



August 17, 2020

**RE:** SUBFY2020-01 Mountain View Townhomes Subdivision

**Location:** 7.78 acres of vacant land behind/south of Fred Meyer at 5425 Chinden

**Parcel #** S0536141980

To Whom It May Concern:

The previously proposed 72-unit Preliminary Plat and Planned Unit Development with Conditional Use Permit has been modified since its original submittal back in December 2019 to reflect the changes requested by Design Review Committee as well as address the concerns outlined by the City Engineer with respect to the development of the project. The newly proposed project now consists of 61 Townhouse units that still contain the same variety of housing types with 2, 3 and 4-unit townhouse buildings on individual lots. Changes to the layout of the project and proposed total number of units stem from the existing topography and ability to successfully locate the retaining walls further away from Settler's Canal to minimize the impact to the existing slope.

All units still meet the off street parking requirements for the zone, but as previously submitted, we are still asking within the PUD that the required 2<sup>nd</sup> parking space be included in the front 20' of driveway with a parking easement in this location for each unit. The total number of proposed off street parking within the project is 122 spaces with an additional 37 spaces for guest parking, exceeding the parking requirements by 6 spaces.

The revised Site and Landscape plans incorporate a newly designed Plaza area at the west end of the project as suggested by Design Review Committee during the original pre-application DR hearing. They also incorporate a pedestrian friendly traffic flow feature throughout the project with the use of colored concrete sidewalks that help define and direct foot traffic to the various project amenities as well as access to the neighboring mixed-use commercial properties. Side elevation elements on the corner lot buildings were also added to help provide more architectural relief as suggested by DR Committee. These changes to the project are reflected in the updated building elevations and newly provided 3D color renderings.

With regards to some of the concerns the Garden City Engineer brought up in his January 2020 review of the previously submitted 72-unit project, below are some of the answers/responses to those questions/concerns. In addition to these responses, supplemental information is

provided within the updated and revised Geotechnical Report as well as the newly provided Grading and Drainage plans included with this August 2020 submittal.

- Subdivision name and reservation approval is included via email from the Ada County Surveyor's office dated September 13, 2019.
- Preliminary acceptance of the Emergency and Pedestrian Access onto the neighboring Fred Meyer property is included via email from Don Forrest, Senior Real Estate Manager-Asset Management for Fred Meyer's parent company Kroger dated January 30, 2020. Because Fred Meyer is not the owner of the property, Fred Meyer first needs to review all necessary documents (Easement Agreements, Plat, Site Plan, Building Elevations and Construction Documents/Drawings, etc.) prior to recommending approval to their landlord, MetLife. As Don referenced other similar situations that received approval, their main concern is a safe, well maintained access. These access easements, if the project is approved, should be a condition of approval for the Final Plat.
- Retaining walls as indicated on the Grading plan indicate height and location of the solid natural rock boulders. The report provided by Focus Engineering indicates utilizing this method of retaining wall will ensure any hydrostatic forces do not build up behind the wall. It is reported that the overall stability of the retaining walls below the hill leading up to Settler's Canal "is critically important to maintain the integrity of the soil supporting the canal" and the "Retaining wall construction is not expected to adversely affect the native soil stability or the integrity of the Settler's Irrigation Canal near the top of the slopes behind the retaining walls."  
In addition, historic photos from 1999 and 2013 indicate the original toe of the Canal slope was altered and pushed further north to make room for the maintenance/access road that was built to haul material from the upper portion of the site off Glenwood and Mountain View Drive down to the flat portion of the property where fill was placed as outlined in the Geotechnical report.
- ACHD has provided preliminary approval on the location and size of the turnaround at the south end of W. 53<sup>rd</sup> as evidence by the email dated July 27 between Jim Coslett, Civil Engineer on the project and Darrien Miles, Engineering Tech for ACHD.
- The prior ditch that used to run through the property was the beginning of the "Thurman Mill Drain" which still operates, and its origin is now located at the southwest corner of the adjacent Fred Meyer property. As noted in the Geotech report, surface and subsurface investigation occurred to determine if the ditch was previously piped or tiled. During exploratory excavation of certain areas where the ditch was located, no pipe, concrete, water, or moist soils were encountered. Groundwater monitoring is continuing with monitoring wells located at the toe of the slope in the area where the ditch used to be located. See Geotech report for further information.

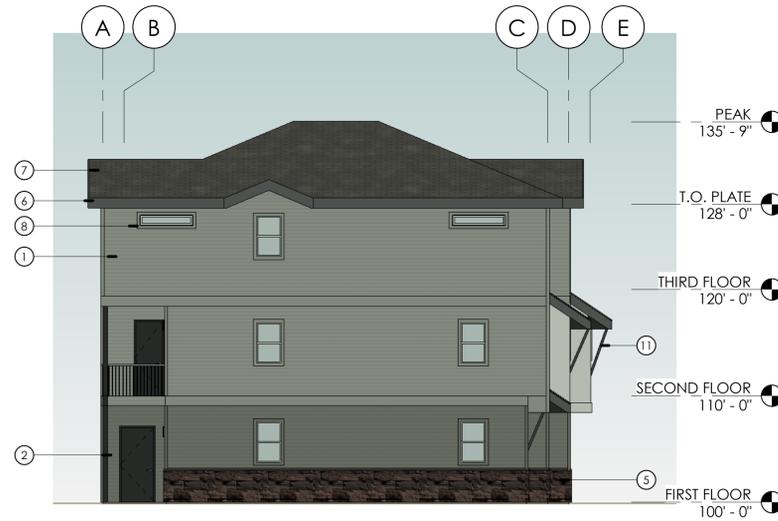
After extensive evaluation while taking the various concerns expressed and questions raised into account, our team of Engineers has provided a revised residential project that is well designed for the site conditions and topography, is a proper use of the land within the existing mixed use area and meets a need for more affordable housing in this area while helping limit the demand on additional City and ACHD services through this infill development.

We look forward to working with Garden City and the agencies necessary for approval to bring this quality residential development to fruition.

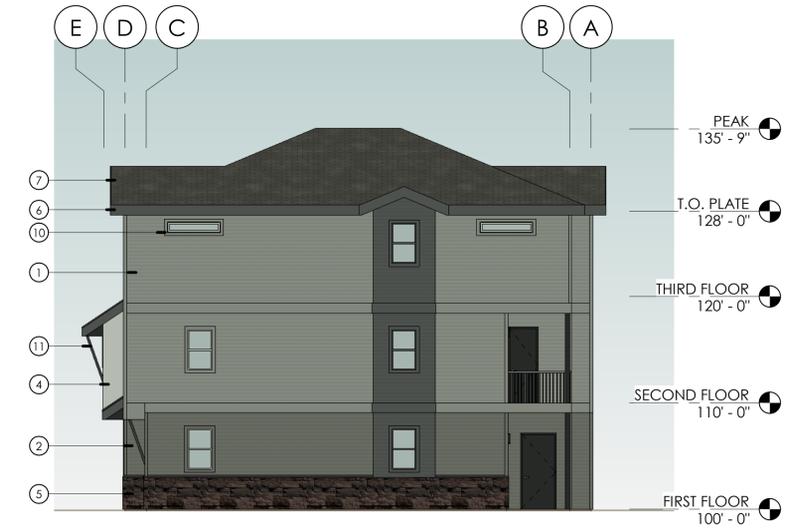
Sincerely,

A handwritten signature in black ink, appearing to read "David Hale", with a long horizontal flourish extending to the right.

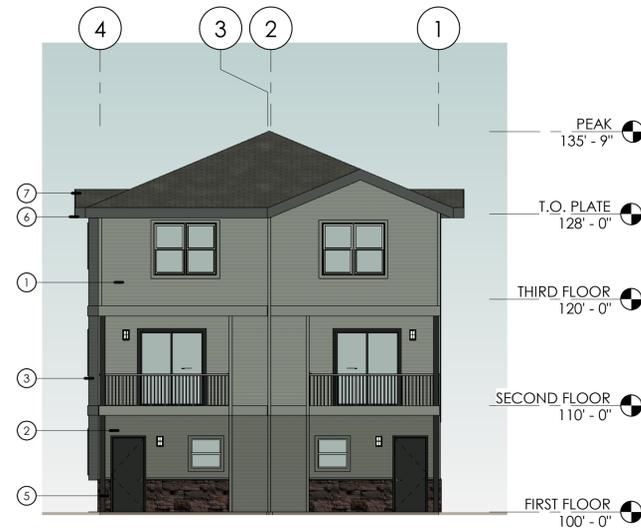
David Hale  
Hale Development, Inc.  
1603 W. Idaho Street  
Boise, ID 83702



**2 WEST ELEVATION**  
1/8" = 1'-0"



**1 EAST ELEVATION**  
1/8" = 1'-0"



**4 NORTH ELEVATION**  
1/8" = 1'-0"



**3 SOUTH ELEVATION**  
1/8" = 1'-0"

**FINISH LEGEND**

\*NOTE: FINISHES LISTED BELOW ARE TO ESTABLISH A BUDGET AND ARE NOT THE FINAL SELECTIONS

**HORIZONTAL LAP SIDING**

① HARDIPLANK CEMENT LAP SIDING - 6" LAP HORIZONTAL; 1X4 TRIM  
MFR: SHERWIN WILLIAMS  
COLOR NAME: RETREAT  
COLOR #: SW 6207

② HARDIPLANK CEMENT LAP SIDING - 6" LAP HORIZONTAL; 1X4 TRIM  
MFR: SHERWIN WILLIAMS  
COLOR NAME: PEWTER GREEN  
COLOR #: SW 6208

③ HARDIPLANK CEMENT LAP SIDING - 6" LAP HORIZONTAL; 1X4 TRIM  
MFR: SHERWIN WILLIAMS  
COLOR NAME: ROCK BOTTOM  
COLOR #: SW 7062

**STUCCO SIDING**

④ STUCCO  
MFR: SHERWIN WILLIAMS  
COLOR NAME: OYSTER BAY  
COLOR #: SW 6206

**STONE**

⑤ CULTURED VENEER STONE  
MFR: CORONADO STONE  
TYPE: OLD COUNTRY LEDGE  
COLOR NAME: HURON

**FASCIA**

⑥ HARDIBOARD FASCIA  
MFR: SHERWIN WILLIAMS  
COLOR NAME: ROCK BOTTOM  
COLOR #: SW 7062

**ROOFING**

⑦ 30 YEAR ARCHITECTURAL ROOFING SHINGLE  
MFR: GAF  
TYPE: TIMBERLINE COOL SERIES  
COLOR NAME: WEATHERED WOOD

⑧ STANDING SEAM METAL ROOFING  
COLOR NAME: DARK BRONZE

**WINDOWS**

⑨ COLOR NAME: ALMOND

**EXTERIOR DOORS**

⑩ TRIM/PANEL  
MFR: SHERWIN WILLIAMS  
COLOR NAME: ROCK BOTTOM  
COLOR #: SW 7062

**STEEL SUPPORTS**

⑪ 3" TUBE STEEL SUPPORTS



neUdesign  
ARCHITECTURE  
725 E 2nd St  
Meridian, ID 83642  
208.884.2824

CONSULTANT

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2 UNIT  
GARDEN CITY, IDAHO

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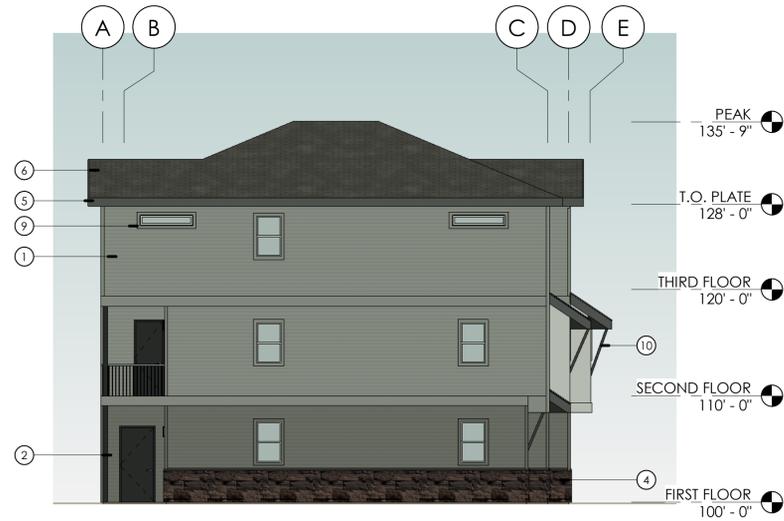
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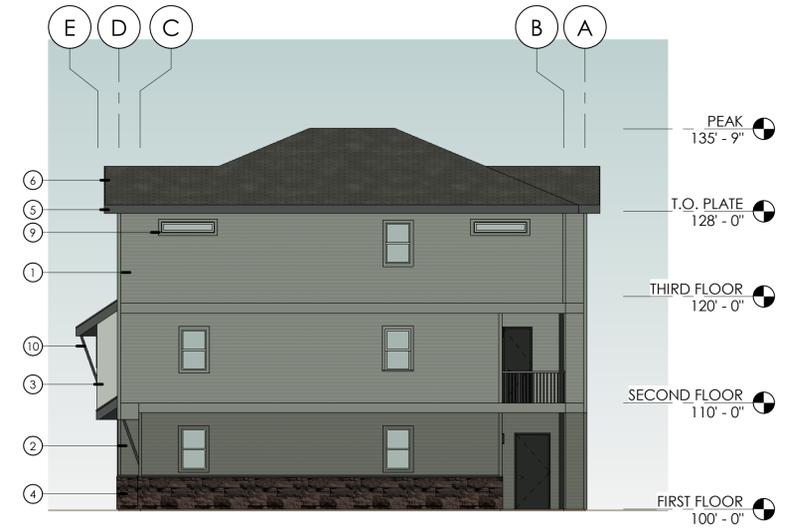
EXTERIOR ELEVATIONS

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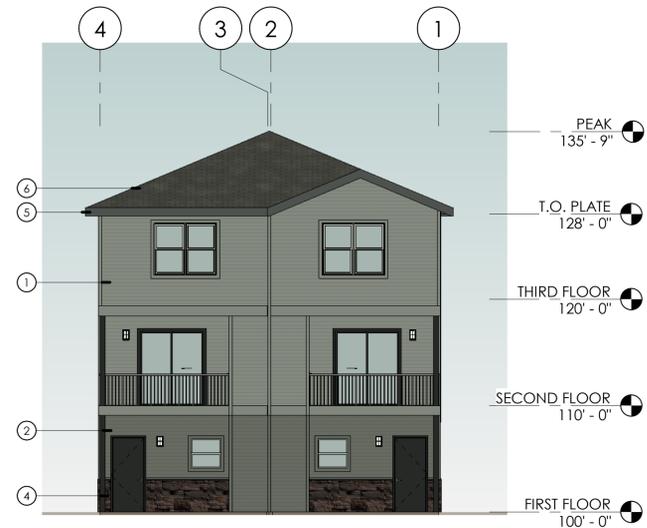




**2 WEST ELEVATION**  
1/8" = 1'-0"



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COLOR NAME: HURON

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COLOR NAME: WEATHERED WOOD

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COLOR NAME: DARK BRONZE

**WINDOWS**

⑧ COLOR NAME: ALMOND

**EXTERIOR DOORS**

⑨ TRIM/PANEL  
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**STEEL SUPPORTS**

⑩ 3" TUBE STEEL SUPPORTS



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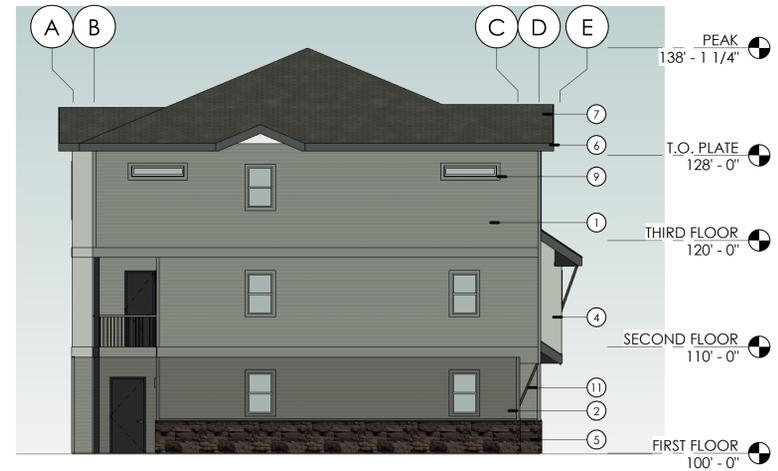
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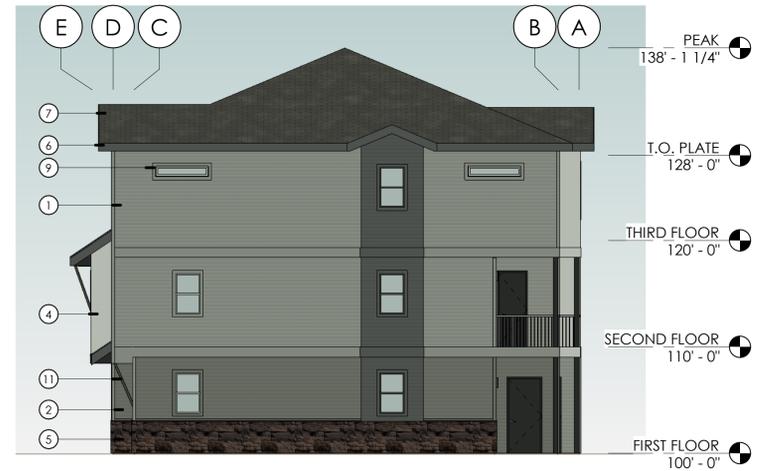
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**STONE**

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COLOR #: SW 7062

**ROOFING**

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COLOR NAME: DARK BRONZE

**WINDOWS**

- 9 COLOR NAME: ALMOND

**EXTERIOR DOORS**

- 10 TRIM/PANEL  
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COLOR NAME: ROCK BOTTOM  
COLOR #: SW 7062

**STEEL SUPPORTS**

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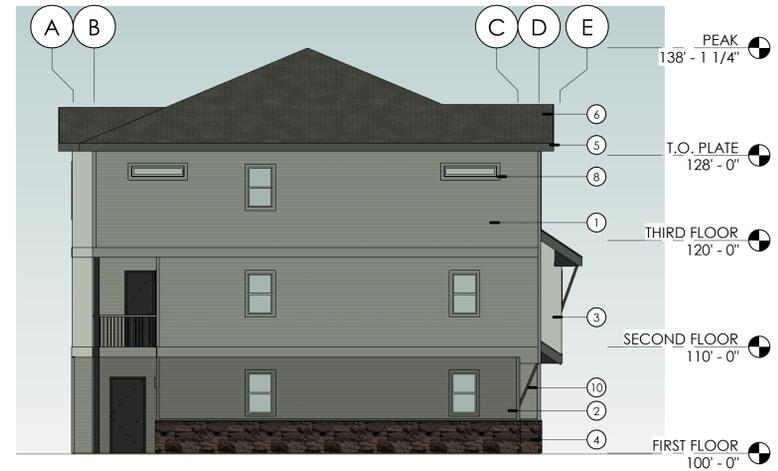
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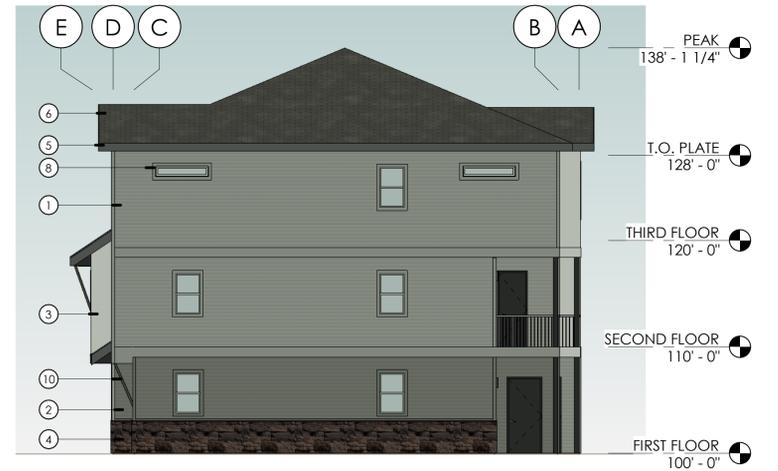
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COLOR #: SW 6208

