

TO: CANNON FALLS CITY COUNCIL
FROM: Neil Jensen, City Administrator
SUBJECT: Rezone and Preliminary Plat for Greg Jablonske, Towering Bluffs, First Addition
DATE: May 4, 2021

Rezone and Preliminary Plat for Greg Jablonske, Towering Bluffs, First Addition. A public hearing was held by the Planning Commission April 12th to consider a request by Greg Jablonske for a rezone and preliminary plat for Towering Bluffs proposing a 22-lot subdivision. This plat is currently zoned as an *R-2 Single Family Residential District*. Mr. Jablonske is requesting the zoning be changed to a PUD. This will allow for smaller and affordable lots which the city has been striving to obtain to spur growth in the community.

The Planning Commission voted 5-1 (Christenson Nay, Mattson Absent) to approve the rezone and preliminary plat. The concern was the small lots and upon review of similar lots in area cities by Board member Christenson after the meeting consensus was made.

Discussion Items: Enclosed for your consideration are:

1. Aerial map identifying the project location
2. Preliminary Plat/Development Plan
3. §151.110 Sidewalk and Trail Code
4. §151.145-§151.149 Tree Placement—Tree Preservation
5. Boring Report
6. Review comments by the City Engineer, Bill Angerman
7. Development Application
8. New home designs

Upon review and critique of the proposed development, staff have the following questions/*comments*: (1) Street names. *To be Determined* (2) Park dedication requirements for residential units are 10% of the 6.51 acre plat be provided as park land (.65 acres) and/or a payment in lieu of land dedication be made at a rate of \$1390.00/unit/ *Developer requested park land donation of 12 acres/120 acre project; TBD on concept plan before final plat.* (3) Sidewalk plan/ *Sidewalks on one side with consistent connectivity.* (4) Zone determination/PUD. (5) Landscape plan/ *At least one 1"-2" caliper tree placed in front yard upon final landscaping.* (6) Goodhue County will be asked to comment on the plat since they have right-of-way abutting the plat.

These items will be worked out in the development agreement and will be brought back for approval with the final Plat.

Cannon Falls City Council is asked to consider Resolution 2547. Staff recommends approval of the application.

**CITY OF CANNON FALLS
GOODHUE COUNTY, MINNESOTA**

RESOLUTION NUMBER 2547

REZONING AND PRELIMINARY PLAT FOR TOWERING BLUFFS

WHEREAS, the Planning Commission conducted a public hearing on April 12, 2021 to accept testimony relating to a request by Greg Jablonske to rezone property that he owns located north of County Road 25 from a R-2 Single-Family Residential District to a PUD Planned Unit Development District and to propose a Preliminary Plat to be called Towering Bluffs (“Plat”) proposing a 22-lot subdivision. Based upon public testimony along with project information presented and considered, the Planning Commission hereby finds that:

- A. The property is proposed to be rezoned from a R-2 District to a PUD District and is described as PID 52.540.0010 (the “Subject Property”) and
- B. The Subject Property is estimated to be 6.51 acres in size; and
- C. The Subject Property is predominately agricultural land; and
- D. Jablonske proposed to develop the Subject Property for single-family residential land use; and
- E. In considering zoning ordinance amendments, Section §152.057 of the Cannon Falls Zoning Ordinance directs consideration of the possible effects of rezoning. Five specific effects to be considered are listed. The five effects of the Planning Commission’s finds relating to them are:

1. The proposed actin has been considered in relation to the specific policies and provisions of and has been found to be consistent with the official City Comprehensive Plan.

The City’s Comprehensive Plan guides this property as follows, property abuts single family uses to the west and agricultural land to all other sides. Single family use is appropriate, which is consistent with the property rezone and Plat.

2. The proposed use is or will be compatible with present and future land uses of the area.

Single family use conforms with the Subdivision and Zoning Code. The development will be required to conform with all performance standards.

3. The proposed use conforms or will be compatible with all performance standards in this chapter.

The City’s existing public services are sufficient to serve the proposed subdivision.

4. The proposed use can be accommodated with existing public services and will not overburden the City’s service capacity.

The City’s existing services are sufficient to serve the proposed subdivision.

5. Traffic generated by the proposed use is within capabilities of streets serving the property.

The streets in the area are sufficient to serve the proposed 22-home subdivision.

WHEREAS, the Planning Commission has reviewed the Preliminary Plat identified as “Towering Bluffs” and find that the plat is not considered to be a Premature Subdivision as defined by Chapter §151.028 and that the proposed project and Plat for Phase I can satisfy applicable performance standards of Chapter 151 and other City land development requirements.

NOW THEREFORE LET IT BE RESOLVED BY THE CITY OF CANNON FALLS, GOODHUE COUNTY, MINNESOTA, that based on the findings of the Cannon Falls Planning Commission where are hereby adopted by the Cannon Fall City Council (a) the Subject Property to be rezoned to PUD Planned Unit Development; and (b) the Preliminary Plat for Phase I be approved subject to compliance with applicable standards of Chapter 151 (Subdivisions), the State of Minnesota Building Code requirements and the recommendations of the City Engineer (April 1, 2021).

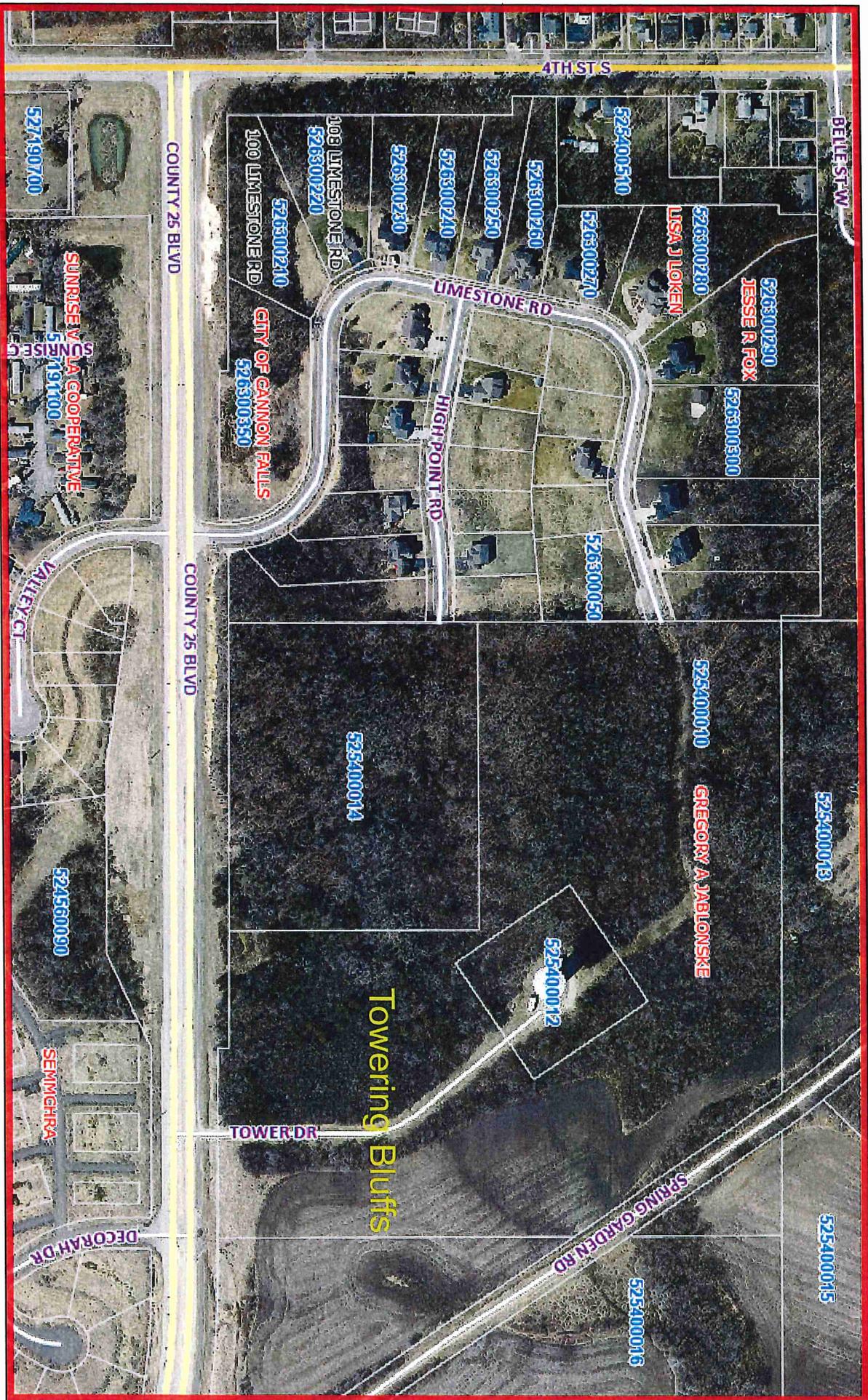
ADOPTED by the City Council of Cannon Falls this 4th day of April, 2021.

CITY OF CANNON FALLS

John O. Althoff, Mayor

ATTEST: _____
Neil L. Jensen, City Administrator

ArcGIS WebMap



April 8, 2021

Township or Other Roads County Roads 4,800

Major Roads 4,800

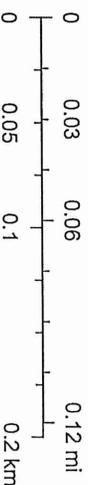
State Highway

County Roads - Paved

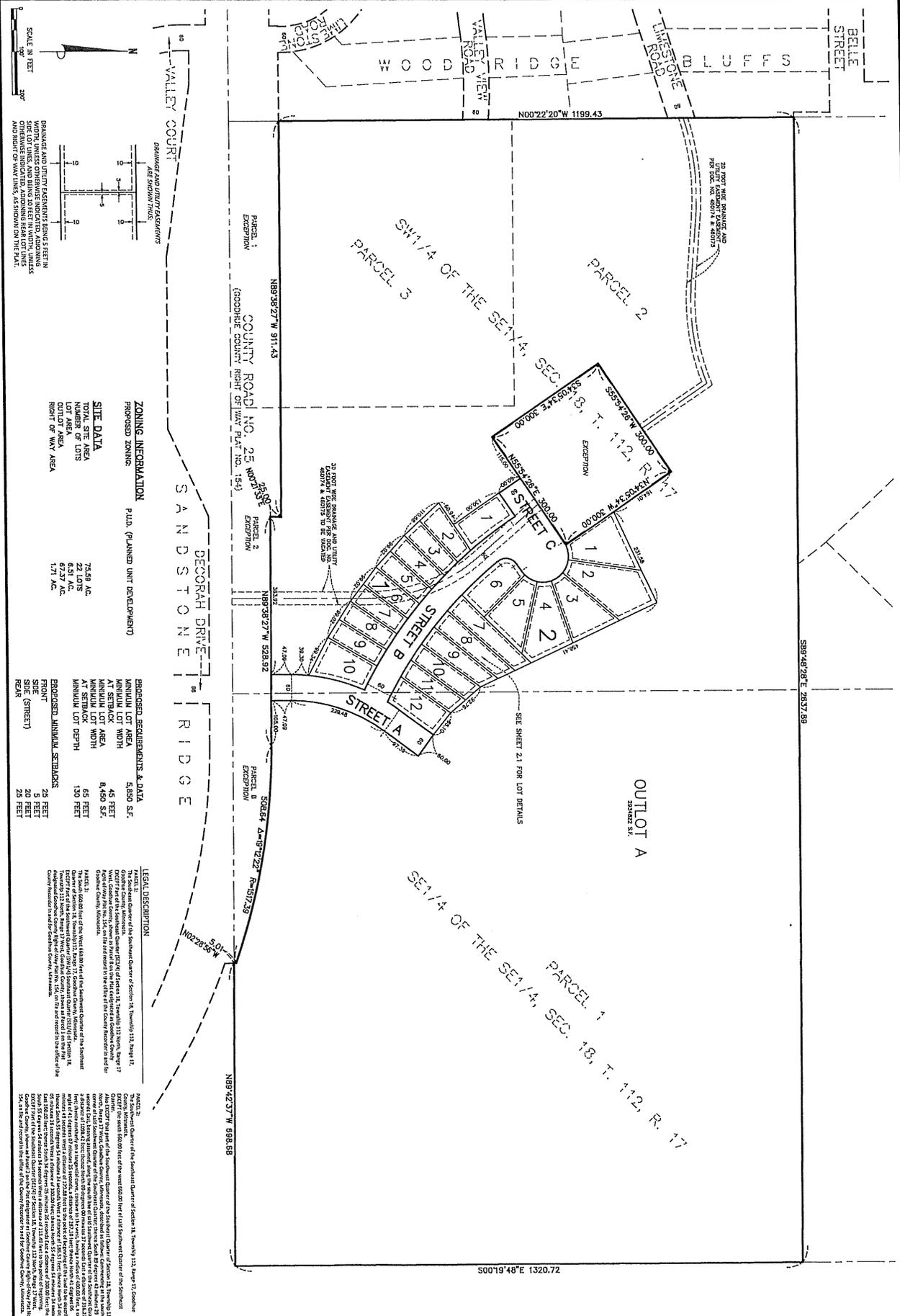
Township or Other Roads

Township or Other Roads

Parcels



1:3,600



ZONING INFORMATION

PROPOSED ZONING: P.U.D. (PLANNED UNIT DEVELOPMENT)

