

PRELIMINARY SITE CONDOMINIUM PLANS FOR  
**SADDLEBROOK ORCHARDS**  
 PART OF THE SW 1/4 OF SECTION 28, T. 3N., R. 11E.,  
 CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

**OWNER/APPLICANT/DEVELOPER:**

GIANNA INVESTMENTS, LLC  
 59227 VAN DYKE  
 WASHINGTON, MI 48094  
 CONTACT: MICHAEL MAGNOLI  
 PHONE: (586) 781-5712

**ARCHITECT:**

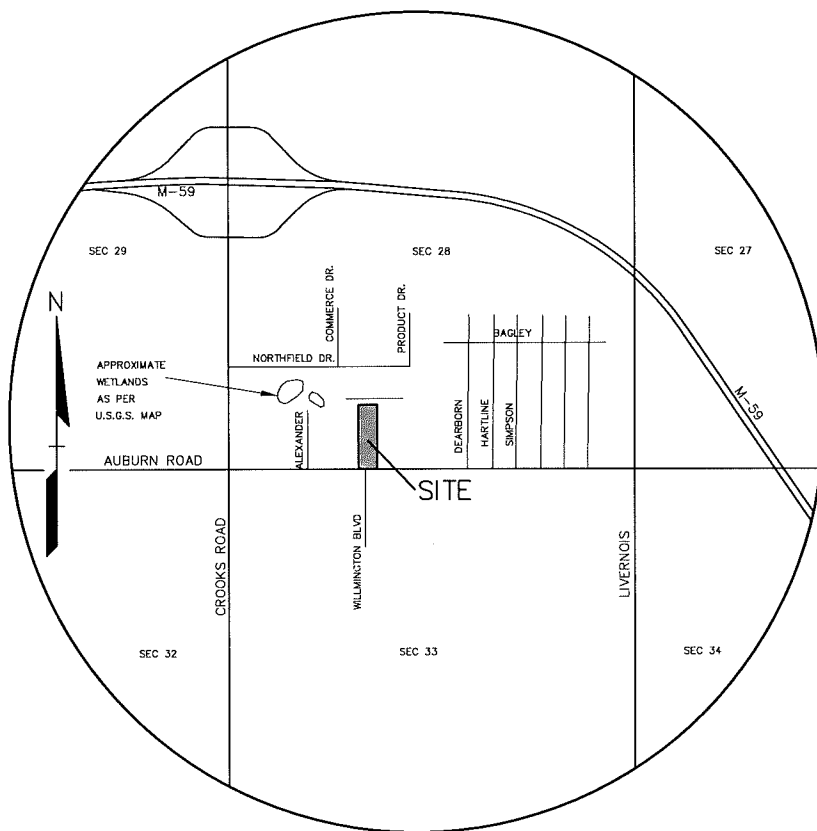
MARTINI SAMARTINO DESIGN GROUP  
 920 E LONG LAKE ROAD  
 TROY, MI 48085  
 PHONE: (248) 524-0445

**CIVIL ENGINEER:**

PEA, INC.  
 2430 ROCHESTER CT, SUITE 100  
 TROY, MI 48083  
 CONTACT: RACHEL SMITH, PE, LEED AP, CFM  
 PHONE: (248) 689-9090 EXT. 111  
 FAX: (248) 689-1044  
 EMAIL: RACHEL.SMITH@PEAINC.COM

**LANDSCAPE ARCHITECT:**

PEA, INC.  
 7927 NEMCO WAY, SUITE 115  
 BRIGHTON, MI 48116  
 CONTACT: JEFF SMITH  
 PHONE: (517) 546-8583  
 FAX: (517) 546-8973  
 EMAIL: JSMITH@PEAINC.COM



LOCATION MAP  
 NO SCALE

**LEGAL DESCRIPTION:**

PROPERTY DESCRIPTION: PARCEL ID # 15-28-300-029  
 THE FOLLOWING IS THE DESCRIPTION OF A PARCEL OF LAND LOCATED IN THE SOUTHWEST 1/4 OF SECTION 28, T3N, R11E, CITY OF ROCHESTER HILLS, FORMERLY AVON TOWNSHIP, OAKLAND COUNTY, MICHIGAN, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 28; TH N 89°23'17" E 1598.44 FT ALONG THE SOUTH LINE OF SAID SECTION 28 AND THE CENTERLINE OF AUBURN ROAD, 120 FT WIDE, TO THE POINT OF BEGINNING; TH N 00°22'02" W 831.90 FT; TH N 89°23'24" E 261.20 FT; TH S 00°25'39" E 831.89 FT; TH S 89°23'17" W 262.07 FT ALONG THE SOUTH LINE OF SAID SECTION 28 AND THE CENTERLINE OF SAID AUBURN ROAD TO THE POINT OF BEGINNING. THE ABOVE DESCRIBED PARCEL OF LAND CONTAINS 4.997 ACRES.

**INDEX OF DRAWINGS:**

- COVER SHEET
- P-1 TOPOGRAPHIC SURVEY
- P-2 PRELIMINARY SITE PLAN
- P-3 PRELIMINARY GRADING PLAN
- P-4 PRELIMINARY UTILITY PLAN
- P-5 PRELIMINARY DETAIL SHEET
- P-6 PRELIMINARY DETAIL SHEET
- T-1.0 TREE PRESERVATION PLAN
- T-1.1 TREE LIST
- L-1.0 LANDSCAPE PLAN
- L-2.0 LANDSCAPE DETAILS
- 1 OF 8 2600 GARAGE LEFT - FOUNDATION PLAN
- 2 OF 8 2600 GARAGE LEFT - FLOOR PLAN
- 3 OF 8 2600 GARAGE LEFT - ELEVATIONS 'A'
- 4 OF 8 2600 GARAGE LEFT - BUILDING SECTION
- 5 OF 8 2600 GARAGE LEFT - ELEVATIONS 'B'
- 6 OF 8 2600 GARAGE LEFT - ELEVATIONS 'C'
- 7 OF 8 2600 GARAGE LEFT - PARTIAL FLOOR PLAN 'C'
- 8 OF 8 2600 GARAGE LEFT - DETAILS
- 1 OF 8 2600 GARAGE RIGHT - FOUNDATION PLAN
- 2 OF 8 2600 GARAGE RIGHT - FLOOR PLAN
- 3 OF 8 2600 GARAGE RIGHT - ELEVATIONS 'A'
- 4 OF 8 2600 GARAGE RIGHT - BUILDING SECTION
- 5 OF 8 2600 GARAGE RIGHT - ELEVATIONS 'B'
- 6 OF 8 2600 GARAGE RIGHT - ELEVATIONS 'C'
- 7 OF 8 2600 GARAGE RIGHT - PARTIAL FLOOR PLAN 'C'
- 8 OF 8 2600 GARAGE RIGHT - DETAILS

**CAUTION!**

THE LOCATION AND DIMENSIONS OF EXISTING UTILITIES AND STRUCTURES ARE SHOWN AS PROVIDED BY THE RECORD DRAWINGS AND FIELD SURVEY. THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ROCHESTER HILLS AND OAKLAND COUNTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ROCHESTER HILLS AND OAKLAND COUNTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ROCHESTER HILLS AND OAKLAND COUNTY.

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CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ROCHESTER HILLS AND OAKLAND COUNTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ROCHESTER HILLS AND OAKLAND COUNTY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ROCHESTER HILLS AND OAKLAND COUNTY.

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 f: 248.689.1044  
 www.peainc.com

GIANNA INVESTMENTS, LLC 59227 VAN DYKE WASHINGTON, MI 48094	COVER SHEET	DES. RLS/TMK I DN. RLS/TMK SUR. KIEFT P. M. JD
SADDLEBROOK ORCHARDS PART OF THE SW 1/4 OF SECTION 28, T. 3N., R. 11E., CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN		

ORIGINAL ISSUE DATE: OCTOBER 20, 2016
PEA JOB NO 2016-137
SCALE: NONE
DRAWING NUMBER: <b>COVER</b>

#16-029

NOT FOR CONSTRUCTION

KREF: S:\PROJECTS\2016\2016137\DWG\16137-TOPOBASE.DWG  
 KREF: S:\PROJECTS\2016\2016137\DWG\16137-SITE PLANS\16137-029.DWG  
 KREF: S:\PROJECTS\2016\2016137\DWG\16137-PLAN REVIEW 1.15.16.DWG



**BENCHMARKS (PER KIET ENGINEERING SURVEY) (USGS DATUM)**

BM #1  
ARROW ON HYDRANT  
LOT 15 OF NORTHFIELD INDUSTRIAL PARK  
ELEV. - 815.32

BM #2  
PK NAIL IN EAST FACE OF 36" OAK (#140)  
ELEV. - 814.45

**FLOODPLAIN NOTE:**  
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE "X", AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 28125C0393F DATED SEPTEMBER, 29, 2006.

**REFERENCE DRAWINGS**

KEPT ENGINEERING FINAL CONSTRUCTION PLANS DATED 6/25/07  
KEPT ENGINEERING EXISTING CONDITIONS PLAN AND BENCHMARKS DATED 3/16/07

**TOPOGRAPHIC AND BOUNDARY SURVEY DISCLAIMER:**  
TOPOGRAPHIC AND BOUNDARY SURVEY, INCLUDING PROPERTY LINES, LEGAL DESCRIPTION, EXISTING UTILITIES, EXISTING ELEVATIONS, EXISTING PHYSICAL FEATURES AND STRUCTURES WAS PROVIDED BY KIET ENGINEERING.

PEA, INC. WILL NOT BE HELD RESPONSIBLE FOR THE ACCURACY OF THE SURVEY OR FOR DESIGN ERRORS/OMISSIONS RESULTING FROM SURVEY INACCURACIES.

**Fire Department Notes:**

- Fire lanes shall be designated by the fire code official, and shall be conspicuously posted on both sides of the fire lane, with fire lane signs spaced not more than 100 feet apart. Fire lane signs shall read "No Stopping, Standing, Parking, Fire Lane", and shall conform to the MUTCD.
- Construction sites shall be safeguarded in accordance with IFD 2006 Chapter 14.
- Open burning is not permitted including the burning of trash, debris, or land clearing materials. Open burning for warming of sand and/or water for the preparation of mortar shall be within the City of Rochester Hills Burn Permit Guidelines.
- Building Construction Type V. Building square footage is 2800 sf.

**SITE DATA:**

**LOCATION OF PROJECT:**  
WEST AUBURN ROAD (NORTH SIDE OF WEST AUBURN ROAD, EAST OF CROOKS)

**SIZE OF PROPERTY:**  
5.0 ACRES (GROSS), 4.64 ACRES (NET)

**PROPOSED USE OF PROPERTY:**  
NINE (9) DETACHED, SINGLE FAMILY HOMES

**CURRENT ZONING:**  
R-4, ONE-FAMILY RESIDENTIAL DISTRICT WITH MR MIXED RESIDENTIAL OVERLAY

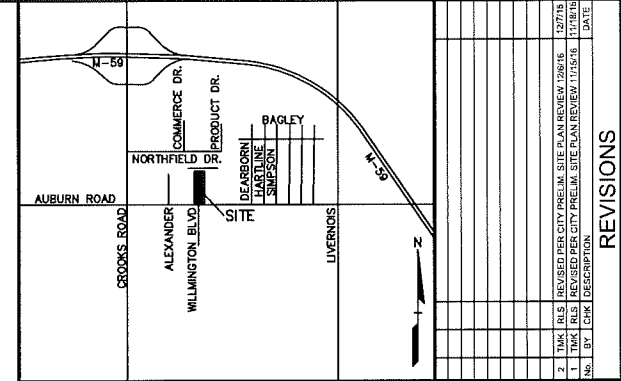
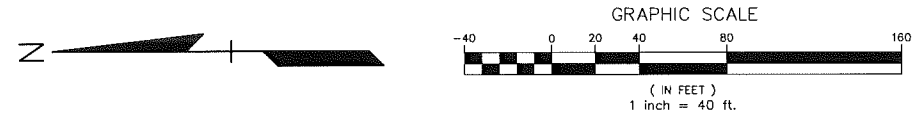
**SURROUNDING PROPERTY DETAILS:**

DIRECTION	ZONING	USE
NORTH	REC-W	REGIONAL EMPLOYMENT CENTER WORKPLACE
SOUTH	R-4	ONE-FAMILY RESIDENTIAL DISTRICT
EAST	R-4	ONE-FAMILY RESIDENTIAL DISTRICT WITH MR MIXED RES. OVERLAY
WEST	R-4	ONE-FAMILY RESIDENTIAL DISTRICT WITH MR MIXED RES. OVERLAY

**REQUIRED AND PROVIDED LOT DIMENSIONS:**

	REQUIRED	PROVIDED
FRONT	25 FOOT SETBACK	25 FOOT SETBACK
REAR	35 FOOT SETBACK	35 FOOT SETBACK
SIDES	10 FOOT MIN. (ONE), 20 FOOT TOTAL	10 FOOT MIN. (ONE), 20 FOOT TOTAL
DENSITY (# OF UNITS)	3.4 UNIT/ACRE=17 UNITS	1.8 UNIT/ACRE=9 UNITS
LOT SIZE PER UNIT	8640 SQ. FT.*	8689 SQ. FT. SMALLEST 9867 SQ. FT. AVERAGE
MAXIMUM HEIGHT	30 FEET, 2 STORY	MAX 30' FEET, 2 STORY
LOT WIDTH	80 FEET	86.5 FEET SMALLEST 104 FEET LARGEST 93.3 FEET AVERAGE
MAX. LOT AREA COVERED BY BUILDINGS	30 PERCENT	25 PERCENT
MIN. FLOOR AREA PER UNIT	912 SQ. FT.	MAX 912 SQ. FT.

\* THE LOT SIZE AVERAGE OPTION HAS BEEN APPLIED PER SECTION 138-5.201.  
MIN. UNIT AREA REQUIRED = 7,000 SQ. FT.  
MIN. UNIT WIDTH AT BLDG. SETBACK REQUIRED = 60.00 FEET



**LEGEND**

● IRON FOUND	⊗ BRASS PLUG SET	⊙ SEC. CORNER FOUND
⊙ IRON SET	⊙ MONUMENT FOUND	⊙ RECORDED
⊙ NAIL FOUND	⊙ MONUMENT SET	⊙ MEASURED
⊙ NAIL & CAP SET		⊙ CALCULATED

**EXISTING**

- ELEC—W—C—ELEC. PHONE OR CABLE TV OR LINE, POLE & GUY WIRE
- UG-CATV—UG-CATV UNDERGROUND CABLE TV, CATV PRESTAB
- UG-PHONE—TELEPHONE U.S. CABLE, PEDESTAL & MANHOLE
- ELEC—W—C—ELEC. U.S. CABLE, MANHOLE, METER & MANHOLE
- W—W—W—WATER MAIN, VALVE & GAS LINE MARKER
- S—S—S—SEWER MAIN, CLEANOUT & MANHOLE
- S—S—S—STORM SEWER, CLEANOUT & MANHOLE
- S—S—S—COMBINED SEWER & MANHOLE
- S—S—S—SQUARE, ROUND & BENTH CATCH BASIN
- S—S—S—POST MOUNTED VALVE
- S—S—S—WATER VALVE, BOY/FRONT VALVE, BOIL SERVICE SHUTOFF
- S—S—S—MATERIAL, TRANSFORMER, IRRIGATION CONTROL VALVE
- S—S—S—UNIDENTIFIED STRUCTURE
- S—S—S—SPOT ELEVATION
- S—S—S—CONTOR LINE
- S—S—S—FENCE
- S—S—S—QUAD NAIL
- S—S—S—STREET LIGHT
- S—S—S—SOIL

**PROPOSED**

- S—S—S—CONC. CONCRETE
- S—S—S—ASPH. ASPHALT
- S—S—S—GRAVEL GRAVEL SHOULDER
- S—S—S—METALD METALD

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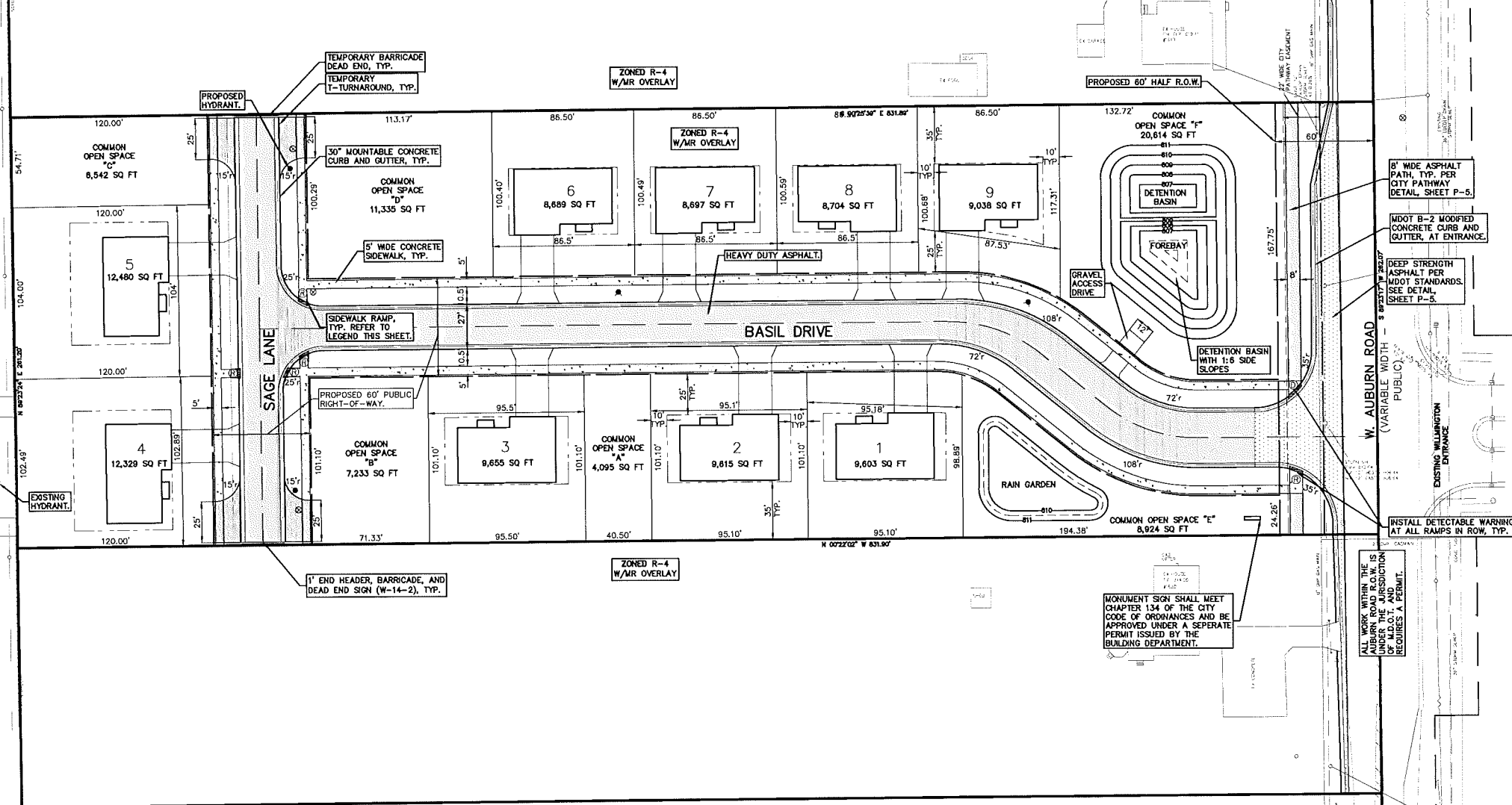
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**REVISIONS**

NO.	DATE	DESCRIPTION
1	10/20/16	ISSUE FOR PERMIT
2	10/20/16	REVISED PER CITY PRELIM. SITE PLAN REVIEW 10/20/16
3	10/20/16	REVISED PER CITY PRELIM. SITE PLAN REVIEW 10/20/16
4	10/20/16	REVISED PER CITY PRELIM. SITE PLAN REVIEW 10/20/16
5	10/20/16	REVISED PER CITY PRELIM. SITE PLAN REVIEW 10/20/16



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**PROJECT AND SITE DESCRIPTION:**  
PROPOSED CONSTRUCTION OF 9-LOT SINGLE FAMILY DETACHED SITE CONDOMINIUM PROJECT ON THE NORTH SIDE OF W. AUBURN ROAD. ACCESS TO ALL UNITS WILL BE VIA PROPOSED ROAD OFF OF W. AUBURN ROAD. THE PROPOSED RESIDENTIAL USE IS PERMITTED BY-RIGHT IN THE R-4, ONE-FAMILY RESIDENTIAL DISTRICT WITH MR MIXED RESIDENTIAL OVERLAY. THE SITE IS CURRENTLY A PARTIALLY CLEARED LOT.

**SITE ARRANGEMENT:**  
THE PROPOSED SITE CONDOMINIUM CONSISTS OF 9 UNITS WITH LOT SIZES RANGING BETWEEN 8,689 SQUARE FEET TO 12,480 SQUARE FEET, WITH AN AVERAGE LOT SIZE OF 9,868 SQUARE FEET. ALL UNITS FRONT ON THE NEW PUBLIC STREET CONNECTION. THE PROPOSED LOTS ARE REGULAR IN SHAPE, ALLOW FOR ADEQUATE SETBACKS, AND PERMIT SUFFICIENT SPACE FOR THE HOMES AND INGRESS AND EGRESS FOR EACH UNIT ACCORDING TO THE LOT SIZING AVERAGING OPTION.

**NATURAL RESOURCES:**  
THE SITE IS CURRENTLY A PARTIALLY CLEARED LOT. SEE TREE PRESERVATION PLAN FOR EXISTING TREES TO BE SAVED.

**FLOODPLAIN:**  
ACCORDING TO FEMA FLOODPLAIN MAP THERE ARE NO IMPACTS TO THE PROPERTY.

**ACCESS AND CIRCULATION:**  
**VEHICULAR ACCESS AND CIRCULATION:**  
VEHICULAR ACCESS TO ALL UNITS WILL BE VIA A NEW PUBLIC STREET OFF OF W. AUBURN ROAD. THE NEW ROAD WILL HAVE A SIXTY (60) FOOT WIDE RIGHT-OF-WAY AND WILL HAVE STUBS PROVIDED NEAR THE BACK OF THE SITE FOR FUTURE CONNECTIONS FOR POSSIBLE SUBDIVISION EXTENSION IF/FUTURE LOTS ARE DEVELOPED. AN ACCESS DRIVE TO THE STORMWATER DETENTION BASIN IS PROVIDED.

**PEDESTRIAN ACCESS AND CIRCULATION:**  
A 5-FOOT WIDE SIDEWALK IS PROVIDED AT BOTH SIDES OF THE NEW ROAD AND AN 8-FOOT WIDE SIDEWALK IS PROVIDED ALONG W. AUBURN. RAMPS HAVE BEEN INDICATED.

**UTILITIES:**  
UTILITIES ARE PLACED WITHIN STREET RIGHT-OF-WAY, OR WITHIN EASEMENTS APPROVED AS TO SIZE AND LOCATION BY THE CITY ENGINEER.

ALL SITES ARE SERVED BY PUBLIC WATER, SANITARY SEWER, STORM WATER AND DETENTION SYSTEMS CONSTRUCTED TO CITY STANDARDS, AT THE EXPENSE OF THE DEVELOPER. EASEMENTS OVER THESE SYSTEMS SHALL BE CONVEYED AND RECORDED BEFORE OCCUPANCY PERMITS ARE ISSUED FOR DWELLING UNITS.

**INSTALL DETECTABLE WARNING AT ALL RAMPS IN ROW, TYP.**

**MONUMENT SIGN SHALL MEET CHAPTER 134 OF THE CITY CODE OF ORDINANCES AND BE APPROVED UNDER A SEPARATE PERMIT ISSUED BY THE BUILDING DEPARTMENT.**

**ALL WORK WITHIN THE AUBURN ROAD R.O.W. IS CONSIDERED TO BE A PUBLIC WORK AND REQUIRES A PERMIT.**

**SIDEWALK RAMP LEGEND:**

- SIDEWALK RAMP "TYPE R" ⊙
- SIDEWALK RAMP "TYPE D" ⊙

REFER TO M.D.O.T. R-28 STANDARD RAMP AND DETECTABLE WARNING DETAILS ON SHEET P-6



**BENCHMARKS**  
(PER KIET ENGINEERING SURVEY)  
(USGS DATUM)

BM #1  
ARROW ON HYDRANT  
LOT 15 OF NORTHFIELD INDUSTRIAL PARK  
ELEV. - 815.32

BM #2  
PK NAIL IN EAST FACE OF 36" OAK (#740)  
ELEV. - 814.45

**FLOODPLAIN NOTE:**  
BY GRAPHICAL PLOTTING, SITE IS WITHIN ZONE "X". AREA DETERMINED TO BE OUTSIDE OF THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FLOOD INSURANCE RATE MAP NUMBER 28125C0393F DATED SEPTEMBER, 29, 2006.

**REFERENCE DRAWINGS**  
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KIET ENGINEERING EXISTING CONDITIONS PLAN AND BENCHMARKS DATED 3/16/07

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**25 YEAR STORM DETENTION DESIGN**  
(OAKLAND COUNTY DESIGN METHOD)

**DETECTION AREA**

Contributing Area (A):	4.64	AC (total inlet parcel area)
Allowable Discharge (Qa):	8.52	C.F.S. (* 10-year undetained flow per OCWRC)
Coefficient of Runoff (C):	0.42	

Calculation of Required Discharge/Acre  
 $Q_0 = ((Q_a)/(A)(C))$  4.37  
 $T = 25 * ((8062.5/Q_0))^{0.5}$  17.94

**25 Year Storage Volume Required:**  
 $V_s = (12500(C)(T+25)) - 40Q_0(T)$  2252.23  
 $V_t = (V_s)(A)(C)$  4,389.15 cf required

**FOREBAY**

CONTOUR	AREA	VOLUME	CUMM
808	1,036.00		
809	1,850.00	1,443.00	1,443.00
810	2,853.00	2,351.50	3,794.50

**DETECTION**

CONTOUR	AREA	VOLUME	CUMM
807.5	5.00		
808	489.00	123.50	123.50
809	1,078.00	783.50	907.00
810	1,855.00	1,468.00	2,375.00

**COMBINED**

CONTOUR	AREA	VOLUME	CUMM
811	6,582.00	5,646.50	11,016.00

**Water Quality Volume:**  
 Water Quality Volume Required = 1815 \* A \* C = 3,537.07 cf  
 Volume provided in forebay = 3,794.50 cf

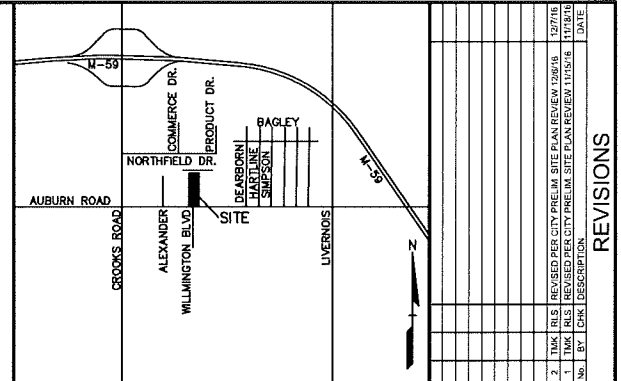
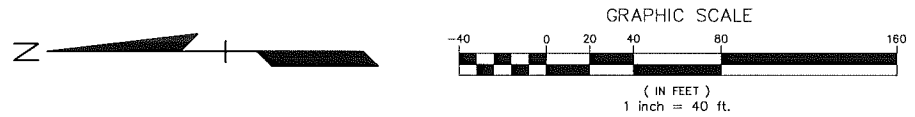
Recharge Volume:  
Recharge Volume Required = 1815 \* A \* C = 3,537.07

**RAIN GARDEN**

CONTOUR	AREA	VOLUME	CUMM
789.5	1,889.00		
790	2,503.00	1,098.00	1,098.00

**STONE VOIDS:**

AREA =	2,503.00 sq ft
DEPTH =	2.5 ft
Volume =	6,257.5 cf
void space =	40 %
void volume =	2,503 cf
<b>Total Volume =</b>	<b>3,601.00</b>



**LEGEND**

● IRON FOUND  
 ○ IRON SET  
 ■ NAIL FOUND  
 □ NAIL & CAP SET

○ BRASS PLUG SET  
 ○ MONUMENT FOUND  
 ○ MONUMENT SET

○ SEC. CORNER FOUND  
 ○ RECORDED  
 ○ MEASURED  
 ○ CALCULATED

**EXISTING**

— 04—ELEC—4A—○—○— ELEC. PHONE OR CABLE TV OR LINE, POLE & GUY WIRE  
 — 04—CATV—○— UNDERGROUND CABLE TV, CABLE FEEDLINE  
 — 04—PHONE—○— TELEPHONE U.G. CABLE, FEEDLINE & MANHOLE  
 — 04—ELEC—04—○— ELECTRIC U.G. CABLE, MANHOLE, METER & HANDHOLE  
 — 04—GAS—○— GAS MAIN, VALVE & GAS LINE MARKER  
 — 04—WATER—○— WATER MAIN, VALVE, SERVICE LINE, TAPPING SLAVE & VALVE  
 — 04—SEWER—○— SANITARY SEWER, CLEANOUT & MANHOLE  
 — 04—STORM—○— STORM SEWER, CLEANOUT & MANHOLE  
 — 04—COMB—○— COMBINED SEWER & MANHOLE  
 — 04—SQUARE—○— SQUARE, ROAD & SIDEWALK CATCH BASIN  
 — 04—POST—○— POST INDICATOR VALVE  
 — 04—WATER—○— WATER VALVE, RESERVANT VALVE BOX, SERVICE SHUTOFF  
 — 04—MIXED—○— MIXED, TRANSFORMER, REGULATOR, CONTROL VALVE  
 — 04—UNID—○— UNIDENTIFIED STRUCTURE

**PROPOSED**

○ 471-1  
 ○ 471-2  
 ○ 471-3

— 070— CONTOUR LINE  
 — 070— FINISH GRADE  
 — 070— STREET LIGHT  
 — 070— SIGN  
 — 070— CONCRETE  
 — 070— ASPHALT  
 — 070— GRAVEL SHOULDER  
 — 070— METAL

— 070— 12" HEAVY ADK DUTY ONLY  
 — 070— HEAVY REP DUTY STRENGTH

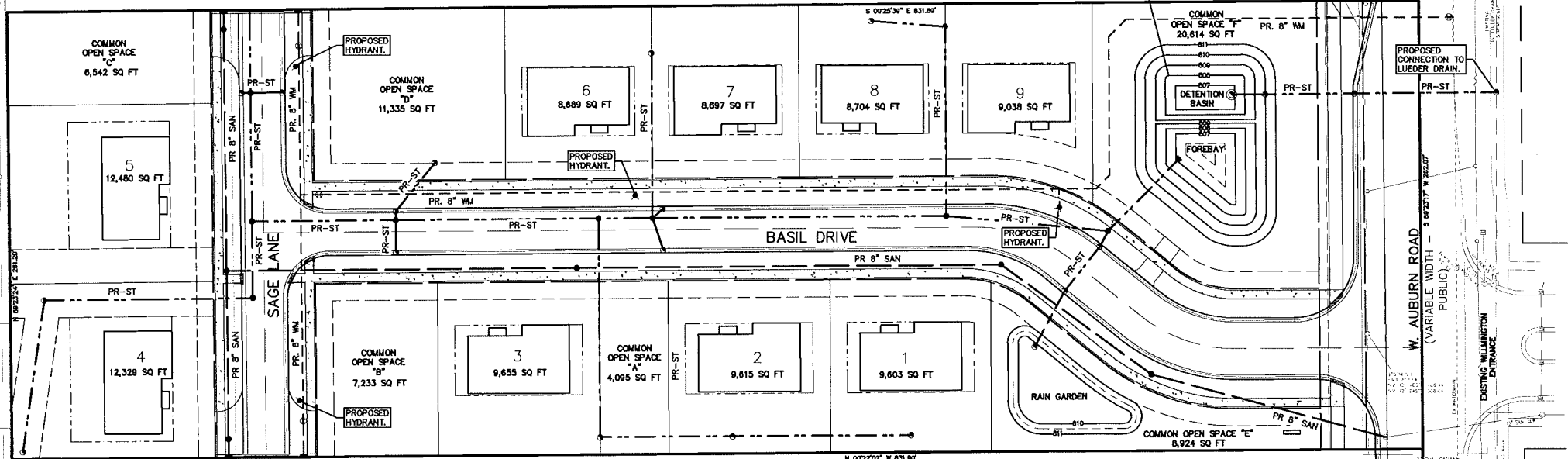
**SANITARY SEWER BASIS OF DESIGN:**  
(Unit Factors Based on Oakland County Unit Assignment Factors)

**RESIDENTIAL**

No. Single Family Lots	9
Expected People per Lot	3.5
Total Expected Population	31.5
Average Daily Flow	100.0 G.P.C.P.D.

**TOTAL**

Average Flow (100 GPCPD)	3,150 G.P.D.
	0.005 C.F.S.
Peaking Factor (PF)	2.46
PF = (18+sqrt(P))/((4+sqrt(P)))	
Peak Flow (G.D.P.)	7,738 G.P.D.
Peak Flow (C.F.S.)	0.012 C.F.S.
8" Pipe Capacity Provided =	0.764 C.F.S.



- GENERAL UTILITY NOTES:**
1. ALL UTILITY LINES, STRUCTURES AND TRENCHES SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF ROCHESTER HILLS STANDARDS AND REQUIREMENTS.
  2. NO PHYSICAL CONNECTION TO THE EXISTING WATER MAIN CAN BE MADE UNTIL THE NEW WATER LEAD PASSES ALL PRESSURE AND BACTERIOLOGICAL TESTS.
  3. ALL WATER LEADS 2" AND SMALLER SHALL BE TYPE 'X' COPPER.
  4. ALL WATER MAINS SHALL BE PROVIDED WITH 6 FEET MINIMUM COVER.
  5. ALL STORM LEADS SHALL BE P.V.C. SOLID WALL PIPE, SCHEDULE 40 UNLESS OTHERWISE NOTED. ALL 12" DIAMETER STORM SEWER AND LARGER SHALL BE REINFORCED CONCRETE (RCP) CL-IV, UNLESS OTHERWISE NOTED.
  6. ALL 8" SANITARY SEWER LEADS SHALL BE P.V.C. SOLID WALL PIPE, SDR 23.5 W/ RUBBER GASKET JOINTS.
  7. BOXES ARE TO BE PROVIDED FOR ALL CLEANOUTS. THE BOXES SHALL BE E.J.I.W. # 1565 OR APPROVED EQUAL.
  8. ALL NECESSARY FITTINGS, THRUST BLOCKS, RESTRAINING GLANDS, BLOW OFFS, ETC. FOR WATER LEAD SYSTEM ARE CONSIDERED INCIDENTAL TO THIS PROJECT. THE CONTRACTOR SHALL INSTALL THESE ITEMS AS NECESSARY AND AS REQUIRED BY THE CITY.
  9. A SOIL EROSION PERMIT WILL BE REQUIRED FROM THE CITY OF ROCHESTER HILLS.
  10. ALL ELECTRIC, TELEPHONE AND CABLE TV SERVICES WILL BE UNDERGROUND.

**LEGAL DESCRIPTION:**

PROPERTY DESCRIPTION: PARCEL ID # 15-28-300-029  
 THE FOLLOWING IS THE DESCRIPTION OF A PARCEL OF LAND LOCATED IN THE SOUTHWEST 1/4 OF SECTION 28, T34N, R11E, CITY OF ROCHESTER HILLS, FORMERLY AVON TOWNSHIP, OAKLAND COUNTY, MICHIGAN, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHWEST CORNER OF SAID SECTION 28; TH N 89°23'17" E 1598.44 FT ALONG THE SOUTH LINE OF SAID SECTION 28 AND THE CENTERLINE OF AUBURN ROAD, 120 FT WIDE, TO THE POINT OF BEGINNING; TH N 00°22'02" W 831.90 FT; TH N 89°23'24" E 281.20 FT; TH S 00°23'39" E 831.89 FT; TH S 89°23'17" W 282.07 FT ALONG THE SOUTH LINE OF SAID SECTION 28 AND THE CENTERLINE OF SAID AUBURN ROAD TO THE POINT OF BEGINNING. THE ABOVE DESCRIBED PARCEL OF LAND CONTAINS 4.997 ACRES.

