PRELIMINARY SITE PLAN FOR BEACON HILL MEADOWS, THE SHOPPES AT BEACON HILL, BEACON HILL PARK TRAILHEAD

novi, Michigan, Section 12

APPLICANT:

IVANHOE MEADOWBROOK L.L.C. 6689 ORCHARD LAKE ROAD, STE. 314 WEST BLOOMFIELD, MI 48322 (248) 626-6114 CONTACT: GARY SHAPIRO CIVIL ENGINEER:

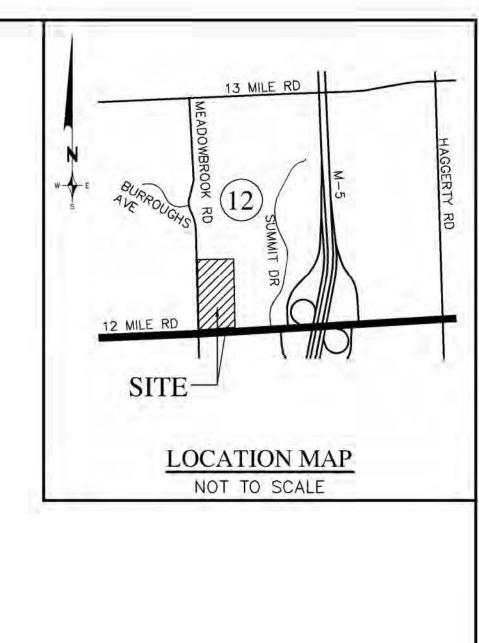
ZEIMET-WOZNIAK & ASSOCIATES, INC. 55800 GRAND RIVER, SUITE 100 NEW HUDSON, MI 48165 (248) 437-5099 CONTACT: ANDY WOZNIAK LANDSCAPE ARCHITECT:

FELINO A. PASCUAL & ASSOCIATES 24333 ORCHARD LAKE ROAD, SUITE G FARMINGTON HILLS, MI 48336 (248) 557-5588 CONTACT: FELINO PASCUAL WOODLAND/WETLAND CONSULTANT:

KING & McGREGOR ENVIRONMENTAL, INC. 43050 FORD ROAD, SUITE 130 CANTON, MI 48187 (734) 534-0594 CONTACT: WOODY HELD MEADOWS ARCHITECT:

TR DESIGN GROUP, LLC 6001 N. ADAMS ROAD, SUITE 202 BLOOMFIELD HILLS, MI 48304 (248) 792-3256 CONTACT: J.R. RUTHIG SHOPPES ARCHITECT:

ROGVOY ARCHITECTS 32500 TELEGRAPH ROAD, SUITE 250 BINGHAM FARMS, MI 48025 (248) 540-7700 CONTACT: MARK DRANE





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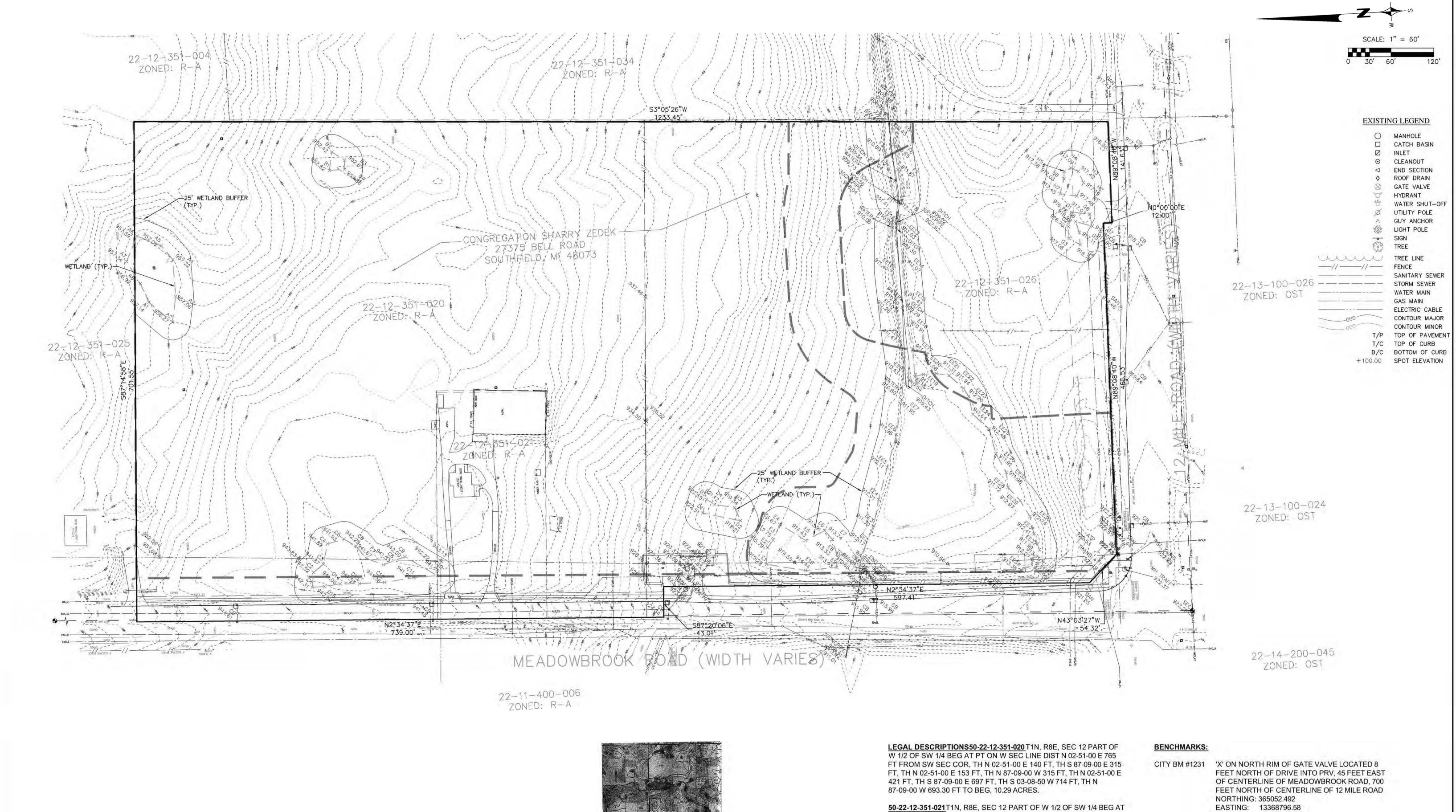
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A-1 BUILDING "A" BUILDING ELEVATIONS & FLOOR PLAN
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NOTE: ALL WORK SHALL CONFORM TO THE CURRENT CITY OF NOVI STANDARDS AND SPECIFICATIONS

AND SPECIFICATIONS.

REVISIONS REVISIONS REVISIONS DATE BY REVISIONS DATE BY DATE BY ZEIMET WEZNIAK DATE 1/11/16 | SCALE | HOR: 1" = N/A VER: 1" = N/A COVER SHEET PROJECT SPONSOR: SP SUBMITTAL 1/11/16 THREE FULL IVANHOE MEADOWBROOK L.L.C. WORKING DAYS DESIGNED BY BEACON HILL PARK JOB NO. 14151 4/13/16 Civil Engineers & Land Surveyors BEFORE YOU DIC SRB MISS DIG SYSTEM, INC. CALL THE MISS 6689 ORCHARD LAKE ROAD, STE, 314 55800 GRAND RIVER AVE., SUITE 100 NOVI, MICHIGAN, SECTION 12 DRAWN BY SHEET SP-1 NEW HUDSON, MICHIGAN 48165 WEST BLOOMFIELD, MI 48322 (248) 626-6114 1-800-482-7171 SRB P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com



THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE

CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS

APPARENT.



SOILS NOTE:

PER THE USDA-SCS SOIL SURVEY OF OAKLAND COUNTY, MICHIGAN ISSUED MARCH 1982, THE SOILS FOR THIS SITE ARE CLASSIFIED AS:

- 10B: MARLETTE SANDY LOAM, 1-6% SLOPES 10C: MARLETTE SANDY LOAM, 6-12% SLOPES
- 13C: OSHTEMO-BOYER LOAMY SANDS, 6-12% SLOPES 15C: SPINKS LOAMY SAND, 6-12% SLOPES
- 23B: SISSON FINE SANDY LOAM, 1-6% SLOPES 41B: AQUENTS, SANDY AND LOAMY, UNDULATING

NOTE: NO BOUNDARY SURVEY WAS PERFORMED. BOUNDARY INFORMATION SHOWN AND LEGAL DESCRIPTIONS PER TAX RECORDS.

PT ON W SEC LINE DIST N 02-51-00 E 905 FT FROM SW SEC COR, TH

N 02-51-00 E 153 FT, TH S 87-09-00 E 315 FT, TH S 02-51-00 W 153 FT,

50-22-12-351-026T1N, R8E, SEC 12 PART OF SW 1/4 BEG AT PT DIST

N 02-37-55 E 764.97 FT FROM SW SEC COR, TH S 87-16-30 E 695.04

FT, TH S 03-08-30 W 652.45 FT, TH N 89-08-40 W 141.64 FT, TH N 12

02-37-55 E 597.41 FT, TH N 87-16-30 W 43 FT, TH N 02-37-55 E 24.97

FT, TH N 89-08-40 W 465.53 FT, TH N 43-01-20 W 54.28 FT, TH N

EASTING: 13368796.58

922.9876 ELEV.:

CITY BM #1312 'X' ON NORTH RIM OF GATE VALVE LOCATED 670 FEET EAST OF THE INTERSECTION OF

MEADOWBROOK ROAD AND 12 MILE ROAD, SOUT OF WEST BOUND 12 MILE ROAD INTERSECTION, 4 FEET SOUTH OF BACK OF CURB NORTHING: 364317.6108 EASTING: 13369467.09

917.5438 ELEV.:

EXISTING CONDITIONS BEACON HILL PARK NOVI, MICHIGAN, SECTION 12

	1/11/16	SCALE HOR: 1" = VER: 1" =	60' N/A
BOOK	DESIGNED BY SRB	ЈОВ NO. 14	151
FELD	DRAWN BY SRB	SHEET SP-2	>

REVISIONS DATE BY REVISIONS DATE BY REVISIONS REVISIONS DATE BY SP SUBMITTAL 1/11/16 4/13/16

ZEIMET WEZNIAK Civil Engineers & Land Surveyors 55800 GRAND RIVER AVE., SUITE 100 NEW HUDSON, MICHIGAN 48165

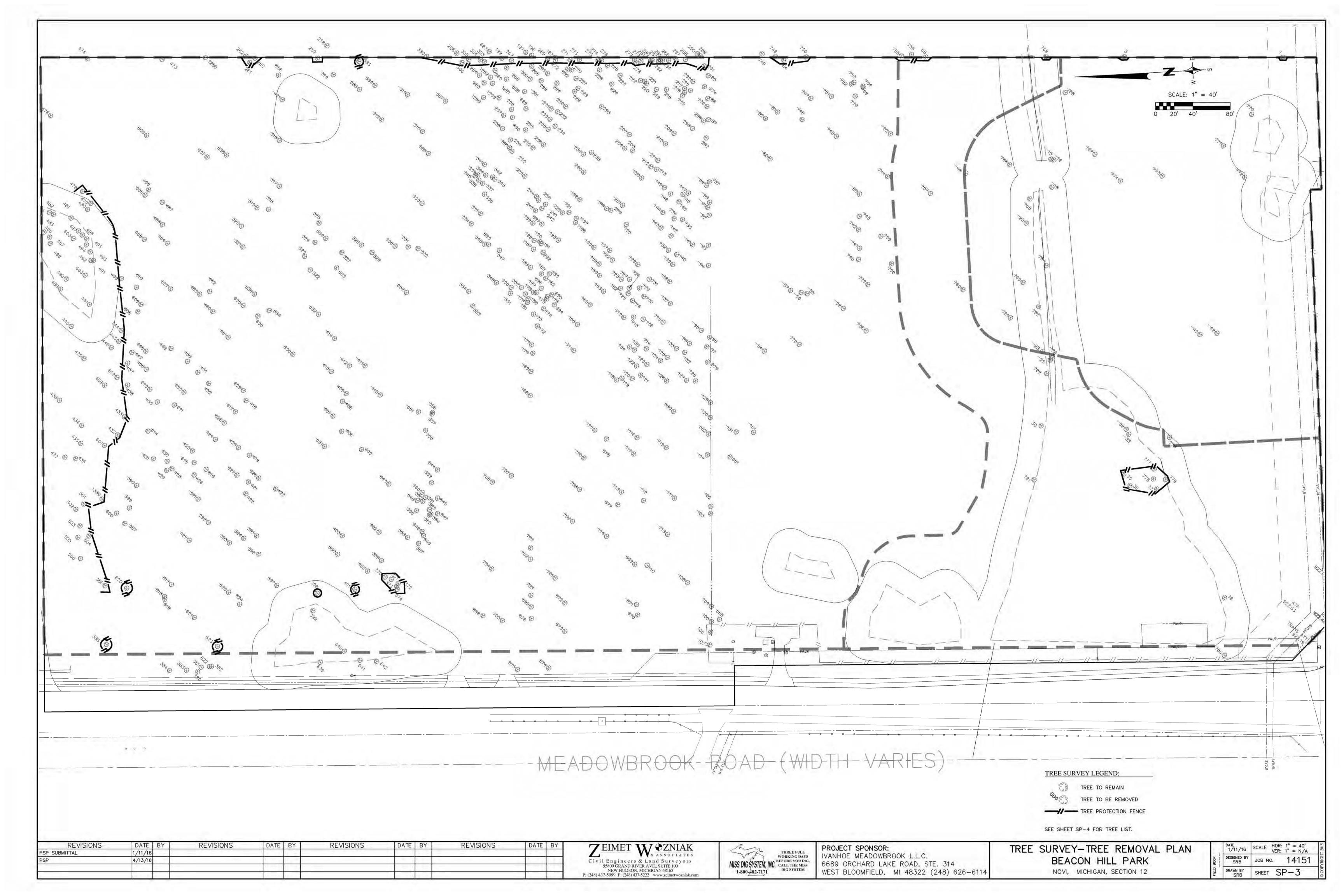
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

THREE FULL WORKING DAYS MISS DIG SYSTEM, INC. CALL THE MISS 1-800-482-7171

PROJECT SPONSOR: IVANHOE MEADOWBROOK L.L.C. 6689 ORCHARD LAKE ROAD, STE. 314 WEST BLOOMFIELD, MI 48322 (248) 626-6114

TH N 87-09-00 W 315 FT TO BEG, 1.11 ACRES.

FT TO BEG, 9.73 ACRES.



	Scientific Name Column2	Common Name Column3				Condition Trunk 4	Keq
46	Acer saccharinum	Silver Maple	21.7			Good	
52	Acer specharinum	Silver Maple	23.9			Fair	
54 55	Ulmus pumila Ailanthus altissima	Siberian Elm Tree of Heaven	26.4 15.0			Poor	
56	Tilia-americana	American Basswood	12.1	8.7		Good	
57 60	Pinus strobus Acer saccharinum	Silver Maple	13.7 24.0	11.0		Good Good	
62	Pyrus communis	Common Pear	15.4	11.0		Fair	
69	Ulmus pumila Ulmus pumila	Siberian Elm Siberian Elm	8.4 8.5			Fair Fair	
80	Acer-saccharinum	Silver Maple	16.7	15.0	15.7	Fair	
81 82	Acer saccharinum Acer saccharinum	Silver Maple Silver Maple	15.2 13.5			Fair Fair	
84	Tilia americana	American Basswood	17.7			Good	
85 86	Pinus sylvestris Tilia americana	Scots Pine American Basswood	10.2 11.2	11.0		Good	
87	Pinus sylvestris	Scots Pine	9.8	22.0		Fair	
89	Prunus serotina Pinus sylvestris	Scots Pine	12.0			Good Fair	
91	Prunus serotina	Black Cherry	9.6			Good	
93	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	22.0 14.0			Good	
94	Pinus strobus	Eastern White Pine	12.0			Good	
96 97	Prinus sylvestris Prunus serotina	Scots Pine Black Cherry	13.7 10.3			Poor	
98	Malus pumila	Apple Tree	8.7			Fair	
99 101	Pinus sylvestris Ulmus pumila	Scots Pine Siberian Elm	12.0 36.5			Fair Very Poor	
102	Pinus sylvestris	Scots Pine	12.0			Fair	
103	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	14.5 15.6		6	Fair Poor	
105	Pinus sylvestris	Scots Pine	11,7			Fair	
106	Pinus sylvestris	Scots Pine	12.6			Fair	
107 108	Juglans nigra Pinus sylvestris	Black Walnut Scots Pine	15.5 13.8			Fair Fair	
110	Pinus sylvestris	Scots Pine	11.9			Fair	
111 112	Ulmus americana	American Elm	9.0			Fair Fair	
113	Juglans nigra	Black Walnut	10.9			Fair	
114 115	Acer negundo	American Elm Box-elder	11.7			Poor	
116	Ulmus americana	American Elm	9.0			Fair	
117 118	Acer negundo Juglans nigra	Box elder Black Walnut	9.2			Poor Fair	
119	Ulmus americana	American Elm	10.0			Fair	
120 121	Pinus sylvestris	Scots Pine	8.4			Fair Fair	
122	Pinus sylvestris	Scots Pine	12,3	10.1		Fair	
123 124	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	9.1			Fair Fair	
125	Pinus sylvestris	Scots Pine	12,2			Fair	
127	Pinus sylvestris Ulmus americana	Scots Pine American Elm	12.1 8.7			Fair	
129	Pinus sylvestris	Scots Pine	21,9			Poor	
130 131	Pinus sylvestris Ulmus pumila	Scots Pine Siberian Elm	15.7 27.8			Poor Fair	
132	Pinus sylvestris	Scots Pine	11.5			Fair	
133	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	12.8			Fair Good	
135	Ulmus americana	American Elm	8.3			Fair	
136 137	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	10.3 11.8			Good	
138	Pinus sylvestris	Scots Pine	12.4			Good	
139 140	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	8.6 9.4			Good	
141	Pinus sylvestris	Scots Pine	11.3			Good	
142 143	Acer saccharinum Pinus sylvestris	Scots Pine	15.2 11.3			Good	
144	Pinus sylvestris	Scots Pine	9.7			Fair	
145 146	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	9.9			Fair	
147	Pinus sylvestris	Scots Pine	9.6			Fair	
148 149	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	11.2 12.3			Fair Fair	
150	Pinus sylvestris	Scots Pine	13.6			Poor	
155 157	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	11.2 11.8			Fair Fair	
157 159	Pinus sylvestris	Scots Pine	9.6			Fair	
160 162	Pinus sylvestris	Scots Pine	11.4 9.4			Fair Fair	
163	Pinus sylvestris Malus pumila	Apple Tree	9.4 8.5	8.2		Fair	
165 166	Ulmus-rubra Juglans-nigra	Red Elm Black Walnut	11.5 15.3			Fair Good	
168	Juglans nigra	Black Walnut	29.8			Good	
169 170	Juglans nigra	Black Walnut American Basswood	25.4			Fair	
170 171	Tilia americana Juglans nigra	Black Walnut	38.0 27.3			Good	
172	Juglans nigra	Black Walnut	11.7			Good Good	
173 174	Juglans nigra Juglans nigra	Black Walnut Black Walnut	9.1 15.5			Good Good	
175	Tilia americana	American Basswood	11.3			Good	
176 177	Tilia americana Juglans nigra	American Basswood Black Walnut	8.8 14.2			Fair Good	
178	Tilia americana	American Basswood	15.0	8.2		Good	
179 180	Tilia americana Juglans nigra	American Basswood Black Walnut	9.4	8.1		Fair Good	
181	Juglans nigra	Black Walnut	13.3			Good	
182 183	Tilia americana Tilia americana	American Basswood American Basswood	10.0 13.6			Good Good	
185	Juglans nigra	Black Walnut	16.7			Good	
186 187	Tilia americana Tilia americana	American Basswood American Basswood	22.5	14.5		Good	
188	Tilia americana	American Basswood	12.0	9,4		Good	
189 190	Tilia americana Juglans nigra	American Basswood Black Walnut	16.7 14.0	14.2	12.7	Good	
191	Tilia americana	American Basswood	8,7			Fair	
192 193	Tilia americana Ulmus rubra	American Basswood Red Elm	16.1 10.6	10.4		Good Fair	
	Pinus sylvestris	Scots Pine	10.1			Fair	
	Tilia americana	American Basswood	11.5			Good	
195 198 199	Prunus serotina	Black Cherry	10.5			Fair	

201 203	Pinus sylvestris Prunus serotina	Scots Pine Black Cherry	10.5			Fair
203	Prunus serotina	Black Cherry	8.3			Poor
207 209	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	11.2			Fair Fair
210	Pinus sylvestris	Scots Pine	9.1			Fair
211 212	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	14.0 11.8			Fair Fair
213	Pinus sylvestris	Scots Pine	9.4			Fair
214 215	Tilia americana Tilia americana	American Basswood American Basswood	14.0 9.5			Good
216	Tilia americana	American Basswood	12.0			Good
217 218	Tilia americana	American Basswood American Basswood	8.6 13.1	9.9		Good
219	Tilia americana	American Basswood	13.7			Good
220	Tilia americana Prunus serotina	American Basswood Black Cherry	9.4			Good
222	Prunus serotina	Black Cherry	8.5			Good
223	Tilia americana Tilia americana	American Basswood American Basswood	9.5 18.5			Good
225	Ulmus americana	American Elm	8.7			Fair
226 227	Tilia americana Tilia americana	American Basswood American Basswood	9.4 8.5			Good
228	Tilia americana	American Basswood	13.1			Good
230	Tilia americana	American Basswood American Basswood	10.3 8.9			Good
231	Tilia americana	American Basswood	13.5			Good
232 233	Tilia americana Tilia americana	American Basswood American Basswood	8.8 10.5	8.5		Good
234	Tilia americana	American Basswood	10.3			Good
235 236	Tilia americana Ulmus americana	American Basswood American Elm	9.0			Good
238	Tilia americana	American Basswood	12.4	10.7		Good
239 240	Pinus sylvestris	Scots Pine	11.0 12.3			Good Fair
241	Tilia americana	American Basswood	16.7			Fair.
242 243	Tilia americana Tilia americana	American Basswood American Basswood	13.0 11.4			Poor
244	Tilia americana	American Basswood American Basswood	12.3			Good
250 251	Tilia americana Juglans nigra	Black Walnut	9.4 25.3			Fair Good
252 253	Tilia americana	American Basswood American Basswood	28.8 13.7	20.4	16.3	Good
254	Tilia americana Tilia americana	American Basswood American Basswood	14.0			Good
255 256	Tilia-americana Tilia-americana	American Basswood American Basswood	17.2 13.2			Good
256 257	Tilia americana	American Basswood	11.0			Good
259 260	Tilia americana Tilia americana	American Basswood American Basswood	14.4 12.8			Poor
261	Prunus virginiana	Choke Cherry	12.6			Fair
262 263	Tilia americana Tilia americana	American Basswood American Basswood	11.3 9.6			Good Good
264	Tilia americana	American Basswood	12.3			Good
265 266	Tilia-americana Tilia-americana	American Basswood American Basswood	11.0 15.0			Good
267	Juglans nigra	Black Walnut	11.9			Good
268 269	Juglans nigra Tilia americana	Black Walnut American Basswood	28.2			Good
270	Tilia americana	American Basswood	8.9			Good
271 272	Tilia americana Tilia americana	American Basswood American Basswood	10.0 10.6			Good Good
273	Tilia americana	American Basswood	13.2	12.0	10.1	Good
274 275	Tilia americana Tilia americana	American Basswood American Basswood	14.7 11.3			Fair Fair
276	Tilia americana	American Basswood	18.0			Fair
277 278	Tilia americana Tilia americana	American Basswood American Basswood	16.3 17.2	16.9		Fair Good
279	Tilia americana	American Basswood	14.7			Fair
280 281	Tilia americana Tilia americana	American Basswood American Basswood	14.9			Fair Fair
282	Tilia americana	American Basswood	13.6	- 14	L L	Good
283 284	Tilia americana Tilia americana	American Basswood American Basswood	28.3 12.8			Good
285	Tilia americana	American Basswood	11.6			Fair
286 287	Tilia americana Tilia americana	American Basswood American Basswood	8.6 11.3			Good
288	Acer saccharum	Suger Maple	13.3			Good
291 292	Tilia americana Tilia americana	American Basswood American Basswood	15.1 9.9			Fair Good
293	Juniperus virginiana	Eastern Red Cedar	9.6			Good
294 295	Ulmus rubra Tilia americana	Red Elm American Basswood	13.4 8.2			Good Good
296 297	Ulmus pumila Prunus serotina	Siberian Elm Black Cherry	15.5 15.0			Fair Good
297 298	Juniperus virginiana	Eastern Red Cedar	8.2			Fair
299 300	Tilia americana	American Basswood American Basswood	8.6	22.5	21.1	Good
300 301	Tilia americana Juglans nigra	Black Walnut	35.2 12.9	21.6	21.1	Poor
303	Tilia americana	American Basswood	13.0			Good
304 305	Tilia americana Ulmus rubra	American Basswood Red Elm	10.2 11.3		E	Good Fair
306 307	Tilia americana	American Basswood	12.2 9.1			Fair Fair
309	Acer saccharum	Suger Maple	9,1 16,9			Fair
310 311	Juniperus virginiana Prunus serotina	Eastern Red Cedar Black Cherry	10.7 9.9			Fair Poor
312	Acer saccharum	Suger Maple	20.5			Good
314 316	Pinus sylvestris Juniperus virginiana	Scots Pine Eastern Red Codar	13.9 8.8			Fair Fair
317	Pinus sylvestris	Scots Pine	13.4			Fair
318 319	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	11.4 8.5			Fair Fair
320	Prunus serotina	Black Cherry	11.0			Fair
321 322	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	18.7 11.2			Fair Fair
_	Pinus strobus	Eastern White Pine	21.7			Fair
324 325	Acer saccharum Prunus serotina	Suger Maple Black Cherry	13.9 10.2			Fair Fair
327	Pinus sylvestris	Scots Pine	13.5			Fair
328 329	Prunus serotina	Black Cherry American Elm	13.6 8.2			Fair Fair
a tank	Pinus sylvestris	Scots Pine	OZ			- art

332	Pinus sylvestris	Scots Pine	17.7		Fair	- 1
333	Tilia americana Tilia americana	American Basswood American Basswood	13.1 10.3		Good Good	1
335	Tilia amencana	American Basswood	13.8		Good	2
336 337	Tilia americana Tilia americana	American Basswood American Basswood	10.8	10.0	Good	3
338	Tilia americana	American Basswood	9.0		Good]
339	Tilia americana Tilia americana	American Basswood American Basswood	11.5 10.0		Good	1
341	Tilia americana	American Basswood	10.7		Good	C
342	Ulmus americana Tilla americana	American Elm American Basswood	9.5 8.8		Fair Good	1
344	Tilia americana	American Basswood	13.4		Fair	2
347 348	Tilia americana Tilia americana	American Basswood American Basswood	9.5 10.0		Good	3
349	Tilia americana	American Basswood	17.8	14.3 1	2.4 Good	E
350 351	Tilia americana Tilia americana	American Basswood American Basswood	9.8	8.7	Good	1
452	Juglans nigra	Black Walnut	9.5		Good	1
353 354	Ulmus americana	White Ash American Elm	10.4 8.5		Fair Fair	1
355	Juniperus virginiana	Eastern Red Cedar	10.4		Fair	
356 357	Juglans nigra Ulmus americana	Black Walnut American Elm	9.3 9.5		Fair Fair	1
358	Acer negundo	Box-elder	10.5	10.2	Poor	t
359 360	Juglans nigra Populus deltoides	Black Walnut Eastern Cottonwood	17.6 8.3		Fair Fair	2
61	Populus deltoides	Eastern Cottonwood	9.5		Fair	1
362	Populus deltoides	Eastern Cottonwood	9,1		Very Poor	(
163 164	Populus deltoides Populus deltoides	Eastern Cottonwood Eastern Cottonwood	10.6 15.9		Fair Fair	7
65	Populus deltoides	Eastern Cottonwood	12.4		Fair	2
366 367	Populus deltoides Juglans nigra	Black Walnut	9.4 9.8		Fair Fair	1
868	Juglans nigra	Black Walnut	13.6		Fair	2
3 69	Pinus sylvestris Pinus strobus	Scots Pine Eastern White Pine	19.2 17.9		Fair Fair	2
371	Pinus strobus	Eastern White Pine	12.0		Fair	C
372 373	Ulmus americana Pinus sylvestris	American Elm Scots Pine	9.0		Fair Fair	0
374	Pinus sylvestris	Scots Pine	11.7		Fair	C
380 381	Juglans nigra Juglans nigra	Black Walnut Black Walnut	13.8 10.8		Fair Fair	0
382	Juglans nigra	Black Walnut	14.8		Fair	0
383	Juglans nigra Juglans nigra	Black Walnut Black Walnut	12.5 10.3		Fair Fair	0
385	Juglans nigra	Black Walnut	15.1		Fair	C
886	Juniperus virginiana	Eastern Red-Cedar	9.7		Fair	0
187 188	Fraxinus americana Fraxinus americana	White Ash White Ash	9.5 9.8		Very Paor	1
389	Ulmus rubra	Red Elm	15.4	0.0	Fair	0
390 391	Acer saccharum Acer saccharum	Suger Maple Suger Maple	9.3 15.1	9.0	Fair Fair	2
392	Pinus sylvestris	Scots Pine	15.0		Fair	2
393 394	Acer saccharum Ulmus rubra	Suger Maple Red Elm	11.0		Fair Fair	2
395	Acer rubrum	Red Maple	19.3	15.9	Fair	5
396 397	Acer saccharinum	Scots Pine Silver Maple	13.5 11.1		Fair Fair	2
398	Acer saccharinum	Silver Maple	16.4		Fair	C
399 400	Ulmus americana Acer saccharinum	American Elm Silver Maple	9.7		Fair	2
101	Pinus sylvestris	Scots Pine	15.1		Fair	C
103	Acer rubrum Acer saccharinum	Red Maple Silver Maple	9.2		Fair Fair	1 2
105	Fraxinus pennsylvanica	Green Ash	10.7		Very Poor	C
105	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	10.3 16.5		Fair Fair	1 2
108	Pinus sylvestris	Scats Pine	13.5		Fair	2
109	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	8.8 16.4		Fair Fair	2
111	Acer saccharum	Suger Maple	11.3		Fair	2
112 113	Acer saccharum Fraxinus pennsylvanica	Suger Maple Green Ash	9.7 9.1		Fair Very Poor	1
114	Ulmus americana	American Elm	9.1 12.5		Poor	.0
117	Pinus sylvestris Pinus sylvestris	Scots Pine	8.8		Fair	1
117 118	Acer saccharum	Scots Pine Suger Maple	13.7 13.3	11.7	Poor Fair	4
119	Acer negundo	Box elder	8.7	a.c	Poor	0
420 421	Ulmus americana Ulmus americana	American Elm American Elm	10.2 9.2	8.6	Fair Poor	3
122	Ulmus americana	American Elm	13.9		Fair	2
4 23 4 24	Acer negundo Acer saccharinum	Box elder SilverMaple	16.0 10.8		Poor Fair	2
125	Acer negundo	Box elder	17.3	13.2	Poor	C
426 427	Acer rubrum Prunus serotina	Red Maple Black Cherry	10.7 10.6		Fair Fair	13
428	Prunus serotina	Black Cherry	10.3		Fair	i
429 430	Fraxinus americana Acer saccharum	White Ash Suger Maple	9.7 9.4		Very Poor Fair	1
431	Ulmus americana	American Elm	8.6		Fair	1
432 433	Prunus serotina Acer saccharum	Black Cherry	14.4		Fair Fair	0
134	Acer saccharum	Suger Maple Suger Maple	16.1		Fair	0
435 436	Fraxinus americana	White Ash American Elm	8.9 9.1		Very Poor Poor	0
436 437	Ulmus americana Fraxinus americana	White Ash	9.1 12.5		Very Poor	(
438	Juglans nigra	Black Walnut	11.3		Fair	0
139 140	Acer saccharum Ulmus americana	Suger Maple American Elm	11.3 13.8		Fair Poor	0
141	Ulmus americana	American Elm	11.1		Poor	(
144	Acer saccharinum	American Elm Silver Maple	12.5 12.3		Poor Fair	0
445	Pinus sylvestris	Scots Pine	15.9		Fair	C
446	Ulmus americana Acer saccharum	American Elm Suger Maple	9.0 11.3		Poor Fair	2
448	Acer saccharum	Suger Maple	18.2	12.6	Fair	A
449	Prunus scrotina	Black Cherry	10.6		Fair	1
450 451	Acer saccharum Acer saccharum	Suger Maple Suger Maple	12.2 13.8	12.7	Fair Fair	4
452	Pinus sylvestris	Scots Pine	12.8		Very Poor	0
453	Pinus sylvestris	Scots Pine	15.6		Poer	0

