



PLANNING COMMISSION MEETING STAFF REPORT

DATE OF MEETING: May 12, 2020
NAME OF PROJECT: Midway Vistas
NAME OF APPLICANT: Kirk Malmrose
PROPERTY OWNER: John Zenger Trust
AGENDA ITEM: Master Plan
LOCATION OF ITEM: 285 Luzern Road
ZONING DESIGNATION: RA-1-43

ITEM: 2

Kirk Malmrose, agent for John Zenger Trust, is proposing a Master Plan and Annexation Agreement Amendment for Midway Vistas. The property was annexed into Midway as part of the Zenger Annexation and was formerly known under the names of Murano and Malmrose. The property is 83.19 acres and contains 49 lots. There are 25 acres of open space in the proposal. The property is located at 285 Luzern Road and is in the RA-1-43 zone.

BACKGROUND:

Kirk Malmrose is proposing a Master Plan approval and Annexation Agreement for Midway Vistas (formerly known as Murano). The proposed development is 49 lots on 83.19 acres and is in the RA-1-43 zone. The project area was approved for annexation into Midway on June 27, 2007 and the property was later annexed into the City on January 30, 2008. As part of the approved annexation, an annexation agreement was developed and approved by both the landowner and Midway. The agreement is binding

with no expiration date and includes many details pertaining to development of the property. The agreement was based on months of review by the City Council, Planning Commission and staff. The Midway Vistas master plan is similar to the approved Murano concept plan that was included in the annexation agreement but there are some differences.

The agreement does contain a provision that allows for amendments. Section V D states the following: *This agreement may be amended in whole or in part by the mutual written consent of the parties to this agreement or by their successors in interest or assigns.* Therefore, the applicant has petitioned for the City to consider some minor alterations from the original agreement, but the City is under no obligation to grant any changes, even if the proposed amendment does comply with a previous or current zoning code. The City should only grant an amendment if there is a prevailing communal benefit that a new plan can offer that the approved plan cannot.

The property is 83.19 acres in size and will be developed in three phases. The proposal is a standard subdivision, which usually have public roads, but the annexation agreement does specify that the roads will be private. The property does contain some sensitive lands in the form of slopes greater than 25%. The proposal has 25.39 acres of open space which is 30.52%. A homeowners association will be required to maintain the open space/common area. There will also be a mix of public and private trails throughout the development.

The Land Use Code requires that a Master Plan request must demonstrate that approval of the project in multiple phases can occur such that the project can still function autonomously if subsequent phases are not completed. Therefore, the Master Plan application must demonstrate that sufficient property, water rights, roads, sensitive lands protection, and open space are proposed with the first phase, and each ensuing phase, to allow the project to function without subsequent phases. All water rights required will be held in escrow by the City before the master plan agreement is recorded.

LAND USE SUMMARY:

- 84.15 acres
- 25 acres of open space
- Zoned RA-1-43
- Three phases
- Standard subdivision
- Private roads (with a public easement) and storm drain system will be maintained by the HOA

- The lots will connect to the Midway Sanitation District sewer and to the City’s culinary water line.
- An 8’ paved public trail is planned to run north and south through the length of the property and east and west. An offsite trail is also required in the annexation agreement.
- Sensitive lands on the property include slopes greater than 25%.

ANALYSIS:

Open Space – The code requires that with each phase there is enough open space to comply with the 15% requirement of the code. If phase I has 75% open space, then phase II only needs to have 25% open space if both phases are equal in acreage. The proposed plans do comply with the open space requirements. Open space per phase is the following:

	Total Acreage	Open Space	%
Phase I	46.89	13.63	29.06%
Phase 2	19.66	8.32	32.98%
Phase 3	16.64	3.05	30.05%
	<u>83.19</u>	<u>25</u>	<u>82.35%</u>

Some of the open space will not be irrigated because for a couple of reasons. Some of the areas that will not be irrigated are in sloped areas and some are areas that historically have never been irrigated. The City tries to anticipate what areas future lot owners or common areas that the HOA may want to irrigate in the future when determining to allow areas without water rights. The Water Board did determine to allow some areas that will not be irrigated, and those areas will be noted on the plat. All lots, except lot 30, have water rights that allow the entire lots to be irrigated.

Density – The annexation agreement limits density to 49 lots which is the amount on the proposed plan.

Access – Each phase of the subdivision must meet the access requirement. The proposed plan does have two points of access for each unit. The three access points for the development are Canyon View Road (public), Interlaken Drive (private), and Luzern Road (Interlaken public road). Because Interlaken Drive is a private road the developer arrived at an agreement with owners of the road that will allow use of Interlaken Drive.

Traffic Study – The developers submitted a traffic study to the City as part of the annexation in 2007. Since that time, there have been development in the area so staff

is requiring a new traffic study to be completed that will be submitted with preliminary approval of the first phase, as the code requires.

Geotechnical Study – The developers have submitted a geotechnical study to the City as part of the application (please see executive summary attached to this report). Horrocks Engineers has reviewed the study to determine if any special requirements are needed for construction of the roads and future structures in the development. The report is available for viewing in the planning office or by request.

Lot acreage – The land use code allows the area of lots to reduce in size based on the amount of open space in the subdivision. The code requires 15% open space for this proposal and the developer has provided 30%. Because the developer has 15% extra open space, the lots may reduce in size by 15%, therefore the minimal size lot allowed is 0.85 acres, of which there are several in the proposed master plan.

Sensitive Lands – The property does contain slopes greater than 25%. Dwellings are not allowed on areas of slope greater than 25%. The proposed plan complies with this requirement.

Trails – The Trails Master Plan contains two trails that cross the property. One trail runs north from Canyon View Road to Interlaken and another runs from the center of the property to Interlaken Drive. These trails will be paved. The Planning Commission and the Trails and Parks Committee have both expressed the desire for a trail to connect to the west side of the property. The developer has provided an access on the proposed plans to make that connection. The City will need to decide if the route that has been proposed is the best route or if there is a better option. The annexation agreement also requires an offsite trail that along Burgi Lane. The City completed that trail several years ago so staff is proposing that the development pay for another similar length trail that will be built in the next few months along Homestead Drive. Both trails are about 300' in length so this proposition does seem equitable.

Setbacks – All structures in the proposed development will need to comply with the RA-1-43 standards.

Height of structures – All structures in the proposed development will be no taller than 35' to the roof measured from natural grade.

All three phases will be one HOA – The three phases of the master plan will all be one Homeowners' Association, and this will be memorialized in the master plan agreement. The HOA is responsible for maintenance of the streets, private trails and any amenities, such as the tennis court, that is provided.

