

GENOA CHARTER TOWNSHIP
Application for Site Plan Review

TO THE GENOA TOWNSHIP PLANNING COMMISSION AND TOWNSHIP BOARD:

APPLICANT NAME & ADDRESS: John Moretti, 4242 Bauer Road, Brighton, Michigan 48116
If applicant is not the owner, a letter of Authorization from Property Owner is needed.

OWNER'S NAME & ADDRESS: John Moretti, 4242 Bauer Road, Brighton, Michigan 48116

SITE ADDRESS: 4242 Bauer Road, Brighton, Michigan 48116 PARCEL #(s): 4711-26-200-002

APPLICANT PHONE: (810) 217-4581 OWNER PHONE: (810) 217-4581

OWNER EMAIL: mrmconstruction2244@yahoo.com

LOCATION AND BRIEF DESCRIPTION OF SITE: 1,500 feet south of the Challis Road and Bauer Road intersection. 40.042 Acres. Partially wooded.

On the south side of "Mudd Lake".

BRIEF STATEMENT OF PROPOSED USE: Site Condominium consisting of 21 lots and a Private Road.

THE FOLLOWING BUILDINGS ARE PROPOSED: 20 dwellings

I HEREBY CERTIFY THAT ALL INFORMATION AND DATA ATTACHED TO AND MADE PART OF THIS APPLICATION IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

BY: Monument Engineering Group Associates


ADDRESS: 298 Veterans Drive, Fowlerville, Michigan 48836

Contact Information - Review Letters and Correspondence shall be forwarded to the following:

1.) Philip A. Razor, Jr. PE of Monument Engineering Group Associates, Inc. at prazor@monumentengineering.com
Name Business Affiliation E-mail Address

FEE EXCEEDANCE AGREEMENT

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

SIGNATURE:  DATE: 1/2/2019
PRINT NAME: John Moretti PHONE: (810) 217-4581
ADDRESS: 4242 Bauer Road, Brighton, Michigan 48116

GENOA TOWNSHIP
APPLICATION FOR PRIVATE ROAD
2911 Dorr Road, Brighton MI 48116 (810) 227-5225

A private road requiring approval of the Township shall be any road providing access to more than four dwelling units or two non-residential principal buildings. This does not include drives within a multiple family complex or parking lot aisles, but does include collector type roadways within such a development.

APPLICANT: John Moretti

OWNER ADDRESS: 4242 Bauer Road, Brighton, Michigan 48116

SITE ADDRESS: 4242 Bauer Road, Brighton, Michigan 48116

APPLICABILITY OF PUBLIC VS. PRIVATE ROAD STANDARDS

All private roads in Genoa Township shall be constructed to the standards of the Livingston County Road Commission unless the Planning Commission and Township Board determine your road qualifies under the following ordinance criteria:

1. Explain how there will be no need for the roadway to be dedicated as a public road in the future.

The private road is intended to serve 21 residential lots and intersects Bauer Road. Building the road to the public road standards would result in the removal of more trees more disturbance to the natural topography.

2. Explain how dedication of the road as a public street would not result in continuity in the public street system at the present time or in the future.

There is no connection to Brighton Estates Subdivision-other than for emergencies. No continuity is available to this roadway system.

3. What uses (number of lots, number of residential units, number of buildings, etc) will have access from the private road. Will the expected traffic volumes along the roadway be below three hundred vehicles per average weekday, based on accepted trip generation figures?

There are 21 Lots to utilize this road, and they generate less than 50 trips per day.

4. Are there any significant natural features such as mature trees, natural slopes, wetlands or other water bodies would be preserved through construction and maintenance as a private road?

The site has natural sloping topography and is partially wooded. Design attempts to minimize impact to trees and natural topography.

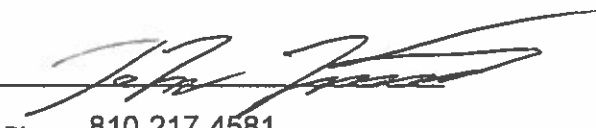
5. What financial and administrative mechanisms will be provided to ensure maintenance of the private road?

A private road easement, maintenance agreement and funding requirement will be part of the Deed Documents for this PUD.

AFFIDAVIT

The undersigned says that they are the Owner (owner, lessee, or other specified interest) involved in this petition and that the foregoing answers and statements herein contained and the information herewith submitted are in all respects true and correct to the best of his/her knowledge and belief.

By: John Moretti



Address: 4242 Bauer Road

Phone: 810-217-4581

Contact Information - Review Letters and Correspondence shall be forwarded to the following:

1.) Philip A. Rasor, Jr. PE of Monument Engineering Group Associates, Inc. at ()
Name Business Affiliation Fax No.
prasor@monumentengineering.com

FEE EXCEEDANCE AGREEMENT

As stated on the site plan review fee schedule, all site plans are allocated two (2) consultant reviews and one (1) Planning Commission meeting. If additional reviews or meetings are necessary, the applicant will be required to pay the actual incurred costs for the additional reviews. If applicable, additional review fee payment will be required concurrent with submittal to the Township Board. By signing below, applicant indicates agreement and full understanding of this policy.

PROJECT NAME: Moretti Estates

PROJECT LOCATON & DESCRIPTION: 4242 Bauer Road Genoa Township
Livingston County, MI 21 Lots being developed as a LRD/PUD on 40 acres

SIGNATURE: John Moretti DATE: 1/2/2019

PRINT NAME: John Moretti PHONE: 810-217-4581

COMPANY NAME & ADDRESS: John Moretti-4242 Bauer Road, Brighton, MI 48116

INSTRUCTIONS

One copy of this application and four (4) copies and PDF of plans (described below) must be submitted to the Genoa Township Hall located at 2911 Dorr Road. Consultant comments will be returned to the applicant approximately two weeks after submittal. 4 copies, two (2) 11 X 17 copies and PDF of the revised plans and other supporting information are due one week after receipt of consultant comments.