455	Ulmus americana	American Elm	10.0		Fair	
456 457	Acer rubrum Pinus sylvestris	Red Maple Scots Pine	12.8 8.1		Fair	
458	Ulmus americana	American Elm	9.7		Poor	
459 460	Acer saccharum Prunus serotina	Suger Maple Black Cherry	11.2		Fair Fair	
461	Acer saccharum	Suger Maple	13.3		Fair	
4 62 4 63	Juniperus virginiana Prunus serotina	Eastern Red Cedar Black Cherry	9.1 12.5		Fair Fair	
464	Pinus sylvestris	Scots Pine	10.9		Fair	
465 466	Fraxinus americana Acer saccharum	White Ash Suger Maple	9.6 14.5		Very Poor Fair	
4 67	Acer saccharum Pinus sylvestris	Suger Maple Scots Pine	12.3 13.7		Fair Fair	
471	Ulmus americana	American Elm	9,1		Fair	
473 474	Prunus serotina Tilia americana	Black Cherry American Basswood	13.2 11.4	10.3 11.0	Fair 8.9 Fair	
474	Robinia pseudoacacia	Black Locust	18.2	11.0	Fair	
478	Acer saccharum	Suger Maple	11.1		Fair	
479 480	Acer negundo Ulmus americana	Box-elder American Elm	10.1		Poor	
481 482	Ulmus americana Acer rubrum	American Elm Red Maple	12.7 10.1		Very Poor Fair	
483	Acer rubrum	Red Maple	10.1		Fair	
486 487	Acer saccharinum Populus deltoides	Silver Maple Eastern Cottonwood	18.0 33.7	11.9	Fair Fair	
488	Populus deltoides	Eastern Cottonwood	23.6		Fair	
489 490	Acer saccharinum Acer saccharinum	Silver Maple Silver Maple	11.6 8.8	8.3	Fair 8.2 Fair	
491	Populus deltoides	Eastern Cottonwood	28.5	0.3	Fair	
492	Populus deltoides	Eastern Cottonwood	31.2	23.1	Fair	
493 494	Populus deltoides Populus deltoides	Eastern Cottonwood Eastern Cottonwood	17.8 17.1		Fair Fair	
495 496	Populus deltoides Populus deltoides	Eastern Cottonwood Eastern Cottonwood	18.3 29.9		Fair Poor	
496	Populus deltoides Populus deltoides	Eastern Cottonwood	25.5		Fair	
499	Acer saccharum	Suger Maple	9.9		Fair	
501 502	Ulmus rubra	Suger Maple Red Elm	9.2		Fair Fair	
503 504	Acer saccharum	Suger Maple	13.2 9.9		Fair Poor	
505	Ulmus americana Ulmus americana	American Elm American Elm	15.8		Dead	
506	Juglans nigra	Black Walnut	19.4		Fair	
601	Ulmus rubra Acer saccharum	Red Elm Suger Maple	8.4 8.2		Fair Fair	
602	Acersaccharinum	Silver Maple	10.1		Fair	
603 604	Populus deltoides Ulmus rubra	Red Elm	12.8 8.4		Fair Fair	
605	Fraxinus americana	White Ash	8.5		Poor	-
606	Acer saccharum Acer saccharum	Suger Maple Suger Maple	9.4 8.0		Fair Fair	
608	Acer saccharum	Suger Maple	8.5		Fair	
609 610	Prunus serotina Prunus serotina	Black Cherry Black Cherry	9.0 8.1		Fair Fair	
611	Salix alba	White Willow	8.0		Fair	
612 613	Acer saccharum Fraxinus pennsylvanica	Suger Maple Green Ash	8.0 8.2		Fair Very Poor	
614	Ulmus americana	American Elm	8.3		Fair	
615 616	Acer saccharum Ulmus ame ricana	Suger Maple American Elm	8.0 8.0		Very Poor	
617	Ulmus americana	American Elm	8.1		Fair	
618 619	Acer rubrum Juniperus virginiana	Red Maple Eastern Red Cedar	14.4 10.5		Fair Fair	
620	Acer saccharum	Suger Maple	9.2		Fair	
621 622	Juniperus virginiana Juglans nigra	Black Walnut	8,1 9.5		Fair Fair	
623	Ulmus americana	American Elm	8.4		Poor	
624 625	Acer saccharum Juniperus virginiana	Suger Maple Eastern Red Cedar	11.3 8,7		Fair Fair	
Service of	Acer negunde	Box elde≠	8.2		Poer	
627 628	Ulmus americana Fraxinus americana	American Elm White Ash	8.4 8.7		Fair Poor	
629	Ulmus americana	American Elm	8.3		Fair	
630 631	Acer rubrum Juglans nigra	Red Maple Black Walnut	8.2 12.8		Fair Fair	
632	Ulmus americana	American Elm	8.4		Fair	
633 634	Ulmus americana Acer rubrum	American Elm Red Maple	13.8 8.3	8.2	Poor Fair	
635	Acer rubrum	Red Maple	8.1		Fair	
636 637	Juniperus virginiana Malus pumila	Eastern Red Cedar Apple Tree	8.3 8.5		Fair Fair	
638	Ulmus americana	American Elm	10.0		Poor	
639 640	Populus deltoides Ulmus americana	Eastern Cottonwood American Elm	9.8		Fair Fair	
641	Populus deltoides	Eastern Cottonwood	12.9		Fair	
642 643	Populus deltoides Ulmus americana	Eastern Cottonwood American Elm	10.7 8.7	8	Fair Fair	
644	Ulmus americana	American Elm	8,8		Fair	
645 646	Pinus resinosa Populus deltoides	Red Pine Eastern Cottonwood	10.0 8.8		Fair Fair	
647	Pinus resinosa	Red Pine	9.4		Fair	
648 649	Populus deltoides Populus deltoides	Eastern Cottonwood Eastern Cottonwood	8.0 8.1		Fair Fair	
650	Acer saccharinum	Silver Maple	10.6		Fair	
651 652	Acer saccharinum Juniperus virginiana	Silver Maple Eastern Red Cedar	8.1 11.0	8.1	Fair Fair	
653	Ulmus americana	American Elm	8.5		Fair	
654 656	Acer saccharum Acer saccharum	Suger Maple Suger Maple	8.2 9.2		Fair Fair	
668	luglans nigra	Black Walnut	8.4		Fair	
669 670	Ulmus americana Ulmus americana	American Elm	8.3 9.1		Fair Fair	
671	Ulmus americana	American Elm	8,2		Fair	
672 673	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	10.3 11.7	- 1	Fair Fair	
	Juglans nīgra	Black Walnut	13.4		Very Poor	
675 676	Juglans nigra Juglans nigra	Black Walnut Black Walnut	21.9 34.2		Fair Fair	
677	Juglans nigra	Black Walnut	8.4		Fair	
678	Juglans nigra	Black Cherry	13.4 10.5		Fair	
679	Prunus serotina	1734746-K-10-044-14-1	444		Poor	

681 682	Robinia pseudoacacia Prunus serotina	Black Locust Black Cherry	17.9 12.4		Very Poor	2
9 82	Acer saccharum	Suger Maple	8.3		Poor	- (
84	Acer saccharum	Suger Maple	9.0	8.6	Good	3
85	Prunus avium	Sweet Cherry	11.6	OCB	Fair	2
86	Prunus scrotina	Black Cherry	8.7		Fair	3
588	Tilia americana	American Basswood	13.9		Good	2
689	Tilia americana	American Basswood	11,4		Good	2
690	Tilia americana	American Basswood	10.5		Good	- 3
691	Tilia əmericəna	American Basswood	8.5		Good	1
692	Tilia americana	American Basswood	8.2		Good	1
693	Tilia americana	American Basswood	8.8		Good	- 1
694	Juniperus virginiana	Eastern Red Cedar	8.8		Fair	3
695	Tilia americana	American Basswood	8.3		Fair	- 1
696	Tilia americana	American Basswood	8.2		Fair	1
697	Juglans nigra	Black Walnut	8.5		Good	
698	Picea abies	Norway Spruce	22.6		Fair	3
699	Juglans nigra	Black Walnut	19.3		Good	2
700	Juglans nigra	Black Walnut Eastern Red Cedar	27.4 14.0		Good	
701	Juniperus virginiana Juglans nigra	Black Walnut	28.4		Good	2
703	Jugians nigra	Black Walnut	24.3		Good	3
704	Juniperus virginiana	Fastern Red Codar	12.6		Good	2
705	Picea pungens	Blue Spruce	12.0		Fair	2
706	Salix alba	White Willow	63.4		Fair	4
707	Juglans nigra	Black Walnut	24.8		Fair	3
708	Ulmus rubra	Red Elm	32.3		Poor	0
709	Populus deltoides	Eastern Cottonwood	9.5		Fair	1
710	Juglans nigra	Black Walnut	11.6		Good	7
711	Ulmus americana	American Elm	9.3		Fair	1
712	Pinus sylvestris	Scots Pine	11.1		Good	2
713	Pinus sylvestris	Scots Pine	10.8		Good	1
714	Pinus sylvestris	Scots Pine	8.3		Fair	13
715	Acer saccharum	Suger Maple	8.0		Fair	1
716	Ulmus pumila	Siberian Elm	24.1		Poor	C
717	Prunus serotina	Black Cherry	12.6		Fair	- 2
718	Ulmus americana	American Elm	8.5		Fair	- 1
719	Prunus serotina	Black Cherry	8.8		Fair	1
720	Tilia americana	American Basswood	8.4		Fair	1
721	Juniperus virginiana	Eastern Red Cedar	8.0		Fair	1
722 723	Pinus sylvestris Pinus sylvestris	Scots Pine Scots Pine	10.9 9.3		Fair	1
724	Pinus sylvestris	Scots Pine	13.4		Fair	2
725	Pinus sylvestris	Scots Pine	12.0		Fair	2
726	Pinus sylvestris	Scots Pine	11.4		Fair	2
727	Pinus sylvestris	Scots Pine	12.3		Fair	- 2
728	Pinus sylvestris	Scots Pine	10.0		Fair	-
729	Pinus sylvestris	Scots Pine	11,8		Fair	- 2
730	Pinus sylvestris	Scots Pine	8.4		Fair	3
731	Pinus sylvestris	Scots Pine	8.5		Fair	1
732	Pinus sylvestris	Scots Pine	8.0		Fair	1
733	Pinus sylvestris	Scots Pine	8.5		Fair	1
734	Pinus sylvestris	Scots Pine	8.6		Fair	1
735	Tilia americana	American Basswood	8.3		Good	143
736	Tilia americana	American Basswood	8.3		Fair	
737	Acer platanoides	Norway Maple	25.2		Fair	3
738	Ulmus pumila	Siberian Elm	18.6		Poor	
739	Acer saccharinum	Silver Maple	16.2		Good	2
740 741	Acer saccharinum	Silver Maple	9.6 27.6		Good	
741	Ulmus pumila Malus pumila	Siberian Elm Apple-Tree	27.6 13.0		Poor	3
743	Acer saccharinum	Silver Maple	24.0		Good	
744	Juglans cinerea	White Walnut	15.7		Poor	- (
745	Acer negundo	Box elder	20.5	10.7	Fair	- 4
746	Ulmus pumila	Siberian-Elm	10.3		Fair	-
747	Ulmus pumila	Siberian Elm	9.2		Fair	1
748	Carya cordiformis	Bitternut Hickory	13.7		Good	
750	Tilia americana	American Basswood	18.0	= 50#	Good	- 0
751	Ulmus pumila	Siberian Elm	15.8		Fair	2
752	Ulmus pumila	Siberian Elm	12.1		Fair	2
753	Ulmus pumila	Siberian Elm	8.9		Poor	t
00000	Ulmus pumila	Siberian Elm	8.1		Fair	3
	Ulmus pumila	Siberian Elm	13,4		Poor	Ţ
759	Acer saccharinum	Silver Maple	16.8		Good	2
E. F. G. (18)	Ulmus americana	American Elm	10.0		Fair	1
	Tilia americana	American Basswood	8.9		Good	1
11/2/21	Tilia americana	American Basswood	9.3		Good	- 1
	Tilia americana	American Basswood	9.6		Good	1
	Tilia americana	American Basswood	9.5		Good	1
-	Praxinus pennsylvanica	Green Ash	9.4	44.7	Poor	- 0
	Prunus serotina	American Barculood	12.1	113	Poor	
	Prince corotina	American Basswood Black Chorpy	11.9 10.1		Poor	2
-	Prunus serotina Prunus serotina	Black Cherry Black Cherry	14.3	11.2	Very Poor	- (
LOU	THE PROPERTY OF THE PARTY OF TH		-	11.2		
390	Juniperus virginiana	Eastern Red-Cedar	14.5		Fair	

T	Calanati - N	The Shoppes at	_		411-7-1	Carth
Tag	Scientific Name	Common Name	1	Trunk 2		Condition
-			Trunk 1	Trunk 2	Trunk 3	
4	I lleaus amaricana	American Elm	14.6			Door
1	Ulmus americana			14.2	10.2	Poor
3	Prunus serotina	Black Cherry	14.3	11.2	10.2	Good
14	Picea pungens	Blue Spruce	14.2			Good
15	Ulmus pumila	Siberian Elm	12.8			Fair
16	Picea pungens	Blue Spruce	10.0			Fair
20	Juglans nigra	Black Walnut	30.5			Good
23	Prunus serotina	Black Cherry	26.0	17.1		Fair
32	Acer saccharinum	Silver Maple	14.3			Good
42	Prunus serotina	Black Cherry	10.2			Fair
43	Prunus-serotina	Black Cherry	9.3			Fair
751	Populus deltoides	Eastern Cottonwood	18.3	18.3		Good
762	Juglans nigra	Black Walnut	11.5			Good
763	Juglans nigra	Black Walnut	11.3		-	Good
754	Salix alba	White Willow	51.3			Fair
765	Jugians nigra	Black Walnut	14.4	9.1		Good
	The State of the S	Apple Tree		J.L		Good
766	Malus pumila	The state of the s	18.3			7-10-10 CO
767	Ulmus pumila	Siberian Elm	21.5			Fair
768	Malus pumila	Apple Tree	17.5			Fair
770	Acer saccharinum	Silver Maple	18.8			Good
771	Ulmus pumila	Siberian Elm	14.0			Very Poo
772	Ulmus pumila	Siberian Elm	15.9			Very Poo
773	Ulmus pumila	Siberian Elm	17.1			Very Poo
774	Ulmus pumila	Siberian Elm	21.0			Fair
776	Prunus serotina	Black Cherry	15.7			Good
			2244		Shoppes	
-		n uiun	1 + 10		2110665	300-100
	Two services	Beacon Hill Par				
Tag	Scientific Name	Common Name	Diamete	r at Brea	st Height	Condition
			Trunk 1	Trunk 2	Trunk 3	
24	Salix nigra	Black Willow	17.8			Fair
25	Salix nigra	Black Willow	18.0			Fair
30	Prunus serotina	Black Cherry	19.7			Good
33	Acer negundo	Box elder	10.1			Good
35	Acer saccharinum	Silver Maple	15.0	13.1	10.2	Fair
36	Acer saccharinum	Silver Maple	9.6	9.3	10.2	Good
37	Acer saccharinum	Silver Maple	14.8	11.3		Good
_	A STATE OF THE STA		_	11.5		
38	Juniperus virginiana	Eastern Red-Cedar	16.0			Fair
68	Pinus strobus	Eastern White Pine	10.2			Good
755	Juglans nigra	Black Walnut	15.5			Good
757	Salix alba	White Willow	31.8			Good
760	Juglans nigra	Black Walnut	21.1			Good
-	Ulmus pumila	Siberian Elm	28.0			Fair
/69	onnas panna	Siberian Cim				4247 4
	Acer saccharinum	Silver Maple	10.2			Good
777	The state of the s	Silver Maple	-	8.0		Good
777 778	Acer saccharinum Acer saccharinum	Silver Maple Silver Maple	10.2			Good
777 778 779	Acer saccharinum Acer saccharinum Acer saccharinum	Silver Maple Silver Maple Silver Maple	10.2 8.0 9.5	8.0 8.3		Good Good
777 778 779 780	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia	Silver Maple Silver Maple Silver Maple Black Locust	10.2 8.0 9.5 9.4			Good Good Fair
777 778 779 780 781	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia Acer negundo	Silver Maple Silver Maple Silver Maple Black Locust Box-elder	10.2 8.0 9.5 9.4 9.9			Good Good Fair Fair
777 778 779 780 781	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia	Silver Maple Silver Maple Silver Maple Black Locust	10.2 8.0 9.5 9.4 9.9	8.3		Good Good Fair Fair
777 778 779 780 781	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia Acer negundo	Silver Maple Silver Maple Silver Maple Black Locust Box-elder Black Walnut	10.2 8.0 9.5 9.4 9.9 11.8			Good Good Fair Fair
777 778 779 780 781	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia Acer negundo	Silver Maple Silver Maple Silver Maple Black Locust Box-elder	10.2 8.0 9.5 9.4 9.9 11.8	8.3		Good Good Fair Fair
777 778 779 780 781 782	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia Acer negundo Juglans nigra	Silver Maple Silver Maple Silver Maple Black Locust Box-elder Black Walnut	10.2 8.0 9.5 9.4 9.9 11.8	8.3 Trailhe ad		Good Good Fair Fair Sub-Tota
777 778 779 780 781 782	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia Acer negundo	Silver Maple Silver Maple Silver Maple Black Locust Box-elder Black Walnut Off-Site	10.2 8.0 9.5 9.4 9.9 11.8	8.3 Trailhe ac	st Height	Good Good Fair Fair
777 778 779 780 781 782	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia Acer negundo Juglans nigra	Silver Maple Silver Maple Silver Maple Black Locust Box-elder Black Walnut Off-Site	10.2 8.0 9.5 9.4 9.9 11.8	8.3 Trailhe ad		Good Good Fair Fair Sub-Tota
777 778 779 780 781 782	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia Acer negundo Juglans nigra Scientific Name	Silver Maple Silver Maple Silver Maple Black Locust Box-elder Black Wolnut Off-Site	10.2 8.0 9.5 9.4 9.9 11.8 Trees Diamete	8.3 Trailhe ac	st Height	Good Good Fair Fair Sub-Tota Condition
7777 7778 7779 780 781 782 Tag	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia Acer negundo Juglans nigra Scientific Name	Silver Maple Silver Maple Silver Maple Black Locust Box-elder Black Walnut Off-Site Common Name	10.2 8.0 9.5 9.4 9.9 11.8 Trees Diamete Trunk 1	8.3 Trailhe ac	st Height	Good Good Fair Fair Sub-Tota Condition
7777 7778 7779 7780 7781 7782 Tag	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia Acer negundo Juglans nigra Scientific Name Tilia americana Juglans nigra	Silver Maple Silver Maple Silver Maple Black Locust Box-elder Black Walnut Off-Site Common Name American Basswood Black Walnut	10.2 8.0 9.5 9.4 9.9 11.8 Virees Diamete Trunk 1 9.1 20.0	8.3 Trailhe ac	st Height	Good Good Fair Fair Sub-Tota Condition Fair Good
7777 7778 7779 780 781 782 Tag 196 197 208	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pse udoacacīa Acer negundo Juglans nīgra Scientific Name Tilia americana Juglans nīgra Juglans nīgra	Silver Maple Silver Maple Silver Maple Black Locust Box-elder Black Walnut Off-Site Common Name American Basswood Black Walnut Black Walnut	10.2 8.0 9.5 9.4 9.9 11.8 Trees Diamete Trunk1 9.1 20.0 26.8	8.3 Trailhe ac	st Height	Good Good Fair Fair Sub-Tota Condition Fair Good Good
7777 7778 7779 7780 7781 7782 Tag 196 197 208	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia Acer negundo Juglans nigra Scientific Name Tilia americana Juglans nigra Juglans nigra Tilia americana	Silver Maple Silver Maple Silver Maple Black Locust Box-elder Black Walnut Off-Site Common Name American Basswood Black Walnut Black Walnut American Basswood	10.2 8.0 9.5 9.4 9.9 11.8 Trees Diamete Trunk 1 9.1 20.0 26.8 12.0	8.3 Trailhe ac	st Height	Good Good Fair Fair Sub-Tota Condition Fair Good Good Good
7777 7778 7779 7780 7781 782 Tag 196 197 208	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pse udoacacīa Acer negundo Juglans nīgra Scientific Name Tilia americana Juglans nīgra Juglans nīgra	Silver Maple Silver Maple Silver Maple Black Locust Box-elder Black Walnut Off-Site Common Name American Basswood Black Walnut Black Walnut	10.2 8.0 9.5 9.4 9.9 11.8 Trees Diamete Trunk 1 9.1 20.0 26.8 12.0 38.2	8.3 Trailhe ac	st Height	Good Good Fair Fair Sub-Tota Condition Fair Good Good Good
7777 7778 7779 7780 781 7782 Tag 196 197 208 258 258	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia Acer negundo Juglans nigra Scientific Name Tilia americana Juglans nigra Juglans nigra Tilia americana	Silver Maple Silver Maple Silver Maple Black Locust Box-elder Black Walnut Off-Site Common Name American Basswood Black Walnut Black Walnut American Basswood	10.2 8.0 9.5 9.4 9.9 11.8 Trees Diamete Trunk 1 9.1 20.0 26.8 12.0	8.3 Trailhe ac	st Height	Good Good Fair Fair Sub-Tota Condition Fair Good Good Good
7777 7778 7779 780 781 782 Tag 196 197 208 258 258 290	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia Acer negundo Juglans nigra Scientific Name Tilia americana Juglans nigra Juglans nigra Tilia americana Tilia americana	Silver Maple Silver Maple Silver Maple Black Locust Box-elder Black Walnut Off-Site Common Name American Basswood Black Walnut Black Walnut American Basswood American Basswood	10.2 8.0 9.5 9.4 9.9 11.8 Trees Diamete Trunk 1 9.1 20.0 26.8 12.0 38.2	8.3 Trailhe ac	st Height	Good Good Fair Fair Sub-Tota Condition Fair Good Good Good Very Poo
7777 7778 7779 780 781 782 Tag 196 197 208 258 289 290 484	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia Acer negundo Juglans nigra Scientific Name Tilia americana Juglans nigra Juglans nigra Tilia americana Tilia americana Morus alba Acer negundo	Silver Maple Silver Maple Silver Maple Black Locust Box-elder Black Walnut Off-Site Common Name American Basswood Black Walnut Black Walnut American Basswood American Basswood White Mulberry Box-elder	10.2 8.0 9.5 9.4 9.9 11.8 Trees Diamete Trunk 1 9.1 20.0 26.8 12.0 38.2 10.5 8.2	8.3 Trailhead r at Brea Trunk 2	st Height	Good Good Fair Fair Sub-Tota Condition Fair Good Good Good Very Poo Fair Very Poo
7777 7778 7779 780 781 782 Tag 196 197 208 258 289 290 484 485	Acer saccharinum Acer saccharinum Acer saccharinum Robinia pseudoacacia Acer negundo Juglans nigra Scientific Name Tilia americana Juglans nigra Juglans nigra Tilia americana Tilia americana Morus alba Acer negundo Tilia americana	Silver Maple Silver Maple Silver Maple Black Locust Box-elder Black Walnut Off-Site Common Name American Basswood Black Walnut American Basswood American Basswood White Mulberry Box-elder American Basswood	10.2 8.0 9.5 9.4 9.9 11.8 Virees Diamete Trunk 1 20.0 26.8 12.0 38.2 10.5 8.2 12.9	8.3 Trailhe ac	st Height	Good Good Fair Fair Sub-Tota Condition Fair Good Good Very Poo Fair Very Poo Fair
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Trees in this class are judged to be high-quality trees with decent crown shape and little to

These trees are in general decent health, which may be brought into better condition with better maintenance. They have few dead limbs, limited insect or disease activity, or slight

Most trees in this group have the following problems: large dead limbs, with as much as one-third (1/3) of the tree already dead; large cavities; drastic deformities; girdling roots;

Trees in this group are extremely weak with irreversible problems such as severe decline

Very Poor: in health, structural degradation, lethal disease or insect infestation with no hope for survival. Trees in this group will have to be removed in the near future and may pose

Dead: Trees in this group are dead, potentially hazardous and should be removed.

Excellent: species. All have excellent form and very minor maintenance problems and are growing in

a location which will enable them to achieve full mature shape.

severe disease problems; or restricted growing spaces.

Trees to be removed

no dead limbs or insect activity.

TRE	FREMOV	AL SUMMAI	2
INL	L KLIVIO V	AL SOMMAN	1

	TOTAL	MEADOWS	SHOPPES	PARK TRAILHEAD
NO. OF EXISTING TREES (ON-SITE)	577	534	19	24
NO. OF EXISTING TREES REMOVED	460	432	22	6
NO. OF EXEMPT TREES REMOVED (DEAD, POOR, OR VERY POOR)	58	55	3	0
NO. OF REGULATED TREES REMOVED	402	377	19	6
REMOVED TREE'S D.B.H.				
8"<11"	187	183	3	9
>11"<20"	157	144	9	4
>20"<30"	20	17	3	0
>30"	6	4	1	1
MULTIPLE TRUNK	32	29	3	0

SEE WOODLAND TREE REPLACEMENT SUMMARY ON LANDSCAPE PLANS FOR REPLACEMENT CREDIT CALCULATIONS.

TREE INDENTIFICATION PERFORMED BY KING & MacGREGOR ENVIRONMENTAL, INC. IN OCTOBER 2015.

| REVISIONS | DATE | BY | REVI

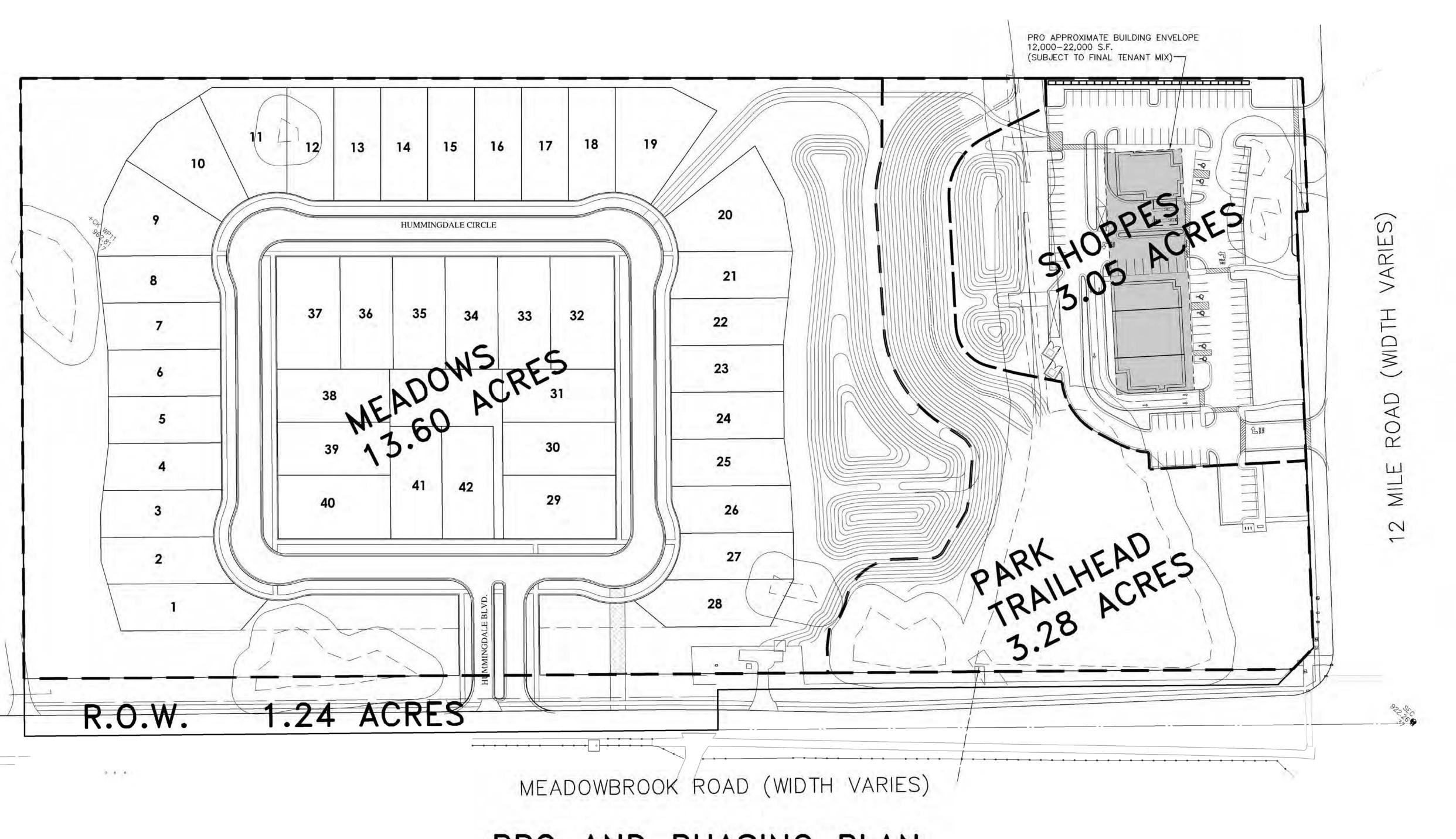


PROJECT SPONSOR:
IVANHOE MEADOWBROOK L.L.C.
6689 ORCHARD LAKE ROAD, STE, 314
WEST BLOOMFIELD, MI 48322 (248) 626-6114

TREE REMOVAL LIST BEACON HILL PARK NOVI, MICHIGAN, SECTION 12 DATE 1/11/16 SCALE HOR: 1* = N/A VER: 1" = N/A

DESIGNED BY SRB JOB NO. 14151

DRAWN BY SRB SHEET SP-4



PRO AND PHASING PLAN

PRO

RESIDENTIAL MEADOWS

42 UNITS

COMMERCIAL SHOPPES

12,000-22,000 S.F (SUBJECT TO FINAL TENANT MIX)

PHASING

13.60 ACRES 3.28 ACRES 16.88 ACRES

3.05 ACRES

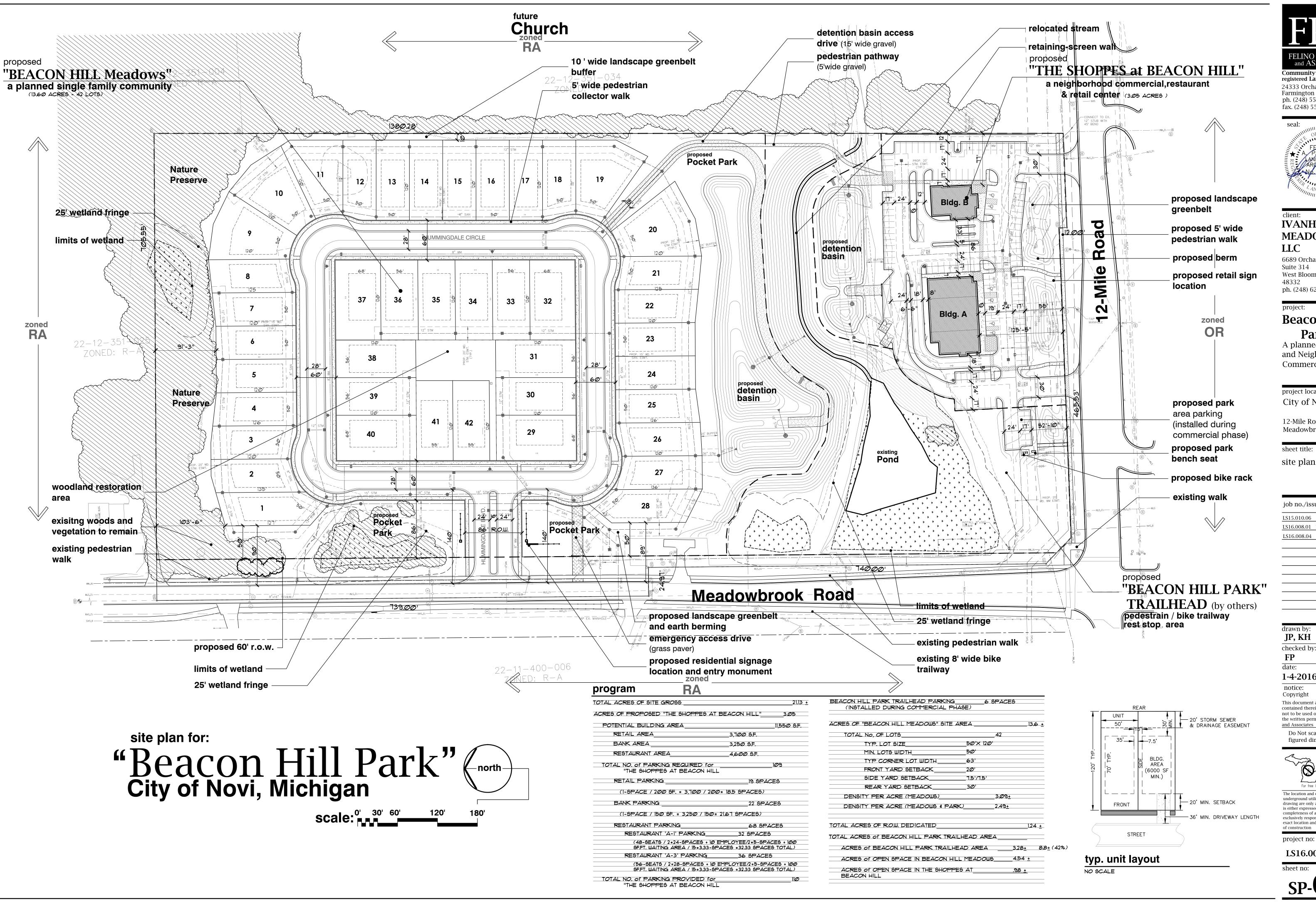
PHASE 1

- MEADOWS COMPLETE CONSTRUCTION INCLUDING MASS GRADING, UNDERGROUND UTILITY INSTALLATION, PAVING, LANDSCAPING AND TREE REPLACEMENT.
- PARK TRAILHEAD CONSTRUCTION INCLUDING MASS GRADING, STREAM RELOCATION, WETLAND RESTORATION, LANDSCAPING AND TREE REPLACEMENT.
- SHOPPES MASS GRADING, INCLUDING SEDIMENTATION AND DETENTION BASINS, STORM SEWER WITHIN THE BASINS AND SITE STABILIZATION.

