ARBOR FARMS

PART OF THE N.W. 1/4 OF SECTION 26, T.3S., R.6E.,
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN
A 24 LOT, SINGLE–FAMILY SITE CONDOMINIUM
L–12–26–200–014

100 50 0 100 200 300
SCALE IN FEET 1"=100'

DESCRIPTION OF ARBOR FARMS

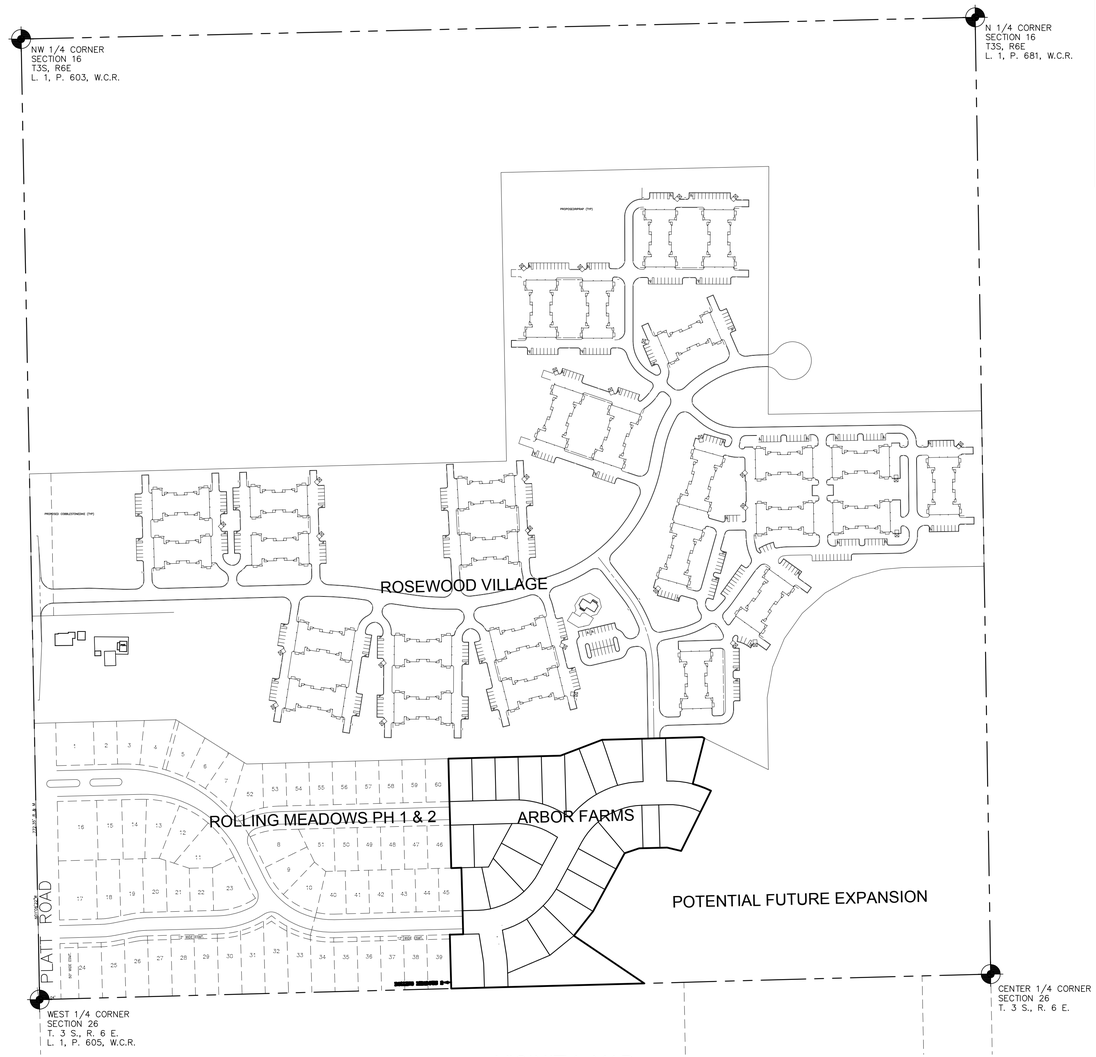
PART OF THE N.W. 1/4 OF SECTION 26, T. 3 S., R. 6 E., PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN, DESCRIBED AS FOLLOWS:

COMMENCING AT THE WEST 1/4 CORNER OF SECTION 26, TOWN 3 SOUTH, RANGE 6 EAST, THENCE N88°27'43"E, 1151.20 FEET ALONG THE EAST AND WEST 1/4 LINE OF SECTION 26 AND IN PART THE SOUTH LINE OF "ROLLING MEADOWS ESTATES SUBDIVISION NO. 1" (LIBER 28 OF PLATS, PAGES 92 – 94, WASHTENAW COUNTY RECORDS) AND "ROLLING MEADOWS ESTATES SUBDIVISION NO. 2" (LIBER 30 OF PLATS, PAGES 1 – 2, WASHTENAW COUNTY RECORDS) TO THE POINT OF BEGINNING; THENCE ALONG THE EAST LINE OF "ROLLING MEADOWS ESTATES SUBDIVISION NO. 2" (LIBER 30 OF PLATS, PAGES 1 – 2, WASHTENAW COUNTY RECORDS) THE FOLLOWING COURSES: N01°32'17"W, 150.72 FEET, AND N88°27'43"E, 37.31 FEET, AND N01°32'17"W, 186.00 FEET, AND S88°27'43"W, 28.31 FEET, AND N01°32'17"W, 306.00 FEET; THENCE N88°27'43"E, 313.51 FEET; THENCE N69°10'16"E, 124.45 FEET; THENCE N88°27'43"E, 280.00 FEET; THENCE S63°48'55"E, 7.09 FEET; THENCE S14°25'45"W, 131.94 FEET TO THE BEGINNING OF A NON–TANGENT CURVE CONCAVE TO THE SOUTH, HAVING A RADIUS OF 263.00 FEET, TO WHICH A RADIAL LINE BEARS N14°25'45"E; THENCE EASTERLY 54.54 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 11°52'58" (THE CHORD OF SAID CURVE BEARS S69°37'47"E, 54.45 FEET); THENCE S26°18'42"W, 187.84 FEET; THENCE N76°26'22"W, 40.49 FEET, THENCE S88°27'43"W, 78.09 FEET; THENCE S71°30'23"W, 42.98 FEET; THENCE S28°27'43"W, 185.14 FEET; THENCE S38°15'35"W, 86.50 FEET; THENCE S55°54'57"E, 237.81 FEET TO THE EAST AND WEST 1/4 LINE OF SECTION 26; THENCE ALONG SAID LINE S88°27'43"W, 539.78 FEET TO THE POINT OF BEGINNING, CONTAINING 8.1492 ACRES OF LAND.

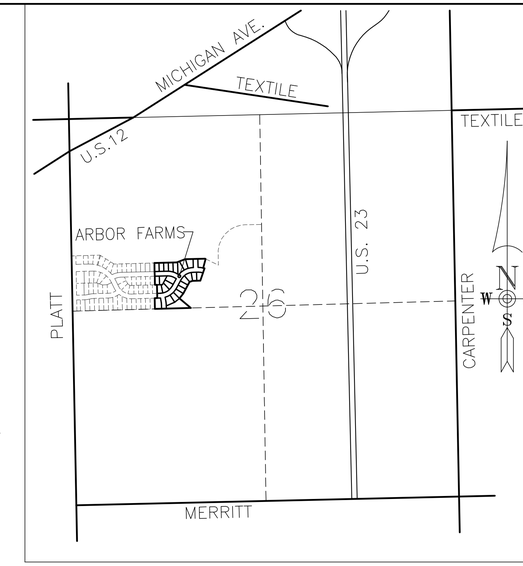
SITE DATA TABLE

Present Zoning	P.U.D.		
Gross Area	354,979	sf	8.15 ac
Area in Street R.O.W.	95,301	sf	2.19 ac
Park Areas	34,216	sf	0.79 ac
Net Lot Area	225,462	sf	5.18 ac
Number of Lots	24	Single Family Units	
Proposed Lot Density	2.9	lots/acre	
Average Lot Area	9,407	sf	0.22 ac
Required Minumin Lot Area	7,800	sf	0.18 ac
Required Minimum Lot Width	65	ft	
Minimum Front Yard	25	ft	
Minimum Rear Yard	30	ft	
Minimum Side Yard	5	ft	
Ground Floor Area	45,900	sf	
Total Floor Area	71,388	sf	
Lot Coverage	20.36	%	
Inpervious Surface (total)	124,427	sf	2.86 ac
Percent Imperviousness	35.05	%	
Floor Area Ratio	31.66	%	
Building Height (feet)	32	ft	
Building Height (floors)	2	floors	

	Plan Date	Submitted	Approved
TOWNSHIP			
Preliminary Site Plan	5/17/2018	6/25/2018	7/12/2018
Engineering Approval	7/11/2018	7/11/2018	
Soil Erosion			
WATER RESOURCES COMMISSION			
WCWRC Engineering	7/11/2018	7/12/2018	
ROAD COMMISSION			
WCRC Road Approval	7/11/2018	7/17/2018	



VICINITY MAP
SCALE: 1" = 200'



VICINITY MAP
SCALE: 1" = 1000'

SHEET INDEX:

CV. COVER SHEET
1. PRELIMINARY SITE PLAN
1A. PRELIMINARY SITE PLAN
2. EXISTING CONDITIONS
3. FINAL ROAD LAYOUT
4. GENERAL DEVELOPMENT PLAN
5. ROAD AND STORM SEWER PROFILES
INGLEWOOD DRIVE 6+13.53–9+72.48
CONIFER DRIVE 0+00–1+53.00
6. SANITARY AND WATER MAIN PROFILES
INGLEWOOD DRIVE 6+13.53–9+72.48
CONIFER DRIVE 0+00–1+53.00
7. ROAD AND STORM SEWER PROFILES
ROLLING MEADOW LANE 13+71.50–25+25
8. SANITARY AND WATER MAIN PROFILES
ROLLING MEADOW LANE 13+71.50–25+25
9. ROAD AND STORM SEWER PROFILE
FOOTHILL DRIVE 0+00–2+80.14
10. SANITARY AND WATER MAIN PROFILES
FOOTHILL DROVE 0+00–2+80.14
11. INTERSECTION DETAILS & MISC. STORM SEWER PROFILES
12. SITE GRADING & S.E.S.C.
13. DRAINAGE MAP, STORM SEWER & DETENTION CALCULATIONS
14. DETENTION POND CROSS SECTION & STORM SEWER PROFILES
15. STRUCTURE SCHEDULES & LEAD SCHEDULES
16. FIRE PROTECTION PLAN
17. TREE/NATURAL FEATURES PLAN
18. TREE SCHEDULE
19. DETAILS SHEET

ATTACHMENTS
LP–1 LANDSCAPE PLANTING PLAN

PITTSFIELD TOWNSHIP STANDARD DETAILS
SOIL EROSION DETAILS AND NOTES
MDOT SIDEWALK DETAILS

NOTES:

1. TO MATCH ADJACENT PLAN SETS AND UTILITY INFORMATION, ALL ELEVATIONS ARE IN THE NGVD 29 DATUM. SUBTRACT 0.40' TO CONVERT TO NAVD 88 DATUM

APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILLS PARKWAY, SUITE 100
BLOOMFIELD HILLS, MI 48304
(248) 921–3996
ATTN: JEFF KATZEN

PROPRIETOR
ROCK PITTSFIELD LLC
1066 WOODWARD AVE.
DETROIT, MICHIGAN 48226
(313) 373–2900
ATTN: STEVE ROSENTHAL

Recieved 2018-08-08

CSPA 18-08
Arbor Farms
FKA Rolling Meadows

CSPA 18–08
ORIGINALLY REVIEWED AS SP #02–1
ORIGINALLY APPROVED BY WASHTENAW COUNTY ROAD COMMISSION ON 08/27/2002
ORIGINALLY APPROVED BY WASHTENAW COUNTY WATER RESOURCES COMMISSION ON 08/12/2002

APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248–921–3996
ATTN: JEFF KATZEN

DATE: 05/17/2018
PM: QMS
ENG: QMS
SURV: AEC
CAD: ADB
\DWG\9525.dwg
XREF:MUSC. & S.S.
SCALE: 1"= N/A

STATUS:
REVISIONS
06/25/18 PER TWP REVIEW LETTER OF 5/21/18
08/29/18 PER SITE PLAN REVIEW OF 6/15/18
07/11/18 ADD ASS. BILL, NEEDS, FIRE ENGINEERING REVIEW LETTER
07/17/18 ADD ASS. BILL, NEEDS, FIRE ENGINEERING REVIEW LETTER
JOB NO. 9525.3.17

ENGINEERS . SURVEYORS
MLP AND ASSOCIATES, INC.
Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
phone: (734) 459–8560
fax: (734) 459–2585

COVER SHEET

ARBOR FARMS
A RESIDENTIAL SITE CONDOMINIUM
PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E.,
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET
CV

ARBOR FARMS

PART OF THE N.W. 1/4 OF SECTION 26, T.3S., R.6E., PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SCALE: ONE INCH = 100 FEET

100 50 0 100 200 300

SCALE IN FEET

DESCRIPTION OF ARBOR FARMS

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COMMENCING AT THE WEST 1/4 CORNER OF SECTION 26, TOWN 3 SOUTH, RANGE 6 EAST, THENCE N88°27'43"E, 1151.20 FEET ALONG THE EAST AND WEST 1/4 LINE OF SECTION 26 AND IN PART THE SOUTH LINE OF "ROLLING MEADOWS ESTATES SUBDIVISION NO. 1" (LIBER 28 OF PLATS, PAGES 92 – 94, WASHTENAW COUNTY RECORDS) AND "ROLLING MEADOWS ESTATES SUBDIVISION NO. 2" (LIBER 30 OF PLATS, PAGES 1 – 2, WASHTENAW COUNTY RECORDS) TO THE POINT OF BEGINNING; THENCE ALONG THE EAST LINE OF "ROLLING MEADOWS ESTATES SUBDIVISION NO. 2" (LIBER 30 OF PLATS, PAGES 1 – 2, WASHTENAW COUNTY RECORDS) THE FOLLOWING COURSES: N01°32'17"W, 150.72 FEET, AND N88°27'43"E, 37.31 FEET, AND N01°32'17"W, 186.00 FEET, AND S88°27'43"W, 28.31 FEET, AND N01°32'17"W, 306.00 FEET; THENCE N88°27'43"E, 313.51 FEET; THENCE N69°10'16"E, 124.45 FEET; THENCE N88°27'43"E, 280.00 FEET; THENCE S63°48'55"E, 7.09 FEET; THENCE S14°25'45"W, 131.94 FEET TO THE BEGINNING OF A NON–TANGENT CURVE CONCAVE TO THE SOUTH, HAVING A RADIUS OF 263.00 FEET, TO WHICH A RADIAL LINE BEARS N14°25'45"E; THENCE EASTERLY 54.54 FEET ALONG SAID CURVE THROUGH A CENTRAL ANGLE OF 11°52'58" (THE CHORD OF SAID CURVE BEARS S69°37'47"E, 54.45 FEET); THENCE S26°18'42"W, 187.84 FEET; THENCE N76°26'22"W, 40.49 FEET; THENCE S88°27'43"W, 78.09 FEET; THENCE S71°30'23"W, 42.98 FEET; THENCE S28°27'43"W, 185.14 FEET; THENCE S38°15'35"W, 86.50 FEET; THENCE S55°54'57"E, 237.81 FEET TO THE EAST AND WEST 1/4 LINE OF SECTION 26; THENCE ALONG SAID LINE S88°27'43"W, 539.78 FEET TO THE POINT OF BEGINNING, CONTAINING 8.1492 ACRES OF LAND.

Lot No.	Lot Area (sf)	Lot Area (ac)
1	7,800	0.1791
2	7,800	0.1791
3	7,804	0.1792
4	8,176	0.1877
5	9,648	0.2215
6	10,558	0.2424
7	8,988	0.2063
8	11,332	0.2601
9	11,336	0.2602
10	10,979	0.2520
11	11,058	0.2539
12	8,475	0.1946
13	7,800	0.1791
14	8,022	0.1842
15	8,648	0.1985
16	8,626	0.1980
17	11,889	0.2729
18	13,496	0.3098
19	8,134	0.1867
20	8,820	0.2025
21	8,895	0.2042
22	10,834	0.2487
23	8,839	0.2029
24	7,800	0.1791
		5.1827

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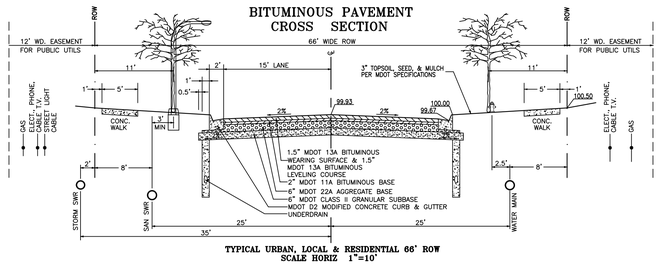
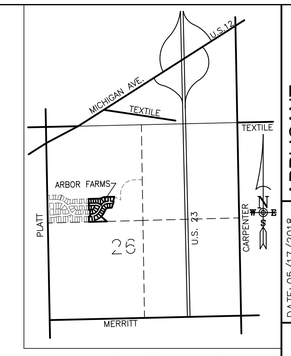
Required Minimum Lot Width	65 ft	
Minimum Front Yard	25 ft	
Minimum Rear Yard	30 ft	
Minimum Side Yard	5 ft	
Ground Floor Area	45,900 sf	
Total Floor Area	71,388 sf	
Lot Coverage	20.36 %	
Inpervious Surface (total)	124,427 sf	2.86 ac
Percent Imperviousness	35.05 %	
Floor Area Ratio	31.66 %	
Building Height (feet)	32 ft	
Building Height (floors)	2 floors	



TYPICAL URBAN, LOCAL & RESIDENTIAL 66' ROW
SCALE HORIZ 1"=10'

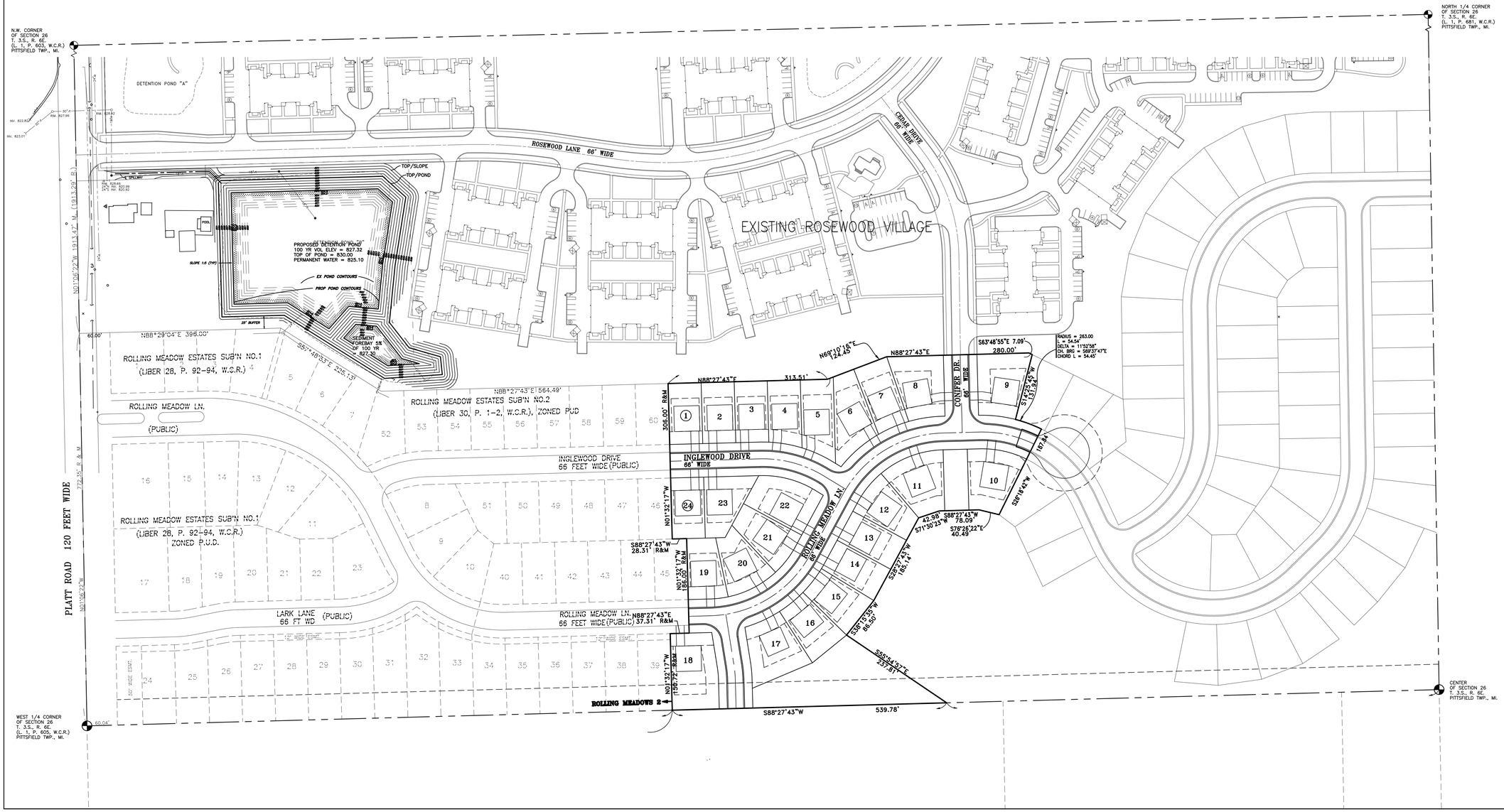
LEGEND:

MANHOLE
CATCH BASIN
INLET
GATE VALVE & WELL
HYDRANT
PROPOSED LIGHT POLE
WATERMAIN (EX.)
STORM SEWER (EX.)
SANITARY SEWER (EX.)
WATERMAIN (PROP.)
STORM SEWER (PROP.)
SANITARY SEWER (PROP.)
WETLAND LIMITS
EX. TREE LINE
EX. FENCE
EX. ELEVATION



VICINITY MAP

SCALE: 1" = 2000'



NOTES:

–ANY OVERHEAD UTILITY LINES SHOULD BE RE–LOCATED UNDERGROUND.

–ALL UTILITIES AND ROADS FOR ARBOR FARMS HAVE BEEN PREVIOUSLY CONSTRUCTED (EXCLUDING THE SOUTH 50' OF FOOTHILL DRIVE AND EAST 32' OF ROLLING MEADOW LANE), EXCEPT FOR 1.5" ROAD WEARING COURSE.

PRELIMINARY SITE PLAN

ARBOR FARMS
A RESIDENTIAL SITE CONDOMINIUM
PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E., PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET 1

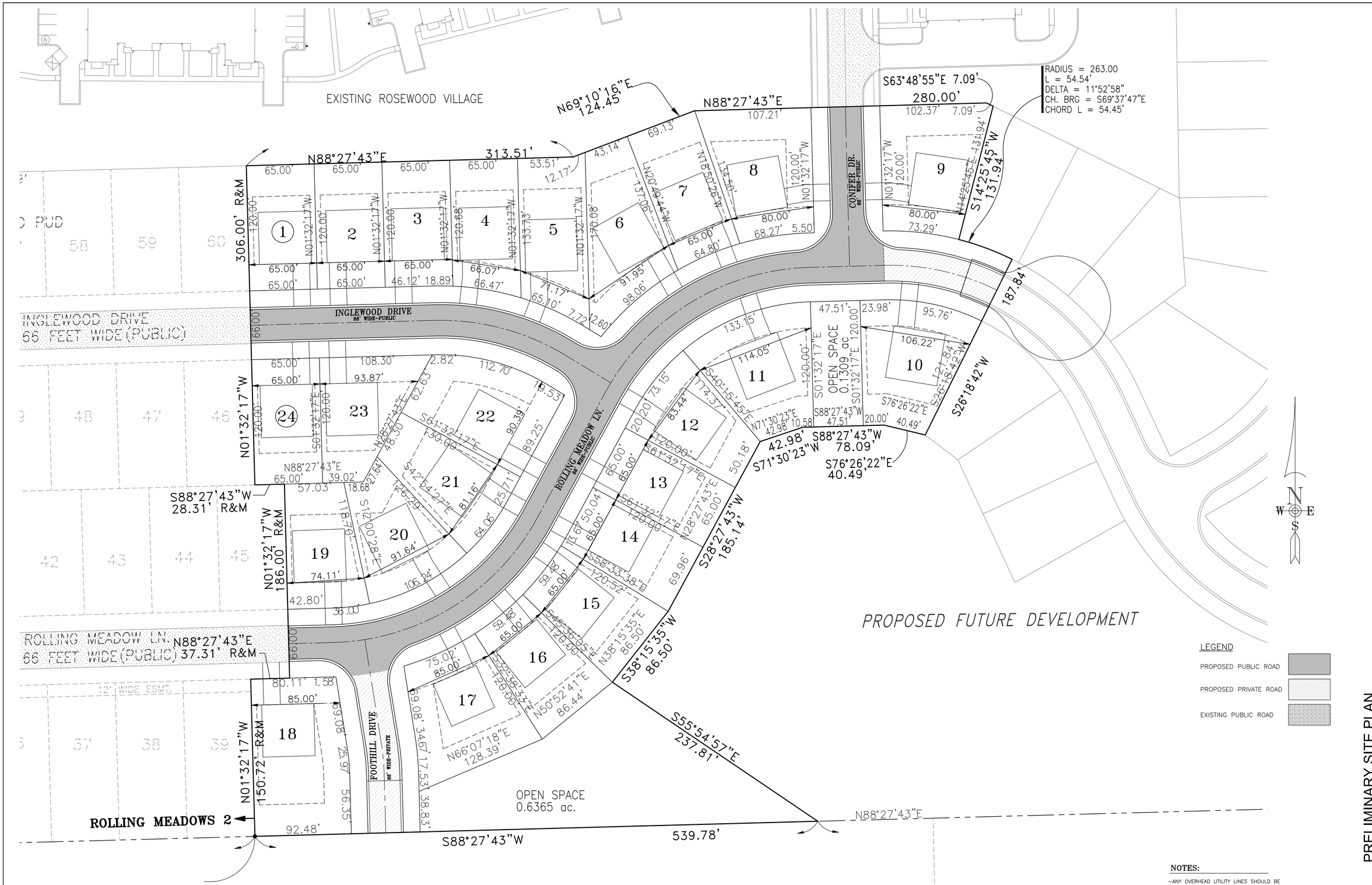
APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248–921–3996
ATTN: JEFF KATZEN

DATE: 05/17/2018
PM: GMS
PLNG: GMS
SURV: AEC
CAD: AGB
\DWG\9525.dwg
XCAL:M.U.S.C. & S.S.
SCALE: 1" = 100'

STATUS:
REVISIONS:
05/17/18 PER TWP REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/02/18 PER MLP/PRIEST ENGINEERING REVIEW LETTER
07/02/18 ADDED PUBLIC WATERMAIN REVIEW LETTER

JOB NO. 9525.3.17

ENGINEERS . SURVEYORS
MLP
AND ASSOCIATES, INC.
Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
phone: (734) 459–8560
fax: (734) 459–2585



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APPLICANT

PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248–921–3996
ATTN: JEFF KATZEN

DATE: 05/17/2018
PM: GMS
PNC: PNC/AEC
SURV: AEC
CAD: AGB
\DWG\9525.dwg
XCALIB\U.S.C. & G.S.
SCALE: 1"= 40'

STATUS:

REVISIONS:
05/08/18 PER TWP REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
08/02/18 PER TRUNKLINE ENGINEERING REVIEW LETTER
08/24/18 REVISED PER TWP. REVIEW LETTER

JOB NO. 9525.3.17

ENGINEERS, SURVEYORS
MLP
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40655 Koppernick Road, Canton, MI 48187
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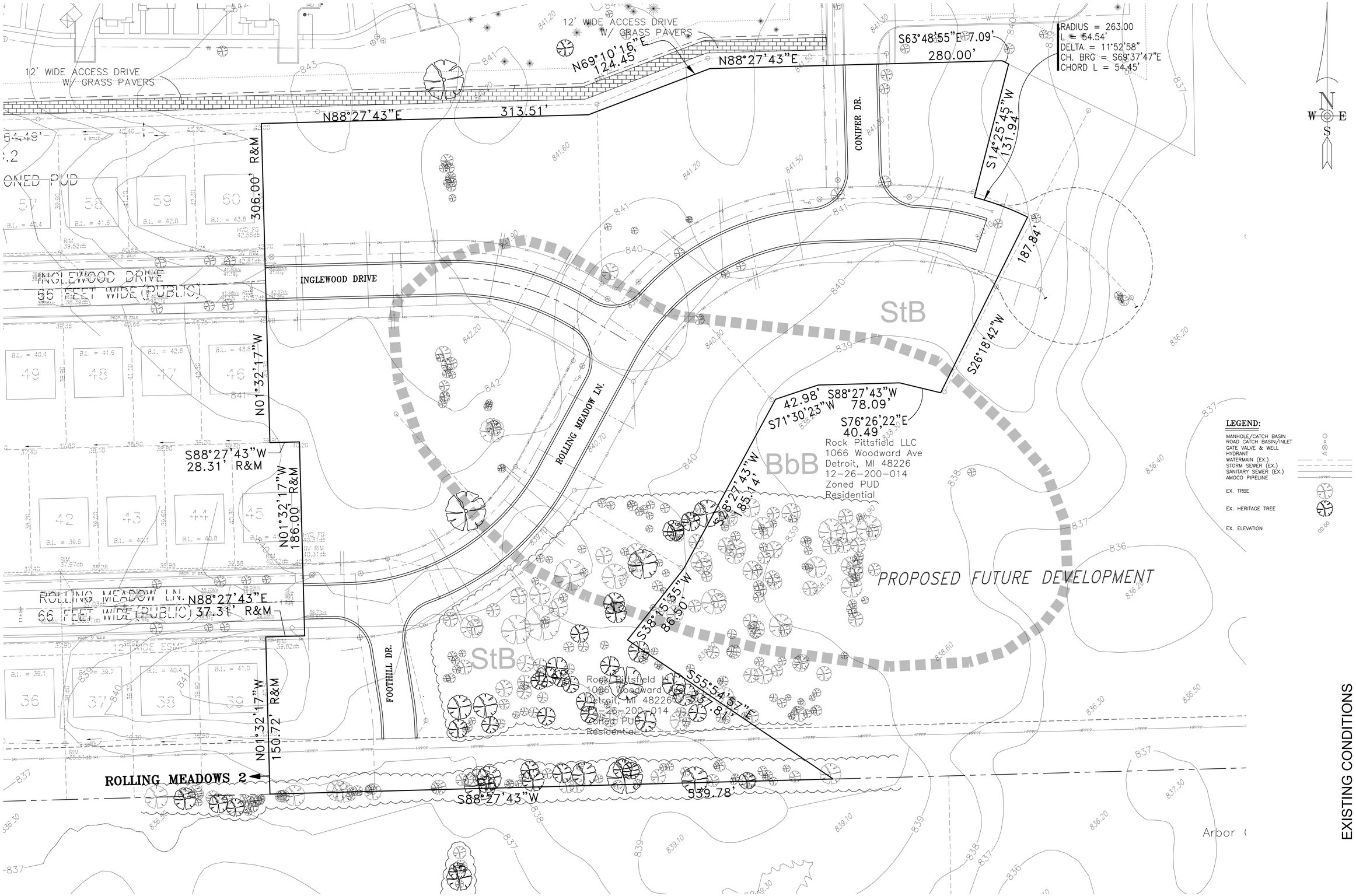
PRELIMINARY SITE PLAN

ARBOR FARMS

A RESIDENTIAL SITE CONDOMINIUM

PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E., PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET
1A



LEGEND:

- MANHOLE/CATCH BASIN
- ROAD CATCH BASIN/INLET
- GATE VALVE & WELL
- HYDRANT
- WATERMAIN (EX.)
- STORM SEWER (EX.)
- SANITARY SEWER (EX.)
- AMOCO PIPELINE
- EX. TREE
- EX. HERITAGE TREE
- EX. ELEVATION

SOILS

ON SITE SOIL CONSISTS OF:
70% ST. CLAIR LOAM (StB) @ 2-6% SLOPES &
30% BLOUNT LOAM (BbB) @ 2-6% SLOPES

APPLICANT

PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN

DATE: 05/17/2018
PM: GMS
PN: PN-MAIN
SURV: AEC
CAD: AGB
\DWG\9525.dwg
XCAT:MJ.S.C. & G.S.
SCALE: 1" = 40'

STATUS:

REVISIONS:
05/24/18 PER TWP REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/02/18 PER ROSS PERO, P.E., SITE ENGINEERING REVIEW LETTER
07/02/18 ADDED PER WWRC REVIEW LETTER

JOB NO. 9525.3.17

ENGINEERS . SURVEYORS
MLP
AND ASSOCIATES, INC.
Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
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fax: (734) 459-2585

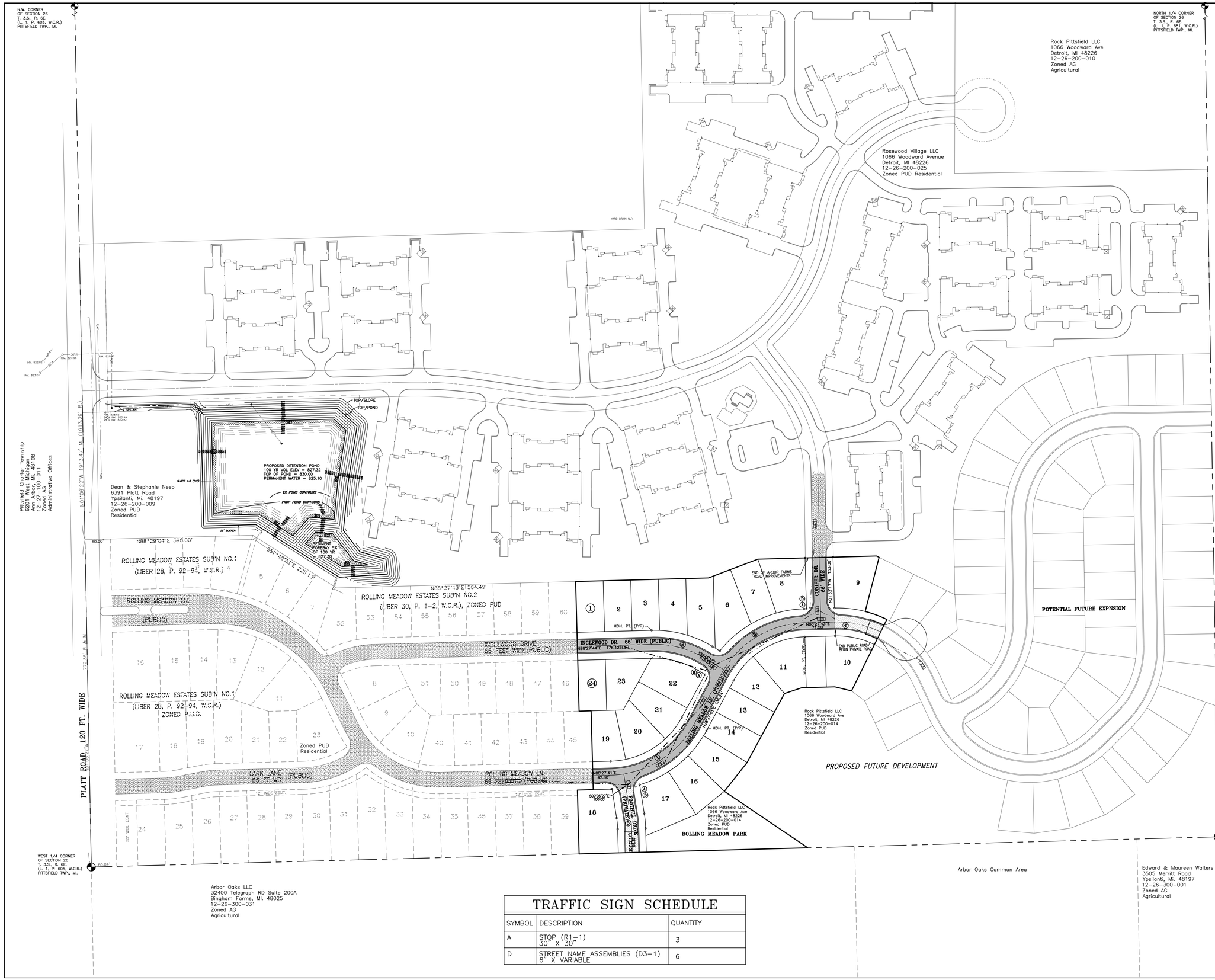
EXISTING CONDITIONS

ARBOR FARMS

A RESIDENTIAL SITE CONDOMINIUM

PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E.,
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET
2



TRAFFIC SIGN SCHEDULE

SYMBOL	DESCRIPTION	QUANTITY
A	STOP (R1-1) 30" X 30"	3
D	STREET NAME ASSEMBLIES (D3-1) 6" X VARIABLE	6

SIGHT DISTANCE TABLE

Conifer Dr.	Right Turn	260'
Rolling Meadow Ln.	Left Turn	260'
Inglewood Dr.	Right Turn	260'
Rolling Meadow Ln.	Left Turn	260'
Foothill Dr.	Right Turn	260'
Rolling Meadow Ln.	Left Turn	260'

CURVE DATA

No.	Radius	Arc	Delta	Chord	Chord Brg	Tangent
1	230	240.86	60°00'00"	230.00	N 58°27'43" E	132.79
2	230	131.58	32°46'42"	129.80	S 75°08'55" E	67.65
3	230	240.86	60°00'00"	230.00	N 58°27'43" E	132.79
4	230	111.79	27°50'56"	110.70	N 77°36'47" W	57.02
5	230	30.32	07°33'10"	30.30	S 05°18'52" E	15.18

FINAL ROAD LAYOUT

ARBOR FARMS

A RESIDENTIAL SITE CONDOMINIUM

PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E., PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET 3

ENGINEERS . SURVEYORS
MLP
AND ASSOCIATES, INC.
Michael L. Priest & Associates, Inc.
40655 Koppernick Road Canton, MI 48187
phone: (734) 459-8560
fax: (734) 459-2585

STATUS:

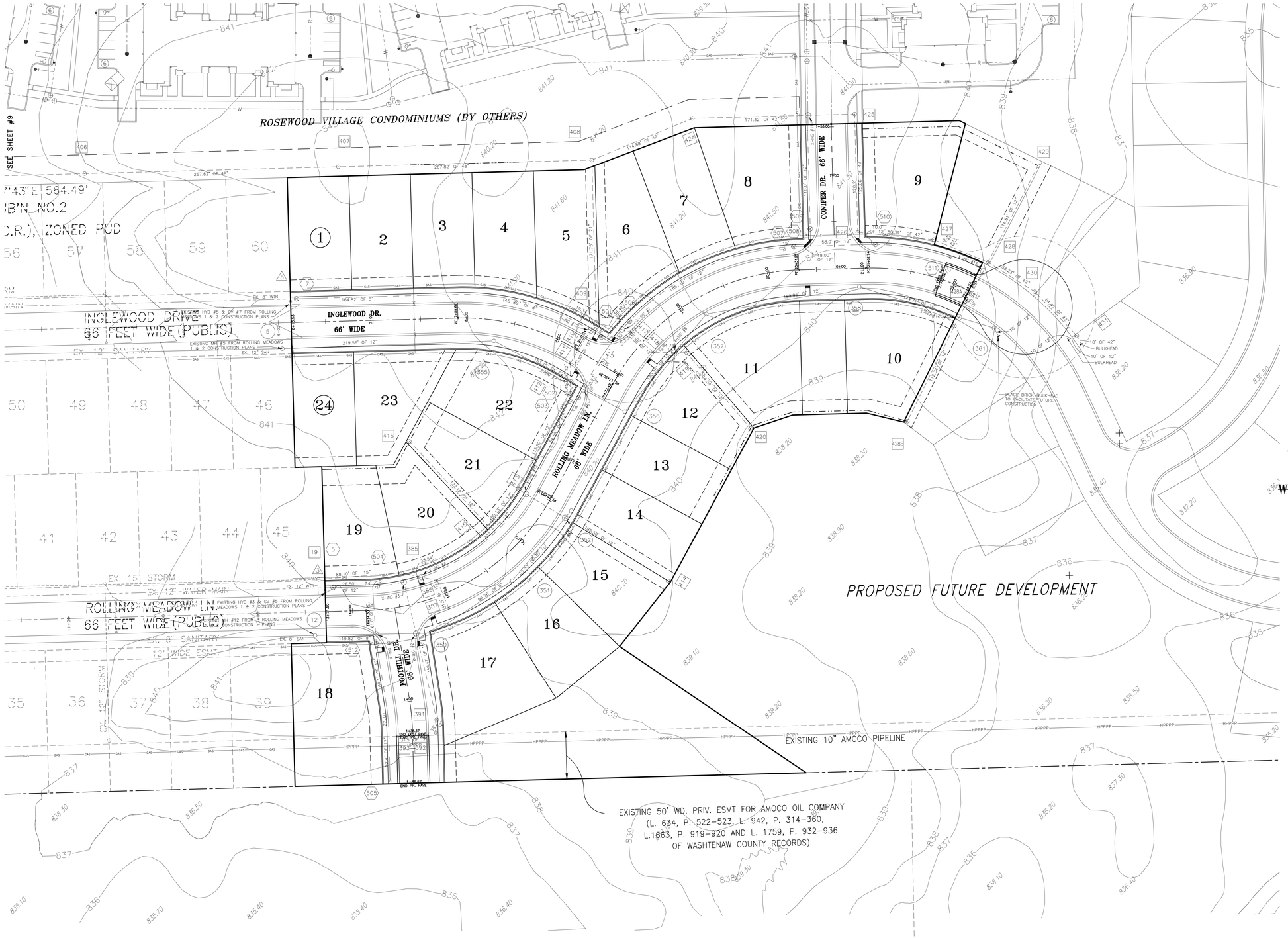
REVISIONS:
05/08/18 PER TWP REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/02/18 PER WASHTENAW COUNTY ENGINEERING REVIEW LETTER
08/02/18 REVISED PER WASHTENAW REVIEW LETTER

JOB NO. 9525.3.17

DATE: 05/17/2018
PM: GMS
DWN: GMS
SURV: AEC
CAD: ADB
\DWG\9525.dwg
XR:ALTMUS.S.C. & G.S.
SCALE: 1" = 100'

APPLICANT

PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN



ROLLING MEADOW ESTATES #3 QUANTITIES

SANITARY SEWER

ITEM	QUANTITY
1 12" PVC SDR 26	656 L.F.
2 12" PVC SDR 21	373 L.F.
3 8" PVC SDR 26	321 L.F.
4 6" LEAD	1324 L.F.
5 MANHOLE	9 EACH

STORM SEWER

ITEM	QUANTITY
1 48" C76 CLIV MGT RG	824 L.F.
2 42" C76 CLIV MGT RG	677 L.F.
3 21" C76 CLIV MGT RG	172 L.F.
4 21" C76 CLIV MGT RG	172 L.F.
5 15" C76 CLIV MGT RG	347 L.F.
6 12" C76 CLIV MGT RG	1148 L.F.
7 REAR YARD INLET	5 EACH
8 REAR YARD CATCH BASIN (7' DIA)	6 EACH
9 MANHOLE "A" (4' DIA)	8 EACH
10 MANHOLE "A" (6' DIA)	6 EACH
11 MANHOLE "A" (8' DIA)	6 EACH
12 STANDARD CATCH BASIN	6 EACH
13 STANDARD INLET	2 EACH

WATER MAIN

ITEM	QUANTITY
1 12" D.I. CL. 54 W.M.	1409 L.F.
2 12" G.V. & WELL	7 EACH
3 8" D.I. CL. 54 W.M.	338 L.F.
4 8" G.V. & WELL	1 EACH
5 HYDRANT	4 EACH

PAVING

ITEM	QUANTITY
1 6" COMPACTED MDOT CLASS II GRANULAR SUBBASE	8568 S.Y.
2 6" MDOT 22A AGGREGATE BASE	8368 S.Y.
3 1 1/2" MDOT 13A LEVELING COURSE	7287 S.Y.
4 1 1/2" MDOT 13A BITUMINOUS WEARING SURFACE	7287 S.Y.
5 MDOT D2 (MODIFIED) MOUNTABLE CONCRETE CURB & GUTTER	3121 L.F.

