AGENDA
Planning & Zoning Commission
Tuesday, June 21, 2016
6:00 P.M.

Public Meeting Room / Eagle Town Hall
200 Broadway
Eagle, CO

This agenda and the meetings can be viewed at www.townofeagle.org.

ITEM		
6:00pm – CALL TO ORDER		
APPROVAL OF MINUTES – June 7, 2016		
PUBLIC COMMENT		
Citizens are invited to comment on any item not on the Agenda subject to a public hearing. Please limit your comments to five (5) minutes per person.		
PRESENTATIONS		
1. Eagle County – West Eagle Plan		
LAND USE FILES		
NEW PUBLIC HEARINGS		
1.	Project:	Sylvan Circle Development Plan
	File #:	DR16-03
	Applicant:	Jonathon Werner (Eagle Sylvan, LLC)
	Location:	58 Sylvan Lake Road
	Staff Contact:	Tom Boni (Town Planner)
	Request:	Development Review for a 42-unit townhome project on 4.67 acres.
2.	Project:	Aguilar Setback Variance
	File #:	V16-03
	Applicant:	Cynthia Aguilar
	Location:	20 Wren Court
	Staff Contact:	Tom Boni (Town Planner)
	Request:	Reduce side yard setback requirement to allow for the construction of a covered deck.

ITEM
TOWN BOARD OF TRUSTEES MEETING REVIEW *Staff update to the Planning & Zoning Commission on recent decisions made by the Board of Trustees on various Land Use files.*
1. Colorado Slab & Tile – Special Use Permit 2. Rocky Mtn Discovery School – Special Use Permit
OPEN DISCUSSION
ADJOURN

The Town of Eagle
Box 609 • Eagle, Colorado 81631
(970) 328-6354 • Fax 328-5203
Meetings:
2nd and 4th Tuesdays

Planning and Zoning Commission
Meeting Minutes
June 7, 2016

PRESENT
Stephen Richards
Jesse Gregg
Charlie Perkins
Jason Cowles
Cindy Callicrate
Donna Spinelli

STAFF
Tom Boni–Town Planner
Carla Nelson–Administrative Assistant
Matt Farrar—Assistant Town Planner
Danielle Couch—Administrative Assistant

ABSENT
Max Schmidt
Jamie Harrison

This meeting was recorded and the CD will become part of the permanent record of the minutes. The following is a condensed version of the proceedings written by Carla Nelson.

CALL TO ORDER The regular meeting of the Planning and Zoning Commission held in the Eagle Town Hall on June 7, 2016 was called to order by Jason Cowles at 6:03 p.m.

APPROVAL OF MINUTES

Spinelli made a motion to approve the minutes of the May 17, 2016, Planning and Zoning Commission Meeting. Gregg seconded. The motion passed unanimously.

PUBLIC COMMENT None

WELCOME

Welcome to Danielle Couch, Administrative Assistant to the Planning Department.

LAND USE PUBLIC HEARINGS
SU16-01 Rocky Mountain School of Discovery

Cowles opened File SU16-01, Rocky Mountain School of Discovery, a request for a special use permit to allow for a pre-

school to serve up to a maximum of 40 children on a +/- one acre parcel of land zoned Rural Residential, located at 409 Brooks Lane.

Boni presented the location of the existing buildings. The Standards for a Special Use Permits were reviewed, as well as possible street and railroad crossing improvements if there is a significant increase in traffic.

The applicant Anne Helene Garberg, further explained her application for a pre-school. The town and the county are in need of pre-schools. Recently, she had taken over Sunshine Mountain Preschool. She teaches by connecting children to nature, using gardens, and greenhouses. Ms. Garberg has offered alternatives to having children dropped-off or picked-up, as a way of minimizing traffic impact, suggested that the parents walk their children across the foot bridge connecting Brooks Lane to the Eagle County Fairgrounds, or shuttle students to Brooks Lane.

Boni noted written comment was submitted by Dana Stiles. Cowles opened public comment and the following citizens addressed the Commission:

1. Ron Bates, 450 Brooks Lane-representing John Hardesty, Dana Stiles and Freddie Modders. Mr. Bates was concerned with narrow lane width, railroad crossing, and inadequate parking. He stated concern with remodeling the home that contained asbestos and lead paint. The quality of life for existing Brooks Lane residents may be highly impacted.

2. Kim Anderson, 206 Haystacker-Ms. Anderson has had previous experience with Ms. Garberg's facilities. She believes in Ms. Garberg's teaching philosophy. She is not opposed to walking her child across the pedestrian bridge instead of driving to the school.

3. Brian Rooney, 120 Howard Street-Mr. Rooney currently drives out of town for his children to attend Ms. Garberg's facility. He notes the need for more childcare in Eagle and throughout the valley.

4. Cynthia Lepthein-409 Brooks Lane. Ms. Lepthein agreed there is a need for childcare, likes the idea of the pre-school, but is concerned about the safety of the students and other children in the area due to increased traffic and the crossing of the railroad tracks.

5. Kelly Anderson-purchasing 409 Brooks Lane. Mr. Anderson is Anne Helene's husband. He has already taken steps to remodel the house, including the asbestos abatement.

6. Public comment--Parent that walks whenever possible to bring her child to school. She is concerned about viability of society.

7. Jenna Castillo--Ms. Castillo has concerns about the bus stop on Highway 6 and the safety of the children due to increased traffic.

8. Kristen Olesen.--Ms Olesen stated the need for more childcare or pre-schools in Eagle.

9. Maria Rodriguez.--Ms. Rodriguez thought that having more childcare a great idea but is concerned that traffic will be an issue.

10. Karen Harkins--Ms. Harkins believes that the children can learn great things at this pre-school but traffic in the community needs assistance.

11. Lucia Rodriguez--Ms. Rodriguez believes that daycare is a great idea, but traffic in the area is already an issue.

12. Mina Chavez--Ms. Chavez feels that children should not wait for the bus alone due to existing traffic concerns.

Cowles closed public comment. The Commission deliberated on the maximum number of children that would attend the pre-school; the minimum number of children required to allow the pre-school to break even financially; getting approval from the Public Utilities Commission (PUC) to make improvements; and traffic mitigation.

Cowles made a motion to recommend approval of File SU16-01, Rocky Mountain School of Discovery with the following conditions:

1. The applicant will negotiate access improvements with the Town of Eagle at the Brooks Lane/Highway 6 intersection. Conceptually to include lane widening and pedestrian access to the school bus stop.

2. Approval of access from the Public Utilities Commission (PUC).

3. The applicant will submit a drop-off and pick-up management plan.

4. A traffic impact report.

5. Number of students be limited to 30.

Callicrate seconded the motion. The motion passed unanimously.

Cowles stated this file will go before the Town Board of Trustees at the next scheduled meeting to be held on June 14, 2016.

BREAK 8:07pm – 8:15pm

SU16-02 Colorado Slab and Tile – Outside Storage
V16-02 Colorado Slab and Tile – Fence in Front Yard

Cowles opened Files SU16-02 and V16-02, Colorado Slab and Tile, a special use permit to allow for outside storage and a variance to allow the installation of a 6' tall fence in the front yard, located at 12 Eagle Park East. This property is zoned Commercial General (CG) and the building is primarily office space.

The applicant, Jason Kaples, owner of Colorado Slab and Tile, described the business and the proposed use of the lot for displaying their stone slabs. Mr. Kaples purchased chain-link fence to be installed around the perimeter of the lot allowing the stone slabs to be visible from Chambers Avenue, while keeping non-customers out of the on-site storage areas.

Cowles opened public comment and receiving none, closed public comment. The Commission deliberated agreeing that outside storage should be allowed and offered several alternative locations for the fence.

Richards made a motion to approve File V16-02, Colorado Slab and Tile, to allow for a 6' fence in the front yard, as it complies with standards 1, 2 and 3 of the Land Use and Development Code, to be located as shown by the applicant and to have a 45 degree corner at the corner of Eagle Park East and Chambers Avenue. Gregg seconded the motion. The motion passed with a vote of 5 to 1, with Spinelli voting nay.

Richards made a motion to approve File SU16-02, Colorado Slab and Tile as it complies with standards 1, 2 and 3 of the Land Use and Development Code, with the following conditions:

1. The chain-link fence should be coated with either black or green epoxy paint.
2. A setback of 2' at the front property lines to allow for landscaping.
3. The applicant will work with town Staff to landscape along fence perimeter inside and outside.

Callicrate seconded. The motion passed with a vote of 5 to 1, with Spinelli voting nay.

Cowles closed Files SU16-02 and V16-02.

SU97 (Amended 2016) Boyz Toyz Snowmobile/ATV Store

Cowles opened File SU97, Boyz Toyz Snowmobile/ATV Store, a request to allow continued operation of store/repair facility, located at 432 Grand Avenue in the Commercial Limited (CL) zoned area. Richards recused himself as he represented the applicant on original application.

Cowles opened public comment and receiving none, closed public comment. Boni presented the location of the store, the location of the vehicles for sale, and the store/repair facility.

Greg made a motion to approve File SU97, Boyz Toyz Snowmobile/ATV Store, an amendment to the special use permit with the following amendments:

1. Remove item #2, Allow temporary storage of vehicles on the east side of the building.
2. Remove item #5, Allow up to 30 vehicles for display on private property.
3. Remove item #6, the loading area will now be on McIntire.
4. Remove item #14, amend to allow shed with Town of Eagle compliance
5. Add, Existing fence should be replaced to property line.

Perkins seconded the motion. The motion passed unanimously.

Cowles closed File SU97 (Amendment 2016).

LURA16-01, Revisons to Land Use and Development Code Section 4.03.040

Cowles made a motion to continue File LURA16-01 to the Planning and Zoning meeting on July 19, 2016. Spinelli seconded. The motion passed unanimously.

ADJOURN

Spinelli made a motion to adjourn the meeting. Perkins seconded. The motion passed unanimously. The meeting was adjourned at 9:54 p.m.

_____ _____

Date Jason Cowles – Planning and Zoning Commission

_____ _____

Date Carla Nelson – Administrative Assistant

EAGLE COUNTY

EAGLE COUNTY

West Eagle Site Planning

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976, Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

May 31, 2016

View of Horse Pasture looking north to Castle Peak

View of Horse Pasture looking southeast to Sawatch Mountains

PROJECT TEAM:

Eagle County Housing and Development Authority & Facilities Management

- Jill Klostermann
- Tori Franks
- Jan Miller
- Ron Seibert
- Cleat Saunier

Zehren and Associates

- Pedro Campos, Principal / Land Planner
- Melissa Brandrup, Senior Architect
- Jesse Gregg, Land Planner
- Josh Rubin, Intern Architect

Alpine Engineering

- Gary Brooks, Principal / Professional Engineer
- Matt Wadey, Principal / Professional Engineer

Town of Eagle

- Tom Boni, Town Planner
- Kevin Sharkey, Town Engineer
- Matt Farrar, Assistant Town Planner

“West Eagle Site Planning”

PROJECT GOALS:

1) Develop a concept plan with appropriate density and scale for infill neighborhood.

2) Establish circulation framework for County-owned parcels consistent with Town of Eagle West Eagle Planning District.

3) Establish a cohesive pedestrian circulation system with strong connectivity to the existing neighborhoods, trails and paths.

4) Identify utility and infrastructure improvements, and upgrades necessary to support development.

5) Identify necessary right-of-way acquistion and easements required for access and circulation.

6) Involve Town of Eagle in the planning process and respond to current plans within the District.

7) Intregrate a variety of housing prototypes and unit types based on trends in market demand and housing needs.

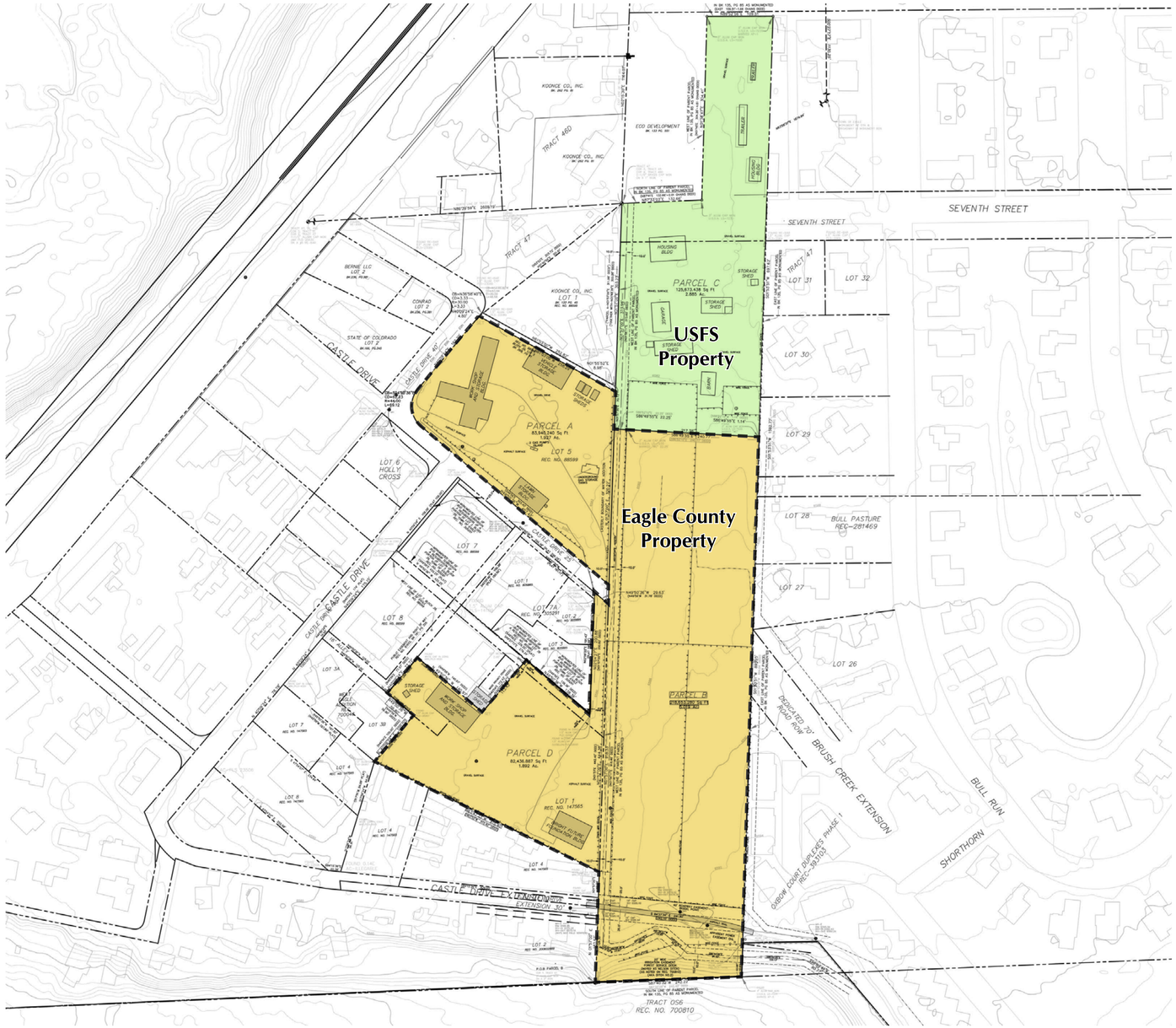
8) Create visualization and graphic communication tools to help convey vision, layout, size and scale, and overall character of proposed development.

SITE CONTEXT:

- 8.84 acres owned by Eagle County located in the West Eagle Planning District, within the Town of Eagle municipal boundary.
- Highway 6 “Grand Avenue” on the western edge of the district.
- Eagle Ranch wetlands and open space on the southern edge of the County owned parcel.
- Eagle River Corridor / Eagle River Park Planning Area to the north, across Highway 6.
- Site is adjacent to and in walking distance to the historic ‘old town’ and grid development pattern.
- Trail connection at south end of parcel.
- USFS adjacency to the north.
- Brush Creek Road Extension planned through parcel and district as major collector for Town of Eagle.

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

Not To Scale



EXISTING CONDITIONS:

- Horse pasture - large rectangle historically used for livestock grazing (USFS), fenced.
- County Facilities Management uses - storage, gas pump and workshops.
- Single Family, duplex, and multi-family residential surrounding land uses, one to two-story (no three story structures).
- Live flowing ditches through the the property, with water rights that need to be maintained and conveyed.
- Private structures observed within designated public right-of-ways.
- Proximity to established ' Bull Pasture' and 'West Eagle' residential neighborhoods.
- Brush Creek Extension right-of-way already identified and exists to the south of downtown.

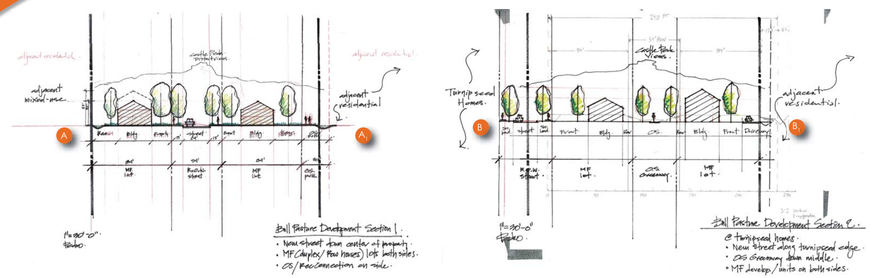
Final Draft and Preferred Alternative

Site Plan showing uses, connections, and redevelopment blocks

1. Commercial Use
2. Mixed Use
3. Senior Housing
4. Residential / Multi-family
5. Existing Residential
6. Shared Parking behind buildings
7. Connectivity with 6th and 7th Streets into original grid
8. Near 90-degree intersection
9. Connectivity to Prince Alley

Cross Sections Residential

Conceptual elevations of buildings, sidewalks, roads, etc.



Residential:

- Residential use on County property is contemplated to be a combination of senior care, workforce, and market rate housing
- Buildings could either be two or three story but must integrate architecturally with the surrounding neighborhoods
- New amenities should be added to the area such as pocket parks and good pedestrian connections
- Residential planning needs to allow for the phasing of units to meet market demand and not oversupply the community
- All new residential units must be built with sustainable building practices

WEST EAGLE SUB AREA PLAN

- Existing Town long range plan that identifies general land-uses and circulation within West Eagle.
- Plan prepared at the time Continuum of Care Retirement Community (CCRC) was identified for County Parcel.
- Plan in need of amendment to respond to current day conditions, new proposals from land owners including Eagle County, Koonce, and others.
- Current County West Eagle planning effort has laid the ground work for the Town of Eagle to amend the plan as a direct next step to enable development of infill parcels.

FUTURE LAND USE MAP DESIGNATIONS

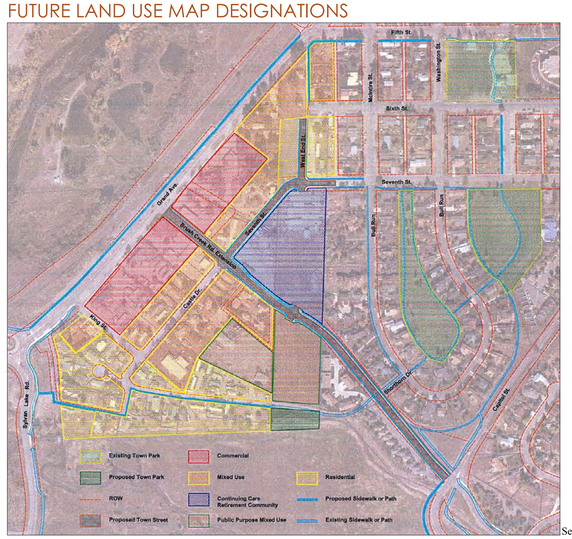


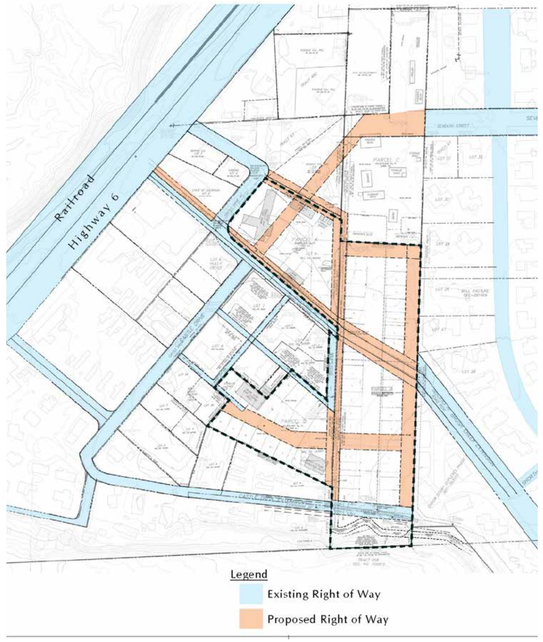
Figure 19: Land Use Map Designations

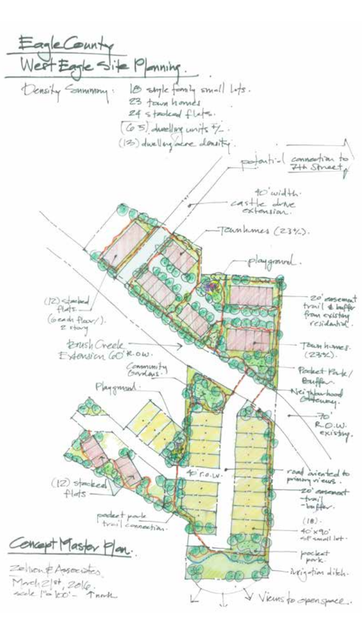
VI. FUTURE LAND USE MAP/ CIRCULATION PLAN

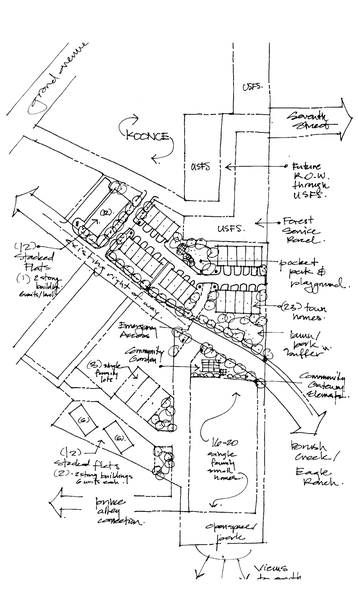
The Future Land Use Map map shows the general distribution of land uses recommended by this plan. Note that these are future land use planning designations and proposed road and pedestrian connections rather than Official Zone Districts and Street Map. Please consult the Town of Eagle Zoning Map for the current zone district designations and street map. Any significant redevelopment of property within the West Eagle Neighborhood is encouraged to use the Planned Unit Development Zone District. This provides flexibility to accommodate a mixture of uses, increased density, flexibility in site design and opportunity for the Town and applicant to agree on a more specific development approval that is beneficial to both applicant/developer and the Town.

See 11x17 Future Land Use Map Designations insert in back.

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com







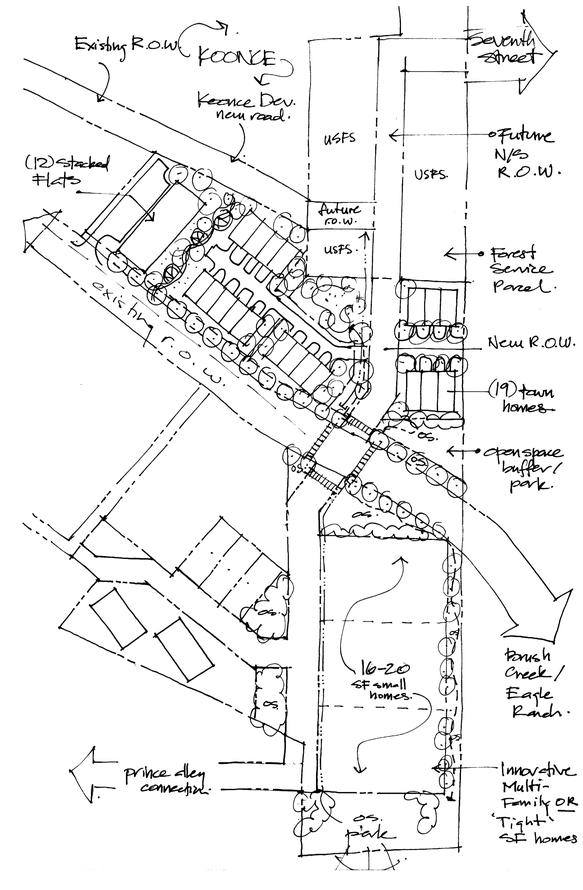
WEST EAGLE PLANNING PROCESS:

- Approximately (3) months of master planning with site visits and confirmation of existing conditions.

- Highly interactive with County Housing, Facilities staff, and Town of Eagle staff participation and input over sequence of (6) meetings.

- Alternative circulation routes explored to establish master circulation framework.

- Variety of housing types and densities studied.



ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

0 30’ 60’ 120’ 180’ 240’

SCALE: 1” = 60’-0”

Conceptual Master Plan

Illustrative Plan / Aerial Image Overlay

May 31, 2016

EAGLE COUNTY

DEVELOPMENT SUMMARY:

(24) Stacked Flats

(27) Townhomes

(16) Small Bungalows

(11) Single Family Lots

78 Dwelling Units Total

Total Area: 8.84 acres
Density: 8.8 d.u. / acre

Parks, Gardens, and Open Space
1.7 Acres (approx 19% of total area)

west eagle conceptual site planning

EAGLE COUNTY

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

0 30’ 60’ 120’ 180’ 240’

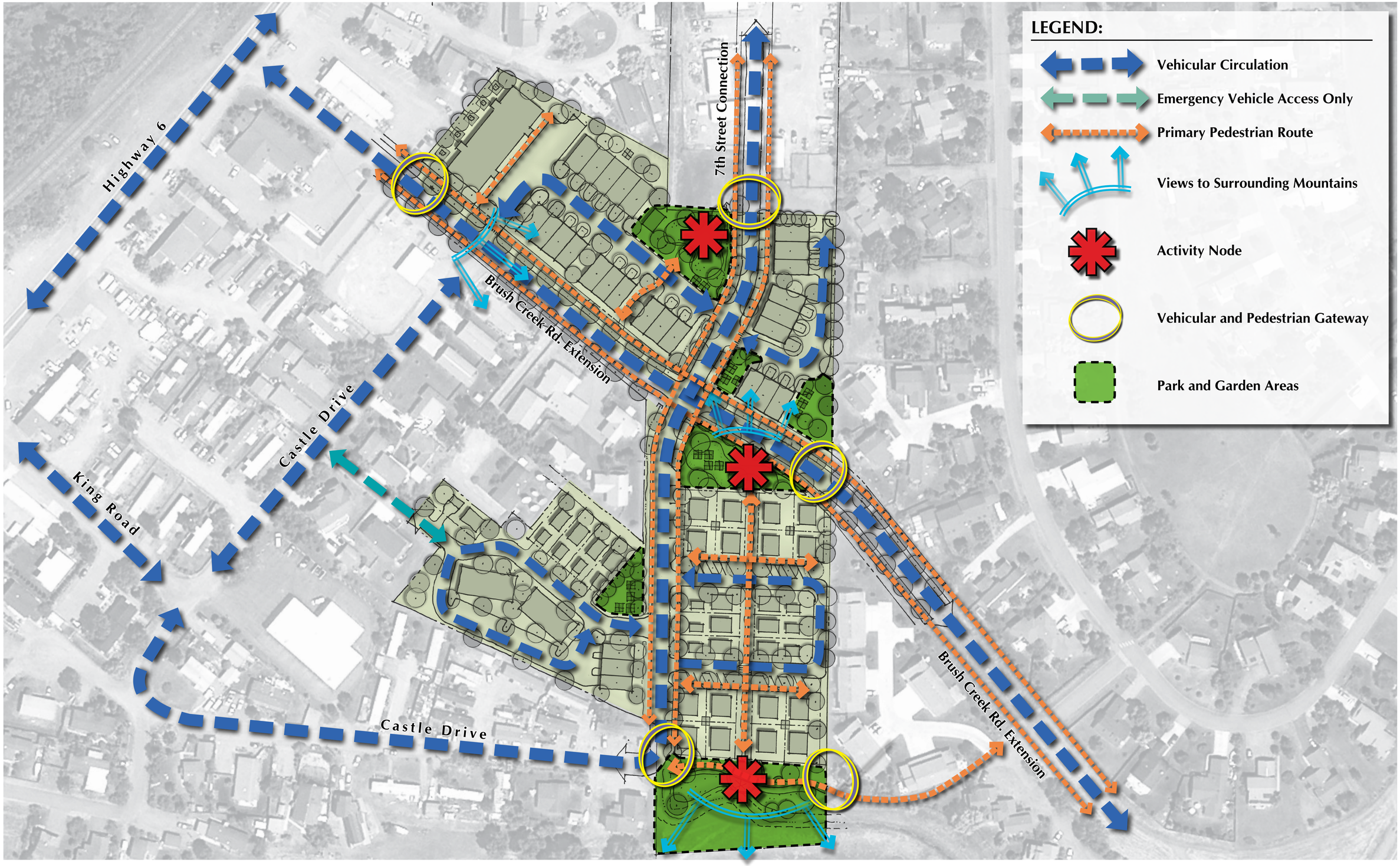
SCALE: 1” = 60’-0”

Conceptual Master Plan

Property Land Use Diagram

May 31, 2016

EAGLE COUNTY



ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

0 30' 60' 120' 180' 240'

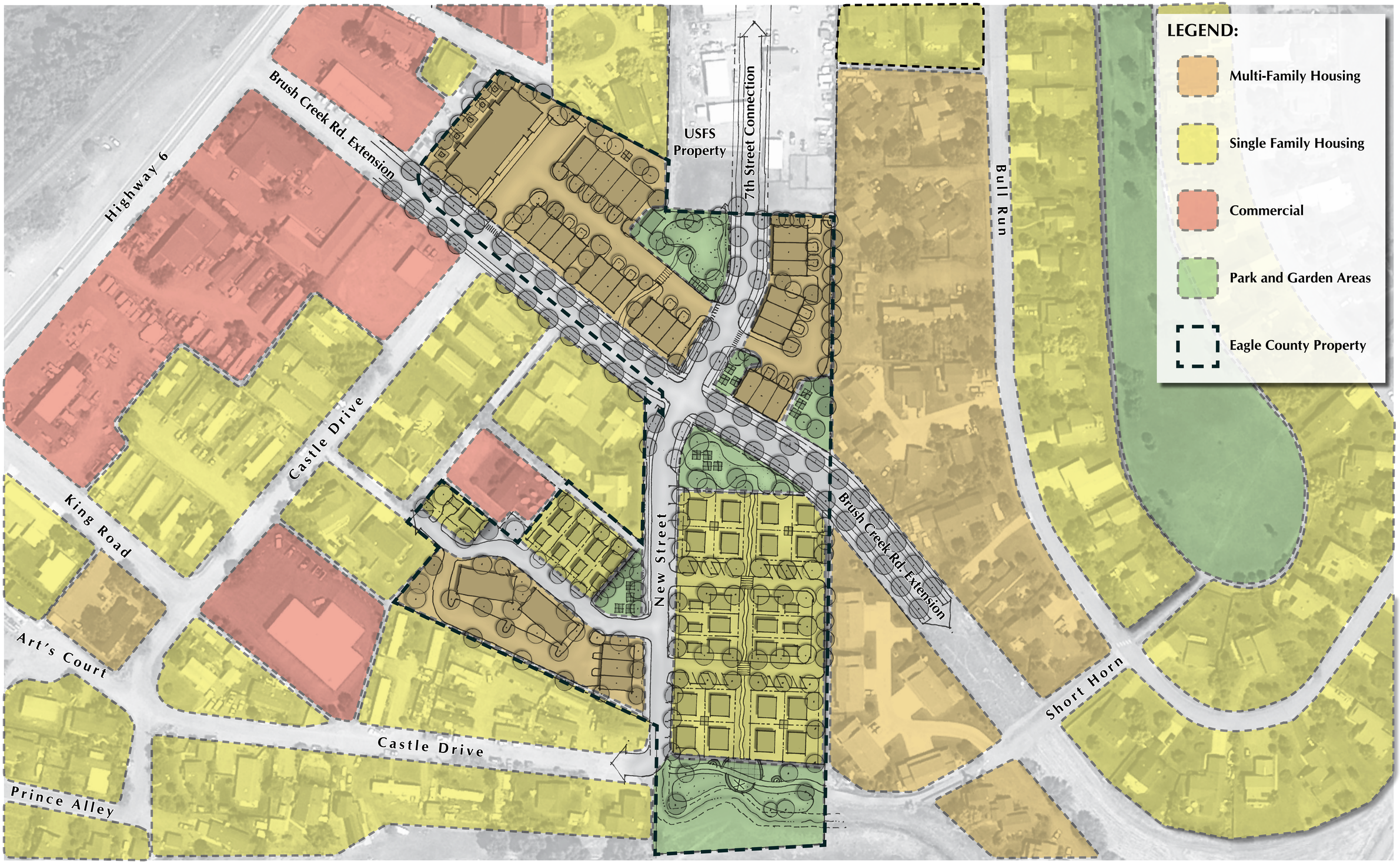
SCALE: 1" = 60'-0"

Conceptual Master Plan

Circulation and Neighborhood Framework Diagram

May 31, 2016

EAGLE COUNTY



west eagle conceptual site planning

EAGLE COUNTY

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

0 30' 60' 120' 180' 240'

SCALE: 1" = 60'-0"

Conceptual Master Plan

Neighborhood Land Use Diagram

May 31, 2016

EAGLE COUNTY

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

0 50' 100' 200' 300' 400'

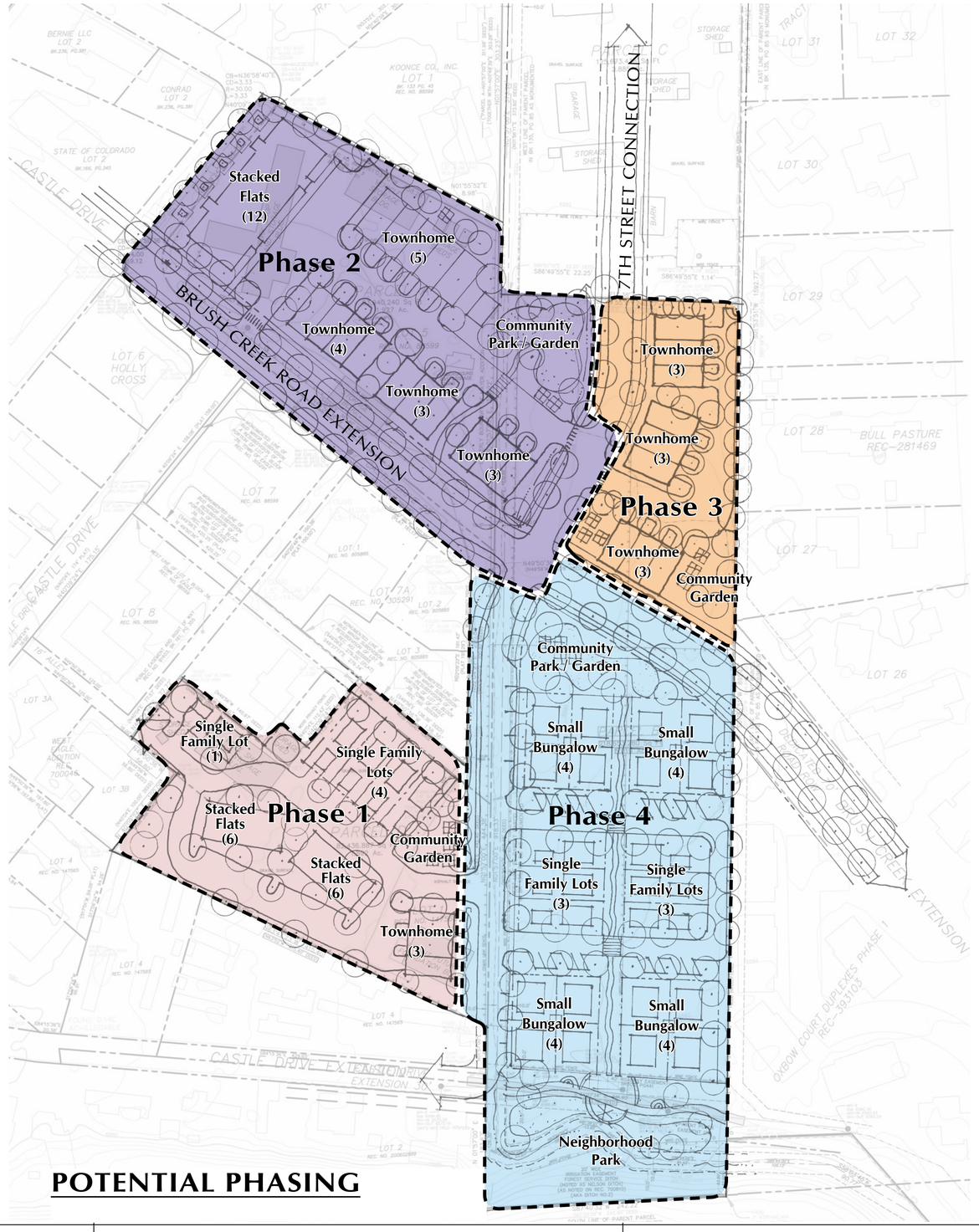
SCALE: 1" = 100'-0"

Conceptual Master Plan

Neighborhood Context / Koonce Parcel Adjacency

May 31, 2016

EAGLE COUNTY

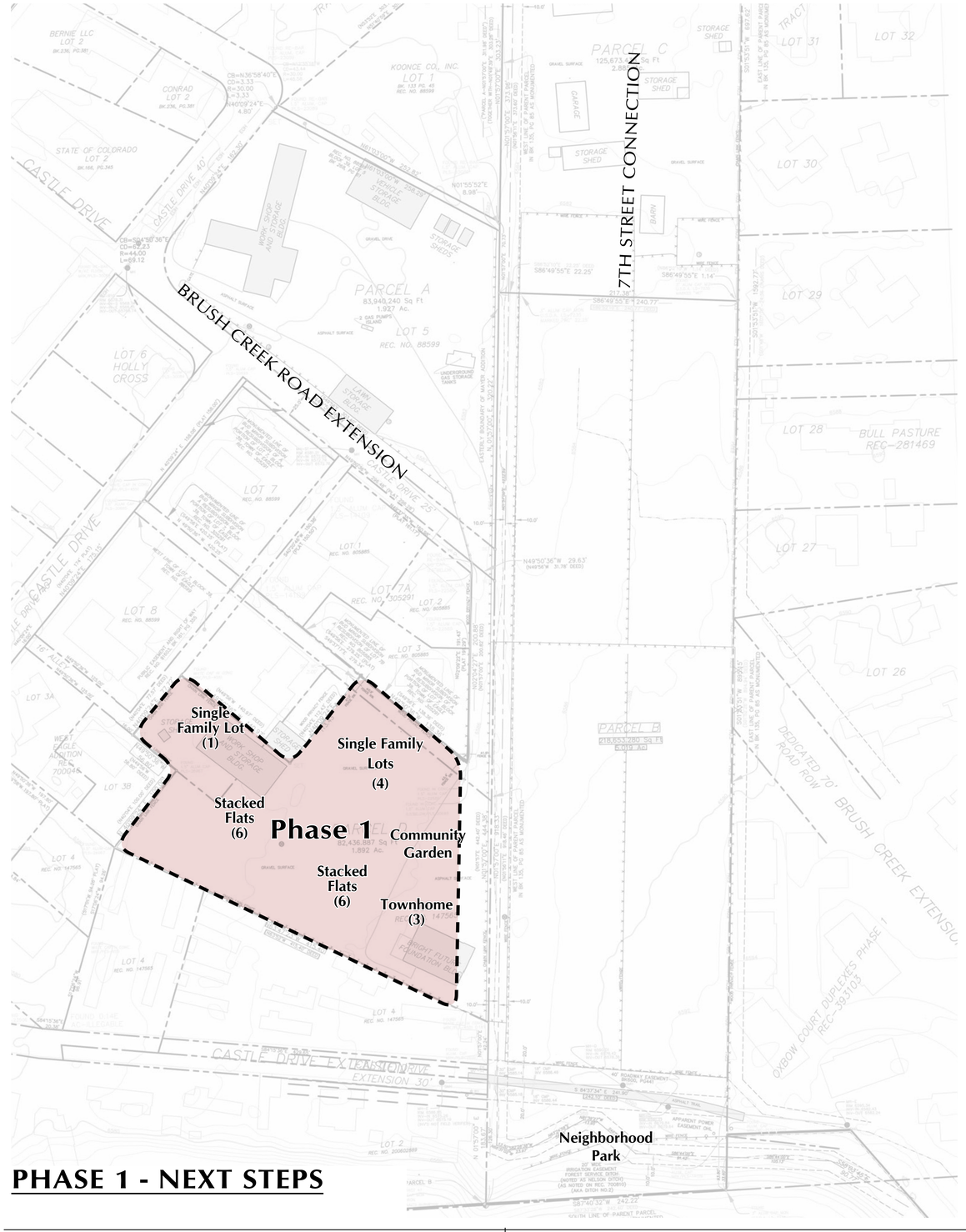


POTENTIAL PHASING

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

0 30' 60' 120' 180' 240'

SCALE: 1" = 60'-0"



PHASE 1 - NEXT STEPS

NEXT STEPS REQUIRED TOWARD A PHASE ONE

1) Monument Boundary Survey to identify easements, conflicts, overlaps.

2) Soils Report to inform road design and development.

3) Irrigation Ditch piping and routing, and conveyance of down stream water rights.

4) Existing Sewer System investigation and preliminary design.

5) Stormwater and Drainage report and analysis, and preliminary design.

6) Site Access study and traffic analysis. Traffic Impact Report and preliminary design of roadways, sidewalks, trails and major intersections.

7) Upgrades to Site Utilities - water system, sanitary sewer system, electrical, gas, phone and cable.

8) Preliminary Level of Design required to fully understand costs and complexity of project.

9) Next procedural step would be preparation of Sketch Plan submittal per Town of Eagle requirements, possibly concurrent with amendment to West Eagle SubArea Plan amendment.

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976, Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

0 30’ 60’ 120’ 180’ 240’

SCALE: 1” = 60’-0”

Conceptual Master Plan

Illustrative Plan / Aerial Image Overlay

May 31, 2016

OPTION 1 - PREFERRED

16 BUNGALOW LOTS

6 SINGLE FAMILY LOTS

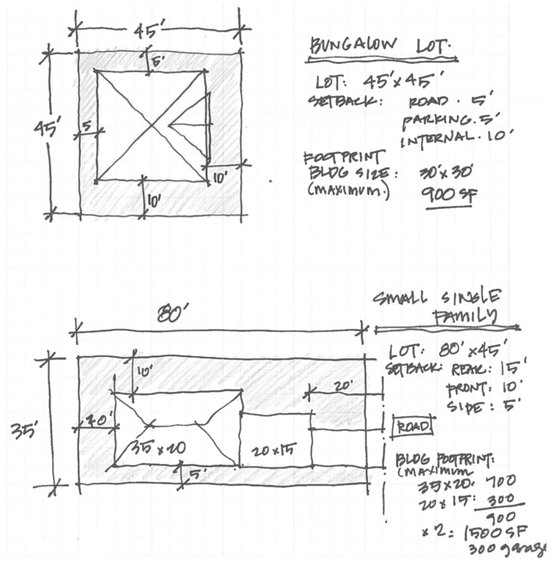
22 UNITS

OPTION 2

8 BUNGALOW LOTS

10 SINGLE FAMILY LOTS

18 UNITS

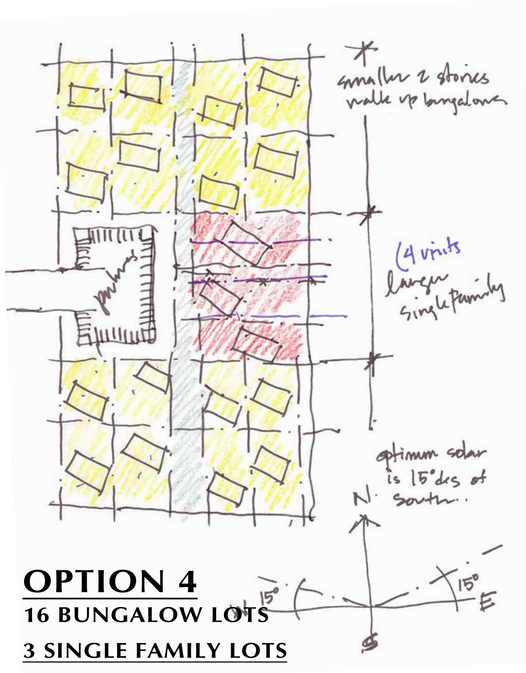


PROTOTYPICAL LOT DIMENSIONS

OPTION 3

16 SINGLE FAMILY LOTS

16 UNITS

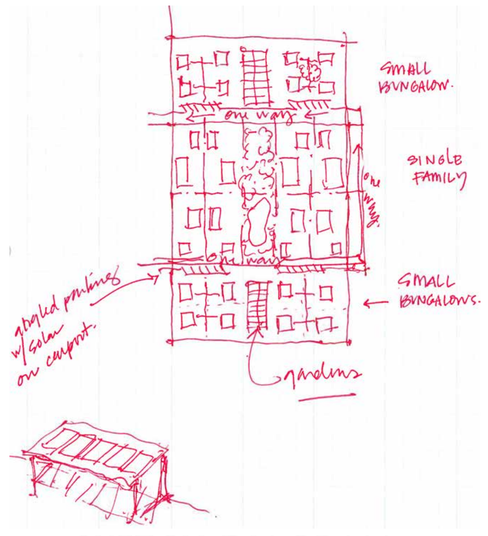


OPTION 4

16 BUNGALOW LOTS

3 SINGLE FAMILY LOTS

18 UNITS



SKETCH DIAGRAM

KEY PLAN

area of study

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

0 30' 60' 120' 180' 240'

SCALE: 1" = 60'-0"

Conceptual Master Plan

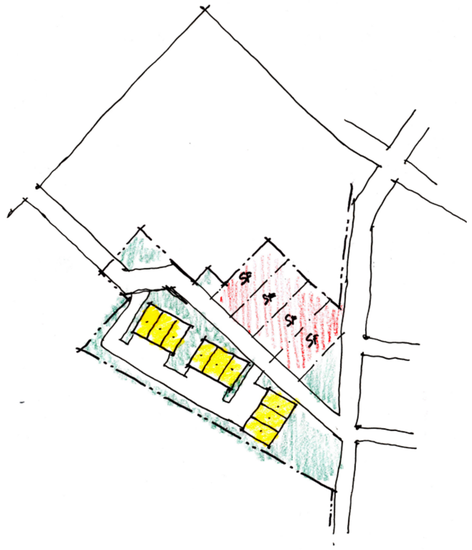
Conceptual lot prototype analysis

April 20, 2016

EAGLE COUNTY

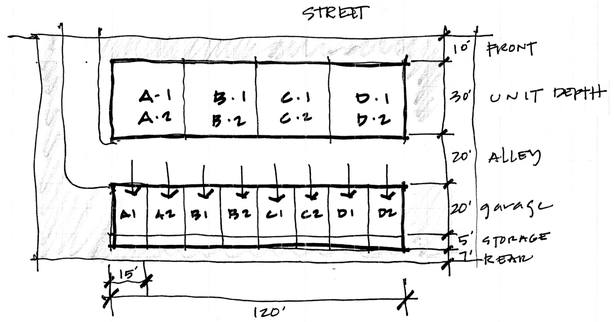
OPTION 1 - PREFERRED

3 TOWNHOMES
12 STACKED FLAT
5 SINGLE FAMILY LOTS
20 UNITS



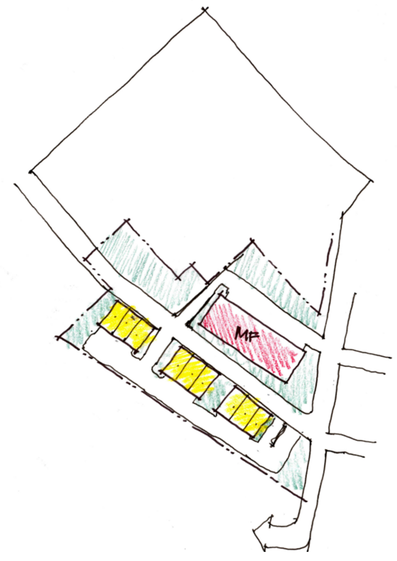
OPTION 2

9 TOWNHOMES
4 SINGLE FAMILY
13 UNITS



MULTI FAMILY
W/ PARKING & STORAGE

PROTOTYPICAL LOT DIMENSIONS

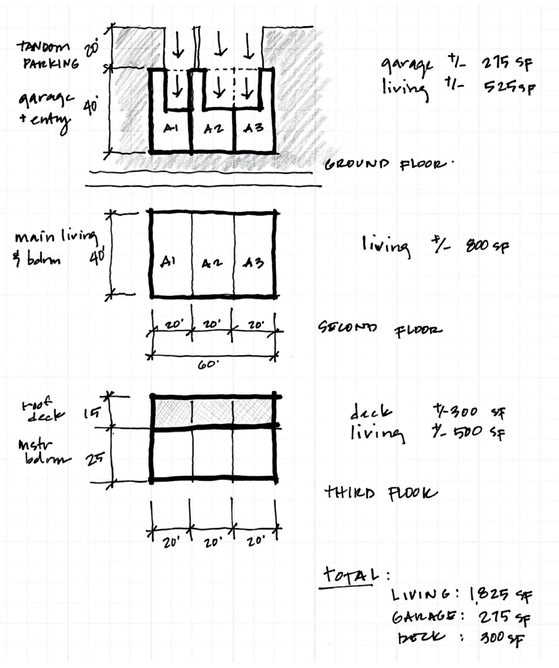


OPTION 3

9 TOWNHOMES
8 STACKED FLAT
17 UNITS

OPTION 4

16 STACKED FLATS
16 UNITS



PROTOTYPICAL LOT DIMENSIONS

KEY PLAN

area of study

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

0 30' 60' 120' 180' 240'

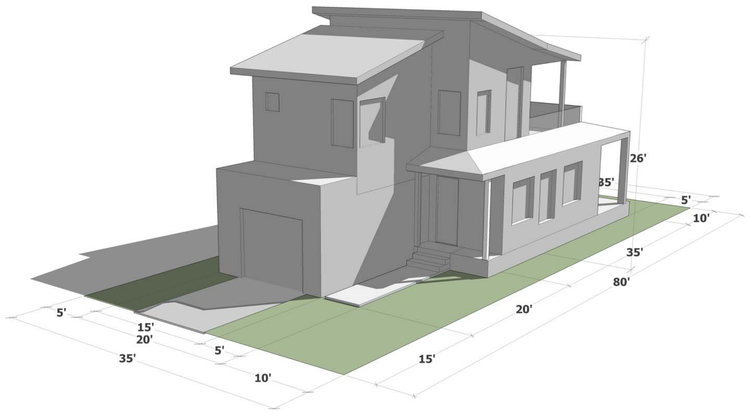
SCALE: 1" = 60'-0"

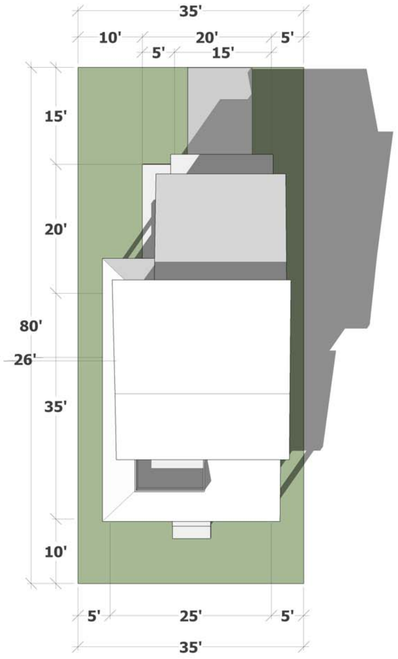
SINGLE FAMILY

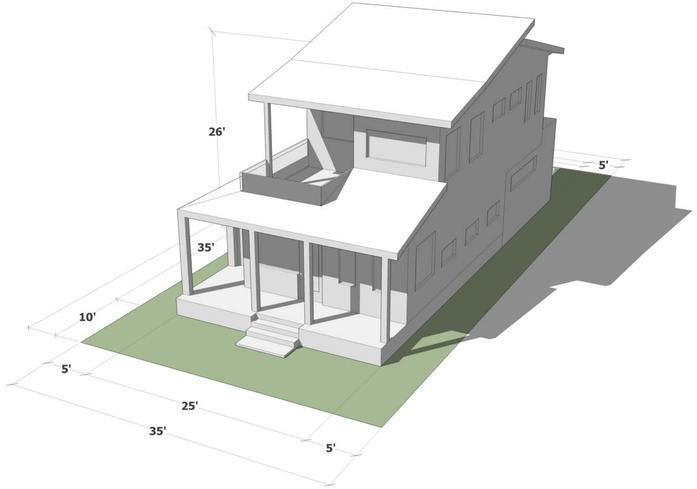
2 Level single family home with 1 car garage and tandem spot, rear alley access

Habitable Area = +/- 1,750 GSF

Garage = +/- 300 GSF







SINGLE FAMILY

Single Family Home with one car garage

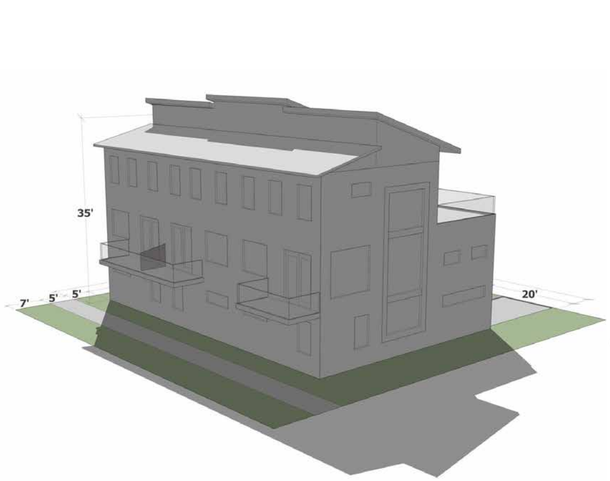
Lot Size	2,800	SF	(35' x 80')
Building Footprint	1,475	GSF	
Parking	1 garage space		
	1 driveway space		
Unit Size			
Habitable	1,600	GSF	
Garage/ Mechanical	300	GSF	
Building separation	(from roof overhangs)		
Front	10'-0"		
Rear	15'-0"		
Side	5'-0"		
Max Building Height	35'-0"		

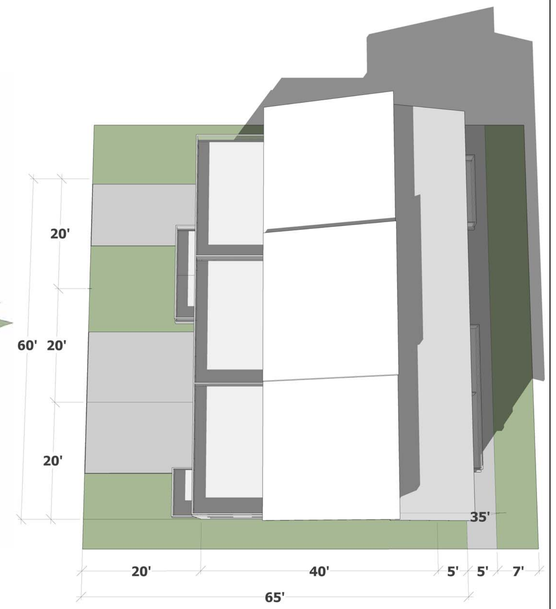
TOWNHOUSE

3 level townhouse, vertically separated with 1 car garage and tandem spot in driveway

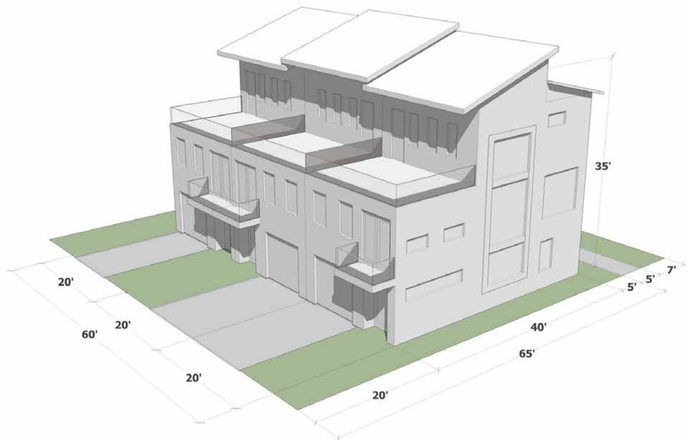
Habitable Area = +/- 1,500 GSF

Garage = +/- 300 GSF





TOWNHOUSE SITE PLAN



TOWNHOME

3-level townhome, vertically separated

Lot Size	1,200	SF	(60' x 20')
Building Footprint	800	GSF	
Parking	1 garage space		
	1 driveway space		
Unit Size			
Habitable	1,650	GSF	
Garage/ Mechanical	300	GSF	
Building separation	(from roof overhangs)		
Front	5'-0"		
Rear	20'-0"		
Side	0'-0"		
Max Building Height	35'-0"		

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

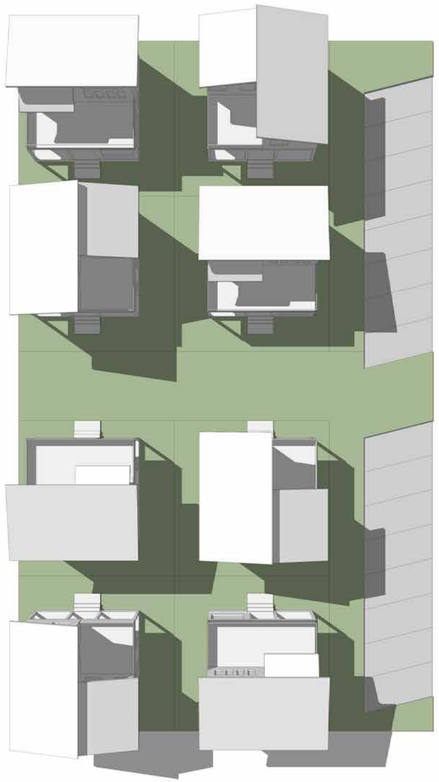
BUNGALOW COURT

2 Level small lot living with angled parking

Type A = +/- 1,300 GSF

Type B = +/- 1425 GSF

BUNGALOW- TYPE A



BUNGALOW SITE PLAN

BUNGALOW- TYPE B

BUNGALOW

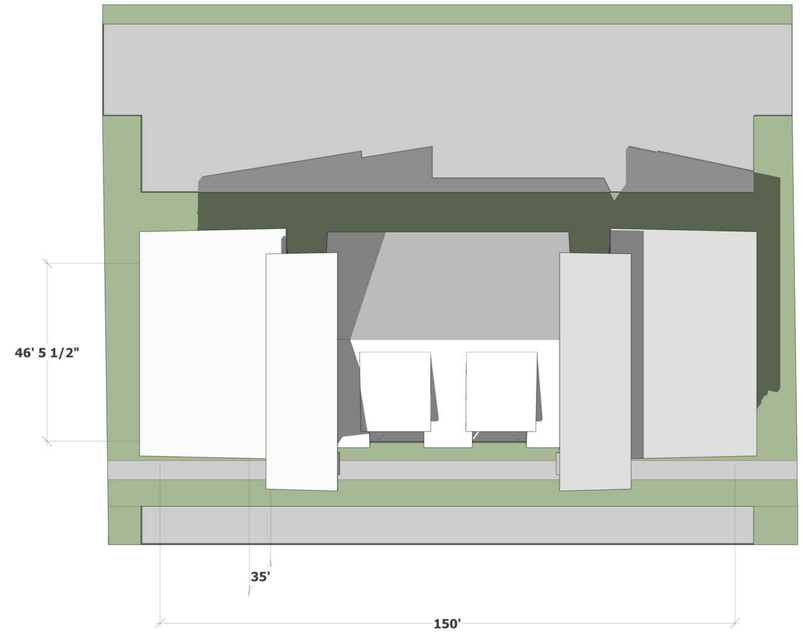
Small Single Family home

Lot Size	2,025	SF	(45' x 45')
Building Footprint	900	GSF	
Parking	2 spaces on street angeled, assigned		
Unit Size			
Habitable	1,350	GSF	
Garage/ Mechanical	150	GSF	
Building separation	(from roof overhangs)		
Front	10'-0"		
Rear	10'-0"		
Side	5'-0"		
Max Building Height	35'-0"		

MULTI-FAMILY HOUSING

2 Levels of 1 and 2 bedroom condos in one buiding.

Unit Sizes = varies 950 GSF to 1,350 GSF

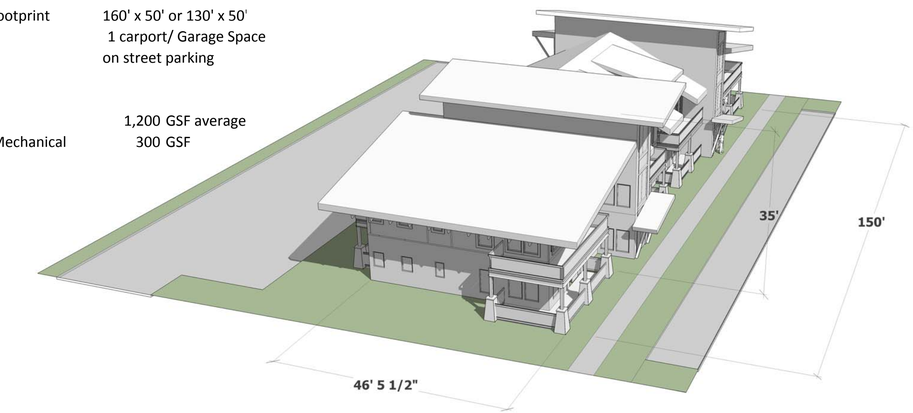


MULTI FAMILY SITE PLAN

MULTIFAMILY

2 levels of condo/ apartments either 6 or 12 units per building

Building footprint	160' x 50' or 130' x 50'
Parking	1 carport/ Garage Space on street parking
Unit Size	
Habitable	1,200 GSF average
Garage/ Mechanical	300 GSF



ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

west eagle conceptual site planning

EAGLE COUNTY

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

Not To Scale

3D Massing Model Aerial View

View Looking North

May 31, 2016

EAGLE COUNTY

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

Not To Scale

3D Massing Model Aerial View

View Looking Southeast

May 31, 2016

EAGLE COUNTY

EAGLE COUNTY

west eagle conceptual site planning

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

Not To Scale

3D Massing Model

Birds Eye View

May 31, 2016

EAGLE COUNTY

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

Not To Scale

3D Massing Model

Birds Eye View

May 31, 2016

EAGLE COUNTY

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

Not To Scale

3D Massing Model

Neighborhood Park

May 31, 2016

EAGLE COUNTY

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

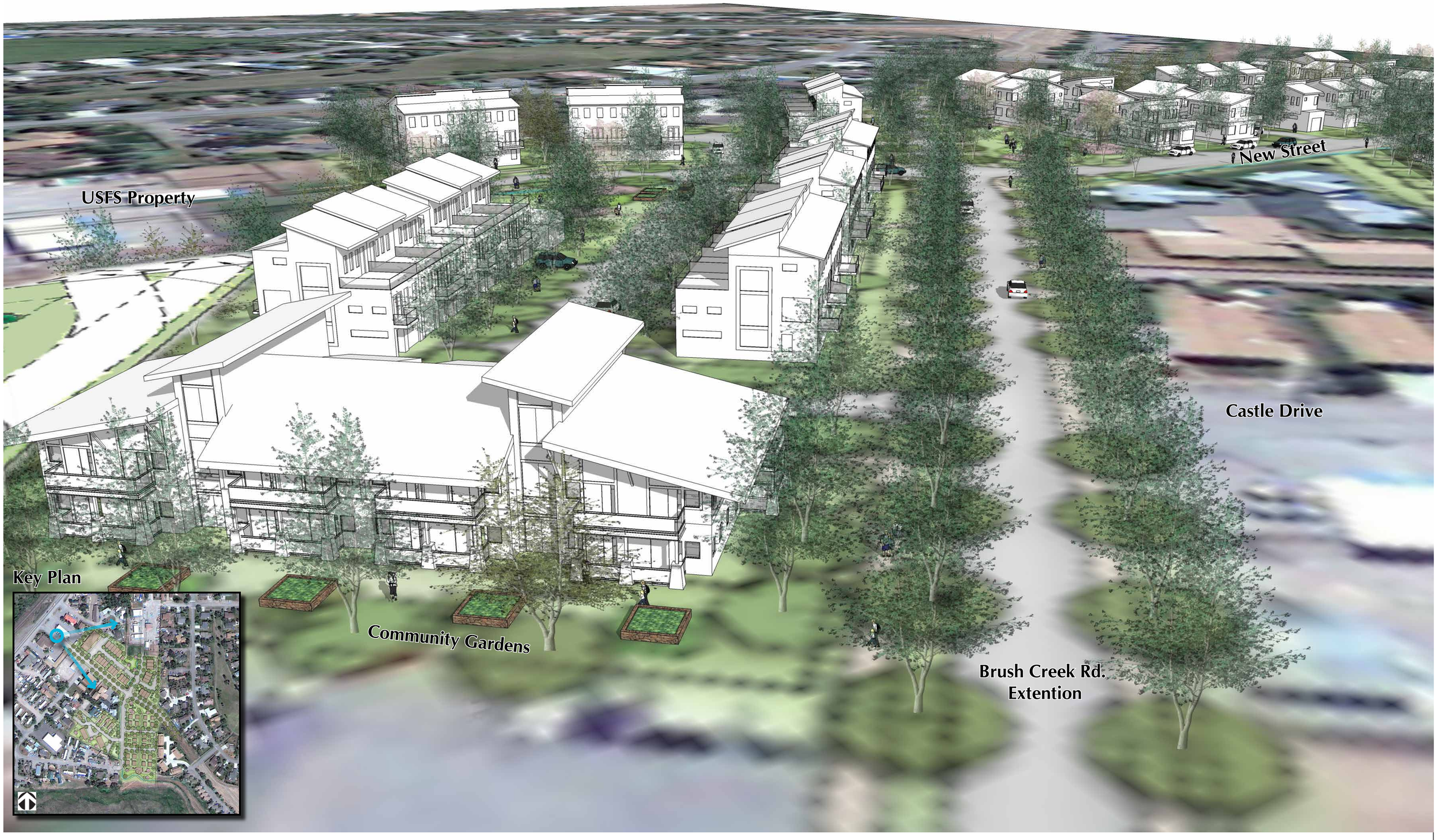
Not To Scale

3D Massing Model

Townhomes & Community Gardens

May 31, 2016

EAGLE COUNTY



ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

Not To Scale

3D Massing Model

Stacked Flats & Brush Creek Rd. Extension

May 31, 2016

EAGLE COUNTY

Key Plan

3D Massing Model

Townhomes

May 31, 2016

Not To Scale

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

EAGLE COUNTY

Key Plan

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

Not To Scale

3D Massing Model

Open Space

May 31, 2016

3D Massing Model

Birds Eye View

May 31, 2016

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

EAGLE COUNTY

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

Not To Scale

3D Massing Model

Birds Eye View

May 31, 2016

EAGLE COUNTY

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

Not To Scale

3D Massing Model

Birds Eye View

May 31, 2016

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

Not To Scale

3D Massing Model

Birds Eye View

May 31, 2016

EAGLE COUNTY

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

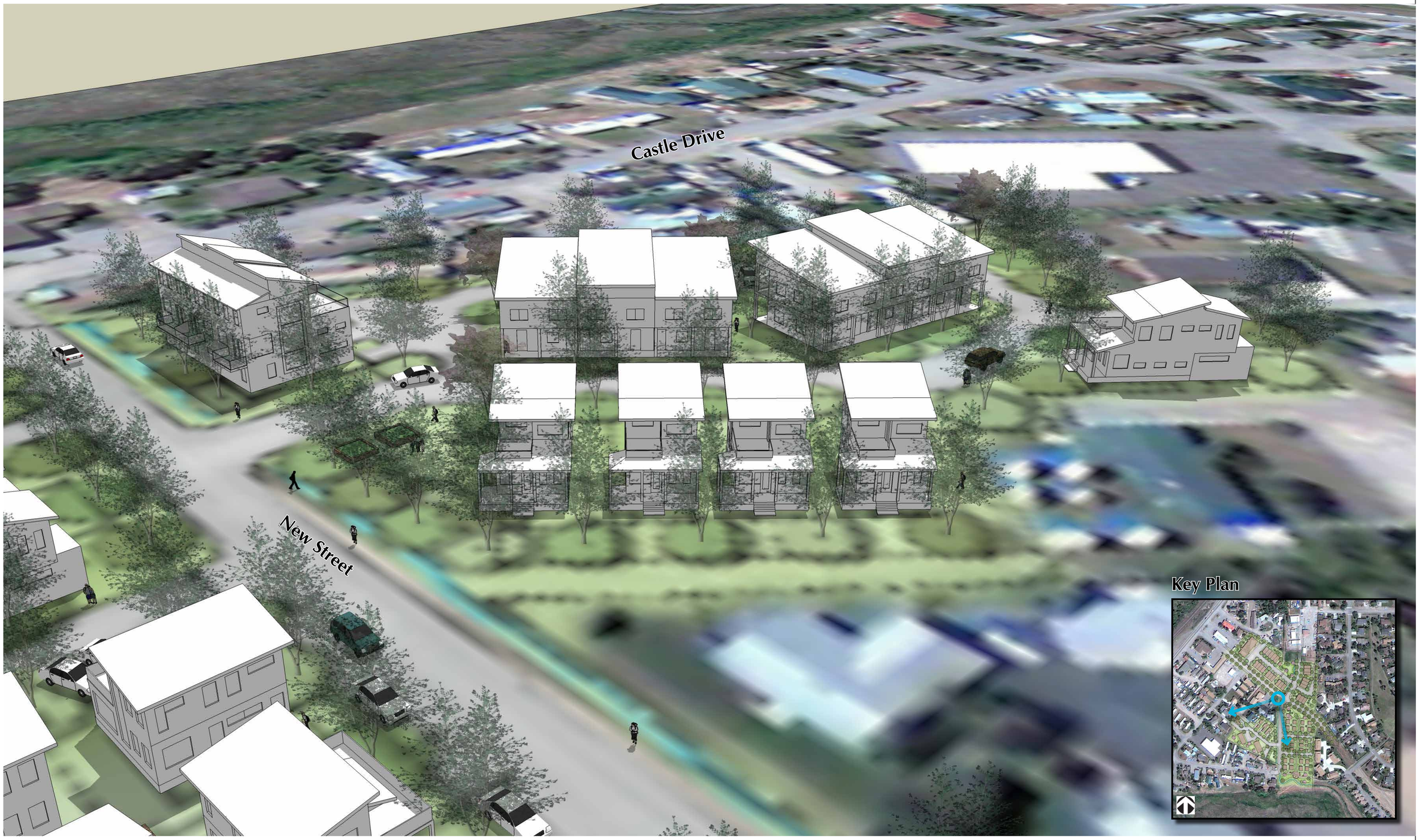
Not To Scale

3D Massing Model

Stacked Flats & Single Family Lots

May 31, 2016

EAGLE COUNTY



ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

Not To Scale

3D Massing Model

Stacked Flats & Single Family Lots

May 31, 2016

EAGLE COUNTY

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

Not To Scale

3D Massing Model

Townhomes

May 31, 2016

EAGLE COUNTY

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

Not To Scale

3D Massing Model

Community Gardens & Brush Creek Rd. Extension

May 31, 2016

EAGLE COUNTY

ZEHREN AND ASSOCIATES, INC.
ARCHITECTURE PLANNING INTERIORS LANDSCAPE ARCHITECTURE
PO Box 1976,Avon, Colorado .(970) 949-0257 F.(970)949-1080 www.zehren.com

Not To Scale

3D Massing Model

Community Gardens & Brush Creek Rd. Extension

May 31, 2016

The Town of Eagle
Box 609 • Eagle, Colorado 81631
(970) 328-6354 • Fax 328-5203
Meetings:
2nd and 4th Tuesdays

CERTIFICATE OF RECOMMENDATION

TO: Planning and Zoning Commission

FROM: Department of Community Development

DATE: Tuesday, June 21, 2015

PROJECT NAME: Sylvan Circle Major Development Permit

FILE NUMBER: DR16-03

APPLICANT: Jonathan Warner

STAFF CONTACT: Tom Boni, Town Planner

APPLICABLE SECTION(S) OF MUNCIPAL CODE:

Section 4.06 (Development Review)
Section 4.07 (Development Standards)

EXHIBIT

A. Aerial Photo
B. Sylvan Lake Roundabout PUD Guide
C. Final Plat
D. Application Packet

PUBLIC COMMENT: None received to date

REQUEST:

The applicant is requesting Development Plan review of a multi-family development containing 42 residential units in seven building of various sizes on a 4.6 acre property zoned Sylvan Lake Planned Unit Development.

DISCUSSION:

This property originally proposed as a site for a Kum n Go Convenience Store/Gas Station was ultimately zoned the Sylvan Lake Round-About Planned Unit Development. Please see attached Planned Unit Development Guide (PUD Guide). It allows for a maximum of 50 dwelling units (50,000 square feet) or commercial development or a combination of commercial and residential development. It also requires the dedication of an open space easement along Brush Creek and the construction of a pedestrian/bicycle trail. This trail is envisioned to become part of an integrated system linking Eagle Ranch with the Fairgrounds. The residential density of the overall development is approximately 9 dwelling units per acre. The net density of the development excluding the open space easement is approximately 13.5 dwelling units per acre. All of the interior access roads are part of the development and will be privately maintained.

The original zoning of this property when it was annexed into the Town of Eagle as part of land acquisition necessary to provide a Highway 6 access to Eagle Ranch was Residential Multi-Family.

Staff has been working with Creative West Architects on this development plan application over the last six months during which time the applicant has purchased the property. One of the key considerations to development of the property is access to Sylvan Lake Road and Highway 6. The applicant at staff's suggestion has moved the connection to Sylvan Lake Road as far to the south as possible. This provides the maximum distance from the roundabout and also facilitates the provision of the required sight distance. Access along Highway 6 is more difficult. The applicant's preference is for a right in-right out access configuration. However, if this is not possible, the applicant has agreed to have only one access to Sylvan Lake Road.

The Town has engaged Fox and Tuttle Traffic Engineers to work on behalf of the Town to evaluate and make a recommendation on this access to Highway 6. If it is determined by our traffic consultant to provide safe access, staff believes that it has secondary benefits to the overall circulation system. In review with Public Works and our Police Department we discussed the benefits of incorporating a deceleration lane and restriping of the Sylvan Lake Roundabout to operate as a full two lane roundabout. We believe that by allowing this limited access onto Highway 6, less people will be making left hand turns onto Sylvan Lake Road which will improve the functioning of this key roadway. We will work with the Fire District to better understand their needs and explain our concerns with drivers that will make left hand turns into the development from Highway 6 if the curb is not extended to prevent this movement.

DEVELOPMENT REVIEW STANDARDS (SECTION 4.06)

The general requirements for a Development Plan Review as described in Section 4.06.060.D of the Land Use and Development Code are:

1. Compliance with the Town's ordinances, regulations, goals, policies and plans.

2. Any adverse impacts resulting from the proposed development are reasonably and adequately mitigated by the applicant to minimize such impacts.