Private Road Application: Copies of the following shall be submitted to the Township, either separately or in conjunction with a site plan according to Article 18:

- (a) Parcel number and name of owner for all properties having legal interest in the private road.
- (b) Plans designed by a registered engineer showing location, dimension and design of the private road. The plan shall identify existing and proposed elevation contours within all areas to be disturbed or altered by construction of the private road.
- (c) Location of all public or private utilities located within the private road right-of-way or easement, or within twenty (20) feet including, but not limited to: water, sewer, telephone, gas, electricity, and television cable.
- (d) Location of any lakes, streams, drainageways, MDNR regulated wetlands, or trees with a caliper of eight (8) inches or greater, within 100 feet of the proposed private road right-of-way or easement;

Private Road Design Standards: Private roads which the Township has determined do not need to comply with all of the standards of the Livingston County Road Commission as noted above shall be constructed to the following standards:

- (a) **Compliance with AASHTO standards:** Except as otherwise provided in this Section, private road design plans shall meet the design criteria outlined in the most recent edition of the American Association of State Highway and Transportation Officials (AASHTO) Manual "A Policy on Geometric Design for Highways and Streets."
- (b) **Access easement width:** The site plan shall provide an easement or easements sixty-six (66) feet in width. The Planning Commission may reduce the required width to not less than fifty (50) feet when all of the following criteria are met:
 - (1) the width is determined to be adequate for the necessary pavement and utilities;
 - (2) adequate clear sight distance can be maintained;
 - (3) there is no desire or reasonable expectation that the road, as shown could become a public street or potentially extended in the future;
 - (4) is not expected to accommodate over three hundred (300) vehicle trips per average weekday based on accepted traffic generation figures.
 - (5) if, in addition to the above, the easement will only provide access to a maximum of four (4) single family lots or dwelling units, the width may be reduced to forty (40) feet.
- (c) **Road design:** All private roads shall meet the public street base, pavement width, surface, slope and drainage system standards of the Livingston County Road Commission, except as provided herein. The pavement material, width and curbing requirement shall be based upon the density of the proposed development as follows:

Lot size	Roadway function (1)	Min. road width (2)	Pavement type (3)	Curb and gutter (4)
Five acres or more	Local	22 ft.	May be gravel	Not required
Two acres or more	Local	22 ft.	Paved; may be gravel if serving 18 or fewer lots	Not required
One acre or more 21 lots	Local Yes	22 ft. 26 ft	Paved asphalt	Not required none
18,000 square feet or more	Local	26 ft.	Paved	Required
	Collector	30 ft.	Paved	Required
Less than 18,000 square feet per lot or multiple family	Local	28 ft.	Paved	Required
	Collector	30 ft.	Paved	Required
Commercial, office or industrial	n.a.	30 ft.	Paved	Required

- (1) A collector road shall be required for any development containing 80 or more dwelling units, which shall serve as the principal access road for the development. Other local roads that access the collector road shall be permitted at the narrower local road width.
- (2) The width of the road required in the above table shall be measured from back to back of curb for roads with curbing and shall be measured as the pavement width for roads that do not have curbing.
- (3) The design of private roads shall be reviewed by the Township Engineer for conformance with Township engineering standards. Where pavement is required, the road shall be paved with asphalt or concrete meeting the material thickness and base requirements of the Livingston County Road Commission. Where a gravel road is permitted, it shall be constructed of eight (8) inches of compacted MDOT 22AA gravel.
- (4) Where the road is required to have curb and gutter, it shall be concrete and meet Township engineering standards. Where curb and gutter is not required, a minimum of five (5) foot wide gravel shoulder shall be provided on both sides of the road.
- (5) The standards above are minimum and a petitioner shall be allowed to propose a higher classification of road in terms of width, pavement or curbing, subject to approval by the Township engineer.

(d) Maximum length, cul-de-sac turnarounds: Maximum length of a private road shall be one thousand (1000) feet with a maximum twenty-four (24) lots or dwelling units served by a single means of access. Any single means of access serving more than five (5) lots or dwelling units shall include a turn-around with a fifty-five (55) foot radius with a center landscaped island, a hammerhead "T" turn or a continuous loop layout. A larger turnaround may be required for commercial and industrial private roads. These standards may be adjusted by the Planning Commission in particular cases, with input from the fire department and Township staff or consultants, provided there is a finding that traffic impacts are adequately mitigated and a second means of emergency access can be required by the Planning Commission.

(e) Grade: Grades shall not exceed ten-percent (10%), with a maximum grade of two-percent (2%) for a minimum distance of thirty (30) feet from its intersection with a public right-of-way or another private road.

(f) Horizontal curve: The minimum horizontal curve radius shall be two-hundred-thirty (230) feet. This may be reduced to one hundred fifty (150) feet where the posted speed limit will be twenty five miles per hour (25 mph) or less. The Planning Commission may reduce this radius on local residential streets if the design would accommodate expected vehicle speeds and truck/bus traffic, as determined by the Township Engineer and Planner, in cases where a significant number of mature trees would be preserved or where the width of the parcel would not accommodate wider radii.

(g) Intersection design standards: Private roads which intersect with existing or proposed private roads or public street rights-of-way should intersect at a ninety (90) degree angle. Where constrained by environmental features, the Township Engineer may allow a

reduced angle of intersection but in no case shall the angle be less than seventy (70) degrees.