LEGEND:

- WATERMAIN (EX.)
- STORM SEWER (EX.)
- SANITARY SEWER (EX.)
- SWALE (PROPOSED)
- EASEMENT (EXISTING)
- EASEMENT (PROPOSED)
- ASPHALT (PROPOSED)
- GRAVEL (PROPOSED)

NOTES:

-ALL SANITARY SEWER LEADS SHALL BE AT A MINIMUM 2% SLOPE.

-ALL ROOF AND SUMP DRAINAGE MUST BE DIRECTED INTO THE STORM SYSTEM.

-ALL UTILITIES AND ROADS FOR ARBOR FARMS HAVE BEEN PREVIOUSLY CONSTRUCTED (EXCLUDING THE SOUTH 50' OF FOOTHILL DRIVE AND EAST 32' OF ROLLING MEADOW LANE), EXCEPT FOR 1.5" ROAD WEARING COURSE.

UTILITY CROSSING #1

SANITARY & WATER	
BTM / 12" WTR	833.91
TOP / 8" SAN	828.44
CLEARANCE	5.47'

UTILITY CROSSING #2

SANITARY & STORM	
BTM / 15" STM	831.84
TOP / 8" SAN	828.61
CLEARANCE	3.24'

UTILITY CROSSING #3

STORM & WATER	
TOP / 15" STM	833.24
BTM / 12" WTR	834.49
CLEARANCE	1.25'

UTILITY CROSSING #4

STORM & WATER	
TOP / 12" STM	833.26
BTM / 12" WTR	833.91
CLEARANCE	0.65'

UTILITY CROSSING #5

SANITARY & STORM	
TOP / 8" SAN	829.61
BTM / 12" STM	831.78
CLEARANCE	2.17'

UTILITY CROSSING #6

SANITARY & WATER	
TOP 12" SAN	827.12
BTM / 12" WTR	834.39
CLEARANCE	7.27'

UTILITY CROSSING #7

STORM & WATER	
TOP / 15" STM	829.88
BTM / 12" WTR	831.03
CLEARANCE	1.15'

UTILITY CROSSING #8

SANITARY & STORM	
BTM / 12" STM	831.85
TOP / 12" SAN	827.58
CLEARANCE	4.27'

UTILITY CROSSING #9

STORM & SANITARY	
BTM / 12" STM	830.86
TOP / 12" SAN	827.17
CLEARANCE	3.69'

UTILITY CROSSING #10

STORM & WATER	
BTM / 8" WTR	833.73
TOP / 12" STM	831.69
CLEARANCE	2.04'

UTILITY CROSSING #11

STORM & WATER	
BTM / 12" WTR	833.72
TOP / 42" STM	830.27
CLEARANCE	3.45'

UTILITY CROSSING #12

STORM & WATER	
BTM / 12" WTR	835.09
TOP / 12" STM	832.88
CLEARANCE	2.21'

UTILITY CROSSING #13

STORM & WATER	
BTM / 12" WTR	833.45
TOP / 12" STM	831.95
CLEARANCE	1.50'

UTILITY CROSSING #14

STORM & SANITARY	
BTM / 12" STM	831.43
TOP / 12" SAN	828.45
CLEARANCE	2.98'

BENCHMARKS

1. TOP OF PUMPER NOZZLE ARM OF ROLLING MEADOWS #2 HYDRANT #5 LOCATED AT END OF EX. INGLEWOOD DR.
ELEV = 844.99
2. TOP OF PUMPER NOZZLE ARM OF ROLLING MEADOWS #2 HYDRANT #3 LOCATED AT END OF EX. ROLLING MEADOW LN.
ELEV = 842.74

GENERAL DEVELOPMENT PLAN

ARBOR FARMS

A RESIDENTIAL SITE CONDOMINIUM

PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E.,
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

ENGINEERS . SURVEYORS
MLP
AND ASSOCIATES, INC.
Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
phone: (734) 459-8560
fax: (734) 459-2585

STATUS:

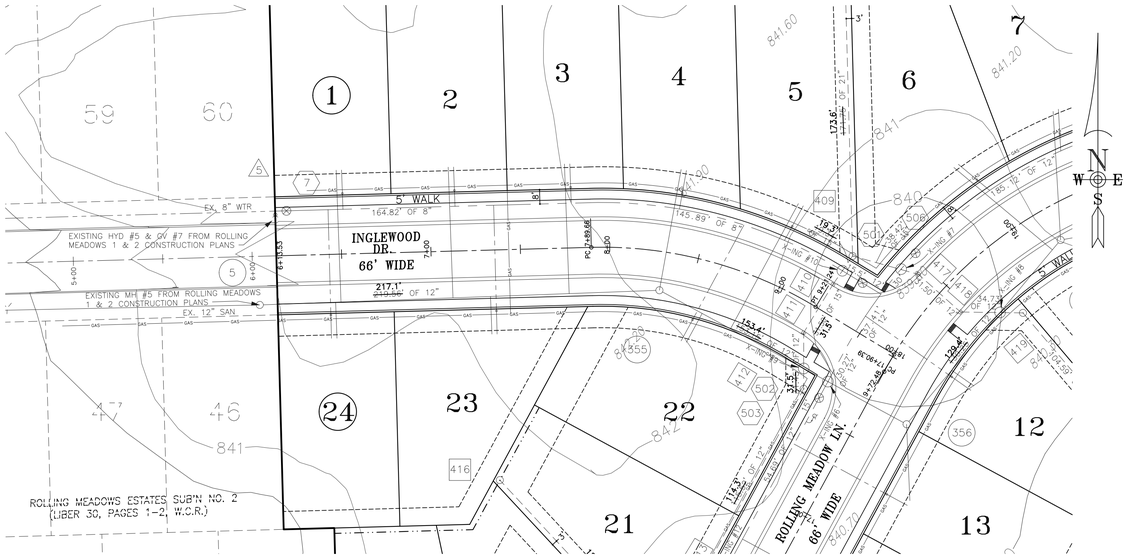
REVISIONS:
05/24/18 PER THE REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/02/18 PER PITTSFIELD TWP. ENGINEERING REVIEW LETTER
07/02/18 NO ADDED PUBLIC WORKS REVIEW LETTER

JOB NO. 9525.3.17

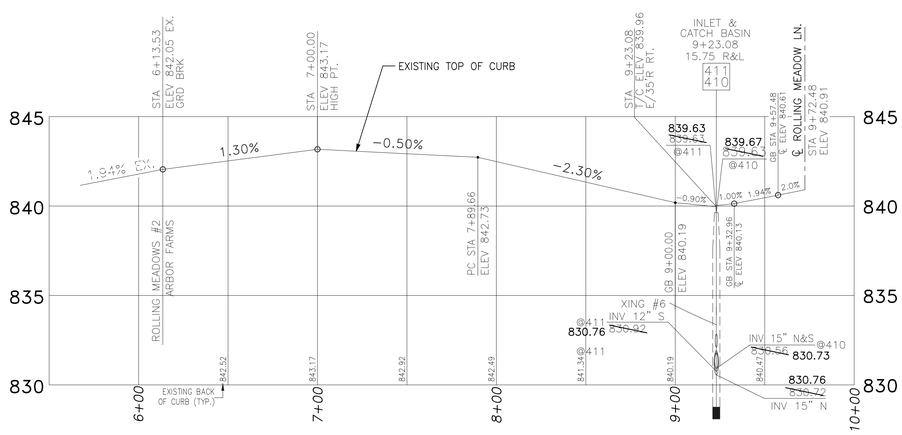
DATE: 05/17/2018
PM: GMS
ENG: GMS
SURV: AEC
CAD: AGB
\DWG\9525.dwg
XCAT(MU,S,C, & S.S.)
SCALE: 1" = 50'

APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN

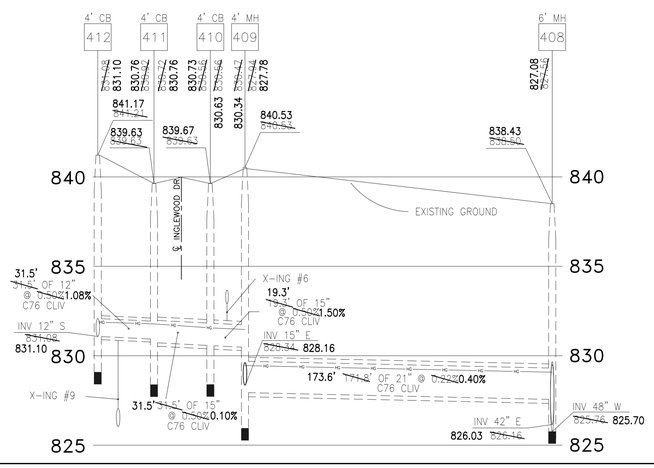
SHEET
4

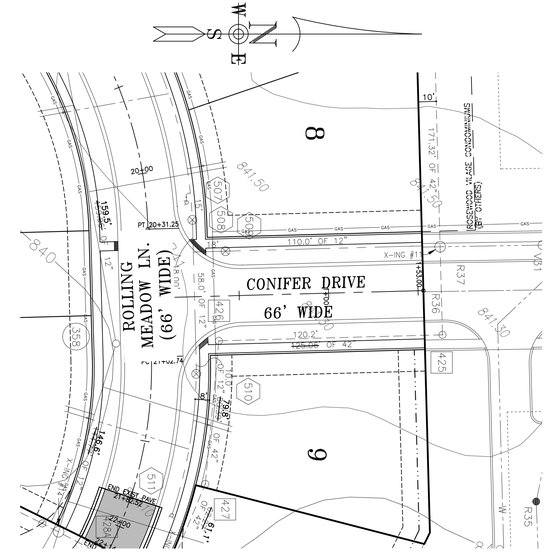


INGLEWOOD DRIVE

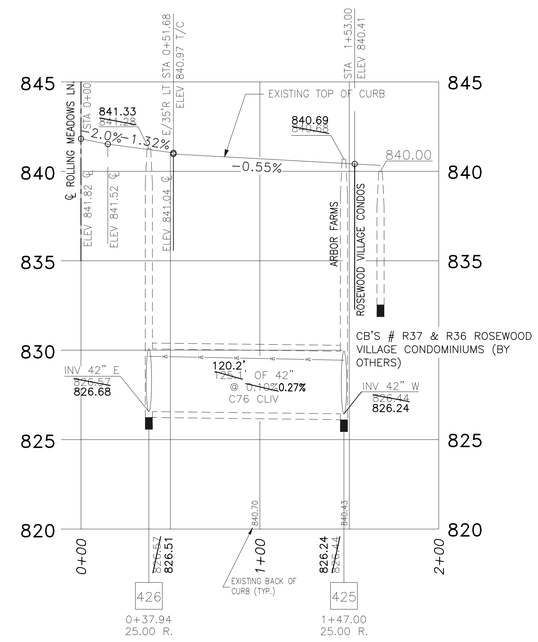


PROFILE LOT 23-5





CONIFER DRIVE



UTILITY CROSSING #1	
SANITARY & WATER	
BTM / 12" WTR	833.91
TOP / 8" SAN	828.44
CLEARANCE	5.47'

UTILITY CROSSING #2	
SANITARY & STORM	
BTM / 15" STM	831.84
TOP / 8" SAN	828.61
CLEARANCE	3.24'

UTILITY CROSSING #3	
STORM & WATER	
TOP / 15" STM	833.24
BTM / 12" WTR	834.49
CLEARANCE	1.25'

UTILITY CROSSING #4	
STORM & WATER	
TOP / 12" STM	833.26
BTM 12" WTR	833.91
CLEARANCE	0.65'

UTILITY CROSSING #5	
SANITARY & STORM	
TOP / 8" SAN	829.61
BTM / 12" STM	831.78
CLEARANCE	2.17'

UTILITY CROSSING #6	
SANITARY & WATER	
TOP 12" SAN	827.12
BTM / 12" WTR	834.39
CLEARANCE	7.27'

UTILITY CROSSING #7	
STORM & WATER	
TOP / 15" STM	829.88
BTM / 12" WTR	831.03
CLEARANCE	1.15'

UTILITY CROSSING #8	
SANITARY & STORM	
BTM / 12" STM	831.85
TOP / 12" SAN	827.58
CLEARANCE	4.27'

UTILITY CROSSING #9	
STORM & SANITARY	
BTM / 12" STM	830.86
TOP / 12" SAN	827.17
CLEARANCE	3.69'

UTILITY CROSSING #10	
STORM & WATER	
BTM / 8" WTR	833.73
TOP / 12" STM	831.69
CLEARANCE	2.04'

UTILITY CROSSING #11	
STORM & WATER	
BTM / 12" WTR	833.72
TOP / 42" STM	830.27
CLEARANCE	3.45'

UTILITY CROSSING #12	
STORM & WATER	
BTM / 12" WTR	835.09
TOP / 12" STM	832.88
CLEARANCE	2.21'

UTILITY CROSSING #13	
STORM & WATER	
BTM / 12" WTR	833.45
TOP / 12" STM	831.95
CLEARANCE	1.50'

UTILITY CROSSING #14	
STORM & SANITARY	
BTM / 12" STM	831.43
TOP / 12" SAN	828.45
CLEARANCE	2.98'

LEGEND:

- WATERMAIN (EX.)
- STORM SEWER (EX.)
- SANITARY SEWER (EX.)
- SWALE (PROPOSED)
- EASEMENT (EXISTING)
- EASEMENT (PROPOSED)
- ASPHALT (PROPOSED)
- GRAVEL (PROPOSED)

BENCHMARKS

1. TOP OF PUMPER NOZZLE ARM OF ROLLING MEADOWS #2 HYDRANT #5
   LOCATED AT END OF EX. INGLEWOOD DR.
   ELEV = 844.99
2. TOP OF PUMPER NOZZLE ARM OF ROLLING MEADOWS #2 HYDRANT #3
   LOCATED AT END OF EX. ROLLING MEADOW LN.
   ELEV = 842.74

NOTE:

-ALL UTILITIES AND ROADS FOR ARBOR FARMS HAVE BEEN PREVIOUSLY CONSTRUCTED (EXCLUDING THE SOUTH 50' OF FOOTHILL DRIVE AND EAST 32' OF ROLLING MEADOW LANE), EXCEPT FOR 1.5" ROAD WEARING COURSE.

ROAD AND STORM SEWER PROFILES
INGLEWOOD DRIVE 6+13.53 - 9+72.48
CONIFER DRIVE 0+00 - 1+53.00

ARBOR FARMS
A RESIDENTIAL SITE CONDOMINIUM
PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E.,
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET
5

APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN

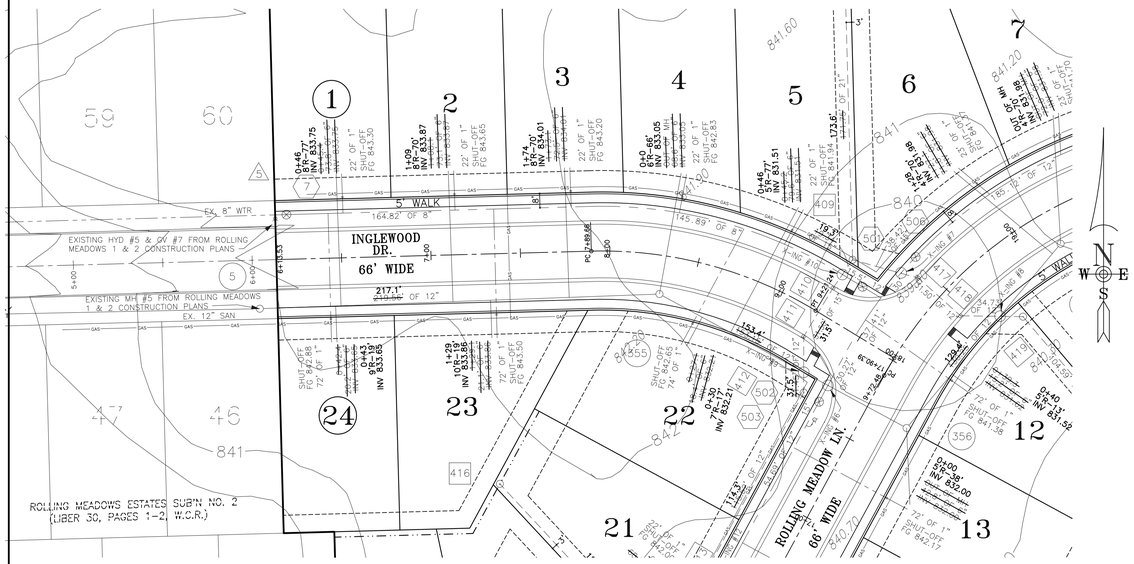
DATE: 05/17/2018
PM: GMS
PE: GMS
SURV: AEC
CAD: AGB
\DWG\9525.dwg
XCALIB:U.S.C. & G.S.
SCALE: 1" = 40'

STATUS:

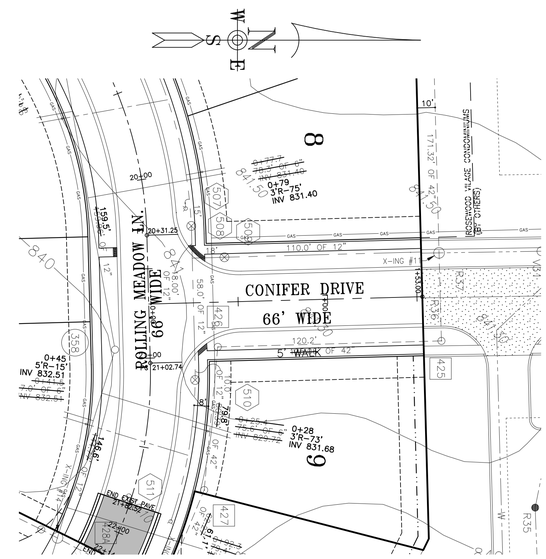
REVISIONS:
06/08/18 PER THE REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/02/18 PER THE REVISED ENGINEERING REVIEW LETTER
07/02/18 ADDED PUBLIC WORKS REVIEW LETTER

JOB NO. 9525.3.17

ENGINEERS, SURVEYORS
MLP
AND ASSOCIATES, INC.
Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
phone: (734) 459-8560
fax: (734) 459-2585



INGLEWOOD DRIVE



CONIFER DRIVE

UTILITY CROSSING #1	
SANITARY & WATER	
BTM / 12" WTR	833.91
TOP / 8" SAN	828.44
CLEARANCE	5.47'

UTILITY CROSSING #2	
SANITARY & STORM	
BTM / 15" STM	831.84
TOP / 8" SAN	828.61
CLEARANCE	3.24'

UTILITY CROSSING #3	
STORM & WATER	
TOP / 15" STM	833.24
BTM / 12" WTR	834.49
CLEARANCE	1.25'

UTILITY CROSSING #4	
STORM & WATER	
TOP / 12" STM	833.26
BTM / 12" WTR	833.91
CLEARANCE	0.65'

UTILITY CROSSING #5	
SANITARY & STORM	
TOP / 8" SAN	829.61
BTM / 12" STM	832.07
CLEARANCE	2.47'

UTILITY CROSSING #6	
SANITARY & WATER	
TOP 12" SAN	827.12
BTM / 12" WTR	834.39
CLEARANCE	7.27'

UTILITY CROSSING #7	
STORM & WATER	
TOP / 15" STM	829.88
BTM / 12" WTR	831.03
CLEARANCE	1.15'

UTILITY CROSSING #8	
SANITARY & STORM	
BTM / 12" STM	831.85
TOP / 12" SAN	827.58
CLEARANCE	4.27'

UTILITY CROSSING #9	
STORM & SANITARY	
BTM / 12" STM	830.86
TOP / 12" SAN	827.17
CLEARANCE	3.69'

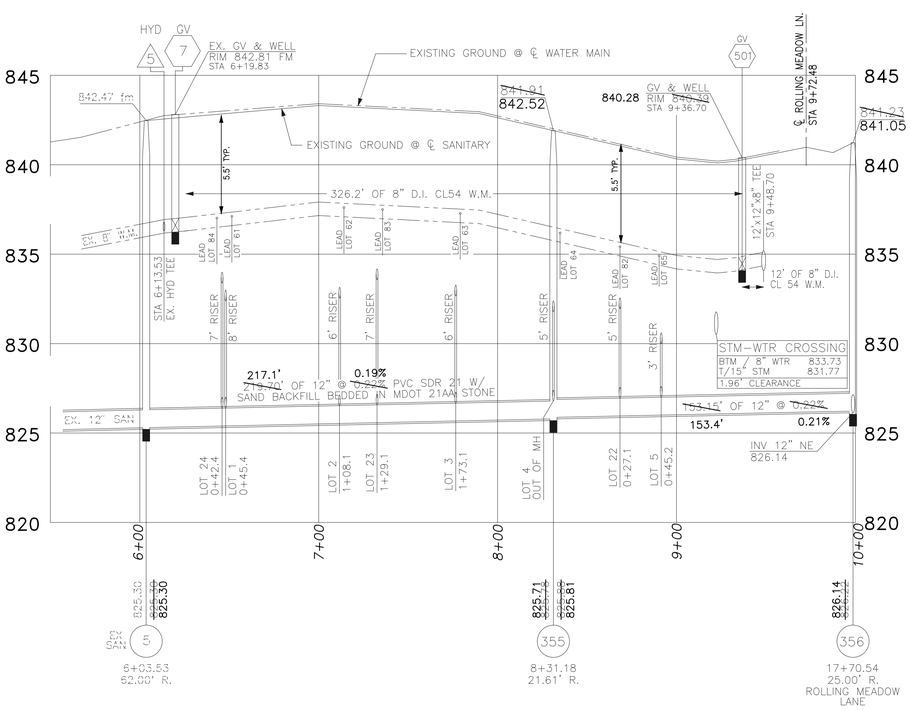
UTILITY CROSSING #10	
STORM & WATER	
BTM / 8" WTR	833.73
TOP / 12" SAN	831.69
CLEARANCE	2.04'

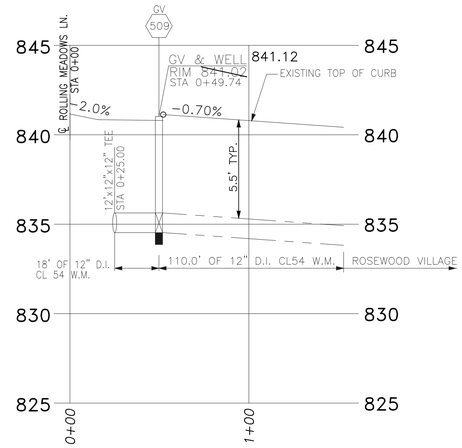
UTILITY CROSSING #11	
STORM & WATER	
BTM / 12" WTR	833.72
TOP / 42" STM	830.27
CLEARANCE	3.45'

UTILITY CROSSING #12	
STORM & WATER	
BTM / 12" WTR	835.09
TOP / 12" STM	832.93
CLEARANCE	2.16'

UTILITY CROSSING #13	
STORM & WATER	
BTM / 12" WTR	834.02
TOP / 12" STM	832.02
CLEARANCE	2.00'

UTILITY CROSSING #14	
STORM & SANITARY	
BTM / 12" STM	831.57
TOP / 12" SAN	828.41
CLEARANCE	3.16'





BENCHMARKS

1. TOP OF PUMPER NOZZLE ARM OF ROLLING MEADOWS #2 HYDRANT #5 LOCATED AT END OF EX. INGLEWOOD DR. ELEV = 844.99
2. TOP OF PUMPER NOZZLE ARM OF ROLLING MEADOWS #2 HYDRANT #3 LOCATED AT END OF EX. ROLLING MEADOW LN. ELEV = 842.74

NOTE:

-ALL UTILITIES AND ROADS FOR ARBOR FARMS HAVE BEEN PREVIOUSLY CONSTRUCTED (EXCLUDING THE SOUTH 50' OF FOOTHILL DRIVE AND EAST 32' OF ROLLING MEADOW LANE), EXCEPT FOR 1.5" ROAD WEARING COURSE.

LEGEND:

- WATERMAIN (EX.)
- STORM SEWER (EX.)
- SANITARY SEWER (EX.)
- SWALE (PROPOSED)
- EASEMENT (EXISTING)
- EASEMENT (PROPOSED)
- ASPHALT (PROPOSED)
- GRAVEL (PROPOSED)

SANITARY AND WATER MAIN PROFILES
INGLEWOOD DRIVE 6+13.53 - 9+72.48
CONIFER DRIVE 0+00 - 1+53.00

ARBOR FARMS
A RESIDENTIAL SITE CONDOMINIUM
PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E., PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET 6

ENGINEERS - SURVEYORS
MLP AND ASSOCIATES, INC.
Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
phone: (734) 459-8560
fax: (734) 459-2585

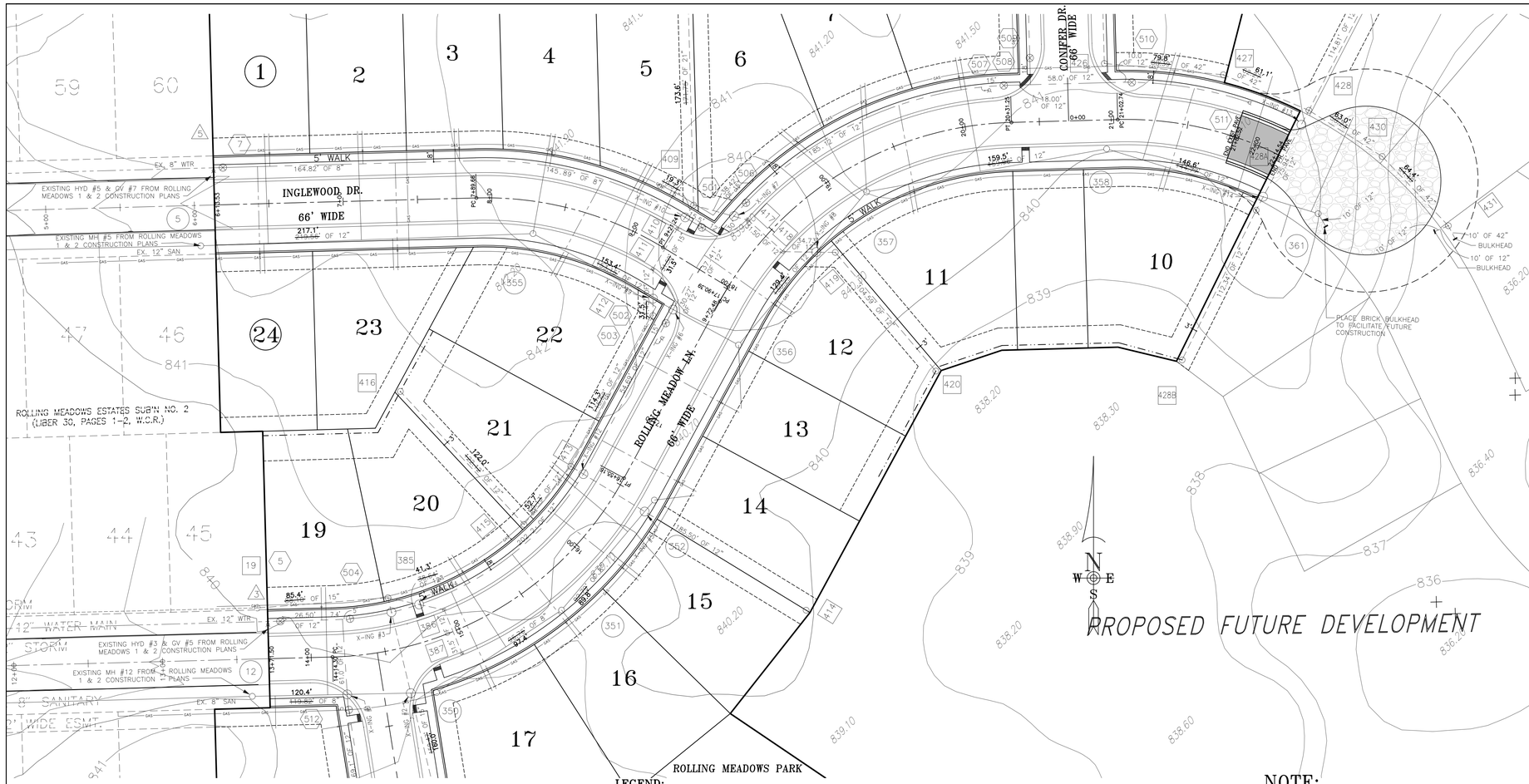
STATUS:

REVISIONS
06/13/18 PER TW RESUBM LETTER of 5/21/18
06/25/18 PER SITE PLAN REVIEW of 6/15/18
07/11/18 ADD AS-BUILT RELEASE PER ENGINEERING REVIEW LETTER
09/04/18 REVISED PER TWMRD REVIEW LETTER

JOB NO. 9525.3.17

DATE: 05/17/2018
PM: GMS
ENG: AES
CAD: ADB
\DWG\9525.dwg
VD ATUM:U.S.C. & G.S.
SCALE: 1" = 40'

APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN



ROLLING MEADOW LANE

LEGEND:

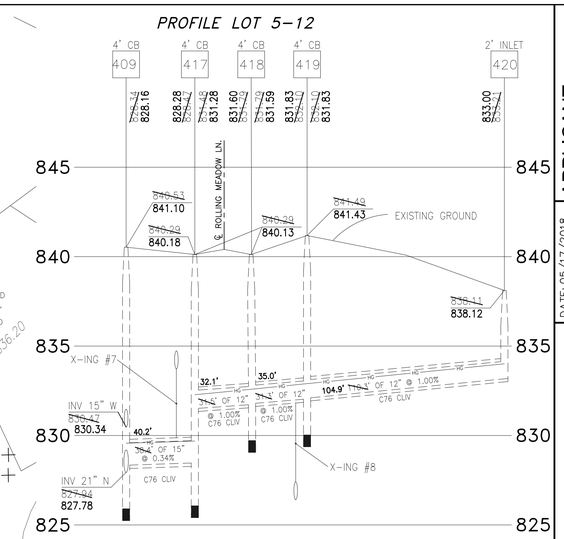
- WATERMAIN (EX.)
- STORM SEWER (EX.)
- SANITARY SEWER (EX.)
- SWALE (PROPOSED)
- EASEMENT (EXISTING)
- EASEMENT (PROPOSED)

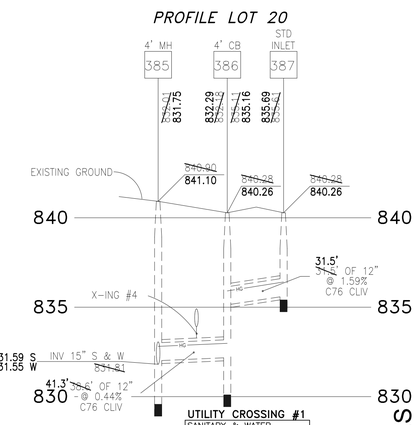
BENCHMARKS

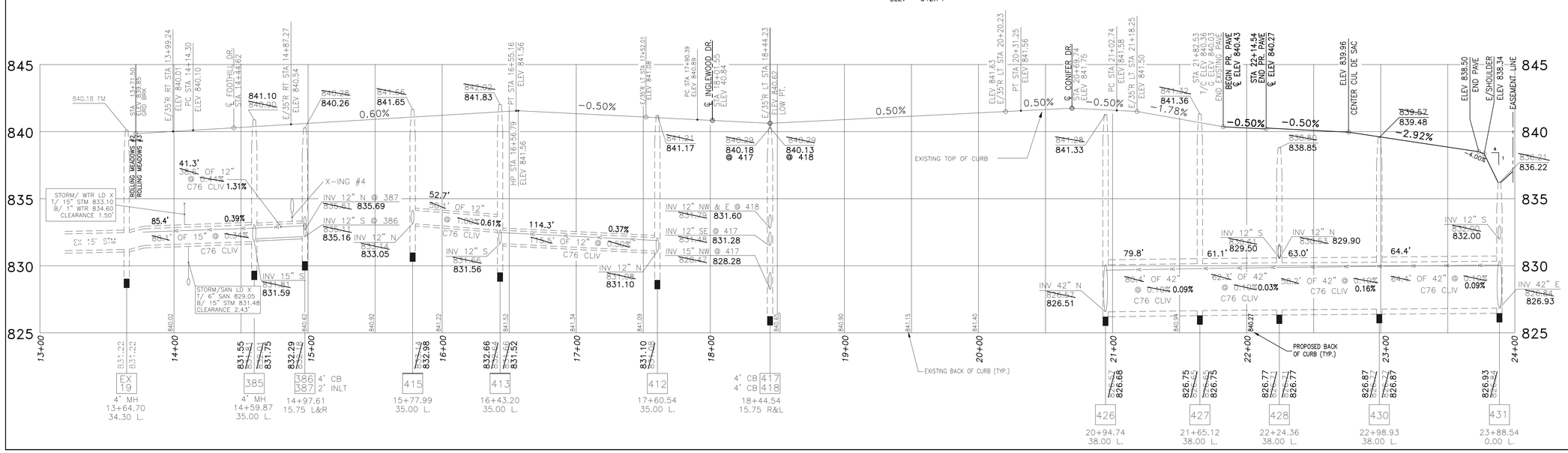
1. TOP OF PUMPER NOZZLE ARM OF ROLLING MEADOWS #2 HYDRANT #5 LOCATED AT END OF EX. INGLEWOOD DR. ELEV = 844.99
2. TOP OF PUMPER NOZZLE ARM OF ROLLING MEADOWS #2 HYDRANT #3 LOCATED AT END OF EX. ROLLING MEADOW LN. ELEV = 842.74

NOTE:

-ALL UTILITIES AND ROADS FOR ARBOR FARMS HAVE BEEN PREVIOUSLY CONSTRUCTED (EXCLUDING THE SOUTH 50' OF FOOTHILL DRIVE AND EAST 32' OF ROLLING MEADOW LANE), EXCEPT FOR 1.5" ROAD WEARING COURSE.







