

A Guide to New Home and Addition Construction

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Rochester Hills Building Department
1000 Rochester Hills Dr.
248-656-4615



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Reference Material

The following forms and handouts for a New Home are available at our service counter or on the Building Departments web page at www.rochesterhills.org.

- Permit applications are required only for hard copy or in person applications.
 - o [Building](#)
 - o [Mechanical](#)
 - o [Electrical](#)
 - o [Plumbing](#)
- Permit Fees Schedules
 - o [Building](#)
 - o [Mechanical](#)
 - o [Electrical](#)
 - o [Plumbing](#)
- [Online Permit Application Guide](#)
- [Standard for Electronic Plan Review Submission.](#)
- [Codes Currently in Effect](#)
- [Address Request Form](#)
- [Energy Code Worksheet for Single-family Residential Buildings](#)
- [Residential Request for Water, Sanitary Sewer & Sump Line Charges](#)
- [Contractor Registration](#)
- [Guide to New Home Construction Inspections](#)
- [Guide to Residential Zoning Requirements](#)
- [Tree Removal & Maintenance Requirements](#)

Surveys

We are always striving to improve our service, please use the following forms to give us your feedback, comments and suggestions.

- [Electronic Submittal Survey](#)
- [Customer Satisfaction Survey](#)

INTRODUCTION

New Home and Addition Construction

Building a new home can be a stressful process for both the homeowner and builder. As the permitting and inspection process tends to vary slightly from city to city, the Building Department has prepared this Guidebook to help all parties understand these processes when building within the City of Rochester Hills. We have included information on areas that have generated confusion or construction delays in the past.

We recognize that in order for your project to be a success, all parties involved need to work together towards the final goal; a safe, well-built home. We take great pride in being part of your success story and encourage you to keep all lines of communication open from the start to the finish. If this guide does not answer your specific questions, please feel free to contact the Building Department at 248-656-4615. We want to know how we can help!

This Guidebook is only intended to be a guide and is not all inclusive of the Michigan Residential Code or requirements of City Ordinances. The information in this Guidebook is subject to change.

BEFORE YOU BUILD

New Home and Addition Construction

Before you start your project, you should be aware that some additional permitting from other departments within the City or outside agencies may be required. These requirements may have an effect on the style, location and cost of your home along with length of time it takes to build your home.

If permits are required from any of the departments or agencies listed below, copies of the permit or approvals will need to be submitted to the Building Department before the building permit can be issued.

Deed Restrictions - Your subdivision may have Deed Restrictions that apply. The City of Rochester Hills cannot enforce Deed Restrictions; however, we encourage you to check for any restrictions that may apply to your project.

Historic District - If your home will be built in a Historic District, it shall first be approved by the Historic District Commission (HDC). The Planning Department can help you understand the process and explain what you need to provide to seek approval from the HDC. Please call the Planning and Economic Development Department at (248) 656-4660 for more information.

Flood Plains - Flood plains are usually associated with lakes, streams, rivers and drainage courses. They are areas designated as “prone to flooding” during times of rain. Building in these areas is strictly regulated. If you are proposing to build a home in a floodplain, it may require a Licensed State of Michigan Engineer’s design and a Floodplain Use Permit prior to your building permit approval. Please call the Rochester Hills Department of Public Services at (248) 656-4640 for more information.

Wetlands - These areas have been determined to be indispensable and are to be protected as a natural resource. They provide numerous beneficial factors including wildlife habitat, water quality, flood controls, pollution reduction, erosion controls, open spaces, recreation areas and aesthetics. If your home will be close to or in regulated wetlands, additional paperwork, including permits, may be required from the City or State of Michigan. Please contact the Building Department at (248) 656-4615 for more information.

Steep Slopes - Conservation practices have been established to prevent disturbance of existing steep slopes to protect public health, safety, and general welfare. Effective protection of steep slopes is regulated by City Ordinance. Please contact the Building Department at (248) 656-4615 for more information.

Water and Sewer - You may check to see if City water and sanitary sewer are available by contacting the Department of Public Service at (248) 656-4685. When water and/or sanitary sewer are not available, a well and/or septic complying with Oakland County standards shall be installed. Additional permits and inspections are required from the Oakland County Health Department if you need to install a well or a septic system.

County or State Roads - If your new home will be located on a County or State Road, a drive approach permit is required from the Oakland County Road Commission (RCOC) or the Michigan Department of Transportation (MDOT), depending on your location.

Trees - A tree removal permit is required for parcels regulated by the Tree Conservation Ordinance and for trees located in the public street right-of-way. Contact the City’s Natural Resources Department at (248) 656-4673 for additional information.

