

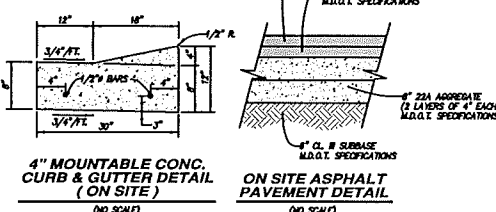
SCALE: 1"=50' NORTH



APPLICANT & OWNER: MARK GESUALE, SHADOW PINES L.L.C., 14955 TECHNOLOGY DRIVE, SHELBY TWP TWP, MI 48315. OWNERSHIP IS FEE SIMPLE.

- SHEET INDEX: 1. PRELIMINARY PLANNED UNIT DEVELOPMENT CONDOMINIUM PLAN, 2. EXISTING CONDITIONS & NATURAL FEATURES BASE PLAN, 3. EXISTING TREE AND REMOVAL PLAN, 4. TREE LIST, NOTES AND DETAILS, 5. PRELIMINARY GRADING PLAN, 6. OVERALL UTILITY PLAN, 7. LANDSCAPING PLAN, 8. OVERALL UTILITY PLAN.

BENCHMARKS: 1. PK IN UTILITY POLE ON SIDE OF SOUTH BLVD. ACROSS FROM 4304 SOUTH BLVD. ELEV: 826.83 MVD 29 DATUM.



LEGEND

- EXISTING GRADE, EXISTING CONTOURS, 1' INTERVAL, EXISTING TREES, EXISTING ASPHALT PAVEMENT, PROP. ON-SITE ASPHALT PAVEMENT WITH INTERLACED MOUNTABLE CURB, PROPOSED DECORATIVE LIGHT POST, SOIL DISTRICT BOUNDARY LINE, PROPOSED SANITARY SEWER, PROPOSED STORM SEWER, PROPOSED WATERMAIN W/ TYPICAL GATE VALVE & WELL & STD. HYDRANT ASSEMBLY, PROPOSED CONCRETE WALKS, EXISTING TREES TO BE REMOVED, 25' NO NATURAL FEATURES BUFFER.

NOTES

- 1. EXISTING BUILDINGS ON SITE ARE TO BE REMOVED AS NOTED. DEMOLITION PERMITS ARE REQUIRED FOR BUILDING REMOVAL. 2. STATE AND CITY REGULATED WETLANDS EXIST ON SITE. 3. PERMITS ARE REQUIRED FOR ALL WORK TO BE PERFORMED WITHIN SOUTH BOULEVARD RIGHTS-OF-WAY FROM ROAD COMMISSION FOR OAKLAND COUNTY. 4. SOILS ARE ACCEPTABLE FOR TYPICAL RESIDENTIAL CONSTRUCTION. 5. DRIVEWAY APPROXS WILL NOT EXTEND PAST PROPERTY LINE EXTENDED. 6. THE INTENT OF THIS SUBMITTAL IS TO DEVELOP AND BUILD FOURTEEN (14) TWO UNIT SINGLE-FAMILY ATTACHED RESIDENCES. 7. A MINIMUM OF ONE TREE PER UNIT SHALL BE PLANTED PER ORDINANCE. 8. BOUNDARY SURVEY BY RECHERT SURVEYING, INC. 9. TOPOGRAPHIC SURVEY AND TREE LOCATIONS BY LAND DEVELOPMENT SERVICES OF MICHIGAN. 10. WETLAND DETERMINATION AND MAPPING AND TREE IDENTIFICATION BY KING & MACGREGOR ENVIRONMENTAL, INC. 11. ALL PROPOSED GRADES WILL MATCH EXISTING ELEVATIONS AT THE PROPERTY LINE. 12. A COMPREHENSIVE SOIL EROSION & SEDIMENTATION CONTROL PLAN SHALL BE DEVELOPED DURING ENGINEERING AND PRIOR TO ANY WORK BEING PERFORMED ON THE SITE. 13. ROAD EDGE DRAIN IS REQUIRED AND SHALL BE PROVIDED 100% THROUGHOUT THE SITE. 14. A LAND IMPROVEMENT PERMIT WILL BE REQUIRED PRIOR TO COMMENCING ANY WORK ON SITE. 15. THE DEVELOPER OF VILLAS AT SHADOW PINES WILL REMOVE OR RELOCATE EXISTING FENCE ON SITE PER THE REQUEST OF THE AFFECTED PROPERTY OWNER. 16. ALL SIGNAGE SHALL MEET CITY REQUIREMENTS AND WILL REQUIRE SEPARATE PERMITS FROM THE BUILDING DEPARTMENT. 17. PROVIDE STANDARD CURB DROP AT ALL SIDEWALK CONNECTIONS. 18. TREE PROTECTIVE FENCING HAS BEEN SHOWN ALONG THE PROPERTY LINES. TREE PROTECTIVE FENCING WILL BE INSTALLED AT THE DROPLINE OF OFF-SITE TREES. IF NECESSARY, STORM DRAIN LINES WILL BE RELOCATED DURING ENGINEERING TO AVOID ANY GRADING, DISROOTING, TRIPPING OR ROOTING WITHIN THE DROPLINE OF TREES LOCATED ON ADJACENT PROPERTIES. (SEE TREE REPLACEMENT PLAN). 19. ALL UTILITIES ARE DESIGNED PURSUANT TO CITY STANDARDS AND ARE SHOWN FOR PLANNING PURPOSES. REFER TO THE CONSTRUCTION PERMITTING PLANS FOR FINAL DESIGN AND LAYOUTS. 20. AN EXEMPTION FOR EMERGENCY VEHICLES SHALL BE SHOWN ON THE MASTER DEED. 21. AREAS OUTSIDE OF THE BUILDING FOOTPRINT SHALL EITHER BE LIMITED OR GENERAL COMMON ELEMENT AND WILL BE DEPICTED ON THE MASTER DEED DRAWINGS. 22. REFER TO LANDSCAPE PLANS FOR UN-SURVEYED TREE INFORMATION.

SOILS:

- 15B SPINDS LOWLY SAND (0 TO 8% SLOPES), 0-4" DARK BROWN LOAMY SAND, 4-25" PALE BROWN SAND, 25-40" YELLOWISH-BROWN LOOSE SAND. MODERATELY RAPID PERMEABILITY, SLOW RUNOFF, LOW AVAILABLE MOISTURE CAPACITY. 27 HOUGHTON AND ADRAIN SANDS, 0-40" BLACK BROOK FINE & RUBBED SANDS. 35A THERFORD LOWLY FINE SAND (0% TO 3% SLOPES), 0-4" VERY DARK GRAYISH BROWN LOAMY FINE SAND, 4-25" LIGHT YELLOWISH BROWN LOAMY FINE SAND, 25-40" MOTTLED PALE BROWN SAND AND DARK BROWN LOAMY SAND, 40-60" LIGHT BROWN GRAY SAND. LOW SURFACE RUNOFF, MODERATELY RAPID PERMEABILITY.

FIRE DEPT. NOTES:

- 1. FIRE LANES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL, AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH FIRE SIGNS SPACED NOT MORE THAN 100 FEET APART, FIRE LANE SIGNS SHALL READ "NO STOPPING, STANDING, PARKING, TREE LANE, AND CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. FIRE PREVENTION ORDINANCE CHAPTER 58, SEC. 503. 2. CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH IFC 2008 CHAPTER 14. 3. OPEN BURNING IS NOT PERMITTED, INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING MATERIALS. OPEN BURNING FOR WASHING OF SAND AND/OR WATER FOR THE PREPARATION OF INERTIAL SHALL BE WITHIN THE CITY OF ROCHESTER HILLS BURN PERMIT REGULATIONS. FIRE PREVENTION ORDINANCE CHAPTER 58, SEC. 307.6.2 & 307.6.2.3.

ENGINEERING NOTES

- 1. ALL UTILITY PIPE MATERIALS SHALL CONFORM TO CITY, COUNTY, & STATE SPECIFICATIONS. 2. UTILITY TRENCHES UNDER OR WITHIN THE INFLUENCE OF PAVEMENT SHALL BE BACKFILLED WITH M.D.T. APPROVED CLASS II SAND ACCORDING TO M.D.T. TRENCH DETAILS "A" & "B" FOR SEWERS AND TRENCH DETAILS "C" & "D" FOR WATER MAINS. 3. WATER MAIN PIPES SHALL BE DUCTILE IRON C15.4. A MINIMUM OF 8" OF COVER SHALL BE PROVIDED OVER WATER MAIN PIPES. WATER SERVICES SHALL BE 1" DIA. COPPER TYPE "K". 4. HYDRANTS SHALL BE E.L.H.R. OR AMERICAN FLOW CONTROL MODEL 1897-250. 5. WATER MAIN THRUST RESTRAINTS SHALL BE CONCRETE THRUST BLOCS INSTALLED IN UNCOVERED EXITS. 6. SANITARY SEWER PIPE SHALL BE A.B.S. TRUSS. SANITARY LEADS SHALL BE 6" DIA. A.B.S. SOLIDWALL. SDR 35 SLOPED AT A MINIMUM OF 1% OR AN APPROVED EQUAL FOR FORCE MAINS. SANITARY LEADS SHALL BE MARKED ONLY "SANITARY". 7. STORM SEWER PIPE UNDER AND WITHIN A 1:1 INFLUENCE OF PAVEMENT SHALL BE CONCRETE 0-70 CLASS 4 CLASS 3 PIPE MAY BE USED UNDER LAWN AREAS. ALL STORM SEWERS SHALL HAVE PREMIUM RUBBER JOINTS. SUMP LEADS SHALL BE 3" DIA. P.V.C. SCHED.40.

PROPERTY DESCRIPTION:

A PARCEL OF LAND BEING A PART OF THE SOUTHEAST 1/4 OF SECTION 31, T.34, R.11E, CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTH 1/4 CORNER OF SAID SECTION 31; THENCE N.80°00'00"E, 1485.50 FT. RECORDED, (MEASURED AS N.80°00'00"E, 1485.86 FT.) ALONG THE SOUTH LINE OF SAID SECTION 31 AND THE CENTERLINE OF SOUTH BLVD. (WIDTH VARIES) TO THE POINT OF BEGINNING; THENCE N.08°33'45"W, 1222.70 FT. RECORDED, (MEASURED AS N.08°23'50"W, 1222.98 FT.); THENCE N.80°00'00"E, 500.00 FT. (RECORDED & MEASURED); THENCE S.08°33'45"E, 987.07 FT. RECORDED, (MEASURED AS S.07°47'11"E, 511.08 FT. & S.08°56'16"E, 283.47 FT.); THENCE S.82°23'39"W, 411.87 FT.; THENCE S.08°23'50"E, 383.22 FT. TO A POINT ON THE SOUTH LINE OF SAID SECTION 31 AND THE CENTERLINE OF SOUTH BLVD. (WIDTH VARIES); THENCE ALONG SAID SOUTH LINE OF SECTION 31, S.80°00'00"W, 80.87 FT. TO THE POINT OF BEGINNING, CONTAINING 8.825 ACRES OR 427,977 SQ.FT. SUBJECT TO THE RIGHTS OF THE PUBLIC OVER SOUTH BOULEVARD AND ANY OTHER EASEMENTS, RESTRICTIONS, OR RIGHTS-OF-WAY OF RECORD, IF ANY.

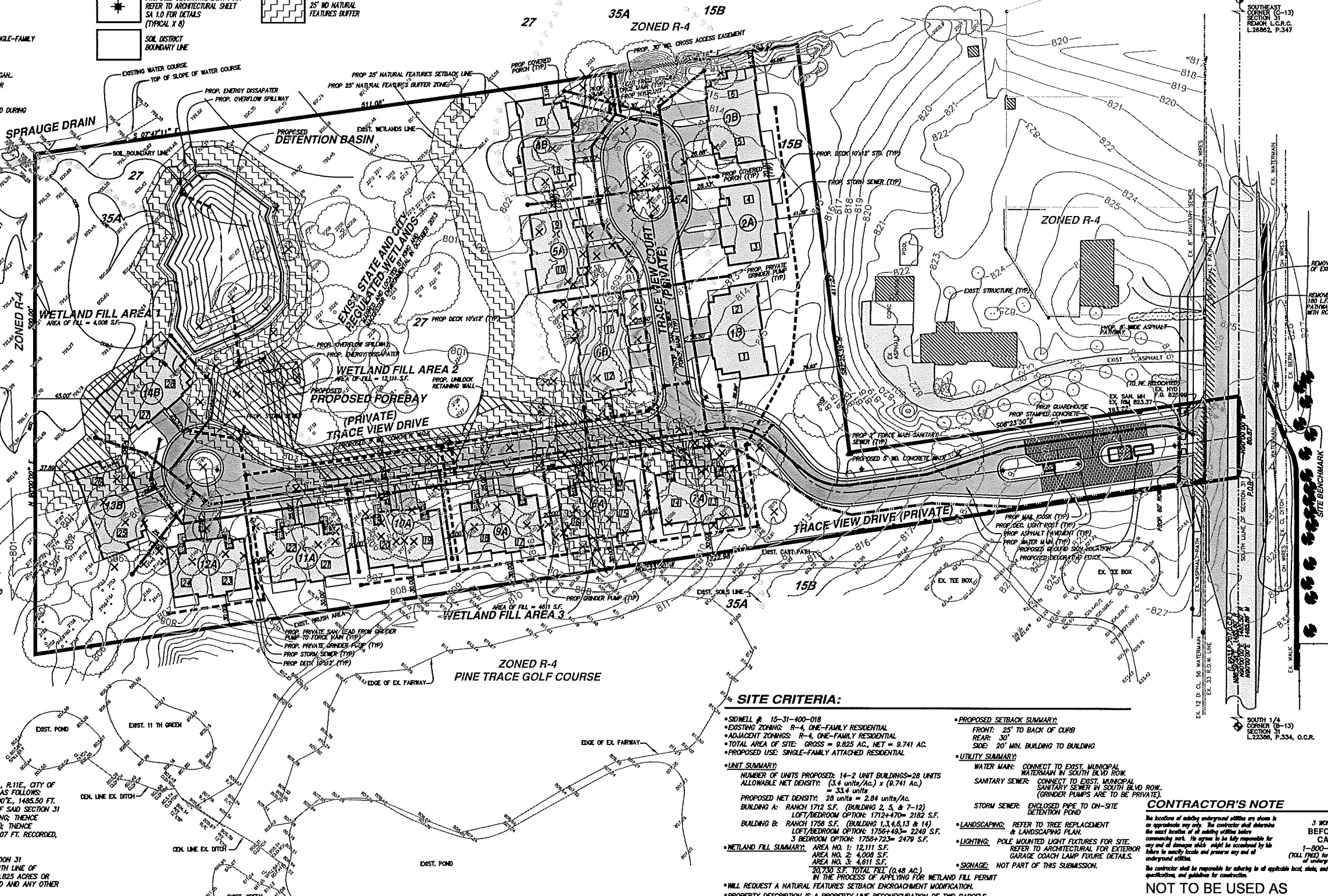
SITE CRITERIA:

- SITEWELL # 15-31-400-018
• EXISTING ZONING: R-4, ONE-FAMILY RESIDENTIAL
• ADJACENT ZONINGS: R-4, ONE-FAMILY RESIDENTIAL
• TOTAL AREA OF SITE: GROSS = 9.825 AC., NET = 9.741 AC.
• PROPOSED USE: SINGLE-FAMILY ATTACHED RESIDENTIAL
• PROPOSED SETBACK SUMMARY: FRONT: 25' TO BACK OF CURB, REAR: 30', SIDE: 20' MIN. BUILDING TO BUILDING
• UTILITY SUMMARY: WATER MAIN: CONNECT TO EXIST. MUNICIPAL WATERMAIN IN SOUTH BLVD ROW. SANITARY SEWER: CONNECT TO EXIST. MUNICIPAL SANITARY SEWER IN SOUTH BLVD ROW. (GRINDER PUMPS ARE TO BE PRIVATE). STORM SEWER: ENCLOSED PIPE TO ON-SITE DETENTION POND
• LANDSCAPING: REFER TO TREE REPLACEMENT & LANDSCAPING PLAN.
• LIGHTING: POLE MOUNTED LIGHT FIXTURES FOR SITE. REFER TO ARCHITECTURAL FOR EXTERIOR GARAGE COACH LAMP FIXTURE DETAILS.
• SIGNAGE: NOT PART OF THIS SUBMISSION.
• WILL REQUEST A NATURAL FEATURES SETBACK ENCROACHMENT MODIFICATION.
• PROPERTY DESCRIPTION IS A PROPERTY LINE RECONFIGURATION OF TWO PARCELS.