UTILITY CROSSING #1

SANITARY & WATER	
BTM / 12" WTR	833.91
TOP / 8" SAN	828.44
CLEARANCE	5.47'

UTILITY CROSSING #2

SANITARY & STORM	
BTM / 15" STM	831.84
TOP / 8" SAN	828.61
CLEARANCE	3.24'

UTILITY CROSSING #3

STORM & WATER	
TOP / 15" STM	833.24
BTM / 12" WTR	834.49
CLEARANCE	1.25'

UTILITY CROSSING #4

STORM & WATER	
TOP / 12" STM	833.26
BTM / 12" WTR	833.91
CLEARANCE	0.65'

UTILITY CROSSING #5

SANITARY & STORM	
TOP / 8" SAN	829.61
BTM / 12" STM	832.07
CLEARANCE	2.47'

UTILITY CROSSING #6

SANITARY & WATER	
TOP 12" SAN	827.12
BTM / 12" WTR	834.39
CLEARANCE	7.27'

UTILITY CROSSING #7

STORM & WATER	
TOP / 15" STM	829.88
BTM / 12" WTR	831.03
CLEARANCE	1.15'

UTILITY CROSSING #8

SANITARY & STORM	
BTM / 15" STM	831.85
TOP / 12" SAN	827.58
CLEARANCE	4.27'

UTILITY CROSSING #9

STORM & SANITARY	
BTM / 12" STM	830.86
TOP / 12" SAN	827.17
CLEARANCE	3.69'

UTILITY CROSSING #10

STORM & WATER	
BTM / 8" WTR	833.73
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CLEARANCE	2.04'

UTILITY CROSSING #11

STORM & WATER	
BTM / 12" WTR	833.72
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UTILITY CROSSING #12

STORM & WATER	
BTM / 12" WTR	835.09
TOP / 12" STM	832.93
CLEARANCE	2.16'

UTILITY CROSSING #13

STORM & WATER	
BTM / 12" WTR	834.02
TOP / 12" STM	832.02
CLEARANCE	2.00'

UTILITY CROSSING #14

STORM & SANITARY	
BTM / 12" STM	831.57
TOP / 12" SAN	828.41
CLEARANCE	3.16'

SP #02-1

APPLICANT

PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN

DATE: 05/17/2018
PM: GMS
ENG: GMS
SURV: AEC
CAD: AGB
\DWG\9525.dwg
VOLUME:U.S.C. & G.S.
SCALE: 1" = 40'

STATUS:

REVISIONS:
05/08/18 PER TWP REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/02/18 PER TWP. ENGINEERING REVIEW LETTER
07/12/18 REVISED PER TWP. ENGINEERING REVIEW LETTER

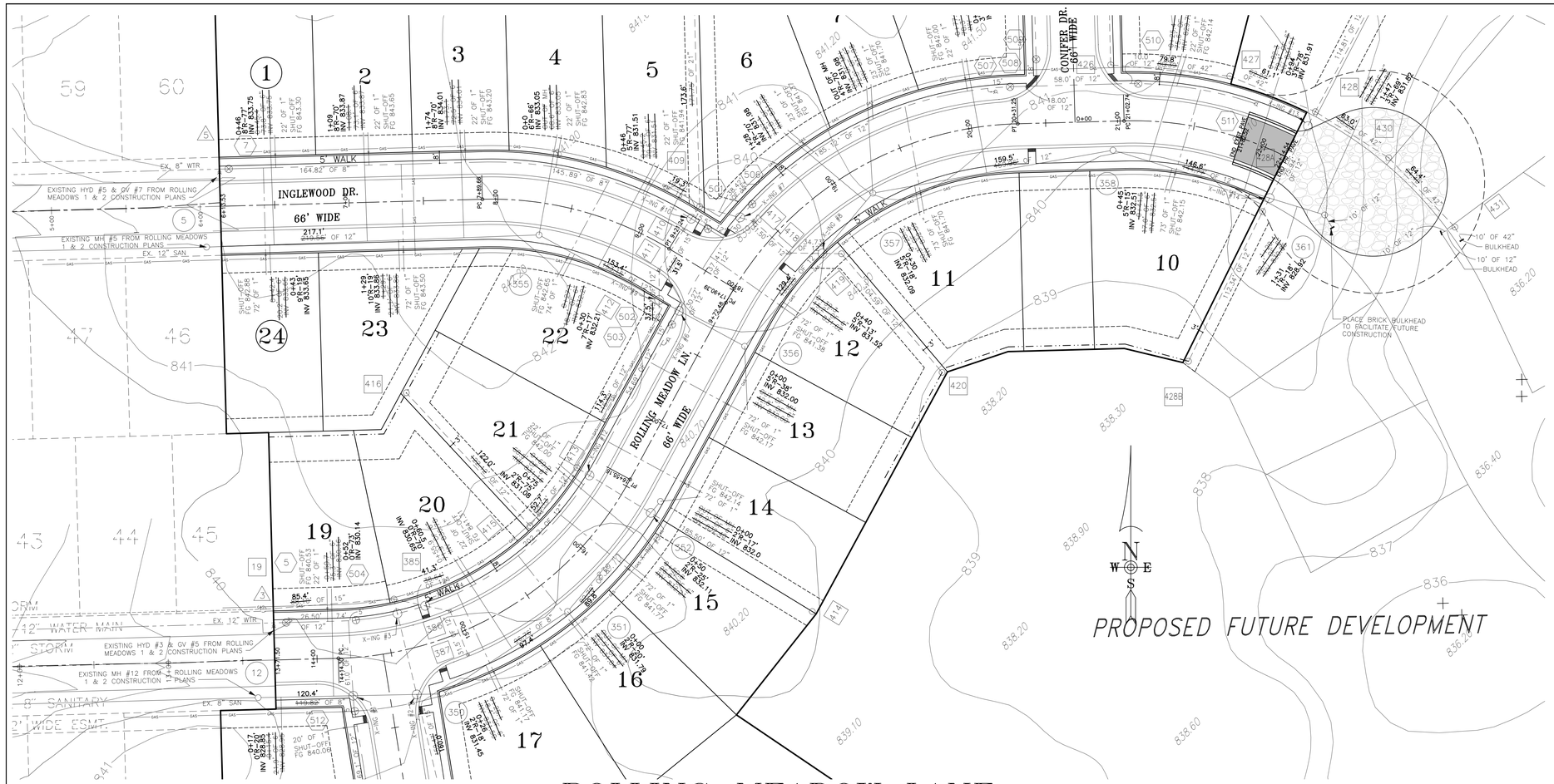
JOB NO. 9525.3.17

ENGINEERS . SURVEYORS
MLP AND ASSOCIATES, INC.
Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
phone: (734) 459-8560
fax: (734) 459-2585

ROAD AND STORM SEWER PROFILES
ROLLING MEADOW LANE 13+71.50 - 25+25.00

ARBOR FARMS
A RESIDENTIAL SITE CONDOMINIUM
PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E.,
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET 7



ROLLING MEADOW LANE

UTILITY CROSSING #1	
SANITARY & WATER	
BTM / 12" WTR	833.91
TOP / 8" SAN	828.44
CLEARANCE	5.47'

UTILITY CROSSING #2	
SANITARY & STORM	
BTM / 15" STM	831.84
TOP / 8" SAN	828.61
CLEARANCE	3.24'

UTILITY CROSSING #3	
STORM & WATER	
TOP / 15" STM	833.24
BTM / 12" WTR	834.49
CLEARANCE	1.25'

UTILITY CROSSING #4	
STORM & WATER	
TOP / 12" STM	833.26
BTM / 12" WTR	833.91
CLEARANCE	0.65'

UTILITY CROSSING #5	
SANITARY & STORM	
TOP / 8" SAN	829.61
BTM / 12" STM	832.07
CLEARANCE	2.47'

UTILITY CROSSING #6	
SANITARY & WATER	
TOP 12" SAN	827.12
BTM / 12" WTR	834.39
CLEARANCE	7.27'

UTILITY CROSSING #7	
STORM & WATER	
TOP / 15" STM	829.88
BTM / 12" WTR	831.03
CLEARANCE	1.15'

UTILITY CROSSING #8	
SANITARY & STORM	
BTM / 12" STM	831.85
TOP / 12" SAN	827.58
CLEARANCE	4.27'

UTILITY CROSSING #9	
STORM & SANITARY	
BTM / 12" STM	830.86
TOP / 12" SAN	827.17
CLEARANCE	3.69'

UTILITY CROSSING #10	
STORM & WATER	
BTM / 8" WTR	833.73
TOP / 12" SAN	831.69
CLEARANCE	2.04'

UTILITY CROSSING #11	
STORM & WATER	
BTM / 12" WTR	833.72
TOP / 42" STM	830.27
CLEARANCE	3.45'

UTILITY CROSSING #12	
STORM & WATER	
BTM / 12" WTR	835.09
TOP / 12" STM	832.93
CLEARANCE	2.16'

UTILITY CROSSING #13	
STORM & WATER	
BTM / 12" WTR	834.02
TOP / 12" STM	832.02
CLEARANCE	2.00'

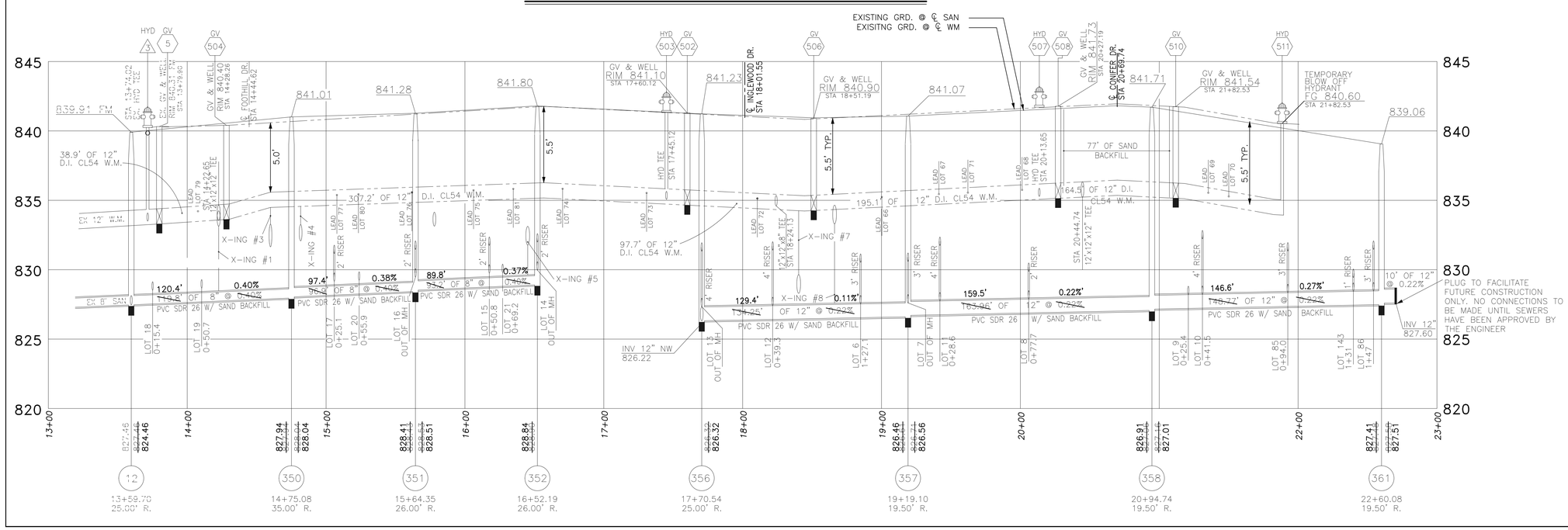
UTILITY CROSSING #14	
STORM & SANITARY	
BTM / 12" STM	831.57
TOP / 12" SAN	828.41
CLEARANCE	3.16'

LEGEND:

- WATERMAIN (EX.)
- STORM SEWER (EX.)
- SANITARY SEWER (EX.)
- SWALE (PROPOSED)
- EASEMENT (EXISTING)
- EASEMENT (PROPOSED)
- ASPHALT (PROPOSED)
- GRAVEL (PROPOSED)

NOTE:

-ALL UTILITIES AND ROADS FOR ARBOR FARMS HAVE BEEN PREVIOUSLY CONSTRUCTED (EXCLUDING THE SOUTH 50' OF FOOTHILL DRIVE AND EAST 32' OF ROLLING MEADOW LANE), EXCEPT FOR 1.5" ROAD WEARING COURSE.



SANITARY AND WATER MAIN PROFILES
ROLLING MEADOW LANE 13+71.50 - 25+25.00

ARBOR FARMS

A RESIDENTIAL SITE CONDOMINIUM

PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E., PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET 8

APPLICANT

PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN

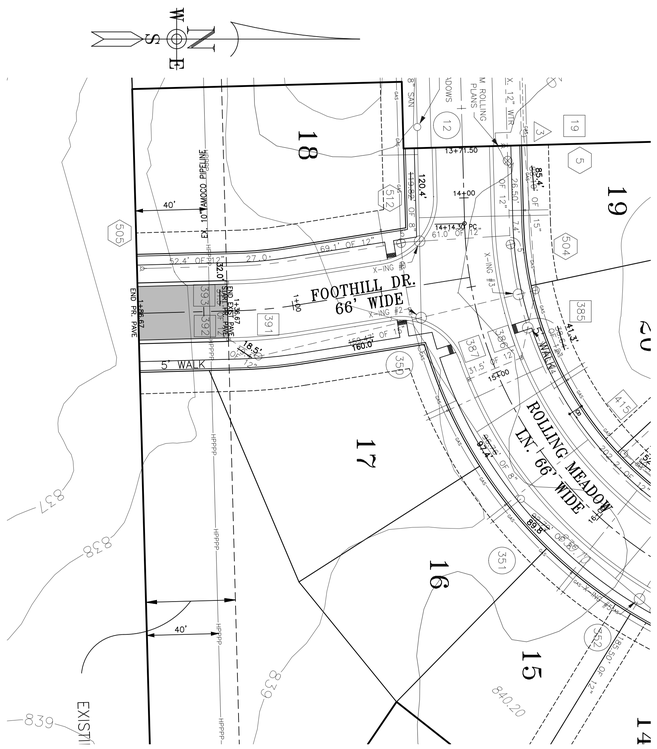
DATE: 05/17/2018
PM: GMS
PIC: GMS
SURV: AEC
CAD: AGB
\DWG\9525.dwg
VERTICAL: U.S.C. & G.S.
SCALE: 1" = 40'

STATUS:

REVISIONS:
05/08/18 PER TWP REVIEW LETTER OF 5/21/18
06/05/18 PER SITE PLAN REVIEW OF 6/5/18
07/02/18 PER TWP. ENGINEERING REVIEW LETTER
07/09/18 NO ISSUES PER TWP. ENGINEERING REVIEW LETTER

JOB NO. 9525.3.17

ENGINEERS - SURVEYORS
MLP
AND ASSOCIATES, INC.
Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
phone: (734) 459-8560
fax: (734) 459-2585



FOOTHILL DRIVE

NOTE:

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LEGEND:

- WATERMAIN (EX.)
- STORM SEWER (EX.)
- SANITARY SEWER (EX.)
- SWALE (PROPOSED)
- EASEMENT (EXISTING)
- EASEMENT (PROPOSED)
- ASPHALT (PROPOSED)
- GRAVEL (PROPOSED)

BENCHMARKS

1. TOP OF PUMPER NOZZLE ARM OF ROLLING MEADOWS #2 HYDRANT #5 LOCATED AT END OF EX. INGLEWOOD DR. ELEV = 844.99
2. TOP OF PUMPER NOZZLE ARM OF ROLLING MEADOWS #2 HYDRANT #3 LOCATED AT END OF EX. ROLLING MEADOW LN. ELEV = 842.74

UTILITY CROSSING #1

SANITARY & WATER	
BTM / 12" WTR	833.91
TOP / 8" SAN	828.44
CLEARANCE	5.47'

UTILITY CROSSING #2

SANITARY & STORM	
BTM / 15" STM	831.84
TOP / 8" SAN	828.61
CLEARANCE	3.24'

UTILITY CROSSING #3

STORM & WATER	
TOP / 15" STM	833.24
BTM / 12" WTR	834.49
CLEARANCE	1.25'

UTILITY CROSSING #4

STORM & WATER	
TOP / 12" STM	833.26
BTM / 12" WTR	833.91
CLEARANCE	0.65'

UTILITY CROSSING #5

SANITARY & STORM	
TOP / 8" SAN	829.61
BTM / 12" STM	831.78
CLEARANCE	2.17'

UTILITY CROSSING #6

SANITARY & WATER	
TOP 12" SAN	827.12
BTM / 12" WTR	834.39
CLEARANCE	7.27'

UTILITY CROSSING #7

STORM & WATER	
TOP / 15" STM	829.88
BTM / 12" WTR	831.03
CLEARANCE	1.15'

UTILITY CROSSING #8

SANITARY & STORM	
BTM / 12" STM	831.85
TOP / 12" SAN	827.58
CLEARANCE	4.27'

UTILITY CROSSING #9

STORM & SANITARY	
BTM / 12" STM	830.86
TOP / 12" SAN	827.17
CLEARANCE	3.69'

UTILITY CROSSING #10

STORM & WATER	
BTM / 8" WTR	833.73
TOP / 12" STM	831.69
CLEARANCE	2.04'

UTILITY CROSSING #11

STORM & WATER	
BTM / 12" WTR	833.72
TOP / 42" STM	830.27
CLEARANCE	3.45'

UTILITY CROSSING #12

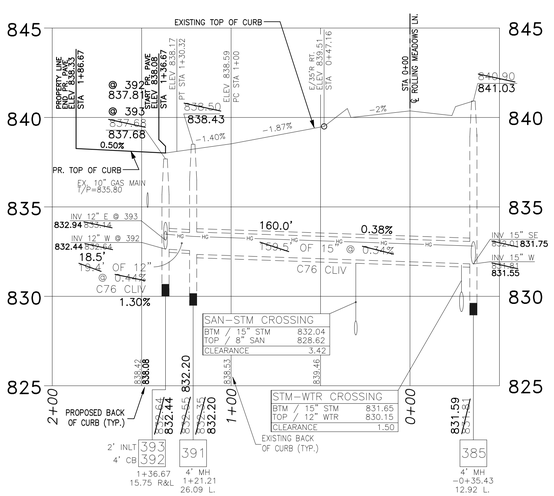
STORM & WATER	
BTM / 12" WTR	835.09
TOP / 12" STM	832.88
CLEARANCE	2.21'

UTILITY CROSSING #13

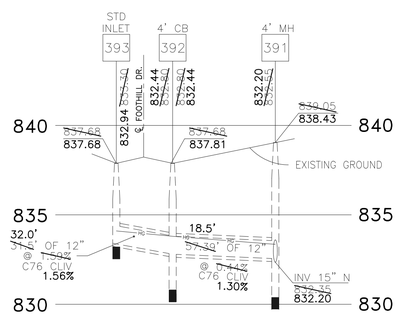
STORM & WATER	
BTM / 12" WTR	833.45
TOP / 12" STM	831.95
CLEARANCE	1.50'

UTILITY CROSSING #14

STORM & SANITARY	
BTM / 12" STM	831.43
TOP / 12" SAN	828.45
CLEARANCE	2.98'



PROFILE MH 393 TO MH 391



ROAD AND STORM SEWER PROFILE
FOOTHILL DRIVE 0+00 - 2+80.14

ARBOR FARMS
A RESIDENTIAL SITE CONDOMINIUM
PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E., PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET
9

APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN

DATE: 05/17/2018
PM: GMS
PN: PINGMAS
SURV: AEC
CAD: AGB
\DWG\9525.dwg
VOLUME: S.C. & S.S.
SCALE: 1"= 40'

STATUS:
REVISIONS:
05/18/18 PER TWP REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/02/18 PER TWP ENGINEERING REVIEW LETTER
09/04/18 ADDED PER WWRC REVIEW LETTER
JOB NO. 9525.3.17

ENGINEERS - SURVEYORS
MLP
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Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
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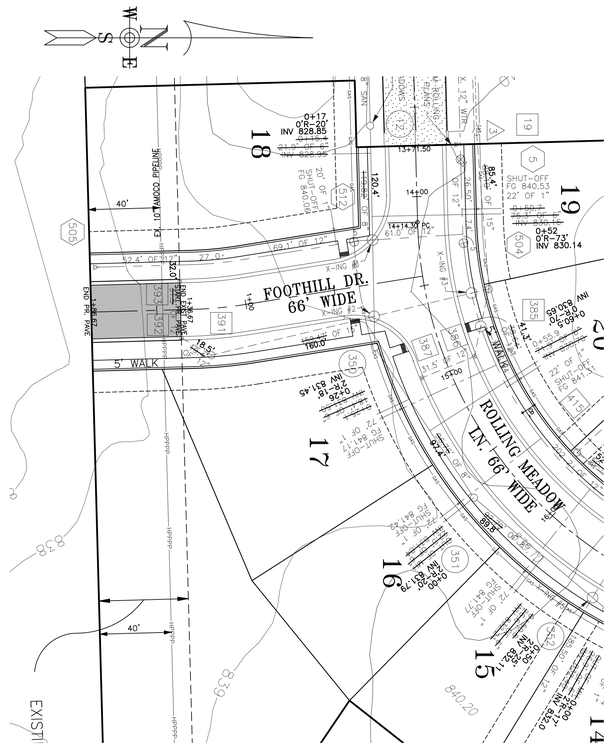
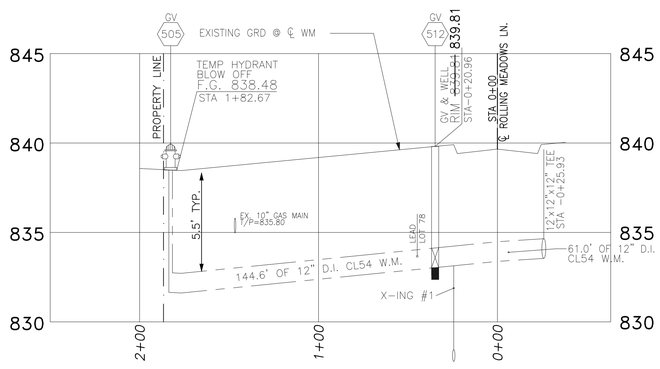


FOOTHILL DRIVE



LEGEND:

WATERMAIN (EX.)
STORM SEWER (EX.)
SANITARY SEWER (EX.)
SWALE (PROPOSED)
EASEMENT (EXISTING)
EASEMENT (PROPOSED)
ASPHALT (PROPOSED)
GRAVEL (PROPOSED)

BENCHMARKS

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HYDRANT #5 LOCATED AT END OF EX. INGLEWOOD DR.
ELEV = 844.99
2. TOP OF PUMPER NOZZLE ARM OF ROLLING MEADOWS #2
HYDRANT #3 LOCATED AT END OF EX. ROLLING MEADOW LN.
ELEV = 842.74

NOTE:

–ALL UTILITIES AND ROADS FOR ARBOR FARMS HAVE BEEN PREVIOUSLY CONSTRUCTED (EXCLUDING THE SOUTH 50' OF FOOTHILL DRIVE AND EAST 32' OF ROLLING MEADOW LANE), EXCEPT FOR 1.5" ROAD WEARING COURSE.

UTILITY CROSSING #1

SANITARY & WATER	
BTM / 12" WTR	833.91
TOP / 8" SAN	828.44
CLEARANCE	5.47'

UTILITY CROSSING #2

SANITARY & STORM	
BTM / 15" STM	831.84
TOP / 8" SAN	828.61
CLEARANCE	3.24'

UTILITY CROSSING #3

STORM & WATER	
TOP / 15" STM	833.24
BTM / 12" WTR	834.49
CLEARANCE	1.25'

UTILITY CROSSING #4

STORM & WATER	
TOP / 12" STM	833.26
BTM / 12" WTR	833.91
CLEARANCE	0.65'

UTILITY CROSSING #5

SANITARY & STORM	
TOP / 8" SAN	829.61
BTM / 12" STM	832.07
CLEARANCE	2.47'

UTILITY CROSSING #6

SANITARY & WATER	
TOP 12" SAN	827.12
BTM / 12" WTR	834.39
CLEARANCE	7.27'

UTILITY CROSSING #7

STORM & WATER	
TOP / 15" STM	829.88
BTM / 12" WTR	831.03
CLEARANCE	1.15'

UTILITY CROSSING #8

SANITARY & STORM	
BTM / 12" STM	831.85
TOP / 12" SAN	827.58
CLEARANCE	4.27'

UTILITY CROSSING #9

STORM & SANITARY	
BTM / 12" STM	830.86
TOP / 12" SAN	827.17
CLEARANCE	3.69'

UTILITY CROSSING #10

STORM & WATER	
BTM / 8" WTR	833.73
TOP / 12" SAN	831.69
CLEARANCE	2.04'

UTILITY CROSSING #11

STORM & WATER	
BTM / 12" WTR	833.72
TOP / 42" STM	830.27
CLEARANCE	3.45'

UTILITY CROSSING #12

STORM & WATER	
BTM / 12" WTR	835.09
TOP / 12" STM	832.93
CLEARANCE	2.16'

UTILITY CROSSING #13

STORM & WATER	
BTM / 12" WTR	834.02
TOP / 12" STM	832.02
CLEARANCE	2.00'

UTILITY CROSSING #14

STORM & SANITARY	
BTM / 12" STM	831.57
TOP / 12" SAN	828.41
CLEARANCE	3.16'

SANITARY AND WATER MAIN PROFILES
FOOTHILL DRIVE 0+00 - 2+80.14

ARBOR FARMS
A RESIDENTIAL SITE CONDOMINIUM
PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E.,
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

ENGINEERS • SURVEYORS
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AND ASSOCIATES, INC.
Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
phone: (734) 459-8560
fax: (734) 459-2585

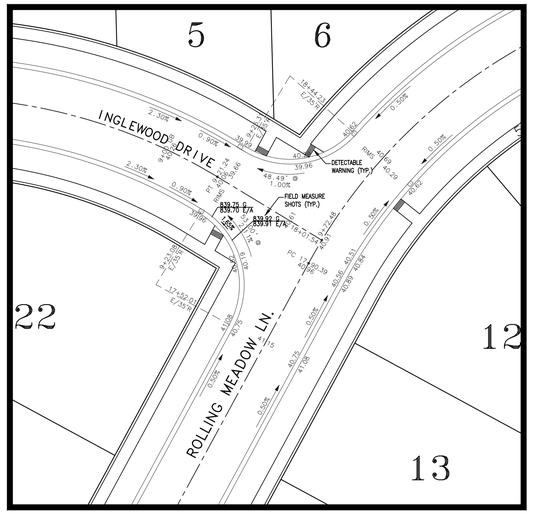
SHEET
10

DATE: 05/17/2018
PM: GMS
PE: GMS
SURV: AEC
CAD: AGB
\DWG\9525.dwg
VOLUME:U.S.C. & G.S.
SCALE: 1" = 40'

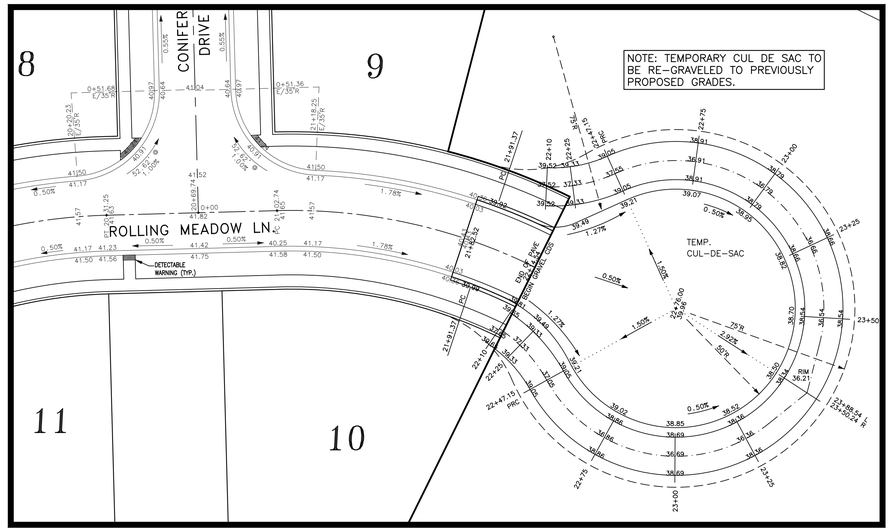
APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN

STATUS:
REVISIONS:
06/08/18 PER THE REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/02/18 PER THE REVISED ENGINEERING REVIEW LETTER
07/09/18 REVISED PER WRWC REVIEW LETTER

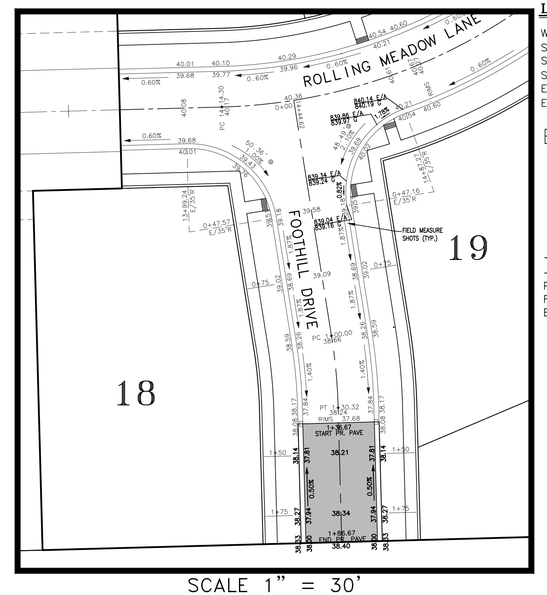
JOB NO. 9525.3.17



SCALE 1" = 30'



SCALE 1" = 30'



SCALE 1" = 30'

LEGEND:

WATERMAIN (EX.)
STORM SEWER (EX.)
SANITARY SEWER (EX.)
SWALE (PROPOSED)
EASEMENT (EXISTING)
EASEMENT (PROPOSED)

BENCHMARKS

1. TOP OF PUMPER NOZZLE ARM OF ROLLING MEADOWS #2 HYDRANT #5 LOCATED AT END OF EX. INGLEWOOD DR. ELEV = 844.99
2. TOP OF PUMPER NOZZLE ARM OF ROLLING MEADOWS #2 HYDRANT #3 LOCATED AT END OF EX. ROLLING MEADOW LN. ELEV = 842.74

NOTE:

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UTILITY CROSSING #1

SANITARY & WATER	
BTM / 12" WTR	833.91
TOP / 8" SAN	828.44
CLEARANCE	5.47'

UTILITY CROSSING #2

SANITARY & STORM	
BTM / 15" STM	831.84
TOP / 8" SAN	828.61
CLEARANCE	3.24'

UTILITY CROSSING #3

STORM & WATER	
TOP / 15" STM	833.24
BTM / 12" WTR	834.49
CLEARANCE	1.25'

UTILITY CROSSING #4

STORM & WATER	
TOP / 12" STM	833.26
BTM / 12" WTR	833.91
CLEARANCE	0.65'

UTILITY CROSSING #5

SANITARY & STORM	
TOP / 8" SAN	829.61
BTM / 12" STM	832.07
CLEARANCE	2.47'

UTILITY CROSSING #6

SANITARY & WATER	
TOP 12" SAN	827.12
BTM / 12" WTR	834.39
CLEARANCE	7.27'

UTILITY CROSSING #7

STORM & WATER	
TOP / 15" STM	829.88
BTM / 12" WTR	831.03
CLEARANCE	1.15'

UTILITY CROSSING #8

SANITARY & STORM	
BTM / 12" STM	831.85
TOP / 12" SAN	827.58
CLEARANCE	4.27'

UTILITY CROSSING #9

STORM & SANITARY	
BTM / 12" STM	830.86
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UTILITY CROSSING #10

STORM & WATER	
BTM / 8" WTR	833.73
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UTILITY CROSSING #11

STORM & WATER	
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TOP / 42" STM	830.27
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UTILITY CROSSING #12

STORM & WATER	
BTM / 12" WTR	835.09
TOP / 12" STM	832.93
CLEARANCE	2.16'

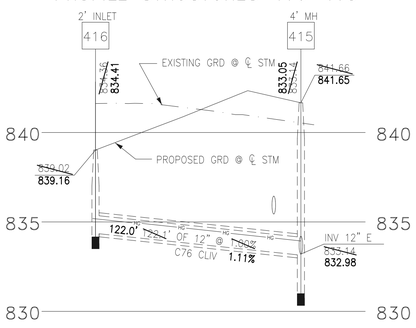
UTILITY CROSSING #13

STORM & WATER	
BTM / 12" WTR	834.02
TOP / 12" STM	832.02
CLEARANCE	2.00'

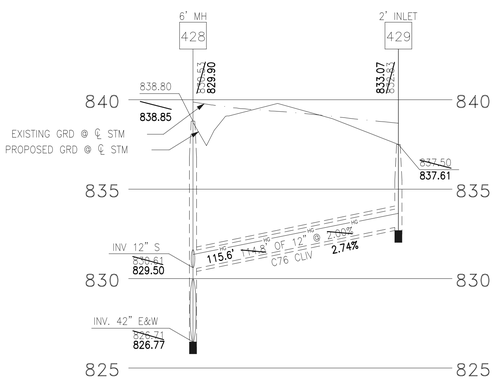
UTILITY CROSSING #14

STORM & SANITARY	
BTM / 12" STM	831.57
TOP / 12" SAN	828.41
CLEARANCE	3.16'

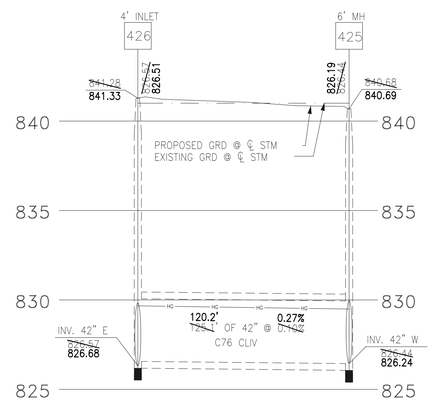
PROFILE STRUCTURES 416–415



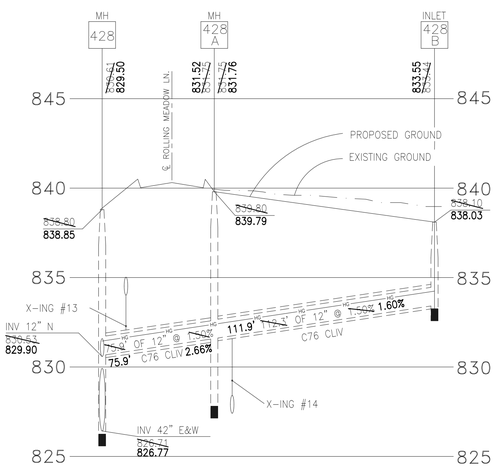
PROFILE STRUCTURES 429–428



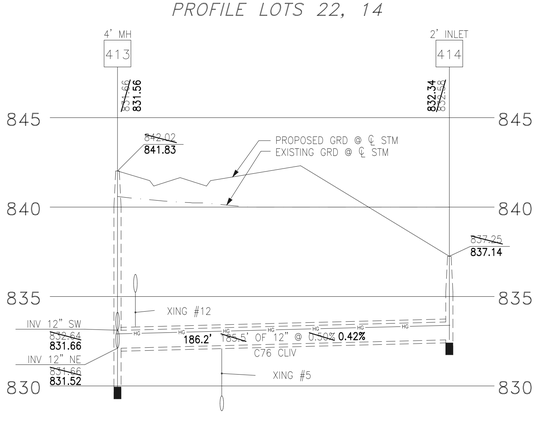
PROFILE STRUCTURES 426–425



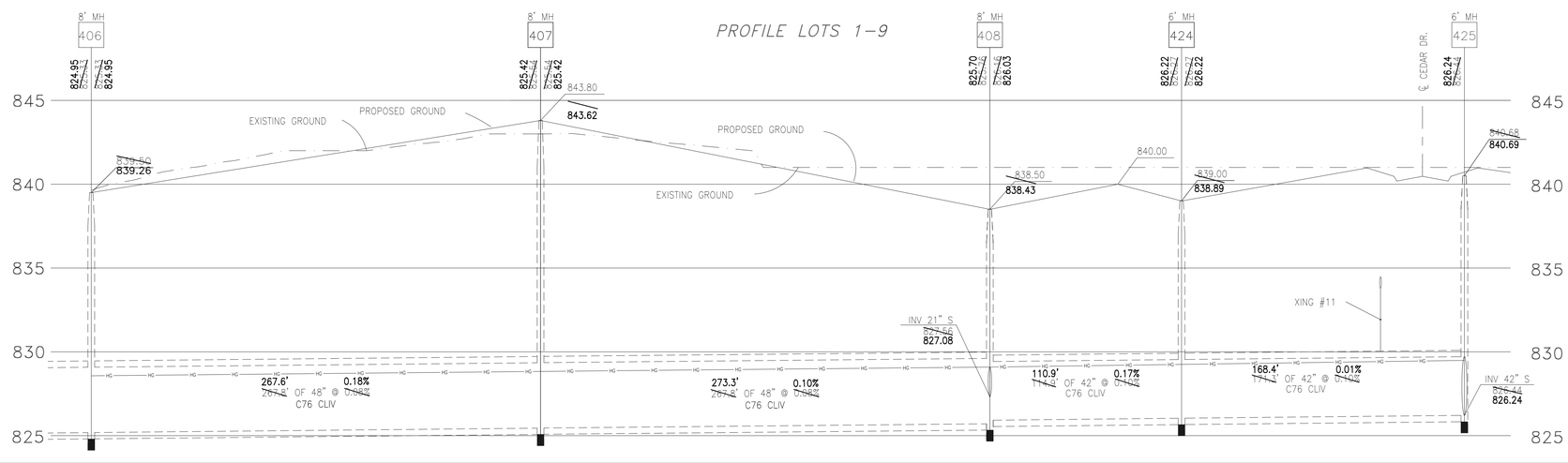
PROFILE MANHOLES 427–427B



PROFILE LOTS 22, 14



PROFILE LOTS 1–9



INTERSECTION DETAILS & MISC. STORM SEWER PROFILES

ARBOR FARMS

A RESIDENTIAL SITE CONDOMINIUM

PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E., PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET 11

ENGINEERS - SURVEYORS
MLP AND ASSOCIATES, INC.
Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
phone: (734) 459-8560
fax: (734) 459-2585

STATUS:

REVISIONS:
05/25/18 PER THE REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW of 6/15/18
07/02/18 PER MEETING WITH ENGINEERING REVIEW LETTER
07/02/18 NO ADDED PER WRWC REVIEW LETTER

JOB NO. 9525.3.17

APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN

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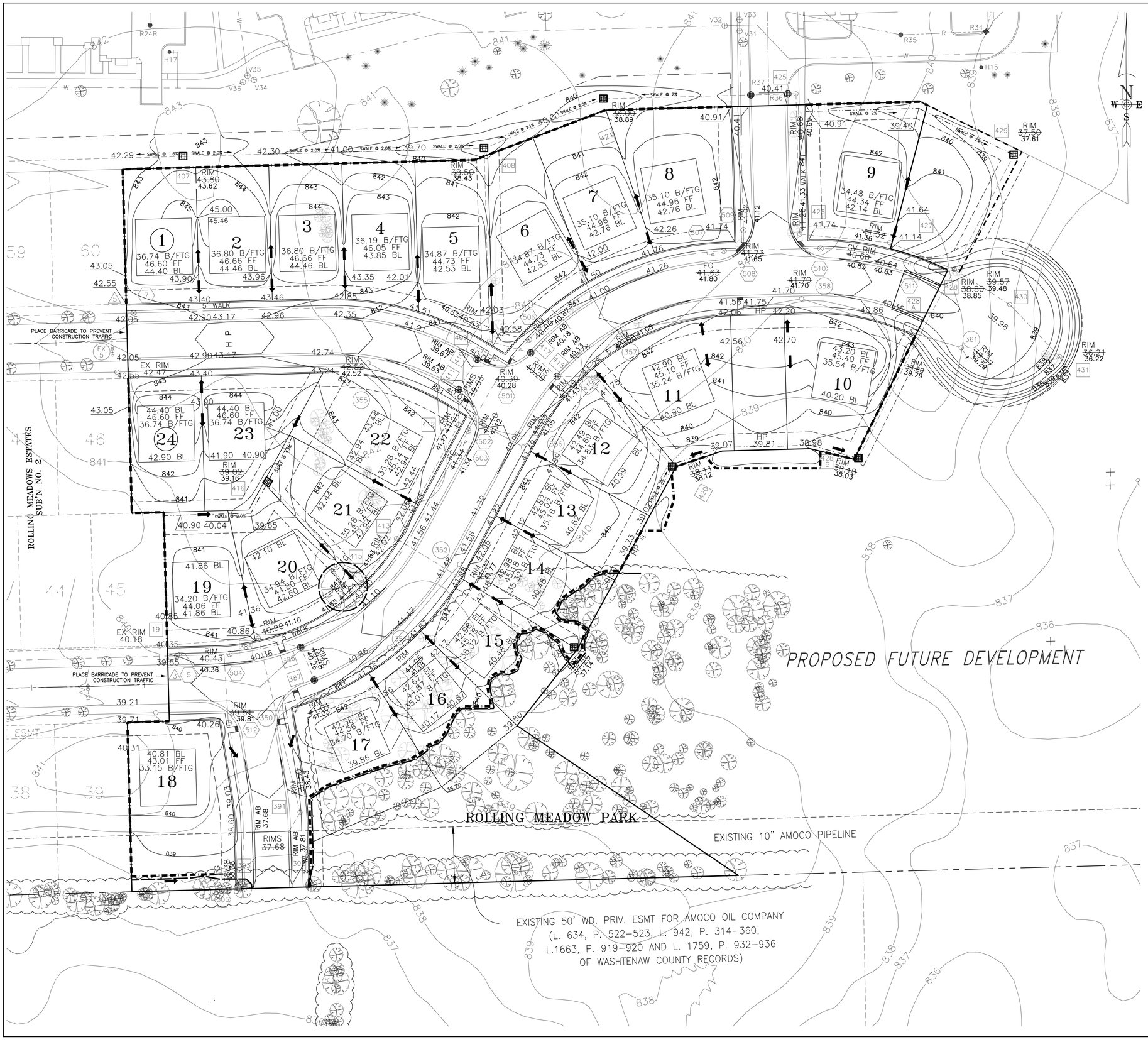
XCAL\MJ.S.C. & S.S.
SCALE: 1" = 30'



LEGEND:

WATERMAIN (EX.)
STORM SEWER (EX.)
SANITARY SEWER (EX.)
SWALE (PROPOSED)
EASEMENT (EXISTING)
EASEMENT (PROPOSED)
ASPHALT (PROPOSED)
GRAVEL (PROPOSED)
SILT FENCE
TREE PROTECTION FENCE
SILT SACK
DRAINAGE ARROW

BL – BRICK LEDGE ELEVATION
BF – BASEMENT FLOOR ELEVATION
FF – FINISH FLOOR ELEVATION

NOTE:

–ALL UTILITIES AND ROADS FOR ARBOR FARMS HAVE BEEN PREVIOUSLY CONSTRUCTED (EXCLUDING THE SOUTH 50' OF FOOTHILL DRIVE AND EAST 32' OF ROLLING MEADOW LANE), EXCEPT FOR 1.5" ROAD WEARING COURSE.