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MFR: SHERWIN WILLIAMS  
COLOR NAME: OYSTER BAY  
COLOR #: SW 6206

**STONE**

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MFR: CORONADO STONE  
TYPE: OLD COUNTRY LEDGE  
COLOR NAME: HURON

**FASCIA**

⑤ HARDIBOARD FASCIA  
MFR: SHERWIN WILLIAMS  
COLOR NAME: ROCK BOTTOM  
COLOR #: SW 7062

**ROOFING**

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MFR: GAF  
TYPE: TIMBERLINE COOL SERIES  
COLOR NAME: WEATHERED WOOD

⑦ STANDING SEAM METAL ROOFING  
COLOR NAME: DARK BRONZE

**WINDOWS**

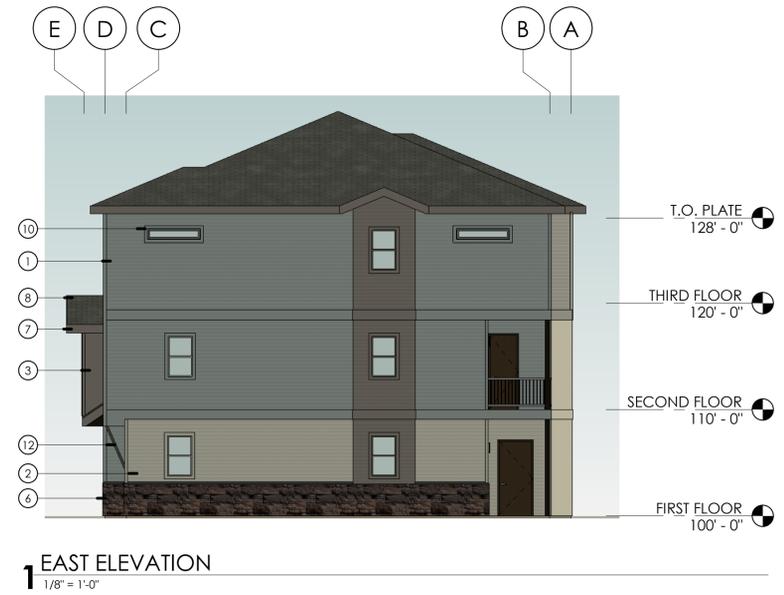
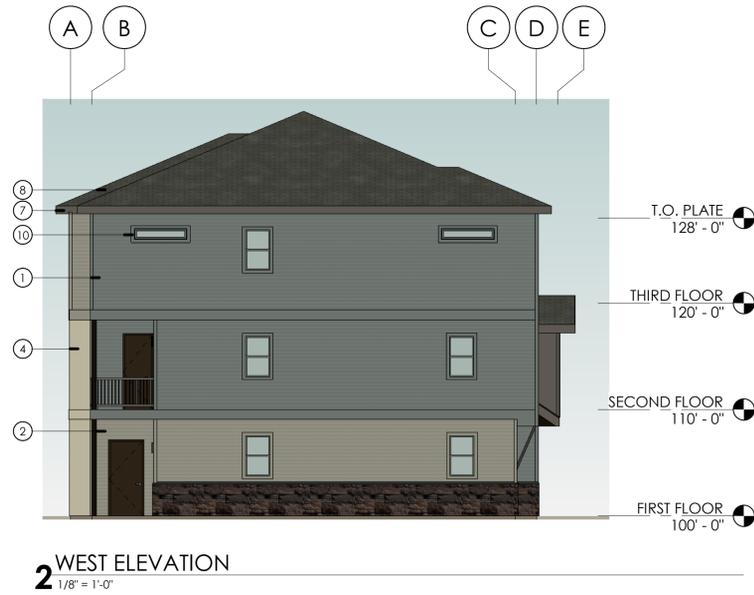
⑧ COLOR NAME: ALMOND

**EXTERIOR DOORS**

⑨ TRIM/PANEL  
MFR: SHERWIN WILLIAMS  
COLOR NAME: ROCK BOTTOM  
COLOR #: SW 7062

**STEEL SUPPORTS**

⑩ 3" TUBE STEEL SUPPORTS



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- 1 HARDIPLANK CEMENT LAP SIDING - 6"  
LAP HORIZONTAL; 1X4 TRIM  
MFR: SHERWIN WILLIAMS  
COLOR NAME: HOMBURG  
COLOR #: SW 7622
- 2 HARDIPLANK CEMENT LAP SIDING - 6"  
LAP HORIZONTAL; 1X4 TRIM  
MFR: SHERWIN WILLIAMS  
COLOR NAME: MOUNTAIN ROAD  
COLOR #: SW 7743
- 3 HARDIPLANK CEMENT LAP SIDING - 6"  
LAP HORIZONTAL; 1X4 TRIM  
MFR: SHERWIN WILLIAMS  
COLOR NAME: THUNDER GRAY  
COLOR #: SW 7645

**STUCCO SIDING**

- 4 STUCCO  
MFR: SHERWIN WILLIAMS  
COLOR NAME: SWELTE SAGE  
COLOR #: SW 6164
- 5 STUCCO  
MFR: SHERWIN WILLIAMS  
COLOR NAME: THUNDER GRAY  
COLOR #: SW 7645
- 6 CULTURED VENEER STONE  
MFR: CORONADO STONE  
TYPE: OLD COUNTRY LEDGE  
COLOR NAME: HURON

**FASCIA**

- 7 HARDIBOARD FASCIA  
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**WINDOWS**

- 10 COLOR NAME: ALMOND

**EXTERIOR DOORS**

- 11 TRIM/PANEL  
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COLOR NAME: THUNDER GRAY  
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**STEEL SUPPORTS**

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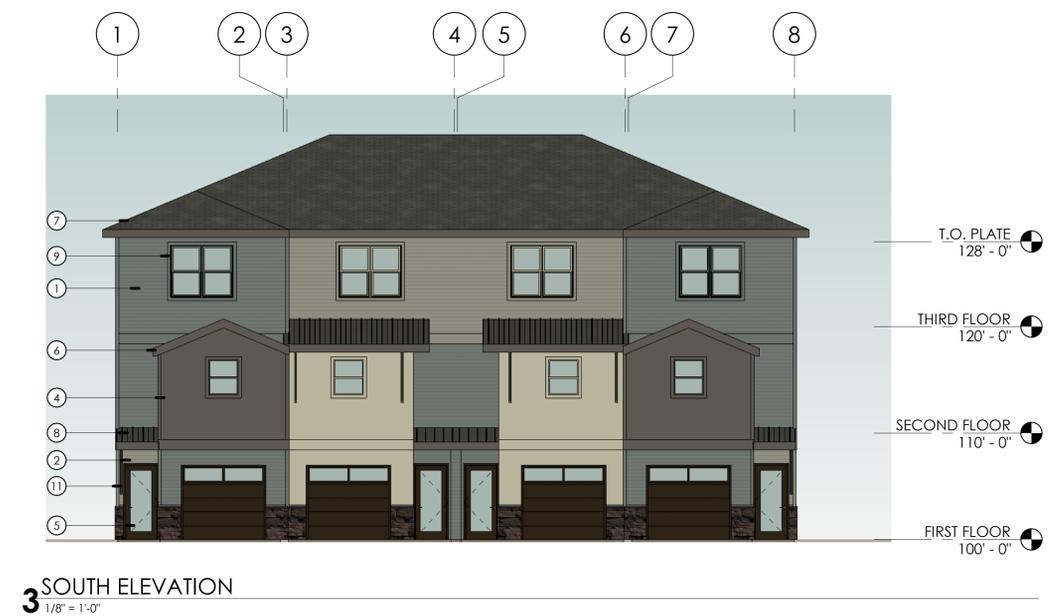
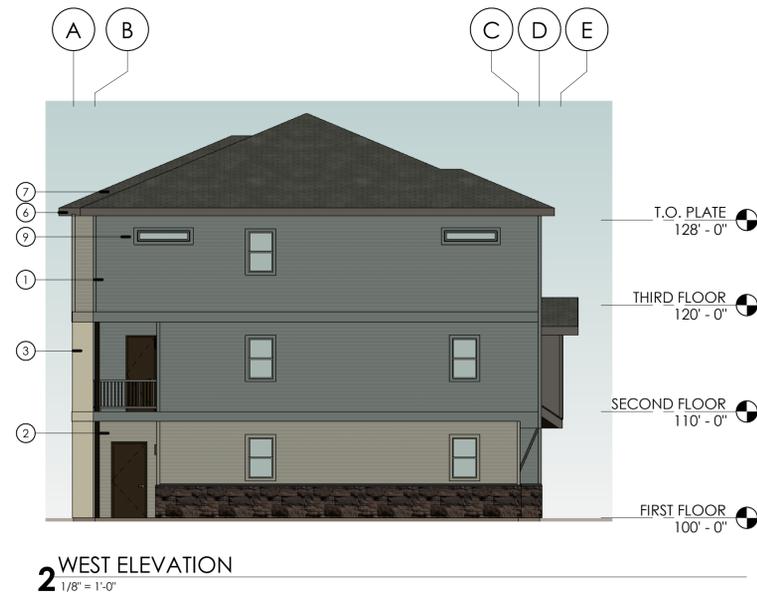
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**STEEL SUPPORTS**

- ⑪ 3" TUBE STEEL SUPPORTS

**RE: Mtn View Townhomes**

Jim Coslett <jcoslett@rocksolidcivil.com>

Tue 7/28/2020 3:12 PM

To: Darrien Miles <Dmiles@achdidaho.org>

Cc: David Hale <david@haledevelopment.com>

Thanks Darien. We will proceed.

**From:** Darrien Miles <Dmiles@achdidaho.org>

**Sent:** Tuesday, July 28, 2020 2:18 PM

**To:** Jim Coslett <jcoslett@rocksolidcivil.com>

**Cc:** david@haledevelopment.com

**Subject:** RE: Mtn View Townhomes

Good afternoon Jim,

Turn around looks good. Please let me know if you have any additional questions.

Thanks,

**Darrien Miles, E.I.**

Engineering Tech II

Ada County Highway District

Development Services

1301 N. Orchard Street, Suite 200

(208)387-6176

**From:** Jim Coslett <jcoslett@rocksolidcivil.com>

**Sent:** Monday, July 27, 2020 2:31 PM

**To:** Kaci Bader <kbader@achdidaho.org>

**Cc:** David Hale <david@haledevelopment.com>

**Subject:** Mtn View Townhomes









# Focus Engineering

Civil-Geotechnical-Environmental-Structural  
5140 W. Catalpa Court, Boise, Idaho 83703  
(208) 395-1979 focusboise@gmail.com

August 13, 2020

Re: Mountain View Townhomes  
SUBFY2020-01  
W. 53<sup>rd</sup> Street  
Garden City, Idaho

Focus Engineering has reviewed preliminary civil site grading plans by Rock Solid Civil and geotechnical report by Site Consulting along with Garden City comments by B&A Engineers for the proposed Mountain View Townhomes project. Following is our opinion regarding retaining wall suitability at the proposed site.

The townhome subdivision project proposes retaining walls in earth cut areas at the rising slope along the south side of the project site. Focus Engineering will contribute to the project by designing retaining walls as shown on the civil site grading plans. Height of walls are generally less than 5' with three wall corners that are 6', 8' and 11' tall respectively. Proposed retaining walls will be solid rock boulder walls, which are classified as gravity walls. The weight and size of boulders are designed to withstand the lateral earth pressure by their own weight and friction between the supporting soil base and between each boulder. Boulder sizes are typically larger at the bottom of the wall and diminish in size toward the top of the wall where lateral earth pressures are less.

Retaining wall design examines three stability conditions; overturning, sliding and vertical bearing pressure. The design then applies a safety factor of at least 1.5. In other words, the retaining walls are designed to be stable for 1.5 times the expected lateral earth pressure forces.

The design and construction of retaining walls will include a vertical layer of free draining fill at the back side of the boulders. A layer of permeable geotextile fabric will be laid against the native soil to help prevent soil particles from migrating into the free draining backfill. A fabric wrapped perforated pipe will be laid at the bottom of the vertical drainage layer with pipe ends open to daylight. This will ensure that hydrostatic forces do not build up behind the wall. An additional advantage of using boulders for retaining wall construction is the gaps between boulders also allow for escape of any accumulated water from behind the wall.

Overall stability of retaining walls constructed below the nearby the Settler's Irrigation canal is critically important to maintain integrity of the soil supporting the canal. Potential for seepage from the Settler's Irrigation canal and saturated soils should be considered in the retaining wall design. Design of retaining walls will also take into account increased lateral soil pressure caused by the steeper slopes behind the walls. In the geotechnical report by Site Consulting there are test pits or soil borings shown at locations between the canal and the proposed retaining walls. Soil types are suitable for boulder retaining wall construction.

Mountain View Townhomes  
W. 53<sup>rd</sup> Street  
Garden City, Idaho

During boulder retaining wall construction the excavated native soil should be reviewed for suitability by the geotechnical engineer. The size and placement of boulders, and placement of free draining backfill, should be reviewed and approved by Focus Engineering.

Similar boulder retaining walls have been successfully constructed at several locations in the Treasure Valley. Examples that are comparable to the proposed Mountain View Townhomes project include North Hill Townhomes and adjacent Lancaster Apartments located on Hill Road between N. 21<sup>st</sup> Street and N. 24<sup>th</sup> Street in Boise.

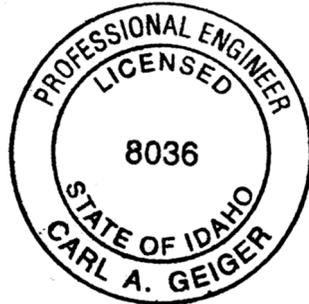
The proposed retaining wall configuration and site layout for the Mountain View Townhomes project appears to be suitable for the site conditions. Retaining wall construction as properly designed is not expected to adversely affect the native soil stability or the integrity of the Settler's Irrigation canal near the top of the slopes behind the retaining walls.

Please contact me if you have any questions or comments.

Sincerely,

Focus Engineering, Inc.  
Boise, Idaho

Carl Geiger, PE



⏪ Reply all ∨ 🗑 Delete 🚫 Junk 🚫 Block ...

## Re: Mountain View Townhomes behind store 439

DH

David Hale

Thu 1/30/2020 2:30 PM

To: Forrest, Don <don.forrest@kroger.com>



Thanks Don. I'll be in touch.

David Hale

---

**From:** Forrest, Don <don.forrest@kroger.com>

**Sent:** Thursday, January 30, 2020 2:22:49 PM

**To:** David Hale <david@haledevelopment.com>

**Subject:** RE: Mountain View Townhomes behind store 439

David – Following up on our phone conversation today, Fred Meyer is not opposed to a safe, well maintained pedestrian or emergency vehicle access, however, we will need detailed information including elevations, specs (CDs) before providing approval. As discussed, this is a leased property with Metlife who will first look to FM for approval and then have their engineers and attorneys review which can sometimes be a lengthy process. Thanks.

Don Forrest | Sr. RE Manager – Asset Mgmt  
FRED MEYER | FRY'S | KING SOOPERS | QFC  
503.797.3117 (V) 360.690.5019 (C)  
[Don.forrest@kroger.com](mailto:Don.forrest@kroger.com)

---

**From:** David Hale <david@haledevelopment.com>

**Sent:** Thursday, January 16, 2020 12:21 PM

**To:** Forrest, Don <don.forrest@kroger.com>

**Subject:** Mountain View Townhomes behind store 439

**\*\* [EXTERNAL EMAIL]:** Do not click links or open attachments unless you recognize the sender and know the content is safe. \*\*

Don,

I appreciate the quick reply and voicemail. I've attached the Site Plan for the Mountain View Townhomes as well as an aerial that shows the vacant land and the shared property line at the rear of the store. I'm planning for 72 total for sale townhouses on the 7 acre vacant land site south of your store. The location of the site I feel is an amenity in relation to being walking distance to the Fred Meyer for the future buyers' shopping needs. Hopefully you too see this as a good thing adding so many rooftops so close by.

There are a few items that I'll need to address. One is the emergency fire access currently planned at the NW corner of the project. This would be in the SW corner of the Fred Meyer parcel back by your loading facilities and significantly away from any pedestrian traffic. It will be gated and not used for any vehicular ingress or egress unless the fire department needs to access the gate. The other access point from the project onto the Fred Meyer property is a stairway and ADA accessible pedestrian ramp that will allow our homeowners direct access to your back property for their shopping needs or to walk through the parking lot to get to the



neUdesign  
ARCHITECTURE  
725 E 2nd St  
Meridian, ID 83642  
208.884.2824

CONSULTANT

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Mountain View Townhomes

Garden City, Idaho

PROFESSIONAL SEAL

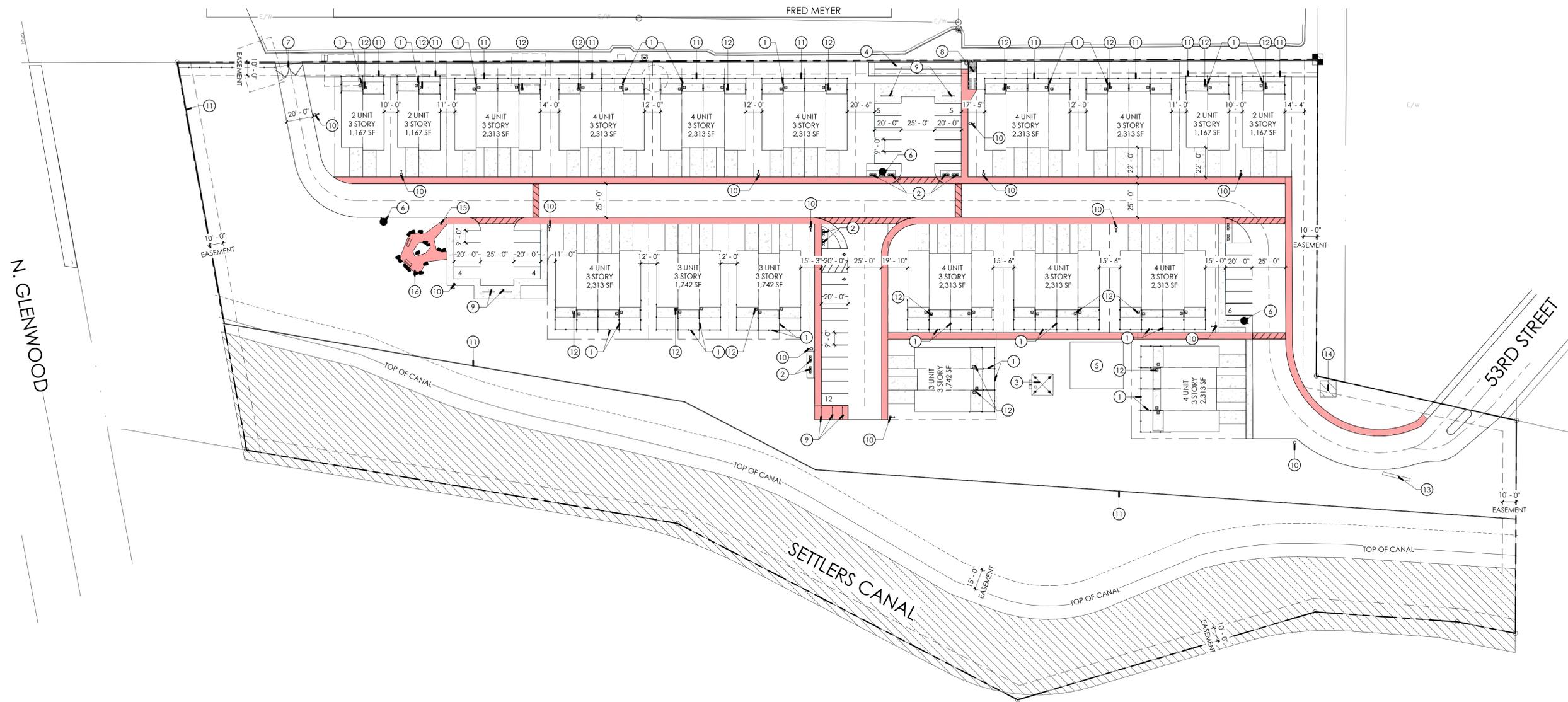
**NOT FOR PERMIT**

NO.	DESCRIPTION	DATE
B	DR PreApp	06.25.19
A	DR PreApp	04.24.19

SITE PLAN

A-101

JOB NUMBER 18222  
DRAWN BY MJC



1 SITE PLAN  
1" = 40'-0"

**SITE NOTES**

- | #  | NOTE   |
|----|--|
| 1  | 6' HIGH WHITE VINYL FENCE BETWEEN YARDS, TYP. ALL UNITS (AT BACK OF YARD WHERE NOTED)                  |
| 2  | MAILBOXES  |
| 3  | COVERED PICNIC AREA  |
| 4  | ADA ACCESSIBLE RAMP TO PARKING LOT   |
| 5  | OUTDOOR GYM  |
| 6  | FIRE HYDRANT   |
| 7  | GATE   |
| 8  | PEDESTRIAN ACCESS TO FRED MEYER  |
| 9  | BIKE RACK  |
| 10 | LIGHT POLE   |
| 11 | 42" HIGH IRON FENCE AT BACK OF YARDS (WHERE NOTED)   |
| 12 | A/C UNIT ON BACK PATIO, TYP. ALL UNITS, FURNACE AND WATER HEATER CLOSET OFF BACK PATIO, TYP. ALL UNITS |
| 13 | SUBDIVISION SIGNAGE LOCATION   |
| 14 | PUMP STATION LOCATION  |
| 15 | COLORED CONCRETE @ CROSSWALKS & DRIVEWAY LOCATIONS "BRICK" COLOR                                       |
| 16 | PLAZA WITH SEATING, REFER TO LANDSCAPE   |