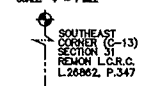
CONTRACTOR'S NOTE

The location of existing underground utilities are shown on an approximate map only. The contractor shall determine the exact location of all existing utilities before commencing work. He agrees to be fully responsible for any and all damages which might be occasioned by his failure to locate and preserve any and all underground utilities. 3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 (TOLL FREE) for the location of underground utilities. The contractor shall be responsible for adhering to all applicable local, state, and federal standards, specifications, and guidelines for construction.

NOT TO BE USED AS CONSTRUCTION DRAWINGS



LOCATION MAP



APEX ENGINEERING GROUP, INC. CIVIL ENGINEERING & LAND PLANNING CONSULTANTS. P.O. BOX 1162, BIRMINGHAM, MI 48312. PHONE: 586-876-3947

VILLAS AT SHADOW PINES. PROJECT: 2012-043. CLIENT: SHADOW PINES L.L.C. 14955 TECHNOLOGY DRIVE, SHELBY TWP, MI 48315. JOB NO: 05-12-2013. DATE: 05-12-2013. DRAWN BY: T. JIN, R. TIE. CHECKED BY: W.E.K. OAKLAND COUNTY, MI.

PRELIMINARY PLANNED UNIT DEVELOPMENT CONDOMINIUM PLAN. SHEET 1 OF 6. MUNICIPAL REVIEW NUMBERS: #13-009

**PROPERTY DESCRIPTION:**

A PARCEL OF LAND BEING A PART OF THE SOUTHEAST 1/4 OF SECTION 31, T.3N, R.11E, CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTH 1/4 CORNER OF SAID SECTION 31; THENCE N.60°00'00"E, 1485.50 FT. RECORDED, (MEASURED AS N.60°00'00"E, 1485.00 FT.) ALONG THE SOUTH LINE OF SAID SECTION 31 AND THE CENTERLINE OF SOUTH BLVD. (WIDTH VARIES) TO THE POINT OF BEGINNING; THENCE N.08°33'45"W, 1222.70 FT. RECORDED, (MEASURED AS N.08°33'50"W, 1222.88 FT.); THENCE N.90°00'00"E, 500.00 FT. RECORDED & MEASURED; THENCE S.08°33'45"E, 987.07 FT. RECORDED, (MEASURED AS S.07°47'11"E, 511.08 FT. & S.08°58'16"E, 263.47 FT.); THENCE S.82°25'39"W, 411.87 FT.; THENCE S.08°23'50"E, 393.22 FT. TO A POINT ON THE SOUTH LINE OF SAID SECTION 31 AND THE CENTERLINE OF SOUTH BLVD. (WIDTH VARIES); THENCE ALONG SAID SOUTH LINE OF SECTION 31, S.90°00'00"W, 80.87 FT. TO THE POINT OF BEGINNING, CONTAINING 9.825 ACRES OR 427,977 SQ.FT., SUBJECT TO THE RIGHTS OF THE PUBLIC OVER SOUTH BOULEVARD AND ANY OTHER EASEMENTS, RESTRICTIONS, OR RIGHTS-OF-WAY OF RECORD, IF ANY.

PARCEL DESCRIPTION FOR 15-31-400-018 HAS BEEN MODIFIED. A PROPERTY LINE RECONFIGURATION IS PROPOSED WITH PARCEL 15-31-400-018.

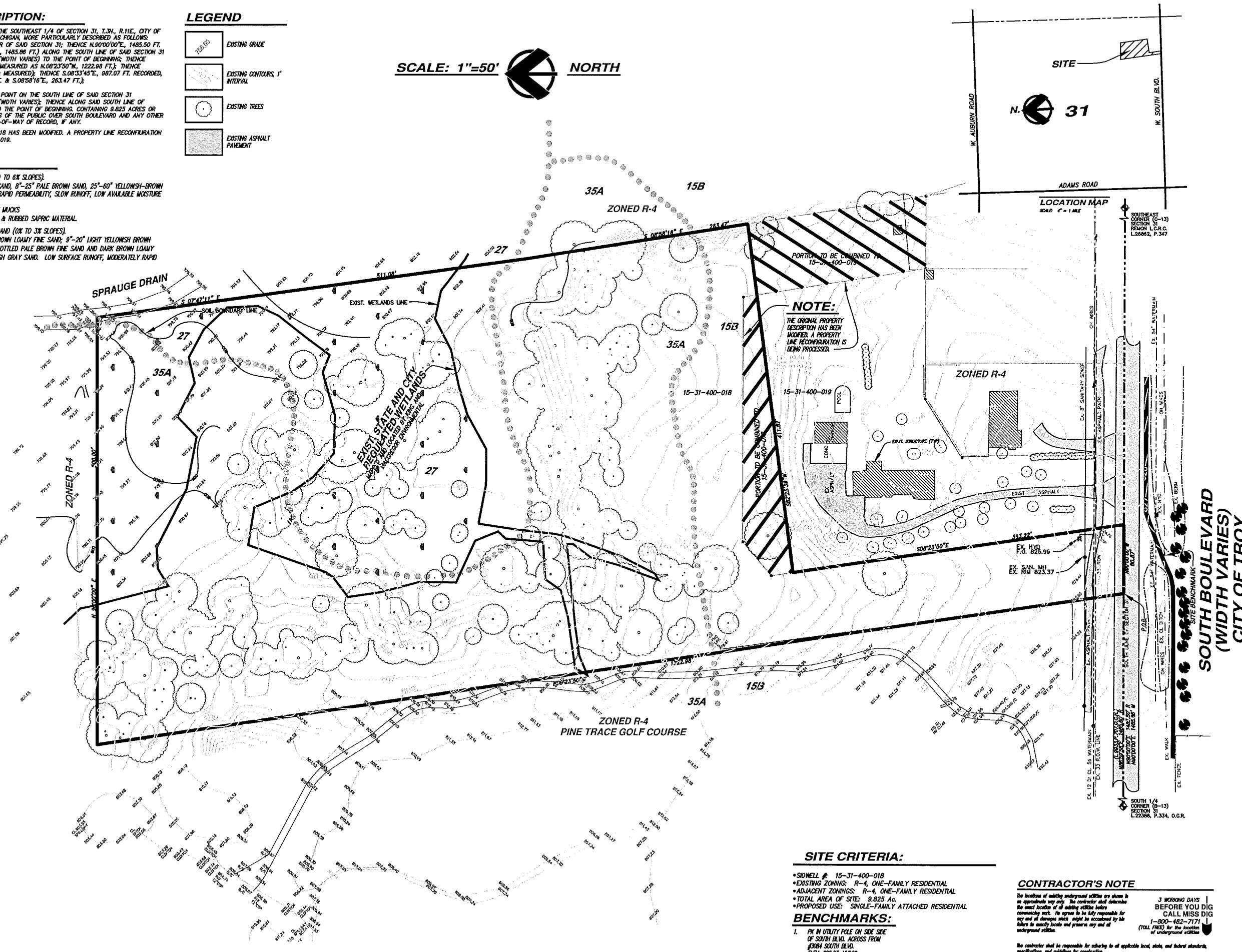
**SOILS:**

- 15B** SPINKS LOAMY SAND (0 TO 6% SLOPES)  
0"-8" DARK BROWN LOAMY SAND, 8"-25" PALE BROWN SAND, 25"-60" YELLOWISH-BROWN LOOSE SAND. MODERATELY RAPID PERMEABILITY, SLOW RUNOFF, LOW AVAILABLE MOISTURE CAPACITY.
- 27** HOUGHTON AND ADRIAN MUCKS  
0"-60" BLACK BROKEN FACE & RUBBED SAPRIC MATERIAL.
- 35A** THETFORD LOAMY FINE SAND (0% TO 3% SLOPES)  
0"-9" VERY DARK GRAYISH BROWN LOAMY FINE SAND; 9"-20" LIGHT YELLOWISH BROWN LOAMY FINE SAND; 20"-45" MOTTLED PALE BROWN FINE SAND AND DARK BROWN LOAMY SAND; 45"-60" LIGHT BROWNISH GRAY SAND. LOW SURFACE RUNOFF, MODERATELY RAPID PERMEABILITY.

**LEGEND**

- EXISTING GRADE
- EXISTING CONTOURS, 1' INTERVAL
- EXISTING TREES
- EXISTING ASPHALT PAVEMENT

SCALE: 1"=50' NORTH



**SITE CRITERIA:**

- SIDWELL # 15-31-400-018
- EXISTING ZONING: R-4, ONE-FAMILY RESIDENTIAL
- ADJACENT ZONINGS: R-4, ONE-FAMILY RESIDENTIAL
- TOTAL AREA OF SITE: 9.825 AC.
- PROPOSED USE: SINGLE-FAMILY ATTACHED RESIDENTIAL

**BENCHMARKS:**

1. 1" IN UTILITY POLE ON SIDE SIDE OF SOUTH BLVD. ACROSS FROM 40084 SOUTH BLVD. ELEV. 826.83, 11/02/09

**CONTRACTOR'S NOTE**

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1-800-482-7171  
(TOLL FREE) for the location of underground utilities

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**APEX**  
ENGINEERING GROUP INC.  
CIVIL ENGINEERING & LAND PLANNING CONSULTANTS  
PHONE: 866-976-9947

PROJECT: VILLAS AT SHADOW PINES  
CLIENT: SHADOW PINES L.L.C.  
14855 TECHNOLOGY DR.  
SHELBY TOWNSHIP, MI 48315

JOB NO: 2012-043  
DATE: 05-12-2013  
DRAWN BY: W.S.B.  
CHECKED BY: W.E.M.

PART OF THE S.E. 1/4 OF SECTION 13  
CITY OF ROCHESTER HILLS  
T.3N, R.11E,  
OAKLAND COUNTY, MI.

REVISIONS:  
1-11-2014 REVISED PER CLIENT  
4-1-2014 REVISED PER CITY

SEAL:  
EXISTING CONDITIONS AND NATURAL FEATURES BASE PLAN

SHEET **2** OF 6  
MUNICIPAL REVIEW NUMBERS: #13-009

**LEGEND**

	EXISTING GRADE		PROPOSED SANITARY SEWER
	EXISTING CONTOURS, 1' INTERVAL		PROPOSED STORM SEWER
	EXISTING TREES		PROPOSED WATERMAIN W/ TYPICAL GATE VALVE & WELL & STD. HYDRANT ASSEMBLY
	EXISTING ASPHALT PAVEMENT		PROPOSED CONCRETE WALKS
	PROP. ON-SITE ASPHALT PAVEMENT WITH INTEGRAL 4" MOUNTABLE CURB		EXISTING TREES TO BE REMOVED
	PROPOSED DECORATIVE LIGHT POST (TYPICAL X 7)		

**TREE SUMMARY:**

TOTAL # OF TAGGED TREES:	244
TOTAL # OF POOR CONDITION TREES:	29
TOTAL # OF ASH TREES:	5
TOTAL # OF TREES OFFSITE:	10
TOTAL # OF REGULATED TREES:	200

SEVERAL TREES WITHIN THE WETLAND AREA WERE NOT TAGGED DUE TO THICKNESS OF BRUSH IN THE NORTHEAST CORNER OF THE SITE. THESE TREES SHALL BE PRESERVED.

SCALE: 1"=50'

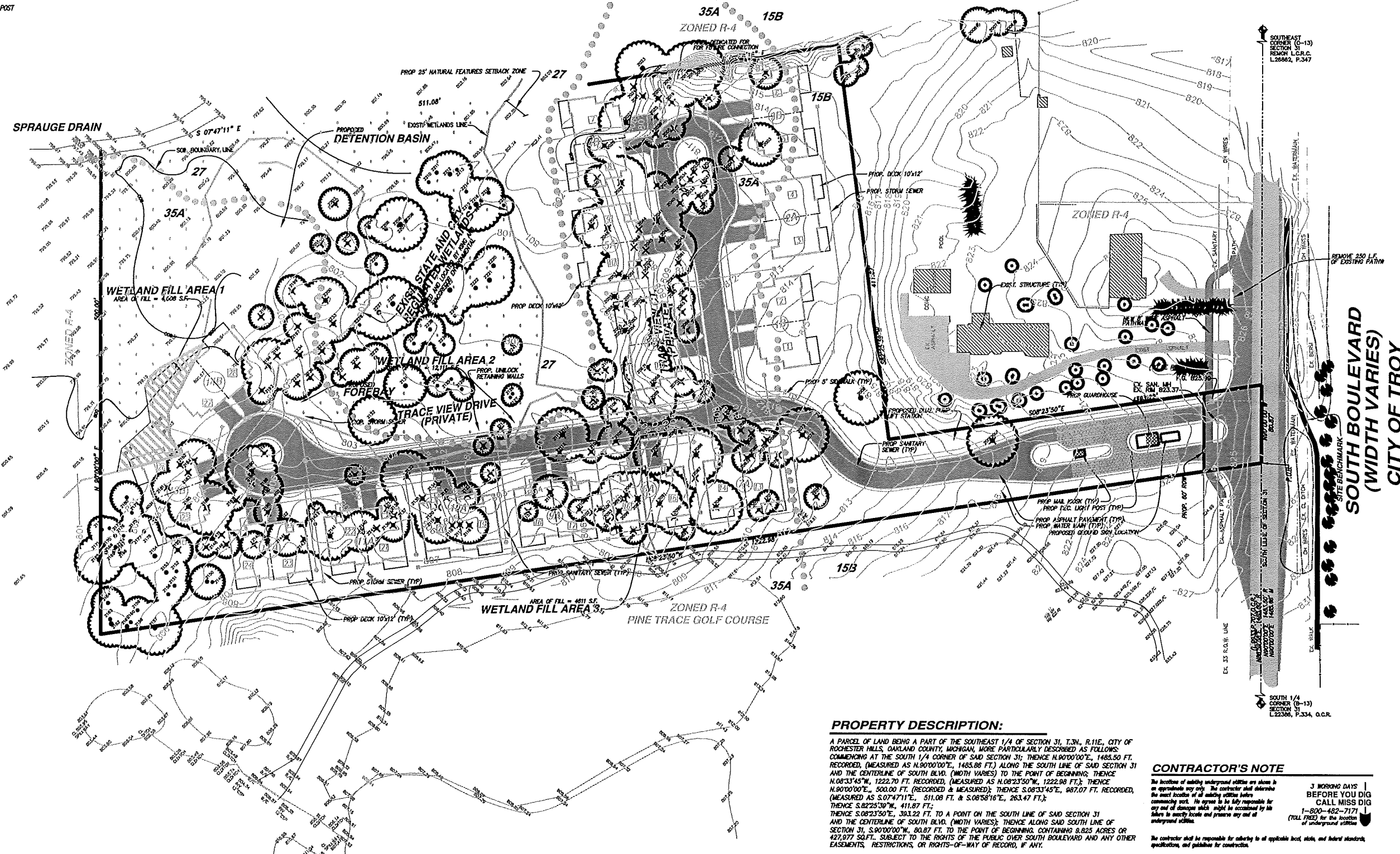
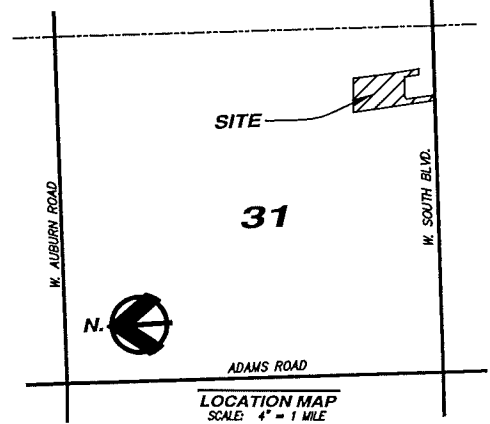


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- TOTAL AREA OF SITE: 9.825 AC.
- PROPOSED USE: SINGLE-FAMILY ATTACHED RESIDENTIAL

**BENCHMARKS:**

1. PK IN UTILITY POLE ON SIDE SIDE OF SOUTH BLVD. ACROSS FROM 30084 SOUTH BLVD. ELEV: 826.83 HY029



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 ENGINEERING GROUP INC.  
 CIVIL ENGINEERING & LAND PLANNING CONSULTANTS  
 P.O. BOX 1162  
 BIRMINGHAM, MI 48312  
 PHONE: 586-876-3947

PROJECT: VILLAGES AT SHADOW PINES  
 CLIENT: SHADOW PINES LLC, 14855 TECHNOLOGY DR, SHELBY TOWNSHIP, MI 48316  
 JOB NO: 2012-043  
 DATE: 05-15-2013  
 DRAWN BY: T. SN, R. FLE  
 CHECKED BY: W.E.M.