FINDINGS FOR DEVELOPMENT REVIEW STANDARDS

Standard #1:

As discussed above, this property is zoned the Sylvan Lake Round-About Planned Unit Development. The regulations contained within that document act as the land use regulations for the property.

The development is in general compliance with the PUD Guide and the Land Use and Development Code.

The Town's goals, policies and plans relevant to this land use application are contained within the Eagle Area Community Plan (EACP).

A finding of compliance with the EACP was made during the approval of the Planned Unit Development for this property. However, at this Development Plan review stage of the process, specifically required by the PUD Guide, we are evaluating a more detailed development plan as to its compliance with the EACP.

The Land Use Designation provided for this property in the EACP in Conservation Oriented Development.

The most relevant Intent Statement of this Designation are as follows:

1. "Balance conservation and development objectives"

2. "Preserve attributes of high conservation value as determined practicable and appropriate on a site by site basis …"

3. Set aside an appropriate amount of land as open space to foster compact development …"

This property is located within the Western Gateway Character Area. The most relevant Planning Principle identified for this area is to "Maintain an attractive, well managed landscape and distribution of land uses at the Town's western boundary."

In the Housing Chapter of the EACP the first policy is "to support and contribute to efforts to address the needs for affordable housing." And the second policy is to promote the preservation and or creation of a wide range of housing units…."

Chapter 6 of the EACP entitled Community Design and Appearance encourages high quality design standards, a pedestrian friendly community and the creation of a "sense of place".

It is staff's opinion that the proposed development is in general compliance with the above reference policies of the EACP.

Standard #2:

Any adverse impacts resulting from the proposed development are reasonably and adequately mitigated by the applicant to minimize such impacts.

The staff believes that there are several additional measures that the applicant could provide to minimize adverse impacts of this development.

1. Additional landscape treatment along the back side of the Eagle Ranch Landscape Easement to buffer the development from the surrounding roadway. Incorporation of a stone wall with additional trees and bushes should be evaluated. This would provide a more managed transition from the more intensively used Round About and the Development. It would contribute to the visual quality experienced by travelers approaching this key intersection and also provide valuable sense of privacy to the residences of the development. This is one of the key planning considerations for this property when evaluating how this land use fits into its context. The building are lower than the surrounding landscaping and need a better transition..

2. Placement of one or two benches with shade trees along the proposed creek-side path.

3. Removal of patios from water and sewer easement. These patios should also be buffered from the access road. Applicant should evaluate strategies on how this might be best accomplished to provide a transition from the private patio space to the more public access drive. One idea is to use the fence railing detailing of the second story patios.

4. If the location of the proposed right in right out access is approved by our traffic consultant, staff would request the applicant consider the practicality of providing a short deceleration lane and restriping of the roundabout to allow through movement on the right hand lane.
5. Re-direct off site storm flow into the onsite storm pipe to provide better treatment through detention pond. We are concerned with the proposed separate discharge point. Staff believes this will help maintain water quality of Brush Creek.

6. Evaluate existing lighting of pedestrian crossing at round about to determine if additional light pole is necessary.

7. Show extension of 10' wide foot path to the North West connecting the Highway 6 Bridge to ensure that it is coordinated with overall plan.

8. Work with staff to prepare open space easement to be dedicated at tine of Development Plan approval.

9. Work with staff to design sewer main serving the North West building. Current design needs to be revised to comply with code.

10. Placement of trees need to be evaluated to ensure they are not located in water and sewer easements.

STAFF RECOMMENDATION:

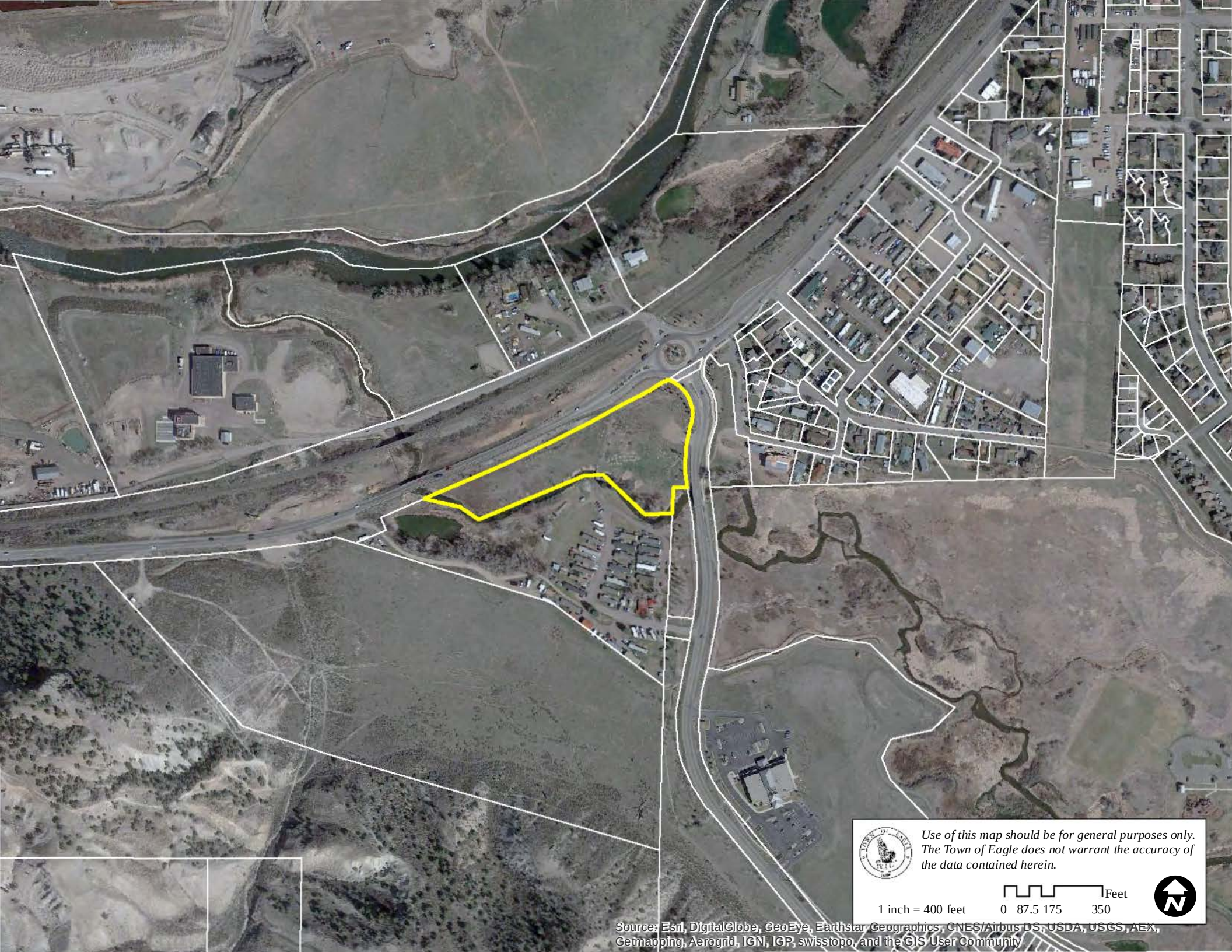
A. Staff recommends continuance of this application to the Planning and Zoning Commission's meeting of July 5, 2016 to address the above concerns and receive evaluation of our traffic consultant, Fox and Tuttle.

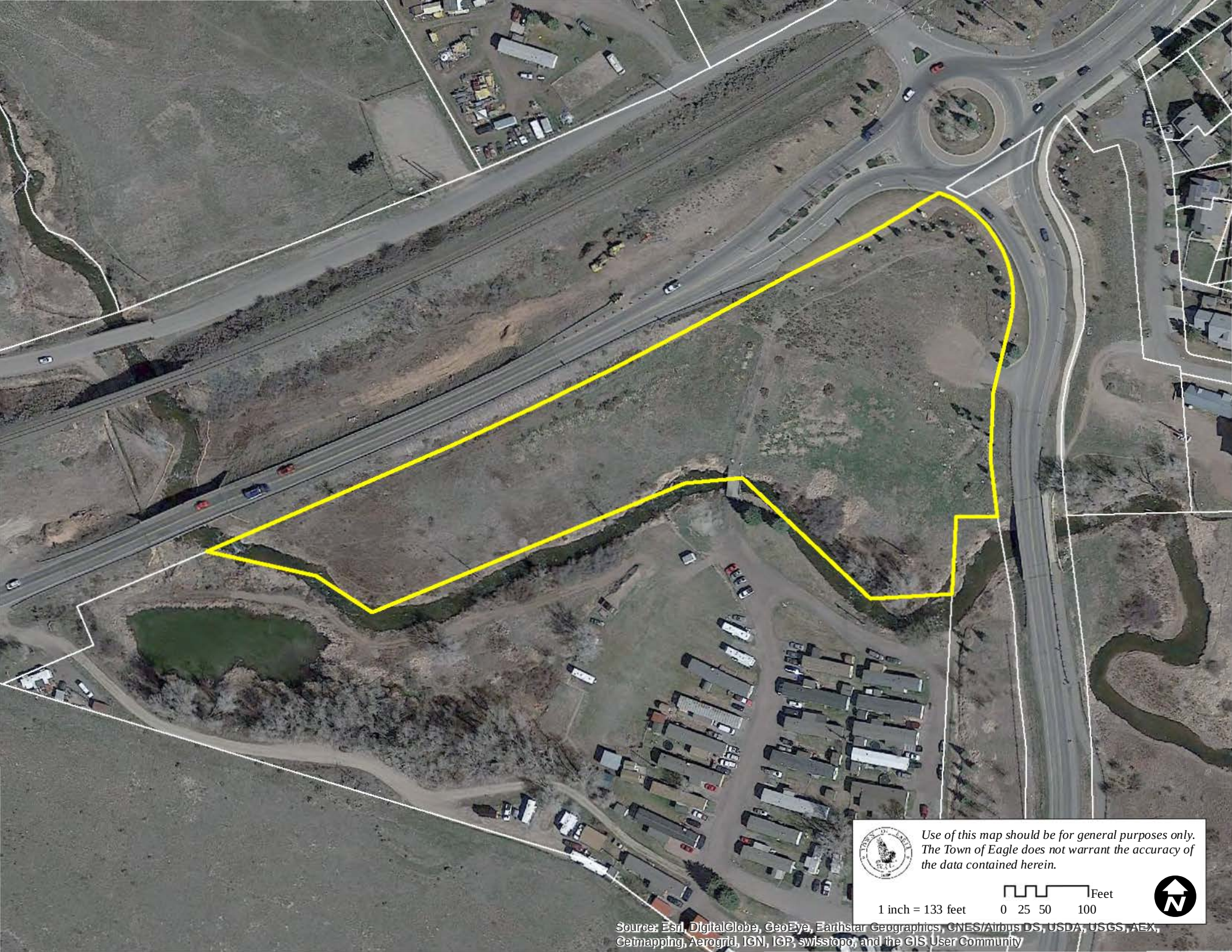
PLANNING & ZONING COMMISSION

1. Questions of Staff/Applicant

2. Public Comment

3. Deliberations


Use of this map should be for general purposes only. The Town of Eagle does not warrant the accuracy of the data contained herein.
Feet
1 inch = 400 feet
0 87.5 175 350
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community


Use of this map should be for general purposes only. The Town of Eagle does not warrant the accuracy of the data contained herein.
Feet
1 inch = 133 feet
0 25 50 100
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

Eagle County, CO
Teak J Simonton
Pgs: 13
REC: $71.00
DOC: $0.00

201324382
12/10/2013
03:05:28 PM

ORDINANCE NO. 25
(Series of 2013)

AN ORDINANCE OF THE TOWN OF EAGLE, COLORADO, AMENDING THE ZONE DISTRICT MAP OF THE TOWN OF EAGLE BY APPROVING A COMMERCIAL PLANNED UNIT DEVELOPMENT WITHIN THE TOWN OF EAGLE TO BE KNOWN AS THE SYLVAN LAKE ROUND-ABOUT PLANNED UNIT DEVELOPMENT AND APPROVING A SITE SPECIFIC DEVELOPMENT PLAN ESTABLISHING A VESTED PROPERTY RIGHT PURSUANT TO ARTICLE 68 OF TITLE 24, C.R.S., AND SECTION 4.17.060 OF THE EAGLE MUNICIPAL CODE.

WHEREAS, by Title 4 of the Eagle Municipal Code, the Town of Eagle enacted a comprehensive zoning ordinance for the Town, known as the Town of Eagle Land Use and Development Code; and

WHEREAS, the Board of Trustees of the Town of Eagle has received an application from Eagle Ranch Lot Investors, LLC, a Colorado limited liability company (the "Applicant"), to amend the zone district map by approving a Commercial Planned Unit Development ("C/PUD") for the real property described as Lot 1, Filing 2, West Eagle Addition, Town of Eagle, County of Eagle, State of Colorado (the "Property") in the particulars hereinafter set forth; and

WHEREAS, the Town of Eagle Planning and Zoning Commission recommended approval of the PUD Zoning Plan on March 19, 2013; and

WHEREAS, the Board of Trustees approved a P.U.D. Zoning Plan on August 13, 2013, subject to conditions; and

WHEREAS, the Applicant submitted an application for a P.U.D. Development Plan, which was found by the Town to be complete on January 15, 2013; and

WHEREAS, the Planning and Zoning Commission, following a public hearing, recommended approval of a revised P.U.D. Development Plan on September 3, 2013; and

WHEREAS, notice of a public hearing on Applicant's application for approval of the proposed P.U.D. Development Plan and rezoning of the Property has been given as required by Section 4.03.060 and 4.17.040 of the Eagle Municipal Code; and

WHEREAS, a public hearing considering said Applicant's proposed P.U.D. Development Plan and rezoning of the Property was held on October 22, 2013 as required by Chapter 4.11 of the Eagle Municipal Code; and

WHEREAS, following conclusion of the public hearing, the Board of Trustees approved the proposed P.U.D. Development Plan on October 22, 2013, for the proposed Commercial Planned Unit Development; and

WHEREAS, The Board of Trustees finds and determines that the Applicant has provided sufficient evidence that the proposed C/PUD is desirable because one or more of the purposes set forth in Section 4.11.020 of the Eagle Municipal Code have been met; and

WHEREAS, the Board of Trustees finds and determines that the Applicant has met its burden of providing evidence that the proposed C/PUD is in conformity with the Town's goals, policies, and master plan, including the Eagle Area Community Plan, and that the Applicant has met its burden of providing evidence that the area in question possesses geological, physiological, and other environmental conditions compatible with and characteristic of the uses requested, and is compatible with surrounding land uses, and that the advantages of the C/PUD requested outweigh the disadvantages of such requested zoning designation; and

WHEREAS, the Applicant has requested the vested property rights to be granted pursuant to Article 68 to Title 24, C.R.S. and Section 4.17.030 of the Eagle Municipal Code be extended from the statutory period of three (3) years to five (5) years; and

WHEREAS, the Board of Trustees has agreed to designate the P.U.D. Development Plan, as approved, as the site specific development plan for the Sylvan Lake Round-About Planned Unit Development ("Site Specific Development Plan") pursuant to Article 68 of Title 24, C.R.S., and Section 4.17.030 of the Eagle Municipal Code; and

WHEREAS, it is the intent of the Board of Trustees that its approval of the P.U.D. Development Plan, as approved with conditions, shall constitute approval of the Site Specific Development Plan establishing a vested property right for the time period of five (5) years pursuant to Article 68 of Title 24, C.R.S. and Section 4.17.060 of the Eagle Municipal Code; and

WHEREAS, the Board of Trustees has made a conditional positive determination of Adequacy of necessary public facilities in accordance with the requirements of Chapter 4.14 of the Eagle Municipal Code, subject to the conditions set forth in Section 4 below.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF TRUSTEES OF THE TOWN OF EAGLE, COLORADO:

Section 1. That Chapter 4.04 of the Eagle Municipal Code, as well as the Zone District Map of the Town of Eagle, established by and incorporated into said Chapter, be and the same hereby is amended so as to provide that the real property described as Lot 1, Filing 2, West Eagle Addition, situate in the Town of Eagle, County of Eagle, State of Colorado, is rezoned as Commercial Planned Unit Development (C/PUD). The zoning densities, uses, and their locations shall be those depicted in the P.U.D. Development Plan for the Sylvan Lake Round-About Planned Unit Development, as approved by the Board of Trustees, which is hereby incorporated herein by reference. The zoning designation herein approved specifically requires the Applicant's full compliance with the P.U.D. Development Plan, as approved, and the Sylvan Lake Round-About PUD Guide, dated October 22, 2013 ("P.U.D. Guide"), attached hereto as Exhibit "A" and incorporated herein by this reference.

Section 2. Upon the effective date of this Ordinance, the zoning amendment herein contained shall be promptly entered on the appropriate page of the official Zone District Map, showing general location, effective date, and nature of the change. One copy of the approved application, including the approved P.U.D. Development Plan and the approved P.U.D. Guide, shall be retained in the records of the Building Official, in order to insure that development proceeds in conformance with the requirements of the approved zone district designation and this Ordinance.

Section 3. The P.U.D. Development Plan, as approved, is hereby designated as and shall constitute the approved Site Specific Development Plan for the Sylvan Lake Round-About Planned Unit Development pursuant to Article 68 of Title 24, C.R.S., and Section 4.17.030 of the Eagle Municipal Code and by virtue of such approval, a vested property right therein has been created to be effective and continual in duration for a period of five (5) years.

In the event that Applicant commences construction of the improvements depicted in the Site Specific Development Plan, which commencement of construction shall be defined as the visible commencement of actual physical construction and operations on the Property, including without limitation, obtaining all required permits and licenses and the installation of a permanent required construction element such as a caisson, footing, foundation or wall within five (5) years from the effective date of this Ordinance, the Town acknowledges that Applicant will have perfected a common law vested property right pursuant to the laws of the State of Colorado ("Common Law Vested Right").

Section 4. Following review of the criteria for determining the availability and adequacy of community facilities as set forth in Section 14.14.080 of the Eagle Municipal Code and other applicable provisions of Chapter 14.14 of the Eagle Municipal Code, the Board of Trustees approves and adopts a conditional positive determination of Adequacy conditioned upon a final determination of adequacy of public facilities ("APF") shall be made concurrently with the Board of Trustees' consideration of development permit(s) for the Property.

Section 5. After the effective date of this Ordinance, it shall be unlawful for any person to erect, construct, reconstruct, use or alter any building or structure or to use any land in violation of the P.U.D. Guide. Any person who violates this Ordinance shall be guilty of a

municipal offense. Each person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any violation of any provisions of this Ordinance are committed, continued or permitted and shall be subject to fines and/or imprisonment as provided under the Eagle Municipal Code.

Section 6. Within sixty (60) days after the effective date of this Ordinance, the Town Clerk, on behalf of the Town of Eagle, Colorado, is directed to:

a. File one copy each of the approved P.U.D. Zoning Plan, the approved P.U.D. Development Plan, the approved P.U.D. Guide, and the original of this Ordinance in the office of the Town Clerk of Eagle, Colorado;

b. File one certified copy of this Ordinance, one copy of the approved P.U.D. Development Plan, and one copy of the approved P.U.D. Guide in the office of the Eagle County, Colorado, Assessor; and

c. File for record one certified copy of this Ordinance, one certified copy of the approved P.U.D. Guide and one certified copy of the approved P.U.D. Development Plan with the Clerk and Recorder of Eagle County, Colorado.

Section 7. Within fourteen (14) days after the approval of this Ordinance, the Town Clerk, on behalf of the Town of Eagle, is hereby authorized and directed to:

a. Publish in a newspaper of general circulation within the Town the full text of this Ordinance (without attachments); and

b. Publish concurrently with the publication of the within Ordinance a notice advising the general public that the P.U.D. Development Plan, as approved, constitutes approval of a site specific development plan establishing a vested property pursuant to Article 68 of Title 24, C.R.S., and pursuant to Section 4.17.100 of the Eagle Municipal Code.

INTRODUCED, READ, PASSED, ADOPTED, AND ORDERED PUBLISHED at a regular meeting of the Board of Trustees of the Town of Eagle, Colorado, held on November 12, 2013.

TOWN OF EAGLE, COLORADO

By: _____
Yuri Kostick, Mayor

ATTEST:

_____
Sarah Braucht, Town Clerk

Publication Date:

November 21, 2013

Trustee Turnipseed introduced, read and moved the adoption of the ordinance titled,

AN ORDINANCE OF THE TOWN OF EAGLE, COLORADO, AMENDING THE ZONE DISTRICT MAP OF THE TOWN OF EAGLE BY APPROVING A COMMERCIAL PLANNED UNIT DEVELOPMENT WITHIN THE TOWN OF EAGLE TO BE KNOWN AS THE SYLVAN LAKE ROUND-ABOUT PLANNED UNIT DEVELOPMENT AND APPROVING A SITE SPECIFIC DEVELOPMENT PLAN ESTABLISHING A VESTED PROPERTY RIGHT PURSUANT TO ARTICLE 68 OF TITLE 24, C.R.S., AND SECTION 4.17.030 OF THE EAGLE MUNICIPAL CODE.

and upon adoption that it be published pursuant to law and recorded in the Book of Ordinances.

Trustee McKibbin seconded the motion. On roll call, the following Trustees voted "Aye":

Turnipseed, McKibbin,

Kostick, Kerst,

Knabel, Webster.

Resa.

Trustees voted "Nay":

,,

.

PUD Guide
Sylvan Lake Round-About
Planned Unit Development

58 Sylvan Lake Road
Lot 1, West Eagle Addition Filing 2
Eagle, Colorado 81631

November 12, 2013

Mauriello Planning Group

1. Statement of Purpose and Intent

To provide for commercial, residential, and/or mixed use development within the Town of Eagle. This PUD Development Guide defines the permitted use of land, provides for open spaces, and includes additional supplementary regulations. This Guide constitutes the standards and zoning provisions with site-specific restrictions for development within this PUD. Any aspect of development not specifically addressed in this PUD Guide or on the Development Plan (the Development Areas Plan is the Development Plan for this PUD) is regulated by the Town of Eagle Land Use and Development Code. Building construction within the PUD is subject to applicable ordinances, rules, regulations, and Codes of the Town of Eagle. This PUD Guide and exhibits shall constitute a site specific development plan and creates a vested right pursuant to Article 68 of Title 24, Colorado Revised Statutes, as amended, for a period of 5 years.

2. Uses by Right*

Commercial and institutional uses:

- Retail establishment (including drive-thrus) including but not limited to:
  - Grocery store
  - Convenience store
  - Liquor store
- Restaurant (sit-down/no drive-thru)
- Coffee shop (including drive-thru)
- Tavern, including breweries and brew pubs
- Office including business, professional, and medical offices
- Lodging
- Bed and Breakfast
- Medical or Rehabilitation Clinic
- Church
- Community Building
- Public Building
- School (small specialized school such as adult education)
- Child Care Facility
- Park and Open Space
- Indoor and Outdoor Recreation Facility
- Home Occupation
- Seasonal Sales from temporary or permanent structures such as fruit and vegetable stands, etc.

Residential Uses:

- Single Family Dwellings
- Two Family Dwellings
- Multiple Family Dwellings

*Any use that may be operated 24 hours a day shall be reviewed by the Planning and Zoning Commission to ensure that impacts to residential neighbors are adequately mitigated.

3. Specifically Prohibited Uses
   - Gasoline Sales
   - Fuel Storage above or below ground
   - Storage of Hazardous Materials (excluding common household products)
   - Vehicular and Boat Service, body shops and Sales (including recreational vehicles)
   - Dry Cleaning Plant
   - Other uses not listed as a use by right or not determined to be similar to a use by right

4. Building Height
   All buildings shall be limited to 35' in height. Height is defined as: the distance measured vertically from any point on a proposed or existing roof or eaves to the existing or finished grade (whichever is more restrictive) located directly below said point of the roof or eaves. Within any building footprint, height shall be measured vertically from any point on a proposed or existing roof to the existing grade directly below said point on a proposed or existing roof.

5. Non Residential/Commercial Building Footprint
   The total building footprint for a commercial or non residential use shall be limited to a maximum of 15,000 sq. ft.

6. Residential Density and Square Footage
   The total number of dwelling units allowed on this entire site shall not exceed 50 units. The floor area of all residential dwelling units shall be limited to a maximum of 50,000 sq. ft.

7. Building Coverage and Impervious Coverage
   Building coverage and impervious coverage shall be 50% building coverage plus 20% other lot coverage for a total of 70% total coverage allowed. Development areas shall not be considered individually. These coverages shall be based upon the combined area of Development Areas 1 and 2 and shall not include the area of the open space easement.

8. Location of Uses and Development
   Two development areas are shown on the attached diagram. Both areas allow for residential, commercial, and mixed use development.

9. Setbacks
   Building setbacks shall be 20' from all property boundaries. Stream setbacks shall be 50' from the high water mark.

10. Open Space
    An open space easement shall be provided to the Town of Eagle allowing for fishing access to Brush Creek, recreational trails, passive open areas, passive, and landscape materials. The open space area may also allow for activities related to permitted commercial and residential uses including walking paths, patios and decks with seating areas, and access to Brush Creek subject to review of the Development Permit and found to be consistent with the intent of the area as open space. Any restaurant patio or deck located within the open space easement shall be approved by Special Use Permit. The open space easement shall be located as conceptually shown on the PUD Development Plan attached and be provided at

time of Building Permit following approval of a Development Permit. The Town of Eagle shall have the right to construct a 10 foot wide recreation trail, at its expense, within the proposed open space easement at any time upon its sole discretion, in which case the owner shall dedicate an appropriate easement for this 10 foot wide recreation trail. If alignment of this trail within the easement is obstructed by wetlands and all reasonable efforts to encroach into wetland areas have been exhausted, the Town and owner shall work out a mutually acceptable alignment/easement that avoids wetlands while minimizing encroachment into the development parcels.

If the Town constructs a trail on the applicant's property within the vesting period, the applicant shall be responsible to fund the lesser of 50% of the actual costs to construct the recreation trail upon the applicant's property or $50,000. Such funding shall be addressed at Development Permit and funded at Building Permit approval which may precede or follow the construction of the recreation trail.

If a Development Permit is obtained for development of the property prior to the construction of the trail, the applicant shall provide the Town with a $25,000 deposit at building permit to be used solely for the construction of the recreation trail on the applicant's property and a Letter of Credit for $25,000 at building permit. The Town shall be obliged to construct the recreation trail within the aforementioned vesting period for the Sylvan Lake Roundabout PUD. Failing to do so shall require that the Town refund the $25,000 and release the Letter of Credit with no further obligation for the applicant to fund recreation trail construction. Should the Town complete the recreation trail as contemplated here-in, the remaining balance required of the applicant to a maximum of $50,000 shall be immediately paid by the applicant to the Town and the Letter of Credit will be released.

If no trail is developed within the vesting period, the applicant shall have no obligation to fund the recreation trail construction whatsoever. If the recreation trail does not connect to the Eagle Ranch Trail system or to the Regional Trail system along Violet Lane, the applicant shall have no obligation to fund the recreation trail construction whatsoever.

The provisions for the establishment of the open space easement and the 50% funding (to a maximum of $50,000) of the recreation trail construction shall be the full extent of the exactions required of the development of this property. No further exactions shall be imposed for the life of this PUD. However, exactions are not to be interpreted to include provisions required by the Municipal Code including the Land Use and Development Code.

A land dedication may be substituted for an easement at the owner's discretion.

11. Water Plant Investment Fee

Section 12.16.040 of the Eagle Municipal Code contemplates that an applicant provide an up front payment for 60% of the estimated water plant investment fees for projects demanding 10 or more EQR. Since it is unknown whether development on this property will reach the threshold for this code section (commercial development is likely to be well below 5 EQR, for example), the prepayment of water plant investment fees, if any, shall be deferred until issuance of a Development Permit.

12. Parking

Shall be provided in accordance with the Land Use and Development Code except that residential studio units of up to 700 sq. ft. shall only be required one to one and half parking spaces, subject to review and approval by the Planning and Zoning Commission during the review of a development permit.

13. Signage

All signs shall comply with the Land Use and Development Code.

14. Exterior Lighting

All exterior lighting shall be in accordance with the lighting standards contained in the Land Use and Development Code, except that LED of equivalent light output shall also be allowed.

15. Accessory Uses

Other uses customary to commercial and residential uses, including but not limited to movie rental services, newspaper boxes, ice boxes, and other outdoor display items shall be permitted.

16. Fencing, Walls, and Railings

Fencing and/or walls shall be required to screen trash facilities and mechanical equipment. All fencing shall be of high quality wood, metal, or masonry.

17. Architecture

The architecture of residential and nonresidential buildings on site shall be consistent with the policies of the Eagle Area Community Plan with specific emphasis on visual quality and consideration of policies to create a western gateway. The architecture of all buildings should be sympathetic to residential uses in the area and include the use of sloping roof forms. The use of flat roofs shall be limited to buildings designed with a historic Eagle vernacular as one may find on Broadway or within the commercial core of Eagle Ranch Village (i.e., brick facade and/or stone facade with an articulated and ornamented terminus to the parapet). Building materials may include brick, stone, wood board and baton, wood lap siding, cementitious versions of wood siding, wood timbers, exposed wood or metal beams, natural and painted metal structural members, high quality asphalt shingles, metal, and corten siding and roofing materials. Imitation stucco is not allowed. Low quality building materials such as vinyl siding shall not be allowed. The overall development of the property shall be integrated with the topography and responsive to Brush Creek as a community resource.

18. Water Quality

Water Quality of Brush Creek and protection of the Town's Water Intake for Lower Basin Water Treatment Plant are of the highest priority. A stormwater water management plan approved by the Town for this property shall be designed to address this high sensitivity to potential water quality degradation of Brush Creek.

19. Landscaping

Landscape installation shall be per Land Use and Development Code. Care will be taken to ensure that landscape materials are placed in a manner that does not inhibit commercial performance but results in an attractive presentation of the site. In addition to the landscaping that will be required within the development areas, landscape materials (trees and shrubs) shall also be required within the open space easement as shown on the attached Conceptual Open Space Landscape Plan. Landscape materials within the open space areas will be required to be shown with any Development Permit application in either Development Area 1 or 2. However, development of either Development Area 1 or 2 shall only be required to provide landscaping within the adjacent and corresponding Open Space Landscape Area 1 or 2. Should the entire site be developed as one project, the entire open space landscaping shall be completed. Any existing debris piles located anywhere on the property shall be removed with a Development Permit approval.

20. Site Access

The town shall allow appropriately designed vehicular access from Sylvan Lake Road and if the Town approves uses of the property conditioned and dependent on access from Highway 6, the Town will support an application for a State Highway Access Permit that complies with the standards for an access permit.

21. 1041

The Town will support the applicant's efforts to modify the existing 1041 approval from Eagle County for a sewer line extension to serve the uses provided for in this PUD Guide.

22. Development Permit

All development applications within this PUD shall require a Development Permit pursuant to Section 4.06 of the Land Use and Development Code. Development permit application submittals will be required to include a wetland delineation. In general impacts to wetlands should be avoided though it is specifically recognized that the extension of utilities to the property will create impacts to wetlands that cannot be avoided. These wetland impacts are recognized as acceptable by the Town. A massing study of the proposed buildings and a review of visual impacts from the roadway and the residential property to the southwest shall be provided with an application for Development Permit.

23. Subdivision

The property may be further subdivided to allow for appropriate development and ownership of the parcels. The creation of not more than four parcels shall be processed in accordance with Section 4.12.050 Minor Subdivision of the Land Use and Development Code. The creation of condominium or townhouse units shall be in accordance with Section 4.12.040 of the Land Use and Development Code. Any subdivision of the property shall not occur prior to approval of a Development Permit.

24. Amendment to PUD

Any changes to this PUD Guide shall follow the procedures established in Section 4.11.050 of the Land Use and Development Code. However, minor changes to the plans, landscaping, signage, or building which do not change the overall intent of the character of the PUD may be approved by the Town Planner. Any decision of the Town Planner may be appealed in writing to the Board of Trustees pursuant to the Municipal Code.

Approved by Eagle Ranch Lot Investors LLC, a Colorado limited liability company, the developer of the Sylvan Lake Round-About Planned Unit Development, this ____ day of November, 2013.

Eagle Ranch Lot Investors LLC
BY: _____
Mervyn Lapin, Manager

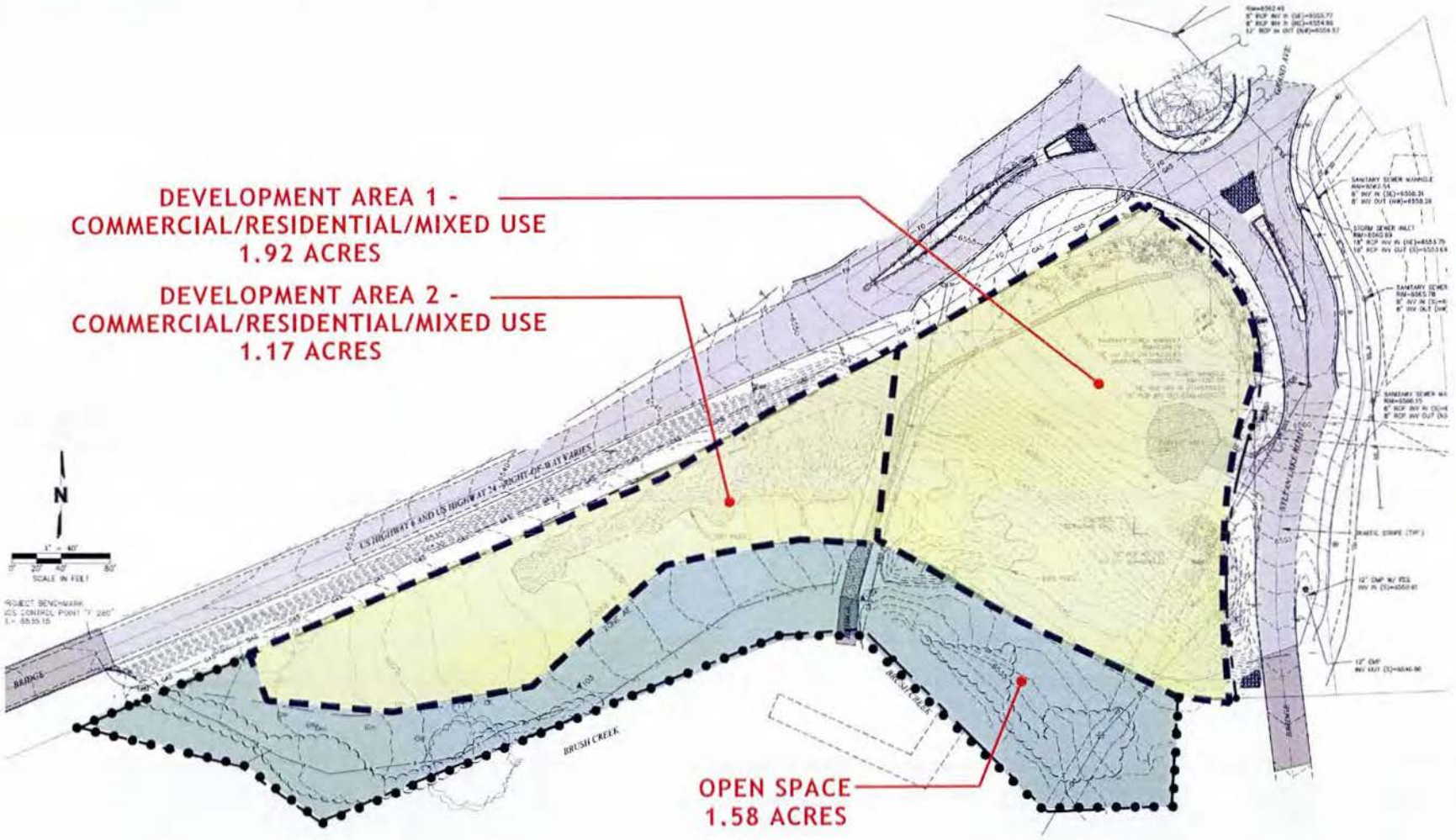
Approved by the TOWN OF EAGLE, COLORADO, a municipal corporation acting by and through its Board of Trustees, this _____ day of November, 2013

BY: _____
Yuri Kostick, Mayor

ATTEST

Sarah Braucht, Town Clerk

ZONING PLAN



PAGE 1

EAGLE RANCH LOT INVESTORS

LOT 1, FILING 2, WEST EAGLE ADDITION

ZONING PLAN DEVELOPMENT AREAS • 31 JULY 2013

MPG Mountain Planning Group

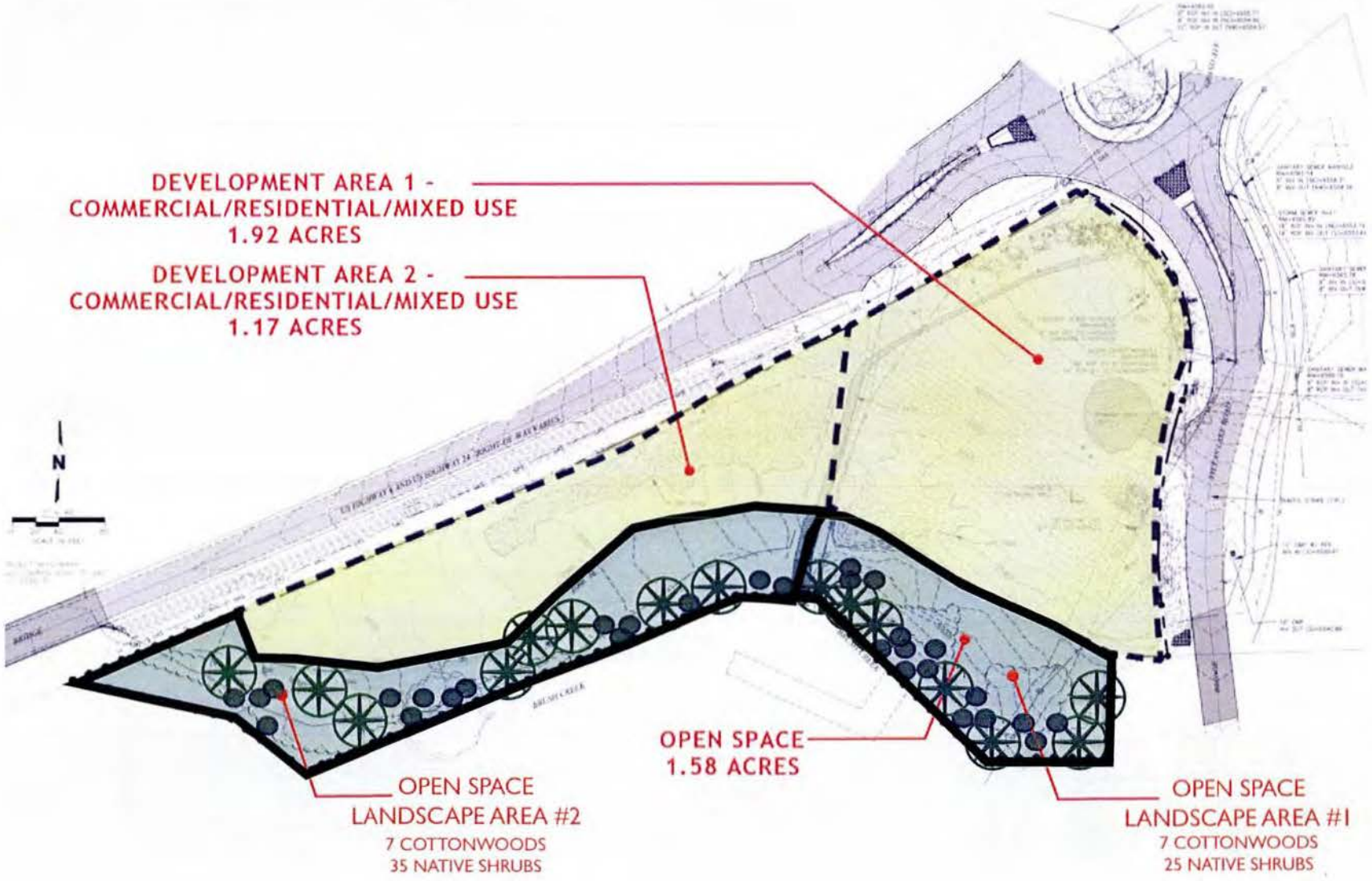
SW

CONCEPTUAL OPEN SPACE LANDSCAPE PLAN

COTTONWOODS 3" CALIPER

NATIVE SHRUBS 3 GAL.

NATIVE GRASSES THROUGHOUT



PAGE 1

EAGLE RANCH LOT INVESTORS

LOT 1, FILING 2, WEST EAGLE ADDITION

MPG Mountain Planning Group

SW

CONTENTS

DR16-03 Sylvan Lake Circle Development Permit

- Project Description
- Preliminary Development Impact Report
- Local Employee Residency Plan
- Compatibility with Town Goals
- Renderings
- Final Plat: West Eagle Addition, Filing 2
- Civil Engineering Preliminary Plans
- Architectural Preliminary Plans
- Landscape Preliminary Plans
- Street Lighting Preliminary Plans
- Proposed Easements
- 100 Year Floodplain Exhibit
- Greater Eagle Fire Protection District Letter of Support
- Transportation Impact Study & Supplement Letter
- Water & Sanitary Sewer Technical Memo
- Drainage Technical Memo
- Wetland Permit Application
- Subsoil Study

Sylvan Circle

58 Sylvan Lake Road
Submittal: 05/24/2016

Project Description
The project is located on the south west corner of the intersection of Sylvan Lake Road and Highway 6 and is bordered to the south by Brush Creek. Access is proposed to be from Sylvan Lake Road and a right-in right-out only access from Highway 6[1].

The property's zoning is a PUD, which allows for up to 50 Multiple Family Dwelling, with a maximum floor area of 50,000 sf.

The proposed project is (42) attached residential dwelling units with a residential floor area of 49,953 sf. (38) of the dwelling units will be market rate and (4) of the units will be deed restricted, as administered through the LERP program.

The project has been designed to meet the need for attainable priced housing and is comprised of a mix of 1, 2 and 3 bedrooms, as follows:

(5) 1-Bedroom @ 1,000 sf (plus 1-car garage)
(10) 2-Bedroom @ 1,048 sf (plus 1-car garage)
(25) 2-Bedroom @ 1,229 sf (plus 1-car garage)
(2) 3-Bedroom @ 1,874 sf (plus 2-car garage)

Each dwelling unit has an enclosed garage and all but the 1-Bedroom units have sufficient driveway length to provide stacked parking in front of the unit. The interior of the homes have open living spaces with large windows and modern design features. Each dwelling unit will have both a covered front porch as well as a rear deck large enough for outdoor living. The majority of units will have a tall crawlspace and stair access that will allow for ample household storage. All of the units are 2-levels, with the exception of the 1-Bed units that are 3-levels with the garage located below the main living area.

The units would be owned lot and block, with the lots fronting on a private road. Each dwelling unit would have exclusive use of some outside yard and driveways and would be responsible for exterior maintenance of the siding, roofing and decks. Each unit would have its own water and sewer tap.

The HOA will be responsible for maintaining the property not contained within the lot and block parcels, which shall include the internal vehicular and pedestrian circulation, parking areas, signage, common landscaping, trash enclosures and site lighting. They would also be responsible for maintenance of commonly shared elements of the buildings and or site, including water leaks, snow removal, waste removal, etc.

[1] Because the access from Highway 6 is dependent on CDOT until devolution of the road to the Town of Eagle takes place, the developers have provided a design for an interim emergency only access until such time that the Town can issue a permit the 2nd access.

Landscaping
The landscape design provides for a large amount of trees and bushes to soften the edge of the development and provide for screening between homes. Trees and bushes are placed at the front of each dwelling unit in a manner that gives each unit the sense of a private yard. A 15' wide landscape buffer is provided around the property, with the exception of the north edge bordering Highway 6, where the landscape buffer is proposed to move closer to the edge of the road through the application of right of way easement with CDOT. The purpose of shifting the landscaping into the right of way was to provide stacked parking at Buildings G & F in order to limit the size of the parking lots.

Part of the project's proposed site improvements cross over the existing Eagle Ranch HOA landscape easement. The developers have had discussions with the HOA Manager and DRB Administrator about the process of modifying the easement location and augmentation of the landscaping in the easement in exchange for the infringement. The Eagle Ranch Manager indicated that they would prefer the Town to weigh in on the proposed development before taking the easement modification to the HOA Board.

Maintenance of the landscaping that is in the common area, including the open space easement and landscaping in the Highway 6 right of way, will be provided by the development's HOA. Maintenance will include: spring clean-up and refreshing of ground cover; weekly mowing, plant and tree care; regular application of nutrients and pesticides in a manner that is most eco-friendly and excludes the use of chemicals known to be harmful to the environment; fall clean-up. In addition, the HOA will provide trash removal from the publicly accessible area adjacent to the creek and will maintain the grill and benches.

Exterior lighting standards will be designed for a residential environment and will maintain minimal lighting levels for the health and safety of the residents (refer to lighting plan). Site lighting will be provided on a motion detector at the trash enclosures and with bollards along primary sidewalks and at parking areas. In addition, lighting that meets Town standards will be provided at the project's monument signs. Primary lighting will be provided at each residence with motion activated fixtures provided at each dwelling unit's garage and entry porch.

Snow storage will be provided on site at the end of the western parking lot. In the event that snow fall exceeds the capacity of typical plowing, skid-steers will store the snow in the area indicated on the landscape plans as 'snow storage'. The snow storage area is located such that melting snow will flow to the detention pond instead of melting directly into the creek.

Architectural Design
The architectural form of the buildings is contemporary, while the selection of exterior siding was based on materials that are commonly found in the area. Lap siding, stained wood, corrugated metal and flat panels are combined on the exterior in a dynamic way to create massing that is different than traditional building design, but still familiar. The shed roofs are indicative of design found on the Highway 6 corridor.

To create a human scale, each dwelling unit has a covered entry porch and at each common wall the roof massing is stepped to break the ridge. The siding for each unit will be changed so that each home will be unique. The variety of materials and the variation of the building forms are intended to reflect

the individuality of the occupants within. The treatment of the massing and choice of exterior siding recognizes traditional materials and forms, while expressing a modern lifestyle.

Open Space

The project shall provide an Open Space easement along Brush Creek for the benefit of the residents and for the Town of Eagle. It is anticipated that the Town's trail system will connect through the property in the future, and a 10' wide easement shall be dedicated for the recreation trail. In addition, (3) parking spaces are provided in the west parking area for the public who will have access for fly fishing. An area adjacent to the creek is proposed that will have seating, trash bins and an outdoor grill. This area will have stepping stones that will allow a defined access to the creek for the public.

It is proposed that the $50,000 identified in the PUD for the purpose of the recreation trail, be allocated to the rough-in of the recreational trail as well as the pro-rated cost of the (3) parking spaces for fly fishing, the path connecting them, the publicly available grilling area and the defined access to the creek.

Phases

The project is anticipated to be completed in 2 phases. The 1st Phase will include Buildings A, B and C and the internal access roads serving them. The 2nd Phase will include Buildings D, E, F & G and the adjacent roads serving them. The scheduling of the work is anticipated to be as follows:

Phase I (beginning summer of 2016)

- Site and sub-grade infrastructure (July 2016)
- Foundation and form work (August-October 2016)
- Framing (August-March 2017)
- Finishes (October-May 2017)
- Unit Completion (March-June 2017)
- Landscaping (May-June 2017)

Phase II (beginning Spring 2017)

- Site and sub-grade infrastructure (May 2017)
- Foundation and form work (June 2017)
- Framing (June-January 2017)
- Finishes (August-March 2018)
- Unit Completion (November-March 2018)
- Landscaping (May-June 2018)

Flood Plain

The development is currently in the process of adjusting the FEMA recognized flood plain to a 100-year flood plain that accurately reflects the conditions on the property and adjacent parcels. Phase I and Buildings D & E are entirely outside the current FEMA defined 100-year flood plain. The rest of the development is outside the 100-year flood plain, as defined in the LOMAR application. Construction of those buildings contained in the FEMA 100-year flood plain shall not begin until the new flood plain has been accepted by FEMA, which is expected to be completed the beginning of 2017.

Soils and Grading

The site requires cut on the eastern end of the property and fill closer to the creek and to the west. The creek side of the townhouses will require retaining walls, which shall be boulder retaining walls as described on Sheet C7.1 of the Civil plans.

The soils report indicates that typical foundation design is feasible, although some areas have been identified where fill will need to be replaced/compacted and where ground water will limit the depth of crawlspaces on the western-most units.

The evaluation of the soils by the Geo Tech during excavation will determine how much soil, if any, needs to be exported from the site. The project will require that soils are imported in Phase II.

Variance Requested

The developers ask for the following variances from the PUD:

1) Landscape easement of 15'. Request that the landscape buffer be allowed to be placed in the CDOT right of way for Highway 6 in order to allow enough room to get stacked parking on the north side of Buildings G & F. The reason to do so would be to provide for (2) cars to park at each residence and to keep the size of the west parking lot to a minimum.
2) Funds for recreation trail. Request that money allocated for the recreation trail be allowed to pay for the fly fishing parking spots, the access from the parking to the recreation trail, the publicly available grill area, and for the defined access to the creek.

The developers ask for the following variance from the Highway 6 Corridor Design Standards:

3) Roof slope. Design standards call for roofs to be asphalt or standing seam metal roof matte finish with minimum slope of 5:12. Proposed roofs are 2:12, and desired so that the view of the roof surface from the adjoining roads is minimized.

Statement of Architectural Design

Materials:

- Siding
  - Lap siding w/ max. 8" exposure and smooth finish to be pre-painted composite material
  - Panel to be composite with smooth finish 4'x8' panels with z-flashing at joints
  - Corrugated siding to be dull metal finish
  - Stained 1x8 shiplap boards to be composite with wood grain texture and finish
- Roofing
  - Architectural asphalt shingles
- Windows
  - Vinyl clad, with Low-E glass
- Garage Doors
  - Insulated steel doors

Demonstrate:

- Orientation – The units along the creek are oriented to face the creek and the views to the south and west. The living spaces of the creek-side units are on the back side of the townhouses, so that the entry and garage create a buffer from Highway 6 and from the Phase I units. The units on the east side are oriented for views to the mountain ranges to the east. Building A is three stories and placed to provide a visual buffer against traffic traveling east on Highway 6. The roads are designed to allow for at least some period of direct solar access during the day.
- Sun - All units have direct solar access during the day, and the exterior decks all have direct sun during the day.
- Views – Good views surround the property, with the primary views being of Brush Creek and the hills beyond to the south, the Sawatch Range to the east and Castle Peak to the north. All units have views of at least one of these features from the living areas and exterior decks.
- Natural light – windows are large and designed for a high level of natural light.
- Shadows – The buildings are pulled away from the internal roads and sidewalks in an attempt to allow as much sunlight as possible to hit them in the winter. No shadows are cast on adjoining properties.
- Ventilation for inhabitants – All units have windows on at least two wall surfaces, allowing for good natural ventilation. All habitable rooms (excluding bathrooms) have operable glazing to facilitate natural ventilation.
- Prevailing winds – Prevailing winds are form the west, however the site is fairly low and is not expected to suffer inordinately from wind exposure.
- Slopes – Slopes on the site are moderate and have been mitigated with retaining walls.
- Existing and future drainage patterns – nearly all drainage is retained on site and there is little to no new drainage that would leave the site. Civil plans describe strategy for retaining water on site in a manner that preserves water quality prior to run-off entering the creek.
- Snow shedding – Roofs are designed such that snow falls on the area directly in front of or behind each dwelling unit. Entries are covered with either flat or roofs sloped to shed snow in areas away from pedestrian travel.
- Existing landscaping – The existing trees and grasses will be left natural outside the limit of work in order to maintain the existing character property.
- Pedestrian circulation – The site has sidewalks or recreation trails that reasonably connect all the residential areas of the site. In additional the sites pedestrian circulation connects to the larger Town trail system at the access point off of Sylvan Lake Road and at the round-about.

- Compatibility with scale – Architectural design brings down the scale through the use of the entry porch roof, the many and varied roof planes and the use of various siding materials.

Compatibility with Highway 6 Corridor Design Standards

- The vernacular described in the design standards included shed roofs and porches that project covered with a separate roof.
- Goals include:
    - Reduce the scale of the buildings
    - Solid to void variation
- Materials
    - Maximum exposure for lap siding is 8”
    - All façade materials to have low reflectivity

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Preliminary Development Impact Report
05/24/2016

Below is the respondents answer to whether or not the development will or will not possibly affect the environment:

1 . By altering an ecological unit or land form, such as a ridgeline, saddle, draw, ravine, hill side, cliff, slope, creek, marsh, watercourse, or other natural land form feature;

Project will change the topography in an area that is more than 50' away from Brush Creek.

2. By directly or indirectly affecting a wildlife habitat, feeding, or nesting ground;

Wildlife habitats and use are outlined on page 6 of the Wetlands Permit application included in this submittal. Other than the stream crossing for the sewer line, there were no other precautions recommended related to wildlife. The stream crossing will be done in coordination with the proper authorities to ensure that the work done will not negatively impact the fish species present.

3. By substantially altering or removing native grasses, trees, shrubs, or other vegetative cover;

Native grasses will be replaced on the majority of the site.

4 . By affecting the appearance or character of a significant scenic area or resource, or involving buildings or other structures that are of a size, bulk, or scale that would be in marked contrast to natural or existing cultural features;

N/A, as this site has been identified as one that is appropriate for development and the scale of the buildings are designed to be human scale.

5. By potentially resulting in avalanche, landslide, siltation, settlement, flood, or other land-form change of hazard to health and safety;

No.

6. By discharging toxic or thermally abnormal substance or involving use of herbicides or pesticides, or emitting smoke, gas, steam, dust, or other particulate matter;

No.

7. By involving any process which results in odor that may be objectionable or damaging;

No.

8. By requiring any waste treatment, cooling, or settlement pond, or requiring transportation of solid or liquid wastes to a treatment or disposal site;

A detention pond is provide for in the design to allow run-off generated on site to settle out particulates.

9. By discharging significant volumes of solid or liquid wastes;

No.

10. By increasing the demand on existing or planned sewage disposal, storm drainage, water distribution system, streets, or other utility systems to a level which is likely to cause an adverse impact on the environment;

    No.

11. By involving any process which generates noise that may be offensive or damaging;

    No.

12. By either displacing significant numbers of people or resulting in a significant increase in population;

    No.

13. By pre-empting a site which is desirable for recreational uses or planned open space;

    No.

14. By altering local traffic patterns or causing an increase in traffic volume or transit service need;

    No.

15. By substantially affecting the revenues or expenditures of the Town government.

    No.

16. By increasing the demand on existing or planned school facilities to a level which is likely to cause an adverse impact on such school facilities, an adverse impact on educational opportunities, or an adverse impact on the revenues and expenditures of the Eagle County School District RE 50-J.

    No.

17. By being a part of a larger project which, at any future stage, may involve any of the impacts listed above.

    No.

Local Employee Residency Plan

The goal of this project is to provide market rate housing that is attainable for middle income individuals. The (42) attached units have been designed to be both efficient and attractive. In addition, the development will provide permanently affordable units for the long-term benefit of the community. The permanently affordable units will comply in full with Town of Eagle Residency Program (LERP) requirements and guidelines.

Pursuant to Ordinance #19, Series of 2002, the development will provide (4) permanently affordable units. The proposed development has (42) dwelling units, with the requirement that 10% of the units are to be deed restricted. The Land Use and Development Code states that if the number of units required results in a fraction, then the quantity is to be rounded down to the nearest whole number:

- *Section 4.04.120 (E) 1: … For those developments of thirty (30) or more residential units whose calculation results in a fraction of a unit, the Local Employee Residence requirement shall be rounded to the nearest integer (up or down).*

Of the (42) attached units proposed, the following is a description of number of bedrooms, size (of conditioned space) and parking spaces.

(25) Unit A	2-Bedroom [1,229 sf] w/1-car garage and 1-stacked parking space
(10) Unit B	2-Bedroom [1,048 sf] w/1-car garage and 1-stacked parking space
(2) Unit C	3-Bedroom [1,874 sf] w/2-car garage and 2-stacked parking spaces
(5) Unit D	1-Bedroom [1,000 sf] w/1-car garage and 1-dedicated parking space

It is proposed that (3) of the (4) LERP units are to be constructed in Phase I, located in Building B. The 4th LERP unit would be constructed in Phase II and would be on the western end of Building G. See attached 'Exhibit A'. The following units would be permanently affordable:

Initial LERP Sales Price for Phase I: $311,850

Building B-3	2-Bedroom [1,048 sf] w/1-car garage and 1-stacked parking space
Building B-4	2-Bedroom [1,048 sf] w/1-car garage and 1-stacked parking space
Building B-11	2-Bedroom [1,048 sf] w/1-car garage and 1-stacked parking space

Initial LERP Sales Price of Phase II: $311,850 (to be determined at commencement of Phase II)

Building G-2	2-Bedroom [1,229 sf] w/1-car garage and 1-stacked parking space

The initial sales price was generated in coordination with Tori Franks, the program administrator with the Eagle County Housing Department.

The average size of LERP Units is 1,093 sf
The average size of the market rate units is 1,199 sf

Concept for marketing to households eligible for the LERP residences would follow the Town guidelines. Working with direction from the program administrator, advertising will first focus on local buyers through on-site signage, newspaper advertisements and open houses. Any eligible buyers will be referred to the program administrator to verify that they are qualified for the LERP program.

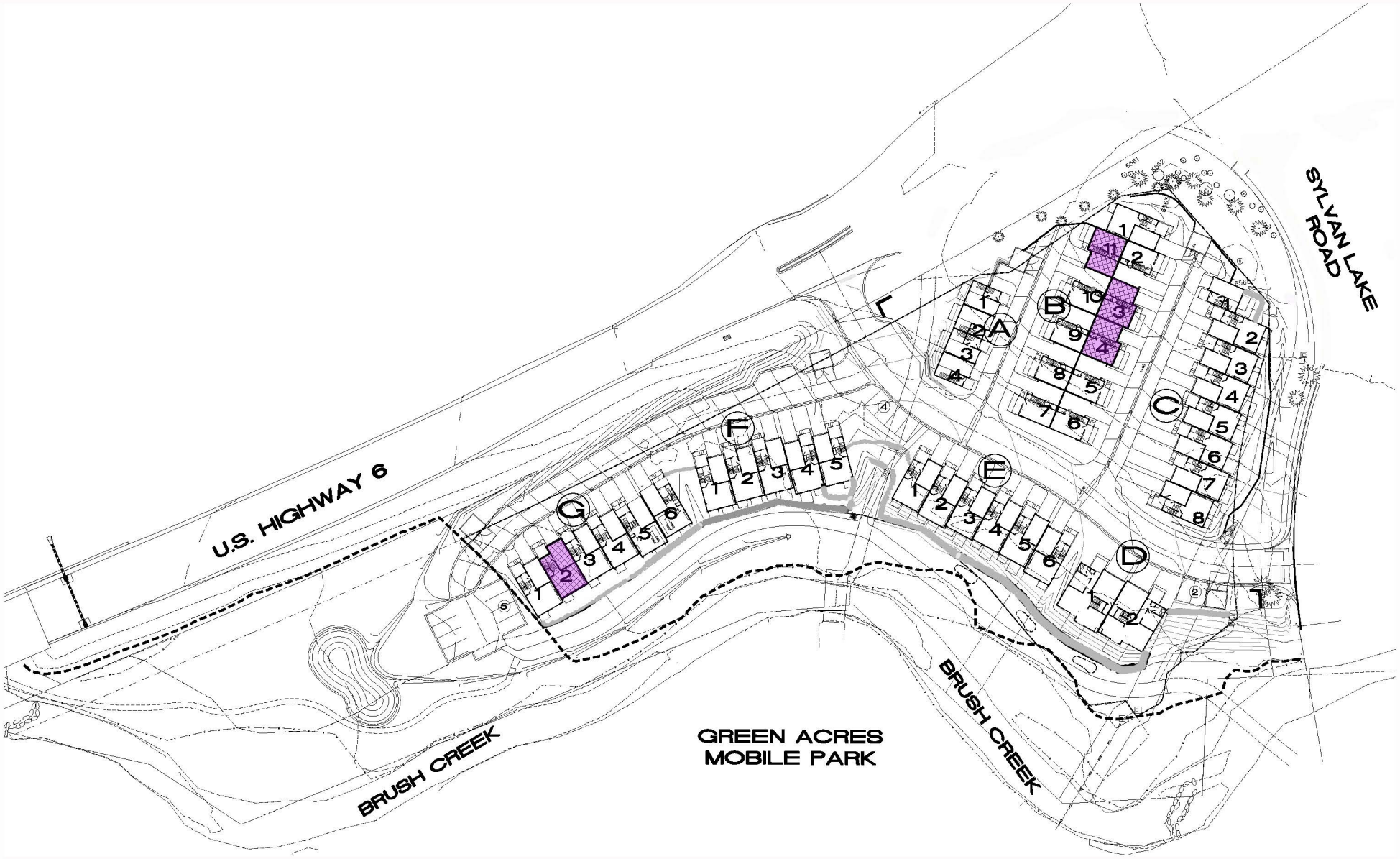


Diagram of LERP Unit Locations

Exhibit A

Compatibility with Town Goals

Western Gateway. The proposed project would become the western the edge of the urban boundary of Town, as well as framing the entry of Eagle Ranch. It is highly visible for vehicles coming from the west on Highway 6, and it is anticipated to be a vital link in the recreational trail system. The proposed project would provide an attractive and well managed landscaped gateway to Town.

The architecture is designed at a residential scale, with stepped massing and varied wall / roof lines. The roof forms are a contemporary version of a shed roof style. The intent of the design is to merge the more rural character of the shed roofline with the compactness of attached housing, while still expressing the individuality of each home. Entry roofs extend from the street side of the buildings so that the garage doors are obscured from the sight lines of passing traffic. Trees are proposed in front of each residence that face Highway 6 to further soften the façade of the buildings and create an appealing landscape screen.

To the greatest extent possible, parking has been provided as enclosed garages and stacked in the driveways to minimize the need for parking lots. Parking lots are kept small and are scattered throughout the development. The parking area to the west is heavily screened on its western edge. Trees are grouped so that when fully mature, they will create a soft screen for the residential structures on both sides of the creek.

Ornamental trees and landscaping have been proposed along the southern side of Highway 6 to define the arrival to Town. The landscaping adjacent to the road will give a visual clue to drivers to slow before entering the round-about. The current landscape easement at the round-about, turning onto Sylvan Lake Road, will be augmented with deciduous and evergreen trees to increase the existing screening and further enhance that corner.

While much of the existing site is natural grasses, there are currently piles of fill, a dirt parking area, an abandoned bridge and an old fence bordering the creek that detract from the potential attractiveness of the site. All these elements would be removed and/or remediated by the proposed development, making the property a more appealing western approach to Town.

Open Space. The proposed 1.58 acre Open Space Easement along the creek will preserve public access to Brush Creek and will host a 10' wide section of multi-use path that will connect to the rest of the recreational trail system. Visible from both Highway 6 and Sylvan Lake Road, the landscaped Open Space easement will present a welcoming scene to those approaching the site.

A seating area near the existing bridge will have stone slab benches and shade trees around an outdoor grill. Natural stone steps will create a defined pathway to allow the public to access the creek. Three parking spaces will be reserved in the western parking area for fly fishermen. Along the 10' path, two bench areas will offer seating next to the creek. The HOA will maintain the landscape in the Open Space easement and will be responsible for waste removal for the trash can located in the seating area.

It is proposed that the $50,000 required from the developer in the PUD for construction of the recreation trail go toward the construction of the 10' section of recreation trail, the three fly fisherman parking spot and the seating area described above.

Trash Enclosures. Careful consideration has been given to the design of the trash enclosures. The materials employed will be of equal quality as those on the residences. All the access doors to the trash enclosures face away from the surrounding roads. The enclosures and are either heavily screened with landscaping or they are tucked into the surrounding grade. The trash enclosures are placed around the property in a such a way as to allow each of the residents to walk their trash from their homes, rather than drive. Each residence is within 150' of a trash enclosure.

Pedestrian Connectivity. One of the goals of the development is to facilitate pedestrian and cyclist connectivity internal to the project and to the larger trail network.

Internally, the parking areas have been dispersed throughout the site to allow visitors and residents to park near their destination. Handicap parking spaces are located in the center of the development. The parking area to the west is connected to the primary entry road via the recreational path, then by either a paved path between Buildings E & F or by a more rustic path to the east of Building D.

A 5' wide sidewalk runs adjacent to the primary entry road and then connects to the sidewalk network on the other side of Sylvan Lake Road by a pedestrian crosswalk south of the round-about. The sidewalk between the development and the crosswalk would be in the Sylvan Lake right-of-way and would be 6' wide.

A pedestrian walkway across Sylvan Lake Road at the access point was analyzed by the Traffic Engineer, but it was deemed that there are not sufficient sight distances to allow for a safe crossing.

The anticipated recreation trail along Brush Creek will create an ideal connection from the development to existing and future trails. It is proposed that a portion of the recreational trail be constructed between the western parking lot and the east end of the property. The connection points to the trail network on the east and west ends of the property will come at a later date, but will be covered by an easement granted to the Town. Along the recreational trail, the development will construct benches and a seating area that has defined access to the creek as a public benefit. We are looking forward to participating as a vital link in the chain of the regional trail system.


Eagle Ranch
Village
Eagle Healthcare
Center
Eagle Ranch
Golf Course

FINAL PLAT
WEST EAGLE ADDITION, FILING 2
A RESUBDIVISION OF LOT 13, BLOCK 40, WEST EAGLE ADDITION TO THE TOWN OF EAGLE, COLORADO
COUNTY OF EAGLE

CERTIFICATE OF DEDICATION AND OWNERSHIP

The undersigned, West Eagle Ranch LLC, a Delaware Limited Liability Company, being the sole owner in fee simple of all that real property described as follows:

Lot 13, Block 40, West Eagle Addition to the Town of Eagle, Colorado according to the Final Plat thereof as filed for record January 3, 1977 at Reception No. 147565 in the office of the Clerk and Recorder, County of Eagle, State of Colorado; containing 6.993 acres more or less.

and as shown on the accompanying Plat, has by these presents laid out, platted and subdivided the same into lots and tracts as shown on this Plat and designated the same as West Eagle Addition, Filing 2, a subdivision in The Town of Eagle, County of Eagle, State of Colorado; and does hereby make the following dedications and grants:

Tract R-2 and Tract R-3 shown hereon being Public Road Right-of-Way to the full width of the platted right-of-way are hereby dedicated to the Town of Eagle for use by the general public forever as public streets, and for drainage and utility purposes and the easements as listed in note number 4 shown hereon.

All utility easements as shown on this Final Plat are dedicated to the Town of Eagle for use by authorized service providers as perpetual easements for the installation, operation, maintenance and repair of utilities and appurtenances thereto including but not limited to electric lines, natural gas pipelines, wastewater lines, water lines, telephone lines, cable service lines, other broadband communication service lines and also for the installation and maintenance of traffic control facilities, street lighting, street trees and grade structures.

The dedication of the easements shown hereon to the Town preclude the installation of improvements, including but not limited to, trees, shrubs, rocks, the deposit of materials, or the alteration of existing ground elevation, within the easement area, which could in any manner impair the Town's or other service providers' use of the easements as provided in this dedication.

The undersigned hereby accepts the responsibility for the completion of all requred Public Improvements for West Eagle Addition, Filing 2, Subdivision, and further, hereby grant the right to install and maintain all necessary structures to the entity responsible for providing the service for which easements are established.

EXECUTED this 16th day of February, 2006.

Owner: West Eagle Ranch LLC
a Delaware Limited Liability Company
PO Box 1630
Eagle, Colorado 81631

By and through its sub-manager:
East West Partners, Inc.
a Colorado Corporation

By: _____
Name: GARY MARTINEZ
Vice President of
East West Partners, Inc.
A Colorado Corporation

STATE OF COLORADO)
) ss.
COUNTY OF EAGLE)

The foregoing Certificate of Dedication and Ownership was acknowledged before me this 16th day of February, 2006. by Gary Martinez as Vice President of East West Partners, Inc. a Colorado corporation, sub-manager of West Eagle Ranch LLC, a Delaware limited liability company.

Witness my hand and official seal.

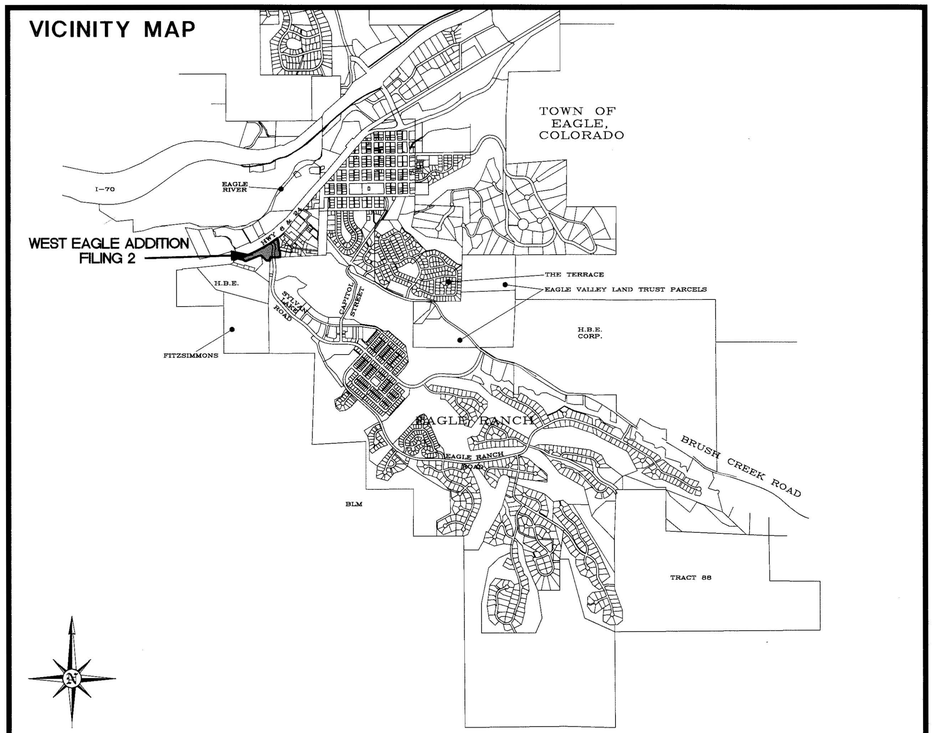
My commission expires: 5-13-09 Deborah K. Mouser Notary Public

DEBORAH K. MOUSER NOTARY PUBLIC STATE OF COLORADO

LAND DESCRIPTION
(As determined by this survey)

Beginning at a found 2-1/2" diameter aluminum cap properly marked for Corner No. 4 of Tract 47 and stamped "26967 1998" on a 2" aluminum pipe marking Corner No. 4 of Tract 47 and Corner No. 1 of Tract 49, in Section 5, Township 5 South, Range 84 West of the 6th Principal Meridian, Eagle County, Colorado; thence along the 1-6 line of said Tract 49 and the West line of Tract OS11, Eagle Ranch, Filing No. 3 S02°35'09"W, a distance of 84.32 feet to the Northeast corner of Parcel A, Green Acres Mobile Home Park as recorded in Book 442 at Page 348; thence along the North boundary of said Parcel A the following two (2) courses and distances:
1) S86°44'24"W, 100.48 feet;
2) N46°33'16"W, 208.85 feet to the Northwest corner of said Parcel A and the Northeast corner of Parcel B, Green Acres Mobile Home Park, also recorded in Book 442 at Page 348; thence along the North boundary of said Parcel B the following four (4) courses and distances:
1) S85°00'34"W, 68.77 feet;
2) S67°45'34"W, 403.15 feet;
3) N56°42'16"W 79.00 feet;
4) N77°16'36"W, at 130.93' pass the Northwest corner of Lot 13, Block 40, West Eagle Addition according to the plat thereof recorded in Book 251 at Page 288, continue N77°16'36"W, a total distance of 133.40 feet to a point on the southerly boundary of the U.S. Highway 6 and 24 right of way according to the Annexation Plat, Wastewater Treatment Facility Annexation as recorded at Reception No. 599898; thence along the southerly boundary of the U.S. Highway 6 and 24 right of way and referring all bearings contained herein to said Annexation Plat, the following four (4) courses and distances:
1) N66°51'21"E, 50.42 feet to a found 5/8" rebar and 2" diameter aluminum cap stamped "PE & RLS 23089 Eagle Town Boundary";
2) continue N66°51'21"E, 161.12 feet to a found 5/8" rebar and 2" diameter aluminum cap stamped "PE & RLS 23089 Eagle Town Boundary";
3) 781.04 feet along the arc of a curve to the left having a radius of 5457.35', a central angle of 08°12'00" and a chord which bears N62°45'21"E, 780.37';
4) 246.66 feet along the arc of a curve to the left having a radius of 2152.06', a central angle of 06°34'01" and a chord which bears N55°22'20"E, 246.53'; thence S14°11'25"E, at 3.18' pass the Northeast corner of said Lot 13, Block 40, West Eagle Addition, continue S14°11'25"E and along the West line of Prince Alley (15' wide) as shown on said plat of West Eagle Addition, a total distance of 124.56 feet to a found 5/8" rebar and 1-1/2" diameter aluminum cap stamped "LS 26967"; thence continue along the West line of said Prince Alley the following two (2) courses and distances:
1) S04°55'05"E, 235.10 feet;
2) S78°31'35"E, 15.66 feet to a found 5/8" rebar marking the Northwest corner of Lot 12, West Eagle Addition; thence along the West line of said Lot 12 S04°48'15"E, a distance of 178.59 feet to the Southwest corner of said Lot 12 and a point on the North line of Tract OS6, Eagle Ranch, Filing No. 1; thence along the North lines of Eagle Ranch, Filing No. 1 and Eagle Ranch Filing No. 3 S87°28'57"W, a distance of 278.86 feet to the Point of Beginning, containing 6.993 acres of land more or less.

VICINITY MAP



SCALE 1" = 2000'

TOWNSHIP 5 SOUTH, RANGE 84 WEST

NOTES:

1) The purpose of this Final Plat is to (i) create various Lots, Tracts, and Rights-of-way as listed in the Land Use Summary on Sheet 1 of this Plat, pursuant to Town of Eagle Land Use Regulations and Colorado Revised Statutes concerning the subdivision of Land to be recorded with the Eagle County Clerk and Recorder pursuant to C.R.S. 38-35-109 such that each Lot may be uniquely described with reference to this Final Plat; (ii) create various Easements for the purposes described hereon.

2) BASIS OF BEARING: N66°51'21"E, 370.18' along the southerly boundary of the U.S. Highway 6 right-of-way as shown on the Annexation Plat, Wastewater treatment Facility Annexation, Reception No. 599898, between a found Colorado Department of Highways brass cap monument set in concrete and a found 5/8" rebar and 2" aluminum cap stamped "LS 23089 TOWN OF EAGLE BOUNDARY".

3) SURVEY DATE: February 17, 2005 through January 13, 2006.