Interlaken Dumpsters in Valais Park – There have been problems with the Interlaken dumpsters located on City property in the Valais Park parking lot. The dumpsters are used by many people even though the dumpsters are only for the residents of

Interlaken and the trash from the Valais Park. Because they are so accessible, they are overused and many times there is trash scattered around the dumpster area. For years the City has tried to relocate the dumpsters and there has been discussion of moving the dumpsters farther up Interlaken Drive near the entrance of Interlaken. It appears there is a suitable site on the Zenger property. The City may require a dumpster site as part of the Annexation Plan Amendment.

WATER BOARD RECOMMENDATION:

The Water Board has reviewed the master plan and has determined that 191.24-acre feet are required for the entire project. The final numbers need to be calculated but Phase 1 would dedicate 120.18 acre-feet, Phase 2 would dedicate 32.7-acre feet, and phase 3 would dedicate 40.91-acre feet. All the required water rights will be held in escrow before the master plan agreement is recorded.

POSSIBLE FINDINGS:

- The proposal complies with the requirements of the code for standard subdivisions.
- The proposal does meet the vision of the area as described in the General Plan for the RA-1-43 zone.
- The public trails will be built by the developer that will be an amenity to the entire community.

ALTERNATIVE ACTIONS:

1. Recommendation of Approval (conditional). This action can be taken if the Planning Commission feels the proposal complies with the requirements of the Land Use Code.
 - a. Accept staff report
 - b. List accepted findings
 - c. Place condition(s) if needed

2. Continuance. This action can be taken if the Planning Commission feels that there are unresolved issues.
 - a. Accept staff report
 - b. List accepted findings
 - c. Reasons for continuance
 - i. Unresolved issues that must be addressed
 - d. Date when the item will be heard again

3. Recommendation of Denial. This action can be taken if the Planning Commission feels that the request does not meet the requirements of the code.
 - a. Accept staff report
 - b. List accepted findings
 - c. Reasons for denial

PROPOSED CONDITIONS:

1. The developer will pay the cost of building a 300' section of trail along Homestead Drive that will take the place of the trail that City built along Burgi Lane that was originally required of the developer.
2. Developer will propose potential locations for the Valais Park dumpsters in the boundaries of the master plan.
3. All approved non-irrigated areas will be noted on the plats.
4. A note is placed on the plats informing future owners that the 15 most elevated lots will each require an irrigation pump because they are located above the irrigation ditch.

May 12, 2020

Midway City
Attn: Michael Henke
75 North 100 West
Midway, Utah 84049

Subject: Midway Vistas Subdivision – Master Plan Review

Dear Michael:

Horrocks Engineers recently reviewed the Midway Vistas subdivision plans for Master Plan approval. The proposed subdivision borders Interlaken to the North, the Scotch Fields Subdivision to the South and Interlaken Drive to the East. The proposed subdivision consists of 49 lots. The following issues should be addressed.

General Comments

- Each phase within the Master Plan appears to be a stand-alone phase.
- All drawings and standards should meet the Midway City updated 2020 specifications.

Water

- The proposed development will be served from the Cottages on the Green pressure zone.
- The proposed development will connect to the existing 8" culinary water line in Interlaken Drive to the east of the subdivision and to a 10" culinary water line in Dutch Fields subdivision to the South of the proposed subdivision.
- To accommodate fire flows it appears a 10" water line will need to be installed throughout the subdivision. This will be addressed during the preliminary approval process.
- During the approval process we need to address the required water pressure of the highest lots.

Roads

- The proposed private roads within development will have right-of-way widths of 56' with sidewalk on both sides of the road.
- As part of the annexation agreement all roads within the subdivision will be private with a public use easement.
- Any access issues relative to the town of Interlaken need to be resolved.

Pressure Irrigation

- The subdivision will be serviced by Midway Irrigation Company. Lots higher in elevation will likely have issues with pressure. This should be addressed as part of the preliminary approved plans.
- All removal, additions, or revisions to pressure irrigation system must be approved by Midway Irrigation Company.

Trails

- An 8' public trail system is shown throughout the development. This should be shown as a private trail with public use easement.
- The trails will connect with Scott Fields development on Canyon View Road.

Storm Drain

- The storm drain system will be private and will be collected within the proposed curb and gutter and discharged to a series of catch basins, sumps, and detention basins with the development.
- Midway Vistas HOA will be responsible for maintenance of the detention basins.

Sewer

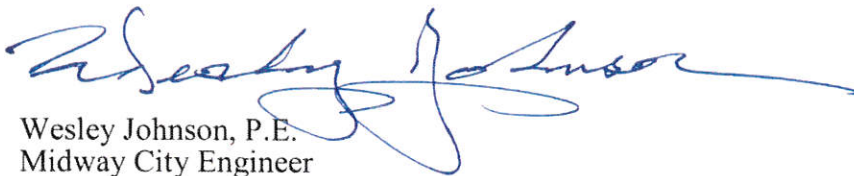
- Sewer will be provided by Midway Sanitary Sewer District.

The following items will need to be submitted for preliminary review:

- Roadway, trail, and detention pond cross sections
- An updated traffic report shall be submitted for final approval.