FROM APPLICATION TO COMPLETION

New Home and Addition Construction A General Guide through the Entire Process

Step 1 – The Building Permit

State law requires that a building permit be obtained for the construction of all new homes. The permit allows the code official to review the plans for the home and perform inspections during construction to confirm that the requirements of the Michigan Residential Code are being followed. By meeting the requirements of the Michigan Residential Code, the completed project will meet minimum standards of life safety, health and welfare as established by the State of Michigan.

Applications for the building permit are usually submitted by the builder; however, homeowners may submit a permit application for work on their property that is, or will be upon completion their place primary residence. Any contractors hired by the home owner for a contract price of \$600 or more shall be licensed in accordance with State of Michigan Residential Builder Laws.

When the building permit application is submitted, it will undergo three reviews:

- A zoning ordinance review to verify that the new home will meet the requirements of the City's Zoning Ordinance including such items as lot coverage, setbacks, height requirements for the zoning district. This review will also determine if a tree removal or a right-of-way permit is required.
- The grade review will review work related to the property including drainage, sidewalks, driveways, utility locations and connections. The review will also check for wetlands, steep slopes, watercourses, flood plains or another agency permits that may be required.
- The building plan review covers the requirements of the Michigan Residential Code that apply to the new home.

Submitting a complete set of documents containing all the necessary information will expedite the plan review process. Prior to applying for a building permit the applicant should prepare the following documents. These documents shall be prepared using the guidelines set forth in the Building Department's [Standard for Electronic Plan Review Submission](#).

1. If your property does not already have a property address, submit an **Address Request Form***.
2. A for a new home, a **Plot Plan** prepared by a licensed surveyor or engineer showing the location of the home, setbacks from property lines, utilities, grading, etc. is required. Refer to the Plot Plan Requirements section of this guide for additional information.
 - a. The Plot Plan for an addition does not need to be prepared by a licensed surveyor unless required by the City should the proximity of the addition to the required yard setbacks be in question.
3. **Construction Drawings** that include floor plans of all levels, elevations and details are required. Refer to Construction Drawing Requirements section of this guide for additional information.
4. If available provide the **Roof Truss Shop Drawings**. These must be available on site at the time of rough framing inspection.
5. **Energy Worksheet for New Single-family Residential Buildings*** indicating which method of energy compliance will be used, along with supporting documents.
6. **Energy Calculations** showing conformance to the Michigan Residential Building Code.
7. **Residential Request for Water, Sanitary Sewer and Sump Line Charges***
8. **Soil Erosion Control Permit or an Exemption Letter from the Oakland County Water Resource Commissioner** is required for all new home permits.
 - a. This applies to additions only if more than one acre of land will be disturbed or the work is within 500 feet of a state lake, pond, stream, wetland or drain.

9. When you are building in a subdivision that has sidewalks, a copy of your **General Liability Insurance** shall be submitted and accepted before the building permit can be issued. Please contact the Building Department at (248) 656-4615 for insurance and certificate requirements.
10. Copies of permits from outside agencies such as drive approach permits from the RCOC and well or septic system permits from the Oakland County Health Department.

* Forms are available online at www.rochesterhills.org or at the Building Department counter.

Registration of Builders License

Prior to applying for a building permit residential builders shall register with the City of Rochester Hills Building Department.

1. Builders can submit their registration form in person or email. A completed Contractor Registration form may be emailed to the customer service staff at Building@rochesterhills.org. Include "Contractor Registration" on the subject line.
 - a. The registration fee can be paid in person or with the permit application fee.
2. When registering the builder shall supply:
 - a. A completed Contractor Registration Form with an original signature by the license holder.
 - b. The original or a copy of the Builder's License.
 - c. A copy of the license holder's driver's license, if not presented in person.
3. Builders who are still actively working in the City are required to renew their registration with the City when their builder's license is renewed.

A Contractor Registration Form is available online at www.rochesterhills.org or at the Building Department service counter.

Applying for the Building Permit

The Building Department is now accepting applications for all permits online at www.rochesterhills.org.

An [Online Permit Application Guide](#) is available to help through the process.

1. Plans and Approved Process

- a. The permit application documents are reviewed in the order they are received. Review time varies depending on the Building Department's work load.
- b. Documents that contain all the necessary information and details will help speed up the review process.
- c. The plot plan is reviewed for compliance with City Ordinances and Engineering Standards while the construction documents are reviewed for compliance to the Michigan Residential Code.
- d. The applicant will be notified by email if the information provided does not meet the City of Rochester Hills Zoning Ordinance, Engineering, or Michigan Residential Code requirements, or if any other information is required.
- e. The applicant will need to submit corrected documents for review.

2. Fees

Fees are due at various stages of the permitting process.

- a. The application and base plan review fees shall be paid before the permit application will be fully processed and the review process begins.
- b. Final plan review and permit fees will be determined during the plan review process and shall be paid prior to issuance of the building permit.
- c. Applicants may pay in person at the City Hall or online by following the link in the email they receive to the online payment portal. Fees can be paid online by credit card or eCheck.