PHASE 2

- SHOPPES BALANCE OF CONSTRUCTION INCLUDING UNDERGROUND UTILITY INSTALLATION, PAVING, LANDSCAPING, TREE REPLACEMENT AND SITE
- PARK TRAILHEAD BALANCE OF CONSTRUCTION INCLUDING PAVING, BENCH AND BIKERACK INSTALLATION AND RESTORATION OF THE DISTURBED

4/13/16







IVANHOE MEADOWBROOK

6689 Orchard Lake Road, Suite 314 West Bloomfield, Michigan 48332 ph. (248) 626-6114

project:

Beacon Hill Park

A planned Single Family and Neighborhood Commercial Retail

project location: City of Novi, MI

12-Mile Road & Meadowbrook Road

sheet title:

site plan

job no./issue/revision date:

LS15.010.06 SPA 6-26-2015 LS16.008.01 PSP 1-11-2016 LS16.008.04 PSP 4-13-2016

JP, KH checked by:

1-4-2016

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Do Not scale drawings. Use figured dimensions only

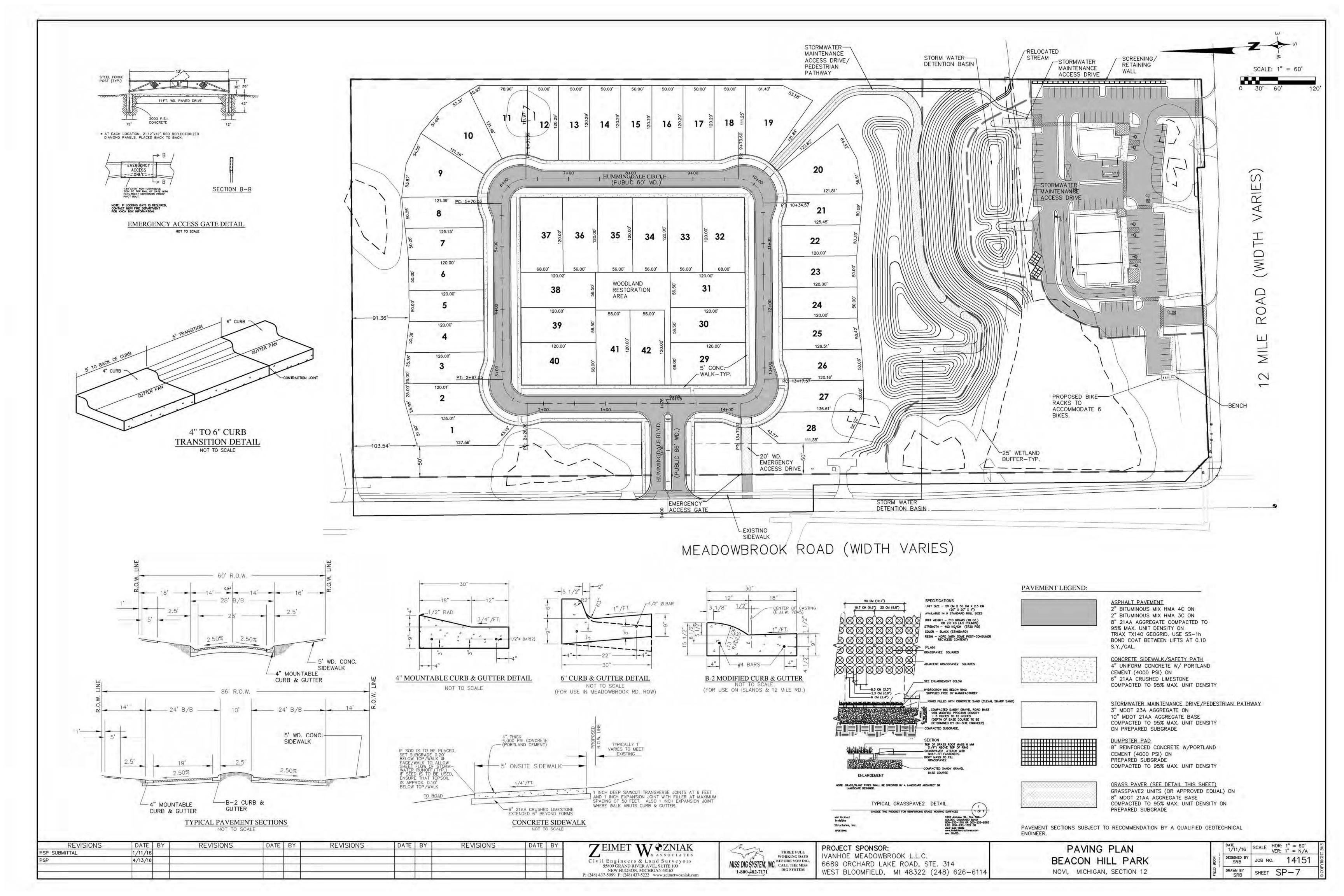
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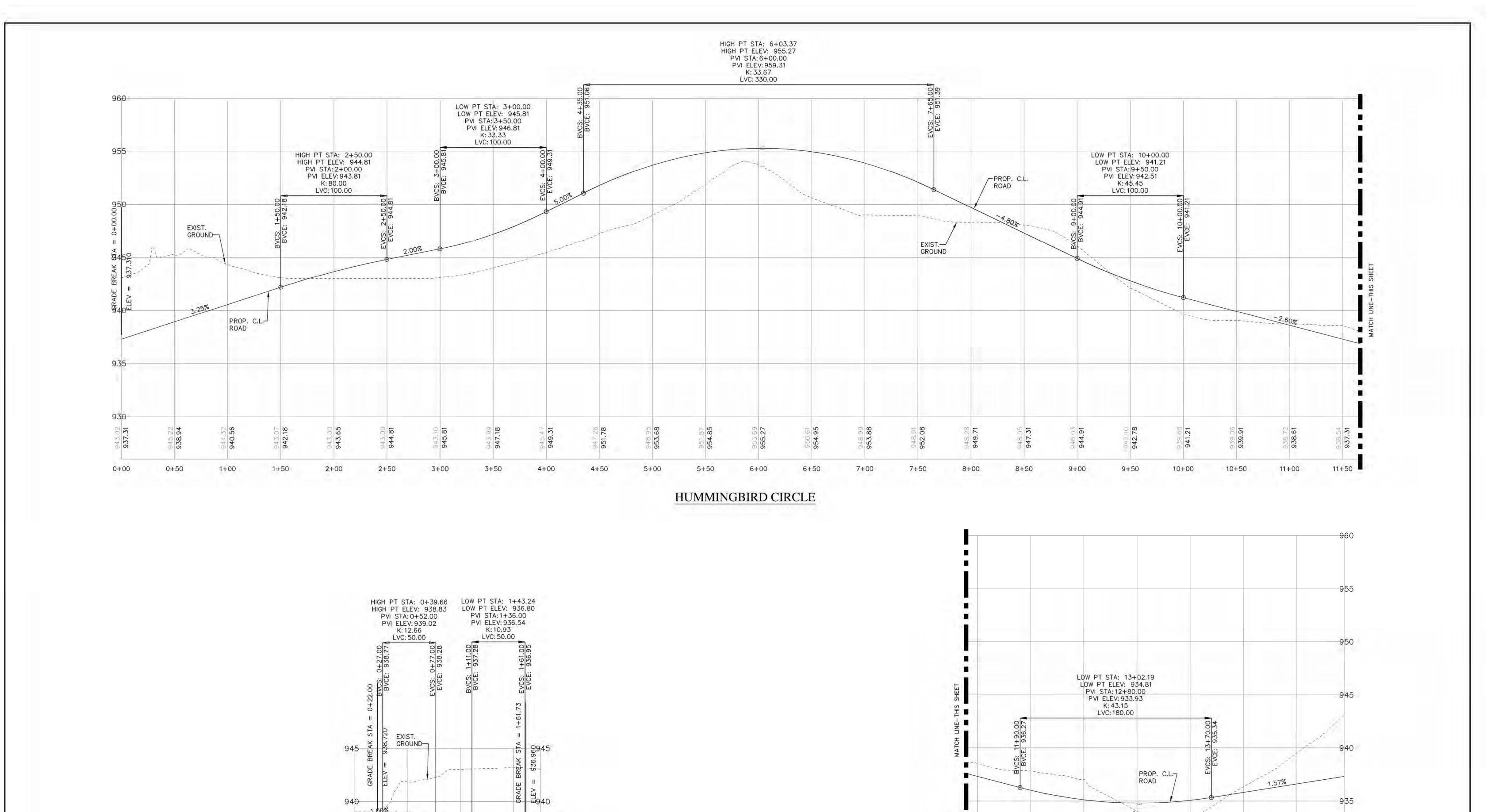
is either expressed or implied as to the ompleteness of accuracy. contractor shall b exclusively responsible for determining the

exact location and elevation prior to the star of construction

LS16.008.01

sheet no: SP-O





REVISIONS DATE BY REVISIONS DA

PROP. C.L.

0+00

0+50

1+00

ZEIMET W EZNIAK

Civil Engineers & Land Surveyors
55800 GRAND RIVER AVE., SUTTE 100

NEW HUDSON, MICHIGAN 48165
P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

-2.50%

1+50 1+75.73

MISS DIG SYSTEM, INC. CALL THE MISS DIG SYSTEM DIG SYSTEM

PROJECT SPONSOR:
IVANHOE MEADOWBROOK L.L.C.
6689 ORCHARD LAKE ROAD, STE, 314
WEST BLOOMFIELD, MI 48322 (248) 626-6114

12+00

ROAD PROFILES
BEACON HILL PARK
NOVI, MICHIGAN, SECTION 12

14+00

14+50

14+95.07

935.08

13+50

GROUND

12+50

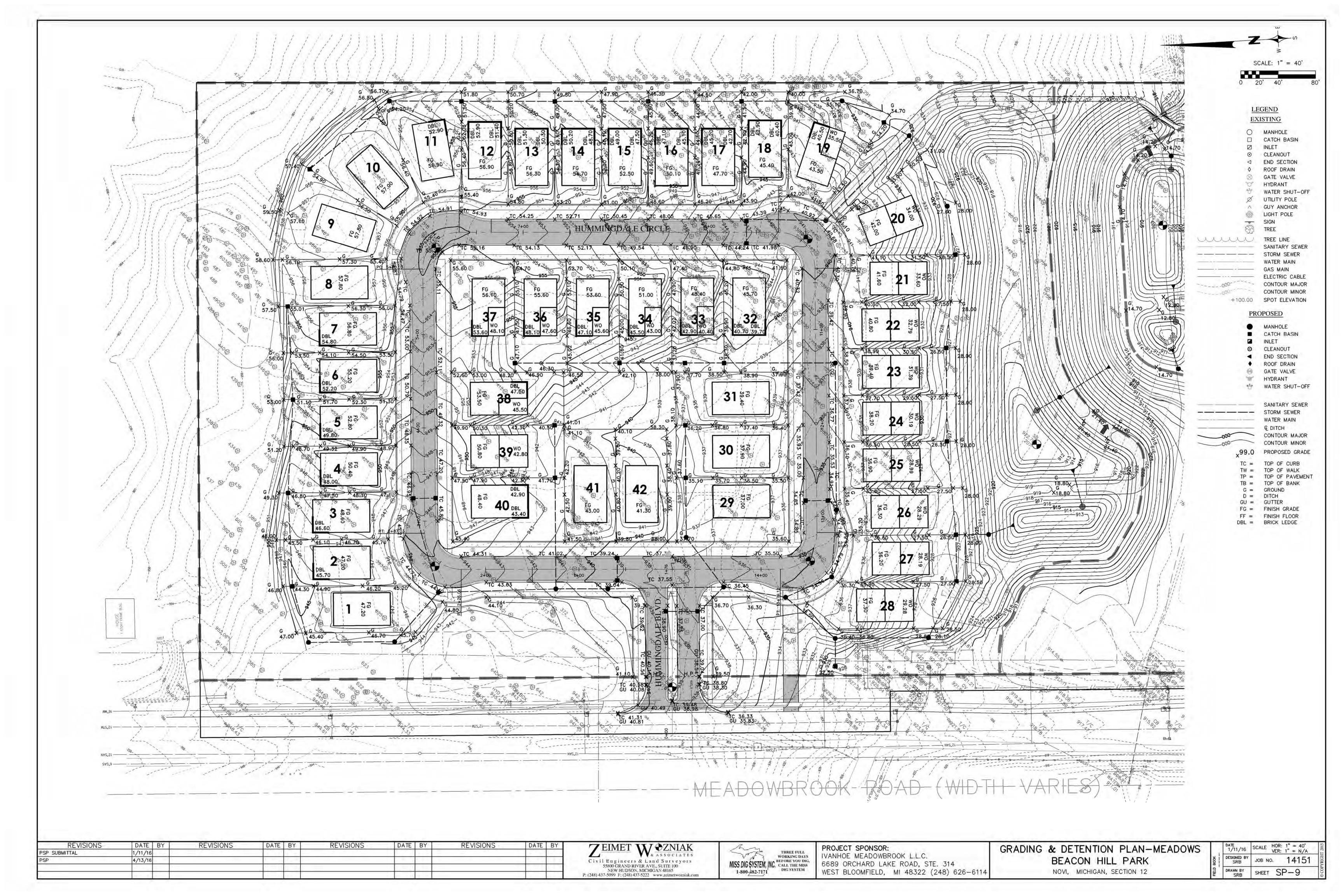
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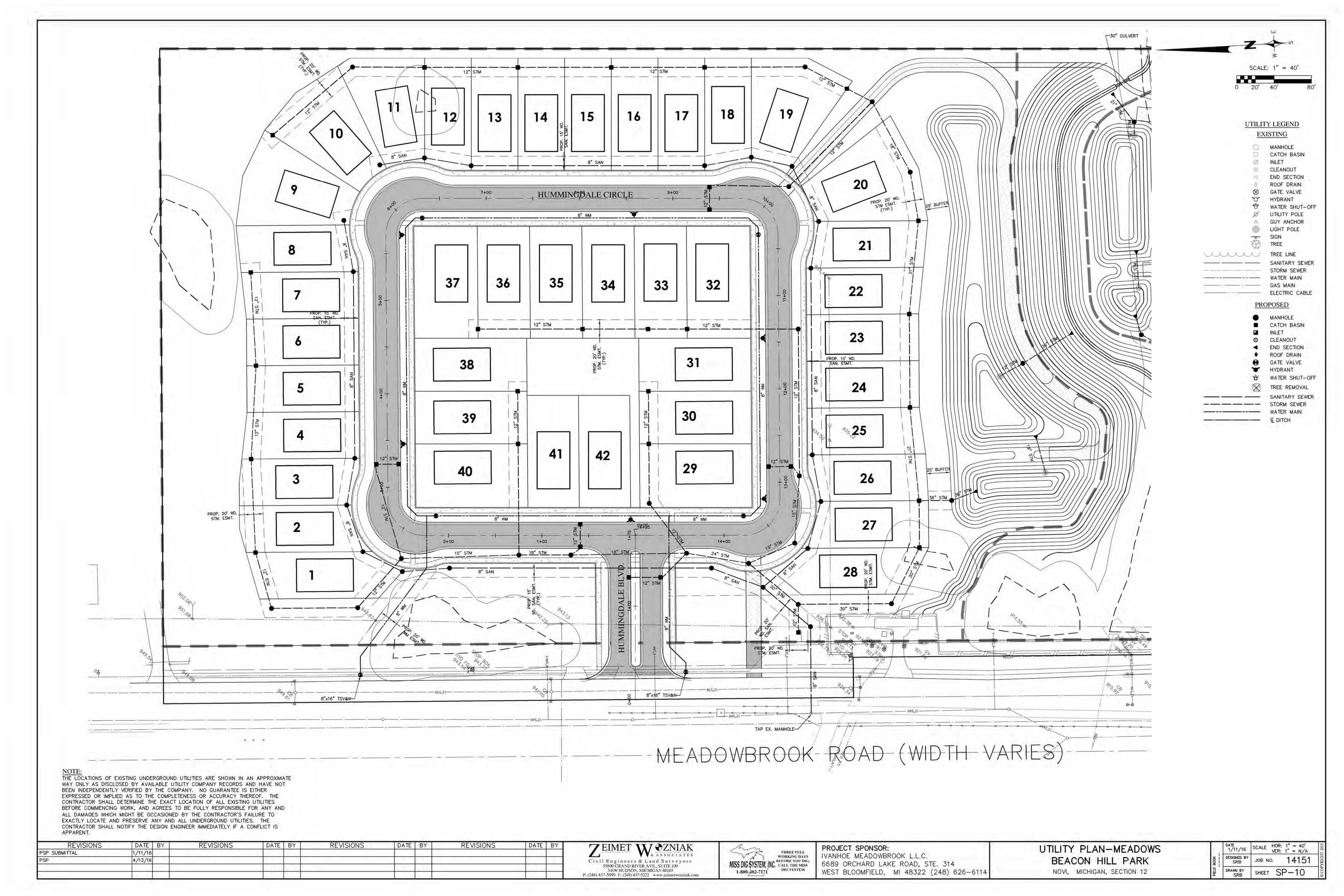
HUMMINGBIRD CIRCLE

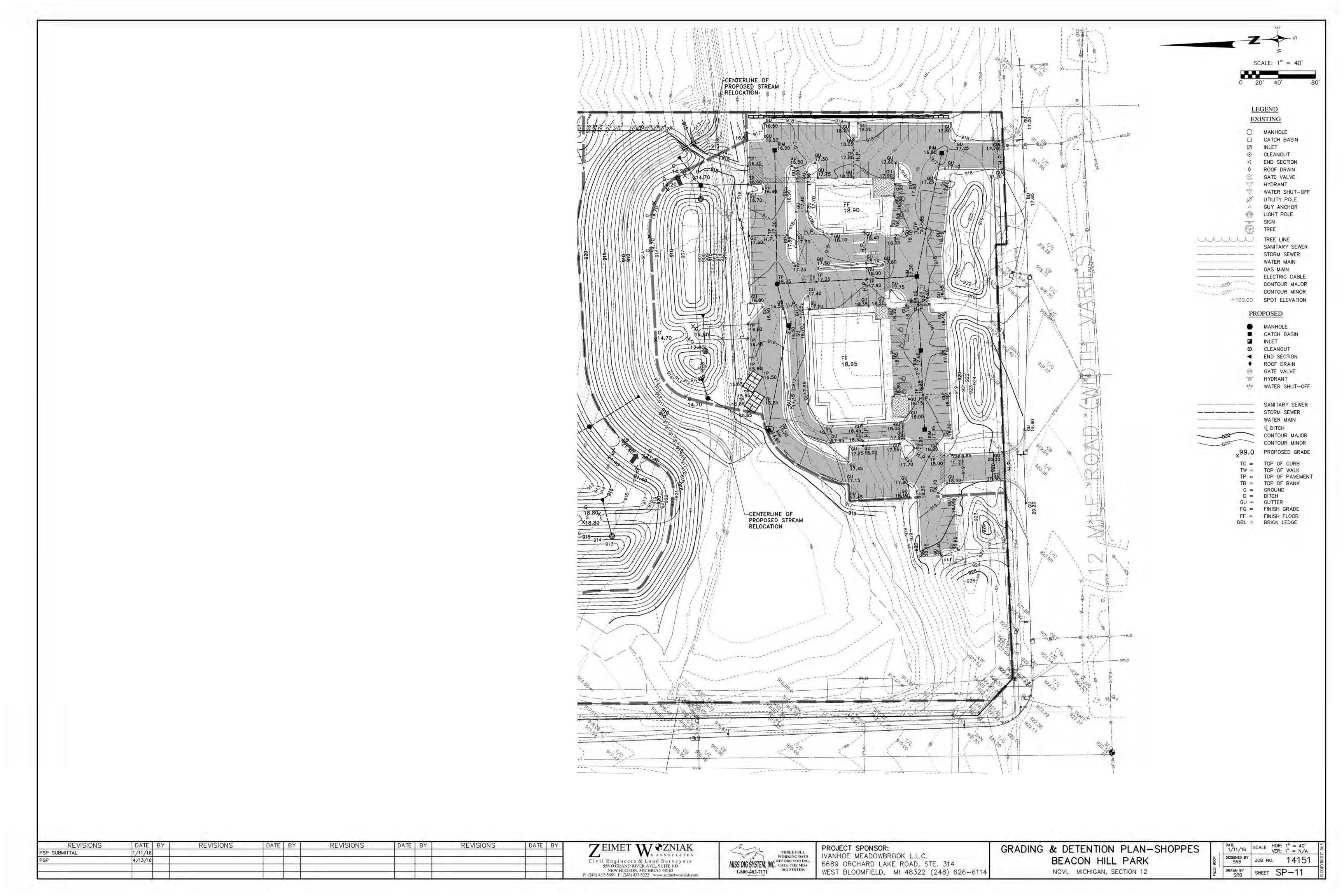
DATE 1/11/16 SCALE HOR: 1" = 40" VER: 1" = 4"

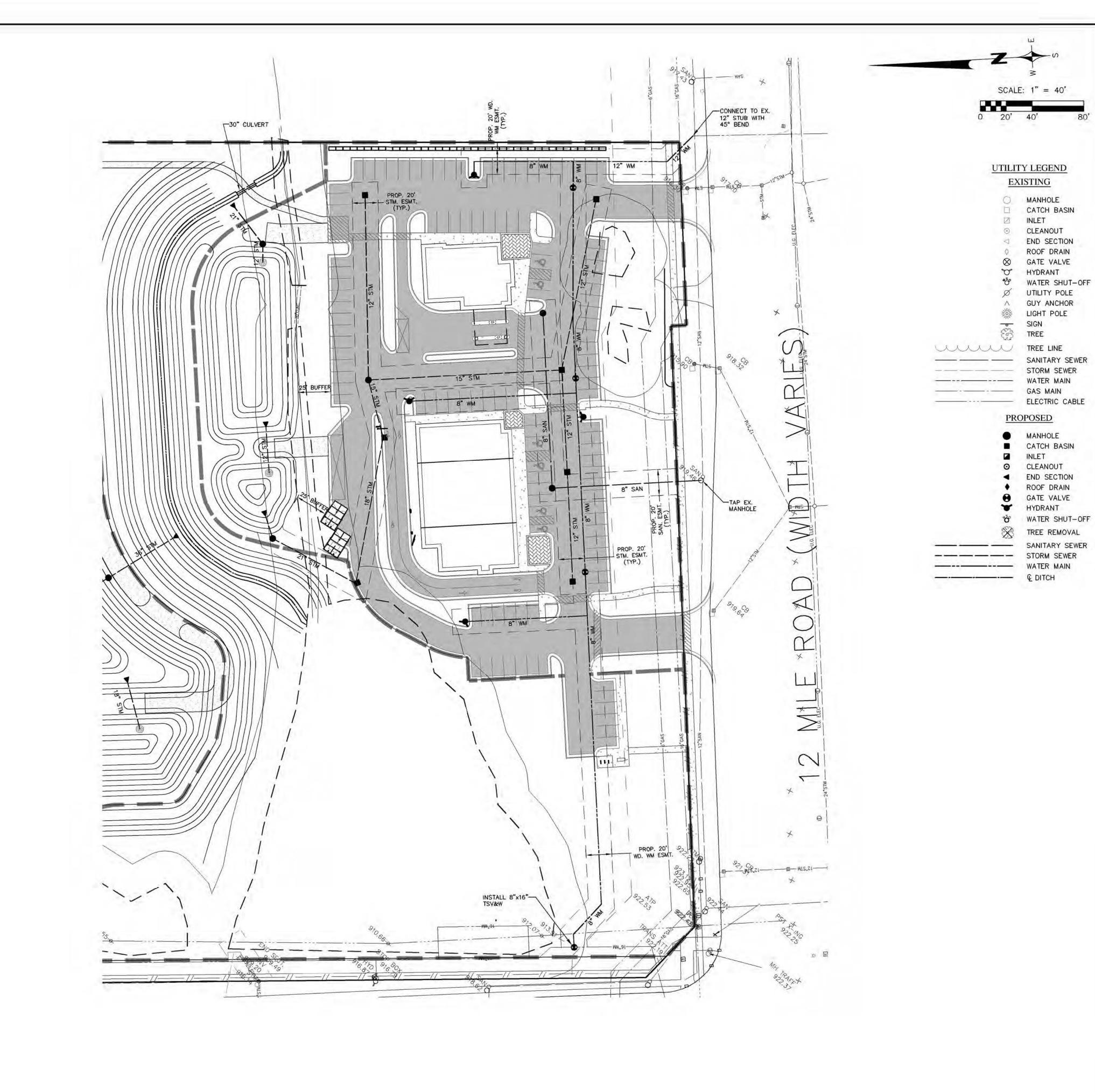
DESIGNED BY SRB JOB NO. 14151

DRAWN BY SRB SHEET SP-8









NOTE:
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AS DISCLOSED BY AVAILABLE UTILITY COMPANY RECORDS AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE COMPANY. NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY IF A CONFLICT IS APPARENT.

REVISIONS	DATE BY	REVISIONS	DATE	BY	REVISIONS	DATE	BY	REVISIONS	DATE	BI
PSP SUBMITTAL	1/11/16			4741				- 7		
PSP	4/13/16									
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ZEIMET W ZNIAK

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6689 ORCHARD LAKE ROAD, STE. 314
WEST BLOOMFIELD, MI 48322 (248) 626-6114

UTILITY PLAN-SHOPPES
BEACON HILL PARK
NOVI, MICHIGAN, SECTION 12

DATE 1/11/16 SCALE HOR: 1* = 40' VER: 1" = N/A

DESIGNED BY SRB JOB NO. 14151

DRAWN BY SRB SHEET SP-12

STORM WATER MANAGEMENT CALCULATIONS THIS EQUATES TO A 5.48" ORIFICE. USE A 12" DIA. OUTLET PIPE WITH A CAPPED TEE. RUNOFF FROM THE CONTRIBUTING AREA OF THE SITE SHALL BE COLLECTED, TREATED IN FOREBAYS AND STORED FOR THE 100-YEAR STORM EVENT WITHIN DETENTION BASINS PER DRILL A 5.5" DIA HOLE IN THE BOTTOM CAP OF THE VERTICAL EXTENSION TO ACT THE CITY OF NOVI STORM WATER MANAGEMENT ORDINANCE. DETENTION BASIN STANDPIPE ORIFICE (BANKFULL DISCHARGE): H = 918.7 - 915.0 = 3.7" 1. EXISTING DRAINAGE TO WETLAND AND STREAM FROM OFFSITE A = 0.3988 (Am) VH/172800 = [0.3988(41145/3.7)\\3.7]/172800 = 0.04937 SF APPROXIMATELY 124 AC (0.19 SQ, MILES) OF LAND ON THE WEST SIDE OF NUMBER OF 1" DIA, HOLES = 0.049.37/0.0055 = 8.9 MEADOWBROOK ROAD DISCHARGES THROUGH A 30" CULVERT UNDER MEADOWBROOK ROAD INTO THE EXISTING WETLAND ON THE BEACON HILL SITE, USING USE (8) 1" DIA HOLES AT ELEVATION 915.0. THE MDEQ MANUAL FOR "COMPUTING FLOOD DISCHARGES FOR SMALL UNGAGED ACTUAL BANKFULL RELEASE RATE: WATERSHEDS" PUBLISHED 2001, THE FOLLOWING FLOWS WERE CALCULATED FOR THE Q = 0.62 × 0.0055 × 8 √ (64.4×3.7) = 0.42 CFS BACKFULL AND 100-YEAR STORM EVENTS. BANKFULL FLOOD EVENT: 3. COMMERCIAL BASIN AREA = 124 ACRES = 0.19 MI2 RUNOFF COEFFICENT, 'C' LENGTH (FT) Δ BLEV (FT) SLOPE (%) VEL (FPS) Το (HR) 200 980-960=20 10.00 3.79 0.01 OVERALL AREA = 3.05 CONTRIBUTING AREA = 3.05 AC. WATERWAY 960-940=20 2.00 940-930=10 4.00 WATERWAY 2.40 0.03 0.26 AC. @ 0.95 = 0.25 250 PAVEMENT 1.43 AC. @ 0.95 = 1.35 WATERWAY 650 930-920=10 1.54 1.49 0.12 OPEN WATER 0.13 AC. @ 1.00 = 0.13 WATERWAY 0.06 920-911=9 2.25 1.80 1.23 AC. @ 0.35 = 0.43 3.05 AC. 2.16 0.94 <u>0.15</u> To TOTAL = 0.88 HR SMALL TRIB 912-911=1 0.20 OPEN SPACE SOILS: % OF TOTAL LAND USE GROUP AREA AREA (MIR) TYPE 'C' = 2.16/3.05 = 0.70 USE 'C' = 0.70 % AREA RCN SRO MIZIN 100-YEAR DETENTION Qa = 0.15 CFS/AC x 3.05 AC = 0.46 CFS B 100.0 0.19 WOODS (FAIR) 22 0.04 60 0.15 0.006 MEADOW 67 0.13 58 0.11 0.014 FARM 11 0.02 74 0.55 0.011 0.031 $Q_c = 0.46 \text{ CFS/}(3.05 \text{ AC.} \times 0.70) = 0.22 \text{ CFS/AC.-IMP.}$ $T_{100} = -25 + \sqrt{(10312.5/0.22)}$ = 191.5 MINUTES * RAINFALL = 2.4" (NO ADJUSTMENT NEEDED) FOR 2-YR., 24 HR STORM (BANKFULL) $V_{e100} = [(16500 \times 191.5)/(25 + 191.5)] - (40 \times 0.22 \times 191.5) = 12,909.5 \text{ CF/AC.-IMP.}$ V100 = 12,909.5 x 3.05 x 0.70 = 27,562 CF ADD 10% FOR CONSTRUCTION TOLERANCES = 1.10 x 27,562 = 30,318 CF TOTAL MIZIN. = AVG SRO= FOREBAY (FIRST FLUSH) Vn = 1815 × 3.05 × 0.70 = 3,875 CF COMP RCN = 330 CFS/ MI2IN. ADD 10% FOR CONSTRUCTION TOLERANCES = 1.10 x 3,875 = 4,263 CF Q= = 330 × 0.19 × 0.16 = 10.0 CFS ADJUSTMENT FACTOR = 0.86 (2% PONDING AT THE DESIGN POINT) QP-ADJUSTED = 10.0 x 0.86 = 8.6 CFS $V_{bf} = 5160 \times 3.05 \times 0.70$ = 11,017 CF ADD 10% FOR CONSTRUCTION TOLERANCES = 1.10 x 11,017 = 12,118 CF 100-YEAR STORMD EVENT: VOLUME PROVIDED (100-YEAR) AREA = 124 ACRES = 0.19 MI2 LENGTH (FT) Δ ELEV (FT) SLOPE (%) VEL (FPS) Τ_C (HR) 200 980-960=20 10.00 3.79 0.01 1000 960-940=20 2.00 1.70 0.16 AREA (SF) AVG AREA (SF) DEPTH (FT) VOL. (CF) 4926 WATERWAY 5588 0.03 0.12 2.40 1.49 6250 WATERWAY 940-930=10 4.00 WATERWAY 930-920=10 1.54 1 6971 920-911=9 2.25 912-911=1 0.20 912 7692 WATERWAY 1.80 400 0.06 SMALL TRIB 0.8 6515 SOILS: GROU 0.2 2295 0.7 8939 30,308 CF * RAINF

73
70
OLATION:
CF
57

AVG. SRC COMP RCN = 330 CFS/ MI2-IN. Qp = 330 x 0.19 x 1.05 = 65.8 CFS ADJUSTMENT FACTOR = 0.86 (2% PONDING AT THE DESIGN POINT) QF. ADJUSTED = 65.8 × 0.86 = 56.6 CFS

2. RESIDENTIAL BASIN RUNOFF COEFFICENT, 'C' = 13.60 AC. OVERALL AREA

0.21 AC. CONSIST OF EXISTING WETLAND AREAS) 1,34 AC. @ 0,95 = 1.27 PAVEMENT OPEN WATER 0.17 AC. @ 1.00 = 0.17 9.82 AC. @ 0.35 = OPEN SPACE 13.39 AC.

'C' = 6.84/13,39 = 0.51 USE 'C' = 0.60

100-YEAR DETENTION Q_o = 0.15 CFS/AC x 13,39 AC = 2,01 CFS Qa = 2.01 CF\$/(13.39 AC. x 0.60) = 0.25 CF\$/AC.-IMP.

 $T_{100} = -25 + \sqrt{(10312.5/0.25)} = 178.1 \text{ MINUTES}$ $V_{\text{s100}} = [(16500 \times 178.1)/(25 + 178.1)] - (40 \times 0.25 \times 178.1) = 12,688 \text{ CF/AC.-IMP}.$ $V_{\text{non}} = 12.688 \times 13.39 \times 0.60$ = 101.935 CF ADD 10% FOR CONSTRUCTION TOLERANCES = 1.10 x 101,935 = 112,129 CF

= 14,582 CF

CONTRIBUTING AREA = 13.39 AC. (THE REMAINING

ADD 10% FOR CONSTRUCTION TOLERANCES = 1.10% 14,582 = 16,040 CF V_{bf} = 5160 x 13.39 x 0.60 = 41,455 CF ADD 10% FOR CONSTRUCTION TOLERANCES = 1.10 x, 41,455 = 45,600 CF

VOLUME PROVIDED (100-YEAR)

AREA (SF) AVG AREA (SF) DEPTH (FT) VOL. (CF) 6576 7816 10522 10522 13228 15022 16816 20512 (DETENTION ONLY) 919 27399 (OVERALL) 30131 30131 920 32863 35040 921 37216 115,955 CF

100-YEAR DETENTION BY INTERPOLATION: T/STORAGE = 920.9, V = 112,451 CF BANKFULL VOLUME, BY INTERPOLATION: T/STORAGE = 918.7, v = 45,185 cf

VOLUME PROVIDED (FOREBAY) AREA (SF) AVG AREA (SF) DEPTH (FT____VOL. (CF) 2539 1 2539 3204 1 3590 4155 1 4763 4763 918 5372 1 6040 919 6709

16,932 CF

FOREBAY STORAGE, BY INTERPOLATION: T/STORAGE = 918.8, V = 15,724 CF

 $A = 1.98/(0.62\sqrt{64.4} \times 5.9) = 0.1638 \text{ SF}$

Q = 1.98 CFS H = 920.9 - 915.0 = 5.9'

OUTLET SIZING A = 0.3988 (Am) VH/86400 H = 918.8 - 915.0 = 3.8' A= [0.3988(14472/3.8) \(\frac{1}{3}.8 \) \(\ NUMBER OF 1" DIA. HOLES = 0.03427/0.0055 = 6.2 USE (6) 1" DIA HOLES AT ELEVATION 915.0 DETENTION BASIN RESTRICTOR PIPE:

BANKFULL VOLUME, BY INTERPOLATION: T/STORAGE = 912.0, V = 12,559 CF VOLUME PROVIDED (FOREBAY)

DEPTH (FT_ VOL. (CF) 1002 1 1002 1 1545 912 2198 1 2198 913 2552 4,745 CF

FOREBAY STORAGE, BY INTERPOLATION: T/STORAGE = 912.8, V = 4,305 CF **OUTLET SIZING** FOREBAY STANDPIPE ORIFICE:

A = 0.3988 (Am) \H/86400 H = 912.8 - 910 = 2.8' $A = [0.3988(3926/2.8)\sqrt{2.8}]/86400 = 0.0108 \text{ SF}$ USE (2) 1" DIA HOLES AT ELEVATION 910,0

DETENTION BASIN RESTRICTOR PIPE: A = Q/(0.62\2GH) Q = 0.46 CFS H = 913.7 - 910 = 3.7'

A = 0.46/(0.62\dd4.4 \times 3.7) = 0.04806 SF THIS EQUATES TO A 2.97" DIA ORIFICE. USE A 12" DIA OUTLET PIPE WITH A CAPPED TEE. DRILL A 4.0" DIA HOLE IN THE BOTTOM CAP OF THE VERTICAL EXTENSION TO ACT AS THE RESTRICTOR SINCE 4.0" IS THE MINIMUM ALLOWABLE RESTRICTOR.

H = 912.0 - 910.0 = 2.0' A = 0.3988(Am)\H/172800 = [0.3988[11161/2.0]\(\frac{1}{2}.0]\(\frac{1}{2}.0)\(\frac{1}2.0)\(\frac{1}2.0)\(\frac{1}2.0)\(\frac{1}2.0)\(NUMBER OF 1" DIA. HOLES = 0.0182/0,0055 = 3.3 USE (3) 1" DIA, HOLES, SET AT ELEVATION 910.0.