REVISIONS:  
 1-1-14 REVISED SET PER CLIENT  
 4-1-14 REVISED PER CITY

SEAL:  
**EXISTING TREE AND TREE REMOVAL PLAN**

SHEET  
**3**  
 OF 6

MUNICIPAL REVIEW NUMBERS:  
**#13-009**

NOT TO BE USED AS CONSTRUCTION DRAWINGS

**TREE LIST:**

Ln	Scientific Name	Common Name	DBH	Dist. 1	Dist. 2	Dist. 3	Dist. 4	Condition	Remove
2001	Acer glaberrimum	Norway Maple	18.0					Good	YES
2002	Ulmus pumila	Sharon Elm	27.8					Good	NO
2003	Ulmus pumila	Sharon Elm	18.0					Good	YES
2004	Ulmus americana	American Elm	8.4	8.9				Good	YES
2005	Acer negundo	Box-Elm	7.8					Good	YES
2006	Acer glaberrimum	Norway Maple	7.8					Good	NO
2007	Acer glaberrimum	Norway Maple	8.7					Fair	NO
2008	Acer glaberrimum	Norway Maple	12.7					Fair	NO
2009	Acer glaberrimum	Norway Maple	7.2					Fair	NO
2010	Acer glaberrimum	Norway Maple	8.4					Fair	NO
2011	Acer glaberrimum	Norway Maple	8.9					Fair	NO
2012	Acer glaberrimum	Norway Maple	8.1					Fair	NO
2013	Quercus alba	Red Oak	11.4					Fair	NO
2014	Thuja occidentalis	Boisey Spruce	7.7	6.5				Fair	YES
2015	Quercus alba	White Oak	28.1					Good	NO
2016	Quercus alba	White Oak	18.8					Good	NO
2017	Quercus alba	White Oak	28.4	18.8				Good	NO
2018	Acer glaberrimum	Norway Maple	16.3					Fair	NO
2019	Thuja occidentalis	Boisey Spruce	7.1					Fair	YES
2020	Populus deltoides	Cottonwood	14.4					Fair	YES
2021	Acer glaberrimum	Norway Maple	14.3					Fair	YES
2022	Thuja occidentalis	Boisey Spruce	8.9					Poor	NO
2023	Acer glaberrimum	Norway Maple	11.8	8.7				Fair	NO
2024	Acer glaberrimum	Norway Maple	8.8					Fair	YES
2025	Thuja occidentalis	Boisey Spruce	10.8					Fair	YES
2026	Acer glaberrimum	Norway Maple	10.3					Fair	YES
2027	Acer glaberrimum	Norway Maple	15.8					Fair	YES
2028	Acer negundo	Box-Elm	11.7					Poor	YES
2029	Quercus alba	White Oak	27.2					Good	YES
2030	Corylus americana	American Hickory	8.8					Good	YES
2031	Juniperus nigra	Black Juniper	8.8					Good	YES
2032	Juniperus nigra	Black Juniper	8.5					Good	YES
2033	Juniperus nigra	Black Juniper	8.2					Fair	YES
2034	Juniperus nigra	Black Juniper	11.0					Good	YES
2035	Acer glaberrimum	Norway Maple	8.3	8.0				Good	YES
2036	Ulmus americana	American Elm	8.1					Good	YES
2037	Juniperus nigra	Black Juniper	8.9					Good	YES
2038	Juniperus nigra	Black Juniper	7.4					Good	YES
2039	Ulmus pumila	Sharon Elm	7.0					Good	YES
2040	Ulmus pumila	Sharon Elm	7.8					Poor	YES
2041	Ulmus pumila	Sharon Elm	18.8					Poor	YES
2042	Ulmus pumila	Sharon Elm	18.0	18.0				Poor	YES
2043	Acer negundo	Box-Elm	13.5					Poor	YES
2044	Ulmus pumila	Sharon Elm	18.8					Poor	YES
2045	Ulmus pumila	Sharon Elm	15.8					Poor	YES
2046	Ulmus pumila	Sharon Elm	13.0					Poor	YES
2047	Ulmus pumila	Sharon Elm	13.9					Poor	YES
2048	Acer glaberrimum	Norway Maple	22.0					Good	YES
2049	Ulmus americana	American Elm	14.3					Fair	YES
2050	Ulmus pumila	Sharon Elm	12.2					Fair	YES
2051	Populus deltoides	Cottonwood	38.2	32.2				Fair	YES
2052	Ulmus americana	American Elm	10.3					Fair	YES
2053	Populus deltoides	Cottonwood	13.0					Fair	YES
2054	Populus deltoides	Cottonwood	37.5					Fair	YES
2055	Populus deltoides	Cottonwood	23.1					Fair	YES
2056	Populus deltoides	Cottonwood	31.1					Fair	YES
2057	Populus deltoides	Cottonwood	22.8					Fair	YES
2058	Ulmus pumila	Sharon Elm	17.2					Fair	YES
2059	Populus deltoides	Cottonwood	40.1					Fair	YES
2060	Ulmus pumila	Sharon Elm	15.1	11.1				Fair	YES
2061	Ulmus pumila	Sharon Elm	10.1					Fair	YES
2062	Acer negundo	Box-Elm	8.9					Fair	YES
2063	Acer negundo	Box-Elm	11.2					Fair	YES
2064	Acer negundo	Box-Elm	8.3					Fair	YES
2065	Acer negundo	Box-Elm	8.4					Fair	YES
2066	Acer negundo	Box-Elm	8.8	8.5				Fair	YES
2067	Ulmus pumila	Sharon Elm	17.7					Fair	YES
2068	Ulmus pumila	Sharon Elm	8.8					Fair	YES
2069	Ulmus pumila	Sharon Elm	17.7					Fair	YES
2070	Ulmus pumila	Sharon Elm	10.7					Fair	YES
2071	Acer negundo	Box-Elm	8.0					Fair	YES
2072	Acer negundo	Box-Elm	8.8					Fair	YES
2073	Ulmus pumila	Sharon Elm	22.2					Fair	YES
2074	Juniperus nigra	Black Juniper	7.4					Good	YES
2075	Acer saccharum	Sugar Maple	8.0					Good	YES
2076	Acer glaberrimum	Norway Maple	7.8					Fair	YES
2077	Acer glaberrimum	Norway Maple	8.3					Fair	YES
2078	Acer glaberrimum	Norway Maple	8.3					Fair	YES
2079	Acer glaberrimum	Norway Maple	7.2					Fair	YES
2080	Acer glaberrimum	Norway Maple	7.7					Fair	YES
2081	Acer saccharum	Sugar Maple	8.7					Good	YES
2082	Acer negundo	Box-Elm	10.0					Fair	YES
2083	Acer negundo	Box-Elm	11.0					Fair	YES
2084	Acer negundo	Box-Elm	8.4					Fair	YES
2085	Acer negundo	Box-Elm	7.8					Fair	YES
2086	Acer negundo	Box-Elm	28.0					Fair	YES
2087	Juniperus nigra	Black Juniper	7.5					Good	YES

Ln	Scientific Name	Common Name	DBH	Dist. 1	Dist. 2	Dist. 3	Dist. 4	Condition	Remove
2088	Acer glaberrimum	Norway Maple	23.2					Good	YES
2089	Rhamnus coccinea	Common Buckthorn	8.7					Fair	YES
2090	Rhamnus coccinea	Common Buckthorn	13.1					Fair	YES
2091	Acer negundo	Box-Elm	16.9	10.8				Fair	YES
2092	Populus deltoides	Cottonwood	50.9					Fair	YES
2093	Acer negundo	Box-Elm	13.3					Fair	YES
2094	Acer negundo	Box-Elm	15.8	12.7				Fair	YES
2095	Fraxinus pennsylvanica	Green Ash	8.7					Fair	YES
2096	Populus deltoides	Cottonwood	37.3					Fair	YES
2097	Populus deltoides	Cottonwood	80.4					Good	YES
2098	Populus deltoides	Cottonwood	8.9					Poor	YES
2099	Prunus serotina	Black Cherry	8.0					Poor	YES
2100	Prunus serotina	Black Cherry	7.2					Poor	YES
2101	Prunus serotina	Black Cherry	12.8					Fair	YES
2102	Prunus vulpina	Sweet Cherry	8.5					Fair	YES
2103	Populus deltoides	Cottonwood	8.4					Fair	YES
2104	Populus deltoides	Cottonwood	8.3					Fair	YES
2105	Acer negundo	Box-Elm	12.7	7.5				Fair	YES
2106	Acer negundo	Box-Elm	8.7	8.3				Fair	YES
2107	Acer negundo	Box-Elm	7.5					Fair	YES
2108	Fraxinus pennsylvanica	Green Ash	8.5					Fair	YES
2109	Fraxinus pennsylvanica	Green Ash	8.1					Fair	YES
2110	Acer negundo	Box-Elm	7.2					Fair	YES
2111	Ulmus americana	American Elm	25.0					Poor	YES
2112	Acer negundo	Box-Elm	11.1					Poor	YES
2113	Morus alba	White Mulberry	7.0					Fair	YES
2114	Ulmus pumila	Sharon Elm	13.0					Fair	YES
2115	Populus tremuloides	Quaking Aspen	8.5					Fair	YES
2116	Prunus serotina	Black Cherry	14.4					Fair	YES
2117	Acer saccharum	Sugar Maple	12.2					Good	YES
2118	Prunus serotina	Black Cherry	8.9					Fair	YES
2119	Acer negundo	Box-Elm	18.5					Fair	YES
2120	Acer negundo	Box-Elm	8.5					Fair	YES
2121	Juniperus nigra	Black Juniper	11.0					Fair	YES
2122	Juniperus nigra	Black Juniper	8.3					Poor	YES
2123	Fraxinus pennsylvanica	Green Ash	8.9					Fair	YES
2124	Acer negundo	Box-Elm	7.4					Fair	YES
2125	Acer negundo	Box-Elm	7.6					Fair	YES
2126	Ulmus americana	American Elm	8.0					Fair	NO
2127	Rhamnus coccinea	Common Buckthorn	8.8					Fair	NO
2128	Populus tremuloides	Quaking Aspen	8.2					Poor	NO
2129	Populus tremuloides	Quaking Aspen	8.1					Poor	NO
2130	Populus tremuloides	Quaking Aspen	8.1					Poor	NO
2131	Acer glaberrimum	Norway Maple	18.3	18.2				Poor	NO
2132	Fraxinus pennsylvanica	Green Ash	17.8					Excellent	NO
2133	Quercus macrocarpa	Bar Oak	18.0					Excellent	YES
2134	Prunus serotina	Black Cherry	13.0					Fair	YES
2135	Prunus serotina	Black Cherry	14.8					Fair	YES
2136	Quercus alba	White Oak	12.3					Fair	YES
2137	Populus deltoides	Cottonwood	11.8					Fair	YES
2138	Prunus serotina	Black Cherry	8.9					Poor	YES
2139	Prunus serotina	Black Cherry	8.0					Fair	YES
2140	Prunus serotina	Black Cherry	14.8					Fair	YES
2141	Quercus velutina	Black Oak	17.8					Fair	YES
2142	Acer glaberrimum	Norway Maple	7.1					Fair	YES
2143	Prunus serotina	Black Cherry	8.9					Fair	YES
2144	Prunus serotina	Black Cherry	13.0					Fair	YES
2145	Ulmus pumila	Sharon Elm	8.5					Fair	YES
2146	Sida acuta	Woodchuck Weed	8.8					Fair	YES
2147	Thuja occidentalis	Boisey Spruce	8.3					Good	YES
2148	Rhamnus coccinea	Common Buckthorn	8.7					Good	YES
2149	Thuja occidentalis	Boisey Spruce	8.9					Good	NO
2150	Thuja occidentalis	Boisey Spruce	13.3					Good	NO
2151	Quercus macrocarpa	Bar Oak	8.9					Good	NO
2152	Ulmus pumila	Sharon Elm	8.4					Good	NO
2153	Prunus serotina	Black Cherry	14.0					Good	NO
2154	Thuja occidentalis	Boisey Spruce	18.1					Fair	NO
2155	Thuja occidentalis	Boisey Spruce	11.2	10.7	10.8	10.5		Fair	YES
2156	Quercus macrocarpa	Bar Oak	10.3					Good	NO
2157	Quercus velutina	Black Oak	35.8					Fair	NO
2158	Thuja occidentalis	Boisey Spruce	14.1	13.2				Fair	NO
2159	Thuja occidentalis	Boisey Spruce	8.8	8.3				Fair	NO
2160	Thuja occidentalis	Boisey Spruce	8.0					Fair	NO
2161	Thuja occidentalis	Boisey Spruce	18.3					Fair	NO
2162	Thuja occidentalis	Boisey Spruce	18.8					Fair	NO
2163	Thuja occidentalis	Boisey Spruce	11.8					Fair	NO
2164	Thuja occidentalis	Boisey Spruce	12.3					Fair	NO
2165	Thuja occidentalis	Boisey Spruce	17.5					Fair	NO
2166	Thuja occidentalis	Boisey Spruce	11.3					Fair	NO
2167	Thuja occidentalis	Boisey Spruce	13.2					Fair	NO

Ln	Scientific Name	Common Name	DBH	Dist. 1	Dist. 2	Dist. 3	Dist. 4	Condition	Remove
2168	Thuja occidentalis	Boisey Spruce	7.7					Fair	NO
2169	Thuja occidentalis	Boisey Spruce	8.8					Poor	NO
2170	Thuja occidentalis	Boisey Spruce	15.4					Fair	NO
2171	Thuja occidentalis	Boisey Spruce	7.7					Fair	NO
2172	Thuja occidentalis	Boisey Spruce	10.2					Fair	NO
2173	Thuja occidentalis	Boisey Spruce	7.7		</				

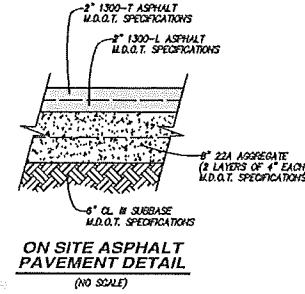
**PROPERTY DESCRIPTION:**

A PARCEL OF LAND BEING A PART OF THE SOUTHEAST 1/4 OF SECTION 31, T.3N., R.11E., CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTH 1/4 CORNER OF SAID SECTION 31; THENCE N.90°00'00"E., 1485.50 FT. RECORDED, (MEASURED AS N.90°00'00"E., 1485.86 FT.) ALONG THE SOUTH LINE OF SAID SECTION 31 AND THE CENTERLINE OF SOUTH BLVD. (WIDTH VARIES) TO THE POINT OF BEGINNING; THENCE N.08°33'45"W., 1222.70 FT. RECORDED, (MEASURED AS N.08°23'50"W., 1222.98 FT.); THENCE N.90°00'00"E., 500.00 FT. (RECORDED & MEASURED); THENCE S.08°33'45"E., 987.07 FT. RECORDED, (MEASURED AS S.07°47'11"E., 511.08 FT. & S.08°58'16"E., 263.47 FT.); THENCE S.82°25'39"W., 411.87 FT.; THENCE S.08°23'50"E., 393.22 FT. TO A POINT ON THE SOUTH LINE OF SAID SECTION 31 AND THE CENTERLINE OF SOUTH BLVD. (WIDTH VARIES); THENCE ALONG SAID SOUTH LINE OF SECTION 31, S.90°00'00"W., 80.87 FT. TO THE POINT OF BEGINNING, CONTAINING 9.825 ACRES OR 427,977 SQ.FT., SUBJECT TO THE RIGHTS OF THE PUBLIC OVER SOUTH BOULEVARD AND ANY OTHER EASEMENTS, RESTRICTIONS, OR RIGHTS-OF-WAY OF RECORD, IF ANY.