Forms and fee schedules are available at the Building Department service counter or online at www.rochesterhills.org

3. Permit Ready

- a. The permit applicant will receive an email when the building permit is ready, with a link to the online payment portal.
- b. Building permit fees are due prior of the issuance of the building permit. Permit fees can be paid in person or online.
- c. Once all fees are paid the applicant will receive an email with the building permit.
- d. The building permit shall be secured within 6 months of the application date or the application may be canceled.
- e. Issued permits that have no activity for more than 6 months may be canceled. A new permit may be required to be obtained to finish the project.

4. Revisions

- a. Revisions to the plans for the home or grade after issuance of the building permit will require re-submittal of revised plans, approval from the Building Department, and the payment of any additional review and permit fees.

5. Additional Fees – Water, Sanitary Sewer & Sump Line

- a. Water, sanitary sewer and sump line fees can be paid to the Department of Public Services (DPS) when you pick up your building permit. These fees shall be paid prior to water and sanitary sewer open trench inspection permits being issued.

6. Trade Permits – Plumbing, Mechanical & Electrical

- a. These types of permits are required and can be applied for and obtained after the building permit has been issued.
- b. All items to be installed shall be listed on the appropriate permits.
- c. Items not listed can be added to the appropriate permits prior to the final inspection.
- d. A Certificate of Occupancy cannot be issued until all fees have been paid.

Forms and fee schedules are available at the Building Department service counter or online at www.rochesterhills.org

7. Additional Permits – Water and Sanitary Sewer Open Trench

- Contractors that are registered with the Department of Public Service (DPS) may obtain water and sanitary sewer open trench inspection permits. A list of currently registered contractors and registration forms are available by contacting Department of Public Services at (248) 656-4685.

Step 2 – Construction

When the building permit has been obtained, construction may begin. All new home construction shall be inspected for conformance to the approved plans and the Michigan Residential Code. For a complete explanation of inspections please review the [Guide to New Home Construction Inspections](#) available online at www.rochesterhills.org.

1. Inspection Request and Results

All request for inspections are to be scheduled online through [BS&A Online](#) using the account information that was established when applying for the permit.

Once an inspection has been performed the permit holder will receive an email stating either the inspection was approved or not approved with a list of items that require correction.

2. During Construction the home or addition should be inspected the following stages.

- Footings
- Open rail
- Backfill
- Pre-masonry
- Rough plumbing
- Rough mechanical

- Gas piping and pressure test
- Rough electrical
- Rough fireplace – both masonry fireplaces and pre-fab fireplaces
- Rough building
- Energy code compliance / insulation
- Basement stone
- Garage sand
- Sump line
- Sidewalks and drive approaches

3. Water Taps

- When your water and sewer open trench inspections have been approved, your home will automatically be scheduled for a water tap. The time it takes to get a water tap varies, based on the Department of Public Services' work load, weather conditions, etc. The work area where the water tap is to be installed shall be clear of all construction materials, debris, and equipment.

4. Water Meter Installations

- You may schedule a water meter installation by calling the Department of Public Service at (248) 656-4685.
- Scheduling varies depending on workload. Please allow time for your scheduling.

Step 3 - Closeout

Prior to the house being completed and a Certificate of Occupancy can be issued the following final inspection shall be completed and any corrections need to be completed.

- Final plumbing
- Final mechanical
- Final gas piping
- Final electrical
- Final fireplace – both masonry fireplaces and pre-fab fireplaces
- Final building and final masonry
- Final grade
- Final tree – Contact the Department of Natural Resources at (248) 656-4673
- All special bills shall be paid, including:
 - Street cleaning
 - Tap repair
 - Debris removal
 - Any other fees or bills due

5. Certificates of Occupancy (C of O)

- A Certificate of Occupancy (C of O) is required before a new home can be used or occupied.
- A C of O can be requested by calling the Building Department at (248) 656-4615.
- Please allow time for processing a C of O. State Law allows 5 business days from the time the request is received to the issuance of a C of O. Our normal processing time is 24 hours.

6. Temporary Certificates of Occupancy (TCO)

- A TCO is required before the new home can be used or occupied and is issued **only** when a Certificate of Occupancy cannot be issued as determined by the Building Department.
- A TCO can be requested by calling the Building Department at (248) 656-4615.
- A TCO is issued for a limited length of time for uncompleted grading issues **only**, when, in the opinion of the Building Official, weather conditions prevent the work from being completed.
- There is a fee for each request for a TCO or for an extension.
- All outstanding items shall be completed and approved by the expiration date indicated on the TCO.
- Proper drainage away from the building is required.
- Temporary soil erosion control shall be installed. Please see the Temporary Erosion Control section of "Building Inspections".
- Two off-street parking spaces usable in all weather conditions are required on site before a TCO can be issued.

