliance with governmental requirements, or with respect to the physical or other condition of any lot or improvement on the lot.

You should also note that compliance with the various governmental requirements does not constitute approval by the Architectural Control Committee.

Project must be completed within 90 days from the date of final approval from the Architectural Control Committee or unless otherwise specified in your association covenants or on your approved plan. This does not apply to new home construction.

Homeowner association rules do not allow the posting of advertising signs of any kind associated with landscape, remodeling, or construction projects being conducted on homeowner property.

Signature: Ingrid Layman Date: 10/1/2015

Signature: Dave Matteson Date: 10/1/2015

HOMESTEAD AT CLARENDON HILLS

A TRACT OF LAND LOCATED IN THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 6 NORTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO

STATEMENT OF OWNERSHIP AND SUBDIVISION:

Know all persons by these presents, that the undersigned owner(s) of the following described land:

A tract of land located in the Northwest Quarter of Section 2, Township 6 North, Range 69 West of the 6th P.M., City of Fort Collins, County of Larimer, State of Colorado, and being more particularly described as follows:

Considering the West line of Section 2 as bearing North 00° 17' 10" East and with all bearings contained herein relative thereto;

COMMENCING at the West Quarter corner of Section 2; thence along the West line of Section 2, North 00° 17' 10" East, 894.74 feet; thence, South 89° 42' 50" East, 50.00 feet to a point on the East right-of-way line of South Shields Street, said point being the **POINT OF BEGINNING**; thence along said East line, North 00° 17' 10" East, 48.44 feet to a point on the Southerly line of that tract of land described in Special Warranty Deed recorded at Reception No. 20130093010; thence along said Southerly line the following 6 courses and distances: South 89° 50' 43" East, 53.45 feet; thence, North 46° 07' 33" East, 26.06 feet; thence, North 65° 25' 29" East, 314.22 feet; thence, North 72° 42' 42" East, 164.00 feet; thence, North 66° 03' 57" East, 211.50 feet; thence, South 89° 50' 43" East, 41.85 feet to a point on the Westerly line of Clarendon Hills Third Filing; thence along said Westerly line the following 2 courses and distances: South 25° 38' 23" West, 29.07 feet; thence, South 00° 08' 23" West, 166.83 feet to the Northwesterly right of way line of Langdale Drive; thence along said Northwesterly line the following 3 courses and distances: along a curve concave to the Southeast having a central angle of 28° 24' 39" with a radius of 450.00 feet, an arc length of 223.14 feet and the chord of which bears South 55° 50' 43" West, 220.86 feet; thence, South 41° 38' 23" West, 130.35 feet; thence along a curve concave to the North having a central angle of 80° 01' 54" with a radius of 15.00 feet, an arc length of 20.95 feet and the chord of which bears South 81° 38' 33" West, 19.29 feet to the North right-of-way line of Clarendon Hills Drive; thence along said North line the following 2 courses and distances: along a curve concave to the Southwest having a central angle of 31° 20' 51" with a radius of 469.00 feet, an arc length of 256.60 feet and the chord of which bears North 74° 01' 42" West, 253.41 feet; thence, North 89° 42' 06" West, 190.00 feet; thence along a curve concave to the Northeast having a central angle of 89° 58' 58" with a radius of 15.00 feet, an arc length of 23.56 feet and the chord of which bears North 44° 42' 06" West, 21.21 feet to the **POINT OF BEGINNING**, containing 142,765 square feet or 3.277 acres, more or less.

For themselves and their successors in interest (collectively "Owner") have caused the above described land to be surveyed and subdivided into lots, tracts and streets as shown on this Plat to be known as HOMESTEAD AT CLARENDON HILLS (the "Development"), subject to all easements and rights-of-way now of record or existing or indicated on this Plat. The rights and obligations of this Plat shall run with the land.

CERTIFICATE OF DEDICATION:

The Owner does hereby dedicate and convey to the City of Fort Collins, Colorado (hereafter "City"), for public use, forever, a permanent right-of-way for street purposes and the "Easements" as laid out and designated on this Plat; provided, however, that (1) acceptance by the City of this dedication of Easements does not impose upon the City a duty to maintain the Easements so dedicated, and (2) acceptance by the City of this dedication of streets does not impose upon the City a duty to maintain streets so dedicated until such time as the provisions of the Maintenance Guarantee have been fully satisfied. The streets dedicated on this Plat are the fee property of the City as provided in Section 31-23-107 C.R.S. The City's rights under the Easements include the right to install, operate, access, maintain, repair, reconstruct, remove and replace within the Easements public improvements consistent with the intended purpose of the Easements; the right to install, maintain and use gates in any fences that cross the Easements; the right to mark the location of the Easements with suitable markers; and the right to permit other public utilities to exercise these same rights. Owner reserves the right to use the Easements for purposes that do not interfere with the full enjoyment of the rights hereby granted. The City is responsible for maintenance of its own improvements and for repairing any damage caused by its activities in the Easements, but by acceptance of this dedication, the City does not accept the duty of maintenance of the Easements, or of improvements in the Easements that are not owned by the City. Owner will maintain the surface of the Easements in a sanitary condition in compliance with any applicable weed, nuisance or other legal requirements.

Except as expressly permitted in an approved plan of development or other written agreement with the City, Owner will not install on the Easements, or permit the installation on the Easements, of any building, structure, improvement, fence, retaining wall, sidewalk, tree or other landscaping (other than usual and customary grasses and other ground cover). In the event such obstacles are installed in the Easements, the City has the right to require the Owner to remove such obstacles from the Easements. If Owner does not remove such obstacles, the City may remove such obstacles without any liability or obligation for repair and replacement thereof, and charge the Owner the City's costs for such removal. If the City chooses not to remove the obstacles, the City will not be liable for any damage to the obstacles or any other property to which they are attached.

The rights granted to the City by this Plat inure to the benefit of the City's agents, licensees, permittees and assigns.

OWNER:

BY: _____

STATE OF COLORADO)
)ss.
COUNTY OF LARIMER)

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by

_____, as _____ of _____.

Witness my hand and official seal

My commission expires: _____

_____
Notary Public

LIENHOLDER:

BY: _____

STATE OF COLORADO)
)ss.
COUNTY OF LARIMER)

The foregoing instrument was acknowledged before me this _____ day of _____, 20____, by

_____, as _____ of _____.

Witness my hand and official seal

My commission expires: _____

_____
Notary Public

MAINTENANCE GUARANTEE:

The Owner hereby warrants and guarantees to the City, for a period of two (2) years from the date of completion and first acceptance by the City of the improvements warranted hereunder, the full and complete maintenance and repair of the improvements to be constructed in connection with the Development which is the subject of this Plat. This warranty and guarantee is made in accordance with the City Land Use Code and/or the Transitional Land Use Regulations, as applicable. This guarantee applies to the streets and all other appurtenant structures and amenities lying within the rights-of-way, Easements and other public properties, including, without limitation, all curbing, sidewalks, bike paths, drainage pipes, culverts, catch basins, drainage ditches and landscaping. Any maintenance and/or repair required on utilities shall be coordinated with the owning utility company or department.