**LEGEND**

	EXISTING GRADE		PROPOSED SANITARY SEWER STRUCTURE
	EXISTING CONTOURS, 1' INTERVAL		PROPOSED STORM SEWER STRUCTURE
	EXISTING TREES		PROPOSED GATE VALVE & WELL & STD. HYDRANT ASSEMBLY
	EXISTING ASPHALT PAVEMENT		EXISTING TREES TO BE REMOVED
	PROP. ON-SITE ASPHALT PAVEMENT WITH INTEGRAL 4" MOUNTABLE CURB		

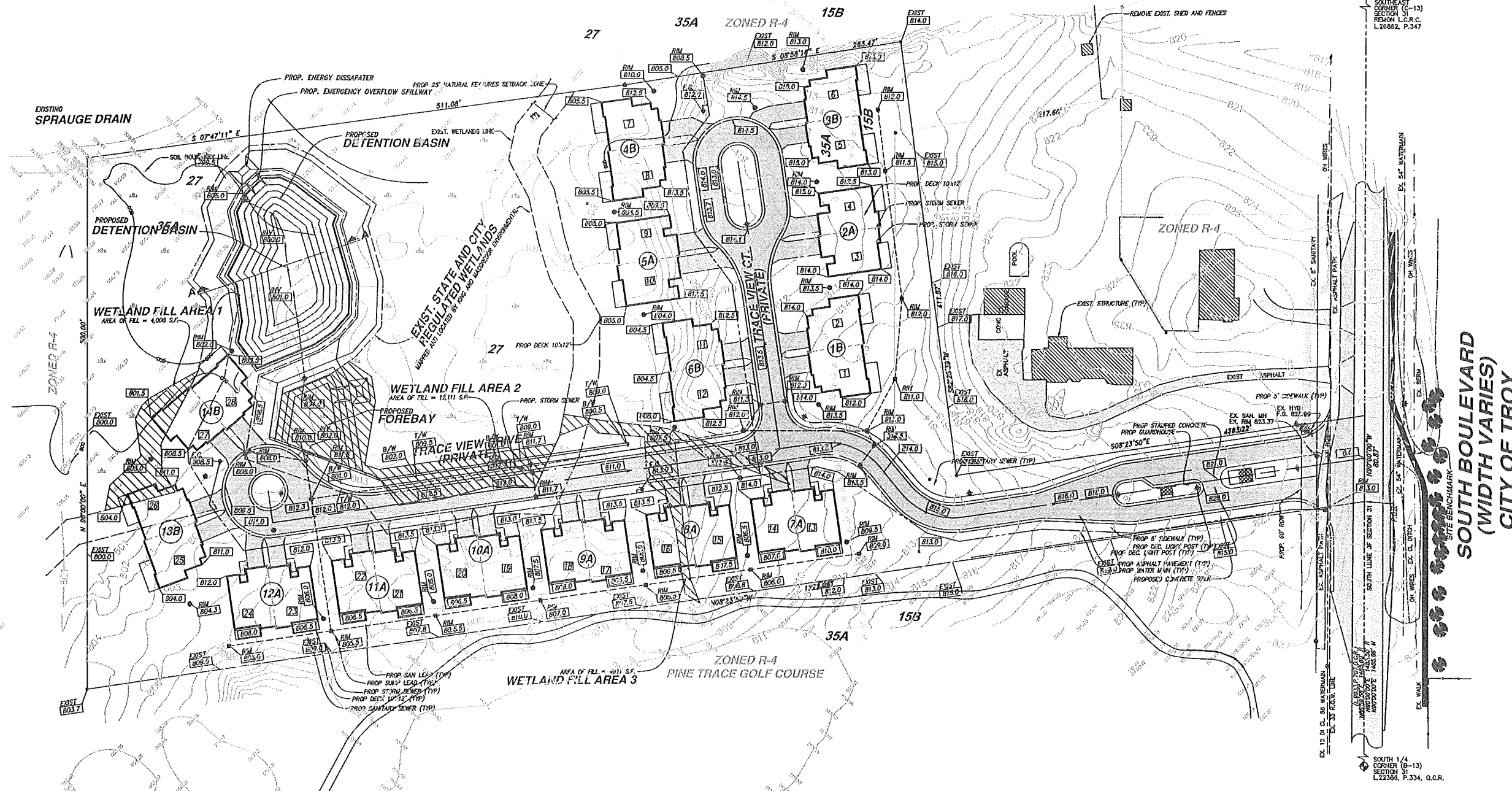
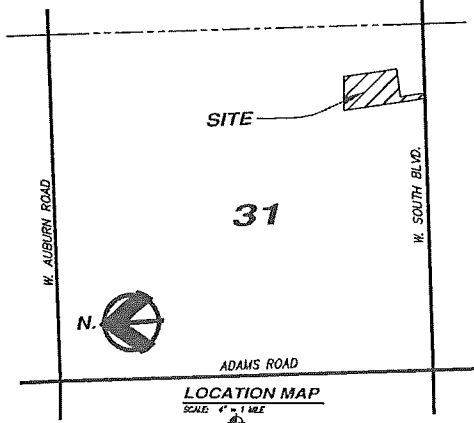
SCALE: 1"=50' NORTH



**APPLICANT & OWNER:**  
 MARK GESUALE  
 SHADOW PINES L.L.C.  
 21872 23 MILE ROAD  
 MACOMB TWP, MI 48042  
**OWNERSHIP IS FEE SIMPLE.**

**BENCHMARKS:**

PK IN UTILITY POLE ON SIDE OF SOUTH BLVD. ACROSS FROM #3084 SOUTH BLVD. ELEV. 826.83 H1029



**SOILS:**

- 15B** SPINDS LOAMY SAND (0 TO 6% SLOPES). 0'-8" DARK BROWN LOAMY SAND, 8"-25" PALE BROWN SAND, 25"-60" YELLOWISH-BROWN LOOSE SAND. MODERATELY RAPID PERMEABILITY, SLOW RUNOFF, LOW AVAILABLE MOISTURE CAPACITY.
- 27** HOUGHTON AND ADRIAN MUCKS. 0'-60" BLACK BROWN FINE & RUBBED SILTY CLAY MATERIAL.
- 35A** THETTORD LOAMY FINE SAND (0% TO 3% SLOPES). 0'-9" VERY DARK GRAYISH BROWN LOAMY FINE SAND; 9'-20" LIGHT YELLOWISH BROWN LOAMY FINE SAND; 20'-45" MOTTLED PALE BROWN FINE SAND AND DARK BROWN LOAMY SAND; 45'-80" LIGHT BROWNISH GRAY SAND. LOW SURFACE RUNOFF, MODERATELY RAPID PERMEABILITY.

**CONTRACTOR'S NOTE**

The locations of existing underground utilities are shown in an approximate way only. The contractor shall determine the exact location of all existing utilities before commencing work. He agrees to be fully responsible for any and all damages which might be occasioned by his failure to exactly locate and preserve any and all underground utilities.

The contractor shall be responsible for adhering to all applicable local, state, and federal standards, specifications, and guidelines for construction.

3 WORKING DAYS  
 BEFORE YOU DIG  
 CALL MISS DIG  
 1-800-482-7171  
 (TOLL FREE) for the location of underground utilities

NOT TO BE USED AS CONSTRUCTION DRAWINGS

**APREX**  
 ENGINEERING & LAND PLANNING CONSULTANTS  
 P.O. BOX 1162  
 BIRMINGHAM, MI 48312  
 PHONE: 988-876-5947

PROJECT: VILLAS AT SHADOW PINES  
 CLIENT: SHADOW PINES L.L.C.  
 1-11-2014 REVISED PER CLIENT  
 4-1-2014 REVISED PER CITY

JOB NO: 2012-043  
 DATE: 05-12-2013  
 DRAWN BY: W.S.B.  
 CHECKED BY: W.E.M.

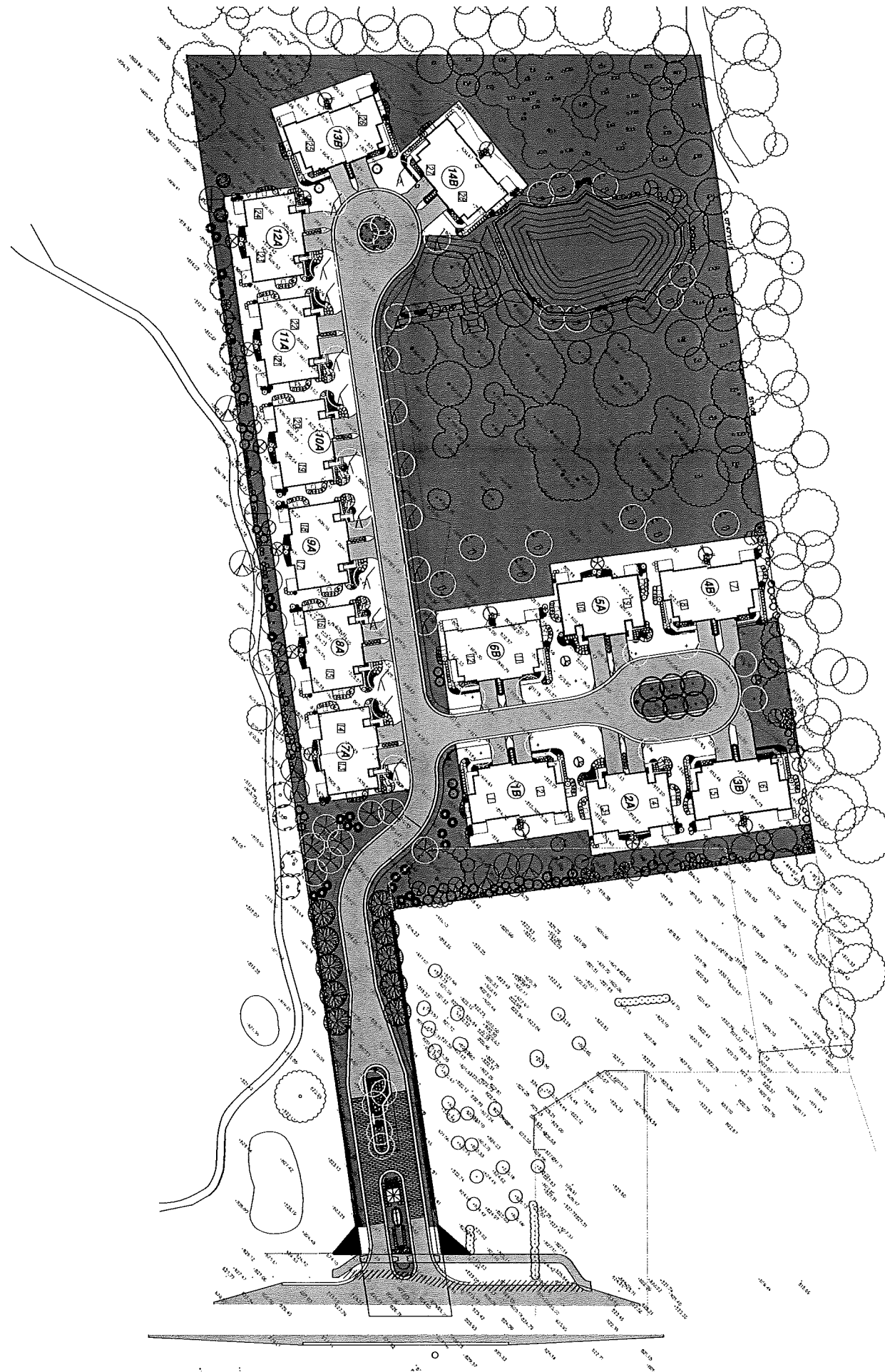
REVISIONS:  
 1-11-2014 REVISED PER CLIENT  
 4-1-2014 REVISED PER CITY

PRELIMINARY GRADING PLAN

SHEET 5 OF 6

MUNICIPAL REVIEW NUMBERS: #13-009





**NOTES:**

1. Base, boundary, topographic, legal description, provided by Apex Engineering Group, Inc.  
 2. Refer to Architectural drawings, provided by Preview Architecture + Planning for building specifications.  
 Landscape screening is proposed to minimize the transmission between land use of nuisances associated with noise, dust, glare, litter, and visual pollution. Establish a greater sense of privacy. Establish aesthetically pleasing, functional and sustainable landscape for long term enhancement of the development and community. Safeguard the public health, safety and welfare, and preserve and enhance aesthetic qualities that contribute to community character.  
 Substantial vegetation exist along the north and east property lines, which will be preserved and are requesting the reviewing authority to waive the buffer requirements in these areas which provide an equal or greater screen.

**TYPE 'B' BUFFER:** Buffer plantings to meet the City's standards for Type 'B' buffer. Buffer yard minimum width 10 feet.  
 Deciduous Shade Trees 3" Caliper, 2 Trees per 100LF  
 Evergreen Trees 10' HT. and 5' Spread, 2 Trees per 100LF  
 Ornamental Trees 2" Caliper or 6' HT., 1.5 Trees per 100LF  
 Shrubs 30" HT. and 24" Spread, 4 Shrubs per 100LF

**TYPE 'C' BUFFER:** Buffer plantings to meet the City's standards for Type 'C' buffer. Buffer yard minimum width 20 feet.  
 Deciduous Shade Trees 3" Caliper, 2 Trees per 100LF  
 Evergreen Trees 10' HT. and 5' Spread, 4 Trees per 100LF  
 Ornamental Trees 2" Caliper or 6' HT., 1.5 Trees per 100LF  
 Shrubs 30" HT. and 24" Spread, 6 Shrubs per 100LF

Open Space



**OPEN SPACE DATA**

ITEM	+/- 9.817 Acres (Gross)	100%
TOTAL SITE AREA	+/- 5.13 Acres (Gross)	52.26%
TOTAL OPEN SPACE		

**REPLACEMENT TREE CREDIT TABLE**

Tree Type and Size	Replacement Credits
2" Caliper Shade Tree	1 Credit
2.5" Caliper Shade Tree	1.5 Credits
3" Caliper Shade Tree	2 Credits
4" Caliper Shade Tree	3 Credits
6" Caliper Shade Tree	4 Credits
8" Evergreen Trees	1 Credit
9" Evergreen Trees	1.5 Credits
10" Evergreen Trees	2 Credits
12" Evergreen Trees	3 Credits
14" Evergreen Trees	4 Credits

Property Line	Type	Area	Required	Provided	Replacement Trees / Credit	
WEST PROPERTY LINE	TYPE 'B' BUFFER - 750LF	7.5 x 2 = 15	Deciduous Shade Trees	15	+	9 X 2 (CREDITS) = 18 OFF SITE 9 X 2 (CREDITS) = 18
			Evergreen Trees	24	+	
			Ornamental Trees	15	+	
			Shrubs	49	+	
SOUTH PROPERTY LINE	TYPE 'C' BUFFER - 413LF	4.13 x 2 = 9	Deciduous Shade Trees	9	+	15 X 2 (CREDITS) = 30
			Evergreen Trees	32	+	
			Ornamental Trees	12	+	
			Shrubs	43	+	
EAST PROPERTY LINE	TYPE 'C' BUFFER - 200LF	2 x 2 = 4	Deciduous Shade Trees	-	+	8 X 2 (CREDITS) = 16
			Evergreen Trees	16	+	
			Ornamental Trees	6	+	
			Shrubs	14	+	
INTERNAL LANDSCAPE PLANTINGS: - 1660LF			REQUIRED	PROVIDED	REPLACEMENT TREE / CREDIT	
			54	54	5 X 2 (CREDITS) = 10	
				18	8 X 4 (CREDITS) = 32	
					18 X 2 (CREDITS) = 36	
DETENTION LANDSCAPE PLANTINGS:			PROVIDED			
			7			
			3			
			45			
			+/- SF			

**NOTES:**

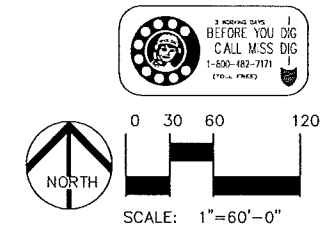
\*TREES WITHIN THE WETLAND AREA WERE NOT TAGGED DUE TO LIMITED ACCESSIBILITY IN THE NORTHEAST CORNER OF THE SITE, WHICH WILL BE PRESERVED.