ACTUAL BANKFULL RELEASE RATE:

DETENTION BASIN STANDPIPE ORIFICE (BANKFULL DISCHARGE:

 $Q = 0.62 \times 0.0055 \times 3 \sqrt{(64.4 \times 2.0)} = 0.12 \text{ CFS}$ 4. SIZE NEW CULVERT AT PROPOSED STREAM CROSSING

COMMERCIAL DISCHARGE = 0.11 CFS TOTAL FLOW = 9.13 CFS

THE NEW CULVERT SHALL BE SIZED TO ACCOMMODATE THE BANKFULL FLOOD FLOW IN THE RELOCATED STREAM. OFF-SITE FLOW = 8.6 CFS RESIDENTIAL DISCHARGE = 0.42 CFS

USING MANNING'STABLE, A 30" DIAMETER CULVERT AT 0.09% (MIN.) SLOPE HAS A CAPACITY OF 12.5 CFS AND V = 2.5 FPS.

CENTERLINE OF PROPOSED STREAM RELOCATION RELOCATION
GI 16.50 16.20 16.45
1.00 28.00 28.00 80.00 28.00 80.00 80.00 1
25.80 FEE CU 16.80 16.5 CU 16.5 CU 16.80 16.5 CU 16.5
32.78 (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4
5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1
550 26.30 28.00 C 26.30 C 28.00 C 26.30 C 26.3
CENTERLINE OF PROPOSED STREAM RELOCATION 915 915 915 915 915 915 915 915 915 91
7 \(\frac{1}{12} \) \(\frac{1}
22, CL 11 11 11 11 11 11 11 11 11 11 11 11 11
192 6 95 6 9 6 9 6 9 6 9 6 9 6 9 6 9 6 9 6
916 - 116 -

SCALE: 1" = 40'

LEGEND

EXISTING

O MANHOLE

INLET

THYDRANT

SIGN

+100.00 SPOT ELEVATION

PROPOSED

INLET

MANHOLE

CLEANOUT

GATE VALVE

WATER SHUT-OFF

CONTOUR MAJOR

CONTOUR MINOR

x99.0 PROPOSED GRADE

TC = TOP OF CURB

TW = TOP OF WALK

TB = TOP OF BANK

FG = FINISH GRADE

FF = FINISH FLOOR

DBL = BRICK LEDGE

G = GROUND

D = DITCH

GU = GUTTER

TP = TOP OF PAVEMENT

■ END SECTION

♦ ROOF DRAIN

HYDRANT

— € DITCH

SANITARY SEWER

---- STORM SEWER

WATER MAIN

CATCH BASIN

TREE

-0

\$13

SANITARY SEWER

ELECTRIC CABLE

CONTOUR MAJOR

CONTOUR MINOR

----- STORM SEWER WATER MAIN

TREE LINE

GAS MAIN

CATCH BASIN

CLEANOUT

END SECTION

ROOF DRAIN

GATE VALVE

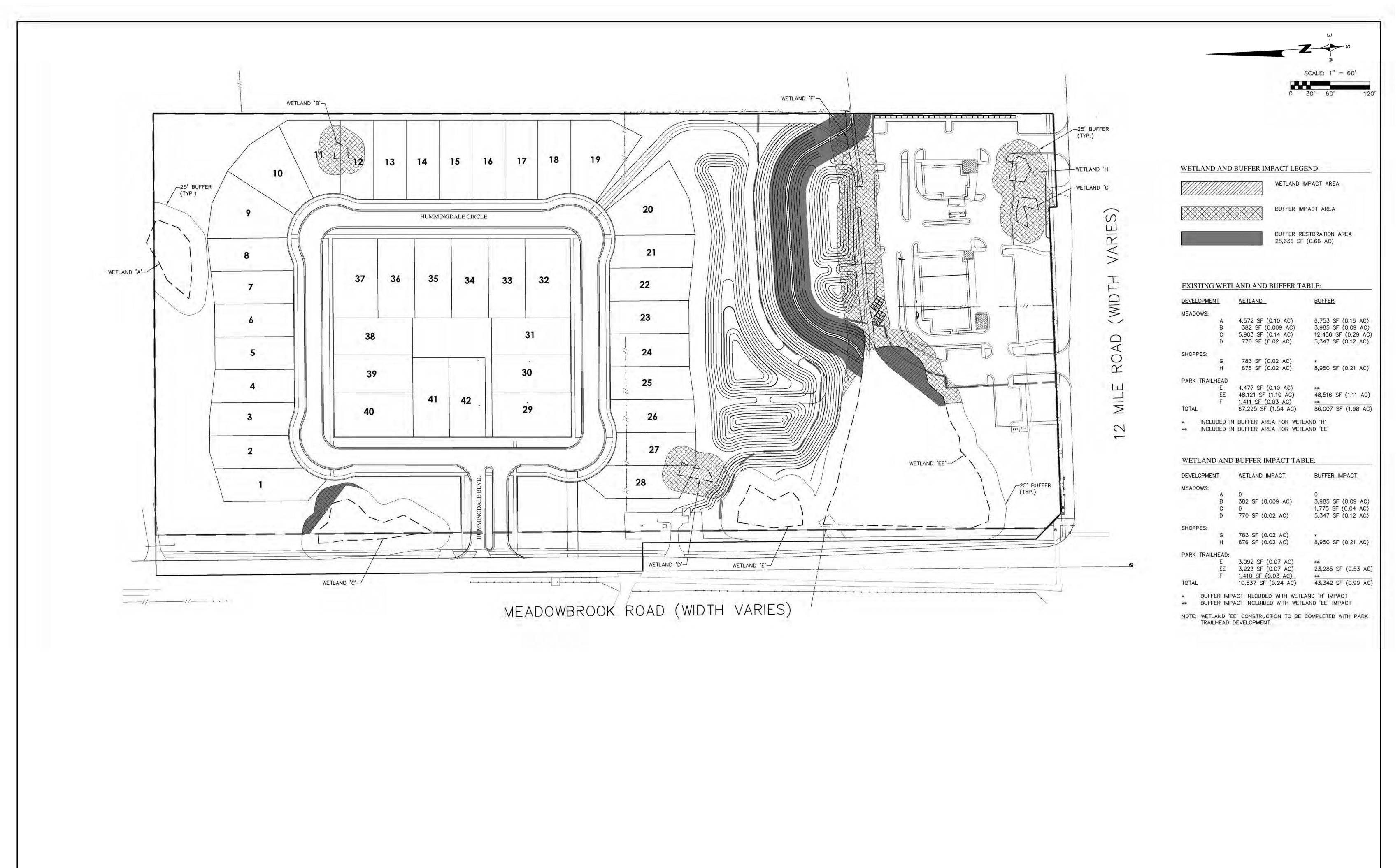
UTILITY POLE

GUY ANCHOR

LIGHT POLE

WATER SHUT-OFF





MISS DIG SYSTEM, INC. CALL THE MISS DIG SYSTEM DIG SYSTEM

ZEIMET W ZNIAK

Civil Engineers & Land Surveyors 55800 GRAND RIVER AVE., SUITE 100 NEW HUDSON, MICHIGAN 48165 P: (248) 437-5099 F: (248) 437-5222 www.zeimetwozniak.com

REVISIONS

REVISIONS

REVISIONS

PSP SUBMITTAL

DATE BY

1/11/16

4/13/16

REVISIONS

DATE BY

DATE BY

PROJECT SPONSOR:
IVANHOE MEADOWBROOK L.L.C.
6689 ORCHARD LAKE ROAD, STE, 314
WEST BLOOMFIELD, MI 48322 (248) 626-6114

WETLAND & BUFFER IMPACT PLAN
BEACON HILL PARK
NOVI, MICHIGAN, SECTION 12

DATE 1/11/16 SCALE HOR: 1* = 60' VER: 1" = N/A

DESIGNED BY SRB JOB NO. 14151

DRAWN BY SRB SHEET SP-14

Existing failed culvert to be removed 32± LF 30" dia.

Existing stream channel to be abandoned 350± LF

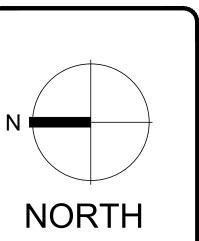
Existing emergent/ open water wetland

0.75± acres Habitat restoration to improve plant species diversity

Treat invasive species

0.5± acres

Mechanical and chemical treatment of common reed and reed canary grass. Replant with native wildflower species. Improve aesthetic character from Meadowbrook Road.



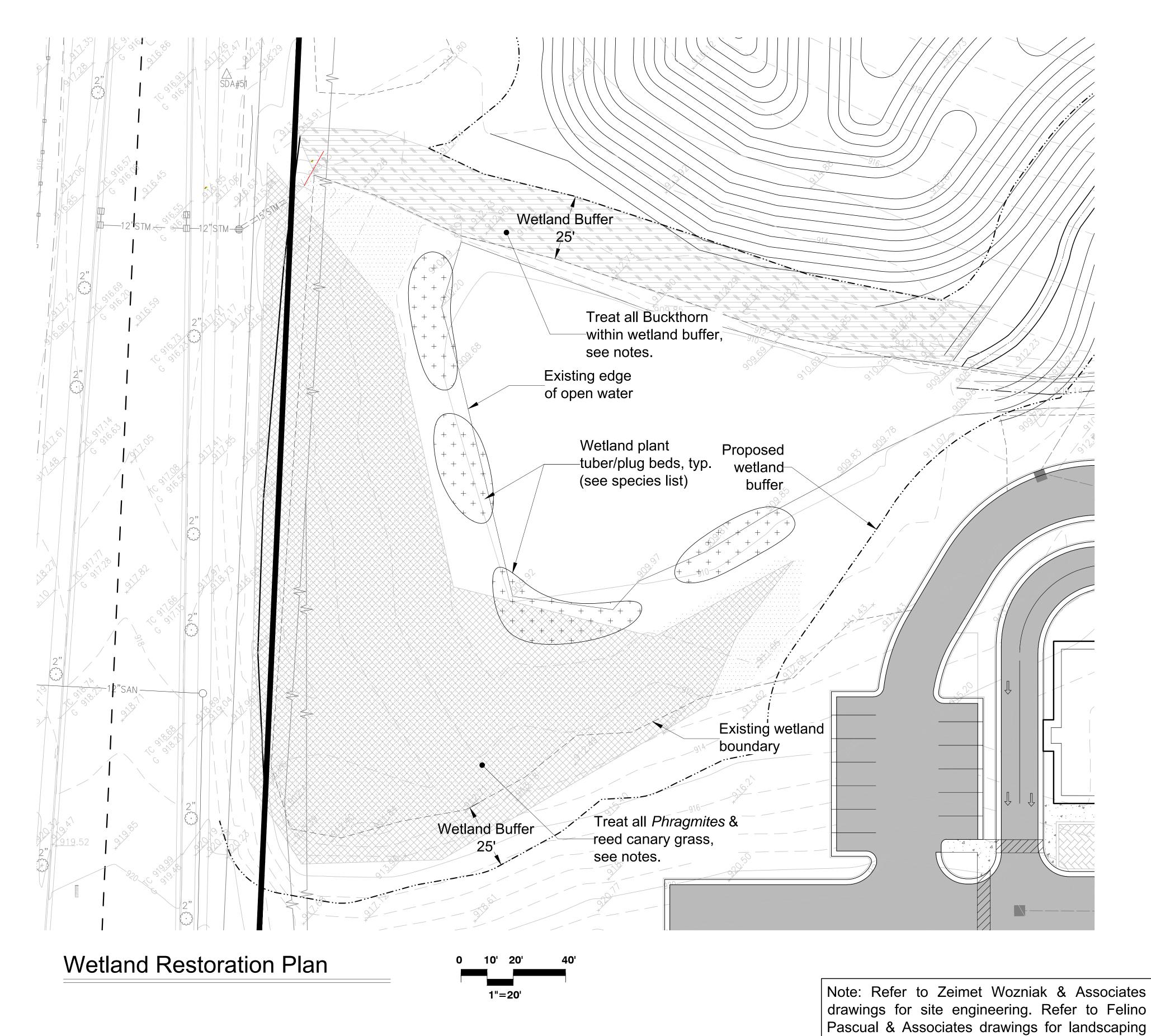
Netland Conceptual Stream F

M

13021-1 SHEET NAME Conceptual Restoration Program SHEET NUMBER W-1

Conceptual Restoration Plan





Wetland Restoration Sequence & Specifications

2016/Year 1

1. Apply herbicide to all reed canary grass (*Phalaris arundinacea*), common reed (*Phragmites australis*), and buckthorn (*Frangula alnus, Rhamnus cathartica*) within the areas identified during treatment periods recommended by the herbicide manufacturer. Application shall include an initial large-scale treatment with follow-up treatments as required to bring live plants to less than 10% cover within the treatment areas.

2. When target plants are less than 10% cover within the treatment areas,

install specified seed mixes and wetland planting beds in the locations indicated on the drawings.

2017-2020/Years 2-5

Apply herbicide as spot treatments as necessary to control the reestablishment of invasive plants.

WETLAND SEED MIX:

SPECIES	COMMON NAME	RATE (PLS OZ./AC
Acorus calamus	Sweet Flag	8.50 [°]
Agrostis alba	Redtop	8.00
Alisma plantago-aquatica	Water Plantain	8.00
Asclepia incarnata	Swamp Milkweed	1.50
Carex cristatella	Crested Oval Sedge	1.00
Carex lurida	Bottlebrush Sedge	6.00
Carex vulipinoidea	Brown Fox Sedge	6.00
Eleocharis obtusa	Blunt Spike Rush	3.00
Helenim autumnale	Sneezeweed	3.00
Iris virginica shrevei	Blue Flag Iris	4.00
Juncus effusus	Common Rush	3.00
Leersia oryzoides	Rice Cut Grass	4.00
Lobelia cardinalis	Cardinal Flower	0.75
Lobelia siphilitca	Great Blue Lobelia	1.00
Mimulus ringens	Monkey Flower	2.00
Peltandra virginica	Arrow-arum	16.00
Penthorum sedoides	Ditch Stonecrop	0.50
Polygonum pensylvanicum	Smartweed	6.00
Pontederia cordata	Pickerel Weed	8.00
Sagittaria latifolia	Common Arrowhead	8.00
Senna hebecarpa	Wild Senna	1.00
Scirpus atrovirens	Bulrush	6.00
Scirpus fluviatilis	River Bulrush	6.00
Scirpus validus	Great Bulrush	6.00
Sparganium eurycarpum	Common Burreed	10.00
	TOTAL	108.25

Cover Crop 320.0 80.0 Avena sativa Seed Oats Lolium multiflorum Annual Rye

Note: Proposed for 0.4± acres of wetland

- + +

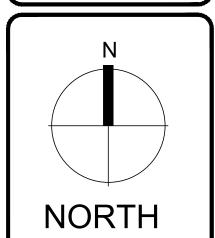
+ + +

outside of the stream and wetlands.

WETLAND PLA	NTS:	
SPECIES	COMMON NAME	QUANTITY
Acorus calamus	Sweet Flag	
Iris virginica	Southern Blue Flag	
Nymphaea tuberosa	Sweet-Scented Waterlily	
Peltandra virginica	Arrow-Arum	
Pontederia cordata	Pickerel Weed	
Sagittaria latifolia	Common Arrowhead	
Sparganium americanum	American Bur-Reed	
Sparganium eurycarpum	Common Bur-Reed	
	T 1 1	0.000

Notes: Final plant selection to be based on availability at the time of installation. Plants to be installed in groupings of 100± of a single species within the planting beds shown. Plants to be protected with Goose Grid following installation.

> Preliminary Not for Construction



Q

Be

Restor

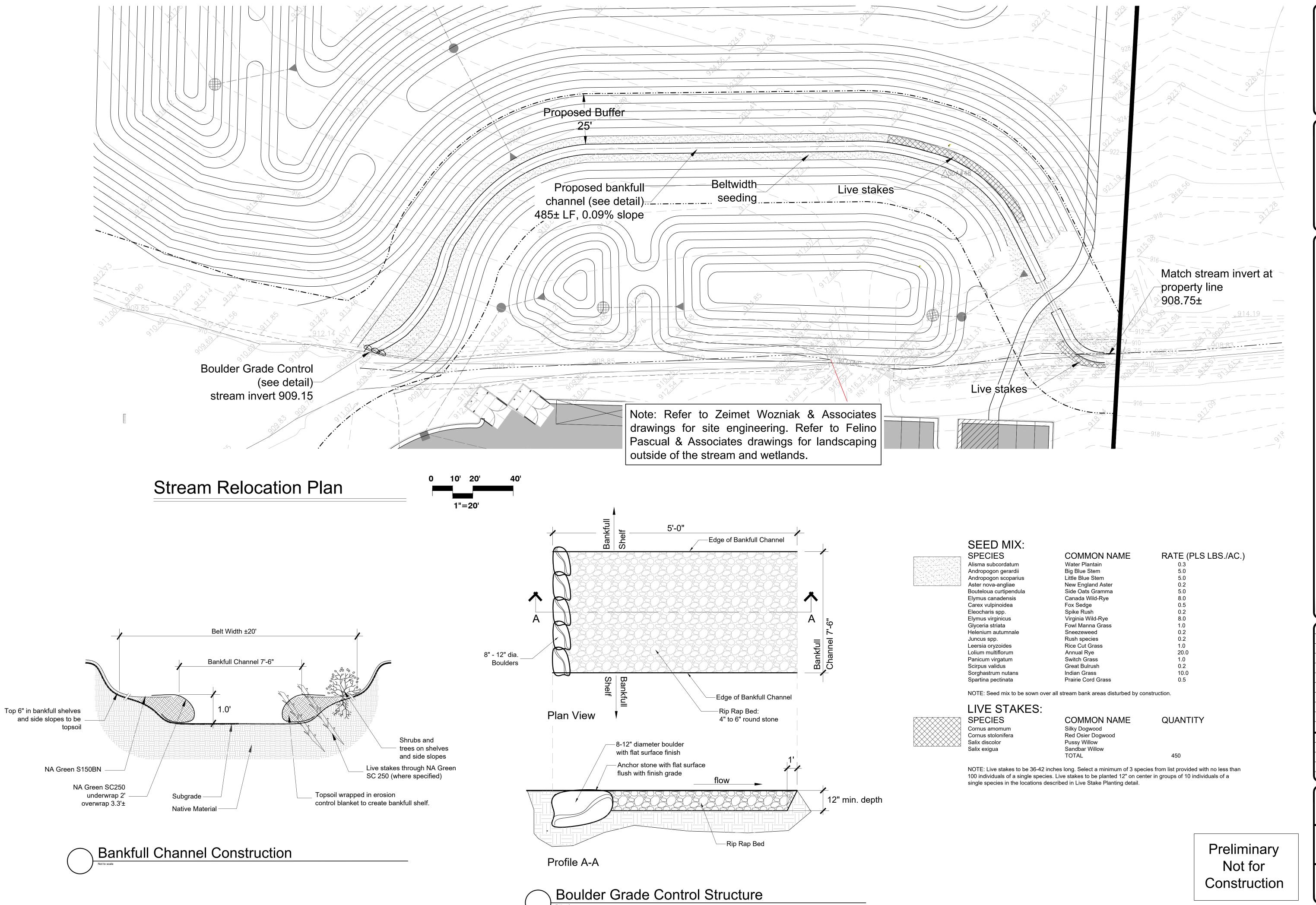
Wetland

/11/16 PSP Submittal WH MSP MSP

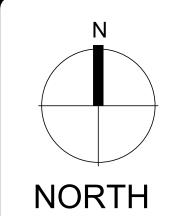
> PROJECT NUMBER 13021-1

SHEET NAME **Detailed Concept**

> SHEET NUMBER W-2



King & MacGregor Environmental Inc. 2520 Woodmeadow SE Grand Rapids, MI 49546 Phone: (616) 957-1231 43050 Ford Road, Suite 130 Canton, MI 48187 Phone: (734) 354-0594



₩

Park

Stream Relocation Plan For:

Beacon Hill

DATE: ISSUED FOR:

01/11/16 PSP Submittal

P.I.C. WH

P.M. WH

DESIGN MSP

TECH. MSP

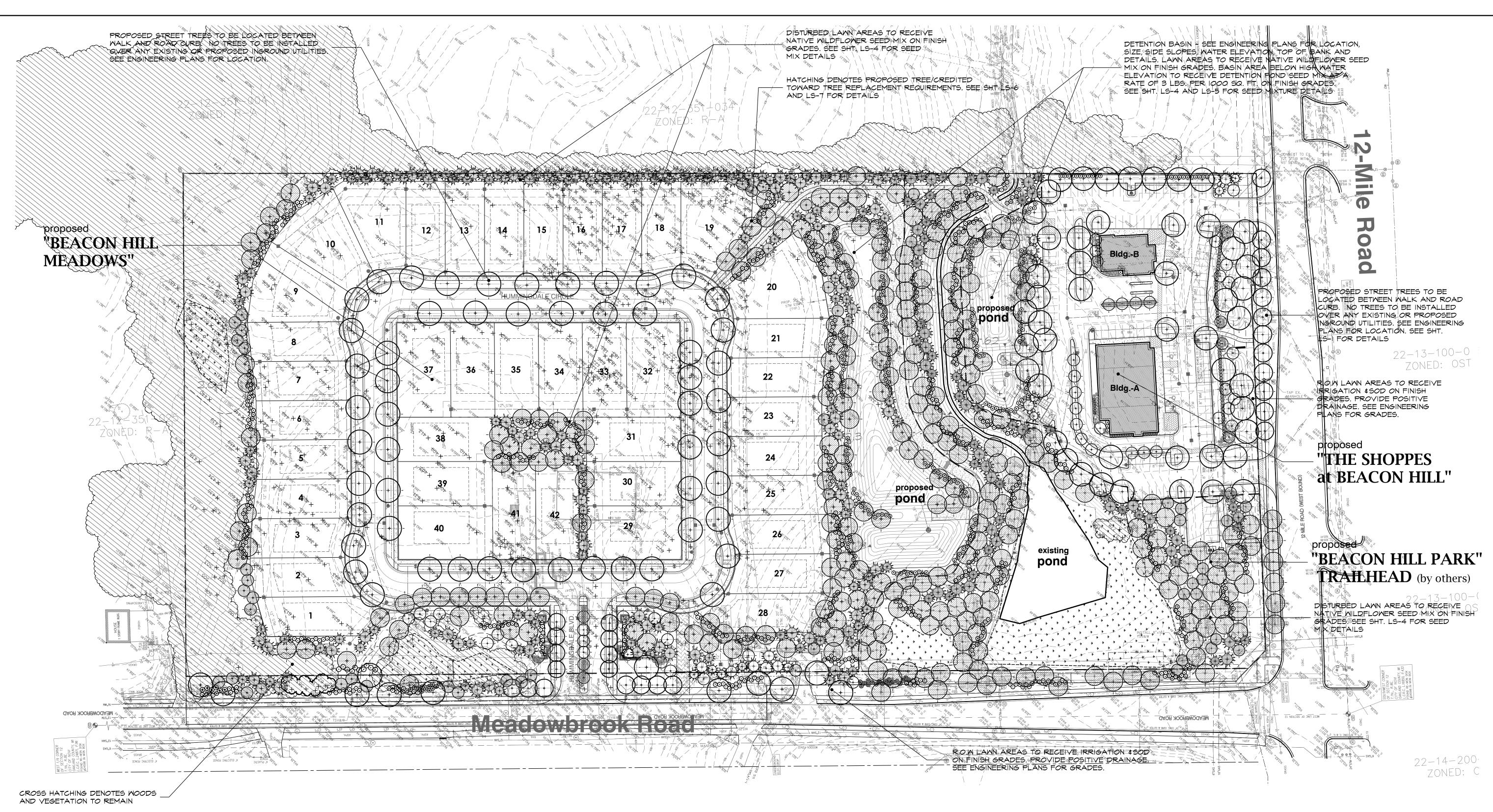
PROJECT NUMBER

13021-1

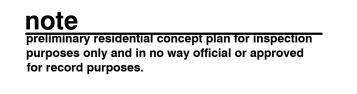
SHEET NAME

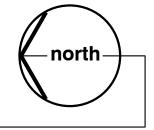
Detailed Concept

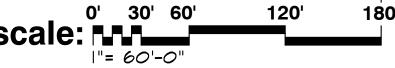
SHEET NUMBER



"Beacon Hill Park"
City of Novi, Michigan







general landscape notes:

- LANDSCAPE CONTRACTOR SHALL VISIT THE SITE, INSPECT EXISITING CONDITIONS, REVIEW PROPOSED PLANTINGS AND RELATED WORK. CONTACT THE OWNER AND/OR LANDSCAPE ARCHITECT WITH ANY CONCERNS OR DISCREPANCY BETWEEN THE PLAN, PLANT MATERIAL LIST, AND/OR SITE CONDITIONS.
- 2. PRIOR TO BEGINING OF CONSTRUCTION ON ANY WORK, CONTRACTORS SHALL VERIFY
 LOCATIONS OF ALL ON SITE UTILITIES. GAS, ELECTRIC, TELEPHONE, CABLE TO BE LOCATED
 BY CONTACTING MISS DIG 1-800-482-1171. ANY DAMAGE OR INTERRUPTION OF SERVICES
 SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE ALL RELATED WORK
 ACTIVITIES WITH OTHER TRADES AND REPORT ANY UNACCEPTABLE JOB CONDITIONS TO
 OWNER PRIOR TO COMMENCING
- 3. NUMERICAL VALUE ON THE LANDSCAPE QUANTITIES SPECIFIED ON THE PLAN TAKE PRECEEDENCE OVER GRAPHIC REPRESENTATION. VERIFY ANY CONCERN-DISCREPANCY WITH LANDSCAPE ARCHITECT.
- 4. ALL CONSTRUCTION AND PLANT MATERIAL LOCATION TO BE ADJUSTED ON SITE
- 5. ALL SUBSTITUTIONS OR DEVIATIONS FROM THE LANDSCAPE PLAN MUST BE APPROVED BY THE CITY OF NOVI AND LANDSCAPE ARCHITECT
- 6. ALL LARGE TREES AND EVERGREENS TO BE STAKED, GUYED AND WRAPPED AS DETAIL SHOWN ON PLAN.

8. DIG SHRUB PITS I' LARGER THAN SHRUB ROOT BALLS AND TREE PITS 2' LARGER THAN

- 5HOWN ON PLAN.

 1. PLANT BEDS TO BE DRESSED WITH MIN. 3" OF FINELY DOUBLE SHREDDED HARDBARK MULCH.
- ROOT BALL. BACK FILL WITH ONE PART TOP SOIL AND ONE PART SOIL FROM

 9. REMOVE ALL TWINE, WIRE AND BURLAP FROM TREE AND SHRUB EARTH BALLS, AND FROM TREE TRUNKS.

- 10. NATURAL COLOR, FINELY SHREDDED HARDWOOD BARK MULCH REQUIRED FOR ALL PLANTINGS.
 4" THICK BARK MULCH FOR TREES IN 4' DIA. CIRCLE WITH 3" PULLED AWAY FROM TRUNK.
 3" THICK BARK MULCH FOR SHRUBS AND 2" THICK BARK MULCH FOR PERENNIALS.
- AMERICAN ASSOCIATION OF NURSERYMEN LANDSCAPE STANDARDS.
- 12. PROVIDE PEAT SOD FOR ALL NEW AND DISTURBED LAWN AREAS UNLESS NOTED OTHERWISE.
- 13. ALL PLANTING AREAS TO BE PREPARED WITH APPROPRIATE SOIL MIXTURES AND FERTILIZER BEFORE PLANT INSTALLATION.

II. PLANT MATERIAL QUALITY & INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT

- 14. PLANT TREES AND SHRUBS GENERALLY NO CLOSER THEN THE FOLLOWING DISTANCES FROM SIDEWALKS, CURBS AND PARKING STALLS:
- 15. NO TREES OR EVERGREENS TO BE INSTALLED OVER ANY PROPOSED OR EXISTING UTILITY LINES AS SHOWN ON THE OVERALL LANDSCAPE PLAN. SEE ENGINEERING PLANS FOR LOCATION AND DETAILS.
- 16. ALL LAWN AREAS AND LANDSCAPE BEDS TO BE FULLY IRRIGATED WITH A AUTOMATIC UNDERGROUND SYSTEMS. IRRIGATION SYSTEM TO HAVE SEPARTE ZONES FOR LAWN AREAS, PARKING ISLANDS, AND SHRUB BEDS WITH DIFFERENT CONTROL MOISTURE LEVEL ADJUSTMENT PER ZONE AS REQUIRED

- IT. UNLESS NOTED OTHERWISE, LANDSCAPE BEDS ADJACENT TO LAWN TO RECIEVE EDGING. EDGING SHALL BE 4" X 1/8" METAL (FINISH BLACK OR GREEN) OR APPROVED EQUAL AND TO BE INSTALLED WITH HORIZONTAL METAL STAKES AT 32" O.C. OR PER MANUFACTERER'S SPECIFICATION.
- IS THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE PLANT MATERIALS AND IRRIGATION INSTALLATION FOR A PERIOD OF TWO YEAR BEGINNING AFTER THE COMPLETION OF LANDSCAPE INSTALLTION DATE APPROVED BY THE CITY OR LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE DURING AND AT THE END OF THE GUARANTEE PERIOD, ANY DEAD OR UNACCEPTABLE PLANTS, AS DETERMINED BY THE CITY OR LANDSCAPE ARCHITECT, WITHOUT COST TO THE OWNER.

misc. notes:

- REFERENCE ENGINEERING PLANS FOR EXISTING AND PROPOSED FINAL UTILITIES, 1. WALLS, AND FENCE LOCATIONS
- 2. REFERENCE ENGINEERING PLANS FOR GRADING WITH MIN. 2' INTERVALS
- 3. REFERENCE ENGINEERING PLANS FOR WOODLAND SURVEY OF EXISITNG TREES OVER 8" INCLUDING PROPOSED PROTECTION FENCE LOCATIONS
- 4. REFERENCE ENGINEERING PLANS FOR EXISTING SOILS PER USDA.

