

## SPECIFICATIONS FOR DETACHED GARAGES

City of South Euclid Building Department  
1349 South Green Road  
South Euclid, Ohio 44121  
216-381-0400

INFORMATION  
BULLETIN

**GS-1**

JANUARY  
2016

Before a new garage is built or an existing garage is expanded, plans must be approved by the Building Department and a permit issued for the work. A garage building shall conform to all items listed below and contained in the attached "Example Plans" and all other applicable Codes and Ordinances. All work shall conform to the requirements of the 2013 Residential Code of Ohio, with updates effective January 1, 2016.

### REQUIRED PERMITS

- General Building Permit
- Electrical Permit
- Sewer (if applicable) - catch basins (if installed) to be twelve (12") inch minimum.

### REQUIRED DRAWINGS

- Site Plan - Provide dimensions on attached generic site plan.
- Floor Plan - Floor plan shall be drawn to scale. Show size of garage, location of windows, man door (required), and overhead garage door(s).
- Elevations - Elevations shall show height of garage, windows, man door, and garage door(s).
- Wall Section - Typical wall section shall fully describe structural members, materials, foundations and slab, wall construction, and roof construction.

### ZONING CODE REQUIREMENTS

- Area - The minimum floor area for an enclosed off-street parking structure is 260 square feet. For lots that do not exceed 6,000 square feet, the maximum floor area for the parking structure is 500 square feet, provided the structure is built on the same lot as the main building. An additional floor area of 150 square feet may be provided for each 2,000 square feet of lot area by which the lot area exceeds 6,000 square feet and such ratio may be prorated. In any case, however, no such garage on one lot shall exceed a total floor area of 800 square feet or be in excess of 15 feet in height to the ridge.
- Setback - Garage shall be no closer than three (3) feet to any rear or side yard property line for zoning purposes. **Any garage wall or roof projection closer than three (3) feet to a property line must have a fire-resistance rating of 1 hour from both sides. (See item 11 below)**
- Garage Door - No garage door shall exceed seven (7) feet in height.

### REQUIREMENTS (plus all items contained in the attached "Example Drawings")

1. Garage bases over six hundred (600) square feet in area shall have full footers to a depth of not less than 38 inches below finished grade.
2. Slope garage slab to overhead door. Driveway must provide positive drainage to street. Where the driveway slopes down toward the garage, there shall be a low spot in the driveway grade not less than 3 feet outside garage with a transverse grating, whose top is not less than 6 inches below the garage floor.
3. Garages of all types shall have gutters and downspouts. Downspouts are required to drain into a separate storm sewer system, or a combined sewer system, or to an approved place of disposal.
4. Wood framed top plates shall be doubled and shall lap each other at corners to tie walls together.
5. Provide double studs at each corner and frame all openings with double studs.
6. Any garage that is within three (3) feet of the principal structure (house) must have the parallel wall covered by not less than ½ inch gypsum board of equivalent to the interior side of exterior walls.
7. All wood within 8 inches of grade is required to be "preservative treated" or natural decay resistant.
8. All garages with electrical service must conform to the 2014 edition of the National Electrical Code. In each garage with electric power, the branch circuit supplying the receptacles shall not supply outlets outside of the garage. At least one receptacle outlet shall be installed for each car space (NEC 210.52(G)). GFCI protection is required by 210.8(A)(2) for receptacles installed in garages. A separate electrical permit is required.
9. All detached garages must have a man door (2'-6" x 6'-8" minimum size).
10. Garage floor surfaces shall be constructed of concrete. Asphalt is not permitted as a garage floor material.
11. Any garage wall and/or projection closer than three (3) feet to the property line must have a minimum fire-resistance rating of 1 hour-tested in accordance with ASTM E 119 or UL 263 with exposure from both sides. You have the option to submit the rated wall assembly for review or use the wall assembly provided for in this package. Note: additional inspections will be required for the fire rated assembly.

### REQUIRED INSPECTIONS

It is the responsibility of the permit holder to secure all the required inspections. Failure to comply with required inspections may cause revocation of building permit and/or cause court action.