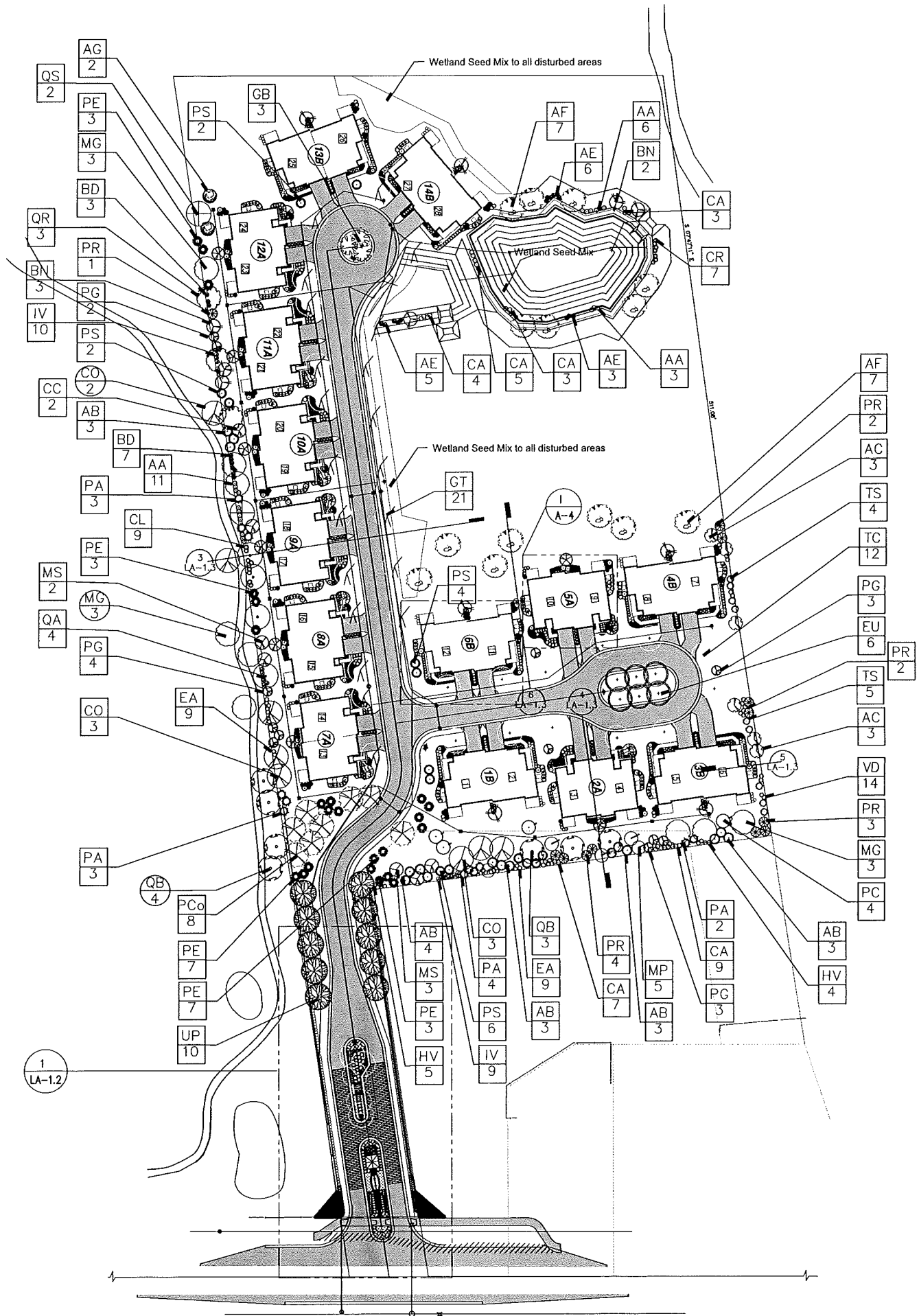
An estimate of trees was done for the northeastern portion of the site.

**TREE SURVEY**

TOTAL # OF TAGGED TREES:	244	55
TOTAL # OF ASH TREES	- 5	-
TOTAL # OF POOR CONDITION TREES	- 29	-
TOTAL # OF OFFSITE TREES	- 10	-
TOTAL # OF REGULATED TREES	200	55
TOTAL # OF REGULATED TREES	200	55
TOTAL # OF TREES TO BE SAVED	- 53	55
TOTAL # OF TREES TO BE REMOVED	147	0
TOTAL # OF REPLACEMENT TREE CREDITS REQUIRED		=147
TOTAL # OF TREE CREDITS PROVIDED		= 160

**NOTES:**  
IRRIGATION SYSTEM AND LANDSCAPE COST ESTIMATE FOR THE LANDSCAPE PLAN WILL BE PROVIDED IN THE FINAL LANDSCAPE REVIEW.





**SHADOW PINES PLANT LIST::**

KEY	QTY.	SIZE	BOTANICAL / COMMON NAME	ROOT
<b>Shade Trees</b>				
AF	14	3" cal	Acer x freemanii 'Celzam' / Autumn Blaze Maple	B&B
CO	8	3" cal	Celtis occidentalis / Common Hackberry	B&B off site
EU	6	3" cal	Eucommia ulmoides / Hardy Rubber Tree	B&B
GB	3	3" cal	Ginkgo biloba 'Autumn Gold' / Autumn Gold Maidenhair Tree	B&B
GT	21	3" cal	Gleditsia L. inermis 'Skycole' / Skyline Honey Locust	B&B
MG	9	3" cal	Metasequoia glyptostroboides / Dawn Redwood	B&B off site
PCo	8	6" cal	Platanus x acerifolia 'Columbia' / Columbia London Plane Tree	B&B entry
QA	4	3" cal	Quercus alba / White Oak	B&B
QB	7	3" cal	Quercus bicolor / Swamp White Oak	B&B off site
QR	3	3" cal	Quercus rubra / Red Oak	B&B
QS	2	3" cal	Quercus shumardii / Shumard Oak	B&B
TC	12	3" cal	Tilia cordata 'Corzam' / Corzam Linden	B&B
UP	10	3" cal	Ulmus x 'Pioneer' / Pioneer Elm	B&B entry
<b>Evergreen Trees</b>				
AB	16	10'ht, 5'sp	Abies concolor / Concolor White Fir	B&B
PA	12	10'ht, 5'sp	Picea abies / Norway Spruce	B&B
PG	12	10'ht, 5'sp	Picea glauca var. densata / Black Hills Spruce	B&B
PS	14	10'ht, 5'sp	Picea glauca / White Spruce	B&B
PR	12	10'ht, 5'sp	Pinus resinosa / Red Pine	B&B
PE	23	10'ht, 5'sp	Pinus strobus / Eastern White Pine	B&B
TS	9	10'ht, 5'sp	Tsuga canadensis / Canadian Hemlock	B&B
<b>Ornamental Trees</b>				
AC	6	2" cal	Amelanchier canadensis / Shadblow Serviceberry	B&B
AG	2	2" cal	Amelanchier canadensis / Autumn Brilliance Serviceberry	B&B
BN	6	2" cal	Betula nigra / River Birch	B&B
CC	2	2" cal	Cralaegus c. inermis 'Cruzan' / Cruzam Hawthorn	B&B
MP	5	2" cal	Malus 'Prairifire' / Prairifire Crab	B&B
MS	5	2" cal	Malus 'Snowdrift' / Snowdrift Crab	B&B
PC	4	2" cal	Pyrus c. 'Cleveland Select' / Cleveland Select Pear	B&B
<b>Shrubs</b>				
AA	20	30"ht, 24" sp	Aronia arbutifolia 'Brilliantissima' / Brilliant Red Chokeberry	Cont.
AE	14	30"ht, 24" sp	Aronia melanocarpa elata / Glossy Black Chokeberry	Cont.
BD	10	30"ht, 24" sp	Buddleia d. 'Sun Gold' / 'Sun Gold' Butterfly Bush	Cont.
CA	31	30"ht, 24" sp	Cornus alba 'Regnzam' / Red Grome Dogwood	Cont.
CL	9	30"ht, 24" sp	Clethra a. 'Ruby Spice' / Ruby Spice Summersweet	Cont.
CR	7	30"ht, 24" sp	Cornus racemosa / Gray DogwoodRed Chokeberry	Cont.
EA	18	30"ht, 24" sp	Euonymus alata 'Compacta' / Dwarf Burningbush	Cont.
HV	9	30"ht, 24" sp	Hamamelis x i. 'Girard's Orange' / Girard's Orange Witch Hazel	Cont.
IV	19	30"ht, 24" sp	Itea virginia / Virginia Sweetspire	Cont.
VD	14	30"ht, 24" sp	Viburnum dentatum / Arrowwood Viburnum	Cont.
<b>Planting Materials</b>				
	+-		Topsoil Installed	
	+-		Shredded Hardwood Mulch Installed	
	+-		Terra Sorb or Approved Equal	
<b>Lawn</b>				
	+-		Seed	
	+-		Sod (owner's option)	
<b>Wetlands</b>				
	+-		Wetlands Seed Mix	LBS

**WETLAND SEED MIX -**  
 (For Impacted Wetland Areas)

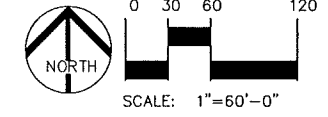
Northeast Wetland Forest Herb Mix  
 Code: STCMX-II  
 \$16000 Per Pound  
 1 pound will cover 14,500 sq. ft. @ 90+ seeds per sq. ft.  
 This mix is intended to add diversity to the herbaceous layer of forested wetland plantings. Twenty nine species commonly found in various wetland forest habitats are included; shade tolerant forest floor species typical of floodplains are well represented. Species have been selected that do not form a turf thus minimizing competition with planted trees and shrubs. The grasses and forbs in this mix will shade the soil surface, provide enhanced diversity, and yield important wildlife habitat early in the development of the forest system. The mix is produced using hand collected seed from western New York and northeastern Pennsylvania; only a limited amount is available. We recommend a seeding rate of 3 pounds per acre and that no additional grasses be planted with it.

Percent by No. of seeds (not weight)	Scientific Name	Common Name
25.96%	N Scirpus atrovirens	Green Bulrush
25.41%	N Scirpus cyperinus	Wool Grass
8.23%	N Carex vulpinoidea	Fox Sedge
7.68%	N Glyceria canadensis	Canada Mannagrass
7.63%	N Verbena hastata	Blue Vervain
6.82%	N Glyceria grandis	Reed Mannagrass
5.70%	N Glyceria striata	Fowl Mannagrass
2.12%	N Panicum clandestinum	Beertongue
1.53%	N Verbena urticifolia	White Vervain
1.51%	N Glyceria helleoaria	Helic Mannagrass
0.94%	N Boehmeria cylindrica	False Nettle
0.94%	N Urtica dioica	Stinging Nettle
0.85%	N Solidago gigantea	Giant Goldenrod
0.85%	N Solidago rugosa	Wrinkled Goldenrod
0.75%	N Cinn. arundinacea	Wood Reed
0.62%	N Leersia virginica	Whitgrass
0.57%	N Cephalanthus occidentalis	Buttonbush
0.45%	N Elymus canadensis	Wild Rye
0.38%	N Slum suave	Water Parsnip
0.32%	N Elymus virginicus	Virginia Wild Rye
0.29%	N Polygonum pennsylvanicum	Pennsylvania Smartweed
0.24%	N Geum macrophyllum	Large-Leaf Avens
0.22%	N Elymus riparius	Riverbank Wild Rye
0.19%	N Rumex verticillatus	Water Dock
0.16%	N Asclepias incarnata	Swamp Milkweed
0.09%	N Carex lurida	Shallow Sedge
0.09%	N Lilium superbum	Turk's Cap Lily
0.09%	N Rubus allegheniensis	Blackberry
0.07%	N Carex lupulina	Hop Sedge

**REPLACEMENT TREE CREDIT TABLE**

Tree Type and Size	Replacement Credits
2" Caliper Shade Tree	1 Credit
2.5" Caliper Shade Tree	1.5 Credits
3" Caliper Shade Tree	2 Credits
4" Caliper Shade Tree	3 Credits
6" Caliper Shade Tree	4 Credits
8' Evergreen Trees	1 Credit
9' Evergreen Trees	1.5 Credits
10' Evergreen Trees	2 Credits
12' Evergreen Trees	3 Credits
14' Evergreen Trees	4 Credits

**NOTES:**  
 IRRIGATION SYSTEM AND LANDSCAPE COST ESTIMATE FOR THE LANDSCAPE PLAN WILL BE PROVIDED IN THE FINAL LANDSCAPE REVIEW.