- (h) Intersection offsets from public streets:** Proposed private roads or entrances to a development shall align directly across from, or be offset at least two-hundred-fifty (250) feet from, public streets or private road intersections on the opposite side of the street, measured centerline to centerline. This standard may be reduced if approved by the Livingston County Road Commission.
- (i) Minimum offsets along private roads:** Private roads and driveways (excluding driveways serving one or two dwelling units) within a development shall align directly across from other private roads or driveways or be offset at least one-hundred-fifty (150) feet measured centerline to centerline.
- (j) Boulevard medians:** Where a boulevard median is proposed, the median shall have a minimum width of eight (8) feet and the roadways on both sides of the median shall have a width of at least eighteen (18) feet. Intersections shall meet the LCRC standards for median approaches and shall be designed to accommodate truck turning radii.
- (k) Vertical Clearance:** In order to provide adequate access for emergency vehicles, fifteen (15) feet of overhead tree clearance shall be provided within the width of the gravel or pavement.
- (l) Street names:** Street names shall be approved by Livingston County following review by the Planning Commission and fire department .
- (m) Signs:** All signs within the private road or access easement shall be identified on the site plan and be in accordance with the Michigan Manual of Uniform Traffic Control Devices, unless the Planning Commission approves another type of design for consistency with the character of the development. Street signs shall be provided at all intersections. These signs shall contrast in terms of color with public street signs, and shall clearly indicate the road is private.
- (n) Yard Setback:** A private road easement shall not abut the property line of an adjacent site unless adequate provisions are made for drainage and screening.

February 6, 2019

Planning Commission
Genoa Township
2911 Dorr Road
Brighton, Michigan 48116

Attention:	Kelly Van Marter, AICP Planning Director and Assistant Township Manager
Subject:	Moretti Estates – Preliminary Condominium Plan Review #2
Location:	4242 Bauer Road – west side of Bauer Road, between Brighton and Challis Roads
Zoning:	LDR Low Density Residential District

Dear Commissioners:

At the Township’s request, we have reviewed the revised preliminary condominium plan (dated 1/25/19) for Moretti Estates, a 30.8-acre site on the west side of Bauer Road. The applicant proposes a 19-unit residential development with minimum 1-acre lots along a new private road.

We have reviewed the proposal in accordance with the applicable provisions of the Genoa Township Zoning Ordinance.

A. SUMMARY

1. If preliminary condominium approval is granted, the following items must be included with the final condominium submittal:
 - a. Condominium documents (Master Deed and By-Laws);
 - b. A detailed landscape plan;
 - c. Building designs/renderings; and
 - d. A detail of the residential entrance signage.
2. When submitted, we suggest the Township Attorney review the condominium documents. We also suggest the applicant include language ensuring protection of the wetlands, natural feature setback and undisturbed wooded areas.
3. We have concerns over the use of gates for the development. Details and an operational description must be provided.
4. If deemed necessary by the Township and/or emergency response agencies, the applicant may be required to enter into an indemnification/hold harmless agreement for the use of gates.
5. The applicant must provide a Private Road Maintenance Agreement, which includes the financial and maintenance assurances required by the Ordinance.
6. We defer technical review of the private road to the Township Engineer.
7. The applicant must address any comments provided by the Township Engineer and/or Brighton Area Fire Authority.

B. PROPOSAL/PROCESS

The applicant proposes a 19-unit site condominium development along a new private road. The project includes lots of not less than 1-acre in area, per current zoning standards (LDR District).

Section 12.07 requires both preliminary and final approval for condominium plans. Procedurally, both reviews go through the Planning Commission for a recommendation to the Township Board, who has final approval authority.



Aerial view of site and surroundings (looking north)

C. CONDOMINIUM PLAN REVIEW

- 1. Submittal Requirements.** Provided the preliminary condominium plan is approved, the applicant will need to include the condominium documents (master deed and by-laws) with their final condominium plan submittal. Per our standard comment, we suggest review of these documents by the Township Attorney.

As requested in our initial review, the revised submittal states that the applicant will include language in the condominium documents related to protection of the wetlands and natural feature setback areas.

- 2. Dimensional Requirements.** The LDR District requires minimum lot sizes of 1-acre (area) and 150 feet (width). Based on the revisions to Sheet C-1.0, all 19 lots meet or exceed these requirements.

Additionally, building envelopes are depicted based on minimum LDR and natural feature setback requirements demonstrating a sufficient buildable area for each lot.

Per the revised submittal, the existing accessory building on proposed Lot 17 will be removed as part of this project.

Lastly, a 10-foot landscape buffer area has been added along Lots 8 and 9 to create more conventional lot layouts given the presence of Bauer Road and White Pines Drive. (In the previous version of the preliminary plan these lots had multiple front yards and concerns were raised about the limitations for placement of accessory structures.)

- 3. Pedestrian Circulation.** The plan identifies an existing asphalt pathway along the entire Bauer Road frontage.

Given the proposed density, internal sidewalks are not required along the private road (Section 12.05).

- 4. Private Road/Shared Residential Driveway/Gates.** The project includes a private road with 1 shared driveway extension. A connection to Quaint Ridge Trail is proposed, though a limited access gate is noted at the site's boundary. It is unclear whether this is intended for emergency access only or if residents will also utilize this connection.

Ultimately, this connection will require authorization from the Road Commission; however, if it is intended for residents, we find this relatively unusual in our experience. If there are multiple vehicles entering the development from Quaint Ridge Trail, stacking will disrupt any traffic flow on the roadway and may block the existing residential driveway on the adjacent property.

If a gate is proposed off the Bauer Road connection, it will need to be set back sufficiently to allow vehicle stacking on the private road without disrupting traffic flow and arrangements will need to be made so typical delivery vehicles (USPS, FedEx, UPS, etc.) and visitors can gain entrance to the residences.

Details of the gate(s) must also be reviewed/approved by the applicable emergency response agencies ensuring their needs are met in the event of an emergency.

If desired by the Township and/or emergency response agencies, the applicant may be required to enter into an indemnification/hold harmless agreement to protect these entities in the event a delay is caused by the gate or damage occurs to an emergency vehicle or the gate structure itself.

With respect to the private road and shared driveway, the revised plan depicts the easement and road/drive widths required by Ordinance. As noted in our initial review, the applicant must provide a Private Road Maintenance Agreement demonstrating the financial and maintenance assurances.

The private road is subject to the standards of Section 15.05 and we defer to the Township Engineer for a detailed technical review of the private road.

- 5. Landscaping.** The landscape plan provides 38 deciduous trees, 34 of which are located along the private road and shared drive. The plan does not indicate the size or species of the proposed plantings.