4) West Eagle Ranch LLC, hereby dedicates to the Town of Eagle the following perpetual, non-exclusive easements and rights-of-way:

a) Tract R-2 and Tract R-3 as Public Right-of-Way.

b) Utility and Pedestrian easement on, over, across and through those areas designated hereon as "Utility and Pedestrian Easement" for the purpose of i) the installation, use, repair, replacement, improvement and maintenance of utilities of any kind whatsoever, including but not limited to waterlines and hydrants, sanitary sewer lines and manholes, telephone lines, cable television lines, gas lines, electric lines, fiber optic lines and other communications lines and all related structures, together with a perpetual right of ingress thereto, ii) installation, use, repair, replacement, improvement, and maintenance of walkways, paths, and related structures, together with a perpetual right of ingress thereto.

c) Utility Easement on, over, under, above, across and through those areas designated hereon as "Utility Easement" for the purpose of the installation, use and repair, replacement, and maintenance of utilities of any kind whatsoever, including but not limited to waterlines and hydrants, sanitary sewer lines and manholes, telephone lines, cable television lines, gaslines, electric lines, fiber optic lines and other communication lines and all related structures, together with a perpetual right of ingress and egress thereto.

d) Drainage Easement on, over, under, above, across and through those areas designated hereon as "Drainage Easement" for the purposes of storm drainage, drainage of water flowing from other lands along with the installation, use and repair, replacement, improvement and maintenance of drainage strutures including but not limited to swales, gutters, pipes, culverts, storm drains, manholes and inlets, together with a perpetual right of ingress and egress thereto.

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

6) See Land Title Guarantee Company Inc., Committment #VC50008014-3 (dated March 31, 2005) for all title information.

7) The platted northerly boundary of the plat of West Eagle Addition recorded January 3, 1977 in Book 251 at Page 288 contains errors in the curve data along U.S. Highway 6 & 24, and is apparently based in part on a metes and bounds land description in the deed recorded prior to the plat of West Eagle Addition on June 26, 1974 in Book 235 at Page 286, in which the "southerly right of way fence line of U.S. Highway No's 6 and 24" as it then existed is described as the northerly boundary of the subject property shown hereon.

The northerly boundary of Lot 13, Block 40, West Eagle Addition as measured and accepted as a part of this survey of West Eagle Addition, Filing 2 is based on the Annexation Plat, Wastewater Treatment Plant Facility Annexation recorded August 28, 1996 under Reception No. 599898, and the found monumentation perpetuating said Annexation Plat.

LAND USE SUMMARY			
LOT/TRACT	AREA	LAND USE	ADDRESS
LOT 1	4.674 ACRES	RESIDENTIAL MULTI-FAMILY	0058 SYLVAN LAKE ROAD
LOT 2	1.104 ACRES	RESIDENTIAL MULTI-FAMILY	718 PRINCE ALLEY
TRACT R-1	0.064 ACRES	ROADWAY TRACT	----------
TRACT R-2	0.887 ACRES	PUBLIC RIGHT-OF-WAY	----------
TRACT R-3	0.264 ACRES	PUBLIC RIGHT-OF-WAY	----------
TOTAL	6.993 ACRES		

PLANNING COMMISSION CERTIFICATE

This Plat approved by the Town of Eagle Planning Commission the 3rd day of January, 2006.

Frederick B. Lawson
Chairman

CERTIFICATE OF TAXES PAID

I, the undersigned, do hereby certify that the entire amount of taxes and assessments due and payable as of 12/31/06 upon all parcels of real estate described on this Plat are paid in full.

Dated this 16th day of February, A.D. 2006.

Karen Shaffer by Julie Lizzi
Treasurer of Eagle County, Colorado
R 0168776

EAGLE COUNTY CLERK AND RECORDER CERTIFICATE

This Plat was filed for record in the office of the Eagle County Clerk and Recorder at 3:18 o'clock P M. on the 27 day of February, 2006, and is duly recorded at Reception No. 200604681

EAGLE COUNTY CLERK & RECORDER
By: Teak Simonds
Deputy

TITLE CERTIFICATE

Land Title Guarantee Company does hereby certify that it has examined the title to all lands shown on this Plat and that title to such lands is vested in West Eagle Ranch LLC, a Delaware limited liability company, free and clear of all liens, ~~taxes~~ and encumbrances, except as follows:

None

EXECUTED this 25th day of January, 2006.

By: Trevor Theelke as Agent for Land Title

BOARD OF TRUSTEES CERTIFICATE

This Plat approved by the Board of Trustees of the Town of Eagle, Colorado, this 10th day of JANUARY, 2006, for filing with the Clerk and Recorder of Eagle County, Colorado, and for conveyance or dedication to the Town of Eagle the public dedications shown hereon; subject to the provisions that approval in no way obligates the Town of Eagle for financing or constructing of improvements on said lands, streets or easements dedicated to the public except as specifically agreed to by the Board of Trustees of the Town of Eagle. Further, said approval in no way obligates the Town of Eagle for maintenance of public improvements until construction of said improvements has been completed in accordance with the Town of Eagle's specifications and the Town of Eagle has agreed to accept said improvements. This approval does not guarantee that the size, soil conditions, sub-surface geology, ground water conditions, or flooding conditions of any lot shown hereon are such that a building permit, development permit, or any other required permit will be issued. This approval is with the understanding that all expenses involving required improvements for all utility services, paving, grading, landscaping, curbs, gutters, sidewalks, road lighting, road signs, flood protection devices, drainage structures, and all other improvements that may be required shall be the responsibility of the owners designated hereon and not the Town of Eagle, unless otherwise specifically agreed to in writing by the Board of Trustees.

TOWN OF EAGLE, COLORADO

By: _____
Mayor

Witness my hand and seal of the Town of Eagle, Colorado.

ATTEST: Marlee M. Johnson
Town Clerk - DEPUTY

TOWN OF EAGLE * SEAL * COLORADO

SURVEYOR'S CERTIFICATE

I, Dana B. Spigener, do hereby certify that I am a registered land surveyor licensed under the laws of the State of Colorado, that this Plat is a true, correct, and complete plat of WEST EAGLE ADDITION, FILING 2 as laid out, platted, dedicated and shown hereon, that such plat was made from an accurate survey of said property by me and under my supervision and correctly shows the location and dimensions of the lots, staked upon the ground in compliance with 38-51-105 C.R.S., and that such plat meets the requirements of 38-33.3-209 C.R.S., as amended, and all other regulations governing the subdivision of land.

EXECUTED this 26th day of January, A.D. 2006.

Dana B. Spigener
Dana B. Spigener, P.L.S. 33655

1/26/06
Date

COLORADO REGISTERED DANA B. SPIGENER 33655 PROFESSIONAL LAND SURVEYOR

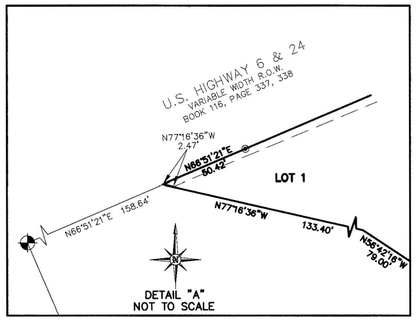
ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 926-3390 •

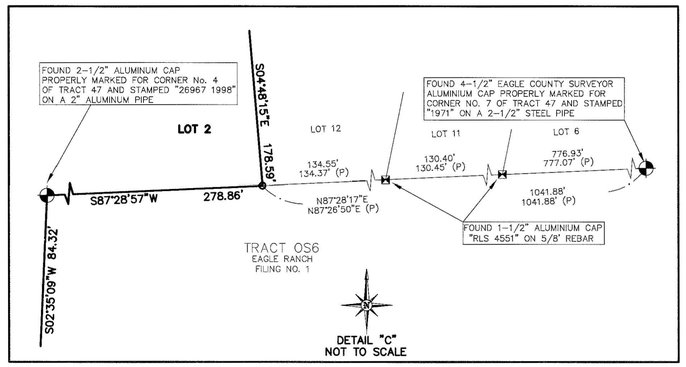
SHEET 1 OF 1

JOB #90714.8

S:\Projects\90500\dwg\West Eagle Addition\LOT13_PLAT_ROTATED.dwg, COVER, 01/19/06 11:26:19 AM, kaython

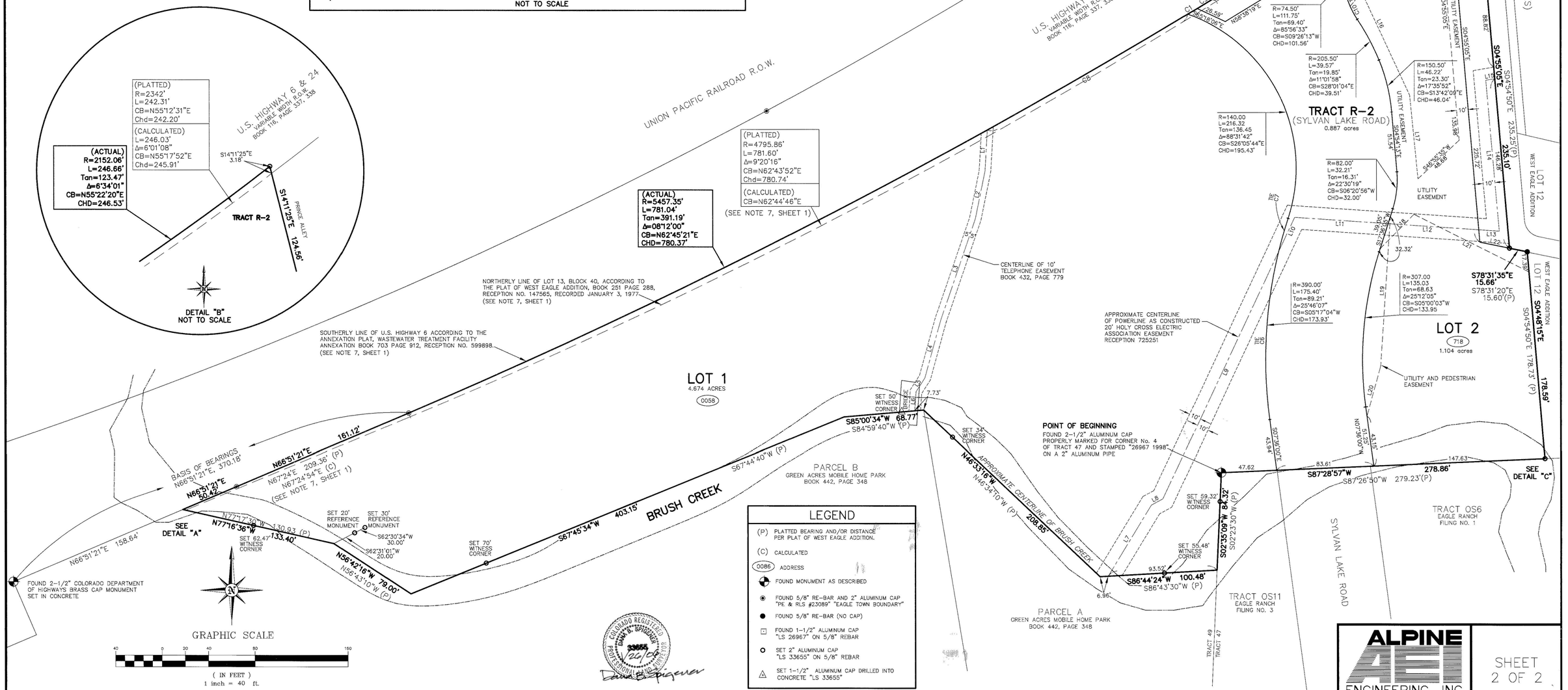
FINAL PLAT
WEST EAGLE ADDITION, FILING 2
A RESUBDIVISION OF LOT 13, BLOCK 40, WEST EAGLE ADDITION TO THE TOWN OF EAGLE, COLORADO COUNTY OF EAGLE





LINE TABLE		
LINE	LENGTH	BEARING
L1	35.38	S03°17'29"W
L2	41.82	S11°32'26"W
L3	92.24	S18°53'01"W
L4	51.28	S15°20'05"W
L5	14.34	S32°31'40"W
L6	16.55	S03°58'24"W
L7	71.80	N31°10'47"E
L8	11.19	N61°21'40"E
L9	235.42	N25°05'15"E
L10	32.36	N25°05'15"E
L11	80.55	S86°10'16"E
L12	78.27	S86°10'16"E
L13	17.68	S86°10'16"E
L14	130.27	N05°01'52"W
L15	7.81	N80°13'42"E
L16	132.85	N24°57'25"W
L17	72.25	N05°38'40"W
L18	41.61	S44°43'00"W
L19	129.30	N03°46'39"E
L20	44.85	N15°19'55"E
L21	110.62	N63°23'20"W
L22	26.06	N78°31'35"W

CURVE TABLE						
CURVE	LENGTH	RADIUS	DELTA	TAN	CB	CHORD
C1	9.25	5457.35	0°05'50"	4.63	N58°53'19"E	9.26
C2	124.69	2152.06	3°19'11"	62.36	N56°59'45"E	124.67
C3	85.56'	2152.06	02°16'41"	42.79'	N53°13'40"E	85.56
C4	33.46	74.50	25°44'04"	17.02	S01°52'35"E	33.18
C5	53.85	74.50	41°25'02"	28.16	N31°41'58"E	52.69
C6	145.86	390.00	21°25'48"	73.80	N03°06'54"E	145.02
C7	29.53	390.00	04°20'19"	14.77	N15°59'58"E	29.53
C8	199.34	5457.35	2°05'34"	99.68	S59°59'01"W	199.33
C9	17.54	5457.35	0°11'03"	8.77	S58°44'53"W	17.54
C10	24.43	74.50	18°47'27"	12.33	S24°08'20"E	24.32
C11	36.41	2152.06	00°58'09"	18.20'	N54°51'05"E	36.41'



LEGEND

(P)	PLATTED BEARING AND/OR DISTANCE PER PLAT OF WEST EAGLE ADDITION.
(C)	CALCULATED
0086	ADDRESS
	FOUND MONUMENT AS DESCRIBED
	FOUND 5/8" RE-BAR AND 2" ALUMINUM CAP "PE & RLS #23089" "EAGLE TOWN BOUNDARY"
	FOUND 5/8" RE-BAR (NO CAP)
	FOUND 1-1/2" ALUMINUM CAP "LS 26967" ON 5/8" REBAR
	SET 2" ALUMINUM CAP "LS 33655" ON 5/8" REBAR
	SET 1-1/2" ALUMINUM CAP DRILLED INTO CONCRETE "LS 33655"

GRAPHIC SCALE

40 0 20 40 80 160

(IN FEET)
1 inch = 40 ft.

COLORADO REGISTERED
DANIEL S. SPIEGEL
33655
PROFESSIONAL LAND SURVEYOR
Daniel S. Spiegel

ALPINE AEI ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 926-3390 •

SHEET 2 OF 2

JOB #90714.8

S:\05050\dwg\West Eagle Addition LOT13_PLAT_ROTATED.dwg, 01/25/2006 08:43:06 AM

SYLVAN LAKE CIRCLE

EAGLE, COLORADO

MAY 2016

PRELIMINARY PLAN
May 19, 2016
NOT FOR CONSTRUCTION

GENERAL NOTES

1. The Contractor shall notify Alpine Engineering, Inc., Owner and Town of Eagle Engineering Dept. at least 48 hours prior to any construction. The Contractor shall coordinate all work with Alpine Engineering, Inc. and Owner.

2. Alpine Engineering, Inc., assumes no responsibility for utility locations. It is the Contractor's responsibility to field verify the location of all utilities prior to commencement of any construction.

3. The Contractor shall conform to all Town of Eagle rules, regulations and stipulations while accessing through or working in the Town.

4. The Contractor shall take all appropriate precautions to significantly reduce any potential pollution caused by his activities, including vehicle fueling, storage of fertilizers or chemicals, etc. The Contractor shall have identified procedures for handling potential pollutants and have identified spill prevention and response procedures prior to any activities at the project site.

5. The Contractor shall keep 2 sets of contract drawings marked up to fully indicate asbuilt conditions. The drawings shall be provided to the Owner and Alpine Engineering, Inc. upon completion of this work. Contractor is to provide at least three ties from physical monuments to all fittings, valves, hydrants, curb stops, air vac valves, prv's, manholes, and services. The Town regulations require a description of all materials and appurtenances to be included in the asbuilts.

6. The Contractor shall maintain traffic at all times to the satisfaction of the Owner, the Town of Eagle and CDOT. The Contractor shall minimize traffic disruptions and provide adequate safety precautions to ensure public safety.

7. Safety is the responsibility of the Contractor. The Engineer is not responsible for safety in, on, or about the project site, nor for compliance by the appropriate party with any regulations relating hereto.

8. It is the Contractor's responsibility to obtain (and conform to) all proper construction permits including a road cut permit for work within the public right of way.

9. The Owner will designate staging areas.

10. The Contractor shall minimize all off site tracking. All soil tracked off site shall be immediately cleaned up to the satisfaction of The Town of Eagle, CDOT and The Owner.

11. If any groundwater is encountered the Contractor shall contact Owner, Alpine Engineering, Inc., and the Project Geotechnical Engineer immediately.

12. The Contractor shall protect and preserve all trees, bushes, shrubs, and ground cover in a manner acceptable to The Owner.

13. Observations of the work in progress and on-site visits are not to be construed as a guarantee or warranty by the Engineer of the Contractor's contractual responsibilities.

14. All materials and workmanship shall be subject to inspection by the Town and/or their representatives, and Alpine Engineering, Inc. The Town reserves the right to accept or reject any such materials and workmanship that do not conform to the approved drawings and/or district standards or specifications.

15. All construction shall conform to town standards and specifications and be subject to construction observation by their representatives. Copies of town standards must by obtained by the Contractor. Contractor shall have one (1) copy of the plans and one (1) copy of the appropriate specifications on the job site at all times.

16. Street closures shall be kept to a minimum length of time. There shall be no material storage on Town Streets or property.

17. It is the Contractor's responsibility to prepare and submit a Traffic Control Plan, as a requirement of the Town of Eagle's Road Cut Permit, and submit to the Town's Engineer prior to construction. The plan shall show existing and proposed traffic signs, existing and proposed crosswalk striping, construction limits, fencing and access, and vehicle tracking control measures.

18. Contractor shall conform to all recommendations in the forthcooming subsoil study prepared by HP Geotech (Report # xxxxx dated xxxx)

19. Topographic information was provided by Archibeque Land Consultants

20. Contractor may use non-potable water for construction watering

21. The access into the Project from Highway 6 will include a separate set of CDOT Access Permit Plans and Approval.

22. All the work within the CDOT right of way shall conform to the CDOT Access Permit and specifications.

UTILITY NOTES

1. The Contractor is warned that conflicts with existing utility services may exist. Prior to beginning any construction, the Contractor shall contact all appropriate utility companies for line locations. The Contractor shall then locate all utilities (including depth). Any conflicts with the proposed construction shall be brought to the attention of the Engineer so that line or grade changes can be made to eliminate any conflicts with these existing utilities. All existing utilities shall be protected from damage by the Contractor. Damaged utilities shall be repaired by the Contractor at no expense to the Owner.

2. All construction activities and excavating for utility trenches shall meet OSHA requirements.

3. All Water System and Sanitary Sewer System construction shall conform to Town of Eagle standard specifications.

4. All water mains and services shall have a minimum cover of 6 feet.

5. Provide 10 feet minimum horizontal separation between water and sewer mains and services or encase per Colorado Department of Health requirements.

6. The Contractor shall mark all service line ends as shown on the details.

7. The Contractor shall provide thrust blocks and megalug restraints at all bends and tees. Angles of water line bends are shown only as a guideline; all bends have not been identified or dimensioned, and additional bends may be required during construction. Vertical bends are not shown but will be required to maintain minimum cover.

8. Water service lines to be Type K Copper with size per plan, a curb stop shall be installed for each service at the property line or edge of easement or as shown on the plans.

9. The Contractor shall verify existing pipe or manhole inverts at tie in points prior to construction.

10. The Contractor shall lay 10 gauge insulated copper trace wire along the water lines, (see detail sheet), and ductile iron water pipe shall be cad-welded charge size of CA-45. The Contractor shall test the pipe and the tracer wire to confirm conductivity prior to acceptance. The Contractor shall field install polyethylene wrap on all water lines (see detail sheet).

11. The Contractor shall test all water mains in accordance with Town standard specifications, tests to include pressure test, chlorine test, bacteric test and leakage test.

12. The Contractor shall attend a mandatory preconstruction meeting with the Town of Eagle Engineering Dept. and Alpine Engineering, Inc., prior to the start of construction.

13. Sewer service lines to be 6" PVC unless otherwise indicated.

14. All sewer lines shall have a minimum of 4.5 feet of cover.

15. All sewer pipe dimensions noted are inside edge of manhole to inside edge of manhole.

16. The Contractor shall test all sewer mains in accordance with Town standard specifications, tests to include low pressure air test, manhole vacuum test, and television test.

17. The Contractor shall have water running in sewer lines during the t.v. recording process and cut sheet format shall conform to Town standard specifications.

18. The Contractor is responsible for coordinating, conducting and scheduling for the testing of all utilities and obtaining approval and acceptance from all utilities.

19. To maintain adequate skin friction on existing water mains during construction, the Contractor shall valve off stubs and deplete the pressure prior to excavation for extending water main stubs. The Contractor shall also go 10 feet minimum from the main cross tee before beginning the excavation trench. The excavation trench shall be a maximum of 1.5 : 1 slope.

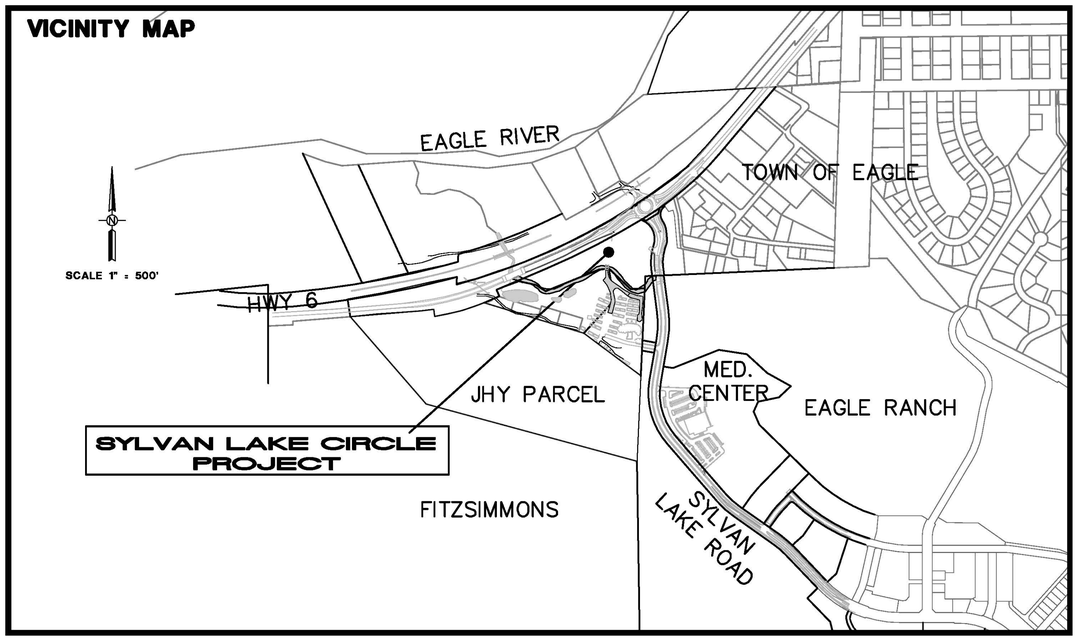
20. The Contractor may need to perform hydraulic testing and disinfection of existing waterlines as part of the testing and acceptance procedure for the proposed waterline.

21. Compaction of all trenches and bedding must be attained as per specifications.

22. PHONE\CATV: All phone and cable TV conduits, pedestals and appurtenances shall be installed in accordance with Century Link's design specifications and shall be reviewed and accepted by Century Tel.

23. If Water Mains cross within 18" (vertical) of sewer services, or if water mains are beneath sewer services, the contractor shall use C900 pipe for the sewer services, and the water and pipe sticks shall be centered on each other.

VICINITY MAP



GRADING AND DRAINAGE NOTES

1. All work performed for this project including storm drains and culverts shall be constructed in accordance with the Town of Eagle standards and the project Technical Specifications.

2. All drain pipes shall be installed with the required bedding.

3. Elevations shown are at pipe invert unless otherwise shown.

4. All standard storm drain structures are subject to modification by the Engineer to meet field requirements.

5. Where any part of the storm drain system is located in a fill section, provide fill material compacted to 95% AASHTO T99 density from the original undisturbed ground up to structure bottom slabs and pipe bedding.

6. Inlet boxes to be oversized to accommodate pipe size where necessary. Provide traffic load rated inlet box and top slab to accommodate grate and frame for oversized boxes.

7. All Reinforced Concrete Pipe Joints (RCP) shall utilize Type R-4 Rubber Gasket Joints which shall be in accordance with AASHTO M198 and ASTM C443 (standard specifications for joints for circular concrete pipe using rubber gaskets).

8. Pipe lengths indicated are slope lengths measured along the centerline of pipe from inside face of box to inside face of box.

9. Curb and Gutters shall be installed in such a manner as to insure positive drainage in all areas, as shown.

10. Direct downspout drainage away from building foundation or to storm per Geotechnical Engineer.

11. Ditch revegetation and ditch protective linings will require field adjustment during construction to account for varying soil conditions. Revegetation and linings will be evaluated after ditches are constructed.

12. Grading adjacent to buildings shall be at a slope away from the building of 6" in 10' per the geotechnical report.

13. The Contractor shall maintain existing drainage channels, culverts, and appurtenances during construction as necessary to protect roads and property.

14. The Contractor shall remove all topsoil and man placed fill prior to commencement of construction.

15. The ground surface surrounding the exterior of buildings shall be graded to slope away from the foundations in all directions.

16. Proof roll all hardscape areas prior to installing basecourse and pavement, per Geotechnical Report.

SHEET INDEX

PROJECT CONTACTS

DEVELOPER: JON WARNER & CURTIS MCDONALD		(720) 644-6699
TOWN OF EAGLE, ENGINEERING	KEVIN SHARKEY	(970) 328-6678
TOWN OF EAGLE, PUBLIC WORKS	DUSTY WALLS	(970) 328-6678
BLACK HILLS GAS	TODD ELLSWORTH	(970) 309-2722
HOLY CROSS ENERGY (ELECTRIC)	KEITH HERNANDEZ	(970) 947-5439
CENTURY LINK (PHONE\CATV)	JASON SHARPE	(970) 328-8290
CIVIL ENGINEER, ALPINE ENGINEERING INC.	MATT WADEY	(970) 926-3373
GEOTECHNICAL ENGINEER, HP-GEOTECH	DAVE YOUNG	(970) 945-7988
LAND SURVEYOR, ARCHIBEQUE LAND CONSULTING	TED ARCHIBEQUE	(970) 328-6020

HOLY CROSS ENERGY CONSTRUCTION SPECIFICATIONS

I. TRENCH AND CONDUIT

1. The developer or contractor will contact Holy Cross Energy before conduit and vault installation begins to schedule a pre-construction meeting with the project inspector.
2. Changes in power facility construction from that shown on the project plans will not be made without advance approval from the Holy Cross Energy Inspector.
3. Holy Cross Energy material shall not be moved from the project to which it was assigned without the advance approval of the inspector and the completion of necessary paperwork. Holy Cross Energy material shall not be installed for any use other than construction of power facilities.
4. All roads will be built to subgrade and all drainages will be constructed to grade before any vaults or conduits are installed.
5. All trench will be excavated deep enough to ensure that the top of installed power facilities will be 48" below final grade. Special care must be taken to insure that the top of conduits will be 48" below the bottom of drainage ditches and all other low areas.
6. Trench will be as straight as possible between vaults and shall have a smooth bottom free from low and high spots. Six inches of road base will be placed the entire length of the trench and well compacted prior to conduit installation. When placed in the trench, the conduit shall be in continuous contact with the compacted road base with no hold down weight added. Twelve inches of road base, as measured from the top of the conduit, will be placed on the conduit and well compacted prior to returning any native backfill to the trench. Large rocks shall not be placed directly on the road base layer. Care must be taken to avoid conduit damage during backfill and compaction; conduits found to be unusable at the time of power cable installation will be repaired by the developer or contractor before power can be made available.
7. Power facilities to be placed parallel to deeper utilities will have a horizontal separation from the deeper utility greater than the depth of such utility below final grade less four feet (see attached drawing). When crossing a deeper utility is unavoidable, the crossing will be made as close to perpendicular as possible.
8. Power line conduits will be installed with a minimum separation of 12" from all other new or existing underground utility lines. Wherever possible, this separation will be horizontal. The power line separation from plastic gas lines will be greater than this minimum wherever practicable. Power line conduits will be located deeper in the trench than the facilities of all other utilities unless the inspector grants a waiver prior to the start of construction.
9. Backfill and compaction above the road base layer will be as required by the governmental entity or other party having jurisdiction.
10. Conduit bell ends will not be allowed in the vaults. Holy Cross Energy will supply factory couplers, 90°, 45°, and 22 ½° elbows as needed for job. Non-factory bends and heated bends will not be allowed. No more than two 90° elbows will be allowed in a conduit run of 500 feet. The conduit shall run straight between factory bends. Allowed bends must be further than 5' from a vault. Factory elbows supplied must be used intact; they cannot be cut to make a lesser bend. Bells will not be cut off conduit sticks to use as couplers. Holy Cross Energy elbows and pipe will be used only for the power facility installation.
11. The conduit will not be backfilled without the Holy Cross Energy inspector seeing all joints unless the inspector gives prior permission. All joints shall be completely seated to the line marked on the male end of the conduit after sufficient glue is applied to both conduits being jointed, even in areas where the trench cannot be excavated completely straight. Glue in the joint shall be allowed to completely dry prior to any stress being applied to the conduit on either side of the joint. Trench backfilled without the inspector viewing each joint or giving prior permission to cover the conduit will be re-excavated to expose the conduit, or the contractor will put a camera through each conduit in the span which was prematurely backfilled to verify the joint seating and conduit condition. The camera verification will be witnessed by the Holy Cross Energy inspector.
12. Individual conduits shall enter each vault at a consistent location. There is to be no crossing of conduits in the trench.
13. Both ends of a conduit run shall be securely plugged at the time of installation with Holy Cross Energy supplied material. Conduit ending outside a vault shall be marked with a 4" x 4" post or other approved method.
14. Red trench marking tape will be supplied by Holy Cross Energy and shall be installed 18" to 24" above the conduit during backfill.
15. At completion of the job, the inspector will do a final inspection. If the job does not meet with Holy Cross Energy's specifications or the approval of inspector, service will not be provided until specifications are met.

II. VAULTS

1. Vaults shall be installed as follows:
   - A Splice vaults shall be installed with the manhole lid grade being slightly above final grade of the surrounding area, except when the vault is in a roadway, the manhole lid grade shall match the grade of the finished roadway surface.
   - B Splice vaults located in roads or other sloped areas will be installed so that the concrete base and lid are at the slope of the surrounding area. Vaults placed in roads will not be located in areas normally traversed by vehicle wheels. The inspector must approve all vaults installed at a slope.
   - C Transformer vaults and switchgear vaults will be installed with the bottom of the lid at final grade. The lid will be level.
   - D Where transformer and switchgear vaults are set into hillsides or sloped cuts, the downhill side of the vault will be graded according to C above. The slope behind the vault will be laid back sufficiently to prohibit soil or rocks from sloughing onto the vault. If the slope cannot be laid back far enough, a retaining wall shall be constructed behind the vault at the direction of the inspector.
   - E All vault pads will be placed on the vaults at the time of vault installation to protect the public and wildlife, unless otherwise instructed by the inspector. The holes through transformer and switchgear pads will be covered at the time of vault installation with concrete pieces supplied by Holy Cross Energy, unless otherwise instructed by the inspector.
   - F Large vault pieces shall be jointed with a tar type sealant provided by Holy Cross Energy, with the exception of the vault lid, at the direction of the inspector.
2. Holes knocked in vaults for conduit installation shall be as small as possible and shall be grouted closed on the outside of the vault prior to backfill.
3. Conduit shall enter vaults perpendicular to the vault wall, at least 2" from any adjacent walls and at least 2" above the vault base. There shall be a minimum separation of 1" between conduits. See vault drawings.
4. Conduit will extend 4" into the vault (measured from the inside wall of the vault) after backfilling is complete.
5. Ground rods in vaults for underground cable installation shall be laid in the trench with the conduits. The end of the rod shall extend approximately 6" into the vault through the conduit knockout. The rod will have a 45° bend located approximately 3" from the vault end, with the bend going away from the conduits. The bent end of the rod must be far enough from the vault wall to allow crimping the grounding conductor onto the rod. The rod must be at least 2" from the conduit at its entrance into the vault. See vault drawings.
6. After the vault has been set, pipes extended in and grouted and the ground rod is in place, vaults shall be swept out removing all dirt or rocks. Cleanup shall be completed to the satisfaction of the inspector prior to cable installation being scheduled.
7. Pedestals for other utilities shall not be located closer than 10' to a vault on sides where transformers or switchgear will have access doors. Pedestals shall not be located closer than 5' to a vault on sides where the pad-mounted equipment will not have access doors.

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 926-3590 •

(SEAL)

SYLVAN LAKE CIRCLE
EAGLE, CO

COVER

NO.	DATE	REVISIONS	BY
	05/20/2016	DEVELOPMENT PERMIT	MCW

DESIGNED	GB, MW
DRAWN	MW
CHECKED	MW, GB
JOB NO.	48445
DATE	3-1-2016

SHEET
C1.1

PRELIMINARY PLAN
May 19, 2016
NOT FOR CONSTRUCTION

1"=20'

INSTALL GRASSCRETE PAVERS, OR ASPHALT EGRESS
REMOVE EXISTING GUARDRAIL FOR EMERGENCY ACCESS
INSTALL COLLAPSIBLE STEEL 5" DIAMETER BOLLARDS (3), 48 " HEIGHT
6550

U.S. HIGHWAY 6

HIGHWAY 6 ACCESS TO THE PROJECT WILL INCLUDE A SEPARATE SET OF CDOT PLANS AND APPROVAL

CONNECT TO EXISTING ASPHALT SAWCUT EXISTING ASPHALT TO FORM CLEAN LINE
INSTALL 2'X3' CURB INLET ON EXISTING CURB (SEE DRAINAGE PLANS)
INSTALL 2FT WIDE THERMOPLASTIC STOP BAR (MILLED IN ASPHALT)
REMOVE EXISTING GUARDRAIL
RELOCATE EXISTING ROUNDABOUT INFO SIGN
CONNECT TO EXISTING GUARDRAIL, TERMINATE WITH FLARED TERMINAL END SECTION
SEE VIEWPORT ABOVE FOR EMERGENCY ACCESS ALTERNATIVE
R25.0'
R15.0'
HWY 6 RIGHT OF WAY
STOP
INSTALL R1-1 STOP SIGN
MONUMENT SIGN
BUILDING SETBACK
EROSION CONTROL BLANKET (LANDLOK C2 OR APPROVED EQUAL)
14'X12' DUMPSTER
CONCRETE
PULL OUT
CONSTRUCT 4' CONCRETE PAN
CONSTRUCT BOULDER WALL (TYP)
CONSTRUCT 4' WIDE CONC. WALK
HANDRAIL RE: ARCH
(8) STEPS, 9" RISE, 12" TREAD
5' CONCRETE WALK
CONSTRUCT 2' CONCRETE PAN
18" RCP STORM
4' ASPHALT PATH
18" HDPE STORM
PATIO (RE: ARCH)
DECK
CONSTRUCT BOULDER WALL (TYP)
WALL 1 TOW=43.1' BOW=40.0'
WALL 2 TOW=39.5' BOW=36.0'
CONSTRUCT TRAIL
10' WIDE GRAVEL TRAIL
EXISTING GRADE
MATCH EXISTING GRADE
100 YR FLOODPLAIN
INFILTRATION BASIN
EFFECTIVE SETBACK
BEGIN CONSTRUCTION BOULDER ROCKERY WALL
7' EXPOSED ROCKERY WALL TOW=44.0' BOW=37.0'
8' EXPOSED ROCKERY WALL TOW=44.0' BOW=38.0'
CONSTRUCT BOULDER ROCKERY WALL
CONSTRUCT 1' DEEP GRASS BIO-SWALE
BRUSH CREEK
GREEN ACRES MOBILE PARK

INSTALL THERMOPLASTIC CROSSWALK STRIPING 2' X 8' WITH 3' GAPS (INLAY STRIPE/GRIND ASPHALT)
SAWCUT EXISTING CURB FOR RAMP INSTALLATION. CONSTRUCT 10' WIDE CONCRETE RAMP WITH CURBING. INSTALL 2' WIDE CAST IRON TRUNCATED DOME PLATE (EAST JORDAN DURALST OR EQUAL)
RELOCATE ELECTRIC FOR WALL CONSTRUCTION
CONCRETE RETAINING WALL W/ RAILING (RE: STRUCTURAL)
REMOVE EXISTING TREE
LANDSCAPE EASEMENT
CONCRETE RETAINING WALL (RE: STRUCTURAL)
ENCROACHMENT
TOP OF CONC.=62.2
ABANDONED MANHOLE
CONSTRUCT BOULDER WALL (TYP)
SYLVAN LAKE ROAD
PROP. 6' CONC. WALK
INSTALL W2-2 (RIGHT)
CONSTRUCT 1' DEEP DRAINAGE SWALE
EXISTING 4' MANHOLE RIM=61.8' INV OUT=51.2'
REMOVE EXISTING TREES
SAWCUT EXISTING CURB & GUTTER AND CONSTRUCT PROPOSED CURB & GUTTER AS SHOWN
DEMO AND REMOVE EXISTING ASPHALT DRIVEWAY
CONSTRUCT 2.5' WIDE CONCRETE CURB AND GUTTER
CONCRETE RETAINING WALL (RE: STRUCTURAL)
INSTALL 3'X3' C INLET RIM=6554.5' INV. IN 18" EXIST=50.15' INV OUT 18"=49.95'
REMOVE EXISTING GUARDRAIL
REMOVE 48 LF OF EXISTING STORM PIPE & END SECTION
INV OUT 18" EXIST=49.66'
CONSTRUCT 8' WIDE CONCRETE PAN
4+49.54
INSTALL 2FT WIDE THERMOPLASTIC STOP BAR (MILLED IN ASPHALT)
INSTALL R1-1 STOP SIGN
REMOVE EXISTING GUARDRAIL
CONNECT TO EXISTING GUARDRAIL, TERMINATE WITH FLARED TERMINAL END SECTION
MONUMENT SIGN
3'X3' INLET WITH SOLID COVER RIM=6551.5' INV IN=6547.7' INV OUT=6547.5'
HANDRAIL RE: ARCH
INV OUT 18" RCP=42.2'
12'X14' DUMPSTER
2'X2 INLET RIM=49.5' INV-OUT 12"=47.0'
12" RCP STORM
18" RCP STORM

1"=20'

LEGEND
- PROPERTY LINE
- 8110 EXISTING CONTOUR
- EASEMENT
- 8106 PROPOSED CONTOUR
- 1.5% PROPOSED GRADING, SLOPE/SPOT
- PROPOSED STORM SEWER
- PROPOSED BOULDER RETAINING
- PROPOSED CONCRETE/ASPHALT
- PROPOSED CURB & GUTTER

PARKING SUMMARY TABLE	REQ'D (PARKED AT UNITS)
(2) 3 BEDROOM DUPLEX UNITS @ 3 / UNIT	= 6 (8)
(35) 2 BEDROOM UNITS @ 2 / UNIT	= 70 (70)
(5) 1 BEDROOM UNITS @ 1.5 / UNIT	= 8 (5)
PLUS 1 SPACE PER 6 DWELLING UNITS	= 7
TOTAL	= 91 (83)
8 SPACES REQUIRED IN ADDITION TO PARKING AT UNITS	
(2) HANDICAP	
(3) FISHING	
(9) NOT ADJACENT TO UNITS	

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97 EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 926-3390 •

SYLVAN LAKE CIRCLE
EAGLE, CO

PRELIMINARY GRADING PLAN

(SEAL)

NO.	DATE	REVISIONS	BY
	05/20/2016	DEVELOPMENT PERMIT	MCW

DESIGNED MCW
DRAWN MCW
CHECKED KAK
JOB NO. 48445
DATE 3-4-2016

SHEET C2.1

O:\Eagle\Sylvan Lake Circle-48445-2015\dwg\Master\GRADING.dwg, 5/19/2016 3:08:38 PM, Wesley

PRELIMINARY PLAN
May 20, 2016
NOT FOR CONSTRUCTION

U.S. HIGHWAY 6

BRUSH CREEK

GREEN ACRES MOBILE PARK

INSTALL 2FT WIDE THERMOPLASTIC STOP BAR (MILLED IN ASPHALT)
REMOVE EXISTING GUARDRAIL
RELOCATE EXISTING ROUNDABOUT INFO SIGN
CONNECT TO EXISTING GUARDRAIL, TERMINATE WITH FLARED TERMINAL END SECTION
INSTALL R1-1 STOP SIGN
MONUMENT SIGN
BUILDING SETBACK
6' WIDE EROSION CONTROL BLANKET (LANDLOK C2 EXCELSOR OR APPROVED EQUAL)
PULL OUT
14'X12' DUMPSTER
CONCRETE
CONSTRUCT 2' CONCRETE PAN
CONSTRUCT 4' CONCRETE PAN
CONSTRUCT BOULDER WALL (TYP)
CONSTRUCT 4' WIDE CONC. WALK
HANDRAIL (RE: ARCH)
5' CONCRETE WALK
18" RCP
18" RCP STORM
18" HDPE STORM
4" ASPHALT PATIO
(6) STEPS, 6" RISE, 12" TREAD
PATIO (RE: ARCH)
DECK
CONSTRUCT 1' DEEP DRAINAGE BIO-SWALE
CONSTRUCT 10' WIDE GRAVEL TRAIL
MATCH EXISTING GRADE
100 YR FLOODPLAIN
WALL 1 TOW=43.1' BOW=40.0'
WALL 2 TOW=39.5' BOW=36.0'
BEGIN CONSTRUCTION BOULDER ROCKERY WALL
7" EXPOSED ROCKERY WALL TOW=44.0' BOW=37.0'
CONSTRUCT BOULDER ROCKERY WALL
INFILTRATION BASIN
EFFECTIVE SETBACK
WATER QUALITY POND VOLUME=2195 FT³ REQ'D=2133 FT³
ADA
FISHING
FUTURE PATH, BY OTHERS
HWY 6 RIGHT OF WAY

BUILDING A: FFG=52.2, FFG=51.4', FFG=50.5', FFG=49.2
BUILDING B: FFG=54.3', FFG=56.9, FFG=52.9', FFG=55.4', FFG=51.4', FFG=53.9', FFG=49.9', FFG=52.5'
BUILDING C: FFG=50.4', FF=49.4'
BUILDING D: FFG=46.6', FF=43.3', FFG=45.3', FF=42.1', FFG=44.6', FF=41.4', FFG=41.8', FF=38.3', FFG=43.3', FF=40.1'
BUILDING E: FFG=47.7', FF=44.5', FFG=48.1', FF=44.9', FFG=48.6', FF=45.4', FFG=49.0', FF=45.8', FFG=49.3', FF=46.1', FFG=49.6', FF=46.4'
BUILDING F: FFG=38.3', FF=35.1', FFG=37.4', FF=37.4', FFG=36.8', FF=33.3', FFG=35.0', FF=31.7', FFG=33.3', FF=30.3', FFG=32.0', FF=31.5'

LEGEND

	PROPERTY LINE
8110	EXISTING CONTOUR
	EASEMENT
8106	PROPOSED CONTOUR
1.5% 26.6'	PROPOSED GRADING, SLOPE/SPOT
	PROPOSED STORM SEWER
	PROPOSED BOULDER RETAINING
	PROPOSED CONCRETE/ASPHALT
	PROPOSED CURB & GUTTER

N
1"=20'

PARKING SUMMARY TABLE	REQ'D (PARKED AT UNITS)
(2) 3 BEDROOM DUPLEX UNITS @ 3 / UNIT	= 6 (8)
(35) 2 BEDROOM UNITS @ 2 / UNIT	= 70 (70)
(5) 1 BEDROOM UNITS @ 1.5 / UNIT	= 8 (5)
PLUS 1 SPACE PER 6 DWELLING UNITS	= 7
TOTAL	= 91 (83)
8 SPACES REQUIRED IN ADDITION TO PARKING AT UNITS	
(2) HANDICAP	
(3) FISHING	
(9) NOT ADJACENT TO UNITS	

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 FAX 926-3590 •

SYLVAN LAKE CIRCLE
EAGLE, CO

PRELIMINARY GRADING PLAN

(SEAL)

NO.	DATE	REVISIONS	BY
	05/20/2016	DEVELOPMENT PERMIT	MCW

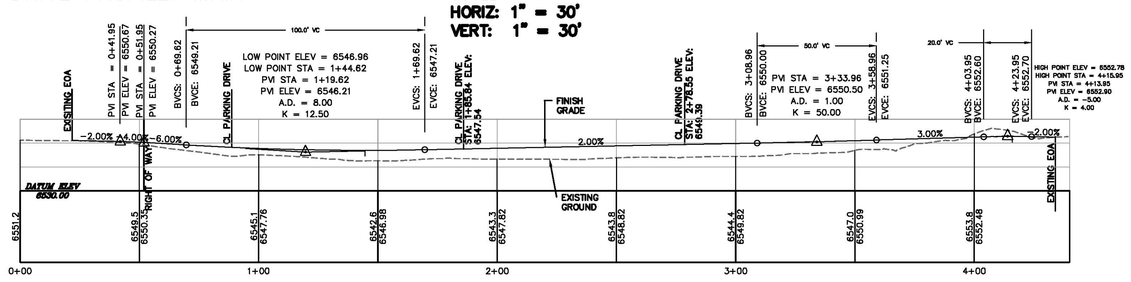
DESIGNED MCW
DRAWN MCW
CHECKED KAK
JOB NO. 48445
DATE 3-4-2016

SHEET C2.2

O:\Eagle\Sylvan Lake Circle-48445-2015\dwg\Master\GRADING.dwg, 5/20/2016 8:30:40 AM, Wesley

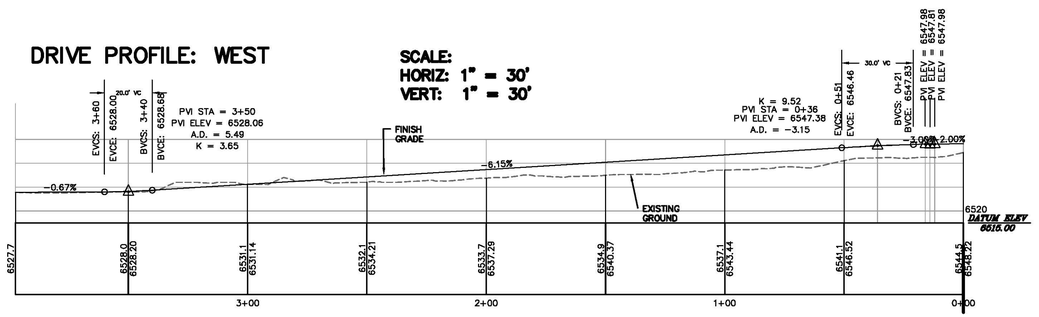
DRIVE PROFILE: MAIN

SCALE:
HORIZ: 1" = 30'
VERT: 1" = 30'



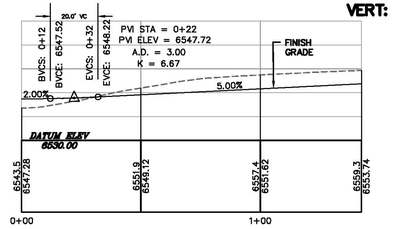
DRIVE PROFILE: WEST

SCALE:
HORIZ: 1" = 30'
VERT: 1" = 30'



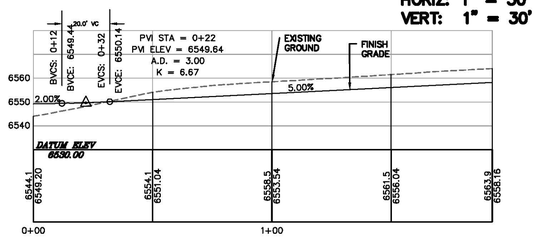
DRIVE PROFILE: NORTHWEST

SCALE:
HORIZ: 1" = 30'
VERT: 1" = 30'



DRIVE PROFILE: NORTHEAST

SCALE:
HORIZ: 1" = 30'
VERT: 1" = 30'



PRELIMINARY PLAN
May 19, 2016
NOT FOR CONSTRUCTION

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3579 • FAX 926-3590 •

(SEAL)

SYLVAN LAKE CIRCLE
EAGLE, CO

ROAD PROFILES

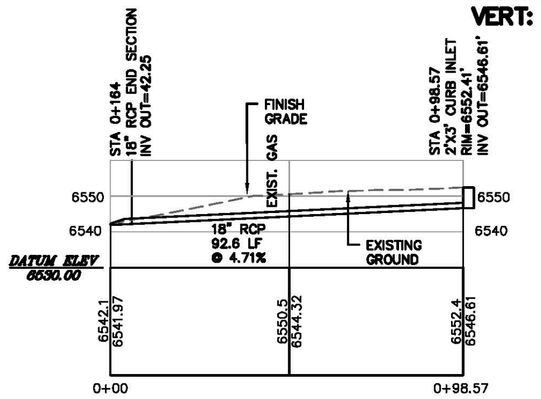
NO.	DATE	REVISIONS	BY
	05/20/2016	DEVELOPMENT PERMIT	MCW

DESIGNED MCW
DRAWN MCW
CHECKED KAK
JOB NO. 48445
DATE 3-4-2016

SHEET
C2.3

STORM PROFILE: HWY 6

SCALE:
HORIZ: 1" = 30'
VERT: 1" = 30'



GENERAL NOTES:.

1. STORM SEWER STRUCTURE TYPES REFER TO THE COLORADO DEPARTMENT OF TRANSPORTATION M & S STANDARDS, CDOT STANDARD SPECIFICATIONS, OR ARE INCLUDED ON THE DETAIL SHEETS.
2. STORM SEWER ELEVATIONS SHOWN ARE AT PIPE INVERT UNLESS OTHERWISE SPECIFIED.
3. PIPE LENGTHS INDICATED ARE SLOPE LENGTHS MEASURED ALONG THE CENTERLINE OF PIPE FROM INSIDE FACE OF INLET (OR MANHOLE) TO INSIDE FACE OF INLET (OR MANHOLE).
4. PIPE LENGTHS FOR LAST RUN AT OUTFALLS DO NOT INCLUDE FLARED END SECTIONS.
5. STORM DRAINAGE FACILITIES NEED TO BE PERIODICALLY INSPECTED AND MAINTAINED TO INSURE PROPER FUNCTION.
6. STORM SEWER STATIONING IS INDEPENDENT OF ROAD STATIONING. STORM SEWER STATIONING CORRELATES TO THE CENTERLINE OF STORM SEWER PIPE AND THE CENTER OF INLET BOXES OR MANHOLES.
7. INSTALL ALL GAS AND ELECTRIC SERVICES AND MAINS ABOVE STORM SEWER EXCEPT WHERE NOTED. IF A CONFLICT EXISTS INSTALL SHALLOWS BELOW STORM SEWER.
8. PROVIDE MIN. 18" VERTICAL SEPARATION BETWEEN STORM SEWER AND ANY OTHER UTILITY LINE.
9. USE ADS N-12 WT FOR PIPE LABELED HDPE. USE PVC SDR-35 PIPE FOR 8" AND SMALLER DIAMETER STORM.

U.S. HIGHWAY 6

SYLVAN LAKE ROAD

STA 0+98.57
2'X3' CURB INLET
RIM=6552.41'
INV OUT=6546.61'

STORM PROFILE: HWY 6

STA 0+164
18" RCP END SECTION
INV OUT=42.25

RIPRAP OUTLET PROTECTION

18" RCP
92.6 LF
@ 4.71%

8' WIDE EROSION CONTROL BLANKET (LANDLOK C2 EXCELSIOR OR APPROVED EQUAL)

STA 1+23.41
4' CONC. MANHOLE
RIM=6546.5'
INV IN=6541.16'
INV OUT=6540.96'

STA 1+38.71
2'X3' VALLEY INLET
RIM=6546.59'
INV IN=6541.60'
INV OUT=6541.40'

STA 0+98.96
4' CONC. MANHOLE
RIM=6542.2'
INV IN=6536.93'
INV OUT=6536.73'

STA 1+72.72
2'X3' VALLEY INLET
RIM=6546.84'
INV IN=6542.42'
INV OUT=6542.22'

STORM PROFILE: MAIN

STORM PROFILE: EAST

18" RCP
12.3 LF
@ 2.0%

18" HDPE
22.5 LF
@ 18.0%

18" RCP
31.0 LF
@ 2.0%

18" RCP
89.7 LF
@ 2.0%

STA 2+65.41
2'X3' VALLEY INLET
RIM=6548.76'
INV IN=6544.42'
INV OUT=6544.22

STA 3+97.48
2'X2' AREA INLET
RIM=6549.5'
INV OUT=6547.0'

18" RCP
87.7 LF
@ 2.0%

12" RCP
41.3 LF
@ 2.0%

CUT EXISTING 18" RCP AND INSTALL INLET, GROUT CONNECTION. REMOVE AND DISPOSE OF SOUTHERN PORTION OF PIPE, REUSE END SECTION IF POSSIBLE. NOTIFY ENGINEER IF INVERT CONNECTION VARIES FROM SHOWN

STA 1+36.37
3'X3' C INLET
RIM=6554.5'
INV. IN 18" EXIST=50.15'
INV OUT 18"=49.95'

STA 0+36.22
3'X3' INLET WITH SOLID COVER
RIM=6551.5'
INV IN=6547.7'
INV OUT=6547.5'

STA 0+08
18" RCP END SECTION
INV OUT=42.2'

STA 0+04
18" HDPE END SECTION
INV OUT=32.90

18" HDPE
45.2 LF
@ 1.0%

STA 0+50.68
3'X3' INLET
RIM=6536.5'
INV IN=6533.59'
INV OUT=6533.39'

STA 3+55.40
18" NYLOPLAST BASIN W/ SOLID COVER
RIM=6550.80'
INV=6546.17'

18" RCP
27.2 LF
@ 20.0%

18" RCP
98.2 LF
@ 1.83%

WATER QUALITY POND VOLUME=2195 FT³ REQ'D=2133 FT³

CONSTRUCT 1' DEEP DRAINAGE BIO-SWALE

100 YR FLOODPLAIN

INFILTRATION BASIN

BRUSH CREEK

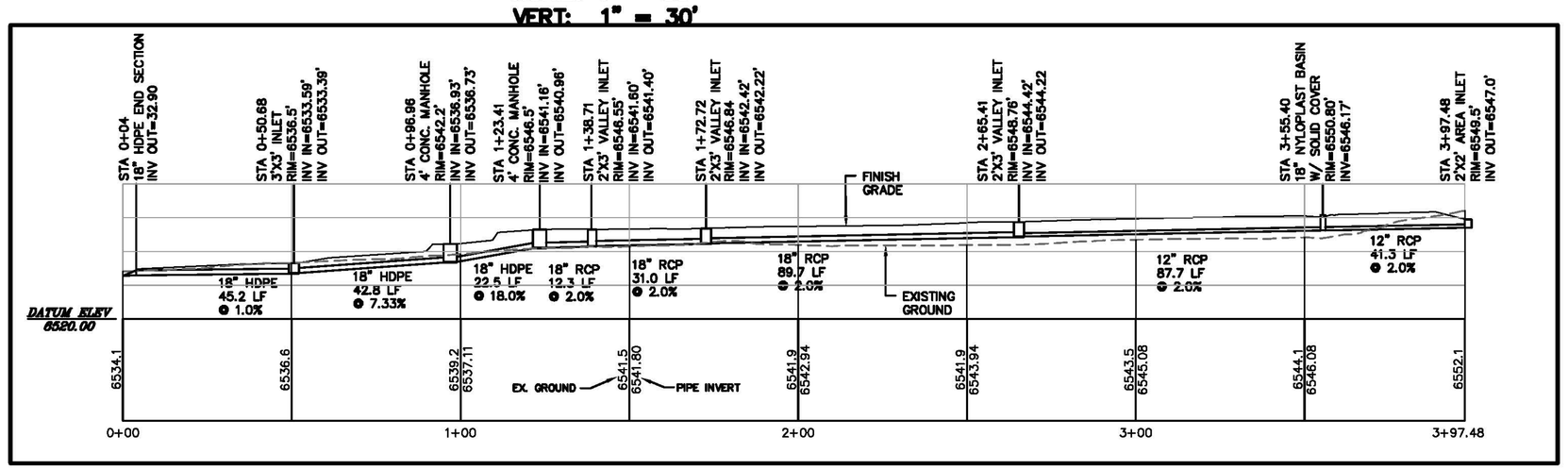
GREEN ACRES MOBILE PARK

WETLANDS (TYP)

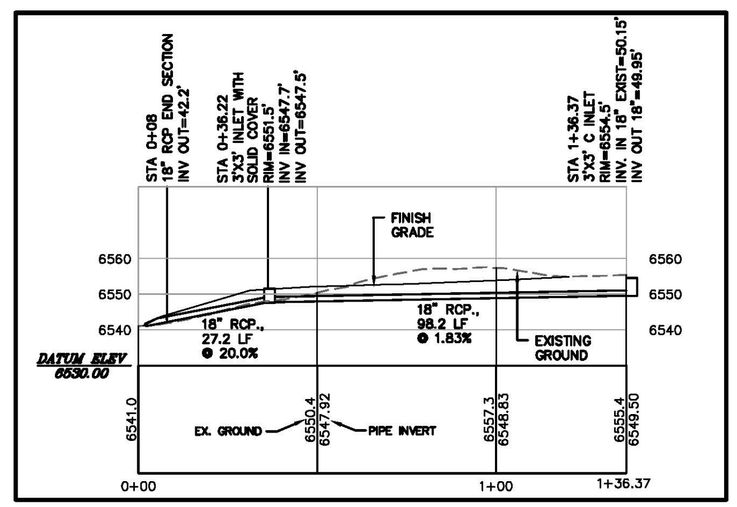
PRELIMINARY PLAN
May 20, 2016
NOT FOR CONSTRUCTION

STORM PROFILE: MAIN

SCALE:
HORIZ: 1" = 30'
VERT: 1" = 30'



STORM PROFILE: EAST



1"=30'

LEGEND

PC	PROPOSED COMMUNICATION (PHONE/FIBER)
PG	PROPOSED GAS
PE	PROPOSED ELECTRIC
PIR	PROPOSED IRRIGATION CONDUIT
8" DIP	PROPOSED WATER
8" PVC (W1)	PROPOSED SEWER, MANHOLE TAG
6" DIP	PROPOSED FIRE HYDRANT W/GV
	PROPOSED STORM SEWER
	PROPOSED STORM STRUCTURE
	PROPOSED ELEC. VAULT, TRANSFORMER & COMM. PEDESTAL
	PROPERTY LINE
EE	EXISTING ELECTRIC
EPH	EXISTING PHONE
ETV	EXISTING TV
ES	EXISTING SEWER
EW	EXISTING WATER
	EXISTING TELEPHONE PEDESTAL
	EXISTING TELEVISION PEDESTAL
	EXISTING ELECTRIC VAULT
	EXISTING SEWER MANHOLE
	EXISTING WATER VALVE
	EXISTING FIRE HYDRANT
8110	EXISTING CONTOUR

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 926-3390 •

SYLVAN LAKE CIRCLE
EAGLE, CO

PRELIMINARY DRAINAGE PLAN

(SEAL)

NO.	DATE	REVISIONS	BY
	05/20/2016	DEVELOPMENT PERMIT	MCW

DESIGNED GB, MW
DRAWN MW
CHECKED MW, GB
JOB NO. 48445
DATE 3-1-2016

SHEET C3.1

PRELIMINARY PLAN
May 20, 2016
NOT FOR CONSTRUCTION

U.S. HIGHWAY 6

SYLVAN LAKE ROAD

BRUSH CREEK

GREEN ACRES MOBILE PARK

SEWER PROFILE: WEST DRIVE

SEWER PROFILE: NORTHWEST DRIVE

SEWER PROFILE: NORTHEAST DRIVE

SEWER PROFILE: GREEN ACRES / BACKLOT

INSTALL 8"X6" REDUCER AND FIRE HYDRANT 6" DIP ASSEMBLY W/ GUARD VALVE (TYP) FH FLANGE=XX.0'

PROPOSED 4' SEWER MH RIM=6553.80' INV OUT (8")=6547.00'

INSTALL 8"X8"X6" TEE WITH THRUST BLOCK AND FIRE HYDRANT 6" DIP ASSEMBLY & GUARD VALVE (TYP) FH FLANGE=XX.0'

STA 7+79.07 SEWER MH RIM=6547.50' INV IN (8")=32.73' INV OUT (8")=32.53'

STA 1+48.0 SEWER MH INV OUT (8")=33.73'

148.0 LF 8" PVC @ 0.7%

SEWER EJECTOR COLLECTOR 2" C900 PVC (2 LINES)

INSTALL 8"X6" REDUCER AND FIRE HYDRANT 6" DIP ASSEMBLY W/ GUARD VALVE (TYP) FH FLANGE=XX.0'

UNITS G 1-4 SEWER EJECTOR PUMP REQUIRED

STA 6+71.11 SEWER MH RIM=6537.80' INV IN (8")=31.80' INV OUT (8")=31.60'

STA 6+15.00 SEWER MH RIM=6538.10' INV IN (8")=31.24' INV OUT (8")=31.04'

PROPOSED 4' SEWER MH RIM=6547.05' INV IN (8")=6540.80' INV OUT (8")=6540.60'

PROPOSED 4' SEWER MH, RIM=6550.50' INV IN (8")=6544.00' INV OUT (8")=6543.80'

INSTALL 8"X8"X8" TEE WITH THRUST BLOCK AND GATE VALVES

PROPOSED 4' SEWER MH RIM=6548.90' INV IN (8")=6542.80' INV OUT (8")=6542.00'

INSTALL 8"X8"X8" TEE WITH THRUST BLOCK AND GATE VALVES

PROPOSED 4' SEWER MH RIM=6557.83' INV OUT (8")=6551.0'

INSTALL 8"X6" REDUCER AND FIRE HYDRANT 6" DIP ASSEMBLY W/ GUARD VALVE (TYP) FH FLANGE=XX.0'

WET TAP EXISTING 8" DIP WATER MAIN WITH 8"X8"X8" TAPPING SLEEVE. INSTALL 8" GATE VALVE

SAWCUT & REMOVE/ REPLACE SIDEWALK TO MATCH EXISTING CONCRETE AND BASECOURSE

UTILITY ROAD CUT, SAWCUT AND REMOVE ASPHALT. INSTALL WATER AND REPLACE PER TOWN OF EAGLE ROAD CUT DETAIL

INSTALL 8"X8"X6" TEE WITH THRUST BLOCK AND FIRE HYDRANT 6" DIP ASSEMBLY & GUARD VALVE (TYP) FH FLANGE=XX.0'

STA 5+27.44 SEWER MH RIM=6536.80' INV IN (8")=30.42' INV OUT (8")=30.22'

STA 4+25.28 SEWER MH RIM=6537.60' INV IN (8")=29.53' INV OUT (8")=29.33'

4+00.46 SEWER MH RIM=6537.50' INV IN (8")=29.18' INV OUT (8")=28.98'

3+71.12 SEWER MH RIM=6536.70' INV IN (8")=28.81' INV OUT (8")=28.61'

EXISTING PUBLIC SEWER EASEMENT, TO BE ABANDONED

PROPOSED PUBLIC SEWER EASEMENT

EXIST. SEWER MH (ASBUILT) RIM=6531.40' INV IN (6")SE=25.29' INV IN(8")NE=27.40' INV IN 8" (PROPOSED)=25.73' INV OUT (SW)=25.53'

CONTRACTOR TO REPAIR AND REPLACE TO EXISTING CONDITIONS ANY LANDSCAPE, SOD, ASPHALT DRIVEWAY, IRRIGATION AND UTILITIES DAMAGED DURING SEWER CONSTRUCTION. CONNECT EXISTING GREEN ACRES SEWER SERVICES (POTENTIAL OF 3) TO NEW SEWER MAIN IF FEASIBLE DURING CONSTRUCTION

STA 2+24.67 SEWER MH RIM=6537.40' INV IN (8")=27.47' INV OUT (8")=27.27'

STA 3+06.92 SEWER MH RIM=6536.80' INV IN (8")=28.20' INV OUT (8")=28.00'

1"=30'

LEGEND

- PC — PROPOSED COMMUNICATION (PHONE/FIBER)
- PG — PROPOSED GAS
- PE — PE — PROPOSED ELECTRIC
- PIR — PROPOSED IRRIGATION CONDUIT
- 8" DIP — PROPOSED WATER
- 8" PVC — (W1) — PROPOSED SEWER, MANHOLE TAG
- 8" DIP — PROPOSED FIRE HYDRANT W/GV
- PROPOSED STORM SEWER
- PROPOSED STORM STRUCTURE
- PROPOSED ELEC. VAULT, TRANSFORMER & COMM. PEDESTAL
- PROPERTY LINE
- EE — EXISTING ELECTRIC
- EPH — EXISTING PHONE
- ETV — EXISTING TV
- ES — EXISTING SEWER
- EW — EXISTING WATER
- EXISTING TELEPHONE PEDESTAL
- EXISTING TELEVISION PEDESTAL
- EXISTING ELECTRIC VAULT
- EXISTING SEWER MANHOLE
- EXISTING WATER VALVE
- EXISTING FIRE HYDRANT
- 8110 — EXISTING CONTOUR

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 926-3590 •

(SEAL)

SYLVAN LAKE CIRCLE
EAGLE, CO

PRELIMINARY UTILITY PLAN

NO.	DATE	REVISIONS	BY
	05/20/2016	DEVELOPMENT PERMIT	MCW

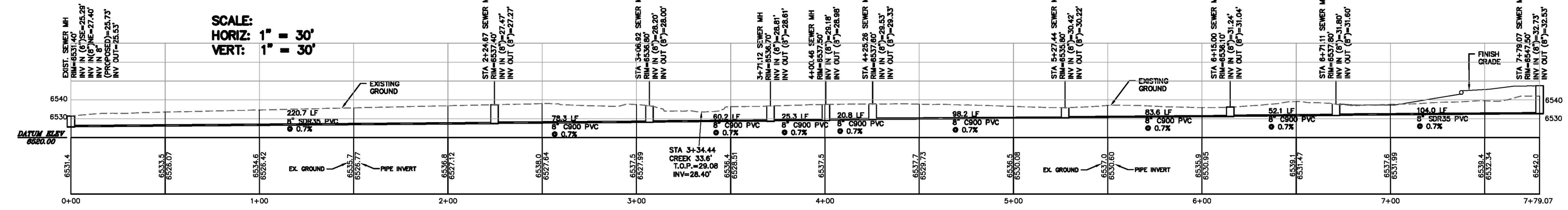
DESIGNED GB, MW
DRAWN MW
CHECKED MW, GB
JOB NO. 48445
DATE 3-1-2016

SHEET C4.1

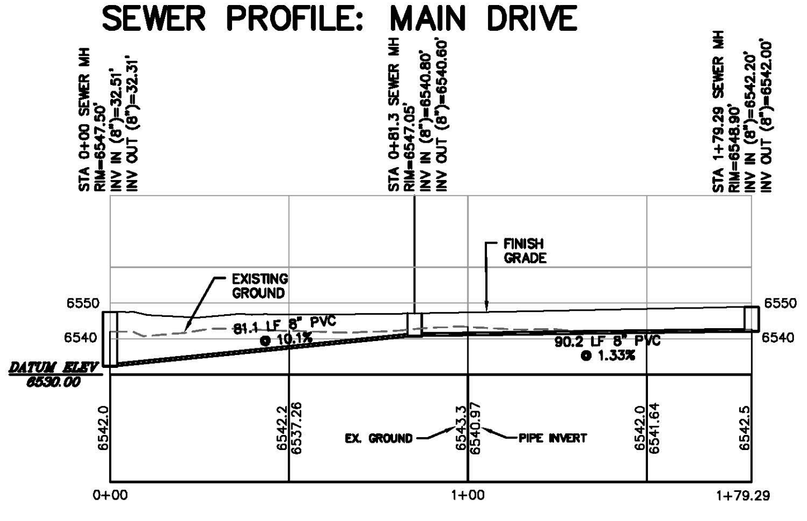
O:\Eagle\Sylvan Lake Circle-48445-2015\dwg\Master\UTILITY-SLC.dwg, 5/20/2016 9:43:55 AM, Wesley

SEWER PROFILE: GREEN ACRES & BACKLOT

SCALE:
HORIZ: 1" = 30'
VERT: 1" = 30'

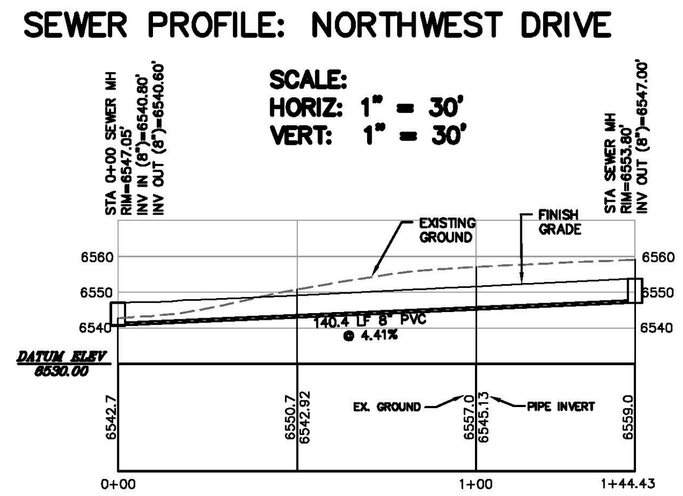


SEWER PROFILE: MAIN DRIVE

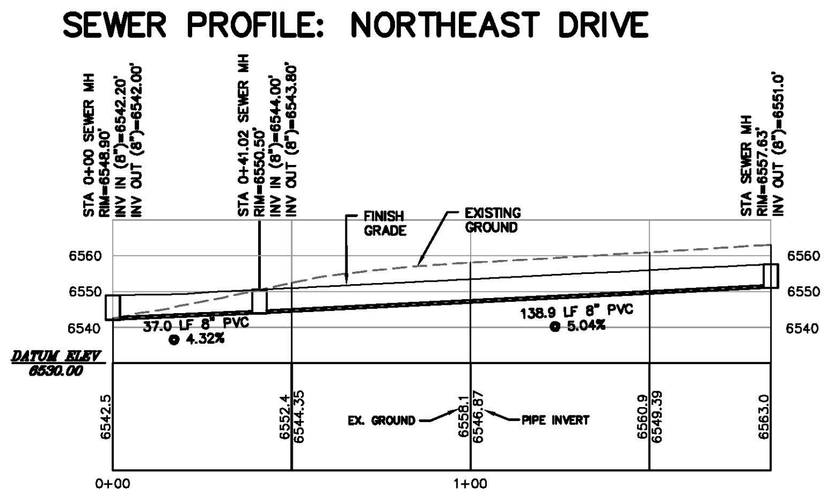


SEWER PROFILE: NORTHWEST DRIVE

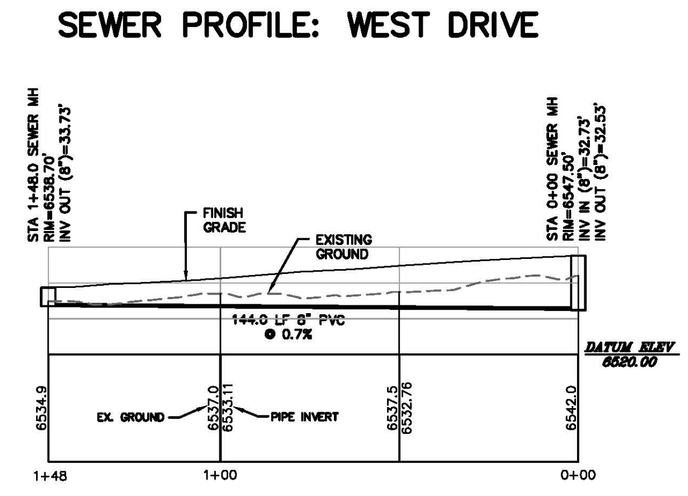
SCALE:
HORIZ: 1" = 30'
VERT: 1" = 30'



SEWER PROFILE: NORTHEAST DRIVE

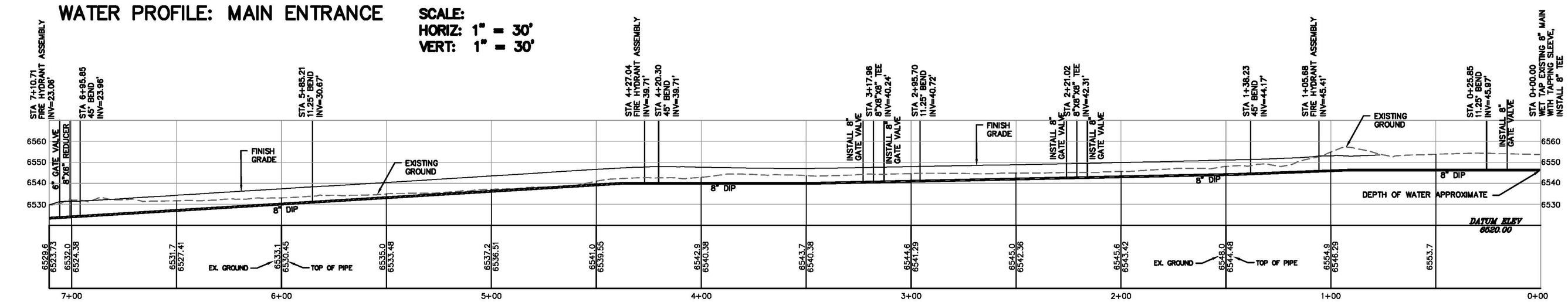


SEWER PROFILE: WEST DRIVE



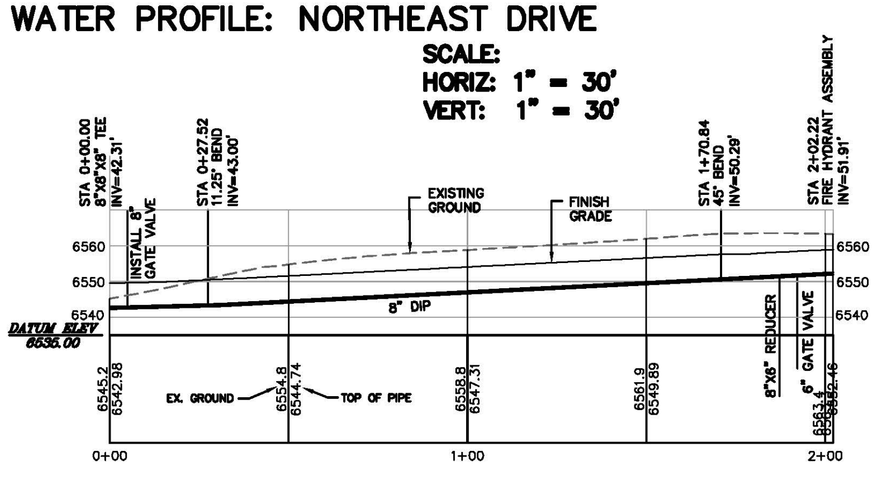
WATER PROFILE: MAIN ENTRANCE

SCALE:
HORIZ: 1" = 30'
VERT: 1" = 30'

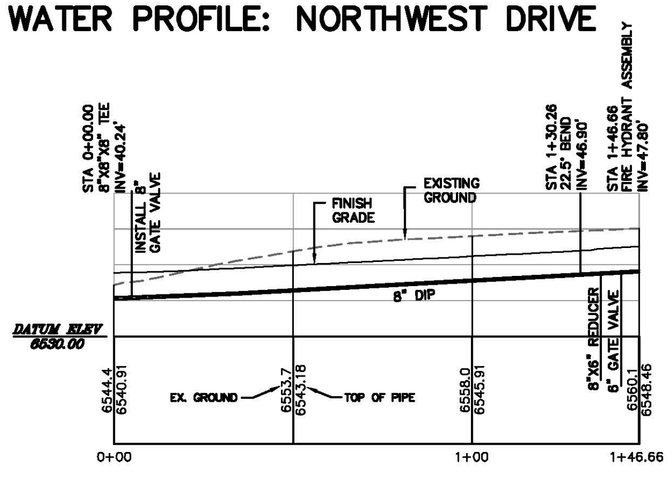


WATER PROFILE: NORTHEAST DRIVE

SCALE:
HORIZ: 1" = 30'
VERT: 1" = 30'



WATER PROFILE: NORTHWEST DRIVE



ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 926-3390 •

(SEAL)

SYLVAN LAKE CIRCLE
EAGLE, CO

PRELIMINARY UTILITY PROFILES

NO.	DATE	REVISIONS	BY
	05/20/2016	DEVELOPMENT PERMIT	MCW

DESIGNED GB, MW
DRAWN MW
CHECKED MW, GB
JOB NO. 48445
DATE 3-1-2016

SHEET
C4.2

PRELIMINARY PLAN
May 19, 2016
NOT FOR CONSTRUCTION

U.S. HIGHWAY 6

SYLVAN LAKE ROAD

BRUSH CREEK

GREEN ACRES MOBILE PARK

PROWING

UTILIZE EXISTING TOWN OF EAGLE EMPTY IRRIGATION SLEEVES TO ROUTE FIBER UNDER HIGHWAY 6. COORDINATE WITH TOWN DURING INSTALLATION, AS NOT TO DAMAGE EXISTING FACILITIES THAT ARE IN OTHER SLEEVES.