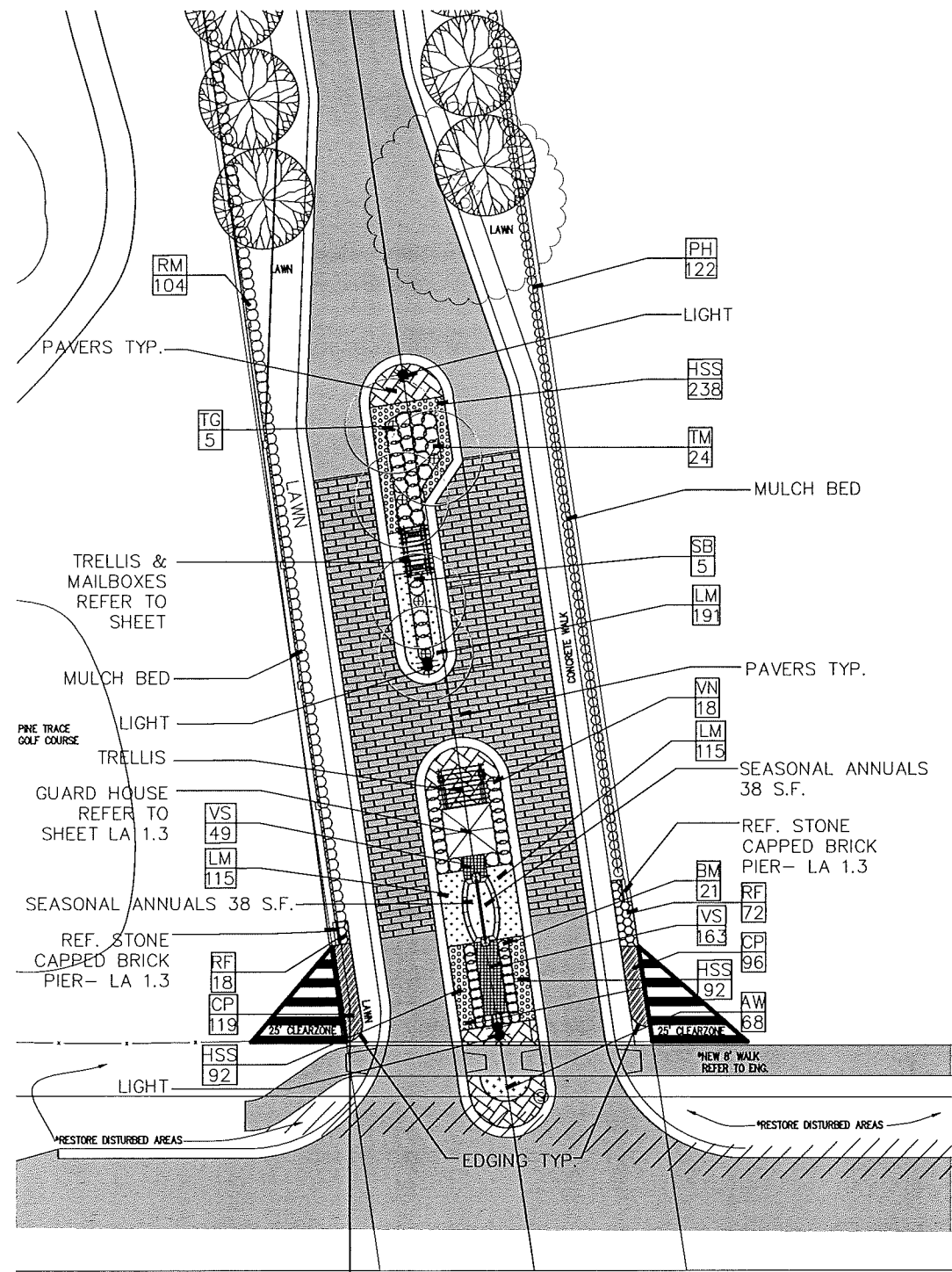


Info@designteamplus.com  
 Client: **Shadow Pines L.L.C.**  
 14955 Technology Dr.  
 Shelby Township, MI 48315  
 PH: 586.219.2212

Project: **Villas at Shadow Pines**  
 Rochester Hills  
 Oakland County  
 Michigan

Date/Revisions	Issued For
2/3/2014	Preliminary PUD Review
3/1/2014	Preliminary PUD Revision





**ENTRANCE PRELIMINARY PLANT MATERIAL SCHEDULE:**

TOT.	QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT
<b>ORNAMENTAL TREE</b>						
	5	TG	Tilia cordata 'Greenspire'	Greenspire Linden	4" Cal.	B&B
<b>SHRUBS</b>						
	21	BM	Buxus Microphylla 'Wintergreen'	Wintergreen Littleleaf Boxwood	24" Ht.	Cont.
	122	PH	Pennisetum Alopecuroides 'Hamelin'	'Hamlin' Dwarf Fountain Grass	24" Ht.	Cont.
	5	SB	Spiraea x b. 'Anthony Waterer'	Anthony Waterer Spiraea	30" Ht.	Cont.
	24	TM	Taxus x Media 'Everlow'	Everlow Yew	24" Sp.	Cont.
	18	VN	Viburnum Opulus 'Nanum'	Dwarf European Cranberrybush	24" Ht.	Cont.
	104	RM	Rosa 'Meivahyn'	Knockout Rose	24" Ht.	Cont.
<b>PERENNIALS</b>						
	68	AW	Aster 'Wood's Light Blue'	'Wood's Light Blue' Aster	12" O.C.	1 Gal. Cont.
	215	CP	Carex Pennsylvania	Pennsylvania Sedge	12" O.C.	1 Gal. Cont.
	422	HSS	Heuchera 'Silver Scrolls'	Little Princess Spiraea	18" O.C.	1 Gal. Cont.
	421	LM	Liriope Muscari 'Big Blue'	'Big Blue' Lily-Turf	12" O.C.	1 Gal. Cont.
	90	RF	Rudbeckia Fulgida 'Goldsturm'	Black Eyed Susan	18" O.C.	1 Gal. Cont.
	212	VS	Veronica Spicata 'Red Fox'	Red Fox Veronica	10" O.C.	1 Gal. Cont.
<b>ANNUALS</b>						
	76		Seasonal Plantings- To be determined			12" O.C. 1 Gal. Cont.
<b>MATERIALS</b>						
	+/-		Mulch (To Be Determined By Contractor)			CY
	+/-		Plant Mix (To Be Determined By Contractor)			CY
	+/-		Terra Sorb (Or Approved Equal)			LBS
	+/-		Edging			LF
	+/-		Pavers - Unilock Hollandstone Color: Sandstone			SF
<b>LAWN</b>						
	+/-		Seed			SF
	+/-		Sod (owner's option)			CY

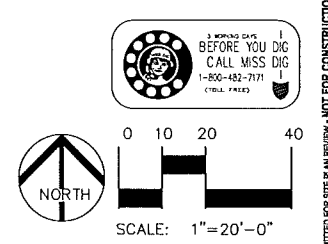
**NOTES:**  
 1. The boxwood shrubs on the entrance island and all landscaping within the 25-foot clear zones must be maintained to a height less than 30" in perpetuity.

ENTRANCE PLANTING PLAN  
 SCALE 1" = 20'-0"

P: 248. 559. 1000  
 info@designteamplus.com  
 Client: **Shadow Pines L.L.C.**  
 14955 Technology Dr.  
 Shelby Township, MI 48315  
 PH: 586.219.2212

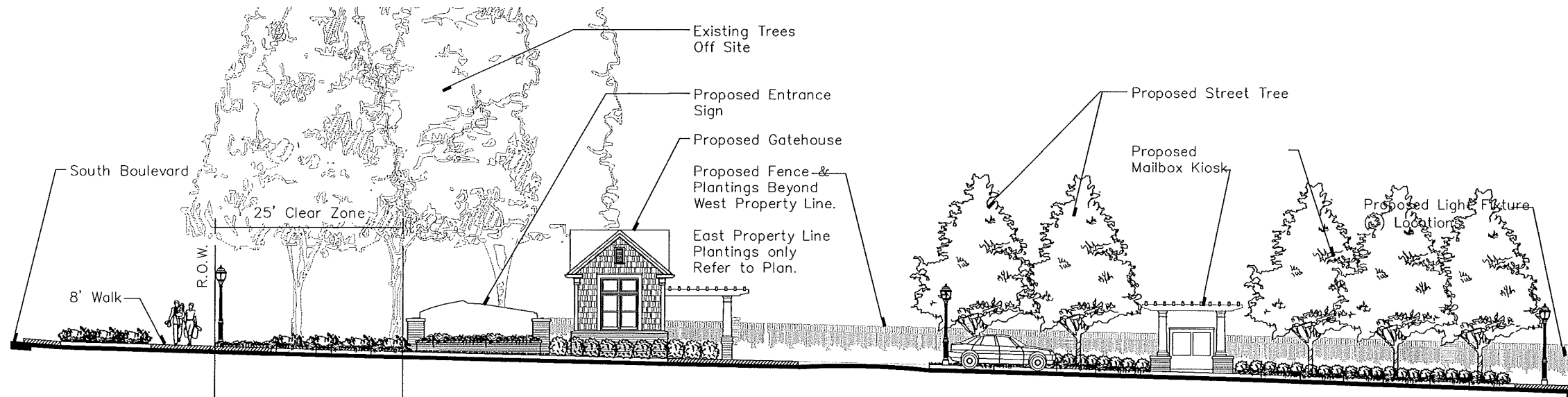
Project: **Villas at Shadow Pines**  
 Rochester Hills  
 Oakland County  
 Michigan

Designed/Drawn	RN/ME/BC
Checked/Approved	RN
Job #	28-2013
Date/Revisions	Issued For
2/3/2014	Preliminary PUD Review
3/4/2014	Preliminary PUD Revision



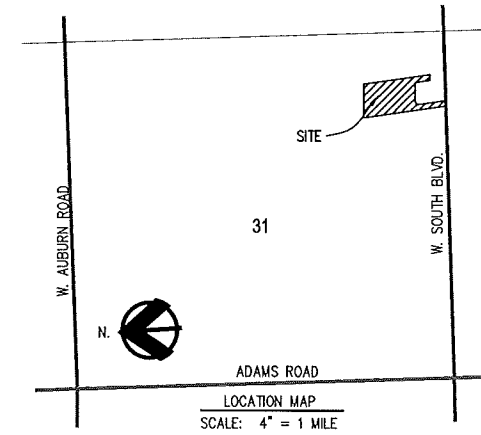
PLAN SUBMITTED FOR SITE PLAN REVIEW - NOT FOR CONSTRUCTION

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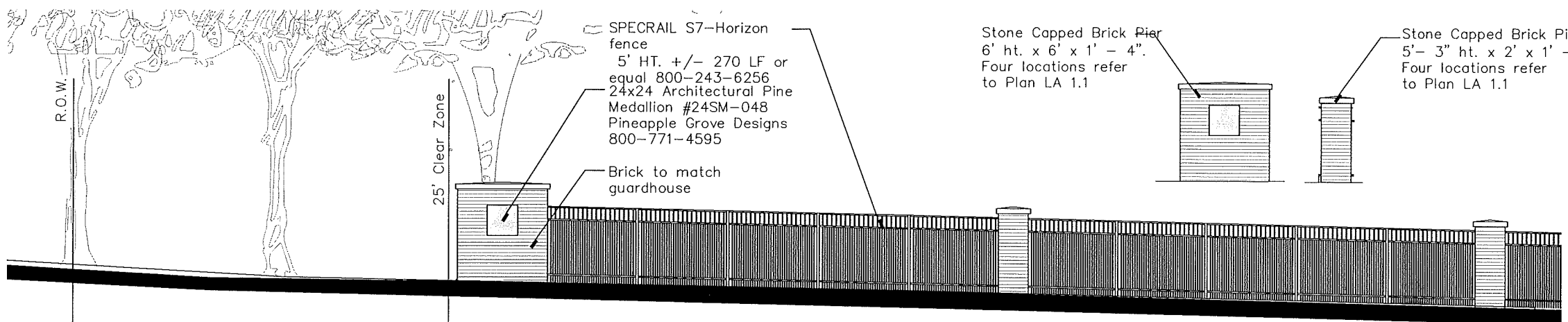
1 Entrance Elevation  
 LA-1.3

Scale: 1" = 8'-0"



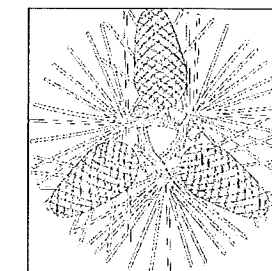
**NOTES:**

1. Base, boundary, topographic, legal description, provided by Apex Engineering Group, Inc.
2. Refer to Architectural drawings, provided by Preview Architecture + Planning for entry sign, gatehouse, and mailbox kiosk specifications.

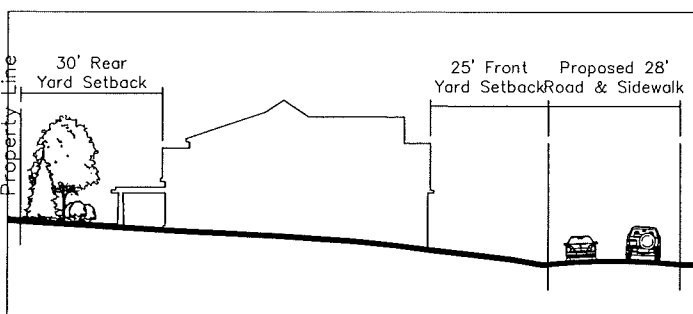


2 Decorative Fence Elevation  
 LA-1.3

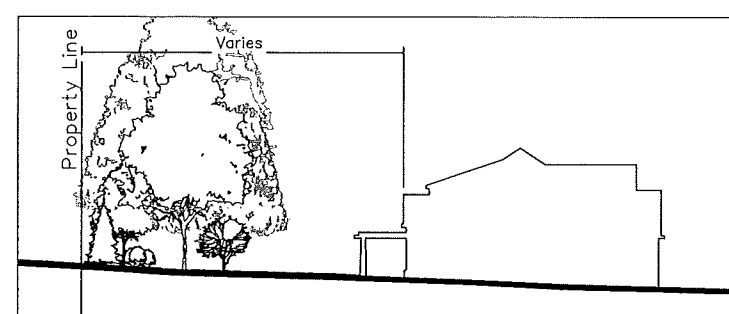
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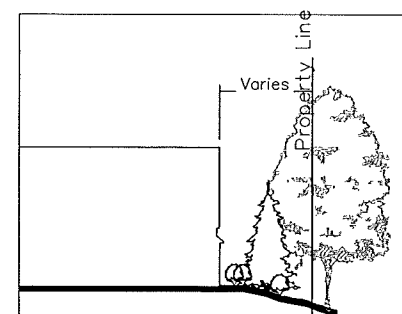
Medallion Detail: 24" X 24"  
 Model: 24SM-048  
 Pineapple Grove Designs  
 800-771-4595.



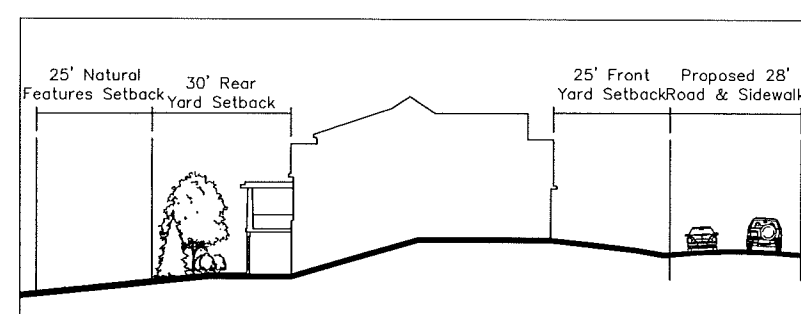
3 Section A-A - Western Property Line to Proposed Road  
 LA-1.3 NTS