FELINO A. PASCUAL and ASSOCIATES

Community Land Planner and registered Landscape Architect 24333 Orchard Lake Rd, Suite G Farmington Hills, MI 48336 ph. (248) 557-5588

fax. (248) 557-5416

seal:



client: IVANHOE MEADOWBROOK LLC

6689 Orchard Lake Road, Suite 314 West Bloomfield, Michigan 48332

project:

ph. (248) 626-6114

Beacon Hill Park

A planned Single Family and Neighborhood Commercial Retail

project location: City of Novi, MI

12-Mile Road & Meadowbrook Road

OVERALL PLANTING

sheet title:

job no./issue/revision date:

LS15.010.06 SPA 6-26-2015 LS16.006.01 PSP 1-11-2016 LS16.006.04 PSP 4-13-2016

drawn by:

JP, KH checked by:

FP date:

date: 1-4-2015

notice:
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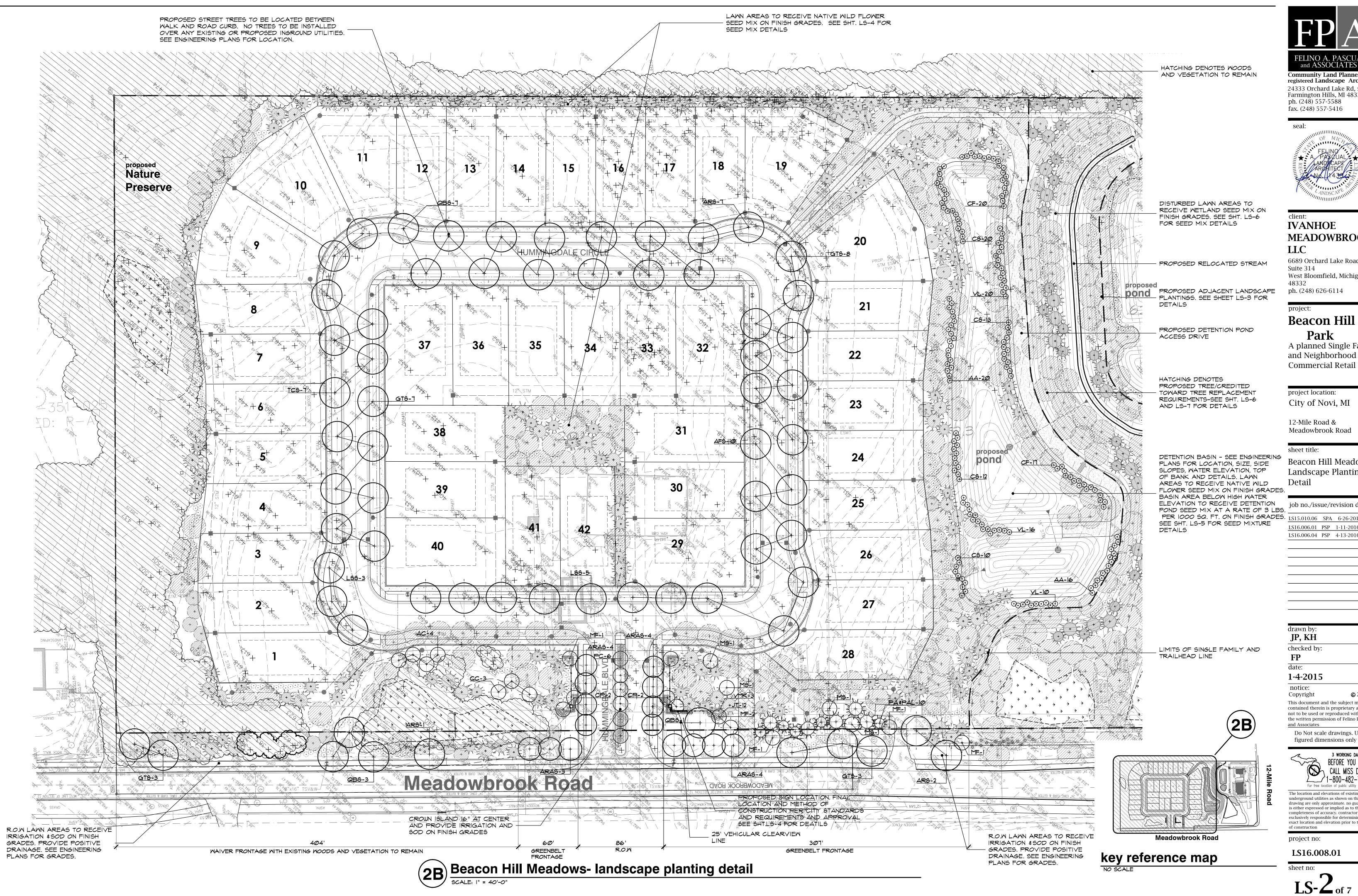
The location and elevations of existing underground utilities as shown on this drawing are only approximate. no guarantee is either expressed or implied as to the completeness of accuracy. contractor shall be exclusively responsible for determining the exact location and elevation prior to the start

project no:

of construction

LS16.008.01

sheet no:





IVANHOE MEADOWBROOK

6689 Orchard Lake Road, Suite 314 West Bloomfield, Michigan

Beacon Hill Park

A planned Single Family and Neighborhood Commercial Retail

project location: City of Novi, MI

12-Mile Road &

Meadowbrook Road

Beacon Hill Meadows

LS16.006.04 PSP 4-13-2016

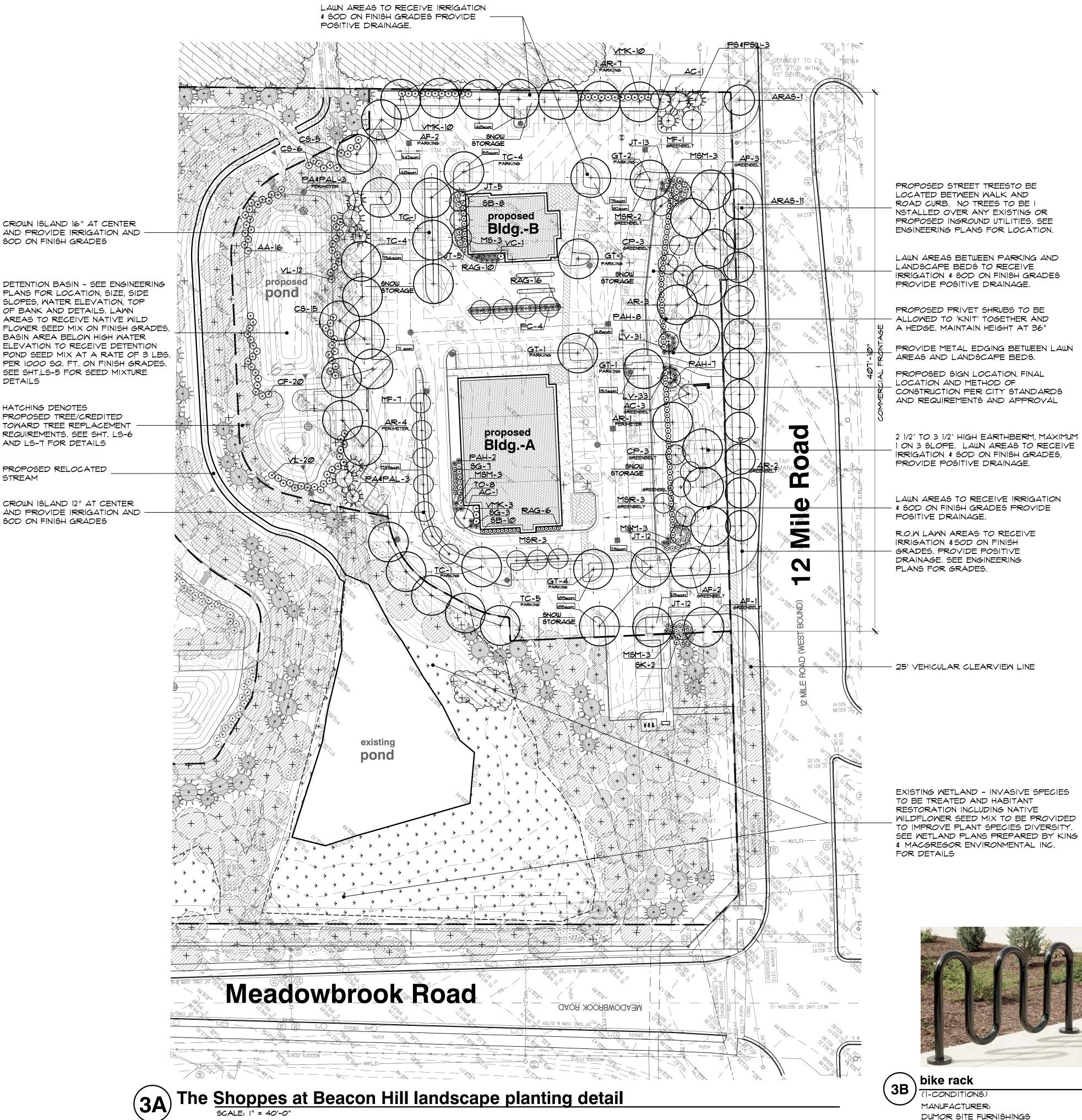
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LS16.008.01



CROWN ISLAND 16" AT CENTER

SOD ON FINISH GRADES

AND PROVIDE IRRIGATION AND

PLANS FOR LOCATION, SIZE, SIDE

SLOPES, WATER ELEVATION, TOP OF BANK AND DETAILS. LAWN

AREAS TO RECEIVE NATIVE WILD

BASIN AREA BELOW HIGH WATER

SEE SHT.LS-5 FOR SEED MIXTURE

DETAILS

STREAM

HATCHING DENOTES

PROPOSED TREE/CREDITED TOWARD TREE REPLACEMENT

AND LS-7 FOR DETAILS

PROPOSED RELOCATED

SOD ON FINISH GRADES

REQUIREMENTS. SEE SHT. LS-6

CROWN ISLAND 12" AT CENTER

AND PROVIDE IRRIGATION AND

ELEVATION TO RECEIVE DETENTION

commercial retail landscape requirements.

greenbelt (12 Mile Road)		REQUIRED	PROVIDED
TOTAL LIN. FT. OF 12 MILE ROAD FRONTAGE		408' <u>+</u>	
ONE (I) 3"DECIDUOUS OR EVERGREEN TREE PER 35 LIN. FT			12
THREE (3) SUBCANOPY TREE PER 40 LIN. FT.			15
detention			
HIGH WATER PERIMETER		585' <u>+</u>	
70%-75% LARGE NATIVE SHRUBS ABOVE HIGH WATER BASIN RIN	AREA		75%
oarking lot trees (OFFICE-CATEGORY-I)			
PARKING SPACE AREA	183 SQFT.		
PARKING AREA FORMULA		1,798 SQFT.	
(17,983 SQFT. X .10 (10 %) = 1,798 SQ.FT.)			
VEHICULAR ACCESS AREA 43	2,321 SQFT.		
VEHICULAR AREA FORMULA		2,116 SQFT.	
$(42,321 \text{ SQFT.} \times .05 (5\%) = 2,116 \text{ SQ.FT.})$		REQUIRED	PROVIDED
TOTAL AREA OF INTERIOR LANDSCAPE ISLANDS AREA		3,914 SQ.FT	3,950 SQ.FT
(1,798 SQFT. + 2,116 SQ.FT. =3,914 SQ.FT.)			
TOTAL NO. OF PARKING LOT TREES		52	30 (A)
(3,914 SQ.FT. LANDSCAPE ISLANDS / 75 =52-TR	EES)		
perimeter parking lot trees			
TOTAL LIN. FT. OF PERIMETER PARKING		I,I75' <u>+</u>	(4)
ONE (1) 3"DECIDUOUS OR EVERGREEN TREE PER 35 LIN. FT.			16 (A)
building foundation			
BUILDING FOUNDATION LANDSCAPE AREA		3,299.79 SQFT.	3,300 + SQF
$(4 2.47' (PERIMETER) \times 8' = 3,299.79 SQFT.)$			
12-Mile Road Street Tree		REQUIRED	PROVIDED
TOTAL LIN. FT. OF COMMERCIAL 12 MILE ROAD FRONTAGE	408'		
ONE (I) 3"DECIDUOUS OR EVERGREEN TREE PER 35 LIN. FT		12	12

(A) LANDSCAPE WAIVER TO BE REQUESTED FOR THE REQUIRED TREE PLANTINGS

residential landscape requirements:

greenbelt (Meadowbrook Road)		REQUIRED	PROVIDE
TOTAL LIN. FT. OF MEADOWBROOK ROAD FRONTAGE	366' <u>+</u> (*)		
ONE (I) 3"DECIDUOUS OR EVERGREEN TREE PER 35 LIN. FT.			10
ONE (I) SUBCANOPY TREE PER 20 LIN. FT.		18	22
ooulevard island			
TOTAL LIN. FT. OF BOULEVARD ISLAND			
COMBINATION OF CANOPY TREES, SUBCANOPY TREES AND SHRUBS		75%	75%
detention			
HIGH WATER PERIMETER] 42.4	<u>+</u>	
70%-75% LARGE NATIVE SHRUBS ABOVE HIGH WATER BASIN RIM AREA		75%	75%

* 856' TOTAL LIN. FT. SINGLE FAMILY FRONTAGE - 86' R.O.W AND 404' (WAIVER FOR EXISTING

WOODLAND/VEGETATION TO BE SAVED) = 366'

street tree notes:

STREET TREES SHALL BE PLANTED IO' FROM ANY DRIVEWAYS, 4' FROM ANY CURBS AND SIDEWALKS (2' FOR SUBCANOPY TREES), 15' FROM OVERHEAD UTILITY LINES, 10' FROM ANY MAN HOLE OR FIRE HYDRANTS, AND 35' FROM THE INTERSECTION

OF CURB LINES ON CORNER LOTS. STREET TREES SHALL HAVE THE FOLLOWING CHARACTERISTICS: NON-STREET SIDE.

2 1/2" CALIPER, NO. 1 GRADE B&B, NORTHERN GROWN PER CURRENT AAN STANDARDS, AND INSTALLED ACCORDING TO ACCEPTED PLANTING PROCEDURES.

STREET TREES SHALL HAVE A CENTRAL LEADER AND RADIAL BRANCHING STRUCTURE. ANY BRANCHES THAT MAY DEVELOP INTO "V" CROTCHES SHALL BE PRUNED SO AS NOT TO BECOME DOMINANT BRANCHES.

THE BRANCHES ON CANOPY TREES SHALL BE LIMBED UP 14' ON THE SIDE OF THE STREET AND 10' ON THE

street tree requirements: PER LOT WIDTH, THE FOLLOWING STREET

TREE PLANTINGS SHALL OCCUR: \$70' AT LEAST I TREE ≥7Ø' AT LEAST 2 TREES ≥105' AT LEAST 3 TREES

MINIMUM STREET TREE SIZE REQUIRED 2 1/2" CALIPER AND MIN. 35' O.C. SPACING

OT FRONTAGE	conditions	required	provided
OTS WITH FRONTAGE <70'	42	42	42
OTS WITH FRONTAGE ≥70'		-	
OTS WITH FRONTAGE >105'	4	12	12
PEN SPACE FRONTAGE, CUL-DE-SAC, ND BLVD. ISLAND		NA	8
NE (I) DECIDUOUS TREE PER 35' BETWEEN URB AND SIDEWALK (SINGLE FAMILY EADOWBROOK R.O.W. FRONTAGE = 770' / 5' = 22 TREES)	'0	22	18 + 5 EXISTING TREE
	TOTALS	76	80

(1-CONDITIONS) POWER-COATED FRAME OR EQUAL P.O. BOX 142, MIFFLINTOWN, PA 17059 MANUFACTURER:

MODEL No. 130-20-51 FINISH: BLACK

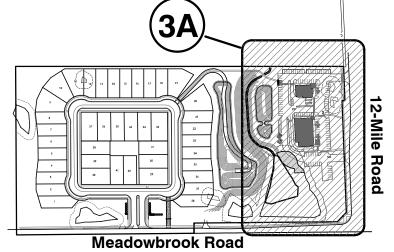
WEB: WWW.DUMOR.COM PH. 800-598-4018



WEB: WWW.DUMOR.COM

PH. 800-598-4018

6' WIDE BENCH SEAT BY DUMOR, INC. MODEL NO. 34-6060D (S-2) RECYCLED PLASTIC POLYESTER DUMOR SITE FURNISHINGS P.O. BOX 142, MIFFLINTOWN, PA 17059



key reference map

NO SCALE

FELINO A. PASCUAL and ASSOCIATES Community Land Planner and registered Landscape Architect 24333 Orchard Lake Rd, Suite G Farmington Hills, MI 48336 ph. (248) 557-5588 fax. (248) 557-5416

IVANHOE MEADOWBROOK LLC

6689 Orchard Lake Road, Suite 314 West Bloomfield, Michigan 48332 ph. (248) 626-6114

project:

Beacon Hill Park

A planned Single Family and Neighborhood Commercial Retail

project location: City of Novi, MI

12-Mile Road & Meadowbrook Road

sheet title:

The Shoppes of Beacon Hill Landscape Planting Detail

job no./issue/revision date:

LS15.010.06 SPA 6-26-2015 LS16.006.01 PSP 1-11-2016 LS16.006.04 PSP 4-13-2016

JP, KH

checked by:

1-4-2015

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project no:

LS16.008.01

sheet no: LS-3 of

entrance plant material list

key	5A	botanical name	size	cost	totals						
		SHRUBS									
PØ	4	PHYSOCARPUS O. 'MONLO'	DIABOLO NINEBARK	3' BB	\$5 Ø	\$200					
JT	19	JUNIPERUS S. 'TAMARISAFOLIA'	TAMS JUNIPER	24" BB	\$ 50	1 950					
BW	52	BUXUS M. 'WINTER GEM'	WINTER GEM BOXWOOD	18" BB	\$ 50	\$26 <i>00</i>					
TE	34	TAXUS XM. 'EVERLOW'	EVERLOW YEW	24" BB	\$ 50	\$17 <i>00</i>					
		PERENNIALS AND GRASSES									
RFG	12	RUDBECKIA F. 'GOLDSTURM	BLACK EYED SUSAN	#3 CONT	\$15	\$180					
PAH	8	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN DWARF FOUNTAIN GRASS	*3 CONT	\$15	\$120					
MSG	1	MISCANTHUS SINENSIS 'MORNING LIGHT'	'MORNING LIGHT' MAIDEN GRASS	#3 CONT	\$15	\$15					

TOTAL | \$5,765

PROPOSED ADJACENT LANDSCAPE PLANTINGS. SEE SHEET LS-I & LS-2

PROPOSED BOXMOOD

AT 24"

PROPOSED SIGN LOCATION AND

STONE/BRICK WALL MONUMENT. SEE VENTRANCE ELEVATION BELOW FOR

SHRUBS TO BE ALLOWED

TO 'KNIT' TOGETHER AND

A HEDGE. MAINTAIN HEIGHT

FOR DETAILS TOWARD TREE REPLACEMENT PROPOSED 2-RAIL HIGH VINLY FENCE AND 6X6 VINLY POST

CROWN ISLAND 16" AT CENTER AND PROVIDE IRRIGATION AND SOD ON FINISH GRADES

AREAS AND LANDSCAPE BEDS.

PROVIDE METAL EDGING BETWEEN LAWN

HATCHING DENOTES

REQUIREMENTS

PROPOSED TREE/CREDITED

LAWN AREAS TO RECEIVE IRRIGATION # SOD ON FINISH GRADES PROVIDE POSITIVE DRAINAGE.

R.O.W LAWN AREAS TO RECEIVE IRRIGATION & SOD ON FINISH GRADES. PROVIDE POSITIVE DRAINAGE. SEE ENGINEERING PLANS FOR GRADES.

Meadowbrook Road entrance planting details

10000

1) PLANT MATERIALS TO BE INSTALLED ACCORDING TO THE CITY OF NOVI AND CURRENT AMERICAN ASSOCIATION OF NURSERYMEN'S STANDARDS.

City of Novi landscape notes:

2) PLANT MATERIALS TO BE GUARANTEED FOR 2 YEARS. REPLACE FALLING MATERIAL WITHIN I YEAR, OR THE NEXT APPROPRIATE PLANTING PERIOD.

3) PLANT MATERIALS TO BE OF PREMIUM QUALITY, NO. I GRADE NORTHERN NURSURY GROWN, IN HEALTHY CONDITION, FREE OF PESTS AND DISEASES.

4) MULCH IS TO BE NATURAL COLORED, FINELY SHREDDED HARDWOOD BARK OF 4" THICK BARK MULCH FOR TREES IN 4' DIA, CIRCLE W/3" PULLED AWAY FROM TRUNK, 3" THICK BARK MULCH FOR SHRUBS AND 2" THICK BARK MULCH FOR PERRENIALS.

5) CALL MISS DIG AT 1-800-482-7171 PRIOR TO ANY CONSTRUCTION. 6) DATE OF INTENDED LANDSCAPE INSTALLATION TO BE FALL 2005.

DECIDUOUS & EVERGREEN TREE: 1) TREE SHALL BE INSTALLED SAME RELATIONSHIP TO FINISH GRADE AS IT BORE ORIGINALLY OR SLIGHTLY HIGHER THAN FINISH GRADE UP TO 6" ABOVE GRADE, IF DIRECTED BY LANDSCAPE ARCHITECT FOR HEAVY CLAY

2) DO NOT PRUNE TERMINAL LEADER PRUNE ONLY DEAD OR BROKEN 3) REMOVE ALL TAGS, STRING, PLASTICS AND OTHER MATERIALS THAT ARE

UNSLIGHTLY AND COULD CAUSE GIRDLING. 4) REMOVE TREE STAKES, GUY WIRES AND TREE WRAP AFTER ONE WINTER SEASON.

SHRUB: SHRUB SHALL BE INSTALLED SAME RELATIONSHIP TO FINISH GRADE AS IT BORE ORIGINALLY OR SLIGHTLY HIGHER THAN FINISH GRADE UP TO 4" ABOVE GRADE, IF DIRECTED BY LANDSCAPE ARCHITECT FOR HEAVY CLAY

2) DO NOT PRUNE TERMINAL LEADER PRUNE ONLY DEAD OR BROKEN BRANCHES. 3) REMOVE ALL TAGS, STRING, PLASTICS AND OTHER MATERIALS THAT ARE UNSLIGHTLY AND COULD CAUSE GIRDLING.

1) EITHER PLASTIC OR WOOD ORANGE SNOW FENCING SHALL BE INSTALLED AT OR BEYOND THE DRIPLINE, UNLESS MORE SUBSTANTIAL FENCING IS

2) STAKES SHALL BE METAL 'T' POLES SPACED NO FURTHER THAN 5' ON

3) FENCING SHALL NOT BE INSTALLED CLOSER TO THE TREE THAN THE DRIPLINE OF THOSE TREES TO BE SAVED. SPECIAL CIRCUMSTANCES SHALL BE REVIEWED BY THE CITY.

4) FENCING SHALL BE ERECTED PRIOR TO CONSTRUCTION. THE CITY SHALL BE NOTIFIED ONCE THE FENCING IS INSTALLED FOR INSPECTION. 5) UNDER NO CIRCUMSTANCES SHALL THE PROTECTIVE FENCING BE REMOVED WITHOUT PROPER APPROVAL FROM THE CITY

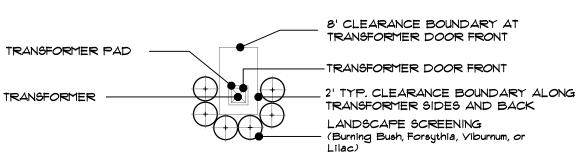
6)NO PERSON SHALL CONDUCT ANY ACTIVITY WITHIN THE AREAS PROPOSED TO REMAIN. THIS SHALL INCLUDE, BUT NOT LIMITED TO: a. NO SOLVENTS OR CHEMICALS WITHIN THE PROTECTED AREAS.

PROTECTED AREAS. c. NO GRADE CHANGES, INCLUDING FILL, WITHIN THE PROTECTED AREAS. d.NO REMOVAL OF VEGETATION FROM THE GROUND UP WITHOUT PERMISSION FROM THE PROPER REVIEWING AUTHORITY, INCLUDING THE WOODLANDS

b. NO BUILDING MATERIALS OR CONSTRUCTION EQUIPTMENT WITHIN THE

REVIEW BOARD. e. ANY REQUIRED SWALE NEEDS TO BE DIRECTED AROUND THE PROTECTED AREAS. IN INSTANCES WHERE SWALES ARE APPROVED THRU A PROTECTED AREA, THE SWALES NEED TO BE HAND DUG. MACHINERY OF ANY KIND IS

1) REGULATED WOODLANDS OR REGULATED TREES ADJACENT ADJACENT TO THE PROPERTY ARE ALSO REQUIRED TO BE PROTECTED WHETHER OR NOT THEY ARE SHOWN ON THE PLAN.



transformer pad planting detail

COMPANY-SERVICE PLANNING DEPARTMENT (9-17-98)

SCALE 1'=20'-0" A MINIMUM OF 2' SEPARATION BETWEEN TRANSFORMER AND FULL GROWN SHRUBS AND TREES. GROUND COVERS ALLOWED UP TO TRANSFORMER PAD IF MAINTAINED BELOW 4" FULL GROWTH. IF TRANSFORMER FACES TOWARDS THE HOUSE, THEN THE SAME CONDITIONS EXIST. NO FULL GROWTH IN FRONT OF THE TRANSFORMER FOR AT LEAST A MINIMUM OF 8'. THERE

ARE NO WAIVERS GRANTED TO THE ABOVE CONDITION. DETAIL PER THE DETROIT EDISON

SEE ENGINEERING PLANS FOR PROPOSED LOCATIONS. TOTAL NUMBER OF TRANSFORMERS AND FINAL LOCATION PER DETROIT EDISON REQUIREMENTS.

native wildflower seed mix:

Mesic Prairie Mix:

A widely adaptable mix recommended for areas of medium soil texture in full sun and partial shade conditions. The best mix to use to replace large lawn areas in commercial landscaping. This mix has a combination of plants that are adapted to moist conditions, but will tolerate drought once established.

30% Native Grasses and Sedges: will contain at least four of the following species. Andropogon gerardii (Big Bluestem)

Carex bicknellii (Copper Oval Sedge) Elymus canadensis (Canada Wild Rye) Panicum virgatum (Switchgrass)

Schizachyrium scoparium (Little Bluestem)

Sorghastrum nutans (Indian Grass) 20% Native Wildflowers: will contain at least fourteen of the following species.

Aster novae-angliae (New England Aster) Aster pilosus (Heath Aster) Coreopsis tripteris (Tall Coreopsis) Baptisia leucantha (White False Indigo) Echinacea purpurea (Purple Cornflower)

NATIVESCAPE LLC

ph: 517.456.9696

www.nativescape.net

MANCHESTER, MI 48158

P.O. BOX 122

Eryngium yuccifolium (Rattlesnake Master) Heliopsis helianthoides (Ox Eye Sunflower) Liatris aspera (Rough Blazing Star) Liatris spicata (Dense Blazingstar) Monarda fistulosa (Bergamot) Physostegia virginiana (Obedient Plant) Pycnanthemum virginianum (Mountain Mint)

Rudbeckia hirta (Black-Eyed Susan) Rudbeckia laciniata (Green-headed Coneflower) Silphium terebinthinaceum (Prairie Dock) Solidago altissima (Tall Goldenrod) Solidago graminifolia (Lance-leaved Goldenrod) Solidago rigida (Stiff Goldenrod) Tradescantia ohioensis (Spiderwort)

Ratibida pinnata (Yellow Cornflower)

Verbena urticifolia (White Vervain) **50% Temporary Grasses:** will contain the following species. Avena sativa (Seed Oats)

Lolium multiflorum (Annual Rve) Recommended Seed Rate: 30lb/acre



sign & pier uplighting detail

(3-CONDITION)

MANUFACTURER: COPPER LIGHTING OR EQUAL

GRANVILLE BUSINESS PARK, BLDG. A 1121 HIIGHWAY 74 SOUTH PEACHTREE, GA 30269 PH. 770-486-4800

MODEL: SF FALCON or EQUAL (150M METAL HALIDE)



decorative light and pole

DECORACTIVE POLE AND STREEET LIGHTS MANUFACTURED BY HALOPANE

LIGHT FIXTURE: WASHINGTON SERIES-ACRYLIC MODEL NO: AWIOOHP12B5DNB OR EQUAL POLE: WADSWORTH SERIES MODEL NO: AWIOOHPI2B5DNB OR EQUAL POLE HIGH: 12' HIGH FINISH: BLACK

POLE DIAMETER: 5" POLE BASE: 12"

entrance -sign notes:

LOCATE AND STAKE ALL EXISTING AND PROPOSED UTILITIES PRIOR TO CONSTRUCTION. COORDINATE ANY ADJUSTMENTS WITH LANDSCAPE ARCHITECT.

ALL ENTRY WALL LIGHTING SHALL BE CONTROLLED WITH A 'PHOTO-EYE' SWITCH. ALL LIGHTING SHALL BE SHIELDED FROM PUBLIC R.O.W.'S AND ADJACENT PROPERTIES.

VERIFY SOIL BEARING CAPACITY PRIOR TO TO ENTRY SIGN MONUMENT & PIER CONSTRUCTION. IF SOIL BEARING CAPACITY FALLS BELOW STANDARD REQUIREMENTS, CONSULT STRUCTURAL ENGINEER FOR RECOMMENDATION OF FINAL ENTRY MONUMENT & PIER FOOTING DESIGN.

4. SIGNAGE TEXT AND LOGO TO BE METAL or PRISMATIC DIMENSIONAL LETTERS. PRIOR TO SIGN INSTALLATION, PERMITS TO BE OBTAINED PER CITYOF NOVI REQUIREMENTS, STANDARDS AND APPROVALS.



fax. (248) 557-5416

seal:

IVANHOE MEADOWBROOK LLC

6689 Orchard Lake Road. Suite 314 West Bloomfield, Michigan 48332 ph. (248) 626-6114

project: **Beacon Hill**

Park A planned Single Family and Neighborhood Commercial Retail

project location: City of Novi, MI

12-Mile Road & Meadowbrook Road

sheet title:

ENTRANCE PLANTINGS, ENTRANCE SIGN & WALL MONUMENT

job no./issue/revision date:

LS15.010.06 SPA 6-26-2015 LS16.006.01 PSP 1-11-2016 LS16.006.04 PSP 4-13-2016

JP, KH

checked by:

1-4-2015 notice:

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Do Not scale drawings. Use figured dimensions only

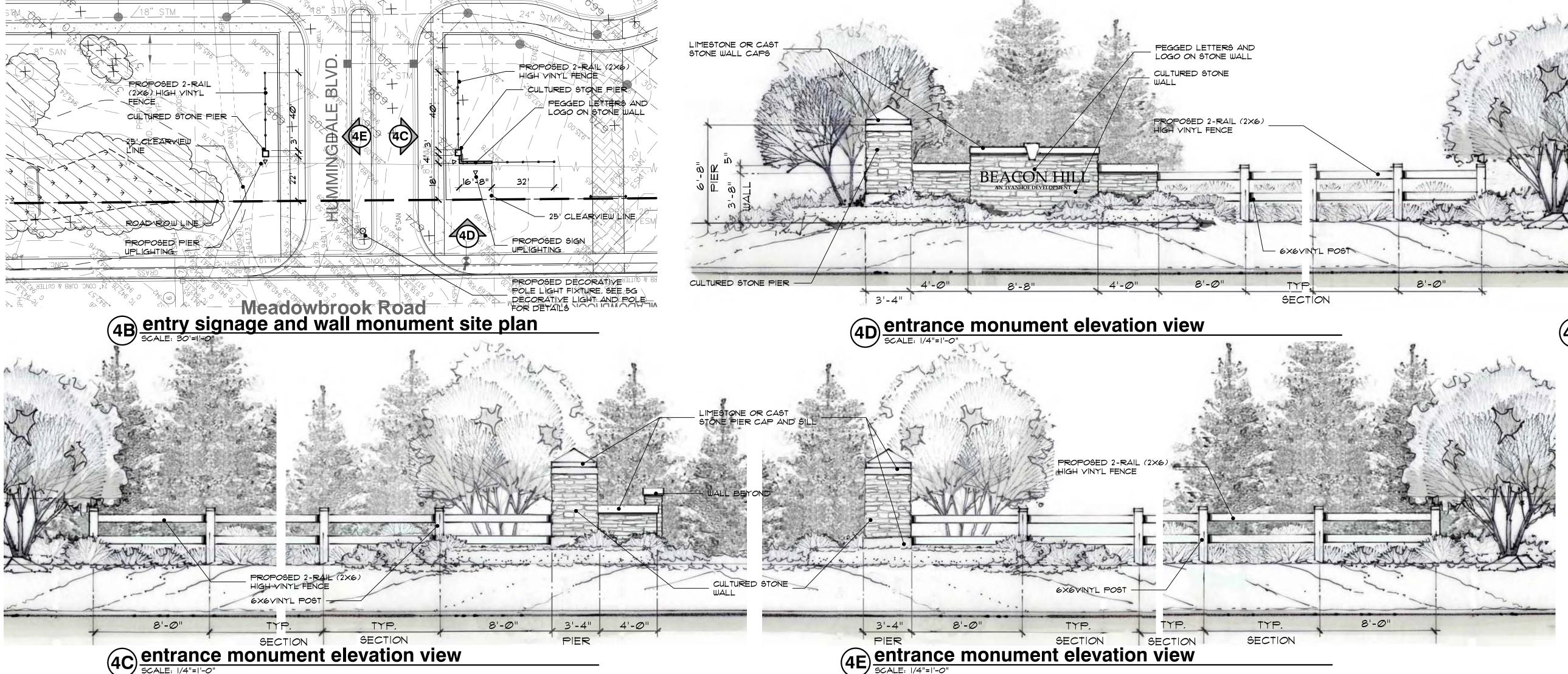


is either expressed or implied as to the completeness of accuracy. contractor shall l exclusively responsible for determining the exact location and elevation prior to the start

of construction project no:

LS16.008.01 sheet no:

LS-4_{of}



nlant material liet

	q	uantitie	es_	plar	nt material list					
key	SHT.L-2	SHT.L-3	totals	botanical name	common name	size	unit cost	COST SHT.L-2	cost SHT.L-3	totals
				STREET TREES			-			
AFS	17	-	17	ACER F. 'JEFFERRED'	AUTUMN BLAZE RED MAPLE	2 1/2" BB	\$ 325	\$5 ,525	-	\$5 ,525
ARAS	15	12	27	ACER R. 'ARMSTRONG'	ARMSTRONG RED MAPLE	4" BB	\$ 325	\$4,875	\$3,3 <i>@</i> @	\$8,775
LSS	8	-	8	LIQUIDAMBAR STYRACIFLUA	AMERICAN SWEETGUM	2 1/2" BB	\$ 325	12,600	-	\$2,600
TCS	7	-	7	TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LINDEN	2 1/2" BB	\$ 325	\$2,275	-	\$2,275
GTS	19	-	19	GLEDITSIA TRI. INERMIS 'SKYCOLE'	SKYLINE LOCUST	2 1/2" BB	\$ 325	\$6, 175	-	\$6,175
QBS	11	-	11	QUERCUS 'BICOLOR'	SWAMP WHITE OAK	2 1/2" BB	\$325	\$3,575	-	\$3,575
ARS	10	-	10	ACER RUBRUM 'FRANK\$RED'	RED SUNSET RED MAPLE	2 1/2" BB	\$325	\$3,250	-	\$3,25@
				LARGE AND SMALL DECIDUOUS TREES						\$ 32,175
AR	-	17	17	ACER R. 'FRANKSRED'	RED SUNSET RED MAPLE	3" BB	\$4 <i>00</i>	-	\$6,8 <i>0</i> 0	\$6,800
PC	6	4	10	PYRUS CALLERYANA 'CHANTICLEER'	CLEVELAND SELECT PEAR	4" BB	\$25 <i>@</i>	\$1,500	\$1,000	\$2,500
AF	-	8	8	ACER 'JEFFERED'	AUTUMN BLAZE RED MAPLE	3" BB	\$400	-	\$3,200	\$3,200
†C	-	15	15	TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LINDEN	3" BB	\$4 <i>00</i>	-	\$6,000	\$6,000
GT	-	9	9	GLEDITSIA TRI. INERMIS 'SKYCOLE'	SKYLINE LOCUST	3" BB	\$4 <i>00</i>	-	13,600	\$3,6 <i>0</i> 0
CC	3	-	3	CERCIS CANADENSIS	EASTERN REDBUD (MULTI-STEM)	10' BB	\$25Ø	\$75 <i>@</i>	-	\$75Ø
AC	4	5	9	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY (MULTI-STEM)	10' BB	\$25Ø	1,000	\$1,250	\$2,25@
MF	7	8	15	MALUS FLORIBUNDA	JAPANESE FLOWERING CRABAPPLE	2" BB	125Ø	\$1,75 <i>@</i>	12,000	\$3,750
MS	4	3	7	MALUS 'SNOWDRIFT'	SNOWDRIFT CRABAPPLE	2" BB	125Ø	\$1,000	\$75Ø	\$1,750
MSR	-	8	8	MALUS 'SARGENTI'	SARGENT CRABAPPLE	2" BB	125Ø	-	\$2,000	\$2,000
CP	4	6		CRATAEGUS PHAENOPYRUM	WASHINGTON HAWTHORN (MULTI-STEM)	10' BB	\$25Ø	\$1,000	\$1,500	\$2,500
<u> </u>	T		10	OTOTAL GOOT TIME TO THE TOTAL THE TIME TO	WASHINGTON HAWTHOJAN THEFT STELLY	10 00	1230	11,000	11,555	\$35,100
										455,11242
еу	SHT.L-2	SHT.L-3	totals	botanical name	common name	size	unit cost	cost SHT.L-2	cost SHT.L-3	totals
				SHRUBS			-			
RAG	-	42	42	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	#3 CONT.	\$ 5Ø	-	\$2,100	\$2,100
sK	-	2	2	SYRINGA PATULA 'MISS KIM'	MISS KIM DWARF LILAC	3' BB	\$ 5Ø	-	\$100	\$100
YC	-	1	1	VIBURNUM CARLESII	KOREAN SPICE VIBURNUM	3' BB	# 5Ø	-	\$5Ø	\$ 5Ø
VMK	-	23	23	VIBURNUM X.B. 'MOHAWK'	MOHAWK VIBURNUM	3' BB	\$50	-	\$1,150	\$1,150
ДД	36	-	36	ARONIA ARBUTIFOLIA	RED CHOKEBERRY	3' BB	\$ 50	\$1,800	-	\$1,800
CF	37	20	57	CORNUS FLAVIRAMEA	YELLOWTWIG DOGWOOD	3' BB	\$ 5Ø	\$1,850	\$1,000	2,850
SG	-	10	10	SPIREA XB. 'GOLDMOUND'	GOLDMOUND SPIREA	#5 CONT.	\$5Ø	-	\$500	\$500
LY	-	64	64	LIGUSTRUM X. VICARYI	GOLDEN VICARY PRIVET	3' BB	\$5Ø	-	\$3,200	\$3,200
5B	-	18	18	6PIREA XB. 'ANTHONY WATERER'	ANTHONY WATERER SPIREA	#5 CONT.	\$ 5Ø	-	\$9 <i>00</i>	\$9 <i>0</i> 0
CS	55	26	81	CORNUS STOLONIFERA	REDTWIG DOGWOOD	3' BB	\$50	\$2,750	\$1,300	\$3, 0 50
ΥL	46	32	78	VIBURNUM LENTAGO	NANNYBERRY VIBURNUM	3' BB	#5 Ø	12,300	\$1,600	13,900
										113,600
										110,222
еу	SHT.L-3	SHT.L-3	totals	botanical name	common name	size	unit cost	COSt SHT.L-2	COST SHT.L-3	totals
				LARGE AND SMALL EVERGREENS						
JŤ	-	47	47	JUNIPERUS S. 'TAMARISAFOLIA'	TAMS JUNIPER	24" BB	\$ 5Ø	-	\$2,35@	\$2,35Ø
PA	6	4	10	PICEA ABIES	NORWAY SPRUCE	8' BB	\$ 325	\$1,950	\$1300	\$3,25Ø
PAL	4	2	6	PICEA ABIES	NORWAY SPRUCE	10' BB	\$ 325	\$1,300	¥65Ø	\$195 <i>@</i>
PS	-	2	2	PINUS STROBUS	EASTERN WHITE PINE	8' BB	\$ 325	-	¥65Ø	\$650
PSL	-	1	1	PINUS STROBUS	EASTERN WHITE PINE	10' BB	\$ 325	-	\$325	\$325
TO	-	8	8	THUJA OCCIDENTALIS 'SMARGD'	EMERALD GREEN ARBORVITEA	6' BB	45 Ø	-	\$400	\$4 <i>00</i>
										18,925
										10,020
кеу	SHT.L-2	SHT.I -3	totals	botanical name	common name	size	unit cost	COST	cost SHT.L-3	totals
- 3	5.11.L-Z	5.11.L-3		PERENNIALS AND GRASSES			unit cost	SHT.L-2	SHT.L-3	ioiais
MSM	_	12	-	MISCANTHUS SINENSIS 'MORNING LIGHT'	MORNING LIGHT' MAIDEN GRASS	#5 CONT.	\$15	-	\$180	\$180
PAH	_	17	-	PENNISETUM ALOPECUROIDES 'HAMELN'	HAMELN DWARF FOUNTAIN GRASS	*3 CONT.	\$15	-	\$255	\$255
<u> </u>	_	11	-	I ENNIGETUIT ALOFECUROIDES HAMELN	HATTELN DWARF FOUNTAIN GRASS	"5 CONI.	710	-	7200	\$255

MIN. 2" DEPTH DOUBLE SHREDDED

PLANTING MIXTURE

subgrade

3 x width of rootball

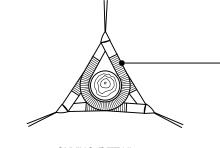
shrub planting detail

HARDWOOD BARK. MULCH SHALL

6'-10" DEPTH

BE NEUTRAL IN COLOR

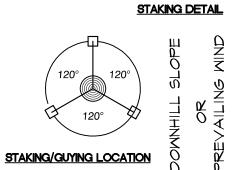
perennial planting detail



remove after one (1) year.

stake trees - just below first branch using 2 - 3" wide belt-like nylon. connect from some flexing of the tree. remove after one (1) year.

use 3 hardwood stakes per tree. 2" x 2" x 8' stakes. drive stakes do not use wire or rope thru a



Orient staking/guying to prevailing 3:1 orient to slope.