Based on the revised grading plan, the applicant will be able to preserve much of the large wooded areas throughout the property. Per our initial review comments, we suggest the applicant incorporate tree protection language into the condominium documents to ensure preservation of these areas.

The applicant has indicated that a detailed landscape plan will be provided with the final condominium plan submittal. Per our initial review comments, we suggest the applicant incorporate a mixture of tree species into the final landscape plan.

Lastly, tree protection fencing must be provided around the wooded areas to be preserved.

- 6. Natural Features.** Existing wetlands on the site must be protected according to both MDEQ regulations and the Genoa Township Wetland Protection Standards in Section 13.02.

The revised grading plan (Sheet C-7.0) has reduced the extent of disturbance such that the 25-foot natural feature setback from the regulated wetland will remain undisturbed.

- 7. Park/Open Space.** Since the revised preliminary plan includes only 19 units, dedicated park and open space areas are not required as part of the project (Section 12.06).

- 8. Lighting.** As requested in our initial review, the revised submittal confirms that lighting is not proposed for this development.

9. **Buildings.** The applicant has indicated that architectural details will be provided with the final condominium plan submittal.
10. **Signs.** The applicant has indicated that details of a residential identification sign will be included with the final condominium plan submittal.
11. **Grading, Drainage, and Utilities.** We defer to the Township Engineer for review and comment on the site engineering elements of the proposal.

Should you have any questions concerning this matter, please do not hesitate to contact our office. We can be reached by phone at (248) 586-0505, or via e-mail at bborden@safebuilt.com and steve.hannon@safebuilt.com.

Respectfully,
SAFEBUILT STUDIO



Brian V. Borden, AICP
Planning Manager



Stephen Hannon, AICP
Planner



February 5, 2019

Ms. Kelly Van Marter
Genoa Township
2911 Dorr Road
Brighton, MI 48116

**Re: Moretti Estates
Preliminary Site Condominium Review No. 2**

Dear Ms. Van Marter:

Tetra Tech has conducted a second preliminary site condominium review of the Moretti Estates plans last updated January 25, 2019. The plans were submitted by Monument Engineering Group Associates, Inc. on behalf of John Moretti. The development includes 30.8 acres located on the west side of Bauer Road, 1,500 feet south of Challis Road. The petitioner is proposing to develop 19 lots through the site condominium process with a private road. We offer the following comments:

TRAFFIC/ROADWAYS

1. The petitioner notes that an application for private road approach and sight distance review has been submitted to the LCRC. A copy of their approval should be provided for the Township's records.
2. The petitioner is proposing a cul-de-sac adjacent to lots 10, 12, 16, and 17 which connects to a shared drive giving access to lots 13, 14, and 15. We suggest the cul-de-sac be moved north, directly south of lot 14 to eliminate the need for the shared drive and create a more intuitive road pattern.
3. A final grading and road construction plan will need to be submitted for review and approval.

DRAINAGE AND GRADING

1. The petitioner is proposing to use Mudd Lake as detention for their stormwater management and they are working with the Livingston County Drain Commissioner to determine the lake's ability to accommodate the new development. They propose to use roadside ditches and underground storm piping to transport stormwater to a sedimentation forebay that will then discharge into Mudd Lake. The petitioner should include a detail to show where the discharge will eventually be leaving Mudd Lake. The petitioner should determine the incremental rise in Mudd Lake's elevation due to additional impervious surface and any findings should be provided to the Township.
2. The final site plans should include the final stormwater management plan that outlines the drainage area.

UTILITIES

1. The petitioner has submitted a hydrogeologic investigation report to the Livingston County Health Department. Documentation verifying the suitability of the soils for these systems should be submitted for the Township's records.
2. The petitioner acknowledged our comments regarding the proposed 12,000-gallon tank from our previous letter. In the previous site plan submittal, the tank was shown on lot 20, which is no longer part of the proposed Moretti Estates development. It is our understanding that the tank will be the HOA's responsibility to maintain as part of the master deed. As such, the petitioner will need to relocate the tank to lands associated with the site condominium or provide easements for the HOA to access and operate the tank. In addition, more details on how the tank will be filled, operated, accessed, and maintained need to be included on the site plan.

The updated preliminary plan shows adequate access to the site and a final site plan should be submitted with the necessary documents and agreements. The above preliminary site plan comments should be addressed in the final site plan documents and submitted for further review along with the MDEQ permits and other county agency permits.

Please call or email if you have any questions.

Sincerely,



Gary J. Markstrom, P.E.
Vice President



Shelby Scherdt
Project Engineer



BRIGHTON AREA FIRE AUTHORITY

615 W. Grand River Ave.
Brighton, MI 48116
o: 810-229-6640 f: 810-229-1619

February 6, 2019

Kelly VanMarter
Genoa Township
2911 Dorr Road
Brighton, MI 48116

RE: Moretti Estates
4242 Bauer Rd.
Genoa Twp., MI

Dear Kelly:

The Brighton Area Fire Department has reviewed the above mentioned site plan. The plans were received for review on January 28, 2019 and the drawings are dated January 2, 2019 with latest revisions dated January 25, 2019. The project is based on an existing 40.042 acres parcel to be subdivided into a 21-lot site condo development (20 new homes). The plan review is based on the requirements of the International Fire Code (IFC) 2018 edition.

All previous comments that have been addressed have been removed from this letter.

1. The need to provide for fire flow for the property has been discussed in depth with the engineer and applicant. The lack of available municipal water has prompted discussion on potential alternatives including a well, tank and even fire sprinklering of the homes. At the time of the submittal a 12,000-gallon tank is being proposed. This is still being discussed. **(The developer has agreed to provide a 12,000-gallon fire suppression water tank is to be installed by the developer. The tank is no longer shown in the drawing set. The location has not been finalized to be in an accessible location for access and use. The Maintenance requirements for the tank shall be included in the Condominium By-Laws. these items will be addressed at final submittal.)**
2. The dead end of the drive into the neighboring subdivision is being proposed for an emergency vehicle access gate. This access shall be provided with a legal easement and deeded with the development. The access shall be constructed properly and connect through to the neighboring cul-de-sac. **(Dead end will be provided with a vehicle activated opener to allow exiting from Moretti estates onto Quaint Ridge, therefore no turnaround is required.)**

Additional comments will be given during the building plan review process (specific to the building plans and occupancy). The applicant is reminded that the fire authority must review the fire protection systems submittals (sprinkler & alarm) prior to permit issuance by the Building Department and that the authority will also review the building plans for life safety requirements in conjunction with the Building Department. If you have any questions about the comments on this plan review please contact me at 810-229-6640.