**SITE ANALYSIS:**

**SITE CHARACTERISTICS**  
ZONING DISTRICT: M1  
LOT AREA: 7.78 ACRES (338,897 SF)  
BUILDING AREA: 35,337 SF (10%)  
IMPERVIOUS SURFACE: 73,806 SF (22%)  
OPENSOURCE: 145,683 SF (43%)  
CANAL AREA: 84,071 SF (25%)

**PARKING STALLS:**  
REQUIRED STANDARD STALLS: 2 (1 ENCLOSED IN GAR.)  
REQUIRED ADA STALLS: 2  
  
PROVIDED STANDARD STALLS: 2 PER UNIT (1 ENCLOSED) + 36 GUEST  
PROVIDED ADA STALLS: 2 GUEST  
PROVIDED STANDARD STALLS: 34 GUEST  
TOTAL PROVIDED STALLS: 36 GUEST

**BIKE PARKING**  
PROVIDED: (7) 2 WIDE RACKS

**BUILDING SQUARE FOOTAGE ANALYSIS:**

**Gross Building Area:**

The area includes the exterior walls to the face of exterior finish. Used to calculate construction cost, bank appraisal, and tax assessor value

	2-PLEXES	3-PLEXES	4-PLEXES
FIRST FLOOR	1,167 SF	1,742 SF	2,313 SF
SECOND FLOOR	1,119 SF	1,674 SF	2,288 SF
THIRD FLOOR	1,242 SF	1,856 SF	2,479 SF
TOTAL	3,528 SF	5,272 SF	7,080 SF

**BUILDING FOOTPRINTS (FIRST FLOOR)**

2-PLEXES	(4) 1,167 SF =	4,668 SF
3-PLEXES	(3) 1,742 SF =	5,226 SF
4-PLEXES	(1) 2,313 SF =	25,443 SF
TOTAL		35,337 SF

**VICINITY MAP**





August 17, 2020

**RE:** SUBFY2020-01 Mountain View Townhomes Subdivision

**Location:** 7.78 acres of vacant land behind/south of Fred Meyer at 5425 Chinden

**Parcel #** S0536141980

To Whom It May Concern:

The previously proposed 72-unit Preliminary Plat and Planned Unit Development with Conditional Use Permit has been modified since its original submittal back in December 2019 to reflect the changes requested by Design Review Committee as well as address the concerns outlined by the City Engineer with respect to the development of the project. The newly proposed project now consists of 61 Townhouse units that still contain the same variety of housing types with 2, 3 and 4-unit townhouse buildings on individual lots. Changes to the layout of the project and proposed total number of units stem from the existing topography and ability to successfully locate the retaining walls further away from Settler's Canal to minimize the impact to the existing slope.

All units still meet the off street parking requirements for the zone, but as previously submitted, we are still asking within the PUD that the required 2<sup>nd</sup> parking space be included in the front 20' of driveway with a parking easement in this location for each unit. The total number of proposed off street parking within the project is 122 spaces with an additional 37 spaces for guest parking, exceeding the parking requirements by 6 spaces.

The revised Site and Landscape plans incorporate a newly designed Plaza area at the west end of the project as suggested by Design Review Committee during the original pre-application DR hearing. They also incorporate a pedestrian friendly traffic flow feature throughout the project with the use of colored concrete sidewalks that help define and direct foot traffic to the various project amenities as well as access to the neighboring mixed-use commercial properties. Side elevation elements on the corner lot buildings were also added to help provide more architectural relief as suggested by DR Committee. These changes to the project are reflected in the updated building elevations and newly provided 3D color renderings.

With regards to some of the concerns the Garden City Engineer brought up in his January 2020 review of the previously submitted 72-unit project, below are some of the answers/responses to those questions/concerns. In addition to these responses, supplemental information is

provided within the updated and revised Geotechnical Report as well as the newly provided Grading and Drainage plans included with this August 2020 submittal.

- Subdivision name and reservation approval is included via email from the Ada County Surveyor's office dated September 13, 2019.
- Preliminary acceptance of the Emergency and Pedestrian Access onto the neighboring Fred Meyer property is included via email from Don Forrest, Senior Real Estate Manager-Asset Management for Fred Meyer's parent company Kroger dated January 30, 2020. Because Fred Meyer is not the owner of the property, Fred Meyer first needs to review all necessary documents (Easement Agreements, Plat, Site Plan, Building Elevations and Construction Documents/Drawings, etc.) prior to recommending approval to their landlord, MetLife. As Don referenced other similar situations that received approval, their main concern is a safe, well maintained access. These access easements, if the project is approved, should be a condition of approval for the Final Plat.
- Retaining walls as indicated on the Grading plan indicate height and location of the solid natural rock boulders. The report provided by Focus Engineering indicates utilizing this method of retaining wall will ensure any hydrostatic forces do not build up behind the wall. It is reported that the overall stability of the retaining walls below the hill leading up to Settler's Canal "is critically important to maintain the integrity of the soil supporting the canal" and the "Retaining wall construction is not expected to adversely affect the native soil stability or the integrity of the Settler's Irrigation Canal near the top of the slopes behind the retaining walls."  
In addition, historic photos from 1999 and 2013 indicate the original toe of the Canal slope was altered and pushed further north to make room for the maintenance/access road that was built to haul material from the upper portion of the site off Glenwood and Mountain View Drive down to the flat portion of the property where fill was placed as outlined in the Geotechnical report.
- ACHD has provided preliminary approval on the location and size of the turnaround at the south end of W. 53<sup>rd</sup> as evidence by the email dated July 27 between Jim Coslett, Civil Engineer on the project and Darrien Miles, Engineering Tech for ACHD.
- The prior ditch that used to run through the property was the beginning of the "Thurman Mill Drain" which still operates, and its origin is now located at the southwest corner of the adjacent Fred Meyer property. As noted in the Geotech report, surface and subsurface investigation occurred to determine if the ditch was previously piped or tiled. During exploratory excavation of certain areas where the ditch was located, no pipe, concrete, water, or moist soils were encountered. Groundwater monitoring is continuing with monitoring wells located at the toe of the slope in the area where the ditch used to be located. See Geotech report for further information.

After extensive evaluation while taking the various concerns expressed and questions raised into account, our team of Engineers has provided a revised residential project that is well designed for the site conditions and topography, is a proper use of the land within the existing mixed use area and meets a need for more affordable housing in this area while helping limit the demand on additional City and ACHD services through this infill development.

We look forward to working with Garden City and the agencies necessary for approval to bring this quality residential development to fruition.

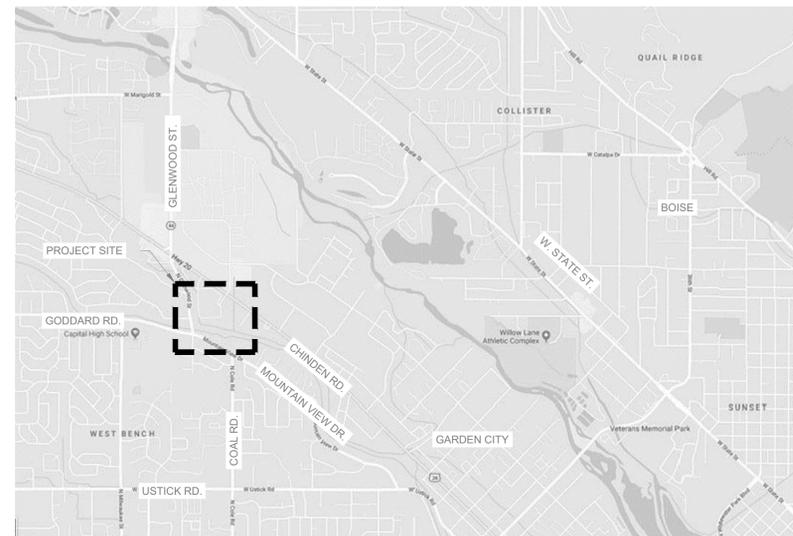
Sincerely,

David Hale  
Hale Development, Inc.  
1603 W. Idaho Street  
Boise, ID 83702

**LANDSCAPE NOTES:**

1. REGULATIONS & STANDARDS
    - 1.1. All contractor work shall be conducted in accordance with ISPPWC (Idaho Standard Public Works Construction), 2019, and City of Garden City, ID codes, standards and state and local regulations.
  2. EXISTING CONDITIONS
    - 2.1. All utilities shall be located prior to construction and protected. Any damage to structures, utilities or concrete will be replaced at contractor's expense.
    - 2.2. The site has many existing improvements such as underground utilities, curb and gutter, light poles and sidewalks.
    - 2.3. See Engineer's plans for information about existing features.
  3. GRADING & SITE PREPARATION
    - 3.1. Prepare finish grades for planting by grubbing and removing weeds. If necessary apply Round-Up (or equivalent herbicide), using a certified applicator. Remove rocks and other materials over 2".
    - 3.2. All gravel overtop to be removed and disposed of off site.
    - 3.3. Finish grade to be smooth transition to allow for entire site to be a natural flowing space.
    - 3.4. Fine grade lawn areas to elevations set by Engineer's plans with positive drainage away from structures. Refer to Civil Engineer's plans for grading information.
    - 3.5. Refer to Engineer's plans for grading information & for all drainage pipes and locations. Protect and retain drainage at all times.
    - 3.6. No pooling or standing water will be accepted per industry standards.
  4. SOILS
    - 4.1. All planter beds to receive a minimum of 18" depth of screened topsoil. Spread, compact, and fine grade to smooth and uniform grade 2" below adjacent surfaces.
    - 4.2. All lawn areas to receive a minimum of 12" depth of screened topsoil. Spread, compact, and fine grade topsoil to a smooth uniform grade 1" below adjacent surfaces.
  - 4.3. Reuse of existing topsoil that has been stockpiled on site is permitted if:
    - 4.3.1. Topsoil is tested and analyzed to ensure a proper growing medium. Provide additional amendments as determined by soil tests. And
    - 4.3.2. Topsoil is to be loose, friable sandy loam that is clean and free of toxic materials, noxious weeds, weed seeds, rocks, grass or other foreign materials.
    - 4.3.3. Topsoil should have a pH of 6.5 to 8.0.
    - 4.3.4. If on site topsoil does not meet these minimum standards contractor is responsible for providing approved imported topsoil or improving onsite topsoil per the approval of the Landscape Architect.
  - 4.4. If imported topsoil is used it must be from a local source and be screened free of any debris or foreign matter. Topsoil must not contain rocks, sticks, lumps, or toxic matter.
  - 4.5. Smooth, compact, and fine grade topsoil in lawn areas to smooth and uniform grade .5" below adjacent surfaces.
  - 4.6. Prepare finish grade of topsoil to elevations set by Engineer's plans with positive drainage away from structures. Refer to Civil Engineer's plans for grading information.
  - 4.7. Amend all new plantings with 2 parts topsoil and 1 part compost.
5. PLANTER BED MULCH
  - 5.1. All planter beds to receive 3" depth of black and tan mini rock mulch.
    - 5.1.1. Place over commercial grade weed barrier fabric. Install fabric per manufacturers recommendations.
6. LAWN AREAS
  - 6.1. Keep all lawn areas 1" minimum off of fencing, building foundations, and additional structures. Install 1" border of 3/8" chips @ 4" depth between lawn and respective structures. Install over commercial grade weed barrier fabric.
  - 6.2. Sodded lawn tall turf type fescue, locally grown and harvested, with cut edge at all planter bed locations.
- 6.3. Lay sod within 24 hrs of harvesting. Lay sod to form a solid mass with offset, tightly fitted joints on even grades.
- 6.4. Strip, repair and replace dead sod as needed.
7. PLANTS
  - 7.1. All plant material shall be installed per industry standards.
  - 7.2. All plant material shall meet or exceed the minimum federal standards as regulated by ANSI z60.1, American Standard for Nursery Stock. Plants not meeting these standards for quality, or plants determined to be unhealthy by Owner's representative, will be rejected.
  - 7.3. All Ball and Burlap trees to be installed per Balled and Burlapped planting detail.
  - 7.4. All shrubs to be installed per detail.
  - 7.5. Trees and shrubs over 36" shall not be planted within clear vision triangles per city code.
  - 7.6. Fertilize all trees and shrubs with 'Agriform' planting tablets or approved equal. Apply per manufacturers recommendations.
8. IRRIGATION (POC)
  - 8.1. Irrigation system shall be built to the following specifications:
    - 8.1.1. Adhere to city codes when connecting to city water.
    - 8.1.2. All irrigation material to be new with manufacturers warranty fully intact.
    - 8.1.3. Install indoor rated controller in mechanical room or riser room, provide 1-1.5" sweep ell or approved other, coordinate with Electrical engineer. Coordinate with General on exact controller location. Provide 2 keys and locate controller in lock-box.
    - 8.1.4. Irrigation system piping to be minimum class 200 PVC or approved equal. Sleeves to be double the size of pipes located within, all wires to be contained in separate sleeves 1-1/2" dia min.
    - 8.1.5. Use common trenching where possible..
    - 8.1.6. All PVC located under hardscapes to be schedule 40 PVC with same req's as above.
  - 8.1.7. All wires to be 14 gauge direct, bury wire at a minimum of 12" below finished grade. Size wire for correct voltage loss.
  - 8.1.8. Supply a minimum of (2) spare wires to furthest valves from controller in all directions.
  - 8.1.9. Connect mainline to point of connection in approximate location determined by contractor upon construction.
  - 8.1.10. Provide 3/4" winterization port in location near POC. Winterization port to be located inside of its own standard valve box.
  - 8.1.11. Contractor is responsible complying with all codes and paying all permits necessary.
  - 8.1.12. Sprinkler heads shall have matched precipitation within each control circuit. Velocities shall not exceed 5 feet per second.
9. CONTRACTOR RESPONSIBILITIES
  - 9.1. Estimated quantities are shown for general reference only. Contractor shall be responsible for all quantity estimates.
  - 9.2. Refer to note 2.1 regarding damages to existing utilities & permitting note in Irrigation section.
  - 9.3. All plant material and workmanship shall be guaranteed for a period of one year beginning at the date of Acceptance by Owner. Replace all dead or unhealthy plant material immediately with same type and size at no cost to Owner.
  - 9.4. Landscape contractor to turn in as built drawings at the end of project. Substantial completion will not be granted until 2 copies @ 1"=20' scale are turned in and approved by owner's representative.
  10. In the event of a discrepancy, notify the Landscape Architect immediately.

**VICINITY MAP:**



**STACK ROCK GROUP**  
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 404 S 8th St. #154  
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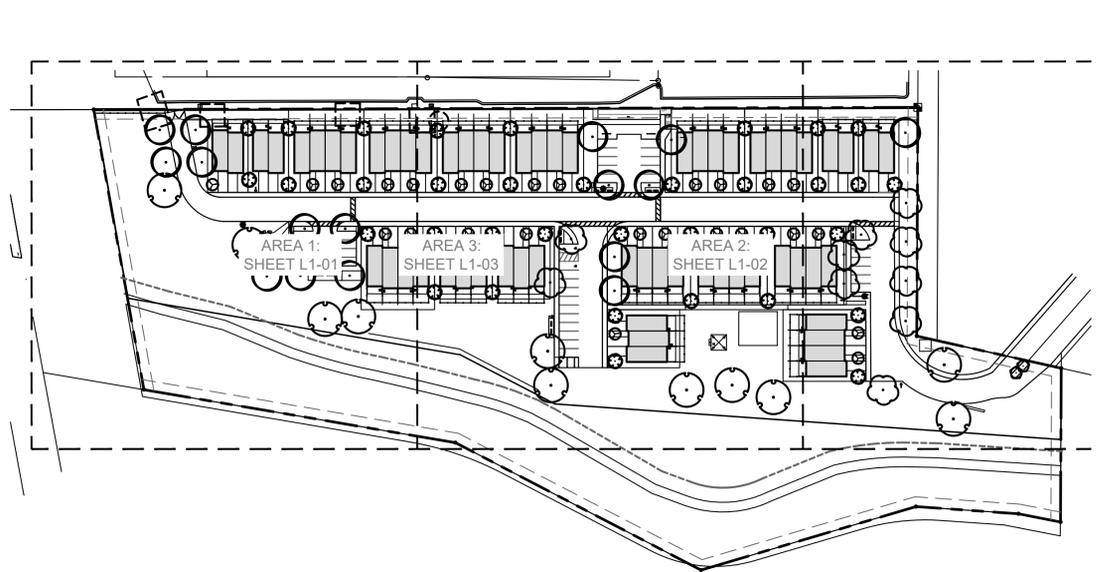
**LANDSCAPE REQUIREMENTS:**

- PER GARDEN CITY MUNICIPAL CODE  
 ZONE: C-2: GENERAL COMMERCIAL
- SCREENING & BUFFERING:**
- STREETS & PROPERTY PERIMETER:**  
 \* STREET TREE SPACING: 1 TREE PER 15LF (or as needed for selected tree)  
 \*\* BUFFERING REQUIRED:  
 1 TREE PER 15 LF (OR PER SPECIES)  
 TREES SHALL BE SPACED SO CANOPIES TOUCH AT MATURITY
- | PERIMETER | LENGTH | TREES REQUIRED @ 35' SPACING | TREES PROVIDED @ 35' SPACING |
|-----------|--------|------------------------------|------------------------------|
| NORTH     | 76'    | 22 @ 35' SPACING             | 0*                           |
| SOUTH     | 1131'  | NA                           | NA                           |
| EAST      | 236'   | 7 @ 35' SPACING              | 5 + 2 EXISTING               |
| WEST      | 276'   | NA                           | NA                           |
- \* 10' WIDE AND 6' HIGH VEGETATIVE BUFFER REQUIRED WHEN DIFFERENT ZONES ABUT ONE ANOTHER.  
 \*\* TALL EVERGREEN HEDGE PROVIDED WITH EXISTING MATURE TREES TO REMAIN ON PROPERTY LINE
- LANDSCAPE COVERAGE AND TOWNHOUSE REQUIREMENTS:**  
 • MINIMUM 5% GROSS SITE AREA AS LANDSCAPED  
 • TOTAL AREA - 7.78 ACRES (338,897 SF) @ 5% = .39 ACRES (16,945 SF)
- OPEN SPACE BREAK DOWN:**  
 • TOTAL PROJECT AREA - 7.78 ACRES (338,897 SF) @ 5% = .39 ACRES (16,945 SF)  
 TREES: TREES REQUIRED TREES PROVIDED  
 1 PER 1,000 SF 17 14 + 3 EXISTING
- TOWNHOUSE BREAKDOWN:**  
 • 1 TREE PER 50 LINEAR FEET  
 • 1 TREE PER PARCEL FRONTAGE & ADJACENT SIDE STREET (CLASS I OR II)
- | TOWNHOMES:   | TREES REQUIRED | TREES PROVIDED |
|--------------|----------------|----------------|
| 62 TOWNHOMES | 62             | 62             |
- | TOWNHOME FRONTAGE:             | TREES REQUIRED | TREES PROVIDED |
|--------------------------------|----------------|----------------|
| 1,200 LINEAR FEET              | 24             | 49             |
| SIDE STREET FRONTAGES - 450 LF | 9              | 9              |
- PARKING LOT:**  
 \* 1 TREE PER 20 SPACES
- | PARKING SPACES | TREES REQUIRED | TREES PROVIDED |
|----------------|----------------|----------------|
| 36 PER CIVIL   | 2              | 8              |
- GENERAL REQUIREMENTS:**  
 \*REVIEW GARDEN CITY CODE REGARDING PROVISIONS TO PRESERVING EXISTING TREES (8-41-7)  
**TREE SIZING:**  
 SHADE TREES: MIN 2" CAL, B&B  
 ORNAMENTAL TREES: MIN 2" CAL, B&B  
 CONIFER TREES: MIN 6" H, B&B  
**SHRUB SIZING:**  
 WOODY SHRUBS: 2 GAL  
 TREE BIODIVERSITY: PROVIDE (3) SPECIES 11-30 TREES