BENCHMARKS (NGVD 29):

1. TOP OF PUMPER NOZZLE ARM OF ROLLING MEADOWS #2 HYDRANT #5 LOCATED AT END OF EX. INGLEWOOD DR. ELEV = 844.99
2. TOP OF PUMPER NOZZLE ARM OF ROLLING MEADOWS #2 HYDRANT #3 LOCATED AT END OF EX. ROLLING MEADOW LN. ELEV = 842.74

TO MATCH ADJACENT PLAN SETS AND UTILITY INFORMATION, ALL ELEVATIONS ARE IN THE NGVD 29 DATUM. SUBTRACT 0.40' TO CONVERT TO NAVD 88 DATUM.

Calculated Soil Loss

The following are calculated soil loss for the construction site.

Site Information:

County:	Washtenaw
Site:	Arbor Farms
Site ID:	001
Soil:	St. Clair (StB)
Slope:	2%
Slope Length:	300 ft.
Mulch Type:	Straw/hay
Mulch Rate:	1.5 (tons/acre)
Acreage:	8.1 acre(s)

Calculated Soil Loss:

Erosion Factors:	R = 100 K = 0.37 LS = 0.43 C = 0.12 P = 1
Tolerable Soil Loss:	T = 3 (tons/acre/year)
Calculated Soil Loss:	A = 1.91 (tons/acre/year)
Potential soil loss (total):	15.46 (tons/year)

START DAY	END DAY
1	2
3	5
6	8
9	12
12	15
16	90

SOIL EROSION CONTROL SEQUENCE OF CONSTRUCTION

1. INSTALL SEDIMENT FENCE AND TREE PROTECTION FENCING PROIR TO GRADING OPERATION.
2. GRADE TEMPORARY CUL DE SAC
3. INSTALL ADDITIONAL STORM SEWER, INCLUDING INLET FILTERS
4. FINISH GRADE, SEED & MULCH ALL DISTURBED AREAS
5. INSTALL PAVEMENT COMPLETE
6. ENSURE ALL SOIL IS STABILIZED. REMOVE ALL TEMPORARY SOIL EROSION CONTOL MEASURES

STREET CLEANING SCHEDULE:

1. ALL ADJACENT STREETS SHALL BE CLEANED WITH SWEEPER ONCE PER WEEK MINIMUM.
2. ALL ADJACENT STREETS SHALL BE SCRAPED AS NEEDED.

SOIL EROSION AND SEDIMENTATION CONTROL NOTES

1. The Contractor shall implement and maintain the soil erosion control measures as shown on the SESC Plans at all times during construction on this project. Any modifications or additions to the soil erosion control measures due to construction or changed conditions, shall be complied with as required or directed by the owner, project engineer, or Pittsfield Charter Township.
2. All soil erosion and sedimentation control work shall conform to the permit requirements of Pittsfield Charter Township and the laws of the State of Michigan.
3. An NPDES Construction Activity Permit is required for all sites greater than five (5) acres.
4. Daily inspections shall be made by the Contractor. Periodic inspections may be made by the Owner/Project Engineer/Township to determine the effectiveness of erosion and sedimentation control measures. Any necessary corrections shall be made without delay by the onsite responsible individual.
5. Erosion and sedimentation from work on the site shall be contained on the site and not be allowed to collect on any off–site areas or in waterways.
6. All mud/dirt tracked onto roads from the site due to construction, shall be promptly removed by the Contractor.
7. Restoration of all disturbed areas, including placement of topsoil, seed, fertilizer and mulch and/or sod shall be completed within five (5) days of the completion of final grade.
8. Construction operations shall be scheduled and performed so that preventative soil erosion control measures are in place prior to excavation in critical areas, and temporary stabilization measures are in place immediately following backfilling operations.
9. Special precautions will be taken in the use of construction equipment to prevent situations that promote erosion.
10. Proper dust control shall be maintained during construction by use of water trucks and/or chloride as required.
11. The Contractor shall be responsible for maintaining all temporary soil erosion control measures and removal of same upon authorized completion of project. Completion of project will not be authorized until all site work, home building, road work, and utility construction is complete and all soils are stabilized.
12. The Contractor shall not grade in existing wetland or conservation areas to be protected. Silt fence shall be installed and maintained adjacent to existing wetland and conservations areas to prevent grading, erosion, and sedimentation into them.
13. Tree protection fencing must remain intact until restoration of the site is complete.
14. a field preconstruction meeting must be held with the SESC Inspector prior to any earth change activity

SEEDING/SOD NOTES

1. Seed or sod in accordance with project specifications.
2. All areas of disturbed earth that are not to be paved or sodded shall have 4 inches of topsoil, seed, fertilizer and mulch.
3. Immediately after seeding, mulch all seeded areas with unweathered small grain straw (preferably wheat) or hay spread. Spread uniformly at the rate of 1–1/2 to 2 tons or 100 pounds (2 to 3 bales) per 1,000 square foot. This mulch should be anchored with a disc–type mulch–anchoring tool.
4. Any disturbed area not paved, seeded or mulched, sodded or built upon on or after November 15th, is to be mulched in the manner as specified above, in order to provide soil erosion protection during the winter and early spring.
5. All erosion and sedimentation control prevention procedures and structures are to comply with the Standards and Specifications for Soil Erosion and Sedimentation Control of the Washtenaw County Soil Conservation District.

SOILS

ON SITE SOIL CONSISTS OF:
70% ST. CLAIR LOAM (StB) @ 2–6% SLOPES &
30% BLOUNT LOAM (BbB) @ 2–6% SLOPES

APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248–921–3996
ATTN: JEFF KATZEN

DATE: 05/17/2018
PM: GMS
PNC: GMS
SURV: AEC
CAD: AGB
\DWG\9525.dwg
VOLUME/U.S.C. & G.S.
SCALE: 1" = 40'

STATUS:
JOB NO. 9525.3.17
REVISIONS:
05/24/18 PER TWP REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/02/18 PER ROLLING MEADOWS ENGINEERING REVIEW LETTER
07/02/18 ADDED PUBL. WORKS REVIEW LETTER

ENGINEERS . SURVEYORS
MLP
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Michael L. Priest & Associates, Inc.
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SITE GRADING & S.E.S.C.

ARBOR FARMS

A RESIDENTIAL SITE CONDOMINIUM

PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E., PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET
12

Volume Required:

1. Determine maximum allowable outflow, Qa, in CFS
   A — Qa
   6.3866 ac X 0.15 cfs/ac (R.M. #3) = 0.958 cfs
   27.04 0.20 cfs/ac (R.M. #1 & # = 5.408 cfs
   6.366
2. Calculate the allowable outflow, Qo = Qa/(acreage)(runoff coefficient)
   Qa A C
   6.366 cfs / 33.4266 ac X 0.44 = 0.435 cfs/ac–imp
3. Calculate time for peak storage, T100
   T100 = –25+(10312.5/Qo)^1/2 = 128.933 min
4. Calculate the maximum storage volume per ac–imp, Vs
   Vs = 16500T/(T+25)–40QoT = 11,576 ft^3/ac–im
5. Calculate the total volume of storage required, Vt
   Vt(100) = (Vs)(#ac)(runoff coefficient) = 169,323 ft^3
6. Calculate the first flush volume
   Vff = 1815*A*C = 26,549 ft^3
7. Calculate the volume required in the Sediment Forebay
   Vsf = 5% of 100 year volume = 8,466 ft^3
8. Calculate the volume of the bankfull flood
   V bf = 8170 A C = = 119,506 ft^3

Detention Pond C Factor Calculation

Provided for in original pond design (by others):

	Area	C	A*C
Rolling Meadows #1 & #2:	18.64	0.35	6.52
Rolling Meadows #3:	3.40	0.35	1.19
Rosewood Village Condominiums:	5.00	0.55	2.75
Ponte Property:	1.70	0.35	0.60
Total:	28.74	0.38	11.06
Without Ponte Property:	27.04	0.39	10.46

Proposed to be provided for in expanded basin:

	Area	C	A*C
Rolling Meadows #3:			
Total area = 8.8224			
3.40 acres already provided for			
Therefore 8.8224 – 3.40 =	5.4224	0.59	3.20
Plus, land acquired for expansion of existing detention pond =	0.9642	1.00	0.96
Total:	6.3866	0.59	4.16
Total:	33.4266	0.44	14.63

Volume Provided:

ELEV	AREA (ft^2)	h (ft)	VOLUME (ft^3)	VOLUME (ft^3)	REMARKS
SEDIMENT FOREBAY					
825.1	4,945			0	
		0.90	5,245		
826.00	6,711			5,245	Permanent Water
		0.45	3,221		
826.45	7,700			8,466	5% of 100 Year Storm
		0.55	4,597		
827.00	8,924			13,063	
		1.00	10,100		
828.00	11,328			23,162	
MAIN DETENTION BASIN					
825.1	69,972			0	Permanent Water
		0.37	26,549		
825.47	72,020			26,549	First Flush
		0.53	38,644		
826.00	74,901			65,193	
		0.71	54,313		
826.71	78,901			119,506	Bankfull Volume
		0.29	23,420		
827.00	80,565			142,926	
		0.32	26,397		
827.32	82,463			169,323	100 Year Volume
		0.68	57,099		
828.00	86,426			226,421	

NOTE:

–ALL UTILITIES AND ROADS FOR ARBOR FARMS HAVE BEEN PREVIOUSLY CONSTRUCTED (EXCLUDING THE SOUTH 50' OF FOOTHILL DRIVE AND EAST 32' OF ROLLING MEADOW LANE), EXCEPT FOR 1.5" ROAD WEARING COURSE.

Outlet Control Structure Calculations:

First Flush of Runoff

Q ff = V / T 24
Q ff = 26549 cf / (24 hr * 3600 sec/hr) = 0.307 cfs

h avg = 2/3 (elev ff – elev bot)
h avg = 2/3 (825.47 – 825.10) = 0.25 ft

A = Qff / 0.62 * (2gh)^1/2
A = 0.307 cfs / 0.62 * (2*32.2*0.25)^1/2 = 0.124 sf

Use 2" diameter holes
A 2" = 0.0218 sf

= 0.124 / 0.0218
5.67 Use 5 2" holes @ 825.10

Detention time:
Q ff new = A ff new (0.62)*(2gh)^1/2
Q ff new = 5*0.0218*0.62*(2*32.2*0.25)^1/2
0.271 cfs

T ff new = V ff / Q ff new
T ff new = 26549 cf / (0.307 cfs*3600sec/hr)
27.2 hr

Bankfull Flood

H avg = 2/3 (elev bf – elev bot)
h avg = 2/3 (826.71 – 825.10) =
1.07 ft

Q bf = A (0.62)*(2gh)^1/2
Q bf = 5*0.0218*0.62*(2*32.2*1.07)^1/2
0.562 cfs

T = V bf / Q

T = 119506 cf / (0.562 cfs)*(3600sec/hr)
59.11 hr

V rem = Vbf – Vff
V rem = 119506–26549
92,957 cf

T rem = T tot – T ff new
T rem = 44 hr – 27.2 hr
16.8 hr

h ff ave = 2/3 (elev bf – elev ff) + (elev ff – elev bot)
h ff ave = 2/3 (826.71 – 825.47) + (825.47 – 825.10)
1.20 ft

Q1 = 0.62 A ff * (2gh)^1/2
Q1 = 0.62 (5*0.0218) * (2*32.2*1.20)^1/2
0.593 cfs

V1 = T rem Q1
V1 = 16.8*(3600sec/hr)*0.593
35,861 cf

V2 = Vrem – V1
57,096

Q2 = V2/Trem
0.945 cfs

H bf avg = 2/3 (elev bf – elev ff)
0.82 ft

A2 = Q2/(0.62(2gh)^1/2)
0.210 sf

= 0.210 / 0.0218
10 holes @ 825.47

100 Year Flood

Q a = 6.37 cfs

Q 100 = Qa–(Qff+Qbf)

Q ff = 0.62 A ff (2gh)^1/2
1.84 cfs

Q bf = 0.62 A bf (2gh)^1/2
1.42 cfs

Q 100 = 6.37 – (1.84 + 1.42
3.11 cfs

h 100 = 827.32 – 826.71
0.62 ft

A 100 = Q100 / 0.62*(2gh)^1
0.796 sf

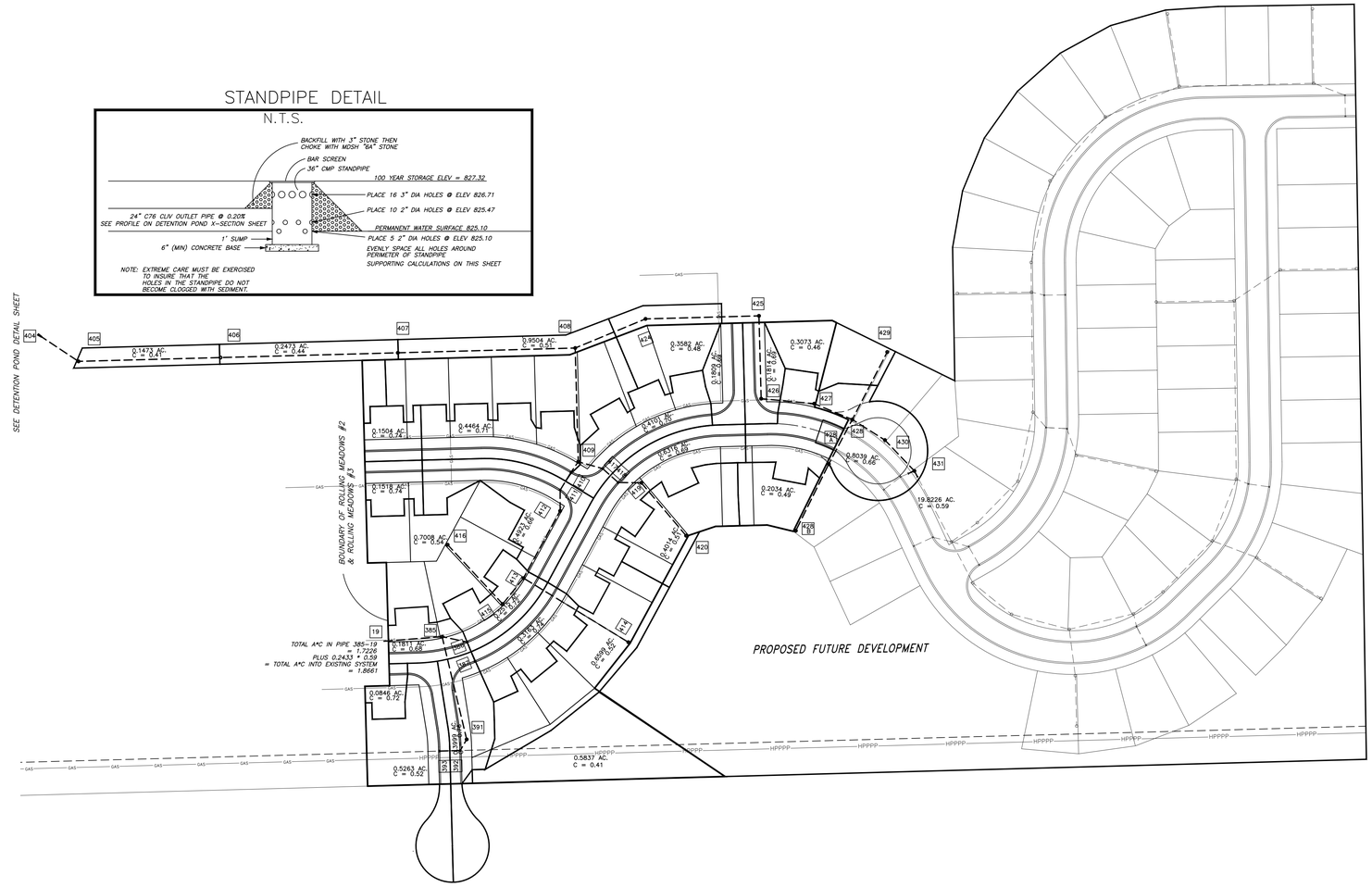
Use 3" diameter holes
A 3" = 0.0491 sf

= 0.796 / 0.0491
16 holes @ 826.71

Q bf = 0.62 A bf (2gh)^1/2
3.07 cfs

STANDPIPE DETAIL

N.T.S.



FROM MH	TO MH	C	AREA Ac	TOTAL AREA	A*C	TOTAL A*C	T min	I in/hr	Q cfs	Q (cap) cfs	PIPE dia	RUN ft	HG SLOPE	FALL in HG	UPST HG ELEV	DWNST HG ELEV	V AVG fps	V (cap) fps	T to DS MH	PIPE SLOPE	UPST INV ELEV	DWNST INV ELEV	UPST RIM	UPST RIM TO INV	UPST CVR	DWNST CVR	RIM TO HG	CROWN OF PIPE	HG TO CROWN
393	392	0.52	0.5263	0.5263	0.2737	0.2737	20.00	3.89	1.06	4.45	12	32.0	0.09%	0.03	833.74	833.34	1.36	5.67	0.39	1.56%	832.94	832.44	837.68	4.74	3.57	4.20	3.94	833.94	-0.20
		0.41	0.5837	PARK	0.2393	PARK																							
392	391	0.76	0.3999	1.5099	0.3039	0.8169	20.39	3.86	3.15	4.06	12	18.5	0.78%	0.14	833.34	833.20	4.01	5.17	0.08	1.30%	832.44	832.20	837.81	5.37	4.20	5.06	4.47	833.44	-0.10
391	385	0.59	0.0000	1.5099	0.0000	0.8169	20.47	3.85	3.14	3.99	15	160.0	0.24%	0.38	833.20	832.59	2.56	3.25	1.04	0.38%	832.20	831.59	838.43	6.23	4.79	8.07	5.23	833.45	-0.25
							21.51																						
387	386	0.74	0.3593	0.3593	0.2659	0.2659	20.00	3.89	1.03	8.38	15	31.5	0.03%	0.01	836.69	836.16	0.84	6.83	0.62	1.68%	835.69	835.16	840.26	4.57	3.13	3.66	3.57	836.94	-0.25
386	385	0.72	0.2515	0.6108	0.1811	0.4470	20.62	3.84	1.71	4.07	12	41.3	0.23%	0.10	833.09	832.55	2.18	5.19	0.32	1.31%	832.29	831.75	840.26	7.97	6.80	8.18	7.17	833.29	-0.20
							20.94																						
385	19	0.59	0.0000	2.1207	0.0000	1.2639	21.51	3.76	4.76	4.02	15	85.4	0.54%	0.46	832.55	832.22	3.88	3.27	0.37	0.39%	831.55	831.22	841.10	9.55	8.11	-832.66	8.55	832.80	-0.25
							21.88																						
		0.59		19.8226		11.6953																							
431	430	0.66	0.7984	20.6210	0.5269	12.2223	31.45	3.10	37.89	30.71	42	64.4	0.14%	0.09	830.04	829.95	3.94	3.19	0.27	0.09%	826.93	826.87	836.22	9.29	5.42	8.74	6.18	830.43	-0.39
430	428	0.59	0.0000	20.6210	0.0000	12.2223	31.72	3.09	37.71	40.08	42	63.0	0.14%	0.09	829.95	829.86	3.92	4.17	0.27	0.16%	826.87	826.77	839.48	12.61	8.74	8.21	9.53	830.37	-0.42
							31.99																						
429	428	0.46	0.3073	0.3073	0.1414	0.1414	20.00	3.89	0.55	5.90	12	115.6	0.02%	0.03	833.87	830.70	0.70	7.51	2.75	2.74%	833.07	829.90	837.61	4.54	3.37	7.78	3.74	834.07	-0.20
							22.75																						
428B	428A	0.49	0.2034	0.2034	0.0997	0.0997	20.00	3.89	0.39	4.51	12	111.9	0.01%	0.01	834.35	832.56	0.49	5.74	3.78	1.60%	833.55	831.76	838.03	4.48	3.31	6.86	3.68	834.55	-0.20
428A	428	0.59	0.0000	0.2034	0.0000	0.0997	23.78	3.59	0.36	5.81	12	75.9	0.01%	0.01	832.32	830.30	0.46	7.40	2.78	2.66%	831.52	829.50	839.79	8.27	7.10	8.18	7.47	832.52	-0.20
							26.56																						
428	427	0.59	0.0000	21.1317	0.0000	12.4633	31.99	3.07	38.27	18.20	42	61.1	0.14%	0.09	829.86	829.77	3.98	1.89	0.26	0.03%	826.77	826.75	838.85	12.08	8.21	10.74	8.99	830.27	-0.41
427	426	0.59	0.0000	21.1317	0.0000	12.4633	32.25	3.06	38.10	29.80	42	79.8	0.14%	0.11	829.77	829.66	3.96	3.10	0.34	0.09%	826.75	826.68	841.36	14.61	10.74	10.78	11.59	830.25	-0.48
426	425	0.59	0.0000	21.1317	0.0000	12.4633	32.58	3.04	37.88	47.68	42	120.2	0.14%	0.17	829.66	829.48	3.94	4.96	0.51	0.22%	826.51	826.24	841.33	14.82	10.95	10.58	11.67	830.01	-0.35
425	424	0.59	0.0000	21.1317	0.0000	12.4633	33.09	3.01	37.55	10.96	42	168.4	0.14%	0.23	829.48	829.25	3.90	1.14	0.72	0.01%	826.24	826.22	840.69	14.45	10.58	8.79	11.21	829.74	-0.26
424	408	0.48	0.3582	21.4899	0.1719	12.6352	33.81	2.98	37.60	41.64	42	110.9	0.14%	0.15	829.25	829.10	3.91	4.33	0.47	0.17%	826.22	826.03	838.89	12.67	8.79	8.52	9.64	829.72	-0.47
							34.28																						
420	419	0.51	0.4014	0.4014	0.2047	0.2047	20.00	3.89	0.80	3.76	12	104.9	0.05%	0.05	833.80	832.63	1.01	4.79	1.72	1.12%	833.00	831.83	838.12	5.12	3.95	8.43	4.32	834.00	-0.20
419	418	0.59	0.0000	0.4014	0.0000	0.2047	21.72	3.75	0.77	2.95	12	35.0	0.05%	0.02	832.63	832.40	0.98	3.76	0.60	0.69%	831.83	831.59	841.43	9.60	8.43	7.37	8.80	832.83	-0.20
418	417	0.69	0.6316	1.0330	0.4358	0.6405	22.32	3.70	2.37	3.56	12	32.1	0.44%	0.14	832.40	832.08	3.02	4.53	0.18	1.00%	831.60	831.28	840.13	8.53	7.36	7.73	7.73	832.60	-0.20
417	409	0.70	0.4101	1.4431	0.2871	0.9276	22.50	3.68	3.42	3.53	15	40.2	0.28%	0.11	829.69	829.58	2.78	2.88	0.24	0.30%	828.28	828.16	840.18	11.90	10.46	10.93	10.49	829.53	0.16
							22.74																						
416	415	0.54	0.7008	0.7008	0.3784	0.3784	20.00	3.89	1.47	3.76	12	122.0	0.17%	0.21	835.21	833.85	1.87	4.79	1.09	1.11%	834.41	833.05	839.16	4.75	3.58	7.43	3.95	835.41	-0.20
415	413	0.00	0.0000	0.7008	0.0000	0.3784	21.09	3.80	1.44	2.78	12	52.7	0.16%	0.09	833.78	833.46	1.83	3.53	0.48	0.61%	832.98	832.66	841.65	8.67	7.50	8.00	7.87	833.98	-0.20
							21.57																						
414	413	0.52	0.6599	0.6599	0.3431	0.3431	20.00	3.89	1.33	2.31	12	186.2	0.14%	0.26	833.14	832.59	1.70	2.94	1.83	0.42%	832.34	831.56	837.14	4.80	3.63	9.10	4.00	833.34	-0.20
							21.83																						
413	412	0.59	0.0000	1.3607	0.0000	0.7216	21.83	3.74	2.70	2.16	12	114.3	0.57%	0.65	832.59	831.94	3.43	2.75	0.55	0.37%	831.52	831.10	841.83	10.31	9.14	8.90	9.24	832.52	0.07
412	411	0.59	0.0000	1.3607	0.0000	0.7216	22.38	3.69	2.67	3.70	12	31.5	0.56%	0.18	831.94	831.76	3.39	4.71	0.15	1.08%	831.10	830.76	841.17	10.07	8.90	7.70	9.23	832.10	-0.16
411	410	0.66	0.4923	1.8530	0.3249	1.0465	22.54	3.68	3.85	1.99	15	31.5	0.36%	0.11	831.76	831.73	3.14	1.62	0.17	1.10%	830.76	830.73	839.63	8.87	7.43	7.50	7.87	832.01	-0.25
410	409	0.71	0.4464	2.2994	0.3169	1.3634	22.70	3.67	5.00	7.92	15	19.3	0.60%	0.12	831.63	831.34	4.08	6.45	0.08	1.50%	830.63	830.34	839.67	9.04	7.60	8.75	8.04	831.88	-0.25
							22.78																						
409	408	0.59	0.0000	3.7425	0.0000	2.2910	22.78	3.66	8.39	10.06	21	173.6	0.28%	0.49	829.58	829.10	3.49	4.18	0.83	0.40%	827.78	827.08	840.53	12.75	10.77	9.37	10.95	829.53	0.05
							23.61																						
408	407	0.51	0.9504	26.1828	0.4847	15.4110	34.28	2.95	45.49	45.98	48	273.3	0.10%	0.27	829.10	828.82	3.62	3.66	1.26	0.10%	825.70	825.42	838.43	12.73	8.31	13.78	9.33	829.70	-0.60
407	406	0.59	0.0000	26.1828	0.0000	15.4110	35.54	2.89	44.55	60.20	48	267.6	0.10%	0.26	828.82	828.56	3.54	4.79	1.26	0.18%	825.42	824.95	843.62	18.20	13.78	9.93	14.80	829.42	-0.60
406	405	0.44	0.2473	26.4301	0.1088	15.5198	36.80	2.83	43.95	31.35	48	210.0	0.09%	0.20	828.56	828.37	3.50	2.49	1.00	0.05%	824.95	824.85	839.30	14.35	9.93	6.38	10.74	828.95	-0.39
405	404	0.41	0.1473	26.5774	0.0604	15.5802	37.80	2.79	43.42	37.44	48	73.6	0.09%	0.07	828.37	828.00	3.45	2.98	0.36	0.07%	824.85	824.80	835.65	10.80	6.38	na	7.28	828.85	-0.48
							38.16				48				828.30						825.10								

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AND ASSOCIATES, INC.
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APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248–921–3996
ATTN: JEFF KATZEN

DATE: 05/17/2018
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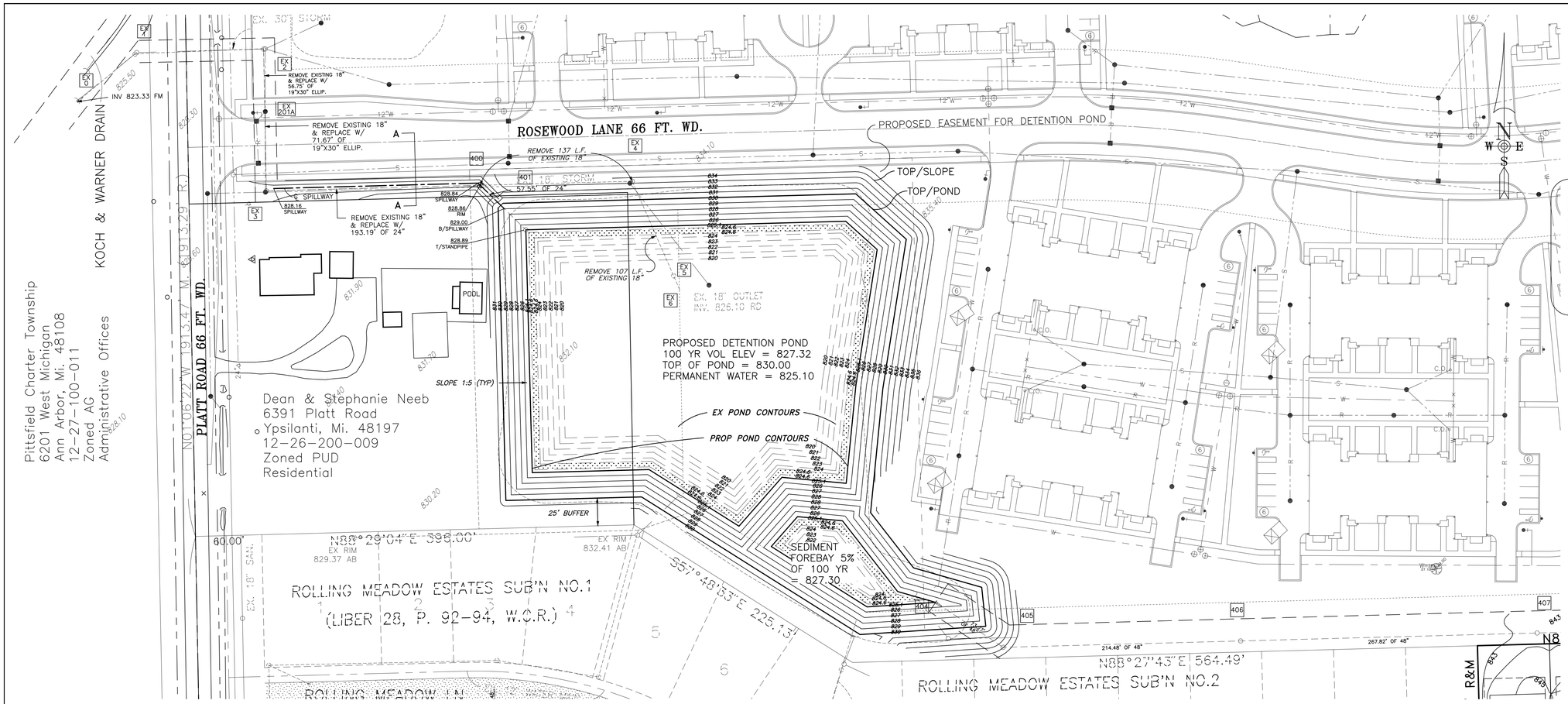
05/24/18 PER TWP REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/02/18 PER ROSS, PRIEST & ASSOCIATES ENGINEERING REVIEW LETTER
07/02/18 ADDED PUBLIC WATER, PER TWP REVIEW LETTER

DRAINAGE MAP, STORM SEWER & DETENTION CALCULATIONS

ARBOR FARMS

A RESIDENTIAL SITE CONDOMINIUM
PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E.,
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET
13

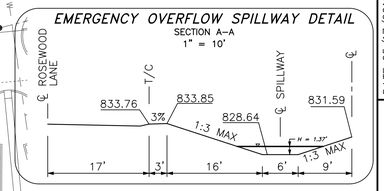


LEGEND:

- WATERMAIN (EX.)
- STORM SEWER (EX.)
- SANITARY SEWER (EX.)
- SWALE (PROPOSED)
- EASEMENT (EXISTING)
- EASEMENT (PROPOSED)
- ASPHALT (PROPOSED)
- GRAVEL (PROPOSED)

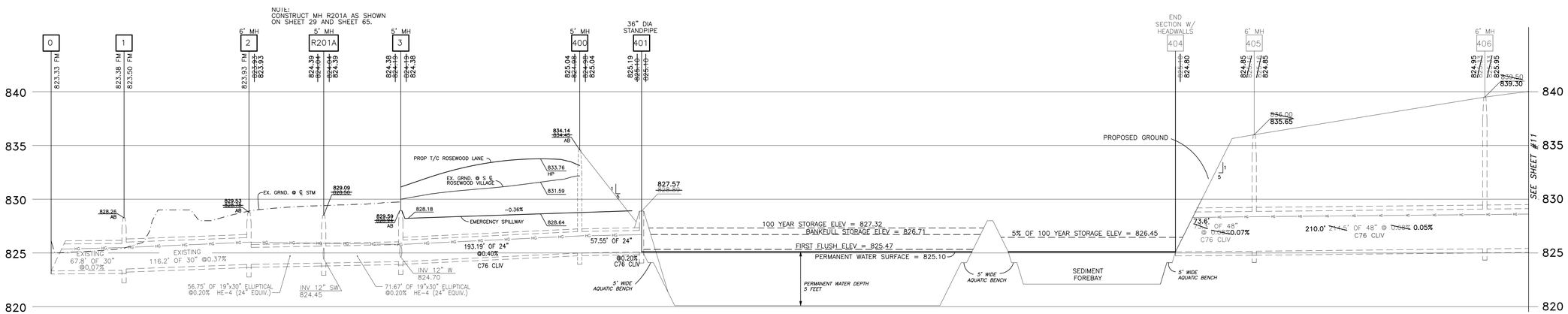
EMERGENCY OVERFLOW SPILLWAY DETAIL

SECTION A-A
1" = 10'



NOTE:

-ALL UTILITIES AND ROADS FOR ARBOR FARMS HAVE BEEN PREVIOUSLY CONSTRUCTED (EXCLUDING THE SOUTH 50' OF FOOTHILL DRIVE AND EAST 32' OF ROLLING MEADOW LANE), EXCEPT FOR 1.5" ROAD WEARING COURSE.