SITE DATA

TOTAL SITE AREA: 76.50 AC
 LOT AREA OF LOTS: 27.00 AC
 LOT AREA OF LOTS: 6.51 AC
 OUTLOT AREA: 6.27 AC
 RIGHT OF WAY AREA: 1.71 AC

PROPOSED REQUIREMENTS & DATA

MINIMUM LOT AREA: 5,880 S.F.
 MINIMUM LOT WIDTH: 42 FEET
 MINIMUM LOT DEPTH: 130 FEET
 MINIMUM SETBACKS:
 FRONT: 25 FEET
 SIDE (STREET): 5 FEET
 REAR: 25 FEET

LEGAL DESCRIPTION:

Parcel 1: The Southeast Quarter of the Southeast Quarter of Section 18, Township 112, Range 17, County of Goodhue, Minnesota, containing 113.00 acres, more or less, as shown on the plat.

Parcel 2: The Southwest Quarter of the Southeast Quarter of Section 18, Township 112, Range 17, County of Goodhue, Minnesota, containing 113.00 acres, more or less, as shown on the plat.

Parcel 3: The Northwest Quarter of the Southeast Quarter of Section 18, Township 112, Range 17, County of Goodhue, Minnesota, containing 113.00 acres, more or less, as shown on the plat.

Parcel 4: The Northeast Quarter of the Southeast Quarter of Section 18, Township 112, Range 17, County of Goodhue, Minnesota, containing 113.00 acres, more or less, as shown on the plat.

PLAT NO. 20

PROJECT NO.

DATE

REVISIONS

DRAWN BY

DATE

FILE

PROJECT NO.

2.0

TOWERING BLUFFS
 DARIUS PALM, PROFESSIONAL SURVEYOR
 PRELIMINARY PLAT
 GREG J. HOMES
 3415 VERNILSON ST., HASTINGS, MN 55033

James R. Hill, Inc.
 PLANNERS / ENGINEERS / SURVEYORS
 2909 WEST C.R. 42, SLATE 100, BURKSVILLE, MO 65636
 PHONE: 952.890.6444 mrking@jrhinc.com
 www.jrhinc.com

§ 151.110 SIDEWALKS AND TRAILS.

Except as otherwise determined by the City Council, concrete sidewalks not less than five feet in width and/or bituminous trails not less than eight feet in width shall be provided in accordance with the following.

<i>Street Type</i>	<i>Sidewalk/Trail Requirements</i>
Arterial and major collector streets	Sidewalk on one side of street and trail on opposite side of the street or trails on both sides of the street*
Cul-de-sacs	No requirements
✓ Minor collector and local streets, excepting cul-de-sacs	Sidewalk on one side of street*
* All sidewalks and trails shall be placed back from the street wherever possible to provide a minimum of 5-foot wide green strip for tree planting and to promote pedestrian safety and reassurance	

(Prior Code, § 12-7-6) (Ord. 259, passed 5-4-2006)

under terms agreed upon in the development agreement. Delayed payment shall include interest at a rate set by the city.

(b) Cash contributions for parks and trails shall be deposited in either the city's Park Fund or Trail Fund and shall only be used for park acquisition or development, and trail acquisition or development as determined by the city. Additionally, the funds may be utilized anywhere within the city park and trail systems.

(6) *Replatted property.* Property being replatted with the same number of lots and same number of dwelling units shall be exempt from all park land dedication requirements. If the number of lots or the number of dwelling units is increased, or if land outside the previously recorded plat is added, then the park land dedication and/or park cash contribution shall be based on the additional lots and on the additional land being added to the plat. If the additional land does not create additional lots, then each one-third acre added shall be considered a new lot for purposes of calculating the dedication requirements.

(7) *Park maintenance.* When land is dedicated and deeded to the city for park purposes, it shall be the responsibility of the city to maintain the dedicated property.

(8) *Platting requirements.* Land dedication to the city shall be in the form of outlots and shall provide adequate public access (as determined by the city).

(9) *Request for park study.* If the applicant or developer does not believe that the estimates contained in this section fairly and accurately represent the effect of the subdivision on the park or trail system of the city, the applicant or developer may request that the city prepare an in-depth study of the effect of the subdivision on the park and trail system and an estimate of that effect in money and/or land. All costs of the study shall be borne by the developer or applicant. If the developer or applicant requests the preparation of a study, the request must be made at the time the development application is submitted. The city shall provide the applicant or developer written notice that the application for development that is submitted shall be deemed incomplete until the requested study has been completed and a determination is made as to the appropriate amount of land or money necessary to offset the effects of the subdivision.

(Prior Code, § 12-8-1) (Ord. 259, passed 5-4-2006)

TREE PRESERVATION

§ 151.145 PURPOSE.

The city finds it is in the best interest of the public to protect, preserve and enhance the natural environment and to encourage a resourceful and prudent approach to the development and alteration of

wooded areas. In the interest of achieving these objectives, the city has established the tree preservation regulations herein.

(Prior Code, § 12-9-1) (Ord. 259, passed 5-4-2006)

§ 151.146 SCOPE OF APPLICATION.

A tree preservation plan shall be submitted to and approved by the city and implemented in accordance with all subdivisions of five or more lots. If no significant trees or woodlands are present on the site, a tree preservation plan will not be required.

(Prior Code, § 12-9-2) (Ord. 259, passed 5-4-2006)

§ 151.147 TREE PRESERVATION FOR SUBDIVISIONS.

(A) *Required actions.* Applicants shall:

- (1) Incorporate the preservation of trees into the overall design of the plat;
- (2) Prepare a tree preservation plan superimposed on the grading plan, as described below;
- (3) Ensure the tree preservation plan is followed during the plan development (mass grading);
- (4) Provide a financial guarantee as part of the development agreement to guarantee the preparation and implementation of the preservation plan and the replacement of all significant trees which were to be saved but were actually destroyed or damaged. The financial security in an amount determined by the City Council and adopted by ordinance shall be provided for:
 - (a) Each mass graded lot with at least one significant tree to be saved;
 - (b) Each custom graded lot with at least one significant tree on the lot; and
 - (c) Each outlot with at least one significant tree.
- (5) Install snow fencing or polyethylene laminar safety netting at the drip line or critical root zones of trees to be saved;
- (6) Install signage at all tree protection areas that instructs workers to stay out;
- (7) Install erosion control measures;
- (8) Keep tree protection measures in place and in good condition until all grading and construction activity is terminated; and

(9) Prevent change in soil chemistry due to concrete wash out and leakage or spillage of toxic materials such as fuels or paints.

(B) *Prohibited actions.*

(1) No soil disturbance shall occur within the subdivision until the tree preservation plan is approved, financial securities have been submitted and development agreement approved and tree protection measures are in place on site.

(2) Construction staging areas and areas for the storage of equipment and stockpiling of materials shall not be within tree protection areas.

(3) Fill shall not be placed against tree trunks, under the drip line or in critical root zones of trees to be saved.

(4) Pruning of oak trees shall not take place from April 1 through July 15. If wounding of oak trees occurs, a non-toxic tree wound dressing must be applied immediately. Excavators shall have a non-toxic tree wound dressing with them on the development site.

(C) *Tree preservation plan.* The tree preservation plan shall be submitted by a forester or landscape architect retained by the applicant and shall consist of the following items:

(1) Tree inventory that includes the size, species, tag numbers and locations of all significant trees, specimen trees and significant tree stands on the property being platted;

(2) Mass graded areas and proposed grades. Changes in grades should be well planned with the objective of preserving significant trees;

(3) Custom graded lots;

(4) All significant trees proposed to be saved and significant trees proposed to be removed in soil disturbance areas;

(5) The plan shall designate tree save zones for:

(a) Areas not in soil disturbance areas or within 50 feet of those areas;

(b) All specimen trees to be saved; and

(c) All significant tree stands to be saved.

(6) Measures proposed to protect significant trees including, but not limited to:

(a) Tree removal procedures including directional felling away from existing trees to be saved and trenching to separate root systems prior to bulldozing trees or stumps;

- (b) Installation of signage at all tree protection areas that instructs workers to stay out;
- (c) Installation of snow fencing or polyethylene laminar safety netting at the drip line or critical root zones of trees to be saved;
- (d) Installation of erosion control measures;
- (e) Designation of a construction staging area along with a designated area for the storage of equipment and stockpiling of materials that is not within tree save zones;
- (f) Construction access locations; and
- (g) Overlay of the subdivision utility plan on the tree preservation plan to strategically lay out utility locations and trenches in a manner that protects trees to be saved. Individual utility stubs to home sites shall be reviewed for compliance with tree preservation plans.

(D) *Certification of plan implementation.* After mass grading has been completed and streets and utilities installed, the subdivider's forester or landscape architect shall:

- (1) Certify in writing to the city the status of all trees indicated as trees to be saved in the approved plan;
- (2) Certify in writing to the city whether tree protection measures were installed; and
- (3) Certify the status of any remove-designated trees that were saved.

(E) *Damaged trees.* If a significant tree indicated to be saved on the tree preservation plan is destroyed or damaged, the applicant shall be replaced in accordance with the tree replacement requirements of § 151.149 of this chapter.

(F) *Release of financial security.* The financial security will be released upon:

(1) Certification in writing by the forester or landscape architect indicating that the tree protection measures were installed on mass graded lots and tree replacement is completed, if necessary. These must be confirmed by the city; and

(2) The home builders having posted a security for the custom graded lots.
(Prior Code, § 12-9-3) (Ord. 259, passed 5-4-2006)

§ 151.148 CUSTOM GRADED LOTS/HOME BUILDERS REQUIREMENTS.*(A) Required actions.*

(1) Home builders shall furnish the following items for tree preservation at the time the building permit application is submitted for all lots with at least one significant tree identified for preservation in a subdivision tree preservation plan.

(a) A tree preservation plan with the elements described in division (C) below of this chapter. The individual lot tree preservation plan shall be certified by a forester or landscape architect and signed by the homebuilder or homeowner.

(b) A financial security in an amount determined by the City Council, and adopted by ordinance, shall be required for tree protection requirements for each lot or outlot with at least one significant tree to be saved and each lot that is a custom graded lot.