PLOT PLAN REQUIREMENTS

New Home and Addition Construction

A plot plan with a current detailed topographic survey prepared by a professional land surveyor, engineer or architect as required by the City's Ordinance shall be submitted with the permit application. To aid in the review process the documents shall be prepared utilizing the [Standards for Electronic Plan Review Submission](#) guide available online at www.rochesterhills.org. Please see "Sample Plot Plan" in the Appendix.

The plot plan shall contain the following information:

1. General

The plot plan should meet the following requirements:

- a. Drawn to a scale between 1" = 20' and 1" = 50'
- b. Include the builder's name, address and telephone number.
- c. Include a north arrow, legal description, street right-of-way and street name.
- d. Include the site benchmark that will be used to establish the home and site elevations should be shown
- e. Indicate the soil erosion control locations and provide details for the construction period
- f. Indicate the permanent controls that are to be in placed prior to a final Certificate of Occupancy.
- g. The footprint of the home shall be consistent between the plot plan and the construction drawings.

2. Zoning

Refer to the Building Department's [Guide to Residential Zoning Requirements](#) available online at www.rochesterhills.org.

- a. Indicate all the dimensions of the proposed structure and the lowest floor and first floor elevations
- b. Indicate the exact lot dimensions and all setbacks from all sides of the home, measured at 90 degree angles to the property lines

3. Trees

Tree removal and protection is subject to requirements of the City's Tree Conservation Ordinance, Chapter 126, Article III. Refer to Parks and Natural Resources' [Tree Removal & Maintenance](#) requirements at www.rochesterhills.org.

- a. An up-to-date tree survey completed by a registered arborist, forester, or landscape architect showing all regulated trees by species, size and location in regards to the new home including trees within the right-of-way
- b. Location of tree protection fencing at trees to remain
- c. Tree preservation calculations and replacement calculations
- d. Location and species of replacement trees
- e. During the plan review, the Department of Parks and Natural Resources will determine if a tree removal permit is required

4. Grading and Drainage

The subdivision Master Grade Plan shall be used as a guide. Elevations may deviate slightly to accommodate the natural topography and drainage requirements.

- a. Indicate existing and proposed elevations and drainage patterns, including all swales, drainage courses, berms, retaining walls, ditches and culverts.
- b. The slope of the grade from the edge of the driveway to the culvert invert is not to exceed a 1 foot vertical to 2 feet horizontal slope.
- c. Indicate the existing and proposed elevations along all property lines, including property corners, at a minimum of 25-foot intervals, on site and to 100 feet beyond the property line. The survey

should continue as far as a storm sewer outlet or “natural” outlet if storm drains are not available in the subdivision.

- d. Indicate the grade elevations around the home at no less than the four corners. If the brick ledge of the home drops 2 feet or more, show the location and elevation of the drop. The brick ledge should be stepped uniformly. If the home has a walkout basement proposed, label and show the location and elevation of the walkout area.
- e. The grade shall have a minimum of 6 inches of fall away from the home in the first 10 feet and a minimum of 1% grade for the remainder of the property for drainage.
- f. The maximum grade slope allowed is 1 foot vertical to 3 feet horizontal (33%). All slopes exceeding a 1 foot vertical to 3 feet horizontal will require retaining walls with details of construction. Additional information and details may be required for retaining walls. This will be determined during the review process.
- g. If the drainage design for a specific lot has rear to front water drainage, and the rear yard exceeds a 1 foot vertical to 10 feet horizontal slope (10%), then a minimum of 12 inches of fall is required from the finish grade at the home to the rear yard protection swale at a minimum of 10 feet away from the rear of the home.

5. Utilities

- a. Indicate the location and elevation of all easements and utilities including manholes, gatewells, hydrants, phone, electric, gas, cable, etc. on the property and within 100 feet of the property.
- b. Indicate all existing and proposed utilities, including septic systems and wells with elevations.
- c. If a sanitary sewer lead is not available for the home, contact Department of Public Services at (248) 656-4640 for a right-of-way permit to tap the main sewer line. This permit is required prior to plot plan approval.
- d. Indicate the sump line location and note on the plan that the “Sump pump discharge water shall be connected directly to an approved drainage system.” If there is no drainage system for this property, contact the Building Department at (248) 656-4615 for additional information.

6. Sidewalks and Driveways

If the road is gravel, a minimum of 5-feet of the drive approach must be gravel. If the road is paved, a minimum of 5-feet of the drive approach must be paved.