DETENTION POND CALCULATIONS

SOILS

ON SITE SOIL CONSISTS OF APPROXIMATELY 70% ST. CLAIR LOAM@ < 4% SLOPES % APPROXIMATELY 30% BLOUNT LOAM @ < 4% SLOPES

Detention Pond C Factor Calculation
Provided for in original pond design (by others):

	Area	C	A*C
Rolling Meadows #1 & #2:	18.64	0.35	6.52
Rolling Meadows #3:	3.40	0.35	1.19
Rosewood Village Condominiums:	5.00	0.55	2.75
Ponte Property:	1.70	0.35	0.60
Total:	28.74	0.38	11.06
Without Ponte Property:	27.04	0.39	10.46

Proposed to be provided for in expanded basin:

	Area	C	A*C
Rolling Meadows #3: Total area = 28.6618 3.40 acres already provided for Therefore 28.6618 – 3.40 =	25.2618	0.59	14.90
Plus, land acquired for expansion of existing detention pond =	0.9642	1.00	0.96
Total:	26.2260	0.59	15.87
Total:	53.2660	0.49	26.33

Volume Required:

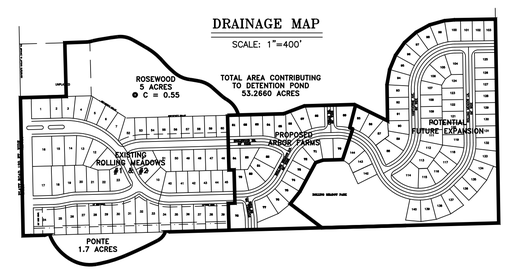
1. Determine maximum allowable outflow, Qa, in CFS
   A — 0.15 cfs/ac (R.M. #3 & #4) — Qa = 3.934 cfs
   26.2260 ac X — 0.20 cfs/ac (R.M. #1 & #2) = 5.408 cfs
   27.04 — 9.342
2. Calculate the allowable outflow, Qa = Qa/(acreage)(runoff coefficient)
   Qa — A — C
   9.342 cfs / — 53.2660 ac X — 0.49 = 0.355 cfs/ac–imp
3. Calculate time for peak storage, T100
   T100 = –25+(10312.5/Qa)^1/2 = 145.495 min
4. Calculate the maximum storage volume per ac–imp, Vs
   Vs = 16500T/(T+25)–400oT = 12,016 ft^3/ac–imp
5. Calculate the total volume of storage required, Vt
   Vt(100) = (Vs)(#ac)(runoff coefficient) = 316,411 ft^3
6. Calculate the first flush volume
   Vff = 1815*A*C = 47,794 ft^3
7. Calculate the volume required in the Sediment Forebay
   Vsf = 5% of 100 year volume = 15,821 ft^3
8. Calculate the volume of the bankfull flood
   V bf = 8170 A C = 215,138 ft^3

Volume Provided:

ELEV	AREA (ft^2)	h (ft)	(ft^3)	VOLUME (ft^3)	VOLUME REMARKS
SEDIMENT FOREBAY					
825.1	4,945				0
		0.90		5,245	5,245 Permanent Water
826.00	6,711			7,818	13,063
		1.00			
827.00	8,924			2,759	15,821 5% of 100 Year Storm
		0.30			
827.30	9,640			7,341	23,162
		0.70			
828.00	11,328				
MAIN DETENTION BASIN					
825.1	69,972				0 Permanent Water
		0.67		47,794	47,794 First Flush
825.77	73,618				
		0.23		17,399	65,193
826.00	74,901				
		1.00		77,733	142,926
827.00	80,565				
		0.87		72,212	215,138 Bankfull Volume
827.87	85,657				
		0.13		11,284	226,421
828.00	86,426				
		0.00		0	226,421
828.00	98,421				
		0.88		89,990	316,411 100 Year Volume
828.89	104,946				
		0.12		12,118	328,529
829.00	105,794				

DRAINAGE MAP

SCALE: 1"=400'



APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN

DATE: 05/17/2018
PM: GMS
DRAWN: GMS
SURV: AEC
CAD: AGB
\DWG\9525.dwg
XCAL\M\D.S.C. & S.S.
SCALE: 1" = 50'

STATUS:
REVISIONS:
05/07/18 PER TWP REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/02/18 PER TWP ENGINEERING REVIEW LETTER
07/02/18 NO ADD'L PUB. HEARING REVIEW LETTER

JOB NO. 9525.3.17

ENGINEERS, SURVEYORS AND ASSOCIATES, INC.
MLP
Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
phone: (734) 459-8560
fax: (734) 459-2585

DETENTION POND CROSS SECTION & STORM SEWER PROFILES

ARBOR FARMS

A RESIDENTIAL SITE CONDOMINIUM
PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E., PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET
14

STORM SEWER

FROM MH	PIPE. dia	DIR	RIM	INVERT ELEV	TYPE OF STR.	STR. DIA.	SUMP DEPTH	COVER TYPE	DEPTH OF STRUCT.
431	42	W	836.21	826.84	STD MH	6	NA	EJIW 1040 B	9.37
431	42	SE	836.21	828.64					
431	12	SW	836.21	832.00					
430	42	W	839.57	826.77	STD MH	6	NA	EJIW 1040 B	12.80
430	42	E	839.57	826.77					
429	12	S	837.50	832.83	STD INLET	2	NA	EJIW 7045	4.67
428	42	W	838.80	826.71	STD MH	6	NA	EJIW 1040 B	12.09
428	42	E	838.80	826.71					
428	12	N	838.80	830.53					
428	12	S	838.80	830.61					
428B	12	N	838.10	833.44	STD INLET	2	NA	EJIW 7045	4.66
428A	12	S	839.80	831.75	STD MH	4	2	EJIW 1040 B	10.05
428A	12	N	839.80	831.75					
427	42	W	841.32	826.65	STD MH	6	NA	EJIW 1040 B	14.67
427	42	E	841.32	826.65					
426	42	N	841.28	826.57	STD MH	6	NA	EJIW 1040 B	14.71
426	42	E	841.28	826.57					
425	42	W	840.68	826.44	STD MH	6	NA	EJIW 1040 B	14.24
425	42	S	840.68	826.44					
424	42	W	839.00	826.27	STD CB	6	NA	EJIW 1040 w/ TYPE 02 BEEHIVE GRATE	12.73
424	42	W	839.00	826.27					
420	12	NW	838.11	833.21	STD INLET	2	NA	EJIW 1040 w/ TYPE 02 BEEHIVE GRATE	4.90
419	12	SE	841.49	832.10	STD MH	4	2	EJIW 1040 B	11.39
419	12	SW	841.49	832.10					
418	12	NW	840.29	831.79	STD CB	4	2	EJIW 7045	10.50
418	12	SE	840.29	831.79					
417	12	SE	840.29	831.48	STD CB	4	2	EJIW 7045	13.82
417	15	W	840.29	828.47					
416	12	SE	839.02	834.36	STD INLET	2	NA	EJIW 1040 w/ TYPE 02 BEEHIVE GRATE	4.66
415	12	NW	841.66	833.14	STD MH	4	2	EJIW 1040 B	10.52
415	12	NE	841.66	833.14					
414	12	NW	837.25	832.58	STD INLET	2	NA	EJIW 1040 w/ TYPE 02 BEEHIVE GRATE	4.67
413	12	NE	842.02	832.64	STD MH	4	2	EJIW 1040 B	12.36
413	12	SE	842.02	831.66					
413	12	SW	842.02	831.66					
412	12	N	841.21	831.08	STD MH	4	2	EJIW 1040 B	12.13
412	12	SW	841.21	831.08					
411	15	NE	839.63	830.72	STD CB	4	2	EJIW 7045	10.91
411	12	S	839.63	830.92					
410	15	SW	839.63	830.56	STD CB	4	2	EJIW 7045	11.07
410	15	NE	839.63	830.56					
409	15	SW	840.53	830.47	STD MH	5	2	EJIW 1040 B	14.59
409	15	E	840.53	828.34					
409	21	N	840.53	827.94					
408	48	W	838.50	825.76	STD CB	6	NA	EJIW 1040 w/ TYPE 02 BEEHIVE GRATE	12.74
408	42	E	838.50	826.16					
408	21	S	838.50	827.56					
407	48	W	843.80	825.54	STD CB	6	NA	EJIW 1040 w/ TYPE 02 BEEHIVE GRATE	18.26
407	48	E	843.80	825.54					
406	48	W	839.50	825.33	STD CB	6	NA	EJIW 1040 w/ TYPE 02 BEEHIVE GRATE	14.17
406	48	E	839.50	825.33					
405	48	W	836.00	825.16	STD CB	6	NA	EJIW 1040 w/ TYPE 02 BEEHIVE GRATE	10.84
405	48	E	836.00	825.16					
404	48	W	NA	825.10	END SEC	NA	NA		
401	24	NW	828.89	825.10	STANDPIPE	3	NA		3.79
400	24	SE	834.45	824.98	STD MH	5	NA	EJIW 1040 B	9.47
	24	W	834.45	824.98					
3	24	E	828.94	824.19	STD MH	5	NA	EJIW 1040 B	4.75
	24	N	828.94	824.19					
2	24	S	828.78	823.93	STD MH	6	NA	EJIW 1040 B	4.85
	30	W	828.78	823.93					
393	12	E	837.68	833.14	STD INLET	2	NA	EJIW 7045	4.54
392	12	N	837.68	832.64	STD CB	4	2	EJIW 7045	7.04
392	12	W	837.68	832.64					
391	15	N	838.50	832.35	STD MH	4	2	EJIW 1040 B	8.15
391	12	S	838.50	832.55					
387	12	N	840.28	835.61	STD INLET	2	NA	EJIW 7045	4.67
386	12	W	840.28	832.18	STD CB	4	2	EJIW 7045	10.10
386	12	S	840.28	835.11					
385	15	W	840.90	831.81	STD MH	4	2	EJIW 1040 B	11.09
385	12	SE	840.90	832.01					
385	15	S	840.90	831.81					

FROM MH	PIPE. dia	DIR	RIM	INVERT ELEV	TYPE OF STR.	STR. DIA.	SUMP DEPTH	COVER TYPE	DEPTH OF STRUCT.
SANITARY SEWER									
361	12	E	839.06	827.58	STD MH	4		EJIW 1040 C	11.58
		W		827.48					
358	12	E	841.71	827.16	STD MH	4		EJIW 1040 C	14.65
358	12	W		827.06					
357	12	SW	841.07	826.61	STD MH	4		EJIW 1040 C	14.46
357	12	E		826.71					
357	6	N		827.60					
356	12	NW	841.23	826.22	STD MH	4		EJIW 1040 C	15.01
356	12	NE		826.32					
356	6	S		827.22					
355	12	W	841.91	825.78	STD MH	4		EJIW 1040 C	16.13
355	12	SE		825.88					
352	8	SW	841.77	828.90	STD MH	4		EJIW 1040 C	12.87
352	6	E		829.90					
351	8	SW	841.28	828.43	STD MH	4		EJIW 1040 C	12.85
351	8	NE		828.53					
351	6	SE		829.43					
350	8	W	841.01	827.94	STD MH	4		EJIW 1040 C	13.07
350	8	NE		828.04					

Water Main Lead Schedule
Water Service Schedule

Lot #	Dia.	Length	Shutoff FG
1	1"	22	843.30
2	1"	22	843.65
3	1"	22	843.20
4	1"	22	842.83
5	1"	22	841.94
6	1"	23	841.37
7	1"	23	841.70
8	1"	22	842.00
9	1"	22	842.14
10	1"	73	842.15
11	1"	73	841.70
12	1"	72	841.38
13	1"	72	842.17
14	1"	72	842.14
15	1"	72	841.77
16	1"	72	841.42
17	1"	72	841.17
18	1"	20	840.06
19	1"	22	840.53
20	1"	22	841.31
21	1"	22	842.00
22	1"	74	842.65
23	1"	72	843.50
24	1"	72	842.86

Sanitary Sewer Lead Schedule

Lot #	Inv. of Main @ Lead	Dia.	Inv. of Lead @ Main	Riser (Ft.)	Length (L.F.)	Slope	Inv. @ End Lead
1	825.39	6"	826.39	6	73.8	2.00%	833.75
2	825.53	6"	826.53	6	73.1	2.00%	833.87
3	825.68	6"	826.68	6	72.5	2.00%	834.01
4	825.78	6"	826.78	5	68.6	2.00%	833.05
5	825.98	6"	826.98	3	79.6	2.00%	831.51
6	826.60	6"	827.60	3	71.8	2.00%	831.98
7	826.60	6"	827.60	3	72.0	2.00%	831.98
8	826.87	6"	827.87	2	78.3	2.00%	831.40
9	827.21	6"	828.21	2	75.6	2.00%	831.68
10	827.25	6"	828.25	4	17.0	2.00%	832.51
11	826.76	6"	827.76	4	20.3	2.00%	832.09
12	826.40	6"	827.40	4	15.2	2.00%	831.62
13	826.22	6"	827.22	4	42.8	2.00%	832.00
14	828.90	6"	829.90	2	26.9	2.00%	832.40
15	828.72	6"	829.72	2	26.6	2.00%	832.21
16	828.43	6"	829.43	2	22.5	2.00%	831.84
17	828.17	6"	829.17	2	18.4	2.00%	831.50
18	827.51	6"	828.51	NO	21.9	2.00%	828.95
19	827.65	6"	828.65	NO	75.3	2.00%	830.16
20	828.26	6"	829.26	NO	71.9	2.00%	830.70
21	828.79	6"	829.79	NO	68.5	2.00%	831.16
22	825.94	6"	826.94	5	18.4	2.00%	832.21
23	825.58	6"	826.58	7	21.1	2.00%	833.86
24	825.39	6"	826.39	7	20.2	2.00%	833.65
25	827.36	6"	828.36	2	79.4	2.00%	831.91
26	827.47	6"	828.47	2	69.4	2.00%	831.82

SANITARY BASIS OF DESIGN

24 lots * 3.5 cap/lot = 112.0 cap

Qavg = 112 cap * {(100 gal) * (day) * (hr) * (min) * (1 cf)} / {(cap-day)*(24 hrs)*(60 min)*(60 sec)*(7.48 gal)} = 0.017 cfs = 8 GPM

COMPUTE PEAKING FACTOR C:

C = (18+(0.1120)^.5) / (4 + (0.1120)^.5) = 4.23

Qmax = Qavg * C (peaking factor)

Qmax = 0.0173 cfs * 4.23 = 0.073 cfs = 33 GPM

USE 12 inch diameter pipe

SLOPE, s = 0.0022 ft/ft

n = 0.0130

Qprovided = V * A

Qprovided = {(1.486/n) * R^(2/3) * s^(1/2)} * {pi * (D^2)/4}

= 1.67 cfs = 750 GPM

V = 2.13 fps

STRUCTURE SCHEDULES &
LEAD SCHEDULES

ARBOR FARMS
A RESIDENTIAL SITE CONDOMINIUM
PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E.,
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

ENGINEERS, SURVEYORS
MLP
AND ASSOCIATES, INC.
Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
phone: (734) 459-8560
fax: (734) 459-2585

STATUS:

REVISIONS:
05/08/18 PER THE REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/02/18 PER THE REVISED PER ENGINEERING REVIEW LETTER
07/31/18 ADDED PER TWP. ENGINEERING REVIEW LETTER

JOB NO. 9525.3.17

DATE: 05/17/2018
PM: GMS
ENG: GMS
SURV: AEC
CAD: AGB
\DWG\9525.dwg
X:\ATLAS\S.C. & S.S.
SCALE: 1" = N/A

APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN

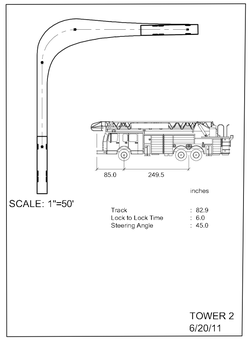
SHEET
15

LEGEND:

WATERMAIN (EX.)

300' RADIUS HYDRANT COVERAGE

BUILDING HEIGHT: 2 STORIES / 32 FEET



APPLICANT

PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN

DATE: 05/17/2018
PM: GMS
ENG: DWS
SURV: AEC
CAD: AGB
\DWG\9525.dwg
XCALIBUR/S.C. & S.S.
SCALE: 1" = 50'

STATUS:

REVISIONS:
05/08/18 PER THE REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/12/18 PER THE REVISED ENGINEERING REVIEW LETTER
07/02/18 REVISED PER WWRC REVIEW LETTER

JOB NO. 9525.3.17

ENGINEERS . SURVEYORS
MLP
AND ASSOCIATES, INC.

Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
phone: (734) 459-8560
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FIRE PROTECTION PLAN

ARBOR FARMS

A RESIDENTIAL SITE CONDOMINIUM

PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E.,
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET
16

NOTES:
EXCAVATED SOILS FROM BASEMENTS AND OTHER NECESSARY GRADING SHALL NOT BE TEMPORARILY OR PERMANENTLY DISPOSED OF IN A WOODLAND OR AROUND HERITAGE TREES TO BE RETAINED.

MINIMIZE GRADING/SOIL DISTURBANCE IN THE VICINITY, AND AT A MINIMUM WITHIN THE CRZ (CRITIVAL ROOT ZONE), OF RETAINED TREES)

NATURAL FEATURES
THE WOODLAND IS CHARACTERIZED BY THE DOMINANCE OF HICKORY IN THE OVERSTORY WITH BOTH SHAGBARK HICKORY AND BITTERNUT HICKORY RANGING IN SIZE FROM SIX INCHES TO THIRTY SIX INCHES (6"–36"). SEVERAL LARGE RED OAK TREES ALSO CONTRIBUTE TO THE OVERSTORY. OTHER SMALLER TREES INCLUDE BOX ELDER, WHITE OAK, BUR OAK, RED OAK, AMERICAN ELM, BLACK CHERRY, AND RED MAPLE. THE UNDERSTORY CONSISTS OF HICKORY, RED OAK, AND AMERICAN ELM WITH MANY HICKORY SAPLINGS. THE SHRUB LAYER IS SPORADIC WITH A DOMINANCE OF BLOCKTHORN. THE GROUND LAYER INCLUDES WOODBINE AND POISON IVY WITH SOME WOODLAND WILDFLOWERS OF MAYAPPLE, SOLOMON'S SEAL, CREEPING STRAWBERRYBUSH, AND JACK-IN-THE-PULPIT. THE GROUND LAYER COVERS APPROXIMATELY FIFTY PERCENT (50%) OF THE THE WOODLAND FLOOR.

PROTECTION OF WOODLAND AND HERITAGE TREES WILL INCLUDE TREE PROTECTION FENCING. IN ADDITION, THE LOT GRADING AT THE REAR OF LOTS 14–17 HAS BEEN REVISED TO MAXIMIZE THE AVOIDANCE OF THE WOODLAND AREA AS MUCH AS POSSIBLE, WHILE STILL ATTEMPTING TO ACHIEVE THE APPLICANT'S DEVELOPMENT GOALS..

LEGEND:

WOODLANDS

TREE TO REMAIN

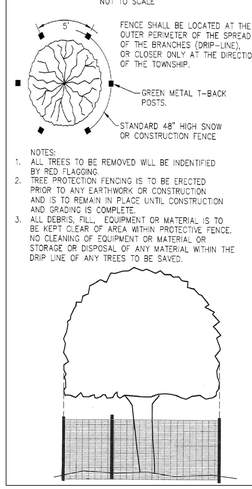
TREE TO REMOVE

HERITAGE TREE

HERITAGE TREE TO REMOVE

TREE PROTECTION FENCING

TREE PROTECTION FENCE DETAIL
NOT TO SCALE



NOTES:
1. ALL TREES TO BE REMOVED WILL BE INDENTIFIED BY RED FLAGGING.
2. TREE PROTECTION FENCING IS TO BE ERECTED PRIOR TO ANY EARTHWORK OR CONSTRUCTION AND IS TO REMAIN IN PLACE UNTIL CONSTRUCTION AND GRADING IS COMPLETE.
3. ALL DEBRIS, FILL, EQUIPMENT OR MATERIAL IS TO BE KEPT CLEAR OF AREA WITHIN PROTECTIVE FENCE. NO CLEANING OF EQUIPMENT OR MATERIAL OR STORAGE OR DISPOSAL OF ANY MATERIAL WITHIN THE DRIP LINE OF ANY TREES TO BE SAVED.

TREE / NATURAL FEATURES PLAN

ARBOR FARMS
A RESIDENTIAL SITE CONDOMINIUM
PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E.,
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

ENGINEERS . SURVEYORS
MLP
AND ASSOCIATES, INC.
Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
phone: (734) 459-8560
fax: (734) 459-2585

STATUS:
REVISIONS:
05/17/18 PER THE REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/02/18 PER PITTSFIELD TWP. ENGINEERING REVIEW LETTER
07/02/18 NO ADD'L PER WRWC REVIEW LETTER

JOB NO. 9525.3.17

DATE: 05/17/2018
PM: GMS
ENG: GMS
SURV: AEC
CAD: ADB
\DWG\9525.dwg
XCAL\MJS.C. & S.S.
SCALE: 1" = 50'

APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN

SHEET
17

ID	DBH	Condition	Common Name	Botanical Name	Remove?	Heritage?	Woodland?	If Removed, Within Building/Street /Driveway?	MITIGATE?	Mitigation Inches
10100	12	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N		N	
10101	10	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N		N	
10102	11	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N		N	
10103	13	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N		N	
10104	9	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N		N	
10105	8	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N		N	
10106	10	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N		N	
10107	10	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N		N	
10108	16	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N		N	
10109	7	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N		N	
10110	7	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N		N	
10111	6	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N		N	
10112	6	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N		N	
10113	12	Very Poor	SHAGBARK HICKORY	CARYA OVATA	REMOVE		N		N	
10114	7	Poor	BLACK CHERRY	PRUNUS SEROTINA	REMOVE		N		N	
10115	8	Fair	ELM	ULMUS	REMOVE		N		N	
10116	9	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		N		N	
10117	10	Undesireable	BOX ELDER	ACER NEGUNDO	REMOVE		N		N	
10118	8	Poor	SHAGBARK HICKORY	CARYA OVATA	REMOVE		N		N	
10119	9	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		N		N	
10120	7	Poor	SHAGBARK HICKORY	CARYA OVATA	REMOVE		N		N	
10121	9	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		N		N	
10122	7	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		N		N	
10123	15	Fair	BLACK CHERRY	PRUNUS SEROTINA	REMOVE		N		N	
10124	8	Poor	BLACK CHERRY	PRUNUS SEROTINA	REMOVE		N		N	
10125	12	Poor	BLACK CHERRY	PRUNUS SEROTINA	REMOVE		N		N	
10126	12	Fair	PIGNUT HICKORY	CARYA GLABRA	REMOVE		N		N	
10127	6	Dead	BLACK CHERRY	PRUNUS SEROTINA	REMOVE		N		N	
10128	8	Fair	BLACK CHERRY	PRUNUS SEROTINA	REMOVE		N		N	
10129	7	Poor	BLACK CHERRY	PRUNUS SEROTINA	REMOVE		N		N	
10130	10	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		N		N	
10131	9	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		N		N	
10132	10	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		N		N	
10133	8	Poor	SHAGBARK HICKORY	CARYA OVATA	REMOVE		N		N	
10134	7	Fair	RED OAK	QUERCUS RUBRA	REMOVE		N		N	
10135	7	Poor	RED OAK	QUERCUS RUBRA	REMOVE		N		N	
10136	8	Poor	RED OAK	QUERCUS RUBRA	REMOVE		N		N	
10137	6	Poor	ELM	ULMUS	REMOVE		N		N	
10138	13	Very Poor	BITTERNUT HICKORY	CARYA CORDIFORMIS	REMOVE		N		N	
10139	15	Very Poor	BITTERNUT HICKORY	CARYA CORDIFORMIS	REMOVE		N		N	
10140	23	Very Poor	BITTERNUT HICKORY	CARYA CORDIFORMIS	REMOVE	Y	N		N	
10141	6	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N		N	
10142	8	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N		N	
10143	38	Fair	RED OAK	QUERCUS RUBRA		Y	N			
10144	18	Fair	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
10145	8	Poor	BLACK CHERRY	PRUNUS SEROTINA			Y			
10146	7	Poor	RED OAK	QUERCUS RUBRA			Y			
10147	7	Fair	RED OAK	QUERCUS RUBRA			Y			
10148	23	Fair	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
10149	23	Very Poor	PIGNUT HICKORY	CARYA GLABRA		Y	Y			
10150	10	Poor	ELM	ULMUS			Y			
10151	15	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
10152	7	Fair	BURR OAK	QUERCUS MACROCARPA	REMOVE		Y	N	Y	7
10153	9	Poor	ELM	ULMUS	REMOVE		Y	Y	N	
10154	8	Poor	ELM	ULMUS	REMOVE		Y	Y	N	
10155	14	Fair	PIGNUT HICKORY	CARYA GLABRA	REMOVE		Y	Y	N	
10156	8	Poor	BLACK CHERRY	PRUNUS SEROTINA	REMOVE		Y	Y	N	
10157	9	Very Poor	BLACK CHERRY	PRUNUS SEROTINA	REMOVE		Y	Y	N	
10158	7	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS	REMOVE		Y	Y	N	
10181	11	Dead	DEAD	N/A			Y	N		
10182	9	Dead	DEAD	N/A			Y	N		
10183	12	Dead	DEAD	N/A			Y	N		
10184	20	Fair	RED OAK	QUERCUS RUBRA			Y	N		
10185	20	Dead	DEAD	N/A			Y	N		
10186	20	Fair	RED OAK	QUERCUS RUBRA			Y	N		
10187	8	Fair	RED OAK	QUERCUS RUBRA			Y	N		
10188	8	Fair	SHAGBARK HICKORY	CARYA OVATA			Y	N		
10189	10	Dead	DEAD	N/A			Y	N		
10190	6	Fair	PIGNUT HICKORY	CARYA GLABRA			Y	N		
10191	8	Fair	PIGNUT HICKORY	CARYA GLABRA			Y	N		
10192	10	Fair	SHAGBARK HICKORY	CARYA OVATA			Y	N		
10193	16	Fair	SHAGBARK HICKORY	CARYA OVATA			Y	N		
10194	10	Fair	SHAGBARK HICKORY	CARYA OVATA			Y	N		
10195	14	Fair	SHAGBARK HICKORY	CARYA OVATA			Y	N		
11000	14	Undesireable	COTTONWOOD	POPULUS DELTOIDES			Y	N		
11001	22	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE	Y	Y	Y	y	33
11002	15	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		Y	Y	N	
11003	13	Fair	PIGNUT HICKORY	CARYA GLABRA	REMOVE		Y	N	Y	13
11004	28	Good	RED OAK	QUERCUS RUBRA	REMOVE	Y	Y	N	Y	42
11005	16	Poor	PIGNUT HICKORY	CARYA GLABRA	REMOVE	Y	Y	N	N	
11006	34	Very Poor	RED OAK	QUERCUS RUBRA	REMOVE	Y	Y	Y	N	
11007	9	Poor	ELM	ULMUS	REMOVE		Y	Y	N	
11008	8	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		Y	Y	N	
11009	20	Poor	RED OAK	QUERCUS RUBRA	REMOVE	Y	Y	Y	N	
11010	7	Fair	BLACK CHERRY	PRUNUS SEROTINA	REMOVE		Y	Y	N	
11011	18	Fair	RED OAK	QUERCUS RUBRA	REMOVE	Y	Y	Y	N	
11012	17	Fair	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
11013	8	Fair	WHITE OAK	QUERCUS ALBA	REMOVE		Y	Y	N	
11014	8	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		Y	N	N	
11015	7	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		Y	N	N	
11016	30	Fair	RED OAK	QUERCUS RUBRA	REMOVE	Y	Y	Y	N	
11017	8	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		Y	Y	N	
11018	8	Fair	BLACK CHERRY	PRUNUS SEROTINA	REMOVE		Y	Y	N	
11019	24	Fair	RED OAK	QUERCUS RUBRA	REMOVE	Y	Y	Y	N	
11020	16	Fair	PIGNUT HICKORY	CARYA GLABRA	REMOVE	Y	Y	Y	N	
11021	8	Dead	DEAD	N/A	REMOVE		Y	Y	N	
11022	12	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11023	28	Poor	RED OAK	QUERCUS RUBRA	REMOVE	Y	Y	Y	N	
11024	19	Very Poor	SHAGBARK HICKORY	CARYA OVATA	REMOVE	Y	Y	Y	N	
11025	8	Undesireable	COTTONWOOD	POPULUS DELTOIDES	REMOVE		Y	Y	N	
11026	12	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11027	10	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11028	11	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11029	30	Fair	RED OAK	QUERCUS RUBRA		Y	Y			
11030	16	Fair	RED OAK	QUERCUS RUBRA		Y	Y			
11031	23	Fair	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
11032	9	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11033	7	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11034	7	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11035	7	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11036	17	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS		Y	Y			
11037	21	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS		Y	Y			
11038	10	Undesireable	SILVER MAPLE	ACER SACCHARINUM			Y			
11039	18	Fair	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
11040	14	Fair	WHITE OAK	QUERCUS ALBA			Y			
11041	14	Dead	DEAD	N/A			Y			
11042	7	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11043	23	Fair	RED OAK	QUERCUS RUBRA		Y	Y			
11044	8	Dead	DEAD	N/A			Y			
11045	9	Dead	DEAD	N/A			Y			
11046	18	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS		Y	Y			
11047	34	Fair	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
11048	16	Fair	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
11049	8	Fair	RED OAK	QUERCUS RUBRA			Y			
11050	14	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11051	7	Fair	RED OAK	QUERCUS RUBRA			Y			
11052	8	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11053	8	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11054	9	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			

ID	DBH	Condition	Common Name	Botanical Name	Remove?	Heritage?	Woodland?	If Removed, Within Building/Street /Driveway?	MITIGATE?	Mitigation Inches
11055	25	Fair	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
11056	12	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11057	6	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11058	11	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11059	7	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11060	8	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11061	16	Fair	WHITE OAK	QUERCUS ALBA		Y	Y			
11062	14	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11063	9	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11064	7	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11065	9	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11066	8	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11067	7	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11068	11	Undesireable	COTTONWOOD	POPULUS DELTOIDES			Y			
11069	20	Undesireable	SILVER MAPLE	ACER SACCHARINUM			Y			
11070	16	Poor	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
11071	9	Fair	RED OAK	QUERCUS RUBRA			Y			
11072	7	Poor	BLACK CHERRY	PRUNUS SEROTINA			Y			
11073	8	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11074	14	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11075	8	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11076	14	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11077	16	Undesireable	DEAD	N/A	REMOVE		Y		N	
11078	10	Poor	PIGNUT HICKORY	CARYA GLABRA			Y			
11079	16	Fair	PIGNUT HICKORY	CARYA GLABRA		Y	Y			
11080	13	Poor	PIGNUT HICKORY	CARYA GLABRA			Y			
11081	10	Poor	SHAGBARK HICKORY	CARYA OVATA			Y			
11082	17	Fair	PIGNUT HICKORY	CARYA GLABRA		Y	Y			
11083	20	Fair	PIGNUT HICKORY	CARYA GLABRA		Y	Y			
11084	21	Poor	RED OAK	QUERCUS RUBRA		Y	Y			
11085	16	Fair	PIGNUT HICKORY	CARYA GLABRA		Y	Y			
11086	10	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11087	16	Fair	PIGNUT HICKORY	CARYA GLABRA		Y	Y			
11088	10	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11089	18	Fair	PIGNUT HICKORY	CARYA GLABRA		Y	Y			
11090	16	Fair	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
11091	7	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11092	7	Dead	DEAD	N/A			Y			
11093	8	Poor	SUGAR MAPLE	ACER SACCHARUM			Y			
11094	8	Undesireable	DEAD	N/A			Y			
11095	7	Fair	STRIPE MAPLE	ACER PENSYLVANICUM			Y			
11096	15	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11097	18	Poor	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
11098	8	Dead	DEAD	N/A			Y			
11099	32	Fair	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
11100	20	Fair	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
11101	9	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11102	20	Fair	BURR OAK	QUERCUS MACROCARPA		Y	Y			
11103	7	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11104	7	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11105	7	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11106	6	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11107	22	Fair	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
11108	8	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11109	19	Dead	DEAD	N/A			Y			
11110	10	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11111	21	Fair	RED OAK	QUERCUS RUBRA		Y	Y			
11112	8	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11113	8	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11114	12	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11115	17	Fair	BURR OAK	QUERCUS MACROCARPA		Y	Y			
11116	14	Fair	BURR OAK	QUERCUS MACROCARPA			Y			
11117	9	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11118	6	Dead	DEAD	N/A			Y			
11119	10	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11120	18	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11121	8	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11122	12	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11123	7	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11124	10	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11125	9	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11126	12	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11127	13	Fair	BURR OAK	QUERCUS MACROCARPA			Y			
11128	6	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11129	13	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11130	14	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11131	14	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11132	10	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11133	10	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11134	16	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11135	9	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11136	17	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11137	8	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11138	11	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11139	9	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11140	22	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11141	8	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11142	11	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11143	6	Undesireable	NORWAY MAPLE	ACER PLATANOIDES			Y			
11144	7	Undesireable	NORWAY MAPLE	ACER PLATANOIDES			Y			
11145	7	Fair	BURR OAK	QUERCUS MACROCARPA			Y			
11146	15	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11147	6	Dead	DEAD	N/A			Y			
11148	15	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11149	14	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11150	8	Very Poor	COMMON APPLE	MALUS PUMILA	REMOVE		Y	Y	N	
11151	7	Poor	SHAGBARK HICKORY	CARYA OVATA	REMOVE		Y	Y	N	
11152	10	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		Y	Y	N	
11153	8	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		Y	Y	N	
11154	8	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		Y	Y	N	
11155	7	Poor	SHAGBARK HICKORY	CARYA OVATA	REMOVE		Y	Y	N	
11156	7	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		Y	Y	N	
11157	8	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		Y	Y	N	
11158	7	Poor	SHAGBARK HICKORY	CARYA OVATA			Y			
11159	7	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11160	15	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11161	9	Fair	SHAGBARK HICKORY	CARYA OVATA	REMOVE		Y	N	Y	9
11162	20	Fair	PIGNUT HICKORY	CARYA GLABRA		Y	Y			
11163	16	Poor	PIGNUT HICKORY	CARYA GLABRA		Y	Y			
11164	13	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11165	12	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11166	12	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11167	18	Poor	PIGNUT HICKORY	CARYA GLABRA		Y	Y			
11168	14	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11169	20	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11170	16	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11171	10	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11172	24	Fair	RED MAPLE	ACER RUBRUM			Y			
11173	14	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11174	10	Fair	RED MAPLE	ACER RUBRUM			Y			
11175	26	Fair	PIGNUT HICKORY	CARYA GLABRA		Y	Y			
11176	15	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11177	7	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11178	14	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11179	16	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11180	9	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11181	18	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11182	18	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11183	18	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			

ID	DBH	Condition	Common Name	Botanical Name	Remove?	Heritage?	Woodland?	If Removed, Within Building/Street /Driveway?	MITIGATE?	Mitigation Inches
11184	10	Fair	BURR OAK	QUERCUS MACROCARPA			Y			
11185	18	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11186	10	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11187	12	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11188	10	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11189	6	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11190	21	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11191	8	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11192	8	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11193	12	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11194	14	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11195	14	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11196	16	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11197	7	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11198	12	Fair	BLACK WALNUT	JUGLANS NIGRA			Y			
11199	18	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11200	8	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11201	10	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11202	7	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11203	8	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11204	7	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS			Y			
11205	7	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11206	14	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11207	20	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11208	16	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11209	24	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11210	14	Fair	RED OAK	QUERCUS RUBRA			Y			
11211	20	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11212	14	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11213	18	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11214	20	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11215	8	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11216	9	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11217	6	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11218	14	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11219	9	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11220	10	Fair	PIGNUT HICKORY	CARYA GLABRA			Y			
11221	16	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11222	14	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11223	7	Dead	DEAD	N/A			Y			
11224	7	Dead	DEAD	N/A			Y			
11225	14	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11226	10	Undesireable	NORWAY MAPLE	ACER PLATANOIDES			Y			
11227	7	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11228	12	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11229	12	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11230	24	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11231	8	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11232	6	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11233	6	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11234	10	Fair	BURR OAK	QUERCUS MACROCARPA			Y			
11235	8	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11236	14	Fair	BURR OAK	QUERCUS MACROCARPA			Y			
11237	7	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11238	20	Fair	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
11239	20	Fair	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
11240	10	Fair	RED MAPLE	ACER RUBRUM			Y			
11241	10	Poor	PIGNUT HICKORY	CARYA GLABRA			Y			
11242	6	Poor	BLACK CHERRY	PRUNUS SEROTINA			Y			
11243	8	Fair	ELM	ULMUS			Y			
11244	8	Fair	ELM	ULMUS			Y			
11245	6	Poor	BLACK CHERRY	PRUNUS SEROTINA			Y			
11246	9	Fair	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N			
11247	9	Fair	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N			
11248	8	Fair	COTTONWOOD	POPULUS DELTOIDES			N			
11249	10	Fair	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N			
11250	6	Fair	COTTONWOOD	POPULUS DELTOIDES	REMOVE		N			
11251	8	Fair	BITTERNUT HICKORY	CARYA CORDIFORMIS	REMOVE		N			
11252	8	Fair	BURR OAK	QUERCUS MACROCARPA			N			
11253	8	Fair	PINE	PINUS SPP.			N			
11254	8	Fair	PINE	PINUS SPP.			N			
11255	9	Fair	PINE	PINUS SPP.			N			
11256	8	Fair	RED MAPLE	ACER RUBRUM			N			
11257	9	Fair	RED MAPLE	ACER RUBRUM			N			
11258	8	Fair	RED MAPLE	ACER RUBRUM			N			
11259	9	Fair	RED MAPLE	ACER RUBRUM			N			
11260	8	Fair	RED MAPLE	ACER RUBRUM			N			
11261	10	Fair	RED MAPLE	ACER RUBRUM			N			
11262	7	Fair	PINE	PINUS SPP.			N			
11263	8	Fair	PINE	PINUS SPP.			N			
11264	8	Fair	PINE	PINUS SPP.			N			
11265	16	Fair	PINE	PINUS SPP.			N			
11266	8	Fair	PINE	PINUS SPP.			N			
11267	10	Fair	PINE	PINUS SPP.			N			
11268	11	Fair	PINE	PINUS SPP.			N			
11269	7	Fair	BURR OAK	QUERCUS MACROCARPA			N			
11270	9	Fair	BURR OAK	QUERCUS MACROCARPA			N			
11271	12	Fair	RED MAPLE	ACER RUBRUM			N			
11272	8	Fair	PINE	PINUS SPP.			N			
11273	11	Fair	PINE	PINUS SPP.			N			
11274	12	Fair	PINE	PINUS SPP.			N			
11275	16	Fair	HONEYLOCUST	GLEDITSIA TRIACANTHOS		Y	N			
11276	10	Fair	PINE	PINUS SPP.			N			
11277	10	Fair	PINE	PINUS SPP.			N			
11278	8	Fair	PINE	PINUS SPP.			N			
11279	10	Fair	PINE	PINUS SPP.			N			
11280	8	Fair	PINE	PINUS SPP.			N			
11281	38	Fair	BLACK WALNUT	JUGLANS NIGRA		Y	Y			
11282	10	Fair	SUGAR MAPLE	ACER SACCHARUM			N			
11283	11	Fair	SUGAR MAPLE	ACER SACCHARUM			N			
11284	11	Fair	SUGAR MAPLE	ACER SACCHARUM			N			
11285	11	Fair	SUGAR MAPLE	ACER SACCHARUM			N			
11286	11	Fair	SUGAR MAPLE	ACER SACCHARUM			N			
11287	10	Fair	SUGAR MAPLE	ACER SACCHARUM			N			
11288	11	Fair	SUGAR MAPLE	ACER SACCHARUM			N			
11289	8	Fair	SUGAR MAPLE	ACER SACCHARUM			N			
11290	9	Fair	SUGAR MAPLE	ACER SACCHARUM			N			
11291	11	Fair	SUGAR MAPLE	ACER SACCHARUM			N			
11292	9	Fair	SUGAR MAPLE	ACER SACCHARUM			N			
11293	12	Fair	SUGAR MAPLE	ACER SACCHARUM			N			
11294	8	Fair	SUGAR MAPLE	ACER SACCHARUM			N			
11295	9	Fair	SUGAR MAPLE	ACER SACCHARUM			N			
11296	22	Dead	DEAD	N/A			Y			
11297	10	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11298	21	Fair	BURR OAK	QUERCUS MACROCARPA		Y	Y			
11299	13	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11300	11	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11301	7	Fair	BURR OAK	QUERCUS MACROCARPA			Y			
11302	13	Fair	CHINKAPIN OAK	QUERCUS MUEHLENBERGII			Y			
11303	18	Fair	BURR OAK	QUERCUS MACROCARPA		Y	Y			
11304	10	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11305	17	Fair	BURR OAK	QUERCUS MACROCARPA		Y	Y			
11306	11	Dead	DEAD	N/A			Y			
11307	11	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11308	7	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11309	13	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11310	10	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11311	11	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11312	8	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			

ID	DBH	Condition	Common Name	Botanical Name	Remove?	Heritage?	Woodland?	If Removed, Within Building/Street /Driveway?	MITIGATE?	Mitigation Inches
11313	10	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11314	7	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11315	12	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11316	7	Dead	DEAD	N/A			Y			
11317	13	Fair	BURR OAK	QUERCUS MACROCARPA			Y			
11318	16	Fair	BURR OAK	QUERCUS MACROCARPA			Y			
11319	24	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11320	8	Dead	DEAD	N/A			Y			
11321	12	Fair	BURR OAK	QUERCUS MACROCARPA			Y			
11322	9	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11323	8	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11324	7	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11325	7	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11326	9	Fair	BURR OAK	QUERCUS MACROCARPA			Y			
11327	8	Fair	BURR OAK	QUERCUS MACROCARPA			Y			
11328	10	Dead	DEAD	N/A			Y			
11329	9	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11330	9	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11331	11	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11332	6	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11333	13	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11334	11	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11335	8	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11336	6	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11337	6	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11338	7	Dead	DEAD	N/A			Y			
11339	18	Fair	SHAGBARK HICKORY	CARYA OVATA		Y	Y			
11340	10	Fair	SHAGBARK HICKORY	CARYA OVATA			Y			
11341	14	Dead	DEAD	N/A			Y			
11342	9	Dead	DEAD	N/A			N			

DEFINITION OF RATINGS:

* GOOD:
The tree appears to be in a healthy and satisfactory condition with an overall sound stem structure and with a full and balanced crown; the growth habit appears normal; there is no indication of pests or diseases present; and the life expectancy is judged to be greater than twenty-five (25) years. The rating based on the health / condition chart ranges from 30 to 24.

* FAIR:
The tree appears to be in a healthy and satisfactory condition with a minimum of structural problems and with minor crown imbalance or thin crown; the growth habit appears normal; there is no indication of pests or diseases present; and the life expectancy is judged to be greater than twenty (20) years. The rating based on the health / condition chart ranges from 23 to 16.

* POOR:
The tree appears to be in an unhealthy condition with structural problems and with major crown imbalance, dead or dying limbs, or growth only in the top quarter of the tree; the growth habit is misshapen and askew; there is evidence of pests or diseases present; and the life expectancy is judged to be less than ten (10) years. The rating based on the health / condition chart ranges from 15 to 7.

* VERY POOR (V. Poor):
The tree appears to be in an unhealthy condition with major structural problems and with major crown imbalance or several dead limbs and/or peeling bark; the growth habit is severely misshapen and askew; there is evidence of pests or diseases present; and the life expectancy is judged to be less than five (5) years. The rating based on the health / condition chart ranges from 6 to 1.

* DEAD:
The tree has no live branches, is topped, or fallen.