(2) Builders shall be liable for their subcontractors that destroy or damage significant trees that were indicated to be saved on the individual lot tree preservation plan.

(3) Tree protection measures shall remain in place until all grading and construction ability is terminated.

(4) Site grading for individual lots shall comply with the final grading plan of the plat and shall not result in the flooding of tree preservation areas.

(B) Prohibited actions.

(1) No soil disturbance shall occur within the lot until the tree preservation plan is approved and tree protection measures are in place.

(2) Pruning of oak trees shall not take place from April 15 through July 1. If wounding of oak trees occurs, a non-toxic tree wound dressing must be applied immediately. Excavators shall have a non-toxic tree wound dressing with them on the development site.

(3) Builders, contractors or others working on site shall not fill, stockpile materials or store equipment or vehicles against the trunk of the tree, in the critical root zone, or under the drip line of a tree to be saved.

(C) Tree preservation plan.

(1) On mass graded lots with at least one significant tree to be saved, home builders are required to follow the tree preservation plan for the plat.

(2) For each custom graded lot with at least one significant tree, the home builder shall submit an individual lot tree preservation plan. The plan shall be consistent with the original tree preservation

plan for the plat. The homeowner and/or home builder, forester or landscape architect shall meet with city staff prior to the development of the individual lot tree preservation plan to determine the placement of the home where the fewest significant trees would be destroyed or damaged. The home builder shall be responsible for ensuring the tree preservation plan is followed during building construction.

(3) The tree preservation plan shall be prepared and incorporated on the certificate of survey for a building permit and shall include the following:

(a) Size, species and location of all significant trees, specimen trees and significant tree stands including significant trees with drip lines or critical root zones extending over the lot line of an adjoining lot;

(b) Identification of all significant trees proposed to be saved and significant trees proposed to be removed, including significant trees with drip lines or critical root zones extending over the lot line of an adjoining lot;

(c) Location of snow fencing or polyethylene laminar safety netting placed at the drip line or critical root zones;

(d) Installation of signage at all tree protection areas that instructs workers to stay out;

(e) Erosion control methods; and

(f) Measures proposed to protect significant trees including but not limited to:

1. Tree removal procedures including directional felling away from existing trees to be saved and trenching to separate root system prior to bulldozing trees or stumps;

2. Coordination of utility planning with tree preservation plan to strategically extend utility connections from the street to the house in a manner that protects trees intended to be saved; and

3. Measures for preventing changes in soil chemistry due to concrete wash out and leakage or spillage of toxic materials such as fuels or paints.

(g) Creation of a temporary access road when temporary site access through a significant tree stand or a critical root zone of a significant tree to be saved is necessary that meets the following standards.

1. The temporary access road shall be routed in a manner that is least disruptive to the significant tree stand per the approval of the Zoning Administrator.

2. Temporary access roads shall not exceed 25 feet in width and shall be delineated by snow fencing or safety fencing.

3. An eight inch deep cover of wood chip mulch shall be placed over the temporary access road to cushion the critical root zones from compaction.

(4) The Zoning Administrator shall monitor the tree protection measures at the time of routing inspections.

(5) If tree replacement is required on the individual lot because the builder destroyed or damaged a tree which was to be saved, the forester or landscape architect in conjunction with the property owner shall determine where the replacement trees shall be installed. Tree replacement shall be consistent with § 151.149 of this chapter.

(6) Prior to the issuance of a certificate of occupancy and release of tree preservation security, the forester or landscape architect shall certify to the city in writing the final disposition of saved trees on the lot and that all the tree protection measures identified on the tree preservation plan were installed from the start of construction to the end of construction and tree replacement is completed, if necessary. (Prior Code, § 12-9-4) (Ord. 259, passed 5-4-2006)

§ 151.149 TREE PLACEMENT.

(A) *Replacement of significant trees.* Subdividers and/or home builders shall be required to replace significant trees which were indicated on the tree preservation plan to be saved but ultimately were destroyed or damaged. The subdivider and home builder shall be required to replace each significant tree destroyed or damaged with two replacement trees.

(B) *Replacement trees; size.* Replacement trees shall consist of nursery stock and be no less than the following sizes.

Coniferous trees	No less than 6 feet high
Deciduous trees	No less than 2.5 inches in diameter

(C) *Replacement trees; species.* Replacement trees shall be species similar to the trees which were destroyed or damaged and can include those species shown on the following table.

Coniferous trees	Austrian pine
	Black Hills spruce
	Eastern red cedar
	Fir
	Northern white cedar

	Red pine
	White pine
	White spruce
Deciduous trees	Birch
	Hackberry
	Honey locust
	Linden
	Maple
	Oak

(D) *Unacceptable trees.* The following trees are unacceptable because of structural instability, susceptibility to disease or because they are invasive species.

Coniferous	Colorado spruce
Deciduous	Amur maple
	Cottonwood (seed producing)
	Siberian elm
	Silver maple
	Ash

(E) *Replacement trees; placement.* Replacement trees shall not be placed on easements or street rights-of-way. The Zoning Administrator shall determine the locations of tree replacement for subdividers' tree plans.

(F) *Replacement trees; removal and replacement.* Any replacement tree which is not alive or healthy, as determined by the Zoning Administrator, or which subsequently dies due to construction activity within one year after the date of project closure, shall be removed by the applicant and replaced with a new healthy tree meeting the same minimum size requirements within eight months of removal. (Prior Code, § 12-9-5) (Ord. 259, passed 5-4-2006)

§ 151.150 REVIEW PROCESS.

The tree preservation plan shall be reviewed by city staff to assess the best possible layout to preserve significant trees and significant woodlands and to enhance the efforts to minimize damage to significant trees and significant woodlands. The applicant shall meet with the city prior to submittal of the subdivision application or prior to application for the grading permit, whichever is sooner, to determine the most feasible and practical placement of buildings, parking, driveways, streets, storage

**BRAUN
INTERTEC**

Braun Intertec Corporation
11001 Hampshire Avenue S
Minneapolis, MN 55438

Phone: 952.995.2000
Fax: 952.995.2020
Web: braunintertec.com

March 28, 2005

Project BL-05-01108

Mr. Greg Jablonski
Greg J Homes
3475 Vermillion Street, Suite 101
Hastings, MN 55033

Re: Preliminary Results and Discussion Letter
The Bluffs, Residential Development
North side of County Road 25
Cannon Falls, Minnesota

Dear Mr. Jablonski:

As requested, Braun Intertec Corporation (Braun Intertec) completed eighteen soil borings for The Bluffs residential development in Cannon Falls, Minnesota. The soil borings were performed in general accordance with our authorization of services letter, dated March 17, 2004.

Soil Boring Results

The soils encountered across the site were variable. However, a majority of the borings encountered fat clay and/or weathered shale. Deposits of alluvial deposited sands and lean clays or glacially deposited lean clays were also encountered across the site.

Topsoil was encountered at all of the boring locations. The topsoil generally consisted of organic clay and ranged in depth from 1 to 2 feet.

Fat clay was encountered at Borings ST-1, ST-2, ST-3, ST-4, ST-6, ST-8, ST-9, ST-10, ST-11, ST-13, ST-14, ST-16 and ST-17. The fat clays were generally present below the topsoil. The thickness of the fat clays ranged from approximately 2 to 7 feet at the boring locations.

Lean clays and sands were also encountered at Borings ST-3, ST-4, ST-6, ST-7, ST-11, ST-12, ST-15, ST-16, ST-17 and ST-18. The sands consisted of poorly graded sand with silt and silty sand. The clays consisted of lean clay and sandy lean clay.

Significant deposits of glacially deposited soils were also encountered at a few locations on the site. The glacially deposited soils consisted of sandy lean clay and lean clay with sand. The soils were encountered at Borings ST-3, ST-4, ST-5 and ST-18.

Weathered Decorah shale was also encountered at several of the boring locations from below fat clay and/or the alluvial deposited soils to the boring termination or refusal depths. Weathered shale was encountered at Borings ST-1, ST-2, ST-5, ST-7, ST-10, ST-14, ST-16 and ST-17. The depth where shale was encountered varied from 4 to 12 feet below grade.

Limestone bedrock fragments were also encountered within the soils at several of the boring locations. Borings ST-7, ST-8 and ST-9 were also terminated on apparent limestone. However, coring of the limestone to document that it is the Plattville limestone formation was not included in our scope of services. The Plattville formation typically underlies the Decorah formation.

Groundwater was observed at Borings ST-3, ST-12 and ST-15 during drilling operations at depths of 7 to 15 feet below grade. However, it is our opinion the water encountered was likely perched in sands

Greg J Homes
Project BL-05-01108
March 28, 2005
Page 2

overlying relatively impermeable clays, shale and limestone and does not represent the actual groundwater level. We anticipate the static groundwater level is generally below the boring termination depths.

Discussion

As indicated above, a variety of soil conditions were encountered in the borings. In "upland" areas fat clay over weathered Decorah shale was the predominate soil/rock profile. At lower elevations the soils were inter-layered lean clays, silty sands and sands. Occasionally, fat clay was also present, usually near the surface. Review of regional geology maps from the U.S. Geological survey indicated that these soil conditions are common on the south side of Cannon Falls.

In our opinion the primary concern in grading and improvement of The Bluffs is the fat clay and shale. The fat clay and the weathered shale can be characterized as expansive soils; i.e. soils that can expand or shrink with corresponding changes in soil moisture content. Considering their present hard, dry condition, potential expansion is the more likely issue if the soils are not managed properly during and after grading. Earthwork contractors need to be aware of the soil/rock conditions and consider the required procedures needed to properly deal with these soil/rock types.

Site grading plans and specifications should take in account the nature of these soils. Also, future home builders and owners should be aware of the issues.

Due to the occurrence of many steep slopes near proposed building pads and roadways, slope stability analysis should be performed as needed to predict long-term stability.

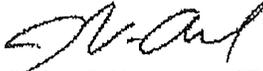
General

Services performed by Braun Intertec personnel for this project have been conducted with that level of care and skill ordinarily exercised by members of the profession currently practicing in this area under similar budget and time restraints. No warranty expressed or implied.

If we can provide additional assistance, please call Josh Van Abel at 952.995.2310 or Ron Shaffer at 952.995.2234

Sincerely,

BRAUN INTERTEC CORPORATION


Joshua J. Van Abel, EIT
Staff Engineer


Ronald A. Shaffer, PE
Senior Engineer

Attachment:

Soil Boring Location Sketch
Log of Boring Sheets, ST-1 to ST-18
Descriptive Terminology
Soil prelim letter - the bluffs

INTERTEC

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-1		
DRILLER: Kevin Keck		METHOD: 3 1/4" HSA Autohammer		DATE: 3/23/05	SCALE: 1" = 4'	
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	Tests or Notes
1033.0	0.0	Ol.	ORGANIC CLAY, black, frozen. (Topsoil)			Benchmark; Boring elevations estimated from provided plan.
1031.0	2.0	CH	FAT CLAY, with Limestone fragments and Gravel, brown and green, moist to wet, hard. (Alluvium)	39		
				50		
				49		
				51		
1024.0	9.0	SHALE	WEATHERED SHALE (Textural Classification: Fat Clay, green, moist, hard) (Decorah Formation)	32		
				40		
				75		
1012.5	20.5		END OF BORING. Water not observed while drilling. Water not observed to cave-in depth of 17 1/2 feet immediately after withdrawing the auger. Boring immediately backfilled.			