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**PRELIMINARY UTILITY PLAN**  
**SADDLEBROOK ORCHARDS**  
CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

DES: RLST/MK | DN: RLST/MK | SUR: KIET | P.M. | JD  
 15-28-300-029-137 SADDLEBROOK SITE COND. - 04/04/2016 FROM UP - 04/04/2016 FROM 10/13/17

ORIGINAL ISSUE DATE:  
OCTOBER 20, 2016

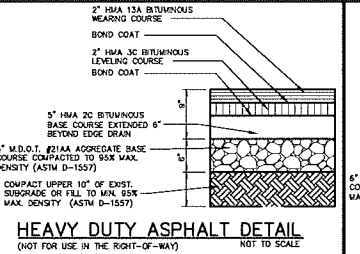
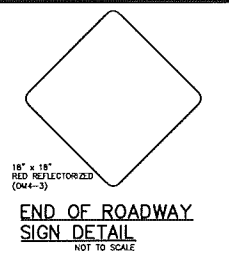
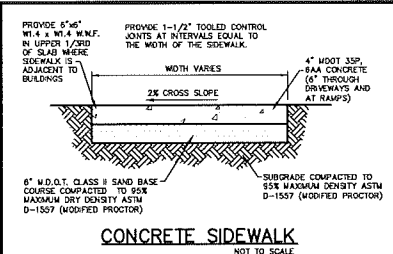
PEA JOB NO. 2016-137

SCALE: 1" = 40'

DRAWING NUMBER:  
**P-4**

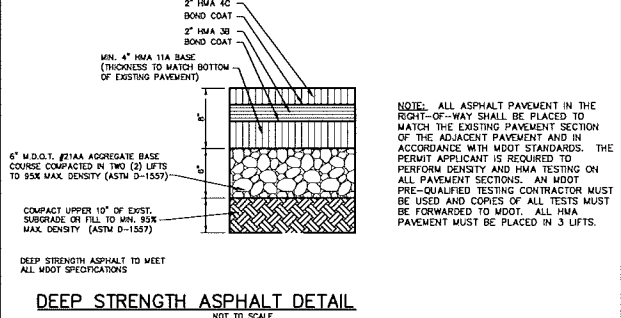
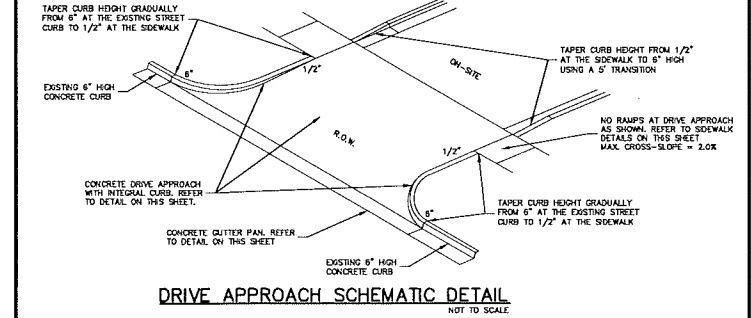
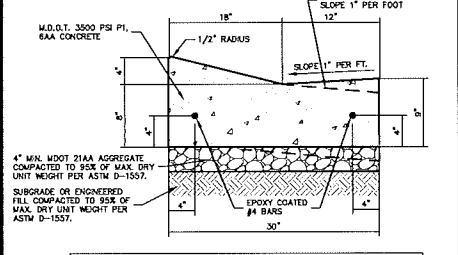
**GENERAL NOTES:**

1. ALL CONSTRUCTION AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ROCHESTER HILLS, ROCO, M.D.O.T.
2. THE CONTRACTOR MUST CONTACT THE ENGINEER SHOULD THEY ENCOUNTER ANY DESIGN ISSUES DURING CONSTRUCTION. IF THE CONTRACTOR MAKES DESIGN MODIFICATIONS WITHOUT THE WRITTEN DIRECTION OF THE DESIGN ENGINEER, THE CONTRACTOR DOES SO AT HIS OWN RISK.
3. ALL NECESSARY PERMITS, TESTING, BONDS AND INSURANCES ETC., SHALL BE PAID FOR BY THE CONTRACTOR. THE OWNER SHALL PAY FOR ALL ROCHESTER HILLS INSPECTION FEES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL DURING THE PERIODS OF CONSTRUCTION. THIS SHALL BE CONSIDERED INCIDENTAL TO THE JOB.
5. THE CONTRACTOR SHALL NOTIFY MISS DIG (811) AND REPRESENTATIVES OF OTHER UTILITIES IN THE VICINITY OF THE WORK A MINIMUM OF 72 HOURS PRIOR TO START OF CONSTRUCTION (EXCLUDING WEEKENDS AND HOLIDAYS) FOR LOCATION AND STAKING OF ON-SITE UTILITY LINES. IF NO NOTIFICATION IS GIVEN AND DAMAGE RESULTS, SAID DAMAGE WILL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR. IF EXISTING UTILITY LINES ARE ENCOUNTERED THAT CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.
6. CONTRACTOR TO VERIFY THAT THE PLANS AND SPECIFICATIONS ARE THE VERY LATEST PLANS AND SPECIFICATIONS AND FURTHERMORE, VERIFY THAT THESE PLANS AND SPECIFICATIONS HAVE BEEN APPROVED. ALL ITEMS CONSTRUCTED BY THE CONTRACTOR PRIOR TO RECEIVING FINAL APPROVAL, HAVING TO BE ADJUSTED OR RE-DONE, SHALL BE AT THE CONTRACTOR'S EXPENSE. SHOULD THE CONTRACTOR ENCOUNTER A CONFLICT BETWEEN THESE PLANS AND/OR SPECIFICATIONS, THEY SHALL SEEK CLARIFICATION IN WRITING FROM THE ENGINEER BEFORE COMMENCEMENT OF CONSTRUCTION. FAILURE TO DO SO SHALL BE AT THE CONTRACTOR'S EXPENSE TO THE CONTRACTOR.
7. ALL PROPERTIES OR FACILITIES IN THE SURROUNDING AREAS, PUBLIC OR PRIVATE, DESTROYED OR OTHERWISE DISTURBED DUE TO CONSTRUCTION, SHALL BE REPLACED AND/OR RESTORED TO THE ORIGINAL CONDITION BY THE CONTRACTOR.
8. MANHOLE, CATCH BASIN, GATE VALVES AND HYDRANT FINISH GRADES MUST BE CLOSELY CHECKED AND APPROVED BY THE ENGINEER BEFORE THE CONTRACTOR'S WORK IS CONSIDERED COMPLETE.
9. CONTRACTOR SHALL REMOVE AND DISPOSE OF OFF-SITE ANY TREES, BRUSH, STUMPS, TRASH OR OTHER UNWANTED DEBRIS AT THE OWNER'S DIRECTION, INCLUDING OLD BUILDING FOUNDATIONS AND FLOORS. BURNING OF TRASH, STUMPS OR OTHER DEBRIS SHALL NOT BE PERMITTED.
10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADING, SIGNAGE, LIGHTS AND TRAFFIC CONTROL DEVICES TO PROTECT THE WORK AND SAFELY MAINTAIN TRAFFIC IN ACCORDANCE WITH LOCAL REQUIREMENTS AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST EDITION). THE DESIGN ENGINEER, OWNER, CITY AND STATE SHALL NOT BE HELD LIABLE FOR ANY CLAIMS RESULTING FROM ACCIDENTS OR DAMAGES CAUSED BY THE CONTRACTOR'S FAILURE TO COMPLY WITH TRAFFIC AND PUBLIC SAFETY REGULATIONS DURING THE CONSTRUCTION PERIOD.
11. ALL EXCAVATIONS SHALL BE SLOPED, SHORED OR BRACED IN ACCORDANCE WITH MI-OSHA REQUIREMENTS. THE CONTRACTOR SHALL PROVIDE AN ADEQUATELY CONSTRUCTED AND BRACED SHORING SYSTEM FOR EMPLOYEES WORKING IN AN EXCAVATION THAT MAY EXPOSE EMPLOYEES TO THE DANGER OF MOVING GROUND.



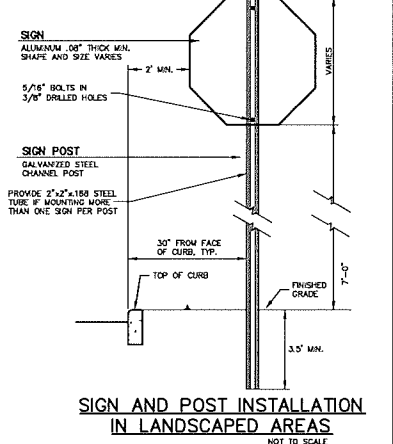
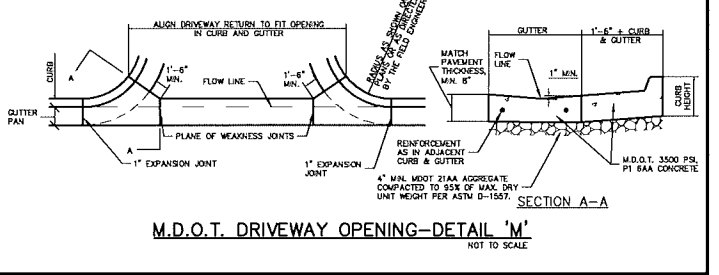
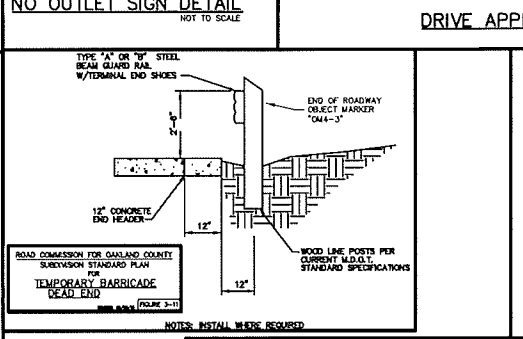
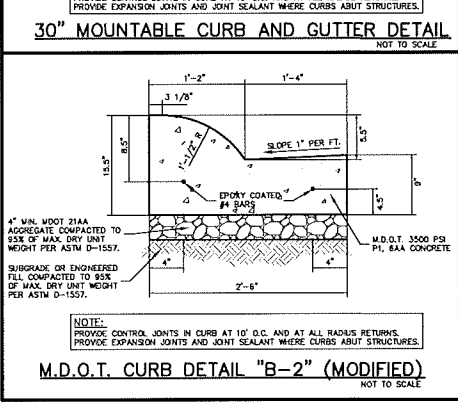
**PAVING NOTES:**

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF ROCHESTER HILLS AND M.D.O.T.
2. IN AREAS WHERE NEW PAVEMENTS ARE BEING CONSTRUCTED, THE TOPSOIL AND SOIL CONTAINING ORGANIC MATTER SHALL BE REMOVED PRIOR TO PAVEMENT CONSTRUCTION.
3. ON-SITE FILL CAN BE USED IF THE SPECIFIED COMPACTION REQUIREMENTS CAN BE ACHIEVED. IF ON-SITE SOIL IS USED, IT SHOULD BE CLEAN AND FREE OF FROZEN SOIL, ORGANICS, OR OTHER DELETERIOUS MATERIALS.
4. THE FINAL SUBGRADE/EXISTING AGGREGATE BASE SHOULD BE THOROUGHLY PROFFERLOD USING A FULLY LOADED TANDEM AXLE TRUCK OR FRONT END LOADER UNDER THE OBSERVATION OF A GEOTECHNICAL/PAVEMENT ENGINEER. LOOSE OR YIELDING AREAS THAT CANNOT BE MECHANICALLY STABILIZED SHOULD BE REINFORCED USING GEORGRIDS OR REMOVED AND REPLACED WITH ENGINEERED FILL OR AS DICTATED BY FIELD CONDITIONS.
5. SUBGRADE UNDERCUTTING, INCLUDING BACKFILLING SHALL BE PERFORMED TO REPLACE MATERIALS SUSCEPTIBLE TO FROST HEAVING AND UNSTABLE SOIL CONDITIONS. ANY EXCAVATIONS THAT MAY BE REQUIRED BELOW THE TOPSOIL IN FILL SECTIONS OR BELOW SUBGRADE IN CUT SECTIONS, WILL BE CLASSIFIED AS SUBGRADE UNDERCUTTING.
6. SUBGRADE UNDERCUTTING SHALL BE PERFORMED WHERE NECESSARY AND THE EXCAVATED MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR. ANY SUBGRADE UNDERCUTTING SHALL BE BACKFILLED WITH SAND OR OTHER SIMILAR APPROVED MATERIAL. BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM UNIT WEIGHT (PER ASTM D-1557) UNLESS OTHERWISE SPECIFIED.
7. BACKFILL UNDER PAVED AREAS SHALL BE AS SPECIFIED ON DETAILS.
8. ANY SUB-GRADE WATERING REQUIRED TO ACHIEVE REQUIRED DENSITY SHALL BE CONSIDERED INCIDENTAL TO THE JOB.
9. FINAL PAVEMENT ELEVATIONS SHOULD BE SO DESIGNED TO PROVIDE POSITIVE SURFACE DRAINAGE. A MINIMUM SURFACE SLOPE OF 1.0 PERCENT IS RECOMMENDED.
10. CONSTRUCTION TRAFFIC SHOULD BE MINIMIZED ON THE NEW PAVEMENT. IF CONSTRUCTION TRAFFIC IS ANTICIPATED ON THE PAVEMENT STRUCTURE, THE INITIAL LIFT THICKNESS COULD BE INCREASED AND PLACEMENT OF THE FINAL LIFT COULD BE DELAYED UNTIL THE MAJORITY OF THE CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED. THIS ACTION WILL ALLOW REPAIR OF LOCALIZED FAILURE, IF ANY DOES OCCUR, AS WELL AS REDUCE LOAD DAMAGE ON THE PAVEMENT SYSTEM.



**GENERAL UTILITY NOTES:**

1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE CITY OF ROCHESTER HILLS AND M.D.O.T.
2. ALL TRENCHES UNDER OR WITHIN THREE (3) FEET OR THE FORTY-FIVE (45) DEGREE ZONE OF INFLUENCE LINE OF EXISTING AND/OR PROPOSED PAVEMENT, BUILDING PAD OR DRIVE APPROACH SHALL BE BACKFILLED WITH SAND COMPACTED TO AT LEAST NINETY-FIVE (95) PERCENT OF MAXIMUM UNIT WEIGHT (ASTM D-1557). ALL OTHER TRENCHES TO BE COMPACTED TO 90% OR BETTER.
3. WHENEVER EXISTING MANHOLES OR SEWER PIPE ARE TO BE TAPPED, DRILL HOLES 4" CENTER TO CENTER, AROUND PERIPHERY OF OPENING TO CREATE A PLANE OF WEAKNESS JOINT BEFORE BREAKING SECTION OUT.
4. THE LOCATIONS AND DIMENSIONS SHOWN ON THE PLANS FOR EXISTING UTILITIES ARE IN ACCORDANCE WITH AVAILABLE INFORMATION WITHOUT UNCOVERING AND MEASURING. THE DESIGN ENGINEER DOES NOT GUARANTEE THE ACCURACY OF THIS INFORMATION OR THAT ALL EXISTING UNDERGROUND FACILITIES ARE SHOWN. CONTRACTOR TO FIELD VERIFY UTILITIES.
5. THE CONTRACTOR MUST COORDINATE TO ENSURE ALL REQUIRED PIPES, CONDUITS, CABLES AND SLEEVES ARE PROPERLY PLACED FOR THE INSTALLATION OF GAS, ELECTRIC, PHONE, CABLE, IRRIGATION, ETC. IN SUCH A MANNER THAT WILL FACILITATE THEIR PROPER INSTALLATION PRIOR TO THE PLACEMENT OF THE PROPOSED PAVEMENT AND LANDSCAPING.
6. REFER TO CITY OF ROCHESTER HILLS STANDARD DETAILS FOR PIPE BEDDING DETAILS.
7. REFER TO CITY OF ROCHESTER HILLS STANDARD DETAIL SHEETS FOR ADDITIONAL INFORMATION.

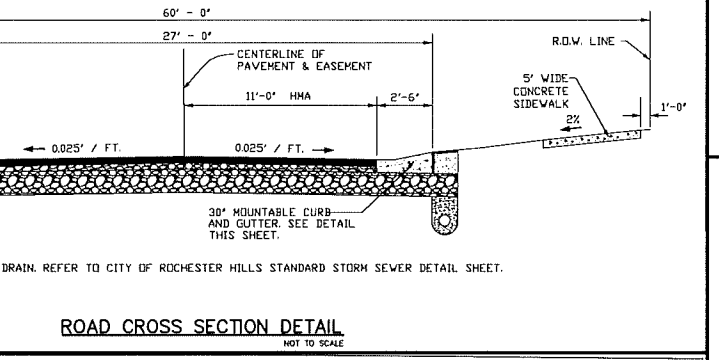
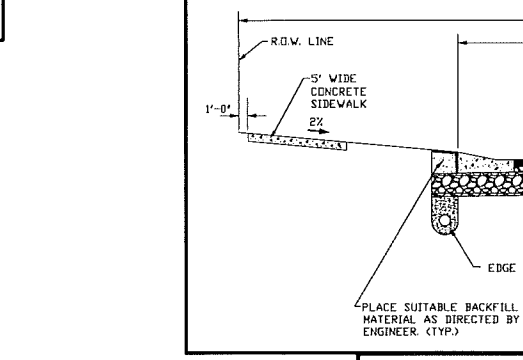


**STORM SEWER NOTES:**

1. ALL STORM SEWER 12" AND LARGER SHALL BE ROP CLASS IV UNLESS OTHERWISE NOTED. REFER TO CITY STANDARD DETAILS SHEETS FOR STANDARD BEDDING DETAILS.
2. JOINTS FOR ALL STORM SEWER 12" AND LARGER SHALL BE MODIFIED TONGUE AND GROOVE JOINT WITH RUBBER GASKETS UNLESS SPECIFIED OTHERWISE (ASTM C-443).
3. ALL STORM SEWER LEADS SHALL BE CONSTRUCTED OF PVC SCHEDULE 40 PIPE AT 1.00% MINIMUM SLOPE WITH GATED JOINTS, UNLESS OTHERWISE NOTED.

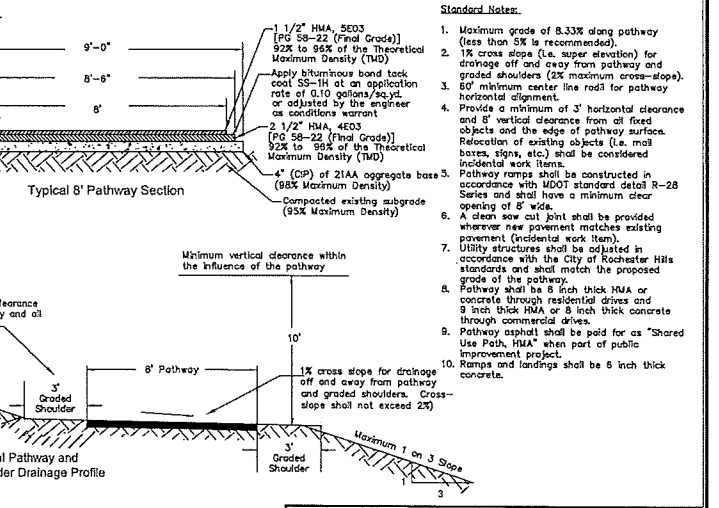
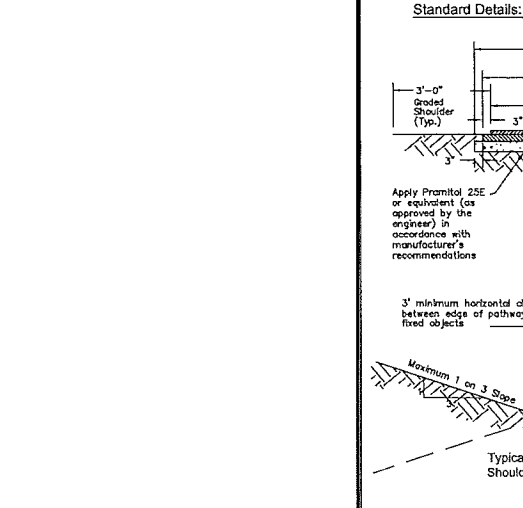
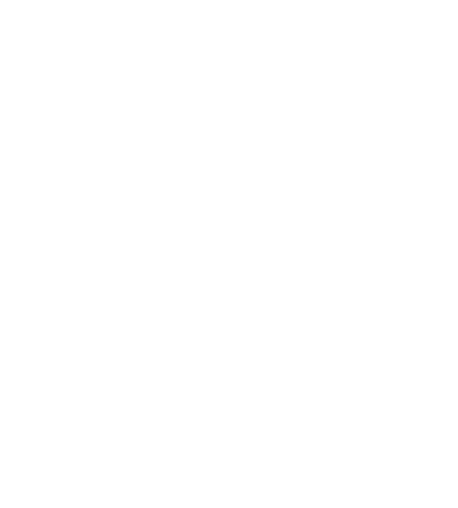
**WATER MAIN NOTES:**

1. ALL WATER MAIN SHALL BE INSTALLED WITH A MINIMUM COVER OF 8' BELOW FINISH GRADE. WHEN WATER MAINS MUST BE INSTALLED UNDER A STORM SEWER OR SANITARY SEWER, THE SECTIONS WHICH ARE DEEPER THAN NORMAL SHALL BE KEPT TO A MINIMUM LENGTH BY THE USE OF VERTICAL TWENTY TWO AND A HALF (22.5) DEGREE BENDS, PROPERLY ANCHORED.
2. ALL TEE'S, BENDS, CONNECTIONS, ETC. ARE CONSIDERED INCIDENTAL TO THE JOB.
3. PHYSICAL CONNECTIONS SHALL NOT BE MADE BETWEEN EXISTING AND NEW WATER MAINS UNTIL TESTING IS SATISFACTORILY COMPLETED.
4. MAINTAIN 10' HORIZONTAL CLEARANCE BETWEEN OUTER EDGE OF WATERMAIN AND ANY SANITARY SEWER OR STRUCTURE.
5. ALL WATER MAIN SHALL BE DUCTILE IRON CLASS 54 WITH POLYETHYLENE WRAP.



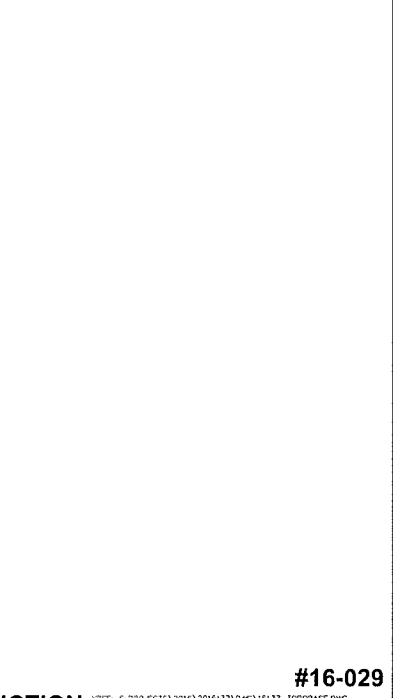
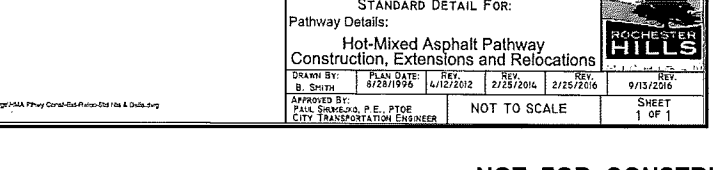
**SANITARY SEWER NOTES:**

1. DOWNSPOUTS, WEEP TILE, FOOTING DRAINS OR ANY CONDUIT THAT CARRIES STORM OR GROUND WATER SHALL NOT BE ALLOWED TO DISCHARGE INTO A SANITARY SEWER.
2. ALL SANITARY LEADS SHALL BE CONSTRUCTED OF PVC SDR 23.5 AT 1.00% MINIMUM SLOPE.
3. ALL SANITARY SEWER SHALL BE CONSTRUCTED OF PVC TRUSS PIPE WITH A MINIMUM DIAMETER OF 8" PER CITY REQUIREMENTS.
4. JOINTS FOR P.V.C. SOLID WALL PIPE SHALL BE ELASTOMERIC (RUBBER GASKET) AS SPECIFIED IN A.S.T.M. DESIGNATION D-3212.



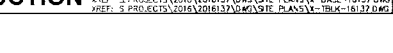
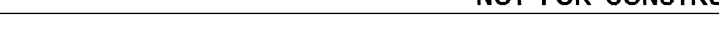
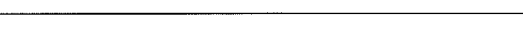
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NO.	REVISION	DATE
1	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
2	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
3	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
4	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
5	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
6	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
7	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
8	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
9	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
10	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
11	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
12	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
13	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
14	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
15	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
16	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
17	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
18	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
19	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016
20	ISSUED PER CITY PRELIMINARY SITE PLAN REVIEW	10/20/2016

**CAUTION!**

THE LOCAL AND STATE DEPARTMENT OF TRANSPORTATION (MDOT) HAS A POLICY OF NOT PROVIDING FINANCIAL ASSISTANCE TO PRIVATE CONTRACTORS FOR THE CONSTRUCTION OF PAVEMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AND STATE DEPARTMENT OF TRANSPORTATION (MDOT) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AND STATE DEPARTMENT OF TRANSPORTATION (MDOT) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE LOCAL AND STATE DEPARTMENT OF TRANSPORTATION (MDOT) PRIOR TO THE START OF CONSTRUCTION.

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**PRELIMINARY DETAIL SHEET**  
**SADDLEBROOK ORCHARDS**  
CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

DES: RLST/MK | DN: RLST/MK | SUR: KIEFT | P.M.: JD

ORIGINAL ISSUE DATE:  
OCTOBER 20, 2016

PEA JOB NO. 2016-137

SCALE: 1" = NONE

DRAWING NUMBER:  
**P-5**



**CITY OF ROCHESTER HILLS NOTES:**  
**TREE PLANTING RESTRICTIONS:**  
 Prior approval is required to plant any tree or shrub on the public right-of-way. All trees and shrubs must be planted at least 10' from the edge of the public road.  
 (Trees must be planted at least 15' away from curb or road edge where the speed limit is more than 35 mph).  
 Shade trees and shrubs must be planted at least 5' from the edge of the public walkway. Evergreen and ornamental trees must be planted at least 10' from the edge of the public walkway. No trees or shrubs may be planted within the triangular area formed at the intersection of any street right-of-way lines at a distance along each line of 25' from their point of intersection. No trees or shrubs may be planted in the triangular area formed at the intersection of any driveway with a public walkway at a distance along each line of 15' from their point of intersection. All trees and shrubs must be planted at least 10' from any fire hydrant. Shade and evergreen trees must be at least 15' away from the nearest overhead wire. Trees must be planted a minimum of 5' from an underground utility, unless the city's Landscape Architect requires a greater distance.

**CLOSING COMMENT:**  
 Prior to the release of the performance bond, the City of Rochester Hills Forestry Division needs to inspect all trees, existing or planted, to identify any that pose a hazard to the safe use of the public right-of-way. Forestry may require the developer to remove, and possibly replace, any such trees.  
 NOTE: THESE REQUIREMENTS ABOVE ARE INCORPORATED INTO THE PLAN

**GENERAL PLANTING NOTES:**

- LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING SITE CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
- CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICE SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
- ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK AND SHALL SATISFY AMERICAN ASSOCIATION OF NURSEYMEN STANDARD FOR NURSERY STOCK. ALL LANDSCAPE MATERIAL SHALL BE NORTHERN GROWN, NO. 1, GRADE.
- CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.
- THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
- ALL SINGLE STEM SHADE TREES TO HAVE STRAIGHT TRUNKS AND SYMMETRICAL CROWNS.
- ALL SINGLE TRUNK SHADE TREES TO HAVE A CENTRAL LEADER; TREES WITH FORKED OR IRREGULAR TRUNKS WILL NOT BE ACCEPTED.
- ALL MULTI STEM TREES SHALL BE HEAVILY BRANCHED AND HAVE SYMMETRICAL CROWNS. ONE SIDED TREES OR THOSE WITH THIN OR OPEN CROWNS SHALL NOT BE ACCEPTED.
- ALL EVERGREEN TREES SHALL BE HEAVILY BRANCHED AND FULL TO THE GROUND, SYMMETRICAL IN SHAPE AND NOT SHEARED FOR THE LAST FIVE GROWING SEASONS.
- ALL TREES TO HAVE CLAY OR CLAY LOAM BALLS, TREES WITH SAND BALLS WILL BE REJECTED.
- NO MACHINERY IS TO BE USED WITHIN THE DRIP LINE OF EXISTING TREES; HAND GRADE ALL LAWN AREAS WITHIN THE DRIP LINE OF EXISTING TREES.
- ALL TREE LOCATIONS SHALL BE STAKED BY LANDSCAPE CONTRACTOR AND ARE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION OF THE PLANT MATERIAL.
- IT IS MANDATORY THAT POSITIVE DRAINAGE IS PROVIDED AWAY FROM ALL BUILDINGS.
- ALL PLANTING BEDS SHALL RECEIVE 3" SHREDDED HARDWOOD BARK MULCH, SEE SPECIFICATIONS. SHREDDED PALETTE AND DIED MULCH WILL NOT BE ACCEPTED.
- ALL LANDSCAPED AREAS SHALL RECEIVE 3" COMPACTED TOPSOIL.
- SEE SPECIFICATIONS FOR ADDITIONAL COMMENTS, REQUIREMENTS, PLANTING PROCEDURES AND WARRANTY STANDARDS.
- FOR NON-LAWN SEED MIX AREAS, AS NOTED ON PLAN, BRUSH MOW ONCE SEASONALLY FOR INVASIVE SPECIES CONTROL.

**TREE PLANT LIST:**

NOTE: 9 TREES TO BE PROVIDED BY CITY - ONE PER LOT ALONG BASIL DRIVE AND SAGE LANE (SPECIES TO BE SPECIFIED BY CITY)

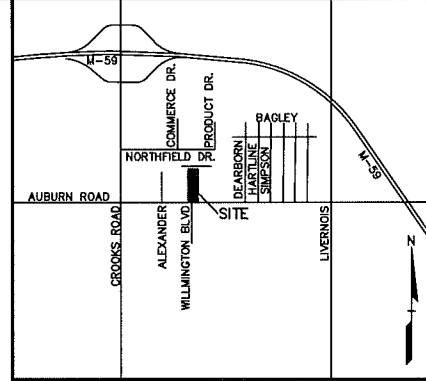
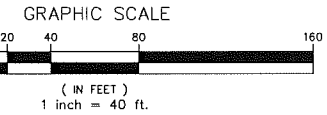
QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
5	AL10	Cornus Serviceberry	<i>Aamelanchier x laevis 'Cornus'</i>	10' HL	B&B
4	AR3	Redpointe Maple	<i>Acer x freemansi 'Redpointe'</i>	3" Cal	B&B
5	AS3	Sugar Maple	<i>Acer saccharum 'Green Mountain'</i>	3" Cal	B&B
8	BN10	River Birch - multistem	<i>Betula nigra</i>	10' HL	B&B
4	CC2.5	American Hornbeam	<i>Carpinus carolina</i>	2.5" Cal	B&B
6	CF2.5	Pink Dogwood	<i>Cornus florida var 'Rubra'</i>	2.5" Cal	B&B
4	GT3	Skyline Honeylocust	<i>Gleditsia triacanthos 'Skyline' Inermis</i>	3" Cal	B&B
4	PA3	Encore London Planetree	<i>Platanus x acerifolia 'Encore'</i>	3" Cal	B&B
5	QB3	Swamp White Oak	<i>Quercus bicolor</i>	3" Cal	B&B
5	QP3	Regal Prince Oak	<i>Quercus robur x bicolor 'Long' (columnar)</i>	3" Cal	B&B
5	SR2.5	Japanese Tree Lilac	<i>Syringa reticulata 'Tovary Silk'</i>	2.5" Cal	B&B
5	TA3	Boulevard Linden	<i>Tilia americana 'Boulevard'</i>	3" Cal	B&B

**EVERGREEN PLANT LIST:**

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
9	AC8	Concolor Fir	<i>Abies concolor</i>	8' HL	B&B
6	PA8	Norway Spruce	<i>Picea abies</i>	8' HL	B&B
12	P68	Black Hills Spruce	<i>Picea glauca 'Densata'</i>	8' HL	B&B
8	PS8	Eastern White pine	<i>Pinus strobus</i>	8' HL	B&B

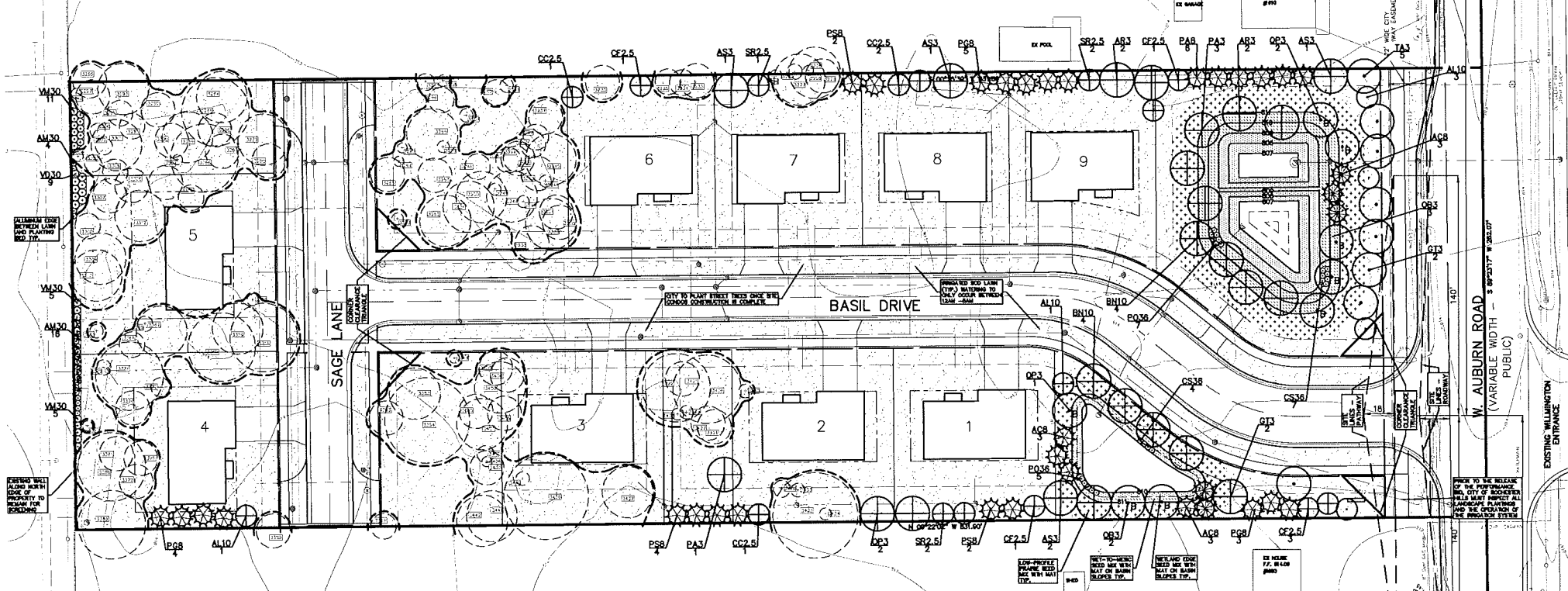
**SHRUB PLANT LIST:**

QUANTITY	KEY SYMBOL	COMMON NAME	SCIENTIFIC NAME	SIZE	SPEC
20	AM30	Black Chokeberry	<i>Aronia melanocarpa</i>	30" HL	Cont.
11	CS36	Red Twig Dogwood	<i>Cornus sericea</i>	36" HL	Cont.
12	PO36	Diablo Ninebark	<i>Physocarpus opulifolius 'Monlo'</i>	36" HL	Cont.
9	VD30	Chicago Lustre Viburnum	<i>Viburnum dentatum 'Synnvestvee'</i>	30" HL	Cont.
21	VM30	Mohican Viburnum	<i>Viburnum lentana 'Mohican'</i>	30" HL	Cont.

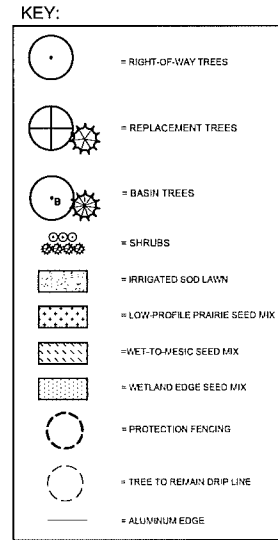
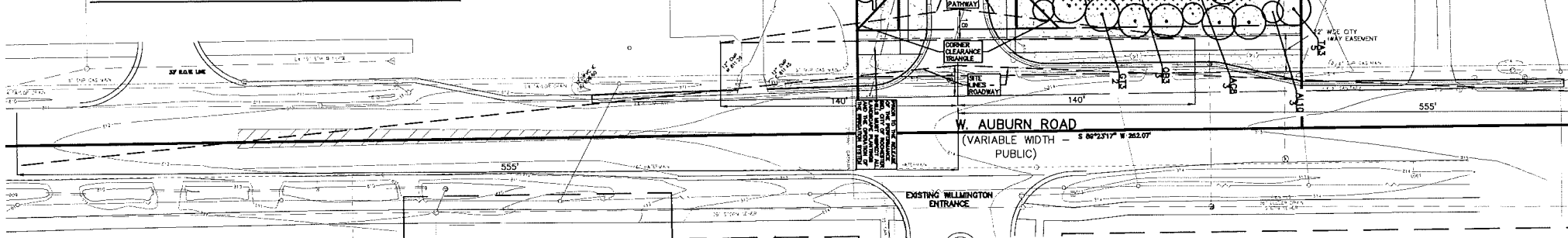


NO.	DATE	BY	DESCRIPTION
1	10/20/2016	JD	ISSUED PER CITY PRELIM. SITE PLAN REVIEW 150616
2	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
3	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
4	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
5	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
6	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
7	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
8	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
9	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
10	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
11	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
12	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
13	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
14	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
15	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
16	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
17	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
18	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
19	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
20	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
21	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
22	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
23	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
24	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
25	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
26	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
27	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
28	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
29	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616
30	10/20/2016	JD	REVISED PER CITY PRELIM. SITE PLAN REVIEW 150616

**OVERALL SITE PLAN:**



**AUBURN ROAD ENTRY SIGHT LINE ENLARGEMENT:**



**LANDSCAPE CALCULATIONS:**  
 PER CITY OF ROCHESTER HILLS ZONING ORDINANCE

**RIGHT OF WAY LANDSCAPING**  
 REQUIRED: 1 DEC TREE / 35 LF OF RIGHT OF WAY  
 1 ORN TREE / 60 LF OF RIGHT OF WAY

**AUBURN ROAD: 282 LF / 35 LF = 8 DEC TREES**  
 282 LF / 60 LF = 4 ORN TREES

**PROVIDED: 8 DEC AND 4 ORN ALONG AUBURN ROAD, 9 TREES TO BE PROVIDED BY THE CITY ADJACENT TO INTERIOR ROAD (CITY TREES NOT SHOWN IN PLAN OR PLANT LIST)**

**BUFFER ZONE TYPE I (NORTH PROPERTY LINE)**  
 REQUIRED: 2.5 DEC TREES / 100 LF, 1.5 ORN TREES / 100 LF, 6 EVG TREES / 100 LF, 10 SHRUBS / 100 LF

282 LF / 100 = 7 DEC, 4 ORN, 16 EVG & 26 SHRUBS

**NO EVERGREEN TREES PROVIDED DUE TO THE PRESENCE OF THE EXISTING MASONRY WALL - DEC AND SHRUBS ARE PROVIDED AT 1.5x REQUIRED NUMBER OF EVERGREEN TREES = 24 ADDITIONAL DEC TREES AND SHRUBS.**

**PROVIDED: 0 DEC, 0 ORN, 0 EVG TREES & 50 SHRUBS**  
 NO DECIDUOUS OR ORNAMENTAL TREES WERE PROVIDED DUE TO 25 EXISTING DECIDUOUS TREES TO REMAIN WITHIN 35' BUFFER OF EXISTING MASONRY WALL.