The Owner shall maintain said improvements in a manner that will assure compliance on a consistent basis with all construction standards, safety requirements and environmental protection requirements of the City. The Owner shall also correct and repair, or cause to be corrected and repaired, all damages to said improvements resulting from development-related or building-related activities. In the event the Owner fails to correct any damages within thirty (30) days after written notice thereof, then said damages may be corrected by the City and all costs and charges billed to and paid by the Owner. The City shall also have any other remedies available to it as authorized by law. Any damages which occurred prior to the end of said two (2) year period and which are unrepaired at the termination of said period shall remain the responsibility of the Owner.

REPAIR GUARANTEE:

In consideration of the approval of this final Plat and other valuable consideration, the Owner does hereby agree to hold the City harmless for a five (5) year period, commencing upon the date of completion and first acceptance by the City of the improvements to be constructed in connection with the development which is the subject of this Plat, from any and all claims, damages, or demands arising on account of the design and construction of public improvements of the property shown herein; and the Owner furthermore commits to make necessary repairs to said public improvements, to include, without limitation, the roads, streets, fills, embankments, ditches, cross pans, sub-drains, culverts, walls and bridges within the right-of-way, Easements and other public properties, resulting from failures caused by design and/or construction defects. This agreement to hold the City harmless includes defects in materials and workmanship, as well as defects caused by or consisting of settling trenches, fills or excavations.

Further, the Owner warrants that he/she owns fee simple title to the property shown hereon and agrees that the City shall not be liable to the Owner or his/her successors in interest during the warranty period, for any claim of damages resulting from negligence in exercising engineering techniques and due caution in the construction of cross drains, drives, structures or buildings, the changing of courses of streams and rivers, flooding from natural creeks and rivers, and any other matter whatsoever on private property. Any and all monetary liability occurring under this paragraph shall be the liability of the Owner. I further warrant that I have the right to convey said land according to this Plat.

NOTICE OF OTHER DOCUMENTS:

All persons take notice that the Owner has executed certain documents pertaining to this Development which create certain rights and obligations of the Development, the Owner and/or subsequent Owners of all or portions of the Development site, many of which obligations constitute promises and covenants that, along with the obligations under this Plat, run with the land. The said documents may also be amended from time to time and may include, without limitation, the Development Agreement, Site And Landscape Covenants, Final Site Plan, Final Landscape Plan, and Architectural Elevations, which documents are on file in the office of the Clerk of the City and should be closely examined by all persons interested in purchasing any portion of the Development site.

ATTORNEY'S CERTIFICATION

I hereby certify that this Subdivision Plat has been duly executed as required pursuant to Section 2.2.3(C)(3)(a) through (e) inclusive of the Land Use Code of the City of Fort Collins and that all persons signing this Subdivision Plat on behalf of a corporation or other entity are duly authorized signatories under the laws of the State of Colorado. This Certification is based upon the records of the Clerk and Recorder of Larimer County, Colorado as of the date of execution of the Plat and other information discovered by me through reasonable inquiry and is limited as authorized by Section 2.2.3(C)(3)(f) of the Land Use Code.

Attorney:

Address:

Registration No.:_____

APPROVED AS TO FORM, CITY ENGINEER

By the City Engineer of the City of Fort Collins, Colorado this _____day of _____ A.D., 20_____.

_____
City Engineer

PLANNING APPROVAL

By the Director of Community Development and Neighborhood Services of the City of Fort Collins, Colorado this _____ day of _____ A.D., 20_____.

_____
Director of Community Development and Neighborhood Services

NOTES AT THE REQUEST OF THE CITY OF FORT COLLINS:

1. There shall be no private conditions, covenants or restrictions that prohibit or limit the installation of resource conserving equipment or landscaping that are allowed by Sections 12-120 - 12-122 of the City code.

SMITH LATERAL DITCH APPROVAL

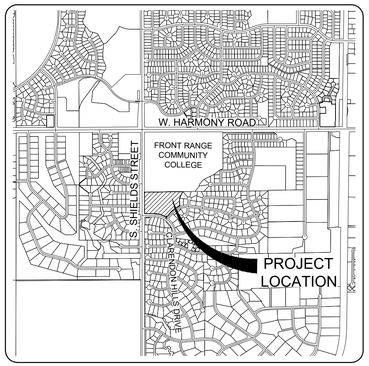
EASEMENTS SHOWN HEREON ARE ADEQUATE AND HEREBY ACCEPTED

BY: _____ DATE _____

BY: _____ DATE _____

NOTICE

ALL RESPONSIBILITIES AND COSTS OF OPERATION, MAINTENANCE AND RECONSTRUCTION OF THE PRIVATE STREETS AND/OR DRIVES LOCATED ON THE PRIVATE PROPERTY THAT IS THE SUBJECT OF THIS PLAT SHALL BE BORNE BY THE OWNERS OF SAID PROPERTY, EITHER INDIVIDUALLY, OR COLLECTIVELY, THROUGH A PROPERTY OWNERS' ASSOCIATION, IF APPLICABLE. THE CITY OF FORT COLLINS SHALL HAVE NO OBLIGATION OF OPERATION, MAINTENANCE OR RECONSTRUCTION OF SUCH PRIVATE STREETS AND/OR DRIVES NOR SHALL THE CITY HAVE ANY OBLIGATION TO ACCEPT SUCH STREETS AND/OR DRIVES AS PUBLIC STREETS OR DRIVES.



NORTH

VICINITY MAP
1"=1500'

DEVELOPER/APPLICANT
Kenneth R. Mitchell
Mosaic Real Estate LLC
1021 Nightingale Drive
Fort Collins, Colorado. 80525
970 685 1575

SITE ENGINEER
Northern Engineering Services, Inc.
Frederick Wegert
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521
(970) 221-4158

PLANNER/ LANDSCAPE ARCHITECT
Kristin Turner
TB Group
444 Mountain Avenue
Berthoud, Colorado 80513
(970) 532-5891

SITE SURVEYOR
Northern Engineering Services, Inc.
Robert C. Tessely, PLS
301 North Howes Street, Suite 100
Fort Collins, Colorado 80521
(970) 221-4158

SURVEYOR NOTES:

1. The Basis of Bearings is the West line of the Northwest Quarter of Section 2-6-69 as bearing North 00° 17' 10" East (assumed bearing), and monumented as shown on drawing.

2. All information regarding easements, rights-of-way or Title of Record, Northern Engineering relied upon Order No. F0622444-383-BA1, prepared by Fidelity National Title Company, dated February 18, 2020.

3. The lineal unit of measurement for this plat is U. S. Survey Feet.

4. For easements created by separate document and shown hereon refer to recorded document for specific terms.

5. A copy of the title commitment and the documents contained therein were provided to the owner, client and attorney listed hereon for their use and review.

6. Not all documents listed in the title commitment are plottable or definable by their terms. All easements that are definable by their descriptions are shown hereon with sufficient data to establish their position. Owner, Client and others should refer to the title commitment and those documents listed therein for a true understanding of all rights of way, easements, encumbrances, interests and title of record concerning the subject property.