TREE HEALTH / CONDITION FACTORS & RATINGS

Values Best	5	4	3	2	1 Worst
1 Trunk	Sound & solid		Sections of bark missing		Extensive decay & hollow
2 Growth Rate	> 6 inch twig elongation		2 inch - 6 inch twig elongation		< 2 inch twig elongation
3 Structure	Sound		One major or several minor limbs dead		Two or more major limbs dead
4 Insects & Diseases	No pests present		One pest present		Two or more pests present
5 Crown Development	Full & balanced		Full but unbalanced		Unbalanced and lacking a full crown
6 Life Expectancy	> 30 years		15 years to 20 years		< 5 years

APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN

DATE: 05/17/2018
PM: GMS
ENG: GMS
SURV: AEC
CAD: ADB
\DWG\9525.dwg
VDATUM:U.S.C. & G.S.
SCALE: 1"=

STATUS:
JOB NO. 9525.3.17
REVISIONS
06/10/18 PER TWP REVIEW LETTER OF 5/23/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/11/18 ADD AS-BUILT, REVISE PER ENGINEERING REVIEW LETTER
08/02/18 REVISED PER WCWRC REVIEW LETTER

ENGINEERS . SURVEYORS
MLP
AND ASSOCIATES, INC.
Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
phone: (734) 459-8560
fax: (734) 459-2585

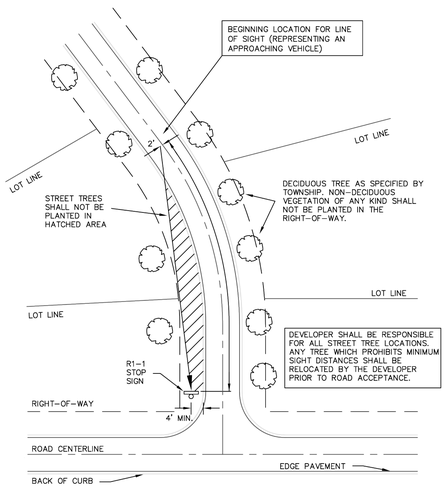
TREE SCHEDULE

ARBOR FARMS

A RESIDENTIAL SITE CONDOMINIUM

PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E.,
PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET
18



SCALE: N.T.S.

TYPICAL RESIDENTIAL STREET TREE LOCATION - STOP APPROACH

8-6-14

Figure 13: Typical Residential Street Tree Location - Stop Approach

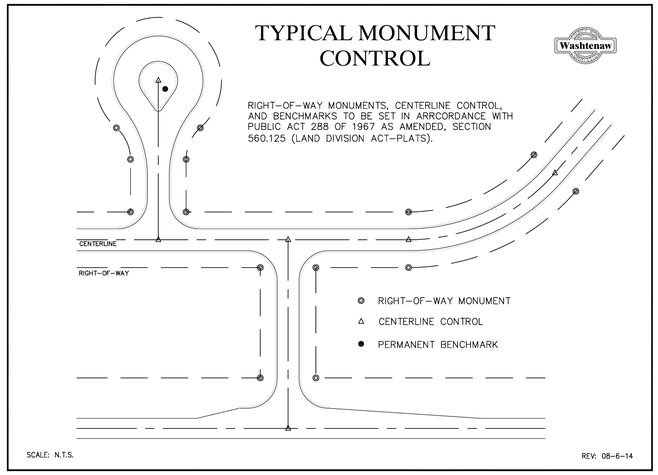


Figure 15: Typical Monument Control

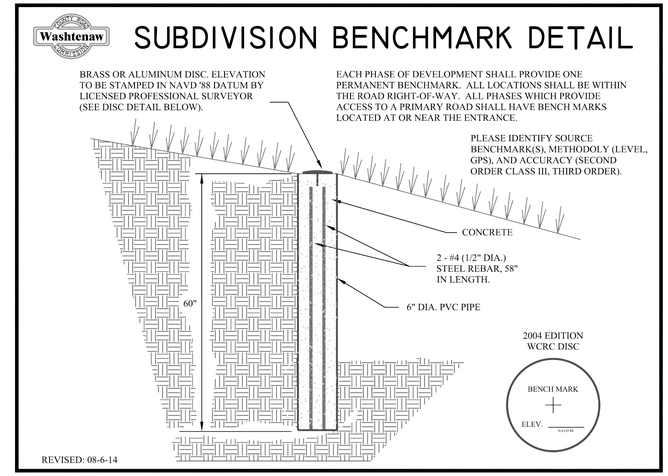


Figure 16: Subdivision Benchmark Detail

DETAIL SHEET

ARBOR FARMS

A RESIDENTIAL SITE CONDOMINIUM

PART OF THE NORTHWEST 1/4 OF SECTION 26, T.3S., R.6E., PITTSFIELD TOWNSHIP, WASHTENAW COUNTY, MICHIGAN

SHEET 19

ENGINEERS, SURVEYORS
MLP
AND ASSOCIATES, INC.
Michael L. Priest & Associates, Inc.
40655 Koppernick Road, Canton, MI 48187
phone: (734) 459-8560
fax: (734) 459-2585

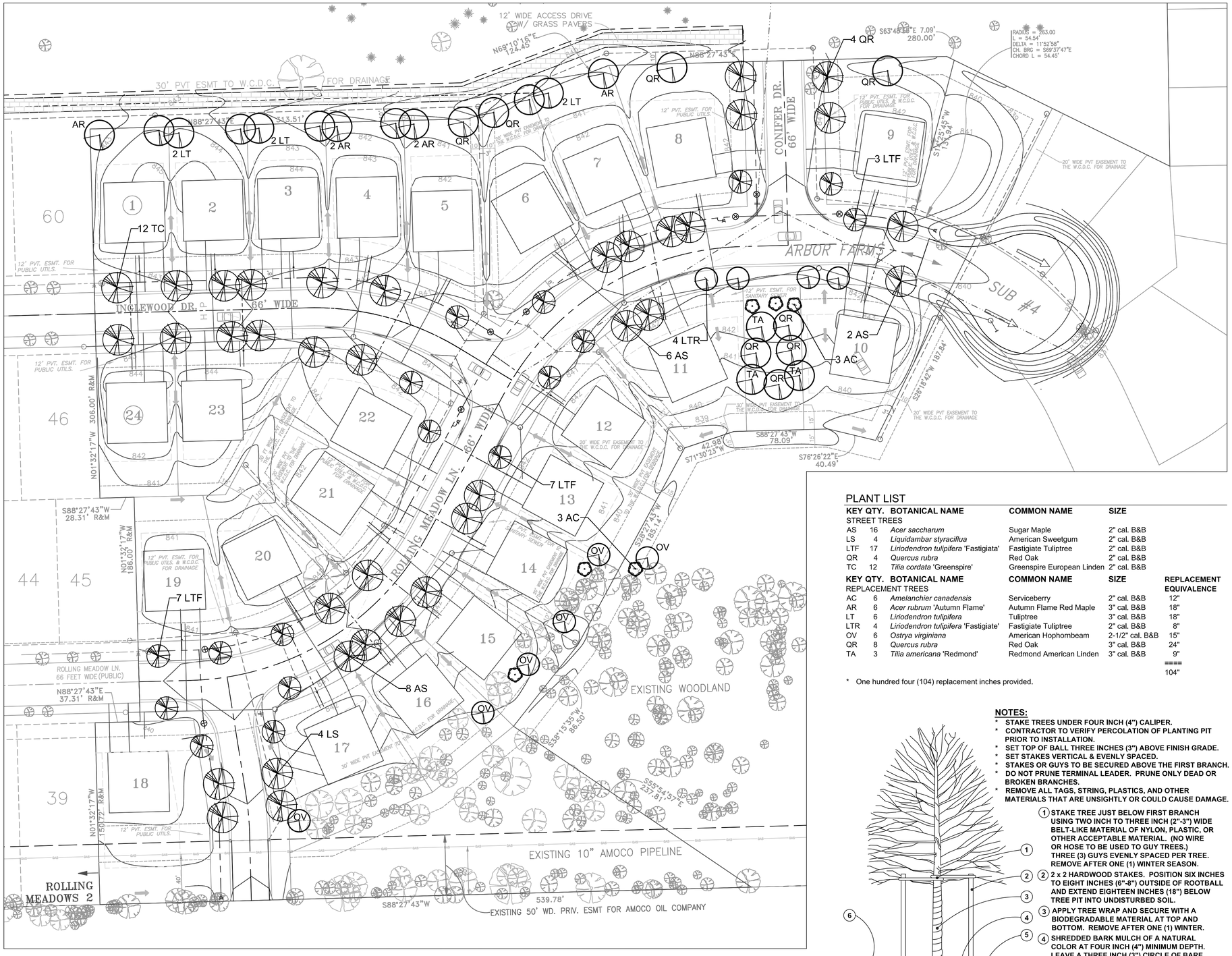
STATUS:

REVISIONS:
05/08/18 PER WCRC TWP REVIEW LETTER OF 5/21/18
06/25/18 PER SITE PLAN REVIEW OF 6/15/18
07/02/18 PER WCRC, PITTSFIELD ENGINEERING REVIEW LETTER
08/06/18 ADDED PER WCRC, REVIEW LETTER

JOB NO. 9525.3.17

DATE: 05/17/2018
PM: GMS
ENG: GMS
SURV: AEC
CAD: AGB
\DWG\9525.dwg
XCAL\M.U.S.C. & C.S.
SCALE: 1" = 50'

APPLICANT
PITTSFIELD LAND LLC
33 BLOOMFIELD HILL PARKWAY, STE 100
BLOOMFIELD HILLS, MI 48304
248-921-3996
ATTN: JEFF KATZEN



LANDSCAPE DEVELOPMENT NOTES:

PLANTING

1. Installation of all plant material shall be in accordance with the latest edition of the *American Association of Nurserymen Standards for Nursery Stock* and with the specifications set forth by Pittsfield Township, Michigan.
2. The plant materials shall conform to the type stated on the plant list. Sizes shall be the minimum stated on the plant list or larger. All measurements shall be in accordance with the latest edition of the *American Association of Nurserymen Standards for Nursery Stock.*
3. The plant material shall be nursery grown and inspected by the Owner's representative before planting. The Owner's representative reserves the right to reject any plant material at any time.
4. Plants designated "B&B" shall be balled and burlapped with firm balls of earth.
5. Dig shrub pits one foot (1') larger than the shrub rootball, tree pits three (3) times the width of the tree rootball and backfill with one (1) part topsoil and one (1) part soil from excavated pit. Plant trees and shrubs at the same grade level at which they were planted at the nursery. If wet, clay soils are evident, plant trees and shrubs slightly higher.
6. The Contractor is responsible for planting the materials at the correct grades and spacing. The plants shall be oriented to give the best appearance.
7. When the plant has been properly set, the pit shall be backfilled with the topsoil mixture, gradually filling, patting, and settling with water.
8. Trees in lawn areas to have a four foot (4') circle of mulch, four inches (4') deep, and three inches (3") away from the trunk. Shrub beds are to be mulched with shredded bark mulch to a minimum depth of three inches (3"). Only natural color shredded hardwood bark mulch will be accepted.
9. Remove all twine, wire, and burlap from the top one third (1/3) of tree and shrub root balls and from tree trunks. Remove all non-biodegradable material such as plastic or nylon completely from branches and stems.
10. All plant materials shall be pruned and injuries repaired. The amount of pruning shall be limited to the removal of dead or injured limbs and to compensate for the loss of roots from transplanting. Cuts should be flush, leaving no stubs. Cuts over three quarters of an inch (3/4") shall be painted with tree paint. Shrubs along the site perimeter shall be allowed to grow together in a natural form.
11. Organic, friable topsoil shall be evenly distributed and fine graded over all areas to receive lawns at uniform depth of four inches (4") after settlement.
12. All lawn areas shall be sodded with a Grade A Kentucky Blue Grass blend over the topsoil.
13. All plantings shall be completed within three (3) months, and no later than November 30, from the date of issuance of a certificate of occupancy if such certificate is issued during the April1 thru September 30 period; if the certificate is issued during the October 1 thru March 31 period, the planting shall be completed no later than the ensuing May 31; plantings shall thereafter be reasonably maintained, including permanence and health of plant materials to provide a screen to abutting properties and including the absence of weeds and refuse.
15. Backfill directly behind all curbs and along sidewalks and compact to the to of curbs or walk to support vehicle and pedestrian weight without settling.

MATERIAL

1. Required landscape material shall satisfy the criteria of the American Association of Nurserymen Standards for Nursery Stock and be: a. Nursery grown; b. State Department of Agriculture inspected; c. No. 1 grade material with a straight, unscarred trunk, and well-developed uniform crown (park grade trees will not be accepted); d. Staked, wrapped, watered, and mulched according to the details provided; and e. Guaranteed for two (2) years.
2. Topsoil shall be friable, fertile soil of clay loam character containing at least five percent (5%) but not more than twenty percent (20%) by weight of organic matter with a pH range between 6.0 and 7.0. The topsoil shall be free from clay lumps, coarse sand, plant roots, sticks, and other foreign materials.
3. The seed mixture shall consist of the following types and proportions: Kentucky Blue Grass blend "Baron/Sheri/Adelphi" @ sixty percent (60%), Chewing Fescue @ twenty-five percent (25%), Creeping Red Fescue @ ten percent (10%), and Perennial Rye Grass @ five percent (5%). Weed content shall not exceed one percent (1%). The mix shall be applied at a rate of 200 pounds per acre.

GENERAL

1. Do not plant deciduous or evergreen trees directly over utility lines or under overhead wires. Maintain a six foot (6') distance from the centerline of utilities and twenty feet (20') from the centerline of overhead wires for planting holes. Call MISS DIG forty-eight (48) hours prior to landscape construction for field location of utility lines.
2. The Contractor agrees to guarantee all plant material for a period of two (2) years. At that time, the Owner's representative reserves the right for a final inspection. Plant material with twenty-five percent (25%) die back, as determined by the Owner's representative shall be replaced. This guarantee includes the furnishing of new plants, labor, and materials. These new plants shall also be guaranteed for a period of one (1) year.
3. The work shall consist of providing all necessary materials, labor, equipment, tools, and supervision required for the completion as indicated on the drawings.
4. All landscape areas including parking lot islands shall be irrigated by an automatic underground irrigation system. Lawns and shrub/landscape areas shall be watered by separate zones to minimize overwatering.

MAINTENANCE OF GENERAL LANDSCAPE AREAS

1. The Owner of the landscaping shall perpetually maintain such landscaping in good condition so as to present a healthy, neat, and orderly appearance, free from refuse and debris.
3. The Contractor is responsible for watering and maintenance of all seed areas until a minimum of ninety percent (90%) coverage, as determined by the Owner's representative.
4. All diseased and/or dead material shall be removed within sixty (60) days following notification and shall be replaced within the next appropriate planting season or within one (1) year, whichever comes first.

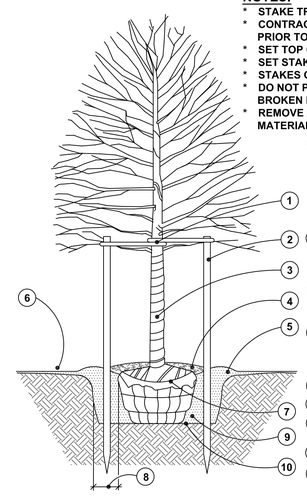
PLANT LIST

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	
STREET TREES					
AS	16	*Acer saccharum*	Sugar Maple	2" cal. B&B	
LS	4	*Liquidambar styraciflua*	American Sweetgum	2" cal. B&B	
LTF	17	*Liriodendron tulipifera* 'Fastigiata'	Fastigiate Tuliptree	2" cal. B&B	
QR	4	*Quercus rubra*	Red Oak	2" cal. B&B	
TC	12	*Tilia cordata* 'Greenspire'	Greenspire European Linden	2" cal. B&B	
KEY	**QTY.**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**REPLACEMENT EQUIVALENCE**
REPLACEMENT TREES					
AC	6	*Amelanchier canadensis*	Serviceberry	2" cal. B&B	12"
AR	6	*Acer rubrum* 'Autumn Flame'	Autumn Flame Red Maple	3" cal. B&B	18"
LT	6	*Liriodendron tulipifera*	Tuliptree	3" cal. B&B	18"
LTR	4	*Liriodendron tulipifera* 'Fastigiate'	Fastigiate Tuliptree	2" cal. B&B	8"
OV	6	*Ostrya virginiana*	American Hophornbeam	2-1/2" cal. B&B	15"
QR	8	*Quercus rubra*	Red Oak	3" cal. B&B	24"
TA	3	*Tilia americana* 'Redmond'	Redmond American Linden	3" cal. B&B	9"
					====
					104"

* One hundred four (104) replacement inches provided.

NOTES:

* STAKE TREES UNDER FOUR INCH (4") CALIPER.
* CONTRACTOR TO VERIFY PERCOLATION OF PLANTING PIT PRIOR TO INSTALLATION.
* SET TOP OF BALL THREE INCHES (3") ABOVE FINISH GRADE.
* SET STAKES VERTICAL & EVENLY SPACED.
* STAKES OR GUYS TO BE SECURED ABOVE THE FIRST BRANCH.
* DO NOT PRUNE TERMINAL LEADER. PRUNE ONLY DEAD OR BROKEN BRANCHES.
* REMOVE ALL TAGS, STRING, PLASTICS, AND OTHER MATERIALS THAT ARE UNSIGHTLY OR COULD CAUSE DAMAGE.



DECIDUOUS TREE

1. STAKE TREE JUST BELOW FIRST BRANCH USING TWO INCH TO THREE INCH (2"-3") WIDE BELT-LIKE MATERIAL OF NYLON, PLASTIC, OR OTHER ACCEPTABLE MATERIAL. (NO WIRE OR HOSE TO BE USED TO GUY TREES.) THREE (3) GUYS EVENLY SPACED PER TREE. REMOVE AFTER ONE (1) WINTER SEASON.
2. 2 x 2 HARDWOOD STAKES. POSITION SIX INCHES TO EIGHT INCHES (6"-8") OUTSIDE OF ROOTBALL AND EXTEND EIGHTEEN INCHES (18") BELOW TREE PIT INTO UNDISTURBED SOIL.
3. APPLY TREE WRAP AND SECURE WITH A BIODEGRADABLE MATERIAL AT TOP AND BOTTOM. REMOVE AFTER ONE (1) WINTER.
4. SHREDDED BARK MULCH OF A NATURAL COLOR AT FOUR INCH (4") MINIMUM DEPTH. LEAVE A THREE INCH (3") CIRCLE OF BARE SOIL AT THE BASE OF THE TREE.
5. MOUND TO FORM TREE SAUCER.
6. FINISH GRADE SLOPED AWAY FROM TREE.
7. CUT AND REMOVE WIRE, BURLAP, AND BINDINGS FROM THE TOP ONE-THIRD (1/3) OF THE ROOTBALL.
8. WIDTH OF ROOTBALL ON EACH SIDE.
9. PLANTING MIX SHALL BE AMMENDED PER SITE CONDITIONS AND PLANT REQUIREMENTS.
10. SCARIFY BOTTOM AND SIDES OF PLANTING PIT TO FOUR INCH (4") DEPTH.

PLANTING DETAILS — not to scale

LANDSCAPE CALCULATIONS:

STREET TREE PLANTINGS (2,641 l.f. of curb)

* One (1) deciduous tree / 50 l.f. = 53 trees

REPLACEMENT TREES

* One hundred four inches (104") of regulated trees to be removed with replacement required

WOODLAND DESCRIPTION

* The woodland is characterized by the dominance of Hickory in the overstory with both Shagbark Hickory and Bitternut Hickory ranging in size from six inches to thirty-six inches (6" - 36"). Several large Red Oak trees also contribute to the overstory. Other smaller trees include Box Elder, White Oak, Bur Oak, Red Oak, American Elm, Black Cherry, and Red Maple. The understory consists of Hickory, Red Oak, and American Elm with many Hickory saplings. The shrub layer is sporadic with a dominance of Buckthorn. The ground layer includes Woodbine and Poison Ivy with some woodland wildflowers of Mayapple, Solomon's Seal, Creeping Strawberrybush, and Jack-in-the-Pulpit. The ground layer covers approximately fifty percent (50%) of the woodland floor.

date: June 25, 2018
revised:
07-11-2018 Add replacement trees & adjust cul-de-sac.

Know what's **below.** **Call** before you dig.

40' 0' 40' 80' 120' north
scale: 1" = 40'

LANDSCAPE PLAN FOR:
Michael L. Priest & Associates, Inc.
40655 Koppernick
Canton, Michigan 48187
(734) 459-8560

PROJECT LOCATION:
Arbor Farms Subdivision
East Side of Platt Road &
South of W. Michigan Ave.
Pittsfield Township,
Michigan

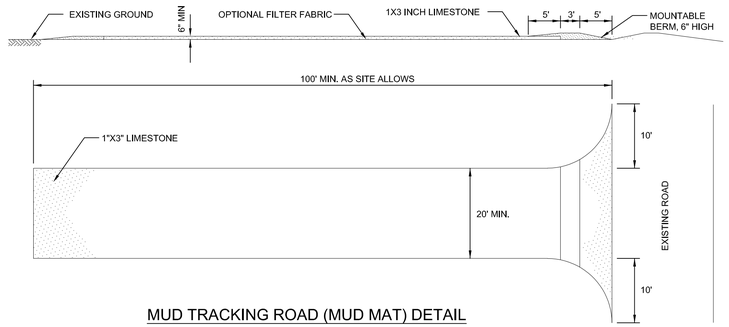
LANDSCAPE PLAN BY:
Nagy Devlin Land Design
31736 West Chicago Avenue
Livonia, Michigan 48150
(734) 634 9208

STATE OF MICHIGAN J. BRIAN DEVLIN NO.1260 REGISTERED LANDSCAPE ARCHITECT

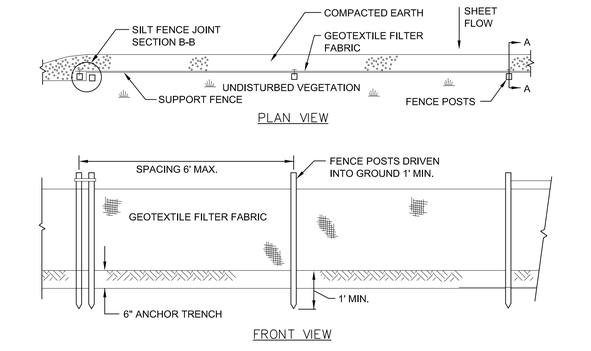
J. Brian Devlin
AUTOCAD SIGNATURE ORIGINAL IN BLUE

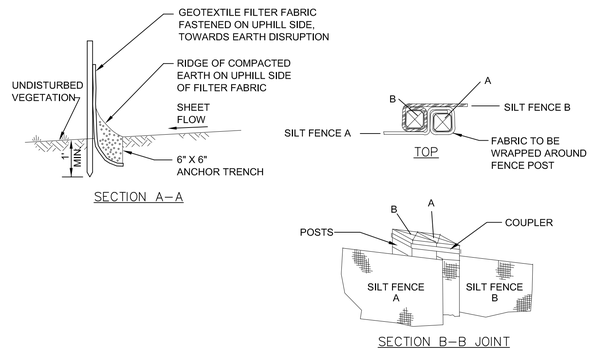
LP - 1: LANDSCAPE PLANTING PLAN

* Base data provided by Michael L. Priest & Associates, Inc.



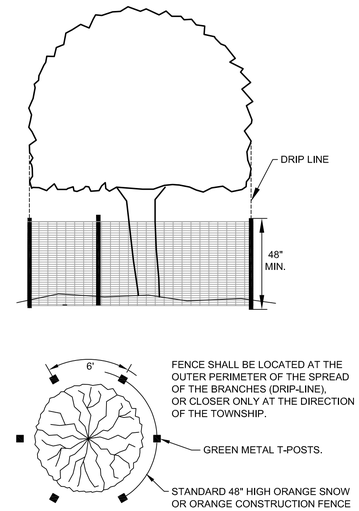
MUD TRACKING ROAD (MUD MAT) DETAIL





SILT FENCE

NOT TO SCALE



NOTES:
1. ALL TREES TO BE REMOVED WILL BE IDENTIFIED BY RED FLAGGING.
2. TREE PROTECTION FENCING IS TO BE ERECTED PRIOR TO ANY EARTHWORK OR CONSTRUCTION AND IS TO REMAIN IN PLACE UNTIL CONSTRUCTION AND GRADING IS COMPLETE.
3. ALL DEBRIS, FILL, EQUIPMENT OR MATERIAL IS TO BE KEPT CLEAR OF AREA WITHIN PROTECTIVE FENCE. NO CLEANING OF EQUIPMENT OR MATERIAL OR STORAGE OR DISPOSAL OF ANY MATERIAL WITHIN THE DRIP LINE OF ANY TREES TO BE SAVED.

TREE PROTECTION FENCE DETAIL

NOT TO SCALE

PITTSFIELD CHARTER TOWNSHIP
SOIL EROSION AND SEDIMENTATION CONTROL NOTES
GENERAL

1. The contractor shall implement and maintain the soil erosion control measures as shown on the plans at all times during construction on this project. Any modifications or additions to the soil erosion control measures due to construction or changed conditions, shall be complied with as required or directed by the owner, project engineer or Pittsfield Township.
2. All soil erosion and sedimentation control work shall conform to the permit requirements of Pittsfield Township and the laws of the State of Michigan.
3. A NPDES construction activity permit is required for all sites greater than 5 acres.
4. Daily inspections shall be made by the contractor. Periodic inspections may be made by the owner/project engineer/Township to determine the effectiveness of erosion and sedimentation control measures. Any necessary corrections shall be made without delay.
5. Erosion and sedimentation from work on the site shall be contained on the site and not be allowed to collect on any off-site areas or in waterways.
6. All mud/dirt tracked onto roads from the site due to construction, shall be promptly removed by the contractor.
7. Restoration of all disturbed areas, including placement of topsoil, seed, fertilizer and mulch and/or sod shall be done within 5 days of the completion of final grade.
8. Construction operations shall be scheduled and performed so that preventative soil erosion control measures are in place prior to excavation in critical areas and temporary stabilization measures are in place immediately following backfilling operations.
9. Special precautions will be taken in the use of construction equipment to prevent situations that promote erosion.
10. Proper dust control shall be maintained during construction by use of water trucks and/or chloride as required.
11. The contractor shall be responsible for maintaining all temporary soil erosion control measures and removal of some upon authorized completion of project. Completion of project will not be authorized until all site work, home building, road work and utility construction is complete and all soils are stabilized.
12. The contractor shall not grade in existing wetland or conservation areas to be protected. Silt fence shall be installed and maintained adjacent to existing wetland and conservation areas to prevent grading, erosion and sedimentation into them.
13. Tree protection fencing must remain intact until restoration of the site is complete.

SEQUENCE OF CONSTRUCTION

1. Install sediment fence and tree protection fencing prior to any grading operation.
2. Install mud-tracking pad.
3. Construct temporary sediment/detention basin.
4. Place topsoil, fertilizer, seed and mulch over the entire detention basin area.
5. Rough grade site, stockpile topsoil and begin building construction.
6. Install storm drainage system including riprap and parking lot inlet filters and detention basin standpipe.
7. Maintain erosion and sedimentation control measures, as required.
8. Install sanitary sewer and water systems.
9. Bring pavement areas to sub-base grade, place sub-base and bituminous pavement.
10. Install franchised utilities.
11. Finish grade, redistribute topsoil, seed and mulch all disturbed areas.
12. Remove any accumulated sediment within the detention basin and replace clean washed stone around standpipe.
13. Complete construction of site.
14. Insure all soil is stabilized. Remove all temporary soil erosion control measures.

SEEDING/SOD

1. Seed or sod in accordance with project specifications.
2. All areas of disturbed earth that are not to be paved or sodded shall have 4 inches of topsoil, seed, fertilizer and mulch.
3. Immediately after seeding, mulch all seeded areas with unweathered small grain straw (preferably wheat) or hay spread. Spread uniformly at the rate of 1 ½ to 2 tons or 100 pounds (2 to 3 bales) per 1,000 square foot. This mulch should be anchored with a disc-type mulch-anchoring tool.
4. Any disturbed area not paved, seeded or mulched, sodded or built upon by November 15, is to be mulched in the manner as specified above, in order to provide soil erosion protection during the winter and early spring.
5. All erosion and sedimentation control prevention procedures and structures are to comply with the Standards and Specifications for soil erosion and sediment control of the Washtenaw County Soil Conservation District.
6. Drainage ditches and slopes steeper than 1:4 (25%) shall be stabilized with erosion control blankets.
7. Steep slopes that do not take upon initial seeding must be re-seeded and stabilized with erosion control blankets.
8. Where excavation has been through lawn areas, the CONTRACTOR shall restore the disturbed area by placing topsoil and seeding or sodding over the final backfill material.

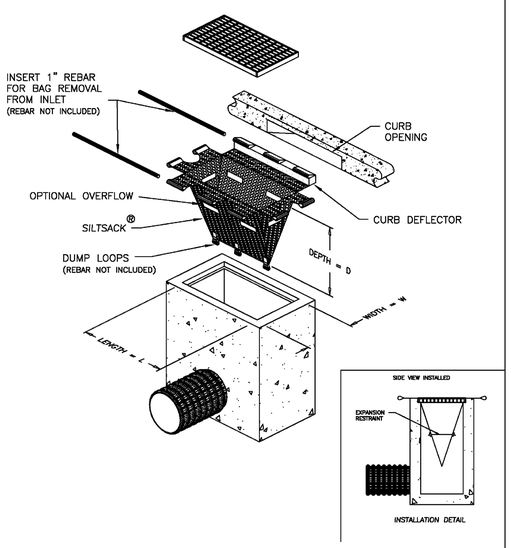
CATCH BASIN/MANHOLE PROTECTION

1. Protect storm sewer catch basins with Siltsack. or approved equivalent as follows:

ROADS

1. During construction, all roads shall be protected from unvegetated areas washing onto road surfaces by placement of silt fence behind curb or a 10 foot wide straw mulch bank behind the curb or other approved method and/or as shown on the plans.
2. During construction of any portion of the project, roads shall be maintained free of dirt, silt and construction debris.

Pittsfield SEC 9/22/2009



DETAIL OF INLET SEDIMENT CONTROL DEVICE
TYPE B – WITH CURB DEFLECTOR

ACF Environmental
Your Complete Source for Geosynthetic Solutions

ACF Environmental, Inc.
2831 Cardwell Rd.
Richmond, Virginia 23234
(800) 448-3636

SILTSACK®
SPECIFICATIONS

NOTE: THE SILTSACK® WILL BE MANUFACTURED FROM A WOVEN POLYPROPYLENE FABRIC THAT MEETS OR EXCEEDS THE FOLLOWING SPECIFICATIONS.

REGULAR FLOW SILTSACK®
(FOR AREAS OF LOW TO MODERATE PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	300 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	120 LBS
MULLEN BURST	ASTM D-3786	800 PSI
TRAPEZOID TEAR	ASTM D-4533	120 LBS
UV RESISTANCE	ASTM D-4355	80 %
APPARENT OPENING SIZE	ASTM D-4751	40 US SIEVE
FLOW RATE	ASTM D-4491	40 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	0.55 SEC -1

* HI-FLOW SILTSACK®
(FOR AREAS OF MODERATE TO HEAVY PRECIPITATION AND RUN-OFF)

PROPERTIES	TEST METHOD	UNITS
GRAB TENSILE STRENGTH	ASTM D-4632	265 LBS
GRAB TENSILE ELONGATION	ASTM D-4632	20 %
PUNCTURE	ASTM D-4833	135 LBS
MULLEN BURST	ASTM D-3786	420 PSI
TRAPEZOID TEAR	ASTM D-4533	45 LBS
UV RESISTANCE	ASTM D-4355	90 %
APPARENT OPENING SIZE	ASTM D-4751	20 US SIEVE
FLOW RATE	ASTM D-4491	200 GAL/MIN/SQ FT
PERMITTIVITY	ASTM D-4491	1.5 SEC -1

OIL-ABSORBANT SILTSACK®
(FOR AREAS WHERE THERE IS A CONCERN FOR OIL RUN-OFF OR SPILLS)

DEPENDING ON YOUR PARTICULAR APPLICATION, THE SILTSACK® CAN BE MADE FROM EITHER ONE OF THE ABOVE FABRICS WITH AN OIL-ABSORBANT PILLOW INSERT OR, MADE COMPLETELY FROM AN OIL-ABSORBANT SILTSACK® WITH A WOVEN PILLOW INSERT.

SILTSACK DISTRIBUTORS:
PRICE & COMPANY
(www.priceandcompany.com)

METRO GRAND RAPIDS, MI
426 36TH STREET SW
WYOMING, MI 49548-2108
1-800-248-8230

METRO DETROIT, MI
29165 WALL STREET
WIXOM, MI 48393-3525
1-866-960-4300

(* HI-FLOW SILT SACK SHALL BE USED FOR ALL APPLICATIONS WITHIN PITTSFIELD TOWNSHIP)

SILTSACK

NOT TO SCALE

Pittsfield Charter Township
6201 W. Michigan Ave.
Ann Arbor, MI 48108–9721
48108–9721
Tel. 734.822.3101
www.pittsfield-mi.gov

SILTSACK	BWA	DRW	12.01.03
TWP REV	BWA	DRW	11.04.27
UPDATES	TTN	DRW	10.01.20
Revision	By	Appd.	YY.MM.DD

Issued	By	Appd.	YY.MM.DD
File Name: SE–01	TTN	DRW	07.10.01
	Dwn.	Chkd.	Dsgn. YY.MM.DD

Permit-Seal

Client/Project
PITTSFIELD TOWNSHIP

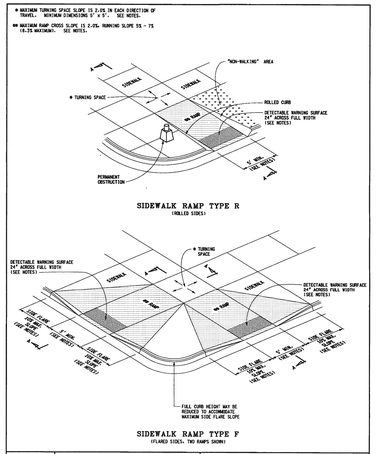
Pittsfield Township, Michigan

Title
SOIL EROSION DETAILS AND NOTES

Project No. 2075001300
Scale NOT TO SCALE
Revision

* MAXIMUM TURNING SPACE SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.

** MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.



SIDEWALK RAMP TYPE R
(ROLLED SIDES)

SIDEWALK RAMP TYPE F
(FLARED SIDES- TWO RAMPS SHOWN)

DEPARTMENT DIRECTION
Kirk T. Steudle

MDOT

PREPARED BY
DESIGN DIVISION

DRAWN BY: R.L.H.
CHECKED BY: R.L.H.

APPROVED BY: Richard L. Hall — DIRECTOR, BUREAU OF HIGHWAY DEVELOPMENT
APPROVED BY: Michael A. Van Fossen — DIRECTOR, BUREAU OF HIGHWAY DEVELOPMENT

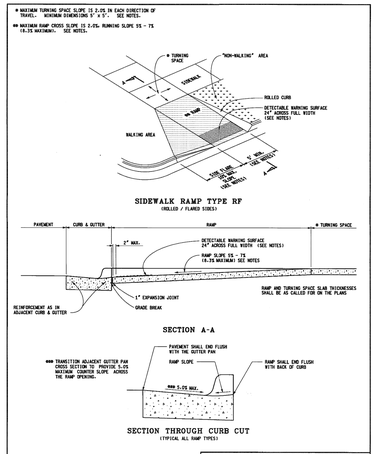
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

9-30-2014	7-1-2014	R-28-I	SHEET 1 OF 7
F.H.W.A. APPROVAL	PLAN DATE		

* MAXIMUM TURNING SPACE SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.

** MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.



SIDEWALK RAMP TYPE RF
(ROLLED / FLARED SIDES)

SECTION A-A

*** TRANSITION ADJACENT GUTTER PAN CROSS SLOPE TO PROVIDE 5.0% MAXIMUM COUNTER SLOPE ACROSS THE RAMP OPENING.

SECTION THROUGH CURB CUT
(TYPICAL ALL RAMP TYPES)

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

9-30-2014	7-1-2014	R-28-I	SHEET 2 OF 7
F.H.W.A. APPROVAL	PLAN DATE		

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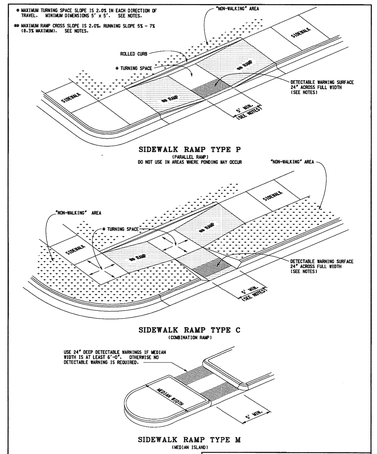


SIDEWALK RAMP TYPE P
(PARALLEL RAMP)
DO NOT USE IN AREAS WHERE PONDING MAY OCCUR

SIDEWALK RAMP TYPE C
(COMBINATION RAMP)

SIDEWALK RAMP TYPE M
(MEDIAN ISLAND)

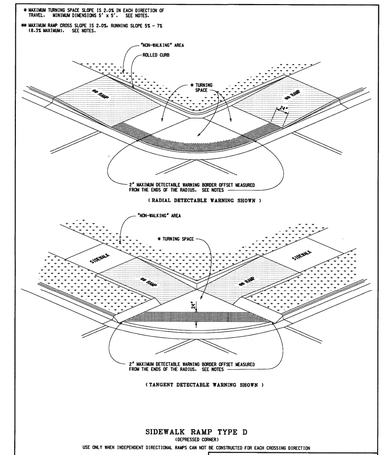
MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

9-30-2014	7-1-2014	R-28-I	SHEET 3 OF 7
F.H.W.A. APPROVAL	PLAN DATE		

* MAXIMUM TURNING SPACE SLOPE IS 2.0% IN EACH DIRECTION OF TRAVEL. MINIMUM DIMENSIONS 5' x 5'. SEE NOTES.

** MAXIMUM RAMP CROSS SLOPE IS 2.0%. RUNNING SLOPE 5% - 7% (8.3% MAXIMUM). SEE NOTES.



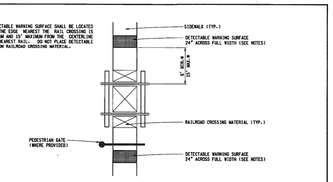
SIDEWALK RAMP TYPE D
(DEPRESSED CORNER)
USE ONLY WHEN INDEPENDENT DIRECTIONAL RAMPS CAN NOT BE CONSTRUCTED FOR EACH CROSSING DIRECTION

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

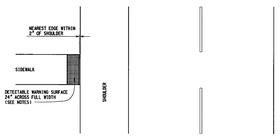
SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

9-30-2014	7-1-2014	R-28-I	SHEET 4 OF 7
F.H.W.A. APPROVAL	PLAN DATE		

* THE DETECTABLE WARNING SURFACE SHALL BE LOCATED BETWEEN 6" AND 24" FROM THE RAILROAD CROSSING, BUT NOT MORE THAN 24" AWAY FROM THE NEAREST RAIL. DO NOT PLACE DETECTABLE WARNING ON RAILROAD CROSSING MATERIAL.



DETECTABLE WARNING AT RAILROAD CROSSING

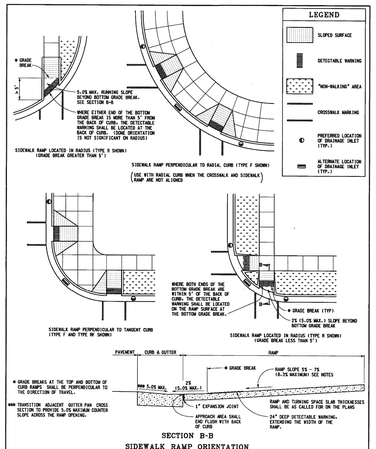


DETECTABLE WARNING AT FLUSH SHOULDER OR ROADWAY

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

9-30-2014	7-1-2014	R-28-I	SHEET 5 OF 7
F.H.W.A. APPROVAL	PLAN DATE		

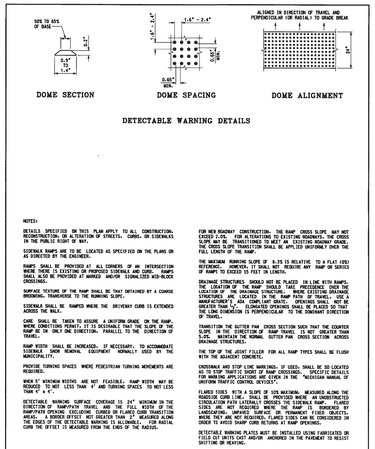


SECTION B-B
SIDEWALK RAMP ORIENTATION

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

9-30-2014	7-1-2014	R-28-I	SHEET 6 OF 7
F.H.W.A. APPROVAL	PLAN DATE		



DETECTABLE WARNING DETAILS

NOTES:

DETAILS SPECIFIED ON THIS PLAN APPLY TO ALL CONSTRUCTION, RECONSTRUCTION, OR ALTERATION OF STREETS, CURBS, OR SIDEWALKS IN THE PUBLIC RIGHT OF WAY.