## SPECIFICATIONS FOR DETACHED GARAGES – MATERIALS

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### Required design loads and performance standards

- Structural Wood - fiber-bending stress "f/b" rating of 1450-1500 psi either yellow pine or #2 Douglas fir.
- Manufactured Pre-Engineered Trusses - fiber-bending stress "f/b" rating of 1450-1500 psi
- Wire Mesh - 6x6-W2.9xW2.9 or 40# per 100sf

### COMPLETE THE FOLLOWING MATERIAL LIST

Items not applicable state N/A

SIZE OF GARAGE	_____
FOUNDATION TYPE (circle one)	Type 1A or Type 1B or Type 2 _____
TYPE OF POUROUS FILL	4" GRAVEL OR CRUSHED STONE _____
CONCRETE SLAB THICKNESS	4" _____
SLAB REINFORCEMENT	6x6-w2.9xw2.9 or 40# per 100sf _____
ANCHOR BOLT SIZE, LENGTH, SPACING	1/2" dia. @ 6'-0" o.c., 12" max. from corners and 1 1/2" washer at each bolt _____
EXTERIOR WALL STUD SIZE	2" x 4" @ 16" o.c. _____
EXTERIOR WALL SHEATHING SIZE & GRADE	_____
FIRE RESISTANCE ASSEMBLY (UL #)**	_____
CORNER BRACING (circle one)	Notch into studs (Diagonally from upper to lower plate at both rear and side) _____ 4' x 8' x 1/2" thick plywood or equivalent _____
EXTERIOR WALL FINISH SIDING	_____
ROOF PITCH	_____
ROOF SHEATHING SIZE & GRADE (circle one)	7/16" C-D, C-C, SHEATHING 24/16 SPAN _____ 1/2" C-D, C-C, SHEATHING 24/16 SPAN _____
RAFTER SIZE AND SPACING	2" x 6" @ 16" o.c. _____
ENGINEERED TRUSS SPACING	_____ (must provide truss spec sheet)
CEILING JOIST SIZE AND SPACING	2" x 6" @ 48" o.c. _____
COLLAR TIE SIZE AND SPACING	2" x 4" @ 48" o.c. _____
ROOF SHINGLE TYPE	_____
OVERHANG SOFFIT MATERIAL	_____
GARAGE DOOR HEADER SIZE UP TO 16 FT. (circle one)	Gable Roof - (2) 2x12's with glued plywood flitch plate Reverse Gable Roof - (2) 2x12's with glued and bolted flitch plate or 4"x14" header _____
GARAGE DOOR SIZE (circle one)	16'-0" x 7'-0" or 9'-0" x 7'-0" _____
MAN DOOR HEADER SIZE	(2) 2x6's up to 36" in width _____
WINDOW HEADER SIZE	(2) 2x6's up to 36" in width _____

**\*\*FOR EXTERIOR WALLS OR PROJECTIONS LESS THAN THREE (3) FEET TO THE PROPERTY LINE, INDICATE THE FIRE RESISTANCE CONSTRUCTION. PROVIDE UL ASSEMBLY NUMBER.**