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN BASIC LOG 01108.GPJ BRAUN.GPJ 4/26/05 10:07

100

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-2 LOCATION: See attached sketch.			
DRILLER: Kevin Keek		METHOD: 3 1/4" IISA Autohammer		DATE: 3/23/05		SCALE: 1" = 4'	
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPP	WL	MC %	Tests or Notes
1042.0	0.0	OL	ORGANIC CLAY, black, frozen. (Topsoil)				
1040.0	2.0	CH	FAT CLAY, brown and gray, wcl, rather stiff. (Alluvium)	10		31	
1038.0	4.0	SHAL	WEATHERED SHALE (Textural Classification: Fat Clay, with Limestone fragments, green and brown, very stiff to hard, moist. (Decorah Formation)	56			
				30			
				42			
				47			
1026.5	15.5		END OF BORING. Water not observed while drilling. Water not observed to cave-in depth of 12 feet immediately after withdrawing the auger. Boring immediately backfilled.	48			

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN BASIC LOG 01108.GPJ BRAUN.GDT 4/12/05 10:08

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-3					
DRILLER: Kevin Keck				METHOD: 3 1/4" HSA Autohammer		DATE: 3/23/05		SCALE: 1" = 4'	
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	MC %	Tests or Notes		
1025.0	0.0	OL	ORGANIC CLAY, black, frozen. (Topsoil)						
1023.5	1.5	CH	FAT CLAY, with a trace of Gravel and fibers, reddish brown, wet, stiff. (Alluvium)	16		26	Pl-64 LL-90		
1021.0	4.0	SP-SM	POORLY GRADED SAND with SILT, fine- to medium-grained, orangish brown, moist to 7 feet then waterbearing, loose to medium dense. (Alluvium)	11					
					9		An open triangle in the water level (WL) column indicates the depth at which groundwater was observed while drilling. Groundwater levels fluctuate.		
					12				
1012.5	12.5	CL	LEAN CLAY with SAND, with a trace of Gravel, brown to 24 feet then gray, wet, very soft. (Glacial Till)	21					
					18				
					24				
					18				
999.5	25.5		END OF BORING.						
			Water observed at 7 feet with 7 feet of hollow-stem auger in the ground.						
			Water not observed with 24 feet of hollow-stem auger in the ground.						
			Boring immediately backfilled.						

BRAUN BASIC LOG 01108.GPJ BRAUN.GDT 4/12/05 10:08 (See Descriptive Terminology sheet for explanation of abbreviations)

2.5/2

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-4			
DRILLER: Kevin Keck				METHOD: 3 1/4" HSA Autohammer		DATE: 3/23/05	
LOCATION: See attached sketch.				SCALE: 1" = 4'			
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	MC %	Tests or Notes
1021.0	0.0	OL	ORGANIC CLAY, black, frozen. (Topsoil)				
1019.5	1.5	CH	FAT CLAY, with Limestone fragments, brown, wet, rather stiff. (Alluvium)	10		24	
1017.0	4.0	CL	SANDY LEAN CLAY, with a trace of Gravel, with Fat Clay and Silty Sand layers, brown, wet, rather stiff. (Alluvium)	10		17	
1014.0	7.0	CL	LEAN CLAY, with Silty Sand layers, brown, wet, rather stiff. (Alluvium)	10			
1012.0	9.0	CL	LEAN CLAY with SAND, with a trace of Gravel, brown to 14 feet then gray, wet, rather stiff to very stiff. (Glacial Till)	12			
				16			
1005.5	15.5			25			
END OF BORING.							
Water not observed while drilling.							
Water not observed to cave-in depth of 13 feet immediately after withdrawing the auger.							
Boring immediately backfilled.							

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN BASIC LOG 01108.rpt BRAUN.GDT 4/12/05 10:08

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-5			
DRILLER: Kevin Keck		METHOD: 3 1/4" HSA Autohammer		DATE: 3/23/05		SCALE: 1" = 4'	
Elev. feet 1015.0	Depth feet 0.0	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	MC %	Tests or Notes
1013.3	1.7	CL	SANDY LEAN CLAY, slightly organic, dark brown, frozen. (Topsoil)				
		CL	LEAN CLAY with SAND, with a trace of Gravel, brown, wet, medium. (Glacial Till)	8		17	
1011.0	4.0	CL	SANDY LEAN CLAY, with a trace of Gravel, brown to 14 feet then gray, wet, rather stiff to very stiff. (Glacial Till)	11		16	
				18			
				20			
				23			
				21			
996.0	19.0	SHAL	WEATHERED SHALE (Textural Classification: Fat Clay, gray, moist, hard)				
994.5	20.5		(Decorah Formation)	58/8"			
			END OF BORING.				
			Water not observed while drilling.				
			Water not observed to cave-in depth of 17 feet immediately after withdrawing the auger.				
			Boring immediately backfilled.				

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN-BASIC LOG 01108.GPJ BRAUN.GDT #/12/05 10:06

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-6		
DRILLER: Kevin Keck				METHOD: 3 1/4" HSA Autohammer		
DATE: 3/23/05				SCALE: 1" = 4'		
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	Tests or Notes
1001.0	0.0	OL	ORGANIC CLAY, with a trace of Gravel, black, frozen. (Topsoil)			
999.5	1.5	CL	LEAN CLAY with SAND, brown, wet, rather stiff. (Alluvium)	10		
997.0	4.0	CH	FAT CLAY, with Limestone fragments, brown, moist to wet, hard. (Alluvium)	57		
995.0	6.0		END OF BORING. The auger met refusal at the 6-foot depth. The boring was moved 12 feet east and re-drilled. Again, the auger met refusal at the 6-foot depth. Water not observed while drilling. Boring immediately backfilled.			

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN-BASIC-LOG-01108.GPJ BRAUN.GDT 4/12/05 10:08

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-7		
				LOCATION: See attached sketch.		
DRILLER: Kevin Keck		METHOD: 3 1/4" IISA Autohammer		DATE: 3/24/05	SCALE: 1" = 4'	
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	Tests or Notes
1012.0	0.0	OL	ORGANIC CLAY, dark brown, frozen. (Topsoil)			
1011.0	1.0	SM	SILTY SAND, fine- to medium-grained, with traces of Gravel, Limestone fragments and Fat Clay layers, brown to green, moist, medium dense. (Alluvium)	18		
				16		
				27		
1003.0	9.0	SHAL	WEATHERED SHALE (Textural Classification: Fat Clay, green, moist, hard) (Decorah Formation)			
1002.0	10.0	LS	VERY WEATHERED LIMESTONE, orange to brown, moist, dense to very dense. (Limestone Bedrock)	31		
999.5	12.5		END OF BORING. The auger met refusal at the 12 1/2-foot depth on apparent Limestone bedrock. Water not observed while drilling. Boring immediately backfilled.	50/2"		

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN BASIC LOG 04105.GPJ BRAUN.GDT 4/12/05 16:03

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-8		
DRILLER: Kevin Keck				METHOD: 3 1/4" HSA Autohammer		
DATE: 3/24/05				SCALE: 1" = 4'		
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	Tests or Notes
1004.0	0.0	OL	ORGANIC CLAY, black, frozen. (Topsoil)			
1002.0	2.0	CH	FAT CLAY, brown, wet, medium to hard. (Alluvium)	8		
998.0	6.0		END OF BORING. The auger met refusal at the 6-foot depth on apparent Limestone bedrock. Water not observed while drilling. Water not observed to cave-in depth of 4 1/2 feet immediately after withdrawing the auger. Boring immediately backfilled.	31		

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN BASIC LOG - 01108.GPJ BRAUN.GDT 4/24/05 10:08

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-9 LOCATION: See attached sketch.		
DRILLER: Kevin Keck		METHOD: 3 1/4" HSA Autohammer		DATE: 3/24/05	SCALE: 1" = 4'	
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	Tests or Notes
1003.0	0.0	OL	ORGANIC CLAY, black, frozen. (Topsoil)			
1001.5	1.5	CH	FAT CLAY, brown, wet rather stiff. (Alluvium)	12		
998.5	4.5		END OF BORING. The auger met refusal at the 4 1/2-foot depth on apparent Limestone bedrock. Water not observed while drilling. Boring immediately backfilled.			

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN BASIC LOG 01108.GPJ BRAUN.GDT 4/12/05 10:08

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-10 LOCATION: See attached sketch.		
DRILLER: Kevin Keck		METHOD: 3 1/4" HSA Autohammer		DATE: 3/24/05	SCALE: 1" = 4'	
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	Tests or Notes
1029.0	0.0					
1028.0	1.0	OL	ORGANIC CLAY, dark brown, frozen. (Topsoil)			
		CH	FAT CLAY, brown and green, rather stiff. (Alluvium)	13		
1025.0	4.0	SHALE	WEATHERED SHALE (Textural Classification: Fat Clay, green, moist, very stiff to hard) (Decorah Formation)	22		
				33		
				34		
				67		
				41		
				50/6"		
1005.0	24.0		END OF BORING.			
			The auger met refusal at the 24-foot depth.			
			Water not observed while drilling.			
			Water not observed to cave-in depth of 18 feet immediately after withdrawing the auger.			
			Boring immediately backfilled.			

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN BASIC LOG #1108.GPI BRAUN.GDT 4/23/05 10:57

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-11 LOCATION: See attached sketch.		
DRILLER: Kevin Keck		METHOD: 3 1/4" HSA Autohammer		DATE: 3/23/05	SCALE: 1" = 4'	
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPI'	WL	Tests or Notes
1003.0	0.0	OL	ORGANIC CLAY, black, frozen. (Topsoil)			
1001.5	1.5	CL	LEAN CLAY, with a trace of Gravel and fibers, brown, wet, rather stiff. (Alluvium)	10		
999.0	4.0	CH	FAT CLAY with Limestone fragments and Silty Sand layers, brown, moist to wet, hard. (Alluvium)	32		
995.0	8.0		END OF BORING. The auger met refusal at the 8-foot depth. Water not observed while drilling. Water not observed to cave-in depth of 7 feet immediately after withdrawing the auger. Boring immediately backfilled.	50/5"		

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN BASIC LOG 01108.GPJ BRAUN.GPJ 4/12/05 10:07

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-12 LOCATION: See attached sketch.				
DRILLER: Kevin Keok		METHOD: 3 1/4" HSA Autohammer		DATE: 3/22/05		SCALE: 1" = 4'		
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPI'	WL	MC %	p 200 %	Tests or Notes
1015.0	0.0							
1013.7	1.3	OL	ORGANIC CLAY, black, frozen. (Topsoil)					
1012.0	3.0	SM	SILTY SAND, fine- to medium-grained, with Limestone fragments, brown, frozen to moist, medium dense. (Alluvium)	22				
		SP-SM	POORLY GRADED SAND with SILT, brown, moist to 9 feet then waterbearing, medium dense. (Alluvium)	18		4	6	
				19				
				20				
			With Sandy Lean Clay layers at 10 feet.	20				
				22				
999.5	15.5		END OF BORING.					
			Water observed at 9 feet with 9 feet of hollow-stem auger in the ground.					
			Water not observed to cave-in depth of 7 feet immediately after withdrawing the auger.					
			Boring immediately backfilled.					

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN BASIC LOG 01109.OP1 BRAUN.GDT 4/20/05 10:07

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-13 LOCATION: See attached sketch.			
DRILLER: Kevin Keck		METHOD: 3 1/4" HSA Autohammer		DATE: 3/22/05		SCALE: 1" = 4'	
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPI'	WL	MC %	Tests or Notes
1005.0	0.0	OL	ORGANIC CLAY, black, frozen. (Topsoil)				
1003.0	2.0	CH	FAT CLAY, brown and gray, wet, rather soft to rather stiff. (Alluvium)	5		29	LL-74 PI-50
998.0	7.0	CH	FAT CLAY, with Limestone fragments, gray, wet, hard. (Alluvium)	5 5/8"			
996.5	8.5		END OF BORING. The auger met refusal at the 8 1/2-foot depth. Water not observed while drilling. Water not observed to cave-in depth of 6 1/2 feet immediately after withdrawing the auger. Boring immediately backfilled.				