**BOND / BASIN REQUIREMENTS**  
 REQUIRED: NATIVE VEGETATION EXTENDING 25' FROM FREEBOARD  
 DEC SHADE TREES MUST BE PROVIDED AT THE S & W EDGE.  
 1.5 DEC, 1 EVG AND 4 SHRUBS / 100 LF BASIN PERIMETER.

**EAST BASIN PERIMETER = 348 LF / 100 = 5 DEC, 3 EVG AND 14 SHRUBS.**  
**WEST BASIN PERIMETER = 233 LF / 100 = 3 DEC, 2 EVG AND 9 SHRUBS**

**PROVIDED: 13 NATIVE TREES = 5 DEC SHADE TREES, 5 EVG TREES AND 23 SHRUBS. EAST BASIN - 5 DEC, 3 EVG AND 14 SHRUBS. WEST BASIN - 3 DEC, 2 EVG AND 9 SHRUBS**

**REPLACEMENT TREES**  
 REQUIRED: MINIMUM 37% OF THE TOTAL OF REGULATED TREES MUST BE PRESERVED. 126 TREES TO REMAIN / 235 TOTAL TREES ON SITE = 54% TO BE PRESERVED.

1 TREE REQUIRED FOR EACH REMOVED TREE. 102 TOTAL TREES TO BE REMOVED (POOR OR DAMAGED TREES NIC) (MIN. 2" CAL DEC AND 8' HT. EVG. FOR EACH 3/4" CAL OR 1" HT. INCREASE WILL COUNT FOR AN EXTRA 1/2 TREE CREDIT) 7 POOR TREES & DEAD TREES REMOVED PER CITY WITH 0 REPLACEMENT.

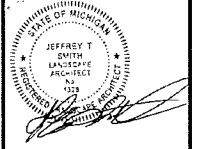
**PROVIDED: 24 - 3" CAL DEC (2 CREDITS EACH = 48), 16 - 2.5" CAL ORN (1.5 CREDITS EACH = 24) AND 30 - 8' EVG TREES = 102 TOTAL PROVIDED TREES**

**CITY OF ROCHESTER HILLS MAINTENANCE AGREEMENT:**  
**PROPERTY MAINTENANCE:**

- Landscaping shall be kept in a neat, orderly and healthy growing condition, free from debris and refuse.
- Pruning shall be minimal at the time of installation, only to remove dead or diseased branches. Subsequent pruning shall assure proper maturation of plants to achieve their approved purpose.
- All dead, damaged, or diseased plant material shall be removed immediately and replaced within six (6) months after it dies or in the next planting season, whichever occurs first. For purposes of this Section, the planting season for deciduous plants shall be between March 1 and June 1 and from October 1 until the prepared soil becomes frozen. The planting season for evergreen plants shall be between March 1 and June 1. Plant material installed to replace dead or diseased materials shall be as close as practical to the size of the material it is intended to replace. The City may notify property owners of the need to replace dead, damaged, or diseased material.
- The approved landscape plan shall be considered a permanent record and integral part of the Site Plan Approval. Unless otherwise approved in accordance with the aforementioned procedures, any revisions to or removal of plant materials, or non-compliance with the maintenance requirements of this Section 138-12.109 will place the parcel in non-conformity with the approved landscape plan and be a violation of this Ordinance.
- If protected trees are damaged, a fine shall be issued on an inch-by-inch basis at a monetary rate as defined by the Forestry Department.

**CITY OF ROCHESTER HILLS IRRIGATION NOTES:**

- ALL SOD AND PLANT BED AREAS TO BE IRRIGATED BETWEEN THE HOURS OF 12 AM AND 5 AM ONLY.
- NO IRRIGATION HEADS TO SPRAY ON CITY PATHWAY, TYP.
- DETAIL IRRIGATION PLANS TO BE SUBMITTED WITH CONSTRUCTION DRAWINGS.



**CAUTION!**  
 THE USER OF THIS PLAN SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ROCHESTER HILLS AND THE STATE OF MICHIGAN. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ROCHESTER HILLS AND THE STATE OF MICHIGAN. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF ROCHESTER HILLS AND THE STATE OF MICHIGAN.

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 F: 248.689.1044  
 www.peainc.com

**GIANNA INVESTMENTS, LLC**  
 5000 W. WASHINGTON, MI 48094

**LANDSCAPE ARCHITECT**  
**LANDSCAPE E LAN**  
**SADDLEBROOK ORCHARDS**  
 7400 W. WASHINGTON, MI 48094  
 CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

DES: RLSTMK | DN: RLSTMK | SUR: KRIEF | P.M: JD  
 10/20/2016 10:30:00 AM

ORIGINAL ISSUE DATE:  
 OCTOBER 20, 2016

PEA JOB NO: 2016-137

SCALE: 1" = 40'

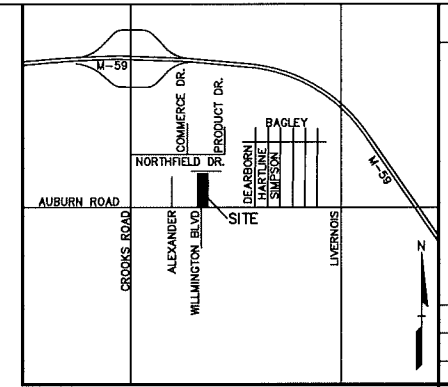
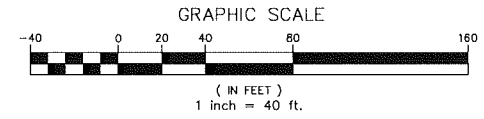
DRAWING NUMBER:

**L-1.0**

**NOT FOR CONSTRUCTION**

**#16-029**





LOCATION MAP - NOT TO SCALE

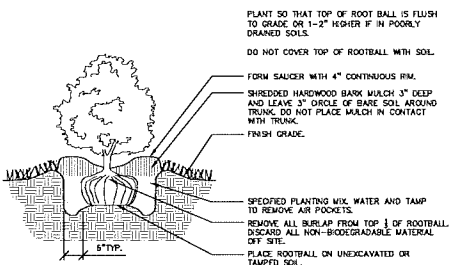
NO.	DATE	BY	CHK	DESCRIPTION
1		JTS		ISSUED FOR PERMITS, SITE PLAN REVIEW, UTILITY, ETC.
2		JTS		REVISED PER PERMITS, SITE PLAN REVIEW, UTILITY, ETC.



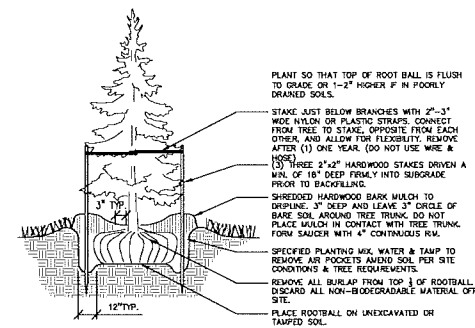
**CAUTION!!**  
 \*ELEVATIONS AND BLENDINGS OF EXISTING AND PROPOSED TERRACE ARE FOR INFORMATION ONLY. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS AND MAKE NECESSARY ADJUSTMENTS TO THE EXISTING CONDITIONS TO MATCH THE PROPOSED CONDITIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE EXACT UTILITY LOCATIONS AND DEPTHS PRIOR TO THE START OF CONSTRUCTION.

THE CLIENT AND DESIGNER ARE THE PROPERTY OF PEAC AND SHALL REMAIN THE PROPERTY OF PEAC. THE CLIENT AND DESIGNER SHALL BE RESPONSIBLE FOR OBTAINING THE EXACT UTILITY LOCATIONS AND DEPTHS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE EXACT UTILITY LOCATIONS AND DEPTHS PRIOR TO THE START OF CONSTRUCTION.

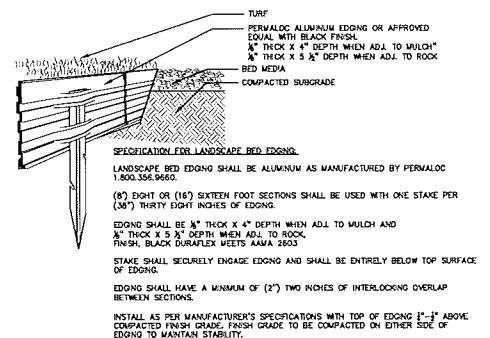
COST OPINION				
PROJECT:		SADDLEBROOK - Rochester Hill - 11.21.2016	JOB NO. 2016-137	
LANDSCAPE COST OPINION				
75	EA	3" Deciduous and 8" Evergreen Trees	\$400.00	\$30,000.00
20	EA	Ornamental Trees	\$250.00	\$5,000.00
73	EA	Shrubs	\$50.00	\$3,650.00
1,956	S.Y.	Low-profile prairie seed mix	\$2.50	\$4,890.00
752	S.Y.	Wet-to-mesic seed mix	\$2.50	\$1,880.00
399	S.Y.	Wetland edge seed mix	\$2.50	\$997.50
13,295	S.Y.	Sod Lawn	\$4.00	\$53,180.00
1	L.S.	Irrigation	\$50,000.00	\$50,000.00
1,108	CY	Topsoil (Haul and Spread) for lawn at 3"	\$7.00	\$7,756.00
9	CY	Mulch	\$45.00	\$416.25
55	CY	Plant Mix for Planting Beds	\$30.00	\$1,650.00
315	L.F.	Metal Edge	\$5.75	\$1,811.25
<b>TOTAL LANDSCAPE</b>				<b>\$161,231.00</b>



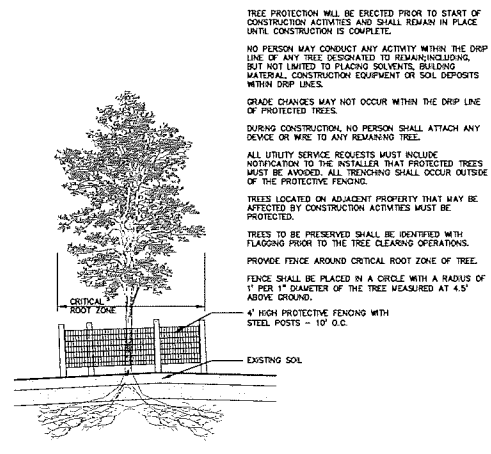
SHRUB PLANTING DETAIL NOT TO SCALE



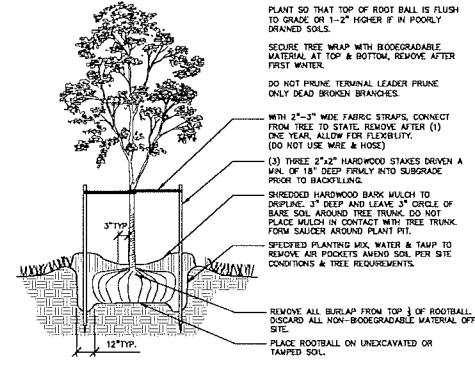
EVERGREEN TREE PLANTING DETAIL NOT TO SCALE



ALUMINUM EDGE DETAIL NOT TO SCALE



TREE PROTECTION DETAIL NOT TO SCALE



DECIDUOUS TREE PLANTING DETAIL NOT TO SCALE

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**GIANNA INVESTMENTS, LLC**  
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**LANDSCAPE DETAILS**  
**SADDLEBROOK ORCHARDS**  
 PART OF THE SADDLEBROOK ORCHARDS PROJECT  
 CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

DES: JTS    DN: KAD    SUR: KIEFT    P.M.    JD

PROJECT NO: 2016-137    SADDLEBROOK SITE COND - 20161118-1313    Date Printed: 11/23/2016    11:23:00 AM    11/23/2016

ORIGINAL ISSUE DATE:  
OCTOBER 20, 2016

PEA JOB NO. 2016-137

SCALE: N/A

DRAWING NUMBER:  
**L-2.0**



TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	COMMENT
3208	WP	19	(Eastern) White Pine	Pinus strobus	GOOD	
3209	NS	22	Norway Spruce	Picea Abies	GOOD	
3210	NS	18	Norway Spruce	Picea Abies	GOOD	
3211	SM	22	Silver Maple	Acer saccharinum	GOOD	
3212	SM	24	Silver Maple	Acer saccharinum	GOOD	
3213	NS	26	Norway Spruce	Picea Abies	GOOD	
3214	SM	15	Silver Maple	Acer saccharinum	POOR	
3215	NM	23	Norway Maple	Acer platanoides	GOOD	
3216	WP	13	(Eastern) White Pine	Pinus strobus	FAIR	
3217	WP	27	(Eastern) White Pine	Pinus strobus	GOOD	
3218	EE	9	Siberian Elm	Ulmus pumila	GOOD	
3219	BX	7	Box elder	Acer negundo	GOOD	
3220	NS	28	Norway Spruce	Picea Abies	GOOD	
3221	NS	22	Norway Spruce	Picea Abies	GOOD	
3222	CT	7	Cottonwood	Populus deltoides	GOOD	
3223	CT	6	Cottonwood	Populus deltoides	GOOD	
3224	CT	10	Cottonwood	Populus deltoides	GOOD	
3225	TH	10	Thornapple/Hawthorne	Cragaeus spp.	GOOD	X2
3226	MH	14	Bitternut Hickory	Carya cordiformis	GOOD	
3227	MH	14	Bitternut Hickory	Carya cordiformis	GOOD	
3228	MH	6	Bitternut Hickory	Carya cordiformis	GOOD	
3229	MH	9	Bitternut Hickory	Carya cordiformis	GOOD	
3230	SH	7	Shagbark Hickory	Carya ovata	GOOD	
3231	MH	10	Bitternut Hickory	Carya cordiformis	GOOD	
3232	SH	7	Shagbark Hickory	Carya ovata	GOOD	
3233	MH	11	Bitternut Hickory	Carya cordiformis	GOOD	
3234	B	8	Basswood	Tilia americana	GOOD	
3235	MH	11	Bitternut Hickory	Carya cordiformis	GOOD	
3236	NM	13	Norway Maple	Acer platanoides	GOOD	
3237	MH	11	Bitternut Hickory	Carya cordiformis	GOOD	
3238	B	8	Basswood	Tilia americana	GOOD	X2
3239	B	7	Basswood	Tilia americana	GOOD	
3240	MH	12	Bitternut Hickory	Carya cordiformis	GOOD	
3241	SH	7	Shagbark Hickory	Carya ovata	GOOD	
3242	SH	8	Shagbark Hickory	Carya ovata	GOOD	
3243	SH	6	Shagbark Hickory	Carya ovata	GOOD	
3244	MH	9	Bitternut Hickory	Carya cordiformis	GOOD	X2
3245	B	7	Basswood	Tilia americana	GOOD	
3246	B	7	Basswood	Tilia americana	POOR	
3247	E	7	American Elm	Ulmus americana	FAIR	
3248	SH	15	Shagbark Hickory	Carya ovata	GOOD	
3249	SM	7	Silver Maple	Acer saccharinum	GOOD	
3250	SH	16	Shagbark Hickory	Carya ovata	GOOD	
3251	SM	10	Silver Maple	Acer saccharinum	GOOD	
3252	SH	16	Shagbark Hickory	Carya ovata	GOOD	
3253	SM	8	Silver Maple	Acer saccharinum	GOOD	
3254	SH	19	Shagbark Hickory	Carya ovata	GOOD	
3255	SH	12	Shagbark Hickory	Carya ovata	GOOD	
3256	MH	7	Bitternut Hickory	Carya cordiformis	GOOD	
3257	SU	8	Sugar Maple	Acer saccharum	GOOD	
3258	NM	7	Norway Maple	Acer platanoides	GOOD	
3259	MH	8	Bitternut Hickory	Carya cordiformis	GOOD	
3260	B	7	Basswood	Tilia americana	GOOD	
3261	NM	10	Norway Maple	Acer platanoides	POOR	
3262	NM	7	Norway Maple	Acer platanoides	GOOD	
3263	SM	6	Silver Maple	Acer saccharinum	GOOD	
3264	SM	6	Silver Maple	Acer saccharinum	GOOD	
3265	SM	8	Silver Maple	Acer saccharinum	FAIR	
3266	WO	34	White Oak	Quercus alba	GOOD	
3267	SM	7	Silver Maple	Acer saccharinum	GOOD	
3268	WO	26	White Oak	Quercus alba	GOOD	
3269	WO	31	White Oak	Quercus alba	GOOD	
3270	WO	26	White Oak	Quercus alba	GOOD	
3271	WO	20	White Oak	Quercus alba	GOOD	
3272	WO	28	White Oak	Quercus alba	GOOD	
3273	SM	7	Silver Maple	Acer saccharinum	FAIR	
3274	SM	6	Silver Maple	Acer saccharinum	FAIR	X3
3275	SM	9	Silver Maple	Acer saccharinum	GOOD	
3276	SM	6	Silver Maple	Acer saccharinum	GOOD	
3277	SH	11	Shagbark Hickory	Carya ovata	GOOD	
3278	WO	37	White Oak	Quercus alba	GOOD	
3279	SM	9	Silver Maple	Acer saccharinum	GOOD	
3280	SM	6	Silver Maple	Acer saccharinum	GOOD	X2
3281	WO	44	White Oak	Quercus alba	GOOD	
3282	SM	6	Silver Maple	Acer saccharinum	GOOD	
3283	SM	6	Silver Maple	Acer saccharinum	GOOD	X2
3284	MH	8	Bitternut Hickory	Carya cordiformis	GOOD	
3285	WO	24	White Oak	Quercus alba	GOOD	
3286	SM	6	Silver Maple	Acer saccharinum	GOOD	

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	COMMENT
3287	SM	8	Silver Maple	Acer saccharinum	GOOD	
3288	SM	19	Silver Maple	Acer saccharinum	GOOD	
3289	SM	17	Silver Maple	Acer saccharinum	GOOD	
3290	SM	8	Silver Maple	Acer saccharinum	GOOD	
3291	B	6	Basswood	Tilia americana	GOOD	
3292	B	6	Basswood	Tilia americana	POOR	
3293	B	15	Basswood	Tilia americana	GOOD	
3294	MH	8	Bitternut Hickory	Carya cordiformis	GOOD	
3295	SM	7	Silver Maple	Acer saccharinum	FAIR	X2
3296	B	8	Basswood	Tilia americana	POOR	
3297	B	12	Basswood	Tilia americana	FAIR	
3298	B	6	Basswood	Tilia americana	FAIR	X2
3299	B	8	Basswood	Tilia americana	GOOD	
3300	E	9	American Elm	Ulmus americana	FAIR	
3301	WO	18	White Oak	Quercus alba	GOOD	
3302	SH	13	Shagbark Hickory	Carya ovata	GOOD	
3303	SH	10	Shagbark Hickory	Carya ovata	FAIR	
3304	CT	6	Cottonwood	Populus deltoides	FAIR	
3305	SH	12	Shagbark Hickory	Carya ovata	GOOD	
3306	SH	13	Shagbark Hickory	Carya ovata	GOOD	
3307	SH	15	Shagbark Hickory	Carya ovata	FAIR	
3308	SH	16	Shagbark Hickory	Carya ovata	GOOD	
3309	RO	30	Red Oak	Quercus rubra	POOR	
3310	SU	30	Sugar Maple	Acer saccharum	FAIR	
3311	SM	60	Silver Maple	Acer saccharinum	POOR	
3312	WO	26	White Oak	Quercus alba	GOOD	
3313	B	7	Basswood	Tilia americana	GOOD	
3314	E	9	American Elm	Ulmus americana	GOOD	
3315	WO	8	White Oak	Quercus alba	GOOD	
3316	B	7	Basswood	Tilia americana	GOOD	
3317	SM	32	Silver Maple	Acer saccharinum	GOOD	
3318	MH	10	Bitternut Hickory	Carya cordiformis	GOOD	
3319	SH	11	Shagbark Hickory	Carya ovata	GOOD	
3320	E	12	American Elm	Ulmus americana	FAIR	
3321	SM	42	Silver Maple	Acer saccharinum	GOOD	
3322	WO	8	White Oak	Quercus alba	GOOD	
3323	SM	7	Silver Maple	Acer saccharinum	GOOD	
3324	SH	18	Shagbark Hickory	Carya ovata	GOOD	
3325	SM	24	Silver Maple	Acer saccharinum	GOOD	X3
3326	WO	14	White Oak	Quercus alba	GOOD	
3327	MH	10	Bitternut Hickory	Carya cordiformis	GOOD	
3328	SM	9	Silver Maple	Acer saccharinum	GOOD	
3329	SH	18	Shagbark Hickory	Carya ovata	FAIR	
3330	SM	12	Silver Maple	Acer saccharinum	GOOD	
3331	B	9	Basswood	Tilia americana	GOOD	
3332	SM	8	Silver Maple	Acer saccharinum	GOOD	
3333	SM	22	Silver Maple	Acer saccharinum	GOOD	
3334	SM	17	Silver Maple	Acer saccharinum	GOOD	
3335	SM	7	Silver Maple	Acer saccharinum	GOOD	
3336	WO	34	White Oak	Quercus alba	GOOD	
3337	SH	6	Shagbark Hickory	Carya ovata	GOOD	
3338	WO	50	White Oak	Quercus alba	FAIR	
3339	WO	52	White Oak	Quercus alba	GOOD	
3340	SM	6	Silver Maple	Acer saccharinum	GOOD	
3341	WO	23	White Oak	Quercus alba	GOOD	
3342	SM	7	Silver Maple	Acer saccharinum	GOOD	
3343	SM	8	Silver Maple	Acer saccharinum	GOOD	
3344	MH	7	Bitternut Hickory	Carya cordiformis	GOOD	
3345	CT	26	Cottonwood	Populus deltoides	FAIR	
3346	MH	10	Bitternut Hickory	Carya cordiformis	GOOD	
3347	B	10	Basswood	Tilia americana	FAIR	
3348	MH	6	Bitternut Hickory	Carya cordiformis	GOOD	
3349	MH	9	Bitternut Hickory	Carya cordiformis	GOOD	
3350	WO	7	White Oak	Quercus alba	FAIR	
3351	B	7	Basswood	Tilia americana	GOOD	X2
3352	SH	8	Shagbark Hickory	Carya ovata	GOOD	
3353	WA	9	White Ash	Fraxinus americana	FAIR	
3354	MH	22	Bitternut Hickory	Carya cordiformis	GOOD	
3355	SU	24	Sugar Maple	Acer saccharum	GOOD	
3356	MH	15	Bitternut Hickory	Carya cordiformis	GOOD	
3357	SU	21	Sugar Maple	Acer saccharum	POOR	
3358	MH	19	Bitternut Hickory	Carya cordiformis	GOOD	
3359	SU	15	Sugar Maple	Acer saccharum	GOOD	
3360	SU	25	Sugar Maple	Acer saccharum	POOR	
3361	SU	27	Sugar Maple	Acer saccharum	FAIR	
3362	MH	7	Bitternut Hickory	Carya cordiformis	GOOD	
3363	SU	12	Sugar Maple	Acer saccharum	FAIR	
3364	RO	7	Red Oak	Quercus rubra	GOOD	
3365	SU	20	Sugar Maple	Acer saccharum	FAIR	

TAG NO.	CODE	DBH	COMMON NAME	LATIN NAME	COND	COMMENT
3366	E	8	American Elm	Ulmus americana	FAIR	
3367	RO	15	Red Oak	Quercus rubra	GOOD	
3368	MH	7	Bitternut Hickory	Carya cordiformis	GOOD	
3369	B	8	Basswood	Tilia americana	FAIR	X2
3370	RO	9	Red Oak	Quercus rubra	GOOD	
3371	SU	21	Sugar Maple	Acer saccharum	FAIR	
3372	MH	8	Bitternut Hickory	Carya cordiformis	GOOD	
3373	MH	7	Bitternut Hickory	Carya cordiformis	FAIR	
3374	B	15	Basswood	Tilia americana	GOOD	
3375	E	6	American Elm	Ulmus americana	GOOD	
3376	RO	11	Red Oak	Quercus rubra	GOOD	
3377	MH	16	Bitternut Hickory	Carya cordiformis	GOOD	
3378	MH	17	Bitternut Hickory	Carya cordiformis	FAIR	
3379	E	9	American Elm	Ulmus americana	GOOD	
3380	RO	35	Red Oak	Quercus rubra	GOOD	
3381	MH	14	Bitternut Hickory	Carya cordiformis	GOOD	
3382	E	6	American Elm	Ulmus americana	GOOD	
3383	SU	18	Sugar Maple	Acer saccharum	GOOD	
3384	MH	10	Bitternut Hickory	Carya cordiformis	GOOD	
3385	RO	20	Red Oak	Quercus rubra	GOOD	
3386	SU	17	Sugar Maple	Acer saccharum	FAIR	
3387	SU	18	Sugar Maple	Acer saccharum	GOOD	
3388	SU	26	Sugar Maple	Acer saccharum	GOOD	
3389	RO	17	Red Oak	Quercus rubra	GOOD	
3390	RO	6	Red Oak	Quercus rubra	GOOD	
3391	MH	9	Bitternut Hickory	Carya cordiformis	GOOD	
3392	RO	34	Red Oak	Quercus rubra	FAIR	
3393	RO	15	Red Oak	Quercus rubra	GOOD	
3394	BE	26	American Beech	Fragus grandifolia	GOOD	
3395	SU	8	Sugar Maple	Acer saccharum	GOOD	
3396	B	10	Basswood	Tilia americana	GOOD	
3397	RO	8	Red Oak	Quercus rubra	GOOD	
3398	MH	7	Bitternut Hickory	Carya cordiformis	GOOD	
3399	SM	8	Silver Maple	Acer saccharinum	POOR	
3400	MH	8	Bitternut Hickory	Carya cordiformis	GOOD	X2
3401	MH	13	Bitternut Hickory	Carya cordiformis	FAIR	
3402	MH	6	Bitternut Hickory	Carya cordiformis	FAIR	
3403	MH	11	Bitternut Hickory	Carya cordiformis	GOOD	
3404	BE	6	American Beech	Fragus grandifolia	GOOD	
3405	MH	6	Bitternut Hickory	Carya cordiformis	GOOD	
3406	SU	24	Sugar Maple	Acer saccharum	FAIR	
3407	SH	9	Shagbark Hickory	Carya ovata	GOOD	
3408	B	10	Basswood	Tilia americana	FAIR	
3409	B	7	Basswood	Tilia americana	GOOD	
3410	SH	7	Shagbark Hickory	Carya ovata	GOOD	
3411	E	7	American Elm	Ulmus americana	GOOD	
3412	SM	12	Silver Maple	Acer saccharinum	POOR	
3413	SM	7	Silver Maple	Acer saccharinum	GOOD	
3414	WO	26	White Oak	Quercus alba	POOR	
3415	B	8	Basswood	Tilia americana	GOOD	
3416	WO	28	White Oak	Quercus alba	GOOD	
3417	WO	32	White Oak	Quercus alba	GOOD	
3418	SM	7	Silver Maple	Acer saccharinum	GOOD	
3419	CT	22	Cottonwood	Populus deltoides	GOOD	
3420	CT	48	Cottonwood	Populus deltoides	GOOD	
3421	SM	10	Silver Maple	Acer saccharinum	GOOD	
3422	SM	14	Silver Maple	Acer saccharinum	GOOD	
3423	E	7	American Elm	Ulmus americana	GOOD	
3424	SH	8	Shagbark Hickory	Carya ovata	GOOD	
3425	SM	6	Silver Maple	Acer saccharinum	FAIR	X2
3426	CT	30	Cottonwood	Populus deltoides	GOOD	
3427	SH	9	Shagbark Hickory	Carya ovata	GOOD	
3428	WO	8	White Oak	Quercus alba	GOOD	
3429	WO	10	White Oak	Quercus alba	GOOD	
3430	BX	8	Box elder	Acer negundo	POOR	
3431	BX	8	Box elder	Acer negundo	POOR	
3432	BX	7	Box elder	Acer negundo	POOR	
3						

# GENERAL NOTES:

- 2x10 FLOOR JOISTS @ 16" O.C. UNDER ALL TILE OR MARBLE FLOORS. 20 LB DEAD LOAD REQUIRED.
- ALL POURED CONCRETE WALLS TO BE BACKFILLED WITH SANDY TYPE SOIL AND BE WELL BRACED UNTIL CONCRETE IS THOROUGHLY CURED AND ADDITIONAL WEIGHT OF THE BUILDING IS IN PLACE.
- ALL FLOOR JOISTS TO BE 7' OR BETTER HEM FIR WITH 1" X 3" CROSS BRDGNS @ 8'-0" O.C.
- ROOF TRUSSES DESIGNED BY TRUSS MANUFACTURER TO CONFORM TO ALL MINIMUM DESIGN LOAD REQUIREMENTS. BRACE ROOF TRUSSES AS RECOMMENDED BY MANUFACTURER.
- ROOF TRUSS FRAMING INDICATED ON DRAWINGS IS OUR ASSUMED LAYOUT. TRUSS MANUFACTURER SHOULD REVIEW THE DRAWING AND INDICATE TO ARCHITECT PRIOR TO FABRICATION ANY CHANGE IN BEARING CONDITIONS THAT WOULD REQUIRE RE-FRAMING OF OUR STRUCTURE TO ACCOMMODATE TRUSSES.
- ALL POURED CONCRETE FOOTING TO BE A MINIMUM OF 3'-6" BELOW FINISHED GRADE BEARING ON UNDISTURBED VIRGIN SOIL WITH A MINIMUM BEARING CAPACITY OF 2,000 PSF. MUST BE VERIFIED BY SOILS ENGINEER IN THE FIELD FOR FOOTING INSPECTION.
- ALL POURED CONCRETE WALLS WITH 1'-0" OR MORE BACKFILL TO BE REINFORCED WITH #4 BARS @ 16" O.C. VERTICALLY WITH ONE #4 BAR TOP AND BOTTOM OF WALL HORIZONTALLY. VERIFY IN FIELD FOR FOOTING INSPECTION.
- ALL WINDOW NUMBERS REFER TO "GENERIC" WINDOWS. IF ALTERNATE WINDOW MANUFACTURER IS USED, ALL SIZES AND SHAPES TO MATCH DIMENSIONALLY.
- ALL ENGINEERED WOOD FLOOR TRUSSES TO BE 1" DENSE KD. WITH 7" BY 6" CONTINUOUS REBORN BRACING ON BOTTOM CHORD @ 8'-0" O.C. (MINIMUM 2 PER SPAN) WELL NAILED TO TRUSSES. PROVIDE CRAFT-STIFFENING.
- THE ROOF TRUSS MANUFACTURER TO FURNISH SHOP DRAWING TO THE DESIGNER PRIOR TO FABRICATION OF THE TRUSSES.
- ALL MICRO-LAM BEAMS TO BE JOINED TOGETHER PER MANUFACTURER'S SPECIFICATIONS.
- ALL POURED CONCRETE WALLS WITH BRICK LEDGE GREATER THAN 4'-0" SHALL BE REINFORCED WITH #5 BARS 24" O.C. VERTICALLY WITH ONE #4 BAR TOP AND BOTTOM OF WALL HORIZONTALLY.
- DO NOT SCALE DRAWING. USE PRINTED DIMENSIONS ONLY. IF ANY DISCREPANCY OCCURS NOTIFY THE DESIGNER IMMEDIATELY FOR CORRECTION. BUILDER RESPONSIBLE TO HAVE REVIEWED ALL DRAWINGS AND IF ADDITIONAL CLARIFICATION OR INFORMATION IS NEEDED BUILDER IS TO CONTACT DESIGNER AND SALES COUNSELOR.
- PROVIDE 5 POUND FELT AT UNTREATED EXPOSED LUMBER.
- ALL BEDROOM WINDOWS TO MEET 205 MICHIGAN RESIDENTIAL EGRESS CODES. ALL WINDOW SILLS 1" ABOVE FINISH GRADE. SHALL HAVE THE BOTTOM OF THE OPENING LOCATED A MIN OF 24" ABOVE FINISH FLOOR OF THE ROOM PER MRC 205 SEC R612.
- PROVIDE FIBER CEMENT, FIBER MAT REIN. CEMENT, GLASS MAT GYPSUM BACKERS OR FIBER REIN. GYPSUM BACKERS AS BACKERS FOR TUB AND SHOWER WALL TILES AND PANELS. BACKERS MUST COMPLY W/ ASTM C 1248, C 1315, C1318 OR C 1378 AND BE INSTALLED PER MANUF. RECOMMENDATIONS. MRC 205 SEC R101.42.
- WHERE HANDRAILS ARE SHOWN HANDRAIL HEIGHT IS TO BE NOT LESS THAN 34" AFF. AND MORE THAN 38" AFF. PER R311.11. GUARD RAIL IS TO BE NOT LESS THAN 36" AFF. PER R312.7. (MRC-205) PROVIDE HANDRAIL ON AT LEAST (1) SIDE OF EVERY STAIRWAY PER SECTION R311.11 OF THE 205 MICHIGAN RESIDENTIAL CODE. HANDRAIL GRIP TO COMPLY WITH 205 MICHIGAN RESIDENTIAL CODE SECTION R311.13.
- DO NOT DRILL KITCHEN WINDOW DOUBLERS.
- PROVIDE A BATH FAN WHERE SHOWN ON PLAN AND VENT FAN TO EXTERIOR AS REQUIRED.
- TYPICAL ALL HABITABLE ROOMS TO HAVE PROPER LIGHT AND VENTILATION AND COMPLY WITH 205 MICHIGAN RESIDENTIAL CODES.
- PROVIDE ELECTRICAL SMOKE DETECTORS IN ALL SLEEPING AREAS, HALLWAYS, AND MECHANICAL ROOMS ON ALL FLOOR LEVELS INCLUDING THE BASEMENT. SMOKE DETECTORS SHALL BE WIRED TOGETHER SO AS WHEN ONE SOUNDS THEY ALL SOUND AND HAVE BATTERY BACKUP PER SEC. R314 OF 205 MICHIGAN RESIDENTIAL CODE.
- PROVIDE ADEQUATE ROOF VENTILATION AND SOFFIT VENTILATION (MIN) AS REQUIRED. VERIFIED BY CALCULATION 1/50 OF AREA VENTILATION REQ'D PER SEC. R604.2.
- TYPICALLY ALL FIN IN POURED CONCRETE FOUNDATION WALLS MUST BE REMOVED AND FILLED WITH FOUNDATION COATING PRIOR TO BACKFILL INSPECTION.
- PROVIDE METAL FLASHING, COUNTER FLASHING AND STEPPED FLASHING WHERE NOTED AND BRICK AND SIDING MEET.
- PROVIDE APPROVED SEALANT WHERE REQUIRED AND AS DETAILED BY MFG.
- VERIFY ELECTRICAL SERVICE IN ACCOMMODATING ALL NEW WORK. VERIFY ALL PROPOSED ELECTRICAL OUTLETS, SWITCHES, DIFFERS, LIGHT LOCATION, ETC. INCLUDING CABLE AND PHONE PRE-WIRING SECURITY. TAKE INTO CONSIDERATION ALL ELECTRICAL INSTALLATION WITH OWNER AND COMPLY WITH 205 MICHIGAN RESIDENTIAL ELECTRICAL CODES.
- VERIFY FIREPLACE OPTION WITH SUBDIVISION SPECS. AND WORK ORDER.
- PROVIDE 7-LAYER MINERAL COATED ROLLED ROOFING AT ALL EAVES TO 24" INSIDE BUILDING. 7-LAYERS MUST BE CEMENTED TOGETHER. VERIFY WITH BUILDING DEPARTMENT.
- PROVIDE 2x6 UNPAVED PRESSURE TREATED SILL PLATE ON SILL SEALER WITH 1/2" ANCHOR BOLTS @ 4'-0" O.C. AND LOCATED NOT MORE THAN 12" INCHES AND NOT LESS THAN 3/4" INCHES FROM THE ENDS OF EACH PLATE SECTION. EXCEPTION: USE ANCHOR STRAPS SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE TO 1/2" INCH ANCHOR BOLTS.
- PROVIDE 4" PERF. DRAIN TILE CONT. AT BASEMENT FIG. N 2" (MIN) PEASTONE WITH 2" BELOW DRAIN TILE. CONNECT TO SUMP AND STORM SEWER AS REQUIRED.
- 6"-8" CLEAR HEADROOM REQUIRED ON ALL STAIRS.
- CHIMNEY TERMINATION MUST PROJECT 2 FEET ABOVE ANY PART OF THE BUILDING WITHIN 10 FEET.
- FIRESTOP ALL DROPS AND CHASES, ELECTRICAL, PLUMBING AND HVAC.
- PROVIDE 1/2" DRYWALL ON THE GARAGE SIDE OF WALLS COMMON TO RESIDENCE AND GARAGE. APPLY 1/2" TYPE "X" DRYWALL TO GARAGE CEILING AREAS BELOW HABITABLE ROOMS PER MRC 205 TABLE R307.6.
- LOWER LEVEL AREA CONSIDERED UNHABITABLE. ANY FUTURE ALTERATIONS TO MODIFY LOWER LEVEL TO A HABITABLE SPACE WILL COMPLY STRICTLY TO THE 205 MICHIGAN RESIDENTIAL CODE. EGRESS WINDOW PROVIDED AS REQUIRED. IN COMPLIANCE WITH MRC 205 SEC. R310.1 - R310.5.
- AREAS THAT REQUIRE TYPED GLASS:
  - FIXED AND SLIDING PANELS OF SLIDING TYPE DOORS.
  - SHOWER AND BATHING DOORS AND ENCLOSURES (IF APPLICABLE).
  - PANELS WITH A GLAZED AREA IN EXCESS OF 9 SQ. FT. WITH LOWEST EDGE LESS THAN 8 INCHES ABOVE THE FINISHED FLOOR LEVEL.
  - ALL OTHER AREAS AS CODE REQUIRES PER 205 MICHIGAN RESIDENTIAL CODE.
- ROOF VENTILATION WHERE HAVE OR CORNICHE VENTS ARE INSTALLED INSULATION SHALL NOT BLOCK THE FREE FLOW OF AIR. A MINIMUM OF 1" HIGH SPACE SHALL BE PROVIDED BETWEEN THE INSULATION AND THE ROOF SHEATHING AT THE LOCATION OF THE VENTS.