CONNECT TO EXISTING CENTURY LINK FIBER VAULT

6" STEEL GAS MAIN

3" STEEL GAS MAIN

EXISTING CENTURY LINK FIBER HANDHOLE

CONTRACTOR TO INSTALL 3'X4' COMM. SPLICE VAULT ELEV. RIM=6550.4'

EXISTING PEDESTAL

INSTALL SINGLE PHASE TRANSFORMER (UM1-3) & VAULT T.O.C.=6546.7' INSTALL SECONDARY ELECTRIC & COMMUNICATION PEDESTAL

STUB OUT CENTURY LINK FIBER CONDUIT IN HANDHOLE FOR FUTURE EXTENSION WEST ALONG HWY 6

INSTALL ELECTRIC SPLICE VAULT UM30R ELEV. RIM=6548.1'

CONNECT INTO EXISTING GAS MAIN. EXTEND 2" POLYETHYLENE GAS MAIN THRU PROJECT

INSTALL SINGLE PHASE TRANSFORMER (UM1-3) & VAULT T.O.C.=6539.4' INSTALL SECONDARY ELECTRIC & COMMUNICATION PEDESTAL

METER BOXES (TYP)

INSTALL SINGLE PHASE TRANSFORMER (UM1-3) & VAULT T.O.C.=6550.56' INSTALL SECONDARY ELECTRIC & COMMUNICATION PEDESTAL

INSTALL SINGLE PHASE TRANSFORMER (UM1-3) & VAULT T.O.C.=6558.6' INSTALL SECONDARY ELECTRIC & COMMUNICATION PEDESTAL

EXISTING CENTURY LINK PEDESTALS

EXISTING ELECTRIC TRANSFORMER

EXISTING SWITCH GEAR

INSTALL ELECTRIC SPLICE VAULT UM30R ELEV. RIM=6557.5"

RELOCATE EXISTING ELECTRIC (2) 6" CONDUITS

STUB OUT CENTURY LINK FIBER CONDUIT IN HANDHOLE FOR FUTURE DEVELOPMENT

SAWCUT & REMOVE/ REPLACE SIDEWALK TO MATCH EXISTING

UTILITY ROAD CUT, SAWCUT AND REMOVE ASPHALT, INSTALL WATER AND JOIN TRENCH COMMUNICATION CONDUIT. REPLACE PER TOWN OF EAGLE ROAD CUT DETAIL

INSTALL SINGLE PHASE TRANSFORMER (UM1-3) & VAULT T.O.C.=6549.4' INSTALL SECONDARY ELECTRIC & COMMUNICATION PEDESTAL

INSTALL ELECTRIC SPLICE VAULT UM30R ELEV. RIM=6551.5'

1"=30'

LEGEND

PC	PROPOSED COMMUNICATION (PHONE/FIBER)
PG	PROPOSED GAS
PE	PROPOSED ELECTRIC
PIR	PROPOSED IRRIGATION CONDUIT
6" DIP	PROPOSED WATER
8" PVC (W1)	PROPOSED SEWER, MANHOLE TAG
6" DIP	PROPOSED FIRE HYDRANT W/GV
	PROPOSED STORM SEWER
	PROPOSED STORM STRUCTURE
T	PROPOSED ELEC. VAULT TRANSFORMER & COMM. PEDESTAL
	PROPERTY LINE
EE	EXISTING ELECTRIC
EPH	EXISTING PHONE
ETV	EXISTING TV
ES	EXISTING SEWER
EW	EXISTING WATER
	EXISTING TELEPHONE PEDESTAL
	EXISTING TELEVISION PEDESTAL
	EXISTING ELECTRIC VAULT
	EXISTING SEWER MANHOLE
	EXISTING WATER VALVE
	EXISTING FIRE HYDRANT
8110	EXISTING CONTOUR

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 926-3390 •

SYLVAN LAKE CIRCLE
EAGLE, CO

PRELIMINARY SHALLOW UTILITIES

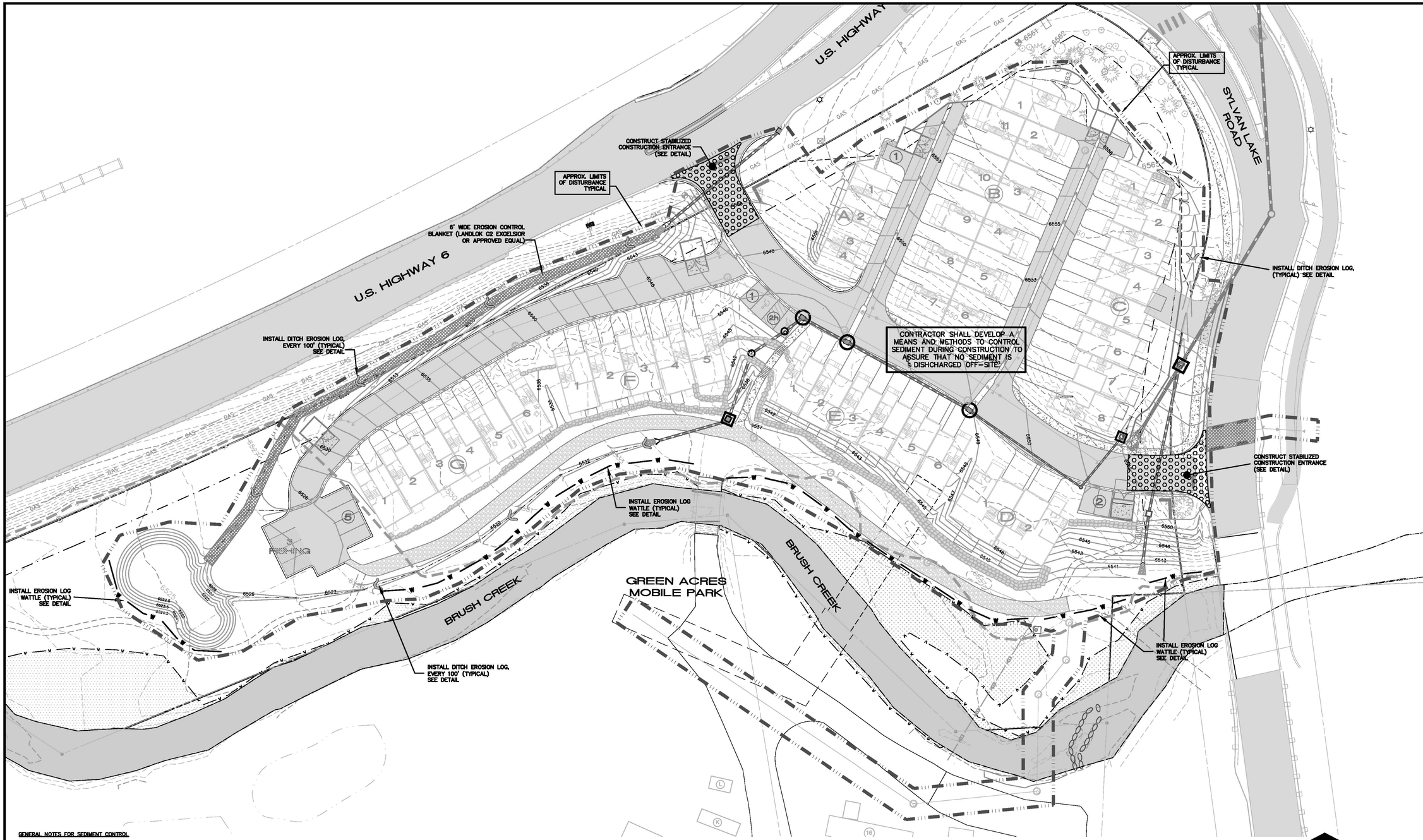
(SEAL)

NO.	DATE	REVISIONS	BY
	05/20/2016	DEVELOPMENT PERMIT	MCW

DESIGNED GB, MW
DRAWN MW
CHECKED MW, GB
JOB NO. 48445
DATE 3-1-2016

SHEET
C5.1

O:\Eagle\Sylvan Lake Circle-48445-2015\dwg\Master\SHALLOWS-SLC.dwg, 5/19/2016 3:16:38 PM, Wesley



1"=30'

LEGEND

- STABILIZED CONSTRUCTION ENTRANCE
- EROSION LOG PROTECTION AND SILT SACK AT AREA INLET
- EROSION LOG WATTLE
- BEAVER DAM INLET PROTECTION AND SILT SACKS AT CURB INLET
- STRAW DITCH WATTLE

GENERAL NOTES FOR SEDIMENT CONTROL

1. CONTRACTOR SHALL SUBMIT A CONSTRUCTION STAGING & MANAGEMENT PLAN IDENTIFYING CONSTRUCTION FENCING, STAGING, STORAGE & CONSTRUCTION TRAILER LOCATION PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. INSTALL AND MAINTAIN SEDIMENT CONTROL MEASURES IN ACCORDANCE WITH THESE PLANS AND AS NEEDED TO PREVENT SEDIMENT FROM DISCHARGING OFF-SITE.
3. ALL PROPOSED SEDIMENT CONTROL MEASURES ARE TEMPORARY MEASURES UNLESS SPECIFIED OTHERWISE ON PLANS.
4. SEDIMENT CONTROL MEASURES MAY REQUIRE FIELD ADJUSTMENTS AT THE TIME OF CONSTRUCTION TO INSURE THAT THEIR INTENDED PURPOSE IS ACCOMPLISHED.
5. PROVIDE REGULAR INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL MEASURES TO INSURE THAT SEDIMENT CONTROL EFFICIENCY IS OBTAINED UNTIL FINAL STABILIZATION OF SITE HAS TAKEN PLACE.
6. INSTALL SEDIMENT CONTROL MEASURES AT THE ONSET OF GRADING OPERATIONS SO THAT EFFECTIVE SEDIMENT CONTROL CAN BE ACHIEVED DURING THE ENTIRE CONSTRUCTION PERIOD.
7. STABILIZE ALL POINTS OF INGRESS AND EGRESS WITH CRUSHED STONE DURING CONSTRUCTION TO PREVENT TRACKING OF MUD ONTO PUBLIC WAYS.
8. FOR TEMPORARY STOCKPILES APPLY SEED, HYDROMULCH AND TACKIFIER IMMEDIATELY AFTER THEY ARE CONSTRUCTED FOR STABILIZATION. IF EROSION OCCURS AFTER APPLICATION OF THE TACKIFIER, USE EXCELSIOR C2 EROSION CONTROL FABRIC. INSTALL SILT FENCE BELOW STOCKPILES TO CAPTURE SEDIMENT.
9. THE TERM 'REVEGETATION' ON THIS PLAN MEANS THE SUCCESSFUL GERMINATION AND ESTABLISHMENT OF STABLE GRASS COVER FROM A PROPERLY PREPARED SEEDBED CONTAINING THE SPECIFIED AMOUNTS OF FERTILIZER IN ACCORDANCE WITH APPLICABLE 'STANDARDS AND SPECIFICATIONS'. REFER TO LANDSCAPE PLANS FOR SEED MIX, FERTILIZER TYPE, MULCH, TACKIFIER AND APPLICATION RATES.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO TAKE APPROPRIATE MEASURES TO INSURE THAT NO SEDIMENT LADEN WATER IS DISCHARGED FROM THE SITE.
11. IF STABILIZATION OF DISTURBED AREAS IS TO BE ACCOMPLISHED DURING THE MONTHS OF OCTOBER THROUGH APRIL, THE STABILIZATION SHALL CONSIST OF MULCHING. SEED AND MULCH AS SOON AS THE SEASON PERMITS.
12. APPROVAL SHALL BE REQUESTED UPON FINAL STABILIZATION OF ALL SITES BEFORE REMOVAL OF SEDIMENT CONTROLS.
13. CONTRACTOR SHALL OBTAIN AND CONFORM TO STORMWATER DISCHARGE PERMIT AND AND ALL ENVIRONMENTAL PERMITS AND KEEP STREETS CLEAN AND FREE OF SEDIMENT.
14. REMOVAL AND CLEANUP OF ANY SEDIMENT THAT LEAVES THE SITE IS THE RESPONSIBILITY OF THE CONTRACTOR

CONSTRUCTION SEQUENCE OF EROSION/SEDIMENT CONTROL MEASURES

BEFORE COMMENCING GRADING OR CONSTRUCTION

1. CONSTRUCT STABILIZED CONSTRUCTION ENTRANCES AT ALL POINTS OF INGRESS AND EGRESS.
2. CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO ASSURE THAT NO SEDIMENT LEAVES THE SITE.
3. CONSTRUCT SILT FENCE AND WATTLES AND ALL SEDIMENT CONTROL DEVICES.
4. BEGIN DEMOLITION, EXCAVATION AND CONSTRUCTION.
5. INSTALL EROSION CONTROL MEASURES AFTER DITCHES AND SWALES HAVE BEEN CONSTRUCTED AND TOPSOIL AND SEED HAVE BEEN PLACED. INSTALL INLET PROTECTION IN ALL INLETS AS THEY ARE CONSTRUCTED.
6. TOPSOIL AND REVEGETATE ALL DISTURBED AREAS WITH APPROVED SEED MIX PER LANDSCAPE PLAN.
7. CONTRACTOR SHALL REMOVE SEDIMENT CONTROL FACILITIES AFTER FINAL STABILIZATION.

FUGITIVE DUST CONTROL

THE CONTRACTOR IS RESPONSIBLE TO CONTROL FUGITIVE DUST AND TO INCORPORATE THE FOLLOWING:

1. ALL UNPAVED ROADS AND OTHER DISTURBED AREAS ON SITE SHALL BE WATERED TO MINIMIZE FUGITIVE DUST.
2. HAUL ROADS SHALL BE TREATED WITH MAGNESIUM CHLORIDE IF WATER IS NOT CONTROLLING THE DUST.
3. ALL DISTURBED SURFACE AREAS SHALL BE REVEGETATED AS SOON AS POSSIBLE.
4. MUD AND DIRT CARRYOUT ONTO PAVED SURFACES SHALL BE PREVENTED. ANY MUD AND DIRT CARRYOUT ONTO PAVED SURFACES SHALL BE CLEANED UP DAILY.

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 926-3390 •

SYLVAN LAKE CIRCLE
EAGLE, CO

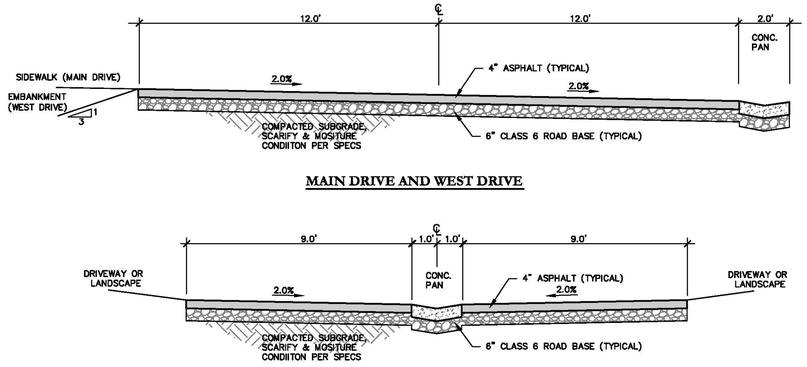
EROSION CONTROL PLAN

(SEAL)

NO.	DATE	REVISIONS	BY
	05/20/2016	DEVELOPMENT PERMIT	MCW

DESIGNED	GB, MW
DRAWN	MW
CHECKED	MW, GB
JOB NO.	48445
DATE	3-1-2016

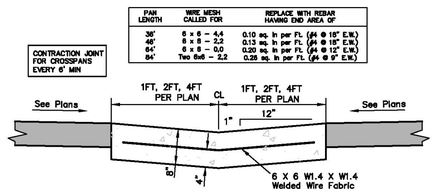
SHEET 6.1



N.T.S.

A TYPICAL DRIVE SECTIONS

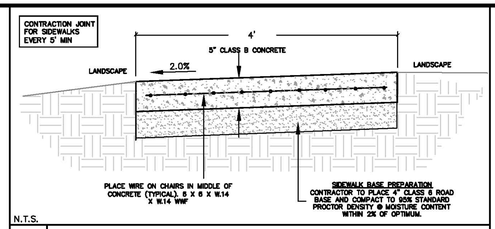
PAN LENGTH	WIRE MESH CALLED FOR	REPLACE WITH REBAR HAVING END AREA OF
36'	6 x 6 – 4.4	0.10 sq. in per Ft. (#4 @ 18" E.W.)
48'	6 x 6 – 2.2	0.13 sq. in per Ft. (#4 @ 18" E.W.)
64'	6 x 6 – 0.0	0.20 sq. in per Ft. (#4 @ 12" E.W.)
84'	Two 6x6 – 2.2	0.26 sq. in per Ft. (#4 @ 9" E.W.)



USE CDOT CLASS B CONCRETE FOR CURB AND GUTTERS

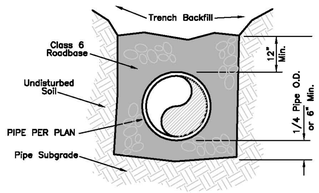
N.T.S.

B CONCRETE CROSSPAN (2', 4', 8' WIDE)



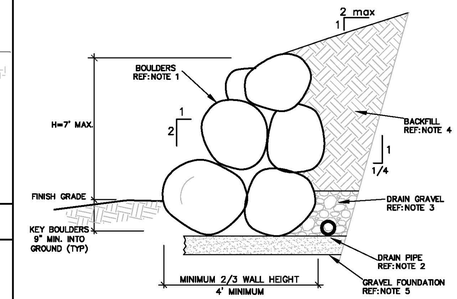
N.T.S.

C CONCRETE SIDEWALK SECTION



N.T.S.

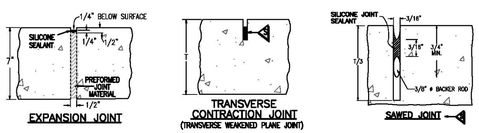
D CULVERT BEDDING



NOTES:
1. BOULDERS WITH MINIMUM SIZE OF 2–3'. EMBED FIRST COURSE A MINIMUM OF 9" BELOW ADJACENT FINAL GRADED GROUND SURFACE. ARRANGE IN A MANNER TO MAXIMIZE INTERLOCKING ACTION.
2. 4" DIAMETER PERFORATED PIPE SLOPED TO A SUITABLE GRAVITY OUTLET.
3. ¾" SCREENED ROCK. MINIMUM DEPTH OF 1.5 FEET. COVER TOP SIDE WITH FILTER FABRIC SUCH AS MIRAFI 140N. PLACE BETWEEN BOULDERS AS NEEDED TO FILL VOIDS.
4. GRANULAR SOILS PLACED IN LIFTS AND COMPACTED TO AT LEAST 95% OF MAXIMUM STANDARD PROCTOR DENSITY WITHIN 2% OF OPTIMUM MOISTURE CONTENT. MAXIMUM 4" SIZE AND 25% PASSING NO. 200 SIEVE.
5. MINIMUM 6–INCH DEPTH OF BASE COURSE COMPACTED TO AT LEAST 95% MAXIMUM STANDARD PROCTOR DENSITY WITHIN 2% OF OPTIMUM MOISTURE CONTENT.

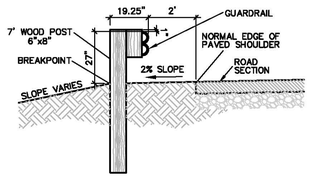
N.T.S.

E BOULDER ROCKERY WALL



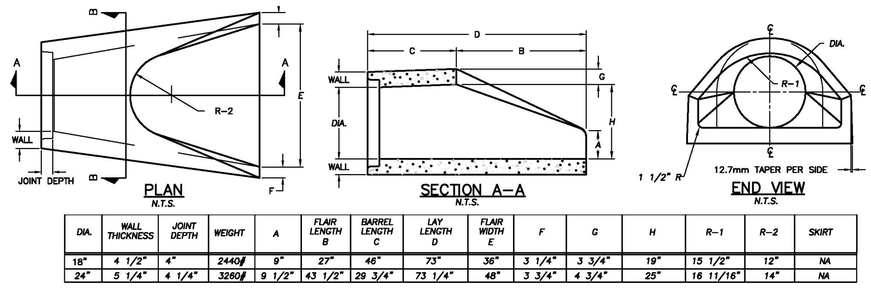
JOINT DETAILS JOINT SEAL DETAILS

F JOINTING DETAILS



N.T.S.

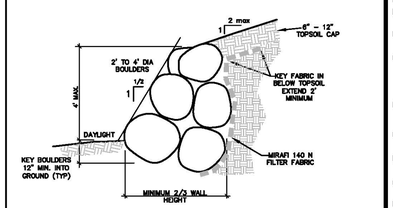
G GUARDRAIL



DIA.	WALL THICKNESS	JOINT DEPTH	WEIGHT	A	FLAIR LENGTH B	BARREL LENGTH C	LAY LENGTH D	FLAIR WIDTH E	F	G	H	R–1	R–2	SKIRT
18"	4 1/2"	4"	2440#	9"	27"	46"	73"	36"	3 1/4"	3 3/4"	19"	15 1/2"	12"	NA
24"	5 1/4"	4 1/4"	3260#	9 1/2"	43 1/2"	29 3/4"	73 1/4"	48"	3 3/4"	4 3/4"	25"	16 11/16"	14"	NA

N.T.S.

H CONCRETE FLARED END SECTION

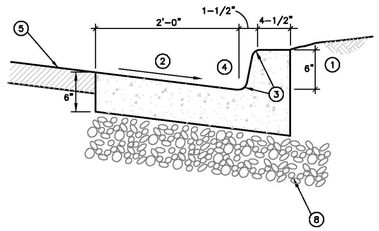


N.T.S.

I BOULDER RETAINING WALL

N.T.S.

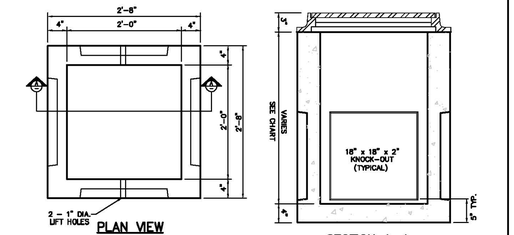
J SIGNAGE



NOTES:
1. BACKFILL, SEE DETAIL OF CUT/FILL SLOPE
2. SLOPE AT 1" PER FOOT IN CATCH CURB, IN SPILL CURB SLOPE SHALL BE 1/2" PER FOOT.
3. 1–1/2" RADIUS TYPICAL
4. FLOW LINE TO MATCH SLOPE OF ADJACENT ROADWAY
5. PAVEMENT, SEE TYPICAL PAVEMENT SECTION
6. PROVIDE CONTRACTION JOINTS 10' O.C. MAXIMUM
7. PROVIDE EXPANSION JOINTS 300' O.C. MAXIMUM
8. 6" CLASS 6 ABC MINIMUM
9. USE CDOT CLASS B CONCRETE FOR CURB AND GUTTERS

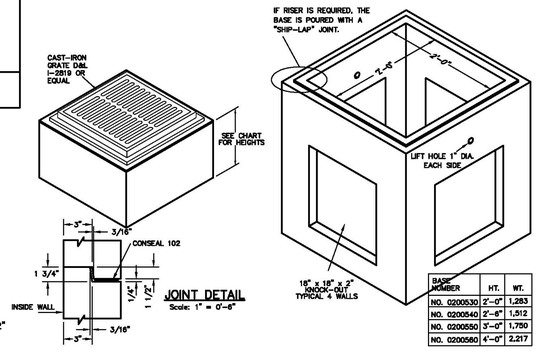
N.T.S.

K 2.5 ft CURB AND GUTTER



RISER NUMBER	HT.	WT.
NO. 0200702	0'–2"	77
NO. 0200704	0'–4"	154
NO. 0200706	0'–6"	233
NO. 0200710	1'–0"	467
NO. 0200720	1'–8"	700
NO. 0200730	2'–0"	933
NO. 0200740	2'–8"	1,167
NO. 0200750	3'–0"	1,400
NO. 0200760	4'–0"	1,867

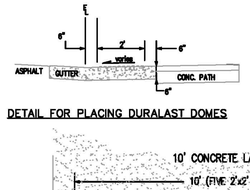
NOTES:
1. DESIGNED FOR AASHTO HS–20 LOADING.
2. DESIGNED ACCORDING TO ASTM C857–87 AND ASTM C858–83.
3. ALL INLET BOXES SHALL HAVE 12" SUMP BELOW OUTLET (TYPICAL)



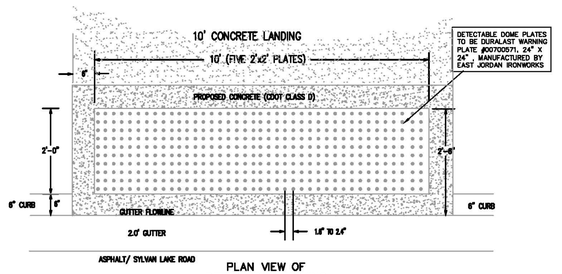
BASE NUMBER	HT.	WT.
NO. 0200530	2'–0"	1,283
NO. 0200540	2'–6"	1,512
NO. 0200550	3'–0"	1,750
NO. 0200560	4'–0"	2,217

N.T.S.

M 2' x 2' AREA INLET



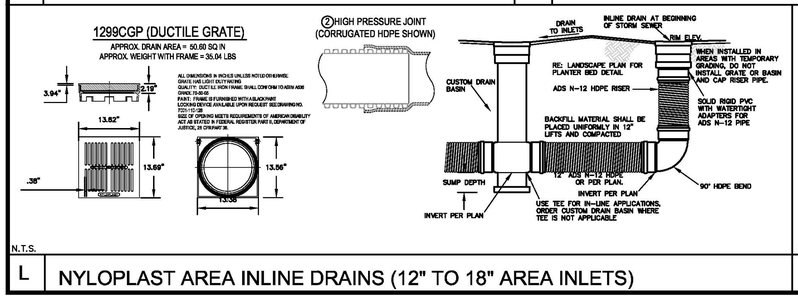
NOTES
1. THE TRUNCATED DOME PLATE SHALL BE EMBEDDED IN THE CONCRETE CURB RAMP WHILE CONCRETE IS PLASTIC.
2. WHEN DETECTABLE WARNING SURFACE IS CUT, GRIND OFF REMAINING PORTION OF ANY CUT DOMES. SEAL ALL CUT PANEL EDGES TO PREVENT WATER DAMAGE.



PLAN VIEW OF DETECTABLE WARNING

N.T.S.

N CONCRETE RAMP W/ TRUNCATED DOME PLATE



N.T.S.

L NYLOPLAST AREA INLINE DRAINS (12" TO 18" AREA INLETS)

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
• 970 926–3373 • FAX 926–3390 •

SYLVAN LAKE CIRCLE
EAGLE, CO

PRELIMINARY GRADING AND DRAINAGE DETAILS

(SEAL)

NO.	DATE	REVISIONS	BY
	05/20/2016	DEVELOPMENT PERMIT	MCW

DESIGNED MCW
DRAWN MCW
CHECKED KAK
JOB NO. 48445
DATE 3–4–2016

PRELIMINARY PLAN
May 19, 2016
NOT FOR CONSTRUCTION

SHEET C7.1

O:\Eagle\Sylvan Lake Circle-48445-2015\dwg\Master\DETAILS.dwg, 5/19/2016 3:12:29 PM, Wesley

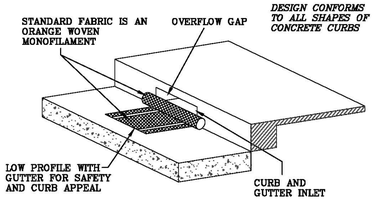
A BEAVER DAM

BEAVER DAM®
Installation and Maintenance Guidelines

Installation: The empty Beaver Dam® should be placed over the grate as the grate stands on end. If using optional oil absorbents; place absorbent pillow on pouch, on the bottom (below-grade side) of the unit. Attach absorbent pillow to tether loop. Tuck the enclosure flap inside to completely enclose the grate. Holding the lifting devices (do not rely on lifting devices to support the entire weight of the grate), place the grate into its frame (street side first), then lower back edge with dam into place. The Beaver Dam® should be partially blocking the curb hood when installed properly.

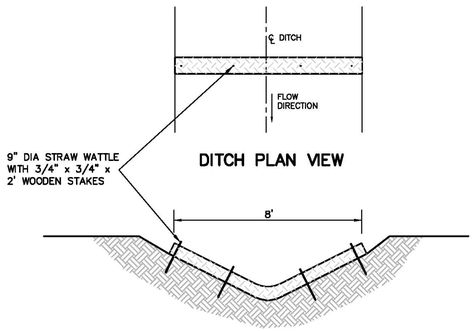
Maintenance: Remove all accumulated sediment and debris from surface and vicinity of unit after each storm event. Remove sediment that has accumulated within the containment area of the Beaver Dam® as needed. If using optional oil absorbents; remove and replace absorbent pillow when near saturation.

BEAVER DAM®



N.T.S.

B DITCH WATTLE



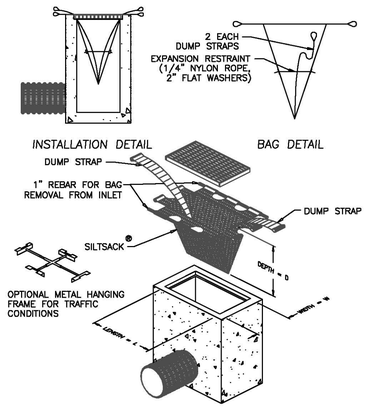
DITCH PLAN VIEW

DITCH CROSS-SECTION

1. The height of a Straw Wattle is 9 in. The installed height is approximately 5 –7 in. The standard length of Straw Wattles is 25 ft., however other lengths will be made upon request.
2. Straw Wattles should be installed in shallow trenches, 2 – 4 in. deep, depending on soil type and slope steepness. Dig the trench deeper for soft, loamy soils and steepest slopes; Dig the trench shallower for hard, rocky soils and gentler slopes. Use mattocks and shovel to dig the trench, throwing excavated soil to the uphill side to prevent runoff from undercutting the Wattle.
3. Install Wattle in drainage ditch perpendicular to flow direction.

N.T.S.

C SILT SACK



SILTSACK® SPECIFICATIONS

NOTE: THE SILTSACK ● WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

REGULAR FLOW SILTSACK ●
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	30 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.50 SEC -1

HI-FLOW SILTSACK ●
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

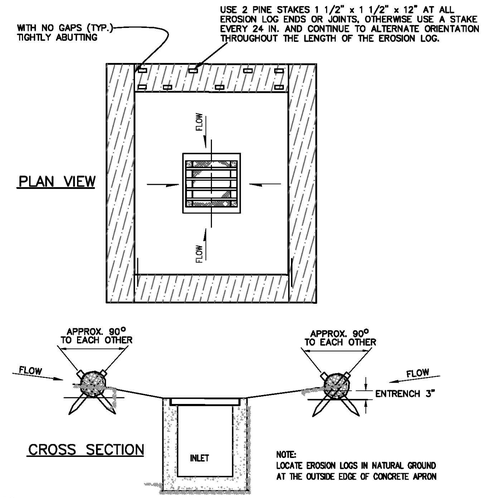
PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

OIL-ABSORBANT SILTSACK ●
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILTSACK ●CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT PILLOW INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILTSACK® , WITH A WOVEN PILLOW INSERT.

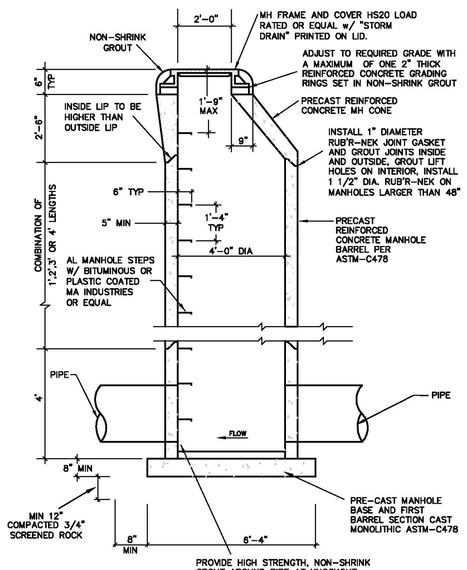
N.T.S.

D EROSION LOG INLET PROTECTION



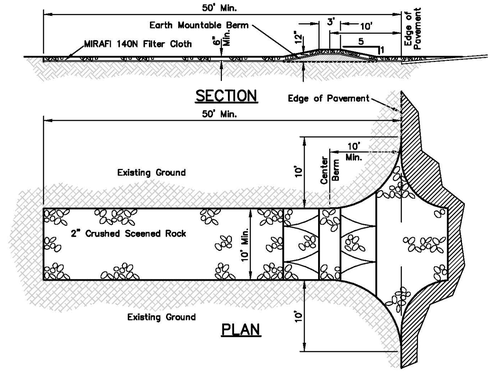
N.T.S.

E STORM SEWER MANHOLE



N.T.S.

F STABILIZED CONSTRUCTION ENTRANCE



CONSTRUCTION NOTES

1. STONE SIZE – USE 2" CRUSHED SCREENED ROCK.
2. LENGTH – AS REQUIRED, BUT NOT LESS THAN 50 FEET.
3. THICKNESS – NOT LESS THAN SIX (6) INCHES.
4. WIDTH – TEN (10) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY. SCE SHALL REMAIN IN PLACE UNTIL PAVING OF ENTRANCE COMMENCES.
8. WASHING – WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

N.T.S.

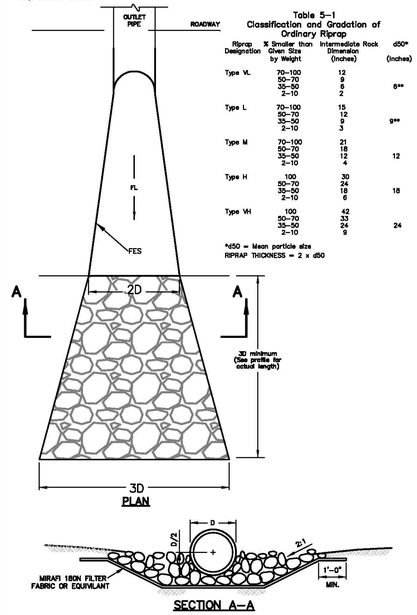
G RIPRAP OUTLET PROTECTION

RIPRAP shall conform to the material, gradation and construction requirements of Section 506, Riprap, of the State Department of Highways, Division of Highways, State of Colorado, Standard Specifications for Road and Bridge Construction and to Chapter 5, Riprap, of the Storm Drainage Criteria Manual, Urban Drainage and Flood Control District (UDFCD), Denver, Colorado. Table 5-1, Classification and Gradation of Ordinary Riprap from the UDFCD is reproduced below.

Table 5-1
Classification and Gradation of Ordinary Riprap

Riprap Designation	% Smaller than Given Size by Weight	Intermediate Rock Dimension (Inches)	d50* (Inches)
Type VL	70–100	12	
	50–70	9	
	35–50	6	6**
	2–10	2	
Type L	70–100	15	
	50–70	12	
	35–50	9	9**
	2–10	3	
Type M	70–100	21	
	50–70	18	
	35–50	12	12
	2–10	4	
Type H	100	30	
	50–70	24	
	35–50	18	18
	2–10	6	
Type VH	100	42	
	50–70	33	
	35–50	24	24
	2–10	8	

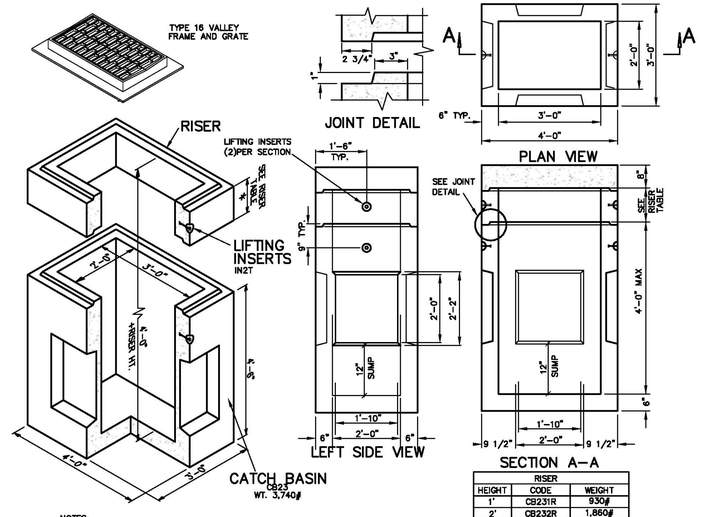
*d50 = Mean particle size
RIPRAP THICKNESS = 2 x d50



NOTE: 1. SEE PLANS FOR D (INSIDE DIAMETER OF CULVERT) & NOMINAL STONE SIZE

N.T.S.

H 2' x 3' CURB/ VALLEY INLET



RISER

HEIGHT	CODE	WEIGHT
1'	CB231R	930#
2'	CB232R	1,860#
3'	CB233R	2,790#

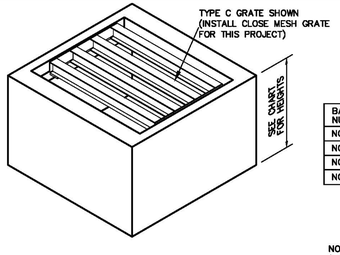
NOTES:
1. CATCH BASINS ARE DESIGNED TO MEET ASTM C858 WITH AASHTO HS-20 LOADING.
2. OPENINGS MAY BE LOCATED AS REQUIRED.
3. CHECK HARDWARE SECTION FOR OPTIONAL ACCESSORIES.

ALL CONCRETE INLETS (2'X3' AND 3'X3') TO HAVE 18" SUMP

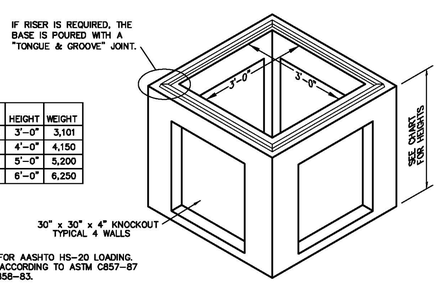
N.T.S.

I TYPE 'C' INLET

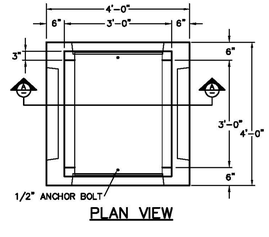
RISER NUMBER	HEIGHT	WEIGHT
NO. 2127018	1'–0"	1,050
NO. 2127024	2'–0"	2,100
NO. 2127036	3'–0"	3,150
NO. 2127048	4'–0"	4,200
NO. 2127060	5'–0"	5,250
NO. 2127072	6'–0"	6,300

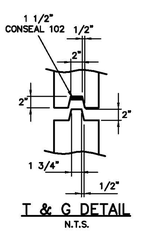


BASE NUMBER	HEIGHT	WEIGHT
NO. 2125030	3'–0"	3,101
NO. 2125040	4'–0"	4,150
NO. 2125050	5'–0"	5,200
NO. 2125060	6'–0"	6,250

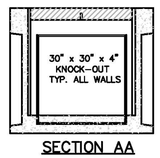


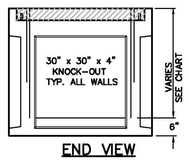
NOTES:
1. DESIGNED FOR AASHTO HS-20 LOADING.
2. DESIGNED ACCORDING TO ASTM C857-87 AND ASTM C858-83.

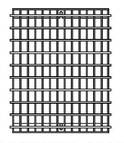




N.T.S.







PRELIMINARY PLAN
May 19, 2016
NOT FOR CONSTRUCTION

N.T.S.

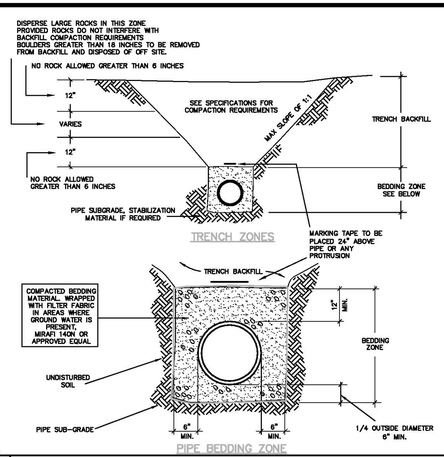
ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
• 970 926-3373 • FAX 926-3390 •
(SEAL)

SYLVAN LAKE CIRCLE
EAGLE, CO
PRELIMINARY
DRAINAGE AND EROSION DETAILS

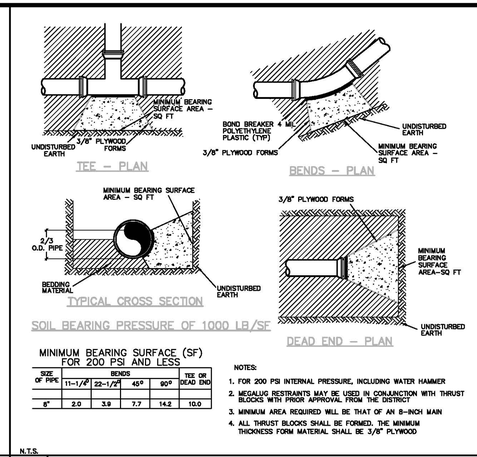
NO.	DATE	REVISIONS	BY
	05/20/2016	DEVELOPMENT PERMIT	MCW

DESIGNED MCW
DRAWN MCW
CHECKED KAK
JOB NO. 48445
DATE 3-4-2016

SHEET C7.2



A SEWER AND WATER PIPE BEDDING



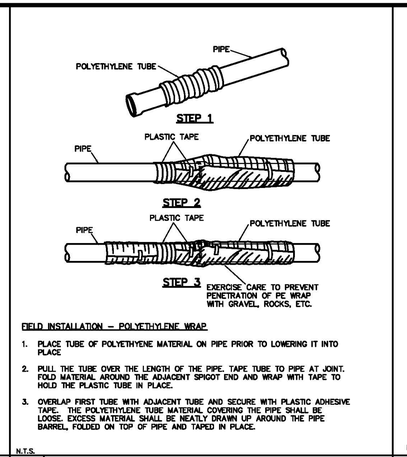
MINIMUM BEARING SURFACE (SF) FOR 200 PSI AND LESS

SIZE OF PIPE	BENDS				TEE OR DEAD END
	11-1/4°	22-1/2°	45°	90°	
8"	2.0	3.9	7.7	14.2	10.0

NOTES:
1. FOR 200 PSI INTERNAL PRESSURE, INCLUDING WATER HAMMER
2. MEGALUG RESTRAINTS MAY BE USED IN CONJUNCTION WITH THRUST BLOCKS WITH PRIOR APPROVAL FROM THE DISTRICT
3. MINIMUM AREA REQUIRED WILL BE THAT OF AN 8–INCH MAIN
4. ALL THRUST BLOCKS SHALL BE FORMED. THE MINIMUM THICKNESS FORM MATERIAL SHALL BE 3/8" PLYWOOD

N.T.S.

B CONCRETE THRUST BLOCK

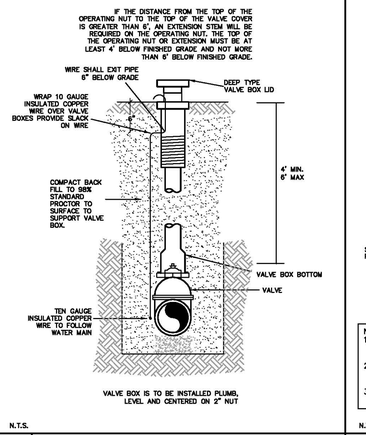


FIELD INSTALLATION – POLYETHYLENE WRAP

1. PLACE TUBE OF POLYETHYENE MATERIAL ON PIPE PRIOR TO LOWERING IT INTO PLACE.
2. PULL THE TUBE OVER THE LENGTH OF THE PIPE. TAPE TUBE TO PIPE AT JOINT. FOLD MATERIAL AROUND THE ADJACENT SPIGOT END AND WRAP WITH TAPE TO HOLD THE PLASTIC TUBE IN PLACE.
3. OVERLAP FIRST TUBE WITH ADJACENT TUBE AND SECURE WITH PLASTIC ADHESIVE TAPE. THE POLYETHYLENE TUBE MATERIAL COVERING THE PIPE SHALL BE LOOSE. EXCESS MATERIAL SHALL BE NEATLY DRAWN UP AROUND THE PIPE BARREL, FOLDED ON TOP OF PIPE AND TAPED IN PLACE.

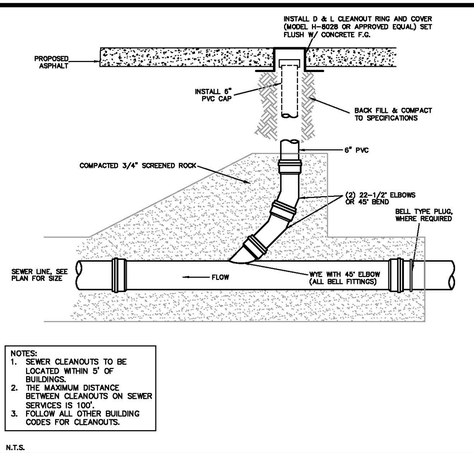
N.T.S.

C POLYETHYLENE WRAP



N.T.S.

D GATE VALVE AND BOX



NOTES:
1. SEWER CLEANOUTS TO BE LOCATED WITHIN 5' OF BUILDINGS.
2. THE MAXIMUM DISTANCE BETWEEN CLEANOUTS ON SEWER SERVICES IS 100'.
3. FOLLOW ALL OTHER BUILDING CODES FOR CLEANOUTS.

N.T.S.

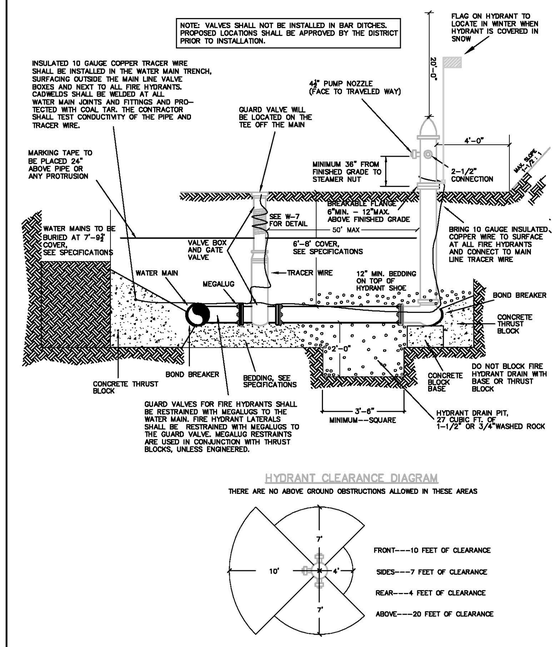
E SEWER CLEANOUT WITH RING AND COVER

Town of Eagle Water Specs

1. Ductile Iron Pipe - CL 52 AWWA C151 350 psi with conductivity straps or use of brass wedges and 10 gauge tracer wire insulated.
2. Fittings - Ductile Iron AWWA C153 350psi MJ joints AWWA C111.
3. Joint Restraint - E6AA Iron Mega Lug Series 1100 or 1700 accepted equal.
4. Gate Valves - Mueller A - 2360 or U.S. Pipe Metro Seal 250 R.S. Resilient wedge gate valves up to and including 12" (AWWA C509).
5. Butter Fly Valves - Mueller Lineseal III Epoxy coated or Pratt "Groundhog" buried service rubber seated, Epoxy coated. AWWA C504 Class 150 B 14" and larger. 3211-23 Mechanical Joint Ends (without mechanical joint accessories)
   * High Pressure Zone Mueller Lineseal XPII, Class 250 B 14" and larger. 5227-23 Mechanical Joint Ends (without mechanical joint accessories)
6. Valve Boxes - Tyler 6850 Series or equal 5 ¼" lid.
7. Fire Hydrants - Mueller Super Centerion A423 5 ¼" main valve opening. Extensions will not be allowed during the first year. After that, only one (1) extension is allowable (maximum 48-inches).
8. Tapping Sleeves - ROMAC SST III stainless steel tapping sleeve or approved equal.
9. Service Saddles - Mueller BR2 Series or approved equal (Bronze).
10. Corporation Stops - Mueller B25008 or approved equal.
11. Curb Stops - Mueller B25209 or approved equal.
12 Curb Boxes- For sizes up to 1.5-in: Mueller H10314 with rod various heights or approved equal. H10334 in concrete or asphalt. 1.5-in and larger: Mueller H-10336
13. Service Filling - Mueller 110 or approved equal.
14. Pressure Reducing Valves- Main line - Pressure Reducing Valve shall bc: CLA - VAL 90-01 or 690-01. Combination Pressure Reducing & Pressure Sustaining Valve shall bc: CLA - VAL 92-01 or 692-01.
15. Copper Tubing - ¾" Line - Type K Copper; 1" Line - Type K Copper; 2" Line - Type K Copper
16. Polyethylene Serivce Line Tubing (Pure-Core or Approved Equal) - ¾" **not allowed** due to the minimum requirement of ¾" ID diameter 1" to 2" SDR9 meeting the requirements of ASTM D 2737 and AWWA C901 and ANSI/NSF standard 61. (Pure - Core) with tracer wire with 10 gauge tracer wire (insulated)
16. Air Vac Valves - 2-in APCO 144 or VALMATIC 202C.2.
17. Polyethylene Encasement - ANSI / AWWA C105 / A21.5-93 or most current revision. Low density polyethylene Film .008" - 8 mil.
18. Water Main Size - Water Main Pipe diameter size should be 8-inch, 12-inch, 16-inch, 20-inch, and 24-inch.

N.T.S.

F

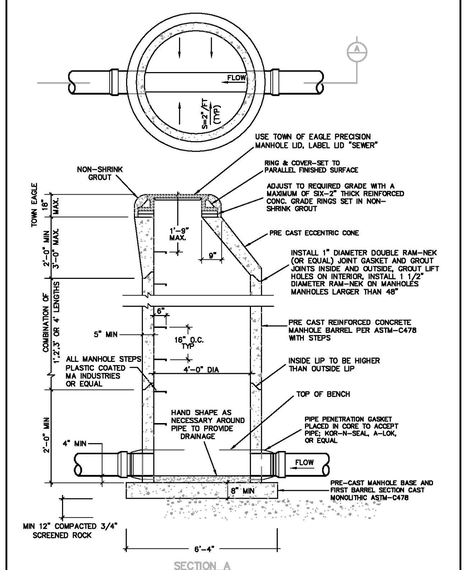


HYDRANT CLEARANCE DIAGRAM

THERE ARE NO ABOVE GROUND OBSTRUCTIONS ALLOWED IN THESE AREAS

N.T.S.

G FIRE HYDRANT ASSEMBLY DETAIL

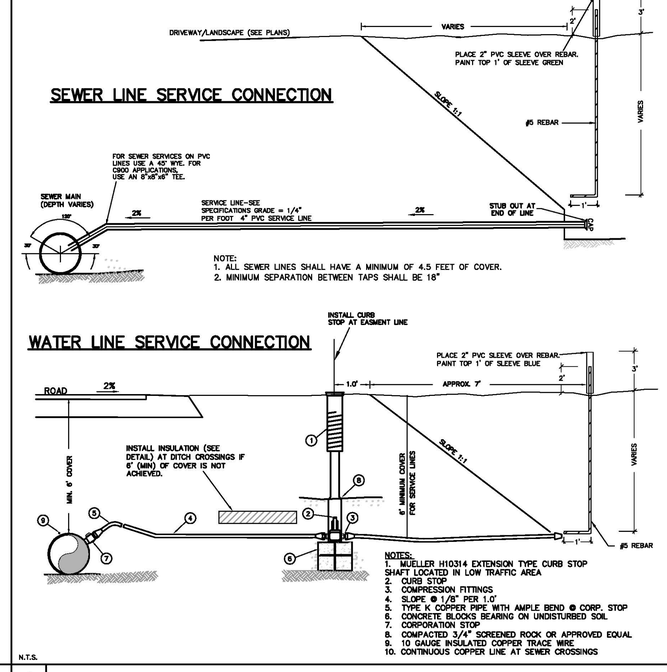


SECTION A

GENERAL NOTE
1. ALL CONCRETE WORK SHALL COMPLY WITH LATEST ACI–318 SPECIFICATIONS

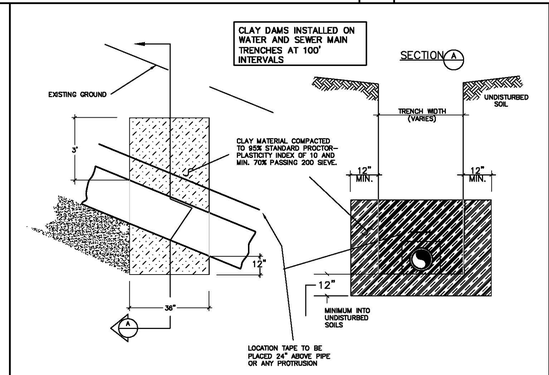
N.T.S.

H STANDARD MANHOLE



N.T.S.

I SEWER AND WATER SERVICE LINE DETAILS



N.T.S.

J CLAY GROUNDWATER BARRIER

PRELIMINARY PLAN
May 19, 2016
NOT FOR CONSTRUCTION

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
• 970 926-3310 • FAX 926-3590 •

SYLVAN LAKE CIRCLE
EAGLE, CO
PRELIMINARY
WATER & SEWER DETAILS

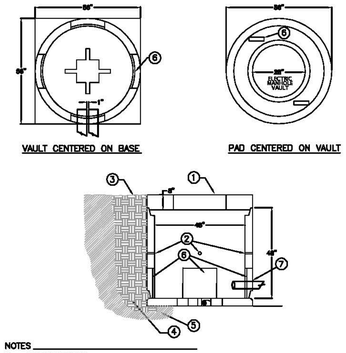
(SEAL)

NO.	DATE	REVISIONS	BY
	05/20/2016	DEVELOPMENT PERMIT	MCW

DESIGNED MCW
DRAWN MCW
CHECKED KAK
JOB NO. 16292.1
DATE 3-4-2016

SHEET C7.3

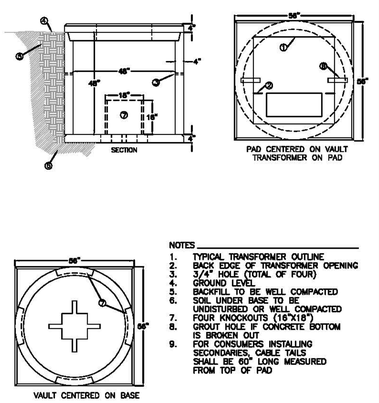
O:\Eagle\Sylvan Lake Circle-49445-2015\dwg\Master\DETAILS.dwg, 5/19/2016 3:13:14 PM, Wesley



SPLICE VAULT (Round)	
1 - 45518 Small Base	1,100 lbs.
1 - 45519 Vault, 4'x41 or 45760 Vault, 4'x51	2,600 lbs.
1 - 45520 Top	2,300 lbs.

HOLY CROSS ENERGY	SPLICE VAULT (4' Round) SPECIFICATION	APPENDIX UM30R

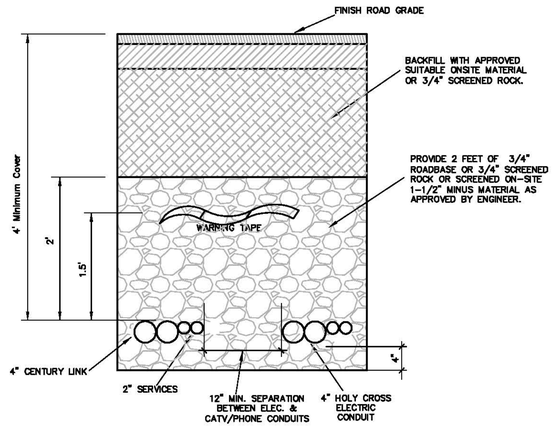
A UM30R SPLICE VAULT



SINGLE PHASE TRANSFORMER VAULT (Round)	
1 - 45518 Small Base	1,100 lbs.
1 - 45519 Vault, 4'x41 or 45760 Vault, 4'x51	2,600 lbs.
1 - 45520 Top (Typical)	1,200 lbs.

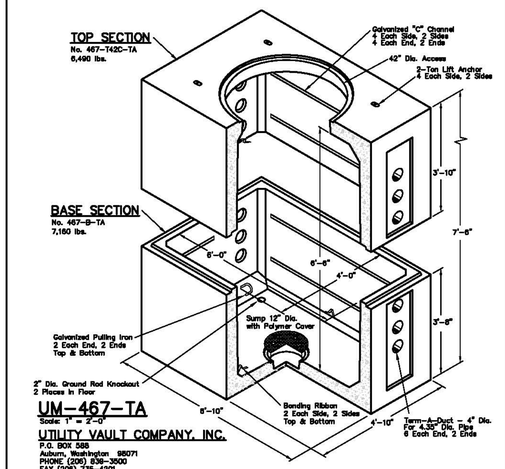
HOLY CROSS ENERGY	1 PHASE TRANSFORMER VAULT SPECIFICATION	APPENDIX UM1-3

B SINGLE PHASE TRANSFORMER



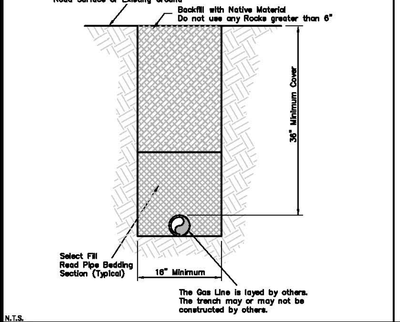
NOTE:
1. PROVIDE CLAY CHECK DAMS @ 100' INTERVALS IN AREAS OF HIGH GROUND WATER.
2. NUMBER OF CONDUITS VARY, SEE UTILITY PLAN
3. SEE INDIVIDUAL UTILITY COMPANY NOTES ON COVER SHEET

C JOINT UTILITY TRENCH



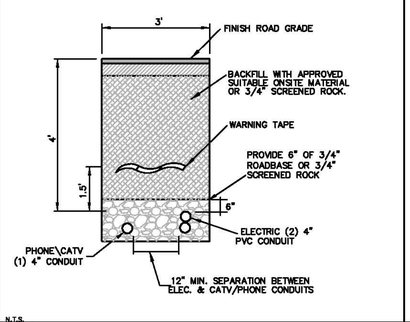
UTILITY VAULT COMPANY, INC.
P.O. BOX 588
Auburn, Washington 98071
PHONE (206) 836-3500
FAX (206) 735-4201

D COMMUNICATION SPLICE VAULT



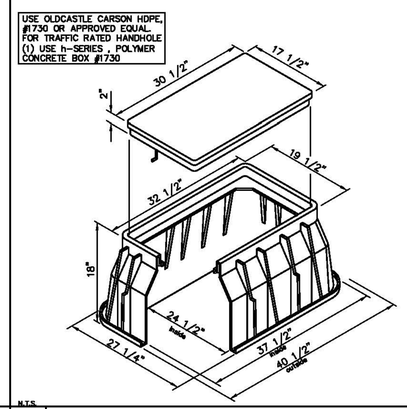
N.T.S.

E GAS TRENCH



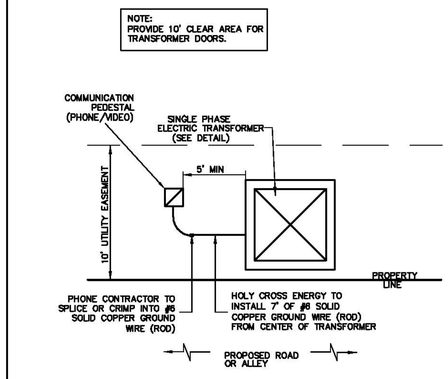
N.T.S.

F ELEC./ PHONE/ JOINT TRENCH



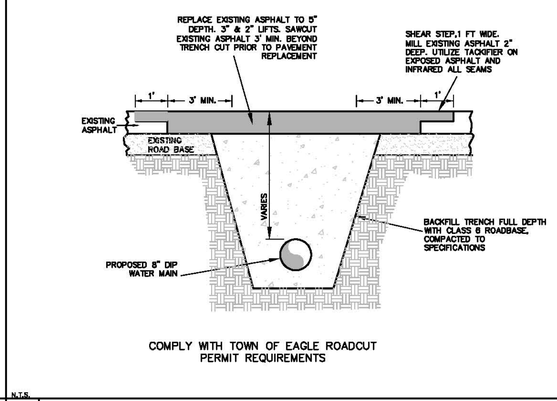
N.T.S.

G HANDHOLE



N.T.S.

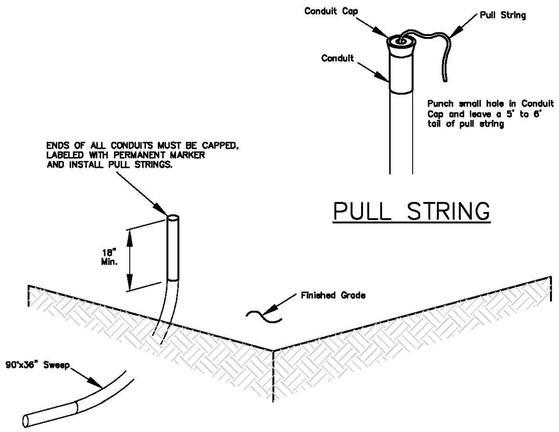
H TRANSFORMER / PEDESTAL LAYOUT



COMPLY WITH TOWN OF EAGLE ROADCUT PERMIT REQUIREMENTS

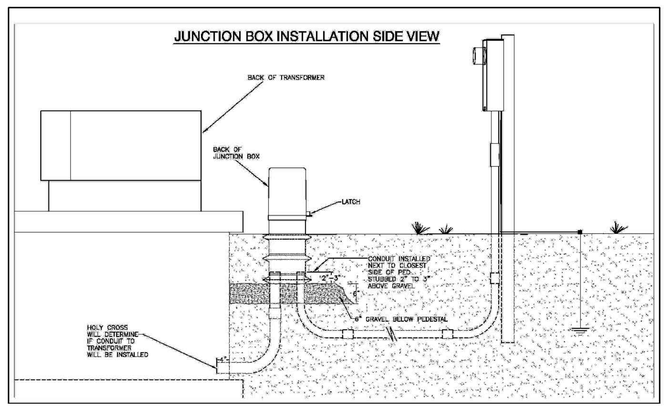
N.T.S.

I ROADCUT DETAIL



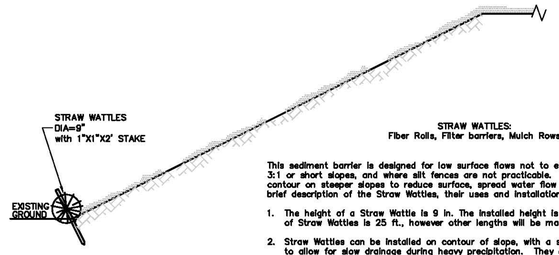
N.T.S.

J CONDUIT SWEEP / STUB



N.T.S.

K ELECTRIC- SECONDARY PEDESTAL



STRAW WATTLES:
Fiber Rolls, Filter barriers, Mulch Rows

This sediment barrier is designed for low surface flows not to exceed 1 cfs for small areas, slope flatter than 3:1 or short slopes, and where silt fences are not practicable. Straw Wattles can also be installed on contour on steeper slopes to reduce surface, spread water flow and capture sediment. The following is a brief description of the Straw Wattles, their uses and installation.

1. The height of a Straw Wattle is 9 in. The installed height is approximately 5 –7 in. The standard length of Straw Wattles is 25 ft., however other lengths will be made upon request.
2. Straw Wattles can be installed on contour of slope, with a slight downslope angle at the end of each row to allow for slow drainage during heavy precipitation. They can also be used at the top of slopes to prevent sheeting over the edge, and they can be used at the toe of slopes. Straw Wattles can also be used along sidewalks and curbs and around storm drains and inlets to prevent sediment pollution.
3. Straw Wattles can be used to replace silt fences, straw bale dikes and sand bag barriers. They can also be placed in drainage swales to slow flows and capture sediment: they can be used as level spreaders to prevent concentrated flow, and in place of earthen berms or dikes.
4. Straw Wattles should be installed on surface.
5. Lay the Wattle in the trench and stake with 3/4" X 3/4" X 18" or 24" wood stakes at each end and 4–foot on center. When installing running lengths, Straw Wattle ends should be buttoned firmly together to prevent leakage, and securely staked together but overlapping is acceptable.
6. When used on slopes, Straw Wattles do not require removal and can be abandoned in place. However, when used for temporary purposes such as along sidewalks on curbs, or around storm drains, they can be removed and reused.
7. Wattles installed on slopes that are steeper than 2:1 shall be spaced at 10' intervals rather than 20' intervals.

N.T.S.