7. Easements and other record documents shown or noted hereon were examined as to location and purpose and were not examined as to restrictions, exclusions, conditions, obligations, terms, or as to the right to grant the same.

8. Northern Engineering or the Professional Land Surveyor listed hereon, does not have the expertise to address mineral rights, and recommends the owner retain an expert to address these matters. Northern Engineering or the Professional Land Surveyor listed heron assumes no responsibility for the mineral rights upon the subject property.

9. Adjacent property owner information per the Larimer County Land information Locator.

10. Current Zoning: RL - Low Density Residential

11. Zoning information per the City of Fort Collins GIS FCMaps Zoning Portal.

12. Per CRS 38-51-105 (3)(a), (3)(b), (4)(b), (4)(c), & 5, the Developer/Owner of the subdivision plat has the requirement of providing monumentation of the interior corners created by this platting procedure within one year of the effective date of a sales contract. The Surveyor of record of said subdivision plat has only the required responsibility of providing for the on the ground monumentation of the external boundary of the subdivision plat.

SURVEYOR'S STATEMENT

I, Robert C. Tessely, a Colorado Registered Professional Land Surveyor do hereby state that this Subdivision Plat was prepared from an actual survey under my personal supervision, that the monumentations as indicated hereon were found or set as shown, and that the foregoing plat is an accurate representation thereof, all this to the best of my knowledge, information and belief.

DRAFT
10-5-20
PRELIMINARY - NOT FOR CONSTRUCTION, RECORDING PURPOSES OR IMPLEMENTATION

For and on Behalf of Northern Engineering
Robert C. Tessely
Colorado Registered Professional
Land Surveyor No. 38470

NOTICE:
According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years after the date of the certificate shown hereon.

SECTION: 2
TOWNSHIP: 6
RANGE: 69 W of the 6th PM

NORTHERN ENGINEERING
FORT COLLINS: 301 North Howes Street, Suite 100, 80521
GREELEY: 4620 Ptld Street, 80633
970.221.4158
northernengineering.com

DATE: 10/5/20
SCALE: As shown
REVIEWED BY: R. Tessely

PROJECT: 1013-008
CLIENT: Mosaic Real Estate
DRAWN BY: L. Smith

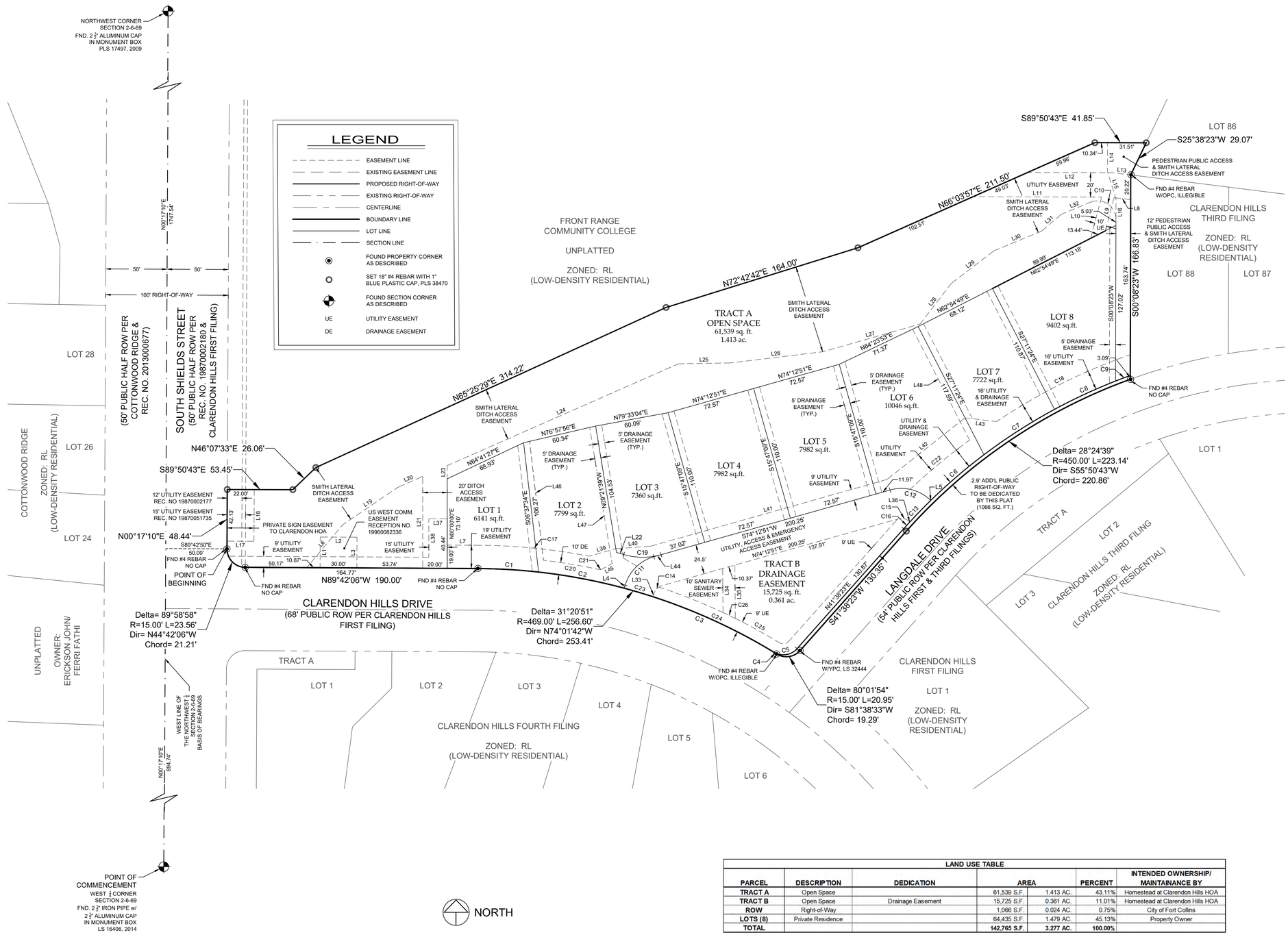
HOMESTEAD AT CLARENDON HILLS

CITY OF FORT COLLINS
STATE OF COLORADO

Sheet 1
Of 2 Sheets

HOMESTEAD AT CLARENDON HILLS

A TRACT OF LAND LOCATED IN THE NORTHWEST QUARTER OF SECTION 2, TOWNSHIP 6 NORTH, RANGE 69 WEST OF THE 6TH PRINCIPAL MERIDIAN, CITY OF FORT COLLINS, COUNTY OF LARIMER, STATE OF COLORADO



LEGEND

- EASEMENT LINE
- EXISTING EASEMENT LINE
- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- CENTERLINE
- BOUNDARY LINE
- LOT LINE
- SECTION LINE
- FOUND PROPERTY CORNER AS DESCRIBED
- SET 18" #4 REBAR WITH 1" BLUE PLASTIC CAP, PLS 38470
- FOUND SECTION CORNER AS DESCRIBED
- UE — UTILITY EASEMENT
- DE — DRAINAGE EASEMENT

NORTH

40 0 40 80 120 Feet

(US SURVEY FEET)
1 inch = 40 ft.