**NOTE:**  
ALL CODES SHALL COMPLY WITH THE INTERNATIONAL RESIDENTIAL CODES & 205 MICHIGAN RESIDENTIAL CODE. THEY SHALL ALSO COMPLY WITH ANY JURISDICTION CODES IN THEIR RESPECTIVE COUNTY, CITY, VILLAGE, OR TOWNSHIP AND THEIR PROVISIONS AND ORDINANCES.

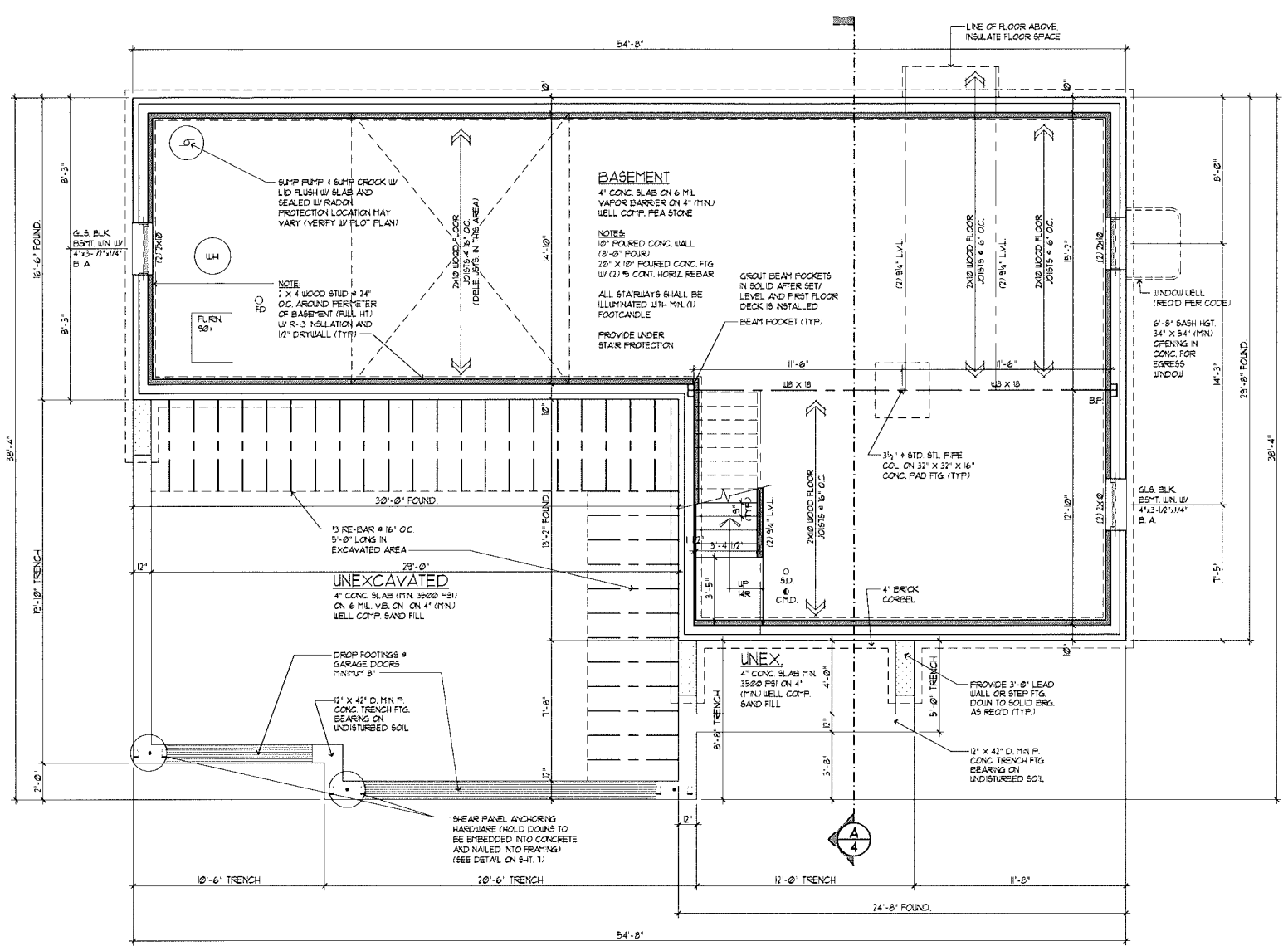
**NOTE:**  
GENERAL NOTES INDICATED ABOVE ARE JUST A SMALL PORTION OF OUR STANDARD NOTES & THE 205 MICHIGAN RESIDENTIAL CODE BUT THE CODE IS HIGH BROADWAY & SHOULD BE STRICTLY FOLLOWED BY BUILDERS, TRACERS & CRAFTSMAN.

- ALL STAIRWAYS SHALL BE ILLUMINATED WITH MN. (U) FOOT CANDLE OF LIGHT.
- PROVIDE UNDERSTAIR PROTECTION PER 205 ENCLOSED ACCESSIBLE SPACE UNDER SHALL HAVE WALLS, UNDER STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSUM BOARD.
- UNEXCAVATED GARAGE SLAB SHALL COMPLY W/ TABLE R402.7 4" CONCRETE SLAB MIN. 3500 MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE ON 4" MIN. WELL COMPACTED SAND BASE.
- PROVIDE NON-ABSORBENT FINISH TO THE SURFACE OF ALL BATHING AREAS W/ WALL MOUNTED SHOWER HEADS, A MIN. OF 6'-0" ABOVE FINISH FLOOR PER MRC 205 SEC. R307.2.
- PROVIDE A 1/2" MIN. SOLID CORE FIRE-RATED DOOR BETWEEN GARAGE AND RESIDENCE MIN. 20 MINUTE FIRE-RATED R307.5.1.
- BUILDER AND SUB BRICK CONTRACTORS TO PROVIDE WEEP HOLES RESTING ON THE FLASHING SPACED 33" O.C. MAX. (74" PREFERRED) AT HEAD DETAILS OF WINDOWS, DOORS, BASEMENT WINDOWS AND GARAGE DOORS. ALSO PROVIDE FLASHING TO FACE OF BRICK W/ MIN. 8" VERTICAL LEG AND FORM END DAPS (LAP UNDER AIRMOISTURE BARRIER). MICHIGAN RESIDENTIAL CODE 205 SEC. 100.15 - 100.18. A PRE-BRICK INSPECTION WILL BE REQ'D PRIOR TO BRICK INSTALLATION FOR FLASHING INSPECTION.
- FASTENER SCHEDULE FOR STRUCTURAL MEMBERS TABLE R603.3 (1) WOOD STRUCTURAL PANELS, SUPERFLOOR ROOF AND WALL SHEATHING TO FRAMING AND PARTICLEBOARD WALL SHEATHING TO FRAMING BUILDING MATERIALS OF 2"-1/2" USE 6d COMMON NAIL/SUPERFLOOR WALLS @ 6" FROM EDGES 12" INTERMEDIATE SUPPORTS AND USE 6d COMMON NAILS FOR ROOF 6" FROM EDGES 12" INTERMEDIATE.
- BUILDER JOINER TO PROVIDE WATERPROOFING TO CODE SUBMIT INFORMATION ON APPROVED PRODUCTS.
- BUILDER/TRUSS MFG TO PROVIDE TRUSS DESIGN DRAWINGS IN COMPLIANCE WITH MRC 205 AND SHALL INCLUDE AT MINIMUM THE INFORMATION SPECIFIED BELOW:
  - SLOPE OR DEPTH, SPAN AND SPACING
  - LOCATION OF ALL JOINTS
  - REQUIRED BEARING WIDTHS
  - DESIGN LOADS AS APPLICABLE
    - TOP CHORD LIVE LOAD (INCLUDING SNOW LOADS)
    - TOP CHORD DEAD LOAD
    - BOTTOM CHORD LIVE LOAD
    - BOTTOM CHORD DEAD LOAD
    - CONCENTRATED LOADS AND THEIR POINTS OF APPLICATION
    - CONTROLLING WIND AND EARTH QUAKE LOADS
- ADJUSTMENTS TO LUMBER AND JOINT CONNECTOR DESIGN VALUES FOR CONDITIONS OF USE.
- EACH REACTION FORCE AND DIRECTION
- JOINT CONNECTOR TYPE AND DESCRIPTION EG. SIZE THICKNESS OR GAUGE AND THE DIMENSIONED LOCATION OF EACH JOINT CONNECTOR EXCEPT WHERE SYMMETRICALLY LOCATED RELATIVE TO THE JOINT INTERFACE.
- LUMBER SIZE, SPECIES AND GRADE FOR EACH MEMBER
- CONNECTION REQUIREMENTS FOR:
  - TRUSS-TO-TRUSS GIRDERS
  - TRUSS PLY TO FLY
  - FIELD SLICES
- CALCULATED DEFLECTION RATIO AND/OR MAXIMUM DESCRIPTION FOR LIVE AND TOTAL LOAD
- MAXIMUM AXIAL COMPRESSION FORCES IN THE TRUSS MEMBERS TO ENABLE THE BUILDING DESIGNER TO DESIGN THE SIZE CONNECTIONS AND ANCHORAGE OF THE PERMANENT CONTINUOUS LATERAL BRACING FORCES SHALL BE SHOWN ON THE TRUSS DRAWING OR ON SUPPLEMENTAL DOCUMENTS.
- REQUIRED PERMANENT TRUSS MEMBER BRACING LOCATION

**ALLOWABLE SPANS FOR LINTELS SUPPORTING MASONRY VENEER**  
TABLE R603.1.1 OF MRC 205

SIZE OF ANGLE (IN")	NO STORY ABOVE	ONE STORY ABOVE	TWO STORES ABOVE	NO. OF 1/2" OR EQ. REIN. BARS*
3 X 3 X 3/4	8'-0"	4'-6"	3'-0"	1
4 X 3 X 3/4	8'-0"	6'-0"	4'-6"	1
5 X 3 1/2 X 3/4	10'-0"	8'-0"	6'-0"	2
6 X 3 1/2 X 3/4	14'-0"	9'-6"	7'-0"	2
(2) 6 X 3 1/2 X 3/4	20'-0"	12'-0"	9'-6"	4

- LONG LEGS OF THE ANGLE SHALL BE PLACED IN A VERTICAL POSITION.
- DEPTH OF REINFORCED LINTELS SHALL NOT BE LESS THAN 8 INCHES AND ALL CELLS OF HOLLOW MASONRY LINTELS SHALL BE GROUTED SOLID. REINFORCING BARS SHALL EXTEND NOT LESS THAN 8 INCHES INTO THE SUPPORT.
- STEEL MEMBERS INDICATED ARE ADEQUATE TYPICAL EXAMPLES. OTHER STEEL MEMBERS, MEETING STRUCTURAL DESIGN REQUIREMENTS, MAY BE USED.



## FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

- SD.** BUILDER TO PROVIDE APPROVED SMOKE DETECTORS AS REQ'D ON ALL FLOORS (INTER-CONNECTED) WITH BATTERY BACK-UP
- CND.** SINGLE STATION CARBON MONOXIDE DETECTOR TO COMPLY W/ UL 2034 AND INSTALLED PER MANUF. SPECIFICATIONS
- NOTE:** ALL STAIRWAYS SHALL BE ILLUMINATED WITH MN. (U) FOOTCANDLE



920 EAST LONG LAKE RD.  
SUITE 200  
TROY MI 48065  
P. 248.524.0445  
F. 248.524.0447

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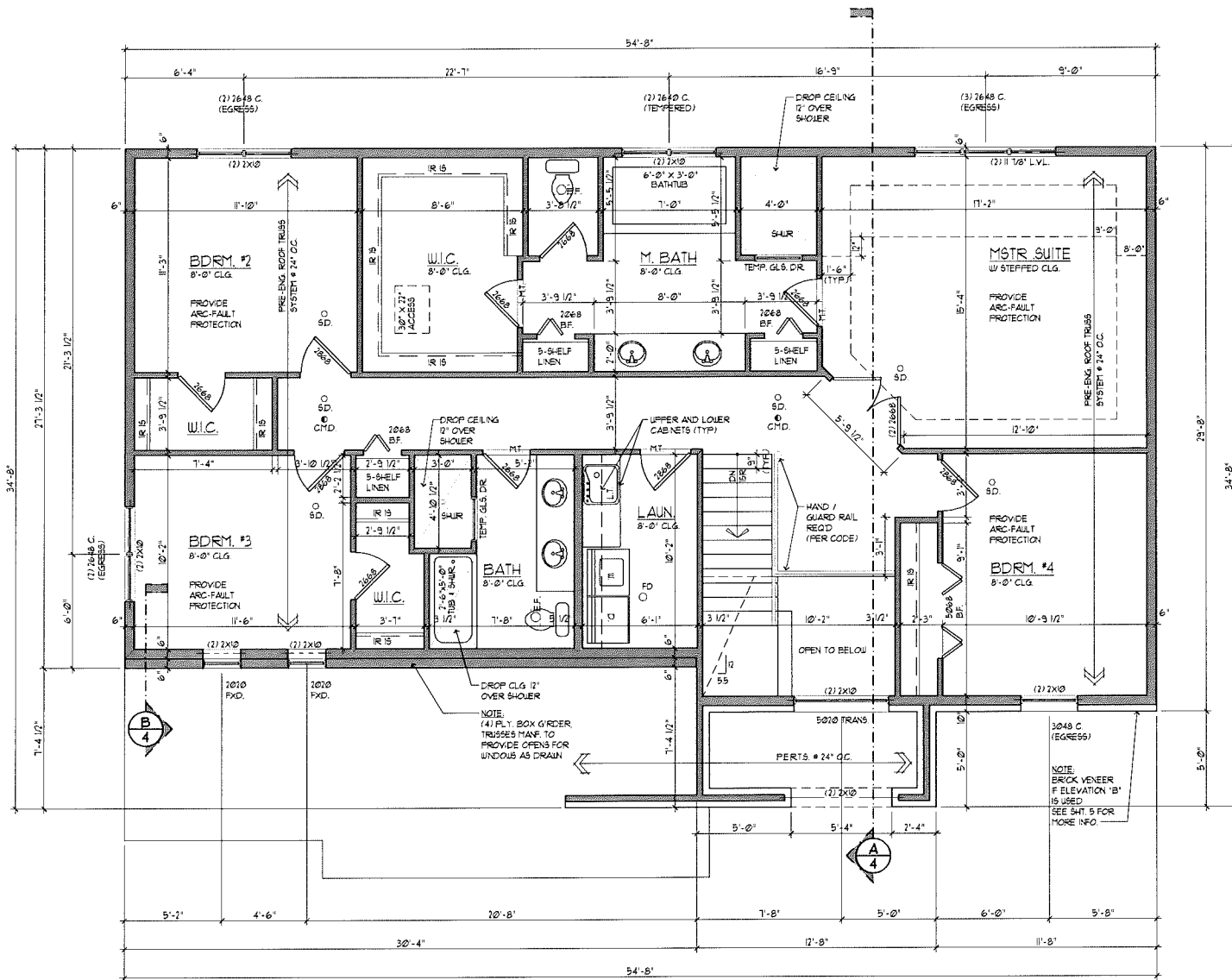
MICHAELANGELO CONSTRUCTION

2600 GARAGE LEFT  
SADDLEBROOK ORCHARDS  
ROCHESTER HILLS MI

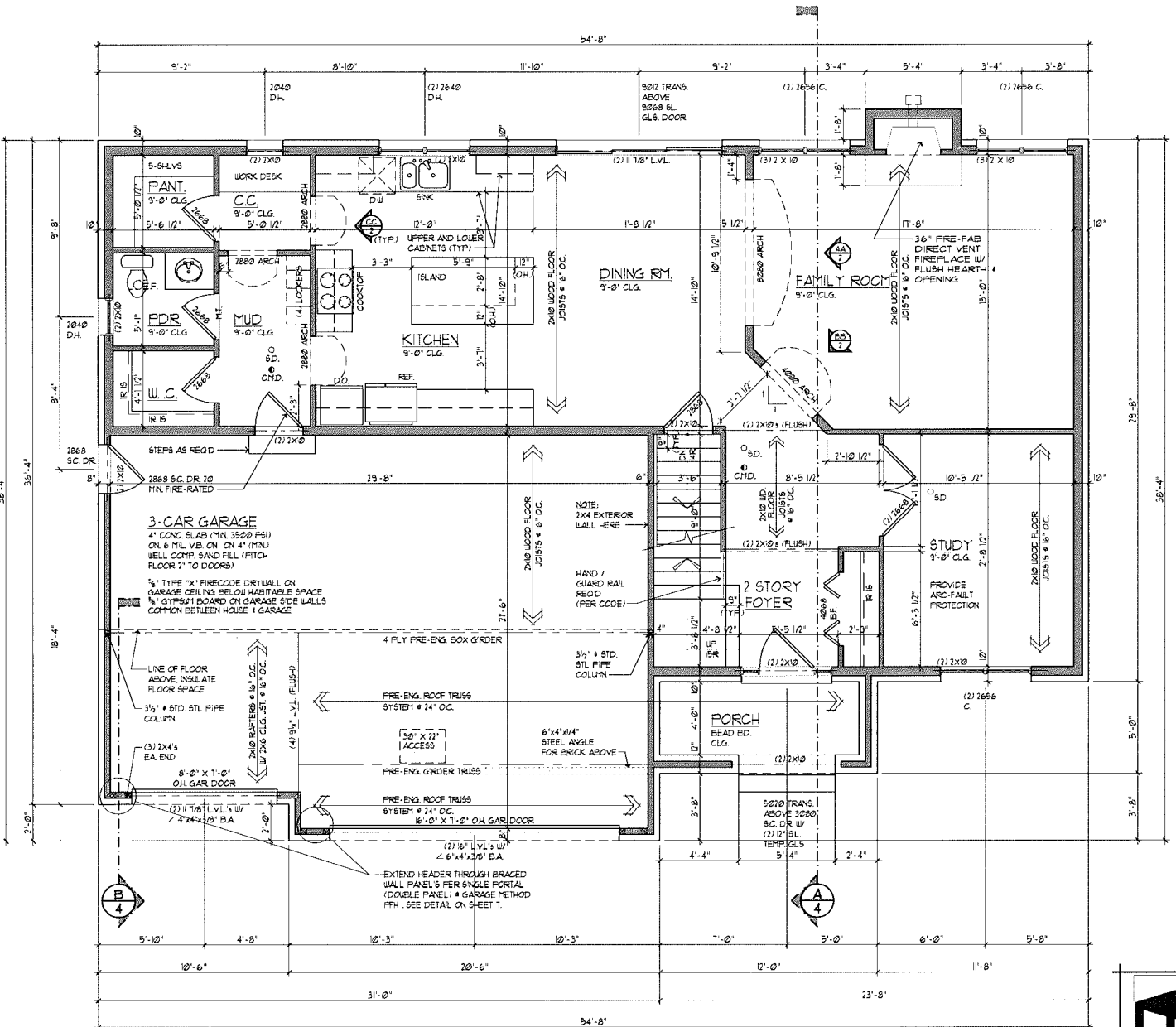
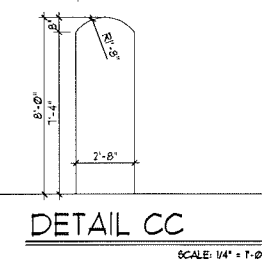
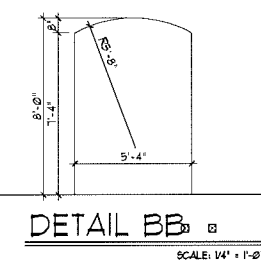
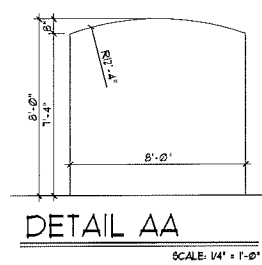
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Drawn By:	SHVCP/NSF
Checked By:	P.S.

Job No:  
**16-335**

Sheet No:  
**1 OF 8**



**SECOND FLOOR PLAN**  
 1441 SQ FT SCALE: 1/4" = 1'-0"



**FIRST FLOOR PLAN**  
 FIRST FLOOR: 172 SQ FT  
 SECOND FLOOR: 1441 SQ FT  
 TOTAL: 2693 SQ FT SCALE: 1/4" = 1'-0"

**GENERAL STRUCTURAL NOTES:**

- (REFER ONLY TO NOTES AFFILIABLE TO THE PROJECT)
- DESIGN CRITERIA:**
- BUILDING CODES USED FOR DESIGN: 2025 MICHIGAN RESIDENTIAL CODE (MRC)
  - FLOOR LIVE AND DEAD LOADS: 40 psf LIVE, 5 psf DEAD FOR WOOD, LINOLEUM AND CARPET FLOORING; 75 psf DEAD FOR 1/2" IN SET CERAMIC FLOORING; 35 psf DEAD FOR MARBLE / GRANITE FLOORING
  - MINIMUM DEFLECTION CRITERIA: L/240 LIVE AND L/360 TOTAL FOR ROOF COMPONENTS WITH RIGID FLOORING (e.g. TILE); L/120 LIVE AND L/360 TOTAL FOR FLOOR COMPONENTS WITH FLEXIBLE FLOORING (e.g. CARPET)
  - ROOF LIVE AND SNOW LOADS: FLAT-ROOF SNOW LOAD: Ps = 30 psf; PLAT ROOF DEAD: Ps = 15 psf
  - WIND LOADS: BASIC WIND SPEED: 30 MPH; WIND IMPORTANCE FACTOR: I = 1.0; BUILDING CATEGORY: II; WIND EXPOSURE: B
  - DESIGN STRENGTHS: CONCRETE: STRENGTH AT 28 DAYS (PSI) LOCATION: CLASS A: 3000 INTERIOR SLABS & WALLS; CLASS B: 3000 FOOTINGS & FOUNDATION WALLS; CLASS C: 3000 AIR-ENTRAINED EXTERIOR SLABS & WALLS; CONCRETE REINFORCEMENT: ASTM A618/A618M-02B (Fy = 60 KSI); WELDED WIRE FABRIC: ASTM A65-01; STRUCTURAL STEEL: ANCHOR RODS: ASTM A307-02; MASONRY: NORMAL WEIGHT Fm = 1500 PSI

**FOUNDATIONS AND EARTHWORK:**

- WATER SHALL NOT BE PERMITTED TO ACCUMULATE IN FOOTING EXCAVATIONS.
- PROVIDE A MINIMUM OF 6 INCHES OF GRANULAR FILL BELOW ALL INTERIOR SLABS-ON-GRADE.
- PROVIDE GRANULAR BACKFILL FOR BASEMENT WALLS. ALL BACKFILL SHALL BE WELL DRAINED.
- THE FOUNDATION DESIGN IS BASED ON A SOIL BEARING CAPACITY OF 1500 PCF.
- OTHERS SHALL DETERMINE THE ACTUAL BEARING VALUE OF THE SOIL.
- ALL FOOTING EXCAVATIONS SHALL BE INSPECTED, PRIOR TO CONCRETE PLACEMENT.
- WHERE COMPACTION OF FILL IS SPECIFIED, COMPACTION OF FILL MATERIAL SHALL BE A MINIMUM 95% OF MAXIMUM DRY DENSITY.
- BOTTOM OF EXTERIOR BUILDING FOOTINGS ARE TO BE AT LEAST 4 INCHES BELOW FINAL OUTSIDE GRADE REGARDLESS OF ELEVATION SHOWN ON PLAN.
- ALL CONTINUOUS FOOTINGS SHALL BE CENTERED UNDER WALLS AND ALL PIERS AND SPREAD FOOTINGS SHALL BE CENTERED UNDER COLUMNS OR PIERS UNLESS NOTED OTHERWISE.
- NO SLABS OR FOUNDATIONS SHALL BE PLACED INTO OR ADJACENT TO SUBGRADE CONTAINING WATER, ICE, FROST OR ORGANIC MATERIAL.
- WHERE FOUNDATION WALLS ARE TO HAVE SOIL PLACED ON BOTH SIDES, PLACE SOIL SIMULTANEOUSLY SO AS TO MAINTAIN A COMMON ELEVATION ON EACH SIDE OF THE WALL.

**CONCRETE:**

- THE REINFORCING STEEL CONTRACTOR SHALL FABRICATE ALL REINFORCEMENT AND FURNISH ALL ACCESSORIES, CHAIRS, SPACER BARS AND SUPPORTS NECESSARY TO SECURE THE REINFORCEMENT UNLESS SHOWN OTHERWISE ON THE PLANS AND/OR DETAILS.
- REINFORCING STEEL SHALL BE ASTM A618 GRADE 60.
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A65.
- CONCRETE REINFORCEMENT SHALL BE PLACED ACCORDING TO THE CRSI "RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS".
- CONCRETE COVERAGE FOR REINFORCEMENT: FOOTINGS: 3" CENTER OF SLAB; SLAB ON GRADE: 2" WILLS EXPOSED TO EARTH; WALLS: 1 1/2"
- COMPRESSION LAP SPLICES FOR GRADE 60 BARS SHALL BE 30 BAR DIAMETER MINIMUM.
- TENSION LAP SPLICES SHALL BE AS DETAILED. USE CLASS "B" SPLICES UNLESS OTHERWISE NOTED.
- ALL WELDED WIRE FABRIC LAPS SHALL BE 6" AT ENDS AND SIDES.
- BAR LENGTHS SHOWN DO NOT INCLUDE HOOKS OR BENDS.
- CONCRETE AT THE TIME OF PLACEMENT SHALL HAVE A SLUMP OF 4" ± 1" UNLESS A SUPER-PLASTICIZING AGENT IS USED.
- ALL OPENINGS IN CONCRETE WALLS SHALL HAVE (2) 5 x 4'-0" LONG BARS DIAGONALLY AT EACH CORNER.

**MASONRY:**

- GROUT FOR VERTICALLY REINFORCED MASONRY WALLS AND BOND BEAMS SHALL CONSIST OF: 1 PART CEMENT, 2 1/2 PARTS FINE AGGREGATE, 2 PARTS FEA GRAVEL, FC = 3000 PSI AT 28 DAYS, GROUT SLUMP 9" TO 10". GROUT SOLID ALL CELLS CONTAINING REINFORCING.
- MASONRY WALLS SHALL HAVE HORIZONTAL REINFORCING CONSISTING OF GALVANIZED STANDARD WEIGHT #3 GAUGE CUR-Q WALL DIA 3/8 THRU 1 1/2 OR EQUAL REINFORCING LOCATED AT EVERY OTHER COURSE UNO.
- LAP ALL VERTICAL REINFORCING SPLICES 48 BAR DIAMETERS, 24" FOR #4 BARS.
- 30" FOR #5 BARS AND 36" FOR #6 BARS.
- ANCHOR BEAMS & LINTELS TO WALL.
- MASONRY WALLS SHALL BE LAID UP AND GROUTED IN 4 FOOT LIFTS (LOW LIFT GROUTING PROCEDURE PER ACI 530). IF CLEANOUTS ARE PROVIDED AT EACH GROUTED CORE, WALLS MAY BE GROUTED IN 8 FOOT LIFTS FOLLOWING THE HIGH-LIFT GROUTING PROCEDURE PER ACI 530.
- THE PROCEDURE OF ACI 530I FOR COLD WEATHER CONSTRUCTION SHALL BE ADHERED TO WHENEVER THE AIR OUTSIDE TEMPERATURE IS BELOW 40 DEGREES F.

**STRUCTURAL STEEL:**

- YIELD STRESS AND TYPE OF STEEL: FOR WIDE FLANGE SHAPES: ASTM A992 WITH YIELD STRESS OF 50,000 PSI; FOR S SHAPES, CHANNELS, ANGLES, BARS, PLATES AND RODS: ASTM A36 WITH YIELD STRESS OF 36,000 PSI; FOR RECTANGULAR AND SQUARE TUBULAR SHAPES: ASTM A500 WITH YIELD STRESS OF 46,000 PSI.
- BOLTS USE CARBON OR ALLOY STEEL, ASTM A325 3/4" DIA OR LARGER IF REQUIRED BY CONNECTION DESIGN. ANCHOR BOLTS SHALL BE WEDGE STYLE ANCHOR HULTI-KWIK BOLT 3. NUTS, CARBON STEEL MEETING ASTM A563. WASHERS, HARDENED STEEL, WASHERS MEETING ASTM F436. ASTM A307 BOLTS MAY BE USED FOR WOOD TO WOOD CONNECTIONS AND STEEL LINTEL TO WOOD CONNECTIONS.
- ANCHOR RODS: ASTM F1554, GRADE 36.

**MISCELLANEOUS:**

- PREFABRICATED I-JOISTS SHALL BE DESIGNED TO SUPPORT THEIR OWN WEIGHT PLUS THE SUPERIMPOSED DEAD AND LIVE LOADS STATED IN THE GENERAL NOTES AND 2006 MRC. I-JOIST SERIES, MANUFACTURER, SPACING, BRIDGING, BLOCKING AND DETAILING SHALL BE DESIGNED BY THE FLOOR SYSTEM PROVIDER SUCH THAT IT MEETS THE DESIGN CRITERIA HEREIN AS A MINIMUM. THE CONTRACTOR SHALL SUBMIT TO THE DESIGNER FOR REVIEW THE DESIGN LAYOUT AND COMPONENT CALCULATIONS BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MICHIGAN PRIOR TO USE IN THE STRUCTURE.
- MN LVL PROPERTIES SHALL BE: E = 1.0 x 10<sup>6</sup> psi; Fv = 125 psi; Fy = 285 psi; Mn PL COLUMN PROPERTIES SHALL BE: E = 1.8 x 10<sup>6</sup> psi; Fy = 2400 psi TRUS JOIST PARALLEL OR EQUAL.
- WALLS SHALL BE BRACED ACCORDING TO R607.0 OF THE 2006 MRC.
- TRUSSES SHALL BE BRACED IN ACCORDANCE WITH RC519 OCTOBER 2006 "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES".
- ALL FRONT LOADS SHALL BE CONTINUOUSLY BLOCKED THROUGHOUT THE STRUCTURE TO THE FOUNDATION OR SUPPORT BEAM.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- THE STRUCTURAL DESIGN IS BASED ON THE BUILDING IN ITS COMPLETED STATE. CONTRACTORS AND THEIR SUBCONTRACTORS SHALL TAKE UNUSUAL PRECAUTIONS MADE NECESSARY TO WITHSTAND ALL HORIZONTAL AND VERTICAL LOADINGS THAT MAY BE ENCOUNTERED DURING THE CONSTRUCTION PRIOR TO COMPLETION OF THE BUILDING.
- DO NOT SCALE DRAWINGS.

**SD:**

- BUILDER TO PROVIDE APPROVED SMOKE DETECTORS AS REQ'D ON ALL FLOORS (INTER-CONNECTED) WITH BATTERY BACK-UP.
- CPID: SINGLE STATION CARBON MONOXIDE DETECTOR TO COMPLY W/ ILL 2034 AND INSTALLED PER MANUF. SPECIFICATIONS.
- NOTE: ALL STAIRWAYS SHALL BE ILLUMINATED WITH FNL (1) FOOTCANDLE.



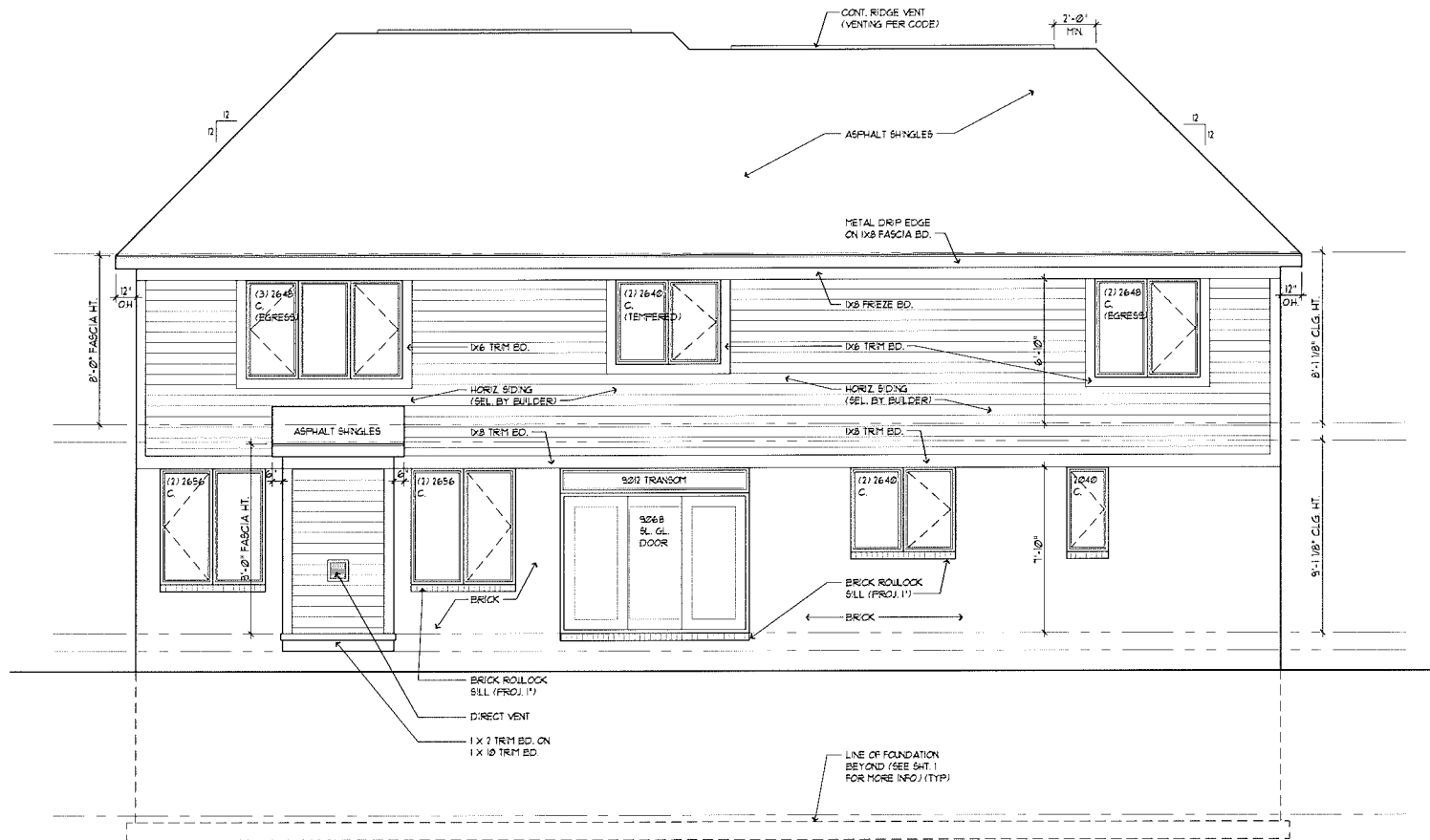
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 TROY MI 48065  
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MICHAELANGELO CONSTRUCTION

2600 GARAGE LEFT  
 SADDLEBROOK ORCHARDS  
 ROCHESTER HILLS MI

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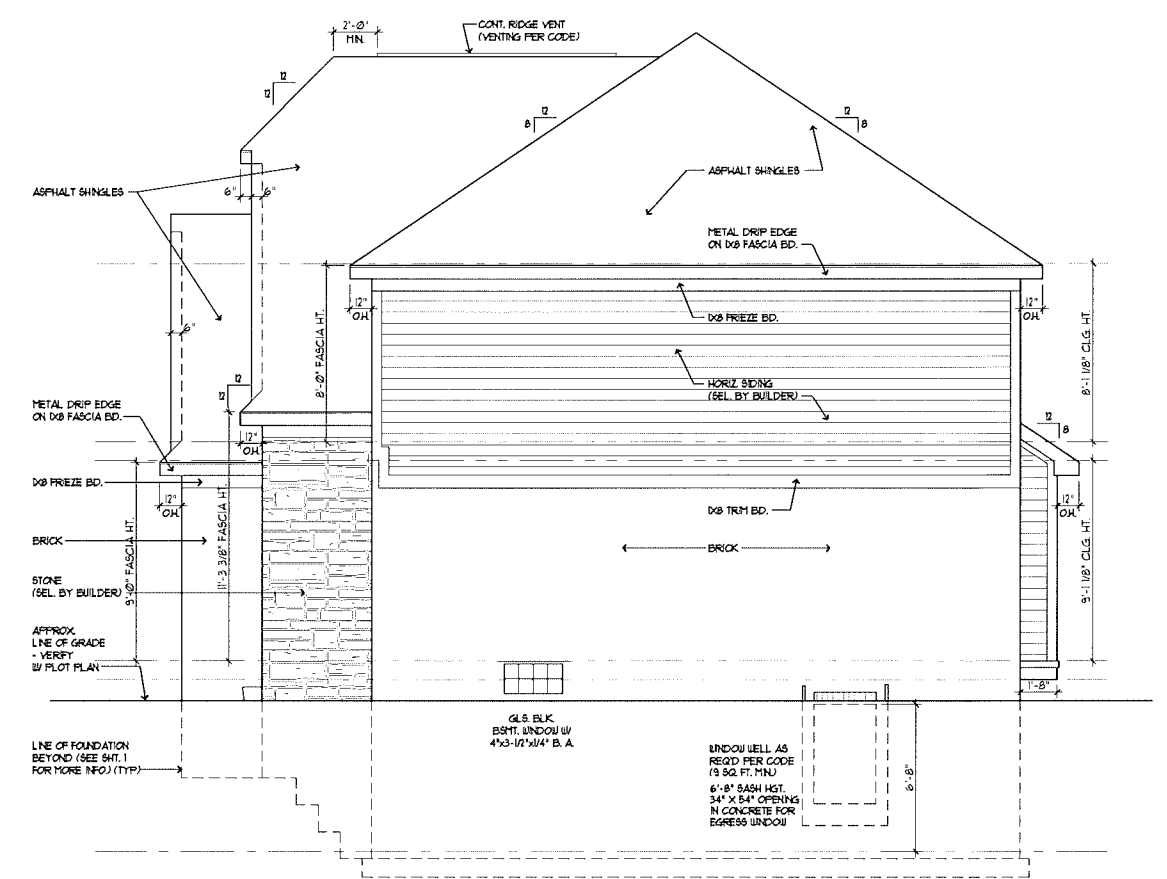
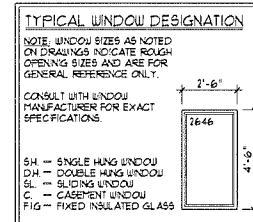
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**16-335**  
 Sheet No:  
**2 OF 8**



REAR ELEVATION - "A"

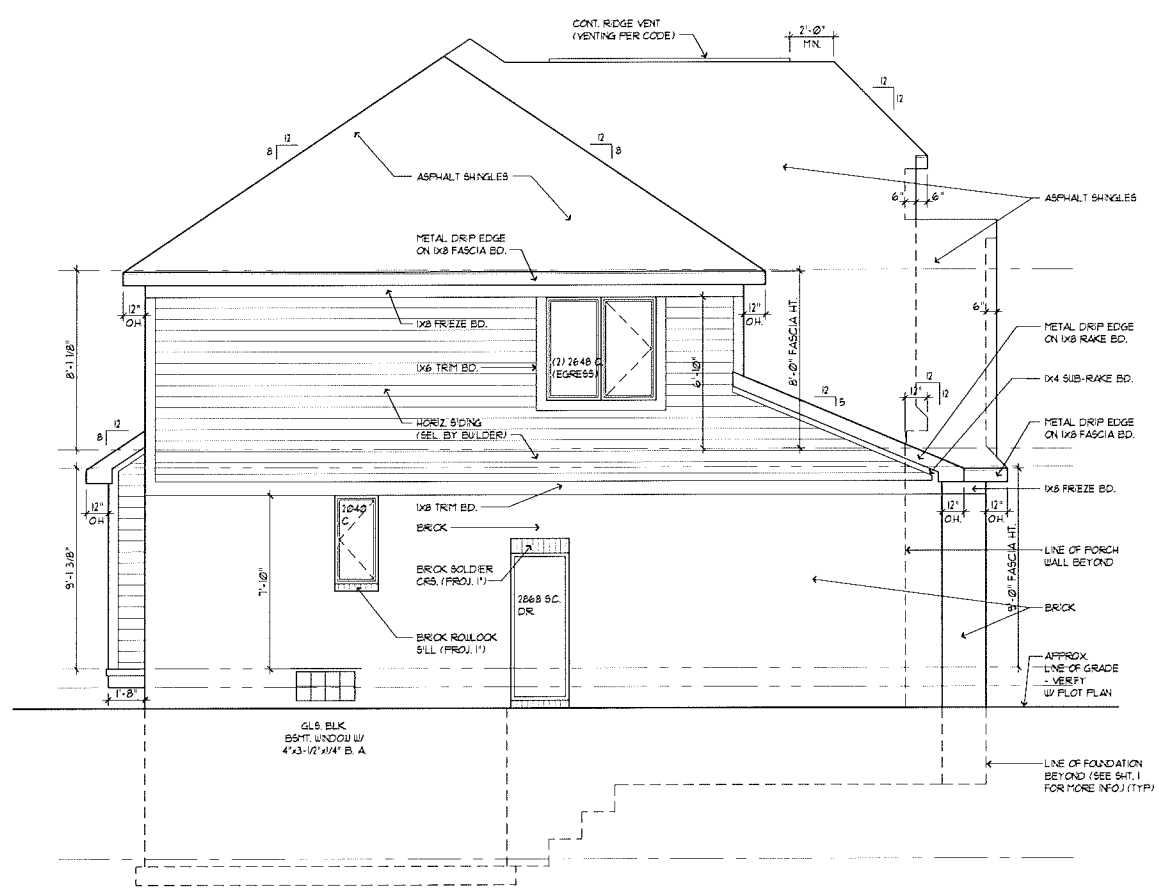
SCALE: 1/4" = 1'-0"

NOTE: ANY WINDOWS WITH BOTTOM SILL LOWER THAN 24" FROM FINISH FLOOR AND EXCEEDING 12" FROM FINAL GRADE MUST BE NON-EGRESS AND/OR NON-OPERABLE.