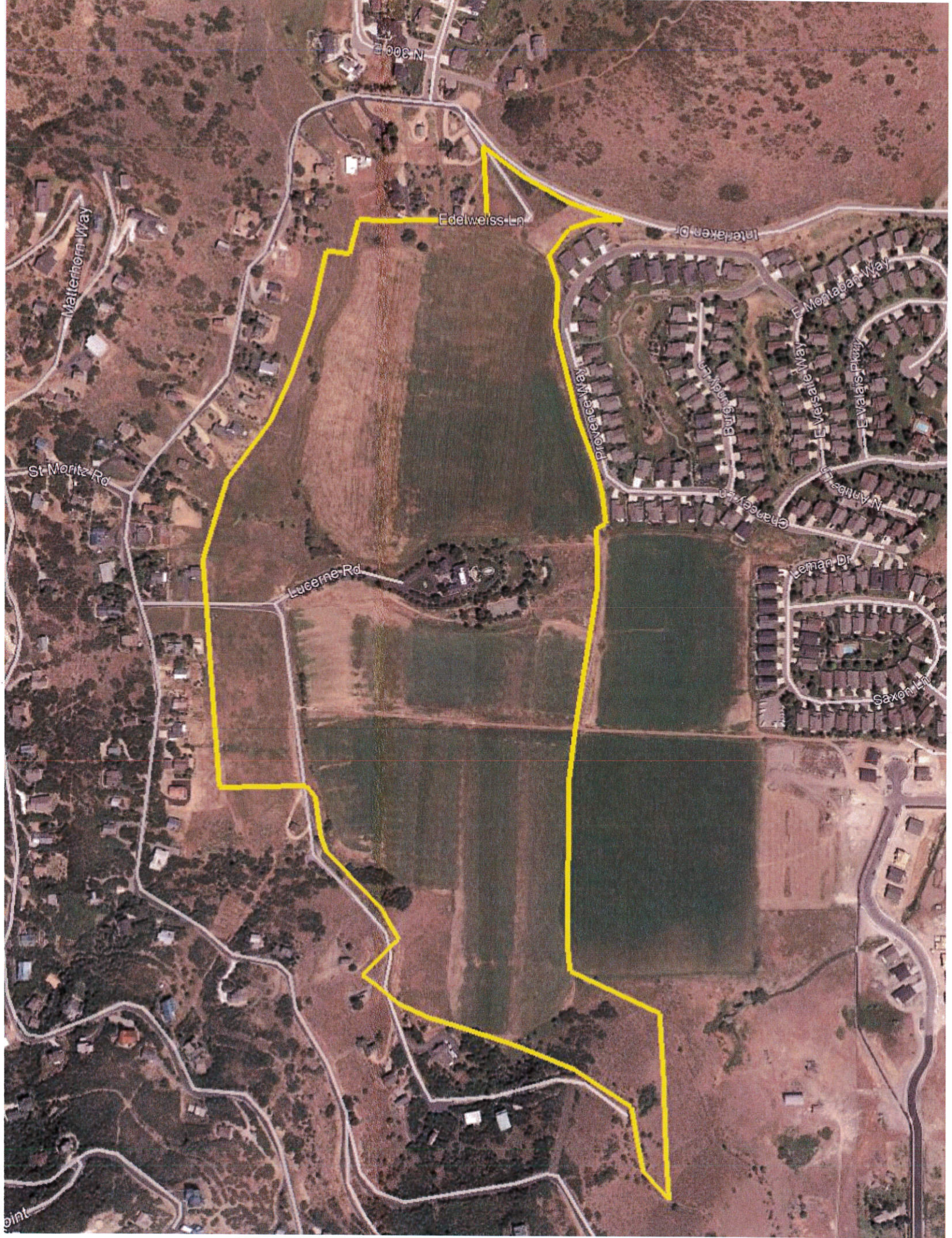
Please feel free to call our office with any questions.

Sincerely,
HORROCKS ENGINEERS

A handwritten signature in blue ink, appearing to read 'Wesley Johnson', with a long horizontal flourish extending to the right.

Wesley Johnson, P.E.
Midway City Engineer

cc: Berg Engineering



N 300 E

Mallethorn Way

Edelweiss Ln

Interlaken Dr

E Montebello Way

St. Moritz Rd

Chamery Ln

E Vesale Way

E Valais Pkwy

Lucerne Rd

Lemay Dr

Saxon Ln

oint



EXISTING UTILITIES SHOWN ON PLANS ARE APPROXIMATE. LOCATIONS CONTRACTOR SHALL BE RESPONSIBLE FOR BLUE STAKING. CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS AND THESE SHOWN ON THIS PLAN.

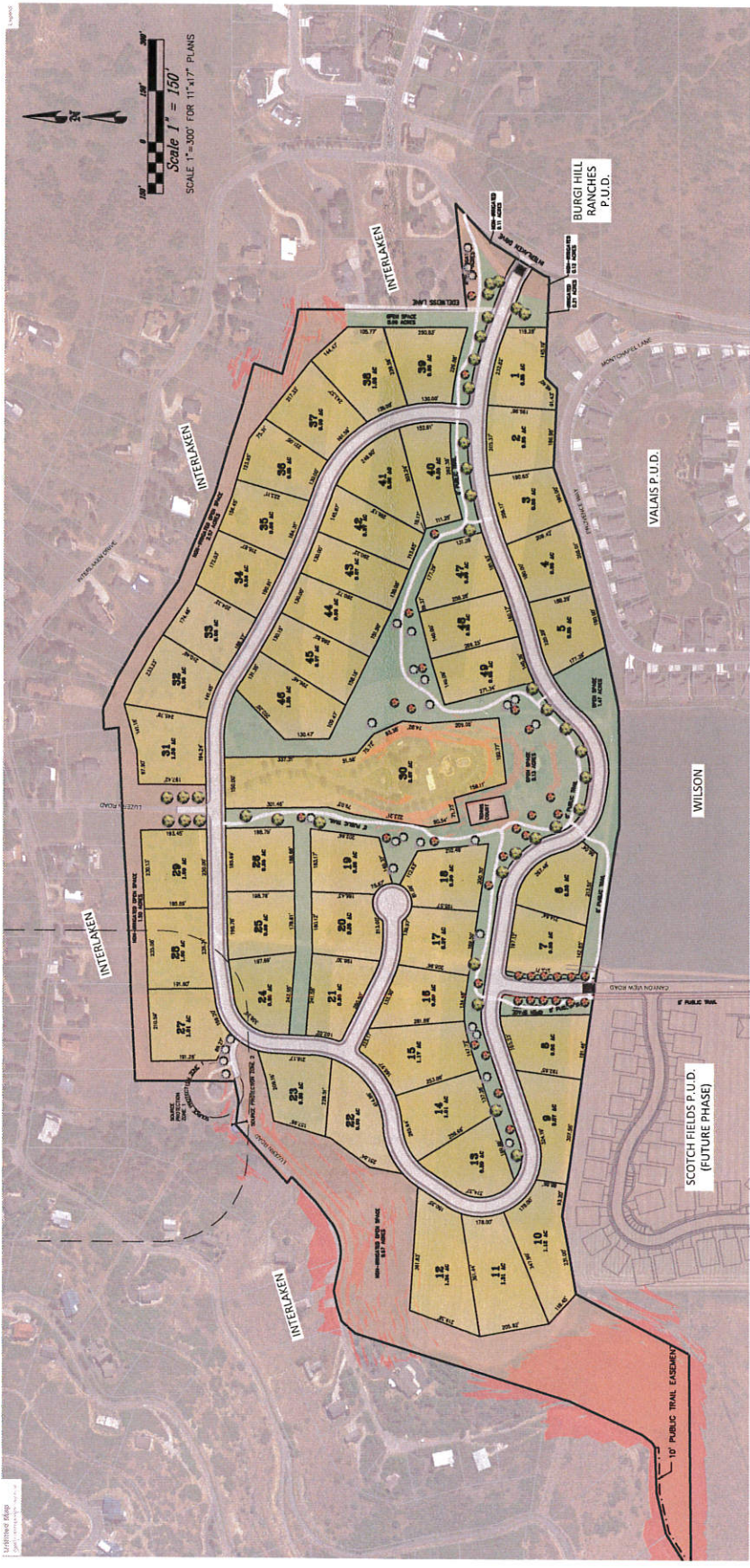
- LEGEND:**
- EXISTING CONTOURS
 - EXISTING PRESSURIZED IRRIGATION
 - EXISTING OVERHEAD POWER
 - EXISTING SANITARY SEWER
 - EXISTING WATER LINE
 - EXISTING GAS LINE
 - EXISTING SLOPES GREATER THAN 25%
 - EXISTING SLOPES GREATER THAN 25%
 - EXISTING SLOPES GREATER THAN 25%
 - EXISTING SLOPES GREATER THAN 25%
 - EXISTING SLOPES GREATER THAN 25%