CURVE TABLE					
CURVE	DELTA	RADIUS	LENGTH	BEARING	CHORD
C1	6°02'30"	469.00'	49.45'	N86°40'53"W	49.43'
C2	8°41'59"	469.00'	71.21'	N79°18'39"W	71.14'
C3	16°15'28"	469.00'	133.08'	N66°49'55"W	132.63'
C4	0°20'54"	469.00'	2.85'	N58°31'44"W	2.85'
C5	79°39'26"	15.00'	20.85'	N81°28'06"E	19.21'
C6	7°15'35"	452.90'	57.38'	N49°18'56"E	57.35'
C7	8°39'57"	452.90'	68.50'	N57°16'42"E	68.43'
C8	6°57'00"	452.90'	54.94'	N65°05'10"E	54.90'
C9	1°37'25"	452.90'	12.83'	S69°22'23"W	12.83'
C10	112°39'09"	15.00'	29.49'	N56°11'12"W	24.97'
C11	57°48'32"	34.00'	34.30'	S45°18'35"W	32.87'
C12	60°11'56"	34.00'	35.72'	N75°41'11"W	34.10'
C13	4°02'46"	452.90'	31.98'	S43°39'46"W	31.98'
C14	57°48'32"	9.50'	9.59'	N45°18'35"E	9.18'
C15	60°11'56"	9.50'	9.98'	S75°41'11"E	9.53'
C16	0°56'46"	452.90'	7.48'	S42°06'46"W	7.48'
C17	10°41'22"	488.01'	91.05'	N84°21'25"W	90.92'
C18	14°57'01"	468.90'	122.35'	S63°25'05"W	122.00'
C19	32°07'40"	55.00'	30.84'	S89°43'19"E	30.44'
C20	5°26'45"	479.00'	45.53'	N80°35'57"W	45.51'
C21	40°46'54"	5.00'	3.56'	S81°43'59"W	3.48'
C22	7°26'50"	485.28'	63.08'	S50°21'16"W	63.03'
C23	2°59'36"	469.00'	24.50'	N73°27'51"W	24.50'
C24	13°15'52"	469.00'	108.58'	N65°20'07"W	108.34'
C25	4°55'45"	478.00'	41.12'	N61°10'03"W	41.11'
C26	1°20'10"	478.00'	11.15'	N64°18'00"W	11.15'

LINE TABLE		
LINE	LENGTH	BEARING
L1	25.07'	S00° 17' 54"W
L2	30.00'	S89° 42' 06"E
L3	25.07'	S00° 17' 54"W
L4	2.67'	S16° 24' 19"W
L5	0.16'	N45° 35' 13"W
L6	45.75'	N39° 55' 20"E
L7	25.33'	N89° 42' 06"W
L8	13.65'	S82° 57' 42"E
L9	28.07'	S14° 49' 34"W
L10	34.80'	S14° 49' 34"W
L11	105.06'	S89° 51' 36"E
L12	68.69'	S89° 51' 36"E
L13	15.51'	S82° 57' 42"E
L14	23.66'	S00° 08' 23"W
L15	23.35'	S17° 18' 05"E
L16	21.58'	S00° 08' 16"W
L17	22.00'	N89° 42' 50"W
L18	42.13'	S00° 17' 10"W
L19	54.08'	N55° 51' 44"E
L20	22.39'	N66° 13' 10"E
L21	74.95'	S00° 00' 00"E
L22	6.20'	S73° 39' 29"E
L23	10.77'	S00° 00' 00"E
L24	206.16'	S66° 13' 10"W

LINE TABLE		
LINE	LENGTH	BEARING
L25	41.96'	S89° 05' 52"W
L26	76.30'	S83° 07' 43"W
L27	82.55'	S74° 06' 46"W
L28	41.85'	S37° 34' 25"W
L29	43.96'	S52° 34' 25"W
L30	41.85'	S67° 34' 25"W
L31	21.29'	S49° 42' 44"W
L32	25.73'	S67° 29' 14"W
L33	2.73'	N16° 24' 19"E
L34	35.92'	N00° 30' 18"W
L35	43.57'	N00° 30' 18"W
L36	0.28'	S45° 35' 13"E
L37	15.00'	N90° 00' 00"W
L38	31.36'	S00° 00' 00"E
L39	22.65'	S74° 12' 51"W
L40	28.63'	S85° 52' 49"W
L41	200.25'	S74° 12' 51"W
L42	81.09'	S51° 42' 51"W
L43	26.01'	N83° 17' 09"W
L44	6.11'	S74° 12' 51"W
L45	8.78'	S61° 20' 31"W
L46	97.73'	N06° 37' 34"W
L47	112.89'	S09° 21' 39"E
L48	101.78'	N27° 11' 24"W

LAND USE TABLE						
PARCEL	DESCRIPTION	DEDICATION	AREA		PERCENT	INTENDED OWNERSHIP/ MAINTAINANCE BY
TRACT A	Open Space		61,539 S.F.	1.413 AC.	43.11%	Homestead at Clarendon Hills HOA
TRACT B	Open Space	Drainage Easement	15,725 S.F.	0.361 AC.	11.01%	Homestead at Clarendon Hills HOA
ROW	Right-of-Way		1,066 S.F.	0.024 AC.	0.75%	City of Fort Collins
LOTS (8)	Private Residence		64,435 S.F.	1.479 AC.	45.13%	Property Owner
TOTAL			**142,765 S.F.**	**3.277 AC.**	**100.00%**	

PRELIMINARY

Robert C. Tessely
Registered Professional Land Surveyor
Colorado Registration No. 38470
For and on behalf of Northern Engineering Services, Inc.

NOTICE:
According to Colorado law you must commence any legal action based upon any defect in this survey within three years after you discover such defect. In no event may any action based upon any defect in this survey be commenced more than ten years after the date of the certificate shown hereon.

SECTION: 2
TOWNSHIP: 6
RANGE: 69 W of the 6th PM

NORTHERN ENGINEERING
FORT COLLINS, 301 North Howes Street, Suite 100, 80521
GREELEY, 820 8th Street, 80631
970.221.4158
northernengineering.com

DATE: 10/5/20
SCALE: 1"=40'
REVIEWED BY: R. Tessely
PROJECT: 1013-008
CLIENT: Mosaic Real Estate
DRAWN BY: L. Smith

HOMESTEAD AT CLARENDON HILLS
CITY OF FORT COLLINS
STATE OF COLORADO

Sheet
2
Of 2 Sheets

From: clarendonhills.layman@gmail.com
To: Jason Holland
Subject: [EXTERNAL] Homestead @ Clarendon Hills PDP190007 - Ditch Access via the Pedestrian Path
Date: Thursday, October 15, 2020 1:08:09 PM
Importance: High

Homestead @ Clarendon Hills PDP190007 - Ditch Access via the Pedestrian Path

Hello Jason,

Last week we received word from the Developer, Ken Mitchell, that the City has requested that the pedestrian path also be used for vehicle access for the Ditch Owners. He also shared that the pedestrian path would be widened from 10' to 12'. He stated that access was based on an established historical use. I would like to understand from you if this is the current expectation, can you advise?