**PLANT SCHEDULE**

TREES	BOTANICAL / COMMON NAME	CONT	CAL	QTY	REMARKS
	Acer x freemanii 'Armstrong' / Armstrong Freeman Maple	B&B	2"	2	35'h x 12' w CLASS II
	Amelanchier x grandiflora 'Robin Hill' / Robin Hill Serviceberry	B&B	2"	35	25'h x 15' w CLASS I
	Fraxinus pennsylvanica 'Autumn Purple' / Autumn Purple Ash	B&B	2"	11	50'h x 35' w CLASS II
	Gleditsia triacanthos 'Skyline' / Skyline Honey Locust	B&B	2"	16	35'h x 30' w CLASS II
	Quercus palustris 'Green Pillar' / Green Pillar Oak	B&B	2"	26	50'h x 12' w CLASS II
	Tilia americana 'Redmond' / Redmond American Linden	B&B	2"	10	50'h x 30' w
SHRUBS	BOTANICAL / COMMON NAME	CONT	FIELD2	QTY	REMARKS
	Calamagrostis x acutiflora 'Karl Foerster' / Feather Reed Grass	1 gal		63	5'h x 3' w
	Juniperus scopulorum 'Skyrocket' / Skyrocket Juniper	5 gal		169	15'h x 3' w
	Pennisetum alopecuroides 'Mouly' / Black Flowering Fountain Grass	1 gal		140	2'h x 3' w
	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac	5 gal		5	12'h x 6' w
	Rosa x 'Double Knockout' / Rose	5 gal		55	3'h x 3' w
	Schizachyrium scoparium 'Standing Ovation' / Standing Ovation Little Bluestem Grass	1 gal		293	3'h x 30' w

**LANDSCAPE OVERVIEW:**



- GENERAL NOTES:**
- A. THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND REPORT AND DISCREPANCIES WITH THE DRAWINGS TO THE ARCHITECT PRIOR TO THE BEGINNING OF CONSTRUCTION. GRADES ARE APPROXIMATE. VERIFY IN FIELD.
  - B. ALL PLANTS, TREES AND HARDSCAPING TO REMAIN UNLESS OTHERWISE NOTED. PROTECT FROM DAMAGE DURING CONSTRUCTION. REPLACE AS REQUIRED.
  - C. PRIOR TO CERTIFICATE OF OCCUPANCY, REPLACE ANY DAMAGED EXISTING HARDSCAPING (ASPHALT, CONCRETE, CURBS, ETC.) AS REQUIRED.
  - D. PROVIDE SECURE BICYCLE PARKING IN CLOSE PROXIMITY TO BUILDING ENTRANCES MEETING ADA REQUIREMENTS. THESE FACILITIES SHALL NOT OBSTRUCT PEDESTRIAN WALKWAYS, PUBLIC SIDEWALKS, OR BUILDING ENTRANCE. EACH CONSTRUCTED FACILITY SHALL SUPPORT THE BICYCLE AND ALLOW THE OWNER OF, TO LOCK FRAME AND FRONT WHEEL WITH ONE LOCK.

Mountain View Townhomes  
 Garden City, Idaho

PROFESSIONAL SEAL

NO.	DESCRIPTION	DATE
B	DR PreApp	06.25.19
A	DR PreApp	04.24.19

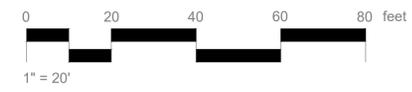
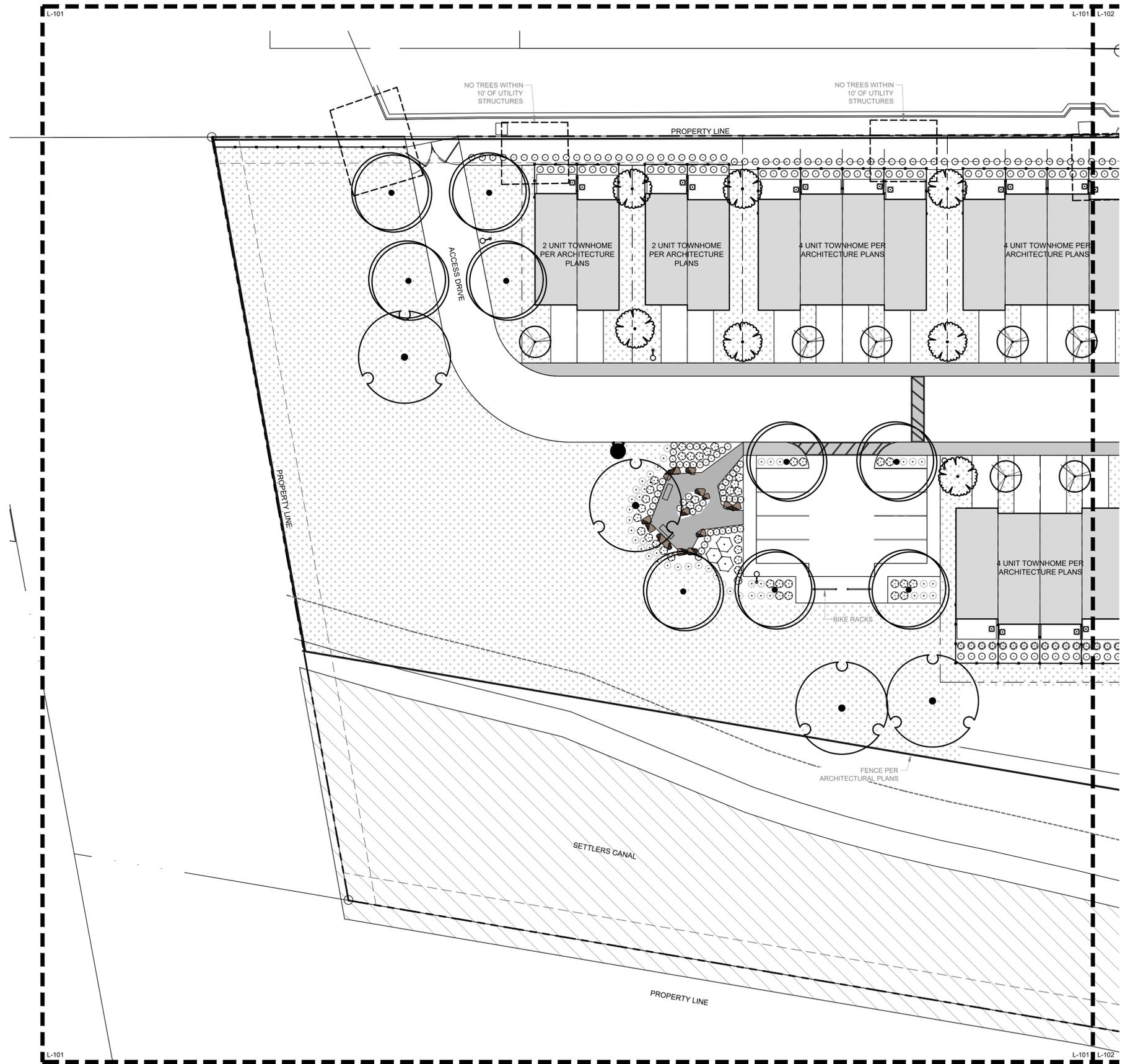
**LANDSCAPE OVERVIEW**

PLANT SCHEDULE		
TREES	COMMON NAME	REMARKS
	Armstrong Freeman Maple	35' h x 12' w CLASS II
	Robin Hill Serviceberry	25' h x 15' w CLASS I
	Autumn Purple Ash	50' h x 35' w CLASS II
	Skyline Honey Locust	35' h x 30' w CLASS II
	Green Pillar Oak	50' h x 12' w CLASS II
	Redmond American Linden	50' h x 30' w
SHRUBS	COMMON NAME	REMARKS
	Feather Reed Grass	5' h x 3' w
	Skyrocket Juniper	15' h x 3' w
	Black Flowering Fountain Grass	2' h x 3' w
	Gro-Low Fragrant Sumac	12' h x 6' w
	Rose	3' h x 3' w
	Standing Ovation Little Bluestem Grass	3' h x 30' w

**LANDSCAPE MATERIALS LEGEND:**

- SOD LAWN
- BRICK COLORED CONCRETE WALKWAY & PLAZA
- EXISTING TREES TO REMAIN - RETAIN AND PROTECT

- GENERAL NOTES:**
- THE CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND REPORT AND DISCREPANCIES WITH THE DRAWINGS TO THE ARCHITECT PRIOR TO THE BEGINNING OF CONSTRUCTION. ALL GRADES ARE APPROXIMATE. VERIFY IN FIELD.
  - ALL PLANTS, TREES AND HARDSCAPING TO REMAIN UNLESS OTHERWISE NOTED. PROTECT FROM DAMAGE DURING CONSTRUCTION. REPLACE AS REQUIRED PRIOR TO CERTIFICATE OF OCCUPANCY. REPLACE ANY DAMAGED EXISTING HARDSCAPING (ASPHALT, CONCRETE, CURBS, ETC.) AS REQUIRED.
  - PROVIDE SECURE BICYCLE PARKING IN CLOSE PROXIMITY TO BUILDING ENTRANCES MEETING ADA REQUIREMENTS. THESE FACILITIES SHALL NOT OBSTRUCT PEDESTRIAN WALKWAYS, PUBLIC SIDEWALKS, OR BUILDING ENTRANCE. EACH CONSTRUCTED FACILITY SHALL SUPPORT THE BICYCLE AND ALLOW THE OWNER OF, TO LOCK FRAME AND FRONT WHEEL WITH ONE LOCK.



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CONSULTANT

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Mountain View Townhomes  
Garden City, Idaho



NO.	DESCRIPTION	DATE
B	DR PreApp	06.25.19
A	DR PreApp	04.24.19

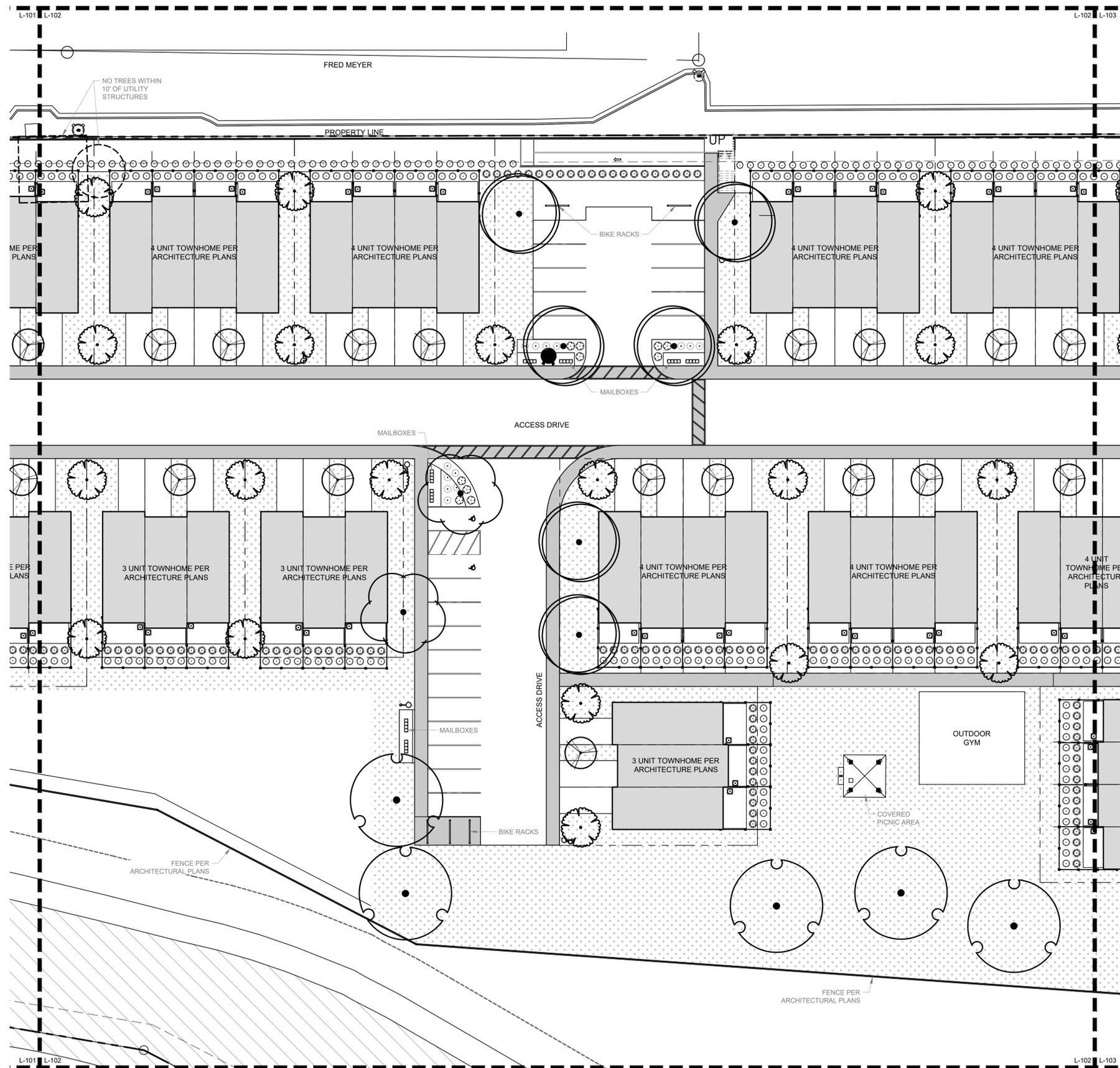
LANDSCAPE PLAN

L-101

PLANT SCHEDULE		
TREES	COMMON NAME	REMARKS
	Armstrong Freeman Maple	35' h x 12' w CLASS II
	Robin Hill Serviceberry	25' h x 15' w CLASS I
	Autumn Purple Ash	50' h x 35' w CLASS II
	Skyline Honey Locust	35' h x 30' w CLASS II
	Green Pillar Oak	50' h x 12' w CLASS II
	Redmond American Linden	50' h x 30' w
SHRUBS	COMMON NAME	REMARKS
	Feather Reed Grass	5' h x 3' w
	Skyrocket Juniper	15' h x 3' w
	Black Flowering Fountain Grass	2' h x 3' w
	Gro-Low Fragrant Sumac	12' h x 6' w
	Rose	3' h x 3' w
	Standing Ovation Little Bluestem Grass	3' h x 30' w

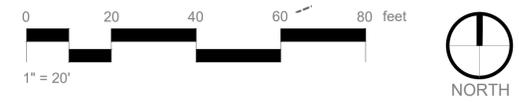
**LANDSCAPE MATERIALS LEGEND:**

- SOD LAWN
- BRICK COLORED CONCRETE WALKWAY & PLAZA
- EXISTING TREES TO REMAIN - RETAIN AND PROTECT



**GENERAL NOTES:**

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Mountain View Townhomes

Garden City, Idaho

PROFESSIONAL SEAL

NOT FOR PERMIT

NO.	DESCRIPTION	DATE
B	DR PreApp	06.25.19
A	DR PreApp	04.24.19

**LANDSCAPE PLAN**

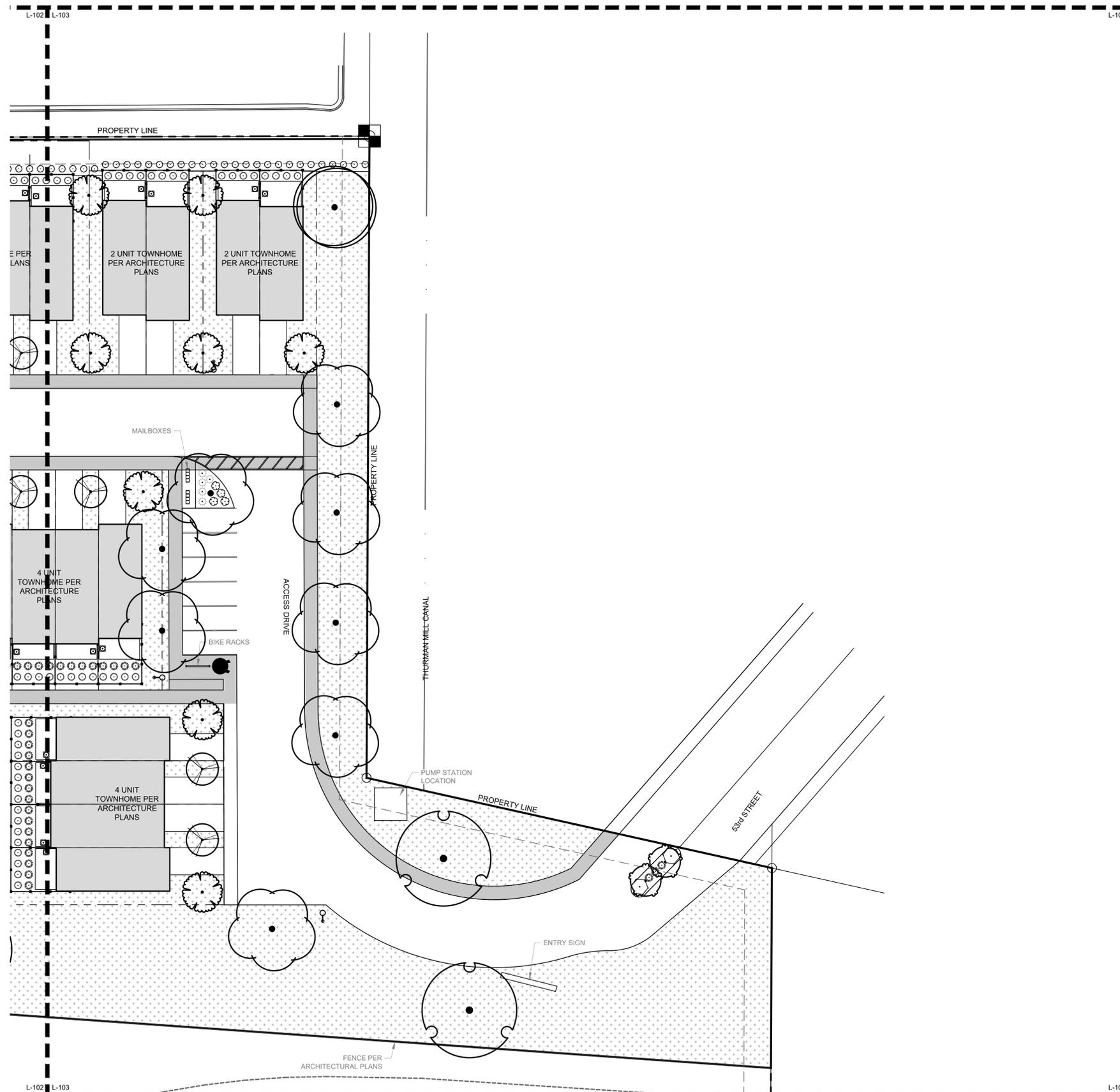
L-102

JOB NUMBER 18222  
DRAWN BY DW/KS

PLANT SCHEDULE		
TREES	COMMON NAME	REMARKS
	Armstrong Freeman Maple	35' h x 12' w CLASS II
	Robin Hill Serviceberry	25' h x 15' w CLASS I
	Autumn Purple Ash	50' h x 35' w CLASS II
	Skyline Honey Locust	35' h x 30' w CLASS II
	Green Pillar Oak	50' h x 12' w CLASS II
	Redmond American Linden	50' h x 30' w
SHRUBS	COMMON NAME	REMARKS
	Feather Reed Grass	5' h x 3' w
	Skyrocket Juniper	15' h x 3' w
	Black Flowering Fountain Grass	2' h x 3' w
	Gro-Low Fragrant Sumac	12' h x 6' w
	Rose	3' h x 3' w
	Standing Ovation Little Bluestem Grass	3' h x 30' w