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN BASIC LOG 01108.GPJ BRAUN.GDT #12/05 10:37

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-14 LOCATION: See attached sketch.		
DRILLER: Kevin Keck		METHOD: 3 1/4" HSA Autohammer		DATE: 3/22/05	SCALE: 1" = 4'	
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	Tests or Notes
1037.0	0.0					
1036.0	1.0	OL	ORGANIC CLAY, black, frozen. (Topsoil)			
		CH	FAT CLAY, with Limestone fragments, yellow and green, moist to wet, hard. (Alluvium)	43		
				35		
1030.0	7.0	SHALE	WEATHERED SHALE (Textural Classification: Fat Clay, moist, green to gray, hard) (Decorah Formation)	31		
				40		
				41		
				58		
				79		
				73		
				89		
1006.5	30.5		END OF BORING. *			

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN BASIC LOG 01108.GPJ BRAUN.GDT 4/23/05 10:07

* Water not observed while drilling.
 Water not observed to cave-in depth of 8 feet immediately after withdrawing the auger.
 Boring immediately backfilled.

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-15		
DRILLER: Kevin Keck				METHOD: 3 1/4" HSA Autohammer		
DATE: 3/22/05				SCALE: 1" = 4'		
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	Tests or Notes
1027.0	0.0	CL	SANDY LEAN CLAY, slightly organic, black, frozen. (Topsoil)			
1026.0	1.0	SC	CLAYEY SAND, fine- to medium-grained, with Gravel, brown, frozen. (Alluvium)	38		
1024.0	3.0	SM	SILTY SAND, fine- to medium-grained, with a trace of Gravel and Limestone fragments, brown, moist, medium dense. (Alluvium)	17		
1020.0	7.0	SP-SM	POORLY GRADED SAND with SILT, fine- to medium-grained, light brown, moist, medium dense. (Alluvium)	17		
1018.0	9.0	CL	SANDY LEAN CLAY, with Silty Sand lenses, with a trace of Gravel, brown, wet, very stiff. (Alluvium)	20		
1015.0	12.0	SP-SM	POORLY GRADED SAND with SILT, fine- to medium-grained, light brown, moist to 15 feet then waterbearing, medium dense. (Alluvium)	27		
1011.5	15.5		END OF BORING. Water observed at 15 feet with 14 feet of hollow-stem auger in the ground. Water not observed to cave-in depth of 12 1/2 feet immediately after withdrawing the auger. Boring immediately backfilled.	26	▽	

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN BASIC LOG 01/28/05; BRAUN.GDT 4/12/05 10:07

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-16			
DRILLER: Kevin Keck				METHOD: 3 1/4" HSA Autohammer		DATE: 3/22/05	SCALE: 1" = 4'
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	MC %	Tests or Notes
1018.0	0.0	OL	ORGANIC CLAY, black, frozen. (Topsoil)				
1016.9	1.1	CH	FAT CLAY, with a trace of Gravel, with Silty Sand seams, brown and gray, frozen to wet, rather stiff. (Alluvium)	10		26	
1012.0	6.0	SM	SILTY SAND, fine- to medium-grained, with occasional Lean Clay layers, with a trace of Gravel, brown, moist, loose to medium dense. (Alluvium)	20		27	LL-64 PI-38
1006.0	12.0	SHAL	WEATHERED SHALE (Textural Classifications: Fat Clay, gray, moist, hard) (Decorah Formation)	50/6"			
1005.5	12.5		END OF BORING. The auger met refusal at the 12 1/2-foot depth. Water not observed while drilling. Boring immediately backfilled.				

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN BASIC LOG 01108.CPI BRAUN.GDT 4/12/05 10:07

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-17					
DRILLER: Kevin Keck				METHOD: 3 1/4" HSA Autohammer		DATE: 3/22/05		SCALE: 1" = 4'	
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPI'	WL	MC %	Tests or Notes		
1034.0	0.0	CL	SANDY LEAN CLAY, slightly organic, black, frozen. (Topsoil)						
1033.0	1.0	SM	SILTY SAND, fine- to medium-grained, with Gravel, brown, frozen to moist. (Alluvium)						
1031.5	2.5	CL	LEAN CLAY, with a trace of Gravel and Limestone fragments, brown, wet, rather stiff. (Alluvium)	9		23	LL-38	PI-21	
1029.0	5.0	CH	FAT CLAY, with Limestone fragments, green, very stiff, wet.	23					
1027.0	7.0	SHALE	WEATHERED SHALE (Textural Classification: Fat Clay, green, moist, very stiff to hard) (Decorah Formation)	32					
				21					
				29					
1018.5	15.5		END OF BORING.	57					
			Water not observed while drilling.						
			Water not observed to cave-in depth of 13 feet immediately after withdrawing the auger.						
			Boring immediately backfilled.						

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN BASIC LOG 01108.GPJ BRAUN.GDT 4/12/05 10:07

Braun Project BL-05-01108 GEOTECHNICAL EVALUATION The Bluffs Residential Development Southeast Quadrant of Main Street and First Street Cannon Falls, Minnesota				BORING: ST-18 LOCATION: See attached sketch.			
DRILLER: Kevin Keck		METHOD: 3 1/4" HSA Autohammer		DATE: 3/22/05		SCALE: 1" = 4'	
Elev. feet	Depth feet	ASTM Symbol	Description of Materials (ASTM D2488 or D2487)	BPF	WL	MC %	Tests or Notes
1022.0	0.0	OL	ORGANIC CLAY, black, frozen. (Topsoil)				
1020.5	1.5	CL	LEAN CLAY with SAND, with a trace of Gravel, brown to 12 feet then gray, wet, medium to very stiff. (Glacial Till)	7		15	
				9		19	
				18			
				18			
				22			
1006.5	15.5		END OF BORING.	21			
Water not observed while drilling. Water not observed to cave-in depth of 12 1/2 feet immediately after withdrawing the auger. Boring immediately backfilled.							

(See Descriptive Terminology sheet for explanation of abbreviations)

BRAUN BASIC LOG 01108.GPJ BRAUN.GDT #12/05 10:08

Descriptive Terminology

Rev. 10/04



Standard D 2487 - 00
Classification of Soils for Engineering Purposes
(Unified Soil Classification System)

Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^a				Soils Classification	
				Group Symbol	Group Name ^b
Coarse-grained Soils more than 50% retained on No. 200 sieve	Gravels More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels Loss than 5% fines ^c	$C_u \geq 4$ and $1 \leq C_u \leq 3^d$	GW	Well-graded gravel ^d
		Gravels with Fines More than 12% fines ^e	$C_u < 4$ and/or $1 > C_u > 3^d$	GP	Poorly graded gravel ^d
	Sands 50% or more of coarse fraction passes No. 4 sieve	Clean Sands Less than 5% fines ^f	$C_u \geq 6$ and $1 \leq C_u \leq 3^d$	SW	Well-graded sand ^h
		Sands with Fines More than 12% ^f	$C_u < 6$ and/or $1 > C_u > 3^d$	SP	Poorly graded sand ^h
Fine-grained Soils 50% or more passed the No. 200 sieve	Silt and Clays Liquid limit less than 50	Inorganic	PI > 7 and plots on or above "A" line ⁱ	CL	Lean clay ^{k l m}
			PI < 4 or plots below "A" line ⁱ	ML	Silt ^{k l m}
		Organic	Liquid limit - oven dried < 0.75	OL	Organic clay ^{k l m n}
			Liquid limit - not dried < 0.75	OL	Organic silt ^{k l m o}
	Silt and clays Liquid limit 50 or more	Inorganic	PI plots on or above "A" line	CH	Fat clay ^{k l m}
			PI plots below "A" line	MH	Elastic silt ^{k l m}
		Organic	Liquid limit - oven dried < 0.75	OH	Organic clay ^{k l m p}
			Liquid limit - not dried < 0.75	OH	Organic silt ^{k l m q}
Highly Organic Soils	Primarily organic matter, dark in color and organic odor			PT	Peat

Particle Size Identification

Boulders	.....	over 12"
Cobbles	.....	3" to 12"
Gravel	.....
Coarse	.....	3/4" to 3"
Fine	.....	No. 4 to 3/4"
Sand	.....
Coarse	.....	No. 4 to No. 10
Medium	.....	No. 10 to No. 40
Fine	.....	No. 40 to No. 200
Silt	.....	< No. 200, PI < 4 or below "A" line
Clay	.....	< No. 200, PI \geq 4 and on or above "A" line

Relative Density of Cohesionless Soils

Very loose	.....	0 to 4 BPF
Loose	.....	5 to 10 BPF
Medium dense	.....	11 to 30 BPF
Dense	.....	31 to 50 BPF
Very dense	.....	over 50 BPF

Consistency of Cohesive Soils

Very soft	.....	0 to 1 BPF
Soft	.....	2 to 3 BPF
Rather soft	.....	4 to 5 BPF
Medium	.....	6 to 8 BPF
Rather stiff	.....	9 to 12 BPF
Stiff	.....	13 to 16 BPF
Very stiff	.....	17 to 30 BPF
Hard	.....	over 30 BPF

Drilling Notes

Standard penetration test borings were advanced by 3" or 6" ID hollow-stem augers unless noted otherwise. Jetting water was used to clean out auger prior to sampling only where indicated on logs. Standard penetration test borings are designated by the prefix "ST" (Split Tube). All samples were taken with the standard 2" OD split-tube sampler, except where noted.

Power auger borings were advanced by 4" or 6" diameter continuous-flight, solid-stem augers. Soil classifications and strata depths were inferred from disturbed samples augered to the surface and are, therefore, somewhat approximate. Power auger borings are designated by the prefix "B."

Hand auger borings were advanced manually with a 1" or 3" diameter auger and were limited to the depth from which the auger could be manually withdrawn. Hand auger borings are indicated by the prefix "H."

BPF: Numbers indicate blows per foot recorded in standard penetration test, also known as "N" value. The sampler was set 6" into undisturbed soil below the hollow-stem auger. Driving resistances were then counted for second and third 6" increments and added to get BPF. Where they differed significantly, they are reported in the following form: 2/12 for the second and third 6" increments, respectively.

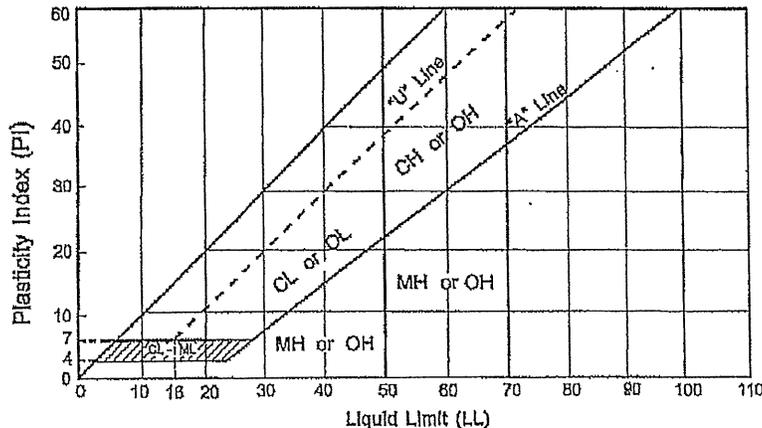
WH: WH indicates the sampler penetrated soil under weight of hammer and rods alone; driving not required.

WR: WR indicates the sampler penetrated soil under weight of rods alone; hammer weight and driving not required.

TW indicates thin-walled (undisturbed) tube sample.

Note: All tests were run in general accordance with applicable ASTM standards.