Assuming that this is the case, our HOA would like to request a meeting with you and the key team members to discuss our deep concerns regarding this issue.

Issue: Allowing vehicle access thru the Pedestrian Path introduces a significant and unacceptable risk of pedestrian – vehicle crashes and increases the risk for property damage to adjoining properties.

Pedestrian – Vehicle crash risk:

The Pedestrian Trail is a highly used trail by neighbors, families, school children, and even FRCC students and staff.
By allowing vehicle access in the space provided, the risk of a vehicle – pedestrian crash is significantly increased.

Pedestrian Trail usage:

Beginning in early July we have continuously monitored the Pedestrian Path on a daily basis. 24 Hour monitoring is done via a camera focused on the path.

- Weekly average usage for the 11 weeks beginning July 13 and ending Sept 27 was 432 Pedestrians and, 179 canines per week.
  - Daily Pedestrian usage ranged from a low of 32 to a max of 90.
- Total usage during the 11 week period was 4,754 Pedestrians.
- Bike riders: Included in the total count were 613 observed bike riders.
- Earliest observed usage was 12:52 a.m., many observations in the 4:00 a.m. hour
- Latest observed usage was 11:52 p.m.

*** Observations made by photo observation. Files available on request.

Ditch Maintenance Activity:

During the same 11 week period, observed Ditch Maintenance Activity averaged 9 times per week with the highest weekly count of 11.

- Daily activity ranged from 0 observations to a high of 4 observations in one day.
- Most activity occurred during early to mid-day hours, however the latest observed maintenance occurred @ 11:03 p.m.
  - Multiple occurrences have been recorded in the 7-9 p.m. evening hours.
- Speed: anecdotally, the different ditch maintenance men drive at different speeds, the most frequent maintenance man driving at speeds much higher than would be safe in a restricted width pedestrian path.

Property Damage Risk

- Ditch maintenance vehicles have driven over landscaping of the adjoining property to the East. The owners have had to install a medium size landscape boulder and a small decorative corner fence to encourage a wider turn from Langdale onto the Pedestrian Path. The fence also provides a visual cue to the driver of where the corner is.

Concern: Vehicles turning from Langdale Drive onto a 12' path will struggle to complete the turn without damaging adjoining property by driving over or thru these properties

In summary, this Pedestrian path is utilized at significant levels by the community. As well, the ditch maintenance activity ranges from daily to multiple times per day. Combining the high pedestrian traffic with frequent vehicle activity, especially in a restricted space, significantly increases the risk of a vehicle – pedestrian crash. In addition, property damage potential due to the lack of driving space is also increased.

Our community believes this is an unacceptable risk and request this situation be changed:

Recommendations:

1. Preferred option: Pedestrian Path only - limit the access on the Pedestrian Path to Pedestrian & non-motorized vehicles only.
   Notes:
   - Given the high Pedestrian utilization, this option affords the best method of protecting lives and reducing the chance of accidents.
   - Ditch Maintenance personnel could utilize the pedestrian path on foot to effect the daily maintenance.
     - The walking distance from Langdale drive to the culvert is ~171' / 56 yards.
   - Ditch maintenance requiring motorized vehicles is achievable for both sides of the ditch via:
     - North access via FRCC parking lots (multiple access points available)
     - West access via Shields St.
     - South access via Clarendon Hills Drive [This is currently provisioned by the Developer].

   ** Note: there is a bridge across the ditch near the west end of the property as well as at the east end.

2) Alternative option: Multi-use Pedestrian Path
   - Enlarge the Pedestrian Path to the historical path width of 22' [see pictures below.. traffic cones set at 22' from East property line]
   - Removable bollards: to prevent non-authorized vehicle access, install removable bollards at the Langdale entrance
     Note, the Ditch maintenance personnel must be required to replace the bollards upon leaving the property.
   - Signage: install signage that states "Pedestrian Path – Non-authorized motor vehicles prohibited."
   - Speed: Establish a maximum vehicle speed for the space. Recommended: 1 mile per hour.
   - Designate a driving path by either a hard surface or semi-hard, such as an agate material.
   - Designate a separate/parallel pedestrian path by installing a smaller width, hard or soft surface material.

Jason, this is an important issue for the community and the safety of the community.
In our meeting we can share our documentation, photos, etc.
Please let us know when we can arrange a meeting to discuss.

Regards,

Mark Layman
Clarendon Hills HOA

Pedestrian Path – historical width of Ditch Maintenance access 22'

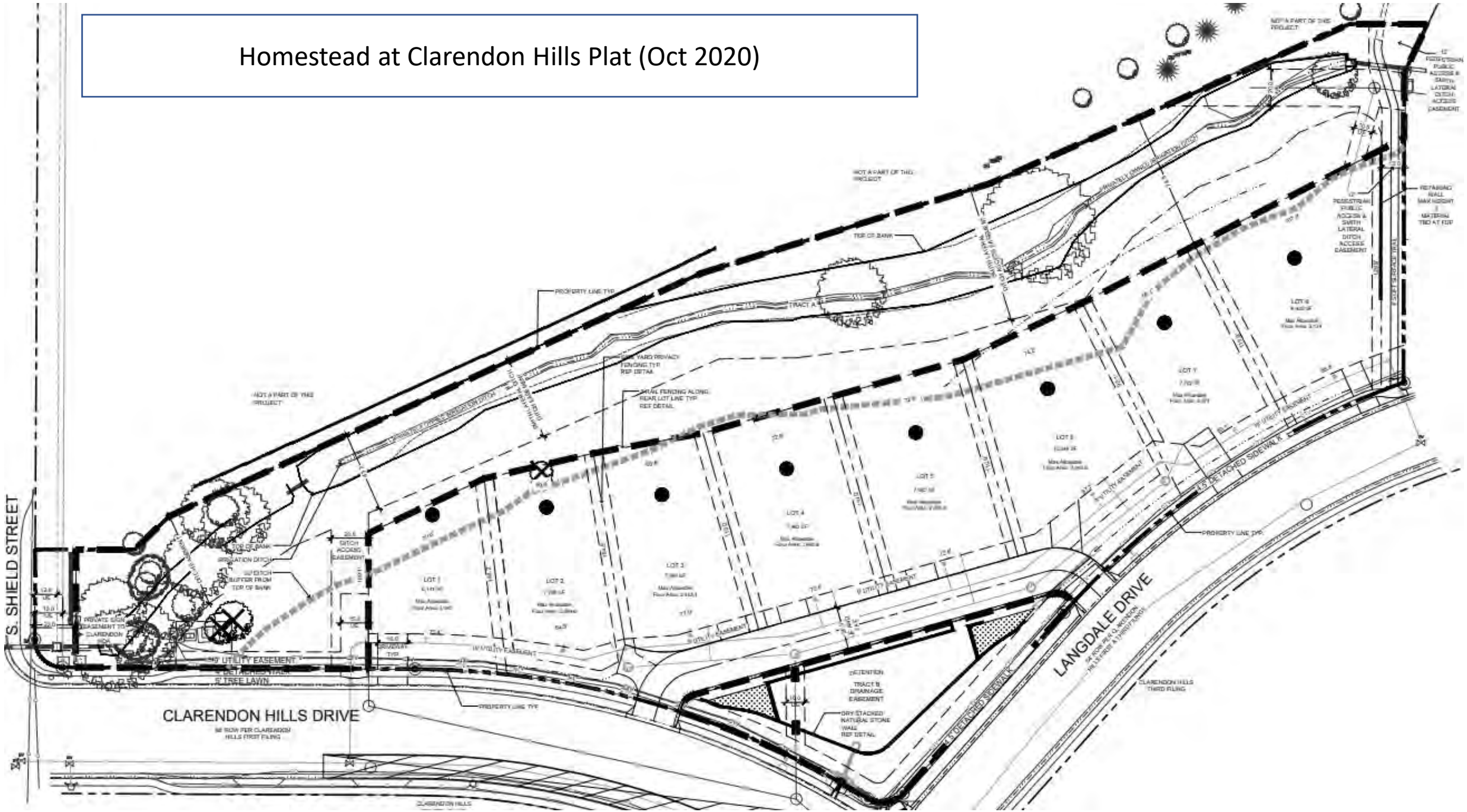
** Traffic cones set are 22’ from east property line.