SIDEWALK RAMPS ARE TO BE LOCATED AS SPECIFIED ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

RAMPS SHALL BE PROVIDED AT ALL CORNERS OF AN INTERSECTION WHERE THERE IS EXISTING OR PROPOSED SIDEWALK AND CURB. RAMPS SHALL ALSO BE PROVIDED AT MARKED AND/OR SIGNALIZED MID-BLOCK CROSSINGS.

SURFACE TEXTURE OF THE RAMP SHALL BE THAT OBTAINED BY A COARSE BROOMING, TRANSVERSE TO THE RUNNING SLOPE.

SIDEWALK SHALL BE RAMPED WHERE THE DEVIANT CURB IS EXTENDED ACROSS THE WALK.

CARE SHALL BE TAKEN TO ASSURE A UNIFORM GRADE ON THE RAMP. WHERE CONDITIONS PERMIT, IT IS DESIRABLE THAT THE SLOPE OF THE RAMP BE ON ONLY ONE DIRECTION, PARALLEL TO THE DIRECTION OF TRAVEL.

RAMP WIDTH SHALL BE INCREASED, IF NECESSARY, TO ACCOMMODATE SIDEWALK SNOW REMOVAL EQUIPMENT NORMALLY USED BY THE MUNICIPALITY.

PROVIDE TURNING SPACES WHERE PEDESTRIAN TURNING MOVEMENTS ARE REQUIRED.

WHEN 5' MINIMUM WIDTHS ARE NOT FEASIBLE, RAMP WIDTH MAY BE REDUCED TO NOT LESS THAN 4' AND TURNING SPACES TO NOT LESS THAN 4'.

DETECTABLE WARNING SURFACE COVERAGE IS 24". MINIMUM IN THE DIRECTION OF RAMP/PATH TRAVEL, AND THE FULL WIDTH OF THE RAMP/PATH. DETECTABLE WARNING SHALL BE LOCATED WITHIN THE AREA. A BORDER OFFSET NOT GREATER THAN 3" MEASURED ALONG THE EDGES OF THE DETECTABLE WARNING IS ALLOWABLE. FOR RADIAL CURB THE OFFSET IS MEASURED FROM THE ENDS OF THE RADIUS.

FOR NEW ROADWAY CONSTRUCTION, THE RAMP CROSS SLOPE MAY NOT EXCEED 2.0%. FOR ALTERATIONS TO EXISTING ROADWAYS, THE CROSS SLOPE MAY BE TRANSITIONED TO MEET AN EXISTING ROADWAY GRADE. THE CROSS SLOPE TRANSITION SHALL BE APPLIED UNIFORMLY OVER THE FULL LENGTH OF THE RAMP.

THE MAXIMUM RUNNING SLOPE OF 8.3% IS RELATIVE TO A FLAT (0%) REFERENCE. HOWEVER, IT SHALL NOT REQUIRE ANY RAMP OR SERIES OF RAMPS TO EXCEED 15 FEET IN LENGTH.

DRAINAGE STRUCTURES SHOULD NOT BE PLACED IN LINE WITH RAMPS. WHEN THE RAMP IS LOCATED IN THE RAMP PATH OF TRAVEL, USE A LOCATION OF THE DRAINAGE STRUCTURE. WHEN EXISTING DRAINAGE STRUCTURES ARE LOCATED IN THE RAMP PATH OF TRAVEL, USE A GRATE WITH BARS PERPENDICULAR TO THE DIRECTION OF TRAVEL NOT GREATER THAN 1/2". ELONGATED OPENINGS SHALL BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DOMINANT DIRECTION OF TRAVEL.

TRANSITION THE GUTTER PAN CROSS SECTION SUCH THAT THE COUNTER SLOPE IN THE DIRECTION OF RAMP TRAVEL IS NOT GREATER THAN 5.0%. MAINTAIN THE NORMAL GUTTER PAN CROSS SECTION ACROSS DRAINAGE STRUCTURES.

THE TOP OF THE JOINT FILLER FOR ALL RAMP TYPES SHALL BE FLUSH WITH THE ADJACENT CONCRETE.

CROSSWALK AND STOP LINE MARKINGS, IF USED, SHALL BE SO LOCATED AS TO NOT INTERFERE WITH THE CROSSWALK. SPECIFIC DETAILS FOR MARKING APPLICATIONS ARE SHOWN IN THE "MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

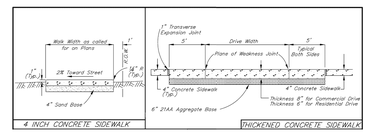
FLARED SIDES, WITH A SLOPE OF 10% MAXIMUM, MEASURED ALONG THE PEDESTRIAN CURB LINE, SHALL BE PROVIDED WHERE AN UNOBSTRUCTED CIRCULATION PATH LATERALLY CROSSES THE SIDEWALK RAMP. FLARED SIDES ARE NOT REQUIRED WHERE THE RAMP IS REMOVED BY MEANS OF A CURB RETURN. FLARED SIDES ARE NOT REQUIRED WHERE THEY ARE NOT REQUIRED. FLARED SIDES CAN BE CONSIDERED IN LIEU OF CURB RETURNS AT RAMP OPENINGS.

DETECTABLE WARNING PLATES MUST BE INSTALLED USING FABRICATED OR FIELD-CUT UNITS CAST AND/OR ANCHORED IN THE PAVEMENT TO RESIST SHIFTING OR HEAVING.

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

SIDEWALK RAMP AND DETECTABLE WARNING DETAILS

9-30-2014	7-1-2014	R-28-I	SHEET 7 OF 7
F.H.W.A. APPROVAL	PLAN DATE		



SIDEWALK STANDARD DETAILS

THE GRAND MAPLE

ELEVATION 1

WIDTH 39'-8"
DEPTH: 44'-8 1/2"

ELEVATION 2

WIDTH 39'-8"
DEPTH: 44'-8 1/2"

ELEVATION 3

WIDTH 39'-8"
DEPTH: 44'-8 1/2"

ELEVATION 4

WIDTH 39'-8"
DEPTH: 44'-8 1/2"

ELEVATION 5

WIDTH 45'-6"
DEPTH: 44'-8 1/2"

ELEVATION 6

WIDTH 39'-8"
DEPTH: 44'-8 1/2"

DRAWING INDEX

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GN2	GENERAL NOTES
A1	ELEVATION 1 FOUNDATION PLAN
S1	ELEVATION 1 FOUNDATION PLAN STRUCTURE
A2	ELEVATION 1 FIRST FLOOR PLAN
A3	ELEVATION 1 SECOND FLOOR PLAN
S2	ELEVATION 1 FLOOR PLANS STRUCTURE
A4	ELEVATION 1 FRONT / LEFT ELEVATION
A5	ELEVATION 1 RIGHT / REAR ELEVATION
A6	ELEVATION 1 SECTION A
A7	ELEVATION 2 FOUNDATION PLAN
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S3	ELEVATION 2 FOUNDATION & FLOOR PLANS STRUCTURE
A9	ELEVATION 2 FRONT / REAR & PARTIAL SIDE ELEVATIONS
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S4	ELEVATION 3 FOUNDATION & FLOOR PLANS STRUCTURE
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A14	ELEVATION 4 PARTIAL PLANS & SECTION A
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A15	ELEVATION 4 FRONT / REAR & PARTIAL SIDE ELEVATIONS
A16	ELEVATION 5 FOUNDATION PLAN
A17	ELEVATION 5 PARTIAL PLANS & SECTION A
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A18	ELEVATION 5 FRONT / REAR & PARTIAL SIDE ELEVATIONS
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CLIENT / PROJECT

HOME RENEWAL SYSTEMS
THE GRAND MAPLE
GARAGE LEFT

JOB No.	13-182
DRAWN:	DM
CHECKED:	ECT
REVIEW	8-28-13
FINAL:	9-27-13
REVISION	3-18-15
REVISION	4-9-15
REVISION	4-28-15
REVISION	6-22-15
REVISION	7-20-15

SCALE:
PER PLAN

SHEET #
COVER

PLAN NOTES

INTERIOR WALLS:
1/2" GYPSUM WALL BOARD ON EACH SIDE OF 2x4 WOOD STUDS @ 16" O.C. 3 1/2" THICK TYPICAL (UNLESS NOTED OTHERWISE).

EXTERIOR WALLS:
SIDING AND/OR MASONRY WITH AIRSPACE, MOISTURE BARRIER PAPER (HOUSE WRAP) ON 7/16" O.S.B. SHEATHING ON 2X4 WOOD STUDS @ 16" O.C. OR AS NOTED, 3 1/2" BATT INSULATION R-13, 1/2" GYPSUM WALL BOARD (GLUE & SCREW). WALL TO BE 4" THICK WITH SIDING AND 8" THICK WITH MASONRY (TYPICAL UNLESS NOTED OTHERWISE).

1. TRUSSES TO BEAR ON EXTERIOR WALLS ONLY UNLESS NOTED OTHERWISE.
2. OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL BE EQUIPPED WITH 20-MINUTE FIRE RATED DOORS (OR EQUIVALENT PER 2009 MRC SECTION R309.1).
3. VENT ALL EXHAUST FANS TO EXTERIOR.
4. WHEN POSSIBLE DIRECT ALL FLUES AND VENTS THAT PENETRATE ROOF BEHIND MAIN RIDGE.
5. INSTALL WATER SUPPLY AND DRAIN BOX (GREY BOX) AT WASHING MACHINE LOCATION.
6. USE MOISTURE RESISTANT DRYWALL AT ALL AREAS SUSCEPTIBLE TO MOISTURE.
8. ALL FIRST FLOOR INTERIOR DOORS TO BE FRAMED 6'-8" TALL. ALL SECOND FLOOR INTERIOR DOORS TO BE FRAMED 6'-8" UNLESS NOTED OTHERWISE. VERIFY W/ BUILDER
9. PROVIDE GUARDRAIL AT STAIRS DURING CONSTRUCTION.
10. WINDOW NOMENCLATURE: 3050 = 3'-0" x 5'-0"
11. PROVIDE SQUASH BLOCKS UNDER ALL BEARING CONDITIONS.
12. GARAGE WALLS TO BE 2X6 STUDS IF OVER 10'-8" TALL.

NOTE:
S.D.
ALL SMOKE DETECTORS INTERCONNECTED W/ BATTERY BACK-UP PER CODE.

NOTE:
DOOR & WINDOW LOCATIONS:

ALL DOORS & WINDOWS ARE ASSUMED TO BE EITHER IN THE CENTER OF THE WALL MASS OR MIN. 3 1/2 INCHES FROM PERPENDICULAR WALL FOR DOOR CASING UNLESS NOTED OTHERWISE

NOTE:
ALL INTERIOR PARTITION WALLS ARE REPRESENTED AS STUD ONLY (3 1/2") (UNLESS NOTED OTHERWISE)

NOTE:
ALL EXTERIOR WALLS ARE REPRESENTED AS 2 X 4 STUD + SHEATHING (4") (UNLESS NOTED OTHERWISE)

NOTE:
VERIFY DROPPED FLOOR AREAS FOR TILE WITH BUILDER

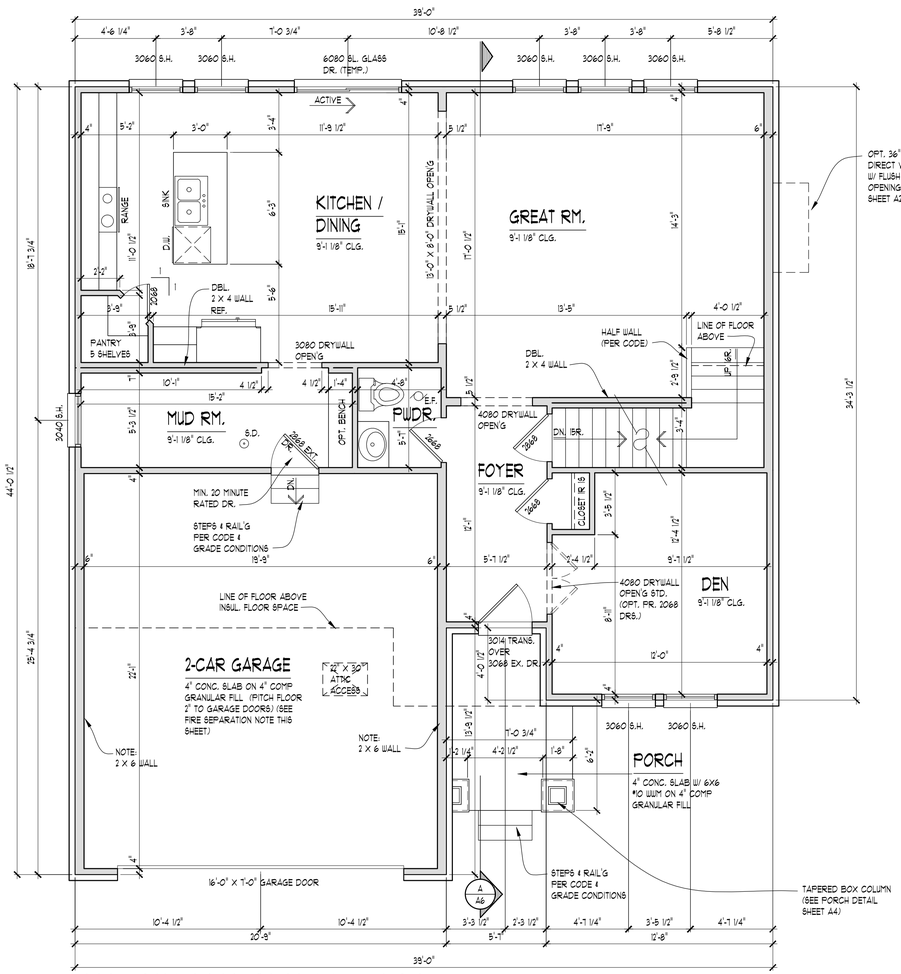
NOTE:
PROVIDE MIN. (2) 2 X 4 HEADER AT ALL INTERIOR & EXTERIOR DOOR & WINDOW OPENINGS (UNLESS NOTED OTHERWISE).

NOTE:
PROVIDE MIN. (1) JACK STUD & (1) KING STUD AT EACH END OF ALL HEADERS (UNLESS NOTED OTHERWISE).

NOTE:
PROVIDE MIN. (1) JOIST OR LADDER FRAMING UNDER ALL UPPER FLOOR PARALLEL PARTITIONS

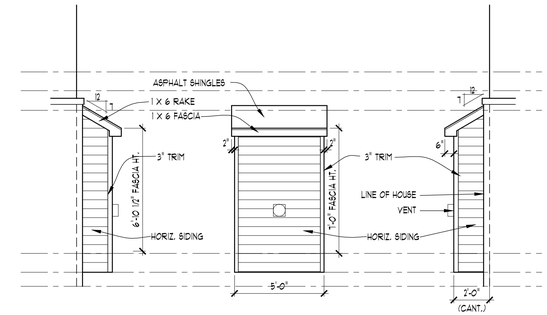
FIRE SEPARATION NOTE

FIRE SEPARATION (R309)
GARAGE SPACE BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM ALL HABITABLE ROOMS ABOVE BY NOT LESS THAN 5/8-INCH TYPE X GYPSUM BOARD OR EQUIVALENT. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 1/2-INCH GYPSUM BOARD OR EQUIVALENT. ALL OTHER GARAGE SPACE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 1/2-INCH GYPSUM BOARD APPLIED TO THE GARAGE SIDE. DROP CLG. UNDER FLR. ABV. (ENCLOSE MECHANICAL AND STRUCTURAL ELEMENTS) VERIFY W/ BLDR.



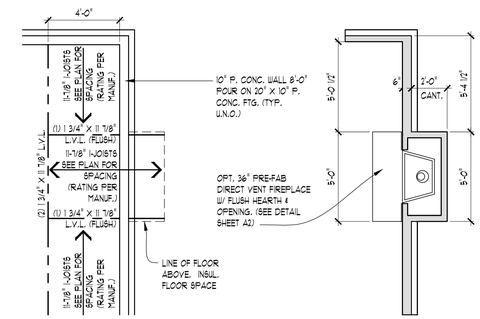
ELEVATION 1 FIRST FLOOR PLAN

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



OPT. FIREPLACE ELEVATION

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



OPT. FIREPLACE FLOOR PLAN

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

AREA SUMMARY:

OVERALL FLOOR AREA:	
FIRST FLOOR	1096 S.F.
SECOND FLOOR	1185 S.F.
TOTAL AREA	2281 S.F.

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-CALL MISS DIG AT 800-482-7171 3 DAYS PRIOR TO ANY EXCAVATION.
-CONSTRUCTION IS THE SOLE RESPONSIBILITY OF THE PERMIT HOLDER

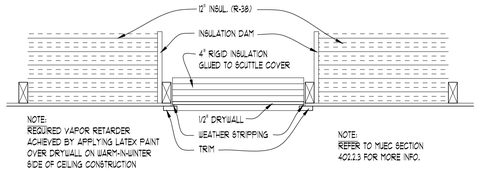
CLIENT / PROJECT

HOME RENEWAL SYSTEMS
THE GRAND MAPLE
GARAGE LEFT

JOB No.	13-182
DRAWN:	DM
CHECKED:	ECT
REVIEW	8-28-13
FINAL:	9-27-13
REVISION	3-18-15
REVISION	4-9-15
REVISION	4-28-15
REVISION	6-22-15
REVISION	7-20-15

SCALE: PER PLAN

SHEET #
A2



ATTIC ACCESS DETAIL

SCALE: 1" = 1'-0"

PLAN NOTES

INTERIOR WALLS:
1/2" GYPSUM WALL BOARD ON EACH SIDE OF 2x4 WOOD STUDS @ 16" O.C. 3 1/2" THICK TYPICAL (UNLESS NOTED OTHERWISE).

EXTERIOR WALLS:
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6. USE MOISTURE RESISTANT DRYWALL AT ALL AREAS SUSCEPTIBLE TO MOISTURE.
8. ALL FIRST FLOOR INTERIOR DOORS TO BE FRAMED 6'-8" TALL, ALL SECOND FLOOR INTERIOR DOORS TO BE FRAMED 6'-8" UNLESS NOTED OTHERWISE. VERIFY W/ BUILDER
9. PROVIDE GUARDRAIL AT STAIRS DURING CONSTRUCTION.
10. WINDOW NOMENCLATURE: 3050 = 3'-0" x 5'-0"
11. PROVIDE SQUASH BLOCKS UNDER ALL BEARING CONDITIONS.
12. GARAGE WALLS TO BE 2X6 STUDS IF OVER 10'-8" TALL.

NOTE:
S.D.
ALL SMOKE DETECTORS INTERCONNECTED W/ BATTERY BACK-UP PER CODE.

NOTE:
DOOR & WINDOW LOCATIONS:

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NOTE:
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NOTE:
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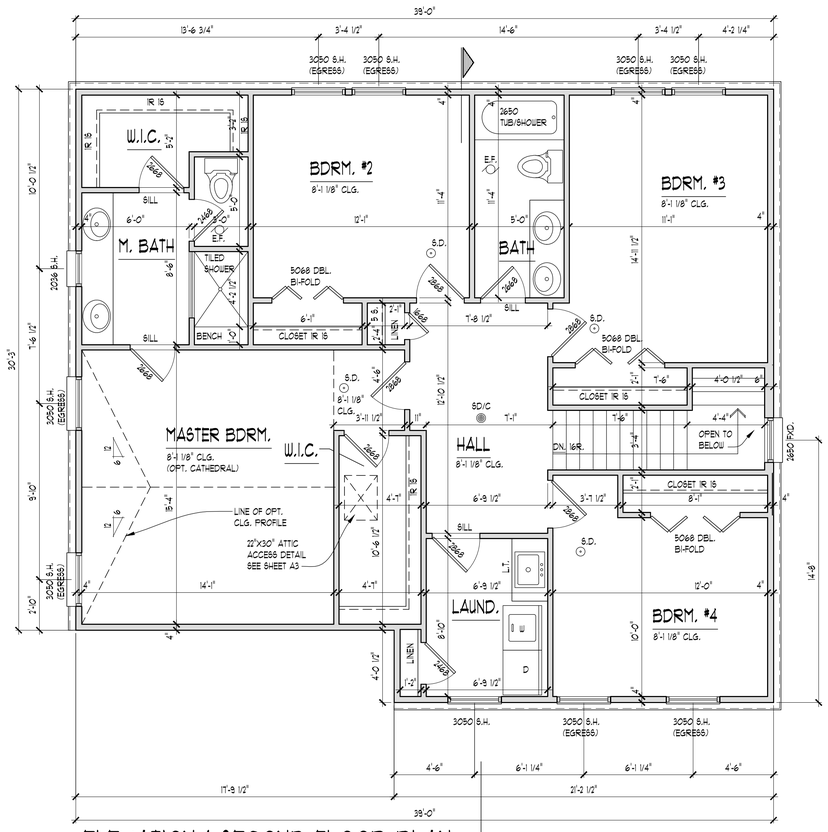
NOTE:
VERIFY DROPPED FLOOR AREAS FOR TILE WITH BUILDER

NOTE:
PROVIDE MIN. (2) 2 X 4 HEADER AT ALL INTERIOR & EXTERIOR DOOR & WINDOW OPENINGS (UNLESS NOTED OTHERWISE).

NOTE:
PROVIDE MIN. (1) JACK STUD & (1) KING STUD AT EACH END OF ALL HEADERS (UNLESS NOTED OTHERWISE).

NOTE:
PROVIDE MIN. (1) JOIST OR LADDER FRAMING UNDER ALL UPPER FLOOR PARALLEL PARTITIONS



ELEVATION 1 SECOND FLOOR PLAN

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

A
A6

AREA SUMMARY:

OVERALL FLOOR AREA:	
FIRST FLOOR	1096 S.F.
SECOND FLOOR	1185 S.F.
TOTAL AREA	2281 S.F.

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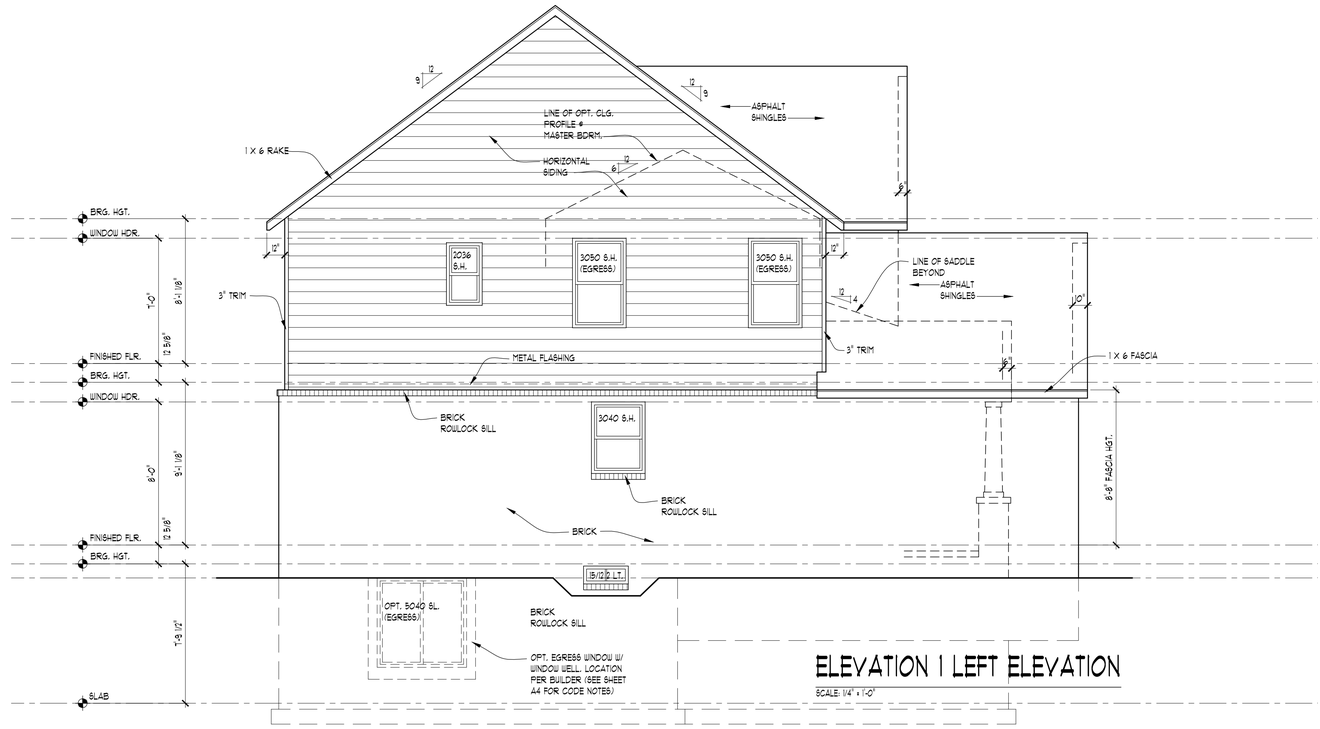
CLIENT / PROJECT

HOME RENEWAL SYSTEMS
THE GRAND MAPLE GARAGE LEFT

JOB No.	13-182
DRAWN:	DM
CHECKED:	ECT
REVIEW	8-28-13
FINAL:	9-27-13
REVISION	3-18-15
REVISION	4-9-15
REVISION	4-28-15
REVISION	6-22-15
REVISION	7-20-15

SCALE:
PER PLAN

SHEET #
A3



ELEVATION 1 LEFT ELEVATION

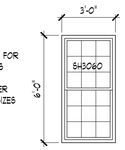
SCALE: 1/4" = 1'-0"

ELEVATION NOTES

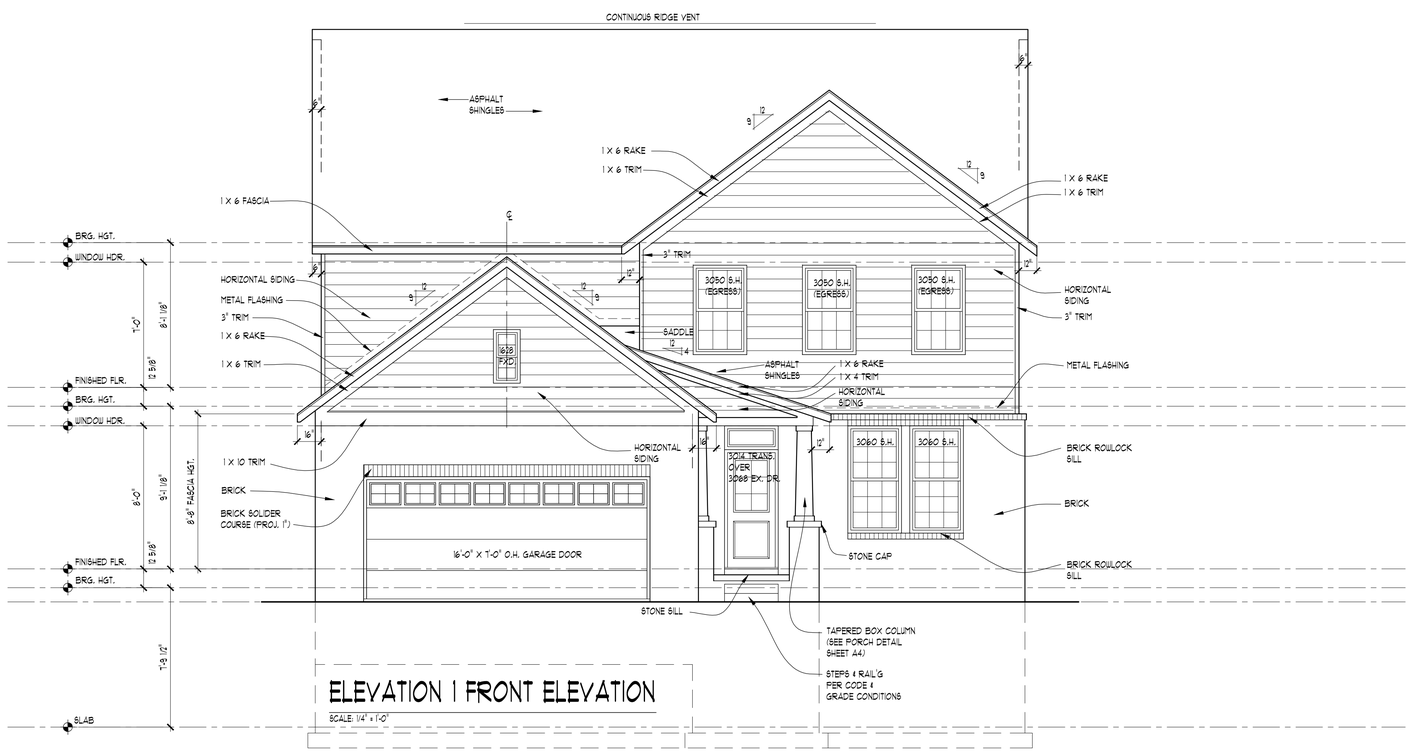
1. ALL ROOF SADDLES TO BE PLYWOOD SHEATHED WITH ICE & WATER SHIELD AND SHINGLES.
2. PROVIDE ICE & WATER SHIELD MIN. 6'-0" COVERAGE AT ALL VALLEYS
3. FIREPLACE FLUE TO BE DETERMINED PER MANUFACTURER'S SPECIFICATION
4. METAL FLASHING AS REQUIRED BY CODE.
5. ROOF & SOFFIT VENTS AS REQUIRED BY CODE.
6. PROVIDE GUTTERS & DOWNSPOUTS FOR DRAINAGE OF ROOF WATER. DOWNSPOUTS ARE TO BE LOCATED SO THAT THE DISCHARGE WILL NOT SPILL ON OR FLOW ACROSS ANY PORCHES, WALKS OR DRIVES.
7. CARPENTER TO VERIFY THICKNESS OF MASONRY PRIOR TO BUILDING BRICK RACK

TYPICAL WINDOW DESIGNATION

NOTE:
GENERAL REFERENCE FOR ROUGH OPENING SIZES ONLY. CONSULT WITH WINDOW MANUFACTURER FOR EXACT WINDOW SIZES & REQUIREMENTS.

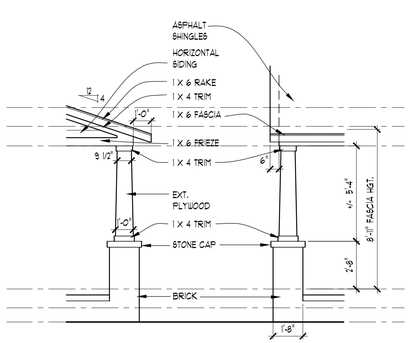


NOTE:
ALL WINDOW SILLS OVER 6'-0" ABOVE EXTERIOR GRADE OR SURFACE BELOW TO BE MINIMUM 24" ABOVE FINISHED FLOOR



ELEVATION 1 FRONT ELEVATION

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



PORCH DETAIL

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

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CLIENT / PROJECT

HOME RENEWAL SYSTEMS
THE GRAND MAPLE
GARAGE LEFT

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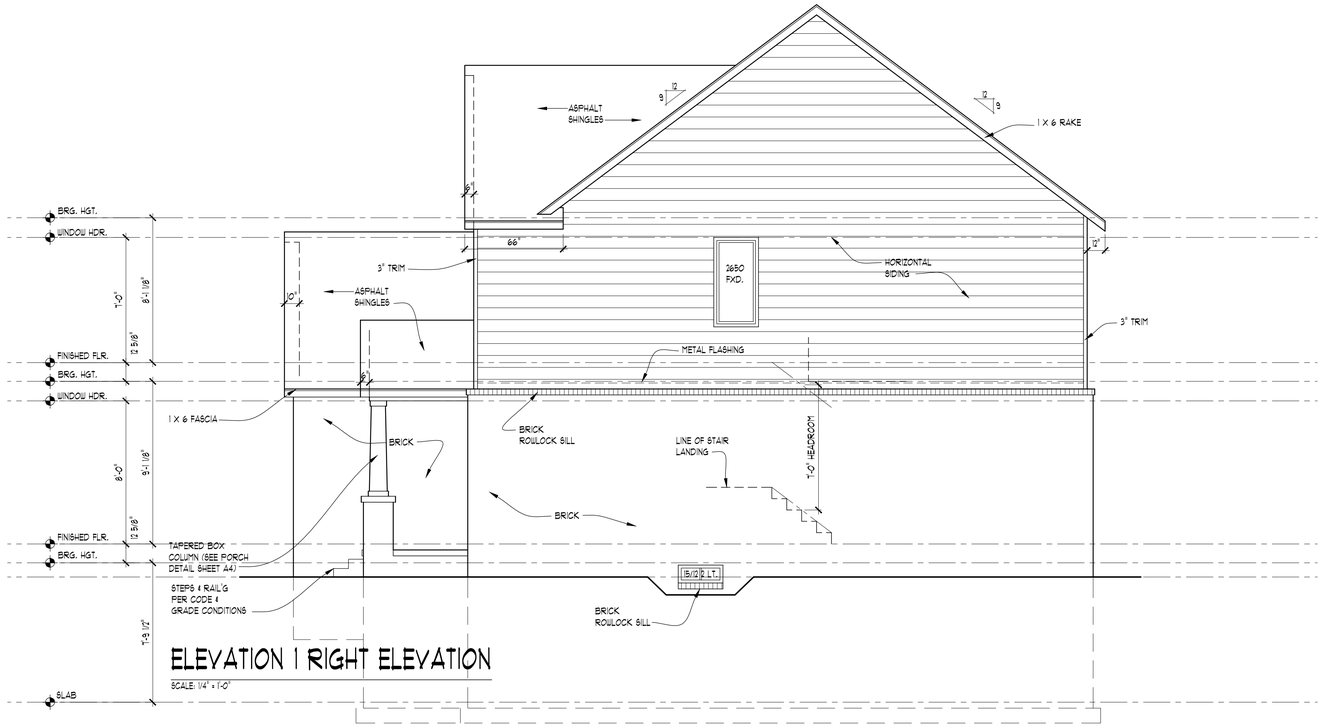
SCALE:
PER PLAN

SHEET #
A4



ELEVATION 1 RIGHT ELEVATION

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

ELEVATION NOTES

1. ALL ROOF SADDLES TO BE PLYWOOD SHEATHED WITH ICE & WATER SHIELD AND SHINGLES.
2. PROVIDE ICE & WATER SHIELD MIN. 6'-0" COVERAGE AT ALL VALLEYS
3. FIREPLACE FLUE TO BE DETERMINED PER MANUFACTURER'S SPECIFICATION
4. METAL FLASHING AS REQUIRED BY CODE.
5. ROOF & SOFFIT VENTS AS REQUIRED BY CODE.
6. PROVIDE GUTTERS & DOWNSPOUTS FOR DRAINAGE OF ROOF WATER. DOWNSPOUTS ARE TO BE LOCATED SO THAT THE DISCHARGE WILL NOT SPILL ON OR FLOW ACROSS ANY PORCHES, WALKS OR DRIVES.
7. CARPENTER TO VERIFY THICKNESS OF MASONRY PRIOR TO BUILDING BRICK RACK

TYPICAL WINDOW DESIGNATION

NOTE:
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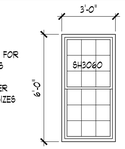
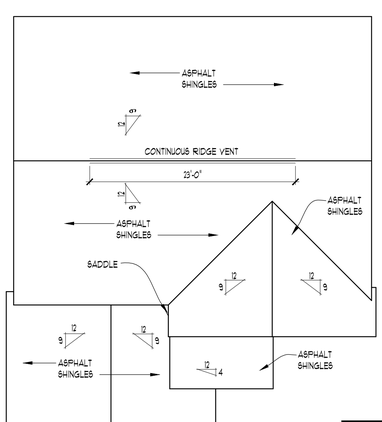


NOTE:
ALL WINDOW SILLS OVER 6'-0" ABOVE EXTERIOR GRADE OR SURFACE BELOW TO BE MINIMUM 24" ABOVE FINISHED FLOOR

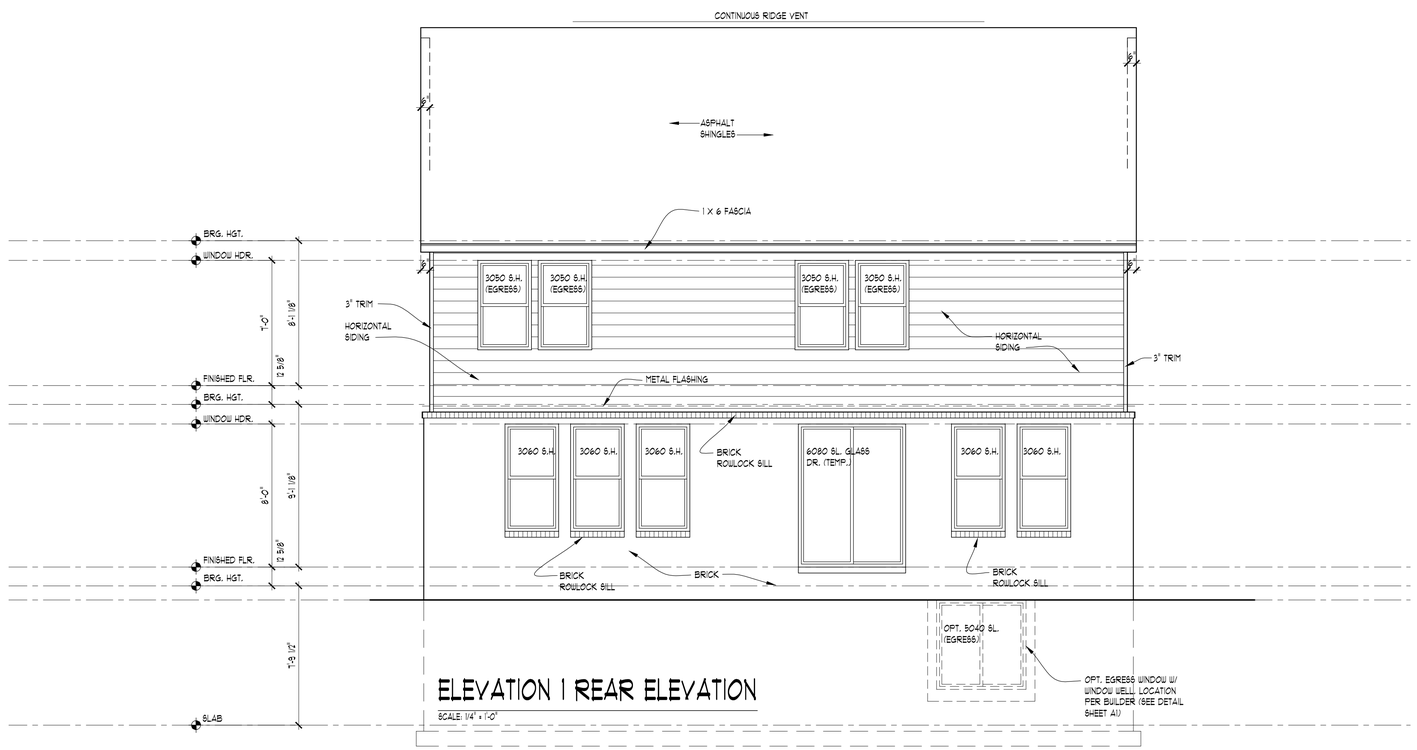


ELEVATION 1 ROOF PLAN

SCALE: 1/8" = 1'-0"

ATTIC VENTILATION CALCULATIONS: FOR RIDGE VENTING

AREA OF ATTIC OVER HEATED SPACE = 1271 SQ. FT.
1271/300 = 4.25 (SQ. FT. REQ'D)
4.25' X 144" = 612.96" (SQ. INCH CONVERSION)
612.96" X 2/3 = 408.64" (SQ. INCHES REQ'D)
408.64" / 18 = 23' (LINEAR FT. OF RIDGE VENT REQ'D)



ELEVATION 1 REAR ELEVATION

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

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CLIENT / PROJECT

HOME RENEWAL SYSTEMS
THE GRAND MAPLE
GARAGE LEFT

JOB No.	13-182
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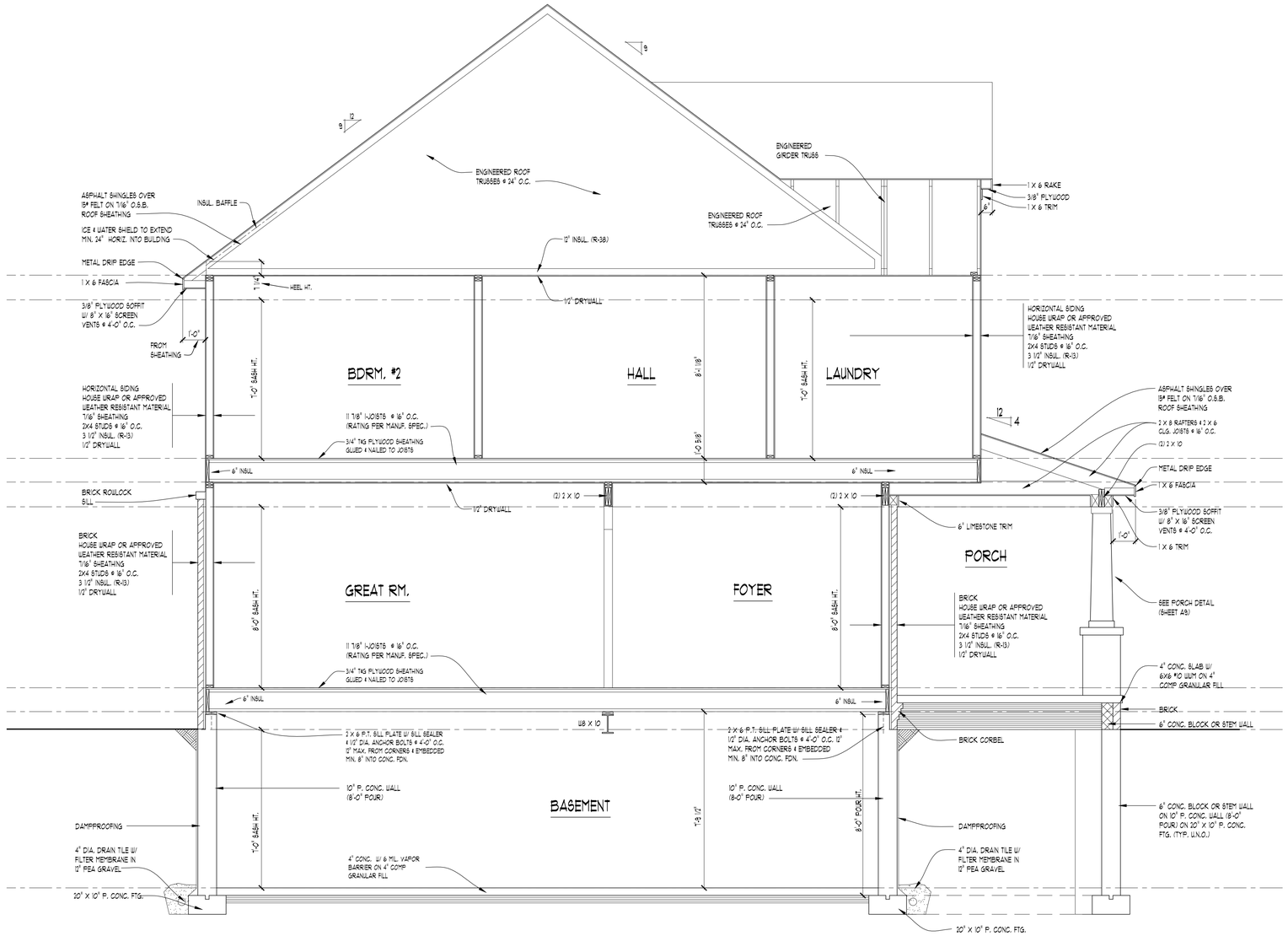
REVISION	4-28-15
REVISION	6-22-15
REVISION	7-20-15

SCALE:
PER PLAN

SHEET #
A5



ELEVATION 1 BUILDING SECTION

A
A1-A3

SCALE: 3/8" = 1'-0"

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SCALE:
PER PLAN

SHEET #
A6

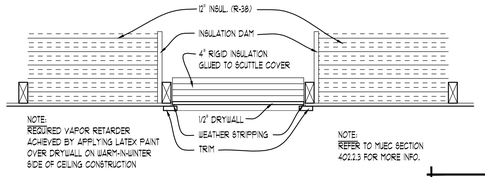
ARBOR FARMS HARTFORD ELEVATIONS – 6/1/18

Hartford Urban Farm 1

Hartford Craftsman 1

Hartford Urban Farm 2

Hartford Craftsman 2



ATTIC ACCESS DETAIL

SCALE: 1" = 1'-0"

PLAN NOTES

INTERIOR WALLS:
1/2" GYPSUM WALL BOARD ON EACH SIDE OF 2x4 WOOD STUDS @ 16" O.C. 3 1/2" THICK TYPICAL (UNLESS NOTED OTHERWISE).