THIS DOCUMENT IS RELEASED FOR REVIEW ONLY. IT IS NOT TO BE USED FOR CONSTRUCTION UNLESS SHOWN AND SEALED.
 DATE: 08/15/2008
 DRAWN BY: J. WILSON
 DATE: 12/02/2008

KIRK MALMOROSE
 MIDWAY VISTAS
 EXISTING CONDITIONS

BERG ENGINEERING
 200 E. MAIN ST. SUITE 204
 DENVER, CO 80202
 PH: 303.557.9749

DESIGNED BY: DATE: 04/02/2008 SHEET: 1
 DRAWN BY: CMB REV: 1



Scale 1" = 150'
SCALE 1"=300' FOR 11"x17" PLANS

ALLOWED LOT SIZE
 COMMON AREA WITH TRAILS & TENNIS COURT (12.03 ACRES)
 IRRIGATED COMMON AREA (11.15 ACRES)
 NON-IRRIGATED COMMON AREA/OPEN SPACE (13.38 ACRES)
 LOTS
 PUBLIC TRAILS (4,717 LF)
 SLOPES GREATER THAN 25%

LOT 30:
 IRRIGATED AREA = 1.63 ACRES
 NON-IRRIGATED AREA = 1.24 ACRES
 IMPERVIOUS AREA = 1.00 ACRES

ROAD ROW IRRIGATED AREA FOR SWALES = 1.91 ACRES

LUZERN ROAD NOTE:
 LUZERN ROAD WILL BE ABANDONED THROUGH
 LOT 30. THE NEW ROAD TO BE BUILT BETWEEN
 THE NEW ROAD IN THE SUBDIVISION AND
 THE WELL PUMP HOUSE AND LOT 27 TO
 CONNECT TO THE NEW ROAD IN THE
 SUBDIVISION.

LEGEND:

- COMMON AREA WITH TRAILS & TENNIS COURT (12.03 ACRES)
- IRRIGATED COMMON AREA (11.15 ACRES)
- NON-IRRIGATED COMMON AREA/OPEN SPACE (13.38 ACRES)
- LOTS
- PUBLIC TRAILS (4,717 LF)
- SLOPES GREATER THAN 25%

LAND USE TABLE

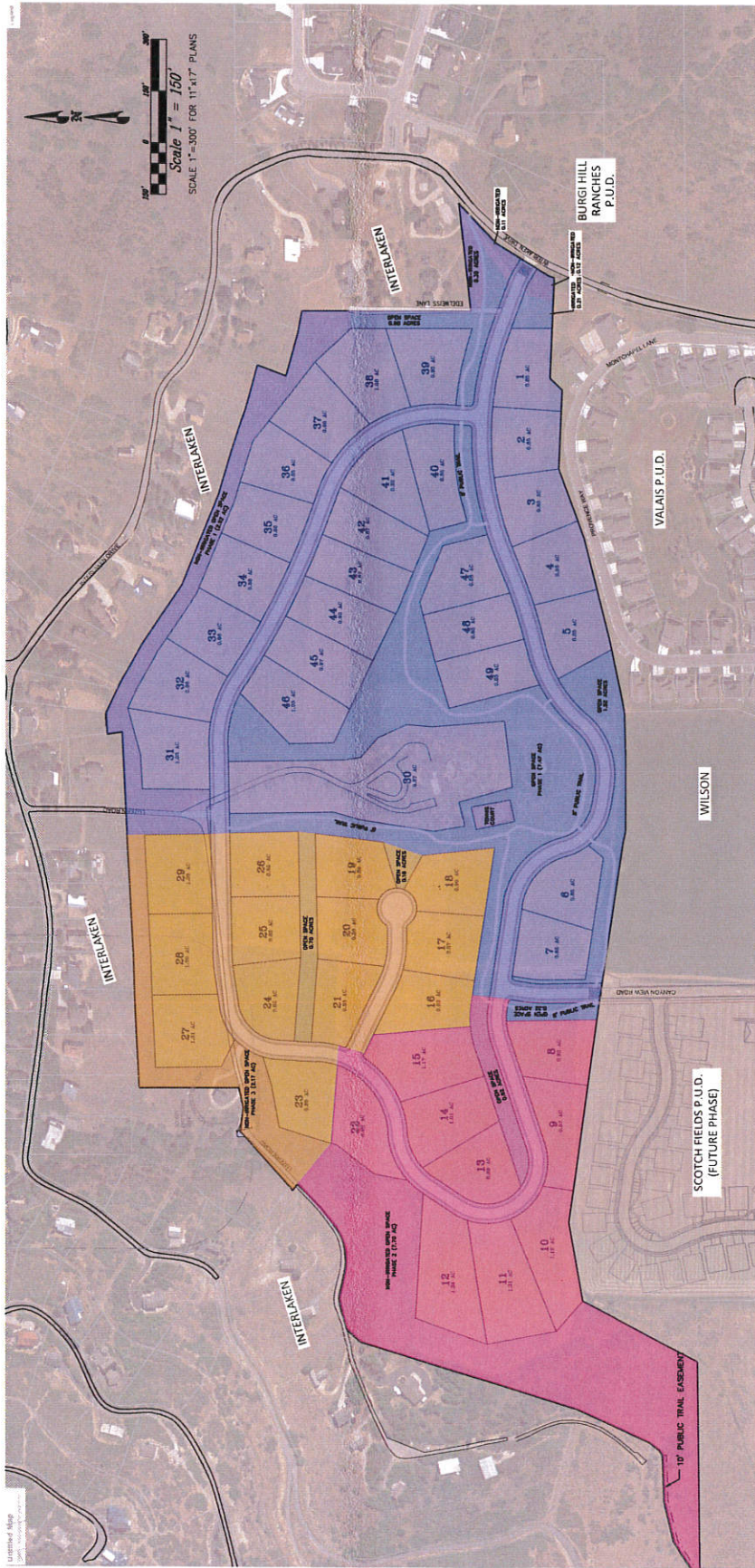
TOTAL AREA	63.19 AC
OPEN SPACE REQUIREMENT	22.48 AC (35.00%)
OPEN SPACE (PROPOSED)	25.39 AC (39.95%)
NUMBER OF LOTS	48 NEW LOTS
	2 EXISTING LOTS
	49 TOTAL LOTS
NUMBER OF LOTS MATCHES ANNEXATION AGREEMENT.	