4 Section B-B - Southern Property Line to Front of Building 2A  
 LA-1.3 NTS



5 Section C-C - West Side of Bldg. # to Eastern Property Line  
 LA-1.3 NTS



6 Section D-D - Southern Natural Features Setback to Proposed Road  
 LA-1.3 NTS

P: 248. 559. 1000

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Project  
**Villas at Shadow Pines**  
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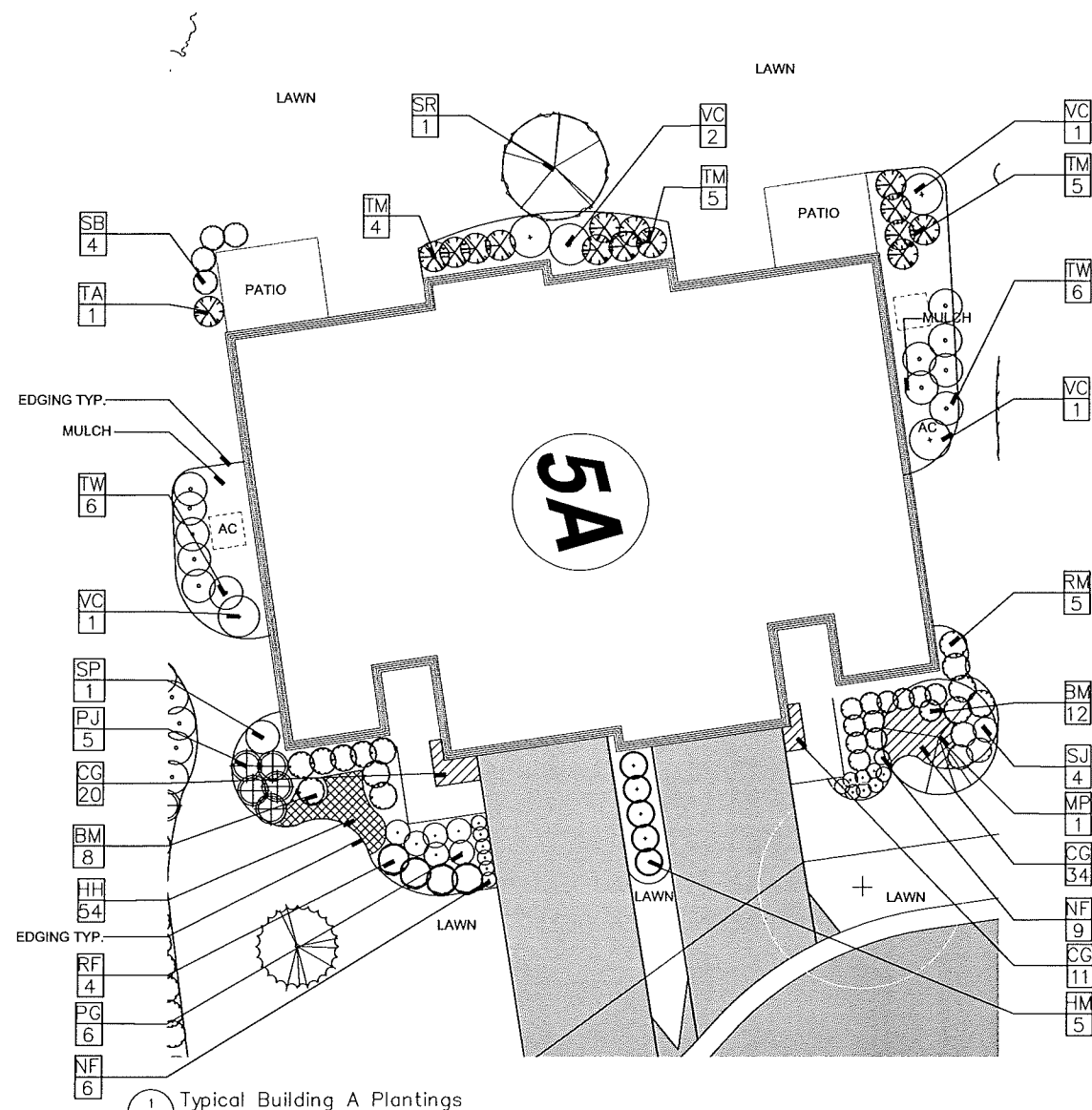
Designed/Drawn RH/MP/BC  
 Checked/Approved RH  
 Job # 28-2013  
 File

Date/Revisions Issued For  
 2/3/2014 Preliminary PSD Review  
 3/4/2014 Preliminary PSD Revision

PLAN SUBMITTED FOR SITE PLAN REVIEW - NOT FOR CONSTRUCTION

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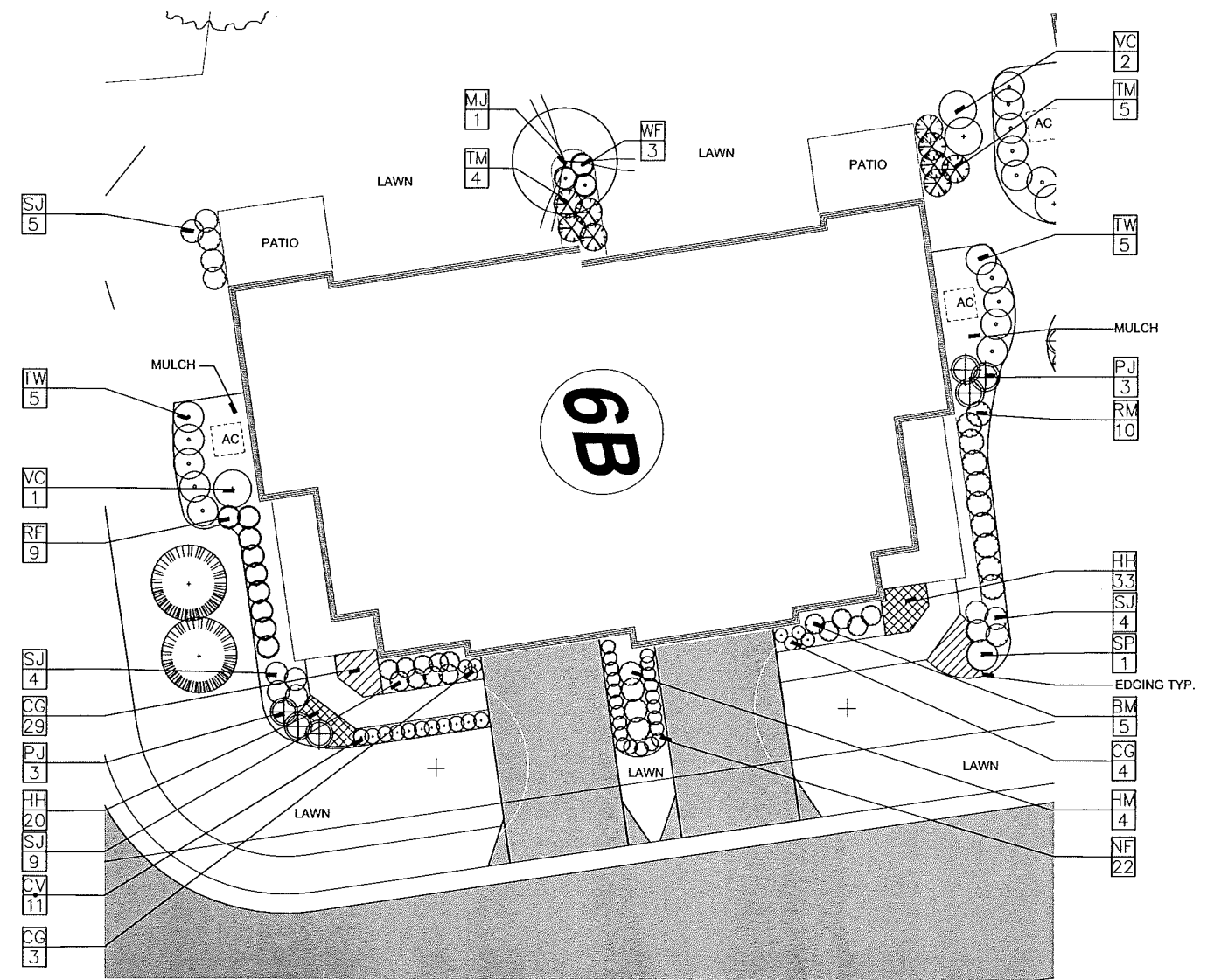




1 Typical Building A Plantings

**TYPICAL BUILDING "A" PRELIMINARY PLANT MATERIAL SCHEDULE:**

TOT.	QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT
<b>ORNAMENTAL TREE</b>						
1	MP	Malus 'Prairifire'	Prairifire Crab	2" Cal.	B&B	
1	SR	Syringa reticulata 'Ivory Silk'	Ivory Silk Tree Lilac	2" Cal.	B&B	
<b>SHRUBS</b>						
20	BM	Buxus Microphylla 'Wintergreen'	Wintergreen Littleleaf Boxwood	24" HL.	Cont.	
5	HM	Hydrangea m. 'Glowing Embers'	Glowing Embers Hydrangea	24" HL.	Cont.	
6	PG	Potentilla fruticosa 'Goldfinger'	Goldfinger Potentilla	24" HL.	Cont.	
5	PJ	Pieris japonica	Japanese Andromeda	24" HL.	Cont.	
4	RF	Rosa 'The Fairy'	The Fairy Rose	24" HL.	Cont.	
5	RM	Rosa 'Meivahyn'	Knockout Rose	24" HL.	Cont.	
4	SB	Spiraea x b. 'Anthony Waterer'	Anthony Waterer Spiraea	30" HL.	Cont.	
4	SJ	Spiraea japonica 'Little Princess'	Little Princess Spiraea	24" HL.	Cont.	
1	SP	Syringa patula 'Miss Kim'	Miss Kim Lilac	30" HL.	Cont.	
1	TA	Thuja occidentalis 'Wintergreen'	Wintergreen Arborvitae	30" HL.	Cont.	
14	TM	Taxus x media 'Everlow'	Everlow Yew	24" Sp.	Cont.	
12	TW	Taxus x media 'Wardii'	Wards Yew	24" HL.	Cont.	
5	VC	Viburnum Carlesii	Korean Spice Viburnum	24" Sp.	Cont.	
<b>PERENNIALS</b>						
65	CG	Coreopsis grandiflora 'Early Sunrise'	Early Sunrise Coreopsis	18" HL.	Cont.	
54	HH	Hemerocallis 'Happy Returns'	Happy Returns Daylily	18" HL.	Cont.	
15	NF	Nepeta faassenii 'Walker's Low'	Walker's Low Catmint	18" HL.	Cont.	
<b>MATERIALS</b>						
+/-		Mulch (To Be Determined By Contractor)			CY	
+/-		Plant Mix (To Be Determined By Contractor)			CY	
+/-		Terra Sorb (Or Approved Equal)			LBS	
+/-		Edging			LF	
+/-		Pavers - Unilock Hollandstone Color: Sandstone			SF	
<b>LAWN</b>						
+/-		Seed			SF	
+/-		Sod (owner's option)			CY	



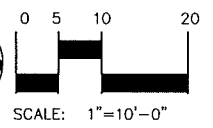
2 Typical Building B Plantings

**TYPICAL BUILDING "B" PRELIMINARY PLANT MATERIAL SCHEDULE:**

TOT.	QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT
<b>ORNAMENTAL TREE</b>						
1	MJ	Malus 'Jewelcole'	Red Jewel Crab	2" Cal.	B&B	
<b>SHRUBS</b>						
5	BM	Buxus Microphylla 'Wintergreen'	Wintergreen Littleleaf Boxwood	24" HL.	Cont.	
4	HM	Hydrangea m. 'Glowing Embers'	Glowing Embers Hydrangea	24" HL.	Cont.	
6	PJ	Pieris japonica	Japanese Andromeda	24" HL.	Cont.	
9	RF	Rosa 'The Fairy'	The Fairy Rose	24" HL.	Cont.	
10	RM	Rosa 'Meivahyn'	Knockout Rose	24" HL.	Cont.	
22	SJ	Spiraea japonica 'Little Princess'	Little Princess Spiraea	24" HL.	Cont.	
1	SP	Syringa patula 'Miss Kim'	Miss Kim Lilac	30" HL.	Cont.	
9	TM	Taxus x media 'Everlow'	Everlow Yew	24" Sp.	Cont.	
10	TW	Taxus x media 'Wardii'	Wards Yew	24" HL.	Cont.	
3	VC	Viburnum Carlesii	Korean Spice Viburnum	5' HL.	Cont.	
3	WF	Weigela florida 'Minuet'	Minuet Weigela	24" HL.	Cont.	
<b>PERENNIALS</b>						
36	CG	Coreopsis grandiflora 'Early Sunrise'	Early Sunrise Coreopsis	18" HL.	Cont.	
11	CV	Coreopsis verticillata 'Moonbeam'	Moonbeam Coreopsis	18" HL.	Cont.	
53	HH	Hemerocallis 'Happy Returns'	Happy Returns Daylily	18" HL.	Cont.	
22	NF	Nepeta faassenii 'Walker's Low'	Walker's Low Catmint	18" HL.	Cont.	
<b>MATERIALS</b>						
+/-		Mulch (To Be Determined By Contractor)			CY	
+/-		Plant Mix (To Be Determined By Contractor)			CY	
+/-		Terra Sorb (Or Approved Equal)			LBS	
+/-		Edging			LF	
+/-		Pavers - Unilock Hollandstone Color: Sandstone			SF	
<b>LAWN</b>						
+/-		Seed			SF	
+/-		Sod (owner's option)			CY	

**NOTES:**

- Plant locations are typical and may need to be field adjusted per building locations.
- Air conditioning units to be screened from roadway using evergreen vegetation. Locations may vary and need to be field adjusted.



SCALE: 1"=10'-0"

PLAN SUBMITTED FOR SITE PLAN REVIEW - NOT FOR CONSTRUCTION

GENERAL NOTES

PLANTING NOTES:

1. INSTALL AND MAINTAIN ALL LANDSCAPING ACCORDING TO ROCHESTER HILLS STANDARDS. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, THE PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
2. ALL PLANT MATERIAL TO BE PREMIUM GRADE NURSERY STOCK. PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED IN THE MOST RECENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK. CONTRACTOR TO SUPPLY NURSERY SOURCES FOR ALL PURCHASED MATERIAL. NO BARE ROOT OR PARK GRADE MATERIAL WILL BE ACCEPTED.
3. SOD: IF OWNER SELECTS THIS OPTION, CONTRACTOR WILL INSTALL SOD IN ALL AREAS INDICATED AS LAWN ON PLAN. SOD TO BE WELL ESTABLISHED, MINERAL GROWTH. SOD BLEND SHALL CONSIST OF A MINIMUM OF THREE (3) IMPROVED VARIETIES OF BLUEGRASS. ACCEPTANCE AND GUARANTEE NOTES SHALL APPLY TO ALL SOD.
4. EDGING SHALL BE A SHOVEL EDGE.
5. ALL TREE PITS MUST BE TESTED FOR PROPER DRAINAGE PRIOR TO PLANTING TREES. A DRAINAGE SYSTEM MUST BE INSTALLED IF PLANTING PIT DOES NOT DRAIN SUFFICIENTLY (REQUIRED IN HEAVY CLAY SOILS).
6. ALL LANDSCAPE AREAS SHALL HAVE PROPER DRAINAGE THAT PREVENTS EXCESS WATER FROM STANDING ON LAWN AREAS OR AROUND TREES AND SHRUBS.
7. STAKES USED FOR TREE SUPPORTS SHALL POINT AWAY FROM ANY CIRCULATION ROUTES.
8. MULCHING AND WATERING OF ALL PLANTS AND TREES SHALL BE IMMEDIATELY OR WITHIN 16 HOURS AFTER INSTALLATION.
9. THE OWNER'S REPRESENTATIVE RESERVES THE RIGHT TO REJECT ANY PLANT MATERIAL NOT MEETING SPECIFICATIONS.
10. REMOVE ALL TREE STAKES AND GUY WIRES AFTER ONE WINTER.
11. USE GRADE "A" DOUBLE SHREDDED HARDWOOD BARK.
12. DIG SHRUB PITS 1' LARGER THAN SHRUB ROOT BALLS AND TREE PITS 2' LARGER THAN ROOT BALLS. BACK FILL WITH ONE PART TOPSOIL AND ONE PART SOIL FROM THE EXCAVATED PLANTING HOLE. PLANT TREES AND SHRUBS AT THE SAME GRADE LEVEL AT WHICH THEY WERE PLANTED AT THE NURSERY. IF WET, CLAY SOILS ARE EVIDENT, PLANT TREES AND SHRUBS HIGHER.
13. REMOVE ALL TWINE, WIRE, AND BURLAP FROM THE TOP 1/3 OF TREE AND SHRUB EARTH BALLS AND FROM TREE TRUNKS.
14. LAWN TREES ARE TO BE MULCHED WITH A MINIMUM OF 4" WIDE BY 4" DEEP SHREDDED BARK FOR TRUNK PROTECTION. ONLY NATURAL-COLORED SHREDDED HARDWOOD BARK MULCH WILL BE ACCEPTED.
15. SHRUB BEDS ARE TO BE MULCHED WITH SHREDDED BARK MULCH TO A MINIMUM DEPTH OF 4". ONLY NATURAL-COLORED SHREDDED HARDWOOD BARK MULCH WILL BE ACCEPTED.
16. BACKFILL DIRECTLY BEHIND ALL CURBS AND ALONG SIDEWALKS AND COMPACT TO THE TOP OF CURB OR WALK TO SUPPORT VEHICLE AND PEDESTRIAN WEIGHT WITHOUT SETTLING.
17. ALL LANDSCAPE AREAS, SPECIAL PARKING LOT ISLANDS AND LANDSCAPE BEDS NEXT TO BUILDINGS SHALL BE EXCAVATED OF ALL BUILDING MATERIALS AND POOR SOILS TO A DEPTH OF 12"-18" AND BACK-FILLED WITH GOOD, MEDIUM TEXTURED PLANTING SOIL (LOAM OR LIGHT YELLOW CLAY). ADD 4"-6" OF TOPSOIL OVERLIFT MATERIAL AND CROWN A MINIMUM OF 6" ABOVE TOP OF CURBS AND/OR WALKS AFTER EARTH SETTLING UNLESS OTHERWISE NOTED ON THE LANDSCAPE PLAN.
18. CONVERSION OF ALL ASPHALT AND GRAVEL AREAS TO LANDSCAPE SHALL BE DONE IN THE FOLLOWING MANNER:
  - A. REMOVE ALL ASPHALT, GRAVEL AND COMPACTED EARTH TO A DEPTH OF 6"-18" DEPENDING ON THE DEPTH OF THE SUB-BASE AND DISPOSE OF OFF SITE.
  - B. REPLACE EXCAVATED MATERIAL WITH GOOD, MEDIUM TEXTURED PLANTING SOIL (LOAM OR LIGHT YELLOW CLAY) TO A MINIMUM OF 2" ABOVE TOP OF CURB AND SIDEWALK, ADD 4"-6" OF TOPSOIL AND CROWN TO A MINIMUM OF 6" ABOVE ADJACENT CURB AND WALK AFTER EARTH SETTLING UNLESS OTHERWISE NOTED ON THE LANDSCAPE PLAN.
19. IF CONVERSION TO LANDSCAPE OCCURS IN AN EXISTING (OR BETWEEN) LANDSCAPE AREA(S), REPLACE EXCAVATED MATERIAL TO 4"-6" BELOW ADJACENT EXISTING GRADES WITH GOOD MEDIUM TEXTURED PLANTING SOIL (LOAM OR LIGHT YELLOW CLAY) AND ADD 4"-6" OF TOPSOIL TO MEET EXISTING GRADES AFTER EARTH SETTLING.
20. ALL PLANT MATERIAL TO RECEIVE TERRA-SORB SUPER ABSORBENT POLYMER OR APPROVED EQUAL BY LANDSCAPE ARCHITECT, FOLLOW MANUFACTURER'S SPECIFICATIONS.