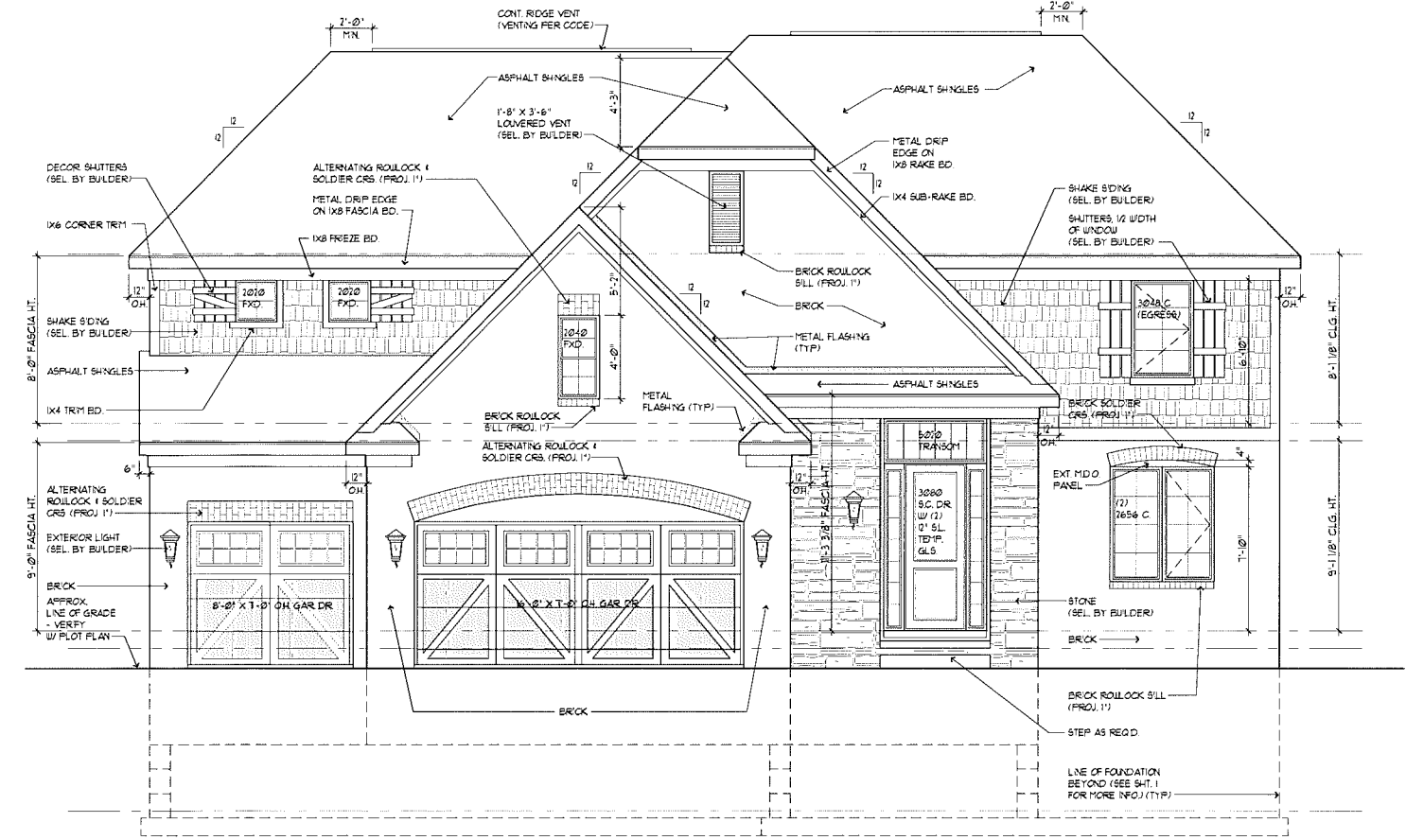
RIGHT ELEVATION - "A"

SCALE: 1/4" = 1'-0"



LEFT ELEVATION - "A"

SCALE: 1/4" = 1'-0"



FRONT ELEVATION - "A"

SCALE: 1/4" = 1'-0"



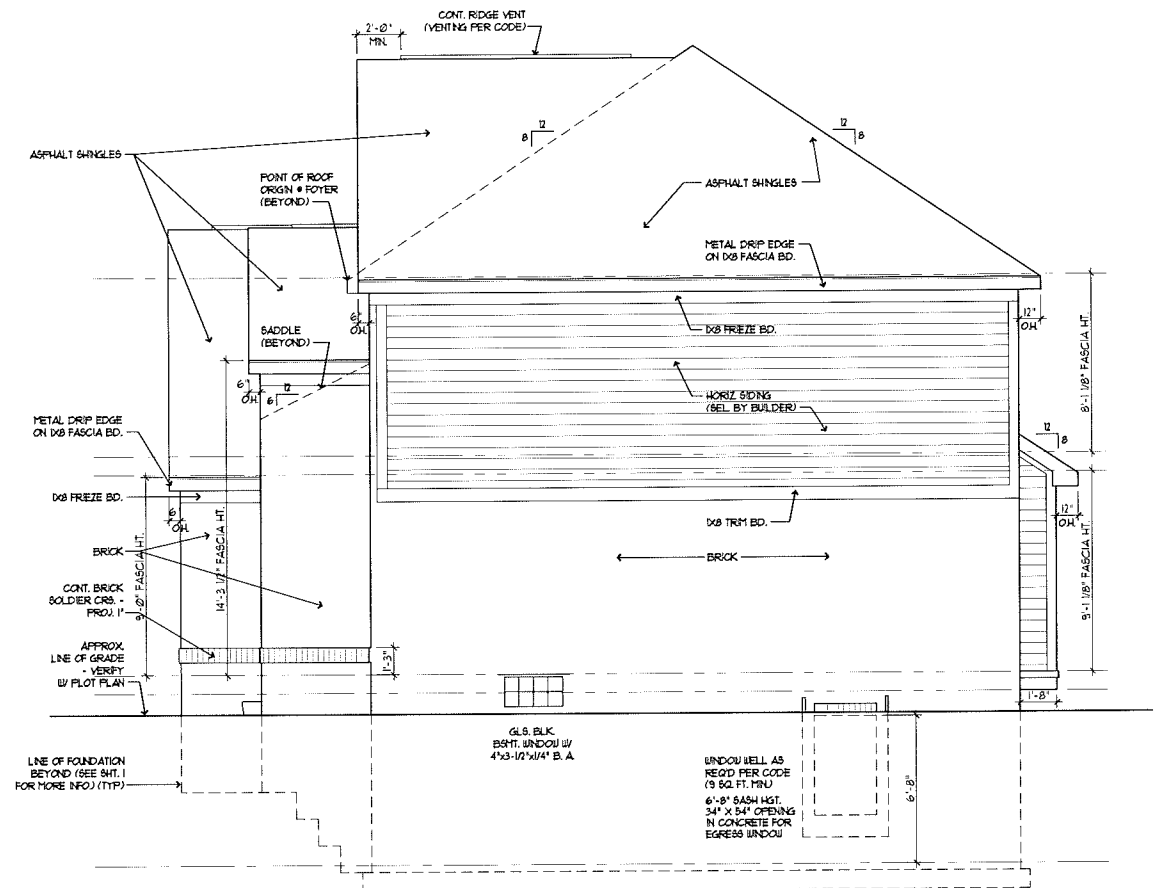
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MICHELANGELO CONSTRUCTION

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SADDLEBROOK ORCHARDS  
ROCHESTER HILLS MI

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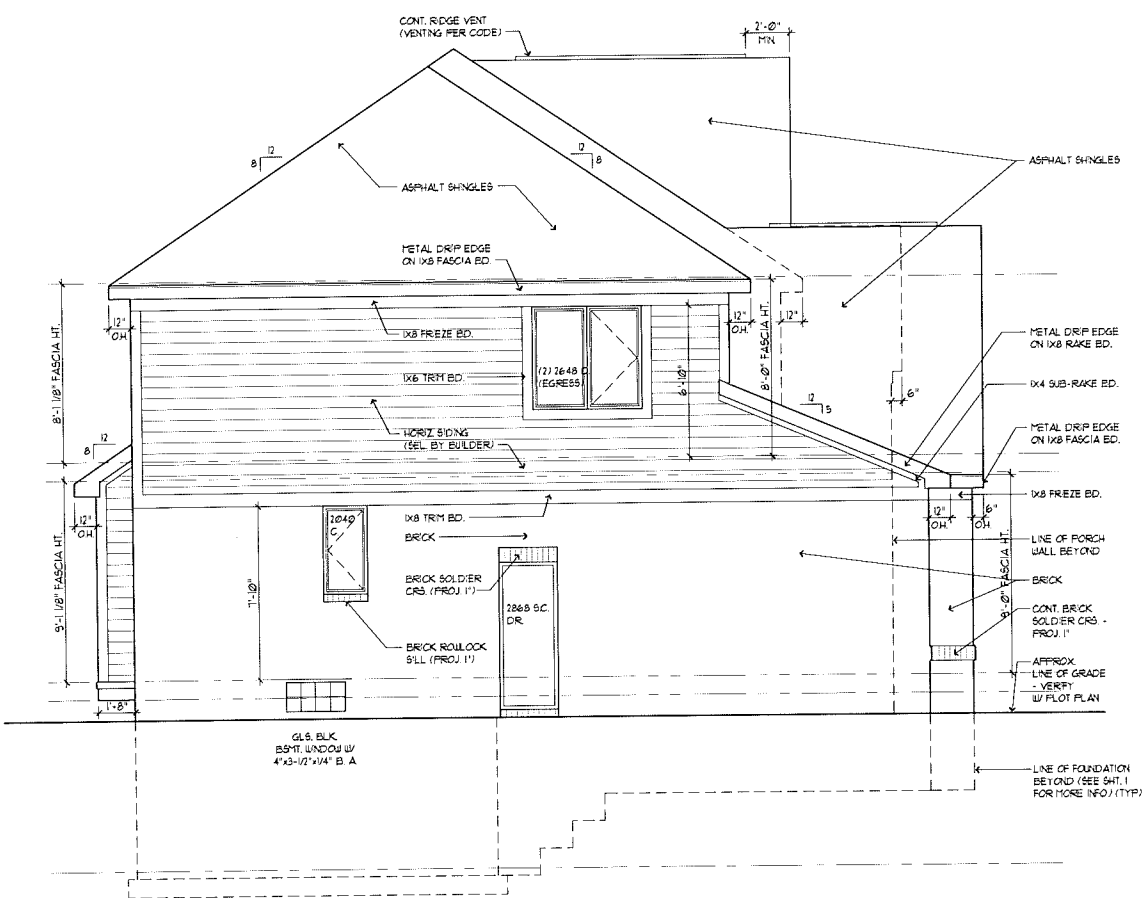
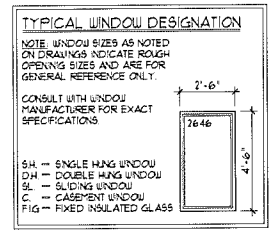




RIGHT ELEVATION - "B"

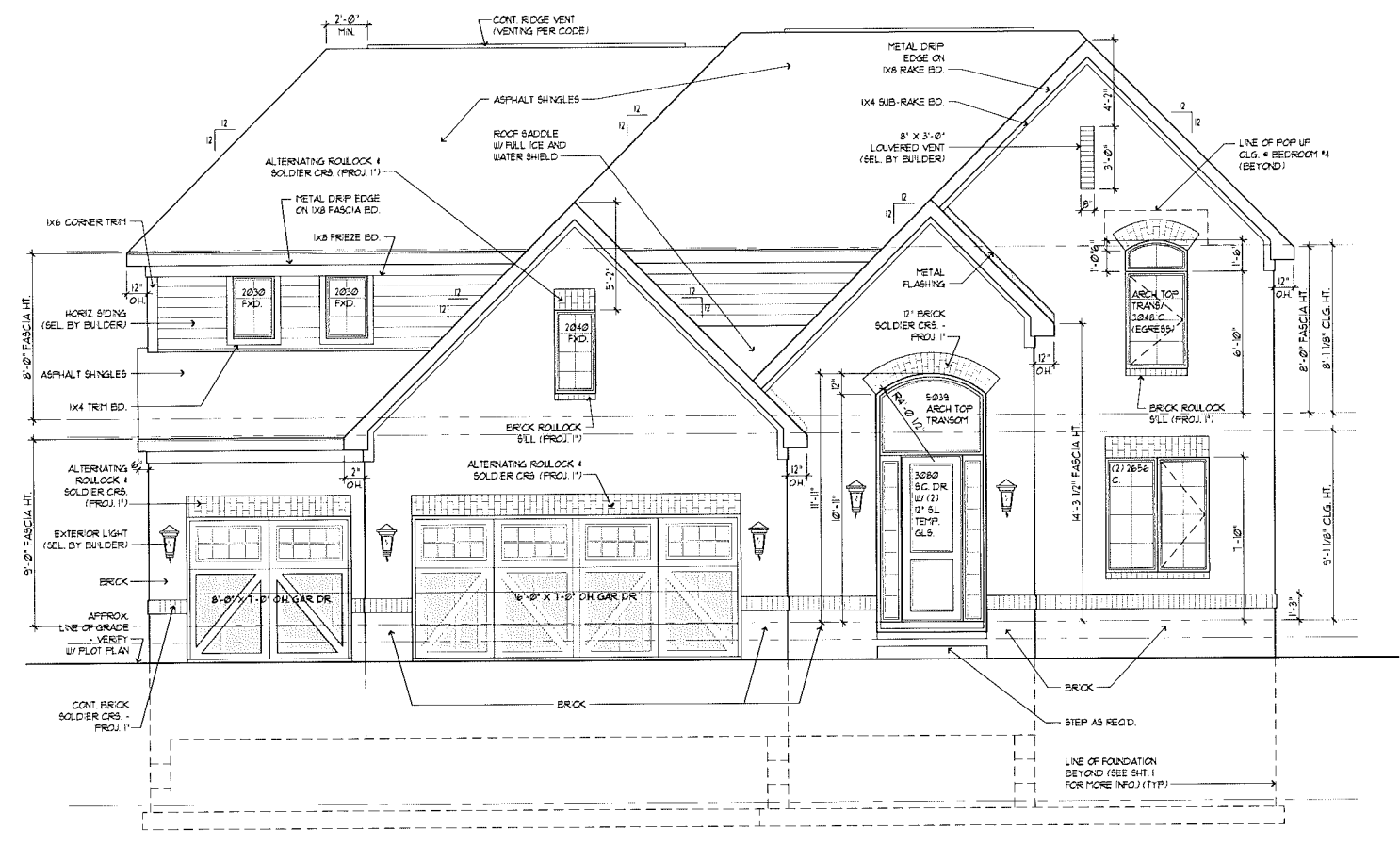
SCALE: 1/4" = 1'-0"

NOTE: ANY WINDOWS WITH BOTTOM SILL LOWER THAN 24" FROM FINISH FLOOR AND EXCEEDING 12" FROM FINAL GRADE MUST BE NON-EGRESS AND OR NON-OPERABLE.



LEFT ELEVATION - "B"

SCALE: 1/4" = 1'-0"



FRONT ELEVATION - "B"

SCALE: 1/4" = 1'-0"

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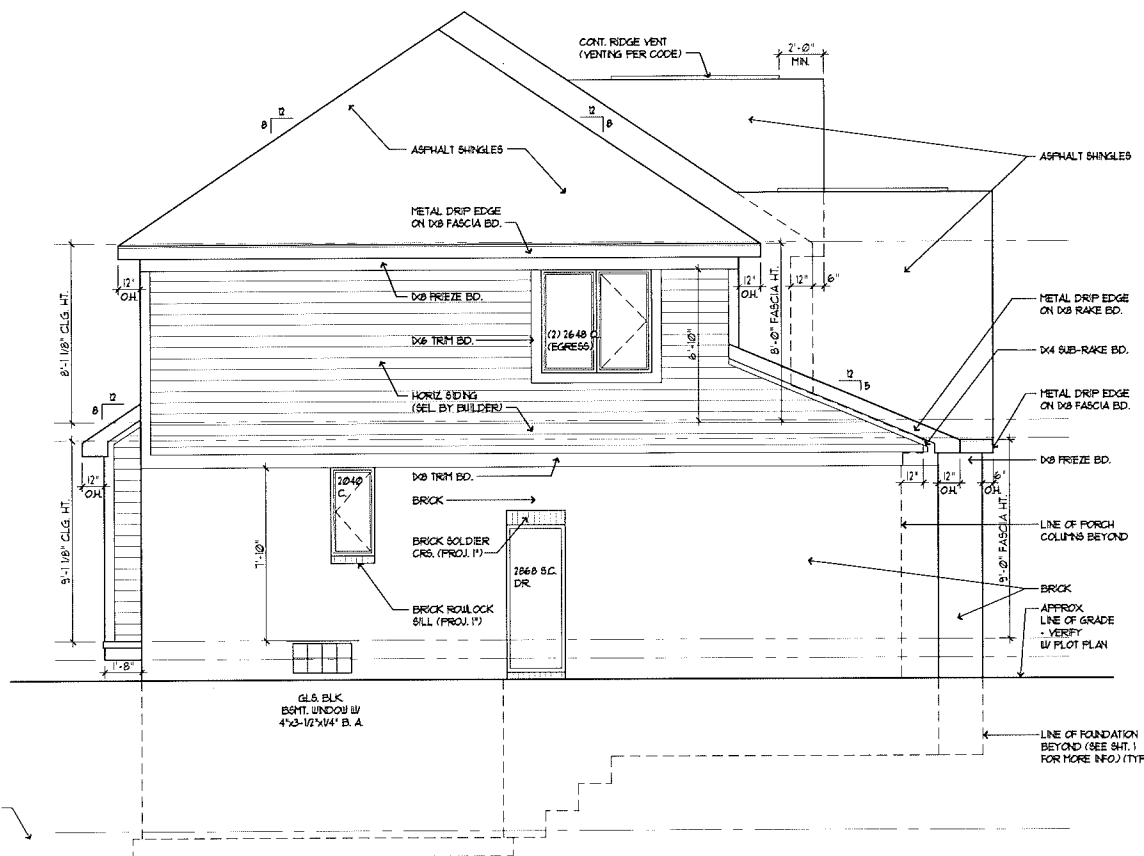
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MICHAELANGELO CONSTRUCTION

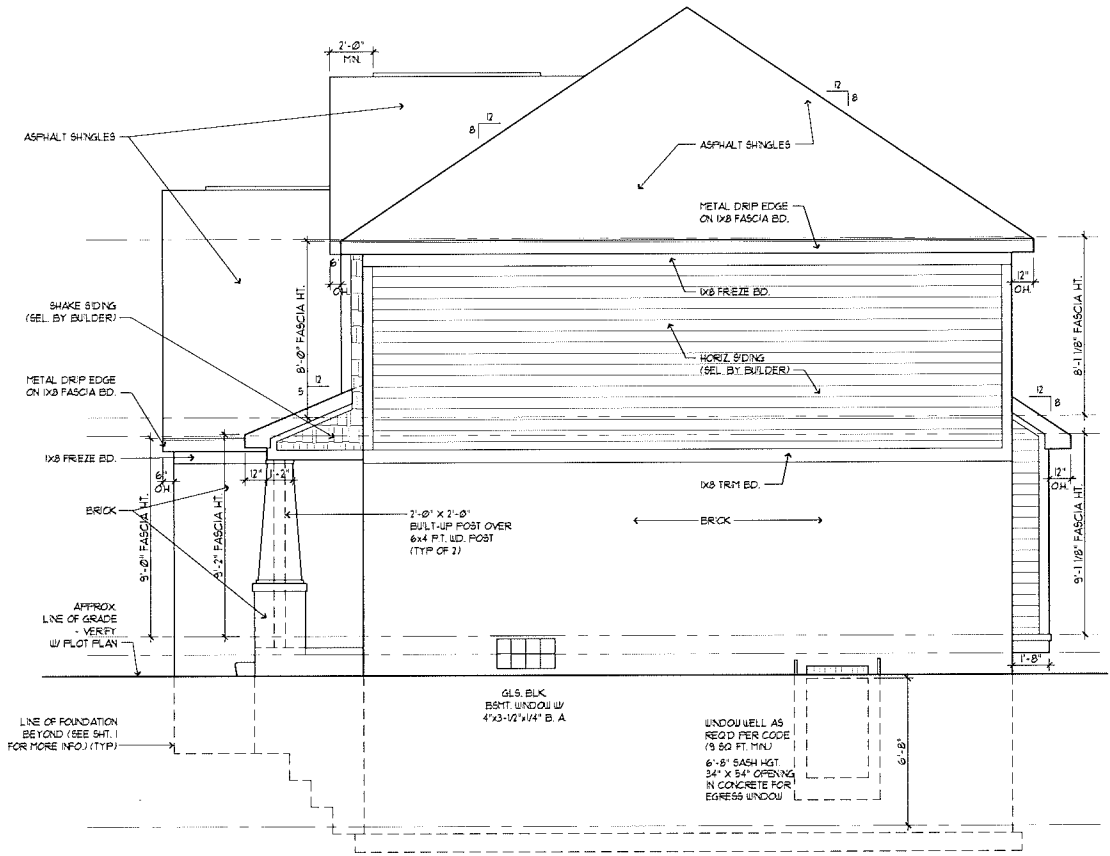
2600 GARAGE LEFT  
SADDLEBROOK ORCHARDS  
ROCHESTER HILLS MI

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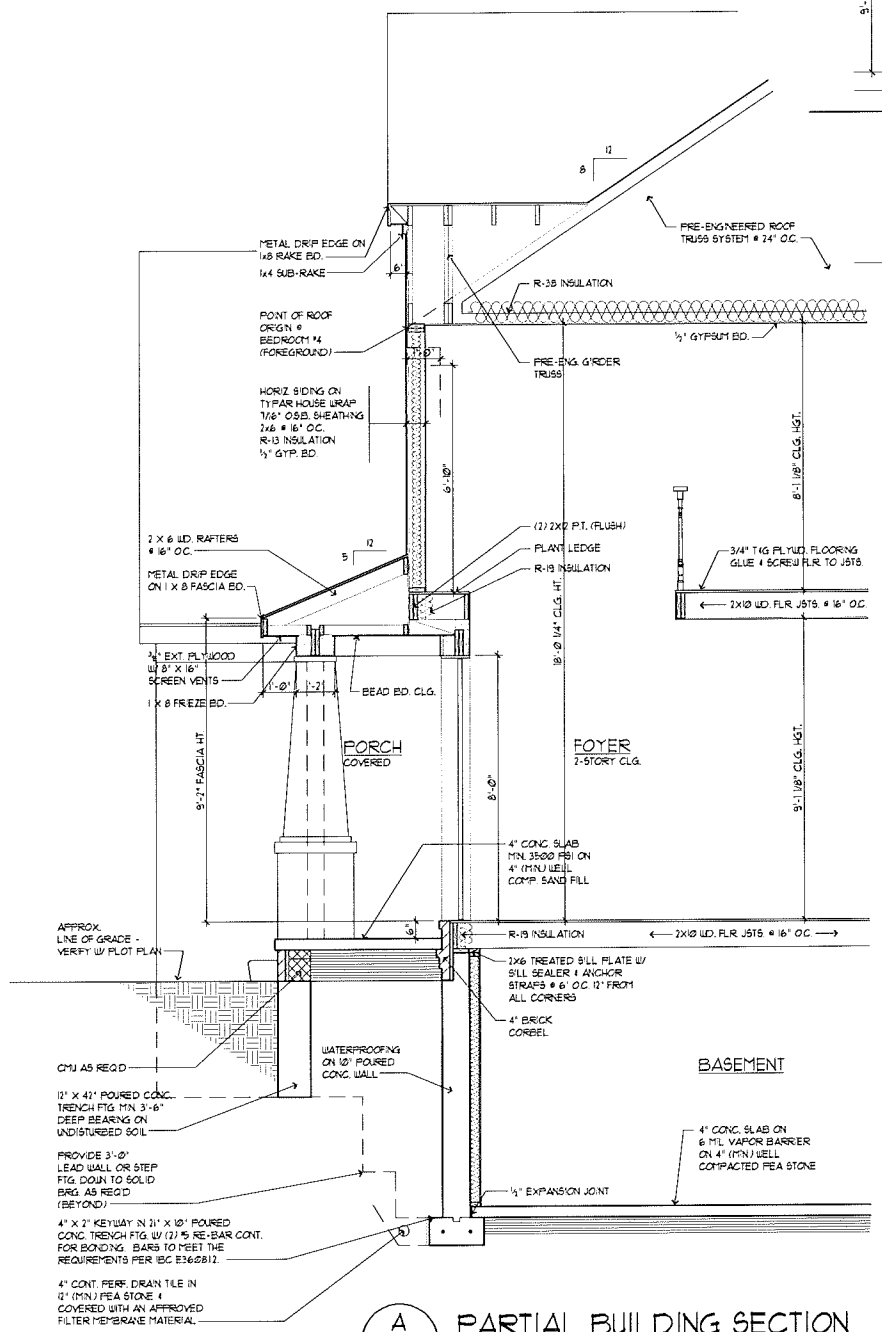




LEFT ELEVATION - "C"  
SCALE: 1/4" = 1'-0"



RIGHT ELEVATION - "C"  
SCALE: 1/4" = 1'-0"

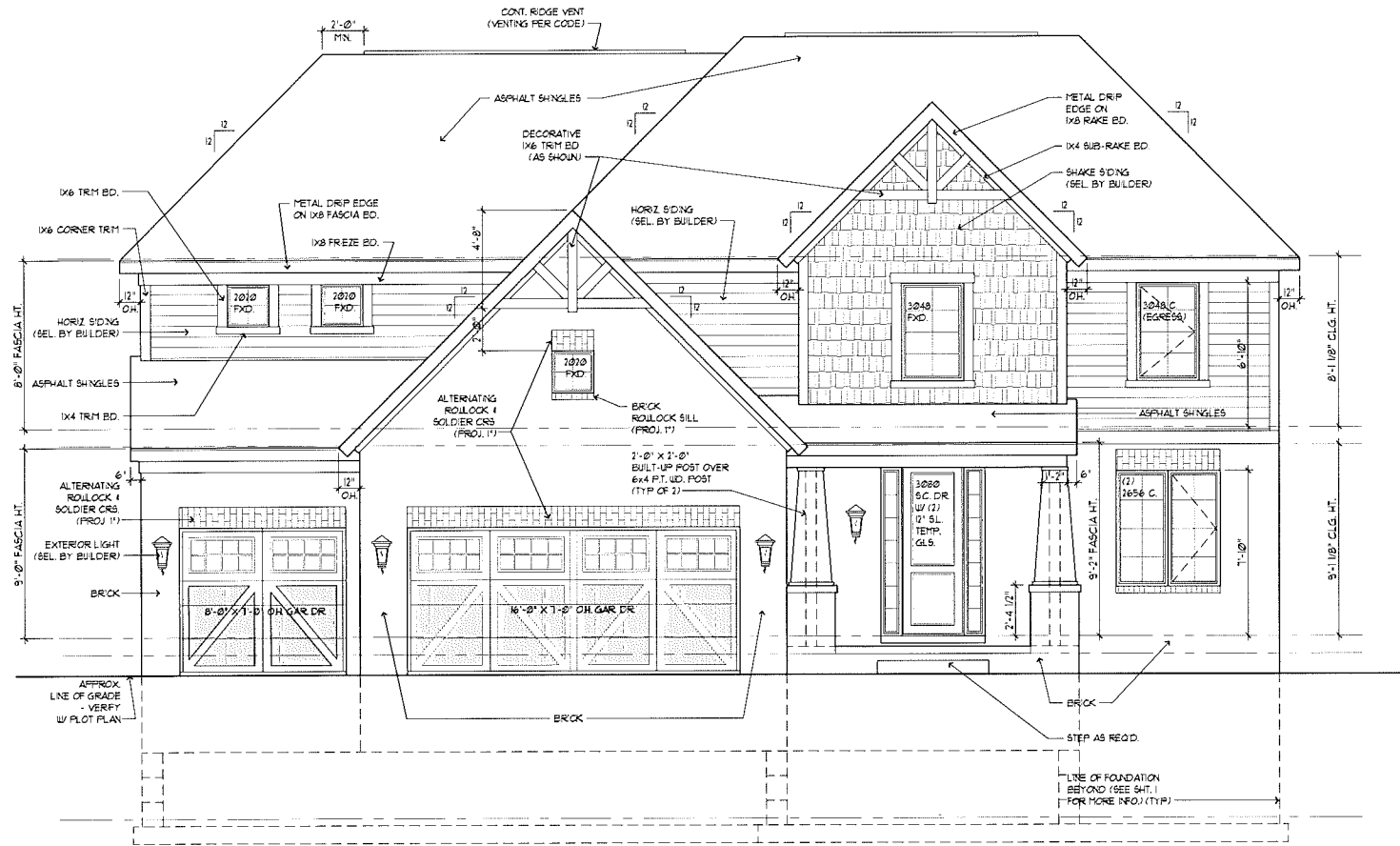


A PARTIAL BUILDING SECTION  
SCALE: 3/8" = 1'-0"

NOTE: ANY WINDOWS WITH BOTTOM SILL LOWER THAN 24" FROM FINISH FLOOR AND EXCEEDING 12" FROM FINISH GRADE MUST BE NON-EGRESS AND OR NON-OPERABLE.

**TYPICAL WINDOW DESIGNATION**  
NOTE: WINDOW SIZES AS NOTED ON DRAWINGS INDICATE ROUGH OPENING SIZES AND ARE FOR GENERAL REFERENCE ONLY. CONSULT WITH WINDOW MANUFACTURER FOR EXACT SPECIFICATIONS.