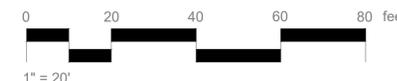
**LANDSCAPE MATERIALS LEGEND:**

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LANDSCAPE PLAN

L-103

**PLANT SCHEDULE**

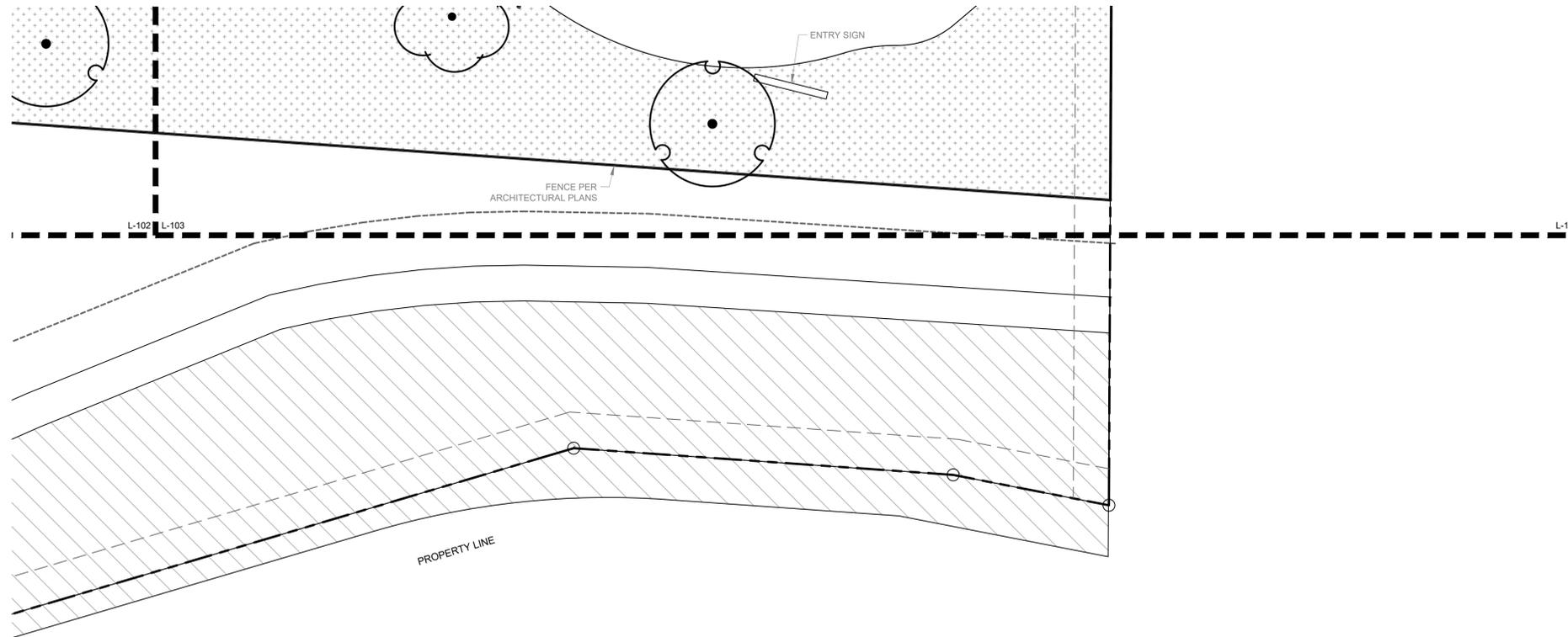
TREES	COMMON NAME	REMARKS
	Armstrong Freeman Maple	35' h x 12' w CLASS II
	Robin Hill Serviceberry	25' h x 15' w CLASS I
	Autumn Purple Ash	50' h x 35' w CLASS II
	Skyline Honey Locust	35' h x 30' w CLASS II
	Green Pillar Oak	50' h x 12' w CLASS II
	Redmond American Linden	50' h x 30' w
SHRUBS	COMMON NAME	REMARKS
	Feather Reed Grass	5' h x 3' w
	Skyrocket Juniper	15' h x 3' w
	Black Flowering Fountain Grass	2' h x 3' w
	Gro-Low Fragrant Sumac	12' h x 6' w
	Rose	3' h x 3' w
	Standing Ovation Little Bluestem Grass	3' h x 30" w

**LANDSCAPE MATERIALS LEGEND:**

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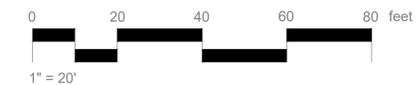
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NO.	DESCRIPTION	DATE
B	DR PreApp	06.25.19
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LANDSCAPE PLAN

L-104



**PLANT SCHEDULE**

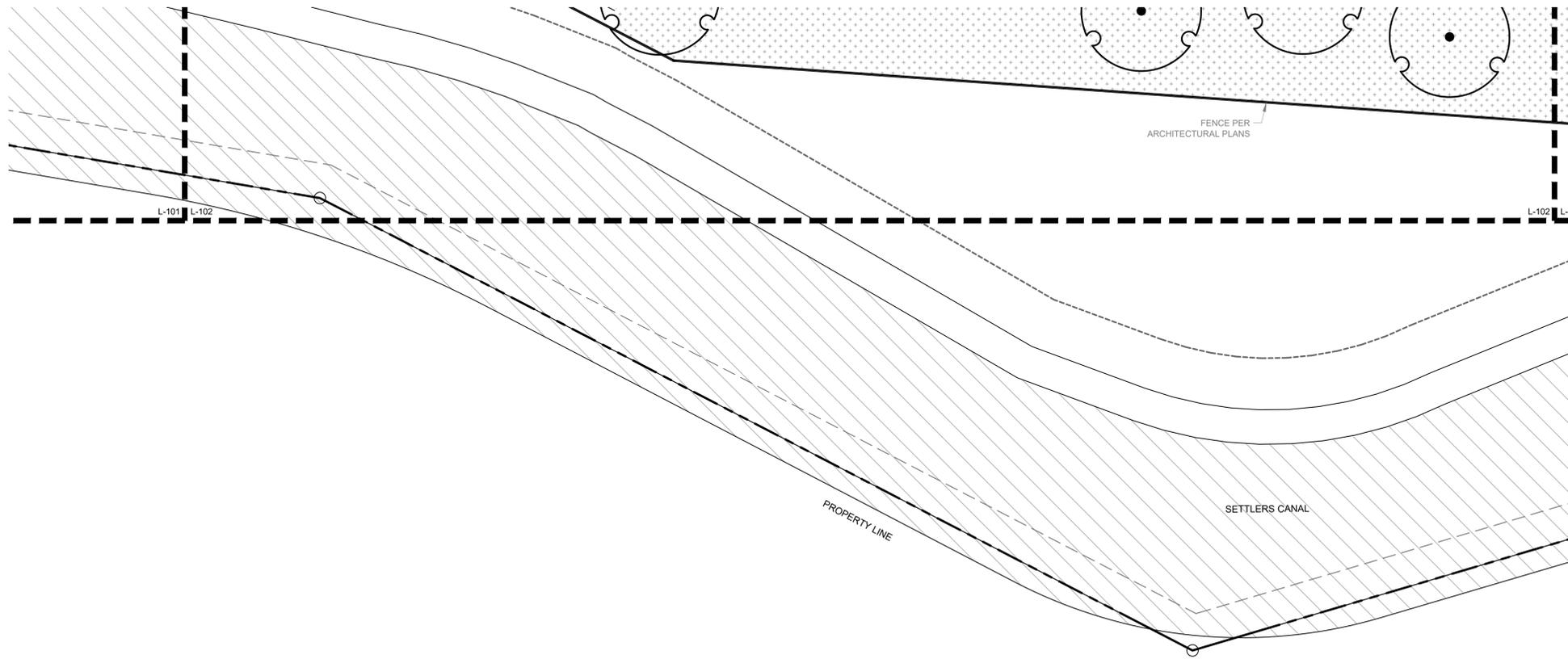
TREES	COMMON NAME	REMARKS
	Armstrong Freeman Maple	35' h x 12' w CLASS II
	Robin Hill Serviceberry	25' h x 15' w CLASS I
	Autumn Purple Ash	50' h x 35' w CLASS II
	Skyline Honey Locust	35' h x 30' w CLASS II
	Green Pillar Oak	50' h x 12' w CLASS II
	Redmond American Linden	50' h x 30' w
SHRUBS	COMMON NAME	REMARKS
	Feather Reed Grass	5' h x 3' w
	Skyrocket Juniper	15' h x 3' w
	Black Flowering Fountain Grass	2' h x 3' w
	Gro-Low Fragrant Sumac	12' h x 6' w
	Rose	3' h x 3' w
	Standing Ovation Little Bluestem Grass	3' h x 30' w

**LANDSCAPE MATERIALS LEGEND:**

- SOD LAWN
- BRICK COLORED CONCRETE WALKWAY & PLAZA
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**GENERAL NOTES:**

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Mountain View Townhomes

Garden City, Idaho

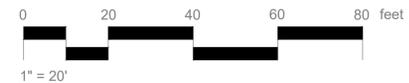
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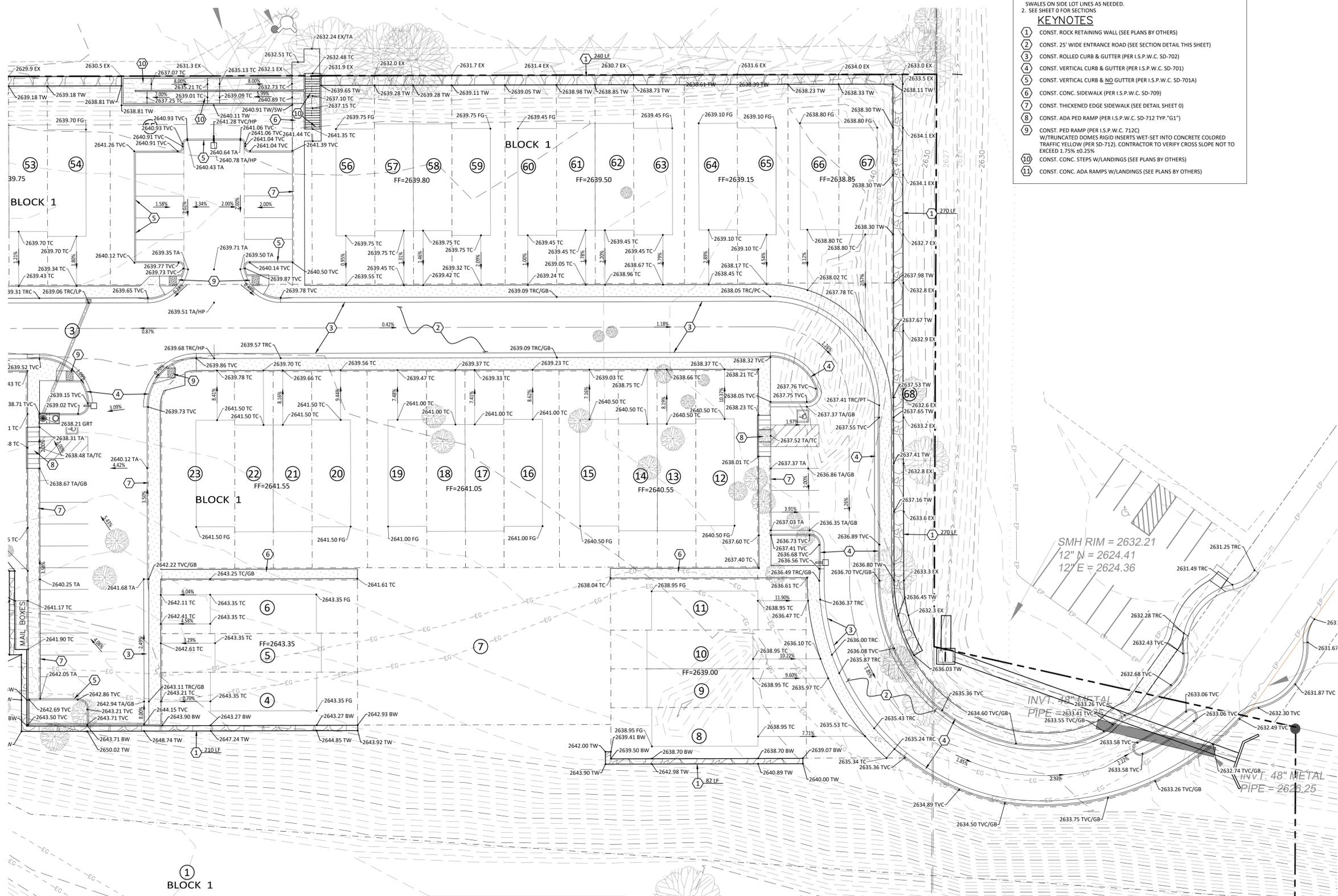


NO.	DESCRIPTION	DATE
B	DR PreApp	06.25.19
A	DR PreApp	04.24.19

**LANDSCAPE PLAN**

L-105





- NOTES:  
 1. LANDSCAPERS/FINE GRADERS TO CONSTRUCT SIDEYARD SWALES ON SIDE LOT LINES AS NEEDED.  
 2. SEE SHEET 0 FOR SECTIONS.
- KEYNOTES**
- ① CONST. ROCK RETAINING WALL (SEE PLANS BY OTHERS)
  - ② CONST. 25' WIDE ENTRANCE ROAD (SEE SECTION DETAIL THIS SHEET)
  - ③ CONST. ROLLED CURB & GUTTER (PER I.S.P.W.C. SD-702)
  - ④ CONST. VERTICAL CURB & GUTTER (PER I.S.P.W.C. SD-701)
  - ⑤ CONST. VERTICAL CURB & NO GUTTER (PER I.S.P.W.C. SD-701A)
  - ⑥ CONST. CONC. SIDEWALK (PER I.S.P.W.C. SD-709)
  - ⑦ CONST. THICKENED EDGE SIDEWALK (SEE DETAIL SHEET 0)
  - ⑧ CONST. ADA PED RAMP (PER I.S.P.W.C. SD-712 TYP. "G1")
  - ⑨ CONST. PED RAMP (PER I.S.P.W.C. 712C) W/TRUNCATED DOMES RIGID INSERTS WET-SET INTO CONCRETE COLORED TRAFFIC YELLOW (PER SD-712). CONTRACTOR TO VERIFY CROSS SLOPE NOT TO EXCEED 1.75% ±0.25%
  - ⑩ CONST. CONC. STEPS W/LANDINGS (SEE PLANS BY OTHERS)
  - ⑪ CONST. CONC. ADA RAMPS W/LANDINGS (SEE PLANS BY OTHERS)

**GRADING LEGEND**

— 2642.85	DESIGN ELEVATION
- - - 2632.2	EXISTING GROUND ELEVATION
1.9% 41	DESIGN SLOPE
FF	FINISHED FLOOR
FG	FINISHED GROUND
TVC	FINISHED SURFACE (@ TOP BACK VERTICAL CURB)
TRC	FINISHED SURFACE (@ TOP BACK ROLLED CURB)
TC	FINISHED SURFACE (@ CONCRETE/SIDEWALK)
TA	FINISHED SURFACE (@ TOP OF ASPHALT)
TW	FINISHED SURFACE (@ TOP OF WALL)
BW	FINISHED SURFACE (@ BOTTOM OF WALL)
GB	GRADE BREAK/CHANGE IN SLOPE
LP	LOW POINT
HP	HIGH POINT
EX	EXISTING SURFACE ELEVATION
BOT	BOTTOM
GRT	TOP OF GRATE
INV	INVERT OF PIPE

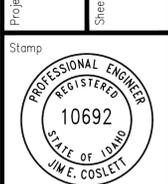
Revisions

Date	Description
1	
2	
3	
4	



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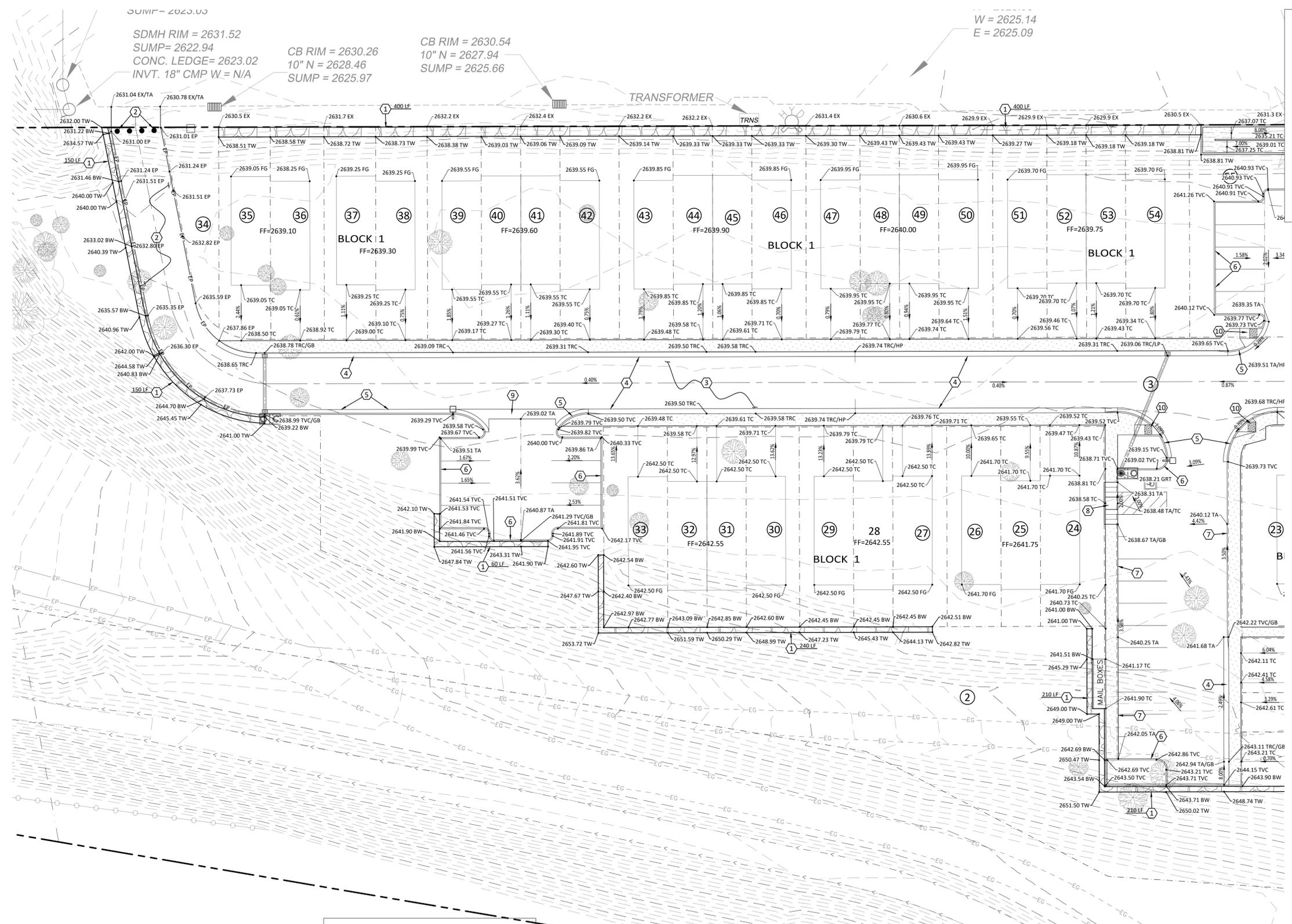
Project Name: MOUNTAIN VIEW TOWNHOMES SUBDIVISION  
 Sheet Name: GRADING & DRAINAGE PLAN



Project No: RSC 20-42  
 Drawn By: RLC  
 Date: 22 June 2020  
 Sheet No:

**811** CALL BEFORE YOU DIG!  
 Know what's below. Call before you dig.  
 CALL DIGLINE INC. PRIOR TO COMMENCING UNDERGROUND WORK 208-342-1585

AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION



SUMIF = 2625.03

SDMH RIM = 2631.52  
 SUMP = 2622.94  
 CONC. LEDGE = 2623.02  
 INVT. 18" CMP W = N/A

CB RIM = 2630.26  
 10" N = 2628.46  
 SUMP = 2625.97

CB RIM = 2630.54  
 10" N = 2627.94  
 SUMP = 2625.66

W = 2625.14  
 E = 2625.09

- NOTES:
- LANDSCAPERS/FINE GRADERS TO CONSTRUCT SIDEYARD SWALES ON SIDE LOT LINES AS NEEDED.
  - SEE SHEET 11 FOR SECTIONS
- KEYNOTES**
- CONST. ROCK RETAINING WALL (SEE PLANS BY OTHERS)
  - CONST. 20' WIDE EMERGENCY ACCESS ROAD (SEE DETAIL THIS SHEET)
  - INSTALL BREAKAWAY BOLLARDS (5' MAX. SPACING 4 TOTAL) FOR EMERGENCY ACCESS (PER "MAXI FORCE" MCSP-SS) OR AS APPROVED BY BOISE FIRE DEPT.) (NOT: BOLLARDS SCALE EXAGGERATED FOR CLARITY)
  - CONST. 25' WIDE ENTRANCE ROAD (SEE SECTION DETAIL SHEET 0)
  - CONST. ROLLED CURB & GUTTER (PER I.S.P.W.C. SD-702)
  - CONST. VERTICAL CURB & GUTTER (PER I.S.P.W.C. SD-701)
  - CONST. VERTICAL CURB & NO GUTTER (PER I.S.P.W.C. SD-701A)
  - CONST. THICKENED EDGE SIDEWALK (SEE DETAIL SHEET 0)
  - CONST. ADA PED RAMP (PER I.S.P.W.C. SD-712 TYP. "G")
  - CONST. 4' WIDE VALLEY GUTTER (PER I.S.P.W.C. SD-708)
  - CONST. PED RAMP (PER I.S.P.W.C. 712C) W/TRUNCATED DOMES RIGID INSERTS WET-SET INTO CONCRETE COLORED TRAFFIC YELLOW (PER SD-712). CONTRACTOR TO VERIFY CROSS SLOPE NOT TO EXCEED 1.75% @ 0.25%