## SPECIFICATIONS FOR DETACHED GARAGES – SITE PLAN

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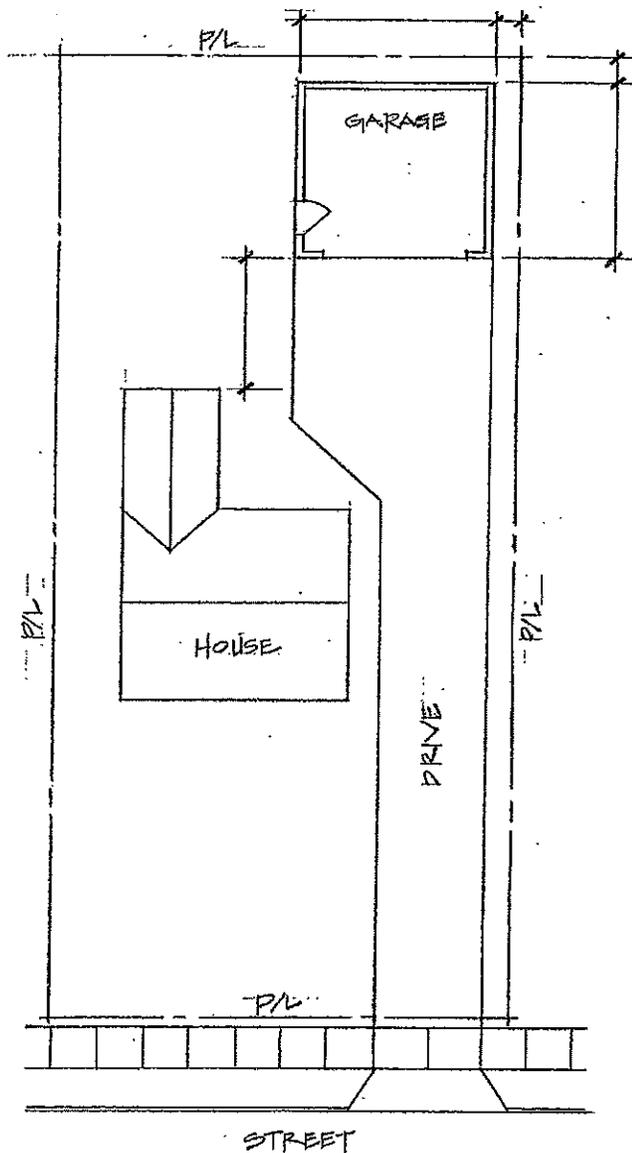
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### SITE PLAN

- Site plan shall be drawn to scale and accurately show lot dimensions, size, and location of principal structure and proposed location of garage.
- Garage shall not be closer than three (3) feet to any lot line (**see requirements for garages located less than three (3) feet to a property line**). See Construction Regulations for distance from principal dwelling.
- Show location and size of storm water downspouts, storm water sewer with connection to existing storm system. Show yard drain if applicable.