L STRAW WATTLES

PRELIMINARY PLAN
May 19, 2016
NOT FOR CONSTRUCTION

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
105 LUNDGREN BLVD, SUITE 201
• 970 926-3373 • FAX 926-3390 •

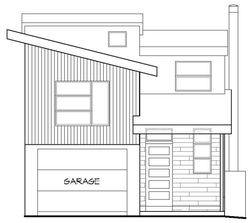
SYLVAN LAKE CIRCLE
EAGLE, CO
PRELIMINARY
SHALLOW UTILITY DETAILS

(SEAL)

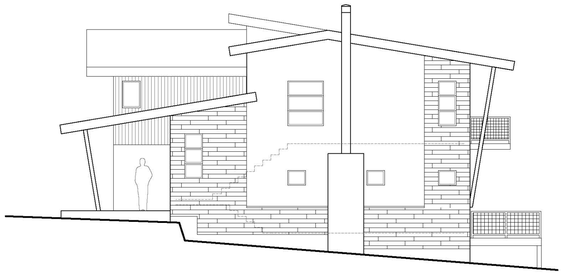
NO.	DATE	REVISIONS	BY
	05/20/2016	DEVELOPMENT PERMIT	MCW

DESIGNED MCW
DRAWN MCW
CHECKED KAK
JOB NO. 48445
DATE 3-4-2016

SHEET C7.4

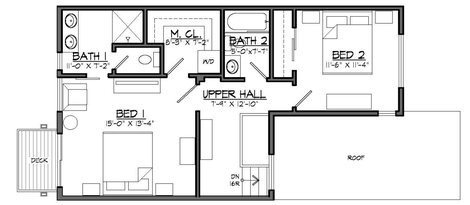


E TOWNHOUSE 'A-1' - WEST ELEVATION ON SOUTH SIDE
SCALE: 1/8" = 1'-0"



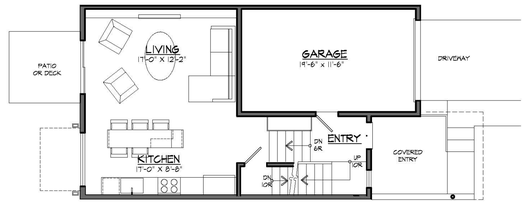
D TOWNHOUSE 'A-1' - SOUTH ELEVATION ON SOUTH SIDE
SCALE: 1/8" = 1'-0"

C TOWNHOUSE 'A-1' - EAST ELEVATION ON SOUTH SIDE
SCALE: 1/8" = 1'-0"



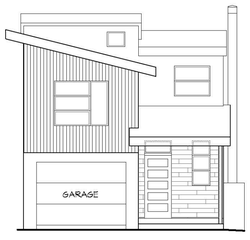
A TOWNHOUSE 'A-1' - UPPER FLOOR
SCALE: 1/8" = 1'-0"

1ST FLOOR	524 SF
2ND FLOOR	700 SF
TOTAL 2-BED	1,224 SF
GARAGE	240 SF

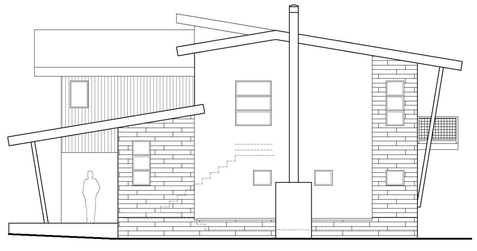


B TOWNHOUSE 'A-1'- LOWER FLOOR
SCALE: 1/8" = 1'-0"

1ST FLOOR	524 SF
2ND FLOOR	700 SF
TOTAL 2-BED	1,224 SF
GARAGE	240 SF

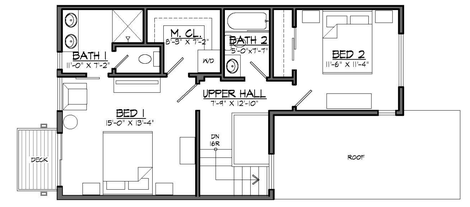


K TOWNHOUSE 'A-2' - WEST ELEVATION ON SOUTH SIDE
SCALE: 1/8" = 1'-0"



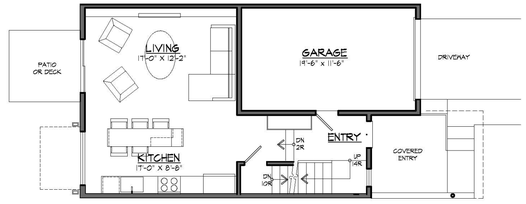
J TOWNHOUSE 'A-2' - SOUTH ELEVATION ON SOUTH SIDE
SCALE: 1/8" = 1'-0"

H TOWNHOUSE 'A-2' - EAST ELEVATION ON SOUTH SIDE
SCALE: 1/8" = 1'-0"



F TOWNHOUSE 'A-2' - UPPER FLOOR
SCALE: 1/8" = 1'-0"

1ST FLOOR	524 SF
2ND FLOOR	700 SF
TOTAL 2-BED	1,224 SF
GARAGE	240 SF



G TOWNHOUSE 'A-2'- LOWER FLOOR
SCALE: 1/8" = 1'-0"

1ST FLOOR	524 SF
2ND FLOOR	700 SF
TOTAL 2-BED	1,224 SF
GARAGE	240 SF

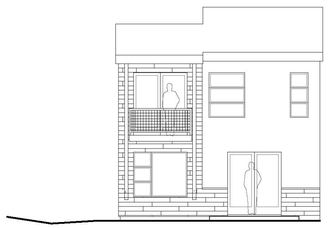
CWA
ARCHITECTS
4400 OSAGE DRIVE
BOULDER CO 80303
t.720.644.6699
f.303.835.4540
www.CreativeWestArchitects.com

SYLVAN LAKE CIRCLE
EAGLE, COLORADO

PRELIMINARY UNIT DESIGN

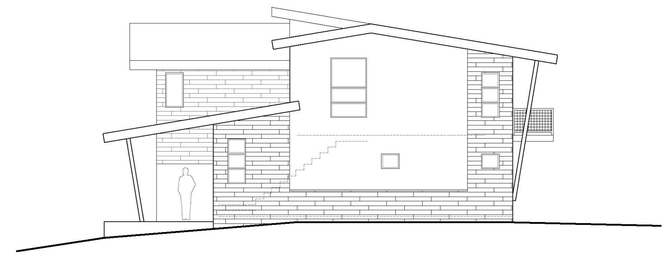
SET	DATE	DESCRIPTION
(1)	05/19/2016	UNIT DESIGN

A1.1

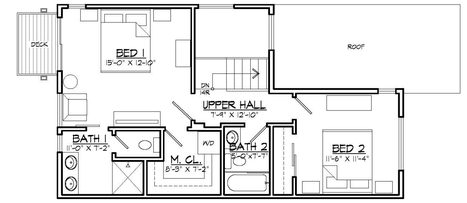


E TOWNHOUSE 'A-3' - WEST ELEVATION ON NORTH SIDE
SCALE: 1/8" = 1'-0"

D TOWNHOUSE 'A-3' - EAST ELEVATION ON NORTH SIDE
SCALE: 1/8" = 1'-0"

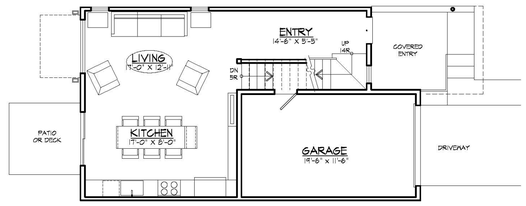


C TOWNHOUSE 'A-3' - NORTH ELEVATION ON NORTH SIDE
SCALE: 1/8" = 1'-0"



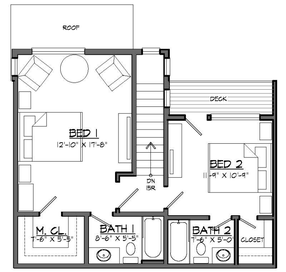
A TOWNHOUSE 'A-3' - UPPER FLOOR
SCALE: 1/8" = 1'-0"

1ST FLOOR	528 SF
2ND FLOOR	700 SF
TOTAL 2-BED	1,228 SF
GARAGE	240 SF



B TOWNHOUSE 'A-3' - LOWER FLOOR
SCALE: 1/8" = 1'-0"

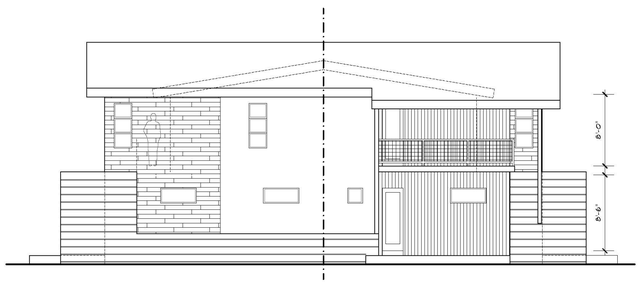
1ST FLOOR	528 SF
2ND FLOOR	700 SF
TOTAL 2-BED	1,228 SF
GARAGE	240 SF



F MUTIL-FAMILY 'B' - UPPER FLOOR
SCALE: 1/8" = 1'-0"

1ST FLOOR	420 SF
2ND FLOOR	628 SF
TOTAL 2-BED	1,048 SF
GARAGE	254 SF

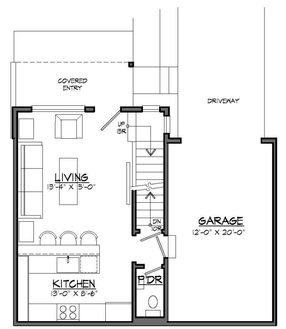
L MULTI-FAMILY 'B' - FRONT ELEVATION ON WEST SIDE
SCALE: 1/8" = 1'-0"



K MULTI-FAMILY 'B' - WEST SIDE
SCALE: 1/8" = 1'-0"

J MULTI-FAMILY 'B' - EAST SIDE
SCALE: 1/8" = 1'-0"

H MULTI-FAMILY 'B' - FRONT ELEVATION ON EAST SIDE
SCALE: 1/8" = 1'-0"



G MULTI-FAMILY 'B' - LOWER FLOOR
SCALE: 1/8" = 1'-0"

1ST FLOOR	420 SF
2ND FLOOR	628 SF
TOTAL 2-BED	1,048 SF
GARAGE	254 SF

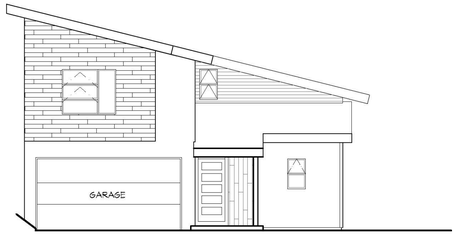
CWA
ARCHITECTS
4400 OSAGE DRIVE
BOULDER CO 80303
t.720.644.6699
f.303.835.4540
www.CreativeWestArchitects.com

SYLVAN LAKE CIRCLE
EAGLE, COLORADO

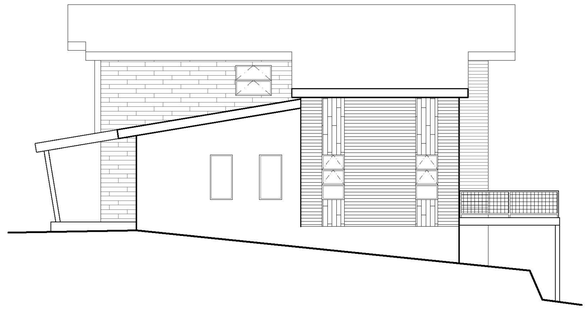
PRELIMINARY UNIT DESIGN

SET	DATE	DESCRIPTION
(1)	05/19/2016	UNIT DESIGN

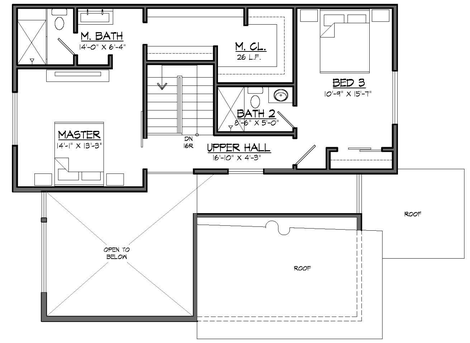
A1.2



C TOWNHOUSE 'C' - NORTH ELEVATION ON WEST SIDE
SCALE: 1/8" = 1'-0"



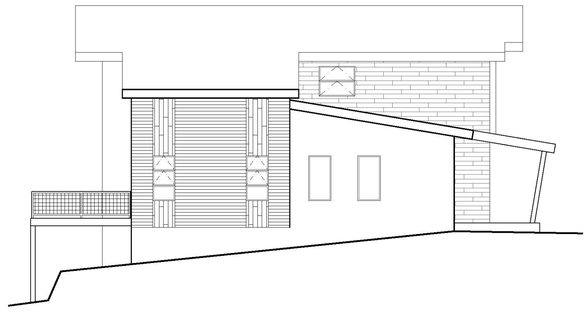
B TOWNHOUSE 'C' - WEST ELEVATION ON WEST SIDE
SCALE: 1/8" = 1'-0"



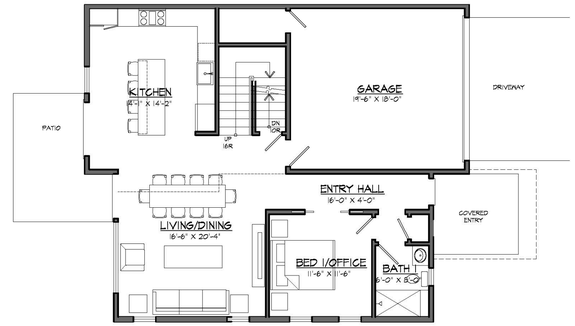
A TOWNHOUSE 'C' - UPPER FLOOR
SCALE: 1/8" = 1'-0"

1ST FLOOR	1,032 SF
2ND FLOOR	842 SF
TOTAL 2-BED	1,874 SF
GARAGE	370 SF

F TOWNHOUSE 'C' - SOUTH ELEVATION ON WEST SIDE
SCALE: 1/8" = 1'-0"



E TOWNHOUSE 'C' - EAST ELEVATION ON EAST SIDE
SCALE: 1/8" = 1'-0"

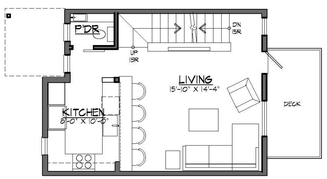


D TOWNHOUSE 'C' - LOWER FLOOR
SCALE: 1/8" = 1'-0"

1ST FLOOR	1,032 SF
2ND FLOOR	842 SF
TOTAL 2-BED	1,874 SF
GARAGE	370 SF

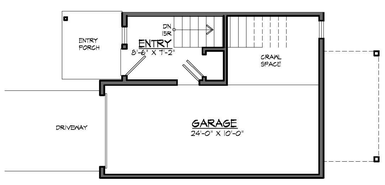
L TOWNHOUSE 'D' - UPPER FLOOR
SCALE: 1/8" = 1'-0"

LOWER LEVEL	93 SF
1ST FLOOR	443 SF
2ND FLOOR	462 SF
TOTAL 2-BED	1,000 SF
GARAGE	348 SF



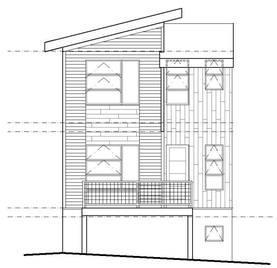
M TOWNHOUSE 'D' - LOWER FLOOR
SCALE: 1/8" = 1'-0"

LOWER LEVEL	93 SF
1ST FLOOR	443 SF
2ND FLOOR	462 SF
TOTAL 2-BED	1,000 SF
GARAGE	348 SF

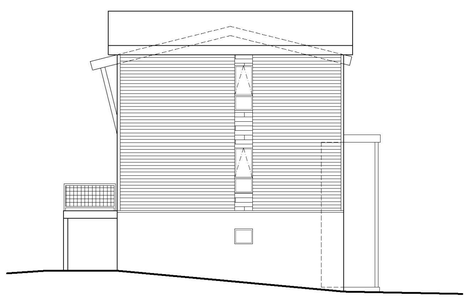


N TOWNHOUSE 'D' - BASEMENT
SCALE: 1/8" = 1'-0"

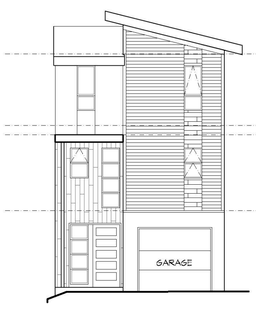
LOWER LEVEL	93 SF
1ST FLOOR	443 SF
2ND FLOOR	462 SF
TOTAL 2-BED	1,000 SF
GARAGE	348 SF



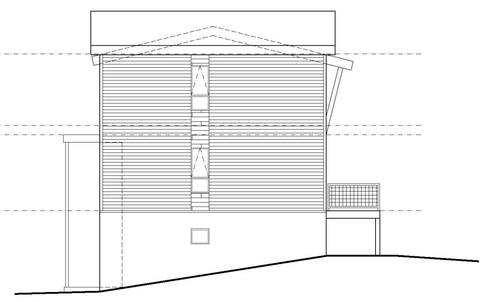
K TOWNHOUSE 'D' - WEST ELEVATION
SCALE: 1/8" = 1'-0"



J TOWNHOUSE 'D' - SOUTH ELEVATION ON SOUTH SIDE
SCALE: 1/8" = 1'-0"



H TOWNHOUSE 'D' - EAST ELEVATION
SCALE: 1/8" = 1'-0"



G TOWNHOUSE 'D' - NORTH ELEVATION ON NORTH SIDE
SCALE: 1/8" = 1'-0"

CWA
ARCHITECTS
4400 OSAGE DRIVE
BOULDER CO 80303
t.720.644.6699
f.303.835.4540
www.CreativeWestArchitects.com

SYLVAN LAKE CIRCLE
EAGLE, COLORADO

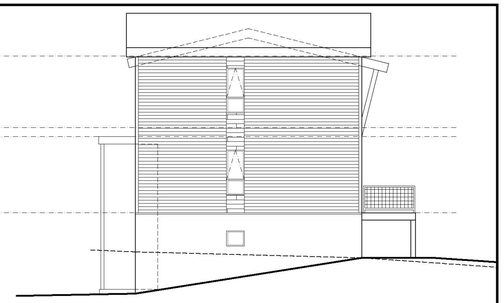
PRELIMINARY UNIT DESIGN

SET	DATE	DESCRIPTION
(1)	05/19/2016	UNIT DESIGN

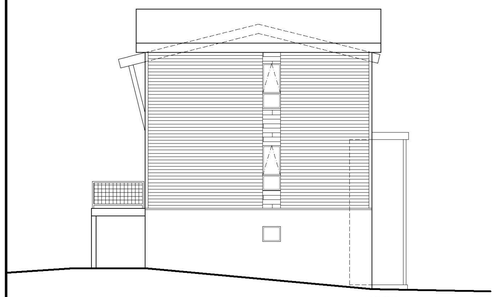
A1.3

C TOWNHOUSE 'D' - WEST ELEV AT BLOCK 'A'
1/8" = 1'-0"

B TOWNHOUSE 'D' - EAST ELEV AT BLOCK 'A'
1/8" = 1'-0"

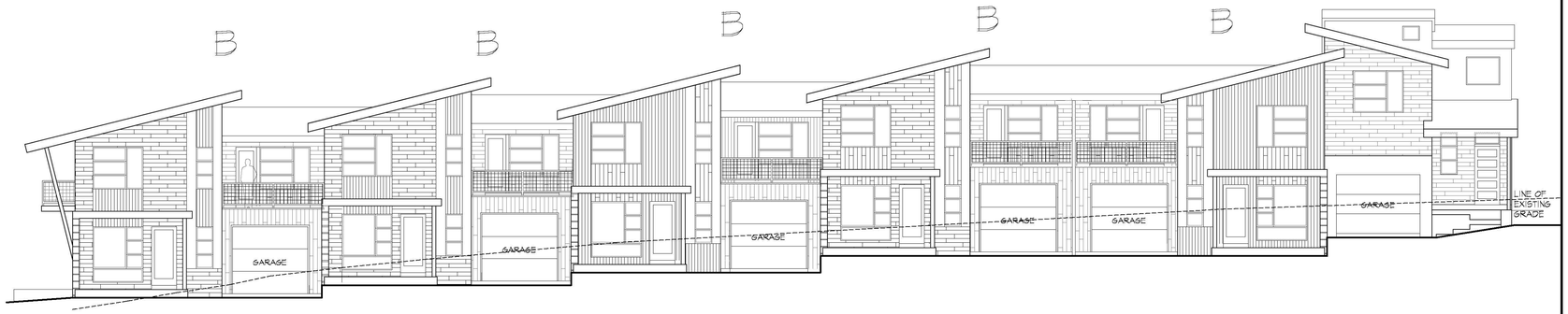


A TOWNHOUSE 'D' - NORTH ELEV AT BLOCK 'A'
1/8" = 1'-0"



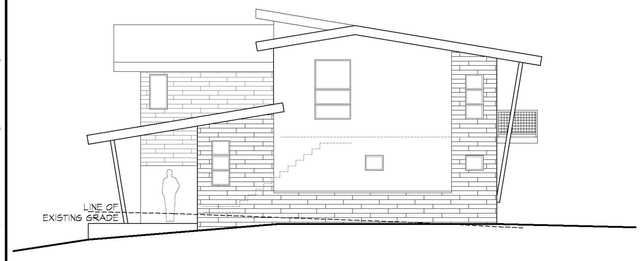
D TOWNHOUSE 'D' - SOUTH ELEV AT BLOCK 'A'
1/8" = 1'-0"

A-3

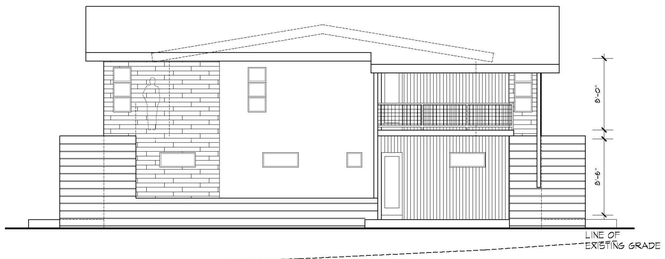


E TOWNHOUSE 'B' - EAST ELEV @ BLOCK 'B'
1/8" = 1'-0"

F TOWNHOUSE 'B' - WEST ELEV @ BLOCK 'B'
1/8" = 1'-0"



H TOWNHOUSE 'A' - NORTH ELEV @ BLOCK 'B'
1/8" = 1'-0"



G TOWNHOUSE 'B' - SOUTH ELEV @ BLOCK 'B'
1/8" = 1'-0"

CWA
ARCHITECTS
4400 OSAGE DRIVE
BOULDER CO 80303
t.720.644.6699
f.303.835.4540
www.CreativeWestArchitects.com

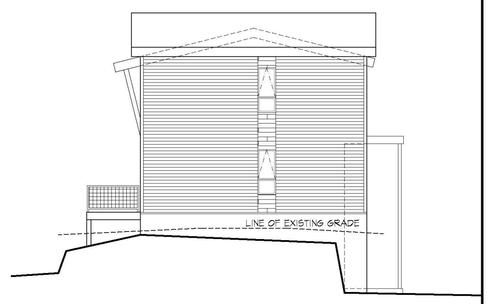
SYLVAN CIRCLE
SYLVAN LAKE ROAD, EAGLE CO

UNIT BLOCKS

SET	DATE	DESCRIPTION
(1)	05/20/2016	DEVELOPMENT REVIEW

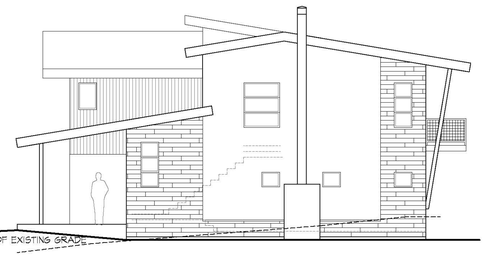
A2.1

B TOWNHOUSE 'A' - EAST ELEV @ BLOCK 'C'
1/8" = 1'-0"

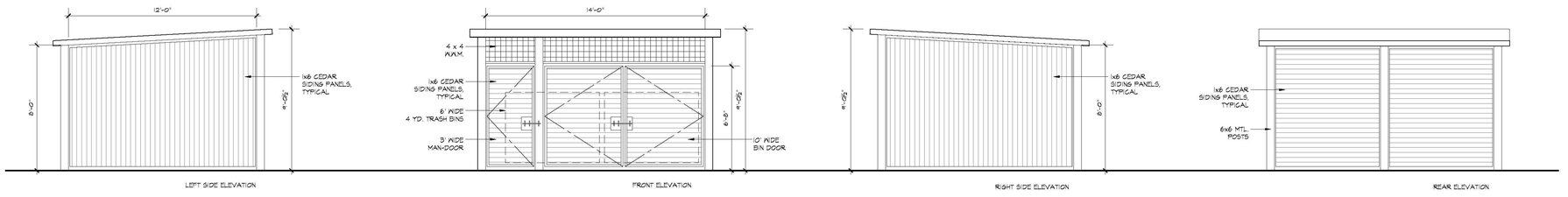


A TOWNHOUSE 'A' - EAST ELEV @ BLOCK 'C'
1/8" = 1'-0"

D TOWNHOUSE 'A' - WEST ELEV @ BLOCK 'C'
1/8" = 1'-0"



C TOWNHOUSE 'A' - SOUTH ELEV @ BLOCK 'C'
1/8" = 1'-0"



G TRASH ENCLOSURE ELEVATIONS
1/4" = 1'-0"

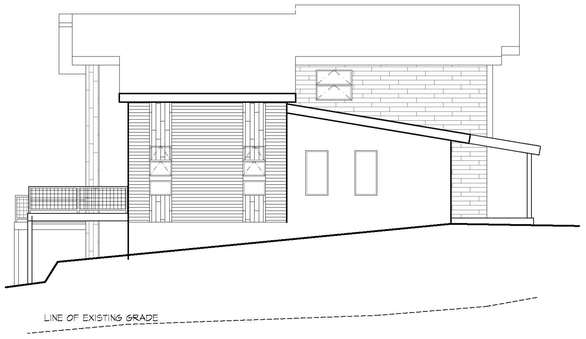
CWA ARCHITECTS
4400 OSAGE DRIVE
BOULDER CO 80303
t.720.644.6699
f.303.835.4540
www.CreativeWestArchitects.com

SYLVAN CIRCLE
SYLVAN LAKE ROAD, EAGLE CO

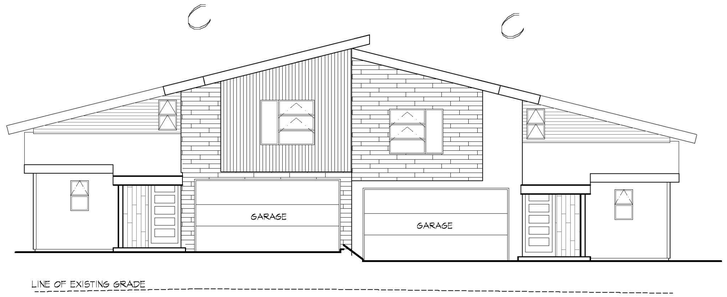
UNIT BLOCKS

SET	DATE	DESCRIPTION
(1)	05/20/2016	DEVELOPMENT REVIEW

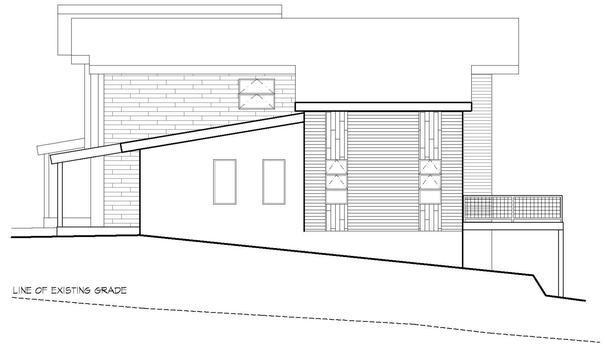
A2.2



C TOWNHOUSE 'D' - NORTH ELEV @ BLOCK 'D'
1/8" = 1'-0"

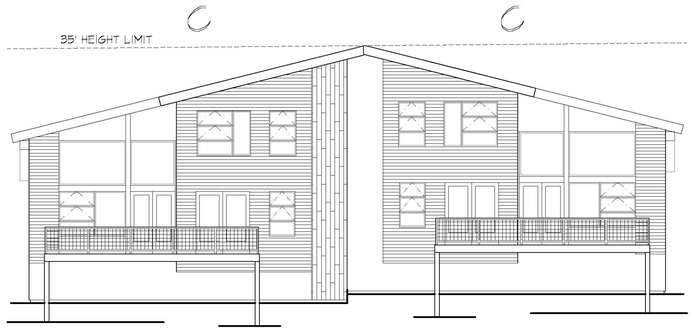


B TOWNHOUSE 'D' - NORTH ELEV @ BLOCK 'D'
1/8" = 1'-0"

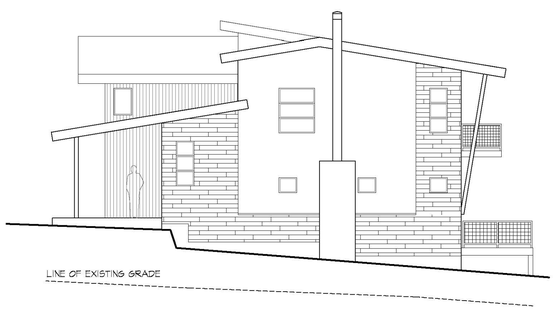


A TOWNHOUSE 'D' - WEST ELEV @ BLOCK 'D'
1/8" = 1'-0"

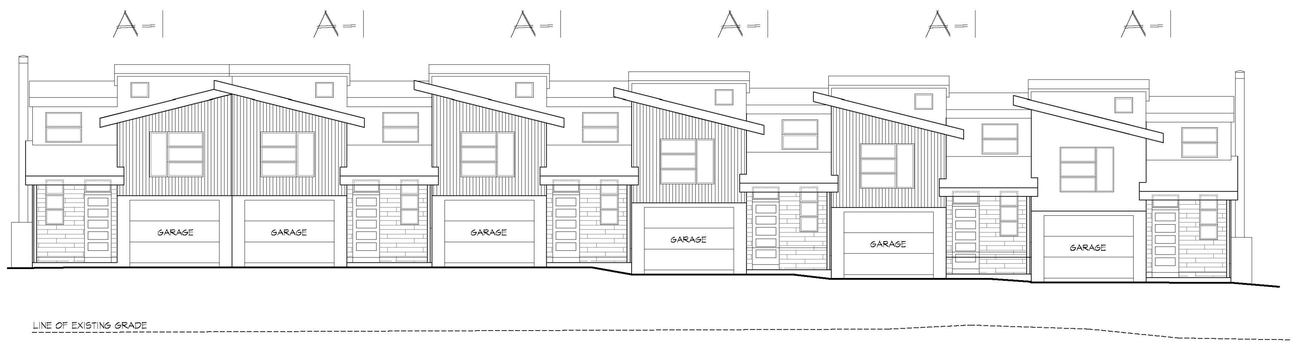
E TOWNHOUSE 'A' - SOUTH ELEV @ BLOCK 'E'
1/8" = 1'-0"



D TOWNHOUSE 'D' - NORTH ELEV @ BLOCK 'D'
1/8" = 1'-0"



G TOWNHOUSE 'A' - WEST ELEV @ BLOCK 'E'
1/8" = 1'-0"



F TOWNHOUSE 'A' - NORTH ELEV @ BLOCK 'E'
1/8" = 1'-0"

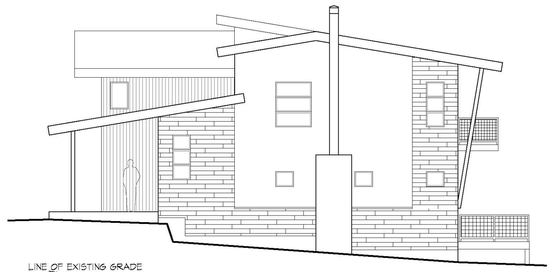
CWA
ARCHITECTS
4400 OSAGE DRIVE
BOULDER CO 80303
t.720.644.6699
f.303.835.4540
www.CreativeWestArchitects.com

SYLVAN CIRCLE
SYLVAN LAKE ROAD, EAGLE CO

UNIT BLOCKS

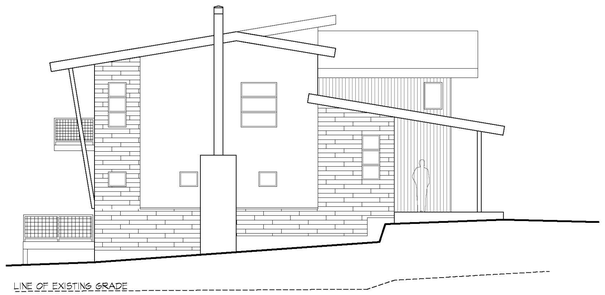
SET	DATE	DESCRIPTION
(1)	05/20/2016	DEVELOPMENT REVIEW

A2.3

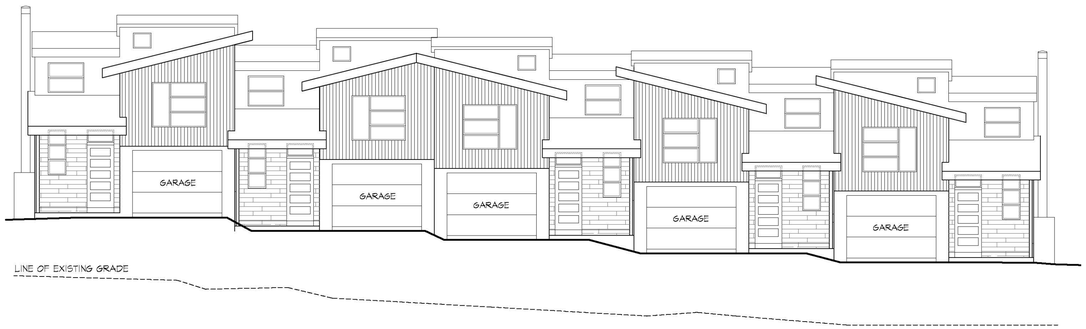


B TOWNHOUSE 'A' - WEST ELEV @ BLOCK 'F'
1/8" = 1'-0"

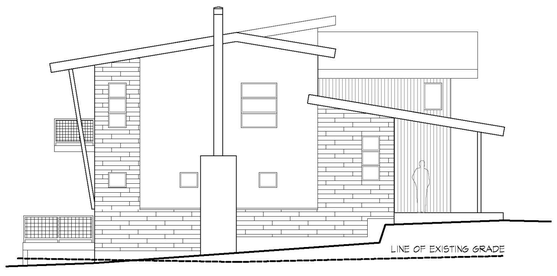
A TOWNHOUSE 'A' - SOUTH ELEV @ BLOCK 'F'
1/8" = 1'-0"



D TOWNHOUSE 'A' - EAST ELEV @ BLOCK 'F'
1/8" = 1'-0"

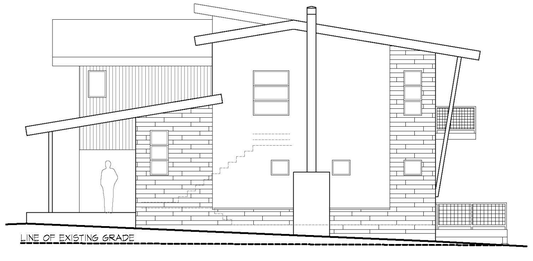


C TOWNHOUSE 'A' - NORTH ELEV @ BLOCK 'F'
1/8" = 1'-0"



F TOWNHOUSE 'A' - EAST ELEV @ BLOCK 'G'
1/8" = 1'-0"

E TOWNHOUSE 'A' - NORTH ELEV @ BLOCK 'G'
1/8" = 1'-0"



H TOWNHOUSE 'A' - WEST ELEV @ BLOCK 'G'
1/8" = 1'-0"

G TOWNHOUSE 'A' - SOUTH ELEV @ BLOCK 'G'
1/8" = 1'-0"

CWA ARCHITECTS
4400 OSAGE DRIVE
BOULDER CO 80303
t.720.644.6699
f.303.835.4540
www.CreativeWestArchitects.com

SYLVAN CIRCLE
SYLVAN LAKE ROAD, EAGLE CO

UNIT BLOCKS

SET	DATE	DESCRIPTION
(1)	05/20/2016	DEVELOPMENT REVIEW

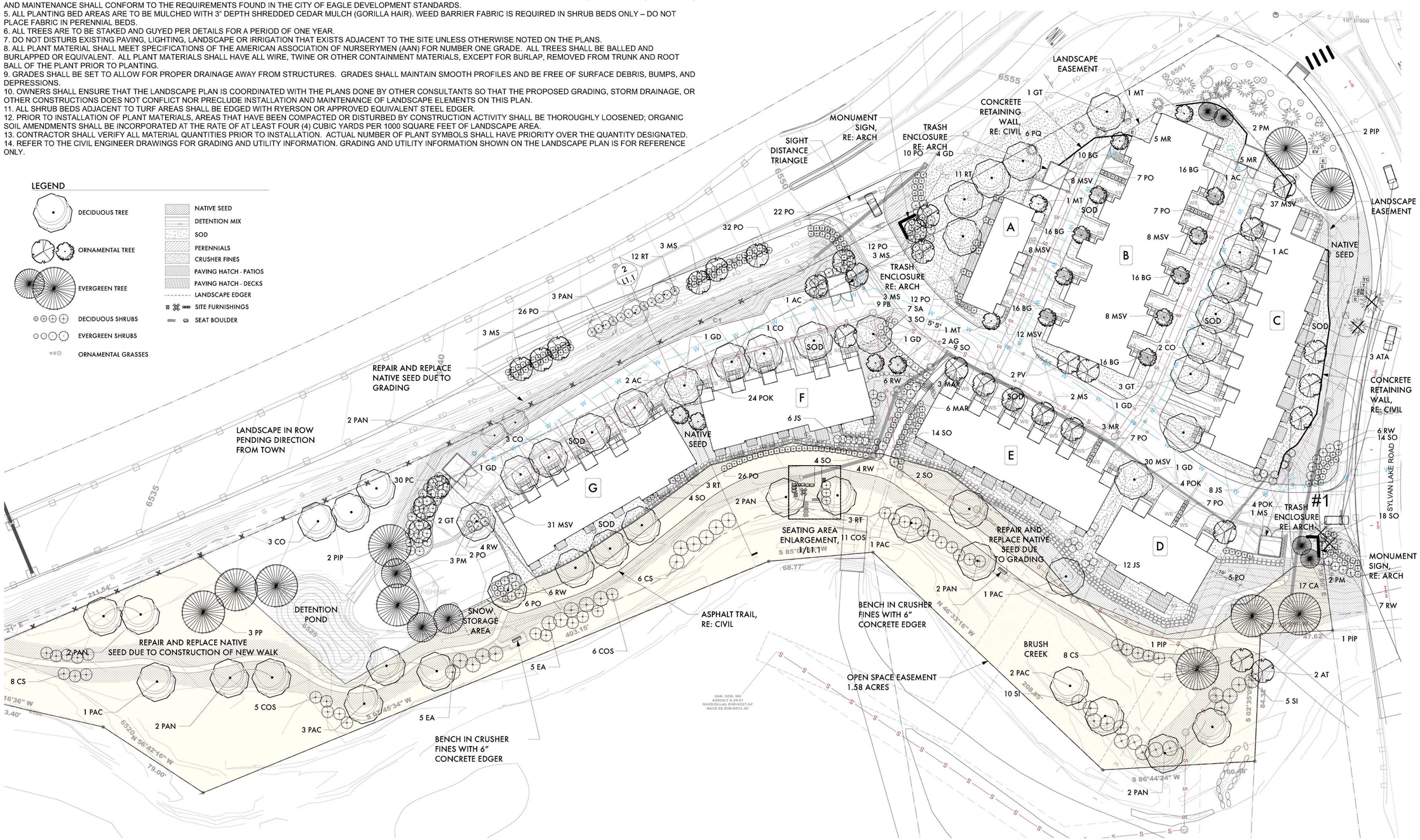
A2.4

NOTES:

1. ALL LANDSCAPE AREAS ARE TO HAVE IMPORTED TOPSOIL TO A DEPTH OF 12" AND SOIL PREPARATION TILLED INTO ROUGH GRADES TO A DEPTH OF 6 INCHES. MINIMUM RATE OF 4 CUBIC YARDS OF ORGANIC MATTER PER 1000 SQUARE FEET.
2. ALL UTILITY EASEMENTS SHALL REMAIN UNOBSTRUCTED AND FULLY ACCESSIBLE ALONG THEIR ENTIRE LENGTH FOR MAINTENANCE EQUIPMENT ENTRY.
3. THE DEVELOPER, HIS SUCCESSORS AND ASSIGNS, SHALL BE RESPONISBLE FOR INSTALLATION, MAINTENANCE AND REPLACMENT OF ALL LANDSCAPING MATERIALS SHOWN OR INDICATED ON THE APPROVED SITE PLAN OR LANDSCAPE PLAN ON FILE IN THE PLANNING DEPARTMENT. ALL LANDSCAPING SHALL BE INSTALLED AS DELINEATED ON THE PLAN, PRIOR TO THE ISSUANCE OF CERTIFICATE OF OCCUPANCY.
4. ALL LANDSCAPED AREAS AND PLANT MATERIAL MUST BE WATERED BY AN AUTOMATIC UNDERGROUND IRRIGATION SYSTEM. IRRIGATION SYSTEM DESIGN, INSTALLATION, OPERATION, AND MAINTENANCE SHALL CONFORM TO THE REQUIREMENTS FOUND IN THE CITY OF EAGLE DEVELOPMENT STANDARDS.
5. ALL PLANTING BED AREAS ARE TO BE MULCHED WITH 3" DEPTH SHREDDED CEDAR MULCH (GORILLA HAIR). WEED BARRIER FABRIC IS REQUIRED IN SHRUB BEDS ONLY – DO NOT PLACE FABRIC IN PERENNIAL BEDS.
6. ALL TREES ARE TO BE STAKED AND GUYED PER DETAILS FOR A PERIOD OF ONE YEAR.
7. DO NOT DISTURB EXISTING PAVING, LIGHTING, LANDSCAPE OR IRRIGATION THAT EXISTS ADJACENT TO THE SITE UNLESS OTHERWISE NOTED ON THE PLANS.
8. ALL PLANT MATERIAL SHALL MEET SPECIFICATIONS OF THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN) FOR NUMBER ONE GRADE. ALL TREES SHALL BE BALLED AND BURLAPPED OR EQUIVALENT. ALL PLANT MATERIALS SHALL HAVE ALL WIRE, TWINE OR OTHER CONTAINMENT MATERIALS, EXCEPT FOR BURLAP, REMOVED FROM TRUNK AND ROOT BALL OF THE PLANT PRIOR TO PLANTING.
9. GRADES SHALL BE SET TO ALLOW FOR PROPER DRAINAGE AWAY FROM STRUCTURES. GRADES SHALL MAINTAIN SMOOTH PROFILES AND BE FREE OF SURFACE DEBRIS, BUMPS, AND DEPRESSIONS.
10. OWNERS SHALL ENSURE THAT THE LANDSCAPE PLAN IS COORDINATED WITH THE PLANS DONE BY OTHER CONSULTANTS SO THAT THE PROPOSED GRADING, STORM DRAINAGE, OR OTHER CONSTRUCTIONS DOES NOT CONFLICT NOR PRECLUDE INSTALLATION AND MAINTENANCE OF LANDSCAPE ELEMENTS ON THIS PLAN.
11. ALL SHRUB BEDS ADJACENT TO TURF AREAS SHALL BE EDGED WITH RYERSON OR APPROVED EQUIVALENT STEEL EDGER.
12. PRIOR TO INSTALLATION OF PLANT MATERIALS, AREAS THAT HAVE BEEN COMPACTED OR DISTURBED BY CONSTRUCTION ACTIVITY SHALL BE THOROUGHLY LOOSENED; ORGANIC SOIL AMENDMENTS SHALL BE INCORPORATED AT THE RATE OF AT LEAST FOUR (4) CUBIC YARDS PER 1000 SQUARE FEET OF LANDSCAPE AREA.
13. CONTRACTOR SHALL VERIFY ALL MATERIAL QUANTITIES PRIOR TO INSTALLATION. ACTUAL NUMBER OF PLANT SYMBOLS SHALL HAVE PRIORITY OVER THE QUANTITY DESIGNATED.
14. REFER TO THE CIVIL ENGINEER DRAWINGS FOR GRADING AND UTILITY INFORMATION. GRADING AND UTILITY INFORMATION SHOWN ON THE LANDSCAPE PLAN IS FOR REFERENCE ONLY.

LEGEND

- DECIDUOUS TREE
- ORNAMENTAL TREE
- EVERGREEN TREE
- DECIDUOUS SHRUBS
- EVERGREEN SHRUBS
- ORNAMENTAL GRASSES
- NATIVE SEED
- DETENTION MIX
- SOD
- PERENNIALS
- CRUSHER FINES
- PAVING HATCH - PATIOS
- PAVING HATCH - DECKS
- LANDSCAPE EDGER
- SITE FURNISHINGS
- SEAT BOULDER



1 LANDSCAPE PLAN
SCALE: 1" = 30' - 0"

CWA ARCHITECTS
4400 OSAGE DRIVE
BOULDER CO 80303
1.720.644.6899
1.303.635.4540
www.CreativeWestArchitects.com

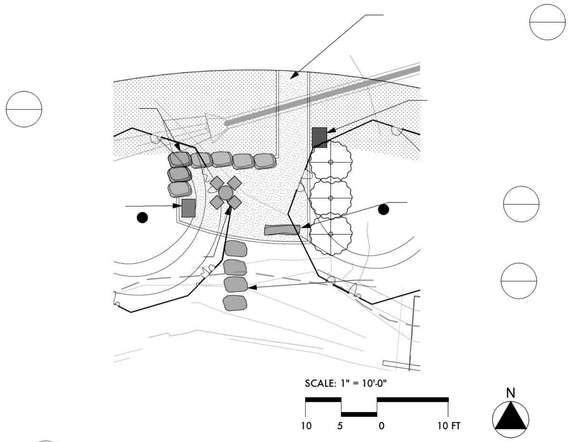
STUDIOTERRA
758 CLUB CIRCLE
LOUISVILLE, CO 80027
303.494.9139
CAROL@STUDIOTERRA.NET

SYLVAN LAKE CIRCLE
EAGLE, COLORADO

DESIGNED	CA
DRAWN	MC
CHECKED	CA
JOB NO.	
DATE	06/08/16

LANDSCAPE PLAN

L1.0

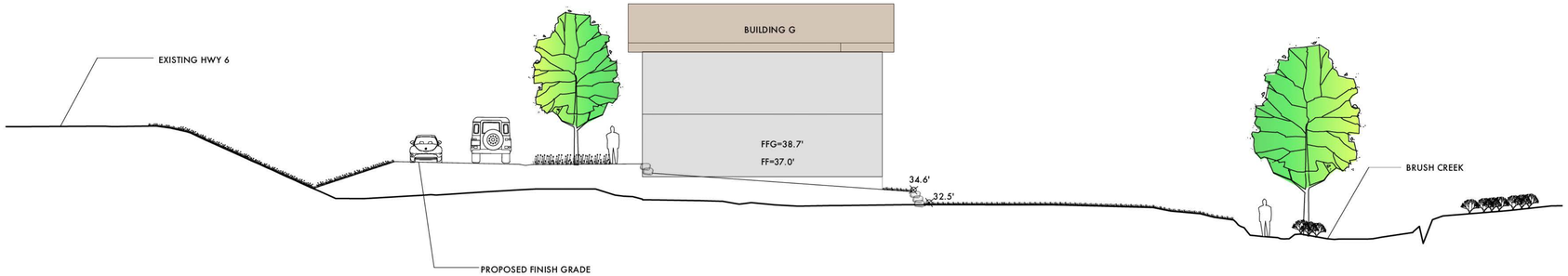


SCALE: 1" = 10'-0"

10 5 0 10 FT

N

1 LANDSCAPE ENLARGEMENT
SCALE: 1" = 10' - 0"



2 SECTION
SCALE: 3/32" = 1' - 0"

CWA
ARCHITECTS
4400 OSAGE DRIVE
BOULDER CO 80303
t.720.644.6699
f.303.835.4540
www.CreativeWestArchitects.com

StudioTerra
758 Club Circle
Louisville, CO 80027
303.494.9139
carol@studioterra.net
LANDSCAPE ARCHITECTURE ■ LAND PLANNING ■ URBAN DESIGN

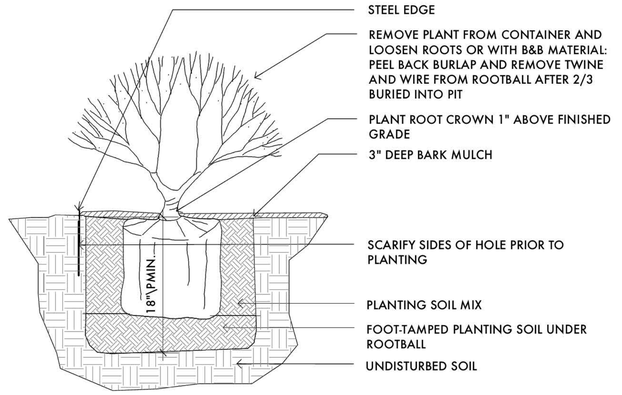
SYLVAN LAKE CIRCLE
EAGLE, COLORADO

StudioTerra
758 Club Circle
Louisville, CO 80027
303.494.9139
carol@studioterra.net
LANDSCAPE ARCHITECTURE ■ LAND PLANNING ■ URBAN DESIGN

DESIGNED	CA
DRAWN	MC
CHECKED	CA
JOB NO.	
DATE	06/08/16

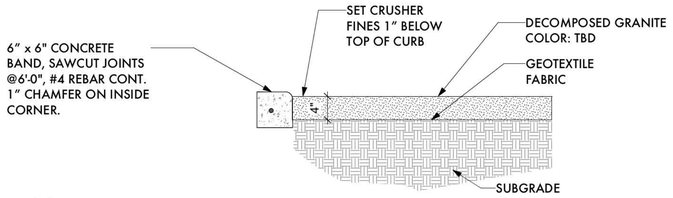
ENLARGEMENTS

L1.1

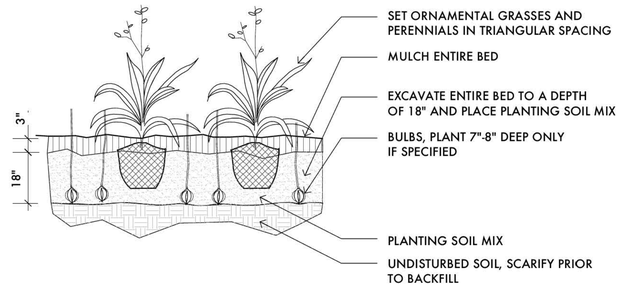


1 SHRUB PLANTING
SCALE: 1" = 1' - 0"

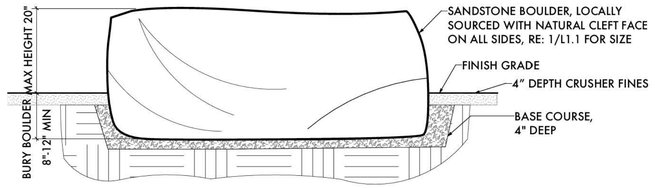
NOTE:
1. DECOMPOSED GRANITE TO BE PLACED AND COMPACTED IN 2" LIFTS UNTIL FINISH GRADE IS MET.
2. INSTALL STABILIZED MATERIAL SO CRUSHER FINES MATERIAL IS COMPACTED AND FIRMLY LOCKED TOGETHER. MATERIALS TO BE MIN. 4" DEPTH AFTER COMPACTION WITH MIN 1.5% SLOPE WITH NO DEPRESSIONS.
3. RE: SPECIFICATIONS



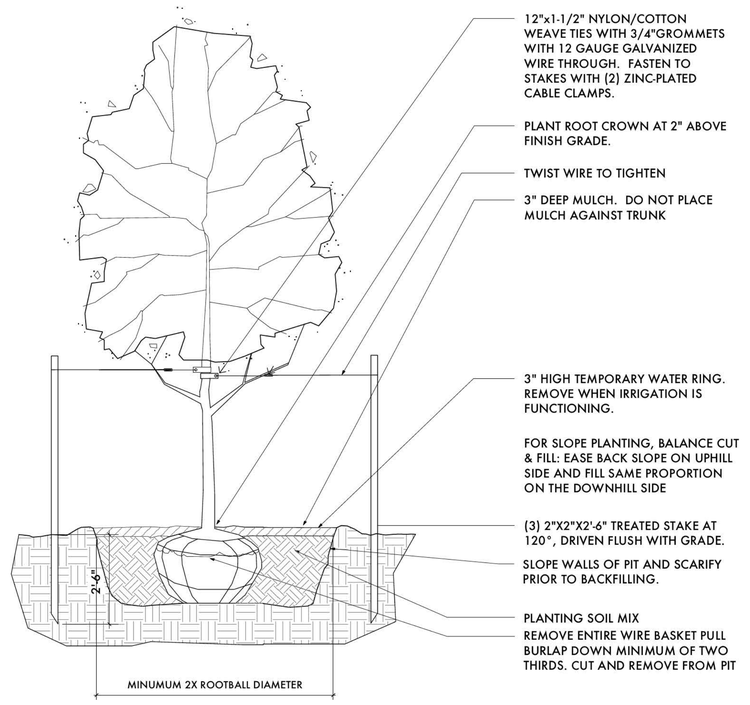
3 CRUSHER FINES PAD
SCALE: 1" = 1' - 0"



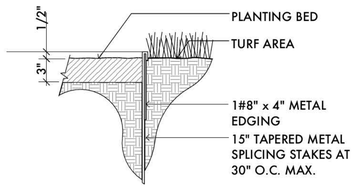
2 PERENNIAL PLANTING
SCALE: 1" = 1' - 0"



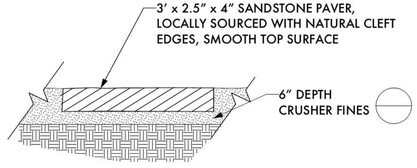
4 SEAT BOULDER IN CRUSHER FINES
SCALE: 1" = 1' - 0"



5 TREE PLANTING
SCALE: 1/2" = 1' - 0"



8 LANDSCAPE EDGER
SCALE: 1" = 1' - 0"



7 STEPPING STONE PAVERS
SCALE: 1" = 1' - 0"

LANDSCAPE COMPLIANCE

LANDSCAPE CHART

	AREA	% OF TOTAL
TOTAL SITE	203,623 SF	100%
BUILDINGS	31,933 SF	16%
BIKE PATH, PARKING, DRIVES	45,960 SF	23%
LANDSCAPE	121,748 SF	60%
PATIOS	2,695 SF	1%
LANDSCAPE IN ROW	35,972 SF	
TOTAL AREA LANDSCAPED	157,720 SF 3.6 AC	

CDOT NATIVE SEED MIX - TO BE USED IN CDOT ROW

COMMON NAME	BOTANICAL NAME	LBS. PLS/ACRE
Bluejoint reedgrass	*Calamagrostis canadensis*	1.0* (wet areas)
Slender wheatgrass	*Elymus trachycaulus ssp. trachycaulus* "San Luis"	5.0
Little bluestem	*Schizachyrium scoparium* "Cimarron"	3.0
Western wheatgrass	*Pascopyrum smithii* "Arriba"	3.0
Mountain brome	*Bromus marginatus* "Garnet" or "Bromar"	6.0
Rocky Mountain fescue	*Festuca saximontana*	2.0
TOTAL		**20.0**

PLANT SCHEDULE

PERENNIALS

ABBR	QTY	SIZE	BOTANICAL NAME	COMMON NAME	SPREAD	HEIGHT	NATIVE	WATER USE	EXPOSURE	FLOWER COLOR	SEASON
CT		1 GAL.	Campanula 'Talkon Blue'	Bellflower, Talkon Blue	12-16"	16-20"		Low	Sun to part-shade	Light Purple	Spring to Summer
GF		1 GAL.	Gaillardia 'Fanfare Blaze'	Blanket Flower, Fanfare Blaze Dwarf	18-24"	15-18"		Low	Sun	Orange	Summer
HS		1 GAL.	Hemerocallis 'Stella de Oro'	Daylily, Dwarf Gold	18-24"	15"		Low	Sun	Yellow	Spring to Fall
PQ		1 GAL.	Parthenocissus Quniquefolia	Virginia Creeper	NA	NA		Low	Sun to Filtered Shade	NA	NA

CONTAINER SHRUBS

ABBR	QTY	SIZE	BOTANICAL NAME	COMMON NAME	SPREAD	HEIGHT	NATIVE	WATER USE	EXPOSURE	FLOWER COLOR	SEASON
BG	80	5 GAL.	Boutelous Gracilis 'Blonde Ambition'	Blonde Ambition Grama Grass	1-2'	2-3'		Very Low	Sun	Blonde	Summer to Fall
CA	17	5 GAL.	Calamagrostic X Acutiflora 'Karl Foerster'	Karl Foerster Feather Reed Grass	18-24"	4-5'		Low	Sun to Filtered Shade	Reddish-Bronze to Buff	Mid to Late Summer
MSV	146	5 GAL.	Miscanthus Sinensis 'Sarabande'	Narrow Leaf Maiden Grass	2-3'	4-5'		Medium	Sun	Creamy White	Late Summer
POK	56	5 GAL.	Pennisetum orientale 'Karley Rose'	Pink Oriental Fountain Grass	2-3'	3-4'		Low	Sun	Pink	Late Spring to Fall

CONTAINER SHRUBS

ABBR	QTY	SIZE	BOTANICAL NAME	COMMON NAME	SPREAD	HEIGHT	NATIVE	WATER USE	EXPOSURE	FLOWER COLOR	SEASON
CS	14		Cornus sericea 'Baileyi'	Bailey Red Twig Dogwood	6-10'	6-10'		Low	Adaptable	White	Late Spring
COS	22		Cornus sericea 'Isanti'	Isanti Dogwood	4-6'	4-5'		Low	Adaptable	White	Late Spring or Early Summer
EA	10		Euonymus alata	Burning Bush	8-12'	8-12'			Sun	NA	NA
PB	9		Prunus besseyi	Western Sand Cherry	4-6'	4-6'	N	Low	Sun	White	Late Spring
PC	30		Prunus cistena	Purple Leaf Sand Cherry	4-6'	6-8'		Low	Sun	Pale Pink	Mid-Spring
PO	33		Physocarpus opulifolius	Common Ninebark	3-4'	3-4'	N	Low	Sun	White	Spring
RT	3		Rhus trilobata	Threeleaf Sumac	3-6'	3-6'	N	Low	Sun	Yellow	Early Spring
SI	15		Salix irrorata	Blue Stem Willow	4-12'	4-8'	N	Medium	Sun to Filtered Shade	Yellow Green	Early Spring
SA	7		Symphoricarpos albus	Common Snowberry	3-5'	3-5'	N	Low	Sun to Filtered Shade	White with Pink	Early Summer
SO	68		Symphoricarpos oreophilus	Mountain Snowberry	3-5'	3-5'	N		Sun to Filtered Shade	Pale Pink	Summer

DECIDUOUS TREES

ABBR	QTY	SIZE	BOTANICAL NAME	COMMON NAME	SPREAD	HEIGHT	NATIVE	WATER USE	EXPOSURE	FLOWER COLOR	SEASON
CO	14		Celtis Occidentalis	Common Hackberry	40-50'	50-60'		Low	SUN	N/A	N/A
GT	6		Gleditsia Triacanthos Inermis 'Skyline'	Skyline Thornless Honeylocust	30-40'	40-50'		Low	SUN	N/A	N/A
GD	9		Gymnocladus Dioicus	Kentucky Coffeetree	40-50'	50-60'		Low	SUN	YELLOW-GREEN	SPRING
PAC	9		Populus acuminata	Lanceleaf Cottonwood	30-40'	40-60'	N	Medium	SUN	N/A	N/A
PAN	9		Populus angustifolia	Narrowleaf Cottonwood	20-30'	30-50'	N	Medium	SUN	N/A	N/A

ORNAMENTAL TREES

ABBR	QTY	SIZE	BOTANICAL NAME	COMMON NAME	SPREAD	HEIGHT	NATIVE	WATER USE	EXPOSURE	FLOWER COLOR	SEASON
AG	2		Acer ginnala	Ginnala Maple	15-20'	15-20'		Low	SUN	GREENISH-YELLOW	MID-SPRING
AT	5		Alnus tenuifolia	Native Thin-leaf Alder	15-20'	15-30'	N	Medium	SUN TO FILTERED SHADE	CATKINS, REDDISH-BROWN	EARLY SPRING
AC	5		Amelanchier canadensis	Shadblow Serviceberry	15-20'	15-25'	N	Low	SUN	WHITE	EARLY SPRING
MR	13		Malus "Radiant"	Radiant Crabapple	15-20'	15-20'		Medium	SUN	DEEP PINK	SPRING
MS	9		Malus "Spring Snow"	Spring Snow Crabapple	20-25'	20-25'		Medium	SUN	WHITE	SPRING
MT	3		Malus "Thunderchild"	Thunderchild Crabapple	15-18'	15-20'		Medium	SUN	PINK	SPRING
PV	2		Prunus virginiana	Choke Cherry	8-12'	8-20'	N	Low	FILTERED SHADE TO SHADE	WHITE	MID-SPRING

EVERGREEN TREES

ABBR	QTY	SIZE	BOTANICAL NAME	COMMON NAME	SPREAD	HEIGHT	NATIVE	WATER USE	EXPOSURE	FLOWER COLOR	SEASON
PIP	7		Picea pungens	Colorado Blue Spruce	20-30'	40-60'	N	Medium	SUN TO FILTERED SHADE	N/A	N/A
PP	3		Pinus ponderosa	Ponderosa Pine	30-40'	60-80'	N	Low	SUN	N/A	N/A
PM	5		Pseudotsuga menziesii glauca	Douglas Fir	12-20'	40-80'	N	Low	Sun	N/A	N/A

SPREADING JUNIPERS

ABBR	QTY	SIZE	BOTANICAL NAME	COMMON NAME	SPREAD	HEIGHT	NATIVE	WATER USE	EXPOSURE	FLOWER COLOR	SEASON
JS	26		Juniperus sabina "Scandia"	Scandia	4-6'	18-24"		Low	SUN TO FILTERED SHADE	N/A	N/A

BROADLEAF EVERGREENS

ABBR	QTY	SIZE	BOTANICAL NAME	COMMON NAME	SPREAD	HEIGHT	NATIVE	WATER USE	EXPOSURE	FLOWER COLOR	SEASON
MAR	6		Mahonia repens	Oregon Grape Holly	12-18"	12-18"	N	Low	SUN TO SHADE	YELLOW	LATE SPRING TO EARLY SUMMER

CWA ARCHITECTS
4400 OSAGE DRIVE
BOULDER CO 80303
1.720.644.6699
1.303.835.4540
www.CreativeWestArchitects.com

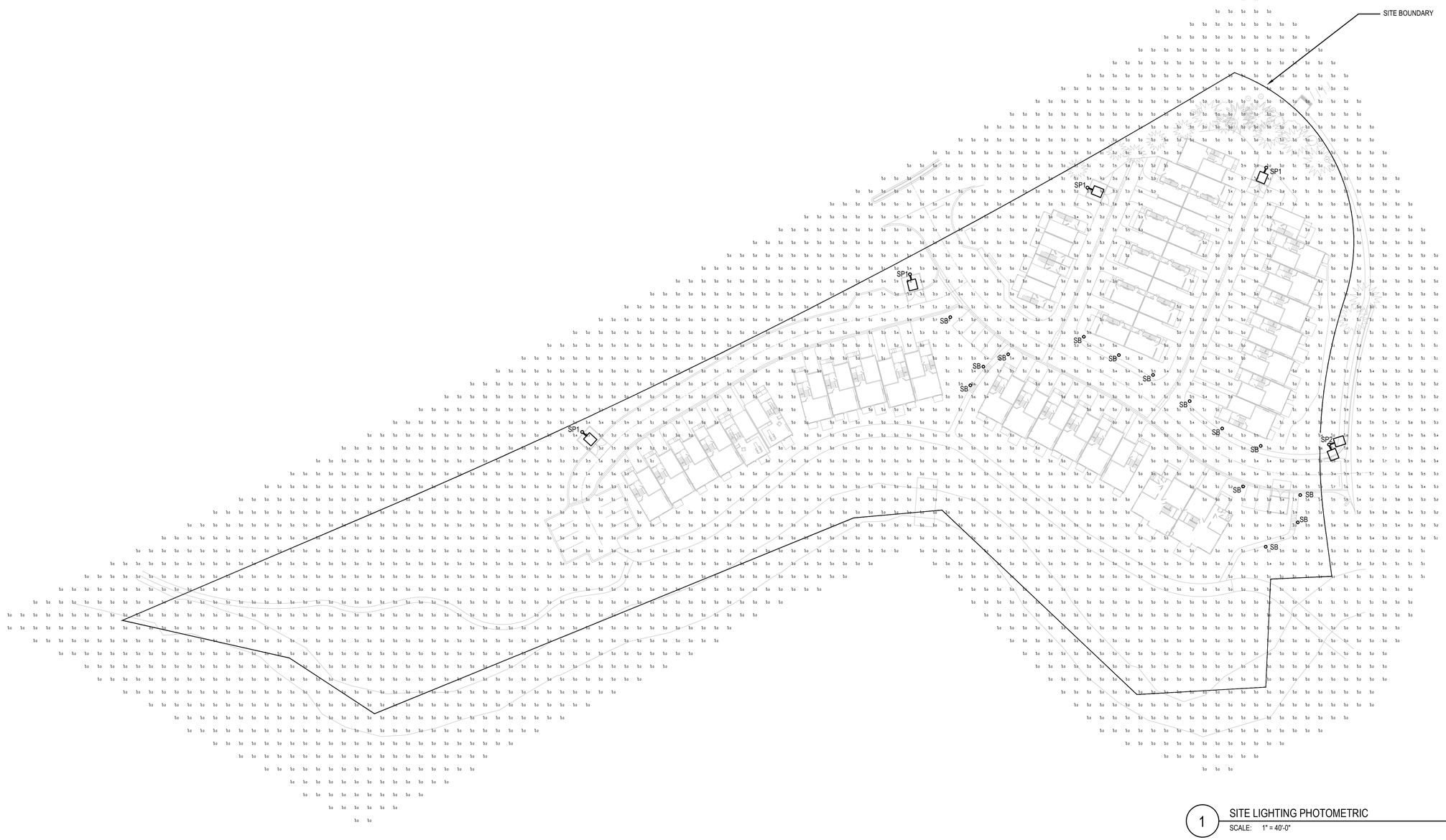
STUDIOTERRA
758 CLUB CIRCLE
LOUISVILLE, CO 80027
303.494.9139
CAROL@STUDIOTERRA.NET

SYLVAN LAKE CIRCLE
EAGLE, COLORADO

DESIGNED	DRAWN	CHECKED	JOB NO.	DATE
CA	MC	CA		06/08/16

DETAILS & PLANTS

L1.2



1 SITE LIGHTING PHOTOMETRIC

SCALE: 1" = 40'-0"

PHOTOMETRY PLAN GENERAL NOTES:

1. VALUES SHOWN ARE MAINTAINED HORIZONTAL ILLUMINANCE VALUES MEASURED AT GRADE.
2. SITE LIGHTING DESIGN HAS BEEN COMPLETED TO PRODUCE EVEN ILLUMINATION OF PARKING AND PAVED AREAS WITH MINIMAL GLARE ONTO ADJACENT PROPERTIES.
3. ALL LIGHT FIXTURES SHALL BE FULLY SHIELDED AND DIRECT LIGHT DOWNWARDS.
4. THERE WILL BE NO OFF-SITE GLARE ALLOWED.

SITE LIGHTING DESIGN HAS BEEN COMPLETED TO CONFORM TO THE TOWN OF EAGLE LIGHTING REQUIREMENTS.

STATISTICS						
Descri□tio□	S□m□o□	Av□	Ma□	Mi□	Ma□/Mi□	Av□/Mi□
OVERALL SITE	+	0.9 fc	5.1 fc	0.0 fc	N/A	N/A

EAGLE □THE HUB PHOTOMETRIC SYLVAN LAKE CIRCLE

EAGLE, COLORADO

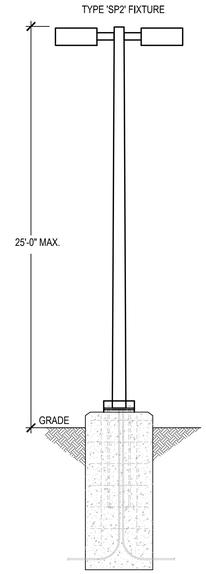
Front Range Electrical Engineering
3333 S. Wadsworth Blvd. Suite D210, Lakewood, CO 80227
Fax: 720.638.8870 Ph: 303.985.0548

ISSUED FOR:	DATE:
PHOTOMETRIC	5/03/16

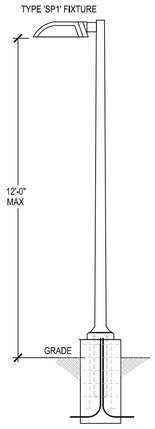
PROJECT: 16-085

LIGHTING PHOTOMETRIC

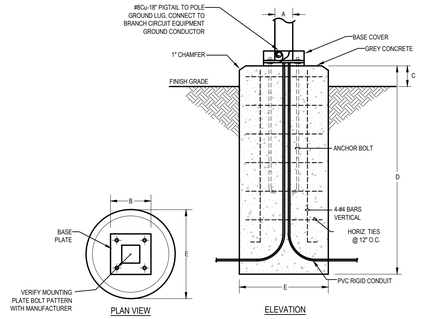
LP1



4 SITE POLE DETAIL
SCALE: NTS



3 SITE POLE DETAIL
SCALE: NTS



TYPE	HEIGHT	A	ANCHOR BOLT SIZE	C	D	E
SP1	12'	4" ROUND	PER MANUFACTURERS RECOMMENDATIONS	30"	90"	18"
SP2	25'	4" ROUND	PER MANUFACTURERS RECOMMENDATIONS	30"	90"	18"

2 POLE BASE DETAIL
SCALE: NTS

GENERAL NOTES:

1. HEIGHT IS INDICATED AS FROM GRADE TO TOP OF FIXTURE FOR ALL FIXTURES.

LUMINAIRE SCHEDULE

Symbol	Label	General Location	General Description	Mounting Height	Color	Catalog Number	Lamp	LLF	Watts
	SB	WALKWAYS	BOLLARD	3' AFG	BLACK	MCGRAW:EDISON BRL:36:42:CF:120:BK	CFL	1.00	42
	SP1	DUMPSTER LOCATIONS	SITE POLE	12' AFG	BLACK	COOPER GLEON:AE:01:LED:E1:SL4:BK	LED	1.00	56
	SP2	DRIVE ENTRY	SITE POLE	25' AFG	BLACK	KIM LIGHTING 2L:CC25A4:P350MA:96L:4K:120:BL	LED	1.00	222

SP2

KIM LIGHTING

CC/CCS25

25" Arm Mounted, Curvilinear, PicoPrism™ LED

8/22/14 • kl_cc25ppled_spec.pdf

Type:
Job:
Catalog number:

/ / / / /
Mtg. Fixture — Electrical Module — Finish — Options See pages 3-5
See page 2 — See page 2

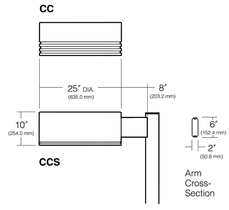
Approvals:

Date:
Page: 1 of 6

Select pole from Kim Arms and Poles Selection Guide. If pole is provided by others indicate O.D. for arm fitting..

Specifications

25" Diameter
96 Light Emitting Diodes
Total Max System Watts = 111W @350mA
or 228W @700mA



IP66 constructed sealed PicoPrism optical modules **do not require a glass lens** and offer improved optical performance.

Housing: Spun aluminum. (Rollformed linear reveals; **CC:** Three equally spaced reveals, ½" wide, separated by ½" ribs, ½" deep. **CCS:** One ¼" groove, ¼" deep.) Sidewalls have a maximum 1° of taper, and are free of welds or fasteners. A rollformed aluminum flange is hemmed into the b ottom providing support for the optical module. An internal aluminum casting provides for mounting of the electrical module plus reinforcing for side-arm mounting of the fixture.

Frame Assembly: One-piece cast aluminum frame is attached to the housing by a zinc plated cold rolled steel hinge with a stainless steel pin. Closure is by four self-retained stainless steel screws. A stainless steel self-locking stop arm is provided to hold the frame in the open position while servicing.

Standard Arm Mounting: Arm is one-piece extruded aluminum with internal bolt guides and fully radiussed top and bottom. Luminaire-to-pole attachment is by internal draw bolts, and includes a pole reinforcing plate with wire strain relief. Arm is circular cut to mate with specified round pole.

Electronic Module: All electrical components are UL and CSA recognized, mounted on a single plate and factory prewired with quick-disconnect plugs. Module includes a driver, thermal control device and surge protector. Electrical module attaches to housing with no-tool hinges and latches. Driver is rated for -40°F starting and has a 0-10V dimming interface for multi-level illumination options.

Optical Module: Precision, IP66 replaceable PicoPrisms are positioned to achieve directional control toward desired task. The entire light engine fastens to the housing as a one-piece module

Dimming: Driver has a 0-10V dimming interface with a dimming range of 10-100%. Approved dimmers include Lutron Diva AVTV, Lutron Nova NFTV and NTFTV. Note: Not compatible with current sourcing dimmers.

Listed to: UL 1598 Standard for Luminaires - UL 8750 Standard for Safety for Light Emitting Diode (LED) Equipment for use in Lighting Products and CSA C22.2#250.0 Luminaires. RoHS compliant. Meets Buy American provisions within ARRA.

Finish/Color: Finish is Super TGIC thermoset polyester powder coat paint, 2.5 mil nominal thickness, applied over a titanated zirconium conversion coating; 5000 hour salt spray test endurance rating. Standard colors are Black, Dark Bronze, Light Gray, Stealth Gray™, Platinum Silver, or White. Custom colors are available.

Warranty: Kim Lighting warrants Curvilinear LED products ("Product(s)") sold by Kim Lighting to be free from defects in material and workmanship for (i) a period of five (5) years for metal parts, (ii) a period of ten (10) years for exterior housing paint finish(s), (iii) a period of six (6) years for LED Light Engines (PicoPrisms) and, (iv) a period of five (5) years for LED power components (LED Driver, LiteShield temperature control device, surge protector), from the date of sale of such goods to the buyer as specified in Kim Lighting shipment documents for each product.

Caution: Fixtures must be grounded in accordance with national, state and/or local electrical codes. Failute to do so may result in serious personal injury.

KIM LIGHTING RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT NOTICE.

HUBBELL
HUBBELL LIGHTING, INC

SP1

McGraw-Edison

Catalog #		Type
Project		
Comments		Date
Prepared by		

DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

SPECIFICATION FEATURES

Construction
Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics
Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 6000K CCT and 3000K CCT.

Electrical
LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 530mA and 700mA drive currents.

Mounting
STANDARD ARM MOUNT: Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during assembly. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the arm mounting requirement table. Round pole adapter included. For wall mounting, specify wall mount bracket option. 3G vibration rated. QUICK MOUNT ARM: Arm is bolted directly to the pole and the fixture slides onto the quick mount arm and is secured via a single fastener, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

Finish
Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

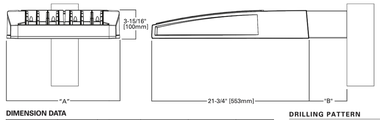
Warranty
Five-year warranty.

GLEON
GALLEON LED

1-10 Light Squares
Solid State LED

AREA/SITE LUMINAIRE

DIMENSIONS

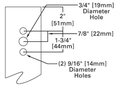


DIMENSION DATA

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length †	Weight with Arm (lbs.)	EPA with Arm ‡ (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. **2.** EPA calculated with optional arm length.

DRILLING PATTERN



CERTIFICATION DATA
UL/cUL Wet Location Listed
ISO 9001
LM79 / LM80 Compliant
3G Vibration Rated
IP66 Rated
DesignLights Consortium™ Qualified*

ENERGY DATA
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120V-277V 50/60Hz
347V & 480V 60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

TD500020EN
2016-01-29 10:56:52

*www.designlights.org

SB

McGRAW-EDISON® energy solutions

Catalog #		Type
Project		
Comments		Date
Prepared by		

DESCRIPTION

The McGraw-Edison BSL / BRL Bollard Series, available in heights from 24" to 42", has crisp, clean lines which blend with any architectural setting. Constructed of seamless, heavy-duty aluminum and finished with a tough polyester powder coat finish, the McGraw-Edison Louvered Bollard Series is gasketed to seal out external contaminants. U.L. 1598 listed and CSA certified for wet locations.

Bollards are designed for walkways, entranceways, drives and other small-area lighting applications where low mounting heights are desirable.

SPECIFICATION FEATURES

Construction
TOP: Rugged, minimum 5/32" thick cast aluminum top cap secured via a concealed stainless steel allen screw with twist removal mechanism for lamp access. Flow through ventilation assure cool to the touch top. LOUVERS: Cast Aluminum Louver blades provide sharp cutoff delivering no direct light above 90°. Louvers are secured to the shaft via tamper stainless steel rods and fasteners. LOWER HOUSING: Nominal 1/8" thick aluminum extruded housing. Bollard housing is secured to the base with flathead, counter-sunk screws for smooth, uncluttered appearance. BASE: Rugged cast aluminum. Completely concealed, polycarbonate/PBT GX24q-3/q-4 base for compact fluorescent lamps.

Electrical
HID High Power Factor ballast for -20°F starting. CFL Electronic ballast for 0°F starting. Product is factory mounted to the base. Quick disconnects provided between lamp and electrical assembly. Metal Halide and High Pressure Sodium lamp sources up to 100W and up to 42W Compact Fluorescent sources.

Optical
LAMP ENCLOSURE: One piece tempered glass with internal flutes for even disbursement of illumination. Decorative colored glass optional. Globe is fully gasketed via EPDM material. Socket is porcelain, medium-base for HID lamp sources and

Mounting
Base mounts onto foundation with three (3) 1/2" x 12 1/2" anchor bolts on a 5" Dia. bolt circle (a centrally located 2 7/8" x 3 1/2" wire entrance opening provided).

Finish
Premium fade and abrasion resistant,TGIC Polyester Powder Coat Finish. Standard colors are Black, Grey, Bronze, White, Dark Platinum and Graphite Metallic. Other finish colors available including all RAL matches.

BSL/BRL
BOLLARD

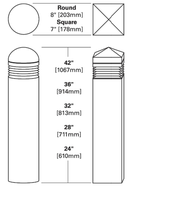
26 - 100W
Pulse Start Metal Halide
High Pressure Sodium
Compact Fluorescent
Incandescent

PATHWAY LUMINAIRE

DARK SKY COMPLIANT CO Cutoff

NOTE: In select finishes only.

DIMENSIONS



WATTAGE TABLE

Lamp Type	Wattage
Pulse Start Metal Halide (MP)	50, 70, 100W
High Pressure Sodium (HPS)	35, 50, 70, 100W
Compact Fluorescent (CF)	(1) 26, (1) 32, (1) 42W
Incandescent (IN)	100W

Energy Data
Reactor Ballast Input Watts
35W MPS NPF (40 Watts)

High Reactance Ballast Input Watts
50W MPS HPF (62 Watts)
50W MP MPF (69 Watts)
70W MPS HPF (86 Watts)
70W MP MPF (94 Watts)
100W HPS HPF (115 Watts)
100W MP MPF (129 Watts)
150W HPS HPF (170 Watts)
150W MP MPF (185 Watts)

SHIPPING DATA
Approximate Net Weight:
26 lbs. (12 kgs.)

ADH082548 pc
2010-06-22 10:28:29

COOPER Lighting
www.cooperlighting.com

EAGLE – THE HUB PHOTOMETRIC
SYLVAN LAKE CIRCLE
EAGLE, COLORADO

Front Range Electrical Engineering
3333 S. Wadsworth Blvd. Suite D210, Lakewood, CO 80227
Fax: 720.638.8870 Ph: 303.985.0548

ISSUED FOR: DATE:
PHOTOMETRIC 5/03/16

PROJECT: 16-085

LIGHTING PHOTOMETRIC

LP2

U.S. HIGHWAY 6

GRANDE AVENUE R.O.W. LINE

EXISTING LANDSCAPE EASEMENT (EAGLE RANCH H.O.A.)

SYLVAN LAKE ROAD

EXISTING EASEMENT

PROPOSED UTILITY EASEMENT

PROPOSED FORCE MAIN (PRIVATE)

LOT 1, WEST EAGLE ADDITION, FILING 2

PROPOSED SEWER LINE EASEMENT

GREEN ACRES MOBILE HOME PARK

EXISTING MANHOLE

EXISTING 8" PVC SEWER MAIN

BRUSH CREEK

PROPERTY LINE

EXISTING ELECTRIC EASEMENT

PROPOSED DRAINAGE EASEMENT

SEWER LINE EASEMENT TO BE GRANTED TO THE TOWN FROM GREEN ACRES MOBILE HOME PARK

THE SYLVAN LAKE CIRCLE PROJECT IS PROPOSED TO BE SUBDIVIDED BY TOWNHOME PLAT TO CREATE COMMON AREA FOR ALL PORTIONS OF THE SITE THAT ARE NOT FEE SIMPLE LOTS, TOWN OF EAGLE OPEN SPACE OR SPECIFICALLY DEFINED FUTURE DEVELOPMENT PARCELS. THE COMMON AREA IS PROPOSED TO BE DEFINED IN THE DECLARATIONS AS A BLANKET DRAINAGE, ACCESS AND UTILITY EASEMENT.

PRELIMINARY PLAN
June 09, 2016
NOT FOR CONSTRUCTION

N.T.S.

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 926-3390 •

SYLVAN LAKE CIRCLE
EAGLE, CO

PROPOSED EASEMENTS

(SEAL)

NO.	DATE	REVISIONS	BY
	05/20/2016	DEVELOPMENT PERMIT	MCW

DESIGNED	GB, MW
DRAWN	MW
CHECKED	MW, GB
JOB NO.	48445
DATE	3-1-2016

SHEET 1 of 1

BEST FIT FLOODPLAIN LIMITS BASED UPON FEMA SECTION ELEVATIONS BY CENTERING THE SECTIONS ON THE EXISTING ABANDONED BRIDGE AND USING FIELD SHOT TOPO.

EXISTING MAN MADE FILL PILES (IGNORED FOR APPROXIMATE FLOODPLAIN LINE)

U.S. HIGHWAY 6 (GRANDE AVENUE)

SYLVAN LAKE ROAD

BRUSH CREEK

6519.3

6519.3

6519.3

6520.3

6538.3

6534.8

6534.9

6535.7

6528.8

6546.8

ALPINE ENG. 100 YEAR FLOODWAY LIMITS

ALPINE ENG. 100 YEAR FLOODPLAIN LIMITS

FEMA INTERPOLATED SECTION ELEVATIONS (typ.)

GREEN ACRES MOBILE HOME PARK

FEMA FLOODPLAIN SECTIONS AND ELEVATIONS (typ.)

APPROXIMATE 100 YEAR FLOODPLAIN LINE FROM 2007 FEMA FIRM MAP SECTIONS AND ELEVATIONS

F G H J K L M N O

N

GRAPHIC SCALE

0 50 100 200

(IN FEET)
1 inch = 100 ft.