Grasses oz/acre

Forbs oz/acre

Mesic Prairie Mix: (Dry Upland Zone)

16 Andropogon gerardii (Big Bluestem)

12 Elymus virginicus (Virginia Wild Rye)

16 Sorghastrum nutans (Indian Grass)

4 Panicum virgatum (Switchgrass)

Aster ericoides (Heath Aster)

Cassia hebecarpa (Wild Senna)

Monarda fistulosa (Bergamot)

Coreopsis tripteris (Tall Coreopsis)

32 Elymus canadensis (Canada Wild Rye)

32 Schizachyrium scoparium (Little Bluestem)

Aster novae-angliae (New England Aster)

Baptisia leucantha (White False Indigo)

Echinacea purpurea (Purple Cornflower)

4 Eryngium yuccifolium (Rattlesnake Master)

3 Heliopsis helianthoides (False Sunflower)

Ratibida pinnata (Yellow Cornflower)

Rudbeckia hirta (Black-Eyed Susan)

Silphium integrifolium (Rosinwood)

Solidago rigida (Stiff Goldenrod)

2 Vernonia altissima (Tall Ironweed)

Silphium laciniatum (Compass Plant)

Solidago riddellii (Riddell's Goldenrod)

Veronicastrum virginicum (Culver's Root)

Silphium terebinthinaceum (Prairie Dock)

1 Helianthus grosseserratus (Sawtooth Sunflower)

Penstemon digitalis (Foxglove Beardtongue

Pycnanthemum virginianum (Mountain Mint)

A widely adaptable mix recommended for areas of

medium soil texture. Use above the wet mesic mix in our

Lake Edge Enhancement System. The best mix to use to

replace large lawn areas in commercial landscaping.

sedimentation basin and wetland plant mix

tree staking detail

Wet Mesic Prairie Mix: (Upland Zone)

mix in our Lake Edge Enhancement System.

16 Andropogon gerardii (Big Bluestem)

32 Elymus canadensis (Canada Wild Rye)

32 Elymus virginicus (Virginia Wild Rye)

Glyceria striata (Fowl Manna Grass)

16 Sorghastrum nutans (Indian Grass)

Aster ericoides (Heath Aster)

Cassia hebecarpa (Wild Senna)

Monarda fistulosa (Bergamot)

Ratibida pinnata (Yellow Cornflower)

Rudbeckia hirta (Black-Eyed Susan)

Silphium integrifolium (Rosinwood)

Solidago rigida (Stiff Goldenrod)

Silphium terebinthinaceum (Prairie Dock)

Solidago riddellii (Riddell's Goldenrod)

Vernonia fasciculata (Smooth Ironweed)

Veronicastrum virginicum (Culver's Root)

Coreopsis tripteris (Tall Coreopsis)

Aster novae-angliae (New England Aster)

Baptisia leucantha (White False Indigo)

Echinacea purpurea (Purple Cornflower)

Heliopsis helianthoides (False Sunflower)

Penstemon digitalis (Foxglove Beardtongue)

Pycnanthemum virginianum (Mountain Mint)

Rudbeckia fulgida speciosa (Showy Black-Eyed Susan)

Rudbeckia subtomentosa (Sweet Black-Eyed Susan)

4 Panicum virgatum (Switchgrass)

Forbs oz/acre

Sedge Meadow Mix oz/acre

2 Carex frankii (Frank's Sedge)

6 Carex vulpinoidea (Fox Sedge)

A mix of sedges, grasses and wildflowers that will

tolerate seasonal saturation, but also drier conditions

during summer and fall. Use above the sedge meadow

2 Carex annectans xanthocarpa (Yellow Fox Sedge)

4. ALL DEAD OR DISEASED PLANT MATERIAL SHALL BE REMOVED AND REPLACED WITHIN SIX (6) MONTHS AFTER IT DIES OR IN THE NEXT PLANTING SEASON, WHICHEVER

tree to stake opposite. allow for

stake trees -just below first branch

using 2 - 3" wide belt-like nylon. connect from tree to stake opposite.

allow for some flexing of the tree.

into undisturbed soil 6"-8" outside of rootball to a depth of 18" below tree pit. remove after one (1) year.

winds, except on slopes greater than

Use same staking/guying orientation for all plants within each grouping or

detention basin seed mix:

TOTAL TRANSFORMER SCREEN PLANTING COST_

TOTAL MISC. ITEM COST (MULCH, EDGING, FABRIC, ETC.)

landscape maintenance notes:

LANDSCAPE AREAS ON THE SITE WILL BE ENSURED.

CONDITION, FREE FROM DEBRIS AND REFUSE.

OCCURS FIRST, THE PLANTING SEASON FOR

cost estimate summary

TOTAL ESTIMATED PLANT MATERIALS COST

TOTAL ESTIMATED IRRIGATION COST_

TOTAL ESTIMATED SEEDING COST

TOTAL TREE REPLACEMENT COST

TOTAL ESTIMATED LANDSCAPE COST_

TOTAL ESTIMATED SOD COST

OF SITE LANDSCAPING, AS FOLLOWS:

THE OWNER OF THE PROPERTY SHALL BE RESPONSIBLE FOR ALL MAINTENANCE

I. LANDSCAPE MAINTENANCE PROCEDURES AND FREQUENCIES TO BE FOLLOWED SHALL BE SPECIFIED ON THE LANDSCAPE PLAN, ALONG WITH THE MANNER IN

WHICH THE EFFECTIVENESS, HEALTH AND INTENDED FUNCTIONS OF THE VARIOUS

2. LANDSCAPING SHALL BE KEPT IN A NEAT, ORDERLY AND HEALTHY GROWING

3. PRUNING SHALL BE MINIMAL AT THE TIME OF INSTALLATION, ONLY TO REMOVE

MATURATION OF PLANTS TO ACHIEVE THEIR APPROVED PURPOSE.

THE SIZE OF THE MATERIAL IT IS INTENDED TO REPLACE.

DEAD OR DISEASED BRANCHES. SUBSEQUENT PRUNING SHALL ASSURE PROPER

DECIDUOUS PLANTS SHALL BE BETWEEN MARCH | AND JUNE | AND FROM OCTOBER |

PLANTS SHALL BE BETWEEN MARCH I AND JUNE 1. PLANT MATERIAL INSTALLED TO

REPLACE DEAD OR DISEASED MATERIAL SHALL BE AS CLOSE AS PRACTICAL TO

5. THE APPROVED LANDSCAPE PLAN SHALL BE CONSIDERED A PERMANENT RECORD

AND INTEGRAL PART OF THE SITE PLAN APPROVAL. UNLESS OTHERWISE APPROVED

IN ACCORDANCE WITH THE AFOREMENTIONED PROCEDURES, ANY REVISIONS TO, OR REMOVAL OF, PLANT MATERIALS WILL PLACE THE PARCEL IN NON-CONFORMITY WITH THE APPROVED LANDSCAPE PLAN, AND SHALL BE VIEW AS A VIOLATION OF THIS ORDINANCE AND THE AGREED UPON TERMS OF THE FINAL SITE PLAN APPROVAL.

UNTIL THE PREPARED SOIL BECOMES FROZEN. THE PLANTING SEASON FOR EVERGREEN

Sedge Meadow Mix: (Edge Zone) A mix of sedges, grasses and wildflowers recommended for soils that are saturated during most of the growing season. Use just above the normal waterline in the capillary zone in our Lake Edge Enhancement System.

Sedge Meadow Mix oz/acre Carex comosa (Bristly Sedge)

- Carex cristatella (Crested Sedge) Carex frankii (Frank's Sedge) Carex hystericina (Porcupine Sedge) Carex Iurida (Lurid Sedge)
- Carex stipata (Awl-Fruited Sedge) Carex tribuloides (Pointed Oval Sedge) Carex vulpinoidea (Fox Sedge) 64 Elymus virginicus (Virginia Wild Rye) 6 Glyceria striata (Fowl Manna Grass) Leersia orvzoides (Rice Cut Grass)
- Panicum virgatum (Switchgrass) Scirpus atrovirens (Dark Green Bulrush) Forbs oz/acre Alisma subcordatum (Water plantain)

Winter Wheat

Angelica atropurpurea (Angelica) Aster novae-angliae (New England Aster) Components per acre

8 lbs grasses and sedges, 3 lbs forbes annual cover: (Edge, Upland & Dry Upland Zones) 50% Temporary Grasses: will contain two of the following species. Avena sativa Lolium multiflorum Annual Rye

Triticum aestivum

NATIVESCAPE L.L.C P.O. BOX 122 MANCHESTER, MICHIGAN 48158 ph: 517.456.9696 www.nativescape.net

\$1002,000

±60,000

_\$15*,000*

Aster puniceus (Swamp Aster)

Cassia hebecarpa (Wild Senna)

Eupatorium perfoliatum (Boneset)

Liatris spicata (Dense Blazing Star)

Lobelia cardinalis (Cardinal Flower)

Rudbeckia hirta (Black-Eyed Susan)

Silphium integrifolium (Rosinweed)

Silphium terebinthinaceum (Prairie Docki

Solidago patula (Swamp Goldenrod)

Solidago riddellii (Riddell's Goldenrod)

Vernonia fasciculata (Smooth Ironweed)

Veronicastrum virginicum (Culver's Root)

Silphium perfoliatum (Cupplant)

Verbena hastata (Blue Vervain)

Zizia aurea (Golden Alexanders)

Lobelia siphilitica (Great Blue Lobelia)

Aster umbellatus (Flat-topped Aster)

Eupatorium maculatum (spotted Joe-Pye Weed)

Helenium autumnale (Autumn Sneezeweed)

Penstemon digitalis (Foxglove Beardtongue)

Pycnanthemum virginianum (Mountain Mint)

3 Rudbeckia subtomentosa (Sweet Black-Eyed Susan)

Rudbeckia fulgida speciosa (Showy Black-Eyed Susan)

Components per acre Wet Mesic8 lbs grasses and sedges, 3 lbs forbesMesic8 lbs grasses, 3 lbs forbes

Rudbeckia subtomentosa (Sweet Black-Eyed Susan)

\$96,235 TOTAL do not prune terminal leader or branch tips. prune away dead or broken branches only. remove nursery applied tree wrap, tape or string from tree trunk and crown.

3 x width of rootball

evergreen planting detail

\$435

remove all non-degradable materials. do not remove soil from the rootball set top of rootball level with grade or slightly above grade if in clay soil mulch 2"-3" depth with shredded hardwood bark.mulch shall be neutral in color.

break up (scarify) sides of planting hole.

fold down or pull back string,

burlap or plastic exposing rootball.

center rootball in planting hole. leave bottom of planting hole firm. do not amend soil unless planting in poor or severely disturbed soil or building rubble. use water to settle soil and remove air pockets and firmly set shrub. gently tamp if needed.

stake with 2x2 hardwood stakes or approved equal driven 6"-8" outside of rootball.loosely stake tree trunk to allow for trunk flexing.stake trees just below first branch with 2"-3" wide belt-like, fabric straps (2 per tree on opposite sides of tree, connect from tree to stake horizontally. do not use rope wire thru a hose.). remove all staking materials after 1 year.

set top of rootball level with grade or slightly above grade if in clay soil.

mulch 2"-3" depth with shredded hardwood bark. mulch shall be neutral in color. leave 3" circle of bare soil at base of tree trunk.

fold down or pull back string, burlap or plastic exposing rootball. remove all non-degradable materials. do not remove soil from the rootball.

break up (scarify) sides of planting hole.

center rootball in planting hole. leave bottom of planting hole firm. do not amend soil unless planting in poor or severely disturbed soil or building rubble.use water to settle soil and remove air pockets and firmly set tree. gently tamp if needed.

unless planting in poor or severely disturbed soil or settle soil and remove air pockets and firmly set tree. gently tamp if needed.

tree planting detail

3 x width of rootball

American Slough Grass Beckmannia syzigachne do not stake trees unless in heavy SPENCE RESTORATION NURSERY P.O. BOX 546 2220 E. FUSON ROAD MUNCIE, INDIANA 47308 ph: 765.286.7154 www.spencenursery.com do not prune terminal leaderor branch tips. prune away dead or broken branches only. prune suckers off. set top of rootball level with grade or slightly above grade if in clay center rootball in planting hole.leave bottom of planting planting hole. hole firm.do not amend soil building rubble.use water to

clay soil, windy conditions, 3" or greater diameter tree trunk or large crown. if staking is needed due to these conditions:- stake with 2x2 hardwood stakes or approved equal driven 6"-8" outside of rootball.- loosely stake tree trunk to allow for trunk flexing. - stake trees just below first branch with 2"-3" wide belt-like, fabric straps (2 per tree on opposite sides of tree, connect from tree to stake horizontally. do not use rope wire thru a hose.).- remove all staking materials after 1 year.

remove nursery applied tree wrap, tape or string from tree trunk and crown. remove any tags or labels.

mulch 2"-3" depth with shredded hardwood bark. mulch shall be neutral in color. leave 3" circle of bare soil at base of tree trunk.

break up (scarify) sides of

fold down or pull back string, burlap or plastic exposing rootball. remove all non-degradable materials do not remove soil from the rootball.

project no:

Plant Material List, Planting Details and Notes



ph. (248) 557-5588

fax. (248) 557-5416

IVANHOE MEADOWBROOK LLC

6689 Orchard Lake Road. Suite 314 West Bloomfield, Michigan 48332 ph. (248) 626-6114

Beacon Hill Park

A planned Single Family and Neighborhood Commercial Retail

project location: City of Novi. MI

12-Mile Road & Meadowbrook Road

sheet title: **Details and Plant Material List**

job no./issue/revision date:

LS15.010.06 SPA 6-26-2015 LS16.006.01 PSP 1-11-2016 LS16.006.04 PSP 4-13-2016

JP, KH checked by:

date:

1-4-2015

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and Associates Do Not scale drawings. Use figured dimensions only

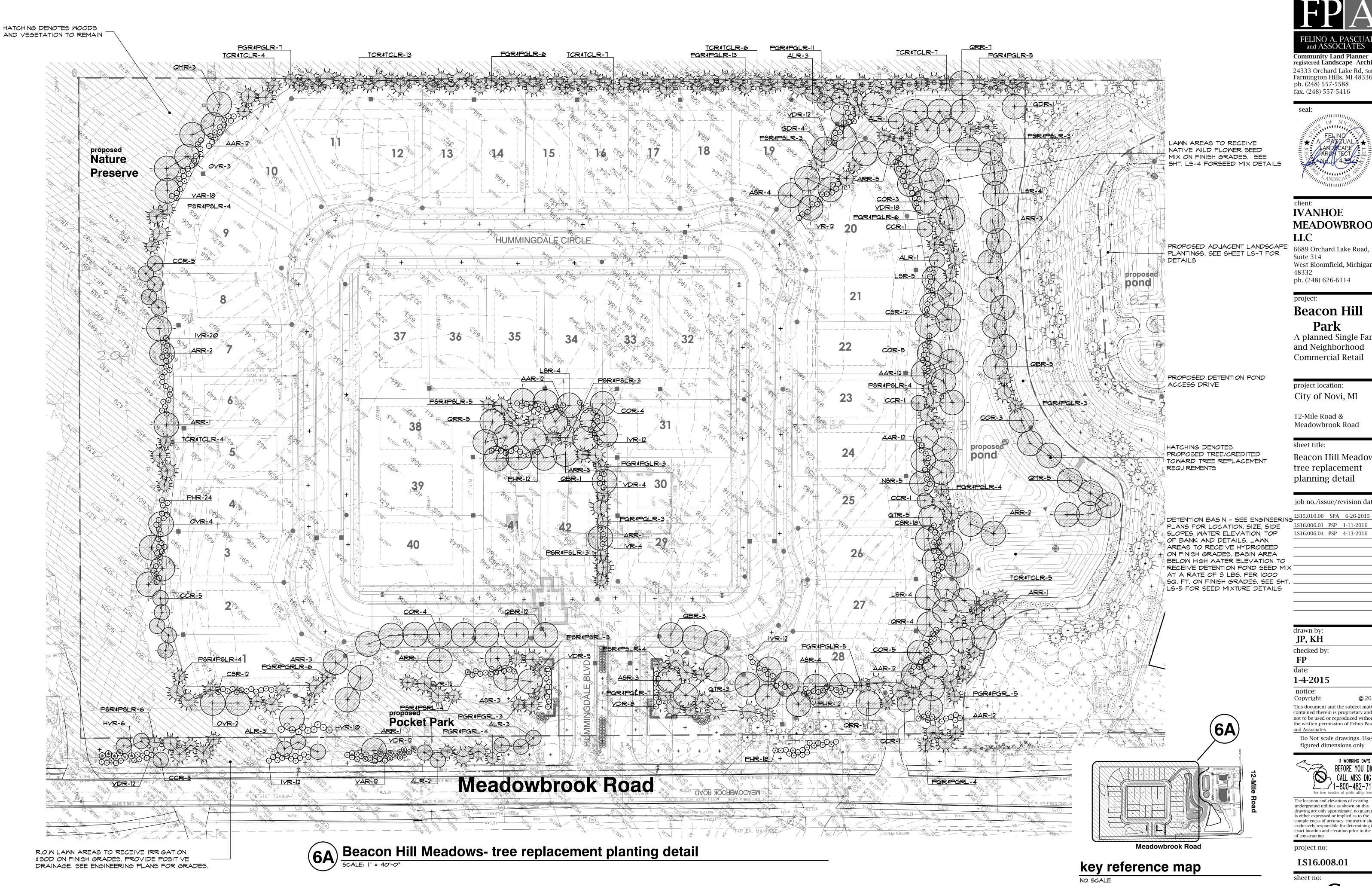
> 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG ____^1-800-482-717*′*

The location and elevations of existing nderground utilities as shown on this is either expressed or implied as to the completeness of accuracy, contractor shall be exclusively responsible for determining the

exact location and elevation prior to the start

of construction

LS16.008.01 sheet no:



FELINO A. PASCUAL and ASSOCIATES Community Land Planner and registered Landscape Architect 24333 Orchard Lake Rd, Suite G Farmington Hills, MI 48336 ph. (248) 557-5588 fax. (248) 557-5416



IVANHOE MEADOWBROOK

Suite 314 West Bloomfield, Michigan ph. (248) 626-6114

project:

Beacon Hill Park

A planned Single Family and Neighborhood Commercial Retail

project location: City of Novi, MI

12-Mile Road & Meadowbrook Road

sheet title: Beacon Hill Meadows

tree replacement planning detail

job no./issue/revision date

drawn by: **JP, KH**

checked by:

1-4-2015

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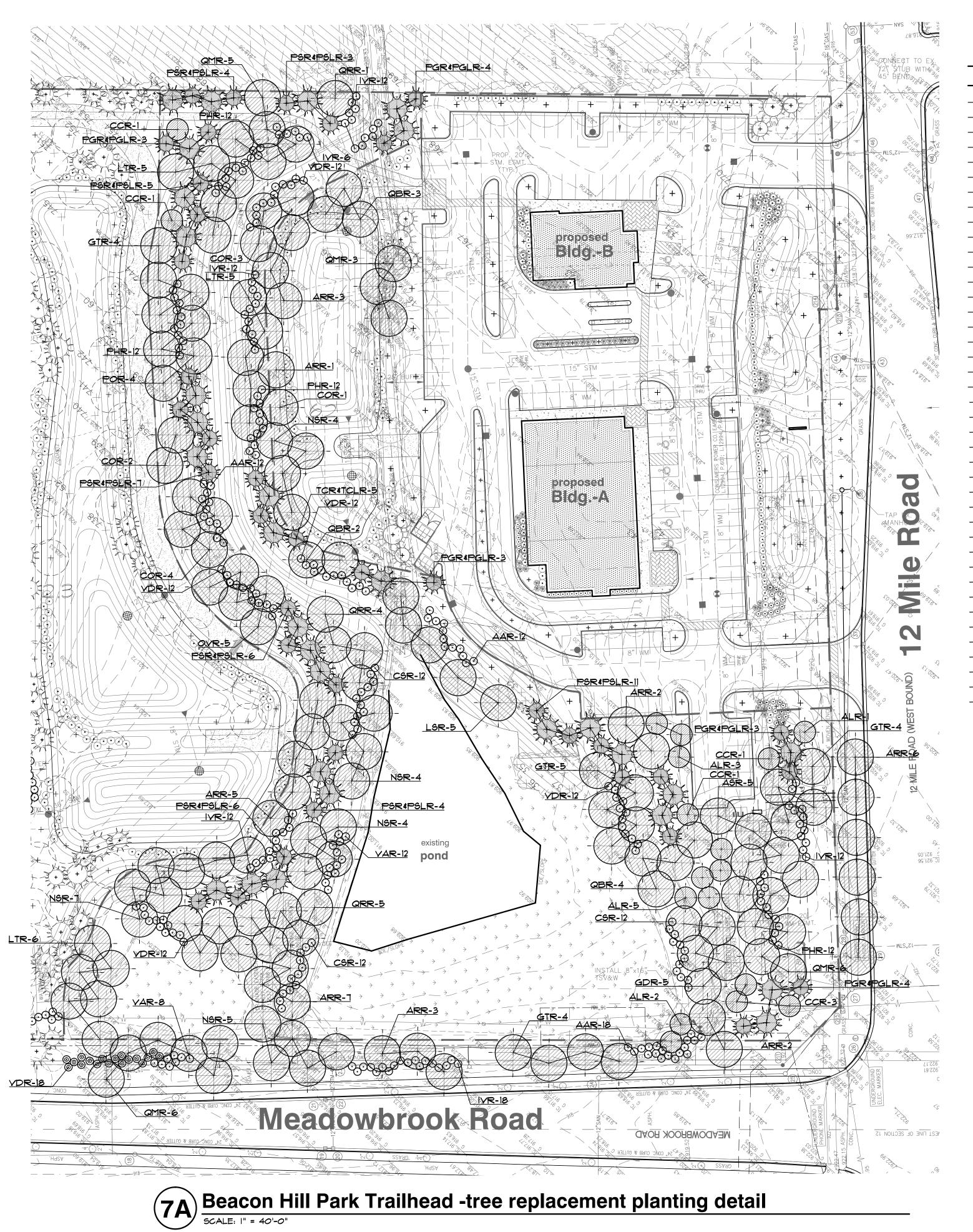
exclusively responsible for determining the exact location and elevation prior to the start

project no:

LS16.008.01

sheet no:

LS-6 of 7



tree replacement plant material list

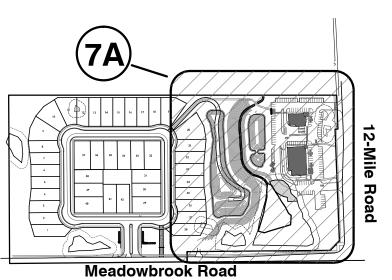
681 TOTALS

	C	quantiti	es		o i opiacomeni	piarit material				cost		
key	SHT.L-6 (single family)	SHT.L-7 (trailhead park)	SHT.L-7 (commercial)	totals	botanical name	common name	size	unit cost	SHT.L-6 (single family)	SHT.L-7 (trailhead park)	SHT.L-7 (commercial)	totals
					DECIDUOUS TREES							
NSR	5	20	4	29	NYSSA SYLVATICA	BLACK GUM TUPELO	2 1/2" BB	\$4 <i>00</i>	1 2,000	\$8,000	11,600	\$11,600
ASR	14	5	-	19	ACER SACCHARUM	SUGAR MAPLE	2 1/2" BB	\$4 <i>0</i> 0	15,600	\$2,000	-	\$7,600
ARR	23	25	4	52	ACER RUBRUM	RED MAPLE	2 1/2" BB	\$4 <i>0</i> 0	19 ,200	\$10,000	\$1,600	120,800
LSR	17	5	-	22	LIQUIDAMBAR STYRACIFLUA	AMERICAN SWEETGUM	2 1/2" BB	\$4 <i>0</i> 0	¥6,800	\$2,000	-	\$8,800
LTR	-	16	-	16	LIRIODENDRON TULIPIFERA	TULIPTREE	2 1/2" BB	\$4 <i>00</i>	•	\$6,400	-	\$6,400
POR	-	4	-	4	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	2 1/2" BB	\$400	-	\$1,600	-	\$1,600
GTR	8	17	-	25	GLEDITSIA TRI. INERMIS 'SKYCOLE'	SKYLINE LOCUST	2 1/2" BB	\$4ØØ	\$3,200	\$6,800	-	\$10,000
GDR	5	5	-	10	GYMNOCLADUS DIOCUS	KENTUCKY COFFEETREE	2 1/2" BB	\$4ØØ	\$2,000	\$2,000	-	\$4000
CCR	17	7	-	24	CERCIS CANADENSIS	EASTERN REDBUD	2 1/2" BB	\$4ØØ	\$6,800	\$2,800	-	\$9,600
OVR	9	5	-	14	OSTRYA VIGINIANA	AMERICAN HOPHORNBEAM	2 1/2" BB	\$400	\$36 <i>0</i> 0	\$2000	-	\$5,600
COR	24	9	1	34	CELTIS OCCIDENTALIS	NORTHERN HACKBERRY	2 1/2" BB	\$400	1 9,600	\$3,600	\$400	\$13,600
QMR	8	17	3	28	QUERCUS MACROCARPA	BUR OAK	2 1/2" BB	\$4 <i>0</i> 0	\$3,200	¥6,800	\$1,200	\$11,200
QRR	17	10	-	27	QUERCUS RUBRA	RED OAK	2 1/2" BB	\$400	\$6,800	\$4,000	-	\$10,800
QBR	13	6	3	22	QUERCUS 'BICOLOR'	SWAMP WHITE OAK	2 1/2" BB	\$4 <i>0</i> 0	\$5,200	\$2,400	\$1,200	\$8,800
ALR	14	11	-	25	AMELANCHIER LAEVIS	SERVICEBERRY	8' BB	\$4 <i>0</i> 0	15,600	\$4,400	-	\$10,000
TOTALS	174	162	15	351	TOTALS							\$140,400
					EVERGREEN TREES							
PGR	58	10	-	68	PICEA GLAUCA	WHITE SPRUCE	T' BB	\$325	\$18,850	\$3,250	-	\$22,100
PGRL	36	7	-	43	PICEA GLAUCA	WHITE SPRUCE	10' BB 0	\$ 325	\$11,700	\$2,275	-	\$13,975
PSR	26	29	-	55	PINUS STROBUS	EASTERN WHITE PINE	T' BB	\$325	\$8,450	\$9,425	-	\$17,875
PSRL	20	22	-	42	PINUS STROBUS	EASTERN WHITE PINE	10' BB 0	\$325	\$6,500	\$7,150	-	\$13,650
TCR	28	-	-	28	TSUGA CANADENSIS	CANADIAN HEMLOCK	7' BB	\$ 325	\$9,100	-	-	\$9,100
TCRL	17	-	-	17	TSUGA CANADENSIS	CANADIAN HEMLOCK	10' BB 0	\$ 325	\$5,525	-	-	\$5,525
TOTALS	185	68	-	253	TOTALS							\$82,225
					SHRUBS							
IVR	72	72	-	144	ILEX VERTICILLATA	MICHIGAN HOLLY	30" BB	#5 Ø	\$3,600	\$3,600	-	\$7,200
PHR	66	48	-	114	PHYSOCARPUS OPLIFOLIUS	NINEBARK	30" BB	#5 Ø	\$3,300	\$2,400	-	\$5,TØØ
AAR	72	42	-	114	ARONIA ARBUTIFOLIA	RED CHOKEBERRY	30" BB	#5 Ø	\$3,600	\$2,100	-	\$5,TØØ
VDR	75	78	-	153	VIBRUNUM DENTATUM	ARROWOOD VIBRUNUM	30" BB	¥5Ø	\$3,75@	\$3,900	-	\$T,65Ø
HVR	28	-	-	28	HAMAMELIS VIRGINIANA	AMERICAN WITCH HAZEL	30" BB	¥5Ø	\$1,400	-	-	\$1,400
CSR	42	36	-	78	CORNUS SERICEA	RED-TWIG DOGWOOD	30" BB	#5 Ø	\$2,100	1,800	-	\$3,900
VAR	3Ø	20	-	50	VIBURNUM ACERIFOLIUM	ARROWOOD VIBRUNUM	30" BB	#5 Ø	\$1,500	\$1,000	-	\$2,500
					-							

TOTAL \$256,675

\$34,**Ø**5Ø

woodland tree replacement summary	MEADOWS	TRAILHEAD	SHOPPES	TOTALS
TOTAL NO OF EXISTING TREE (8" DBH OR GREATER) TO BE REMOVED	432	22	6	460
NO OF EXEMPT TREES (DEAD OR POOR CONDITION) REMOVED	55	3	-	58
NO OF REGULATED TREE REMOVED	277	19	6	402
NO OF TREES REMOVED BETWEEN 8"-II" DBH	183	3	4 - -	187
NO OF TREES REMOVED BETWEEN II"-20" DBH	144	9		157
NO OF TREES REMOVED BETWEEN 20"-29" DBH	٦٦	3 3		20 6 32
NO OF TREES REMOVED 30" DBH OR GREATER	4			
NO OF TREES REMOVED WITH MULTI-TRUNK	29			
*SEE TREE SURVERY/TREE REMOVAL PLAN PREPARED BY ZEIMET WOZNIAK & ASSOCIATES FOR TREE SPECIES, SIZES, AND DETAILS	MEADOMS	TRAILHEAD	SHOPPES	TOTALS
TOTAL NO OF TREE REPLACEMENT CREDITS REQUIRED	657	48	13	718
187 - (8"-II" DBH) X I-TREE REPLACEMENT CREDIT	183	3	ı	187
57 - ("-20" DBH) X 2-TREE REPLACEMENT CREDIT		18	8	314
20 - (20"-29" DBH) X 3-TREE REPLACEMENT CREDIT		9	- 4	60 24
6 - (30" + DBH) X 4-TREE REPLACEMENT CREDIT	<u> </u>	4		
32 - (MULTI-TRUNK) 954.3" / 8"		14	-	133
(MIN. 2 1/2" CALIPER DECIDUOUS TREE= 1-CREDIT OR MIN. 7' HIGH EVERGREEN TREE	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	<u>'</u>		
		TRAILHEAD		TOTALS
TOTAL NO OF TREE REPLACEMENT CREDITS PROVIDED	422.5	280.5	15	718
351 - 2 1/2" DECIDUOUS TREE @ 1.0-CREDITS	174	162	15	351
5 - 7' EVERGREEN @ .67-CREDITS	75	26	_	101 (14
102-10'EVERGREEN @ 1.5-CREDITS	109.5	43.5	-	153
	64	49		113 (169



key reference map





IVANHOE MEADOWBROOK LLC

6689 Orchard Lake Road, Suite 314 West Bloomfield, Michigan ph. (248) 626-6114

project:

Beacon Hill Park

A planned Single Family and Neighborhood Commercial Retail

project location: City of Novi, MI

12-Mile Road & Meadowbrook Road

sheet title:

tree replacement

job no./issue/revision date:

LS16.006.01 PSP 1-11-2016 LS16.006.04 PSP 4-13-2016

drawn by: **JP, KH** checked by:

1-4-2015

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project no:

LS16.008.01

LS-7 of 7

Beacon Hill Park

Ivanhoe Companies





COLONIAL STREETSCAPE SCALE 1/4" = 1'-0"