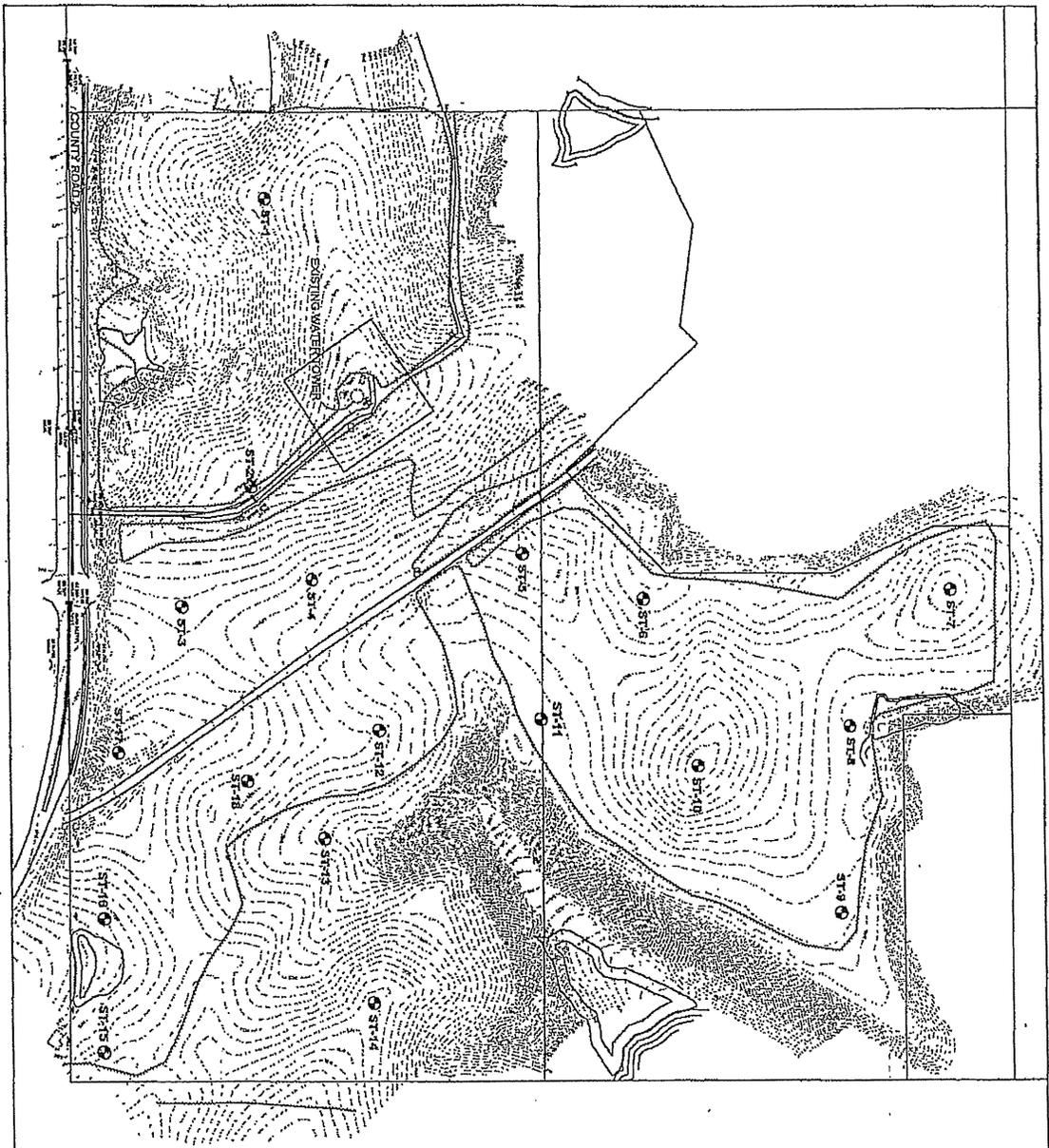
- Based on the material passing the 3-in (76mm) sieve.
- If field sample contained cobbles or boulders, or both, add "with cobbles or boulders or both" to group name.
- $C_u = D_{60} / D_{10}$ $C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$
- If soil contains $\geq 15\%$ sand, add "with sand" to group name.
- Gravels with 5 to 12% fines require dual symbols:
GW-GM well-graded gravel with silt
GW-GC well-graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay
- If fines classify as CL-ML, use dual symbol GC-GM or SC-SM.
- If fines are organic, add "with organic fines" to group name.
- If soil contains $\geq 15\%$ gravel, add "with gravel" to group name.
- Sands with 5 to 12% fines require dual symbols:
SW-SM well-graded sand with silt
SW-SC well-graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay
- If Atterberg limits plot in hatched area, soil is a CL-ML, silty clay.
- If soil contains 15 to 25% plus No. 200, add "with sand" or "with gravel" whichever is predominant.
- If soil contains $\geq 30\%$ plus No. 200, predominantly sand, add "sandy" to group name.
- If soil contains $\geq 30\%$ plus No. 200 predominantly gravel, add "gravelly" to group name.
- PI ≥ 4 and plots on or above "A" line.
- PI < 4 or plots below "A" line.
- PI plots on or above "A" line.
- PI plots below "A" line.



Laboratory Tests

DD	Dry density, pcf	OC	Organic content, %
WD	Wet density, pcf	S	Percent of saturation, %
MC	Natural moisture content, %	SG	Specific gravity
LL	Liquid limit, %	C	Cohesion, psf
PL	Plastic limit, %	ϕ	Angle of internal friction
PI	Plasticity index, %	qu	Unconfined compressive strength, psf
P2000	% passing 200 sieve	qp	Pocket penetrometer strength, tsf

BRAUN
INTERTEC

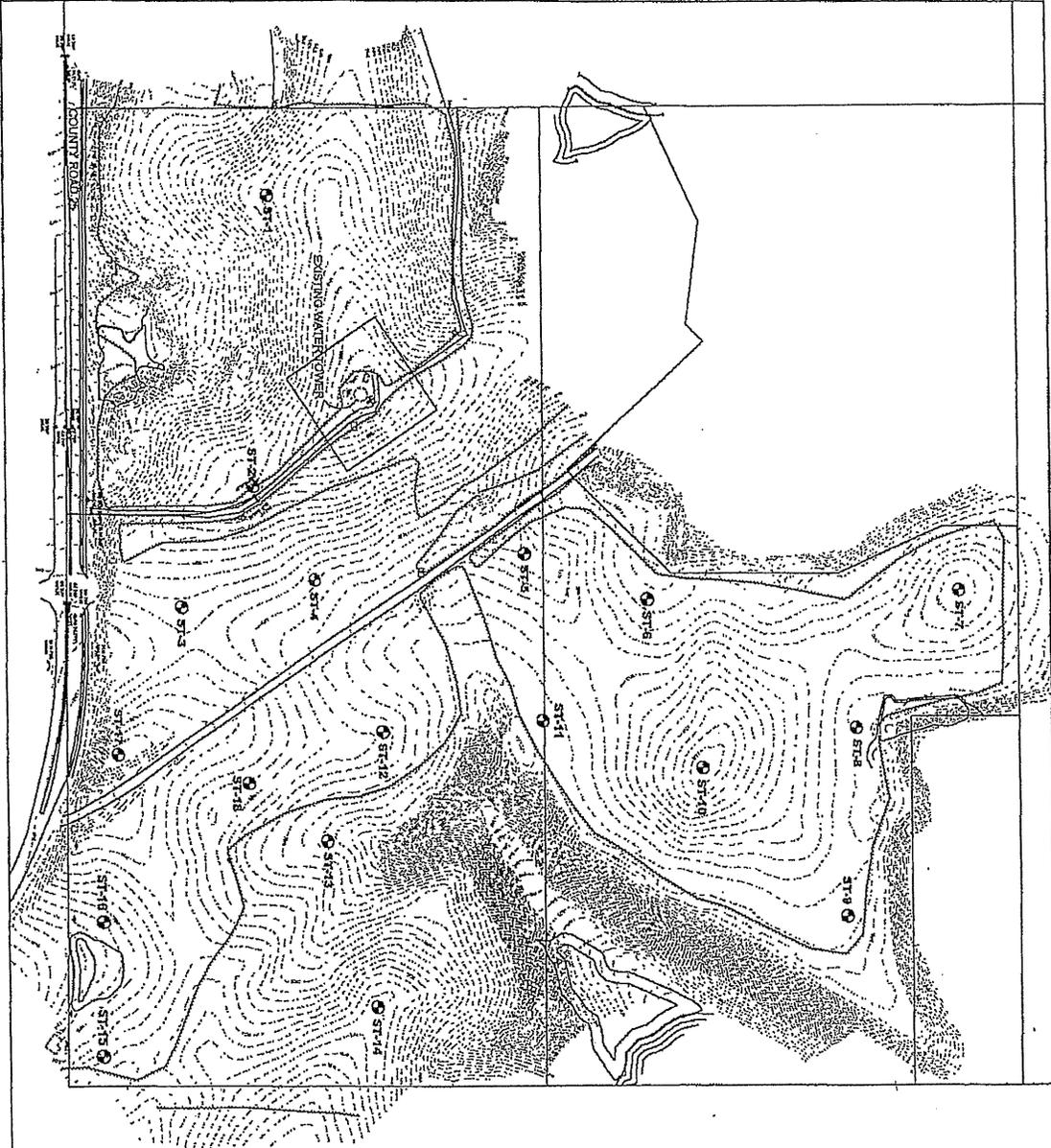


⊙ DENOTES APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORINGS

FIGURE NO.	INT	DATE
	DRAWN BY: JAG	3-22-05
	APP'D BY: JJV	3-25-05
	JOB NO. BLO501108	
	DWG. NO. BLO501108	SHEET OF
SCALE 1" = 300'		

SOIL BORING LOCATION SKETCH
 GEOTECHNICAL EVALUATION
 THE BLUFFS RESIDENTIAL DEVELOPMENT
 SE QUAD OF MAIN STREET AND FIRST STREET - CANNON FALLS, MINNESOTA

BRAUN
 INTERTEC



○ DENOTES APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING

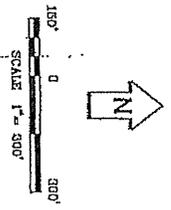


FIGURE NO.	INT	DATE
	DRAWN BY: JAG	3-22-05
	APP'D BY: JJV	3-25-05
	JOB NO. BL0501108	
	DWG. NO. BL0501108	SHEET OF
SCALE 1" = 300'		

SOIL BORING LOCATION SKETCH
 GEOTECHNICAL EVALUATION
 THE BLUFFS RESIDENTIAL DEVELOPMENT
 SE QUAD OF MAIN STREET AND FIRST STREET - CANNON FALLS, MINNESOTA



2905 South Broadway
Rochester, MN 55904-5515
Phone: 507.288.3923
Fax: 507.288.2675
Email: rochester@whks.com
Website: www.whks.com



March 15, 2021

Mr. Neil Jensen
City Administrator
City of Cannon Falls
918 River Road
Cannon Falls, MN 55009

RE: Cannon Falls, MN
Towering Bluffs Subdivision
Review of Preliminary Plat and Plans

Dear Neil:

We have reviewed the preliminary plat and plans for the referenced project, as requested. We offer the following comments on the submitted plat and plans.

1. Zoning items and development fees that apply to this site should be discussed with the City Administrator and Land Use and Licensing Specialist – Dianne Howard.
2. A general development plan was previously submitted in February 2003 and was included in the approved Environmental Assessment Worksheet (EAW). The City should discuss if a revised sketch plan is needed since this plat deviates from the original plan included in the EAW.
3. The Developer is proposing to construct a storm water management pond located within the Towering Bluffs Subdivision in Outlot A. This pond is in a different location than previously shown in the EAW documents. An overall concept for storm water management should be discussed now, including if this pond will serve future phases of this development. If the pond will serve future phases, then wording should be included in the development agreement addressing pond maintenance and sediment removal prior to the City taking final ownership of the pond.
4. During the final plan review, all engineered fill areas should be shown on the final plans.
5. A pre-application meeting and neighborhood meeting are recommended for this subdivision per section 151.077 (A) and (B) of the ordinance.
6. Please address section 151.076 (C) (5) of the ordinance which refers to neighborhood context.
7. Grading is shown on City property (water tower site) outside of the plat. Permission to grade should be addressed in the development agreement.