- a. Where sidewalks are required provide elevations at both side property corners and at the driveway. The cross-slope requirements are 2%. The maximum incline is 1 foot vertical to 12 feet horizontal (8.33%). For crosswalks, the maximum incline is 5% (1 foot vertical to 20 feet horizontal).
- b. Indicate the width and type of proposed driveway construction and elevations at the garage floor and at the edge of the road or top of curb at the centerline of the approach. The drive grade requirements are as follows:
 - i. Side entrance slab – minimum 2% - maximum 4% slope.
 - ii. Slope down to road – minimum 2% - maximum 10% slope.
 - iii. Reverse drive slope – minimum 2% - maximum 7% slope.
- c. Indicate all existing curb drops and all proposed curb cuts.
- d. The angle of the driveway should be 90 degrees to the roadway edge wherever possible.
- e. Show all roadside features and the sight distance for the approach.
- f. A circle drive may be permitted if the lot frontage is 75 feet or more and the distance between the drives is a minimum of 45 feet center to center.
- g. Driveways on corner lots are required to be a minimum of 25 feet from the property corner at the intersection of the two streets in either direction.
- h. Maintain 5 feet between the driveway and fire hydrant and 6-feet between the driveway and a high back catch basin.
- i. Driveways should avoid all utility manholes. If unavoidable, a permit and inspection from the Department of Public Service is required for the adjustment and isolation of the structure.

7. Steep Slopes

- a. When the home is to be built on or adjacent to slopes that are greater than 33 percent, provide dimensions from the home or face of foundation to the toe or the top of the slope as required by the Michigan Residential Code and the City's Steep Slope Ordinance, Section 138-9.200.
- b. During the plan review, Building Department will determine if a steep slope permit is required from the Department of Public Services.

8. Wetlands and Floodplains:

- a. Indicate any wetland limits with the 25-foot natural features setback and required protective fencing. Activity within 10 feet of the regulated wetlands will require a wetlands use permit. Provide information for the wetlands per the Natural Resources Ordinance, Chapter 126, Article IV.
- b. Indicate the location and elevation of all watercourses and provide the floodplain elevation on the plan. Adhere to the City's Flood Plain Use and Regulation Ordinance, Chapter 114, Article III.
- c. Provide a State of Michigan Department of Environmental Quality permit if the property has state regulated wetlands.

9. Other Agency Permits That May Be Required

- a. If the road that your home is on is a County road, a drive approach permit from the Road Commission for Oakland County (RCOC) is required prior to plot plan approval.
- b. If the road that your home is on is a State road, a drive approach permit from the Michigan Department of Transportation (MDOT) is required prior to plot plan approval.
- c. If there is a septic system on your property, a permit from the Oakland County Health Department is required prior to plot plan approval.
- d. A soil erosion control permit from the Oakland County Water Resource Commissioner (OCWRC) is required for all New Home permit applications.
- e. Sump lines that are connected to an Oakland County storm sewer may require a permit from the Oakland County Water Resource Commission (OCWRC).
- f. Sump lines that discharge to a ditch on a County road when there is not a storm structure available, will require a right of way permit from the RCOC.
- g. A pathway permit from the City's Department of Public Service will be required if any work effects pathways along the road.

Construction Drawing Requirements

New Home and Addition Construction

A set of construction drawings is required for all new homes and shall be submitted with the permit application. To aid in the review process the documents should be prepared utilizing the [Standards for Electronic Plan Review Submission](#) guide available online at www.rochesterhills.org.

The following list is a not intended to be all inclusive of details that will be required. Depending on the type and complexity of the project, more details or engineering by a State of Michigan Licensed Architect or Engineer may be required.

The construction drawings shall contain the following information:

1. General

- a. Drawing shall be in a scale of not less than $1/8'' = 1'-0''$.
- b. The footprint of the home shall be consistent on the plot plan and the construction drawings.
- c. Construction drawings for homes with over 3,500 square feet of habitable space shall require the signature, and seal of a State of Michigan licensed Architect or Engineer.
- d. Electrical plans are required when the electrical system rating exceeds 200 amps.
- e. Heat plans are required for all new homes, regardless of the size and shall be available at the job site. Plans shall include the following information:
 - i. Equipment sizing and efficiencies
 - ii. An indication that all ducts shall be sealed.
 - iii. Indicate the R-values for duct insulation and methods of installation.
 - iv. Manual D and J calculation

2. Foundation Plan that contains the following information:

- a. Footing and column pad sizes with all layout dimensions
- b. Sizes and spacing of beams and columns
- c. First floor joist direction, size, spacing and span
- d. Size of support for all bearing walls and point loads from above
- e. Framing details at stair and fireplace openings
- f. Basement floor thickness, type of vapor barrier and a 4-inch sand or gravel base shall be indicated.
- g. Basement wall types and thickness, and reinforcing steel sizes and spacing (if applicable)
- h. Location and sizes of all emergency egress windows and window wells or doors leading directly to the exterior
- i. Sizes and types of sill plates and size, type, and spacing of anchorage shall be indicated.
- j. Energy requirements, if applicable, of the foundation
- k. Wall bracing anchor requirements, if applicable (other than typical foundation anchors)