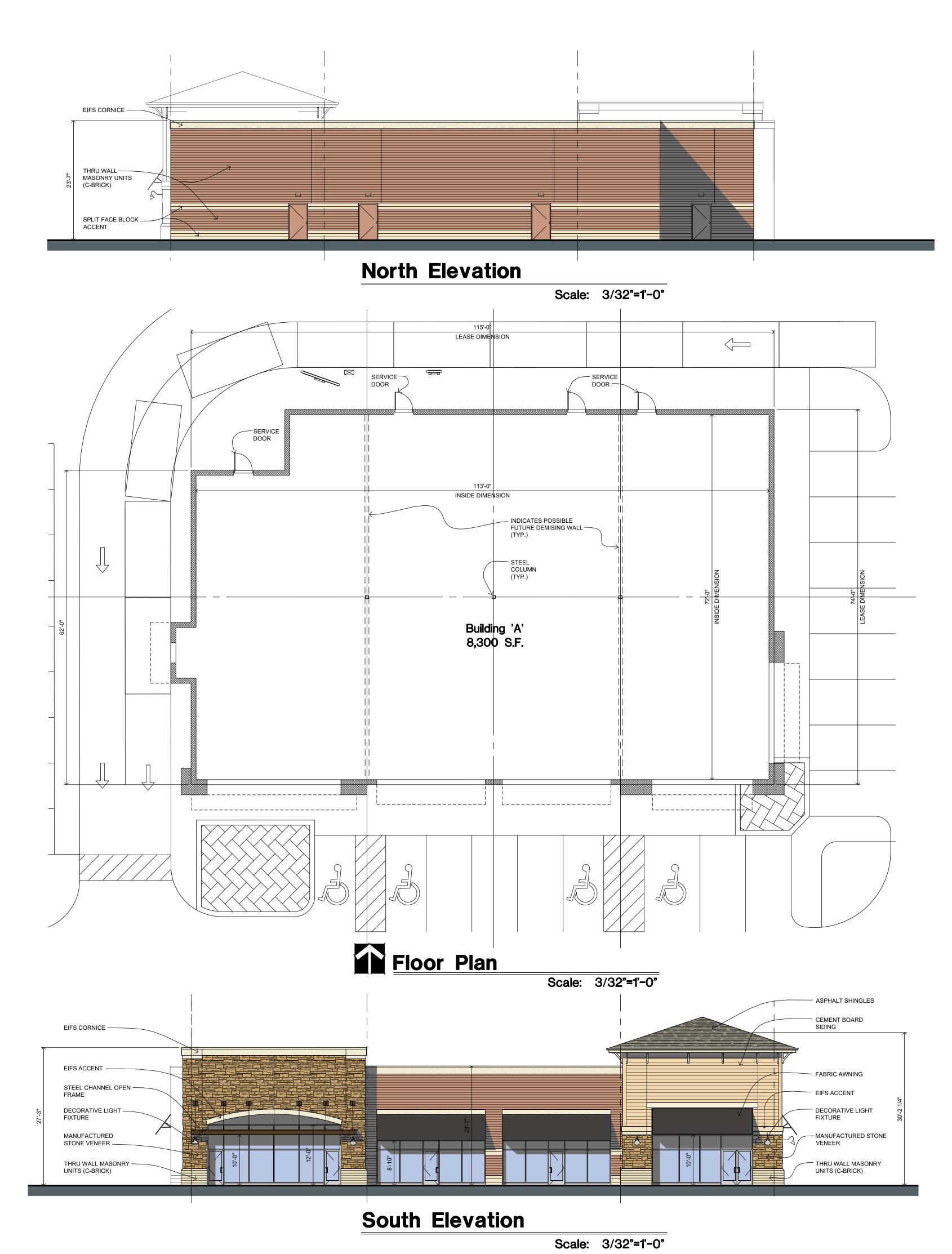


RANCH STREETSCAPE SCALE 1/4" = 1'-0"









issued for: project: Beacon

ARCHITECTS

32500 TELEGRAPH ROAD SUITE 250 BINGHAM FARMS, MICHIGAN 48025-2404

PH 248.540.7700 FX 248.540.2710 www.rogvoy.com



drawing:

Building 'A' **Building Elevations** & Floor Plan

DO NOT SCALE DRAWING

drawn: KL checked: MD approved: MD

14051

Scale: 3/32"=1'-0"

Scale: 3/32"=1'-0"

East Elevation

West Elevation

- EIFS CORNICE

THRU WALLMASONRY UNITS

(C-BRICK)

- SPLIT FACE

BLOCK ACCENT

EIFS CORNICE

- MANUFACTURED

STONE VENEER

THRU WALL MASONRY UNITS

(C-BRICK)

- SPLIT FACE BLOCK ACCENT

ASPHALT SHINGLES -

CEMENT BOARD -

FABRIC AWNING -

DECORATIVE LIGHT -FIXTURE

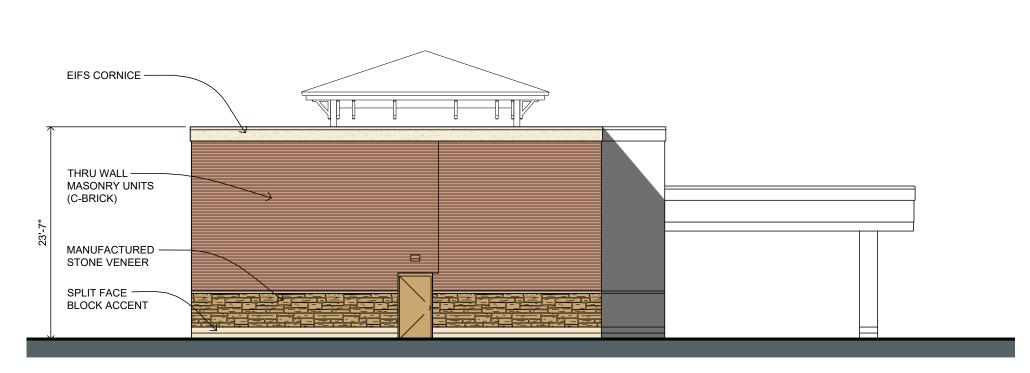
MANUFACTURED STONE – VENEER

THRU WALL MASONRY-

UNITS (C-BRICK)

EIFS ACCENT -

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North Elevation

Scale: 3/32"=1'-0"



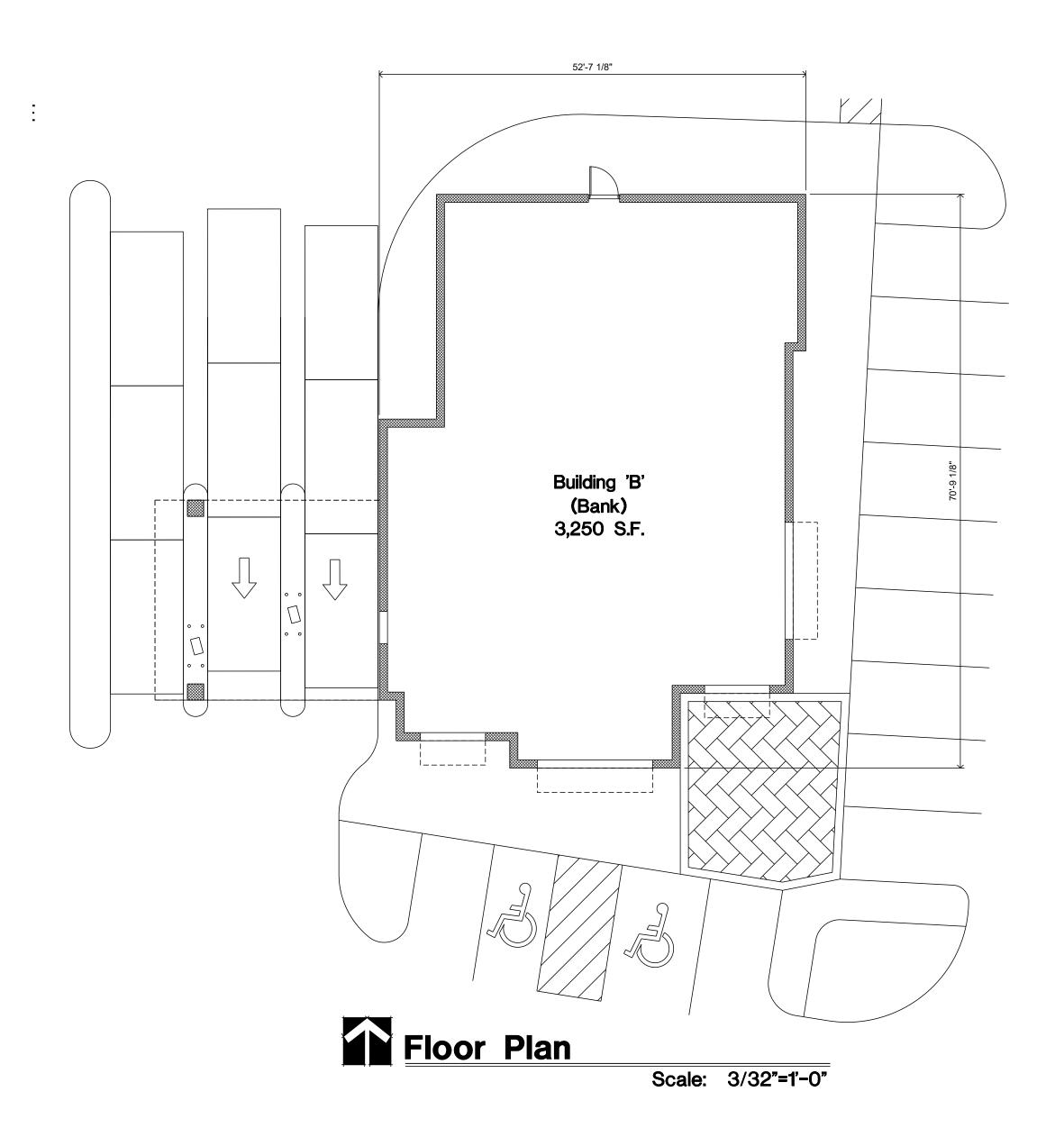
East Elevation

Scale: 3/32"=1'-0"



West Elevation

Scale: 3/32"=1'-0"





South Elevation

Scale: 3/32"=1'-0"

issued for:

OWNER REVIEW 10 DEC. 15

PSP SUBMITTAL 11 JAN. 16

project:

Beacon Hill Park



32500 TELEGRAPH ROAD SUITE 250 BINGHAM FARMS, MICHIGAN 48025-2404

PH 248.540.7700 FX 248.540.2710 www.rogvoy.com



drawing:

Building 'B'
Building Elevations
& Floor Plan

DO NOT SCALE DRAWING

issue date: drawn: KL checked: MD approved: MD

file number:

A-2

14051



April 8, 2016

Ms. Barbara McBeth City of Novi Community Development 45175 West Ten Mile Road Novi, MI 48375

RE: Beacon Hill Park rezoning with a PRO, JSP15-0008

Response to Planning Review

Dear Ms. McBeth:

We would like to thank Community Development and Clearzoning for the recommendation to the Planning Commission to consider a positive recommendation to the City Council.

We have reviewed the Clearzoning report dated March 18, 2016 and are prepared to address any comments on subsequent submittals.

Should you need any additional information please don't hesitate to contact us.

Very truly yours,

Andrew J. Wozniak

April 20, 2016

Ms. Barbara McBeth City of Novi Community Development 45175 West Ten Mile Road Novi, MI 48375

RE: Beacon Hill Park PRO

Response to Engineering Review

Dear Ms. McBeth:

We would like to thank Engineering for their recommendation for approval of the Revised Concept Plan and Concept Storm Water Management Plan.

We have reviewed their letter dated April 15, 2016 and will address additional comments detailed in their review letter dated March 21, 2016 during Final Site Plan submittal.

Should you need any additional information please don't hesitate to contact us.

Very truly yours,

Andrew J. Wozniak

April 21, 2016

Ms. Barbara McBeth City of Novi Community Development 45175 West Ten Mile Road Novi, MI 48375

RE: Beacon Hill Park rezoning with a PRO, JSP15-0008

Response to Landscape Review

Dear Ms. McBeth:

We would like to thank City staff for their landscape review the recommendation for approval with reservations of the revised site plan.

We have reviewed the landscape report dated April 15, 2016 and will address the comments during Final Site Plan submittal. We are requesting five deviations/waivers pertaining to this review, all of which are supported by City staff.

We offer the following response to the review comments.

Existing Trees

"As this is a PRO, there could be some flexibility in terms of allowing extra credits for the use of upsized trees which is normally not allowed by the Landscape Design Manual. In light of this, I support the use of some upsized evergreens to provide more interest along Meadowbrook, and more screening between the residential lots "fronting" the commercial, but I don't believe that the total benefit in credits for this should be more than 33% of the trees planted (in other words 33, not 85). As ECT is officially responsible for reviewing plans for the Woodlands, I defer to their review on this matter".

3. While ECT will provide the woodland review, it should be noted that the Landscape Design Manual specifically forbids the use of upsizing credits for Woodland Replacement Trees (Section 3.c.(2)). The applicant can request a deviation as part of the PRO agreement, and staff supports the use of some upsizing with credit within the PRO to provide additional interest and screening along Meadowbrook, and along the south edge of the residential part of the development to provide additional screening from the commercial part of the development. That being said, the number of credits sought seems excessive, as noted in the discussion above.

With the support of City Staff, Tollgate Education Community and MSU Horticulture staff, we are proposing larger trees along the Meadowbrook Road Frontage and between the commercial and residential developments. As City staff suggests and everyone agrees, larger trees will "provide additional landscape interest and screening along Meadowbrook Road and along the south edge of the residential portion of the development to provide additional screening from the commercial part of the development".

We are proposing to upsize only evergreen trees as suggested by Toll Gate Educational Community and MSU Horticulture Department staff to maximize the impact of the upsizing and to create a more natural landscape. Upsizing only evergreen trees was discussed and supported by City staff at our meeting on April 13, 2016.

A total of 604 replacement trees and 681 replacement shrubs are proposed to satisfy 100% of the required replacement credits. It's important to note that only 102 trees will be upsized. We believe that the proper way to analyze the requested upsizing is to look at the total amount of Woodland Replacement Trees, not just the evergreen trees. We are proposing to upsize 153 of the total 718 required woodland replacement tree credits which is only 21% of the total.

Larger trees cost more money and we are requesting credit for upsizing these trees. We will plant Woodland Replacement Trees and shrubs that are not upsized to satisfy the requirements, but feel that this will not achieve the effect that everyone desires.

Thank you for your support to "use of some upsized evergreen trees to provide more interest along Meadowbrook, and more screening between the residential lots "fronting" the commercial" We are requesting a deviation from the PRO to receive credit for upsizing 102 Woodland Replacement Trees as <u>part of the Woodland review.</u>

Meadowbrook

b. A landscape waiver for the berm could be sought for the wetland just north of the residential entry (approximately 170 lf) and the wet areas south of the residential area (approximately 420 lf). This waiver would be supported by staff.

A berm cannot be provided due to topography, existing vegetation and topography.

Thank you for your support of our request for a waiver to not provide a berm just north of the residential entry (approximately 107 lf)

c. If the developer wishes to not build berms along the remaining frontage, this would require a deviation as part of the PRO. Given the heavy vegetation proposed within the greenbelt and right-of-way, this would also be supported by staff.

A berm cannot be provided due to existing vegetation.

Thank you for your support of our request for a deviation as part of the PRO to not build a berm along the remaining residential frontage of Meadowbrook Road.

Plantings

b. A landscape waiver could be sought for the required trees and subcanopy trees in the wetland areas described above for the berms. This waiver would be supported by staff.

A berm and the required trees cannot be installed due to existing vegetation and topography.

Thank you for your support of our request for a waiver for the required for the required trees and subcanopy trees required to be installed on the berms.

c. No required greenbelt landscaping is proposed for the 540 If of frontage south of the residential section. Some of this deviation is due to the existing wetland areas, and some is due to the heavy plantings of woodland replacement trees. Normally, required trees cannot be replaced with woodland trees. However, in this case, the Planning Commission is allowed leeway in allowing a waiver for the greenbelt plantings if it finds that "the site would be enhanced by an alternate design solution" As the park area will be heavily landscaped and protected with a conservation easement, and much of the existing natural area will be enhanced through restoration, a waiver for the required greenbelt trees in this section can be requested and will be supported by staff.

We are proposing to heavily landscape the Meadowbrook Road frontage. Additional landscaping should not be required since this parcel is not being developed and is being donated to the City.

Thank you for your support of our request for a waiver for installation of the greenbelt landscaping along the Meadowbrook Road frontage south of the residential development (approximately 540 feet).

d. The required plantings for the remaining 540lf of frontage (1336lf – 540lf – 86lf – 170lf) should be provided. Existing trees may be able to meet some or all of the requirements for that section of frontage, but their size and identity need to be shown with size and identity on the plan. They need to be acceptable size and acceptable species to count.

We are proposing to heavily landscape the Meadowbrook road frontage which will be supplemented by existing trees and vegetation. The size and identity of the existing trees is show on sheet SP-4 but will be clarified on the landscape plans during Final Site Plan submittal.

Twelve Mile Road

2 An undulating berm at least 3' tall with a 2' crest is required between the road and the parking lot. No berm is proposed. A privet hedge is proposed, but this does not provide the same screening of automobile headlights as a berm would. A landscape waiver may be requested from the Planning Commission, but would not be supported by staff as there is no topographical reason for not providing this berm. Also, while allowed by ordinance, privet is known to be an invasive plant that invades area woodlands and

should be substituted with another non-invasive species if the applicant elects to pursue the hedge as screening.

A berm has been provided along Twelve Mile Road on the revised plans.

3 In addition to the berm, one large evergreen or deciduous canopy tree per 35 If frontage and 1 subcanopy tree per 20 If frontage is required along the parking lot. The calculations and trees provided need to be revised.

The required trees will be provided during Final Site Plan submittal.

4 The total frontage for Twelve Mile Road should be included in the calculations. A landscaping waiver for the western 160' can be sought and will be supported for the same reason described in 3.c. above.

We are providing extensive landscaping along the entire Twelve Mile Road frontage. We suggest that the western 160 feet of the Twelve Mile Road frontage should not require additional landscaping and should not be included in the calculation for the commercial development since this parcel is not being developed and is being donated to the City.

Thank you for your support of our request for a deviation for landscaping along the western 160 feet of the Twelve Mile Road frontage.

<u>Screening Between Residential and Non-residential – Berm (Wall) & Buffer</u>

3 It appears that the proposed landscaping will provide the required screening, despite the difference in height, but a section view from Meadowbrook should be added to show the proposed buffering capability of that landscaping, showing the buildings at proposed elevations and the landscaping at a height that can be expected after 2 years of growth.

A section view will be provided during Final Site Plan submittal.

4 If that section reveals that the screening is insufficient, additional screening in the form of dense evergreens, a landscaped berm high enough to provide the required buffering, or other screening will be required.

Noted

Street Tree Requirements

Residential Interior:

2 An additional street tree needs to be added to the plan to match the numbers shown as provided in the calculations.

An additional street tree will be provided during Final Site Plan submittal.

Meadowbrook Road:

1 Please break out the frontage by road in the calculations (1336lf less 86lf for Meadowbrook and 607 lf for Twelve Mile Road).

The frontage calculations will be broken down by road during Final Site Plan submittal. As previously stated, the Twelve Mile Road and Meadowbrook Road frontage should not should not be included since this parcel is not being developed and is being donated to the City

2 1 deciduous canopy tree per 35 If is required along areas facing parking, and 1 tree per 45 If is required along other right-of-way frontage for commercial, and 1 tree per 35 If is required for residential. 1 tree per 45 If can be used for the Meadowbrook frontage south of the residential areas.

Noted and will be addressed during Final Site Plan submittal.

3 Parking lot trees must be deciduous canopy trees, not evergreen trees or subcanopy trees. Please replace the above with deciduous canopy trees. Per the ordinance definition, deciduous canopy trees must have a mature canopy width of at least 20' to provide shading effect for adjacent spaces.

Noted and will be addressed during Final Site Plan submittal.

4 The replacement trees shown along the parking lots' perimeters must be changed to be interior or perimeter parking lot trees to provide the greatest number of trees possible toward meeting those requirements. Replacement trees can only be used along the perimeter if the other requirements are met.

Noted and will be addressed during Final Site Plan submittal.

Parking Lot Perimeter Canopy Trees

Perimeter calculations have been provided as requested. Please check to see that the perimeter length is correctly measured. Once the replacement trees along the perimeter are converted to perimeter or interior trees as noted above and the parking lot is reconfigured to provide a greater number of interior trees in acceptable islands, the shortage of trees may be considered acceptable.

Noted and will be addressed during Final Site Plan submittal.

2 Parking lot perimeter trees are required to be deciduous canopy trees. Please replace any evergreen perimeter trees with deciduous canopy species.

Noted and will be addressed during Final Site Plan submittal.

Transformer/Utility Box Screening

1 When transformers/utility boxes are added to the plans, be sure to screen them per the city standard detail.

Noted and will be addressed during Final Site Plan submittal.

Building Foundation Landscape

1 Building foundation landscaping is calculated as the entire building perimeter * 8 feet. I calculated the total perimeters of the two buildings as approximately 584 feet. This would result in a requirement for a total of 4672 square feet of foundation landscape area. The basis of calculation does not appear to be correct. Please correct that and the required area.

Noted and will be addressed during Final Site Plan submittal.

2 60% of the frontage visible from Twelve Mile Road should be landscaped. As proposed, there is no foundation landscaping proposed along the Twelve Mile frontage of either building. Landscaping needs to be added along the south elevation of the two buildings and needs to be adjacent to outdoor patios.

Noted and will be addressed during Final Site Plan submittal.

3 If, because of the nature of the operations, all of the required foundation landscaping cannot be located immediately adjacent to the building, a landscape waiver can be requested, but the balance of the required space must be provided elsewhere on the commercial area of the site.

Noted and will be addressed during Final Site Plan submittal.

4 Please label all landscape areas in SF on site plans.

Noted and will be addressed during Final Site Plan submittal.

General/Other

Proposed Trees to be saved

3 Please leave the labels for trees to remain on the landscape plan.

Noted and will be addressed during Final Site Plan submittal.

Again, we would like to thank you for this review and we look forward to working with you on this project.

Very truly yours,

Andrew J. Wozniak



April 21, 2016

Ms. Barbara McBeth City of Novi Community Development 45175 West Ten Mile Road Novi, MI 48375

RE: Beacon Hill Park rezoning with a PRO, JSP15-0008

Response to Woodland Review

Dear Ms. McBeth:

We would like to thank ECT for their woodland review the recommendation for approval of the revised site plan.

We have reviewed the ECT report dated April 19, 2016 and will address the comments on the Final Stamping Set as requested. We are requesting two deviations pertaining to this review.

We offer the following response to the review comments.

 ECT supports the use of Woodland Replacement Trees and shrubs as currently proposed in order to supplement the required trees along Meadowbrook Road but we do not support the replacement of Street Tree requirements with Woodland Replacement Trees. Please see the specific comments in the Landscape Review letter dated April 15, 2016.

The required number of Street Trees along the residential (Meadows) and commercial (Shoppes) have been provided and are shown on sheets LS-2 and LS-3 of the landscape plans. In addition to the required Street Trees, we are proposing to install Woodland Replacement Trees within the right-of-way to enhance the design as suggested by Toll Gate Education Community. The Woodland Replacement Trees are shown on sheets LS-6 and LS-7.

We are proposing to heavily landscape the frontage of the Park Trailhead along the Meadowbrook Road and Twelve Mile Road rights-of-way. These plantings would be Woodland Replacement Trees and are shown on sheet LS-6 and LS-7. We are proposing that Street Trees along the proposed frontage of the Park Trailhead should not be required since this parcel is not being developed and is being donated to the City.

We request a deviation from this requirement if necessary.

2. The City's Landscape Design Manual specifically forbids the upsizing of Woodland Replacement Trees for additional Credits (Section 3.c.(2)). The applicant can, however, request a deviation as part of the PRO agreement. ECT and the City Landscape Architect support the use of some upsizing with credit within the PRO in order to provide additional landscape interest and screening along Meadowbrook Road and along the south edge of the residential portion of the development to provide additional screening from the commercial part of the development. That being said, the number of additional credits through the use of upsized Woodland Replacement trees (i.e., 10-foot evergreen trees) seems excessive.

As noted in the Landscape Review, 40% of the proposed evergreen trees are upsized from 7' to 10' height (i.e., 102 of 253 total evergreens are proposed as 10' tall trees). Consistent with the Landscape Design Manual, the applicant is requesting 1.5 credits per 10' tree instead of the 0.67-credit per tree that is normally allowed for a 7' tall evergreen per the Woodland Ordinance. The result is an additional 85 Woodland Replacement Credits on 102 replacement trees provided. ECT concurs with the Landscape Review in that the amount of credits for the providing upsized evergreen trees as Woodland Replacement trees should be limited. The total benefit in credits derived from the "upsized" Woodland Replacement material should not be more than 33% of the total number of "upsized" trees planted.

With the support of City Staff, Tollgate Education Community and MSU Horticulture staff, we are proposing larger trees along the Meadowbrook Road Frontage and between the commercial and residential developments. As City staff suggests and everyone agrees, larger trees will "provide additional landscape interest and screening along Meadowbrook Road and along the south edge of the residential portion of the development to provide additional screening from the commercial part of the development".

We are proposing to upsize only evergreen trees as suggested by Toll Gate Educational Community and MSU Horticulture Department staff to maximize the impact of the upsizing and to create a more natural landscape. Upsizing only evergreen trees was discussed and supported by City staff at our meeting on April 13, 2016.

A total of 604 replacement trees and 681 replacement shrubs are proposed to satisfy 100% of the required replacement credits. It's important to note that only 102 trees will be upsized. We believe that the proper way to analyze the requested upsizing is to look at the total amount of Woodland Replacement Trees, not just the evergreen trees. We are proposing to upsize 153 of the total 718 required woodland replacement tree credits which is only 21% of the total.

Larger trees cost more money and we are requesting credit for upsizing these trees. We will plant Woodland Replacement Trees and shrubs that are not upsized to satisfy the requirements, but feel that this will not achieve the effect that everyone desires.

Thank you for your support to "use some upsizing with credit within the PRO". We are requesting a deviation from the PRO to receive credit for upsizing 102 Woodland Replacement Trees.

The Applicant is encouraged to provide preservation/conservation easements for any areas of remaining woodland.

Preservation/ conservation easements will be provided.

4. The Applicant is encouraged to provide woodland conservation easements for any areas containing woodland replacement trees, if applicable. It is not clear how all of the proposed replacement trees will be quaranteed in perpetuity. As stated in the woodland ordinance.

Where replacements are installed in a currently non-regulated woodland area on the project property, appropriate provision shall be made to guarantee that the replacement trees shall be preserved as planted, such as through a conservation or landscape easement to be granted to the city. Such easement or other provision shall be in a form acceptable to the city attorney and provide for the perpetual preservation of the replacement trees and related vegetation.

Woodland conservation easements will be provided. Provisions to guarantee that the replacement trees shall be preserved as planted will be provided.

5. A Woodland Permit from the City of Novi would be required for proposed impacts to any trees 8-inch d.b.h. or greater. Such trees shall be relocated or replaced by the permit grantee. All replacement trees shall be two and one-half (2 ½) inches caliper or greater deciduous trees or 6-foot tall (minimum) coniferous trees. Deciduous replacement trees shall be provided at a 1:1 replacement ratio and coniferous replacement trees shall be provided at a 1.5:1 replacement ratio. See the Woodland Tree Replacement Chart (attached) for acceptable replacement tree species.

Noted

6. A Woodland Replacement financial guarantee for the planting of replacement trees will be required, if applicable. This financial guarantee will be based on the number of on-site woodland replacement trees (credits) being provided at a per tree value of \$400. Based on a successful inspection of the installed on-site Woodland Replacement trees, seventy-five percent (75%) of the original Woodland Financial Guarantee shall be returned to the Applicant. Twenty-five percent (25%) of the original Woodland Replacement financial guarantee will be kept for a period of 2-years after the successful inspection of the tree replacement installation as a Woodland Maintenance and Guarantee Bond.

Noted

7. The Applicant will be required to pay the City of Novi Tree Fund at a value of \$400/credit for any Woodland Replacement tree credits that cannot be placed on-site.

Noted

8. Replacement material should not be located 1) within 10' of built structures or the edges of utility easements and 2) over underground structures/utilities or within their associated easements. In addition, replacement tree spacing should follow the Plant Material Spacing Relationship Chart for Landscape Purposes found in the City of Novi Landscape Design Manual.

Noted

Again, we would like to thank you for this review and we look forward to working with you on this project.

Very truly yours,

Andrew J. Wozniak

The Ivanhoe Companies

April 14, 2016

Ms. Barbara McBeth City of Novi Community Development 45175 West Ten Mile Road Novi, MI 48375

RE: Beacon Hill Park

Landscape and Woodlands: Ivanhoe; Americana Foundation; Tollgate Education Center; and the City of Novi Site Plan Collaboration

Dear Ms. McBeth:

Since the Planning Commission meeting on September 9, 2015, we have had multiple collaborative meetings with you, Clear Zoning, ECT and City staff to achieve our mutual goal. As you are aware, there have been numerous revisions accommodating the requests from the consultants' letters.

For well over a year, we have been working and adjusting the plan to have a complementary development to the Tollgate Education Center property directly to the west. The key accommodation and collaboration resulted in an extraordinary open space running north and south the entire length of Meadowbrook Road, adjacent to the 5 acre park and the deeper open space park area in front of the commercial, effectuating a continuous buffer on the main roads whereby the community will have 42% open space.

We redesigned the community, specifically as recommended by Tollgate Education Center, whereby the Beacon Hill Meadows road is located approximately 140 feet from Meadowbrook Road which will provide a visual extension of the farm. We revised the plan and added an additional 50 foot landscaped nature corridor. Tollgate Education Center strongly recommended and we have agreed, that the proposed landscaping on the east side of Meadowbrook Road should present a natural progression of plantings from low shrubs to medium understory plantings to canopy trees, to provide a natural appearance.

Under the direction of the Americana Foundation and their consultants, in collaboration with our consultants; Felino Pascual & Associates, Zeimet Wozniak & Associates and King & MacGregor, we have been working with Toll Gate Education Center staff and Michigan State University staff to revise the proposed landscaping plans for Beacon Hill Park along Meadowbrook Road. We have met, and revised the plans multiple times, with the direction of Mr. Roy Prentice, Farm Manager of the Tollgate Education Center and Dr. Robert Schutzki, Associate Professor with the Department of Horticulture at MSU in a collaborative effort to achieve our goal. It is essential to all that the proposed landscaping not only provide a buffer between the farm and the proposed homes, but blends seamlessly with the existing features of Tollgate Education Center and the west side of Meadowbrook Road.

In order to accomplish this we will require flexibility in the proposed landscaping, unique to our sites on Meadowbrook Road. Rather than a single row of trees located along the proposed Meadowbrook Road right-of-way, north of the proposed entrance to Beacon Hill Meadows, we are proposing clusters of bushes be located nearest the sidewalk then a variation of sub-canopy ornamental trees which finally give way to larger canopy trees. Beyond the canopy trees we propose to preserve the natural

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The Ivanhoe Companies

vegetation within the green belt area. We are proposing to move some of the required landscaping into the Meadowbrook Road right-of-way in order to preserve the existing vegetation and provide a natural buffer while maintaining site distance visibility. This will offer a natural feel for Meadowbrook Road that we, along with Tollgate Education Center, are hoping to achieve. I have attached correspondence from Mr. Roy Prentice, Dr. Schutzki, and representatives from Americana Foundation and Tollgate Education Center outlining their desires that include achieving the set-back and natural design of the project including tree and shrubs species.

The park area located adjacent to the proposed community residential entrance has been revised to incorporate a natural progression from low plantings to large canopy trees. South of the entrance park we are proposing that the street trees be clustered both in and adjacent to the Meadowbrook Road right-of-way to introduce the natural feel of the corridor as you proceed north from 12 Mile Road.

As up are aware, we have met with Novi's woodland consultant and responded to his comments, and updated him on the restoration plan as well as clarifying that over the course of two years there have been multiple alternative uses and revised site plans that have transpired throughout the process. The Meadowbrook Road landscaped corridor was further improved by a large woodland buffer preservation area on the north property line. We have also added a creative woodland restoration area in the center of the residential component. We have located the placement of the trees to create a contiguous wooded corridor the entire length of Meadowbrook with extensive planting of trees in the trailhead park on the corner of 12 Mile Road that we are donating to the City.

Tollgate and MSU suggested that some of the proposed trees be larger particularly along Meadowbrook Road. It was also suggested that larger evergreen trees will provide a more varied and natural looking buffer between the proposed residential (Meadows) and the commercial (Shoppes). A total of 604 replacement trees and 681 replacement shrubs are proposed to satisfy 100% of the required replacement credits. It's important to note that only 102 trees (approximately 21%) will be upsized. As proposed by Tollgate and endorsed by City staff, all of the upsized trees will be evergreens, which will provide maximum impact.

In order to achieve the desired contiguous, natural landscape, the following deviations are requested:

- 1) Credit for upsizing 102 Woodland Replacement Trees.
- 2) Locate street trees in clusters both in and adjacent to the Meadowbrook Road right-of-way.
- 3) Locate replacement trees and shrubs, Meadow Brook Road street trees and greenbelt plantings within the Meadowbrook Road right-of-way.

I would like to thank you, your staff, and consultants for working with us collaboratively to achieve what is an exemplary design that will flow seamlessly into the 5 acre open space park and the Beacon Hill Trailhead on the corner.

Attachments: Beacon Hill Landscape overview from Roy Prentice, Tollgate Education Center Letter of Collaboration from Gary Rentrop, Americana Foundation/Tollgate Farms Copy of email regarding Native Plants

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Beacon Hill Landscape

Objective: Create a more naturalistic look with enhanced and strategic plant density and more integrated plantings. In general, planting heights should mimic a woods edge: low shrubs toward the road blending to intermediate sized deciduous and evergreens blending to taller tree species near the development.

Procedure:

Buffer along Meadowbrook Road of 90' to140' gives a great opportunity to create a visual break for residents of the development between Meadowbrook and their homes. This buffer also will promote the "Natural Beauty" aspects of Meadowbrook. Below are ways to take full advantage of the opportunities offered by this buffer.

 Street trees along Meadowbrook: Make more naturalistic by placing at a random distance from Meadowbrook (either side of the sidewalk) and mixing species.

Shapiro and Pascual indicated that the planting of the trees along Meadowbrook as pictured on the landscape plan was performed by the City with funds provided by the developer. Shapiro and Pascual said that it may be possible to work with the City to alter the plan if the City understands that the intent of the new landscape plan is to create a more naturalistic appearance.