KIRK M. MIRON
 MIDWAY VISTAS
 MASTER SITE PLAN

THIS DOCUMENT IS RELAYED
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 AND IS NOT VALID FOR CONSTRUCTION
 UNLESS IT IS SIGNED BY THE
 ENGINEER.
 PAUL S. BORG, P.E.
 SERIAL NO. 232999
 DATE: 12/22/2009



INSURER: CNR
 DRAWING NO.: 1451
 SHEET: 3



Scale 1" = 150'
SCALE 1" = 300' FOR 11"X17" PLANS

LAND USE TABLE

TOTAL AREA	83.19 AC
OPEN SPACE REQUIREMENT	12.48 AC (15.00%)
OPEN SPACE (PROPOSED)	25.39 AC (30.52%)
NUMBER OF LOTS	48 NEW LOTS
	1 EXISTING LOT
	49 TOTAL LOTS

NUMBER OF LOTS MATCHES ANNEXATION AGREEMENT.

LEGEND

[Blue Box]	PHASE 1
[Pink Box]	PHASE 2
[Yellow Box]	PHASE 3

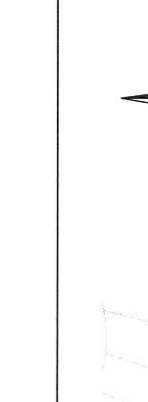
PHASE	TOTAL LOTS	TOTAL AREA	OPEN SPACE		CUMULATIVE		NON-IRRIGATED OPEN SPACE
			IN PHASE	SPACE %	IN PROJECT	OPEN SPACE %	
1	27	46.89 AC	13.63 AC	29.06%	29.06%	3.36 AC	
2	9	19.66 AC	8.32 AC	43.90%	32.98%	7.70 AC	
3	13	16.64 AC	3.05 AC	18.33%	30.05%	2.17 AC	
		83.19 AC					

NOTES:
 1. 10% REQUIRED PER CITY ORDINANCE
 2. 10% REQUIRED FOR REDUCE LOT SIZES PROPOSED WITH THIS PROJECT

KIRK MATHIAS
 MIDWAY VISTAS
 PHASING PLAN

BERG ENGINEERING
 10000 N. 100TH AVENUE, SUITE 100
 DENVER, CO 80231
 PHONE: 303.440.8800
 FAX: 303.440.8801
 WWW.BERGENGINEERING.COM

DATE: 11.01.2008
 DRAWN BY: JLV
 CHECKED BY: JLV
 SHEET NO: 4



- LEGEND.**
- EXISTING SEWER TO REMAIN
 - EXISTING SEWER TO BE ABANDONED
 - PROPOSED 8" SEWER

- SANITARY SEWER SYSTEM NOTES.**
1. ALL SEWER CONSTRUCTION TO BE IN ACCORDANCE WITH THE FOLLOWING:
 - 1.1. ALL SEWER MAIN LINES SHALL BE 8" DIA. 15' DEEP.
 - 1.2. ALL SEWER MAIN LINES AND LATERALS SHALL BE INSTALLED WITH TRUPEC BRAND.
 - 1.3. ALL PRIVATE STREETS WILL BE DEDICATED AS A CASSEMENT HAS BEEN PROVIDED FOR ALL SEWERS NOT LOCATED WITHIN A STREET.

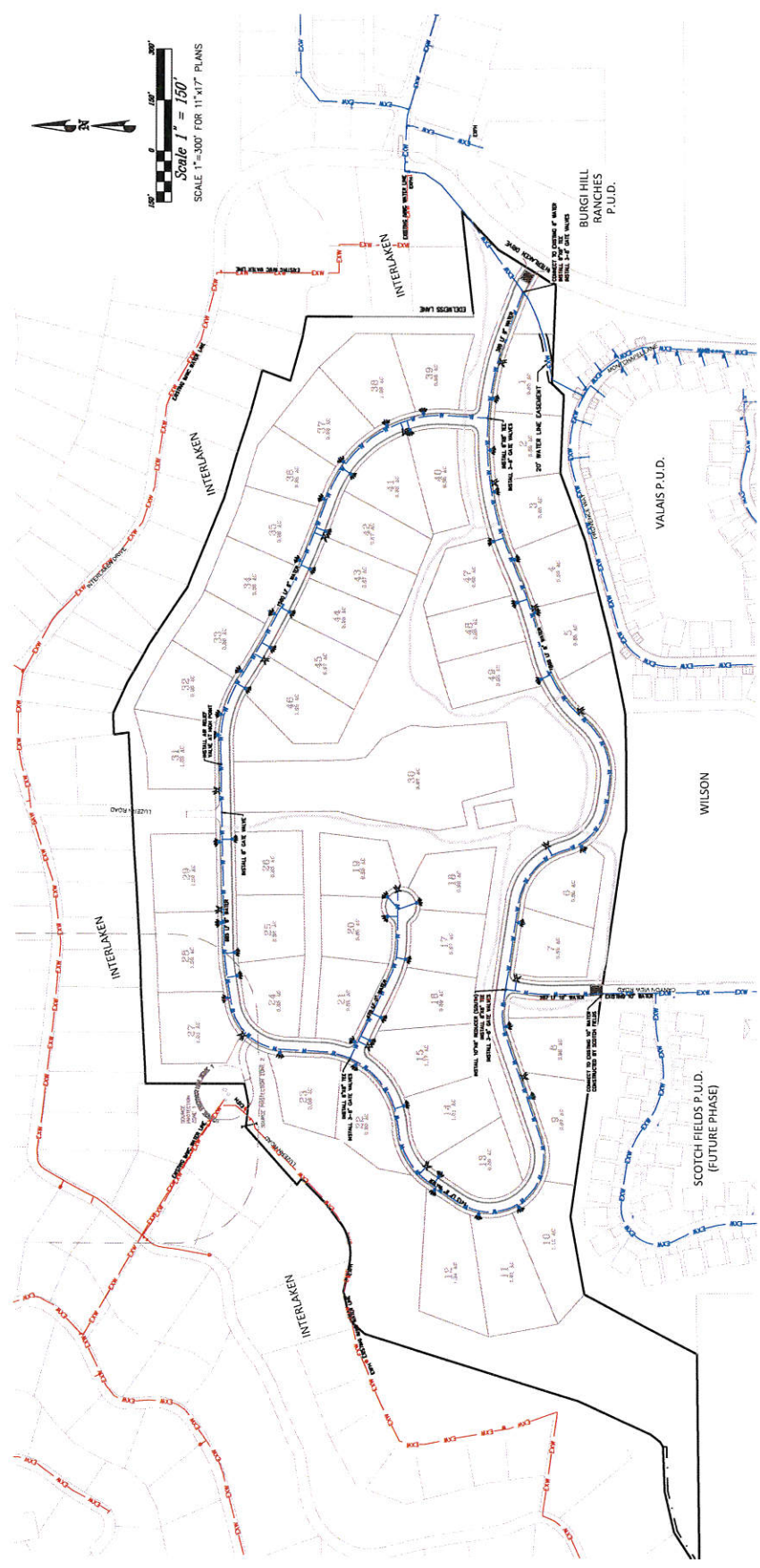
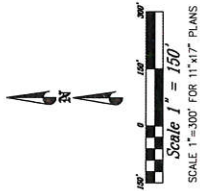
BLUE STAKE NOTE.
 ALL EXISTING UTILITIES SHOWN ON THIS PLAN ARE APPROXIMATE AND MAY BE INCOMPLETE. CONTRACTOR IS RESPONSIBLE FOR BLUE STAKING OF UTILITIES.