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970.926.1022 • FAX 970.926.3990 •

(SEAL)

SYLVAN LAKE CIRCLE
100 YEAR FLOODPLAIN
FEMA FLOODPLAIN EXHIBIT

NO.	DATE	REVISIONS	BY

DESIGNED MCW
DRAWN MCW
CHECKED GLB/KAK
JOB NO. 48445
DATE 05/10/2018

SHEET 1

O:\Eagle\Sylvan Lake Circle-48445-2015\dwg\Drainage\Floodplain Exhibit -State Plane Coords.dwg, 5/2/2018 9:24:24 AM, Brooke

BEST FIT FLOODPLAIN LIMITS BASED UPON FEMA SECTION ELEVATIONS BY CENTERING THE SECTIONS ON THE EXISTING ABANDONED BRIDGE AND USING FIELD SHOT TOPO.

EXISTING MAN MADE FILL PILES (IGNORED FOR APPROXIMATE FLOODPLAIN LINE)

U.S. HIGHWAY 6 (GRANDE AVENUE)

SYLVAN LAKE ROAD

BRUSH CREEK

FEMA INTERPOLATED SECTION ELEVATIONS (typ.)

ALPINE ENG. 100 YEAR FLOODPLAIN LIMITS

GREEN ACRES MOBILE HOME PARK

6538.3

6534.8

GRAPHIC SCALE

0 30 60 120

(IN FEET)
1 inch = 60 ft.

N

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 970 926-3990 •

(SEAL)

SYLVAN LAKE CIRCLE
100 YEAR FLOODPLAIN
FEMA FLOODPLAIN EXHIBIT

NO.	DATE	REVISIONS	BY

DESIGNED MCW
DRAWN MCW
CHECKED GLENKAK
JOB NO. 49445
DATE 05/18/2018

SHEET 2

O:\Eagle\Sylvan Lake Circle-49445-2015\dwg\Drainage\Floodplain Exhibit -State Plane Coords.dwg, 5/20/2018 8:34:11 AM, Brooks

GREATER EAGLE
FIRE PROTECTION DISTRICT

P.O. Box 961 • Eagle, Colorado 81631 • (970) 328-7244 • Fax - (970) 328-7280

TO: Gary Brooks
Alpine Engineering, Inc.
34510 Highway 6, Unit A-9
Edwards, CO 81632

RE: Sylvan Lake Circle Support

Mr. Brooks,

The Greater Eagle Fire Protection District would like to offer its support and approval of the Sylvan Lake Circle project that is proposed in Eagle, Colorado. The district feels that this project is well suited for the Town of Eagle and will be a great addition to our district, our town, and our citizens. The district would like to state the importance of having two access points for this project, one access point on Sylvan Lake Road and one access point on US Highway 6. If the project is constructed, incorporating access points off both Sylvan Lake Road and US Highway 6 would be beneficial to the residents of this project by reducing response times and allowing better access for responding emergency vehicles. A second access point also allows neighboring fire districts that respond to mutual aid calls easier access to the future residents of this housing community. A second ingress/egress point on this project would allow vehicles to use an alternate access point and reduce the amount of vehicle traffic that could potentially disrupt our response to an emergency. Multiple access points removes the potential of a single access point closure and does not limit the residents' abilities to leave the property. Two access points allows the communities residents the ability to leave the property during an emergency, opposite where an access point could be closed. The district also feels that having the ability to make a left turn into this project from US Highway 6 is very important. Allowing a soft lane barrier, in which a fire apparatus could make a left turn from US Highway 6 and enter the property would be beneficial. This would allow for a quicker response, more efficient use of the roadway for responding emergency vehicles, and the ability for the district to better serve our future citizens. We look forward to working with you on this project.

Respectfully,

Kurt Vogel, MBA, CFO
Fire Chief
Greater Eagle Fire Protection District

Auxiliary Turn Lane Assessment
Transportation Impact Study

for

Sylvan Lake Circle
Eagle, Colorado

May 16, 2016

PREPARED FOR:
Eagle Sylvan, LLC
c/o Creative West Architects
4400 Osage Drive
Boulder, CO
Contact: Jonathan Warner

PREPARED BY:
McDowell Engineering, LLC
PO Box 4259
Eagle, CO 81631
970.623.0788
Contact: Kari J. McDowell Schroeder, PE, PTOE
Project Number: M1197

Statement of Engineering Qualifications

Kari J. McDowell Schroeder, PE, PTOE is a Transportation and Traffic Engineer for McDowell Engineering, LLC. Ms. McDowell Schroeder has over nineteen years of extensive traffic and transportation engineering experience. She has completed numerous transportation studies and roadway design projects throughout the State of Colorado. Ms. McDowell Schroeder is a licensed Professional Engineer in the State of Colorado and has her certification as a Professional Traffic Operations Engineer from the Institute of Transportation Engineers.

Traffic Impact Study for Sylvan Lake Circle

Table of Contents

Tables and Figures

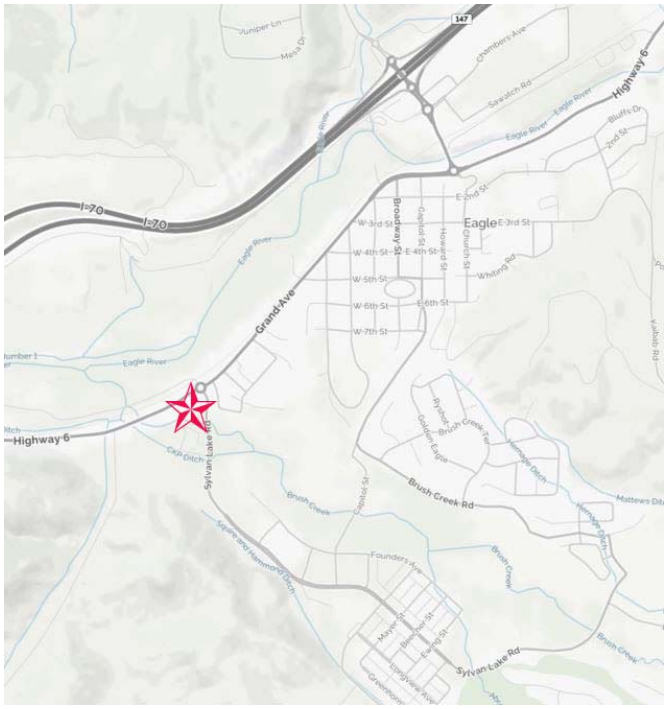
1.0 Project Description

McDowell Engineering has prepared this Transportation Impact Study for the proposed Sylvan Lake Circle residential development located in Eagle, Colorado. The purpose of this study is to forecast and analyze the impacts of the additional traffic volumes associated with the proposed project. Recommendations to mitigate any traffic impacts are also included. The analysis complies with the Town of Eagle standards.

The applicant is proposing to construct 42 townhome residential dwelling units on the 4.7-acre site. The project is planned for construction to start in Summer 2016, with full occupancy in Year 2017.

The project is located at 58 Sylvan Lake Road on the south side of Grand Avenue and west of the Sylvan Lake Road. Refer to the Area Map in ***Figure 1***. The proposed access locations are depicted in the site plan - ***Figure 2***. The access onto Grand Avenue (US 6) will be restricted to right-in, right-out only movements. The Sylvan Lake Road access will be full movement.

Figure 1: Area Map



SHEET 1

DESIGNED XXX
DRAWN XXX
CHECKED XXX
JOB NO. XXX
DATE XX/XX/2000

NO.	DATE	REVISIONS	BY

SYLVAN LAKE CIRCLE
EAGLE, CO

SITE PLAN

(SEAL)

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 926-3281 •

1.1 Traffic Study Scope

This traffic study evaluates peak hour traffic operations at the following intersections:

- Grand Avenue (US 6) & Sylvan Lake Road
- Grand Avenue (US 6) & North Site Access
- Sylvan Lake Road & East Site Access

The traffic study scope was reviewed with Town of Eagle staff prior to the completion of this study. The Traffic Study Scoping Form can be found in the **Appendix**.

2.0 Existing Conditions

2.1 Description of Existing Transportation System

Grand Avenue (US 6) is a two-lane, paved highway though Eagle. It connects to the communities of Gypsum/Dotsero to the west and Edwards/Avon to the east. US 6 is currently a State Highway. It is classified as a NR-B highway, non-rural arterial and access to the roadway is controlled by an Access Management Plan. The posted speed limit of Grand Avenue is 45mph at the site access.

However, CDOT and the Town of Eagle are currently in the devolution process for US 6. This includes the entire frontage abutting the Sylvan Lake Circle property. The roadway is anticipated to be turned over to the Town in October 2016.

Sylvan Lake Road connects Grand Avenue (US 6) to Brush Creek Road, extending through the Eagle Ranch commercial area. In the vicinity of the project site, it is a two-lane, paved collector street with a posted speed limit of 35mph. The roadway section is wider in the Eagle Ranch commercial area to accommodate on-street parking. The intersection of US 6 is controlled by a roundabout.

2.2 Project Access

The site is currently accessed from Sylvan Lake Road approximately 240-feet south of the Sylvan Lake Road roundabout.

The applicant is proposing the following access scenarios:

Interim Access: Prior to the devolution of Grand Avenue (US 6), the site's access to the roadway network includes an emergency-only access to Grand Avenue located approximately 250-feet west of the Sylvan Lake Road roundabout (north site access) and a full movement access to Sylvan Lake Road located approximately 360-feet south of the Sylvan Lake Road roundabout (east site access). The emergency access to Grand Avenue is intended to serve the Greater Eagle Fire Protection District[12] and other emergency vehicles only. Access restrictions will prevent vehicle traffic from using the emergency access but will allow the Fire District access in the event of an emergency.

Future Access: Future access to the site includes a right-in / right-out (RIRO) access to Grand Avenue located approximately 250-feet west of the Sylvan Lake Road roundabout (north site access) and a full movement access to Sylvan Lake Road located approximately 360-feet south of the Sylvan Lake Road roundabout (east site access).

The interim and future access configurations are being proposed to address the request of the Greater Eagle Fire Protection District for access to Grand Avenue in the short term. Once devolution has passed access control responsibilities from CDOT to the Town of Eagle, the applicant would request that the emergency access is converted to a RIRO access.

2.3 Traffic Data Collection

Traffic data was collected at the Grand Avenue (US 6) & Sylvan Lake Road / Violet Lane in late September and early October of 2015.

Turning movement counts were collected from 7:00 – 9:00am and 4:00 – 6:00pm on a weekday and from 11:00am – 1:00pm on a Saturday. School was in session.

There was construction activity on the Brush Creek Bridge, west of the US 6/Sylvan Lake Road roundabout throughout the count period. However, a fully functioning and traffic-controlled temporary bridge was in place. Therefore, the traffic data collected is considered accurate.

There were mountain bike events in the Town of Eagle on the Saturday that was counted. However, similar sporting events occur frequently in the Town, and are considered typical weekend traffic.

3.0 Future Traffic Projections

3.1 Background Infrastructure Assumptions

There are several developments in the Eagle area that have been approved or are seeking approval that will add traffic to the roadway network in the future.

Haymeadow Development

The Haymeadow Development, located southeast of the Eagle Pool and Ice Rink, has been approved but construction has not yet begun. The Haymeadow Development will consist of a total of 837 units (not including Accessory Dwelling Units). This will include a mix of condominiums, townhomes, duplexes and single family homes (344 multi-family units and 493 single family/duplex units).

Frost Creek Development

Changes to the existing Frost Creek development are currently being considered by Eagle County. The development is asking for increasing the approved units from 98 to 142 single family residences and increase the number of guest cabins from 5 to 20.

JHY Parcel Development

Development of the JHY Property is currently being considered by the Town of Eagle. This Development would construct 100,000sf of commercial property and 300 residential dwelling units on the 30-acre site. In lieu of the commercial development an additional 100 residential units could be considered.

It is anticipated that by the year 2035 improvements to the Eagle road network will be made. Some of the improvements anticipated are:

- Brush Creek Road Extension
- Brush Creek Road & Sylvan Lake Road Improvements
- Grand Avenue Capacity Improvements
- Sylvan Lake Road Improvements

These improvements are described in detail in the Town of Eagle's *West Eagle Sub Area Plan*[3] and in the *Haymeadow Traffic Study*[4].

3.2 Background Traffic Growth

Year 2017 Background Traffic:

CDOT's published 20-year growth factor[5] of 1.81 for US 006E at Milepost 148.6. This equates to an annual growth rate of 3.01% on Grand Avenue (US 6) which was used to forecast 2017 background traffic on Grand Avenue.

In addition, a 2.28% growth rate was used to forecast the Sylvan Lake Road traffic based upon the current volumes and the Town's Year 2035 traffic model volumes. A 2.00% growth rate was used on Sylvan Lake Road turning movements into the Grand Avenue / Sylvan Lake Road roundabout for forecasting 2017 background traffic.

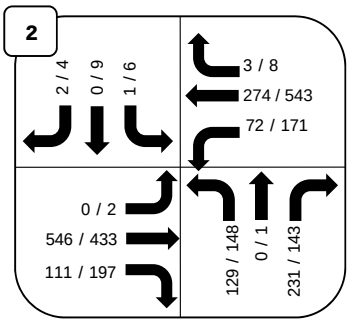
Year 2035 Background Traffic:

Based upon initial scoping with the Town, the Year 2035 has been selected as the long term planning horizon for this study. The Town of Eagle has a well-developed traffic forecasting matrix for the Brush Creek Valley. The *Projected Brush Creek Growth Model*[6] was updated by the Town in November of 2015 to reflect the anticipated future growth and buildout rates along Brush Creek Road. The Town's updated model was used to analyze the Year 2035 long-term impacts on the roadway network.

In addition to the Town's *Projected Brush Creek Growth Model*[6], the proposed traffic from three developments is included in the background traffic projections. The Haymeadow development's anticipated traffic, the additional expansion of Frost Creek, and the proposed JHY development are included in this analysis.

The resulting Year 2015 existing traffic volumes can be found in **Figure 3**. Year 2017 and Year 2035 background traffic volumes can be found in **Figure 4** and **Figure 5**, respectively.

Figure 3: Year 2015 Existing Traffic



McDOWELL ENGINEERING LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Project Number: M1197
Prepared by: BBG
Date: 4/19/2016
Sylvan Lake Circle
Eagle, Colorado

LEGEND :

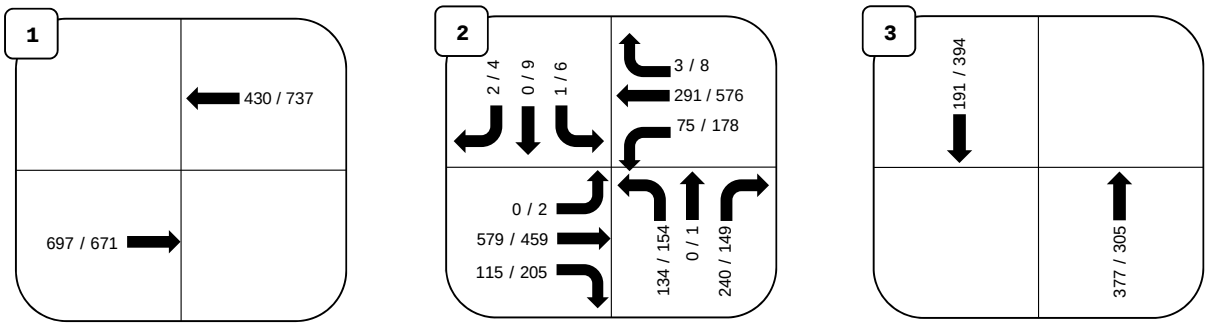
AM / PM Volumes XX / XX

Turning Movements

N

(NTS)

Figure 4: Year 2017 Background Traffic



McDOWELL ENGINEERING LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Project Number: M1197
Prepared by: BBG
Date: 4/19/2016
Sylvan Lake Circle
Eagle, Colorado

LEGEND :

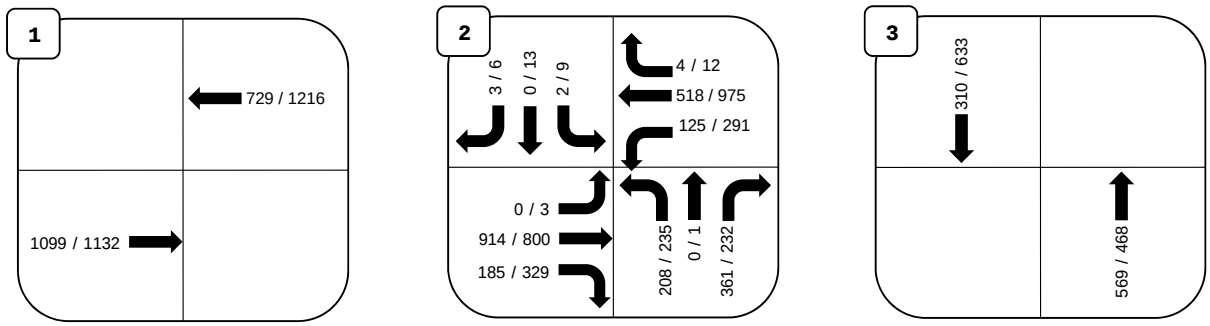
AM / PM Volumes XX / XX

Turning Movements

N

(NTS)

Figure 5: Year 2035 Background Traffic



McDOWELL ENGINEERING LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Project Number: M1197
Prepared by: BBG
Date: 4/19/2016
Sylvan Lake Circle
Eagle, Colorado

LEGEND :

AM / PM Volumes XX / XX

Turning Movements

N

(NTS)

4.0 Project Traffic

4.1 Trip Generation for Proposed Land Use

The applicant is proposing to construct 42 residential townhome units on the property. The Institute of Transportation Engineers' *Trip Generation Manual*[8] data for land use #230, Residential Condominium / Townhouse was used to determine the anticipated trip generation for the proposed development.

A five percent multimodal reduction was applied due to the close proximity of ECO Transit's Sylvan Lake Road bus stop which is located approximately 260-feet east of the Sylvan Lake Road roundabout. It is recommended that the project include the necessary site improvements to provide connectivity from the site to the adjacent bicycle and pedestrian facilities, as well as the bus stop.

Project Trip Generation

Based on Figure 3.1 of ITE's *Trip Generation Handbook*, fitted curve calculations were used to determine trip generation for the proposed project.

Based upon the applicant's proposed land use and a 5% multimodal trip reduction, the project can be anticipated to generate 288 vehicle trips per day (vpd) on the average weekday. Peak hour traffic on a weekday at project buildout is anticipated to be 25 vehicles per hour (vph) during the morning peak hour, 49 vph during the evening peak hour.

Refer to **Table 1** for trip generation calculations for the proposed development.

McDOWELL ENGINEERING LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Table 1 - Project Trip Generation

Sylvan Lake Circle - Eagle, CO

Estimated Project-Generated Traffic[1]

Project Number: M1197
Prepared By: KJS
Date: 18-Feb-16
Revised:

			Trip Generation Rates			Average Weekday	AM Peak Hour Traffic				PM Peak Hour Traffic			
							Inbound		Outbound		Inbound		Outbound	
ITE Code	Units		Avg. Weekday	AM Peak Hour	PM Peak Hour	Trips	% Trips	Trips	% Trips	Trips	% Trips	Trips	% Trips	Trips
Proposed Land Use:														
#230 Residential Condominium/Townhouse	42	DU[2]	Fitted Curve Equations			303	19%	5	81%	21	64%	33	36%	19
Multimodal Reduction	-5%					-15		0		-1		-2		-1
Total						288		5		20		31		18

[1] Values obtained from *Trip Generation Manual, 9th Edition,* Institute of Transportation Engineers, 2012.

[2] Dwelling Units

4.2 Directional Distribution

The distribution of project-generated vehicular traffic on greater roadway network is influenced by several factors including the following:

- The location of the site relative to other facilities and the roadway network
- The configuration of the existing and proposed adjacent roadway network
- Relative location of neighboring population and employment centers

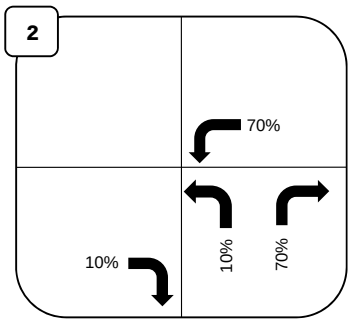
Therefore, it is anticipated that site generated traffic will have the following origins and destinations:

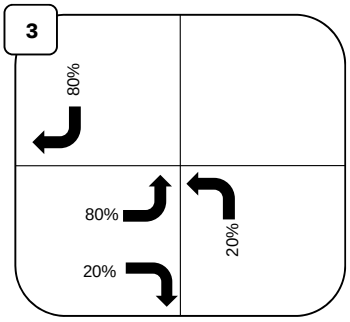
- Grand Avenue (US 6) west of Sylvan Lake Road = 10%
- Grand Avenue (US 6) east of Sylvan Lake Road = 70%
- Sylvan Lake Road = 20%

The anticipated directional distribution of project-generated traffic is depicted in **Figure 6a** for the interim access condition and **Figure 6b** for the future access condition. Distribution is not anticipated to change from Year 2017 to Year 2040.

Figure 6a: Directional Distribution - Interim Access

* Interim Access includes Emergency Access to US 6 (#1) and Full access to Sylvan Lake Rd (#3)





McDOWELL ENGINEERING LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Project Number: M1197
Prepared by: BBG
Date: 4/19/2016
Sylvan Lake Circle
Eagle, Colorado

LEGEND :

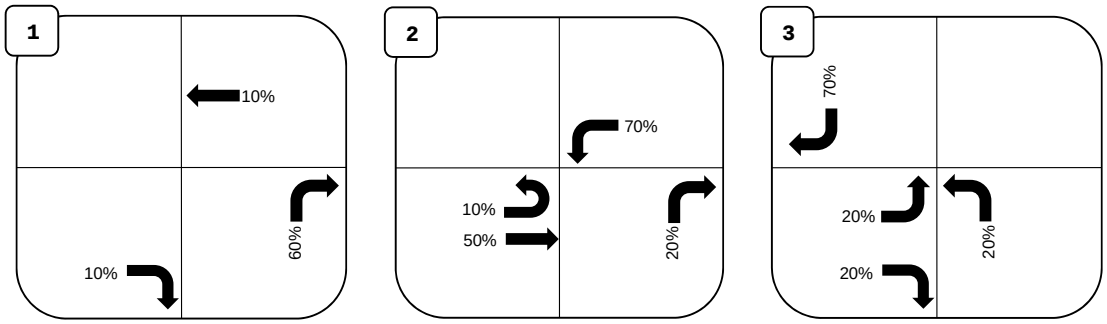
Directional Distribution X% (X%)
Residential (Commercial%)

Turning Movements

N
(NTS)

Figure 6b: Directional Distribution - Future Access

* Future Access includes RIRO Access to US 6 (#1) and Full access to Sylvan Lake Rd (#3)



McDOWELL ENGINEERING LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Project Number: M1197
Prepared by: BBG
Date: 4/19/2016
Sylvan Lake Circle
Eagle, Colorado

LEGEND :

Directional Distribution XX%

N

(NTS)

4.3 Traffic Assignment and Total Traffic

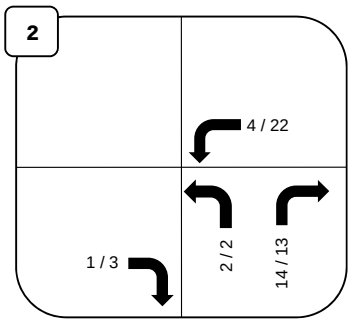
When the trip generation for this site is applied to the estimated trip distribution, the result is the anticipated assignment of trips on the roadway system. **Figure 7a** depicts the new vehicle trips that are anticipated from the proposed development for the interim access condition. **Figure 7b** depicts the new vehicle trips for the future access condition.

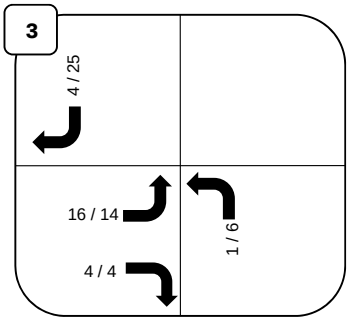
Figures 8 and 9 depict the total vehicle trips on Grand Avenue and Sylvan Lake Road.

The Year 2017 total traffic is the sum of Year 2017 background traffic and the project-generated traffic. This total can be seen in **Figure 8a** for the interim access condition and **Figure 8b** for the future access condition.

Similarly, Year 2035 total traffic is the sum of the Year 2035 background traffic and the project-generated traffic. This total can be seen in **Figure 9a** for the interim access condition and **Figure 9b** for the future access condition.

Figure 7a: Assignment of Project Traffic - Interim Access





McDOWELL ENGINEERING LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Project Number: M1197
Prepared by: BBG
Date: 4/19/2016
Sylvan Lake Circle
Eagle, Colorado

LEGEND :

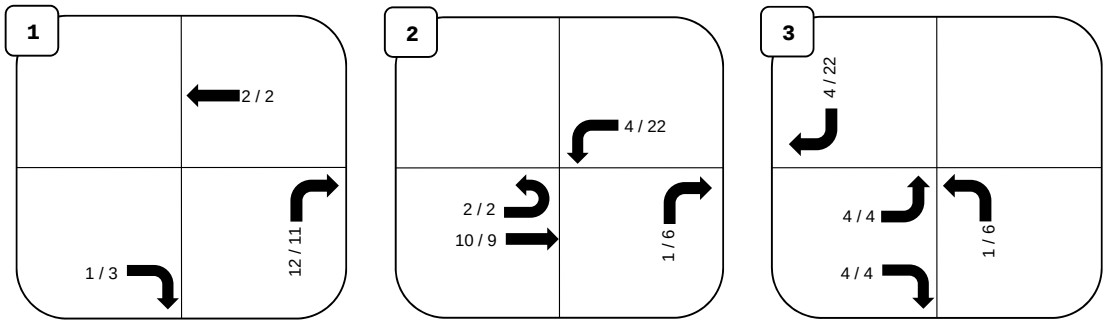
Directional Distribution X% (X%)
Residential (Commercial%)

Turning Movements

N
(NTS)

Figure 7b: Assignment of Project Traffic - Future Access

*Future Access includes RIRO Access to US 6 (#1) and Full access to Sylvan Lake Rd (#3)



McDOWELL ENGINEERING LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Project Number: M1197
Prepared by: BBG
Date: 4/19/2016
Sylvan Lake Circle
Eagle, Colorado

LEGEND :

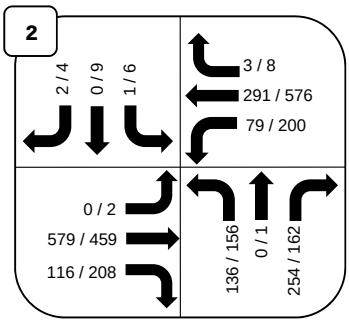
Directional Distribution X% (X%)
Residential (Commercial%)

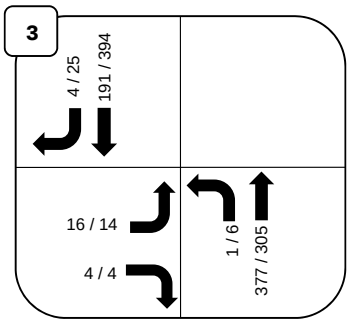
Turning Movements

N
(NTS)

Figure 8a: Year 2017 Total Traffic - Interim Access

* Interim Access includes Emergency Access to US 6 (#1) and Full access to Sylvan Lake Rd (#3)





McDOWELL ENGINEERING LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Project Number: M1197
Prepared by: BBG
Date: 4/19/2016
Sylvan Lake Circle
Eagle, Colorado

LEGEND :

AM / PM Volumes XX / XX

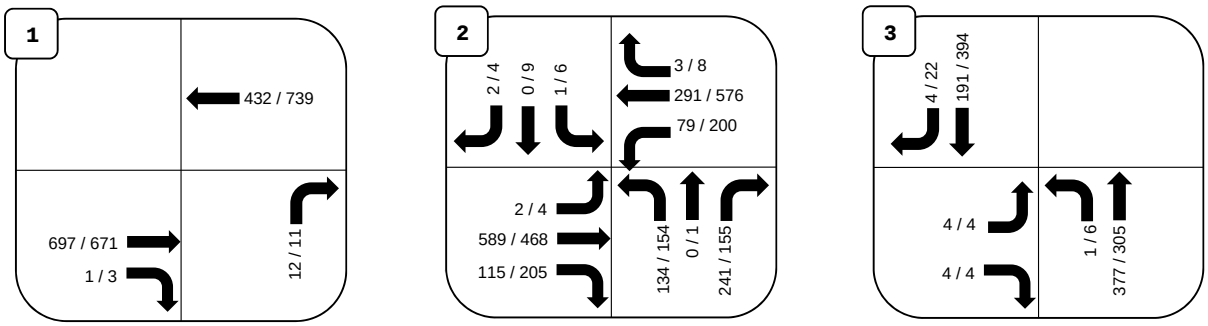
Turning Movements

N

(NTS)

Figure 8b: Year 2017 Total Traffic - Future Access

*Future Access includes RIRO Access to US 6 (#1) and Full access to Sylvan Lake Rd (#3)



McDOWELL ENGINEERING LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Project Number: M1197
Prepared by: BBG
Date: 4/19/2016
Sylvan Lake Circle
Eagle, Colorado

LEGEND :

AM / PM Volumes XX / XX

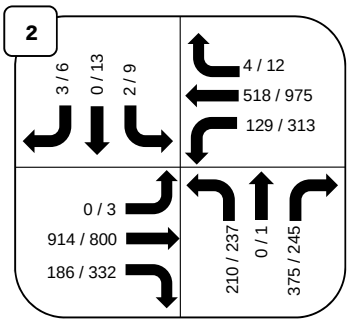
Turning Movements

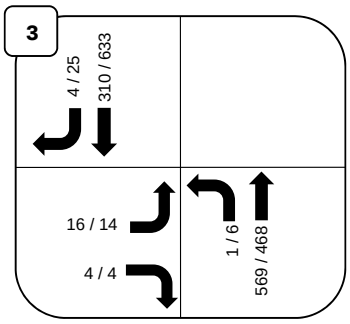
N

(NTS)

Figure 9a: Year 2035 Total Traffic Alternate 4 - Interim Access

* Interim Access includes Emergency Access to US 6 (#1) and Full access to Sylvan Lake Rd (#3)





McDOWELL ENGINEERING LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Project Number: M1197
Prepared by: BBG
Date: 4/19/2016
Sylvan Lake Circle
Eagle, Colorado

LEGEND :

AM / PM Volumes XX / XX

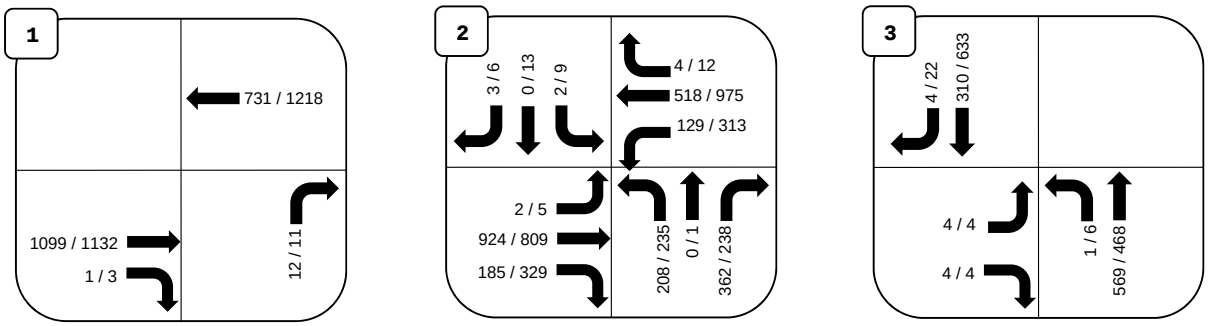
Turning Movements

N

(NTS)

Figure 9b: Year 2035 Total Traffic - Future Access

*Future Access includes RIRO Access to US 6 (#1) and Full access to Sylvan Lake Rd (#3)



McDOWELL ENGINEERING LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Project Number: M1197
Prepared by: BBG
Date: 4/19/2016
Sylvan Lake Circle
Eagle, Colorado

LEGEND :

AM / PM Volumes XX / XX

Turning Movements

N

(NTS)

5.0 Transportation Impact Analysis

5.1 Access Description

The proposed access locations are depicted in the site plan - ***Figure 2***.

Interim Access: Prior to the devolution of Grand Avenue (US 6), the site's access to the roadway network includes an emergency-only access to Grand Avenue located approximately 250-feet west of the Sylvan Lake Road roundabout (north site access) and a full movement access to Sylvan Lake Road located approximately 360-feet south of the Sylvan Lake Road roundabout (east site access). The emergency access to Grand Avenue is intended to serve the Greater Eagle Fire Protection District[12] and other emergency vehicles only. Access restrictions will prevent vehicle traffic from using the emergency access but will allow the Fire District access in the event of an emergency.

Future Access: Future access to the site includes a right-in / right-out (RIRO) access to Grand Avenue located approximately 250-feet west of the Sylvan Lake Road roundabout (north site access) and a full movement access to Sylvan Lake Road located approximately 360-feet south of the Sylvan Lake Road roundabout (east site access).

The interim and future access configurations are being proposed to address the request of the Greater Eagle Fire Protection District for access to Grand Avenue in the short term. Once devolution has passed access control responsibilities from CDOT to the Town of Eagle, the applicant would request that the emergency access is converted to a RIRO access.

5.2 Access Permits

CDOT and the Town of Eagle are in the process of devolution of ownership of this section Grand Avenue (US 6). However, at this time CDOT owns and maintains Grand Avenue (US 6) and has authority to permit access to the highway.

Section 2.6(3) of the *State Highway Access Code*[10] (*Access Code*) requires a new access permit when there is a land use change. Therefore, a new State Highway Access Permit will be required for the proposed interim access configuration that includes an emergency access as requested by the Greater Eagle Fire Protection District[12].

5.3 Auxiliary Turn Lane Analysis

The Town of Eagle refers to the *Access Code* to provide regulation for auxiliary lanes.

Grand Avenue (US 6) and North Site Access: Grand Avenue (US 6) is currently classified by CDOT as an R-A, regional highway. It is currently posted with a 45 mph speed limit in both directions at the site access.

Per Section 3.8(5) of the *Access Code*, a right turn deceleration lane is required when the peak hour turning volume exceeds 25vph. A left turn deceleration lane is required when the peak hour turning volume exceeds 10vph. A right turn acceleration lane is required for any access with a projected peak hour right turning volume greater than 50vph when the posted speed on the highway is greater than 40mph.

Based upon the Year 2035 total traffic volumes no auxiliary deceleration or acceleration lanes will be required at the north site access. Details for this analysis are shown in **Table 2**.

Sylvan Lake Road and East Site Access: Sylvan Lake Road is equivalent to CDOT's NR-B classification for a non-rural arterial. It is currently posted with a 35 mph speed limit in both directions at the site access.

Per Section 3.11(4) of the *Access Code*, a right turn deceleration lane is required when the peak hour turning volume exceeds 50vph. A left turn deceleration lane is required when the peak hour turning volume exceeds 25vph. A right turn acceleration lane is not required.

Based upon the Year 2035 total traffic volumes no auxiliary deceleration or acceleration lanes will be required at the east site access. Details for this analysis are shown in **Table 2a** and **Table 2b**.

Table 2a: Auxiliary Turn Lane Analysis – Interim Access Condition

Intersection	Movement	Year 2035 Peak Traffic (vph)		*Access Code* [3]	*Access Code* [3] Required Turn Lane
		AM	PM		
Sylvan Lake Road /	Sylvan Lake Road Posted Speed = 35mph				
East Site Access	EBL	16	14	>25vph	Decel lane not required.
	EBR	4	4	N/A	Accel lane not required.
	NBL	1	6	>25vph	Decel lane not required.
	SBR	4	25	>50vph	Decel lane not required.

Table 2b: Auxiliary Turn Lane Analysis – Future Access Condition

Intersection	Movement	Year 2035 Peak Traffic (vph)		*Access Code* [3]	*Access Code* [3] Required Turn Lane
		AM	PM		
Grand Avenue (US 6) /	Grand Ave. Posted Speed = 45mph				
North Site Access	EBR	1	3	>25vph	Decel lane not required.
	NBR	12	11	>50vph	Accel lane not required.
Sylvan Lake Road /	Sylvan Lake Road Posted Speed = 35mph				
East Site Access	EBL	4	4	>25vph	Decel lane not required.
	EBR	4	4	N/A	Accel lane not required.
	NBL	1	6	>25vph	Decel lane not required.
	SBR	4	22	>50vph	Decel lane not required.

5.4 Sensitivity Analysis

CDOT typically requests a sensitivity analysis to determine when auxiliary turn lanes may be triggered if the directional distribution is changed.

Based upon the auxiliary lane triggers from the Access Code, 80% of traffic would need to be arriving from the west (Gypsum) on Grand Avenue (US 6) to trigger the need for an eastbound right deceleration lane.

Even with 100% of the egressing traffic using the north access to make a northbound right movement out of the site, the need for an acceleration lane is not triggered.

5.5 Design Vehicle

Per Table 4-3 of the *Access Code*, the design vehicle for a residential land use is a passenger car or pickup truck when the property is not located on a school bus route. If the property is located on a school bus route, the project should be designed for a single unit truck.

5.6 Sight Distance

Grand Avenue (US 6): The proposed north site access location has adequate sight distance to the west that exceeds the 450-foot requirement (585' for SU) in Table 4-2 of CDOT's *Access Code* for a two-lane, 45mph roadway. This is based upon the requirements for single unit trucks over 10,000 pounds. This access will be RIRO only therefore sight distance to the east is not applicable.

If Grand Avenue is widened to four lanes in the future; the entering sight distance requirement will be 540 feet for a 45mph roadway (675' for SU) and 420 feet for a 35mph roadway (525' for SU.) The proposed Grand Avenue access sight distance to the west exceeds 900 feet.

Sylvan Lake Road: Alpine Engineering performed separate sight distance analyses for the proposed access to Sylvan Lake Road. This was based upon a previous speed study by the Town of Eagle that determined southbound vehicles accelerating out of the Sylvan Lake Road roundabout were travelling at 27-30mph at the site access. Alpine Engineering's detailed analysis is included in the **Appendix**.

5.7 Access Design Criteria

The proposed site accesses shall to be constructed per Section 4 of the *Access Code*. Town of Eagle's regulations and engineering standards will also apply.

For the Future Access configuration, the north site access onto Grand Avenue will be limited to right—in, right-out movements only. By extending the splitter island of the west leg of the Grand Avenue / Sylvan Lake Road roundabout west past the site access, left turns in and out of the site would be restricted.

6.0 Recommendations and Conclusions

The proposed Sylvan Lake Circle project is anticipated to be successfully accommodated into the greater roadway system.

Trip Generation:

Based upon the applicant's proposed land use and a 5% multimodal trip reduction, the project can be anticipated to generate 288 vehicle trips per day (vpd) on the average weekday. Peak hour traffic on a weekday at project buildout is anticipated to be 25 vehicles per hour (vph) during the morning peak hour, 49 vph during the evening peak hour.

State Highway Access Permits:

CDOT and the Town of Eagle are in the process of devolution of ownership of this section Grand Avenue (US 6). However, at this time CDOT owns and maintains Grand Avenue (US 6) and has authority to permit access to the highway. Section 2.6(3) of the *State Highway Access Code*[10] (*Access Code*) requires a new access traffic forecasts; there are not any foreseen safety or operational reasons to recommend auxiliary lanes or other highway improvements.

Auxiliary Turn Lanes:

The traffic volumes generated by this development are not anticipated to require the construction of auxiliary turn lanes on Grand Avenue or Sylvan Lake Road. Based upon review of the proposed operations, Grand Avenue and Sylvan Lake Road characteristics, and traffic forecasts; there are not any foreseen safety or operational reasons to recommend auxiliary lanes or other highway improvements.

Access Construction:

The proposed site accesses shall to be constructed per Section 4 of the Access Code. Town of Eagle's regulations and engineering standards will also apply.

For the Future Access configuration, the north site access onto Grand Avenue will be limited to right—in, right-out movements only. By extending the splitter island of the west leg of the Grand Avenue / Sylvan Lake Road roundabout west past the site access, left turns in and out of the site would be restricted.

Site Improvements

Project generated traffic was reduced by 5% due to the proximity of multiuse paths and the ECO Transit bus stop. It is recommended that the project include the necessary site improvements to provide pedestrian connectivity from the site to the adjacent bicycle and pedestrian facilities, as well as the bus stop.

7.0 Appendix

Reference Documents

1. *JHY Traffic Impact Study.* McDowell Engineering, March 2016
2. *Frost Creek Transportation Impact Study*. McDowell Engineering, November 2015.
3. *West Eagle Sub Area Plan.* Town of Eagle, September 2011.
4. *Haymeadow Traffic Impact Study*. Fox Tuttle Transportation Group, August 2013.
5. OTIS Traffic Data. Colorado Department of Transportation. http://apps.coloradodot.info/dataaccess/
6. *Projected Brush Creek Growth Model.* Town of Eagle, Updated November 2015.
7. *Highway Capacity Manual.* Transportation Research Board, 2010.
8. *Trip Generation Handbook, 9th Edition*. Institute of Transportation Engineers, 2012.
9. *State Highway Access Code.* State of Colorado, 2002.
10. *Policy on Geometric Design of Highways and Streets.* AASHTO.
11. *Sight Distance.* Alpine Engineering, May 2016.
12. *Letter from Greater Eagle Fire Protection District, May 2016.*

Included Documents

- Traffic Study Scoping Correspondence with the Town of Eagle
- Traffic Counts
- CDOT OTIS Traffic Data
- Alpine Engineering's Sight Distance Analysis

Traffic Study Scoping Correspondence with the Town of Eagle:

Traffic Study Scoping Form

Contact Information	
Consultant Name: Tele: E-mail:	McDowell Engineering; Kari McDowell Schroeder, PE, PTOE 970-623-0788 kari@mcdowelleng.com
Developer/Owner Name:	Sylvan Lake Circle

Project Information *(Attach proposed Site Plan)*					
Project Name:	Sylvan Lake Circle				
Project Location:	Southwest Corner of the US 6/Sylvan Lake Roundabout, Eagle				
Project Description: Application type (rezoning, subdivision), acreage, new or re-development, etc.	-				
Existing / Proposed Land Uses	ITE Code	#units or Size	Existing / Proposed Land Uses	ITE Code	#units or Size
See Attached.					
Please attach Trip Generation Summary table for large or mixed use projects					

Assumptions			
Study Horizons	Current Year: 2015	Build-out : 2016	Long Term : 2035
Study Area Boundaries *(Attach map if needed)*	North: US 6	South: Proposed East Site Access	
	East: Sylvan Lake Road	West: Proposed North Site Access	
Intersections and Road Segments to be Evaluated *(Attach map if needed)*	1. All Site entrances	5.	
	2.	6.	
	3.	7.	
	4.	8.	
Trip Distribution	*See Attached Sketch*	Refer to the original submittal dated November 18, 2014. (Residential: 10% to/from the west, 90% to/from the east.)	

Assumptions (continued)					
Trip Reductions *(include in Trip Generation table if provided)* (See below also.)	Internal Capture	Use: 0 %	Pass By	Use: %	
		Use: %		Use: %	
Anticipated Future Traffic Growth Rates (*Describe methodology)*	per CDOT OTIS for US 6		Study Time Periods *(circle all that apply)*	AM (7-9) PM (4-6)	
				SAT (noon) Other	
Other Factors proposed/assumed transp. improvements, other studies, nearby proposed developments, etc.	Multimodal trip reduction for bus use = 5.0%.				
Analysis Methods & Issues *(check all that apply)*	☒ Synchro ☐ HCS ☐ aaSidra or Rodel ☒ Intersections ☒ Roadway Sections ☐ Signal Warrants ☒ Safety/Sight Distance ☒ Queuing & Storage ☒ CDOT (Access Permit, other) ☒ Identify Bicycle, Pedestrian & Transit Accommodations ☐ TDM ☐ Neighborhood Impacts ☐ Other _____				

ATTACHMENTS, NOTES, & other ASSUMPTIONS:

SIGNED: Kari McDowell Schroeder
Applicant or Consultant

PRINT NAME: Kari McDowell Schroeder, PE, PTOE
Applicant or Consultant

DATE: 10/23/2015

REVIEW AGENCY: _____

DEPARTMENT: _____

SIGNED: _____

PRINT NAME: _____

DATE: _____

McDOWELL ENGINEERING LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Table 4 - Project Trip Generation

Sylvan Lake Circle - Eagle, CO

Estimated Project-Generated Traffic[1]

Project Number: M1197
Prepared By: KJS
Date: 12-Oct-15
Revised:

--DRAFT--

		Trip Generation Rates			Average Weekday	AM Peak Hour Traffic				PM Peak Hour Traffic			
						Inbound		Outbound		Inbound		Outbound	
ITE Code	Units	Avg. Weekday	AM Peak Hour	PM Peak Hour	Trips	% Trips	Trips	% Trips	Trips	% Trips	Trips	% Trips	Trips
Proposed Land Use:													
#231 Low-Rise Residential Condominium/Townhouse	44 DU[2]	8	Regression Equation		352	25%	7	75%	19	58%	25	42%	18

[1] Values obtained from *Trip Generation Manual, 9th Edition,* Institute of Transportation Engineers, 2012.

[2] Dwelling Units

Kari McDowell Schroeder

From: Tom Gosiorowski
Sent: Friday, May 15, 2015 3:17 PM
To: Kari McDowell Schroeder
Subject: RE: Sylvan Lake Circle - CDOT & Traffic Engineering

Kari,

Could you meet or call on Tuesday afternoon 5/19 at 1:30 p.m.?

With regard to the RIRO on Highway 6, I think that we can get this approved if we can show need. I understand that the access code states that if a property has access to the local street then there is no right of having access to the state highway, but the code does not state that you cannot have highway access if you have local street access. So in my opinion it comes down to need and what access configuration creates the best overall traffic flow. I haven't calculated trip gen for the project, but if the peak hour trips would cause a single Sylvan Lake Road (SLR) driveway intersection to drop below the Town's standard of LOS C, or would cause adverse impact to traffic operations within the roundabout, then I think we would have need for a Highway 6 access. Also, the local fire department may require two access points in and out of the site, and due to the short frontage on SLR it is not feasible to have two connections to that road.

When I met with the project architect/developer he stated that they might be agreeable to a RIRO on SLR and a RIRO on Highway 6. This might be the most ideal situation for LOS and overall traffic flow, and if that was the case then I think we could convince CDOT of the need for a Highway 6 access.

The Town is the Issuing Authority for access permits on Highway 6 here, and I have had a very good working relationship with Dan, so I think that if it proves out that two access points are optimal then we can get that approved. I think that you may have to do some initial traffic calcs to see how LOS and traffic operations look and then we can make a final decision as to what access configuration would be best.

Thanks,

Tom Gosiorowski, PE
Town Engineer
Town of Eagle
970.471.2132 mobile
970.328.6542 office
970.328.6066 fax
PO Box 609
1050 Chambers Avenue
Eagle, CO 81631

From: Kari McDowell Schroeder [mailto:kari@mcdowelleng.com]
Sent: Friday, May 15, 2015 2:53 PM
To: Kevin Sharkey; Tom Gosiorowski
Subject: Sylvan Lake Circle - CDOT & Traffic Engineering

Kevin and Tom,

Can you please give me a call to discuss the access locations for the proposed Sylvan Lake Circle project located on the southwest corner of the Sylvan Lake Road roundabout? I discussed the proposed RIRO US 6 access with Dan

Roussin. He said that we would need to show that the Sylvan Lake Road sight distance would make a Sylvan Lake Road access infeasible before CDOT would consider a US 6 access.

I know that this project has quite a bit of history. I have a copy of the old Kum & Go traffic study for the site that I will review over the weekend.

I would also appreciate the opportunity to formalize the required traffic study scope for the new project.

Thank you,

Kari
970-623-0788

Kari J. McDowell Schroeder, PE, PTOE
Transportation / Traffic Engineer

McDOWELL ENGINEERING LLC
TRANSPORTATION ENGINEERING CONSULTANTS

Eagle ● Broomfield ● Grand Junction
970.623.0788 ● 303.949.4748 ● 303.845.9541 fax

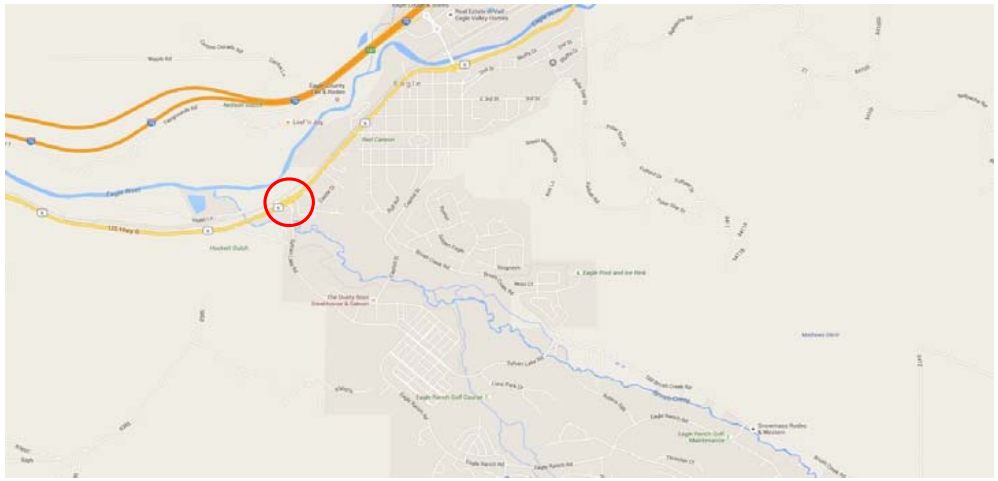
kari@mcdowelleng.com
www.mcdowelleng.com

Traffic Counts

Sylvan Lake Rd at Hwy 6, EB & NB legs
Eagle, Colorado
Data Collection Date: Wednesday, September 30, 2015
Weather: Partly Cloudy

Weekday Traffic Counts

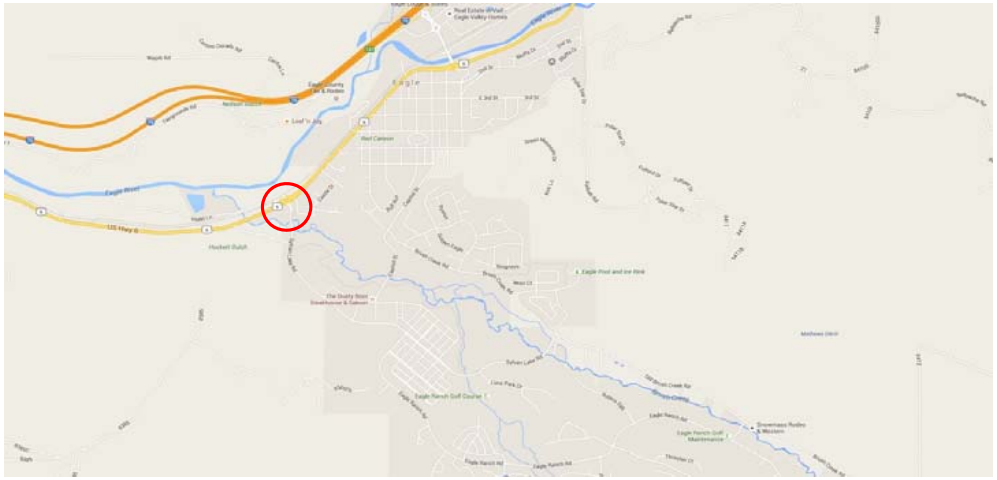
Start Time	Hwy 6 Eastbound							Hwy 6 Westbound							Sylvan Lake Rd Northbound							Sylvan Lake Rd Southbound						
	Left		Thru		Right		Peds/ Bikes	Left		Thru		Right		Peds/ Bikes	Left		Thru		Right		Peds/ Bikes	Left		Thru		Right		Peds/ Bikes
	Cars	Trucks	Cars	Trucks	Cars	Trucks		Cars	Trucks	Cars	Trucks	Cars	Trucks		Cars	Trucks	Cars	Trucks	Cars	Trucks		Cars	Trucks	Cars	Trucks	Cars	Trucks	
7:00 AM	0	0	80	5	7	0	0	10	0	47	2	1	0	0	15	0	0	0	39	0	1	0	0	0	0	1	0	0
7:15 AM	0	0	112	7	11	1	2	11	1	60	4	1	0	0	22	1	0	0	51	0	0	2	0	0	0	1	0	0
7:30 AM	0	0	103	17	25	0	0	9	0	59	8	0	0	0	33	0	0	0	61	2	1	1	0	0	0	1	0	0
7:45 AM	0	0	153	23	35	2	1	22	3	78	6	0	0	0	48	1	0	0	59	3	0	0	0	0	0	0	0	1
8:00 AM	0	0	107	24	30	7	3	19	0	61	2	2	0	0	23	1	0	0	53	2	2	0	0	0	0	0	0	0
8:15 AM	0	0	70	20	15	1	0	16	3	52	8	1	0	0	28	1	0	0	37	4	0	0	0	0	0	0	0	0
8:30 AM	0	0	85	13	19	0	2	20	3	65	11	1	0	1	32	1	0	0	34	3	0	0	0	0	0	2	0	1
8:45 AM	0	0	79	9	11	1	2	25	4	66	9	1	0	1	32	2	0	0	31	0	0	0	0	0	0	0	0	0
Total	0	0	789	118	153	12	10	132	14	488	50	7	0	2	233	7	0	0	365	14	4	3	0	0	0	5	0	2
Peak Hour Total	0	0	475	71	101	10	4	66	6	250	24	3	0	0	126	3	0	0	224	7	3	1	0	0	0	2	0	1
Peak Hour Total	0		546		111		4	72		274		3		0	129		0		231		3	1		0		2		1



Sylvan Lake Rd Roundabout at HWY 6
Eagle, Colorado
Data Collection Date: Wednesday September 30, 2015
Weather:

Weekday Traffic Counts

Start Time	Hwy 6 Eastbound							Hwy 6 Westbound							Sylvan Lake Road Northbound							Sylvan Lake Road Southbound						
	Left		Thru		Right		Peds/ Bikes	Left		Thru		Right		Peds/ Bikes	Left		Thru		Right		Peds/ Bikes	Left		Thru		Right		Peds/ Bikes
	Cars	Trucks	Cars	Trucks	Cars	Trucks		Cars	Trucks	Cars	Trucks	Cars	Trucks		Cars	Trucks	Cars	Trucks	Cars	Trucks		Cars	Trucks	Cars	Trucks	Cars	Trucks	
4:00 PM	0	0	74	4	27	5	0	39	3	130	6	1	0	2	17	1	1	0	21	0	0	1	0	1	0	1	0	0
4:15 PM	1	0	112	4	47	0	0	31	1	83	6	1	0	0	19	0	1	0	34	0	0	3	0	0	0	2	0	0
4:30 PM	0	0	96	7	30	1	0	44	0	127	9	1	0	0	18	4	0	0	23	0	0	1	0	0	0	1	0	0
4:45 PM	0	0	101	7	46	2	2	37	2	98	7	1	0	1	27	0	1	0	33	2	1	2	0	0	0	0	0	1
5:00 PM	0	0	123	4	48	2	0	41	1	142	10	1	0	0	47	5	0	0	51	2	0	2	0	0	0	0	0	0
5:15 PM	0	1	82	6	53	2	0	42	1	121	8	3	0	0	36	0	0	0	44	2	0	2	0	2	1	2	0	0
5:30 PM	0	0	112	2	49	2	1	51	0	126	8	4	0	1	30	0	0	0	22	0	1	1	0	2	0	0	0	2
5:45 PM	1	0	96	8	40	1	0	35	0	123	5	0	0	0	29	1	1	0	22	0	2	1	0	4	0	2	0	3
Total	2	1	796	42	340	15	3	320	8	950	59	12	0	4	223	11	4	0	250	6	4	13	0	9	1	8	0	6
Peak Hour Total	1	1	413	20	190	7	1	169	2	512	31	8	0	1	142	6	1	0	139	4	3	6	0	8	1	4	0	5
Peak Hour Total	2		433		197		1	171		543		8		1	148		1		143		3	6		9		4		5



CDOT OTIS Traffic Data

COLORADO DOT DEPARTMENT OF TRANSPORTATION **OTIS** Online Transportation Information System

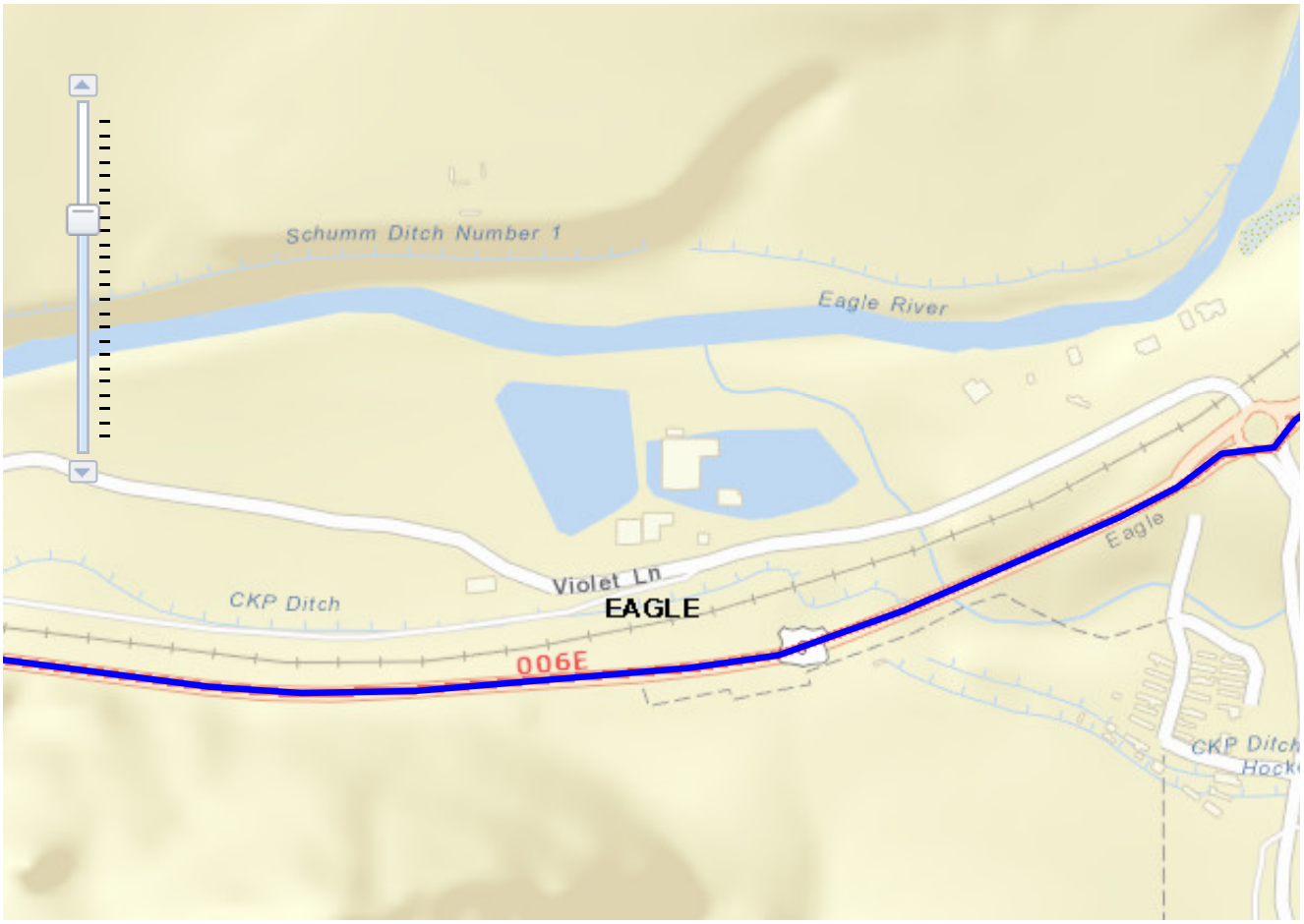
CDOT-OTIS Online Transportation Information System

(/otis/)

- Highway Data (/otis/HighwayData)
- Traffic Data (/otis/TrafficData)
- Data Catalog (/otis/catalog)
- Reports (/otis/Statistics)
- Map View (/otis/Flex/MapView)
- Help (/otis/trafficdata/Help?actionName=Index)

Traffic Data Explorer

(/otis/HighwayData#/ui/0/0/criteria/006E/147/150) (/otis/Flex/MapView?hwy=006E&begrefpt=147&endrefpt=150)



Search by city / county (#)

Search by highway segment (#)

Select a route and begin and end ref points. You can select a route from the drop down list or click the pencil icon then click the map. You can enter the ref points into the text boxes or click the pencil icon then click the map.

Zoom to County (optional): select a county ▼

CDOT Route Number: 006E ▼ Find by Name

Begin Reference: 147

End Reference: 150

Count type: ◉ All ○ Short Duration ○ Continuous Count

Search by traffic station (#)

- Stations (#stations-tab)
- AADT (#aadt-tab)
- Future Traffic (#futuretraffic-tab)
- ESAL (#esal-tab)

Export to Excel (/otis/API/TRANSYS/GetTrafficStationsByRouteRefs/006E/147/150/true/true.csv)

Station ID Route Start End County City Description

Found 4 stations. Click the magnifying glass icon in front of a station to see count data below.

Export to Excel (/otis/API/TRANSYS/GetAadtsByRouteRefs/006E/147/150/true/true.csv)

Route	Start	End	Description	AADT	Year	Single Unit	Comb Trucks	% Trucks	20 Year Factor	DHV	DVMT	DD
006E	145.501	149.144	ON SH 6 E/O EAGLE COOLEY MESA RD, GYPSUM	8,700	2014	250	180	5	1.81	11	33,025	62
006E	149.144	149.576	ON SH 6, GRAND AVE NE/O 5TH ST & BROOKS LN, EAGLE	9,300	2014	420	180	6.4	1.84	11	4,055	62
006E	149.576	149.666	ON SH 6 W/O SH 70 SPUR TRAFFIC CIRCLE, EAGLE	16,000	2014	580	130	4.4	1.57	10	1,600	58
006E	149.666	159.184	ON SH 6 E/O SH 70 SPUR TRAFFIC CIRCLE, EAGLE	2,900	2014	120	60	6.2	1.8	16	27,533	58

Found 4 stations. Click the magnifying glass icon in front of a station to see count data below.

Projection Year: 2036 Export to Excel (/otis/API/TRANSYS/GetFutureTrafficByRouteRefs/2036/006E/147/150/true/true.csv)

Route	Start	End	AADT	Year	Single Trucks	Combined Trucks	% Trucks	DHV	Projected AADT	Projected Single Trucks	Projected Combined Trucks
006E	145.501	149.144	8,700	2014	250	180	5	11	16,452	473	340
006E	149.144	149.576	9,300	2014	420	180	6.4	11	17,893	808	346
006E	149.576	149.666	16,000	2014	580	130	4.4	10	26,032	944	212
006E	149.666	159.184	2,900	2014	120	60	6.2	16	5,452	226	113

Build Year: Design Life (yrs): Lanes: 1 Rigid pavement: Export to Excel (/otis/API/TRANSYS/GetEsalsByRouteRefs///1/false/006E/147/150/true/true.csv)

Route	Start	End	Length	AADT	Year	20 Year Factor	Single Trucks	Combined Trucks	Projected AADT	Projected Single Trucks	Projected Combined Trucks	18 Kip ESALs

- Daily (#daily-tab)
- Monthly Summaries (#monthly-tab)
- Annual (#annual-tab)

08/13/2014 View Entire Month (/otis/trafficdata/GetDailyTrafficVolumeForStationByMonth/100303/false/2014/8)

Export to Excel (/otis/API/TRANSYS/GetDailyTrafficVolumeForStationByDay/100303/false/2014-8-13.csv)

Dir 0h 1h 2h 3h 4h 5h 6h 7h 8h 9h 10h 11h 12h 13h 14h 15h 16h 17h 18h 19h 20h 21h 22h 23h

P = Primary direction S = Secondary direction C = Combined traffic counts

Export to Excel (/otis/API/TRANSYS/GetMonthlyTrafficVolumeForStation/100303.csv)

Yr Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Annual data are only avaible for continuous sites.

Download CDOT's traffic database

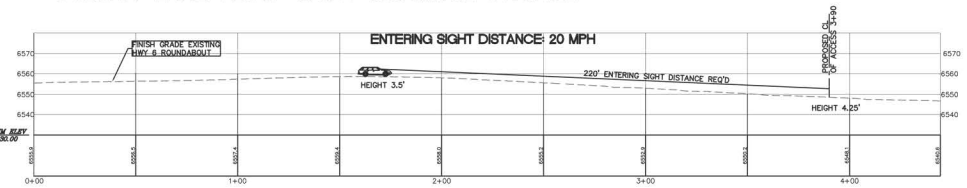
Excel format (http://dtdapps.coloradodot.info/staticdata/Downloads/TrafficDataBase/cdot_traffic.xlsx)
Access format (http://dtdapps.coloradodot.info/staticdata/Downloads/TrafficDataBase/cdot_traffic.zip)

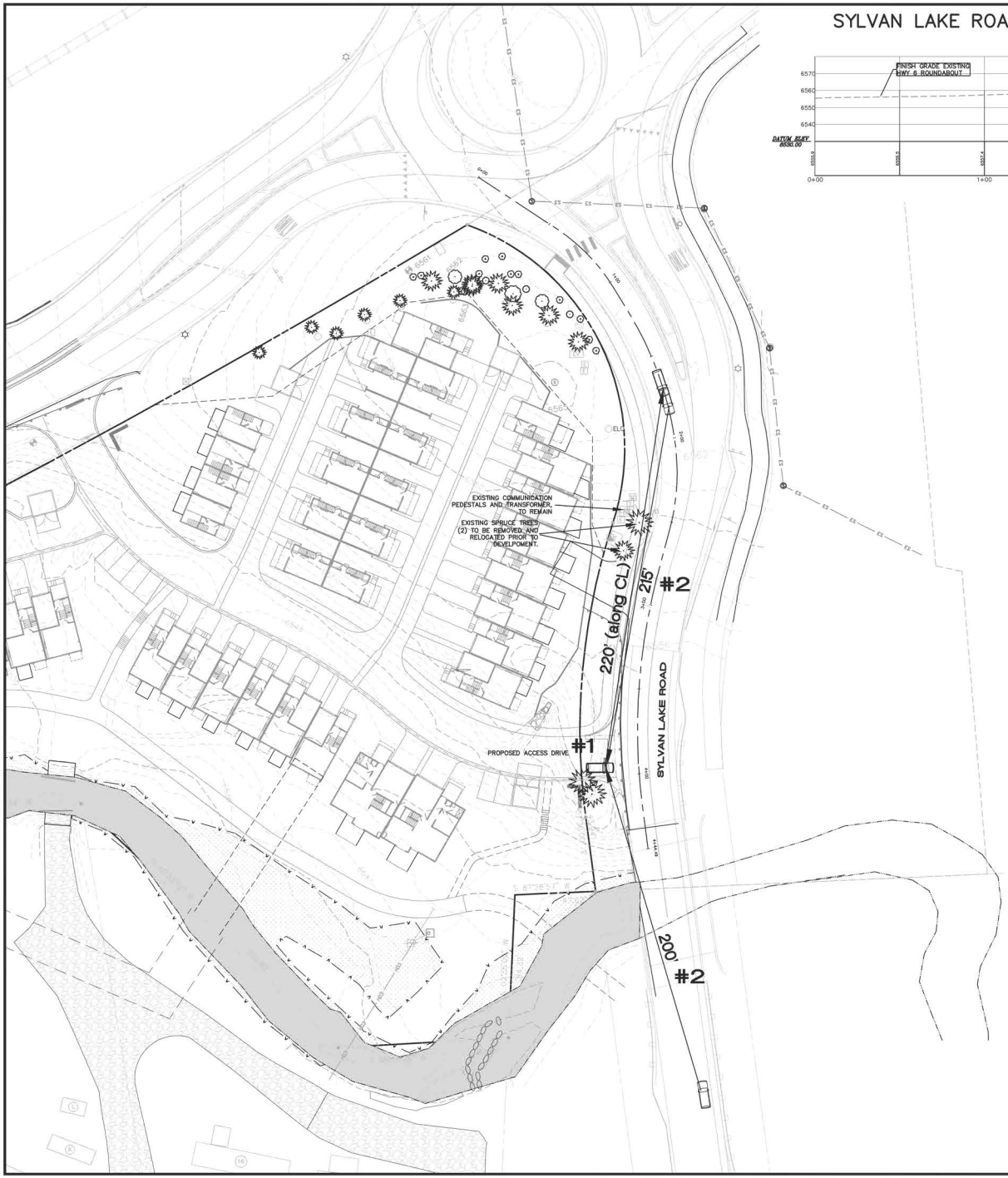
Served from Ext4

CDOT Home Page (http://www.coloradodot.info/)

Alpine Engineering's Sight Distance Analysis

SYLVAN LAKE ROAD SIGHT DISTANCE PROFILE





SCALE: 1"=30'

AASHTO 2011 POLICY OF GEOMETRIC DESIGN CHAPTER 3

SYLVAN LAKE ROAD:
POSTED 30 MPH

*SYLVAN LAKE RD DRIVER'S EYE AT 3.5' HEIGHT. DRIVERS EYE AT ACCESS IS 4.25' HEIGHT, VEHICLE 5' BACK FROM EDGE OF ROAD.

#1 ENTERING (DECISION) SIGHT DISTANCE

*2011 AASHTO GREEN BOOK (TABLE 3-3)
LEFT TURN DISTANCE= 220'
ADJUSTEMENT FACTORS:
NONE, ROAD NEAR FLAT THRU ROUNDABOUT

#2 STOPPING SIGHT DISTANCE

*2011 AASHTO GREEN BOOK (TABLE 3-1)
A. 30 MPH, LEVEL ROAD THRU BRIDGE
B. 30 MPH, 4.5% DOWNGRADE
SIGHT DISTANCE= A. 200' B. 215

ALPINE ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
• 970 926-3373 • FAX 926-3390 •

(SEAL)

SYLVAN LAKE CIRCLE
EAGLE, CO

SIGHT DISTANCE

NO.	DATE	REVISIONS	BY

DESIGNED XXX
DRAWN XXX
CHECKED XXX
JOB NO. XXX
DATE XX/XX/XXXX

SHEET 1

O:\Eagle\Sylvan Lake Circle-48448-2016\dwg\Master\SIGHT DISTANCE.dwg, 5/13/2016 11:39:47 AM, Wesley

To: Eagle Sylvan, LLC
c/o Creative West Architects
4400 Osage Drive
Boulder, CO
Contact: Jonathan Warner

From: Kari J. McDowell Schroeder, PE, PTOE

Date: June 13, 2016

Re: **Sylvan Lake Circle**
Intersection Level of Service
Eagle, Colorado

Background:

This letter supplements the *Auxiliary Turn Lane Assessment Transportation Impact Study*[1] completed for this project by McDowell Engineering and dated May 16, 2016. The Town of Eagle has requested additional information concerning the operation of the proposed interim and future access scenarios.

Interim and future access configurations are being proposed to address the request of the Greater Eagle Fire Protection District for access to Grand Avenue in the short term. Once devolution has passed access control responsibilities from CDOT to the Town of Eagle, the applicant would request that the emergency access is converted to a RIRO access.

Interim Access: Prior to the devolution of Grand Avenue (US 6), the site's access to the roadway network includes an emergency-only access to Grand Avenue located approximately 250-feet west of the Sylvan Lake Road roundabout (north site access) and a full movement access to Sylvan Lake Road located approximately 360-feet south of the Sylvan Lake Road roundabout (east site access). The emergency access to Grand Avenue is intended to serve the Greater Eagle Fire Protection District[12] and other emergency vehicles only. Access restrictions will prevent vehicle traffic from using the emergency access but will allow the Fire District access in the event of an emergency.

Future Access: Future access to the site includes a right-in / right-out (RIRO) access to Grand Avenue located approximately 250-feet west of the Sylvan Lake Road roundabout (north site access) and a full movement access to Sylvan Lake Road located approximately 360-feet south of the Sylvan Lake Road roundabout (east site access).

Traffic Operations Evaluation:

Year 2017 and Year 2040 background and total traffic from the *Transportation Impact Study*[1] was evaluated for the interim and future access scenarios using *Highway Capacity Manual 2010*[2] (HCM) analysis procedures.

Intersection Level of Service:

Using HCM methodology, Synchro Version 8 software was used to determine the delay and Level-of-Service (LOS) at the two-way stop controlled (TWSC) intersections.

Table 1 summarizes the delay and LOS for each access scenario in Year 2017 and Year 2035.

Table 1: Total Traffic Level of Service

Name	Access Scenario	Traffic Control	Approach	Total Traffic			
				Year 2017		Year 2035	
				Level of Service		Level of Service	
				(Delay in Seconds)		(Delay in Seconds)	
				AM	PM	AM	PM
Sylvan Lake Road / East Site Access	Interim - without North Site Access	EB Stop	EB	B (13)	B (16)	C (17)	C (23)
			NB	A (0)	A (0)	A (0)	A (0)
			SB	A(0)	A (0)	A (0)	A (0)
Sylvan Lake Road / East Site Access	Future - with North Site Access	EB Stop	EB	B (11)	B (13)	B (14)	C (19)
			NB	A (0)	A (0)	A (0)	A (0)
			SB	A (0)	A (0)	A (0)	A (0)
US 6 / North Site Access	Future - with North Site Access	NB Stop	EB	A (0)	A (0)	A (0)	A (0)
			NB	B (14)	B (14)	C (22)	C (23)

Interim Access: As can be seen in **Table 1**, the intersection is anticipated to operate at an acceptable LOS through Year 2035 without the north site access to Grand Avenue.

Future Access: As can be seen in **Table 1**, operations of the East Site Access improve slightly with the addition of the North Site Access. The addition of the North Site Access does not degrade the operation of Grand Avenue. Further, the Greater Eagle Fire Protection District has requested that at a minimum an emergency access be provided to Grand Avenue.

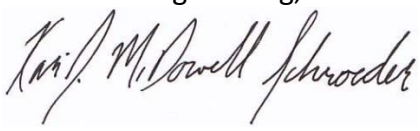
Conclusions:

Either access scenario will operate acceptably through Year 2035. Operations of the East Site Access improve slightly with the addition of the North Site Access. The addition of the North Site Access does not degrade the operation of Grand Avenue. Further, the Greater Eagle Fire Protection District has requested that at a minimum an emergency access be provided to Grand Avenue.

This analysis demonstrates that the project can operate at an acceptable LOS with either access scenario.

Please call if you would like any additional information or have any questions regarding this matter.