SH - SINGLE HUNG WINDOW  
DH - DOUBLE HUNG WINDOW  
SL - SLIDING WINDOW  
C - CASEMENT WINDOW  
FIG - FIXED INSULATED GLASS



FRONT ELEVATION - "C"  
SCALE: 1/4" = 1'-0"

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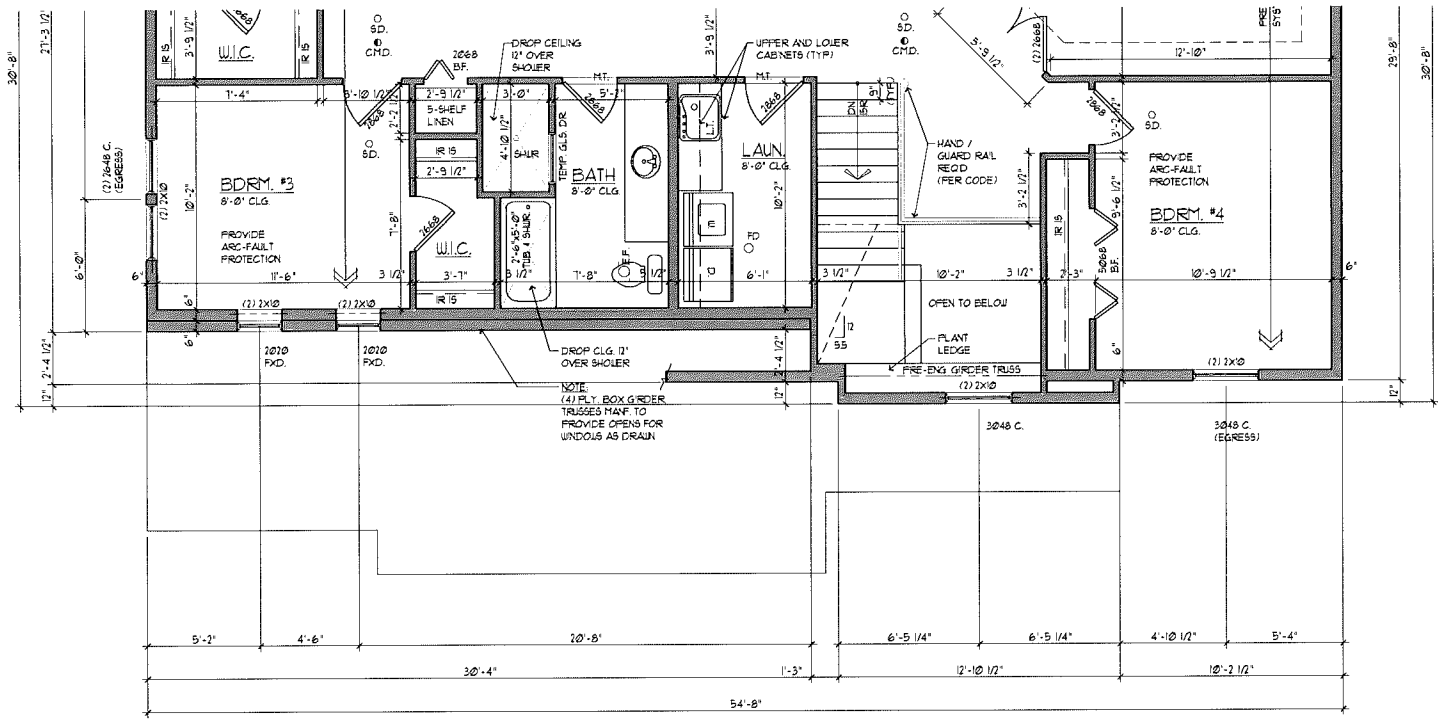
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MICHAELANGELO CONSTRUCTION

2600 GARAGE LEFT  
SADDLEBROOK ORCHARDS  
ROCHESTER HILLS MI

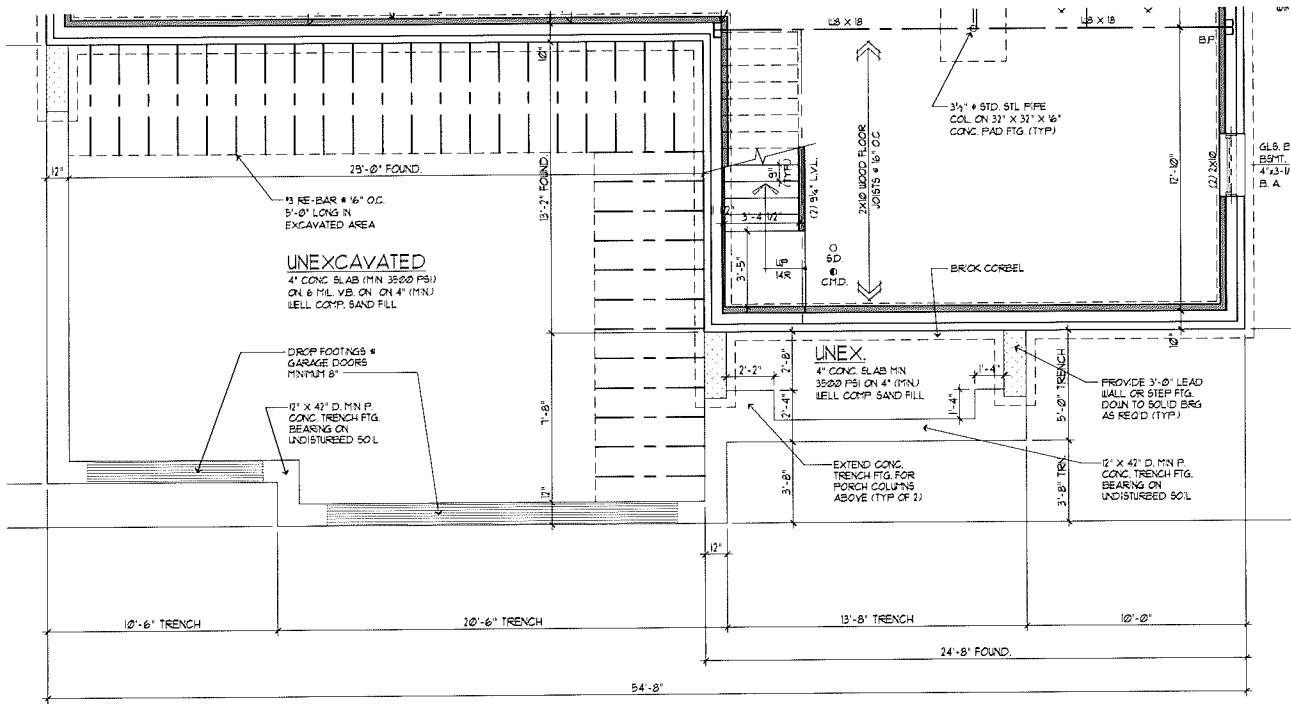
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<b>16-335</b>
Sheet No:
<b>6 OF 8</b>



- SD. O. BUILDER TO PROVIDE APPROVED SMOKE DETECTORS AS REQ'D ON ALL FLOORS (INTER-CONNECTED) WITH BATTERY BACK-UP
- CMD. E. SINGLE STATION CARBON MONOXIDE DETECTOR TO COMPLY W/ UL 7034 AND INSTALLED PER MANUF. SPECIFICATIONS
- NOTE: ALL STAIRWAYS SHALL BE ILLUMINATED WITH MIN. (1) FOOTCANDLE

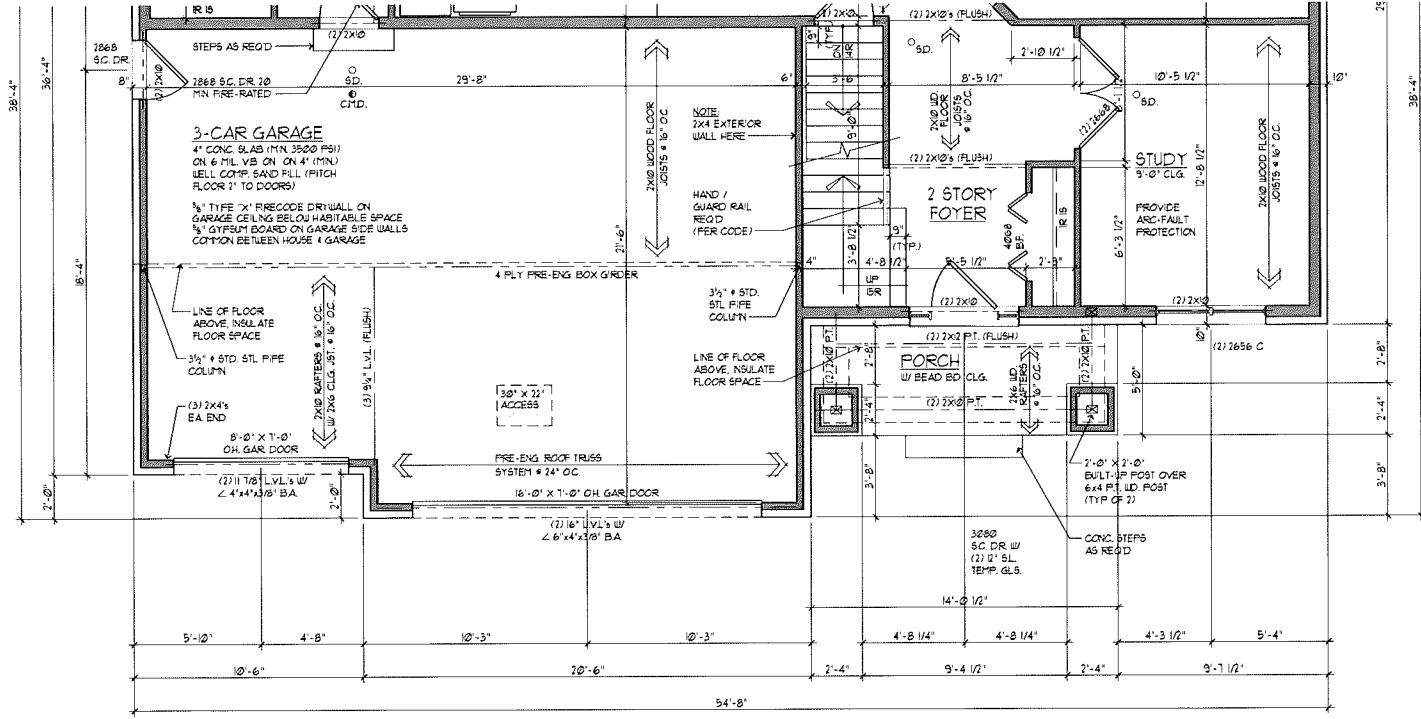
PARTIAL SECOND FLOOR PLAN - "C"

1/4" = 1'-0" SCALE: 1/4" = 1'-0"



PARTIAL FOUNDATION PLAN - "C"

SCALE: 1/4" = 1'-0"



PARTIAL FIRST FLOOR PLAN - "C"

1/4" = 1'-0" SCALE: 1/4" = 1'-0"  
 FIRST FLOOR: 122 SQ FT  
 SECOND FLOOR: 144 SQ FT  
 TOTAL: 266 SQ FT



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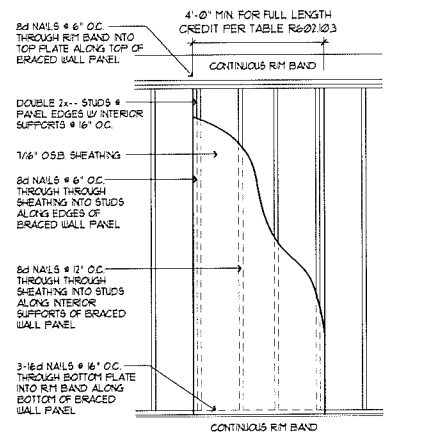
MICHAELANGELO  
 CONSTRUCTION

2800 GARAGE LEFT  
 SADDLEBROOK  
 ORCHARDS  
 ROCHESTER HILLS MI

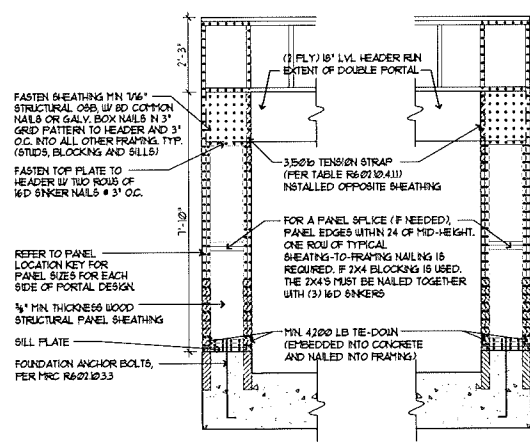
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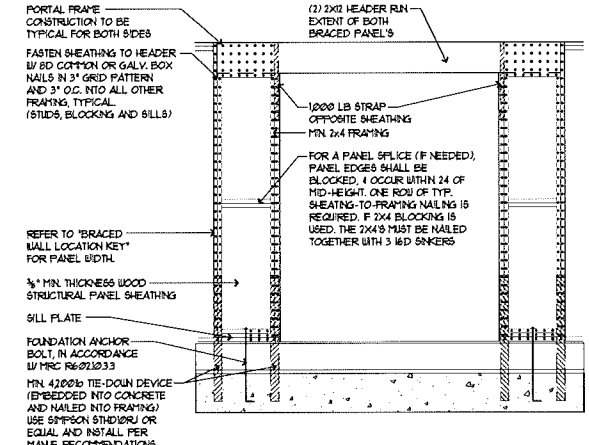
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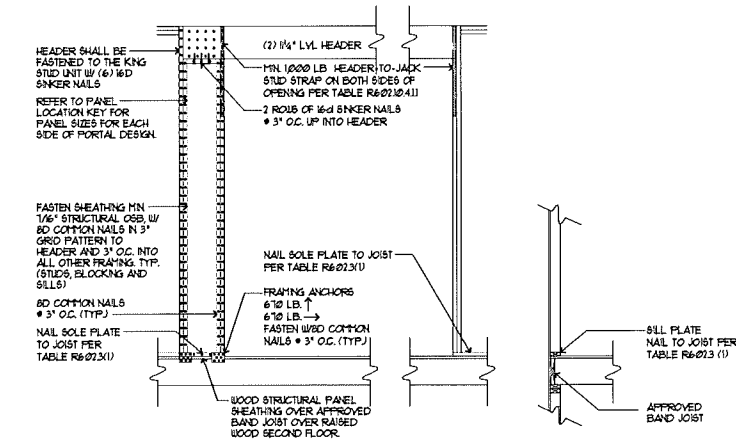
NOTES:  
1. 1/2" GYPSUM BOARD TO BE USED ON INSIDE FACE OF WOOD STRUCTURAL PANEL AND FASTENED IN ACCORDANCE W/ TABLE R6-02.33  
2. ALL HORIZONTAL PANEL JOINTS TO BE FASTENED TO 2x-4 COMMON BLOCKING



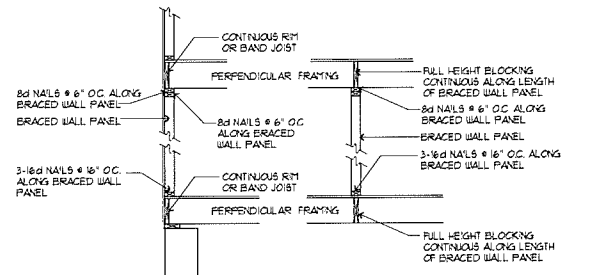
SINGLE PORTAL (DOUBLE PANEL) METHOD PFH - PORTAL FRAME W/ HOLD-DOWNS @ GARAGE DETAIL  
SCALE: 1/4" = 1'-0"



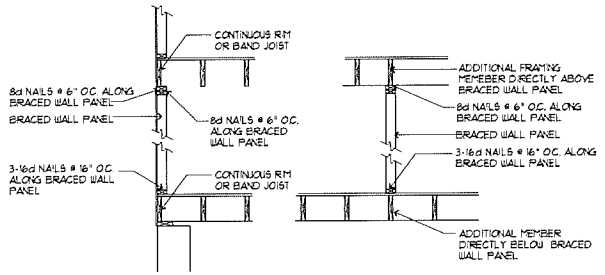
SINGLE PORTAL (DOUBLE PANEL) METHOD PFH PORTAL FRAME W/ HOLD DOWNS  
TYPICAL FOR (2) TWO LOCATIONS ON BUL (1-1)  
SCALE: 1/4" = 1'-0"



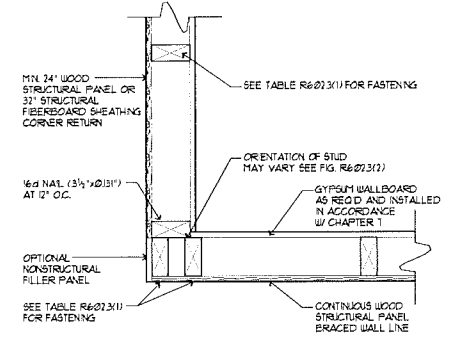
SINGLE PORTAL (SINGLE PANEL) METHOD CS-PF FRAMING ANCHOR OPTION  
FIGURE R6-02.10.4(1)  
SCALE: 1/4" = 1'-0"



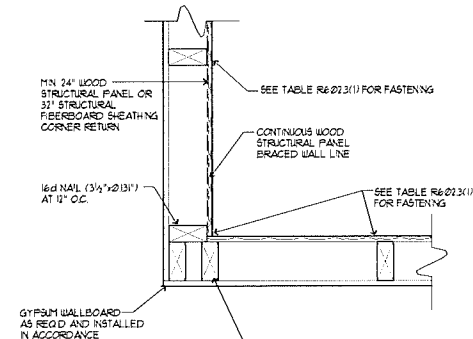
BRACED WALL PANEL CONNECTION  
WHEN PERPENDICULAR TO FLOOR/CEILING FRAMING  
SCALE: 1/4" = 1'-0"



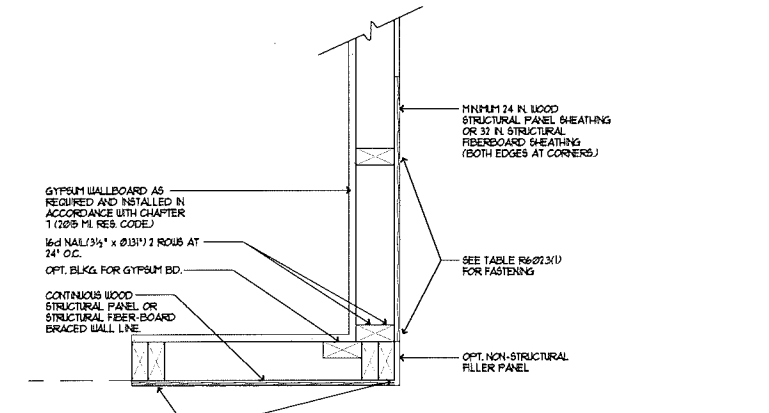
BRACED WALL PANEL CONNECTION  
WHEN PARALLEL TO FLOOR/CEILING FRAMING  
SCALE: 1/4" = 1'-0"



OUTSIDE CORNER PLAN DETAIL  
SCALE: 1/4" = 1'-0"



INSIDE CORNER PLAN DETAIL  
SCALE: 1/4" = 1'-0"



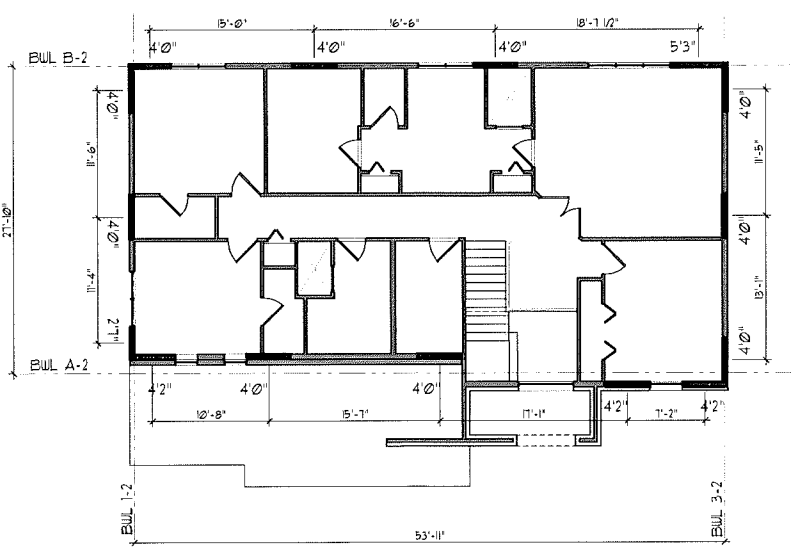
GARAGE DOOR CORNER (TYP.)  
SCALE: 1/4" = 1'-0"

BRACED WALL DESIGN												
BRACED WALL LINE	FLOORS ABOVE BUL	EAVE-TO-RIDGE HEIGHT (ft.)	BUL SPACING (ft.)	WALL HEIGHT (ft.)	BRACING METHOD	EAVE-TO-RIDGE HEIGHT FACTOR	WIND WALL HEIGHT FACTOR	NUMBER OF BUL FACTOR	HOLD-DOWN DEVICE FACTOR	WIND BRACING AMOUNTS		
										MIN. REQ'D PER TABLE R6-02.10(1) (ft.)	COMBINED ADJUSTMENT FACTORS	ADJUSTED MIN REQ'D AMOUNT
BUL 1-1	1	10.0	34.0	9.0	USP	1.03	95	-	-	82	95	17.9
BUL 2-1	1	10.0	34.0	9.0	USP	1.03	95	-	-	82	95	17.8
BUL A-1	0	6.0	1.0	10.0	USP	1.06	11	145	-	14	145	4.0
BUL B-1	1	10.0	14.0	9.0	CS	1.03	95	145	-	41	142	6.61
BUL C-1	1	10.0	5.0	9.0	USP	1.03	95	145	-	0.0	142	14.9
BUL D-1	1	6.0	9.0	9.0	CS	1.03	95	145	-	9.0	142	1.09
BUL 1-2	0	10.0	21.83	8.0	CS	-	9.0	-	-	8.08	9.0	7.8
BUL 2-2	0	10.0	21.83	8.0	USP	1.06	9.0	-	-	9.59	9.0	9.5
BUL A-2	0	10.0	21.83	8.0	CS	1.06	9.0	-	-	4.61	9.0	4.46
BUL B-2	0	10.0	21.83	8.0	USP	1.06	9.0	-	-	5.17	9.0	4.94

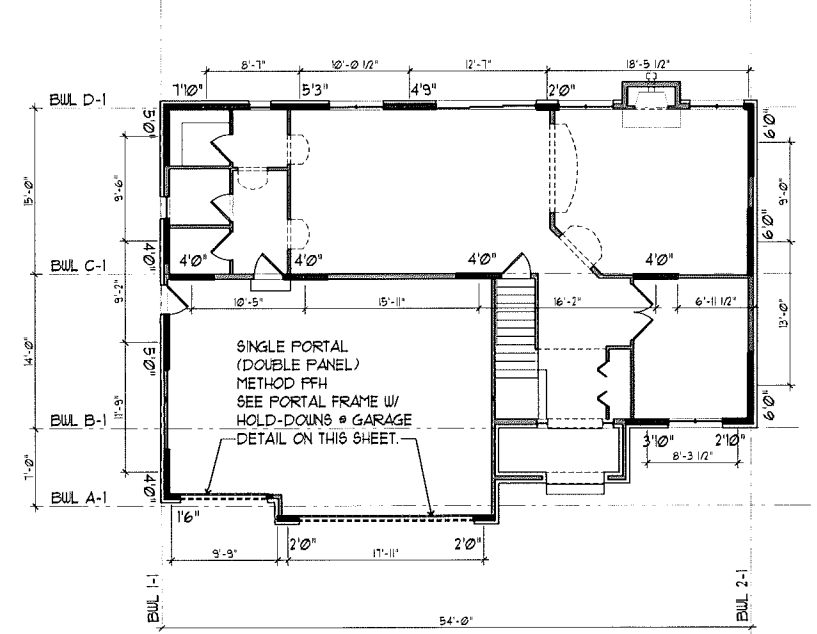
NOTES:  
1. WALL BRACING CALCULATIONS WERE COMPLETED USING THE 'WALL BRACING LENGTH CALCULATOR' APPLICATION ON SIMPSON STRONG TIE WEBSITE, WWW.STRONGTIE.COM  
2. DESIGN FACTORS:  
SEISMIC DESIGN CATEGORY: A  
BASIC WIND SPEED: 80mph  
WIND EXPOSURE CATEGORY: B  
3. ALL EXTERIOR WALLS TO BE STRUCTURALLY SHEATHED.  
4. SPACE PANELS PER CODE ACROSS LENGTH OF BUL'S.

BRACED WALL PANEL SCHEDULE											
BRACED WALL LINE	BEGINNING BWP		INTERMEDIATE BWP		INTERMEDIATE BWP		ENDING BWP		PROVIDED AMOUNT	ADJUSTED MIN. REQ'D AMOUNT	
	BRACING METHOD	EFFECTIVE LENGTH	BRACING METHOD	EFFECTIVE LENGTH	BRACING METHOD	EFFECTIVE LENGTH	BRACING METHOD	EFFECTIVE LENGTH			
BUL 1-1	USP	4.0	USP	5.0	USP	4.0	USP	6.0	18.0	17.9	
BUL 2-1	USP	6.0	USP	6.0	USP	6.0	USP	6.0	18.0	17.8	
BUL A-1	USP	4.0	USP	4.0	-	-	USP	4.0	7.0	4.0	
BUL B-1	CS	3.83	-	-	-	-	CS	2.83	6.61	6.61	
BUL C-1	GB	4.0	GB	4.0	GB	4.0	GB	4.0	16.0	14.9	
BUL D-1	CS	1.83	CS	5.19	CS	4.19	CS	7.0	19.83	1.09	
BUL 1-2	CS	2.8	CS	4.0	-	-	CS	4.0	10.58	7.8	
BUL 2-2	USP	4.0	USP	4.0	-	-	USP	4.0	7.0	9.5	
BUL A-2	CS	4.6	CS	4.0	CS	4.0	CS	4.6 (x2)	10.48	4.46	
BUL B-2	USP	4.0	USP	4.0	USP	4.0	USP	5.19	17.9	4.94	

NOTES:  
1. SEE PANEL LOCATION KEY FOR PANEL SPACING  
2. WHEN REFERRING TO THE 'BRACED WALL PANEL LOCATION KEY' FOR CORRESPONDING PANELS, THE TITLE FOR EACH BRACED WALL LINE (i.e. BUL 1-1) DENOTES THE BEGINNING SIDE OF EACH BRACED WALL LINE  
3. WHEN DETERMINING EFFECTIVE BRACING LENGTHS FOR FRG METHOD, APPLY A FACTOR OF (1.5) TO THE ACTUAL PANEL LENGTHS PER R6-02.10.3.4  
4. WHEN DETERMINING EFFECTIVE BRACING LENGTHS FOR PFH METHOD, MIN. PANEL WIDTH AND GREATER IS EQUIVALENT TO 4'-0" OF QUALIFIED BRACED WALL LENGTH  
5. (2) INDICATES A NUMBER OF BRACED WALL PANELS OF EQUAL EFFECTIVE LENGTH, POSITIONED NEXT TO EACH OTHER. INDICATED EFFECTIVE LENGTH TO BE MULTIPLIED BY THAT FACTOR.



SECOND FLOOR BRACED PANEL LOCATION KEY  
SCALE: 1/4" = 1'-0"



FIRST FLOOR BRACED PANEL LOCATION KEY  
SCALE: 1/4" = 1'-0"

**MARTINI SAMARTINO Design Group**  
920 EAST LONG LAKE RD. SUITE 200 TROY MI 48065 P. 248.524.0445 F. 248.524.0447  
MICHAELANGELO CONSTRUCTION  
2600 GARAGE LEFT SADDLEBROOK ORCHARDS ROCHESTER HILLS MI  
Review Set: \_\_\_\_\_  
Permit Set: \_\_\_\_\_  
Final Set: 10.07.16  
Drawn By: SH/CP/NSF  
Checked By: P.S.  
Job No: 16-335  
Sheet No: 8 OF 8

# GENERAL NOTES:

- 2ND FLOOR JOISTS @ 12" O.C. UNDER ALL TILE OR MARBLE FLOORS 20 LB DEAD LOAD REQUIRED.
- ALL POURED CONCRETE WALLS TO BE BACKFILLED WITH SANDY TYPE SOIL AND BE WELL BRACED UNTIL CONCRETE IS THOROUGHLY CURED AND ADDITIONAL HEIGHT OF THE BUILDING IS IN PLACE.
- ALL FLOOR JOISTS TO BE 9" OR BETTER KEM FIR WITH 1" X 3" CROSS BRIDGING @ 8'-0" O.C.
- ROOF TRUSS DESIGNED BY TRUSS MANUFACTURER TO CONFORM TO ALL MINIMUM DESIGN LOAD REQUIREMENTS. BRACE ROOF TRUSSES AS RECOMMENDED BY MANUFACTURER.
- ROOF TRUSS FRAMING INDICATED ON DRAWINGS IS OUR ASSUMED LAYOUT. TRUSS MANUFACTURER SHOULD REVIEW THE DRAWING AND INDICATE TO ARCHITECT PRIOR TO FABRICATION ANY CHANGE IN BEARING CONDITIONS THAT WOULD REQUIRE RE-FRAMING OF OUR STRUCTURE TO ACCOMMODATE TRUSSES.
- ALL POURED CONCRETE FOOTING TO BE A MINIMUM OF 3'-6" BELOW FINISHED GRADE BEARING ON UNDISTURBED VIRGIN SOIL WITH A MINIMUM BEARING CAPACITY OF 2000 PSF. MUST BE VERIFIED BY SOILS ENGINEER IN THE FIELD FOR FOOTING INSPECTION.
- ALL POURED CONCRETE WALLS WITH 1'-0" OR MORE BACKFILL TO BE REINFORCED WITH #4 BARS @ 6" O.C. VERTICALLY WITH ONE #4 BAR TOP AND BOTTOM OF WALL HORIZONTALLY. VERIFY IN FIELD FOR FOOTING INSPECTION.
- ALL WINDOW NUMBERING REFER TO "GENERIC" WINDOWS. IF ALTERNATE WINDOW MANUFACTURER IS USED, ALL SIZES AND SHAPES TO MATCH DIMENSIONALLY.
- ALL ENGINEERED WOOD FLOOR TRUSSES TO BE 1 DENSE KD. WITH 1" BY 6" CONTINUOUS REBORN BRACING ON BOTTOM CHORD @ 8'-0" O.C. (MINIMUM 2 PER SPAN) WELL NAILED TO TRUSSES. PROVIDE DRAFT STOPPING.
- THE ROOF TRUSS MANUFACTURER TO FURNISH SHOP DRAWINGS TO THE DESIGNER PRIOR TO FABRICATION OF THE TRUSSES.
- ALL MICRO-LAM BEAMS TO BE JOINED TOGETHER PER MANUFACTURER'S SPECIFICATIONS.
- ALL POURED CONCRETE WALLS WITH BRICK LEDGE GREATER THAN 4'-0" SHALL BE REINFORCED WITH #5 BARS 24" O.C. VERTICALLY WITH ONE #4 BAR TOP AND BOTTOM OF WALL HORIZONTALLY.
- DO NOT SCALE DRAWING. USE PRINTED DIMENSIONS ONLY. IF ANY DISCREPANCY OCCURS NOTIFY THE DESIGNER IMMEDIATELY FOR CORRECTION. BUILDER RESPONSIBLE TO HAVE REVISIONS ALL DRAWINGS AND IF ADDITIONAL CLARIFICATION OR INFORMATION IS NEEDED BUILDER IS TO CONTACT DESIGNER AND SALES COUNSELOR.
- PROVIDE 8 POUND FELT AT UNTREATED EXPOSED LUMBER.
- ALL BEDROOM WINDOWS TO MEET 205 MICHIGAN RESIDENTIAL EGRESS CODES. ALL WINDOW SILLS 1" ABOVE FINISH GRADE. SHALL HAVE THE BOTTOM OF THE OPENING LOCATED AT MIN. OF 24" ABOVE FINISH FLOOR OF THE ROOM PER MRC 205 SEC. R602.
- PROVIDE FIBER-CEMENT, FIBER-MAT REIN. CEMENT GLASS MAT GYPSUM BACKERS OR FIBER REIN. GYPSUM BACKERS AS BACKERS FOR TUB AND SHOWER WALL TILES AND PANELS. BACKERS MUST COMPLY W/ ASTM C 108, C 1075, C108 OR C 1078 AND BE INSTALLED PER MANUF. RECOMMENDATIONS. MRC 205 SEC. R102.2.
- WHERE HANDRAILS ARE SHOWN, HANDRAIL HEIGHT IS TO BE NOT LESS THAN 34" AFF. AND MORE THAN 38" AFF. PER R311.13. GUARD RAIL IS TO BE NOT LESS THAN 36" AFF. PER R312.2 (MRC-205). PROVIDE HANDRAIL ON AT LEAST 11" SIDE OF EVERY STAIRWAY PER SECTION R311.13 OF THE 205 MICHIGAN RESIDENTIAL CODE SECTION R311.13.
- DO NOT DRILL KITCHEN WINDOW DOUBLERS.
- PROVIDE A BATH FAN WHERE SHOWN ON PLAN AND VENT FAN TO EXTERIOR AS REQUIRED.
- TYPICAL ALL HABITABLE ROOMS TO HAVE PROPER LIGHT AND VENTILATION AND COMPLY WITH 205 MICHIGAN RESIDENTIAL CODES.
- PROVIDE ELECTRICAL SMOKE DETECTORS IN ALL SLEEPING AREAS, HALLWAYS AND MECHANICAL ROOMS ON ALL FLOOR LEVELS INCLUDING THE BASEMENT. SMOKE DETECTORS SHALL BE WIRED TOGETHER SO AS WHEN ONE SOUNDS THEY ALL SOUND AND HAVE BATTERY BACKUP PER SEC. R34 OF 205 MICHIGAN RESIDENTIAL CODE.
- PROVIDE ADEQUATE ROOF VENTILATION AND SOFFIT VENTILATION (MIN) AS REQUIRED. VERIFIED BY CALCULATION W/50% OF AREA VENTILATION REQ'D PER SEC. R306.2.
- TYPICALLY ALL FIN IN POURED CONCRETE FOUNDATION WALLS MUST BE REMOVED AND FILLED WITH FOUNDATION COATING PRIOR TO BACK FILL INSPECTION.
- PROVIDE METAL FLASHING, COUNTER FLASHING AND STEPPED FLASHING WHERE NOTED AND BRICK AND SIDING MEET.
- PROVIDE APPROVED SEALANT WHERE REQUIRED AND AS DETAILED BY MFG.
- VERIFY ELECTRICAL SERVICE IN ACCOMMODATING ALL NEW WORK. VERIFY ALL PROPOSED ELECTRICAL OUTLETS, SWITCHES, DIMMERS LIGHT LOCATION, ETC. INCLUDING CABLE AND PHONE FIRE-WIRING SECURITY. TAKE INTO CONSIDERATION ALL ELECTRICAL INSTALLATION WITH OUTER AND COMPLY WITH 205 MICHIGAN RESIDENTIAL ELECTRICAL CODES.
- VERIFY FIREPLACE OPTION WITH SUBDIVISION SPECS. AND WORK ORDER.
- PROVIDE 2-LAYER MINERAL COATED ROLLED ROOFING AT ALL EAVES TO 24" INSIDE BUILDING. 2-LAYERS MUST BE CEMENTED TOGETHER. VERIFY WITH BUILDING DEPARTMENT.
- PROVIDE 1/8" GALVANIZED PRESSURE TREATED SILL PLATE ON SILL SEALER WITH 1/2" ANCHOR BOLTS @ 6'-0" O.C. AND LOCATED NOT MORE THAN 12" INCHES AND NOT LESS THAN 3/4" INCHES FROM THE ENDS OF EACH PLATE SECTION. EXCEPTION: USE ANCHOR STRIPS SPACED AS REQUIRED TO PROVIDE EQUIVALENT ANCHORAGE TO 1/2" INCH ANCHOR BOLTS.
- PROVIDE 4" PERFOR. DRAIN TILE CONT. AT BASEMENT FIG. IN 2" (MIN) PEASTONE WITH 2" BELOW DRAIN TILE. CONNECT TO SUMP AND STORY SEWER AS REQUIRED.
- 6'-8" CLEAR HEADROOM REQUIRED ON ALL STAIRS.
- CHIMNEY TERMINATION MUST PROJECT 2 FEET ABOVE ANY PART OF THE BUILDING WITHIN 10 FEET.
- FIRESTOP ALL DROPS AND CHASES ELECTRICAL, PLUMBING AND HVAC.
- PROVIDE 1/2" DRYWALL ON THE GARAGE SIDE OF WALLS COMMON TO RESIDENCE AND GARAGE. APPLY 3/4" TYPE "X" DRYWALL TO GARAGE CEILING AREAS BELOW HABITABLE ROOMS PER MRC 205 TABLE R302.6.
- LOWER LEVEL AREA CONSIDERED UNHABITABLE. ANY FUTURE ALTERATIONS TO MODIFY LOWER LEVEL TO A HABITABLE SPACE WILL COMPLY STRICTLY TO THE 205 MICHIGAN RESIDENTIAL CODE. EGRESS WINDOWS PROVIDED AS REQUIRED. IN COMPLIANCE W/ MRC 205 SEC. R301.1 - R303.5.
- AREAS THAT REQUIRE TEMPERED GLASS:
  - FIXED AND SLIDING PANELS OF SLIDING TYPE DOORS.
  - SHOWER AND BATHING DOORS AND ENCLOSURES (IF APPLICABLE).
  - PANELS WITH A GLAZED AREA IN EXCESS OF 9 SQ. FT. WITH LOWEST EDGE LESS THAN 18 INCHES ABOVE THE FINISHED FLOOR LEVEL.
  - ALL OTHER AREAS AS CODE REQUIRES PER 205 MICHIGAN RESIDENTIAL CODE.
- ROOF VENTILATION WHERE EAVE OR CORNICE VENTS ARE INSTALLED INSULATION SHALL NOT BLOCK THE FREE FLOW OF AIR. A MINIMUM OF 1" HIGH SPACE SHALL BE PROVIDED BETWEEN THE INSULATION AND THE ROOF SHEATHING AT THE LOCATION OF THE VENTS.

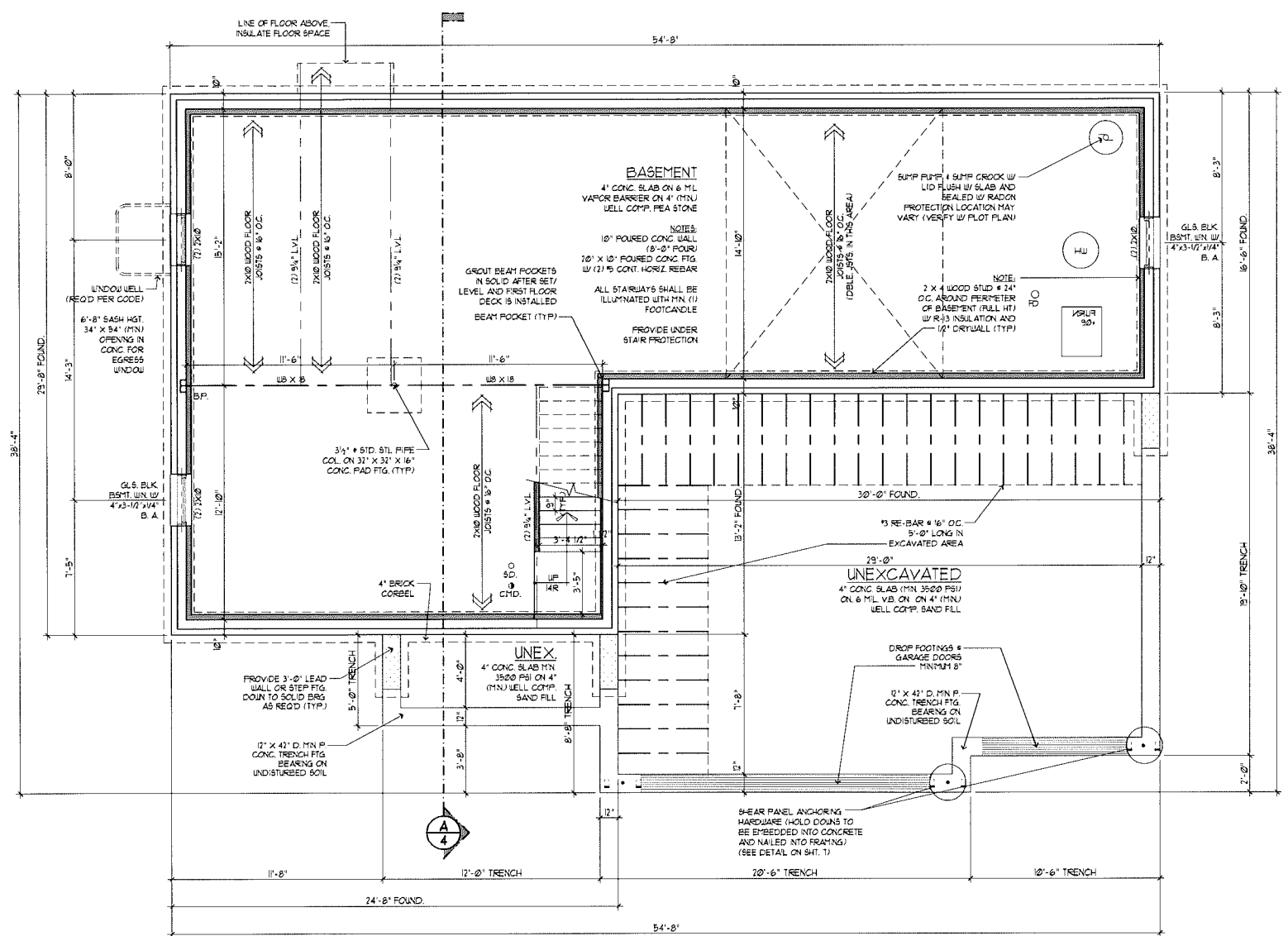
NOTE:  
ALL CODES SHALL COMPLY WITH THE INTERNATIONAL RESIDENTIAL CODES & 205 MICHIGAN RESIDENTIAL CODE. THEY SHALL ALSO COMPLY WITH ANY JURISDICTION CODES IN THEIR RESPECTIVE COUNTY, CITY, VILLAGE, OR TOWNSHIP AND THEIR PROVISIONS AND ORDINANCES.