KIRK MAIRONE
 MIDWAY VISTAS
 SEWER MASTER PLAN



DATE: 05/15/2013	5
REV: 05/15/2013	
BY: KIRK MAIRONE	
CHECKED: KIRK MAIRONE	

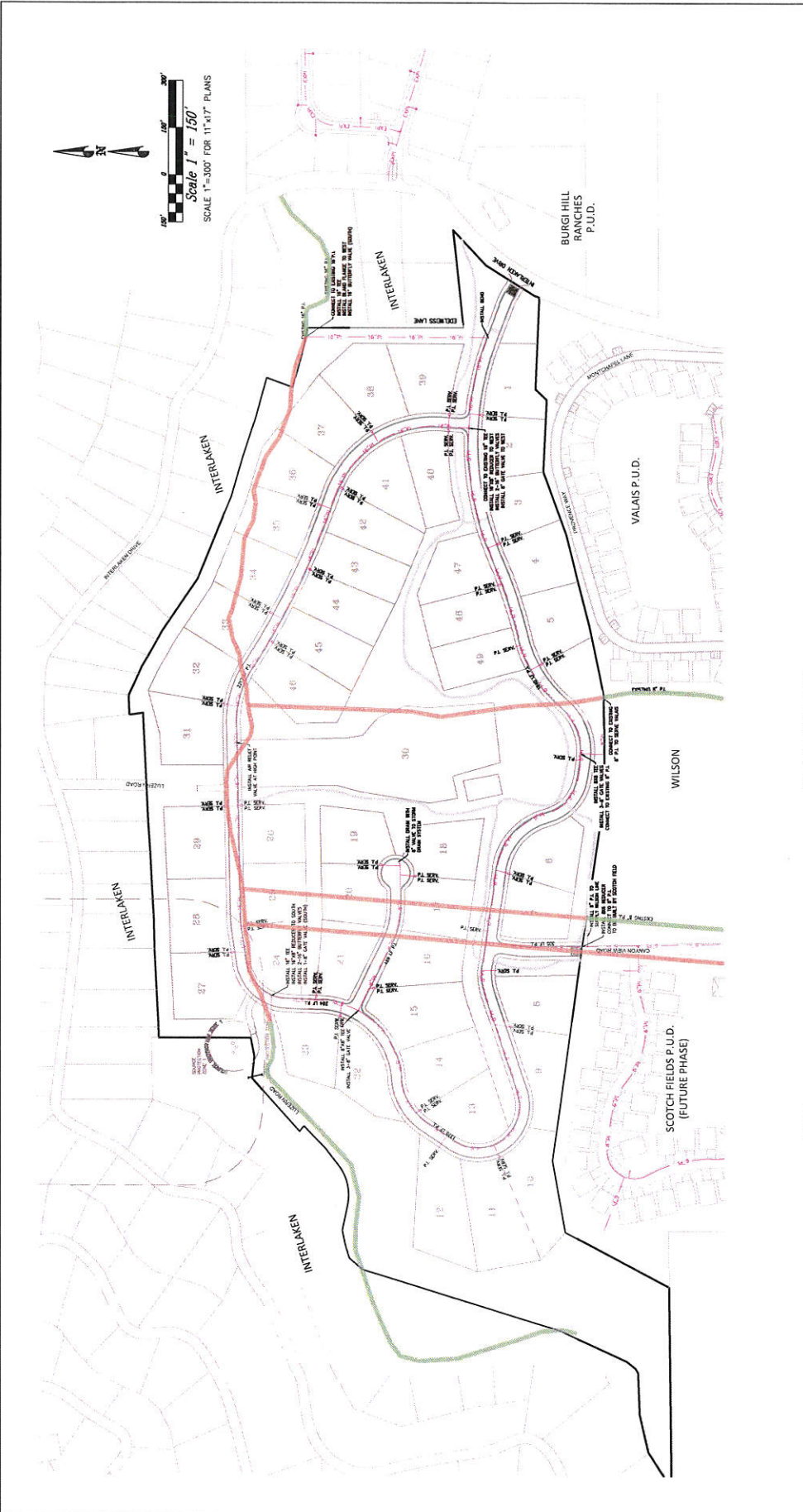
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QUANTITY AND MATERIALS FOR WATER IMPROVEMENTS SHALL MEET MIDWAY CITY STANDARDS AND ALL CULINARY WATER MAIN SHALL BE AWWA C900 DR18 BLUE PIPE.
 BLUE STAKE NOTE:
 LOCATION OF EXISTING UTILITIES SHOWN ON THIS PLAN IS BASED ON RECORD DRAWINGS AND FIELD SURVEY. CONTRACTOR IS RESPONSIBLE FOR BLUE STAKING OF UTILITIES.

- LEGEND:**
- PROPOSED 8" WATER
 - EXISTING WATER (MIDWAY)
 - EXISTING WATER (INTERLAKEN)
 - FIRE HYDRANT
 - WATER METER

BERG ENGINEERING
 380 S. Main St. Suite 204
 Parkville, MO 64150 P.C.
 PH: 816.267.9949
 DATE: 11.08.2020



LEGEND:

- EXISTING PRESSURIZED IRRIGATION TO REMAIN
- PROPOSED 18" PRESSURIZED IRRIGATION
- PROPOSED 8" PRESSURIZED IRRIGATION
- PROPOSED 18" PRESSURIZED IRRIGATION

PRESSURIZED IRRIGATION NOTES:

- ALL PRESSURIZED IRRIGATION IMPROVEMENTS SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR IRRIGATION SYSTEMS, 1995 EDITION, AS MAINTAINED BY THE IRRIGATION ENGINEERS SOCIETY OF AMERICA (IESA).
- ALL IRRIGATION SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH THE IRRIGATION ENGINEERS SOCIETY OF AMERICA (IESA) STANDARD SPECIFICATIONS FOR IRRIGATION SYSTEMS, 1995 EDITION, AS MAINTAINED BY THE IRRIGATION ENGINEERS SOCIETY OF AMERICA (IESA).