February 6, 2019
Page 2
Moretti Estates
4242 Bauer Rd.
Site Plan Review

Cordially,

A handwritten signature in black ink, appearing to read "R. Boisvert".

Rick Boisvert, CFPS
Fire Marshal

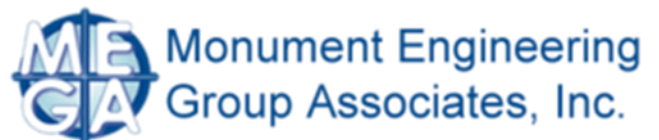


**IMPACT ASSESSMENT
FOR
MORETTI ESTATES
GENOA CHARTER TOWNSHIP
LIVINGSTON COUNTY, MICHIGAN**

PREPARED BY

MONUMENT ENGINEERING GROUP ASSOCIATES, INC.
298 VETERANS DRIVE
FOWLerville, MI 48836
517-223-3512

December 18, 2018
Revised January 25, 2019



In accordance with Genoa Charter Township Ordinance Section 18.07, this Impact Assessment has been prepared to assist the Township in their review of the Site Plan for this Project. This report will detail the required information and give a project overview of the development demonstrating its compliance with current Township regulations.

1. PARTY RESPONSIBLE FOR PREPARATION OF IMPACT STATEMENT:

Prepared for John Moretti:

Moretti Construction Services
2244 Euler Road, Suite 102
Brighton, MI 48114
810-217-4581

Prepared by:

Monument Engineering Group Associates, Inc.
298 Veterans Drive
Fowlerville, MI 48836
517-223-3512

Monument Engineering Groups Associates, Inc. (MEGA), has prepared this impact assessment. MEGA is a professional consulting services corporation offering land surveying, civil engineering, and site planning services throughout the State of Michigan and the mid-west. We are licensed to provide engineering and surveying services in Michigan, as well as in Ohio, Indiana, Pennsylvania, Florida and Virginia. We have been providing these services for nearly 40 years to both public and private sector clients.

2. PROJECT SITE LOCATION:

The subject site contains approximately 30.842 acres for the Moretti Estates Development. The original single Parcel 4711-26-200-002 contains approximately 40.04 acres of land which will now be split into two parcels, the larger one for the Moretti Estates and the other retained by the current owner. The original parcel that contains the Moretti Estates site is in the S ½ of the NE ¼ of Section 26, T2N-R5 of Genoa Chartered Township, Livingston County, Michigan. This parcel is located along the western side of Bauer Road between the intersections of Bauer Road with Brighton Road to the south, and Bauer Road and Challis Road to the north. To the north of this parcel, it is bordered by Mudd Lake and Parcel 4711-26-200-005, owned by the Livingston County Road Commission (LCRC) and Parcel 4711-26-200-012 a private residence. Along its eastern edge, it is predominantly bordered by Bauer Road and its right-of-way, again owned by LCRC and a private residence Parcel 4711-26-200-003. To the south and west, the subject site is bounded by Brighton Estates Subdivision, a platted subdivision.

Currently, the site is zoned as LDR (low density residential) and is immediately surrounded by LDR on the north, south and western boundaries. Across Bauer Road, a PRF zoning for Mt. Brighton Skiing Facility is present (PRF is public and recreational facilities). No change in zoning is required for this development.

Included in Exhibit A is a location map, Exhibit B is an aerial photograph, and Exhibit C is the Genoa Charter Township's current Zoning Map for this area. Exhibit D is the Soil Map for the area and Exhibit E is the Existing Drainage Characteristics Map. The final exhibit, Exhibit F, is the delineated Wetland's map for the site's area.

3. PROJECT IMPACT on NATURAL FEATURES:

The proposed site is 30.846 acres of mostly wooded land with about 25% of the land open grasslands. Bounded on the north by Mudd Lake, the east by Bauer Road and to the south and west by the existing Brighton Estates Subdivision, the developer is endeavoring to maintain as much natural vegetation and trees as possible. The regulated wetland along the shoreline of Mudd Lake (identified as Wetland A) will be maintained and not encroached upon, and the larger unregulated wetland (Wetland B) is no longer part of the subject parcel for the Moretti Estates. Wetland C, upland, will be filled-in as part of this project and a permit is in process with MDEQ to allow for this construction. The developer is currently in process with obtaining the necessary permits and concurrence from both the Livingston County Drain Commissioner (LCDC) and MDEQ for these activities.

Soils on the site consist primarily of Fox Sandy Loam and Fox-Boyer Complex Loams. These are best described as very deep, well drained soils. A soil map is included as Exhibit D.

As illustrated in Exhibit E, the site tends to drain towards the north to Mudd Lake with only the southwestern corner of the parcel draining towards Brighton Estates Subdivision. Storm water from the roadway system and some areas will be collected and directed to on-site sedimentation forebays, with an outlet structure that conveys this water to Mudd Lake. As was noted earlier in this document, the proposed method for both water quality and detention is to use the sedimentation forebay and the lake as the detention basin. To this end, the Developer is working with both MDEQ and LCDC to accomplish this proposed method of treatment.

Landscape treatments will be utilized along the entrance to the site from Bauer Road and canopy trees will be provided to the individual lots that are not currently wooded themselves. In general, the developer intends to preserve much of the existing woodlands and the natural wetland features on the site. These will be used to enhance the natural aesthetic component of the proposed development.