GRADING LEGEND	
2642.85	DESIGN ELEVATION
2632.2	EXISTING GROUND ELEVATION
1.9% 41	DESIGN SLOPE
FF	FINISHED FLOOR
FG	FINISHED GROUND
TRC	FINISHED SURFACE (@ TOP BACK VERTICAL CURB)
TVC	FINISHED SURFACE (@ TOP BACK ROLLED CURB)
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LP	LOW POINT
HP	HIGH POINT
EX	EXISTING SURFACE ELEVATION
BOT	BOTTOM
GRT	TOP OF GRATE
INV	INVERT OF PIPE

30 0 15 30 60

SCALE IN FEET  
 1" = 30'

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 PRIOR TO COMMENCING UNDERGROUND WORK  
 208-342-1585

Revisions	
Date	Description
1	
2	
3	
4	

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 Civil Engineering and Land Development Consulting  
 270 North 27th Street, Suite 402, Boise, ID 83702  
 www.rocksolidcivil.com

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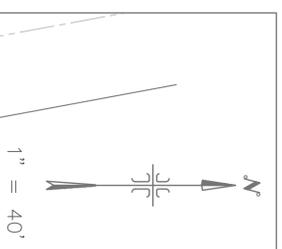
Project Name: MOUNTAIN VIEW TOWNHOMES SUBDIVISION  
 Sheet Name: GRADING & DRAINAGE PLAN

Stamp: PROFESSIONAL ENGINEER REGISTERED STATE OF IDAHO 10692 JIM E. COSLETT

Project No: RSC 20-42  
 Drawn By: RLC  
 Date: 22 June 2020  
 Sheet No: C2  
 2 of 2

AGENCY REVIEW NOT APPROVED FOR CONSTRUCTION





PRELIMINARY PLAT SHOWING  
MOUNTAIN VIEW TOWNHOMES  
A SUBDIVISION

LOCATED IN THE SE 1/4 OF THE NE 1/4,  
SECTION 36, T.4N., R.1E., B.M.  
ADA COUNTY, IDAHO  
2020

METROPOLITAN SUBDIVISION



- NOTES**
- 1) ALL LOT LINES COMMON TO A PUBLIC OR PRIVATE RIGHT-OF-WAY HAVE A 10' UTILITY EASEMENT.
  - 2) LOTS 2, 7, 24, 32 AND 38 ARE COMMON LOTS. LOT 3 IS A COMMON DRIVE LOT. LOTS 2, 7, 24, 32 AND 38 ARE TO BE SETTLED BY IRRIGATION DESIGN. ALL OTHER LOTS ARE DESIGNATED AS BUILDING LOTS.
  - 3) ALL SANITARY SEWER MAINS SHALL BE 8" UNLESS OTHERWISE SHOWN.
  - 4) ALL WATER MAINS SHALL BE 8" UNLESS OTHERWISE SHOWN.
  - 5) DRAINAGE SHALL BE REMOVED VIA SUBSURFACE FACILITIES AS APPROVED BY THE CITY OF GARDEN CITY AND ACHD.
  - 6) THIS SUBDIVISION IS SUBJECT TO COMPLIANCE WITH THE IDAHO CODE SECTION 31-3805 CONCERNING IRRIGATION WATER.
  - 7) SANITARY SEWER SERVICE PROVIDED BY THE CITY OF GARDEN CITY.
  - 8) PORTABLE WATER WILL BE PROVIDED BY THE CITY OF GARDEN CITY.
  - 9) ALL COMMON DRIVES AND COMMON LOTS WILL BE OWNED AND MAINTAINED BY ACCESS EASEMENT.
  - 10) THE MOUNTAIN VIEW TOWNHOMES PROPERTY OWNERS ASSOCIATION.
  - 11) THIS DEVELOPMENT RECOGNIZES IDAHO CODE 22-4503, RIGHT TO FARM ACT, WHICH STATES THAT AGRICULTURAL OPERATION OR USE OF LAND OR FOREMANE, NOT INCLUDING THE USE OF LAND FOR AGRICULTURE, SHALL BE PERMITTED ON ANY LAND AFTER THE SAME HAS BEEN IN OPERATION FOR MORE THAN ONE (1) YEAR, WHEN THE OPERATION BEGAN, PROVIDED THAT THE PROVISIONS OF THIS SECTION DO NOT APPLY TO ANY LAND WHICH IS CURRENTLY USED FOR AGRICULTURE, NEGLIGENT OPERATION OF ANY AGRICULTURAL OPERATION OR APPEARANCE TO IT.
  - 12) ANY RESUBDIVISION OF THIS PLAT SHALL COMPLY WITH THE APPLICABLE ZONING REGULATIONS IN EFFECT AT THE TIME OF RESUBDIVISION.
  - 13) FIRE PROTECTION WILL BE PROVIDED IN ACCORDANCE WITH THE ADA COUNTY FIRE & RESCUE DEPARTMENT. ALL DRIVENAYS ARE CONSIDERED TO BE FIRE LINES.
  - 14) PRESSURIZED IRRIGATION SHALL BE PROVIDED TO ALL LOTS BY A PRESSURE SYSTEM WITH WATER SUPPLIED BY THE THURMAN MILL IRRIGATION DISTRICT.
  - 15) THIS PROPERTY FALLS OUTSIDE OF THE 500 YR. AND 100 YR. FLOODPLAIN. SEE FLOOD INSURANCE RATE MAP (FIRM) ADA COUNTY, IDAHO PANEL 185 OF 875, DATED 05/11/2009, 15B 15, 2009.
  - 16) THERE IS A 20' EASEMENT LOCATED ON ALL DRIVENAYS FOR PARKING AS PER THE CITY OF GARDEN CITY.

**DEVELOPMENT FEATURES**

TOTAL ACRES.....	7.78 ACRES
BUILDING PADS.....	260 ACRES
COMMON DRIVES / PARKING.....	1.20 ACRES
COMMON AREA.....	219 ACRES
CANAL AREA.....	1.97 ACRES
REQUIRED PARKING.....	153 SPACES
GARAGE PARKING.....	61 SPACES
DRIVENAY PARKING.....	31 SPACES
GUEST PARKING.....	37 SPACES
PROPOSED PARKING.....	159 SPACES
TOTAL OPEN SPACE.....	219 ACRES - 284
USABLE OPEN SPACE.....	1.67 ACRES - 72,745 SF
REQUIRED USABLE OPEN SPACE.....	1.18 ACRES - 51,400 SF
EXISTING ZONING.....	M
PROPOSED NO. OF LOTS.....	66 LOTS
PROPOSED NO. OF UNITS.....	61 UNITS
PROPOSED DENSITY.....	7.84 UNITS/AC.

**OWNERS/DEVELOPERS**

CS2, LLC  
3363 E. PRESIDENTIAL DRIVE  
MERIDIAN, IDAHO  
(208) 629-7333

**PLANNER**

DAVID HALE  
DAVID HALE DEVELOPMENT, INC.  
1603 W. IDAHO STREET  
BOISE, IDAHO 83702  
208-863-4002

**SEWAGE DISPOSAL**

GARDEN CITY PUBLIC WORKS  
WATER SUPPLY  
GARDEN CITY  
FIRE DISTRICT  
NORTH ADA COUNTY  
SCHOOL DISTRICT  
BOISE

**IRRIGATION DISTRICT**

SETTLERS IRRIGATION DIST.  
AND THURMAN MILL DIST.

**LEGEND**

- PROPERTY BOUNDARY
- LOT LINE
- RIGHT OF WAY LINE
- SIDEWALK
- CURB & GUTTER
- CENTER LINE
- EASEMENT
- 4" PRESSURE IRRIGATION
- 8" SEWER
- 8" WATER
- 8" WATER (EXISTING)
- 8" SEWER (EXISTING)
- LOT NUMBER
- FIRE HYDRANT

**CS2, LLC**

**MOUNTAIN VIEW TOWNHOMES**

**PRELIMINARY PLAT**

**JOB NO. 13-107**

**SHEET NO. 1**







**RE: Mountain View Townhomes Subdivision Name Reservation**

Sub Name Mail &lt;subnamemail@adacounty.id.gov&gt;

Fri 9/13/2019 9:52 AM

To: David Hale &lt;david@haledevelopment.com&gt;

Cc: Jeff Beagley &lt;Jeff@sawtoothls.com&gt;

September 13, 2019

Jeff Beagley, Sawtooth Land Surveying  
David Hale, Hale DevelopmentRE: Subdivision Name Reservation: **MOUNTAIN VIEW TOWNHOMES SUBDIVISION**

At your request, I will reserve the name **Mountain View Townhomes Subdivision** for your project. I can honor this reservation only as long as your project is in the approval process. Final approval can only take place when the final plat is recorded.

This reservation is available for the project as long as it is in the approval process unless the project is terminated by the client, the jurisdiction or the conditions of approval have not been met, in which case the name can be re-used by someone else.

Sincerely,

**Dale P. Meyers, PLS, CFedS**  
**Associate County Surveyor****Ada County Development Services**

200 W. Front St., Boise, ID 83702

(208) 287-7938 *office*(208) 287-7909 *fax*

---

**From:** david@haledevelopment.com [mailto:david@haledevelopment.com]**Sent:** Monday, September 9, 2019 1:09 PM**To:** Sub Name Mail**Cc:** 'Jeff Beagley'**Subject:** [EXTERNAL] Subdivision name reservation requestRequested Subdivision Name: **Mountain View Townhomes**

1. Located in the SE ¼ of the NE ¼, Section 36, T.4N, R.1E, BM Ada County Idaho Parcel S0536141980
2. Surveyor – Sawtooth Land Surveying, LLC Jeff Beagley D: 208.287.8450 ▪ F: 208.398.8105 ▪ C: 208.608.2511
3. Owner: CS2, LLC Developer: Hale Development, Inc.

Although there are 3 other sub names starting with "Mountain View...", I'm hopeful that because this property is adjacent to the Mountain View Place Sub and it's more than 10 years since that sub was recorded, this name will work.



David Hale  
Hale Development  
1603 West Idaho Street  
Boise, Idaho 83702-5226

Revised August 8, 2020  
July 22, 2020  
Page 1 of 27  
File # 20609-A-R1

Re: Updated Preliminary Geotechnical Recommendation Report  
Proposed Mountain View Townhomes  
Ada County Parcel # S-0536141980, 7.22 Acres  
Between Settlers Canal and Fred Meyers  
Garden City, Idaho

Mr. Hale:

As per our discussions, we have reviewed your proposed plans for development of the referenced property. We have also reviewed the comments provided by Garden City Engineer, Joe Canning, and the prior geotechnical report prepared in 2014 by this firm for a previously proposed project on the subject property. The original report has been used as a starting point for this new document. This report replaces all prior reports by SITE Consulting, LLC.

On February 25, 2014 SITE staff supervised the drilling of four geotechnical borings on the referenced project. On March 5, 2020 eight additional test pit were excavated. During both field investigations the borings and test pits were logged, and subsurface soils were sampled. Selected soil samples were submitted to our in-house soil laboratory for testing.

Based upon observed conditions and reported development plans, there is no geotechnical concern that will prevent development or construction of the proposed townhouse complex on the referenced parcel. The construction as described in the provided Site Plan and Grading Plan can be completed and not adversely impact the adjacent properties, slopes, and Settler's Canal. After final design is completed, SITE should review the design for compliance with the recommendations contained herein. At that time, additional exploration and / or laboratory testing may be required. A Final Geotechnical Recommendation Report will be issued to address any additional concerns or changes that come up during the design, review, and approval processes.

Design and construction recommendations concerning earthwork, structural fill, foundations, floors and pavements, compaction requirements, storm water disposal, and other concerns are provided. The construction and civil engineering recommendations presented within this report are to be incorporated into the project plans and specifications and adhered to during design and construction. It is noted that extensive inspection and testing are recommended during earthwork operations.



Post Office Box 190537 - Boise, Idaho 83719  
site.consulting.idaho@gmail.com - 208-440-6276

We appreciate this opportunity to be of service and we look forward to working with you during the design and construction of this development. Should you have any questions or require additional information, please contact our office at your convenience.

Respectfully submitted;  
SITE Consulting, LLC  
Bob J. Arnold, PE

Draft for Review



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Draft for Review



## INTRODUCTION

### PURPOSE AND SCOPE

This report presents the results of a Geotechnical Evaluation performed on a 7.22-acre, Ada County Tax Parcel #S-0536141980 located on the east side of Glenwood Street, north of the Settlers Canal, and south of the Fred Meyers store at Glenwood and Chinden Boulevard. The purpose of this investigation was to evaluate the subsurface soil conditions and provide information to be used to design and evaluate the cost of construction of a planned high-density townhouse complex. Preliminary geotechnical recommendations for earthwork operations, building foundations and civil construction are provided.

The field investigation included a February 2014 subsurface exploration by means of a geotechnical drill rig operated by R. P. Jones Drilling of Boise, Idaho and a March 2020 subsurface exploration utilizing an excavator operated by Aspen Creek Construction. For the 2014 field work, a CME 75 drill rig with eight-inch outside-diameter hollow stem augers was used to perform the drilling. The drill was equipped with an automatic trip hammer allowing Standard Penetration Tests (SPT's) to be performed. SPTs were performed using 1.5- and 2.0-foot length split spoons run through eight inch, hollow-stem, continuous flight augers. Since the drilling operation was intended to evaluate the structural fill previously placed on the subject property, continuous sampling was employed. Representative samples were obtained using split-spoon sampling procedures in general accordance with ASTM D-1586. The split spoon was driven 1.5 or 2.0 feet ahead of the auger into undisturbed soil. The standard penetration value "N" is defined as the number of blows of a 140-pound hammer, falling thirty inches, required to drive a standard 1½" diameter split spoon sampler one foot into the soil. The number of blows required to drive the sampler is recorded in increments of six inches of penetration. The "N" value is obtained by adding the second and third incremental blow counts and indicates the relative density and provides a basis for evaluating the density and consistency of the soils and the soils bearing capacity. Results of the penetration tests are shown on the boring logs.



During the March 5, 2020 field exploration, test pits were excavated to depths of 10 to 14 feet. It was assumed foundations will be founded at approximately 36" below the current surface of the pre-graded lots. At this depth, an AMS Dynamic Cone Penetrometer was used to further evaluate the foundation supports soils in place density and bearing capacity. This penetrometer generates N values that are equivalent to Standard Penetration Test, (SPT), values generated with a geotechnical drill rig. N values are reported on the test pit logs.

Representative samples were obtained from both the borings and the test pits, identified as to location and depth, bagged in sealable plastic bags, and delivered to the laboratory for additional testing.

#### **AUTHORIZATION**

Verbal authorization to proceed with this geotechnical investigation was received from our client, Mr. David Hale on or about January 10, 2020. Authorization to perform the field work and generate this report, payment for the services rendered, and the use of the recommendations provided herein indicate the client's acceptance of the scope of work, warranty, limitations and general conditions provided herein and within the submitted and approved proposal. Only the client and sub consultants/contractors working on the identified parcel and herein described project are authorized to utilize and duplicate this report without client and SITE authorization.

#### **WARRANTY AND LIMITATIONS**

The exploration and evaluation of subsurface conditions documented herein is considered sufficient to form a basis for the provided recommendations. The provided recommendations are based on the available soil information and preliminary design details either assumed or furnished by the client. It is warranted that these recommendations have been promulgated after being prepared in accordance with locally accepted professional engineering and geotechnical engineering practice. No other warranties are implied or expressed.



## BACKGROUND & RESEARCH

### GENERAL

As authorized by the former and current clients, this consultant observed the drilling of four borings and excavation of eight test pits on the subject property. An aerial photo of the property from Ada County Assessors website and a hand-held GPS unit were used to locate the boring / test pit locations. The locations were then transferred to the Google Earth Aerial Photo included in the Appendix. Generally, the borings and test pits were randomly placed across the property, but both borings and test pits were specifically placed atop a ditch that crossed the property prior to the prior mass filling.

Prior to our original investigation, SITE was provided copies of numerous reports by local materials testing firms concerning the property. Reports by Rakow Construction Services (5/2009) and Strata, Inc. (8/2007 & 2/2008) - indicate that they provided compaction testing during the placement of the onsite fill materials. Their reports indicate acceptable compaction. It is noted that these reports document failing test results that were subsequently corrected with additional compactive effort and then retested. A more recent report by Materials Testing & Inspection (1/2014) indicates the fill to be unacceptable. Their report was generated after additional fill placement and involved compaction testing within test pits excavated in the completed fill. This method is difficult since excavation equipment disrupts the compacted soil mass and representative laboratory samples can be difficult to identify and isolate. For these reasons, this consultant prefers to utilize a geotechnical drill rig with continuous split spoon sampling and standard penetration testing for evaluation of deep fills. This method showed the onsite fill to be consistent and acceptable in all locations tested.

Review of historical aerial photos available of Google Earth, indicates that filling of the property may have started as early and 2002. In a 2002 photo, a former drainage ditch that crossed the property from east to west is no longer visible. The ditch is clearly visible in a 1999 photo. Unfortunately, no photos are available between these two dates. Photos from 10/2006 and 10/2012 indicate onsite earthwork activities. No documentation was provided for the more recent, 2012 filling efforts.



## FIELD INVESTIGATION

At the time of our investigations, the surface soils on this property were firm and stable allowing complete access with drilling and excavation equipment. During our February 25, 2014 investigation, four borings were advanced to depths of up to 16.5 feet below the existing ground surface. In each boring, the imported fill was penetrated, and the native subgrade soils contacted. Groundwater was encountered in three of the four boring but not in the deepest boring #B-3. During our March 2020 test pit exploration, groundwater was not encountered in any of the test pits that typically were 13-14 feet deep. As indicated, samples were gathered during both field explorations and were submitted for laboratory testing.

Based on observed conditions, it is believed the water encountered in the original borings was perched atop the original native soil surface beneath the onsite structural fill. Numerous monitoring wells are planned and will be monitored through the end of the irrigation season to confirm seasonal high and clearance to stormwater facilities. A groundwater report and evaluation will be published after the end of the irrigation season.

At this time, based upon the observed conditions in our new test pits, it appears the groundwater is at sufficient depth to not impact or be impacted by the planned onsite construction.

## LABORATORY TESTING

In the laboratory, sieve analysis, Moisture Content and Liquid Limit, Plastic Limit and Plasticity Index testing were performed on selected samples. Tests were performed in general accordance with the cited ASTM test methods. All test results are included on the logs and reports located in the Appendix.



## OBSERVED CONDITIONS

As indicated, since the early 1990's, multiple contactors have been allowed to place a substantial depth of fill across the entire property. Prior property owners required proper compaction and testing and inspection during these filling operations. Borings and test pits indicate that fills range from 9.5 to greater than 14.0 feet in thickness. The deepest fill area is within a former ditch or canal that crossed the property prior to mass filling and along the north property line. The presence of fill was originally confirmed during the 2014 drilling effort by the presence of asphalt concrete pavement (ACP) pieces in the samples. Nearly all 2020 test pits also contained ACP as well as Portland cement concrete (PCC) pieces. These materials are included in a silty sand or sandy silt soil matrix. SITE's 2014 client reported, and it was confirmed by conversation with Sommers Construction (former employee) and Idaho Sand and Gravel that materials placed on the site were excavated from a Ustick Road improvement project. Both contactors indicated that fill was end dumped, dozed into thin lifts, and then watered and compacted as needed. No information is known about fill placed in 2012. The possibility of undocumented or non-compacted soil on the site surface is addressed herein with construction recommendations.