 Use evergreens near the homes in the development as a screen from the road. This practice will also give homeowners a greater sense of seclusion.
 Smaller hardwoods like serviceberry, redbud, alternate leaf dogwood and Ostrya can be mixed into and toward the road from the evergreens. Shrubs and other low plants (viburnums, witch hazel- <u>Arnold Promise</u> and <u>Jelena</u>, physocarpus – green varieties if planting in natural area) can be placed closer to the road. Each group of plants of similar height blended into the next plant height group. Avoid obvious lines of similar species.

The landscaper, Pascual, indicated that he understood the concept of what we would like to achieve and that he would work on this.

 What happens in Pocket Park on Meadowbrook Road (located on the north end of the development)? Does this area remain an unmanaged wetland, or are shrubs and other plantings added? Will there be efforts to control Phragmites?

Activities in controlled wetlands (as designated by the City of Novi) may not be possible. Will attempt to control Phragmites and other invasive species in this area.

 It looks like new plantings are to be placed in an existing woodlot at north end of development. If this is true, these new plantings will have a low chance of outcompeting existing vegetation.

Indicated that they would be willing to make use of current woodlot by only selectively removing trees where necessary to promote the growth of new plantings. Willing to relocate plantings on the plan to take advantage of cover provided by existing woodlot. Indicated that he would still keep the same number of trees along the road even if there location was changed.

 Will there be any grading/excavation work done along Meadowbrook Road in the planting zone? There should be a fairly decent top soil layer in this area unless disturbed and reduced during construction.

Civil Engineer, Andrew Wozniak indicated that there would be a significant amount of soil grading and redistribution south of the wetland "Pocket Park." Wozniak indicated that after grading a minimum of 4" of top soil would be returned to all areas. After I indicated that 4" was marginal depth of top soil for trees and shrubs, Shapiro indicated that there was always a lot of top soil on job sites and they would make sure that depth was adequate.

Review tree and shrub planting guidelines. Soil surface should overlap
planted root ball. If planting material established as indicated in guidelines,
moisture will naturally flow to the area around root ball. Water may not
enter root ball readily due to difference in texture between the newly
planted stock and the soil on the planting site. This could easily lead to
insufficient moisture entering the root ball death of planting stock.

This was a point that Bob Schutzki brought up after looking at the planting specifications on the landscape plan. Pascual indicated that he would alter the planting specifications to accommodate the new planting guidelines outlined by Dr. Schutzki.

I appreciate the responsiveness of Ivanhoe Developments on this project. I am happy to provide further assistance on the landscape design along Meadowbrook Road. I am sure that one of the attractions for potential residents of the Beacon Hill property is the unique "rural feel" of Meadowbrook road and the proximity of the 160 acre Tollgate Farm and Education Center. With a few strategic changes to the landscape plan, I believe that the Beacon Hill Development can successfully blend with the existing look of Meadowbrook Road.

Roy Prentice
MSU Tollgate Farm Manager

ATTORNEYS AND COUNSELORS AT LAW

RENTROP & MORRISON, P.C.

39572 WOODWARD AVENUE, SUITE 222 BLOOMFIELD HILLS, MICHIGAN48304

GARY R.RENTROP E-mail: grentrop@rentropmorrison.com TELEPHONE (248)644-6970 FACSIMILE (248)644-7141

February 22, 2016

Gary Shapiro Ivanhoe Meadowbrook, LLC 6689 Orchard Lake Road, Suite 314 Farmington Hills, MI 48322

Re: Proposed Beacon Hill Park Development NE Comer - Twelve Mile and Meadowbrook Roads.

Dear Gary:

I am writing to outline conditions which, if satisfied, would result in Americana Foundation (AF) and Michigan State University (MSU) not opposing a PRO approval for Beacon Hill Park development as outlined for us in your February 11, 2016 letter to me and your site plan drawings dated January 4, 2016 provided to the AF and MSU representatives by you at our meeting with you on February 18, 2016.

- 1. Meadowbrook Landscape: We appreciate your revisions to provide a deeper greenbelt buffer with an average depth in excess of 100 feet as illustrated and referenced in your site plan drawing and letter. The landscaping plan, however, is too "parklike" with trees neatly in a row. We would like to see a landscape plan in the buffer area which in more rural in character using native plant and tree species. We would like to have the opportunity to have input directly with your landscape architect for the purpose of developing a revised landscape plan for this area. Insofar as possible the plan should include trees of height and density to screen the view of homes to be built in your development from Meadowbrook Road and from the farm. MSU will make available land on its property across from the area proposed for homes to be constructed for plantings which will contribute to this screening. We would like you to consider the planting of evergreen trees instead of all deciduous trees to provide screening in the winter months. We recognize much of the plantings proposed in your plans are required to meet the requirements of the city's ordinance. We will work with you and the city to obtain a variance from the city's requirements in order to achieve an approved rural landscaping plan.
- 2. Construction: If it is possible, access to the property for construction should be off of 12 Mile Road. If it is not possible due to the requirement of wetlands crossing, best efforts shall be made by you, your contractors and employees to minimize construction traffic and adverse conditions due to construction traffic on Meadowbrook Road. Specific details of what best effort steps will entail needs to be provided by you.
- The Beacon Hill Park property must obtain Planned Rezoning Overlay (PRO) from the City of Novi.

I look forward to continue to work with you toward resolution.

Sincerely,

Gary Shapiro

From: Sent:

To:

Felino Pascual <felino@fpa.design> Tuesday, April 12, 2016 8:59 AM Gary Shapiro; Andy Wozniak

Subject:

Fwd: native plants

----- Forwarded message -----

From: Prentice, Roy < prentic | @anr.msu.edu >

Date: Tue, Apr 12, 2016 at 8:02 AM

Subject: native plants

To: "felino@fpa.design" <felino@fpa.design>

Hi Joel.

At our last meeting you asked for recommendations for native plants that would do well in our area. Sorry to be so tardy getting these to you. Below are some good selections. Although I love the look of the native viburnums, I would not feel good about recommending them to you at this time. There is a viburnum leaf beetle that has started to show up in SE Michigan plantings. It can be pretty devastating to the foliage of viburnums. A good site to see an overview of native plants is maintained by the City of Ann Arbor: http://www.a2gov.org/departments/Parks-Recreation/NAP/Native-Plants/Pages/NativeShrubs.aspx

Amelanchier laevis Serviceberry

Cephalanthus occidentalis Common buttonbush

Cornus alternifolia Alternate-leafed Dogwood

Cornus sericea Red osier dogwood, Red-twig dogwood

Corylus americana American hazelnut

Dasiphora fruticosa Shrubby cinquefoil

Hamamelis virginiana American witch hazel

The witch hazels are great for fall flowering. Arnold Promise and Jelena are good varieties.

Ilex verticillata Winterberry, Michigan holly

Photinia melanocarpa Black chokeberry

Physocarpus opulifolius

Common Ninebark

Sambucus racemosa var. racemose

Red elderberry

Sambucus nigra

Common elderberry

Staphylea trifolia

American bladdernut

Roy Prentice

MSU Tollgate Farm Manager

28115 Meadowbrook Rd.

Novi, MI 48377

248 330 3623

Felino A. Pascual (Joel), RLA, CLARB Principal

Felino Pascual & Associates, Inc Land Planners & Landscape Architects

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April 8, 2016

Ms. Barbara McBeth City of Novi Community Development 45175 West Ten Mile Road Novi, MI 48375

RE: Beacon Hill Park rezoning with a PRO, JSP15-0008

Response to Wetland Review

Dear Ms. McBeth:

We would like to thank ECT for the recommendation to approve the revised plan for wetlands.

We have reviewed the ECT report dated March 21, 2016 and will address the comments on the Final Site Plan submittal as requested.

Should you need any additional information please don't hesitate to contact us.

Very truly yours,

Andrew J. Wozniak



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April 8, 2016

Ms. Barbara McBeth City of Novi Community Development 45175 West Ten Mile Road Novi, MI 48375

RE: Beacon Hill Park rezoning with a PRO, JSP15-0008

Response to Traffic Review

Dear Ms. McBeth:

We would like to thank AECOM for the recommendation to approve the revised plan for traffic.

We have reviewed the AECOM report dated March 18, 2016 and will address the comments to the satisfaction of the City on subsequent submittals, as requested.

Should you need any additional information please don't hesitate to contact us.

Very truly yours,

Andrew J. Wozniak



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April 20, 2016

Ms. Barbara McBeth City of Novi Community Development 45175 West Ten Mile Road Novi, MI 48375

RE: Beacon Hill Park PRO

Response to Fire Department Review

Dear Ms. McBeth,

We would like to thank the Fire Department for their recommendation for approval of the revised site plan.

We have reviewed their letter dated April 15, 2016 and will meet the specifications for the required secondary access and break away gate.

Should you need any additional information please don't hesitate to contact us.

Thank you.

Sincerely,

Andrew Wozniak

Ms. Barbara McBeth City of Novi Community Development 45175 West Ten Mile Road Novi, MI 48375

RE: Beacon Hill, Preliminary Site Plan, Job # JSP15-0008

Dear Ms. McBeth:

The following is in response to the city landscape review comments dated March 21, 2016; Collaboration with Tollgate Education Center; and Our meeting on April 12, 2016. Please see our revised landscape plans, Job No. LS16.008.04, dated 04-13-2016, sheets LS-1 through LS-7 for details and offer the following comments below:

Existing Trees

- Existing trees and tags has been shown on landscape plan
- Upsizing of the woodland replacement trees has been addressed in the woodland response letter and on the plan
- Location and tree protection detail will be provided at final site submittal

Adjacent to Public Rights-of-way-Berm

Meadowbrook

- Requesting a deviation for undeveloped frontage where woods, vegetation and wetland areas exist for greenbelt planting required
- Landscape plan has been updated accordingly to meet Meadowbrook greenbelt requirements along developed frontage
- A berm will not be installed and a deviation will be requested due to topography

Twelve Mile

- A berm has been provided along Twelve Mile Road, commercial frontage
- We are requesting deviation for undeveloped greenbelt planting along the park trailhead frontage. Note the substantial tree replacements within the natural park setting
- Greenbelt landscape requirement has been revised and proposed plantings has been provided along the commercial frontage, calculations have been updated

Screening Between Residential and Non-residential Berm

- A deviation will be requested for the berm requirement. A large buffer and extensive landscaping has been provided between residence and commercial in lieu of 6'-8' berm
- A section depicting the open space plantings between the commercial and residential components will be provided during site plan submittal
 - Wildflower seed mix has been added and additional shrub plantings has been provided along the reconfigured stream



Street Tree Requirements (residential interior)

· Street tree quantities has been updated

Street Tree Requirements (12-Mile and Meadowbrook)

- Calculations have been updated for Meadowbrook Road and Twelve Mile Road per commercial and single family frontage calculations
- Street tree plantings has been provided accordingly per revised frontage requirements.

Parking Lot Landscape (commercial)

- Parking lot calculations have been revised to 5% of area
- Islands area will be adjusted to meet requirements during final site plan approval
- Parking lot trees required will be all deciduous canopy trees will be updated during final site plan.
- Required parking lot trees will be provided during final plan per future tenant.

Parking Lot Perimeter (commercial)

- Perimeter Parking lot trees will be deciduous canopy trees and will be updated during final site plan submittal
- Required parking lot planting adjustments will be provided once final tenant selection is in place

Building Foundation Landscape

- A 60% perimeter landscape deviation is requested as it is not practical in this unique situation and can be addressed after final tenant selection and during final site plan submittal. Note the extensive depth of landscaped greenbelt along the 12 Mile Road corridor
- Final calculations of the landscaped area will be provided during final site plan submittal

Storm Basin Landscape

Plantings around the detention basins have been updated with native species

Proposed trees to be saved

· Labels for existing trees have been added to the landscape plan

Please do not hesitate to contact me should you have any questions or comments.

Sincerely,

Felino A Pascual, RLA





April 15, 2016

Ms. Barbara McBeth
Deputy Director of Community Development
City of Novi
45175 West Ten Mile Road
Novi. MI 48375

Re: Beacon Hill (JSP15-0008)

Response to Woodland Review

Dear Ms. McBeth:

This letter is provided on behalf of Ivanhoe Meadowbrook, LLC to address the Woodland Review Comments provided by ECT in their March 21, 2016 Woodland Review of the Revised Concept Plan (PSP16-0108). Responses to the comments are provided below.

Comment 1. ECT encourages the Applicant to minimize impacts to on-site Woodlands to the greatest extent practicable; especially those trees that may meet the minimum size qualifications to be considered a Specimen Tree. Twenty-two (22%) of the regulated on-site trees are proposed to be preserved and seventy eight percent (78%) are proposed for removal. In addition 89% of the potential Specimen Trees are proposed to be removed. The applicant should demonstrate why additional trees cannot be preserved within the proposed lots in areas that fall outside of the proposed building envelopes, as well as in proposed open-space areas.

Preservation of individual trees on the property is proposed to the extent practicable; preservation areas are concentrated in visually prominent locations along the northern and western property boundaries. In other locations, such as on individual lots, additional tree preservation would be complicated by mass grading necessary to accommodate the significant topographic relief on the property without relying on an extensive system of retaining walls, and the need to convey surface water across the site in a manner that meets City and County requirements. We note this involves site grading on all portions of all residential lots; it is only in common spaces at the north and west sides of the residential portion of the project where grading is not proposed and therefore tree preservation is possible.

Furthermore, the preservation of individual trees on residential lots such as these can be problematic for several reasons. First, many of the identified tree species are non-native or represent native species that the Novi Landscape Design Manual expressly prohibits from planting. Our interpretation of the Landscape Design Manual is that these prohibited species are of low quality and are not suitable for residential and commercial settings because of their soft wood and typically weak branching structure. Second, there are significant and inherent challenges with preserving individual trees from existing woodlands during and following construction. These challenges include root cutting and soil compaction from adjacent construction activities, tree health stress brought about by changes in drainage patterns from mass grading of surrounding areas, and tree physical stress brought about by removal of neighboring trees that expose the remaining tree(s) to increases in light and wind which in turn may lead to sunscald or breakage of limbs and stems. Given the proposed site plan, it is our

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> 162 Kuivila Road Crystal Falls, MI 49920 Phone: 906/367-0171

opinion that efforts to preserve individual trees on the proposed residential lots are unlikely to be successful and therefore neither prudent nor feasible.

As it relates to Specimen Trees, we are unaware of any on-site trees that meet the full definition of "Specimen Tree" as regulated by Novi ordinance.

<u>Comment 2.</u> The Applicant should demonstrate that alternative site layouts that would reduce the overall impacts to woodlands have been reviewed and considered. The Applicant should consider modification of the proposed lot boundaries in order to preserve existing woodland areas.

The proposed site plan represents an effort to preserve visually prominent woodlands and wetlands along the western and northern property boundaries while also allowing for the prudent development of the property. This current site layout has been developed over a two year design process working with City staff, Tollgate Education Center and considering comments from the Planning Commission and adjacent properties. Alternative site plans considered are included in the Beacon Hill Revised PRO Plan booklet produced by the applicant and dated February 22, 2016.

<u>Comment 3.</u> For multi-stemmed trees, Woodland Replacements required are calculated by summing the d.b.h. of each stem greater than or equal to 8 inches and dividing the total by 8. All fractional Woodland Replacements required are rounded up to the nearest whole tree replacement. It is recommended that the applicant provide a column on the Tree Removal List (Sheet SP-4) that specifies the required Woodland Replacement Credits required for each tree to be removed. The applicant should review and revise the Plan as necessary

The calculation of Woodland Replacements has been revised and is depicted on Zeimet Wozniak & Associates drawing sheet SP-4.

<u>Comment 4.</u> A tree species (red maple multi-stem/Acer r. 'Franksred') proposed for woodland replacement credit is not acceptable per the City of Novi Woodland Tree Replacement Chart (attached). The applicant should review and revise the Plan as necessary noting the tree species that are acceptable as Woodland Replacement credit.

This tree has been removed from the proposed Woodland Replacement tree list.

Comment 5. It is recommended that the applicant revise the Tree Replacement Plan Material List (Sheet LS-6 of 6) to include the number of Woodland Replacement credits being provided for each type of Woodland Replacement material; not just the quantity to be planted. It should be noted that all deciduous replacement trees shall be two and one-half (2 1/2) inches caliper or greater and count at a 1-to-1 replacement ratio. All coniferous replacement trees shall be 6-feet in height (minimum) and provide 1.5 trees-to-1 replacement credit replacement ratio (i.e., each coniferous/evergreen tree planted provides for 0.67 credits).

The Tree Replacement Plan Material List has been revised.



Comment 6.

The Woodland Tree Replacement Summary on Sheet LS-4 of 6 notes that a total of 402 regulated woodland trees are to be removed requiring 702 total Woodland Replacement credits. The summary notes that a total of 702 on-site Woodland Replacement credits will be provided. In general, per the Landscape Design Manual Section 3.c.(2) no additional Woodland Replacement credits can be gained by using larger plant material than those specified in the table 3.c.(I). As a rule, the standard woodland replacement tree credits listed on the Woodland Replacement Chart in Section 37 must be used, including the 1.5:1 evergreen ratio. As noted above, all deciduous replacement trees shall be two and one-half (2-1/2) inches caliper or greater and count at a 1-to-1 replacement ratio. Based on this requirement, it appears as if the Plan is currently proposing 289 deciduous replacement trees (providing 289 credits at 1:1 replacement ratio) and 224 coniferous replacement trees (will provide 149 credits at 1.5:1 replacement ratio). As such, the plan appears to provide for a total of 438 Woodland Replacement Credits (as opposed to the 702 credits noted in the Woodland Tree Replacement Summary). The "upsizing" of Woodland Replacement trees for additional Woodland Replacement credit is not supported by the City of Novi. As such acceptable replacement evergreen trees shall be provided at a 1.5:1 replacement ratio. The applicant should review and revise the calculations on the Plan and the tree replacement plant list as necessary.

The replacement tree summary on sheet LS-7 has been updated to reflect the new replacement credits required and provided. A total of 604 replacement trees and 681 replacement shrubs are proposed to satisfy the required replacement credits. In working with staff from Tollgate Education Center and Michigan State University (MSU), it was suggested that some of the proposed trees be larger particularly along Meadowbrook Road. It is also our understanding that they feel a progression from shrubs to sub-canopy trees to larger canopy trees will work with the existing trees to blend with the farm property. Tollgate and MSU staff also suggested that larger evergreen trees will provide a more varied and natural looking buffer between the proposed residential (Meadows) and the commercial (Shoppes). Of the 604 replacement trees and 681 replacement shrubs, only 102 trees will be upsized. All of the upsized trees will be evergreens, intended to provide maximum impact. The applicant requests additional credit for upsizing these 102 Woodland Replacement trees. A separate letter from Gary Shapiro provides further information regarding woodlands.

<u>Comment 7.</u> The Applicant is encouraged to provide preservation/conservation easements for any areas of remaining woodland.

The Applicant is willing to provide conservation easements for remaining areas of wetland, wetland buffer setback, woodland and areas of woodland replacement trees in areas which will not conflict with future use of the property by residents and visitors. Limits of conservation easements will be determined as soon as the configurations of the final site plan and utility plan are determined.



<u>Comment 8.</u> The Applicant is encouraged to provide woodland conservation easements for any areas containing woodland replacement trees, if applicable. It is not clear how all of the proposed replacement trees will be guaranteed in perpetuity.

The Applicant is willing to provide conservation easements for remaining areas of wetland, wetland buffer setback, woodland and areas of woodland replacement trees in areas which will not conflict with future use of the property by residents and visitors. Limits of conservation and/or landscape easements will be determined as soon as the configurations of the final site plan and utility plan are determined.

Comment 9. A Woodland Permit from the City of Novi would be required for proposed impacts to any trees 8-inch d.b.h. or greater. Such trees shall be relocated or replaced by the permit grantee. All replacement trees shall be two and one-half (2-1/2) inches caliper or greater deciduous trees or 6-foot tall (minimum) coniferous trees. Deciduous replacement trees shall be provided at a 1:1 replacement ratio and coniferous replacement trees shall be provided at a 1.5:1 replacement ratio. See the Woodland Tree Replacement Chart (attached) for acceptable replacement tree species.

The applicant notes this comment.

Comment 10. A Woodland Replacement financial guarantee for the planting of replacement trees will be required, if applicable. This financial guarantee will be based on the number of on-site woodland replacement trees (credits) being provided at a per tree value of \$400.

The applicant notes this comment.

Comment 11. The Applicant will be required to pay the City of Novi Tree Fund at a value of \$400/credit for any Woodland Replacement tree credits that cannot be placed on-site.

The applicant notes this comment.

Comment 12. Replacement material should not be located 1) within 10' of built structures or the edges of utility easements and 2) over underground structures/utilities or within their associated easements. In addition, replacement tree spacing should follow the Plant Material Spacing Relationship Chart for Landscape Purposes found in the City of Novi Landscape Design Manual.

The applicant is committed to working with City staff to ensure that the replacement trees are located in accordance to their requirements.



We trust that this additional information addresses these comments at this point in the Novi review process and we anticipate continuing to work with the City and ECT to more-fully address some of the tree issues highlighted as the project advances through the site plan approvals process.

Sincerely,

King & MacGregor Environmental, Inc.

Matt Stone-Palmquist, Licensed Landscape Architect, Certified Arborist

cc: Gary Shapiro, Ivanhoe Meadowbrook, LLC Andy Wozniak, Zeimet Wozniak & Associates



The Ivanhoe Companies

April 14, 2016

Ms. Barbara McBeth City of Novi Community Development 45175 West Ten Mile Road Novi, MI 48375

RE: Beacon Hill Park

Landscape and Woodlands: Ivanhoe; Americana Foundation; Tollgate Education Center; and the City of Novi Site Plan Collaboration

Dear Ms. McBeth:

Since the Planning Commission meeting on September 9, 2015, we have had multiple collaborative meetings with you, Clear Zoning, ECT and City staff to achieve our mutual goal. As you are aware, there have been numerous revisions accommodating the requests from the consultants' letters.

For well over a year, we have been working and adjusting the plan to have a complementary development to the Tollgate Education Center property directly to the west. The key accommodation and collaboration resulted in an extraordinary open space running north and south the entire length of Meadowbrook Road, adjacent to the 5 acre park and the deeper open space park area in front of the commercial, effectuating a continuous buffer on the main roads whereby the community will have 42% open space.

We redesigned the community, specifically as recommended by Tollgate Education Center, whereby the Beacon Hill Meadows road is located approximately 140 feet from Meadowbrook Road which will provide a visual extension of the farm. We revised the plan and added an additional 50 foot landscaped nature corridor. Tollgate Education Center strongly recommended and we have agreed, that the proposed landscaping on the east side of Meadowbrook Road should present a natural progression of plantings from low shrubs to medium understory plantings to canopy trees, to provide a natural appearance.

Under the direction of the Americana Foundation and their consultants, in collaboration with our consultants; Felino Pascual & Associates, Zeimet Wozniak & Associates and King & MacGregor, we have been working with Toll Gate Education Center staff and Michigan State University staff to revise the proposed landscaping plans for Beacon Hill Park along Meadowbrook Road. We have met, and revised the plans multiple times, with the direction of Mr. Roy Prentice, Farm Manager of the Tollgate Education Center and Dr. Robert Schutzki, Associate Professor with the Department of Horticulture at MSU in a collaborative effort to achieve our goal. It is essential to all that the proposed landscaping not only provide a buffer between the farm and the proposed homes, but blends seamlessly with the existing features of Tollgate Education Center and the west side of Meadowbrook Road.

In order to accomplish this we will require flexibility in the proposed landscaping, unique to our sites on Meadowbrook Road. Rather than a single row of trees located along the proposed Meadowbrook Road right-of-way, north of the proposed entrance to Beacon Hill Meadows, we are proposing clusters of bushes be located nearest the sidewalk then a variation of sub-canopy ornamental trees which finally give way to larger canopy trees. Beyond the canopy trees we propose to preserve the natural

6689 Orchard Lake Road #314 Office: 248-626-6114 West Bloomfield, MI 48322 Cell: 248-520-6980

The Ivanhoe Companies

vegetation within the green belt area. We are proposing to move some of the required landscaping into the Meadowbrook Road right-of-way in order to preserve the existing vegetation and provide a natural buffer while maintaining site distance visibility. This will offer a natural feel for Meadowbrook Road that we, along with Tollgate Education Center, are hoping to achieve. I have attached correspondence from Mr. Roy Prentice, Dr. Schutzki, and representatives from Americana Foundation and Tollgate Education Center outlining their desires that include achieving the set-back and natural design of the project including tree and shrubs species.

The park area located adjacent to the proposed community residential entrance has been revised to incorporate a natural progression from low plantings to large canopy trees. South of the entrance park we are proposing that the street trees be clustered both in and adjacent to the Meadowbrook Road right-of-way to introduce the natural feel of the corridor as you proceed north from 12 Mile Road.

As up are aware, we have met with Novi's woodland consultant and responded to his comments, and updated him on the restoration plan as well as clarifying that over the course of two years there have been multiple alternative uses and revised site plans that have transpired throughout the process. The Meadowbrook Road landscaped corridor was further improved by a large woodland buffer preservation area on the north property line. We have also added a creative woodland restoration area in the center of the residential component. We have located the placement of the trees to create a contiguous wooded corridor the entire length of Meadowbrook with extensive planting of trees in the trailhead park on the corner of 12 Mile Road that we are donating to the City.

Tollgate and MSU suggested that some of the proposed trees be larger particularly along Meadowbrook Road. It was also suggested that larger evergreen trees will provide a more varied and natural looking buffer between the proposed residential (Meadows) and the commercial (Shoppes). A total of 604 replacement trees and 681 replacement shrubs are proposed to satisfy 100% of the required replacement credits. It's important to note that only 102 trees (approximately 14%) will be upsized. As proposed by Tollgate and endorsed by City staff, all of the upsized trees will be evergreens, which will provide maximum impact.

In order to achieve the desired contiguous, natural landscape, the following deviations are requested:

- 1) Credit for upsizing 102 Woodland Replacement Trees.
- 2) Locate street trees in clusters both in and adjacent to the Meadowbrook Road right-of-way.
- 3) Locate replacement trees and shrubs, Meadow Brook Road street trees and greenbelt plantings within the Meadowbrook Road right-of-way.

I would like to thank you, your staff, and consultants for working with us collaboratively to achieve what is an exemplary design that will flow seamlessly into the 5 acre open space park and the Beacon Hill Trailhead on the corner.

Sincerely,

Gary Shapiro

Attachments: Beacon Hill Landscape overview from Roy Prentice, Tollgate Education Center

Letter of Collaboration from Gary Rentrop, Americana Foundation/Tollgate Farms

Copy of email regarding Native Plants

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Beacon Hill Landscape

Objective: Create a more naturalistic look with enhanced and strategic plant density and more integrated plantings. In general, planting heights should mimic a woods edge: low shrubs toward the road blending to intermediate sized deciduous and evergreens blending to taller tree species near the development.

Procedure:

Buffer along Meadowbrook Road of 90' to140' gives a great opportunity to create a visual break for residents of the development between Meadowbrook and their homes. This buffer also will promote the "Natural Beauty" aspects of Meadowbrook. Below are ways to take full advantage of the opportunities offered by this buffer.

 Street trees along Meadowbrook: Make more naturalistic by placing at a random distance from Meadowbrook (either side of the sidewalk) and mixing species.

Shapiro and Pascual indicated that the planting of the trees along Meadowbrook as pictured on the landscape plan was performed by the City with funds provided by the developer. Shapiro and Pascual said that it may be possible to work with the City to alter the plan if the City understands that the intent of the new landscape plan is to create a more naturalistic appearance.

 Use evergreens near the homes in the development as a screen from the road. This practice will also give homeowners a greater sense of seclusion.
 Smaller hardwoods like serviceberry, redbud, alternate leaf dogwood and Ostrya can be mixed into and toward the road from the evergreens. Shrubs and other low plants (viburnums, witch hazel- <u>Arnold Promise</u> and <u>Jelena</u>, physocarpus – green varieties if planting in natural area) can be placed closer to the road. Each group of plants of similar height blended into the next plant height group. Avoid obvious lines of similar species.

The landscaper, Pascual, indicated that he understood the concept of what we would like to achieve and that he would work on this.

 What happens in Pocket Park on Meadowbrook Road (located on the north end of the development)? Does this area remain an unmanaged wetland, or are shrubs and other plantings added? Will there be efforts to control Phragmites?

Activities in controlled wetlands (as designated by the City of Novi) may not be possible. Will attempt to control Phragmites and other invasive species in this area.

 It looks like new plantings are to be placed in an existing woodlot at north end of development. If this is true, these new plantings will have a low chance of outcompeting existing vegetation.

Indicated that they would be willing to make use of current woodlot by only selectively removing trees where necessary to promote the growth of new plantings. Willing to relocate plantings on the plan to take advantage of cover provided by existing woodlot. Indicated that he would still keep the same number of trees along the road even if there location was changed.

 Will there be any grading/excavation work done along Meadowbrook Road in the planting zone? There should be a fairly decent top soil layer in this area unless disturbed and reduced during construction.

Civil Engineer, Andrew Wozniak indicated that there would be a significant amount of soil grading and redistribution south of the wetland "Pocket Park." Wozniak indicated that after grading a minimum of 4" of top soil would be returned to all areas. After I indicated that 4" was marginal depth of top soil for trees and shrubs, Shapiro indicated that there was always a lot of top soil on job sites and they would make sure that depth was adequate.

Review tree and shrub planting guidelines. Soil surface should overlap
planted root ball. If planting material established as indicated in guidelines,
moisture will naturally flow to the area around root ball. Water may not
enter root ball readily due to difference in texture between the newly
planted stock and the soil on the planting site. This could easily lead to
insufficient moisture entering the root ball death of planting stock.

This was a point that Bob Schutzki brought up after looking at the planting specifications on the landscape plan. Pascual indicated that he would alter the planting specifications to accommodate the new planting guidelines outlined by Dr. Schutzki.

I appreciate the responsiveness of Ivanhoe Developments on this project. I am happy to provide further assistance on the landscape design along Meadowbrook Road. I am sure that one of the attractions for potential residents of the Beacon Hill property is the unique "rural feel" of Meadowbrook road and the proximity of the 160 acre Tollgate Farm and Education Center. With a few strategic changes to the landscape plan, I believe that the Beacon Hill Development can successfully blend with the existing look of Meadowbrook Road.

Roy Prentice
MSU Tollgate Farm Manager

ATTORNEYS AND COUNSELORS AT LAW

RENTROP & MORRISON, P.C.

39572 WOODWARD AVENUE, SUITE 222 BLOOMFIELD HILLS, MICHIGAN48304

GARY R.RENTROP E-mail: grentrop@rentropmorrison.com TELEPHONE (248)644-6970 FACSIMILE (248)644-7141

February 22, 2016

Gary Shapiro Ivanhoe Meadowbrook, LLC 6689 Orchard Lake Road, Suite 314 Farmington Hills, MI 48322

Re: Proposed Beacon Hill Park Development NE Comer - Twelve Mile and Meadowbrook Roads.

Dear Gary:

I am writing to outline conditions which, if satisfied, would result in Americana Foundation (AF) and Michigan State University (MSU) not opposing a PRO approval for Beacon Hill Park development as outlined for us in your February 11, 2016 letter to me and your site plan drawings dated January 4, 2016 provided to the AF and MSU representatives by you at our meeting with you on February 18, 2016.

- 1. Meadowbrook Landscape: We appreciate your revisions to provide a deeper greenbelt buffer with an average depth in excess of 100 feet as illustrated and referenced in your site plan drawing and letter. The landscaping plan, however, is too "parklike" with trees neatly in a row. We would like to see a landscape plan in the buffer area which in more rural in character using native plant and tree species. We would like to have the opportunity to have input directly with your landscape architect for the purpose of developing a revised landscape plan for this area. Insofar as possible the plan should include trees of height and density to screen the view of homes to be built in your development from Meadowbrook Road and from the farm. MSU will make available land on its property across from the area proposed for homes to be constructed for plantings which will contribute to this screening. We would like you to consider the planting of evergreen trees instead of all deciduous trees to provide screening in the winter months. We recognize much of the plantings proposed in your plans are required to meet the requirements of the city's ordinance. We will work with you and the city to obtain a variance from the city's requirements in order to achieve an approved rural landscaping plan.
- 2. Construction: If it is possible, access to the property for construction should be off of 12 Mile Road. If it is not possible due to the requirement of wetlands crossing, best efforts shall be made by you, your contractors and employees to minimize construction traffic and adverse conditions due to construction traffic on Meadowbrook Road. Specific details of what best effort steps will entail needs to be provided by you.
- The Beacon Hill Park property must obtain Planned Rezoning Overlay (PRO) from the City of Novi.

I look forward to continue to work with you toward resolution.

Sincerely,

Gary Shapiro

From: Sent:

To:

Felino Pascual <felino@fpa.design> Tuesday, April 12, 2016 8:59 AM Gary Shapiro; Andy Wozniak

Subject:

Fwd: native plants

----- Forwarded message -----

From: Prentice, Roy < prentic | @anr.msu.edu >

Date: Tue, Apr 12, 2016 at 8:02 AM

Subject: native plants

To: "felino@fpa.design" <felino@fpa.design>

Hi Joel.

At our last meeting you asked for recommendations for native plants that would do well in our area. Sorry to be so tardy getting these to you. Below are some good selections. Although I love the look of the native viburnums, I would not feel good about recommending them to you at this time. There is a viburnum leaf beetle that has started to show up in SE Michigan plantings. It can be pretty devastating to the foliage of viburnums. A good site to see an overview of native plants is maintained by the City of Ann Arbor: http://www.a2gov.org/departments/Parks-Recreation/NAP/Native-Plants/Pages/NativeShrubs.aspx

Amelanchier laevis Serviceberry

Cephalanthus occidentalis Common buttonbush

Cornus alternifolia Alternate-leafed Dogwood

Cornus sericea Red osier dogwood, Red-twig dogwood

Corylus americana American hazelnut

Dasiphora fruticosa Shrubby cinquefoil

Hamamelis virginiana American witch hazel

The witch hazels are great for fall flowering. Arnold Promise and Jelena are good varieties.

Ilex verticillata Winterberry, Michigan holly

Photinia melanocarpa Black chokeberry

Physocarpus opulifolius

Common Ninebark

Sambucus racemosa var. racemose

Red elderberry

Sambucus nigra

Common elderberry

Staphylea trifolia

American bladdernut

Roy Prentice

MSU Tollgate Farm Manager

28115 Meadowbrook Rd.

Novi, MI 48377

248 330 3623

Felino A. Pascual (Joel), RLA, CLARB Principal

Felino Pascual & Associates, Inc Land Planners & Landscape Architects

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