4. PROJECT STORM WATER MANAGEMENT IMPACTS:

To effectively manage the proposed change to the stormwater pattern currently encountered on the site, the Developer is working with the Livingston County Drain Commissioner's (LCDC) Office to maintain the natural look and feel for this site by utilizing smaller sedimentation forebays as the water quality structures for this site, with outlet connecting to Mudd Lake, for detention. The outlet from Mudd Lake is the Brighton Estates Drain.

The Developer is currently evaluating, with the LCDC's direction, the use of Mudd Lake for actual detention of the design storm event for the Moretti Estates Storm Water Management Plan. The proposed system is to convey the site's storm water to a collection site/system to outlet this stormwater run-off into the sedimentation forebays and then to establish an outlet system into Mudd Lake which will eventually discharge into the Brighton Estates Drain. This will require, in addition to permits from LCDC and MDEQ, easements with all the property owners around the lake for such use.

There are 4 property owners to be negotiated with, and the easements will be part of the Condominium's Documents recorded for all lots. Brighton Estates already has easements with the Drain Commissioner's Office therefore no easement is required from this platted subdivision for their concurrence on this method of storm water management.

Preliminary meetings indicate there is adequate capacity at the outlet from Mudd Lake into the Brighton Estates Drain to accommodate the site's run-off.

While the site is under construction, soil erosion and dust control measures will be implemented, and Best Management Practices followed. For dust control, water tankers will maintain the optimum moisture content of the soil to prevent dust from occurring to the greatest extent possible. For erosion control, silt fencing, check dams and inlet filter mechanisms will be installed and utilized during this time. Permanent restoration including top soiling and seeding with mulching and watering will occur after all mass grading and earthmoving activities are substantially complete.

For the Final Site Plan Submission, the Developer will also be securing LCDC's Soil Erosion and Sedimentation Control Permit to be in place prior to the start of any construction activities.

5. PROJECT IMPACT ON SURROUNDING LAND USES:

The development is in conformance with the future land use map and current zoning established for this portion of the township. The area is currently zoned for LDR and the proposed development meets this criterion with all lots exceeding 1.0 acre in area and minimum of 150 feet in width of the lot.

Access to this site has now been revised to allow use of the private roadway for residents and guests from Bauer Road on the eastern side of the property with the western side access via Brighton Estates' Quaint Ridge Trail's cul-de-sac. Access will be controlled by vehicle activated gates, egress will always be available to any Moretti Estates resident or visitor without need for access code or key card.

Noise Levels are expected to be typical of a single-family residential community and within Genoa Township Standards. No site lighting is proposed for this development.

6. PROJECT IMPACT ON PUBLIC FACILITIES and SERVICES:

The development proposes 19 single family residential lots after approval of the site plan. The addition of 19 new single-family homes is likely to have a mix of buyers due to the Developer's more upscale approach to managing the existing site and retaining woodlands and other natural features. Consequently, the anticipated mix will include empty nesters and those with no children in addition to families with children. The overall impact to public facilities, schools, police and fire service is expected to be minimal.

7. PROJECT IMPACT ON PUBLIC UTILITIES:

The development proposes all lots will be serviced by well and septic field systems. Soil Investigations for suitability of septic systems were performed in August of 2018 under the supervision of the Livingston County Health Department personnel and 3 test wells as required by LCHD standards were also drilled and tested. Final approval from the LCHD is anticipated soon for the use of well and septic within this development. Electric, Telephone and Natural Gas Services will be extended underground to the site from Bauer Road and provided for all lots within the development.

8. STORAGE and HANDLING of HAZARDOUS MATERIALS:

The storage and handling of hazardous materials within the site is not anticipated and will be noted as not permitted in the condominium documents for the development.

9. PROJECT IMPACT ON TRAFFIC:

The development proposed for Moretti Estates is to accommodate 19 lots in place of the current 1 large parcel with 1 residence. Bauer Road is an existing two (2) lane cross section with a north bound and a south bound lane. Using ITE Trip Generation Manual, 7th ed. for Single Family Detached Housing based on the number of proposed dwelling units, the calculated trip generation using the average rate for A.M. and P.M. peak hours of traffic is calculated herein:

A.M. Peak Hour:

$0.70 \times (19 \text{ residences}) + 12.05 = 25.35 \text{ trips}$
 Exiting is 74% so $(.74 \times 25.35) = 18.76 \text{ directional trips}$

P.M. Peak Hour:

$\ln(T) = 0.89 \times \ln(19 \text{ residences}) + 0.61 = 3.23$
 $e^{(3.23)} = 25.27 \text{ trips} \times 64\% \text{ (entering)} = 16.17 \text{ directional trips}$

As shown from the above calculations, under fully developed conditions, this site will generate less than 20 directional trips in both A.M. and P.M. Peak Hours of Traffic. Reviewing the Township Zoning requirements of 18.07.09 with less than 50 directional trips during peak hour, no Traffic Impact Study is required.