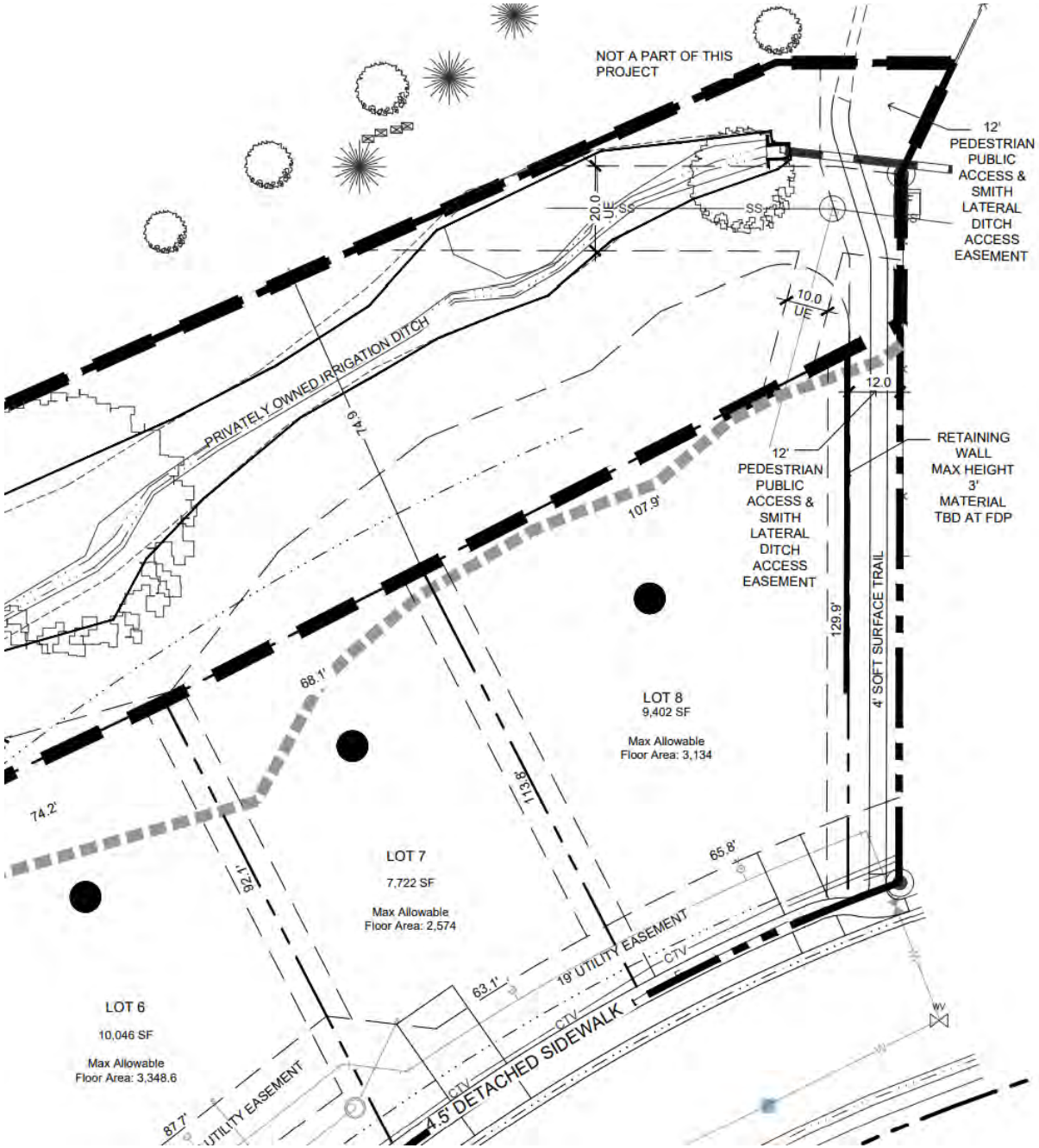
Pedestrian Path – historical width of Ditch Maintenance access 22’
** Traffic cones set are 22’ from east property line.

Homestead at Clarendon Hills – Pedestrian Path

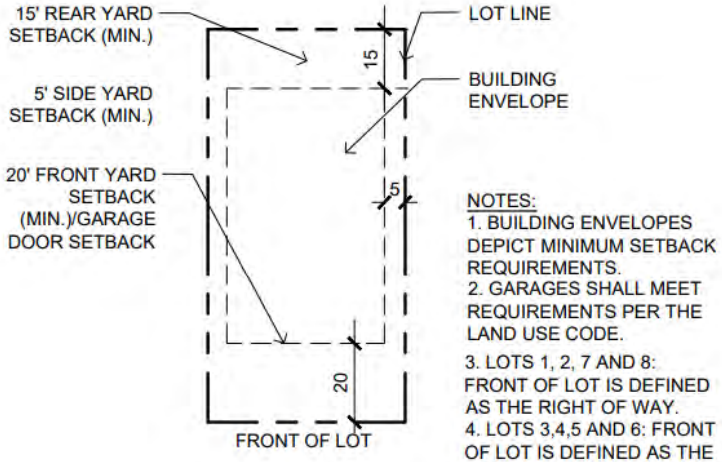
PDP190007

Homestead at Clarendon Hills Plat (Oct 2020)





Typical Lot Setbacks: Single Family Detached



NOTES:
1. BUILDING ENVELOPES DEPICT MINIMUM SETBACK REQUIREMENTS.
2. GARAGES SHALL MEET REQUIREMENTS PER THE LAND USE CODE.
3. LOTS 1, 2, 7 AND 8: FRONT OF LOT IS DEFINED AS THE RIGHT OF WAY.
4. LOTS 3,4,5 AND 6: FRONT OF LOT IS DEFINED AS THE EDGE OF PAVING FOR THE PRIVATE DRIVE.
5. ALL SETBACKS ARE MEASURED FROM THE BUILDING TO LOT LINE.