3. 1st & 2nd Floor Plans (as applicable) that contain the following information:

- a. Full dimensions and use of all rooms
- b. Ceiling height of all rooms
- c. 2nd floor joist direction, size, spacing and span
- d. Roof framing direction, size, spacing and span
- e. Sizes and locations of all support for bearing walls and concentrated loads
- f. Sizes of all doors and windows. Note on the drawings any second-floor windows greater than 72" above grade & less than 24" above the finished floor.
- g. Sizes and types of all headers indicated for every opening
- h. Operable emergency egress windows or exterior doors in all sleeping rooms
- i. Details of the separation required between the attached garage and home
- j. Locations of all smoke and carbon monoxide alarms on every floor

4. **Roof Framing Plan** (if applicable)
 - a. Indicate the location, direction, size, spacing and span of all roof and ceiling framing members.
 - b. Indicate the support for all bearing walls and concentrated loads from ends of hip and valley rafters, ceiling joists, rafters, trusses and girder trusses.
 - c. Indicate the roof pitch for all portions of the roof.

5. **Building or Wall Sections** showing the following information: (Depending on the complexity of your project, more sections or details may be required.)
 - a. Footing and basement wall sizes, type and height, and any required reinforcing
 - b. Basement wall waterproofing/damp-proofing and drain tile with stone
 - c. 1st and 2nd floor ceiling heights
 - d. Location of finish grade
 - e. All basement egress windows or doors
 - f. Insulation types and R-values being used

6. **Wall Construction Details** including the following information:
 - a. Interior finishes
 - b. Type of exterior sheathing
 - c. Anchor bolt size and spacing
 - d. Type and thickness of subfloor
 - e. Size and spacing of wall studs.
 - f. Insulation with R values for all areas per the Michigan Residential Code Energy Worksheet for Single-family Residential Buildings
 - g. Truss & rafter connectors to plates
 - h. Roof construction details with thickness and type of sheathing, felt paper, snow and ice shield, and type of roof covering. Include type and amount of attic ventilation
 - i. Brick veneer (if applicable):
 - i. Base course flashing
 - ii. Weather-resistant membranes
 - iii. Lintels and flashing
 - iv. Brick wall ties and flashing
 - v. Weep holes (33 inches on center maximum)
 - j. Provide details for all walls over 10 feet in height and any walk-out walls. These walls shall be designed to resist wind load and support all other imposed loads.

Please note: Details may be required to be signed and sealed by a Structural Engineer as determined by the Plan Reviewer.

7. **Crawl Space Details** (if applicable) including the following:
 - a. Ventilation indicated within 3 feet of each corner
 - b. A minimum 18" x 24" access if in the floor, a 16" x 24" access if in a foundation wall
 - c. Clearance between ground and floor joists – at least 18 inches required for untreated wood
 - d. Clearance between ground and wood beams – at least 12 inches required for untreated wood

8. **Stair Details**
 - a. Tread, riser, guardrail and handrail sizes, heights, spacing, and materials indicated
 - b. Indicate headroom height.

9. **Building Elevations – Front, sides and rear**
 - a. **Elevations** shall be provided that include the location of proposed grades and clearly indicate all emergency egress windows.

10. Braced Wall Details— For each floor

- a. Details shall clearly indicate the type, size and location of all braced walls, braced wall lines and all related dimensions.
- b. Details shall be provided for all portal frame openings, including garage door openings.
- c. References shall be provided showing Michigan Residential Code requirements for each braced wall line vs. what is proposed for each braced wall.
- d. Any special requirements, including tie-downs, strapping, etc., shall be clearly indicated.

Appendix

PHONE DIRECTORY CITY OF ROCHESTER HILLS

Common City of Rochester Hills telephone numbers to refer to as needed during the review, permitting, and building processes.