Sincerely,
McDowell Engineering, LLC



Kari J. McDowell Schroeder, PE, PTOE
Traffic Engineer

Encl.: HCM Analysis

Intersection	
Intersection Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	16	4	1	377	191	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	4	1	410	208	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	622	210	212	0	-	0
Stage 1	210	-	-	-	-	-
Stage 2	412	-	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-	-
Pot Capacity-1 Maneuver	450	830	1358	-	-	-
Stage 1	825	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	450	830	1358	-	-	-
Mov Capacity-2 Maneuver	450	-	-	-	-	-
Stage 1	825	-	-	-	-	-
Stage 2	668	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	0	0

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1358	-	495	-	-
HCM Lane V/C Ratio	0.001	-	0.044	-	-
HCM Control Delay (s)	7.653	0	12.6	-	-
HCM Lane LOS	A	A	B		
HCM 95th %tile Q(veh)	0.002	-	0.137	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	14	4	6	305	394	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	4	7	332	428	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	787	442	455	0	-	0
Stage 1	442	-	-	-	-	-
Stage 2	345	-	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-	-
Pot Capacity-1 Maneuver	360	615	1106	-	-	-
Stage 1	648	-	-	-	-	-
Stage 2	717	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	357	615	1106	-	-	-
Mov Capacity-2 Maneuver	357	-	-	-	-	-
Stage 1	648	-	-	-	-	-
Stage 2	711	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15	0	0

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1106	-	394	-	-
HCM Lane V/C Ratio	0.006	-	0.05	-	-
HCM Control Delay (s)	8.274	0	14.6	-	-
HCM Lane LOS	A	A	B		
HCM 95th %tile Q(veh)	0.018	-	0.156	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	16	4	1	569	310	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	4	1	618	337	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	960	339	341	0	-	0
Stage 1	339	-	-	-	-	-
Stage 2	621	-	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-	-
Pot Capacity-1 Maneuver	285	703	1218	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	536	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	285	703	1218	-	-	-
Mov Capacity-2 Maneuver	285	-	-	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	535	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17	0	0

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1218	-	323	-	-
HCM Lane V/C Ratio	0.001	-	0.067	-	-
HCM Control Delay (s)	7.958	0	16.9	-	-
HCM Lane LOS	A	A	C		
HCM 95th %tile Q(veh)	0.003	-	0.215	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	0.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	14	4	6	468	633	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	4	7	509	688	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1224	702	715	0	-	0
Stage 1	702	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-	-
Pot Capacity-1 Maneuver	198	438	885	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	196	438	885	-	-	-
Mov Capacity-2 Maneuver	196	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	588	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	23	0	0

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	885	-	223	-	-
HCM Lane V/C Ratio	0.007	-	0.088	-	-
HCM Control Delay (s)	9.098	0	22.7	-	-
HCM Lane LOS	A	A	C		
HCM 95th %tile Q(veh)	0.022	-	0.285	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	4	4	1	377	191	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	1	410	208	4

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	622	210	212	0	-	0
Stage 1	210	-	-	-	-	-
Stage 2	412	-	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-	-
Pot Capacity-1 Maneuver	450	830	1358	-	-	-
Stage 1	825	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	450	830	1358	-	-	-
Mov Capacity-2 Maneuver	450	-	-	-	-	-
Stage 1	825	-	-	-	-	-
Stage 2	668	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11	0	0

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1358	-	584	-	-
HCM Lane V/C Ratio	0.001	-	0.015	-	-
HCM Control Delay (s)	7.653	0	11.3	-	-
HCM Lane LOS	A	A	B		
HCM 95th %tile Q(veh)	0.002	-	0.045	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	4	4	6	305	394	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	7	332	428	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	785	440	452	0	-	0
Stage 1	440	-	-	-	-	-
Stage 2	345	-	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-	-
Pot Capacity-1 Maneuver	361	617	1109	-	-	-
Stage 1	649	-	-	-	-	-
Stage 2	717	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	358	617	1109	-	-	-
Mov Capacity-2 Maneuver	358	-	-	-	-	-
Stage 1	649	-	-	-	-	-
Stage 2	711	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	0	0

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1109	-	453	-	-
HCM Lane V/C Ratio	0.006	-	0.019	-	-
HCM Control Delay (s)	8.265	0	13.1	-	-
HCM Lane LOS	A	A	B		
HCM 95th %tile Q(veh)	0.018	-	0.059	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	4	4	6	569	310	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	7	618	337	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	981	349	361	0	-	0
Stage 1	349	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-	-
Pot Capacity-1 Maneuver	277	694	1198	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	530	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	275	694	1198	-	-	-
Mov Capacity-2 Maneuver	275	-	-	-	-	-
Stage 1	714	-	-	-	-	-
Stage 2	525	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	0	0

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1198	-	394	-	-
HCM Lane V/C Ratio	0.005	-	0.022	-	-
HCM Control Delay (s)	8.021	0	14.3	-	-
HCM Lane LOS	A	A	B		
HCM 95th %tile Q(veh)	0.016	-	0.068	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	0.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	4	4	6	468	633	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	4	7	509	688	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1222	700	712	0	-	0
Stage 1	700	-	-	-	-	-
Stage 2	522	-	-	-	-	-
Follow-up Headway	3.518	3.318	2.218	-	-	-
Pot Capacity-1 Maneuver	198	439	888	-	-	-
Stage 1	493	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	196	439	888	-	-	-
Mov Capacity-2 Maneuver	196	-	-	-	-	-
Stage 1	493	-	-	-	-	-
Stage 2	588	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19	0	0

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	888	-	271	-	-
HCM Lane V/C Ratio	0.007	-	0.032	-	-
HCM Control Delay (s)	9.084	0	18.7	-	-
HCM Lane LOS	A	A	C		
HCM 95th %tile Q(veh)	0.022	-	0.099	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	697	1	0	432	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	758	1	0	470	0	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	759	0	1228	758
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	470	-
Follow-up Headway	-	-	2.218	-	3.518	3.318
Pot Capacity-1 Maneuver	-	-	852	-	197	407
Stage 1	-	-	-	-	463	-
Stage 2	-	-	-	-	629	-
Time blocked-Platoon, %	-	-		-		
Mov Capacity-1 Maneuver	-	-	852	-	197	407
Mov Capacity-2 Maneuver	-	-	-	-	197	-
Stage 1	-	-	-	-	463	-
Stage 2	-	-	-	-	629	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14

Minor Lane / Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	407	-	-	852	-
HCM Lane V/C Ratio	0.032	-	-	-	-
HCM Control Delay (s)	14.1	-	-	0	-
HCM Lane LOS	B			A	
HCM 95th %tile Q(veh)	0.099	-	-	0	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	671	3	0	739	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	729	3	0	803	0	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	733	0	1534	731
Stage 1	-	-	-	-	731	-
Stage 2	-	-	-	-	803	-
Follow-up Headway	-	-	2.218	-	3.518	3.318
Pot Capacity-1 Maneuver	-	-	872	-	128	422
Stage 1	-	-	-	-	476	-
Stage 2	-	-	-	-	441	-
Time blocked-Platoon, %	-	-		-		
Mov Capacity-1 Maneuver	-	-	872	-	128	422
Mov Capacity-2 Maneuver	-	-	-	-	128	-
Stage 1	-	-	-	-	476	-
Stage 2	-	-	-	-	441	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	14

Minor Lane / Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	422	-	-	872	-
HCM Lane V/C Ratio	0.028	-	-	-	-
HCM Control Delay (s)	13.8	-	-	0	-
HCM Lane LOS	B			A	
HCM 95th %tile Q(veh)	0.087	-	-	0	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1099	1	0	731	0	12
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1195	1	0	795	0	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1196	0	1990	1195
Stage 1	-	-	-	-	1195	-
Stage 2	-	-	-	-	795	-
Follow-up Headway	-	-	2.218	-	3.518	3.318
Pot Capacity-1 Maneuver	-	-	584	-	67	227
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	445	-
Time blocked-Platoon, %	-	-		-		
Mov Capacity-1 Maneuver	-	-	584	-	67	227
Mov Capacity-2 Maneuver	-	-	-	-	67	-
Stage 1	-	-	-	-	287	-
Stage 2	-	-	-	-	445	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	22

Minor Lane / Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	227	-	-	584	-
HCM Lane V/C Ratio	0.057	-	-	-	-
HCM Control Delay (s)	21.8	-	-	0	-
HCM Lane LOS	C			A	
HCM 95th %tile Q(veh)	0.182	-	-	0	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	1132	3	0	1218	0	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1230	3	0	1324	0	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1234	0	2556	1232
Stage 1	-	-	-	-	1232	-
Stage 2	-	-	-	-	1324	-
Follow-up Headway	-	-	2.218	-	3.518	3.318
Pot Capacity-1 Maneuver	-	-	565	-	29	216
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	249	-
Time blocked-Platoon, %	-	-		-		
Mov Capacity-1 Maneuver	-	-	565	-	29	216
Mov Capacity-2 Maneuver	-	-	-	-	29	-
Stage 1	-	-	-	-	275	-
Stage 2	-	-	-	-	249	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	23

Minor Lane / Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	216	-	-	565	-
HCM Lane V/C Ratio	0.055	-	-	-	-
HCM Control Delay (s)	22.6	-	-	0	-
HCM Lane LOS	C			A	
HCM 95th %tile Q(veh)	0.175	-	-	0	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

AEI
Alpine Engineering, Inc.

TECHNICAL MEMO:

To: Jonathan Warner, CWA
From: Gary L Brooks, AEI
Date: June 9, 2016

Sanitary Sewer:

The project is proposed to be served by 8" PVC sewer mains that will cross Brush Creek, traverse across a portion of the Green Acres Mobile Home Park and tie into an existing manhole and 8" PVC sewer main located south of Brush Creek. The sewer main crossing of Brush Creek and the portion on the mobile home park require an Eagle County 1041 Permit.

All proposed units will have individual sewer service lines. The westernmost four (4) townhome units will require individual sump pumps and a force main line connecting into a proposed manhole. The force main is proposed to be a private line maintained by the Sylvan Lake Circle Home Owners Association.

Treated Water System:

The proposed treated water distribution system for the SLC parcel is anticipated to connect to the town's existing water main line infrastructure east of Sylvan Lake Road along the eastern boundary of the project. According to town staff the existing water treatment plant has approximately 300 SFE's available to serve future growth before the plant will need to be expanded. The proposed density of this project falls within the current plant capacity.

The proposed distribution system connects into the Town water system at the existing 8" DIP transmission line located east of Sylvan Lake Road. The SLC water system is proposed to be served by a 8" DIP water main.

The water pressure appears to be adequate to serve the development and have sufficient fire flows, as the project is located in the upper part of the Eagle's Zone #1 the "Town Zone". Zone #1 water system and tanks are set at an elevation of approximately 6689'. This elevation would equate to a hydrostatic water pressure of approximately 60 psi at the center of the project.

A hydraulic study is being run by Hatch Mott MacDonald, the town's water system engineer, of the proposed SLC parcel water system to insure that adequate system pressure and fire flow volumes are available to serve the project. Fire flow demand was provided to HMM for the project which will be sprinkled.

Water services to individual lots or multi-family units will be designed in compliance with Town Design Standards. Water line easements will be created and dedicated to the Town by Final Plat for all water mains outside of the public right-of-way.

Sylvan Lake Circle Parcel – Water Demand
Water Demand Calculations – Maximum Day Demand (MDD) at Buildout

Residential In-house Use

Unit/Density Type	Unit Count	Persons Per Unit	Water Volume Per Capita Daily (Gallons)	Average Daily Volume (Gallons)	Peaking Factor	Peak Day Volume (Gallons)
Residential	42	2.0	90	**11,760**	2.0	**23,560**

Common Area Irrigation (Assumed Acreage)

Irrigated Acreage	Application Rate (AF)	Avg Day Demand (acre feet)	Peaking Factor	Peak Day (AF)	Peak Day (Gallons)
0.5	0.01683	0.008415	2.0	**0.01687**	**5,484**

Peak Day Demand:

In-house	23,520.00 gallons/day
Irrigation	5,484.00 gallons/day
Total	29,004.00 gallons/day

Thank you,

Gary Brooks, Principal
Alpine Engineering, Inc.
Phone: (970) 926-3373
Cell: (970) 376-2280
www.alpinecivil.com

AEI
Alpine Engineering, Inc.

DRAINAGE TECHNICAL MEMO:

To: Jonathan Warner, CWA
Gary Brooks, AEI
From: Heiko Mues, AEI
Date: June 13, 2016

Drainage:

The purpose of this Drainage Technical Memo is to summarize the existing hydrologic conditions found at the Sylvan Lake Circle development site and to describe the proposed storm drainage design and stormwater quality treatment facilities for the proposed project.

The proposed Sylvan Lake Circle Parcel development is located south and west of the U.S. Highway 6 Sylvan Lake Roundabout and just north of the Green Acres Mobile Home Park in the Town of Eagle, Colorado. The site is proposed to have 42 townhome units.

Existing Conditions:

The majority of the existing parcel is currently covered with grasses and sage. There is some off-site drainage coming onto the site from the Sylvan Lake Roundabout and surrounding property. Some stormwater runoff from the Sylvan Lake Roundabout and Sylvan Lake Road discharges onto the site from an 18" RCP storm sewer pipe on the east end of the site. Some runoff from U.S. Highway 6 and the Sylvan Lake Road Roundabout discharges to the west on the north side of the site.

Proposed Conditions:

Historic drainage patterns will be maintained with the proposed storm sewer. Off-site stormwater flows will be kept separate from on-site as much as possible.

The runoff from the existing 18" RCP storm sewer from Sylvan Lake Road on the east side of the site will be intercepted by proposed storm sewer and rerouted away from proposed improvements and discharged to Brush Creek approximately where it flowed historically. A cross pan is proposed at the Sylvan Lake Road entrance to the site to keep Sylvan Lake Road flows in the curb pan and discharging to their historical discharge point.

The road and curb pan runoff from U.S. Highway 6 at the northeast corner of the site that flows onto the site will be intercepted by a proposed inlet before the emergency entrance and piped to where it generally flowed historically.

On-site stormwater is being collected in curb, pans and inlets and piped to Bioswales that will provide some water quality treatment of stormwater. The Bioswales flow to the Water Quality Retention Pond.

Water Quality Treatment:

Water quality treatment of stormwater is being provided by Bioswales, Infiltration Basins and a Water Quality Retention Pond.

The Bioswales will carry runoff from the developed site to the Water Quality Retention Pond providing some treatment during the conveyance of stormwater. The Bioswales will consist of course sand, peat moss and sandy loam and with grass plantings.

The Infiltration Basins are located below a portion of the developed site that does not drain to the Water Quality Retention Pond via a Bioswale. An Infiltration Basin has also been located below the east 18" RCP storm sewer from Sylvan Lake Road to provide some water quality treatment of the off-site runoff discharging at the southeast corner of the site. The Infiltration Basins will consist of cobble to infiltrate runoff with soil and grass plantings except at the east off-site 18" RCP storm sewer outfall where riprap will cover the cobble infiltration basin.

The Water Quality Retention Pond will be constructed entirely in cut so that there is no fill placed within the floodplain and there is no increase in the water surface of the floodplain as a result of the proposed development. The Water Quality Retention Pond will also treat off-site runoff from U.S. Highway 6 at the northeast corner of the site that flows onto the site. The Water Quality Retention Pond has been sized for the entire drainage area. The Retention Pond may also receive some groundwater discharge at certain times of the year based upon the soils report. A riprap outlet spillway and riprap outfalls at the Bioswale discharge points will be provided to prevent erosion.

The Denver Urban Drainage and Flood Control District (UDFCD) manual has been used to calculate the WQCV based upon impervious area percentages of each developed drainage basin. Calculations are provided below.

CDPHE Permits:

It is anticipated that sediment control for the Sylvan Lake Circle Parcel will be addressed through the Colorado Discharge Permit System (CDPS), Stormwater Discharges Associated with Construction Activity permit. This permit is obtained from the Colorado Department of Public Health and Environment (CDPHE) and requires the preparation of a Stormwater Management/Best Management Practices (SWM/BMP) plan. A SWM/BMP plan will be prepared for the site to ensure that sediment control measures will be installed to control sediment from leaving the site.

It is also anticipated that a groundwater discharge permit will be obtained for this site should any dewatering of groundwater be required during construction. This permit is also obtained from the CDPHE as part of the CDPS permit system.

Heiko Mues, PE
Alpine Engineering, Inc.
Cell: (970) 390-5594
www.alpinecivil.com

TABLE 1

SYLVAN LAKE CIRCLE

PERCENT IMPERVIOUS CALCULATIONS

TYPE OF AREA			PERCENT IMPERVIOUS
STREETS			100
DRIVEWAY, WALKS			90
ROOFS			90
GRASS			0

BASIN	TOTAL AREA (acres)	STREETS (acres)	DRIVEWAY (acres)	ROOFS (acres)	GRASS (acres)
D1	3.77	1.10	0.37	0.73	1.57

BASIN	TOTAL AREA				% IMPERVIOUS
D1	3.77				56

TABLE 2

SYLVAN LAKE CIRCLE

WATER QUALITY CAPTURE VOLUME (WQCV)

DRAIN TIME	COEFFICIENT
12	0.8
24	0.9
40	1.0

BASIN	DRAIN TIME COEFFICIENT		IMPERVIOUSNESS (i)	WQCV WATERSHED INCHES
D1	1.0		0.56	0.22

BASIN	TOTAL AREA (ACRES)	Storage Available (cubic feet)	WQCV (CUBIC FEET)	WQCV (CUBIC FEET) other (EAGLE) Req'd
D1	3.77		3058	2133

WQCV=(DRAIN TIME COEF)(0.91i^3-1.19i^2+0.78i) in Watershed Inches
WQCV=(Total Area)*(WQCV in Watershed Inches)*(43560/12) in Cubic Feet
WQCV other=(WQCV in Cubic Feet)(*0.30/0.43) for Eagle County

SYLVAN LAKE CIRCLE
WATER QUALITY POND - STORAGE VOLUME

Elevation	Area (ft^2)	Avg. Area (ft^2)	Depth (ft)	Volume (ft^3)	Cumulative Volume (ft^3)	Cumulative Volume (Ac-ft)	Cumulative Volume (Gallons)
6522.5	1,776	1,776	0	0	0	0.000	0
6523	2,188	1,982	0.5	991	991	0.023	7,413
6523.5	2,627	2,408	0.5	1,204	2,195	0.050	16,417

O:\Eagle\Sylvan Lake Circle-48445-2015\dwg\Drainage\WQCV\DAM-SLC.dwg, DAM-24x36, 6/14/2016 11:39:28 AM, Mues

SHEET
DAM

DESIGNED	MW
DRAWN	MW
CHECKED	MW
JOB NO.	48445
DATE	06/13/2016

NO.	DATE	REVISIONS	BY

SYLVAN LAKE CIRCLE
EAGLE, CO

DRAINAGE AREA MAP

(SEAL)

ALPINE AEI ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 926-3390 •

Wetland Permit Application

Ewing Parcel Sewer Main Extension

Eagle County, Colorado

prepared for:

West Eagle Ranch, LLC
P.O. Drawer 2770, Avon, CO 81620

prepared by:

Western Ecological Resource, Inc.
711 Walnut Street, Boulder, CO 80302

April 2008

Table of Contents

Section / Title **Page**

List of Figures

Number / Title **Page**

List of Tables

Number / Title **Page**

List of Photos

Number / Title **Page**

1.0 Introduction

A sanitary sewer line is being extended to the Ewing Parcel, an undeveloped property owned by West Eagle Ranch, LLC. The parcel, which is bisected by Sylvan Lake Road, is located just south of U.S. Highway 6 near the western boundary of the Town of Eagle (Figure 1). Specifically, the project site is located in Section 5 of Township 5 South and Range 84 West in Eagle County, Colorado (Figure 2).

The project purpose is to extend the existing sanitary sewer main in the Green Acres Mobile Home Park, located just south of the Ewing Parcel across Brush Creek, to the Ewing Parcel to enhance its appeal for sale. To aid in project planning, wetlands were delineated along Brush Creek in the vicinity of the proposed sewer line crossing. The delineation includes a portion of the Ewing Parcel located north of the creek and west of Sylvan Lake Road, as well as the southern bank of Brush Creek within the mobile home park.

This report describes the Brush Creek Wetlands with respect to their vegetation, soils, and hydrology; provides a Wetland Map; includes a description of the proposed work; identifies the associated impacts to wetlands and wildlife; discusses avoidance and minimization; and provides a plan to re-establish the temporarily impacted wetlands following sewer line installation.

Please note, all Figures are included with the text, Photos are in Section 9.0 and Tables are in Section 10.0.

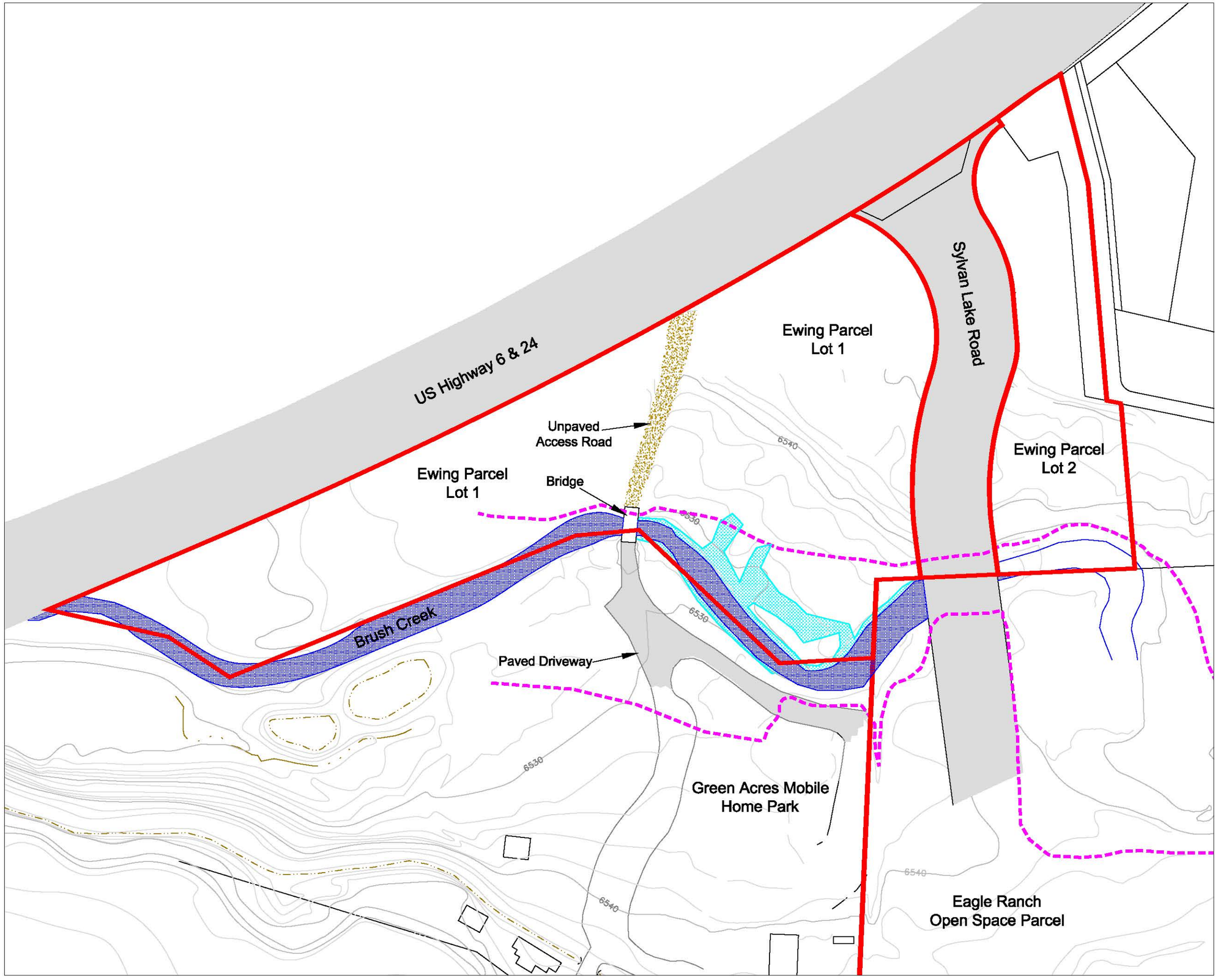
2.0 Environmental Setting

The portion of the Ewing Parcel included in the wetland delineation is located southwest of the Sylvan Lake Road roundabout on Highway 6, and just west of the existing Eagle Ranch residential development in Eagle, Colorado (Figure 1). The area of the wetland delineation is bounded by Sylvan Lake Road on the east and by U.S. Highway 6 to the north. A driveway in the Green Acres Mobile Home Park that crosses a bridge onto the Ewing Parcel forms the southern and western boundaries of the wetland delineation. The project area is bisected by Brush Creek, a perennial tributary of the Eagle River. Wetlands occur along the banks of Brush Creek and in a few low areas on the terrace north of the creek. Upland habitats north of the river have been disturbed by agricultural activities and road construction, and are vegetated by introduced grasses and weeds. South of Brush Creek, the native riparian vegetation has been replaced with an irrigated bluegrass lawn in the mobile home park. Elevations of the project area range from a high of approximately 6,550 feet on the terrace north of the creek to a low of approximately 6,526 feet where Brush Creek flows under the small bridge at the western boundary of the project area.

3.0 Delineation Methods

Wetlands were delineated by Heather Houston of Western Ecological Resource, Inc. and David Buscher of Buscher Soil & Environmental Consulting, Inc. in accordance with the U.S. Army Corps of Engineers' 1987 Wetland Delineation Manual on October 29, 2007. Specifically, wetland boundaries were delineated and flagged based upon the prevalence of hydrophytic vegetation, hydric soils, and indicators of a wetland hydrology. Field forms for the five test pits with vegetation, soils, and hydrology data are included in Appendix A. In general, plant species names follow Weber and Whitmann (1992). The wetland status of plants follows the 1988 National List for the Intermountain Region. Classification of wetlands follows Cowardin et al. (1979). Wetlands were surveyed by Alpine Engineering, Inc. of Edwards, Colorado.

Figure 1. Vicinity Map
Ewing Parcel
Sewer Main Extension

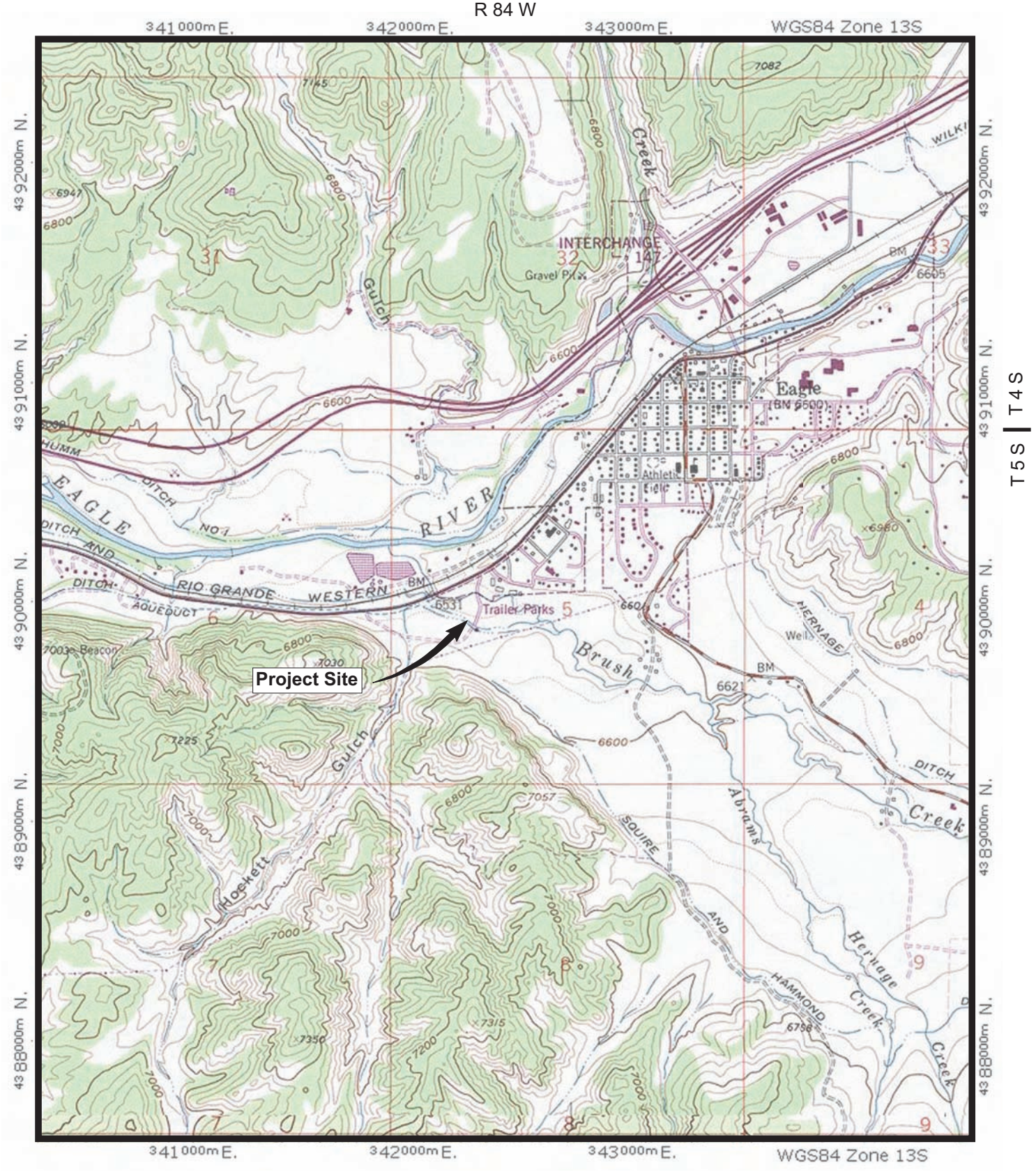


Legend:

- Wetlands*
- Aquatic Habitat
- Property Boundaries
- 100 Year Floodplain
- Area of Delineation

Date: April 2008
Scale: 1 in = 100 ft

prepared by:
Western Ecological Resource, Inc.
711 Walnut Street
Boulder, CO 80302
(303) 449-9009 FAX (303) 449-9038



BASE: USGS 7.5 Minute Eagle, Colorado Quadrangle
Photorevised: 1987

WESTERN ECOLOGICAL RESOURCE, INC.
711 Walnut Street • Boulder, CO 80302

FIGURE 2. Project Location Map
Ewing Parcel
Sewer Main Extension

N

Scale 1" = 2000'
Contour Interval = 40'

3.1 Agency Coordination

The U.S. Army Corps of Engineers has not visited the project site to review the delineated wetland boundary.

4.0 Wetlands Present

4.1 Brush Creek Wetland

4.1.1 Location

Herbaceous wetlands occur along the banks of Brush Creek (Photo 1), a perennial tributary of the Eagle River, and in a few low areas on the terrace north of the creek, as illustrated by the Wetland Map (Figure 3).

4.1.2 Classification

Under the Cowardin Classification System for Wetlands and Deepwater Habitats (Cowardin et al., 1979), the Brush Creek Wetland is classified in the Palustrine System, with Emergent Persistent and Scrub-Shrub Wetland Classes.

4.1.3 Vegetation

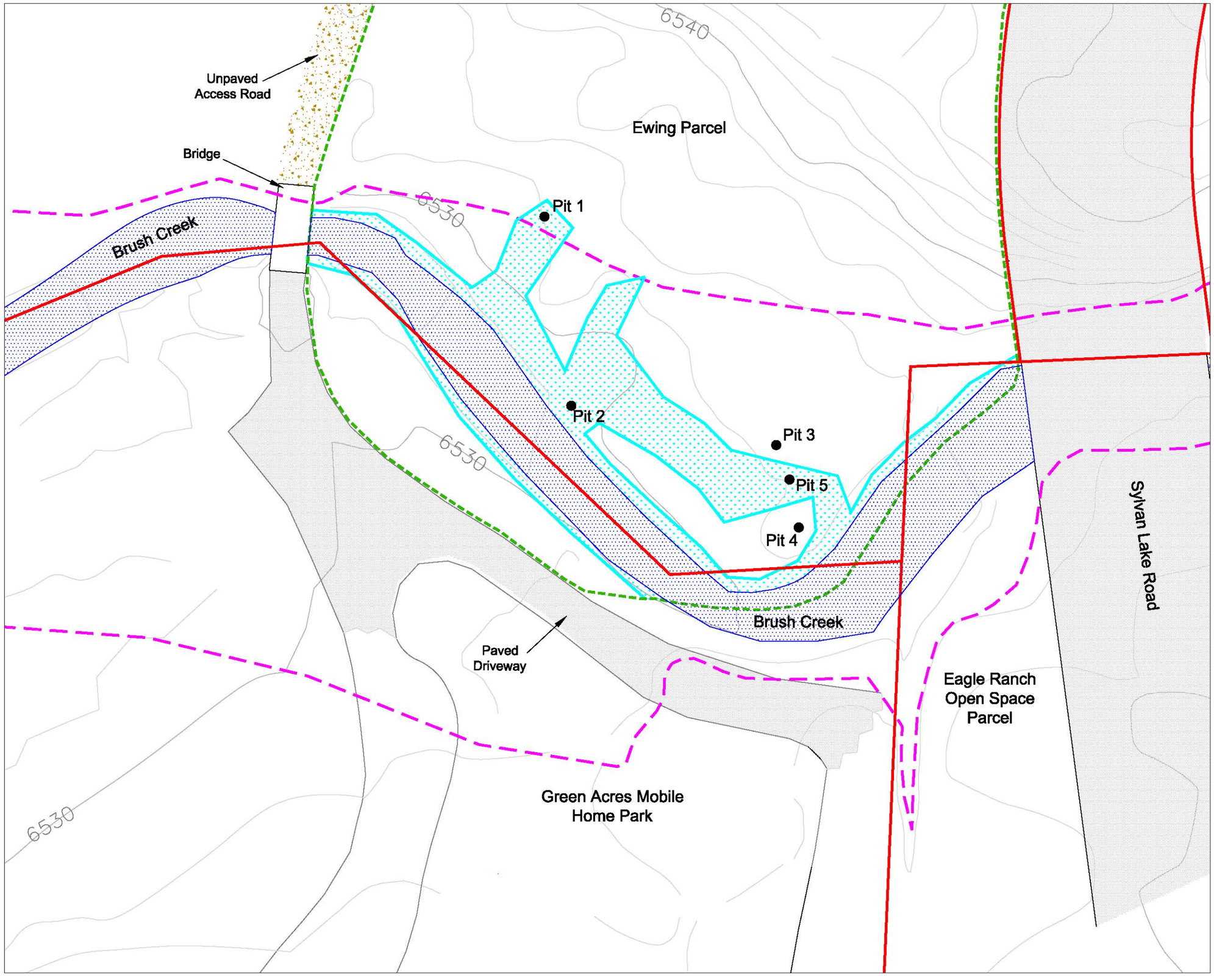
Within the Ewing Parcel on the north side of Brush Creek, the wetland has a well-developed overstory of riparian trees and shrubs (Photo 1). Narrowleaf cottonwoods *(Populus angustifolia)* are the dominant trees, however Russian olives *(Elaeagnus angustifolia)*, a state-listed noxious weed, are also present. In the shrub layer, there are small stands of sandbar willow *(Salix exigua)*, as well as mixed stands with silver buffaloberry *(Shepherdia argentea)*, hawthorn *(Crataegus rivularis)*, Woods' rose *(Rosa woodsii)*, mountain willow *(Salix monticola)*, Bebb willow *(Salix bebbiana)*, and yellow currant *(Ribes aureum)*. In the herbaceous understory, reed canarygrass *(Phalaris arundinacea)* is the most abundant plant, where it grows in the shallow water along the edge of the creek, and in low areas on the adjacent terrace with seasonally high ground water (Photo 2). Other common graminoids in the saturated soil habitat include beaked sedge *(Carex utriculata)* (Photo 3), Nebraska sedge *(Carex nebrascensis)*, and woolly sedge *(Carex lanuginosa)* in the wetter areas, and redtop *(Agrostis gigantea)*, clustered field sedge *(Carex praegracilis)*, Baltic rush *(Juncus balticus ssp. ater)*, and Kentucky bluegrass *(Poa pratensis)* in drier areas. Some of the common forbs in the saturated soil habitat include stinging nettle *(Urtica gracilis ssp. gracilis)*, Siskiyou aster *(Aster lanceolatus ssp. hesperius)*, willow-leaved dock *(Rumex triangulivalvis)*, and New Mexico checkermallow *(Sidalcea neomexicana)*. Table 1 lists the vascular plant species observed in the project area during the wetland delineation.

In the mobile home park, the south bank of Brush Creek has been planted with an irrigated Kentucky bluegrass lawn that extends to the edge of the creek and there is little woody vegetation (Photo 4). In the saturated soils next to the creek, scattered hydrophytes are growing in the lawn, including Nebraska sedge, woolly sedge, redtop, red fescue *(Festuca rubra)*, and meadow fescue *(Festuca pratensis)* (Photo 5). Alsike clover *(Trifolium hybridum)* is also common in the lawn. Two blue spruce *(Picea pungens)* trees have been planted in the lawn near the creek. In the shallow water of the channel, there is a narrow band of reed canarygrass that lines the bank.

4.1.4 Hydrology

The Brush Creek Wetland is supported by perennial flows in the creek that saturate the banks, as well as a seasonally high ground water table associated with the alluvial aquifer. In addition, small depressions on the terrace north of the creek collect a small volume of snowmelt and stormwater runoff. Irrigation of the lawn south of the creek also provides some water to the wetland.

Figure 3. Wetland Map
Ewing Parcel
Sewer Main Extension



Legend:

- Wetlands*
- Aquatic Habitat
- Property Boundaries
- 100 Year Floodplain
- Delineation Boundary
- Pit 1 — Soil Pits

* Please note, the U.S. Army Corps of Engineers has not visited the project site to verify the wetland boundary. Wetland boundaries were surveyed by Alpine Engineering of Edwards, Colorado.

Date: April 2008
Scale: 1 in = 40 ft

prepared by:
Western Ecological Resource, Inc.
711 Walnut Street
Boulder, CO 80302
(303) 449-9009 FAX (303) 449-9038

4.1.5 Soils

Three soil pits were dug within the boundary of the Brush Creek Wetland. Pit 1 is located on the terrace north of the creek approximately four feet above the stream flow elevation at the time of the delineation. The soil was not saturated, but it contained oxidized root channels and mottles, which are indicative of reducing conditions. The hydric soil in Pit 1 is in the Fluvaquentic Epiaquolls. Pit 2 is located on a narrow levee approximately 1.5 feet above the stream flow elevation on the day of the delineation, in a marginal area near an upland island. The soil was not saturated, but oxidized root channels and mottles were present below a depth of seven inches. The hydric soil in Pit 2 is also classified in the Fluvaquentic Epiaquolls. Pit 5 is located in a low area on the terrace north of the creek. Soil in the pit was not saturated, but it did contain mottles below a depth of seven inches, as well as oxidized root channels. This soil is hydric, and is classified in the Fluvaquentic Endoaquolls.

5.0 Wildlife Habitats & Use

A comprehensive Wildlife Assessment Report that includes the project area was prepared for the Eagle Ranch development (Rick Thompson, Western Ecosystems, 1996). The Assessment Report states that Brush Creek provides year-round habitat for fish, waterbirds, waterfowl, muskrats, and beaver. Within Eagle Ranch and in the project area, Brush Creek is generally considered a high-value wildlife habitat.

Brush Creek supports a fishery with mottled sculpin, brown trout, and rainbow trout (R. Thompson, 1996; B. Heicher, Town of Eagle Open Space Coordinator, personal communication). Due to the effects of whirling disease, brown trout comprise approximately 85% of the trout population, although this varies seasonally (B. Heicher, personal communication). Rainbow trout are most common in Brush Creek during the spring and summer months when they migrate upstream from the Eagle River to spawn. In contrast, brown trout are most abundant during spawning in the late summer and fall. Although spawning dates vary, general guidelines have been established for each species that identify sensitive time periods for spawning and egg development. For rainbow trout, this sensitive period is between March 15 and July 15. For brown trout, the period is between September 15 and March 15. Please note, although brown trout spawn in the fall, their eggs overwinter in the gravel streambed and egg development continues into the spring months, when hatching occurs.

The project site is located on Brush Creek approximately 2,000 linear feet upstream of the confluence of Brush Creek and the Eagle River. Due to its proximity to the Eagle River, this reach is potentially more important for spawning than other areas of Brush Creek located farther upstream (B. Heicher, Town of Eagle Open Space Coordinator, personal communication; Brian Healey, USFS Fisheries Biologist, personal communication).

The project area is within the overall range of elk and mule deer. However, the value of the project area for these species is reduced by the proximity of Sylvan Lake Road, Highway 6, the Highway Roundabout, and disturbances associated with humans in the mobile home park. In addition, the native vegetation south of the creek has been eliminated, which further reduces the wildlife habitat value.

There are no threatened, endangered, or candidate wildlife that occur in the location of the proposed sewer line crossing. The proposed project has no water depletions and hence would not affect the four endangered Colorado River fish (Colorado pikeminnow, bonytail chub, humpback chub, and razorback sucker) that occur far downstream of the project area on the mainstem of the Colorado River.

6.0 Proposed Project

In order to prepare the Ewing Parcel for sale, sewer service must be extended to the parcel from the existing sanitary sewer system in the adjacent Green Acres Mobile Home Park (Figure 4).

6.1 Details

6.1.1 Sewer Line Extension

The proposed sewer main extension would connect to the existing 8-inch PVC sewer line at the location of an existing manhole in the Green Acres Mobile Home Park. The new sewer line, a C900 type 8-inch PVC pipe, would extend southeast for approximately 119 feet from the existing manhole, then turn northeast and continue for another 150 feet to cross Brush Creek and terminate on the Ewing Parcel north of the creek. To minimize adverse impacts to the existing wetland hydrology, clay check dams would be installed along the proposed sewer line in all wetland areas.

6.1.2 Temporary Diversion of Brush Creek

A temporary cofferdam will be used to divert the stream flow of Brush Creek to allow installation of the sewer line below the streambed. A pump will be used to convey water from the cofferdam and return it to Brush Creek downstream of the work area. Thus, the flow in Brush Creek downstream of the work area will be maintained during installation of the sewer line.

6.1.3 Sediment Control Measures

The project will utilize Best Management Practices to comply with erosion control standards identified by Eagle County and the Town of Eagle. These measures will include the use of silt fencing, straw bales, and other approved methods to limit sedimentation into wetlands and the aquatic habitat of Brush Creek. In addition, two temporary sediment traps with removable pumping stations or sump pits will be constructed in uplands near the work area to filter ground water encountered during the construction process (Figures 4-7). Ground water present in the excavated sewer line trench will be pumped into the sediment trap where it will be filtered through clean gravel or stone. A second pump will pull water from the sediment trap and the clean, filtered water will be pumped into Brush Creek downstream of the work area.

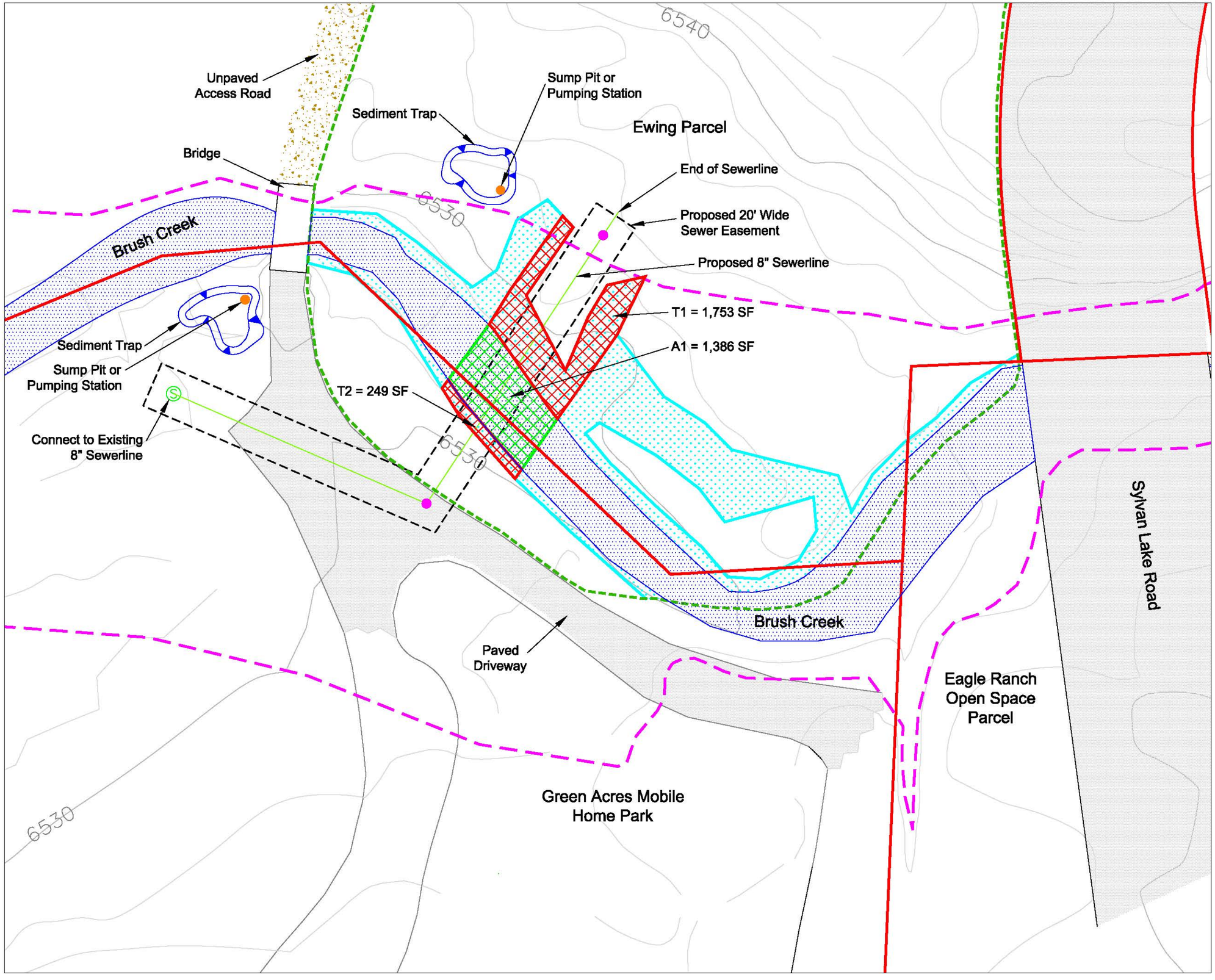
6.2 Waters of the U.S. Impacts

The proposed sewer line would temporarily impact 2,002 square feet (0.05 acre) of wetlands and 1,386 square feet of the aquatic habitat of Brush Creek (Figure 4). Specifically, 1,753 square feet of wetlands would be temporarily impacted north of the creek (T1) and 249 square feet would be temporarily impacted south of the creek (T2).

6.3 Avoidance & Minimization

The proposed sewer line crossing was designed to minimize the temporary impacts to wetlands and the aquatic habitat of Brush Creek. In designing the crossing, several alternative sewer alignments were evaluated. As shown by Figure 4, the proposed sewer line crosses the wetland in a narrow area between two lobes of the wetland that extend north from the channel. One alternative considered which would have a smaller wetland impact would locate the sewer line farther to the west near the small bridge over Brush Creek. However, this alternative was rejected because the configuration would not provide the minimum amount of soil cover required on top of the pipeline due to scour concerns in the creek bed. The preferred sewer alignment minimizes the temporary impacts to wetlands while meeting the requirements of the Town of Eagle to provide sufficient soil cover on top of the sewer line.

Figure 4. Proposed Sewerline & Wetland Impact Map Ewing Parcel Sewer Main Extension

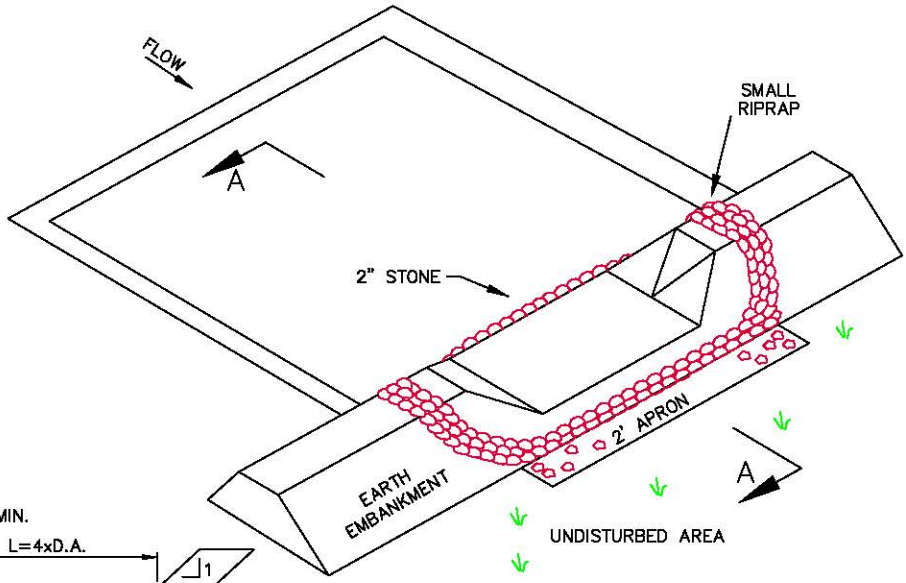


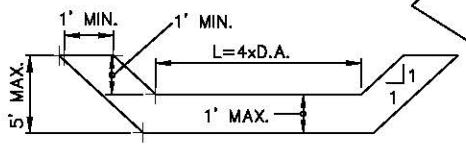
Legend:

- Wetlands
- Aquatic Habitat
- Temporary Wetland Impact
- Temporary Aquatic Habitat Impact
- Property Boundary
- 100 Year Floodplain
- Sanitary Sewerline

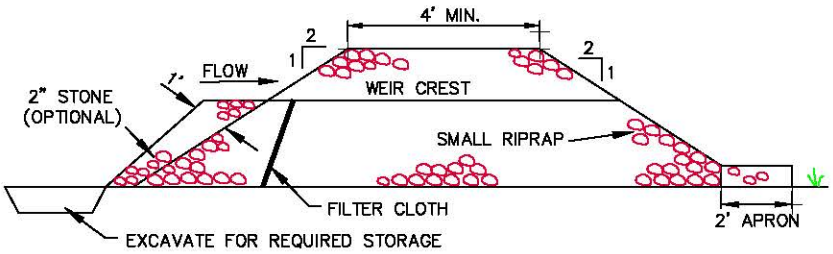
Date: April 2008
Scale: 1 in = 40 ft

prepared by:
Western Ecological Resource, Inc.
711 Walnut Street
Boulder, CO 80302
(303) 449-9009 FAX (303) 449-9038





PROFILE



CROSS SECTION A–A

OPTION: A ONE FOOT LAYER OF 2" STONE MAY BE PLACED ON THE UPSTREAM SIDE OF THE RIPRAP IN PLACE OF THE EMBEDDED FILTER CLOTH.

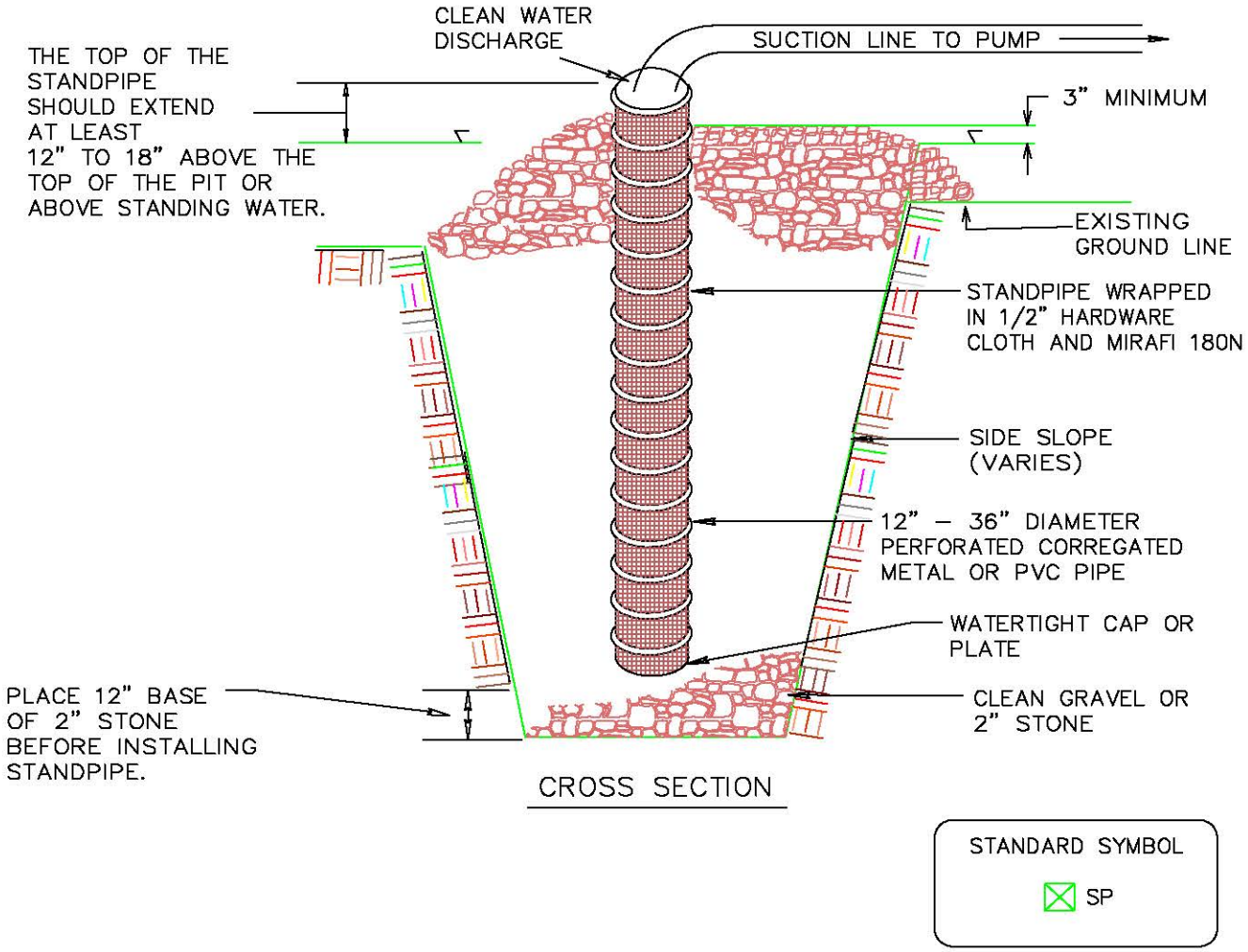
CONSTRUCTION SPECIFICATIONS

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER–SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIPRAP 4"–8" ALONG WITH A 1' THICKNESS OF 2" AGGREGATE PLACED ON THE UP–GRADE SIDE ON THE SMALL RIPRAP OR EMBEDDED FILTER CLOTH IN THE RIPRAP.
5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 THE DESIGN DEPTH OF THE TRAP.
6. THE STRUCTURE SHALLL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.
7. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION IS MINIMIZED.
8. THE STRUCTURE SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

Figure 5. Sediment Trap Detail

Date: April 2008
Scale: Not to Scale

ALPINE AEI ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 926-3390 •



Construction Specifications

1. Pit dimensions are variable, with the minimum diameter being 2 times the standpipe diameter.

2. The standpipe should be constructed by perforating a 12" to 24" diameter corrugated or PVC pipe. Then wrapping with 1/2" hardware cloth and Mirafi 180N. The perforations shall be 1/2" x 6" slits or 1" diameter holes.

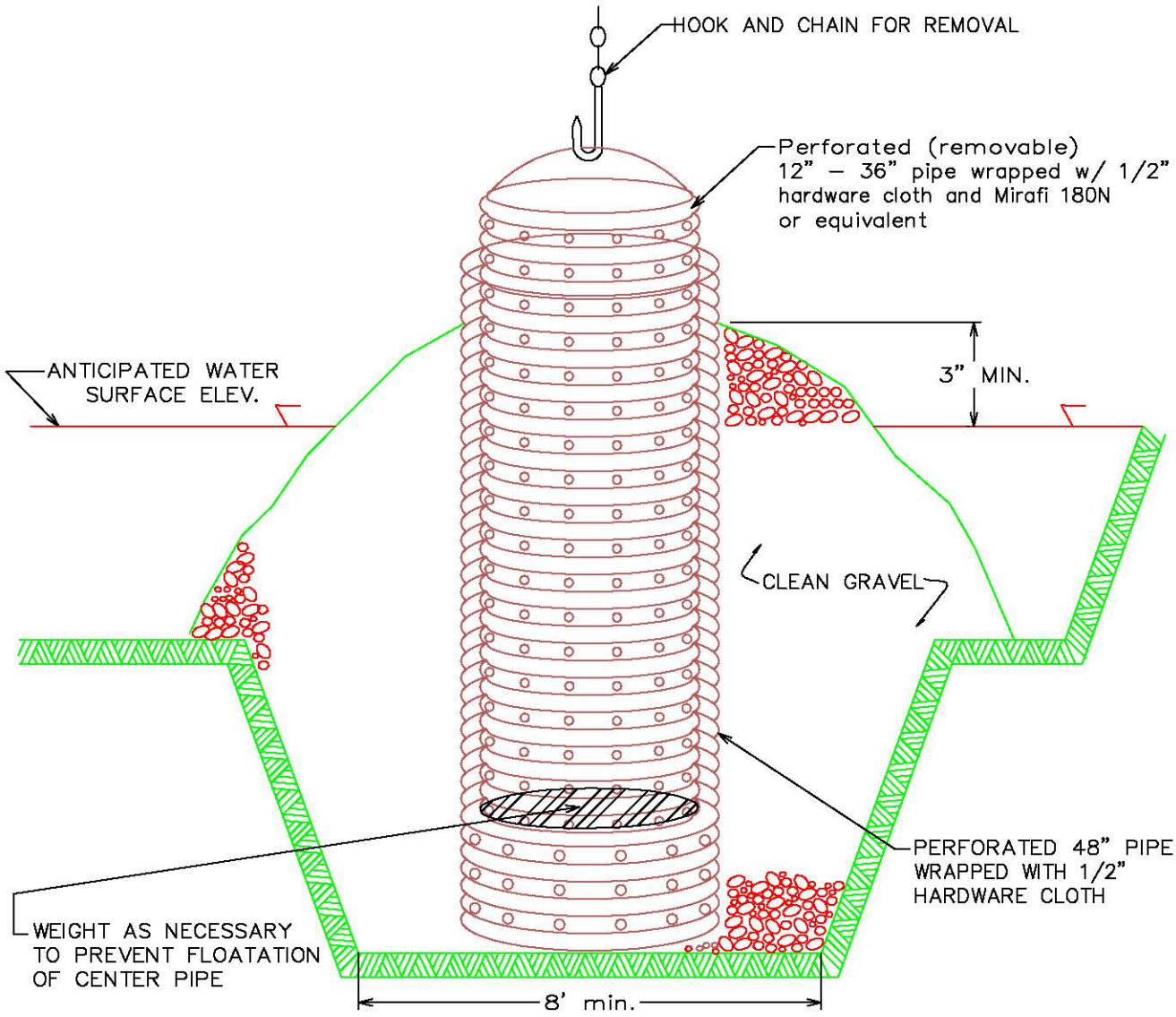
3. A base of filter material consisting of clean gravel or 2" stone should be placed in the pit to a depth of 12". After installing the standpipe, the pit surrounding the standpipe should then be backfilled with the same filter material.

4. The standpipe should extend 12" to 18" above the lip of the pit or the riser crest elevation (basin dewatering only) and the filter material should extend 3" minimum above the anticipated standing water elevation.

Figure 6. Sump Pit Detail

Date: April 2008
Scale: Not to Scale

ALPINE AEI ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 926-3390 •



ELEVATION

Construction Specifications

1. The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.

2. After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.

3. The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" X 6" slits or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Mirafi 180N.

4. The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

Figure 7. Removable Pumping Station Detail

Date: April 2008
Scale: Not to Scale

ALPINE AEI ENGINEERING INC
EDWARDS BUSINESS CENTER • P.O. BOX 97
EDWARDS, COLORADO 81632
• 970 926-3373 • FAX 926-3390 •

Where the sewer line crosses Brush Creek, a trench box will be used to minimize the width of the trench to 20 feet and hence the area of disturbance to the streambed. Best Management Practices will be utilized to minimize siltation into Brush Creek, including the use of silt fencing, straw bales, and other procedures outlined in Eagle County's Erosion Control Standards. As illustrated by Figures 4-7, two sediment traps with sump pits or removable pumping stations will be used to filter ground water encountered during the excavation before it is pumped to Brush Creek. Pumps will also be used to convey water from the cofferdam back into Brush Creek downstream of the work area to maintain the stream flow. It is anticipated that work in Brush Creek will be completed between July 15 and September 15, between the two sensitive time periods for rainbow trout (March 15- July 15) and brown trout (September 15 – March 15), thereby reducing potential impacts to spawning fish.

6.4 Impacts to Fish & Wildlife

During the sewer line installation, there will be a temporary impact to the aquatic habitat of Brush Creek, which is a spawning area for brown and rainbow trout. However, as described above, it is anticipated that the work will be completed between July 15 and September 15, thereby avoiding the most sensitive time periods, specifically March 15 – July 15 for rainbow trout and September 15 – March 15 for brown trout. In addition, several mitigation measures will be employed to reduce impacts to fish. First, a trench box will be used to limit the area of the streambed disturbance. Second, there will be no interruption of the stream flow downstream of the work area. A temporary cofferdam will be used to dewater the work area for the sewer line installation, and pumps will be used to convey the water from above the cofferdam back into the creek below the work area. Third, Best Management Practices will be employed to minimize sedimentation into the creek that could negatively impact fish. For example, turbid ground water encountered in the sewer line trench will be filtered through one of two sediment traps with sump pits or removable pumping stations before being pumped into Brush Creek below the work area. Silt fencing, straw bales, and other measures will also be employed to prevent sediment-laden runoff from entering the creek.

7.0 Mitigation

The 2,002 square feet of temporary impacts to herbaceous wetlands will be restored by returning the disturbed area to its original topography with material excavated from the trench, and then replacing the salvaged wetland sod.

During excavation, the upper 12-18 inches of wetland sod and the hydric soils will be salvaged and briefly stockpiled in accordance with the terms of Nationwide Permit No. 12. Subsoil material will then be removed and stockpiled separately. Following pipeline installation, the impacted wetlands will be returned to their original topography by replacing the salvaged subsoil to achieve a grade approximately 12-18 inches below the original topography, then replacing the upper 12-18 inches of salvaged hydric soil and wetland sod to achieve the original topography. If required, a geofabric will be used to stabilize salvaged vegetation on the banks of Brush Creek and reduce the potential for detrimental erosion. If there is poor vegetation establishment from the salvaged materials, the native wetland seed mix of Table 2 will be applied. On the north bank of Brush Creek, sandbar willow cuttings will also be harvested from adjacent populations and planted in the mitigation area.

The substrate excavated from the streambed of Brush Creek will be replaced following pipeline installation and the streambed will be returned to its approximate original topography.

8.0 Monitoring

After the sewer line installation is complete and the salvaged hydric soils and wetland sod have been replaced in the mitigation area, a wetland ecologist will visit the site and prepare a brief letter to the Corps documenting the As-Built Condition. In addition, the site will be monitored during the growing season following installation to document vegetation establishment, and identify any potential problems with hydrology, erosion, weed invasion, or human and wildlife use. The ecologist will determine if there is adequate vegetation establishment from the salvaged plant materials or if a wetland seeding is necessary. A list of the plant species growing in the restoration area will be compiled and photographs will be taken to document the progress of the restoration. The monitoring data will be summarized in a brief Wetland Monitoring Report to be submitted to the U.S. Army Corps of Engineers.

9.0 Photos

Photo 1. Brush Creek Wetland, view to the east near the location of the proposed sewer line crossing. The north bank has a well developed riparian habitat. (10/29/07).

Photo 2. Reed canarygrass is the dominant herbaceous vegetation along the banks of Brush Creek and on this small island in the channel. (10/19/07).

Photo 3. This depression north of Brush Creek contains a stand of beaked sedge and is supported by a seasonally high ground water table. (10/29/07).

Photo 4. The riparian habitat on the south side of Brush Creek has been replaced with a bluegrass lawn, however hydrophytes still occur along the bank. (10/29/07).

Photo 5. Nebraska sedge, woolly sedge, redtop, and red fescue grow in a narrow band at the edge of the lawn & reed canarygrass is present in the shallow water. (10/29/07).

10.0 Tables

TABLE 1
Vascular Plant Species List
Ewing Parcel Sewer Main Extension

Scientific Name	Common Name	Family	Origin*	Wetland Status**
Trees				
Elaeagnus angustifolia	Russian olive	Eleangnaceae	I+	FAC
Picea pungens	Blue spruce	Pinaceae	N	FAC-
Populus angustifolia	Narrowleaf cottonwood	Salicaceae	N	FAC*
Shrubs				
Crataegus rivularis	Hawthorn	Rosaceae	N	NL
Ribes aureum	Yellow currant	Grossulariaceae	N	FACW
Ribes inerme	Whitestem gooseberry	Grossulariaceae	N	FAC+
Rosa woodsii	Woods' rose	Rosaceae	N	FAC-
Salix bebbiana	Bebb willow	Salicaceae	N	FACW+
Salix exigua	Sandbar willow	Salicaceae	N	OBL
Salix monticola	Mountain willow	Salicaceae	N	OBL
Shepherdia argentea	Silver buffaloberry	Elaeagnaceae	N	NL
Perennial Graminoids				
Agrostis gigantea (A. alba)	Redtop	Poaceae	I	FACW
Bromus inermis	Smooth brome	Poaceae	I	NL
Carex lanuginosa	Woolly sedge	Cyperaceae	N	OBL
Carex nebrascensis	Nebraska sedge	Cyperaceae	N	OBL
Carex praegracilis	Clustered field sedge	Cyperaceae	N	FACW
Carex utriculata (C. rostrata)	Beaked sedge	Cyperaceae	N	OBL
Elymus cinereus	Basin wild rye	Poaceae	I	NI
Elymus lanceolatus	Thickspike wheatgrass	Poaceae	N	NL
Elymus trachycaulus	Slender wheatgrass	Poaceae	N	FACU
Elytrigia repens	Quackgrass	Poaceae	I+	FACU
Festuca pratensis	Meadow fescue	Poaceae	I	FACU
Festuca rubra	Red fescue	Poaceae	N	FAC
Juncus arcticus ssp. ater (J.balticus)	Baltic rush	Juncaceae	N	FACW
Phalaris arundinacea	Reed Canarygrass	Poaceae	I	OBL
Poa pratensis	Kentucky bluegrass	Poaceae	I	FACU
Scirpus pungens (S. americanus)	Threesquare bulrush	Cyperaceae	N	OBL
Triglochin maritimum	Arrowgrass	Juncaginaceae	N	OBL
Perennial Forbs				
Achillea lanulosa	Yarrow	Asteraceae	N	FACU
Aster lanceolatus ssp. hesperius	Siskiyou aster	Asteraceae	N	OBL
Cirsium arvense	Canada thistle	Asteraceae	I+	FACU

TABLE 1
Vascular Plant Species List
Ewing Parcel Sewer Main Extension

Scientific Name	Common Name	Family	Origin*	Wetland Status**
Epilobium ciliatum	Northern willowherb	Onagraceae	N	FAC
Rumex triangulivalvis	Willow-leaved dock	Polygonaceae	N	FACW
Sidalcea neomexicana	New Mexico checkermallow	Malvaceae	N	FACW
Trifolium hybridum	Alsike clover	Fabaceae	I	FAC-
Urtica gracilis ssp. gracilis	Stinging nettle	Urticaceae	N	FAC
Ferns & Fern Allies				
Equisetum arvense	Field horsetail	Equisetaceae	N	FAC+
Hippochaete laevigata	Smooth horsetail	Equisetaceae	N	FACW
Annual/Biennial Forbs				
Descurainia sophia	Flixweed	Brassicaceae	I+	NI
Kochia scoparia	Kochia	Chenopodiaceae	I	FACU
Melilotus officinalis	Yellow sweet clover	Fabaceae	I	FACU

* Origin

N = Native
I = Introduced
I+ = Colorado State Noxious Weed

** Wetland Status

OBL = Obligate Wetland
FACW = Facultative Wetland
FAC = Facultative
FACU = Facultative Upland
UPL = Obligate Upland
NO/NL = No Status in this Region

TABLE 2
Wetland Seed Mix
Ewing Parcel Sewer Main Extension

Scientific Name	Common Name	Origin*	Wetland Status**	Seeding Rate# (PLS Lbs./acre)
Perennial Graminoids				
Carex praegracilis	Clustered field sedge	N	FACW	1/2
Eleocharis palustris	Creeping spikerush	N	OBL	1
Juncus arcticus ssp. ater (J.balticus)	Baltic rush	N	FACW	1/8
Juncus longistylis	Long styled rush	N	FACW+	1/8
Juncus torreyi	Torrey's rush	N	FACW+	1/8
Triglochin maritimum	Arrowgrass	N	OBL	1
		Total Perennial Graminoids		**2 7/8**
Perennial Forbs				
Aster lanceolatus ssp. hesperius	Siskiyou aster	N	OBL	1
Sidalcea candida	Checker mallow	N	FACW+	2
		Total Perennial Forbs		**3**
			GRAND TOTAL	**5 7/8**

This seeding rate corresponds to approximately 173 seeds per square foot.

* Origin

N = Native
I = Introduced
I+ = Colorado State Noxious Weed

** Wetland Status

OBL = Obligate Wetland
FACW = Facultative Wetland
FAC = Facultative
FACU = Facultative Upland
UPL = Obligate Upland
NO/NL = No Status in this Region

11.0 References

Colorado Natural Heritage Program (CNHP). 2003. Field Guide to the Wetland and Riparian Plant Associations of Colorado. Colorado Natural Heritage Program, Fort Collins, Colorado.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. La Roe. 1979. Classification of wetlands and deepwater habitats of the United States. U.S. Fish and Wildlife Service Pub. FWS/OBS-79/31, Washington, D.C., 103 p.

Harrington, H.D. 1964. Manual of the Plants of Colorado. The Swallow Press, Inc. Chicago, Illinois 60605.

Kartesz, J.T. 1994a. A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland. Vol. 1 - Checklist. Second edition. Timber Press, Inc. Portland, Oregon. 622 p.

Kartesz, J.T. 1994b. A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland. Vol. 2 - Thesaurus. Second edition. Timber Press, Inc. Portland, Oregon. 816 p.

National List of Plant Species that Occur in Wetlands. 1988 List. Intermountain (R8) Region. http://www.nwi.fws.gov/bha/

NatureServe Explorer: An Online Encyclopedia of Life. http://www.natureserve.org/explorer/

U.S. Army Corps of Engineers. 1987. Wetlands Delineation Manual, Technical Report Y-87-1. U.S. Army Corps of Engineer Waterways Experiment Station, Vicksburg, MS.

USDA, NRCS. 2007. The PLANTS Database (http://plants.usda.gov). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

University of Colorado Herbarium (COLO). Specimen Database of Colorado Vascular Plants. http://cumuseum.colorado.edu/Research/Botany/Databases/search.php

Weber, W. A. and R. C. Whitmann. 2001. Colorado Flora: Western Slope, Third edition. University Press of Colorado. Boulder, Colorado.

Weber, W.A. & R.C. Wittmann, 1992. Catalog of the Colorado Flora: a Biodiversity Baseline. University Press of Colorado. Niwot, Colorado. Including most recent addenda available from CU Herbarium (COLO), Boulder, Colorado.

Appendix A. Field Data Forms

HP Geotech
HEPWORTH-PAWLAK GEOTECHNICAL

Hepworth-Pawlak Geotechnical, Inc.
5020 County Road 154
Glenwood Springs, Colorado 81601
Phone: 970-945-7988

Fax: 970-945-8454
email: hpgeo@hpgeotech.com

SUBSOIL STUDY
FOR FOUNDATION DESIGN
PROPOSED SYLVAN CIRCLE TOWNHOMES
58 SYLVAN LAKE ROAD
EAGLE, COLORADO

JOB NO. 116 035A

APRIL 27, 2016

PREPARED FOR:

CREATIVE WEST ARCHITECTS
ATTN: JONATHON WARNER
4400 OSAGE DRIVE
BOULDER, COLORADO 80303
jon@creativewestarchitects.com

TABLE OF CONTENTS

PURPOSE AND SCOPE OF STUDY

This report presents the results of a subsoil study for the proposed Sylvan Circle Townhomes development to be located at 58 Sylvan Lake Road, Eagle, Colorado. The project site is shown on Figure 1. The purpose of the study was to develop recommendations for the foundation design. The study was conducted in accordance with our proposal for geotechnical engineering services to Creative West Architects dated February 22, 2016.

A field exploration program consisting of exploratory borings was conducted to obtain information on the subsurface conditions. Samples of the subsoils and bedrock obtained during the field exploration were tested in the laboratory to determine their classification, compressibility or swell and other engineering characteristics. The results of the field exploration and laboratory testing were analyzed to develop recommendations for foundation types, depths and allowable pressures for the proposed building foundations. This report summarizes the data obtained during this study and presents our conclusions, design recommendations and other geotechnical engineering considerations based on the proposed construction and the subsurface conditions encountered.

BACKGROUND INFORMATION

Hepworth-Pawlak Geotechnical, Inc. previously conducted a preliminary geotechnical study for the Ewing Parcel which included the subject site and presented our findings in a report dated June 17, 1998, Job No. 197 567. We have been provided a report of geotechnical exploration for a proposed Kum & Go Store on a portion of the subject site prepared by Olsson Associates dated June 26, 2012, Project No. 012-0160. Information from these reports has been reviewed and considered in the preparation of this report.

PROPOSED CONSTRUCTION

The proposed development, shown on Figure 1, will consist of seven multi-family townhome buildings. The buildings will typically be two story wood frame structures over crawlspace or with ground floor slabs-at-grade. Some of the buildings will probably have basement levels with slab-on-grade floors. The lower bench of the site near Brush Creek will be elevated with moderate fill depth. We assume relatively light foundation loadings, typical of the proposed type of construction. Cut depths for the buildings are expected to range from about 3 to 8 feet. There will be asphalt paved access drives and parking.

If building loadings, location or grading plans change significantly from those described above, we should be notified to re-evaluate the recommendations contained in this report.

SITE CONDITIONS

The site consists of an upper, previously graded fill bench near Sylvan Lake Road and Highway 6, and a lower, mostly natural bench near Brush Creek, see Figure 1. There is an older, backfilled foundation in the southern part of the upper bench. There are also several shallow fill piles on the lower bench. The upper and lower benches are relatively flat with slope grades from about 3 to 5% down to the southwest. The intervening slope between the benches is moderately steep on the order of 20 to 30% grade and from about 8 to 12 feet high. Elevation difference across the individual building sites ranges from about 5 to 15 feet, and across the site is about 30 to 35 feet. The lower bench area is about 4 to 6 feet above Brush Creek.

Vegetation consists of grass and weeds with scattered brush and some willows and cattails near Brush Creek. There are scattered boulders and cobbles on the ground surface. There is considerable fill along the north side of the site from recent improvements along Highway 6.

SINKHOLE POTENTIAL

Bedrock of the Pennsylvanian age Eagle Valley Evaporite underlies the site. These rocks are a sequence of gypsiferous shale, fine-grained sandstone and siltstone with some massive beds of gypsum and limestone. There is a possibility that massive gypsum deposits associated with the Eagle Valley Evaporite underlie portions of the property. Dissolution of the gypsum under certain conditions can cause sinkholes to develop and can produce areas of localized subsidence. During previous work in Eagle Ranch, several sinkholes were observed scattered throughout the Brush Creek valley. These sinkholes appear similar to others associated with the Eagle Valley Evaporite in other areas of the Eagle River valley.