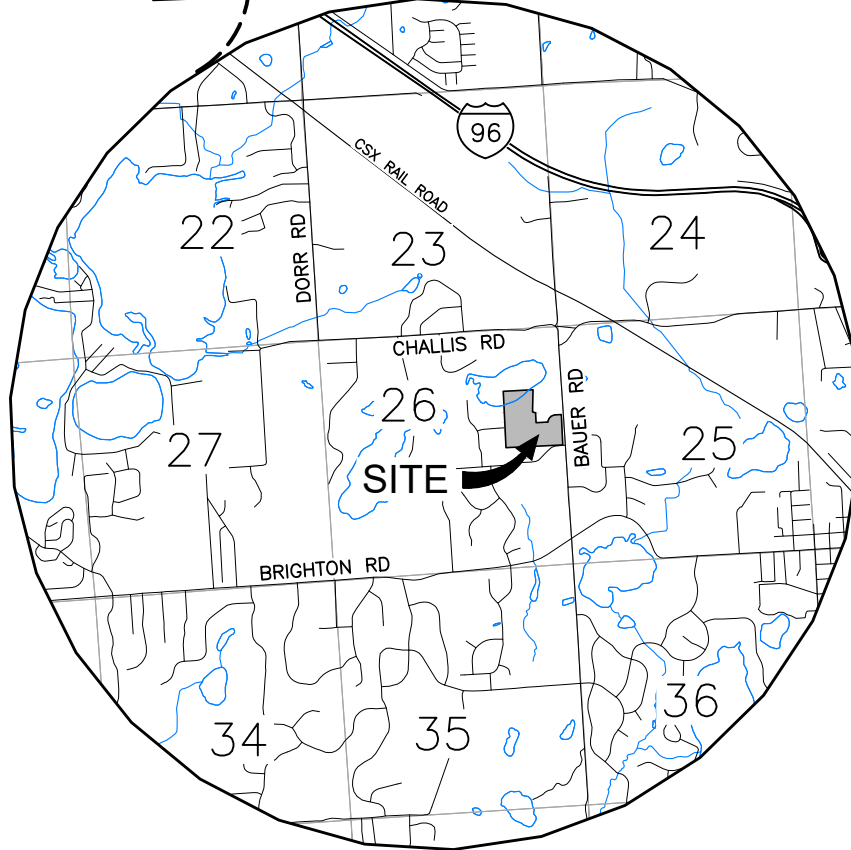
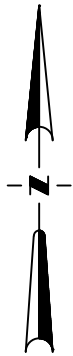
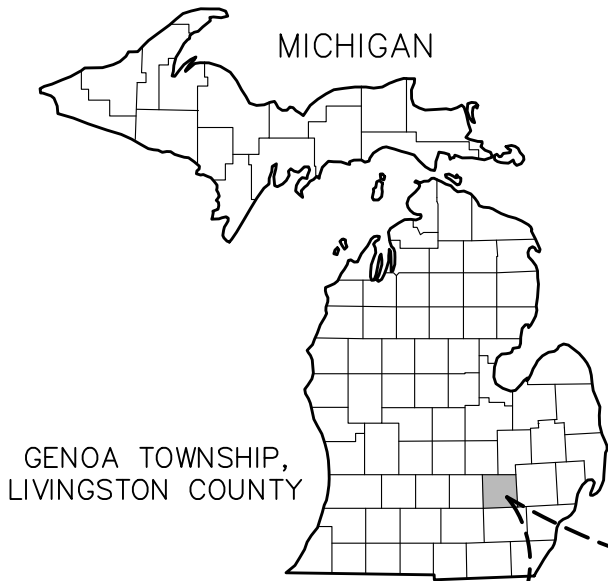
10. PROJECT IMPACT ON HISTORICAL and CULTURAL RESOURCES:

The development is not known to have any historic or cultural resources on this site, and it is not believed any historic or cultural resources will be affected by the proposed development. Mudd Lake is not a natural lake, so no anticipated cultural resources are expected around its shoreline.

11. SPECIAL PROVISIONS:

The development will need no special provisions as part of its development.

EXHIBIT A LOCATION MAP



ENGINEERS · SURVEYORS · CONSULTANTS · LANDSCAPE
ARCHITECTS · LAND PLANNERS

298 VETERANS DRIVE
FOWLerville,
MICHIGAN 48836
(OFFICE) 517-223-3512

PROJECT:

**MORETTI
ESTATES**

NE 1/4, SEC. 26, T2N-R5E GENOA TWP

SCALE: NTS		DATE: 1/25/2019	DR. BY: MLL	CHK: PR
SHEET: 1 of 7		FILE : 18-025_IMPACT EXH	JOB No. 18-025	

EXHIBIT B AERIAL



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ARCHITECTS · LAND PLANNERS

298 VETERANS DRIVE
FOWLERVILLE,
MICHIGAN 48836
(OFFICE) 517-223-3512

PROJECT:

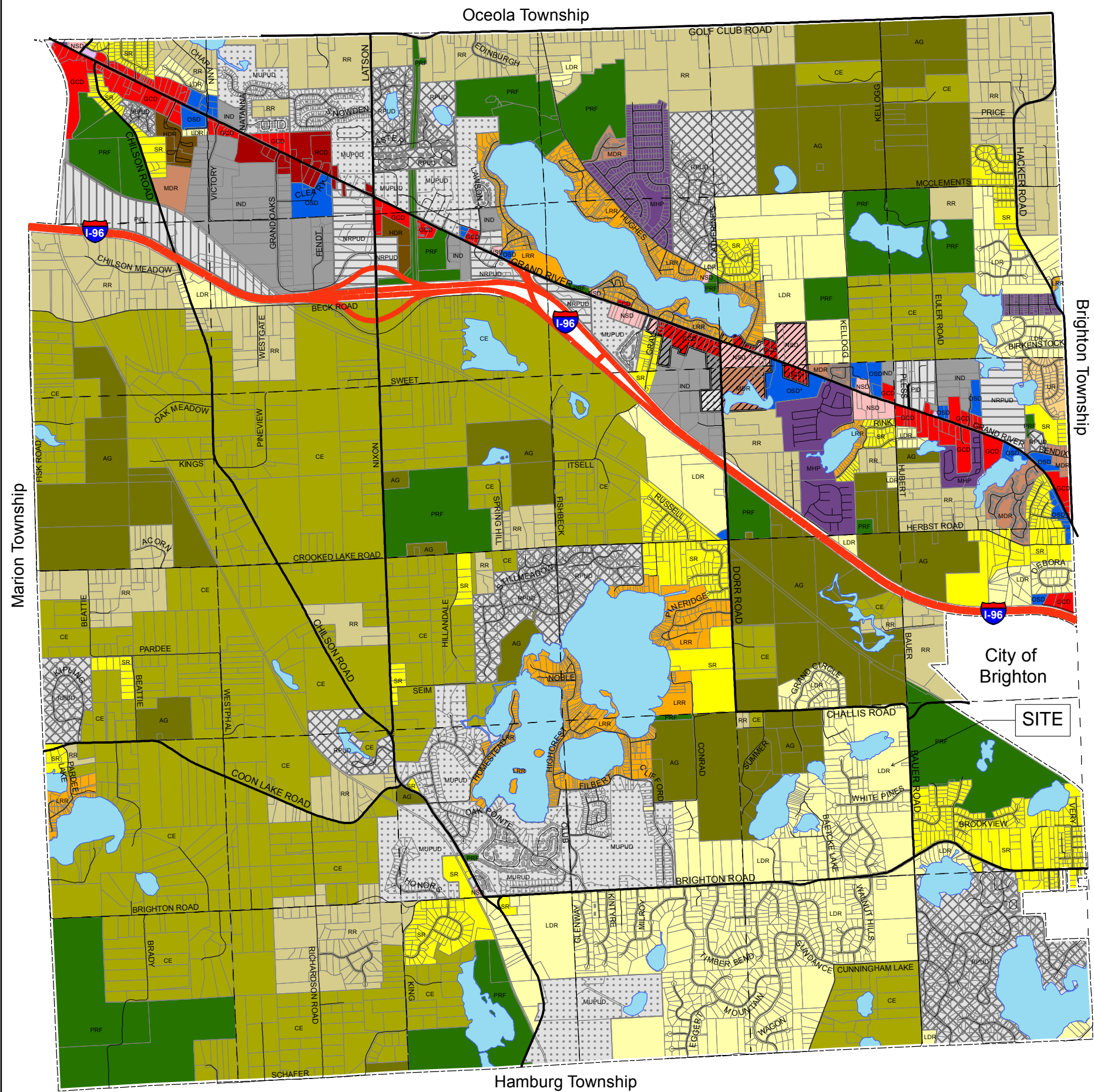
**MORETTI
ESTATES**

NE 1/4, SEC. 26, T2N-R5E GENOA TWP

	DATE: 1/25/2019	DR. BY: MLL	CHK: PR
SCALE: 1" = 1,000'	SHEET: 2 of 7	FILE : 18-025_IMPACT EXH	JOB No. 18-025

EXHIBIT C Zoning Map

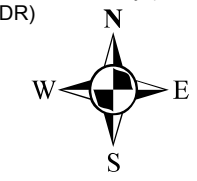
Genoa Charter Township
Livingston County, Michigan



Legend

	AG		RC
	CE		GC
	RR		NS
	LDR		OS
	SR		NRPUD
	LRR		IND
	UR		PID
	MDR		PRF
	HDR		MUPUD
	RPUD		RDPUD
	MHP		Town Center

Updates:
 04/11/08 - Multiple Revisions (42 parcels)
 09/12/08 - 4489 & 4495 Oak Pointe Drive (LRR)
 02/25/11 - United Way Conditional Rezoning (OSD)
 10/2/12 - Corrected Map re. court stipulation for Pet Ritz from 05/18/2006 (AG)
 11/29/12 - Corrected Map re. Zeeb property approved 3/15/04 (MUPUD)
 01/07/13 - Dakota (14-100-014) Conditional Rezoning (OSD)
 10/10/13- Corrected Map re. (29-200-036) - was rezoned 8/18/2003 (RPUD)
 11/13/2014 - Removed Lucy Rd 425 Area, Rezone Latson Elementary (09-100-036;RR-NRPUD)
 Correct Brighton Lake Rd. Error (RPUD-LDR)



1 inch = 3,500 feet

Official Zoning Map
 Adopted May 2, 2005
 Created by: Kelly VanMarter
 Basemap layers provided by:
 Livingston County GIS

EXHIBIT D SOIL MAP



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FOWLerville,
MICHIGAN 48836
(OFFICE) 517-223-3512

PROJECT:

**MORETTI
ESTATES**

NE 1/4, SEC. 26, T2N-R5E GENOA TWP

SCALE: 1" = 250'		DATE: 1/25/2019	DR. BY: MLL	CHK: PR
SHEET: 3 of 7		FILE : 18-025_IMPACT EXH	JOB No. 18-025	

EXHIBIT D

SOIL MAP UNIT LEGEND

Livingston County, Michigan (MI093)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BtB	Boyer-Oshtemo loamy sands, 2 to 6 percent slopes	1.75	4.38%
FoA	Fox sandy loam, 0 to 2 percent slopes	0.17	0.42%
FoB	Fox sandy loam, 2 to 6 percent slopes	6.56	16.39%
FoC	Fox sandy loam, 6 to 12 percent slopes	4.12	10.30%
FrB	Fox-Boyer complex, 2 to 6 percent slopes	6.18	15.45%

FrD	Fox-Boyer complex, 12 to 18 percent slopes	7.22	18.03%
FrE	Fox-Boyer complex, 18 to 25 percent slopes	4.89	12.20%
FrF	Fox-Boyer complex, 25 to 40 percent slopes	2.79	6.96%
Ho	Houghton muck, 0 to 1 percent slopes	1.96	4.89%
Md	Made land	1.32	3.29%
MoD	Miami loam, 12 to 18 percent slopes	0.02	0.04%
W	Water	3.07	7.66%
Totals for Area of Interest		40.04	100.00%



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PROJECT:

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ESTATES**

NE 1/4, SEC. 26, T2N-R5E GENOA TWP

	DATE: 1/25/2019	DR. BY: MLL	CHK: PR
SCALE: 1" = 250'	SHEET: 4 of 7	FILE : 18-025_IMPACT EXH	JOB No. 18-025

EXHIBIT E EXISTING DRAINAGE



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PROJECT:

**MORETTI
ESTATES**

NE 1/4, SEC. 26, T2N-R5E GENOA TWP

SCALE: 1" = 250' SHEET: 5 of 7

DATE: 1/25/2019

DR. BY: MLL CHK: PR

FILE : 18-025_IMPACT EXH JOB No. 18-025

EXHIBIT F WETLAND MAP



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PROJECT:

**MORETTI
ESTATES**

NE 1/4, SEC. 26, T2N-R5E GENOA TWP

		DATE: 1/25/2019	DR. BY: MLL	CHK: PR
SCALE: 1" = 250'	SHEET: 6 of 7	FILE : 18-025_IMPACT EXH	JOB No. 18-025	