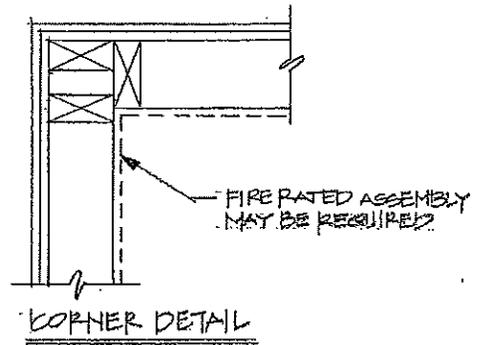
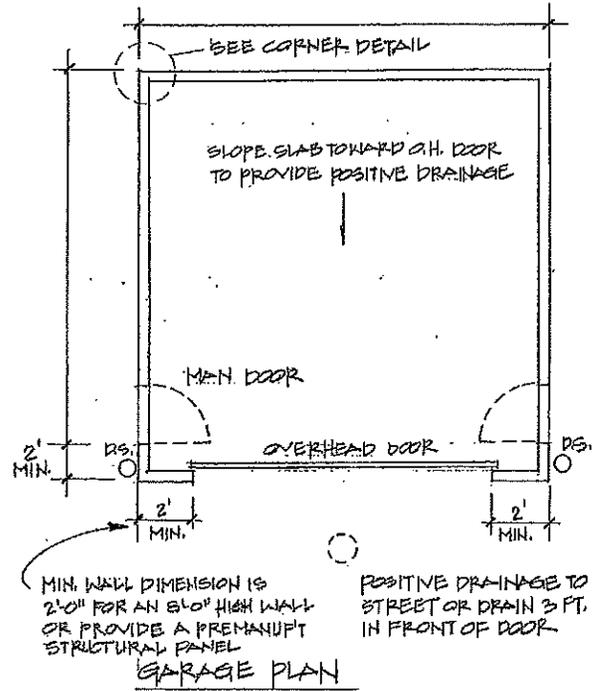
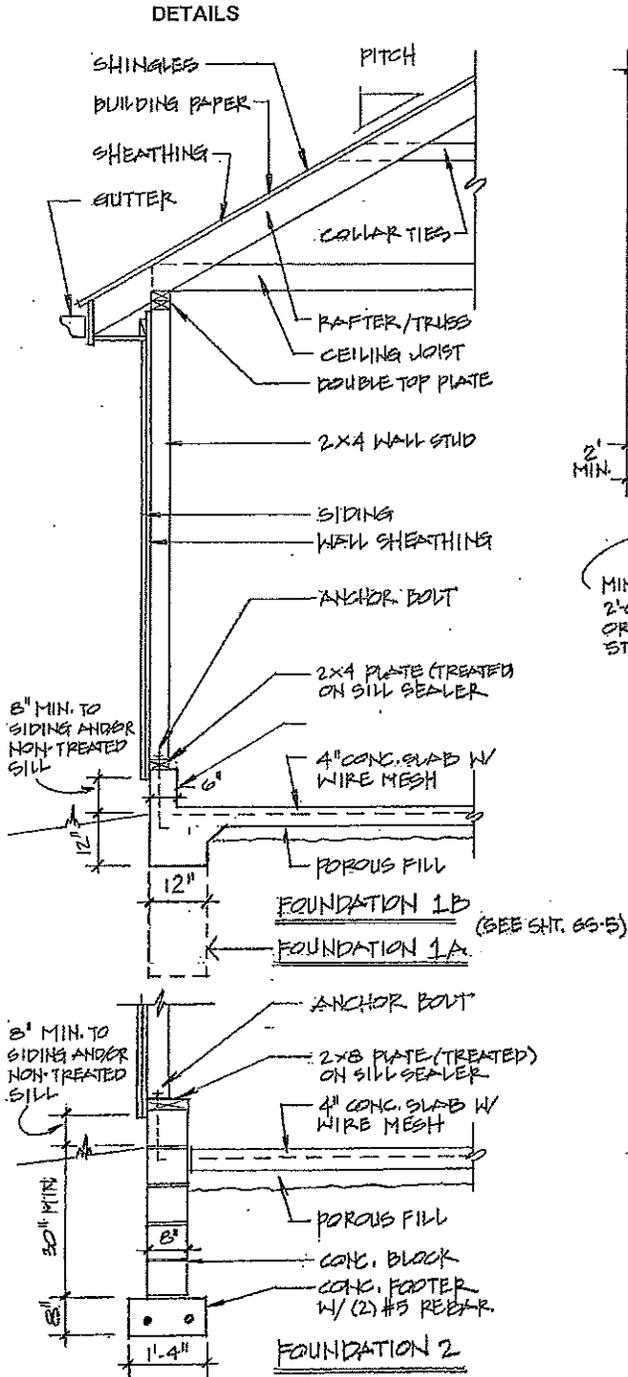
# SPECIFICATIONS FOR DETACHED GARAGES - DETAILS