Fencing:
- Side fencing to start 6’ back from front of house and 6’ tall

Pedestrian Path

Pedestrian – Vehicle crash risk:

The Pedestrian Trail is a highly used trail by neighbors, families, school children, and even FRCC students and staff.
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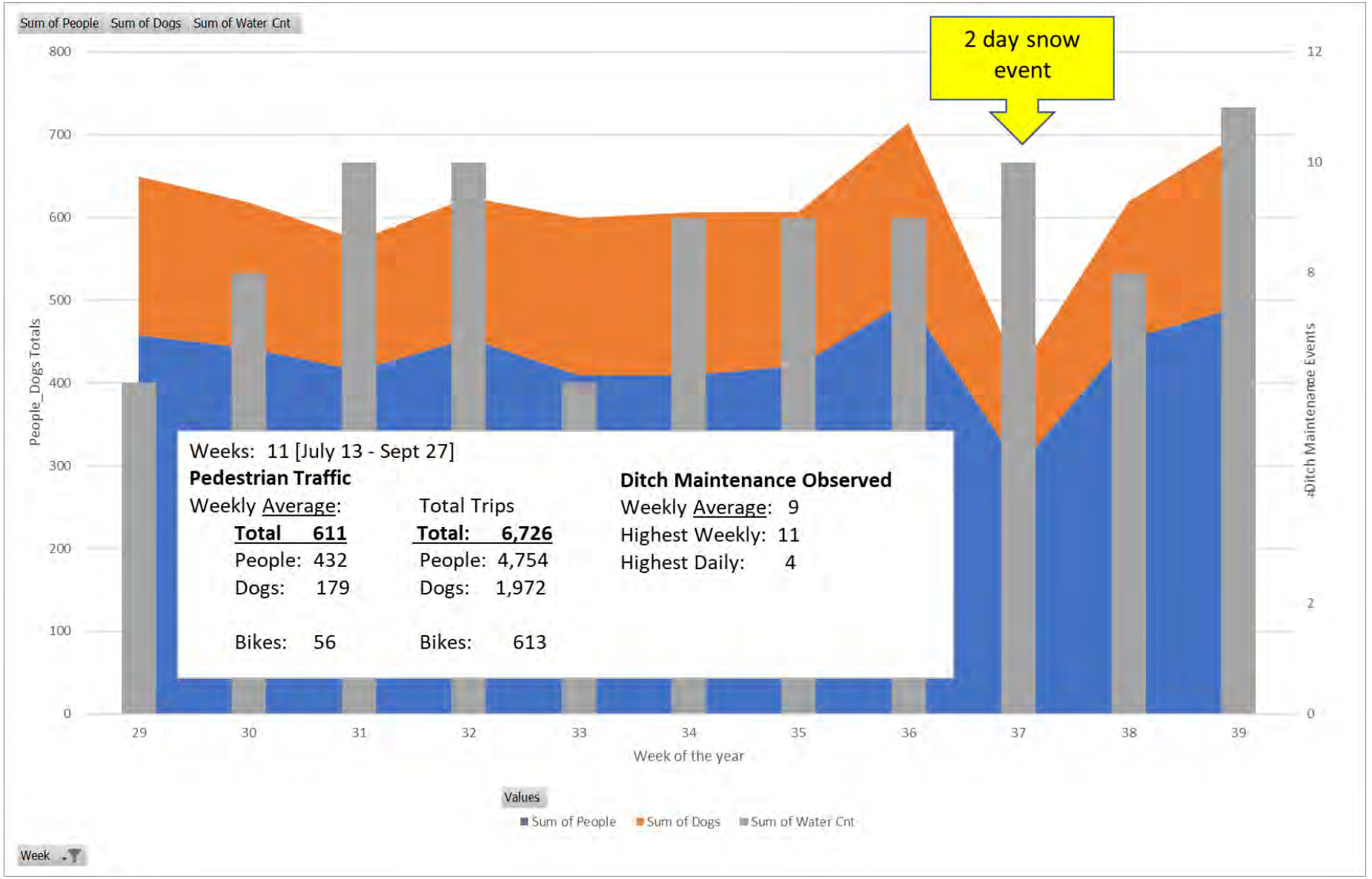
Concern: Vehicles turning from Langdale Drive onto a 12’ path will struggle to complete the turn without damaging adjoining property by driving over or thru these properties

Pedestrian Path Usage – July 13, 2020 thru Sept 27, 2020



Solution

Limit access on the Pedestrian Path to Pedestrian & non-motorized vehicles only.

Notes:

- Given the high Pedestrian utilization, this option affords the best method of protecting lives and reducing the chance of accidents.
- Ditch Maintenance personnel could utilize the pedestrian path on foot to effect the daily maintenance.
  - The walking distance from Langdale drive to the culvert is ~171’ / 56 yards.
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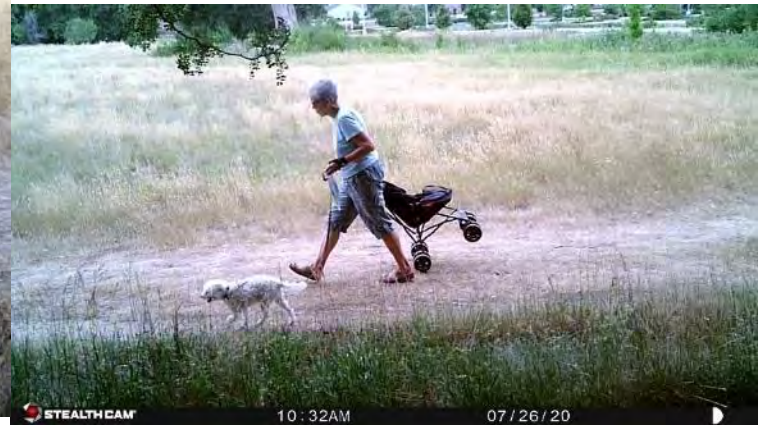
  - South access via Clarendon Hills Drive [This is currently provisioned by the Developer].

    ** Note: there is a bridge across the ditch near the west end of the property as well as at the east end.

Selected Pedestrian Observations



Selected ditch maintenance vehicle observations

Deer

Raccoon

Fox

STATEMENT OF AUTHORITY

1. This Statement of Authority relates to an entity named Brookwood at Mail Creek Homeowners' Association.

2. The type of entity is a Colorado nonprofit corporation.

3. The nonprofit corporation is formed under the laws of the state of Colorado.

4. The mailing address for the entity is 5029 Crest Road, Fort Collins, CO 80526.

5. The below signatories are Members of, and homeowners in, Brookwood at Mail Creek Homeowners' Association.

6. The names and positions of each person authorized to execute the plat and any necessary related documents in connection with the development proposal known as Homestead at Clarendon Hills in Fort Collins, Larimer County, Colorado instruments conveying, encumbering or otherwise affecting title to real property on behalf of the entity are:

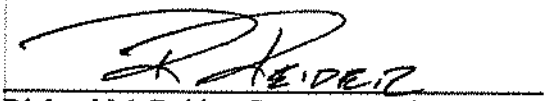
   Richard M. Reider, Secretary and Treasurer

7. The authority of the foregoing persons to bind the entity is not limited.

8. This Statement of Authority is effective as of September 1, 2020.

9. This Statement of Authority may be executed in counterparts by the Members of Brookwood at Mail Creek Homeowners' Association all of which shall be collectively deemed to constitute the original Statement of Authority.