BLUE STAKE NOTE:

- LOCATION OF EXISTING UTILITIES SHOWN ON THIS PLAN IS FOR INFORMATION ONLY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR BLUE STAKING OF UTILITIES.

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 WWW.BERG-ENG.COM

BERG ENGINEERING
 PRESSURIZED IRRIGATION
 MASTER PLAN

KIRK WILMORSE
 MIDWAY VISTAS
 MASTER PLAN

DATE: 05.16.2010
 DRAWN BY: CBR
 CHECKED BY: JPB

7

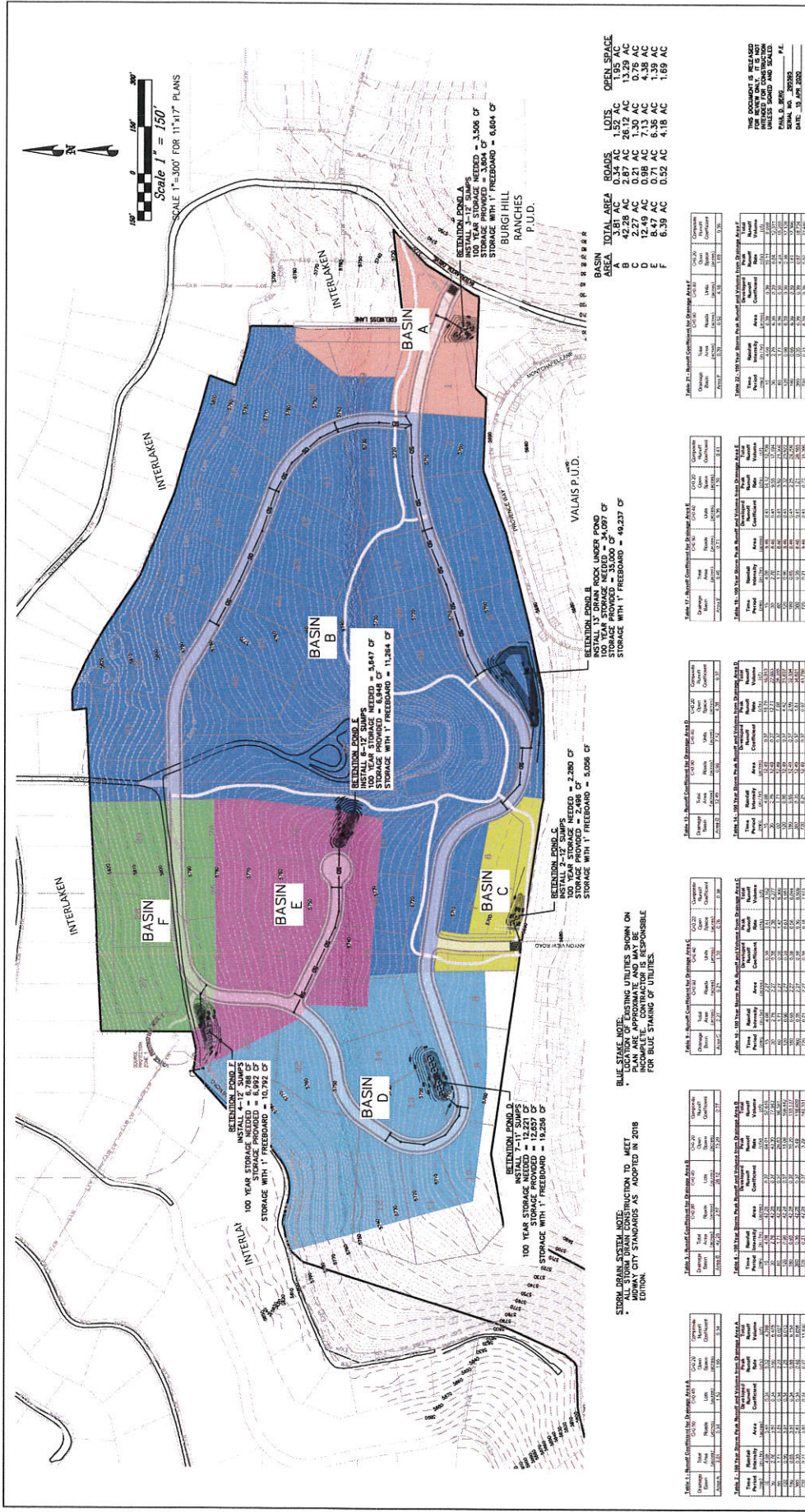


Table 1: Basins

Basin	Area (AC)	Open Space (AC)
A	42.28	13.29
B	2.87	26.12
C	0.21	1.30
D	12.49	0.98
E	6.39	0.52
F	6.39	4.18

Table 2: Basin A

Drainage	Area (AC)	Population	Peak Flow (MGD)	Peak Flow (CFS)
Basin A	42.28	1,000	0.15	1,000

Table 3: Basin B

Drainage	Area (AC)	Population	Peak Flow (MGD)	Peak Flow (CFS)
Basin B	2.87	50	0.01	50

Table 4: Basin C

Drainage	Area (AC)	Population	Peak Flow (MGD)	Peak Flow (CFS)
Basin C	0.21	10	0.00	10

Table 5: Basin D

Drainage	Area (AC)	Population	Peak Flow (MGD)	Peak Flow (CFS)
Basin D	12.49	300	0.05	300

Table 6: Basin E

Drainage	Area (AC)	Population	Peak Flow (MGD)	Peak Flow (CFS)
Basin E	6.39	150	0.02	150

Table 7: Basin F

Drainage	Area (AC)	Population	Peak Flow (MGD)	Peak Flow (CFS)
Basin F	6.39	150	0.02	150

BLUE STAKE NOTE:
EXISTING UTILITIES SHOWN ON PLAN ARE APPROXIMATE AND MAY BE FOR BLUE STAKING OF UTILITIES.

RETENTION POND A: INSTALL 12 SHIMPS. 100 YEAR STORAGE NEEDED = 3,006 CF. STORAGE PROVIDED = 6,804 CF.

RETENTION POND B: INSTALL 12 SHIMPS. 100 YEAR STORAGE NEEDED = 5,847 CF. STORAGE PROVIDED = 11,264 CF.