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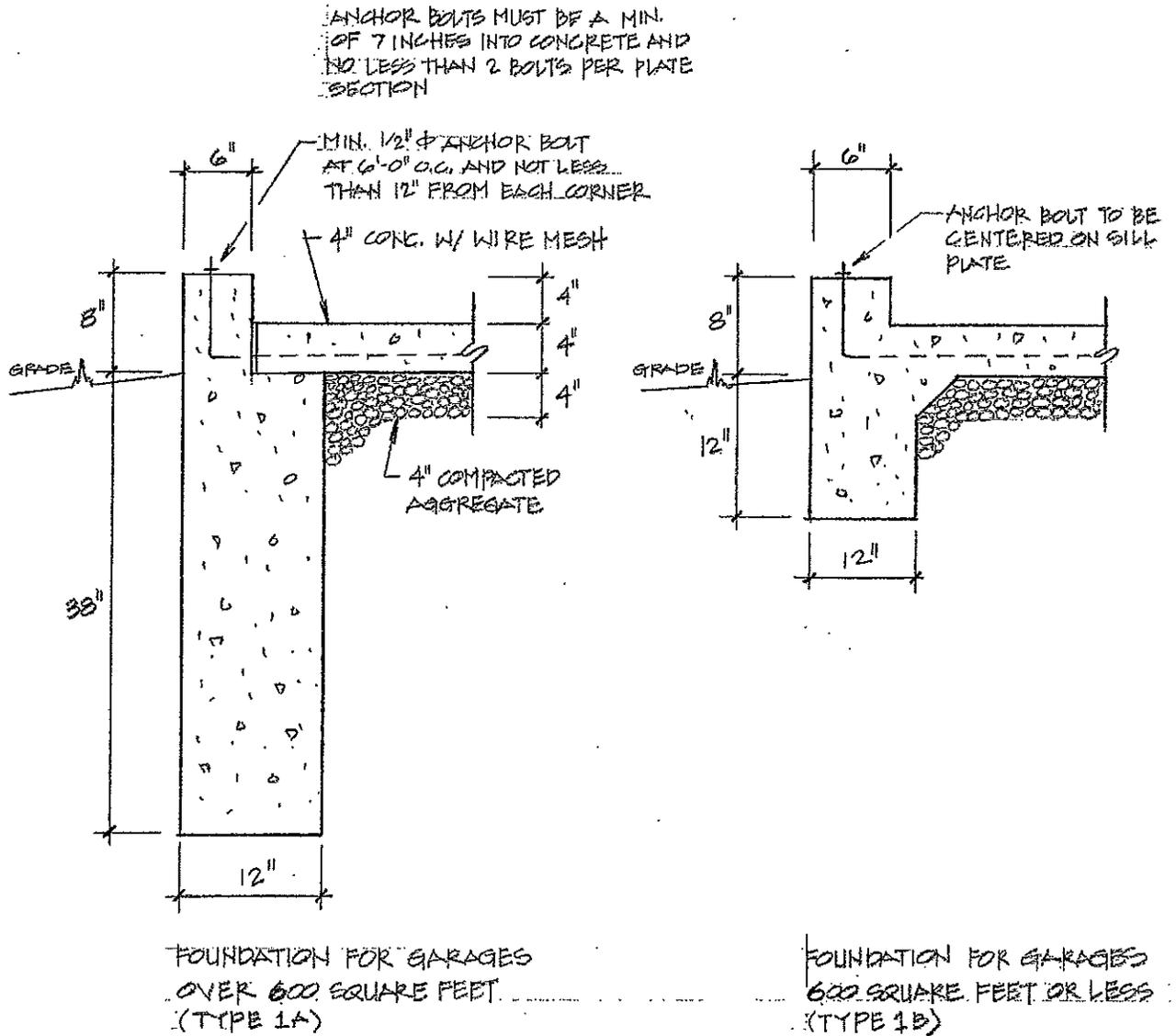
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**GS-5**

JANUARY 2016

The following detail is for clarification of the footing and framing requirements for garages. If the foundation wall is constructed of masonry block, use a 2"x8" plate (treated) in lieu of the 2"x4".



# SPECIFICATIONS FOR DETACHED GARAGES –DETAILS

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The following rated wall assembly is to be used on any wall located closer than 3'-0" to a property line. Prior to the installation of the 5/8" Type X gypsum wallboard on the interior, any insulation and/or vapor barrier inspection must be performed. Prior to any exterior siding, the underlayment must be inspected.

The rated wall assembly is to extend from the concrete curb/slab to the underside of the roof deck. Any overhang must also have a fire-resistance rating of 1 hour.

(Detail – 19<sup>th</sup> Edition GA-600-2009 Gypsum Association Fire Resistance Design Manual Sound Control Gypsum Systems)