EXTERIOR WALLS:
SIDING AND/OR MASONRY WITH AIRSPACE, MOISTURE BARRIER PAPER (HOUSE WRAP) ON 1/16" O.S.B. SHEATHING ON 2X4 WOOD STUDS @ 16" O.C. OR AS NOTED, 3 1/2" BATT INSULATION R-13, 1/2" GYPSUM WALL BOARD (GLUE & SCREW). WALL TO BE 4" THICK WITH SIDING AND 8" THICK WITH MASONRY (TYPICAL UNLESS NOTED OTHERWISE).

1. TRUSSES TO BEAR ON EXTERIOR WALLS ONLY UNLESS NOTED OTHERWISE.
2. OPENINGS BETWEEN THE GARAGE AND RESIDENCE SHALL BE EQUIPPED WITH 20-MINUTE FIRE RATED DOORS (OR EQUIVALENT PER 2009 MRC SECTION R309.1).
3. VENT ALL EXHAUST FANS TO EXTERIOR.
4. WHEN POSSIBLE DIRECT ALL FLUES AND VENTS THAT PENETRATE ROOF BEHIND MAIN RIDGE.
5. INSTALL WATER SUPPLY AND DRAIN BOX (GREY BOX) AT WASHING MACHINE LOCATION.
6. USE MOISTURE RESISTANT DRYWALL AT ALL AREAS SUSCEPTIBLE TO MOISTURE.
8. ALL FIRST FLOOR INTERIOR DOORS TO BE FRAMED 6'-8" TALL ALL SECOND FLOOR INTERIOR DOORS TO BE FRAMED 6'-8" UNLESS NOTED OTHERWISE. VERIFY W/ BUILDER
9. PROVIDE GUARDRAIL AT STAIRS DURING CONSTRUCTION.
10. WINDOW NOMENCLATURE: 3050 = 3'-0" x 5'-0"
11. PROVIDE SQUASH BLOCKS UNDER ALL BEARING CONDITIONS.
12. GARAGE WALLS TO BE 2X6 STUDS IF OVER 10'-8" TALL.

NOTE:
S.D.
ALL SMOKE DETECTORS INTERCONNECTED W/ BATTERY BACK-UP PER CODE.

NOTE:
DOOR & WINDOW LOCATIONS:

ALL DOORS & WINDOWS ARE ASSUMED TO BE EITHER IN THE CENTER OF THE WALL MASS OR MIN. 4 INCHES FROM PERPENDICULAR WALL FOR CASING UNLESS NOTED OTHERWISE

NOTE:
ALL INTERIOR PARTITION WALLS ARE REPRESENTED AS STUD ONLY (3 1/2") (UNLESS NOTED OTHERWISE)

NOTE:
ALL EXTERIOR WALLS ARE REPRESENTED AS 2 X 4 STUD + SHEATHING (4") (UNLESS NOTED OTHERWISE)

NOTE:
VERIFY DROPPED FLOOR AREAS FOR TILE WITH BUILDER

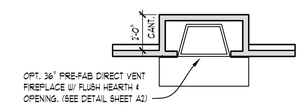
NOTE:
PROVIDE MIN. (2) 2 X 4 HEADER AT ALL INTERIOR & EXTERIOR DOOR & WINDOW OPENINGS (UNLESS NOTED OTHERWISE).

NOTE:
PROVIDE MIN. (1) JACK STUD & (1) KING STUD AT EACH END OF ALL HEADERS (UNLESS NOTED OTHERWISE).

NOTE:
PROVIDE MIN. (1) JOIST OR LADDER FRAMING UNDER ALL UPPER FLOOR PARALLEL PARTITIONS

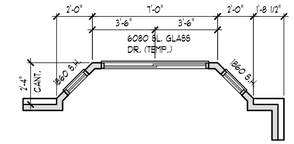
FIRE SEPARATION NOTE

FIRE SEPARATION (R302.6)
GARAGE SPACE BENEATH HABITABLE ROOMS SHALL BE SEPARATED FROM ALL HABITABLE ROOMS ABOVE BY NOT LESS THAN 5/8-INCH TYPE X GYPSUM BOARD OR EQUIVALENT. WHERE THE SEPARATION IS A FLOOR-CEILING ASSEMBLY, THE STRUCTURE SUPPORTING THE SEPARATION SHALL ALSO BE PROTECTED BY NOT LESS THAN 1/2-INCH GYPSUM BOARD OR EQUIVALENT. ALL OTHER GARAGE SPACE SHALL BE SEPARATED FROM THE RESIDENCE AND ITS ATTIC AREA BY NOT LESS THAN 1/2-INCH GYPSUM BOARD APPLIED TO THE GARAGE SIDE. DROP CLG. UNDER FLR. ABV. (ENCLOSE MECHANICAL AND STRUCTURAL ELEMENTS) VERIFY W/ BLDR.



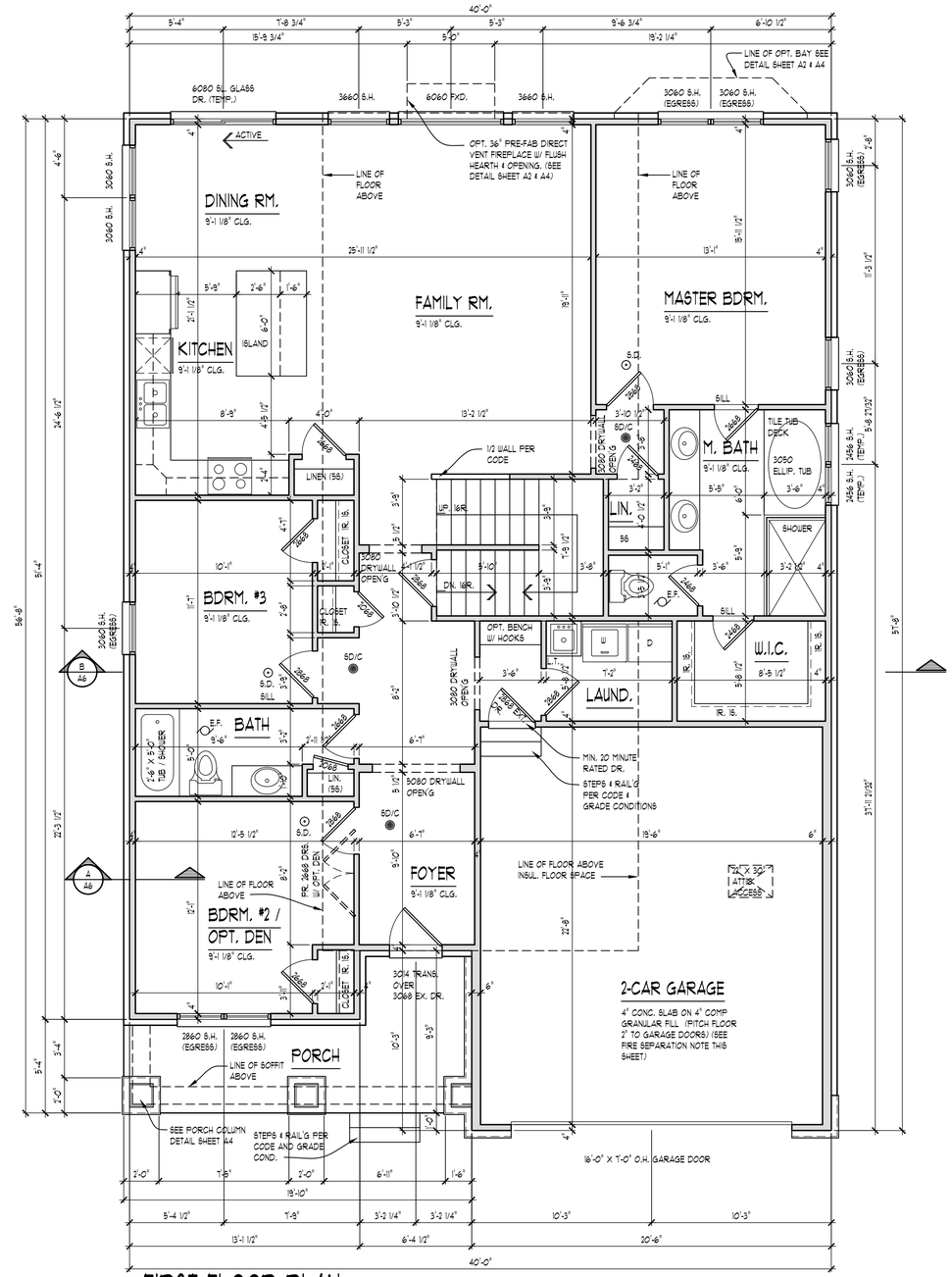
OPT. FIREPLACE PARTIAL FIRST FLOOR PLAN

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



OPT. BAY @ MASTER BDRM. PARTIAL FIRST FLOOR PLAN

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



FIRST FLOOR PLAN

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

AREA SUMMARY:

OVERALL FLOOR AREA:	
FIRST FLOOR	1744 S.F.
BONUS RM.	767 S.F.
TOTAL AREA	2511 S.F.

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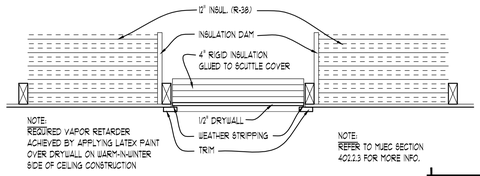
CLIENT / PROJECT

HOME RENEWAL SYSTEMS
HARTFORD GARAGE RIGHT

JOB No.	15-166
DRAWN:	ECT
CHECKED:	ECT
REVIEW	-
FINAL:	4-23-15
REVISION	4-28-15
REVISION	4-30-15
REVISION	7-21-15

SCALE: PER PLAN

SHEET #
A2



ATTIC ACCESS DETAIL

SCALE: 1" = 1'-0"

PLAN NOTES

INTERIOR WALLS:
1/2" GYPSUM WALL BOARD ON EACH SIDE OF 2x4 WOOD STUDS @ 16" O.C. 3 1/2" THICK TYPICAL (UNLESS NOTED OTHERWISE).

EXTERIOR WALLS:
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NOTE:
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NOTE:
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NOTE:
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NOTE: S.D.
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NOTE:
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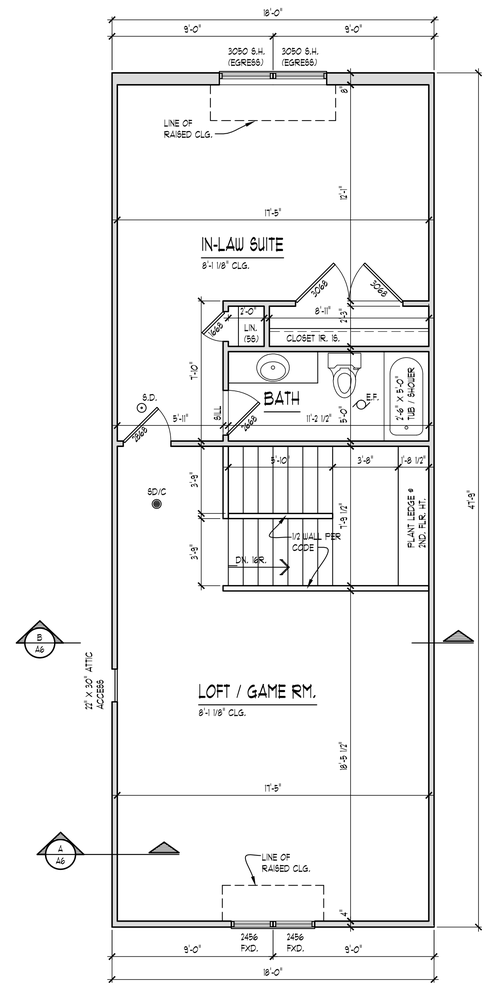

SECOND FLOOR PLAN

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

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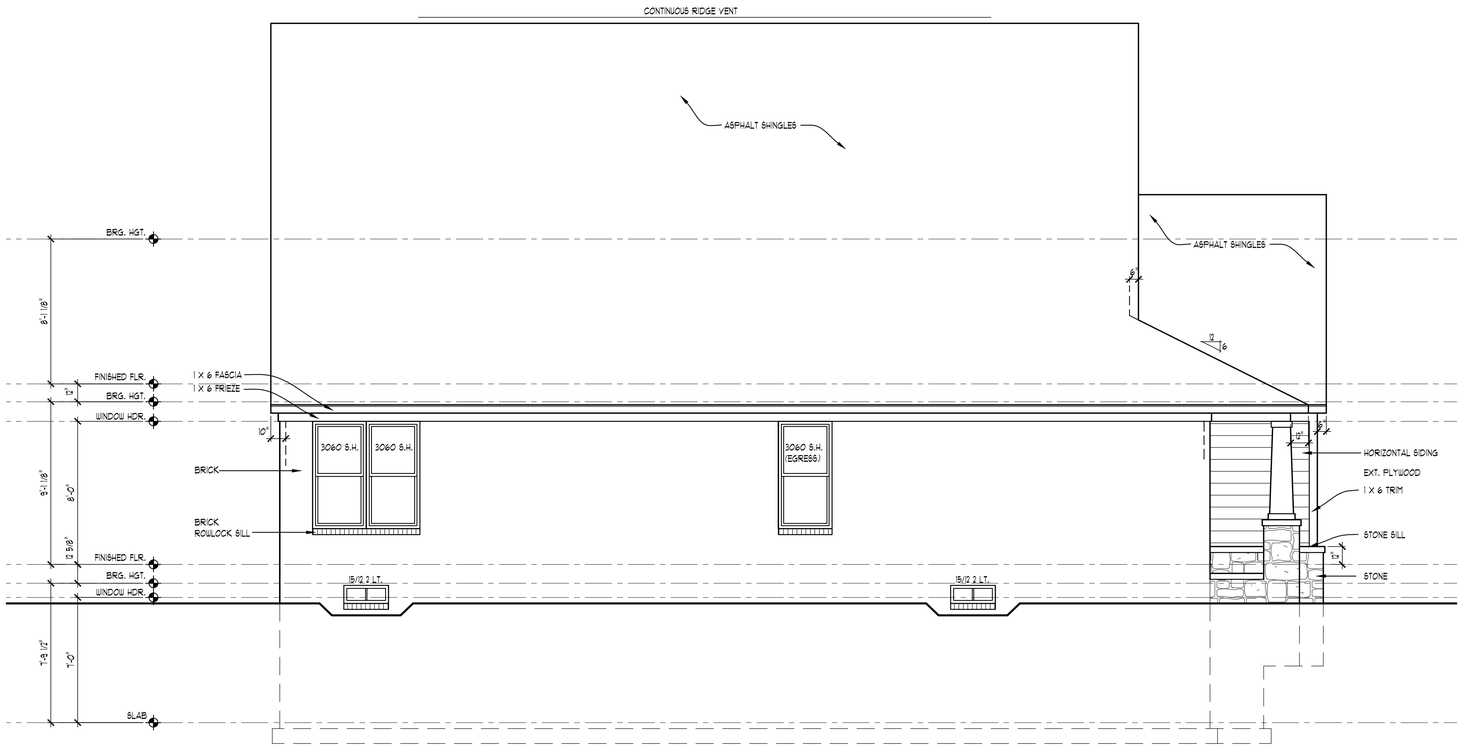
CLIENT / PROJECT

HOME RENEWAL SYSTEMS
HARTFORD GARAGE RIGHT

JOB No.	15-166
DRAWN:	ECT
CHECKED:	ECT
REVIEW	-
FINAL:	4-23-15
REVISION	4-28-15
REVISION	4-30-15
REVISION	7-21-15

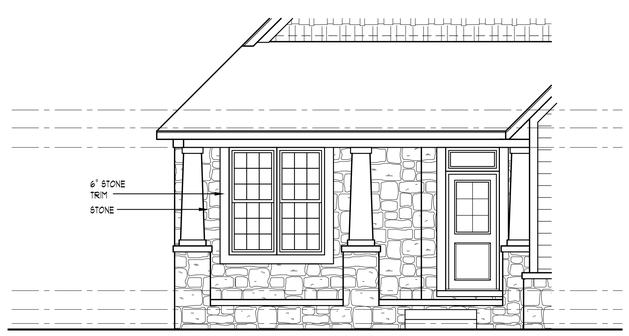
SCALE:
PER PLAN

SHEET #
A3



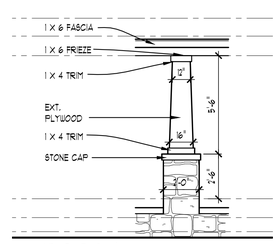
LEFT ELEVATION

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



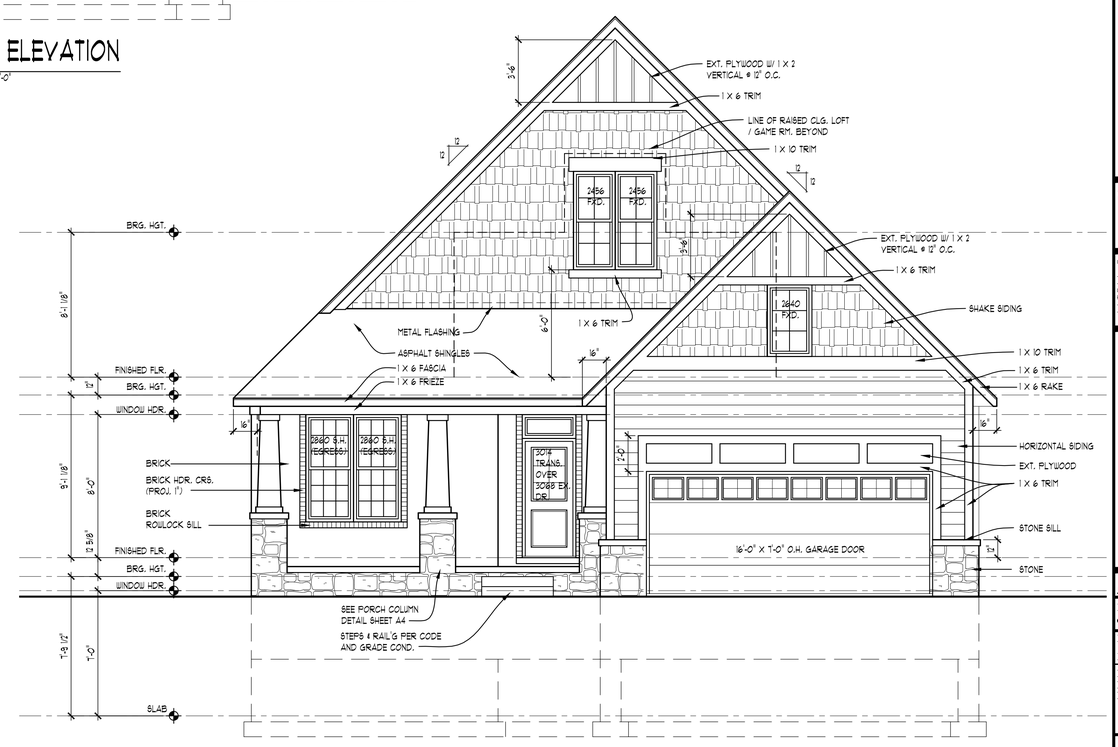
OPT. STONE @ FRONT PORCH WALL

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



PORCH COLUMN DETAIL

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



FRONT ELEVATION

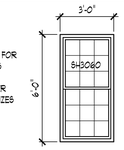
SCALE: 1/4" = 1'-0"

ELEVATION NOTES

1. ALL ROOF SADDLES TO BE PLYWOOD SHEATHED WITH ICE & WATER SHIELD AND SHINGLES.
2. PROVIDE ICE & WATER SHIELD MIN. 6'-0" COVERAGE AT ALL VALLEYS
3. FIREPLACE FLUE TO BE DETERMINED PER MANUFACTURER'S SPECIFICATION
4. METAL FLASHING AS REQUIRED BY CODE.
5. ROOF & SOFFIT VENTS AS REQUIRED BY CODE.
6. PROVIDE GUTTERS & DOWNSPOUTS FOR DRAINAGE OF ROOF WATER. DOWNSPOUTS ARE TO BE LOCATED SO THAT THE DISCHARGE WILL NOT SPILL ON OR FLOW ACROSS ANY PORCHES, WALKS OR DRIVES.
7. CARPENTER TO VERIFY THICKNESS OF MASONRY PRIOR TO BUILDING BRICK RACK

TYPICAL WINDOW DESIGNATION

NOTE:
GENERAL REFERENCE FOR ROUGH OPENING SIZES ONLY. CONSULT WITH WINDOW MANUFACTURER FOR EXACT WINDOW SIZES & REQUIREMENTS.



NOTE:
OVERHANG DIMENSIONS (O.H.) ARE FROM SHEATHING U.N.O.

NOTE:
ALL WINDOW SILLS OVER 6'-0" ABOVE EXTERIOR GRADE OR SURFACE BELOW TO BE MINIMUM 24" ABOVE FINISHED FLOOR

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CLIENT / PROJECT

HOME RENEWAL SYSTEMS
HARTFORD
GARAGE RIGHT

JOB No.	15-166
DRAWN:	ECT
CHECKED:	ECT
REVIEW	-
FINAL:	4-23-15
REVISION	4-28-15
REVISION	4-30-15
REVISION	7-21-15

SCALE:
PER PLAN

SHEET #
A4

ELEVATION NOTES

1. ALL ROOF SADDLES TO BE PLYWOOD SHEATHED WITH ICE & WATER SHIELD AND SHINGLES.
2. PROVIDE ICE & WATER SHIELD MIN. 6'-0" COVERAGE AT ALL VALLEYS
3. FIREPLACE FLUE TO BE DETERMINED PER MANUFACTURER'S SPECIFICATION
4. METAL FLASHING AS REQUIRED BY CODE.
5. ROOF & SOFFIT VENTS AS REQUIRED BY CODE.
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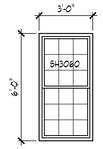

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NOTE:
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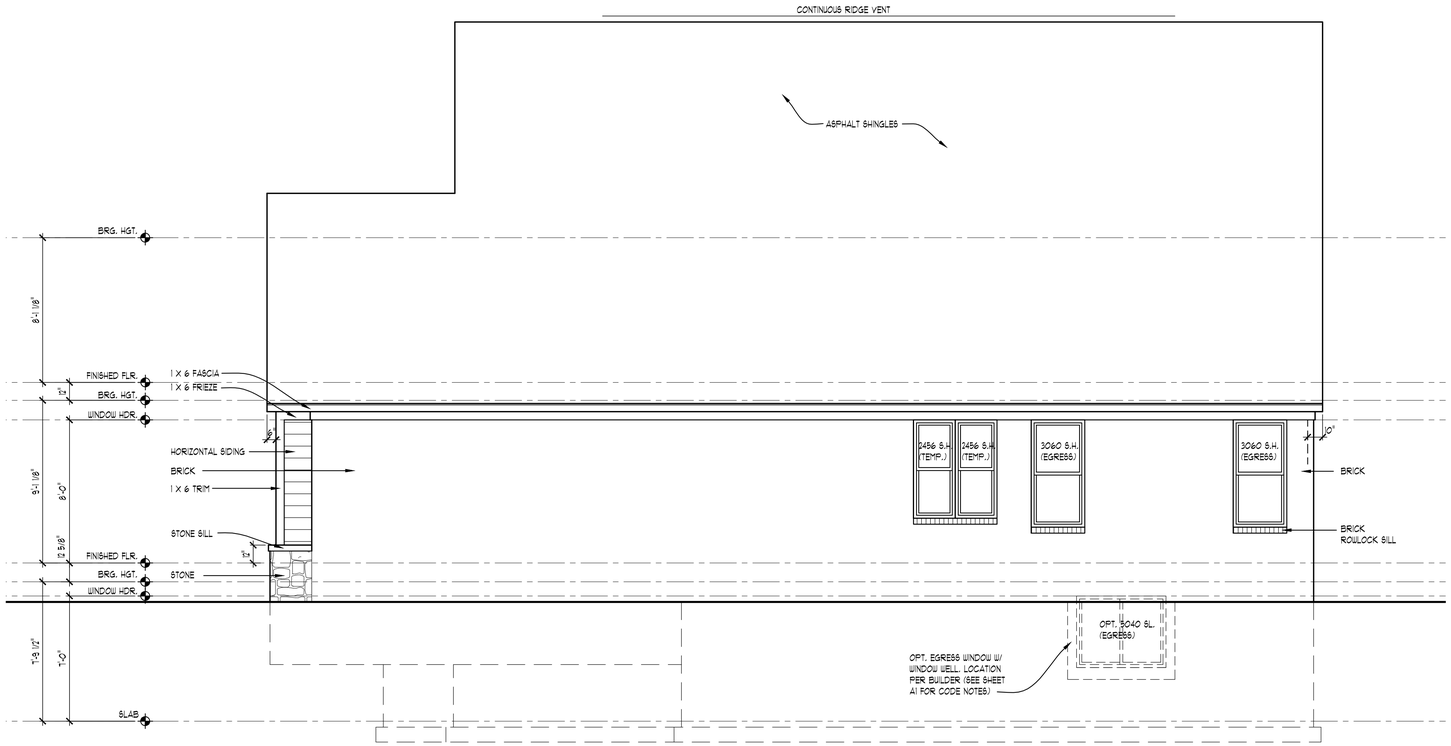
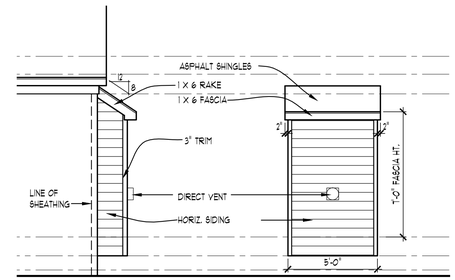


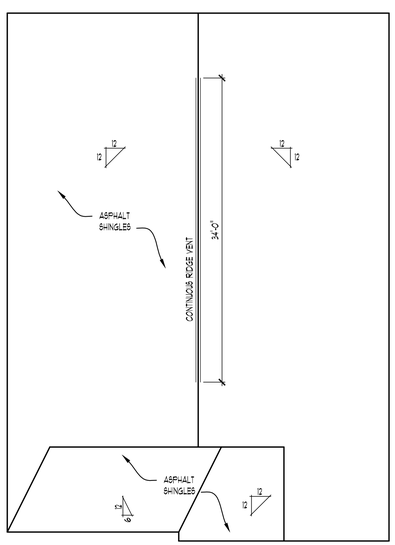
RIGHT ELEVATION

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



OPT. FIREPLACE PARTIAL ELEVATIONS

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

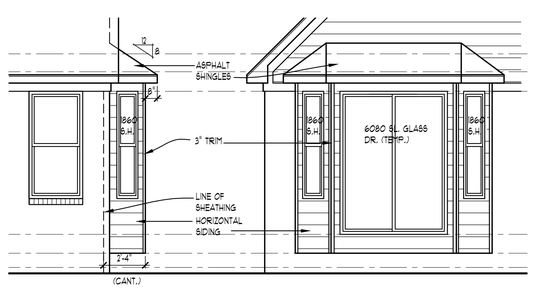


ROOF PLAN

SCALE: 1/8" = 1'-0"

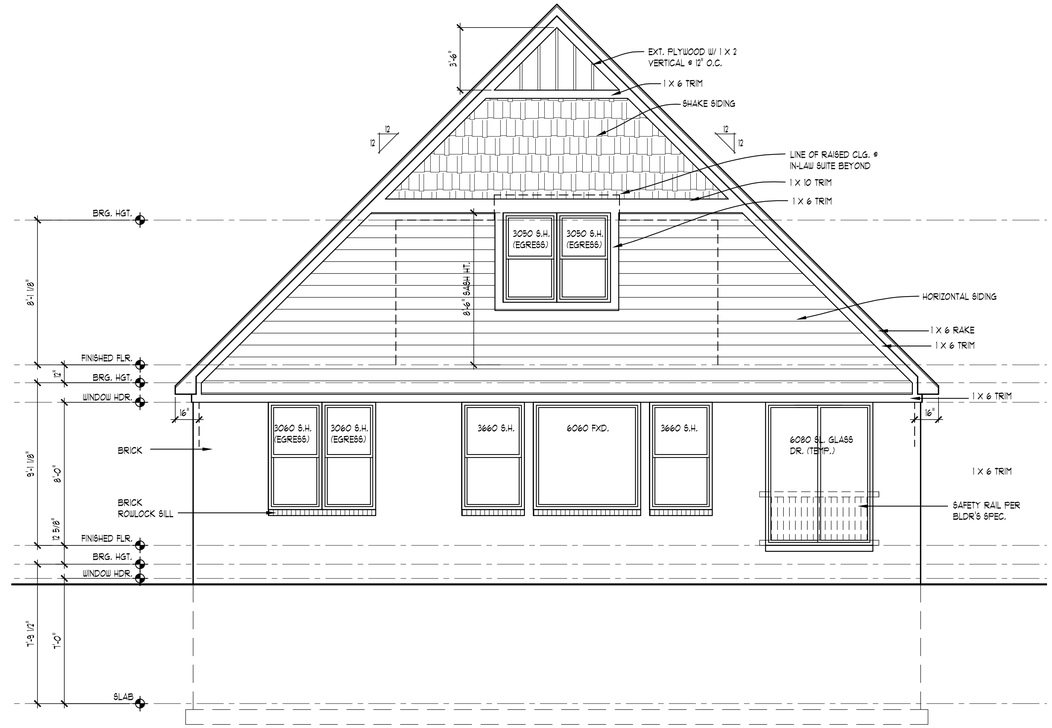
ATTIC VENTILATION CALCULATIONS: FOR RIDGE VENTING

AREA OF ATTIC OVER HEATED SPACE = 1863 SQ. FT.
1863/300 = 6.21 (SQ. FT. REQ'D)
6.21' X 144" = 895" (SQ. INCH CONVERSION)
895" X 2/3 = 597" (SQ. INCHES REQ'D)
597" / 18 = 34' (LINEAR FT. OF RIDGE VENT REQ'D)



OPT. BAY @ MASTER BDRM. PARTIAL ELEVATIONS

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



REAR ELEVATION

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

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CLIENT / PROJECT

HOME RENEWAL SYSTEMS
HARTFORD GARAGE RIGHT

JOB No.	15-166
DRAWN:	ECT
CHECKED:	ECT
REVIEW	-
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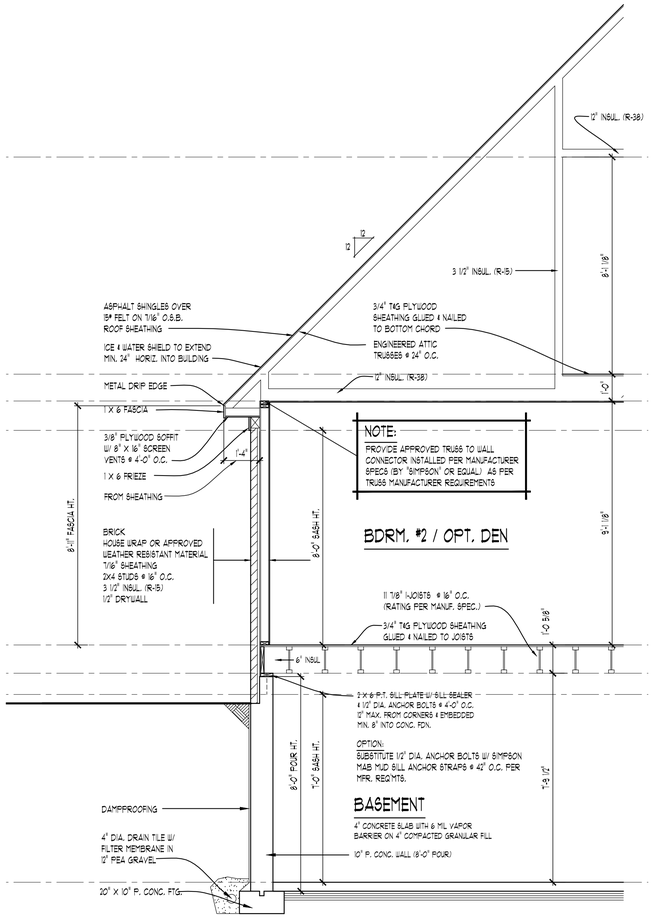
REVISION	7-21-15

SCALE: PER PLAN

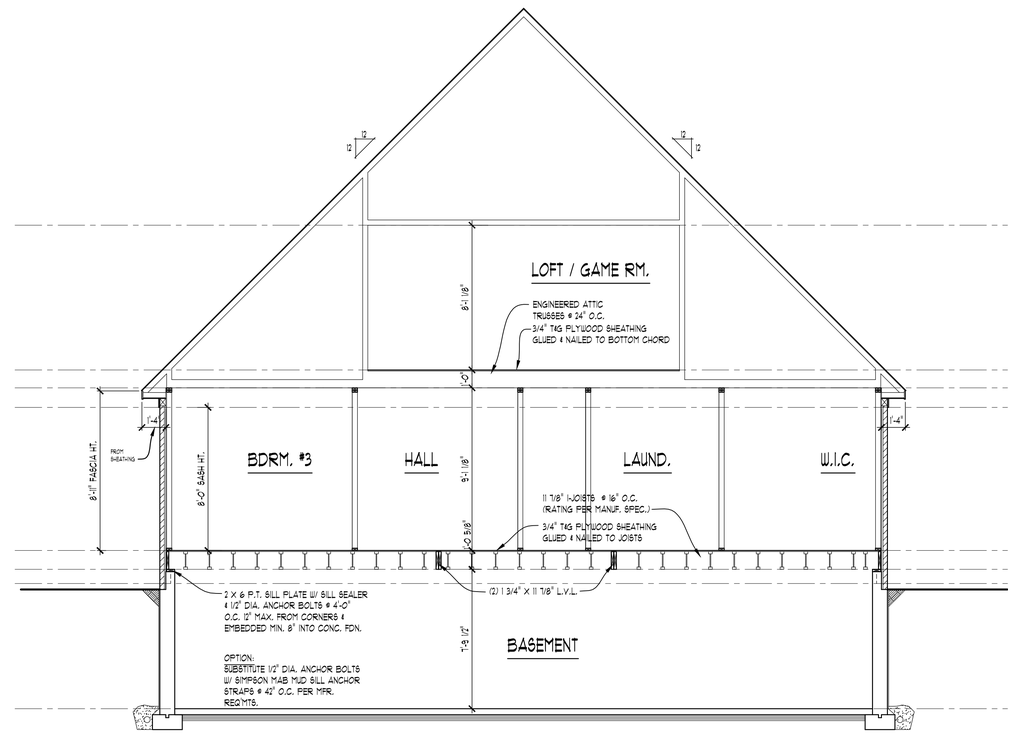
SHEET #
A5



WALL SECTION

SCALE: 3/8" = 1'-0"

A / A1-A3



BUILDING SECTION

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

B / A1-A3

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SHEET #
A6