RETENTION POND C: INSTALL 12 SHIMPS. 100 YEAR STORAGE NEEDED = 2,260 CF. STORAGE PROVIDED = 5,096 CF.

RETENTION POND D: INSTALL 7-11 SHIMPS. 100 YEAR STORAGE NEEDED = 12,253 CF. STORAGE PROVIDED = 19,256 CF.

RETENTION POND E: INSTALL 12 SHIMPS. 100 YEAR STORAGE NEEDED = 8,992 CF. STORAGE PROVIDED = 10,792 CF.

RETENTION POND F: INSTALL 12 SHIMPS. 100 YEAR STORAGE NEEDED = 10,792 CF. STORAGE PROVIDED = 10,792 CF.

**GEOTECHNICAL STUDY
MURANO SUBDIVISION
APPROX. 1600 NORTH
INTERLAKEN DRIVE
MIDWAY, UTAH**

Prepared By:

Y² GEOTECHNICAL, P.C.
P.O. BOX 983
LAYTON, UT 84041

(801) 546-6505

Y² JOB NUMBER: 07G-127

Prepared for:

SCOTT MCEUEN
WATTS ENTERPRISES
5200 SOUTH HIGHLAND DRIVE
SALT LAKE CITY, UTAH 84117

August 16, 2006

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LABORATORY RESULTS

CONSOLIDATION GRAPHS (8 pages)
GRAIN SIZE ANALYSIS (4 pages)
ATTERBERG LIMITS RESULTS
SUMMARY OF LABORATORY TESTING

1.0 INTRODUCTION

This report presents the results of a geotechnical investigation for the proposed subdivision to be located at approximately 1600 North Interlaken Drive in Midway, Utah. The general location of the site, with respect to existing roadways, is shown on Figure No. 1, *Vicinity Map*, at the end of this report.

This investigation was done to assist in evaluating the subsurface conditions and engineering characteristics of the foundation soils and in developing our opinions and recommendations concerning appropriate foundation types, floor slabs, and pavements. This report presents the results of our geotechnical investigation including field exploration, laboratory testing, engineering analysis, and our opinions and recommendations. Data from the study is summarized on Figures 3 thru 22 and in the Laboratory Results.

2.0 PROPOSED CONSTRUCTION

We understand that the proposed development will be a 48 lot residential development consisting of single family homes on 55 acres. It is anticipated that these buildings will be one to two story with both with and without basements. We estimate that the maximum loads for the proposed structures will not exceed 4 kips per linear foot for bearing walls, 30 kips for columns, and 150 to 200 pounds per square foot for floor slabs. If structural loads are significantly greater than those discussed herein or if the project is substantially different than described above, our office should be notified so that we may review our recommendations, and if necessary, make modifications.

In addition to the structures described above it is anticipated that utilities will be constructed to service the buildings, that exterior concrete flatwork will be placed in the form of curb and gutter, and sidewalks, and that an asphalt concrete paved roadway will be constructed.

3.0 CONCLUSIONS

The following is a brief summary of our findings and conclusions:

1. The subject site is suitable for the proposed construction provided the recommendations presented in this report are followed.
2. Based upon the twenty test pits excavated for this investigation, this site is covered with 12 to 30 inches of topsoil. The native soils below the topsoil generally consisted of a medium stiff to hard lean clay (CL), stiff to hard lean clay with sand (CL), hard fat clay with sand (CH), dense clayey gravel with sand (GC), stiff sandy lean clay with gravel (CL), dense silty sand with gravel (SM), medium dense to very dense clayey gravel (GC), stiff gravelly lean clay with sand (CL), hard lean clay with gravel (GC), hard sandy lean clay (CL), hard fat clay (CH), and medium dense clayey sand (SC) which extended to the maximum depth investigated (10 feet). Bedrock was encountered in some test pits between 4 and 9 feet below existing site grade. Water was not encountered in our test pits at the time of this investigation.
3. The native clay soils are expansive and susceptible to swelling. Laboratory testing indicated swell of between 2.0% and 4.1% when wetted.
4. Due to the expansive nature of the native clay soils encountered on this site, footings may need to be constructed on up to 4 feet of properly placed and compacted structural fill extended to the undisturbed native soils. Lot specific testing and recommendations should be conducted at the time of construction to adequately address the swelling nature of the native clays at the anticipated foundation depth.
5. Standard strip and spread footings may be designed for a maximum bearing capacity of 4,000 psf on 4 feet of structural fill. However, a lower bearing capacity may be specified if less structural fill is required. More detailed information pertaining to the construction of foundations is provided in Section 10.0, Foundations of this report.
6. Due to the expansive nature of the native clay soils preventing water infiltration below the building will be critical. A subsurface drainage system should be designed to correct and divert water away from the building. Downspouts need to discharge at least 10 feet beyond the backfill. Subsurface drainage is discussed in section 13.0 of this report.
7. Due to the expansive nature of the native clay soils, a separator stabilization fabric should be used below the aggregate road base. The native soils classified as Type A-6 and A-7-5 materials according to the AASHTO M-145. Therefore, residential pavements should consist of 3 inches of asphalt and 11 inches of untreated aggregate

base placed directly on the stabilization fabric on the native subgrade or 3 inches of asphalt, 6 inches of untreated aggregate base and 8 inches of granular borrow placed directly on the stabilization fabric on the native subgrade material. Additional pavement recommendations are stated in Section 14.0 of this report.

8. This investigation was performed with test pits. Section 10.0 of this report provides specific requirements for placement of structures near test pit locations.

4.0 SITE CONDITIONS

The site is an irregular shaped parcel of land located at approximately 1600 North Interlaken Road in Midway, Utah. The site sits in a small valley to the west of Burgi Hill, and slopes uphill to the north and east at approximately 4 percent and is cultivated with hay, grasses and weeds with a few small trees along the northern edge. A hydrothermal spring is located on the southwest corner of the property boundary. No standing or surface water, other than the heavily irrigated crops, was noticed on the site at the time of our investigation. The site is surrounded to the east by Burgi Hill, the north by Wasatch National Forrest, to the west by undeveloped land, and to the south by developed subdivision.

5.0 FIELD INVESTIGATION

The field investigation consisted of excavating 20 test pits to depths between 2½ and 10 feet below current site grades with approximate locations shown on Figure 2 at the end of this report. The soils encountered at the site were continuously logged by a qualified member of our geotechnical staff. Both relatively undisturbed and disturbed samples were obtained and returned to our laboratory for testing.

6.0 LABORATORY TESTING

The samples obtained during the field investigation were sealed and returned to our laboratory where samples were selected for laboratory testing. Laboratory tests included natural moisture and density determinations, Atterberg Limits tests, consolidation-swell tests, and grain size distribution analyses. The results of these tests are shown at the end of this report.