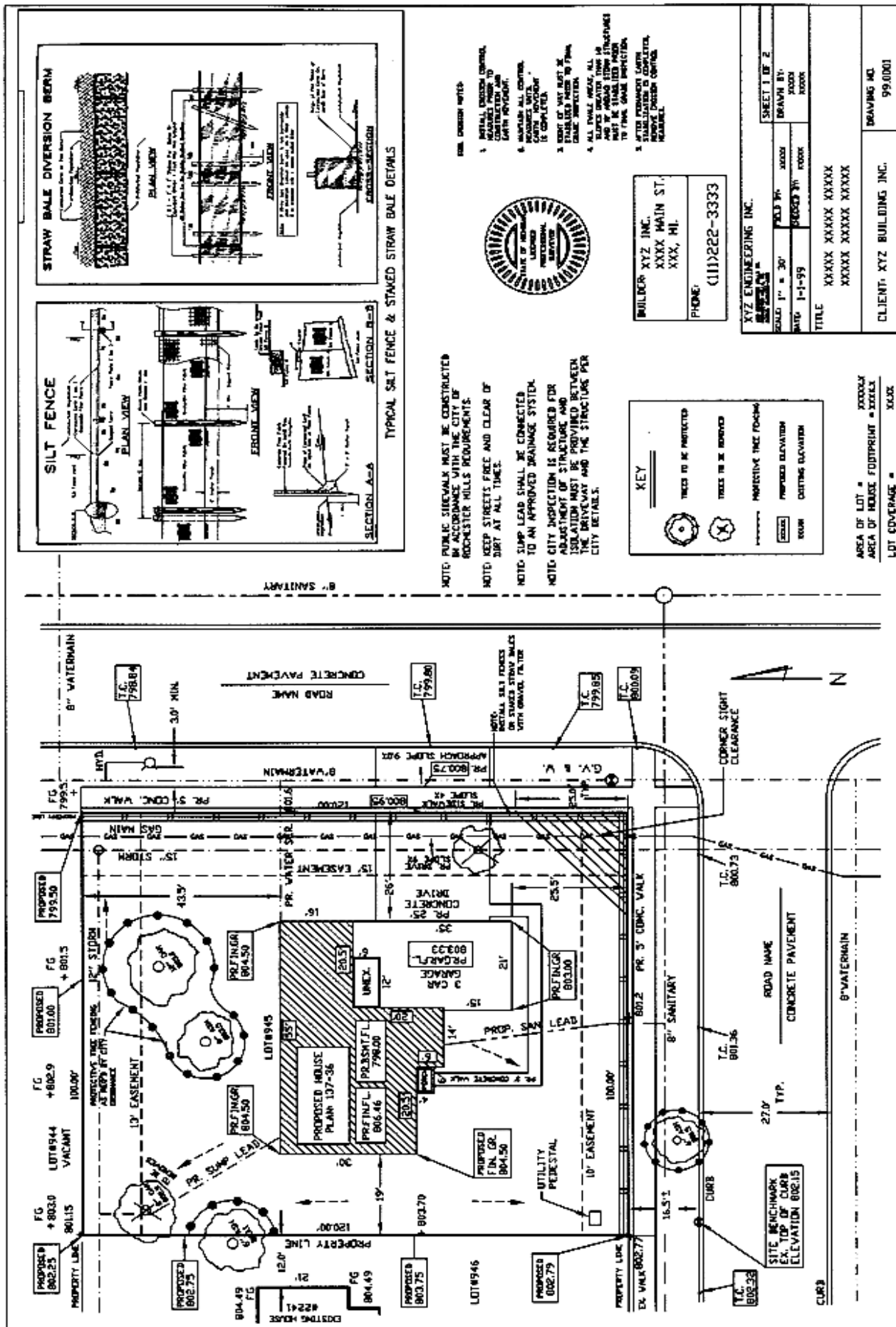
Office Hours: Monday – Friday (except holidays) 8:00 a.m. – 5:00 p.m.
 Building Department Inspector Hours 8:00 a.m. – 9:00 a.m. and 3:30 p.m. – 4:30 pm.

CITY DEPARTMENT:	<u>PHONE</u>	<u>FAX</u>
Accounting	(248) 656-4632	(248) 608-8178
Assessing	(248) 656-4605	(248) 841-2585
Building	(248) 656-4615	(248) 656-4623
Inspection Request Line	(248) 656-4619	
City Clerk	(248) 656-4630	(248) 656-4744
Engineering	(248) 656-4640	(248) 656-4758
Facilities	(248) 656-4658	(248) 656-4670
Fire Prevention	(248) 656-4717	(248) 656-4726
Mayor	(248) 656-4664	(248) 656-4603
Parks, Forestry Division	(248) 656-4673	(248) 841-2576
Planning	(248) 656-4660	(248) 841-2576
Public Service	(248) 656-4685	(248) 656-4758
Water/Sewer Billing	(248) 656-4688	(248) 608-8178

City Website: www.rochesterhills.org

OUTSIDE AGENCIES, PERMITTING AGENCIES:

AT&T (telephone)	1-800-244-4444
Cable:	
Comcast Cablevision	1-800-266-2278
Wide Open West	1-800-848-2278
Consumers Energy	1-800-477-5050
DTE Energy	1-800-477-4747
Michigan Department of Environmental Quality	1-800-662-9278
Michigan Department of Transportation	(248) 483-5100
Michigan Department of Natural Resources	(734) 953-0241
MISS DIG	1-800-482-7171
Oakland County Customer Service	(248) 858-0720
Oakland County Water Resource Commissioner	(248) 858-1105
Oakland County Health Department.....	(248) 858-1280
Road Commission for Oakland County	(248) 858-4804