NOTE:  
GENERAL NOTES INDICATED ABOVE ARE JUST A SMALL PORTION OF OUR STANDARD NOTES IN THE 205 MICHIGAN RESIDENTIAL CODE BUT THE CODE IS MUCH BROADER & SHOULD BE STRICTLY FOLLOWED BY BUILDERS, TRACERS & CRAFTSMAN.

- ALL STAIRWAYS SHALL BE ILLUMINATED WITH MIN. (1) FOOT CANDLE OF LIGHT.
- PROVIDE UNDERSTAIR PROTECTION PER 205 ENCLOSED ACCESSIBLE SPACE UNDER SHALL HAVE WALLS UNDER STAIR SURFACE AND ANY SOFFITS PROTECTED ON THE ENCLOSED SIDE WITH 1/2" GYPSUM BOARD.
- UNEXCAVATED GARAGE SLAB SHALL COMPLY W/ TABLE R402.2 4" CONCRETE SLAB MIN. 3500 MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE ON 4" MIN. WELL COMPACTED SAND BASE.
- PROVIDE NON-ABSORBENT FINISH TO THE SURFACE OF ALL BATHING AREAS W/ WALL POINTED SHOULDER HEADS, A MIN. OF 6'-0" ABOVE FINISH FLOOR PER MRC 205 SEC. R302.1.
- PROVIDE A 1/2" MIN. SOLID CORE FINERATED DOOR BETWEEN GARAGE AND RESIDENCE MIN. 20 MINUTE FINERATED R302.5.1.
- BUILDER AND SUB BRICK CONTRACTORS TO PROVIDE WEEP HOLES RESTING ON THE FLASHING SPACED 33" O.C. MAX. (74" PREFERRED) AT HEAD DETAILS OF WINDOW DOORS, BASEMENT WINDOWS AND GARAGE DOORS. ALSO PROVIDE FLASHING TO FACE OF BRICK W/ MIN. 8" VERTICAL LEG AND FORM END DAYS (LAP UNDER AIRMOISURE BARRIER). MICHIGAN RESIDENTIAL CODE 205 SEC. 103.15 - 103.8. A PRE-BRICK INSPECTION WILL BE REQ'D PRIOR TO BRICK INSTALLATION FOR FLASHING INSPECTION.
- FASTENER SCHEDULE FOR STRUCTURAL MEMBERS TABLE R602.3 (1) WOOD STRUCTURAL PANELS, SUBFLOOR ROOF AND WALL SHEATHING TO FRAMING AND PARTICLEBOARD WALL SHEATHING TO FRAMING BUILDING MATERIALS OF 2" X 4" USE 6d COMMON NAIL/SUBFLOOR WALL 4" @ 6" FROM EDGES 2" INTERMEDIATE SUPPORTS AND USE 8d COMMON NAILS FOR ROOF 6" FROM EDGES 12" INTERMEDIATE.
- BUILDER JOINER TO PROVIDE WATERPROOFING TO CODE SUBMIT INFORMATION ON APPROVED PRODUCTS.
- BUILDER/TRUSS MFG. TO PROVIDE TRUSS DESIGN DRAWINGS IN COMPLIANCE WITH MRC 205 AND SHALL INCLUDE AT MINIMUM THE INFORMATION SPECIFIED BELOW:
  - SLOPE OR DEPTH, SPAN, AND SPACING
  - LOCATION OF ALL JOINTS
  - REQUIRED BEARING WIDTHS
  - DESIGN LOADS AS APPLICABLE:
    - TOP CHORD LIVE LOAD (INCLUDING SNOW LOADS)
    - TOP CHORD DEAD LOAD
    - BOTTOM CHORD LIVE LOAD
    - BOTTOM CHORD DEAD LOAD
    - CONCENTRATED LOADS AND THEIR POINTS OF APPLICATION
    - CONTROLLING WIND AND EARTH QUAKE LOADS
- ADJUSTMENTS TO LUMBER AND JOINT CONNECTOR DESIGN VALUES FOR CONDITIONS OF USE.
- EACH REACTION FORCE AND DIRECTION
- JOINT CONNECTOR TYPE AND DESCRIPTION E.G. SIZE THICKNESS OR GAUGE; AND THE DIMENSIONED LOCATION OF EACH JOINT CONNECTOR EXCEPT WHERE SYMMETRICALLY LOCATED RELATIVE TO THE JOINT INTERACE
- LUMBER SIZE SPECIES AND GRADE FOR EACH MEMBER
- CONNECTION REQUIREMENTS FOR:
  - TRUSS-TO-TRUSS ORDER
  - TRUSS PLY TO PLY
  - FIELD SPLICES
- CALCULATED DEFLECTION RATIO AND/OR MAXIMUM DESCRIPTION FOR LIVE AND TOTAL LOAD
- MAXIMUM AXIAL COMPRESSION FORCES IN THE TRUSS MEMBERS TO ENABLE THE BUILDING DESIGNER TO DESIGN THE SIZE CONNECTIONS AND ANCHORAGE OF THE PERMANENT CONTINUOUS LATERAL BRACING. FORCES SHALL BE SHOWN ON THE TRUSS DRAWING OR ON SUPPLEMENTAL DOCUMENTS.
- REQUIRED PERMANENT TRUSS MEMBER BRACING LOCATION

SIZE OF ANGLE (IN)**	NO STORY ABOVE	ONE STORY ABOVE	TWO STORIES ABOVE	NO. OF 1/2" OR EQ. REIN. BARS*
3 X 3 X 1/4	6'-0"	4'-6"	3'-0"	1
4 X 3 X 1/4	8'-0"	6'-0"	4'-6"	1
5 X 3 1/2 X 3/8	10'-0"	8'-0"	6'-0"	2
6 X 3 1/2 X 3/8	14'-0"	9'-6"	7'-0"	2
(2) 6 X 3 1/2 X 3/8	10'-0"	8'-0"	6'-6"	4

- LONG LEGS OF THE ANGLE SHALL BE PLACED IN A VERTICAL POSITION
- DEPTH OF REINFORCED LINTELS SHALL NOT BE LESS THAN 8 INCHES AND ALL CELLS OF HOLLOW MASONRY LINTELS SHALL BE GROUTED SOLID. REINFORCING BARS SHALL EXTEND NOT LESS THAN 8 INCHES INTO THE SUPPORT.
- STEEL MEMBERS INDICATED ARE ADEQUATE TYPICAL EXAMPLES. OTHER STEEL MEMBERS MEETING STRUCTURAL DESIGN REQUIREMENTS MAY BE USED.



## FOUNDATION PLAN

SCALE: 1/4" = 1'-0"

SD: BUILDER TO PROVIDE APPROVED SMOKE DETECTORS AS REQ'D ON ALL FLOORS (INTER-CONNECTED) WITH BATTERY BACK-UP

CPD: SINGLE STATION CARBON MONOXIDE DETECTOR TO COMPLY W/ UL 2034 AND INSTALLED PER MANUF. SPECIFICATIONS

NOTE: ALL STAIRWAYS SHALL BE ILLUMINATED WITH MIN. (1) FOOTCANDLE



920 EAST LONG LAKE RD.  
SUITE 200  
TROY MI 48065  
P. 248.524.0445  
F. 248.524.0447

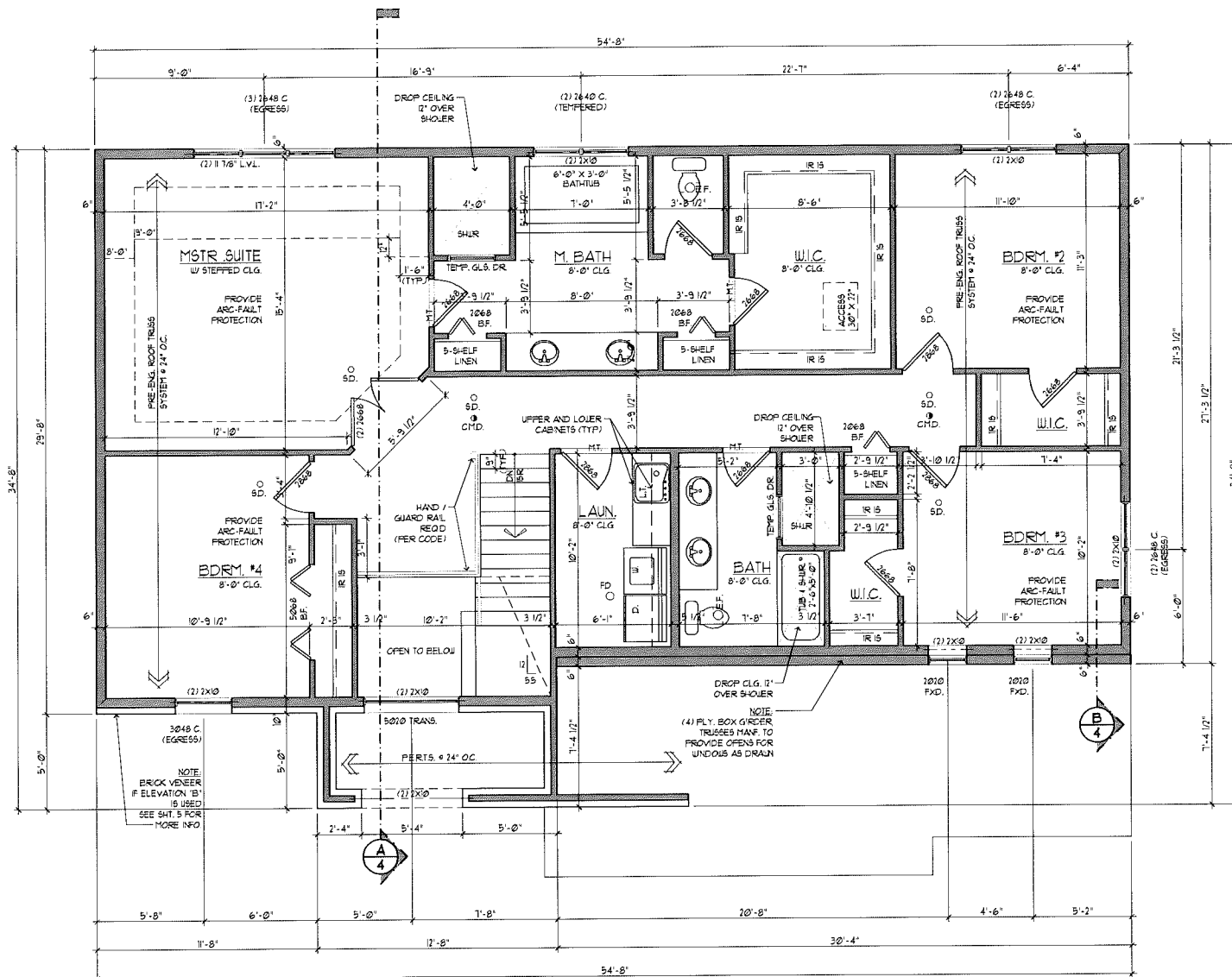
MICHAELANGELO CONSTRUCTION

2600 GARAGE RIGHT  
SADDLEBROOK ORCHARDS  
ROCHESTER HILLS MI

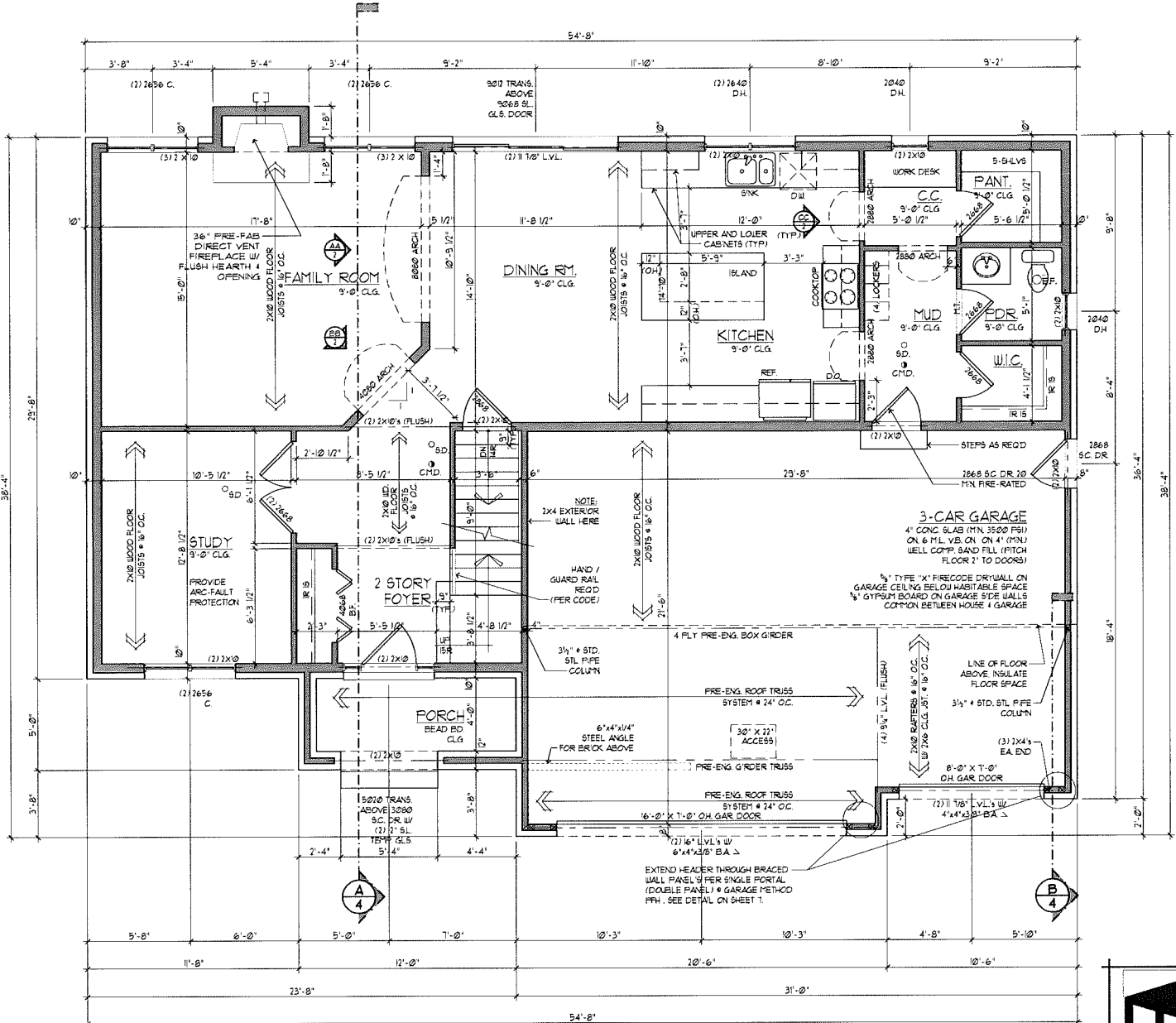
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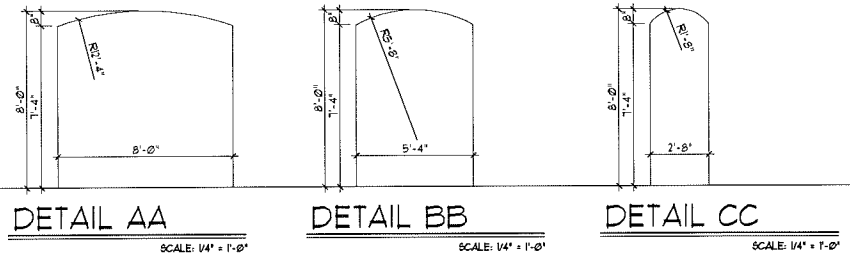
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**SECOND FLOOR PLAN**  
1441 SQ FT SCALE: 1/4" = 1'-0"



**FIRST FLOOR PLAN**  
1272 SQ FT  
SECOND FLOOR 1441 SQ FT  
TOTAL: 2653 SQ FT SCALE: 1/4" = 1'-0"



**GENERAL STRUCTURAL NOTES:**

(REFER ONLY TO NOTES APPLICABLE TO THE PROJECT)

**DESIGN CRITERIA:**

- BUILDING CODES USED FOR DESIGN: 1998 MINNESOTA RESIDENTIAL CODE (MRC)
- FLOOR LIVE AND DEAD LOADS: 40 psf LIVE, 5 psf DEAD FOR WOOD LAMINUM AND CARPET FLOORING, 15 psf DEAD FOR THIN SET CERAMIC FLOORING, 35 psf DEAD FOR MARBLE / GRANITE FLOORING
- MINIMUM DEFLECTION CRITERIA: L/160 LIVE AND L/320 TOTAL FOR ROOF COMPONENTS WITH RIGID FLOORING (e.g. TILE), L/180 LIVE AND L/360 TOTAL FOR FLOOR COMPONENTS WITH FLEXIBLE FLOORING (e.g. CARPET)
- ROOF LIVE AND SNOW LOADS: FLAT ROOF SNOW LOAD 15 psf, FLAT ROOF DEAD 5 psf
- WIND LOADS: BASIC WIND SPEED 80 MPH, WIND IMPORTANCE FACTOR I = 1.0, BUILDING CATEGORY II, WIND EXPOSURE B
- DESIGN STRENGTHS: CONCRETE STRENGTH AT 28 DAYS (PSI) LOCATION: A 3000 INTERIOR SLABS & WALLS, B 3000 FOOTINGS & FOUNDATION WALLS, C 3000 AIR-ENTRAINED EXTERIOR SLABS & WALLS. CONCRETE REINFORCEMENT: WELDED WIRE FABRIC ASTM A615/ASTM-A618 (Fy = 60 KSI) ASTM A885-01. STRUCTURAL STEEL: ANCHOR RODS: ASTM A307-02, ALTERNATIVELY - F554-99 GR 36 MAY BE USED. MASONRY: NOMINAL WEIGHT Fm = 800 PSF

**FOUNDATIONS AND EARTHWORK:**

- WATER SHALL NOT BE PERMITTED TO ACCUMULATE IN FOOTING EXCAVATIONS.
- PROVIDE A MINIMUM OF 6 INCHES OF GRANULAR FILL BELOW ALL INTERIOR SLABS ON-GRADE.
- PROVIDE GRANULAR BACKFILL FOR BASEMENT WALLS. ALL BACKFILL SHALL BE WELL DRAINED.
- THE FOUNDATION DESIGN IS BASED ON A SOIL BEARING CAPACITY OF 15000 PSF. OTHERS SHALL DETERMINE THE ACTUAL BEARING VALUE OF THE SOIL.
- ALL FOOTING EXCAVATIONS SHALL BE INSPECTED, PRIOR TO CONCRETE PLACEMENT.
- WHERE CORROSION OF FILL IS SPECIFIED, CORROSION OF FILL MATERIAL SHALL BE A MINIMUM 96% OF MAXIMUM DRY DENSITY.
- BOTTOM OF EXTERIOR BUILDING FOOTINGS ARE TO BE AT LEAST 41 INCHES BELOW FINAL OUTSIDE GRADE REGARDLESS OF ELEVATION SHOWN ON PLAN.
- ALL CONTIGUOUS FOOTINGS SHALL BE CENTERED UNDER WALLS AND ALL PIERS AND SPREAD FOOTINGS SHALL BE CENTERED UNDER COLUMNS OR PIERS UNLESS NOTED OTHERWISE.
- NO SLABS OR FOUNDATIONS SHALL BE PLACED INTO OR ADJACENT TO SUBGRADE CONTAINING WATER, ICE FROST OR ORGANIC MATERIAL.
- WHERE FOUNDATION WALLS ARE TO HAVE SOIL PLACED ON BOTH SIDES, PLACE SOIL SIMULTANEOUSLY SO AS TO MAINTAIN A COMMON ELEVATION ON EACH SIDE OF THE WALL.

**CONCRETE:**

- THE REINFORCING STEEL CONTRACTOR SHALL FABRICATE ALL REINFORCEMENT AND FURNISH ALL ACCESSORIES, CHAIRS, SPACER BARS AND SUPPORTS NECESSARY TO SECURE THE REINFORCEMENT UNLESS SHOWN OTHERWISE ON THE PLANS AND/OR DETAILS.
- REINFORCING STEEL SHALL BE ASTM A618 (GRADE 60).
- WELDED WIRE FABRIC SHALL CONFORM TO ASTM A885.
- CONCRETE REINFORCEMENT SHALL BE PLACED ACCORDING TO THE CRSI (RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS).
- CONCRETE COVERAGE FOR REINFORCEMENT: FOOTINGS: 3" SLAB ON GRADE: 1" CENTER OF SLAB WALLS EXPOSED TO EARTH: 1" COLUMNS: 1"
- COMPRESSION LAP SPLICES FOR GRADE 60 BARS SHALL BE 30 BAR DIAMETER MINIMUM.
- TENSION LAP SPLICES SHALL BE AS DETAILED. USE CLASS 'B' SPLICES UNLESS NOTED OTHERWISE.
- ALL WELDED WIRE FABRIC LAPS SHALL BE 6" AT ENDS AND SIDES.
- BAR LENGTHS SHOWN DO NOT INCLUDE HOOKS OR BENDS.
- CONCRETE AT THE TIME OF PLACEMENT SHALL HAVE A SLUMP OF 4" ± 1" UNLESS A SUPER-PLASTICIZING AGENT IS USED.
- ALL OPENINGS IN CONCRETE WALLS SHALL HAVE (2) 5" x 4'-0" LONG BARS DIAGONALLY AT EACH CORNER.

**MASONRY:**

- GROUT FOR VERTICALLY REINFORCED MASONRY WALLS AND BOND BEAMS SHALL CONSIST OF 1 PART CEMENT, 2 PARTS FINE AGGREGATE, 7 PARTS FEA GRAVEL, P.C. ± 3000 PSI AT 28 DAYS, GROUT SLUMP 9" TO 10". GROUT SOLID ALL CELLS CONTAINING REINFORCING.
- MASONRY WALLS SHALL HAVE HORIZONTAL REINFORCING CONSISTING OF GALVANIZED STANDARD WEIGHT 5 GAUGE GROUT-SLUMP 9" TO 10" TRUSS TYPE OR EQUAL REINFORCING LOCATED AT EVERY OTHER COURSE UNLESS NOTED OTHERWISE.
- LAP ALL VERTICAL REINFORCING SPLICES 48 BAR DIAMETERS, 24" FOR 4 BARS, 30" FOR 5 BARS AND 36" FOR 6 BARS.
- ANCHOR BEAMS AND LINTELS TO WALL.
- MASONRY WALLS SHALL BE LAID UP AND GROUTED IN 4 FOOT LIFTS (LOW LIFT GROUTING PROCEDURE PER ACI 530). IF CLEANOUTS ARE PROVIDED AT EACH GROUTED COURSE, WALLS MAY BE GROUTED IN 8 FOOT LIFTS FOLLOWING THE HIGH-LIFT GROUTING PROCEDURE PER ACI 530.
- THE PROCEDURE OF ACI 530 FOR COLD WEATHER CONSTRUCTION SHALL BE ADHERED TO WHENEVER THE AIR OUTSIDE TEMPERATURE IS BELOW 40 DEGREES F.

**STRUCTURAL STEEL:**

- YIELD STRESS AND TYPE OF STEEL: FOR WIDE FLANGE SHAPES: ASTM A992 WITH YIELD STRESS OF 50/60 PSF FOR 5 SHAPES, CHANNELS, ANGLES, BARS, PLATES AND RODS. ASTM A36 WITH YIELD STRESS OF 36/60 PSF FOR RECTANGULAR AND SQUARE TUBULAR SHAPES. ASTM A500 WITH YIELD STRESS OF 46/60 PSF.
- BOLTS: USE CARBON OR ALLOY STEEL ASTM A325 7/8" DIA OR LARGER IF REQUIRED BY CONNECTION DESIGN. ANCHOR BOLTS SHALL BE WEDGE STYLE ANCHOR HILTI KWIK BOLT 3. NUTS: CARBON STEEL MEETING ASTM A563. WASHERS: HARDENED STEEL WASHERS MEETING ASTM F436. ASTM A307 BOLTS MAY BE USED FOR WOOD TO WOOD CONNECTIONS AND STEEL LINTEL TO WOOD CONNECTIONS.
- ANCHOR RODS: ASTM F554, GRADE 36.

**MISCELLANEOUS:**

- PRE-FABRICATED JOISTS SHALL BE DESIGNED TO SUPPORT THEIR OWN WEIGHT PLUS THE SUPERIMPOSED DEAD AND LIVE LOADS STATED IN THE GENERAL NOTES AND 2006 IRC. I-JOIST SERIES MANUFACTURER SPACING, BRIDGING, BLOCKING AND DETAILING SHALL BE DESIGNED BY THE FLOOR SYSTEM PROVIDER SUCH THAT IT MEETS THE DESIGN CRITERIA HEREIN AS A MINIMUM. THE CONTRACTOR SHALL SUBMIT TO THE DESIGNER FOR REVIEW THE DESIGN LAYOUT AND COMPONENT CALCULATIONS BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MINNESOTA PRIOR TO USE IN THE STRUCTURE.
- MIN LVL PROPERTIES SHALL BE: E = 2.9 x 10<sup>6</sup> PSI, Fy = 250 PSI, Fv = 265 PSI.
- MIN PSL COLUMN PROPERTIES SHALL BE: E = 1.8 x 10<sup>6</sup> PSI, Fy = 2400 PSI, TRUSS JOIST PARALLEL OR EQUAL.
- WALLS SHALL BE BRACED ACCORDING TO R602.10 OF THE 2006 IRC.
- TRUSSES SHALL BE BRACED IN ACCORDANCE WITH BCIS' OCTOBER 2006 (GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES).
- ALL POINT LOADS SHALL BE CONTINUOUSLY BLOCKED THROUGHOUT THE STRUCTURE TO THE FOUNDATION OR SUPPORT BEAM.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
- THE STRUCTURAL DESIGN IS BASED ON THE BUILDING IN ITS COMPLETED STATE. CONTRACTORS AND THEIR SUBCONTRACTORS SHALL TAKE WHATEVER PRECAUTIONS MADE NECESSARY TO WITHSTAND ALL HORIZONTAL AND VERTICAL LOADINGS THAT MAY BE ENCOUNTERED DURING THE CONSTRUCTION PRIOR TO COMPLETION OF THE BUILDING.
- DO NOT SCALE DRAWINGS.

**BUILDER TO PROVIDE APPROVED SMOKE DETECTORS AS REQUIRED ON ALL FLOORS (INTER-CONNECTED) WITH BATTERY BACK-UP.**

**ENGINEER TO PROVIDE DETAILING TO COMPLY WITH ALL 2006 AND INSTALLED PER MANUF. SPECIFICATIONS.**

**NOTE: ALL STAIRWAYS SHALL BE ILLUMINATED WITH MIN. 1" FOOTCANDLE.**



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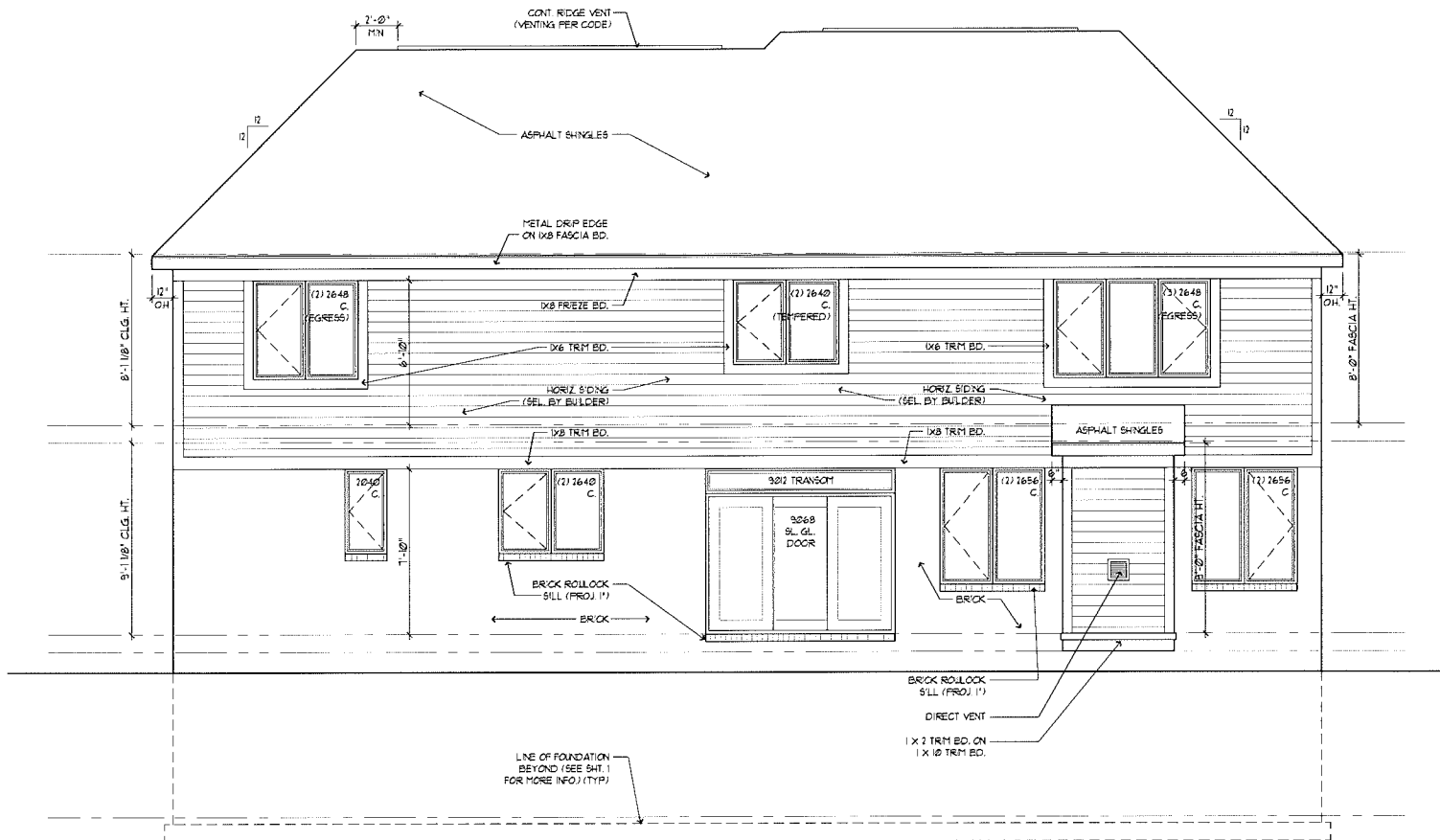
MICHAELANGELO CONSTRUCTION

2650 GARAGE RIGHT SADDLEBROOK ORCHARDS ROCHESTER HILLS MI

Review Set: Permit Set: Final Set: 10.07.16 Revisions: Drawn By: SHCP/NSF Checked By: P.S.

Job No: 16-335

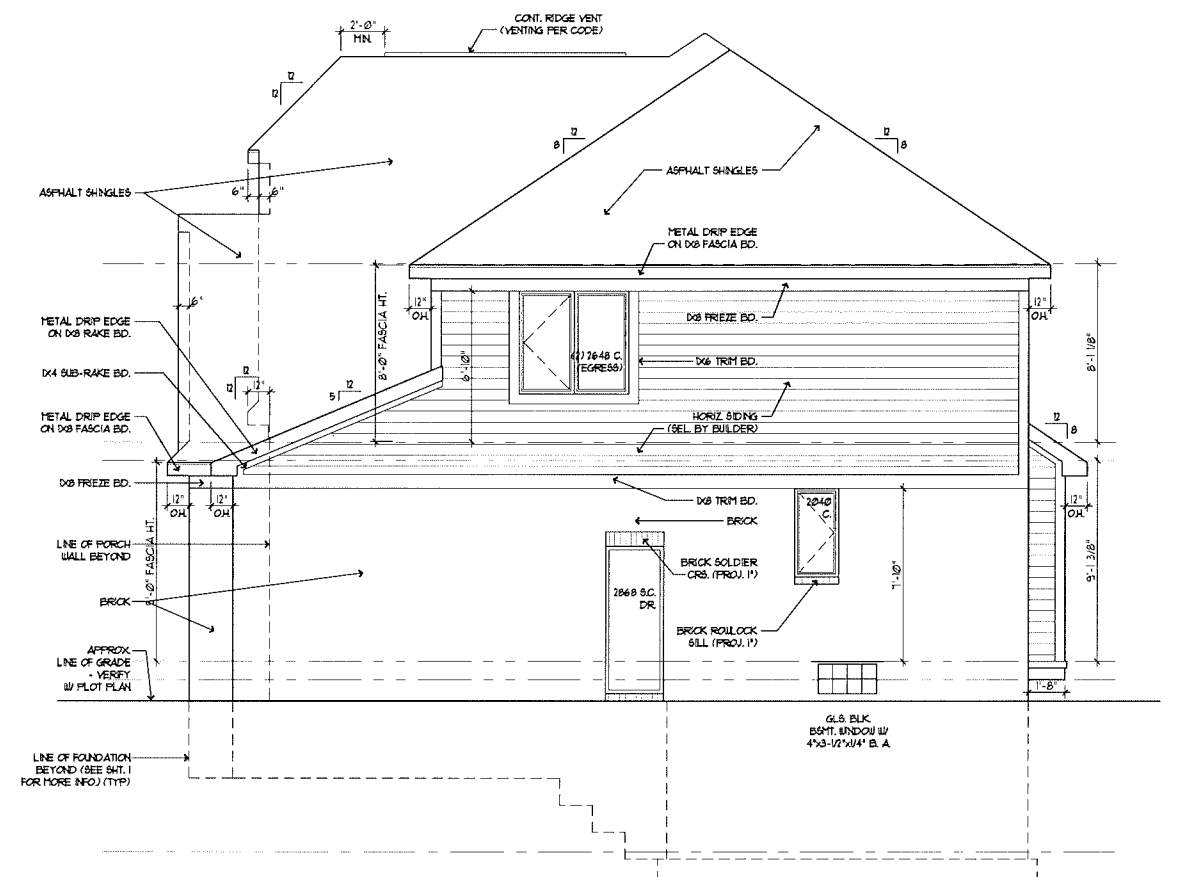
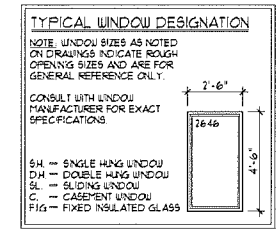
Sheet No: 2 OF 8



REAR ELEVATION - "A"

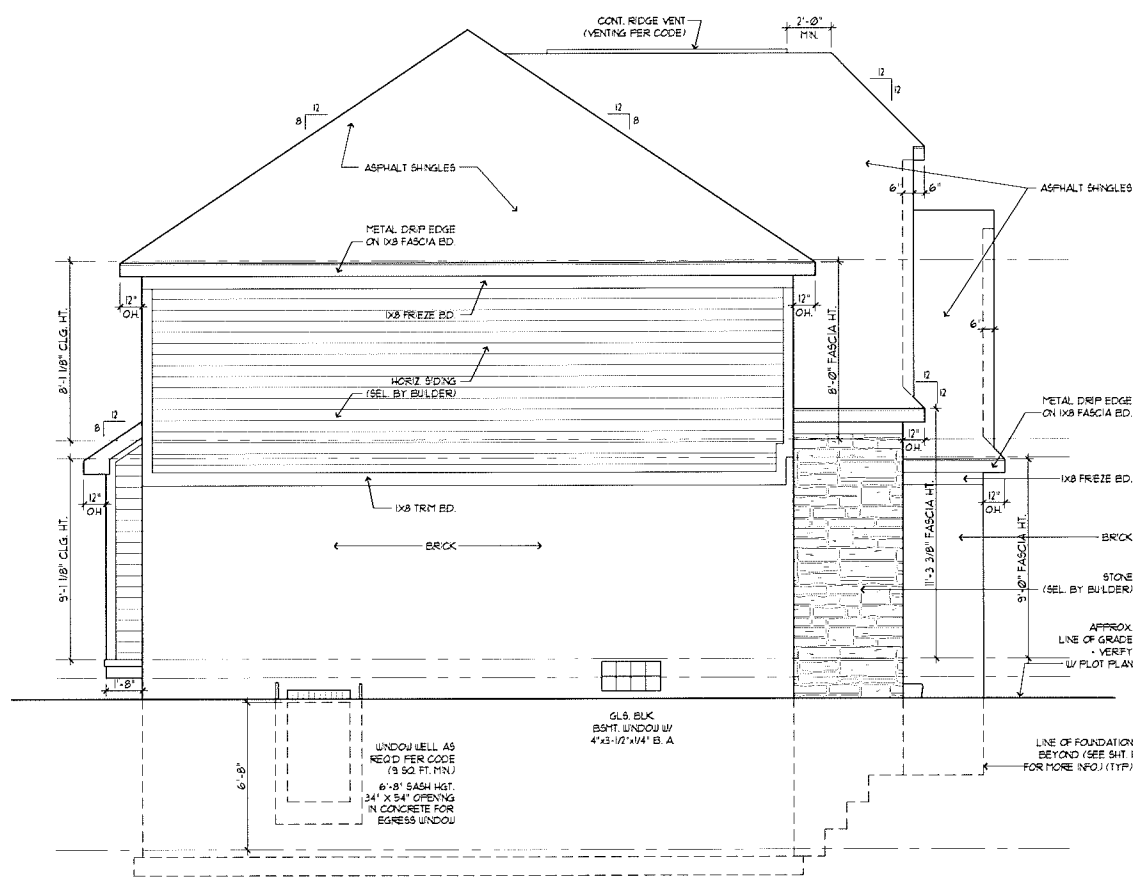
SCALE: 1/4" = 1'-0"

NOTE: ANY WINDOWS WITH BOTTOM SILL LOWER THAN 24" FROM FINISH FLOOR AND EXCEEDING 12" FROM FINAL GRADE MUST BE NON-EGRESS AND OR NON-OPERABLE.