Sinkholes were not observed in the immediate area of the subject site. No evidence of cavities was encountered in the subsurface materials; however, the exploratory borings were relatively shallow, for foundation design only. The existing grading on the site could have covered any existing sinkholes which can be further evaluated when the site is stripped of old fill and topsoil during construction. Based on our present knowledge of the subsurface conditions at the site, it cannot be said for certain that sinkholes will not develop. The risk of future ground subsidence at the Sylvan Circle Townhomes development site throughout the service life of the proposed buildings, in our opinion, is low and similar to other nearby sites; however, the owners should be made aware of the potential for sinkhole development. If further investigation of possible cavities in the bedrock below the site is desired, we should be contacted.

FIELD EXPLORATION

The field exploration for the project was conducted on March 9 and 10, 2016. Eight exploratory borings were drilled at the locations shown on Figure 1 to evaluate the subsurface conditions. The boring locations were field staked by the surveyor prior to our field exploration. The borings were advanced with 4-inch diameter continuous flight

augers powered by a truck-mounted CME-45B drill rig. The borings were logged by a representative of Hepworth-Pawlak Geotechnical, Inc.

Samples of the subsoils and bedrock were taken with 1⅜ inch and 2 inch I.D. spoon samplers. The samplers were driven into the subsoils and bedrock at various depths with blows from a 140-pound hammer falling 30 inches. This test is similar to the standard penetration test described by ASTM Method D-1586. The penetration resistance values are an indication of the relative density or consistency of the subsoils and hardness of the bedrock. Depths at which the samples were taken and the penetration resistance values are shown on the Logs of Exploratory Borings, Figures 2 and 3. The samples were returned to our laboratory for review by the project engineer and testing.

SUBSURFACE CONDITIONS

Graphic logs of the subsurface conditions encountered at the site are shown on Figures 2 and 3. The subsoils at the site were somewhat variable with respect to type, depth and engineering characteristics. The subsoils encountered, below from about 2 to 8 feet of fill and/or organic topsoil, consisted of generally medium dense to dense, silty sandy to very sandy gravel and cobbles with boulders underlain with depth by weathered to hard claystone/siltstone. Boring 5 encountered a 2 feet thick layer of clayey silty sand below the fill and overlying the coarse granular soils, and Boring 7 encountered clayey silty sand at depths between 10 and 16½ feet within the natural coarse granular soils. The clayey silty sand was loose to medium dense and contained some very sandy clay and silt zones. The claystone/siltstone which was encountered only in Borings 4 and 6 through 8 at depths from 9 to 20 feet, was medium hard in the weathered zone becoming less weathered and hard to very hard with depth. The claystone/siltstone is of the Eagle Valley Evaporite. The fill consisted primarily of clayey to silty sand and gravel with cobbles, and some sandy clay and silt with gravel and organics at Boring 4. Drilling in the dense, coarse granular soils with auger equipment was difficult due to the cobbles and boulders and drilling refusal was encountered in the deposit in Borings 1 through 3 and 5.

Laboratory testing performed on samples obtained from the borings included natural moisture content and density, gradation analyses, and Atterberg limits. Results of swell-consolidation testing performed on relatively undisturbed drive samples of the claystone/siltstone, presented on Figure 5, indicate low compressibility under conditions of loading and wetting with no swell potential when wetted under a constant 1,000 psf surcharge. Results of gradation analyses performed on small diameter drive samples (minus ¾ to 1½ inch fraction) of the fill and natural granular subsoils are shown on Figures 6 through 8. The laboratory testing is summarized in Table 1.

Free water was encountered in Borings 4 and 6 through 8 at the time of drilling or when checked 25 or 26 days later at depths from about 2 to 8 feet. No free water was encountered in Borings 1 through 3 and 5 located on the upper bench area. The subsoils were moist to very moist becoming wet near and below the free water level. The claystone/siltstone was moist to generally slightly moist with depth.

FOUNDATION BEARING CONDITIONS

At assumed excavation depths, the subgrade conditions will vary across the site. In general, shallow excavations will be in the existing fill and/or topsoil which are not suitable for support of spread footing foundations. Spread footings bearing on the natural dense, coarse granular soils or on properly placed and compacted structural fill should be suitable for support of buildings with some risk of settlement. The risk of settlement is primarily from variable bearing conditions such as transitioning structural fill to natural coarse granular soils, or where footings are underlain by compressible clayey silty sand soils.

Drilled piers or micro-piles bearing in the hard to very hard claystone/siltstone are suitable foundation alternatives and should provide a relatively low risk of movement. Provided below are recommendations for spread footings. If recommendations for a drilled pier or micro-pile foundation system are desired, we should be contacted.

DESIGN RECOMMENDATIONS

FOUNDATIONS

Considering the subsurface conditions encountered in the exploratory borings and the nature of the proposed construction, we recommend the buildings be founded with spread footings bearing on the natural granular soils and/or properly placed and compacted structural fill with some risk of settlement. Suitable structural fill materials include road base, single pass (minus 6 inch size) "pit-run" sand and gravel or similar materials such as the on-site coarse granular soils. Some of the existing fill on the site may also be feasible for us as structural fill provided debris, topsoil and oversized rocks are removed.

The design and construction criteria presented below should be observed for a spread footing foundation system.

1) Footings placed on the undisturbed natural granular soils or compacted structural fill should be designed for an allowable bearing pressure of 2,000 psf. Based on experience, we expect settlement of footings designed and constructed as discussed in this section will be up to about 1 to 1½ inches.
2) The footings should have a minimum width of 18 inches for continuous walls and 2 feet for isolated pads.
3) Exterior footings and footings beneath unheated areas should be provided with adequate soil cover above their bearing elevation for frost protection. Placement of foundations at least 48 inches below exterior grade is typically used in this area.
4) Continuous foundation walls should be heavily reinforced top and bottom to span local anomalies such as by assuming an unsupported length of at least 14 feet. Foundation walls acting as retaining structures should also be designed to resist lateral earth pressures as discussed in the "Foundation and Retaining Walls" section of this report.

5) All existing fill, debris, topsoil, fine grained soils and any loose disturbed soils should be removed and the footing bearing level extended down to the natural coarse granular soils. Structural fill placed on the natural coarse granular soils below footings areas should be compacted to at least 98% standard Proctor density at a moisture content within about 2% of optimum. Prior to the footing construction or fill placement, the exposed soils should be adjusted to near optimum moisture content and compacted. If water seepage is encountered, the excavation should be dewatered. The subgrade in areas may need to be stabilized such as by subexcavation and replacement with coarse granular soils.

6) A representative of the geotechnical engineer should observe all footing excavations and test structural fill compaction prior to concrete placement to evaluate bearing conditions.

FOUNDATION AND RETAINING WALLS

Foundation walls and retaining structures which are laterally supported and can be expected to undergo only a slight amount of deflection should be designed for a lateral earth pressure computed on the basis of an equivalent fluid unit weight of at least 55 pcf for backfill consisting of the on-site predominantly granular soils. Cantilevered retaining structures and site retaining walls which are separate from the buildings and can be expected to deflect sufficiently to mobilize the full active earth pressure condition should be designed for a lateral earth pressure computed on the basis of an equivalent fluid unit weight of at least 45 pcf for backfill consisting of the on-site predominantly granular soils. The backfill should not contain debris, topsoil or oversized (plus 6 inch) rocks.

All foundation and retaining structures should be designed for appropriate hydrostatic and surcharge pressures such as adjacent footings, traffic, construction materials and equipment. The pressures recommended above assume drained conditions behind the walls and a horizontal backfill surface. The buildup of water behind a wall or an upward sloping backfill surface will increase the lateral pressure imposed on a foundation wall or

retaining structure. An underdrain should be provided to prevent hydrostatic pressure buildup behind walls.

Backfill should be placed in uniform lifts and compacted to at least 90% of the maximum standard Proctor density at a moisture content near optimum. Backfill placed in pavement and walkway areas should be compacted to at least 95% of the maximum standard Proctor density. Care should be taken not to overcompact the backfill or use large equipment near the wall, since this could cause excessive lateral pressure on the wall. Some settlement of deep foundation wall backfill should be expected, even if the material is placed correctly, and could result in distress to facilities constructed on the backfill. Use of a select granular material such as road base and increasing compaction to 98% standard Proctor density could be done to reduce backfill settlements.

The lateral resistance of foundation or retaining wall footings will be a combination of the sliding resistance of the footing on the foundation materials and passive earth pressure against the side of the footing. Resistance to sliding at the bottoms of the footings can be calculated based on a coefficient of friction of 0.45. Passive pressure of compacted backfill against the sides of the footings can be calculated using an equivalent fluid unit weight of 350 pcf for moist condition and 225 pcf for buoyant condition. The coefficient of friction and passive pressure values recommended above assume ultimate soil strength. Suitable factors of safety should be included in the design to limit the strain which will occur at the ultimate strength, particularly in the case of passive resistance. Fill placed against the sides of the footings to resist lateral loads should be a granular material compacted to at least 95% of the maximum standard Proctor density at a moisture content near optimum.

FLOOR SLABS

The natural on-site soils, exclusive of topsoil, are suitable to support lightly loaded slab-on-grade construction. Existing fill, debris and topsoil will need to be removed below slab areas and replaced with structural fill to provide a low risk of slab movement and

distress. The structural fill below slab areas can consist of the on-site granular soils or a suitable imported material such as road base or single pass (minus 6 inch) "pit-run".

To reduce the effects of some differential movement, floor slabs should be separated from all bearing walls and columns with expansion joints which allow unrestrained vertical movement. Floor slab control joints should be used to reduce damage due to shrinkage cracking. The requirements for joint spacing and slab reinforcement should be established by the designer based on experience and the intended slab use. A minimum 4 inch layer of free-draining gravel should be placed beneath slabs to facilitate drainage. This material should consist of minus 2 inch aggregate with at least 50% retained on the No. 4 sieve and less than 2% passing the No. 200 sieve.

All fill materials for support of floor slabs should be compacted to at least 95% of maximum standard Proctor density at a moisture content near optimum. Required fill should consist of suitable granular soils devoid of debris, topsoil and oversized rocks.

UNDERDRAIN SYSTEM

Free water was encountered in most of the borings at the site and may be encountered in excavations, especially those located on the lower bench. Also, it has been our experience in the area that local perched groundwater can develop during times of heavy precipitation or seasonal runoff. Frozen ground during spring runoff can also create a perched condition. Therefore, we recommend below-grade construction, such as retaining walls, crawlspace and basement areas, be protected from wetting and hydrostatic pressure buildup by an underdrain system.

The drains should consist of drainpipe placed in the bottom of the wall backfill surrounded above the invert level with free-draining granular material. The drain should be placed at each level of excavation and at least 1 foot below lowest adjacent finish grade and sloped at a minimum 1% to a suitable gravity outlet above the flood level of Brush Creek or a sump where the water can be collected and pumped. If rigid PVC drain

pipe is used, the minimum slope can be reduced to ½%. For the lower bench area, building interior lateral drains on about 20 to 30 feet spacing may also be needed. Free-draining granular material used in the underdrain system should contain less than 2% passing the No. 200 sieve, less than 50% passing the No. 4 sieve and have a maximum size of 2 inches. The drain gravel backfill should be at least 1½ feet deep, extend to above any seepage in the adjacent cut face, and be covered by filter fabric such as Mirafi 140N or 160N.

SITE GRADING

All structural fill at the site should be properly placed and compacted. Existing fill and topsoil below movement sensitive facilities such as sidewalks, driveways and parking areas should also be removed and can be further evaluated at the time of construction. After unsuitable soils are removed, the exposed surface should be evaluated for presence of old sinkholes such as proofrolling with a heavily loaded truck. Stabilization of soft subgrade areas could be needed prior to fill placement and/or construction of other facilities.

Fills should be limited to about 8 to 10 feet deep, especially where underlain by potentially compressible soils. Embankment fills should be compacted to at least 95% of the maximum standard Proctor density near optimum moisture content. Prior to fill placement, the subgrade should be carefully prepared by removing all vegetation and topsoil and compacting to at least 95% of the maximum standard Proctor density. The fill should be benched into the portions of the site exceeding 20% grade.

Permanent unretained cut and fill slopes should be graded at 2 horizontal to 1 vertical or flatter and protected against erosion by revegetation or other means. The risk of slope instability will be increased if seepage is encountered in cuts and flatter slopes may be necessary. If seepage is encountered in permanent cuts, an investigation should be conducted to determine if the seepage will adversely affect the cut stability. Boulder

walls should be feasible for retaining relatively low cuts and fills at the site with proper design and construction.

SURFACE DRAINAGE

Positive surface drainage is an important aspect of the project. The following drainage precautions should be observed during construction and maintained at all times after the buildings have been completed:

1) Inundation of the foundation excavations and underslab areas should be avoided during construction.
2) Exterior backfill should be adjusted to near optimum moisture and compacted to at least 95% of the maximum standard Proctor density in pavement and slab areas and to at least 90% of the maximum standard Proctor density in landscape areas.
3) The ground surface surrounding the exterior of the buildings should be sloped to drain away from the foundation in all directions. We recommend a minimum slope of 12 inches in the first 10 feet in unpaved areas and a minimum slope of 2½ inches in the first 10 feet in paved areas. Free-draining wall backfill should be capped with filter fabric and about 2 feet of the on-site finer graded soils to reduce surface water infiltration.
4) Roof downspouts and drains should discharge well beyond the limits of all backfill.
5) Landscaping which requires regular heavy irrigation should be located at least 5 feet from foundation walls.

PAVEMENT SECTION THICKNESS

We understand asphalt pavement is proposed for access drive and parking areas. Internal traffic for the development when built out has been provided as about 300 vehicles per day not including construction traffic. We understand that due to the proposed staged building construction, the pavement areas will likely be subjected to construction traffic.

We estimate an 18 kip equivalent daily load application (EDLA) of about 15 to 20 for the residential development traffic including assumed construction traffic. The project civil engineer should check our assumed traffic loading.

The subgrade soils are assumed to consist of low to non-plastic, primarily granular soils but may vary across the site. AASHTO Classifications on the samples tested, range from A-5 to A-2-4 which range from poor to fair support for pavement sections. We assume a Hveem stabilometer 'R' value of about 10 for the subgrade soils. The fine grained soils are probably susceptible to frost heave.

Based on our experience and CDOT design procedures using an 18 kip EDLA of about 20 (including construction traffic), a Regional Factor of 2.25 and a serviceability index of 2.0, we recommend the minimum pavement section thickness for the driveway/access road consist of 4 inches of asphalt on 10 inches of base course or 5 inches of asphalt on 6 inches of base course. For automobile only parking areas, we recommend the minimum pavement section thickness consist of 3 inches of asphalt on 8 inches of base course or 4 inches of asphalt on 4 inches of base course. For areas subjected to regular truck traffic, and tight turning areas, a concrete pavement section consisting of at least 6 inches of Portland cement concrete on 4 inches of base course should be considered.

The asphalt should be a batched hot mix, approved by the engineer and placed and compacted to a density of 92% to 96% of the maximum theoretical density. The base course should meet CDOT Class 6 specifications. All base course and required subgrade fill should be compacted to at least 95% of the maximum standard Proctor density at a moisture content within 2% of optimum. Concrete should have a design compressive strength of 4,500 psi and be air entrained.

Required fill to establish design subgrade level can consist of the on-site granular soils, excluding debris, topsoil and oversized (plus 6-inch) rocks or similar import material. Prior to fill placement the subgrade should be stripped of unsuitable soils then scarified to a depth of 8 inches, adjusted to near optimum moisture and compacted to at least 95% of

standard Proctor density. In soft or wet areas, the subgrade may require drying or stabilization prior to fill placement. A geogrid such as Tensar TX-140 and/or subexcavation and replacement with aggregate base soils may be needed for the stabilization. The subgrade should be proofrolled. Areas that deflect excessively should be corrected before placing pavement materials. The subgrade improvements and placement and compaction of base and asphalt materials should be monitored on a regular basis by a representative of the geotechnical engineer.

The collection and diversion of surface water away from paved areas is extremely important to the satisfactory performance of the pavement. Drainage design should provide for the removal of water from the paved areas and prevent wetting of the subgrade soils.

LIMITATIONS

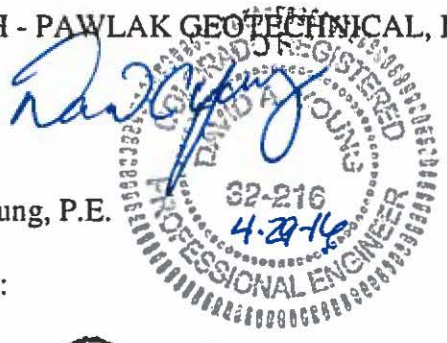
This study has been conducted in accordance with generally accepted geotechnical engineering principles and practices in this area at this time. We make no warranty either express or implied. The conclusions and recommendations submitted in this report are based upon the data obtained from the exploratory borings drilled at the locations indicated on Figure 1, the proposed type of construction and our experience in the area. Our services do not include determining the presence, prevention or possibility of mold or other biological contaminants (MOBC) developing in the future. If the client is concerned about MOBC, then a professional in this special field of practice should be consulted. Our findings include interpolation and extrapolation of the subsurface conditions identified at the exploratory borings and variations in the subsurface conditions may not become evident until excavation is performed. If conditions encountered during construction appear different from those described in this report, we should be notified so that re-evaluation of the recommendations may be made.

This report has been prepared for the exclusive use by our client for design purposes. We are not responsible for technical interpretations by others of our information. As the

project evolves, we should provide continued consultation and field services during construction to review and monitor the implementation of our recommendations, and to verify that the recommendations have been appropriately interpreted. Significant design changes may require additional analysis or modifications to the recommendations presented herein. We recommend on-site observation of excavations and foundation bearing strata and testing of structural fill by a representative of the geotechnical engineer.

Respectfully Submitted,

HEPWORTH - PAWLAK GEOTECHNICAL, INC.



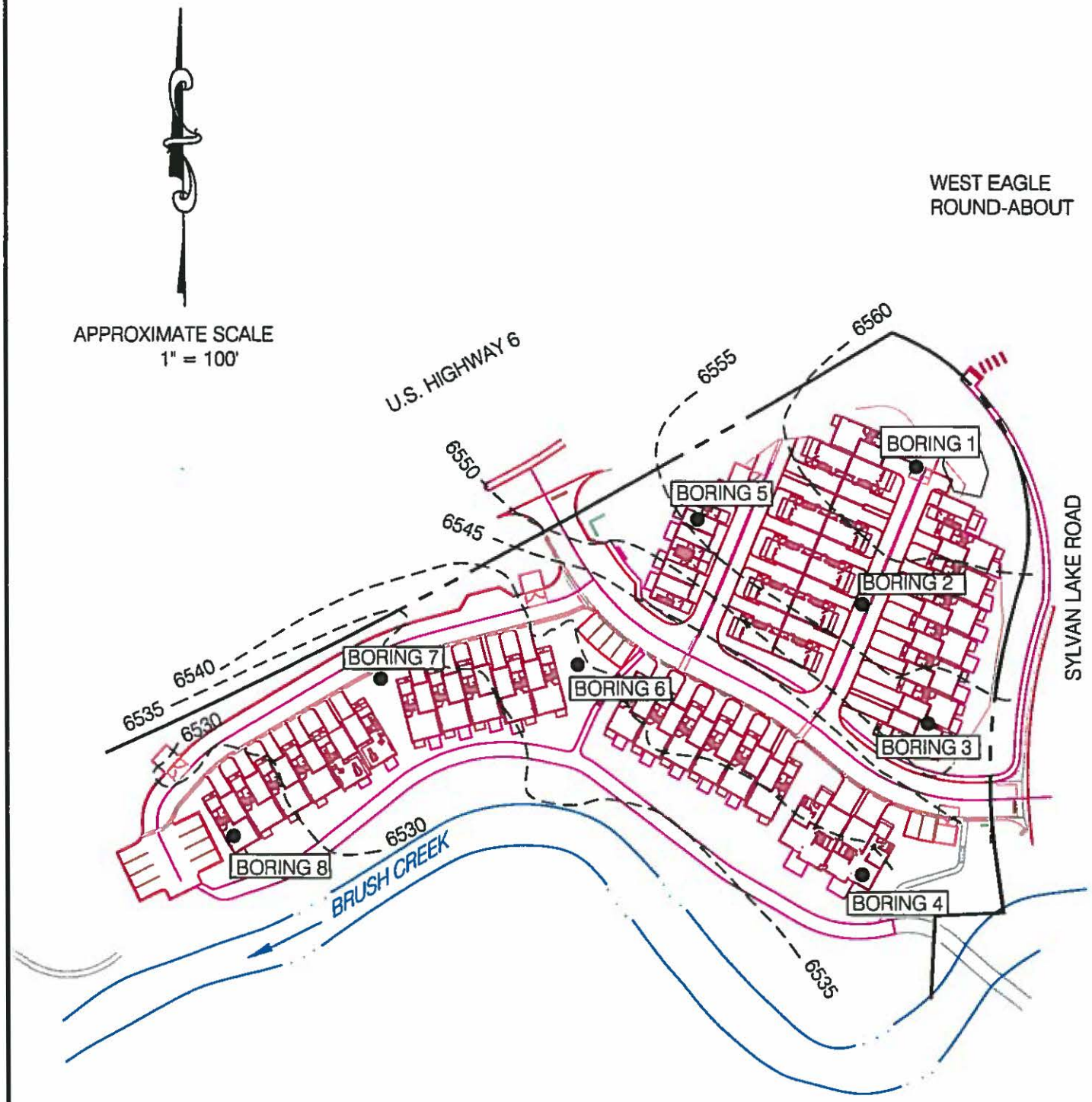
David A. Young, P.E.

Reviewed by:

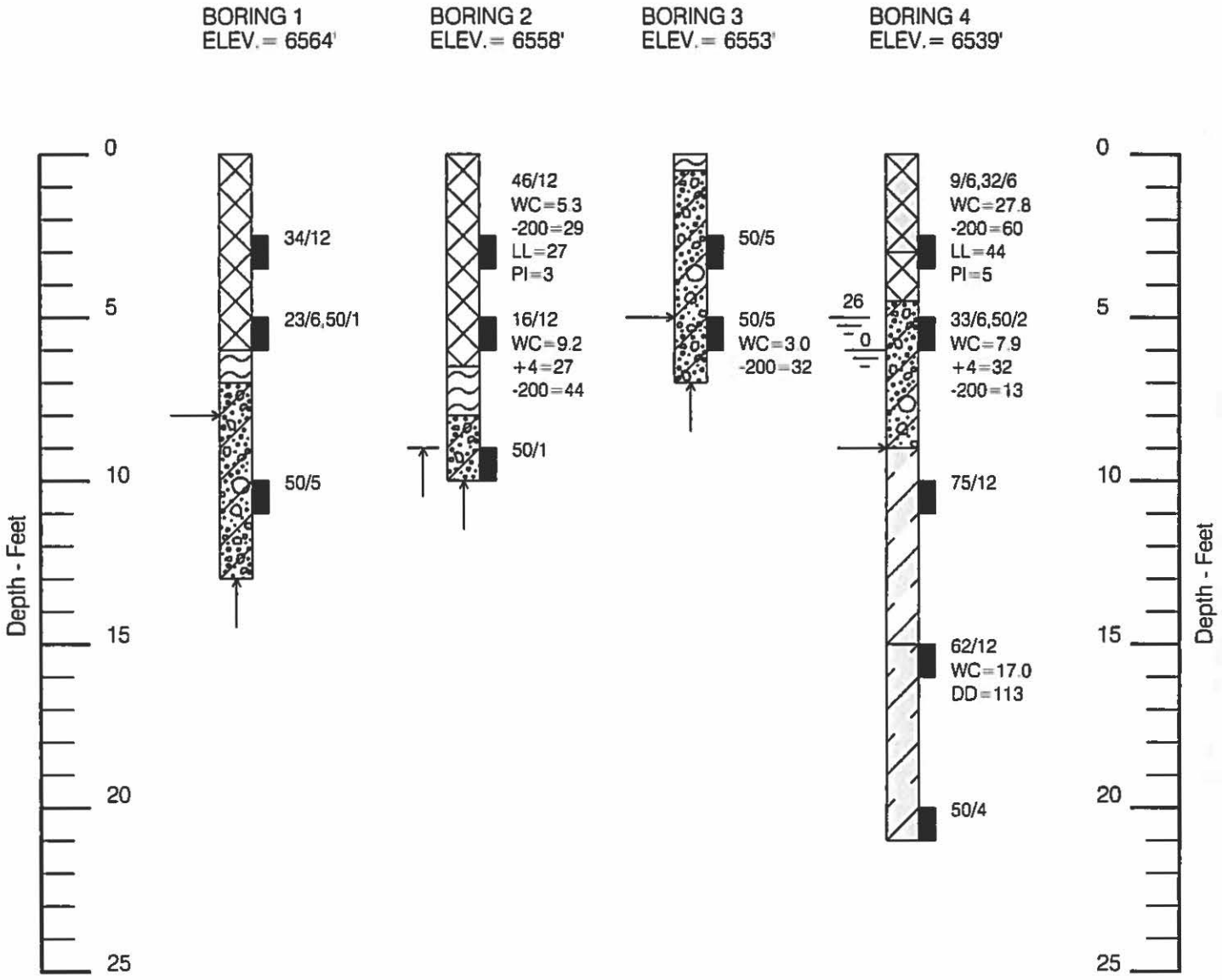
Steven L. Pawlak, P.E.

DAY/ksw

cc: Alpine Engineering – Gary Brooks (brooks@alpinecivil.com)

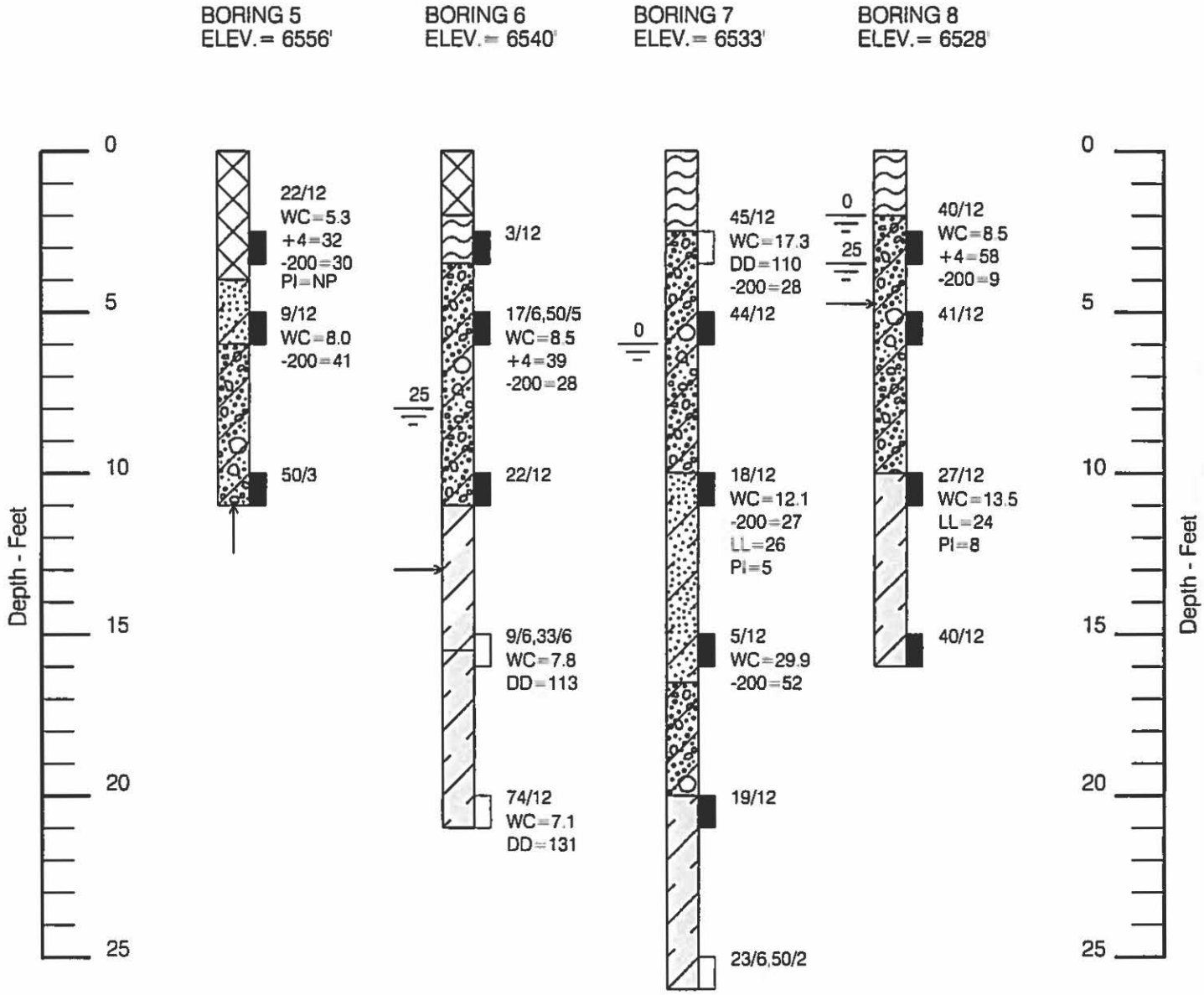


116 035A	HP Geotech Hepworth-Pawlak Geotechnical	LOCATION OF EXPLORATORY BORINGS	Figure 1



Note: Explanation of symbols is shown on Figure 4.

116 035A	HP Geotech Hepworth-Pawlak Geotechnical	LOGS OF EXPLORATORY BORINGS	Figure 2



Note: Explanation of symbols is shown on Figure 4.

116 035A	HP Geotech Hepworth-Pawlak Geotechnical	LOGS OF EXPLORATORY BORINGS	Figure 3

LEGEND:

TOPSOIL; organic silty clayey sand, soft, very moist, dark brown.

FILL; manplaced clayey to silty sand and gravel with cobbles, generally medium dense, moist, brown to dark brown, low plastic fines.

FILL; manplaced sandy clay and silt with gravel and possible cobbles, loose, moist, dark brown, some mixed topsoil, low plasticity.

SAND (SC-SM); clayey and silty to occasionally very sandy clay and silt, loose to medium dense, moist, wet in Boring 7, brown, low plastic fines.

GRAVEL AND COBBLES (GM); sandy to very sandy, probable small boulders, silty, medium dense to dense, moist to wet, brown, non-plastic fines, rocks are primarily subrounded.

WEATHERED CLAYSTONE/SILTSTONE; medium hard, moist, mixed grey and grey-brown, low plasticity.

CLAYSTONE/SILTSTONE; hard to very hard, slightly moist to moist, dark grey, low plasticity, occasionally gypsiferous. Eagle Valley Evaporite.

Relatively undisturbed drive sample; 2-inch I.D. California liner sample.

Drive sample; standard penetration test (SPT), 1 3/8 inch I.D. split spoon sample, ASTM D-1586.

39/12 Drive sample blow count; indicates that 39 blows of a 140 pound hammer falling 30 inches were required to drive the California or SPT sampler 12 inches.

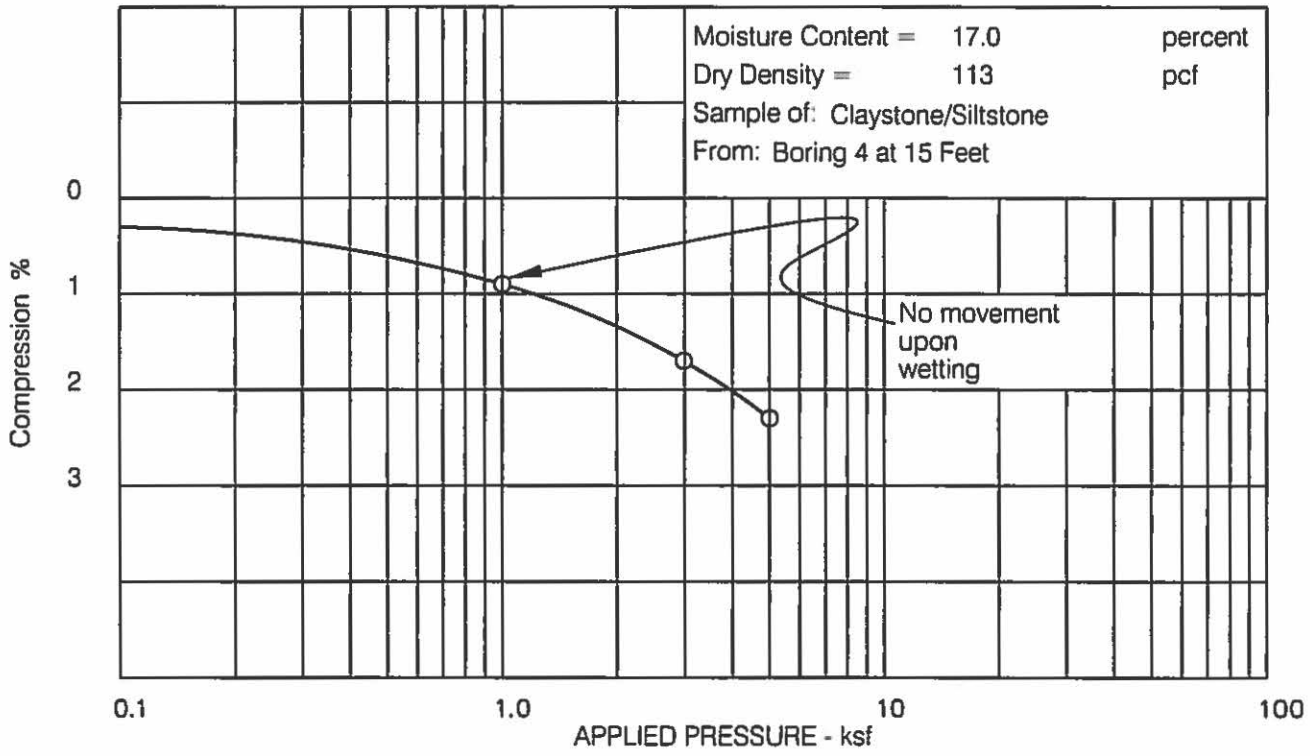
0,26 Free water level in boring and number of days following drilling measurement was taken.

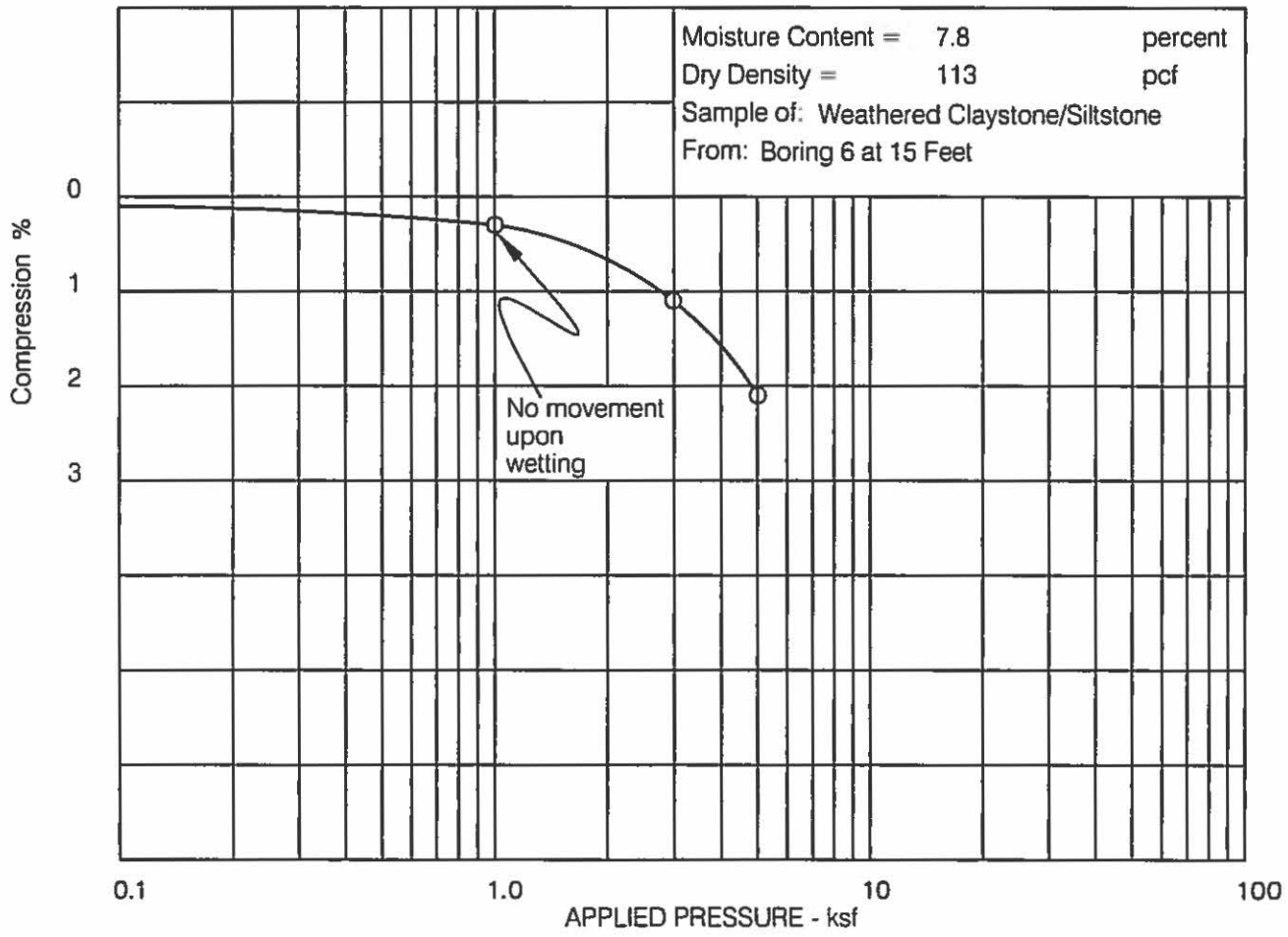
→ Depth at which boring had caved when measured on April 4, 2016.

Practical drilling refusal. Where shown above bottom of log, indicates that multiple attempts were made to advance the boring.

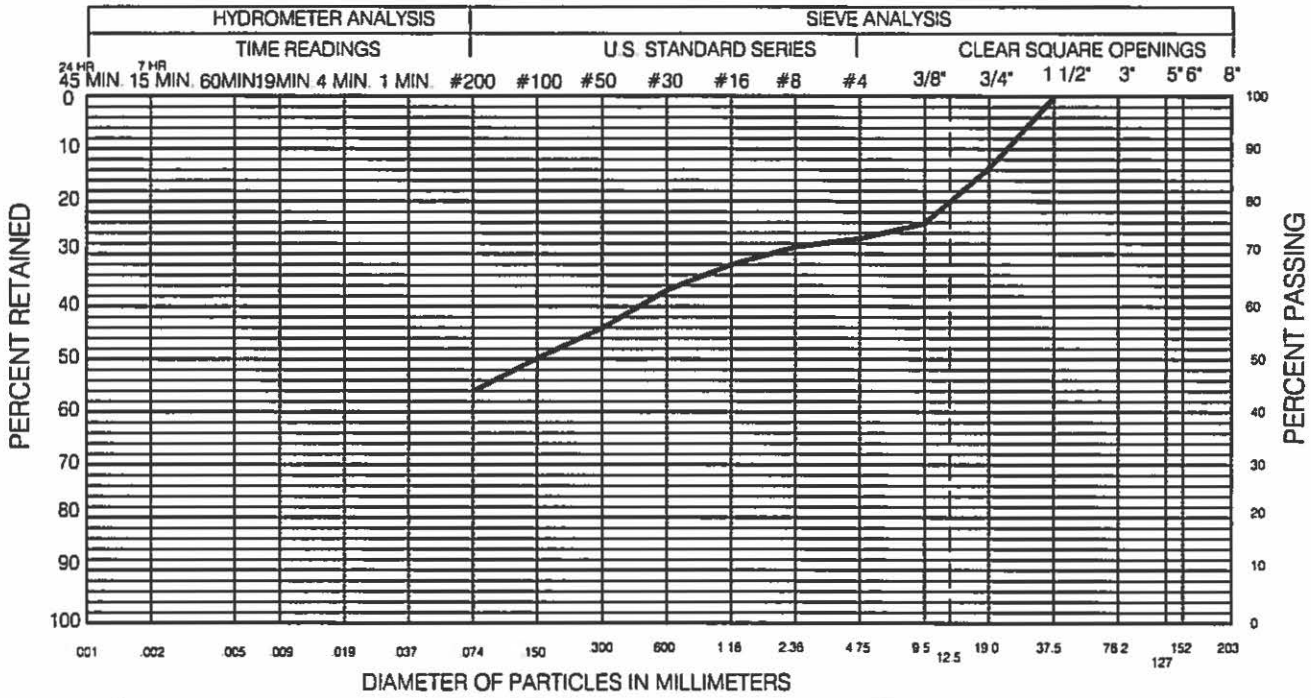
NOTES:

1. Exploratory borings were drilled on March 9 and 10, 2016 with 4-inch diameter continuous flight power auger.
2. Locations of exploratory borings were field staked by Archibeque Land Consultants.
3. Elevations of exploratory borings were obtained by interpolation between contours shown on the site plan provided.
4. The exploratory boring locations and elevations should be considered accurate only to the degree implied by the method used.
5. The lines between materials shown on the exploratory boring logs represent the approximate boundaries between material types and transitions may be gradual.
6. Water level readings shown on the logs were made at the time and under the conditions indicated. No free water encountered in Borings 1 through 3 and 5. Boring 7 was lost and could not be checked on April 4, 2016. Borings 2 and 5 were backfilled after drilling. Fluctuations in water level may occur with time.
7. Laboratory Testing Results:
   - WC = Water Content (%)
   - DD = Dry Density (pcf)
   - +4 = Percent retained on the No. 4 sieve
   - -200 = Percent passing No. 200 sieve
   - LL = Liquid Limit (%)
   - PI = Plasticity Index (%)





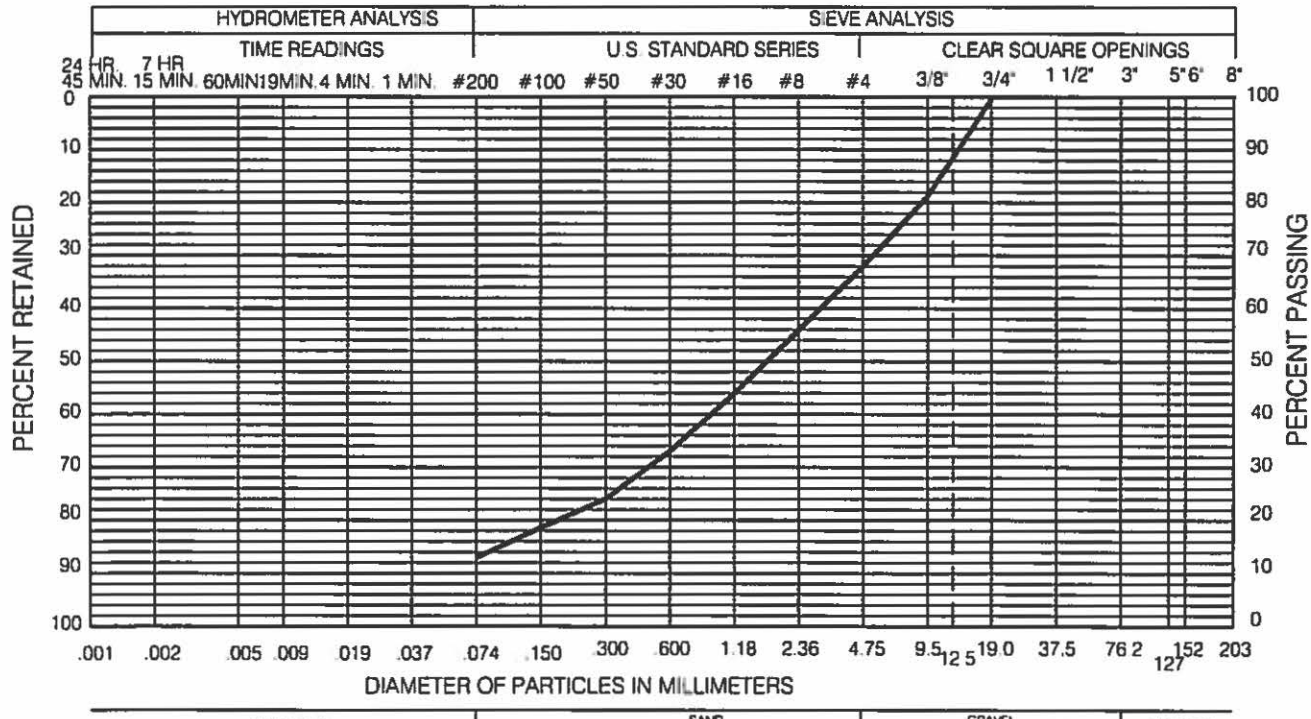
116 035A	HP Geotech Hepworth-Pawlak Geotechnical	SWELL-CONSOLIDATION TEST RESULTS	Figure 5



GRAVEL 27 % SAND 29 % SILT AND CLAY 44 %

LIQUID LIMIT % PLASTICITY INDEX %

SAMPLE OF: Clayey Silty Sand and Gravel (Fill) FROM: Boring 2 at 5 Feet

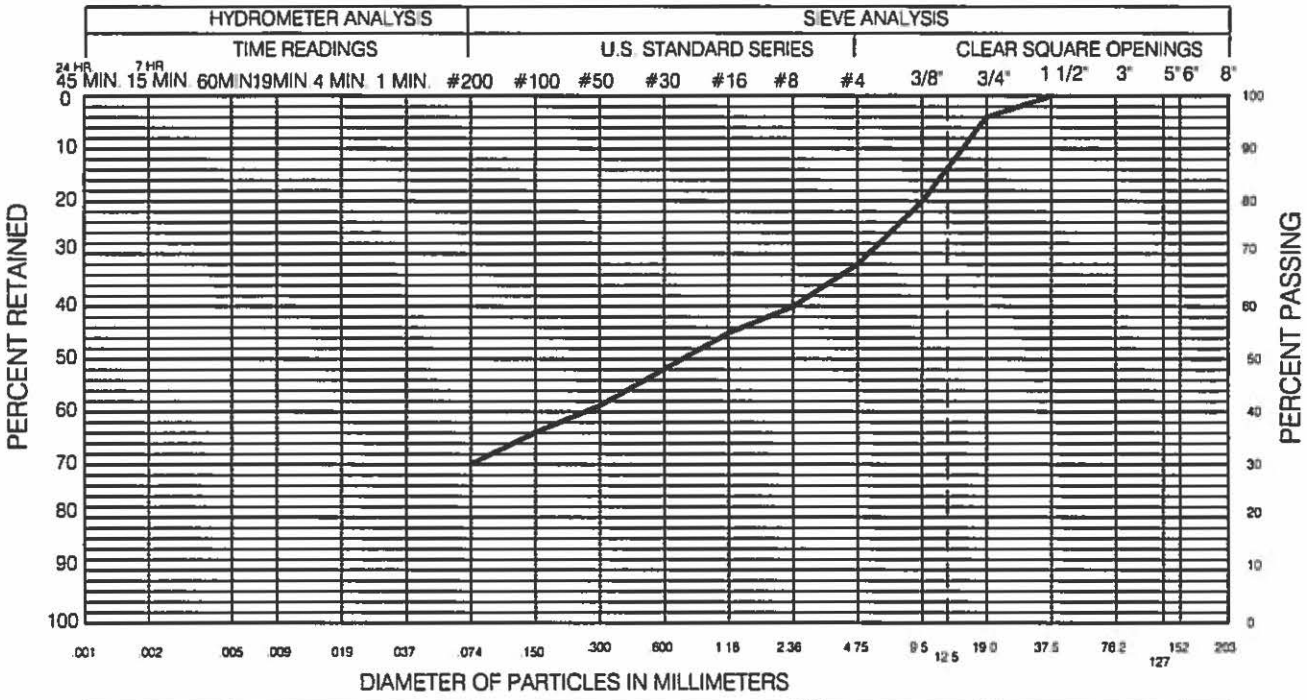


GRAVEL 32 % SAND 55 % SILT AND CLAY 13 %

LIQUID LIMIT % PLASTICITY INDEX %

SAMPLE OF: Silty Sand and Gravel FROM: Boring 4 at 5 Feet

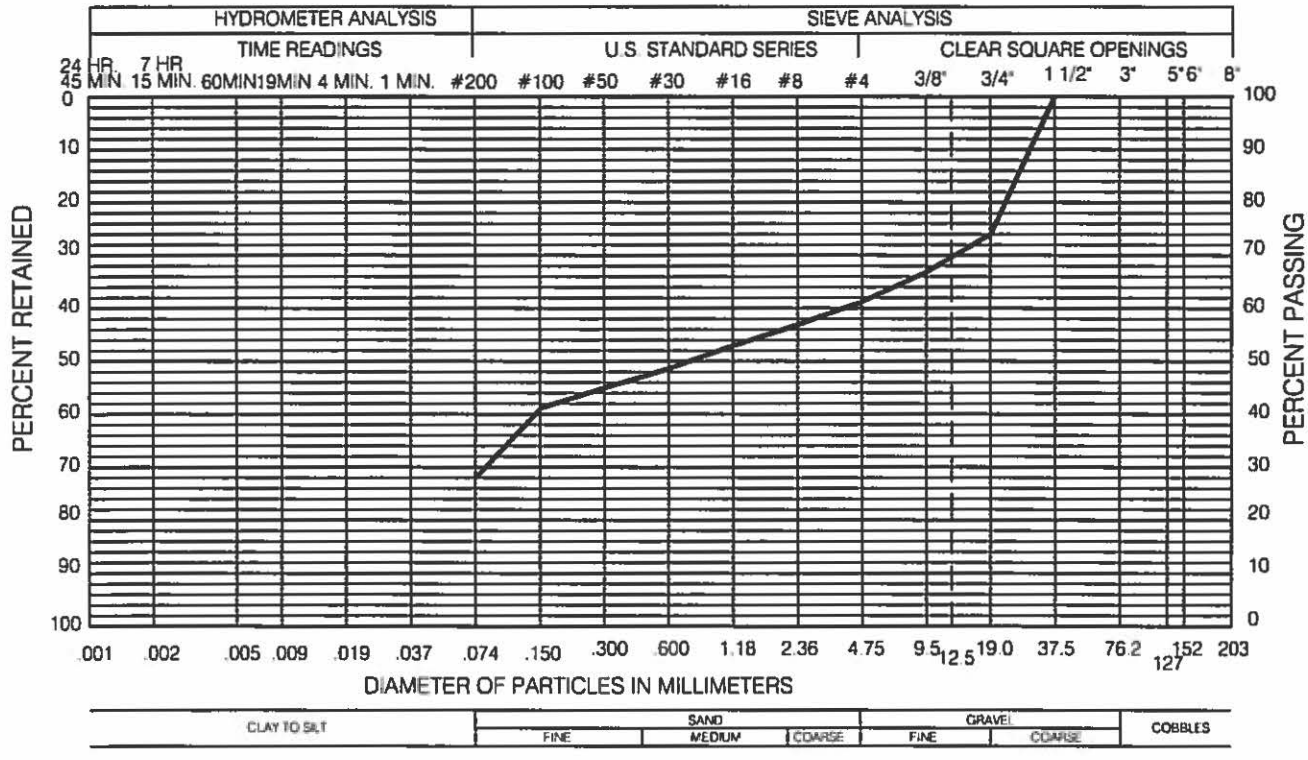
116 035A	HP Geotech Hepworth-Pawlak Geotechnical	GRADATION TEST RESULTS	Figure 6



GRAVEL 32 % SAND 38 % SILT AND CLAY 30 %

LIQUID LIMIT % PLASTICITY INDEX NP %

SAMPLE OF: Silty Sand and Gravel (Fill) FROM: Boring 5 at 2 ½ Feet

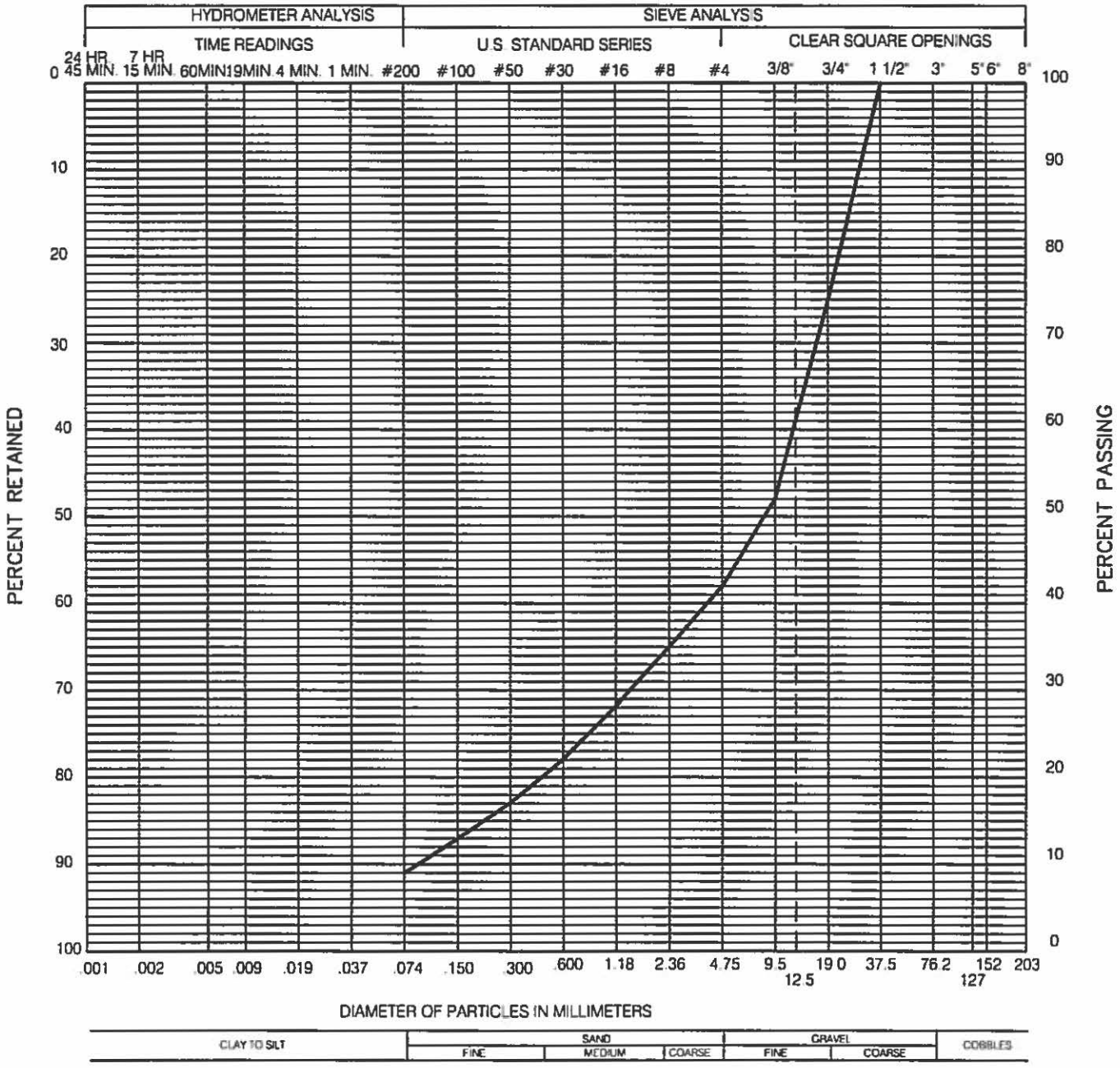


GRAVEL 39 % SAND 33 % SILT AND CLAY 28 %

LIQUID LIMIT % PLASTICITY INDEX %

SAMPLE OF: Silty Sandy Gravel FROM: Boring 6 at 5 Feet

116 035A	HP Geotech Hepworth-Pawlak Geotechnical	GRADATION TEST RESULTS	Figure 7



GRAVEL 58 % SAND 33 % SILT AND CLAY 9 %

LIQUID LIMIT % PLASTICITY INDEX NP %

SAMPLE OF: Silty Sandy Gravel FROM: Boring 8 at 2 ½ Feet

116 035A	HP Geotech Hepworth-Pawlak Geotechnical	GRADATION TEST RESULTS	Figure 8

HEPWORTH-PAWLAK GEOTECHNICAL, INC.

TABLE 1

SUMMARY OF LABORATORY TEST RESULTS

Job No. 116 035A

SAMPLE LOCATION		NATURAL MOISTURE CONTENT	NATURAL DRY DENSITY	GRADATION		PERCENT PASSING NO. 200 SIEVE	ATTERBERG LIMITS		AASHTO CLASSIFICATION	SOIL OR BEDROCK TYPE
BORING	DEPTH (ft)	(%)	(pcf)	GRAVEL (%)	SAND (%)		LIQUID LIMIT (%)	PLASTIC INDEX (%)		
2	2½	5.3				29	27	3	A-2-4 (0)	Clayey Silty Sand with Gravel (Fill)
	5	9.2		27	29	44				Clayey Silty Sand and Gravel (Fill)
3	5	3.0				32				Silty Sand and Gravel
4	2½	27.8				60	44	5	A-5 (3)	Sandy Clayey Silt with Gravel and Topsoil (Fill)
	5	9.7		32	55	13				Silty Sand and Gravel
	15	17.0	113							Claystone/Siltstone
5	2½	5.3		32	38	30		NP	A-2-4 (0)	Silty Sand and Gravel (Fill)
	5	8.0				41				Silty Sand and Gravel
6	5	8.5		39	33	28				Silty Sandy Gravel
	15	7.8	113							Weathered Claystone/Siltstone
	20	7.1	131							Claystone/Siltstone
7	2½	17.3	110			28				Silty Sand and Gravel
	10	12.1				27	26	5	A-4 (0)	Clayey Silty Sand
	15	29.9				52				Sand and Clay
8	2½	8.5		58	33	9				Silty Sandy Gravel
	10	13.5					24	8		Claystone/Siltstone

The Town of Eagle
Box 609 • Eagle, Colorado 81631
(970) 328-6354 • Fax 328-5203
Meetings:
2nd and 4th Tuesdays

CERTIFICATE OF RECOMMENDATION

TO: Planning & Zoning Commission

FROM: Department of Community Development

DATE: June 21, 2016

PROJECT NAME: Aguilar Side Yard Setback Variance

FILE NUMBER: V16-03

APPLICANT: Mauro Aguilar

LOCATION: 20 Wren Court

APPLICABLE SECTION(S) OF MUNCIPAL CODE:
Section 4.05.02 (Variance Standards0

EXHIBIT(S):
A. Application Letter
B. Aerial Photos of Site
C. Photos

PUBLIC COMMENT: None Received as of June 10, 2016

STAFF CONTACT: Tom Boni, Town Planner

REQUEST: Variance to allow covered deck in side yard.

DISCUSSION:

The applicant has an approved building permit to construct a deck in the side yard of the subject property. However, plans did not include a roof. After constructing the deck the building official noticed the construction of the support for a roof and issued a Stop Work Order. After meeting with staff, the owner presented photos of other homes in the Orchard that had constructed similar roofed decks. While all of the examples were not relevant to this situation at least two were similar situations.

Subsequent to issuing the stop work order, the Town has received several complaints regarding the unfinished construction and effect it was having on the appearance of the neighborhood and the ability to sell surrounding homes. Most if not all of the neighbors were in support of allowing this roofed deck to be completed. Due to several problems including the applicant moving out of State, this unfinished condition has persisted for approximately three years.

ZONING VARIANCE STANDARDS

Listed below are the findings required by Section 4.05.020 of the Land Use & Development Code for approval of a Zoning Variance:

1. That the variance granted is without substantial detriment to the public good and does not impair the intent and purposes of the Town's regulations, goals, policies and plans, including the specific regulation in question; and

2. That the variance granted is the minimum necessary to alleviate the hardship; and

3. That there exists on the property in question exceptional topography, shape, size or other extraordinary and exceptional situation or condition peculiar to the site, existing buildings, or lot configuration such that strict application of the zone district requirements from which the variance is requested would result in peculiar and exceptional practical difficulties to or exceptional and undue hardship upon the owner of the property in question; or

4. That such exceptional situation or condition was not induced by any action of the applicant and is not a general condition throughout the zone district.

FINDINGS FOR A ZONING VARIANCE

1. Based on the existence of several other similar covered decks in this subdivision and the narrowness of the lot, staff believes that this variance can be granted without substantial detriment to the public good and does not impair the intent an purposes of the Town's regulations, goals, policies and plans, including the specific regulation in question.

2. The proposed deck is 10 feet wide which is a reasonable but not wide deck structure and staff believes that a finding can be made that it is the minimum necessary.

3. This property is a narrow lot and the extension of a covered deck living space on the northwest side of the lot is a reasonable request and that the prohibition of this roof over the deck would be an undue hardship on the owner.

STAFF RECOMMENDATION

Staff recommends approval of file number V16-03, variance from the required setback of 12.5 feet from side property line based on compliance with standards 1, 2 and 3 as referenced earlier in this staff report conditional upon:

1. Applicant submit a landscape plan to be approved by the Town Planner showing additional landscaping in the surrounding area to buffer the deck.

PLANNING & ZONING COMMISSION

1. Questions of Staff and/or Applicant

2. Public Comment

3. Deliberations

May, 06, 2016

From
Mauro and Cynthia Aguilar
20 Wren court, Lot No. 42
Eagle, Colorado 81631

To
Eagle county Community Development Department
Variance Request Letter and Justification

Summary of Proposed Modifications
This Letter is a request for a zoning variance. The existing deck we have contracted to be built has the following dimensions: 28.7 feet long by 10.4 feet wide from the side property line. The existing lot is zoned as Residential Medium and currently requires 12.5 feet setback.

The covered deck will be 12 feet maximum height with a 2 feet decline by the property line. It is an ordinary design with wood joists and posts, aluminum roof framing. It is to be built on top of an existing approved deck that will only require an additional approximate 10.4 feet to be added in an effort to cover the entire deck existing structure.

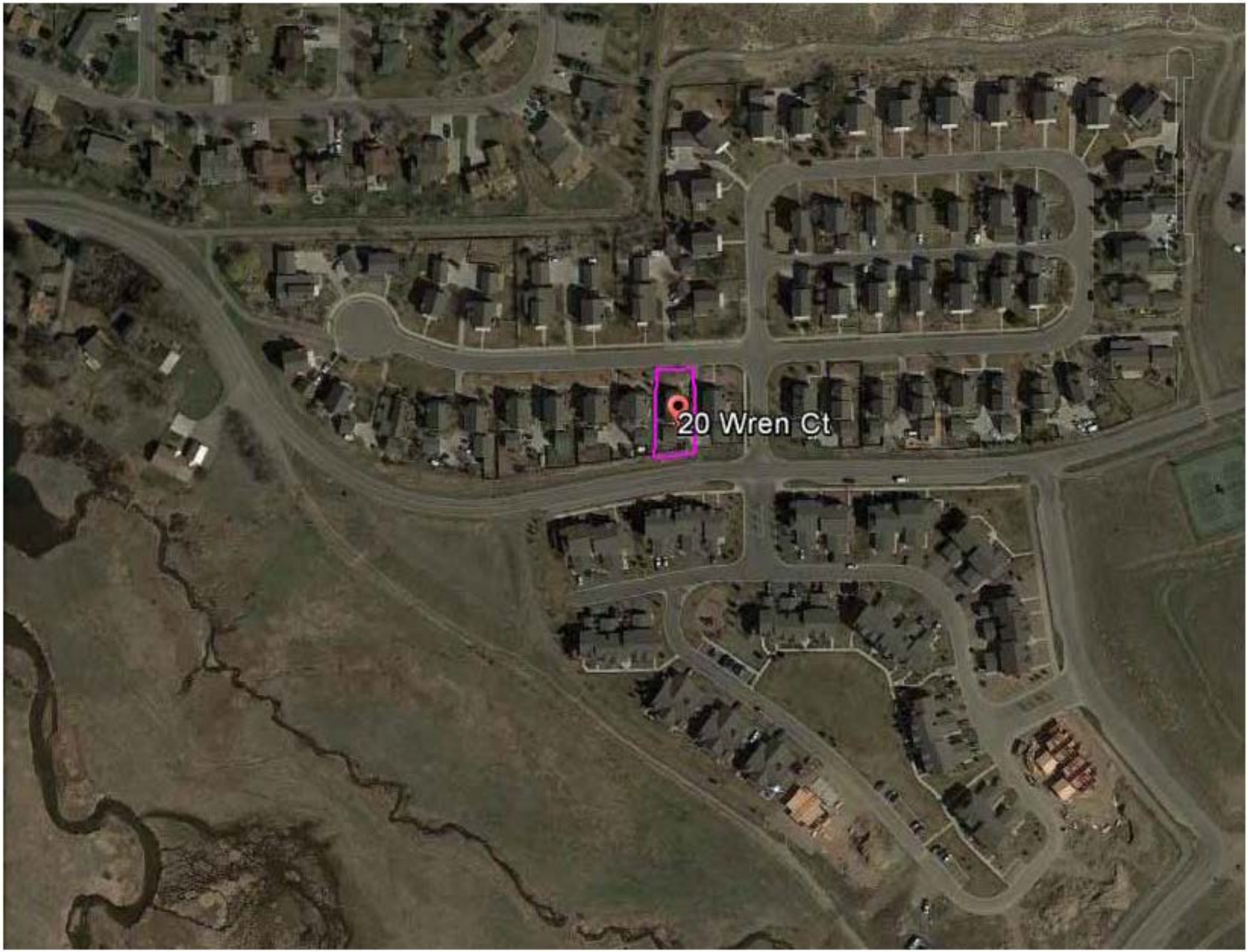
Justification of Variance
The variance being requested is to reduce the setback from 12.5 Feet to 6.2 approximately. The ultimate goal is to finish the existing planned structure in an effort to provide an aesthetically uniform and consistent covered deck without sacrificing the integrity of the neighborhood design that are fortunate to have the required setback. The variance requested herewith in would not be detrimental to the public good nor is in conflict with intended purpose of the zoning ordinance. Furthermore, this variance will allow the deck structure to blend in correlation with height of the existing home.
It is imperative that you are aware that lots on wren court address # 53 and # 123 and # 270 Tanager circle have constructed similar covered decks and they blend in with neighborhood as the project that I am respectfully proposing.

This covered deck will add value to the property while having no negative impact on the neighborhood. The proposed covered deck will also be covered by trees in front and the back of the property for ultimate privacy.

Conditions Peculiar to this property
We are blessed to have very narrow lot. The zoning ordinance requiring a 12.5 feet side setback is unique to this lot since is one of the narrowest lot in the neighborhood. The surrounding properties have structures larger in size and are not affected by the setback regulation.

Hardship created

Currently we are faced with snow and ice accumulation on our deck creating due to the lack of direct sun exposure over or deck, therefore creating a potential risk anyone walking thru the deck when accessing from the garage on the west side of the property.


20 Wren Ct


20 Wren Ct

Gmail

CYNTHIA AGUILAR <cynyvette@gmail.com>

deck measurements picture

1 message

CYNTHIA AGUILAR <cynyvette@gmail.com>
To: Babe <maurocristian@msn.com>

Wed, Jun 1, 2016 at 8:23 PM

–
Cynthia
970-393-0986
Have a Blessed Day!

Screenshot (1).png
2549K

OneNote

Home Insert Draw View Share

B I U A Camera Picture

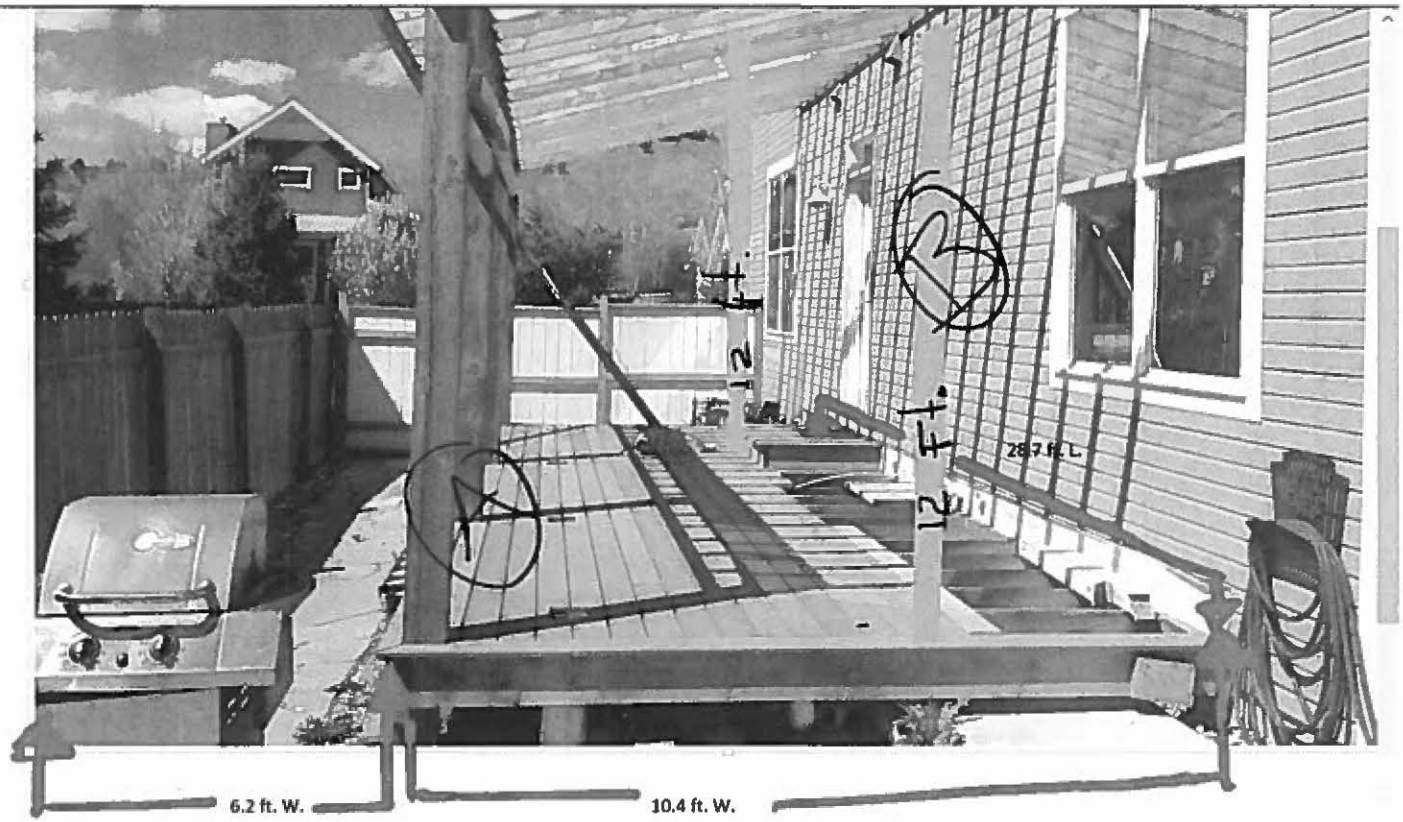
Quick Notes New Section 1

+ Page

OneNote: all your no...
OneNote can help organize your life
▶ Play video now!...

20 Wren court cover...
c
28.7 ft. L.
6.2 ft. W.

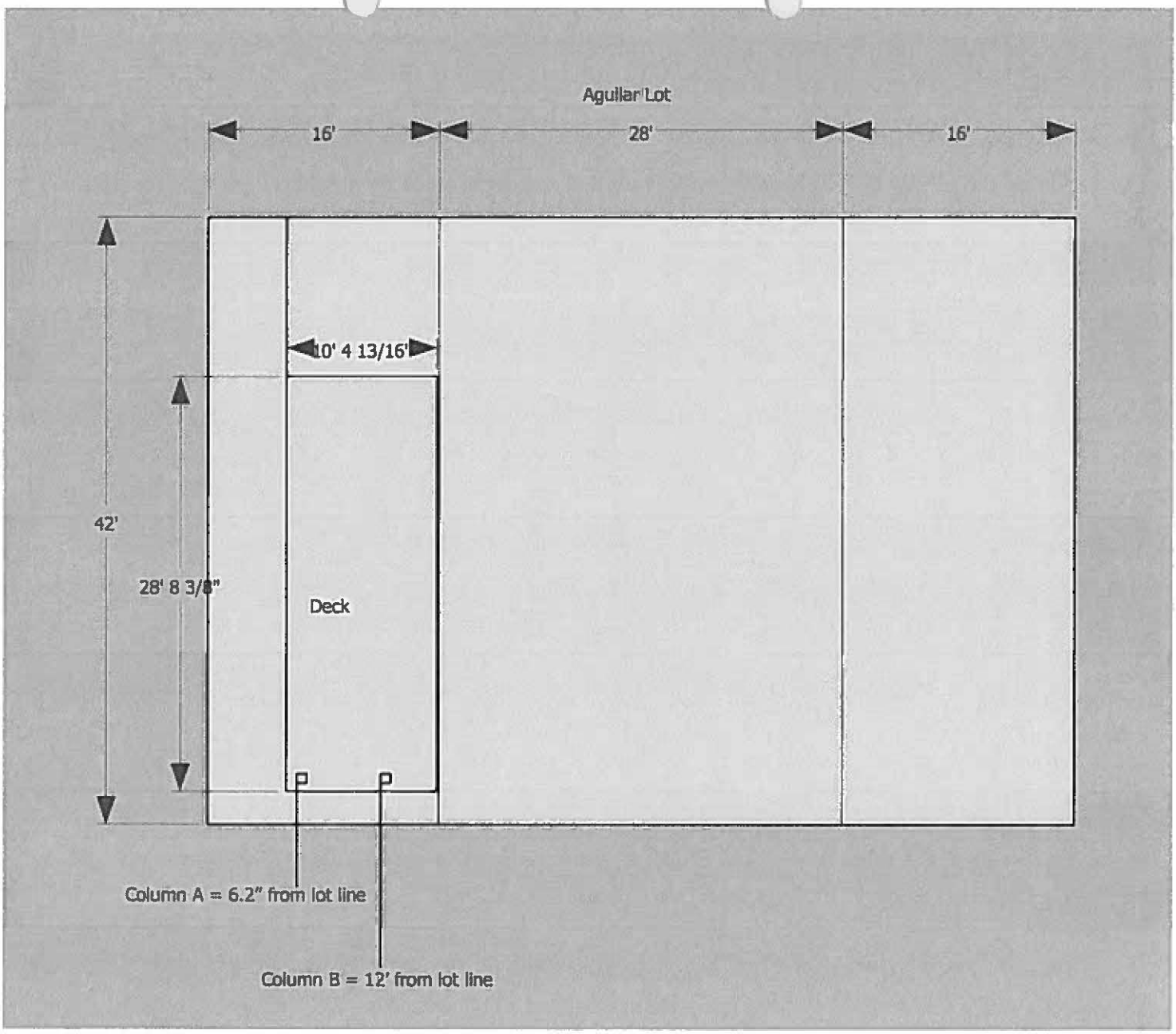
194 Wren court cove...
Notes.
Approximate distance from point A to B is 20 feet...



Notes. (approximate measurements)

- **Column A at 6.2 ft.**
- **Column B is the required set back at 12 ft.**

Ask me anything


Aguilar Lot
16'
28'
16'
10' 4 13/16"
42'
28' 8 3/8"
Deck
Column A = 6.2" from lot line
Column B = 12' from lot line