Accepted by:



Richard M. Reider, Secretary and Treasurer,
Brookwood at Mail Creek Homeowners' Association

Member of Brookwood at Mail Creek Homeowners' Association
Address: 4620 Crest Road, Fort Collins, CO 80526

Joseph G. Bouchard

Donna Ardith Bouchard

Member of Brookwood at Mail Creek Homeowners' Association
Address: 4820 Crest Road, Fort Collins, CO 80526

Laura J. Renn

Anthony J. Renn

Member of Brookwood at Mail Creek Homeowners' Association
Address: 4825 Crest Road, Fort Collins, CO 80526

Crest Road 4825, LLC

BY: Christopher Love

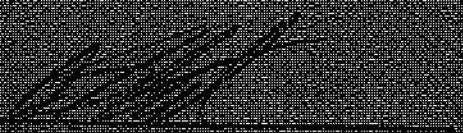
Title: Trustee of Sole Member

Member of Brookwood at Mail Creek Homeowners' Association
Address: 4920 Crest Road, Fort Collins, CO 80526

Yasamin Tarin

Jorge Luis Tarin

Member of Brookwood at Mail Creek Homeowners' Association
Address: 4925 Great Bonde Fort Collins, CO 80528



Signature: James Bryant Revocable Trust

By: James B Bryant

Title: Owner

Member of Brookwood at Mail Creek Homeowners' Association
Address: 5001 Crest Road, Fort Collins, CO 80526

Bruce J. Dalton

Marcelle D. Dalton

Member of Brookwood at Mail Creek Homeowners' Association
Address: 5020 Crest Road, Fort Collins, CO 80526

Robert E. Underhill 9-30-20

Charlene J. Underhill 9-30-20

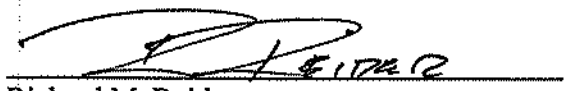
Member of Brookwood at Mail Creek Homeowners' Association
Address: 5025 Crest Road, Fort Collins, CO 80526

The John W. Cramer Trust, Restated

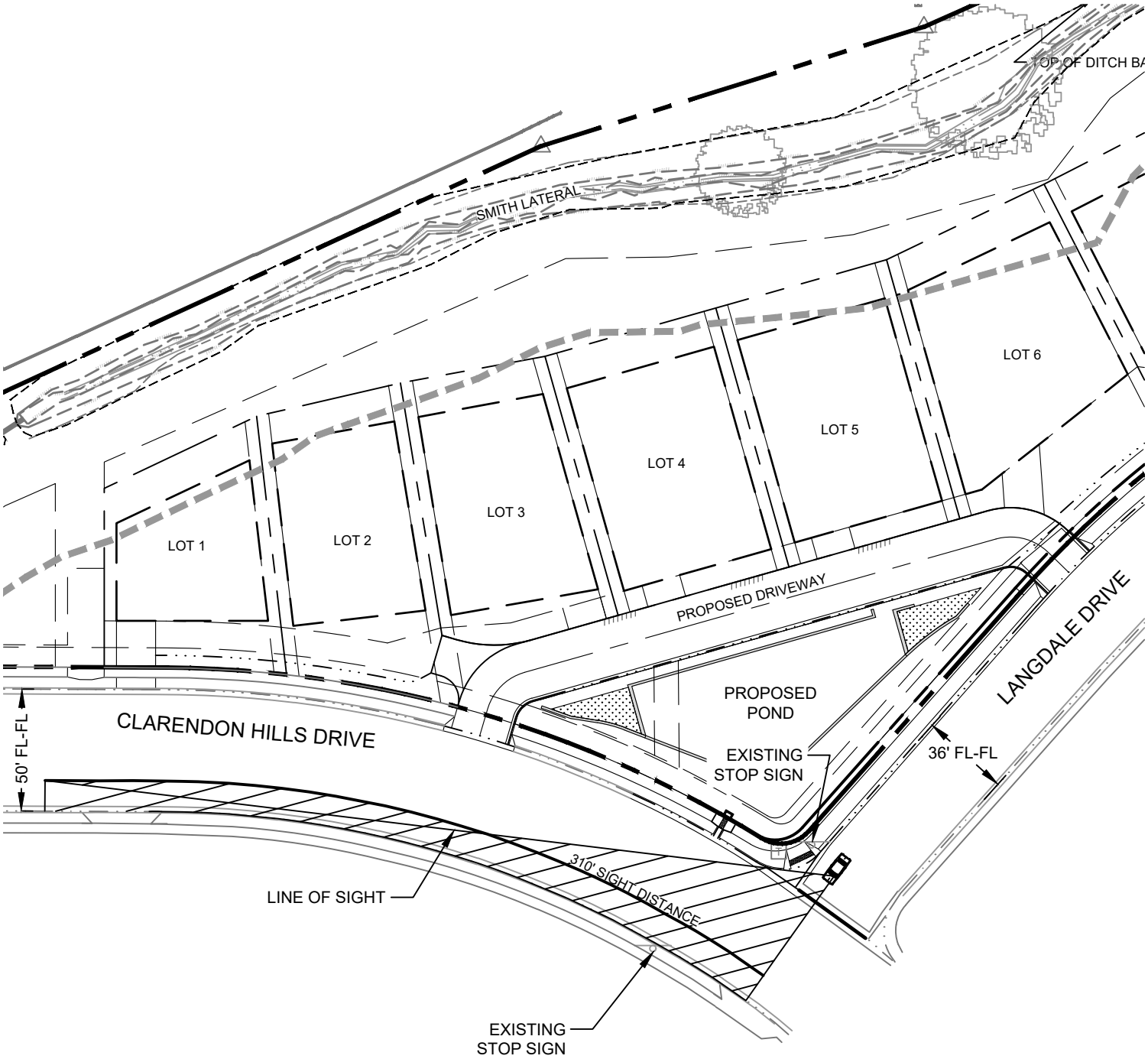
BY: _____

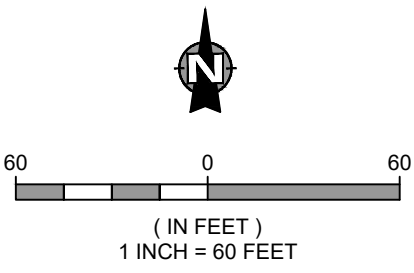
Title: _____

Member of Brookwood at Mail Creek Homeowners' Association
Address: 5029 Crest Road, Fort Collins, CO 80526



Richard M. Reider





HOMESTEAD AT CLARENDON HILLS

FORT COLLINS, CO

09-24-20

NORTHERN ENGINEERING

SIGHT DISTANCE

Intersection Stopping Sight Distance

P:\1013-008\DWG\EXHIBITS\1013-008_SIGHT DISTANCE EXHIBIT.DWG