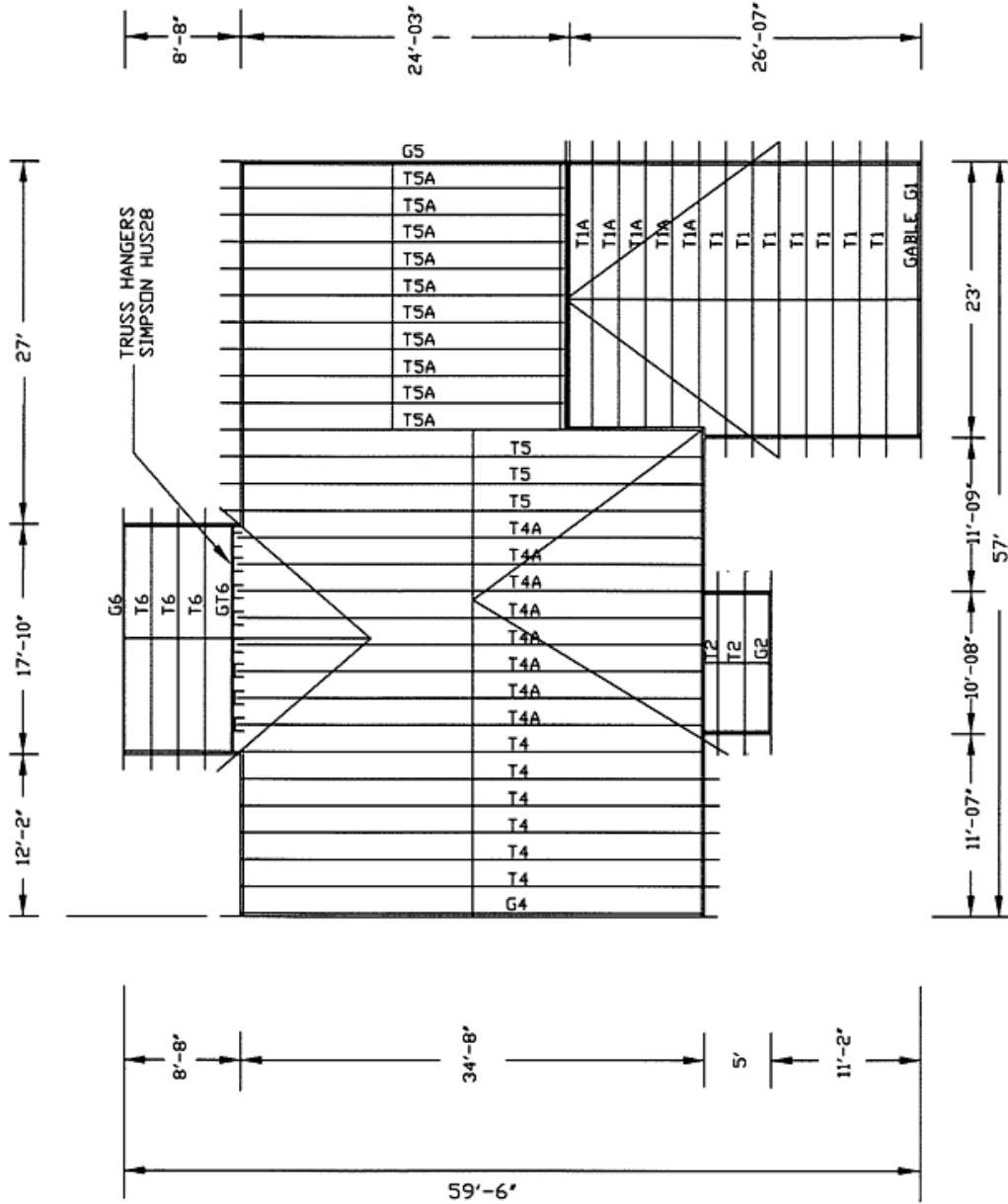
SAMPLE PLOT PLAN

XYZ BUILDERS
 LOT 13
 XXXX STREET
 ROCHESTER HILLS, MI.

ROOF TRUSS NOTES
 TRUSS SPACING: 24" O.C.
 LOADING: 47 PSF
 TDP LL = 30
 TDP DL = 7
 BOT DL = 10
 PITCH = 7/12
 TYP CH = 16"

WALL HEIGHTS
 1ST FLOOR:
 9'-1 1/8"
 2ND FLOOR:
 9'-1 1/8"

1. INDICATE SIZE, TYPE AND LOCATION OF ALL TRUSS HANGERS.



SAMPLE TRUSS SCHEMATIC