8. A 12-inch watermain is shown between Lots 7 and 8, Block 1 for a watermain connection to the existing watermain. A 10-foot easement is shown on the plat. We recommend a minimum 20-foot-wide utility easement.
9. Temporary hydrants should be considered at the dead end watermain stubs.
10. Sidewalks should be shown on both sides of the proposed typical section. Sidewalk is currently shown in the typical section on one side but not on the plan.
11. Grading between houses should show positive drainage away from houses. The proposed grading plan doesn't provide enough detail.
12. A geotechnical and hydraulic report should be submitted for the subdivision with the final plat and plans. Please note the area to the south had problems with expansive soils.

We would recommend approval of the proposed plat and plans conditional upon the above items being addressed.

Please contact us if you have any questions.

Sincerely,

WHKS & co.



William Angerman, P.E.
Cannon Falls Consulting City Engineer

Cc: Dianne Howard, City of Cannon Falls
Dan Howard, City of Cannon Falls
Joel Cooper, James R. Hill
Greg Jablonske, Greg J. Homes
Daren Sikkink, WHKS

P A I D APR - 8 2021



DEVELOPMENT APPLICATION

918 River Road
Cannon Falls, MN 55009
507-263-9308

SUBJECT TO STAFF REVIEW

Street Location of Property: Towering Bluffs
Legal Description of Property:

Owner of Record: Name: Gregory A. Jablonske
Daytime Phone: 651-248-0366
Address: 3475 Vermillion St
Hastings, MN 55033
E-Mail Address: greg.jablonske@edinarealty.com

Applicant (if other than owner) Name:
Daytime Phone:
Address:
E-Mail Address:
Notary Stamp

Nature of Legal or Equitable Interest of Applicant (Documentation must be attached :)

- Request: [] Conditional Use Permit [] Rezoning/Ordinance Text Amendment
[] Subdivision [] Variance
[] Concept [] Interim Use Permit
[X] Preliminary Plat [] Amendment
[] Final Plat [] CUP/PUD
[] Administrative [] Site Plan Review
[] Administrative Permit [] Special Home Occupation
[] Vacation [] Annexation Petition
[] Comp Plan Amendment [] Appeal
[] Other

Base fee/Recording \$500.00
Escrow Deposit \$2,500.00
TOTAL \$3,000.00

Note: Each requested approval may require a separate fee and/or escrow amount, even where they apply to the same project.

Date Application Received: 4/8/11

Date Submission Deemed to be Complete: _____

Give detailed description of project and reason for conditional use or variance, if applicable:

Preliminary Plat of Towering Bluffs

SUPPORTING DOCUMENTATION: Applicant must submit with the application all documentation required by the Zoning or Subdivision Ordinance relating to the requested approval. Applicant will be advised of the completeness. Only when it has been determined that an application is complete will it be placed on a Planning Commission agenda for consideration. Applications that do not include the proper plans and/or documentation may be delayed from formal review. **FAILURE ON THE PART OF THE APPLICANT TO SUPPLY ALL NECESSARY SUPPORTIVE INFORMATION MAY BE GROUNDS FOR DENIAL OF THE REQUEST.**

APPLICANT RESPONSIBILITY FOR PAYMENT OF ALL CITY FEES AND COSTS IN PROCESSING APPLICATION: Applicant acknowledges that she/he understands that before this request can be considered and/or approved, all fees, including the basic application fee and any escrow processing deposits must be paid to the city and that, if additional fees are required to cover costs incurred by the City, the City Clerk has a right to require additional escrow amounts and payment. These fees include all actual costs including, but not limited to, planning, engineering, public notification and legal costs. All processing of an application will be halted if payments are not made within 30 days of receipt of a monthly statement from the City, in the event any escrow account established is insufficient to cover the costs.

SIGNED:



Property Owner

Date: _____

Applicant (if not the Property Owner)

Date: _____

FOR CITY USE ONLY

Date Application Filed: 4/8/21

Basic Fees: 500⁰⁰

Received By: AK 4/8/21

Escrow Deposit: 2500⁰⁰

Evidence of Ownership Submitted: Yes No Required
Certified Lot Survey: Yes No Required
Legal Description Adequate: Yes No Required

Date of Planning Commission Meeting: 4/12/21

Recommendation of Planning Commission on: 4/12/21 Approve Deny

Recommendation of City Council on: 4/20/21 Approve Deny

Subject to following conditions: _____

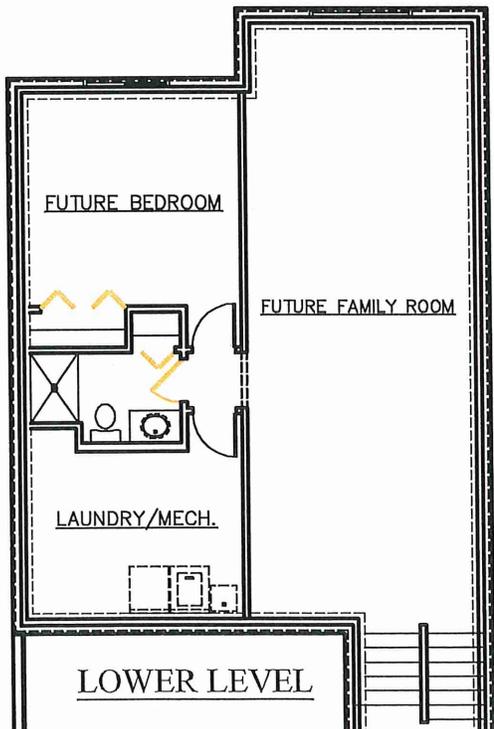
CARVER



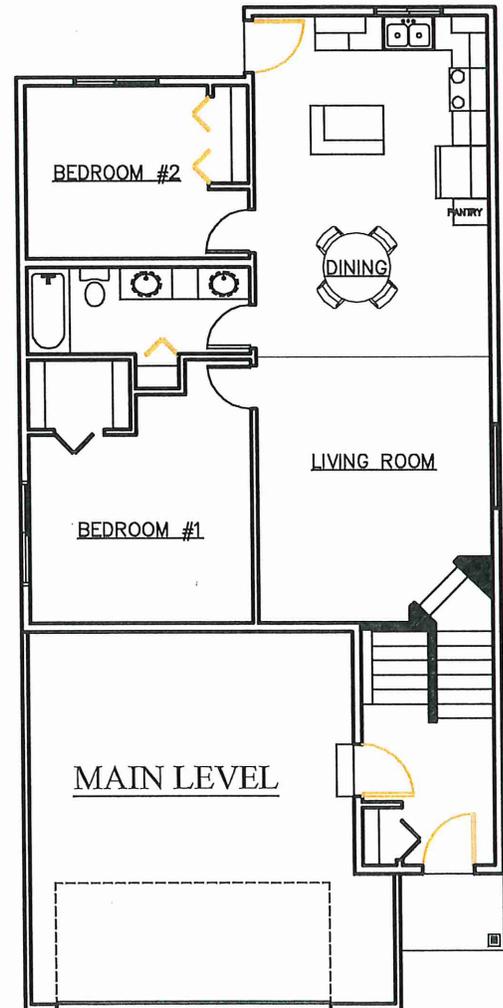
ROOM SIZES

BEDROOM #1	13' X 10'-10"
BEDROOM #2	10'-8" X 10'
LIVING ROOM	13'-8" X 15'-6"
DINING	13'-8" X 10'
KITCHEN	13'-8" X 9'-6"
FUTURE BEDROOM #3	12'-4" X 12'
FUTURE FAMILY ROOM	13' X 33'-8"

SOME OPTIONS MAY BE SHOWN

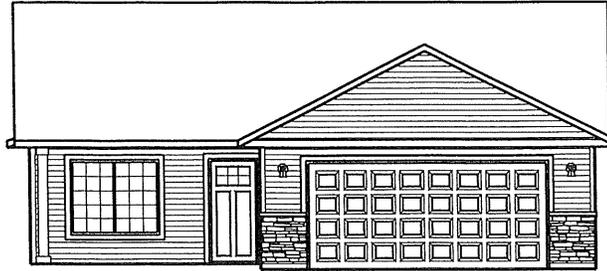


- * 2-3 BEDROOMS, 1-2 BATHS
- * 1,076 - 1,764 SQUARE FEET
- * OPEN FLOOR PLAN
- * VAULTED CEILINGS
- * WALK-IN-CLOSET
- * COVERED FRONT PORCH

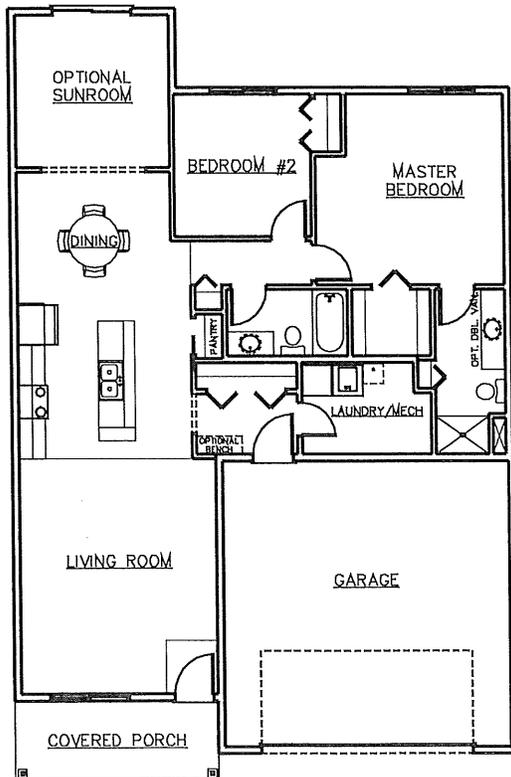


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SOME OPTIONS MAY BE SHOWN



- * 2 BEDROOMS, 2 BATHROOMS
- * 1,428 SQUARE FEET
- * OPEN FLOOR PLAN
- * VAULTED CEILING
- * WALK-IN-CLOSET
- * COVERED FRONT PORCH
- * SUNROOM