The fill materials are typically silty sands or sandy silts or sandy silt/clay soils with varying amounts of clay and gravel. As indicated, some construction related debris including pieces of concrete and pavement was observed in the samples. All fill materials were consistent in color, moisture with reasonably consistent Standard Penetration Numbers. Native soils below the fill included a dark brown to black silty sand or sandy silt, pitrun type sand and gravel, and fine silty sand.

Standard penetration tests (N Values) performed during drilling and test pit operations indicate that the structural fill materials placed by the client / owner were well compacted and will support the proposed apartment buildings and driveway pavement section. This opinion is based upon the recommendations provided herein being specified and followed during the planned construction.



## CONSTRUCTION RECOMMENDATIONS

### GENERAL EARTHWORK

Discussions with the project civil engineer, (Rock Solid Civil), indicate that only minor regrading of the lot is required for drainage and that street or driveway and parking lots will be excavated into the existing site surface slightly more than the recommended pavement section. Materials cut from pavement area will be placed on the building pads as structural fill. Prior to the placement of fill on the building pads, all end dumped debris, rubbish, and the organic layer (rootzone) is to be removed. It is anticipated that 4-8 inches of the surface will be removed. Deeper excavation will be required where large trees or bushes are rooted. After clearing and grubbing it is recommended the entire site be scarified, watered (as needed), recompact and compaction tested and inspected. This will address the lack of documentation testing on the last fill placed on the property since 2012. The exposed subgrade surface is to pass compaction testing AND a visual inspection (proof-rolling) by the project geotechnical engineer. Materials to be cut from driveway and parking areas and excavated from infiltration facilities are acceptable for use as structural fill. All exposed subgrade surfaces and each lift of fill is to meet the compaction requirements for structural fill. Note that compaction testing and stability inspection are both recommended. Soils can meet compaction requirements and still be unacceptable if rutting, deflection, or excessive moisture are present.

### STRUCTURAL FILL

Any additional imported fill is to be free of organic matter or other deleterious substances with non-expansive and non-plastic fines. Structural fill placed on building pads is to extend laterally outside foundations a distance equal to the total depth of the structural fill. Structural fill should be placed in uniform, thin horizontal lifts; moisture conditioned as necessary, and compacted to a minimum relative compaction of 98% of the maximum dry density as determined by ASTM Method D-698 "Standard Proctor". Compaction of structural fills should be verified by in place density testing and construction observations. A qualified engineer or his representative should monitor fill placement to ensure the work is performed in accordance with these recommendations. Field nuclear moisture - density testing shall be performed on each lift of compacted fill with at least two tests per building pad.



## **EXCAVATIONS**

No drilling and blasting or rock trenching will be required to install subsurface utilities, foundations, and stormwater disposal systems on the subject property. Excavation with standard construction equipment and methods is anticipated. It may be necessary to over excavate deep utility trenches to the native soils and backfill with granular structural fill in order to properly support subsurface utilities. It can also be anticipated that some materials excavated from deep utility trenches will be too wet to be used as backfill material. In this situation, imported granular fill is recommended for backfilling trenches. Based upon our test pits, properly shored, or supported tranches are feasible and dewatering is not anticipated.

Shallow excavations and trenches that do not exceed four feet in depth may be constructed with side slopes approaching vertical. Below this depth it is recommended that slopes not exceed a vertical to horizontal ratio of one to one. The ability of the materials on site to maintain a vertical or near vertical excavation when standing open without support over any extended period of time can be expected to be quite variable. This information is provided for planning purposes. It is our opinion that maintaining safe working conditions is the responsibility of the contractor. Jobsite conditions such as soil moisture content, weather condition, earth movements, and equipment type & operation can all affect slope stability. All excavations should be sloped or braced as required by local, state, and federal requirements.

## **FOUNDATION SYSTEMS**

Recommendations are based upon provided, researched, and assumed information. Please contact this consultant if assumptions are incorrect. It is reported that eighteen building structures are planned. Duplex, triplex and fourplex buildings are planned. It is unknown if crawlspaces or slab on grade floors are planned. All proposed residential buildings may be supported on conventional, continuous, and isolated pad foundations founded upon tested and approved onsite soil material or structural fill. Bearing pressures of up to 1500 psf are allowed for foundation design. Provided the recommendations herein are followed, total settlements of less than one inch are anticipated. If this value is unacceptable, contact SITE for additional foundation recommendations.



## FOUNDATION EXCAVATION

After foundation areas have been excavated or graded to design grade it is recommended that the foundation support surface be tested and / or inspected for stability and proper compaction. Recomposition with either hoepac or steel drum type equipment is recommended if compaction is below specified values. Compaction of the foundation supporting soils is to be confirmed by compaction testing (at least two tests) for each building. Compaction is to meet the requirements provide herein for structural fill. In addition to compaction testing, a geotechnical engineer is to inspect the subgrade soils to confirm that conditions are similar to those documented within this report and used for design and that all foundation bearing surfaces are firm and stable. This inspection should verify that any loose fills, excessively wet soils, and all organic materials have been removed and that no excessively soft areas are present. If unacceptable soils are determined to be present at the foundation support elevation it is recommended that foundations be over excavated to acceptable materials or a maximum of two feet and replaced with additional foundation concrete or granular structural fill.

## RETAINING WALLS

It is understood that large boulder retaining walls are planned along the east, west, north, and south property lines. Discussions with the client and Focus Engineering indicate the walls will be three to ten feet tall. These retaining walls will allow for steeper and more linear transitions between properties or areas with different surface elevations while stabilizing and improving slope stability and drainage. Based on using imported pitrun type materials or native silty sands or sandy silt for wall backfill, the following lateral earth pressures are recommended. Retaining walls free to rotate should be designed using equivalent fluid pressure of 30 psf/f. Walls restrained at the top should be designed using equivalent fluid pressure of 60 psf/f. Soil density of 120 pcf can be assumed for additional soil surcharge. A wall drainage system, such as is shown in the Boulder Wall Detail provided in the Appendix is required.

## SEISMIC DESIGN

Soils on site are classified as Site Class D as per ASCE 7, chapter 20. Structures construction on this site are to be design per IBC requirements for such a seismic classification.



## **STORM WATER CONTROL**

It is recommended that storm runoff be directed away from all open excavations and not be allowed to puddle. If construction is to occur during the wet season, then soft soils must be considered. If the subgrade is wet, traffic with rubber-tired equipment is to be avoided since rubber-tired equipment will increase rutting and deflections of wet or saturated surface soils. It can be anticipated that the soils on the surface will quickly become too wet for any vehicular traffic. It is understood that storm water, including roof runoff, will be directed to standard seepage beds. The seepage beds are to extend through the onsite fill to the native sands and gravels. This may require deep excavation. Any over excavation can be backfilled up to the filter sand layer with clean sand and gravel (pitrun) with less than 10 percent passing a #200 sieve. Monitoring well readings are required to confirm the depth to and clearance above seasonal high groundwater.

## **SLAB ON GRADE CONCRETE**

For all slab on grade concrete including sidewalks, driveways, garage floors, patios and occupied spaces, inspection must confirm that expansive, fat clays and undocumented fill materials are not present in the upper two feet of supporting soils. If present, such soils are to be removed and replaced with at least one foot of granular structural fill. Care must be taken so that all excavations below concrete floors and slabs are properly backfilled in accordance with the structural fill recommendations outlined herein. This is very critical where a slab will extend over utility trenches or retaining wall backfill. Trenches and wall backfill areas are to be filled in lifts and benched each lift so that fill is not placed against a vertical soil face greater than three feet tall. Testing is to confirm that compaction has been achieved. Areas of excessive yielding or deflection should be excavated and backfilled with structural fill. Concrete slab on grade floors, sidewalks, patios, and pavements should be placed atop a minimum of  $\frac{1}{2}$  foot of ISPWC  $\frac{3}{4}$ " base. This granular mat should be properly compacted to the specification of structural fill. In occupied spaces with slab on grade floors a vapor barrier or retarder is recommended. Any vapor retarder or barrier must meet the requirements of both the local building code and the floor surface manufacturer.



## **FLEXIBLE PAVEMENT SECTION**

It is recommended that pavements be based upon ACHD's standard section for a residential development. Therefore, within the proposed Mountain View Townhomes a pavement section of 2.5" asphaltic concrete, 4.0" of  $\frac{3}{4}$ " road base, and 12.0 inches of sub base is recommended for the driveway and any pavement that will be frequented by large truck traffic such as trash truck, delivery trucks and school busses.

In the parking areas where engineering controls prevent large truck traffic, the pavement section can be reduced to 2.5" asphaltic concrete over 10.0" of  $\frac{3}{4}$ " road base. Both pavement sections are to be constructed atop a subgrade confirmed to meet the compaction and stability requirements for structural fill. Materials meeting the requirements of ISPWC are required for any work within this project. It is also anticipated that ACHD may dictate a thicker section for any work in the 53rd Street right of way. This may include matching the existing section or designing a new section based upon ACHD generated / recommended Traffic Index and a locally sampled R-Value.

## **GENERAL COMMENTS**

After the plans and specifications are completed and after the foundation supporting subgrade is prepared for foundation placement, it is recommended that this or another geotechnical consultant be provided the opportunity to review the final design and specifications and inspect the foundation support soils. At that time, it may be necessary to submit supplementary recommendations. Engineering inspection, construction monitoring, and materials testing have been recommended and must be performed to verify conditions and suitability of materials used for structural fills and to confirm subgrade stability and proper placement and compaction. Any revision in the plans for the proposed development from those described in this report or deviations from the noted subsurface conditions should be brought to the attention of this consultant. This report has been prepared for the exclusive use of the identified owner / client and their retained design consultants. Findings and recommendations within this report are for specific application to the proposed subdivision development described here and apply only to the property identified.

**APPENDIX FOLLOWS**



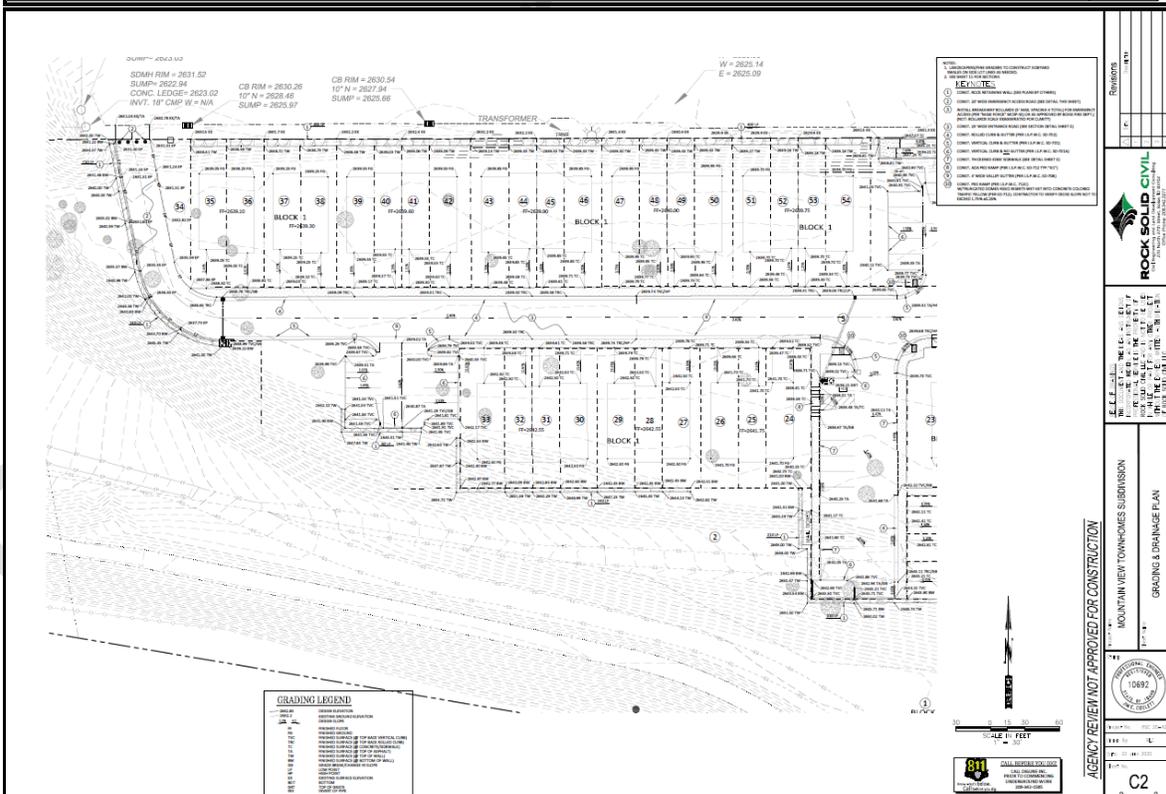
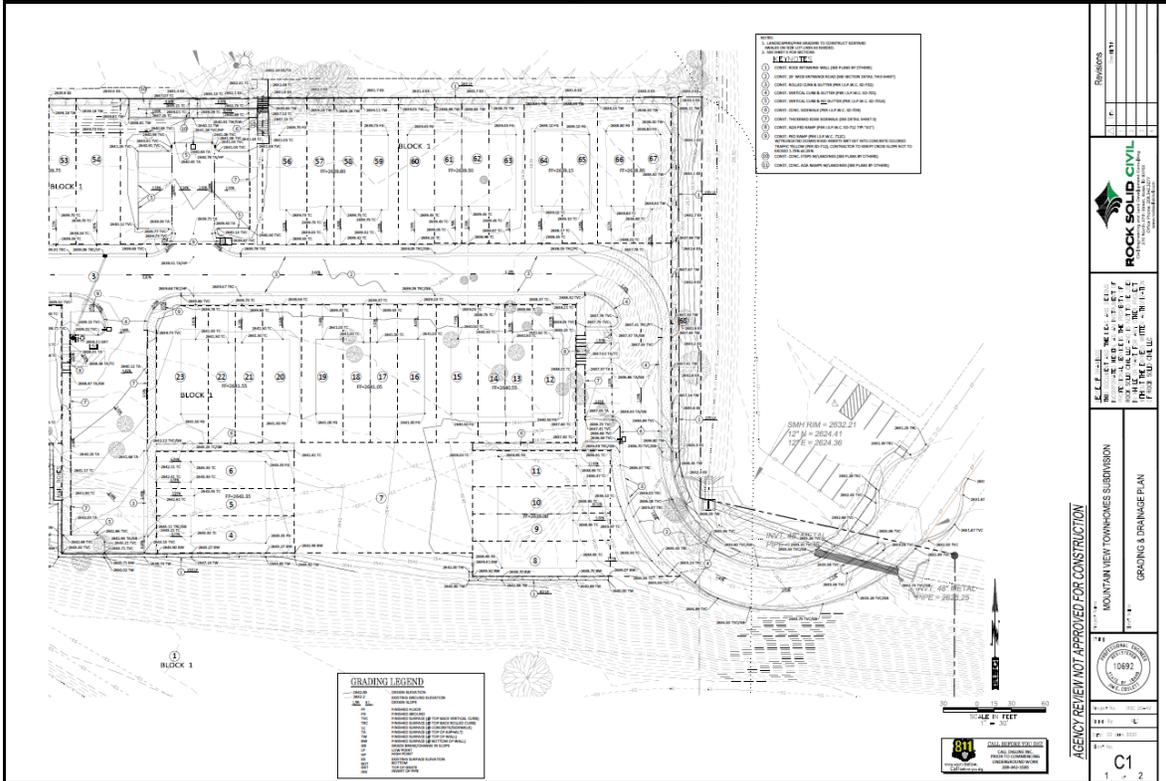
## **APPENDIX**

- Site Plan
- Grading Plan
- Boring & Test Pit Locations
- Boring Logs
- Test Pit Logs
- Soil Log Legend
- Abbreviations & Acronyms
- Standard Proctor on Fill
- Boulder Retaining Wall Detail

Draft for Review



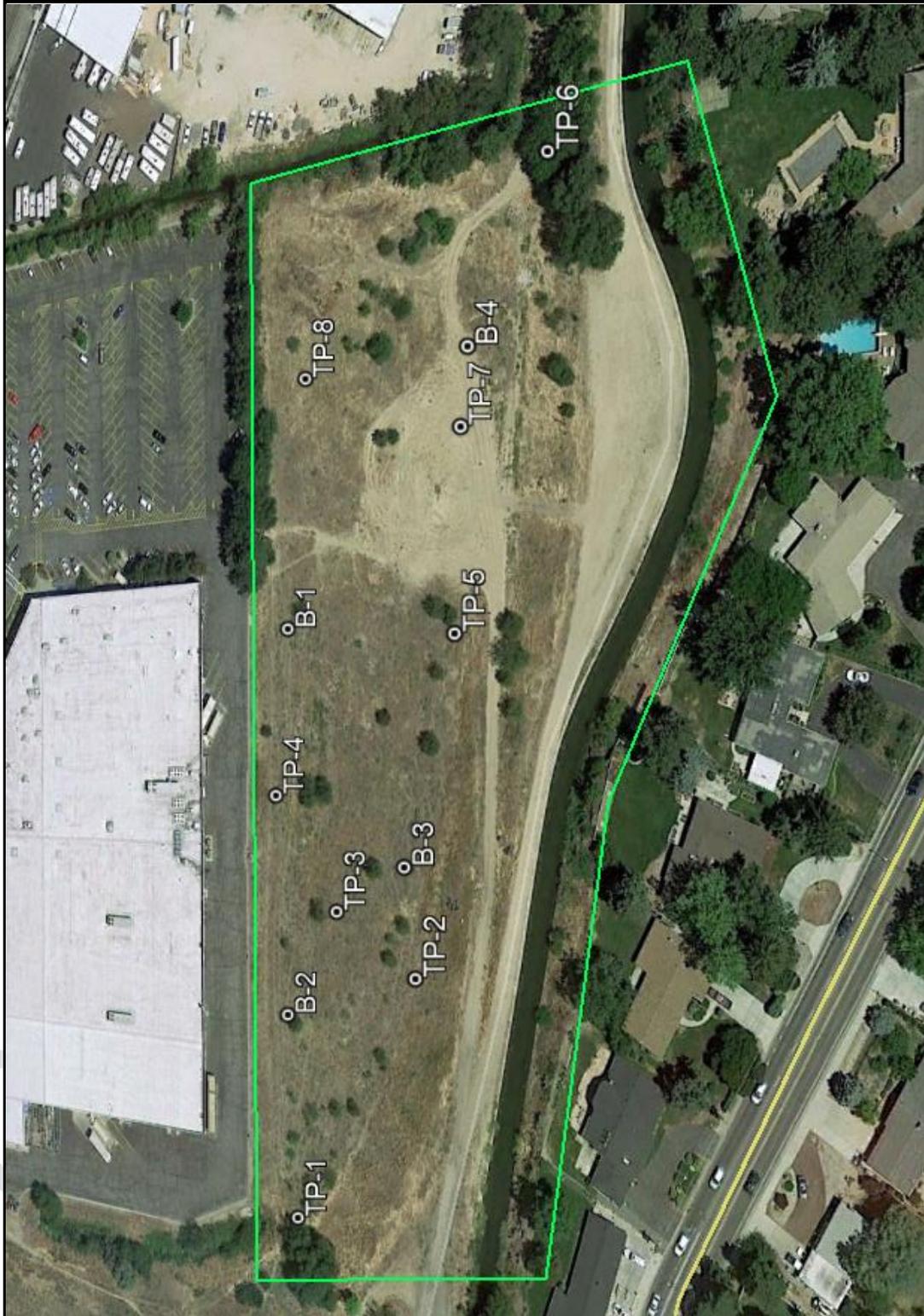
### Grading Plan (2)



Provided by Rock Solid Civil

Geotechnical Services / Soil Testing & Inspection Services

**Approximate Boring & Test Pit Locations**





Post Office Box 190537 - Boise, Idaho 83719  
 site.consulting.idaho@gmail.com - 208-440-6276

## Boring Log

Boring #: B-1 File: 14038GI001  
 Client: Jim Fuhrman Date Drilled: February 25, 2014  
 Project: Glenwood Townhomes Driller: R P Jones  
 Location: 43 38 41.0N, 116 16 32.1W Logged By: Bob Arnold