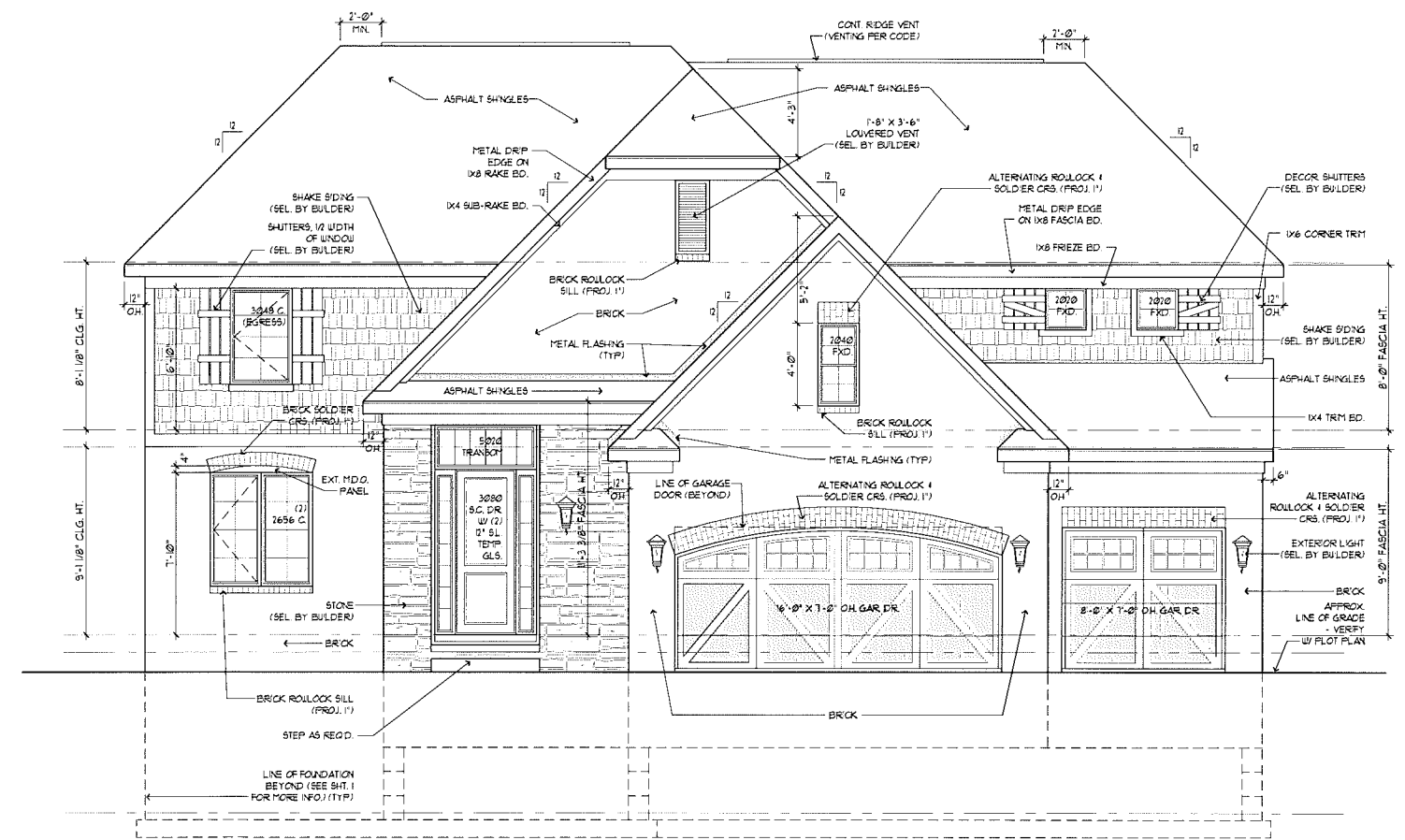
RIGHT ELEVATION - "A"

SCALE: 1/4" = 1'-0"



LEFT ELEVATION - "A"

SCALE: 1/4" = 1'-0"



FRONT ELEVATION - "A"

SCALE: 1/4" = 1'-0"



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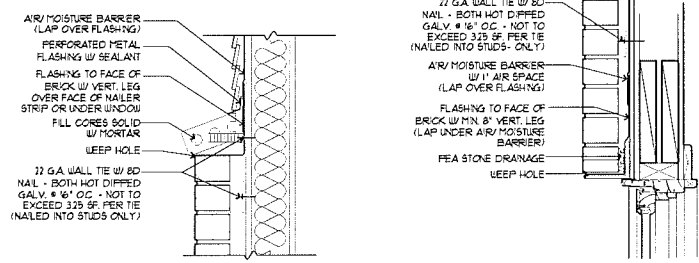
MICHELANGELO CONSTRUCTION

2600 GARAGE RIGHT  
SADDLEBROOK  
ORCHARDS  
ROCHESTER HILLS MI

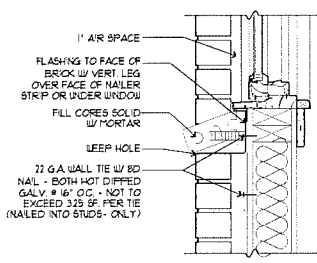
Review Set:  
Permit Set:  
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Revisions:  
Drawn By: SH/CP/NSF  
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Job No:  
**16-335**

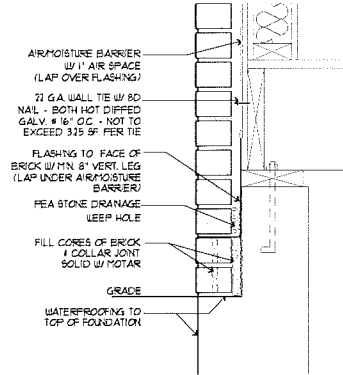
Sheet No:  
**3 OF 8**



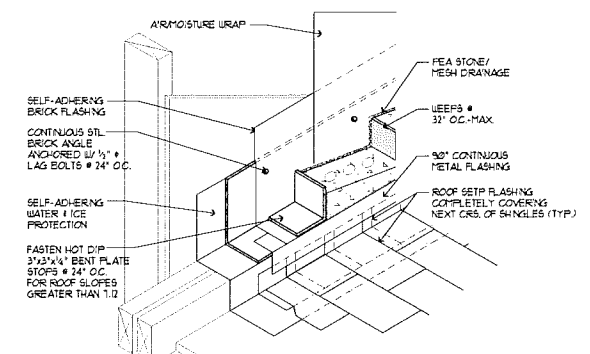
**BRICK ROWLOCK SILL (PRO WINDOW HEADER)**  
SCALE: 1/2" = 1'-0"



**WINDOW SILL**  
SCALE: 1/2" = 1'-0"



**WALL DETAIL**  
SCALE: 1/2" = 1'-0"



**RAKE TRUSS-FLASHING DETAIL**  
SCALE: 1/4" = 1'-0"

**NOTE:**  
ASPHALT SHINGLES SHALL COMPLY WITH R9092 & R9092.4  
SHINGLES OVER 5" BUILDING FELT ON 1/8" O.S.B. ROOF SHEATHING.  
NOTE: SHINGLES SHALL HAVE SELF-SEAL STRIPS OR BE INTERLOCKING AND CONFORM TO ASTM D779 OR D3462.  
ICE BARRIER WITH 2 LAYERS OF UNDERLAYMENT CEMENTED TOGETHER OR OF A SELF-ADHERING POLYMER MODIFIED BITUMEN SHEET TO EXTEND FROM EAVE'S EDGE TO AT LEAST 24 INCHES INSIDE THE EXTERIOR WALL LINE OF BUILDING.

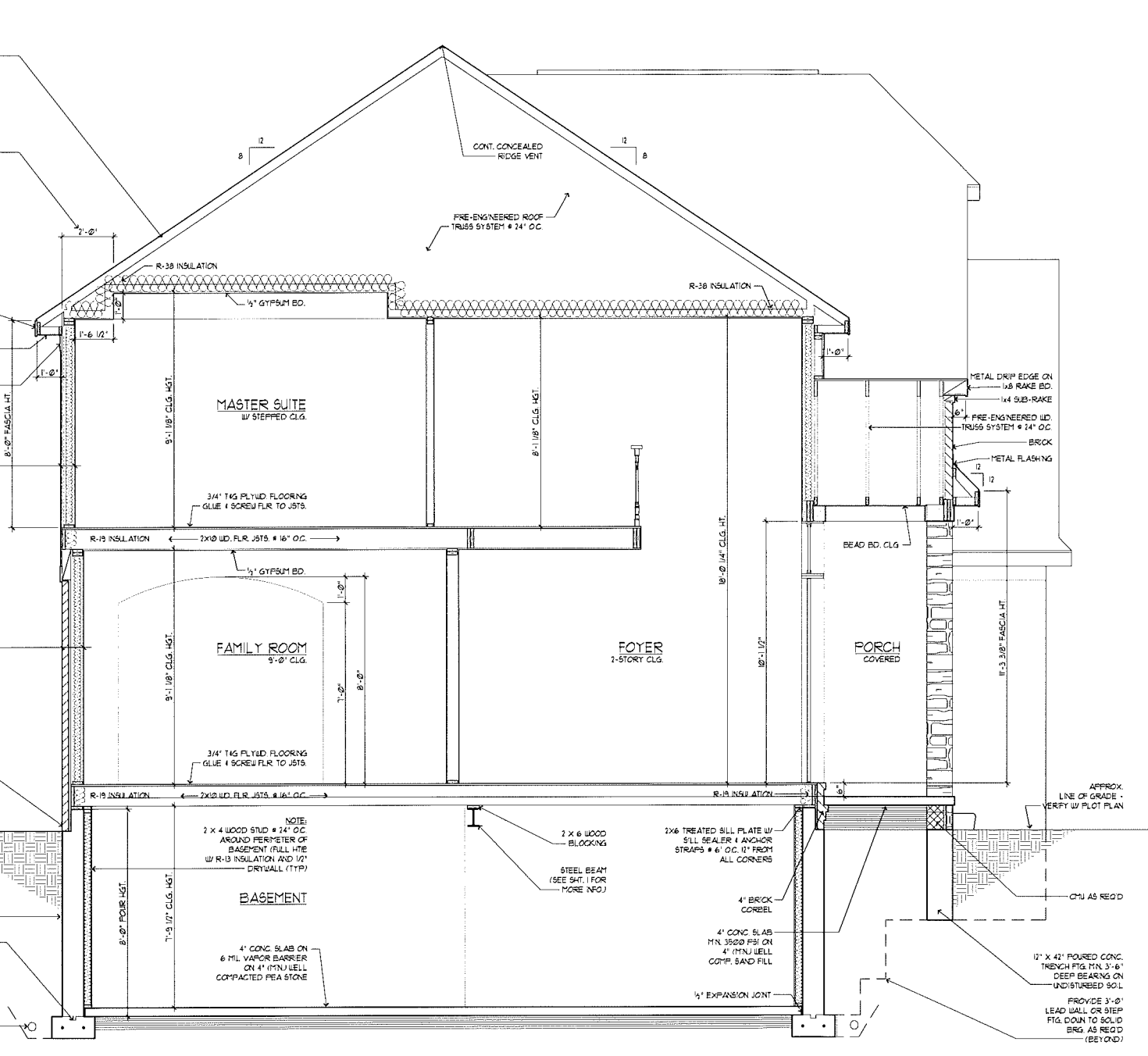
**NOTE:**  
PROVIDE INSULATION Baffles AT ALL EAVES FOR CLEAR MIN. 1" AIR SPACE

METAL DRIP EDGE ON 1 X 8 FASCIA BD.  
3/4" EXT. FLYWOOD W/ 8" X 16" SCREEN VENTS  
1 X 8 FREEZE BD.  
8"-10" FASCIA HT.  
HORIZ. SIDING ON TYPAR HOUSE WRAP 1/8" O.S.B. SHEATHING 3/8" # 16' O.C. R-13 INSULATION 1/2" GYP. BD.

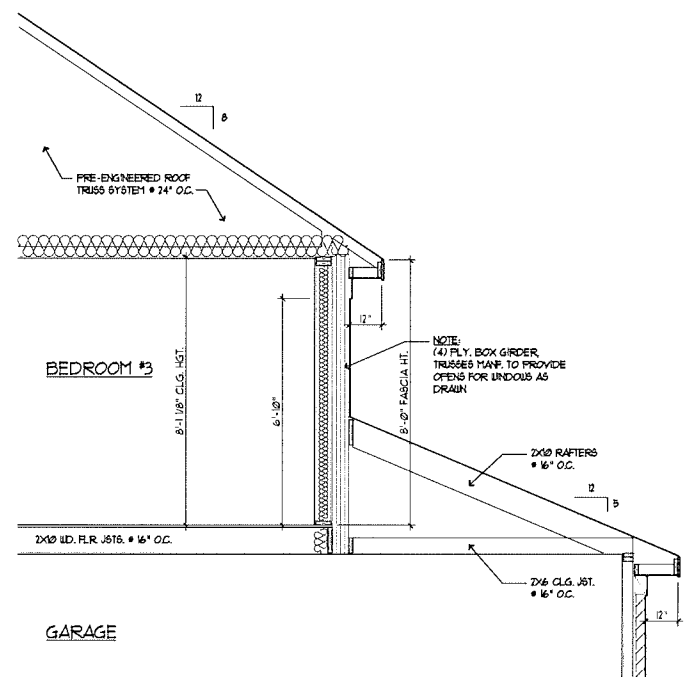
BRICK 1" AIRSPACE TYPAR HOUSE WRAP 1/8" O.S.B. SHEATHING 3/8" # 16' O.C. R-13 INSULATION 1/2" GYP. BD.  
WEEPOLES RESTING ON THE FLASHING SPACED # 32' O.C. MAX (24" PREFERRED OR MFC 2003)

WATERPROOFING ON 10" POURED CONC. WALL  
4" X 2" KEYWAY IN 21" X 10" POURED CONC. TRENCH FTG. W/ (2) # 6 RE-BAR CONT. FOR BONDING BARS TO MEET THE REQUIREMENTS PER IBC E1629.12

4" CONT. PERFOR. DRAIN TILE IN 12" MIN. PEA STONE & COVERED WITH AN APPROVED FILTER MEMBRANE MATERIAL



**A BUILDING SECTION**  
SCALE: 3/8" = 1'-0"



**B PARTIAL SECTION**  
SCALE: 3/8" = 1'-0"



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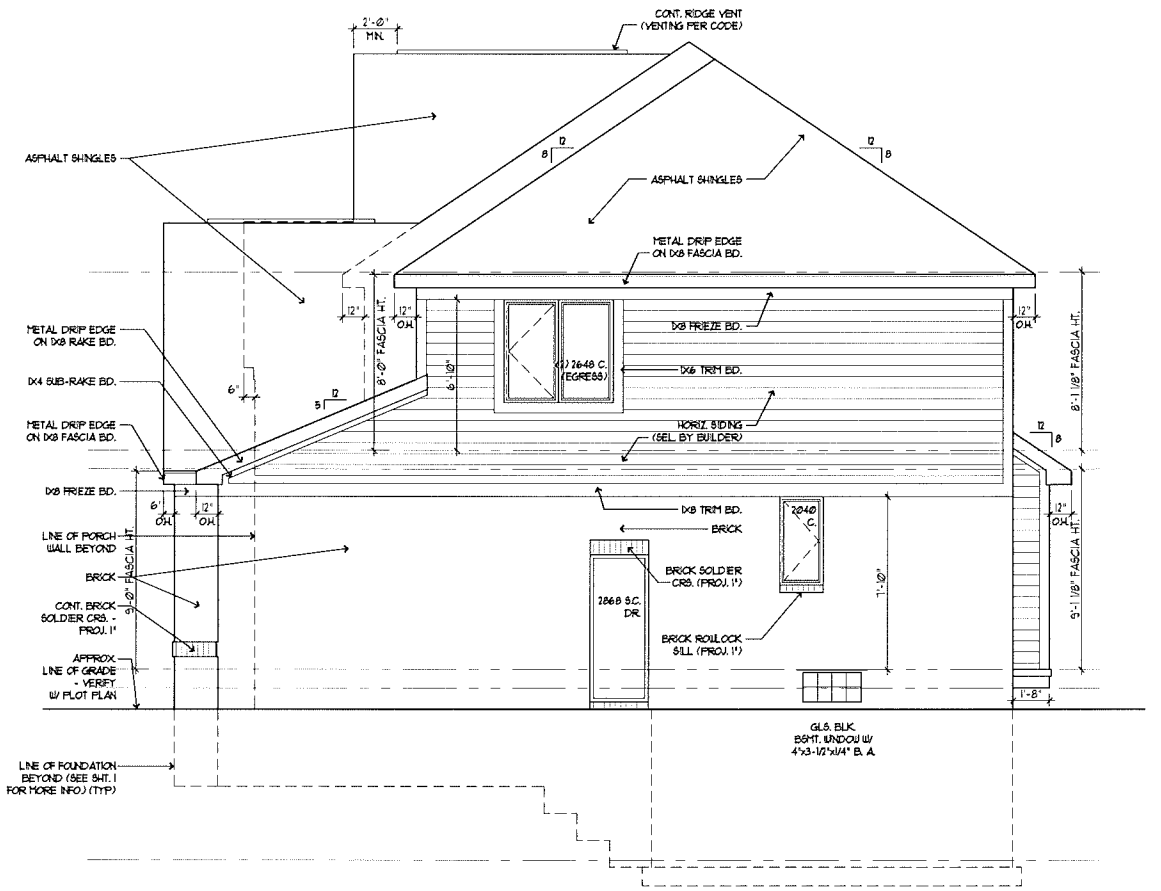
**MICHAELANGELO CONSTRUCTION**

2500 GARAGE RIGHT  
SADDLEBROOK ORCHARDS  
ROCHESTER HILLS MI

Review Set:	
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Revisions:	
Drawn By:	SH/CP/NSF
Checked By:	P.S.

Job No:  
**16-335**

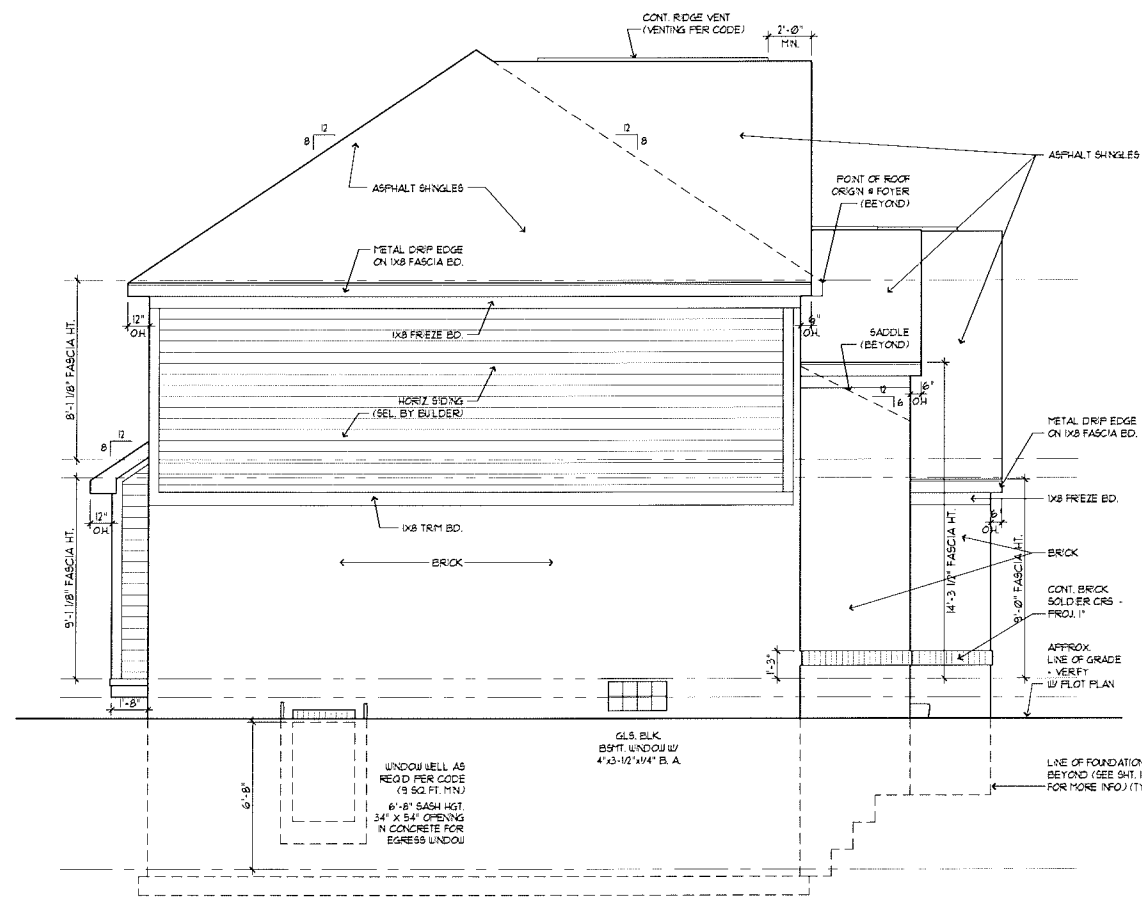
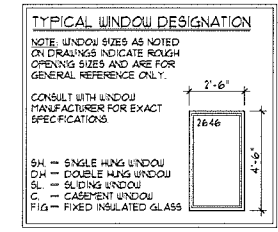
Sheet No:  
**4 OF 8**



RIGHT ELEVATION - "B"

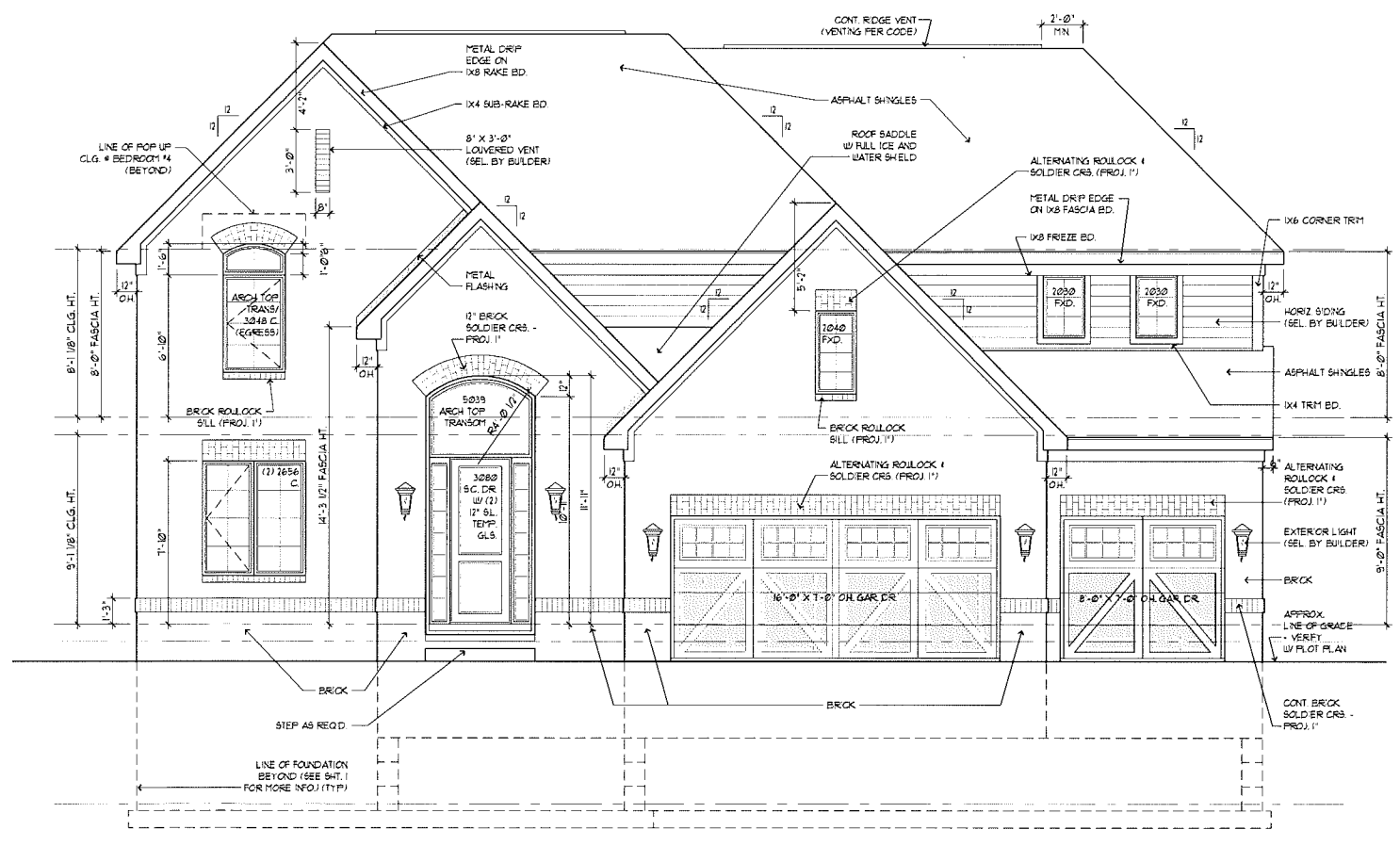
SCALE: 1/4" = 1'-0"

NOTE: ANY WINDOWS WITH BOTTOM SILL LOWER THAN 24" FROM FINISH FLOOR AND EXCEEDING 12" FROM FINAL GRADE MUST BE NON-EGRESS AND OR NON-OPERABLE



LEFT ELEVATION - "B"

SCALE: 1/4" = 1'-0"



FRONT ELEVATION - "B"

SCALE: 1/4" = 1'-0"



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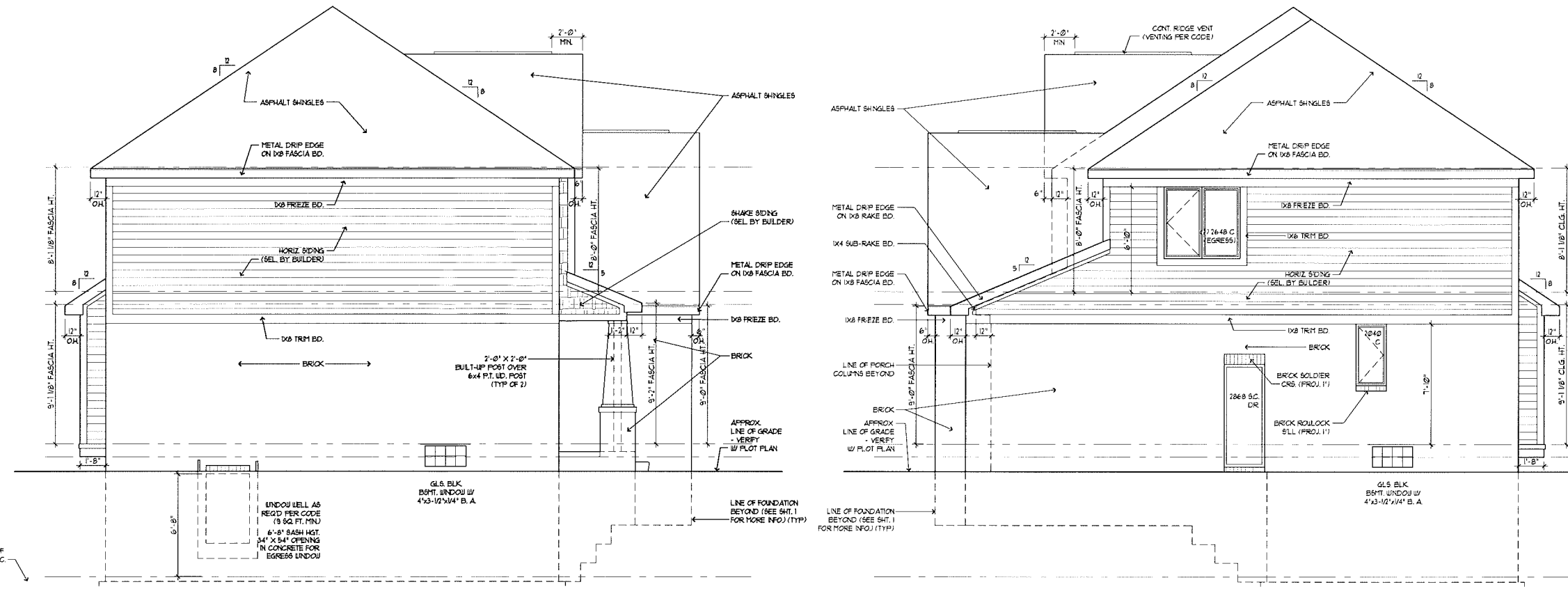
2800 GARAGE RIGHT  
SADLEBROOK  
ORCHARDS  
ROCHESTER HILLS MI

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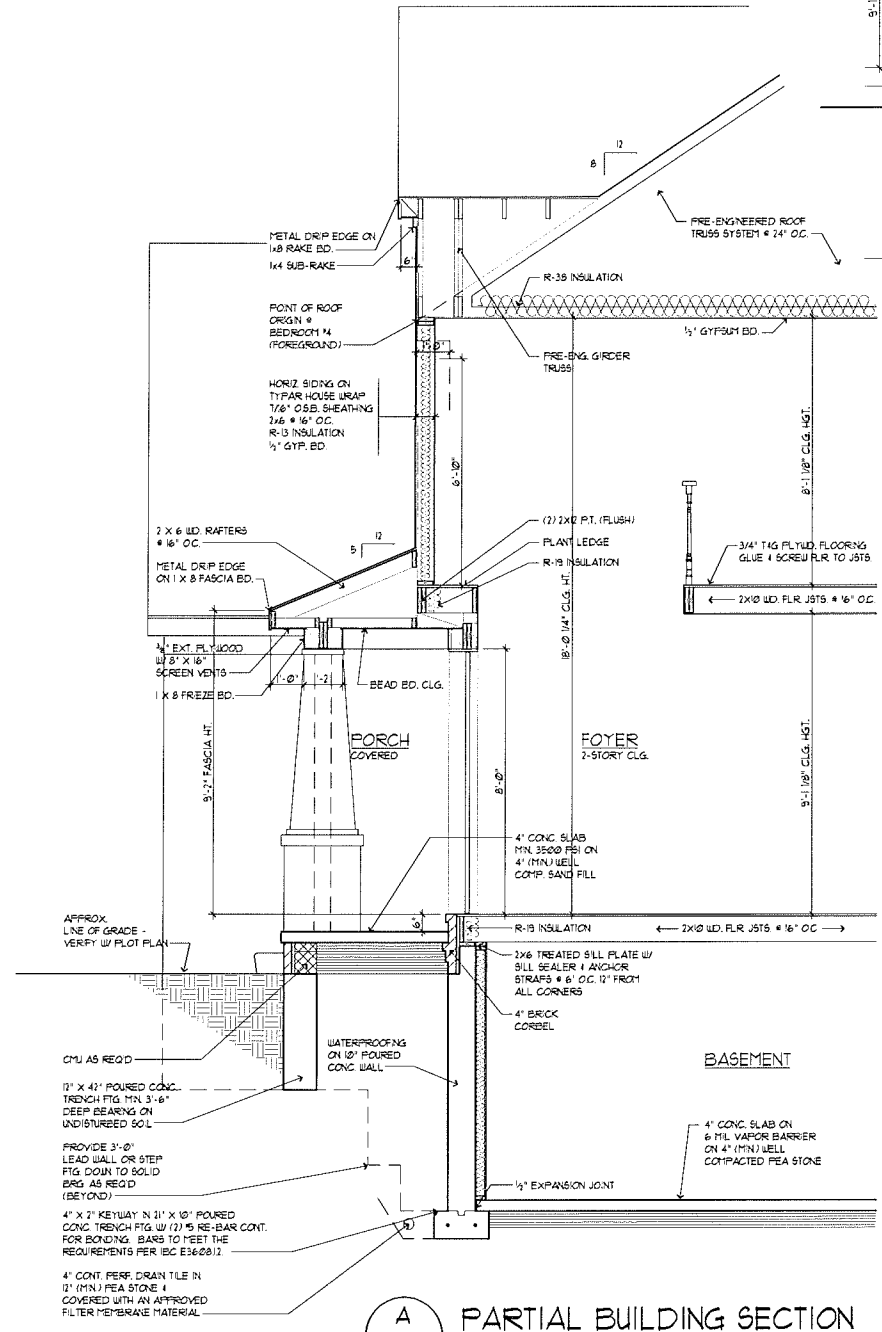
Sheet No:  
**5 OF 8**





LEFT ELEVATION - "C"  
SCALE: 1/4" = 1'-0"

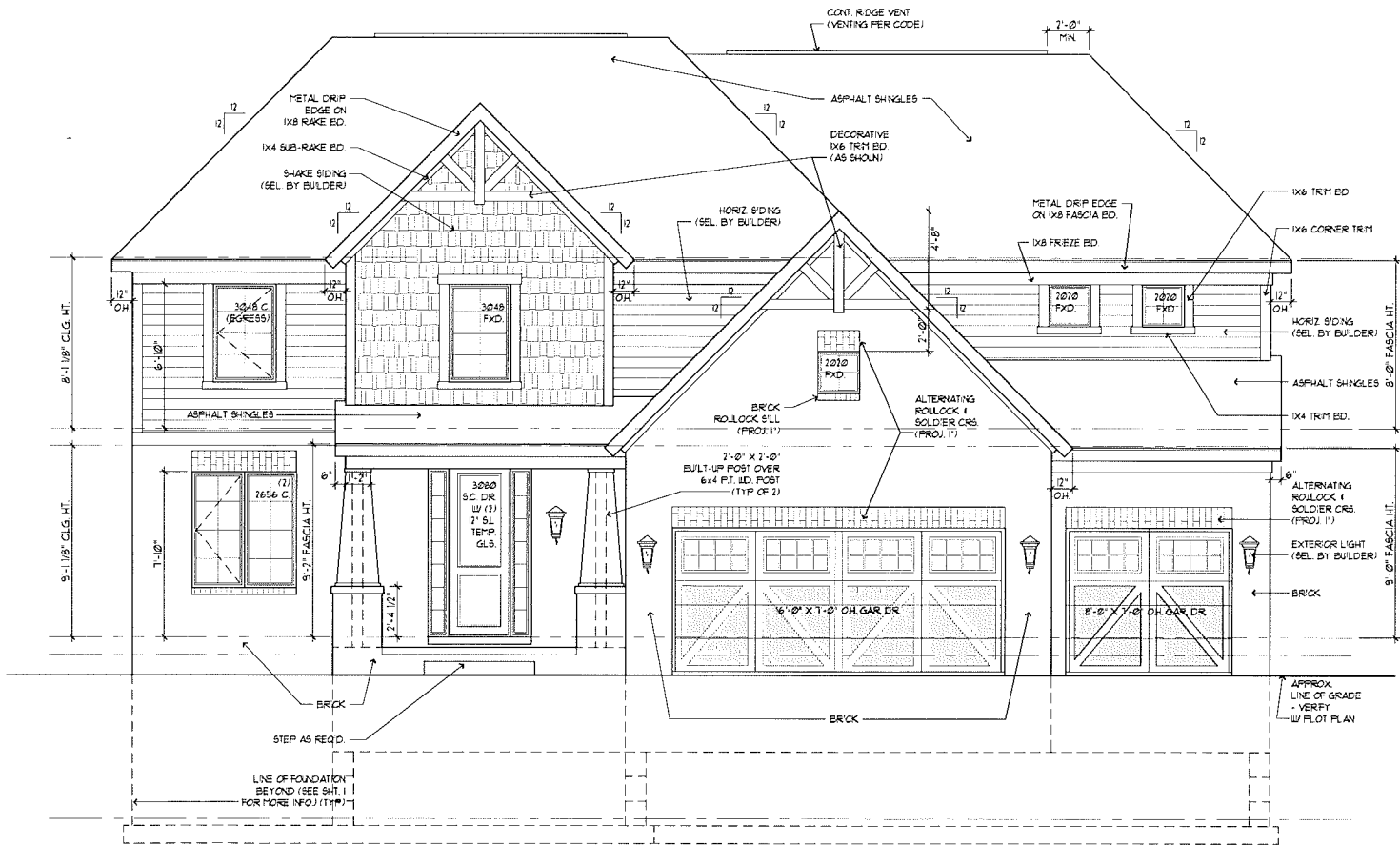
RIGHT ELEVATION - "C"  
SCALE: 1/4" = 1'-0"



A PARTIAL BUILDING SECTION  
SCALE: 3/8" = 1'-0"

NOTE: ANY WINDOWS WITH BOTTOM SILL LOWER THAN 24" FROM FINISH FLOOR AND EXCEEDING 1" FROM FINAL GRADE MUST BE NON-EGRESS AND/OR NON-OPERABLE.

TYPICAL WINDOW DESIGNATION  
NOTE: WINDOW SIZES AS NOTED ON DRAWINGS INDICATE ROUGH OPENING SIZES AND ARE FOR GENERAL REFERENCE ONLY.  
CONSULT WITH WINDOW MANUFACTURER FOR EXACT SPECIFICATIONS.  
SH = SINGLE HUNG WINDOW  
DH = DOUBLE HUNG WINDOW  
SL = SLIDING WINDOW  
C = CASEMENT WINDOW  
FIG = FIXED INSULATED GLASS



FRONT ELEVATION - "C"  
SCALE: 1/4" = 1'-0"

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MICHAELANGELO CONSTRUCTION

2600 GARAGE RIGHT SADDLEBROOK ORCHARDS ROCHESTER HILLS MI

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Job No:	16-335
Sheet No:	6 OF 8