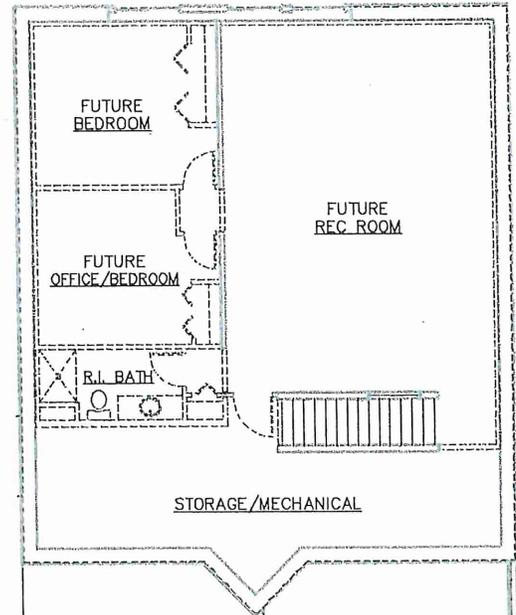
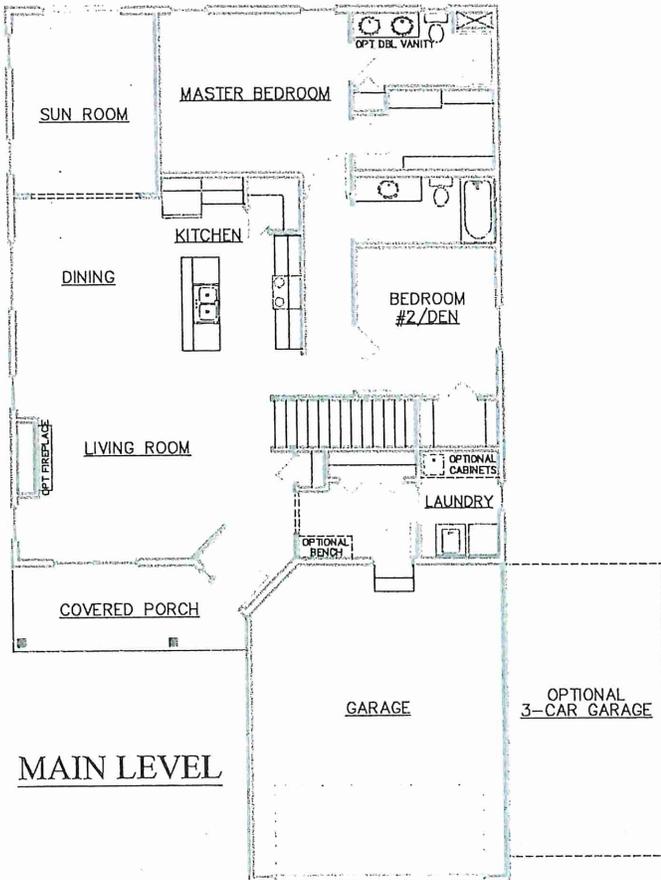
ROOM SIZES

KITCHEN	16' X 12'
DINING	11'-8" X 10'
LIVING ROOM	15' X 18'
MASTER BEDROOM	14'-4" X 14'-4"
BEDROOM #2	10'-4" X 10'-8"
SUNROOM	11'-8" X 11'-6"

WOODLAND



SOME OPTIONS MAY BE SHOWN



LOWER LEVEL

ROOM SIZES

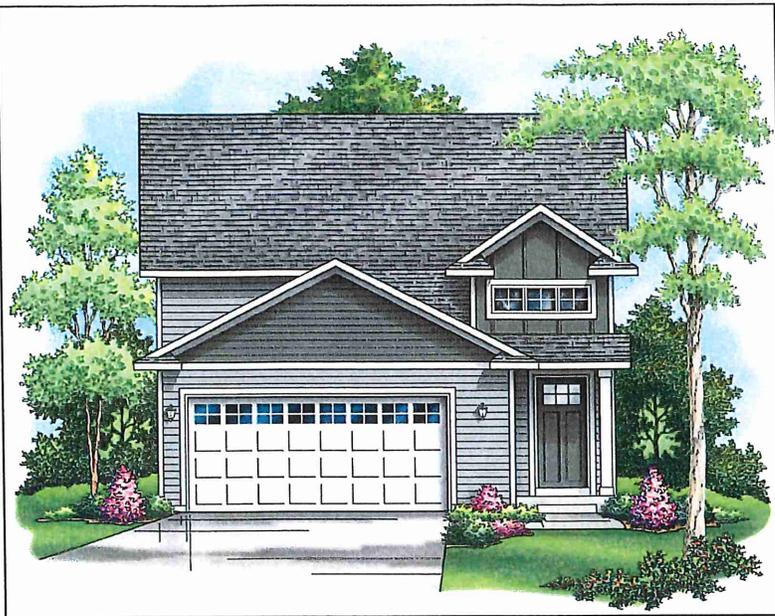
KITCHEN	9' X 13'
DINING	13' X 11'-6"
LIVING ROOM	16' X 15'-6"
MASTER BEDROOM	14'-8" X 12'
BEDROOM #2/DEN	10'-8" X 11'-4"
SUN ROOM	11'-4" X 14'
FUTURE REC ROOM	20'-5" X 27'-8"
FUTURE BEDROOM	12' X 12'
FUTURE OFFICE	12' X 11'-8"

- * 2-4 BEDROOMS, 2-3 BATHROOMS
- * 1,624 - 2,680 SQUARE FEET
- * OPEN FLOOR PLAN
- * LARGE KITCHEN PANTRY
- * WALK-IN-CLOSET
- * COVERED FRONT PORCH
- * SUN ROOM



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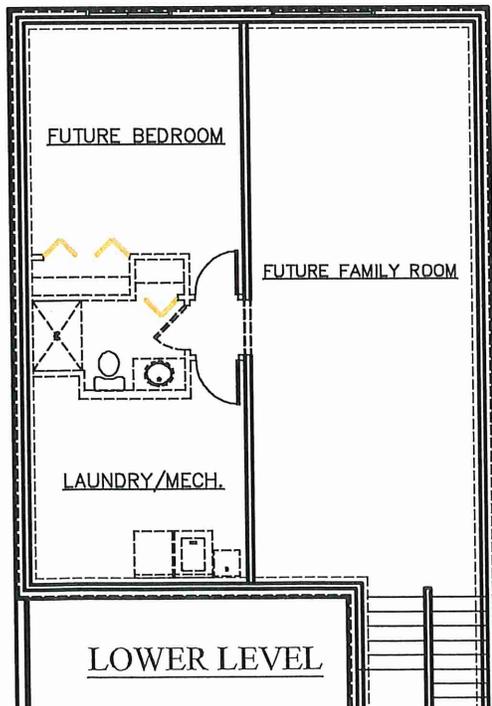
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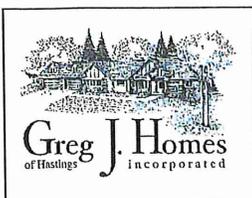
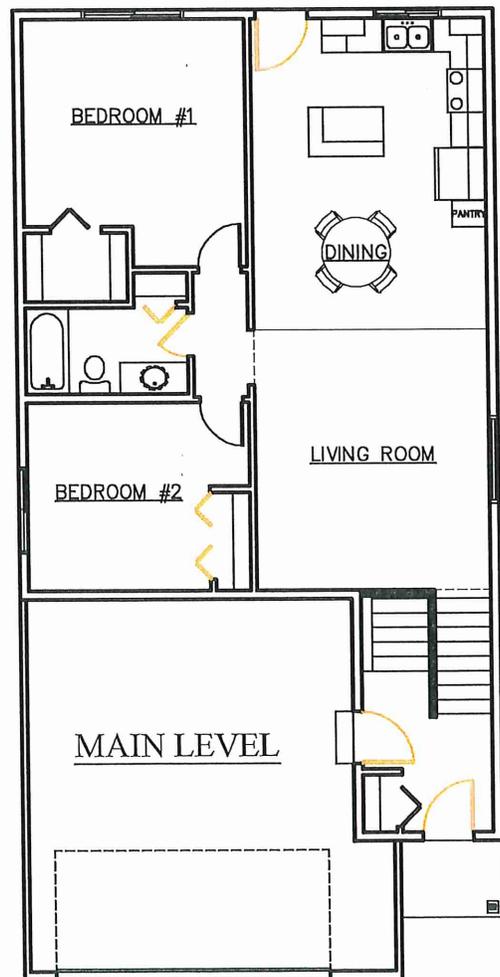
ROOM SIZES

BEDROOM #1	13' X 12'
BEDROOM #2	10'-8" X 10'-10"
LIVING ROOM	13'-8" X 15'
DINING	13'-8" X 10'
KITCHEN	13'-8" X 10'
FUTURE BEDROOM #3	12'-4" X 13'
FUTURE FAMILY ROOM	13' X 31'-8"

SOME OPTIONS MAY BE SHOWN



- * 2-3 BEDROOMS, 1-2 BATHS
- * 1,073 - 1,651 SQUARE FEET
- * OPEN FLOOR PLAN
- * VAULTED CEILINGS
- * WALK-IN-CLOSET
- * COVERED FRONT PORCH



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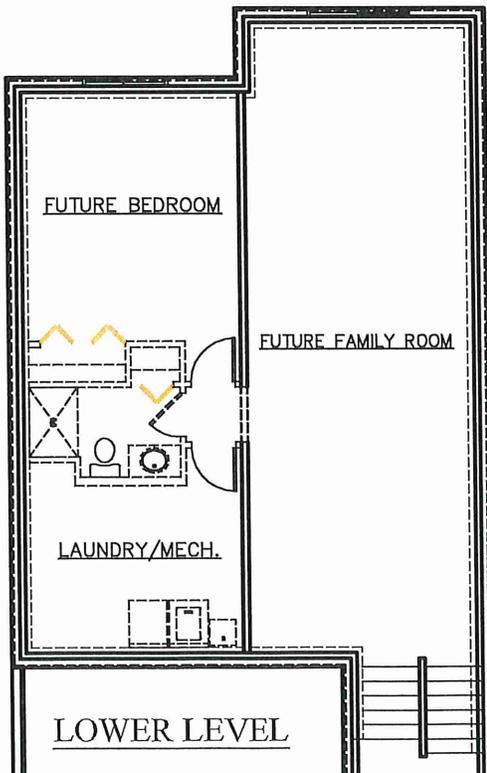
BLUFFTON



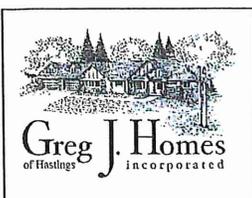
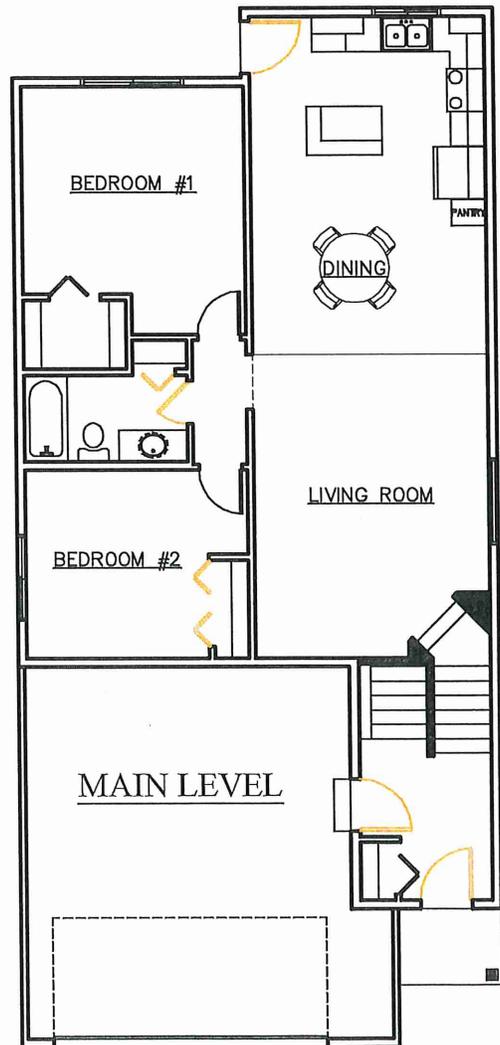
ROOM SIZES

BEDROOM #1	13' X 12'
BEDROOM #2	10'-8" X 10'-10"
LIVING ROOM	13'-8" X 17'-6"
DINING	13'-8" X 11'-6"
KITCHEN	13'-8" X 9'-6"
FUTURE BEDROOM #3	12'-4" X 14'
FUTURE FAMILY ROOM	13' X 35'-8"

SOME OPTIONS MAY BE SHOWN



- * 2-3 BEDROOMS, 1-2 BATHS
- * 1,132 - 1,870 SQUARE FEET
- * OPEN FLOOR PLAN
- * VAULTED CEILINGS
- * WALK-IN-CLOSET
- * COVERED FRONT PORCH



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