DEPTH	SOILS DESCRIPTION	N	3/8	#4	#10	#40	200	M	PI	LL
0.0-2.0	FILL - Tan, Moist, Firm, Sandy, SILT with gravel, ACP									
2.0-3.5	FILL - Tan, Moist, Firm, Sandy, SILT with gravel, ACP	12								
3.5-5.0	FILL - Tan, Moist, Firm, Silty, SAND with gravel, ACP	10	77	70	66	50	38.2	13.5	NP	NP
5.0-7.0	FILL - Tan, Moist, Firm, Silty, SAND with gravel, ACP	10								
7.0-8.5	FILL - Tan, Moist, Firm, Silty, SAND with gravel, ACP	13								
8.5-10.0	T-2/3 FILL - Dark Brown, Wet, Sandy, SILT with gravel Native Soils at 9.5 B 1/3 Black, Wet to Saturated, SILT	16	96	91	87	66	51.3	13.7	NP	NP
10.0-12.0	Black, Wet to Saturated, Silty, SAND	35		100	95	73	38.2	12.9	NP	NP
12.0-13.5	Brown, Saturated, Sand & Gravel	45								
15.0-16.5	Light Brown to Tan, Saturated, Fine, SAND	9								
16.5	Bottom of Boring Groundwater at 10.5'									



### Boring Log

Boring #: B-2 File: 14038GI001  
 Client: Jim Fuhrman Date Drilled: February 25, 2014  
 Project: Glenwood Townhomes Driller: R P Jones  
 Location: 43 38 41.0N, 116 16 36.1W Logged By: Bob Arnold

DEPTH	SOILS DESCRIPTION	N	3/8	#4	#10	#40	200	M	PI	LL
0.0-2.0	FILL - Tan, Moist, Firm, Sandy, SILT with gravel, ACP, Concrete									
2.0-3.5	FILL - Tan, Moist, Firm, Silty, SAND with gravel, ACP	17								
3.5-5.0	FILL - Tan, Moist, Firm, Silty, SAND with gravel, ACP	10								
5.0-7.0	FILL - Dark Brown, Wet, SILT with Sand	10	100	99	98	93	84.2	17.7	8.3	33.5
7.0-8.5	FILL - Dark Brown, Wet, SILT with Sand	10								
8.5-10.0	Native Soils at 10.0 Black, Wet to Saturated, Silty, Fine, SAND	11								
10.0-12.0	Black, Wet to Saturated, Silty, Fine, SAND	8								
12.0-13.5	Brown, Saturated, Sand & Gravel	35								
15.0-17.0	Light Brown to Tan, Saturated, Fine, SAND	8								
17.0	Bottom of Boring Groundwater at 10.5'									



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### Boring Log

Boring #: B-3 File: 14038GI001  
 Client: Jim Fuhrman Date Drilled: February 25, 2014  
 Project: Glenwood Townhomes Driller: R P Jones  
 Location: 43 38 39.8N, 116 16 34.5W Logged By: Bob Arnold

DEPTH	SOILS DESCRIPTION	N	3/8	#4	#10	#40	200	M	PI	LL
0.0-2.0	FILL - Tan, Moist, Firm, Sandy, SILT with gravel, ACP, Concrete									
3.5-5.0	FILL - Dark Brown, Wet, Silty, SAND	10	91	82	75	58	43.2	13.3	NP	NP
5.0-6.5	FILL - Dark Brown, Wet, SILT with Sand	9								
6.5-8.5	FILL - Dark Brown, Wet, SILT with Sand	10								
8.5-10.0	FILL - Dark Brown, Wet, SILT with Sand	12								
10.0-11.5	T-2/3 Dark Brown, Wet, SILT with sand and gravel Native Soils at 11.0	9	98	92	91	88	56.6	19.6	6.3	31.5
11.5-13.0	B 1/3 Black, Wet to Saturated, SILT Over native sand and gravel	21								
15.0-16.5	Native Sand & gravel	28								
16.5	Bottom of Boring No water in 16.5' Well									

Draft for Review



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## Boring Log

Boring #: B-4 File: 14038GI001  
 Client: Jim Fuhrman Date Drilled: February 25, 2014  
 Project: Glenwood Townhomes Driller: R P Jones  
 Location: 43 38 39.2N, 116 16 29.5W Logged By: Bob Arnold

DEPTH	SOILS DESCRIPTION	N	3/8	#4	#10	#40	200	M	PI	LL
0.0-2.5	FILL - Tan, Moist, Firm, Sandy, SILT with gravel, ACP, Concrete									
2.5-4.0	FILL - Tan, Moist, Firm, Sandy, SILT with gravel, ACP, Concrete	7								
5.0-7.0	FILL - Tan, Moist, Firm, Sandy, SILT with gravel, ACP, Concrete	12	98	94	89	70	50.3	15.7	6.3	28.5
7.0-8.5	FILL - Tan, Moist, Firm, Sandy, SILT with gravel, ACP, Concrete	10								
8.5-10.0	FILL - Tan, Moist, Firm, Sandy, SILT with gravel, ACP, Concrete	11								
10.0-12.0	T-3/4 Dark Brown, Wet, SILT with sand and gravel Native Soils at 11.5 B 1/4 Black, Wet to Saturated, SILT	46								
12.0-13.5	NO Recovery	25								
13.5-15.0	Black, Saturated, Silty, SAND	6			100	98	57.9	28.8	NP	NP
15.0-17.0	Black, Saturated, Silty, SAND	5								
16.5	Bottom of Boring Groundwater at 15.3' in well One week after installation									

Location adjusted to match GPS data to field location



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### TEST PIT LOG

Test Pit:	TP-1		File #:	20609								
Client:	Hale Development		Date Excavated:	3/5/20								
Project:	Mountain View		Excavated By:	Aspen Creek - Backhoe								
Location:	43 38 40.89 -116 16 38.18		Logged By:	J. Meusch, PM - SITE								
DEPTH	SOILS DESCRIPTION											
(feet)	N	3/4"	1/2"	3/8"	# 4	# 10	# 40	# 100	#200	%M	LL	PI
0.0-2.0	Brown, Moist, Sand & Silt											
2.0-8.0	Brown, Moist, Firm, Silty, Sand with Gravel & ACP (SM)											
3.0	14	100	85	76	68	65	49	42	35.5	14.5	NP	NP
8.0-13.0	Dark Brown, Moist, Firm, Silty, Sand (SM)											
10.0				100	98	93	69	35	25.5	13.5	NP	NP
13.0	Bottom of Excavation @ 13.0 No Ground Water Encountered No Monitoring Well in Place											

### TEST PIT LOG

Test Pit:	TP-2		File #:	20609								
Client:	Hale Development		Date Excavated:	3/5/20								
Project:	Mountain View		Excavated By:	Aspen Creek - Backhoe								
Location:	43 38 39.70 -116 16 35.58		Logged By:	J. Meusch, PM - SITE								
DEPTH	SOILS DESCRIPTION											
(feet)	N	3/4"	1/2"	3/8"	# 4	# 10	# 40	# 100	#200	%M	LL	PI
0.0-2.0	Tan, Moist, Sand & Silt with Gravel & ACP											
2.0-10.0	Dark Brown, Moist, Firm, Sand & Silt											
3.0	20+	100	90	80	71	64	55	48	36.6	13.5	NP	NP
10.0-13.0	Black, Moist, Firm, Silt, Sand, Gravel											
13.0	Bottom of Excavation @ 13.0 No Ground Water Encountered No Monitoring Well in Place											



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### TEST PIT LOG

Test Pit:	TP-3		File #:	20609								
Client:	Hale Development		Date Excavated:	3/5/20								
Project:	Mountain View		Excavated By:	Aspen Creek - Backhoe								
Location:	43 38 40.48 -116 16 34.99		Logged By:	J. Meusch, PM - SITE								
DEPTH	SOILS DESCRIPTION											
(feet)	N	3/4"	1/2"	3/8"	# 4	# 10	# 40	# 100	#200	%M	LL	PI
0.0-2.0	Brown, Moist, Sand & Silt											
2.0-5.0	Brown, Moist, Firm, Sand & Silt with Gravel, ACP & PCC											
5.0-14.0	Dark Brown, Moist, Firm, Sand & Silt with Gravel											
14.0	Bottom of Excavation @ 14.0 No Ground Water Encountered No Monitoring Well in Place											

### TEST PIT LOG

Test Pit:	TP-4		File #:	20609								
Client:	Hale Development		Date Excavated:	3/5/20								
Project:	Mountain View		Excavated By:	Aspen Creek - Backhoe								
Location:	43 38 44.13 -116 16 33.83		Logged By:	J. Meusch, PM - SITE								
DEPTH	SOILS DESCRIPTION											
(feet)	N	3/4"	1/2"	3/8"	# 4	# 10	# 40	# 100	#200	%M	LL	PI
0.0-2.0	Brown, Moist, Sand & Silt											
2.0-5.0	Brown, Moist, Firm, Sand, Silt with Gravel & ACP											
5.0-14.0	Dark Brown, Moist, Firm, Sand, Silt											
14.0	Bottom of Excavation @ 14.0 No Ground Water Encountered No Monitoring Well in Place											



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### TEST PIT LOG

Test Pit:	TP-5		File #:	20609								
Client:	Hale Development		Date Excavated:	3/5/20								
Project:	Mountain View		Excavated By:	Aspen Creek - Backhoe								
Location:	43 38 39.32 -116 16 32.23		Logged By:	J. Meusch, PM - SITE								
DEPTH	SOILS DESCRIPTION											
(feet)	N	3/4"	1/2"	3/8"	# 4	# 10	# 40	# 100	#200	%M	LL	PI
0.0-2.0	Tan, Moist, Sand & Silt with Gravel, ACP & PCC											
2.0-10.0	Dark Brown, Moist, Firm, Silty, Sand (SM)											
3.0	14	100	99	97	93	88	69	60	47.7	14.4	NP	NP
10.0-13.0	Black, Moist, Firm, Silt, Sand & Gravel											
13.0	Bottom of Excavation @ 13.0 No Ground Water Encountered No Monitoring Well in Place											

### TEST PIT LOG

Test Pit:	TP-6		File #:	20609								
Client:	Hale Development		Date Excavated:	3/5/20								
Project:	Mountain View		Excavated By:	Aspen Creek - Backhoe								
Location:	43 38 38.49 -116 16 27.84		Logged By:	J. Meusch, PM - SITE								
DEPTH	SOILS DESCRIPTION											
(feet)	N	3/4"	1/2"	3/8"	# 4	# 10	# 40	# 100	#200	%M	LL	PI
0.0-2.0	Brown, Moist, Sand & Silt											
2.0-5.0	Brown, Moist, Firm, Sand & Silt with ACP & PCC											
5.0-13.0	Dark Brown, Moist, Firm, Sand, Silt & Gravel with ACP & PCC											
13.0	Bottom of Excavation @ 13.0 No Ground Water Encountered No Monitoring Well in Place											



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### TEST PIT LOG

Test Pit:	TP-7		File #:	20609								
Client:	Hale Development		Date Excavated:	3/5/20								
Project:	Mountain View		Excavated By:	Aspen Creek - Backhoe								
Location:	43 38 39.26 -116 16 30.26		Logged By:	J. Meusch, PM - SITE								
DEPTH	SOILS DESCRIPTION											
(feet)	N	3/4"	1/2"	3/8"	# 4	# 10	# 40	# 100	#200	%M	LL	PI
0.0-2.0	Brown, Moist, Sand & Silt											
2.0-4.0	Brown, Moist, Firm, Sand & Silt with Gravel & ACP											
4.0-10.0	Tan, Moist, Firm, Sand Gravel, Cobble											
10.0	Bottom of Excavation @ 10.0 (Sluffing Stopped Excavation) No Ground Water Encountered No Monitoring Well in Place											

### TEST PIT LOG

Test Pit:	TP-8		File #:	20609								
Client:	Hale Development		Date Excavated:	3/5/20								
Project:	Mountain View		Excavated By:	Aspen Creek - Backhoe								
Location:	43 38 40.81 -116 16 29.54		Logged By:	J. Meusch, PM - SITE								
DEPTH	SOILS DESCRIPTION											
(feet)	N	3/4"	1/2"	3/8"	# 4	# 10	# 40	# 100	#200	%M	LL	PI
0.0-10.0	Tan, Moist, Sand & Gravel with ACP & PCC											
3.0	18	100	90	80	73	60	55	42	32.2	11.5	NP	NP
10.0-13.0	Dark Brown, Moist, Firm, Sand, Silt, Gravel											
13.0	Bottom of Excavation @ 13.0 No Ground Water Encountered No Monitoring Well in Place											

## Soil Log Legend

UNIFIED SOIL CLASSIFICATION SYSTEM  
 (ASTM STANDARD TEST METHOD D 2487 FOR CLASSIFICATION OF SOIL FOR ENGINEERING PURPOSES)

MAJOR DIVISIONS			TYPICAL DESCRIPTIONS	
COARSE GRAINED SOILS <50%-#200	GRAVEL & GRAVELLY SOILS <50%-#4	< 5%-#200	GW	Well-graded gravel, gravel-sand mixture, little or no fines.
		5-12%-#200	GP	Poorly graded gravel, gravel sand mixture, little or no fines
		> 12%-#200	GM	Silty gravel, gravel-sand-silt mixtures
			GC	Clayey gravel, gravel-sand-clay mixtures
	SAND & SANDY SOILS ≥50%-# 4	< 5%-#200	SW	Well-graded sand, gravelly sand, little or no fines.
			SP	Poorly graded sand, gravelly sand, little or no fines
		>12%-#200	SM	Silty sand, sand-silt mixtures
			SC	Clayey sand, sand-clay mixtures
FINE GRAINED SOILS ≥50%-#200	SILTS & CLAYS LL< 50%	INORGANIC	ML	Inorganic silt and very fine sand, rock flour, silty or clayey fine sand or clayey silt with slight plasticity
			CL	Lean clay-low to medium plasticity, gravelly clay, sandy clay, silty clay
	SILTS & CLAYS LL>50%	ORGANIC	OL	Organic silt and organic silty clay of low plasticity
		INORGANIC	MH	Elastic silt, micaceous or diatomaceous fine sand or silty soil.
			CH	Fat clay - high plasticity
		ORGANIC	OH	Organic clay-med. or high plasticity: organic silt
HIGHLY ORGANIC SOILS			PT	Peat, humus, swamp soil with high organic content

## Abbreviations and Acronyms

AASHTO	American Association of State Highway & Transportation Officials
ASTM	American Society for Testing and Materials
ACP	Asphaltic Concrete Pavement
ASCE	American Society of Civil Engineers
BH	Bore Hole
IBC	International Building Code
ISPWC	Idaho Standard for Public Works Construction
ITD	Idaho Transportation Department
N	Standard Penetration Test – Blow Counts
NP	Non-Plastic
PCC	Portland Cement Concrete
PCF	Pounds per Cubic Foot
TP	Test Pit
USCS	Unified Soil Classification System



### STANDARD PROCTOR

Jim Fuhrman  
 1950 East Redwick Court  
 Meridian, Idaho 83646

Glenwood Property

SITE File #: 14038  
 Date Sampled: 2/25/2014  
 Lab Number: 14004

Sample Source: Composite Sample of Fill from FOUR boring Locations

**Sieve Analysis Results:**

3.0"	<u>100</u>	1.0"	<u>100</u>	3/8"	<u>84</u>	#40	<u>54</u>
2.0"	<u>100</u>	3/4"	<u>96</u>	#4	<u>76</u>	#100	<u>42</u>
1.5"	<u>100</u>	1/2"	<u>88</u>	#10	<u>71</u>	#200	<u>37.8</u>

**Soil Description:**

Silty SAND with gravel

**Moisture / Denisty Relationship:**

ASTM D-698     X     Method B     X      
 ASTM-D-1557     X     Method C     X    

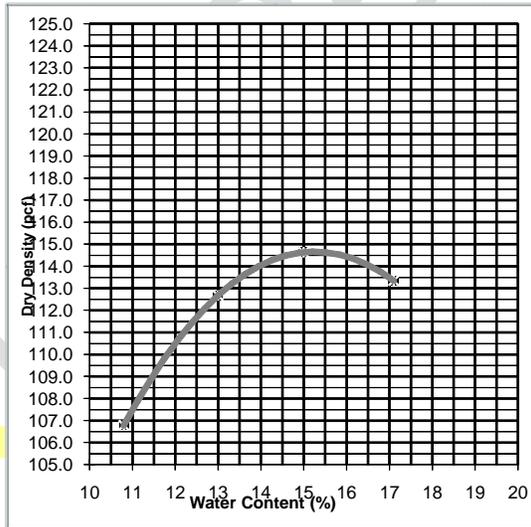
Trial Number 1  
 Moisture Content (%) 10.8%  
 Dry density (lbs/ft3) 106.8

**MAXIMUM / OPTIMUM RESULTS**

Dry Density (pcf): **114.7**  
 Moisture Content (%): **15.2**

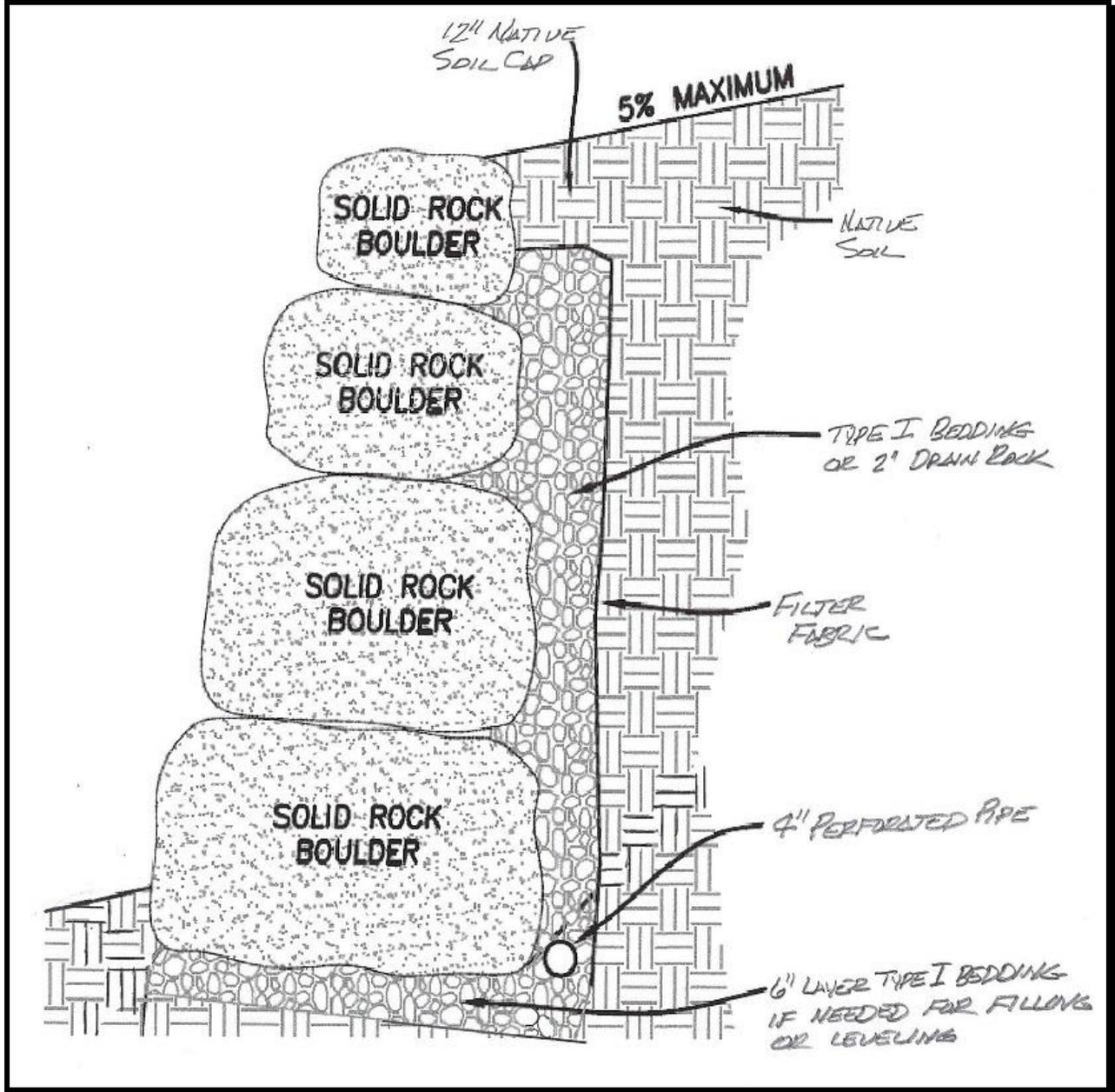
**ROCK CORRECTED RESULTS**

Percent Rock	Dry Density	Moisture Content
10	118.3	13.9
15	120.2	13.2
20	122.1	12.6



Reviewed by:  
 Bob J. Arnold, PE

### Boulder Retaining Wall Drain Detail



Nothing follows