GA FILE NO. WP 8130		PROPRIETARY*	1 HOUR FIRE																																	
<p align="center"><b>GYPSUM WALLBOARD, GLASS MAT GYPSUM SUBSTRATE, WOOD STUDS</b></p> <p><b>EXTERIOR SIDE:</b> One layer 5/8" proprietary type X glass mat gypsum substrate (sheathing) applied parallel or at right angles to 2 x 4 wood studs 16" o.c. with galvanized roofing nails, 1 3/4" long, 0.128" shank, 7/16" head, 7" o.c. Exterior surface covered with weather exposed cladding or finish system.</p> <p><b>INTERIOR SIDE:</b> One layer 5/8" proprietary type X glass mat gypsum substrate, glass mat water-resistant gypsum backing board, gypsum wallboard, water-resistant gypsum backing board, or gypsum veneer base applied parallel or at right angles to studs with 6d coated nails, 1 7/8" long, 0.0915" shank, 1/4" heads, 7" o.c.</p> <p>Joints staggered on opposite sides. (LOAD-BEARING)</p>																																				
<p align="center"><b>PROPRIETARY GYPSUM PANEL PRODUCTS</b></p> <table border="0"> <tr> <td>American Gypsum Company LLC</td> <td>-</td> <td>5/8" FireBloc® Type X</td> </tr> <tr> <td>CertainTeed Gypsum Inc.</td> <td>-</td> <td>5/8" ProRoc® Type X Gypsum Panels</td> </tr> <tr> <td></td> <td>-</td> <td>5/8" GlasRoc® Sheathing Type X Gypsum Panels</td> </tr> <tr> <td>Georgia-Pacific Gypsum LLC</td> <td>-</td> <td>5/8" DensGlass Gold® Fireguard®</td> </tr> <tr> <td></td> <td>-</td> <td>5/8" DensArmor Plus® Fireguard® Interior Guard</td> </tr> <tr> <td>Lafarge North America Inc.</td> <td>-</td> <td>5/8" Firecheck® Type X</td> </tr> <tr> <td>Temple-Inland</td> <td>-</td> <td>5/8" Type X</td> </tr> <tr> <td>National Gypsum Company</td> <td>-</td> <td>5/8" e2XP® FIRE-SHIELD® Gypsum Sheathing</td> </tr> <tr> <td></td> <td>-</td> <td>5/8" Gold Bond® Brand FIRE-SHIELD® Gypsum Board</td> </tr> <tr> <td>Temple-Inland</td> <td>-</td> <td>5/8" GreenGlass Type X</td> </tr> <tr> <td></td> <td>-</td> <td>5/8" Type X</td> </tr> </table>			American Gypsum Company LLC	-	5/8" FireBloc® Type X	CertainTeed Gypsum Inc.	-	5/8" ProRoc® Type X Gypsum Panels		-	5/8" GlasRoc® Sheathing Type X Gypsum Panels	Georgia-Pacific Gypsum LLC	-	5/8" DensGlass Gold® Fireguard®		-	5/8" DensArmor Plus® Fireguard® Interior Guard	Lafarge North America Inc.	-	5/8" Firecheck® Type X	Temple-Inland	-	5/8" Type X	National Gypsum Company	-	5/8" e2XP® FIRE-SHIELD® Gypsum Sheathing		-	5/8" Gold Bond® Brand FIRE-SHIELD® Gypsum Board	Temple-Inland	-	5/8" GreenGlass Type X		-	5/8" Type X	<p>Thickness: 4 3/4"</p> <p>Approx. Weight: 7.5 psf</p> <p>Fire Test: WHI-495-0702, 8-7-85; WHI-495-0703, 8-8-85; UL R2717, 89NK3419, 8-29-89; UL R3501, 07NK17992, 12-12-07; UL R6937, 06NK17692, 9-19-08; UL R15187, 02NK31412, 7-17-02; UL Designs U337 &amp; U305</p>
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## REPLACING GARAGE SLAB – DETACHED GARAGES

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**GS-7**

January 2016

- Prior to replacing a garage slab (monolithic footer/slab), the contractor must properly detach the structure from the existing slab and raise to a height to properly remove the existing concrete slab and provide adequate clearance to install the formwork (min. 2"x) prior to concrete placement.
- Prior to raising the existing garage structure, the contractor is responsible to properly brace and support the structure to avoid racking and potential collapse of the structure.
- The contractor is responsible for properly disconnecting any connections to the storm sewer and the electrical service prior to raising the garage. Upon completion of the project, the contractor is required to reinstall the sewer and electrical connections.
- The contractor shall not support the garage in place and pour up to the sill plate. In this manner, the curbing cannot be properly formed. Cutting away of the sill plate and bottom of the wall studs is not permitted.
- The footer is to run continuous on all four sides of the structure and be a minimum of 12 inches below grade on undisturbed ground surface. Proper dimensions of slab/forms must be observed.
- Any deteriorated sill plates must be replaced and new anchor bolts installed in the new curbing. Provide sill sealer over new concrete curbing. All sill plates to be flush with outside edge of curb/foundation.
- All existing structures to be plumb and square.
- Must maintain a minimum headroom clearance of 7'-0" from highest point of slab to underside of roof framing.