RESPONSIBILITY NOTES

1. LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, THE PLAN SHALL GOVERN QUANTITIES. CONTACT LANDSCAPE ARCHITECT WITH ANY CONCERNS.
2. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON-SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ELECTRIC, GAS, TELEPHONE, CABLE TELEVISION MAY BE LOCATED BY CALLING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF CONTRACTOR. CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES ON THE JOB AND SHALL REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER'S REPRESENTATIVE PRIOR TO COMMENCING.
3. CONTRACTOR WILL SUPPLY FINISHED GRADE AND EXCAVATE AS NECESSARY TO SUPPLY 4" TOPSOIL DEPTH IN ALL PLANTING BEDS AND 4" TOPSOIL DEPTH IN ALL LAWN AREAS USING MATERIAL FROM SPOIL PILE.
4. ACCEPTANCE OF GRADING AND SOD SHALL BE BY THE LANDSCAPE ARCHITECT AND/OR PROJECT REPRESENTATIVE AND AS DETERMINED BY THE CITY. THE CONTRACTOR SHALL ASSUME MAINTENANCE RESPONSIBILITY FOR A MINIMUM OF TWO (2) YEARS. MAINTENANCE SHALL INCLUDE WATERING, WEEDING, REPLACEMENTS OF WASHOUTS AND OTHER OPERATIONS NECESSARY TO KEEP SOD IN A THRIVING CONDITION. UPON FINAL ACCEPTANCE BY LANDSCAPE ARCHITECT AND/OR PROJECT REPRESENTATIVE AND AS DETERMINED BY THE CITY, THE OWNER SHALL ASSUME ALL MAINTENANCE RESPONSIBILITIES.
5. THE CONTRACTOR SHALL GUARANTEE ALL LANDSCAPING FOR A PERIOD OF TWO (2) YEARS BEGINNING AFTER APPROVAL BY THE CITY OF ROCHESTER HILLS 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 OF ROCHESTER HILLS LANDSCAPE ARCHITECT, WITHOUT COST TO THE OWNER.
6. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON LANDSCAPE PLAN PRIOR TO PRICING THE WORK.

CITY GENERAL NOTES

1. ALL PLANT MATERIAL SHALL MEET CURRENT STANDARDS OF THE AMERICAN ASSOCIATION OF NURSERYMEN AND APPROVED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE, INC.
2. ALL PLANT MATERIAL SHALL BE TRUE TO NAME IN CONFORMANCE TO THE CURRENT EDITION OF STANDARDIZED PLANT NAMES ESTABLISHED BY THE AMERICAN JOINT COMMITTEE ON HORTICULTURAL NOMENCLATURE, OR OTHER SOURCE ACCEPTED BY THE CITY.
3. ALL PLANT MATERIAL SHALL BE NURSERY GROWN IN A NORTHERN CLIMATE; HARDY TO THE CLIMATE OF MICHIGAN; APPROPRIATE FOR THE SOIL, CLIMATIC AND ENVIRONMENTAL CONDITIONS; AND RESISTANT TO DISEASE AND INSECT ATTACK.
4. A MINIMUM FOUR (4) INCHES OF TOPSOIL SHALL BE PROVIDED FOR ALL LAWN AREAS, GROUND COVERS, AND PLANTING BEDS.
5. ARTIFICIAL PLANT MATERIAL IS PROHIBITED AND SHALL NOT BE USED TO MEET THE REQUIREMENTS OF THIS ARTICLE.
6. LAWN AREAS SHALL BE PLANTED IN SPECIES OF GRASS NORMALLY GROWN IN MICHIGAN. GRASS MAY BE SODDED OR HYDRO-SEEDED, PROVIDED THAT ADEQUATE MEASURES ARE TAKEN TO MINIMIZE SOIL EROSION. SOD OR SEED SHALL BE CLEAN AND FREE OF WEEDS AND NOXIOUS PESTS OR DISEASE.
7. A MINIMUM 4-INCH LAYER OF SHREDDED HARDWOOD BARK SHALL BE IN ALL PLANTER BEDS CONTAINING TREES OR SHRUBS AND AROUND THE BASE OF ALL TREES PLANTED WITHIN LAWN AREAS. ALL SHRUBS PLANTED WITHIN LAWN AREAS ARE TO BE PLANTED IN GROUPS AND MULCHED AS A GROUP, AND HEDGEROWS ARE TO BE MULCHED AS ONE CONTINUOUS STRIP.
8. LIVE GROUNDCOVERS SUCH AS MYRTLE, BLUE RUG JUMPERS, BALTIC IVY AND OTHER SIMILAR VINES AND PLANT MATERIAL SHALL BE MULCHED WITH A 2-INCH LAYER OF SHREDDED HARDWOOD BARK. ANY DEVIATIONS MUST BE APPROVED BY THE CITY'S LANDSCAPE ARCHITECT.
9. PLANT MATERIALS SHALL NOT BE PLACED CLOSER THAN FOUR FEET FROM THE FENCE LINE OR PROPERTY LINE.
10. DECIDUOUS AND ALL SHRUBS MAY NOT BE PLANTED WITHIN TEN (10) FEET OF ANY CURB OR PUBLIC WALKWAY.
11. TREES AND SHRUBS MAY NOT BE PLANTED WITHIN 10 FEET OF A FIRE HYDRANT.
12. WHERE PLANT MATERIALS ARE PLANTED IN TWO OR MORE ROWS, PLANTING SHALL BE STAGGERED IN ROWS.
13. WHERE SHRUB PLANTINGS ARE REQUIRED TO FORM A CONTINUOUS HEDGE, THE PLANTS SHALL NOT BE SPACED OUT MORE THAN 36 INCHES ON CENTER AT PLANTING AND SHALL HAVE A MINIMUM HEIGHT AND SPREAD OF 30 INCHES AT PLANTING. SHRUBS THAT WILL NOT ATTAIN SUFFICIENT WIDTH TO FORM A COMPLETE HEDGE SPACED 36 INCHES ON CENTER SHALL BE PLANTED AT A SPACING THAT WILL ALLOW THEM TO FORM A COMPLETE HEDGE WITHIN TWO YEARS OF PLANTING.

LANDSCAPING NOTES

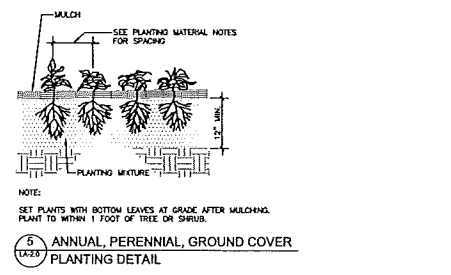
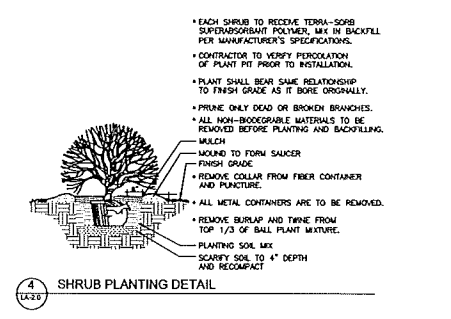
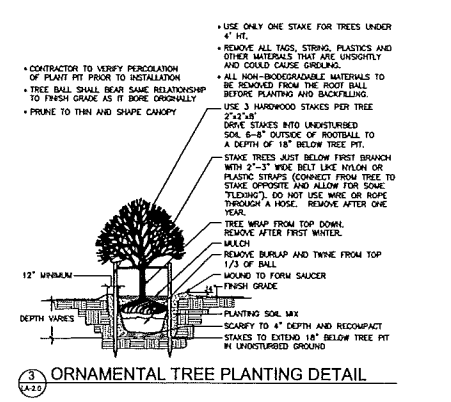
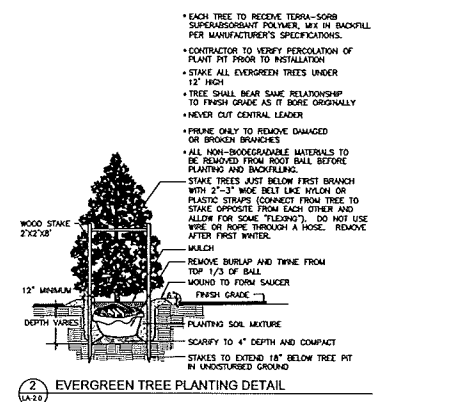
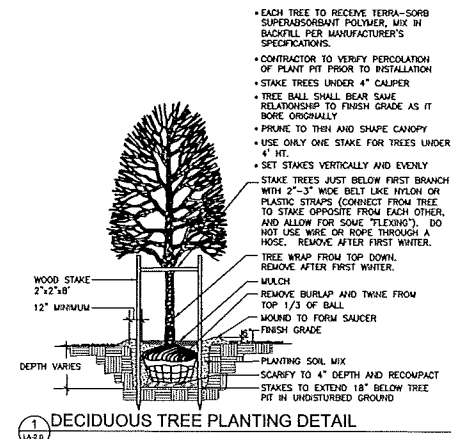
1. PRIOR TO THE RELEASE OF THE PERFORMANCE BOND, THE CITY OF ROCHESTER HILLS MUST INSPECT ALL LANDSCAPE PLANTING INCLUDING BUT NOT LIMITED TO EXISTING TREES, REPLACEMENT TREES, BUFFER PLANTINGS, AND PARKING LOT ISLANDS. THE RIGHT-OF-WAY WILL BE APPLIED BY THE FORESTRY DIVISION TO IDENTIFY ANY PLANTINGS NEW OR EXISTING THAT POSE A HAZARD TO THE SAFE USE OF THE RIGHT-OF-WAY. FORESTRY MAY REQUIRE THE DEVELOPER TO REMOVE AND POSSIBLY REPLACE ANY SUCH TREES.
2. ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF THE PUBLIC R.O.W.. SHADE TREES AND SHRUBS MUST BE PLANTED AT LEAST 5' FROM THE EDGE OF THE PUBLIC WALKWAY. EVERGREEN AND ORNAMENTAL TREES MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF THE PUBLIC WALKWAY. ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM ANY FIRE HYDRANT. SHADE AND EVERGREEN TREES MUST BE PLANTED AT LEAST 15' FROM THE NEAREST OVERHEAD WIRE AND AT LEAST 10' FROM THE NEAREST UNDERGROUND UTILITY.
3. NO TREES OR SHRUBS MAY BE PLANTED WITHIN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY STREET RIGHT-OF-WAY AT A DISTANCE OF 25' FROM THEIR POINT OF INTERSECTION. NO TREES OR SHRUBS MAY BE PLANTED IN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY DRIVEWAY WITH A PUBLIC WALKWAY AT A DISTANCE ALONG EACH LINE OF 15' FROM THEIR POINT OF INTERSECTION.
4. PRIOR APPROVAL IS REQUIRED TO PLANT ANY TREE OR SHRUB IN THE PUBLIC RIGHT-OF-WAY.
5. NO SUBSTITUTIONS OR CHANGES OF LOCATION OR PLANT TYPES SHALL BE MADE WITHOUT THE APPROVAL OF THE DEVELOPER AND THE CITY OF ROCHESTER HILLS.
6. THE DEVELOPER AND/OR THE CITY OF ROCHESTER HILLS SHALL HAVE THE RIGHT, AT ANY STAGE OF THE INSTALLATION, TO REJECT ANY WORK OR MATERIAL THAT DOES NOT MEET THE REQUIREMENTS OF THE PLANS OR SPECIFICATIONS.
7. REPLACEMENT TREES MAY NOT BE PLANTED WITHIN THE DRIP LINE OF EXISTING TREES.
8. NO SUBSTITUTIONS OR CHANGES OF LOCATION OR PLANT TYPE SHALL BE MADE WITHOUT THE APPROVAL OF THE DEVELOPER AND THE CITY OF ROCHESTER HILLS.
9. TREES MUST BE AT LEAST 10' FROM UNDERGROUND UTILITIES AND 15' FROM OVERHEAD UTILITIES.

**1 MAINTENANCE NOTES**

1. THE CLEAR ZONE SHALL BE MAINTAINED AT ALL INTERSECTIONS THAT INGRESS AND EGRESS TO THE SITE. IT IS THE OWNER'S RESPONSIBILITY TO MAINTAIN THE PLANT MATERIAL AT A HEIGHT OF NOT OVER THIRTY (30) INCHES ABOVE PAVEMENT AND PROVIDE UNOBSTRUCTED SIGHT DISTANCE FOR DRIVERS IN VEHICLES APPROACHING THE INTERSECTION.
2. VERTICAL CLEARANCE OF AT LEAST EIGHTY (80) INCHES MUST BE PROVIDED ABOVE WALKS AT ALL TIMES. IT IS THE OWNER'S RESPONSIBILITY TO MAINTAIN TREES AND OTHER OVERHANGING OBJECTS TO PROVIDE ADEQUATE HEADROOM TO COMPLY WITH ADA GUIDELINES.
3. ALL IRRIGATION WILL OCCUR BETWEEN THE HOURS OF 12AM AND 5AM.

TREE PROTECTION NOTES

1. THE TREE PROTECTION FENCING (TPF) SHALL BE ERRECTED PER THE PLANS APPROVED BY THE CITY OF ROCHESTER HILLS PLANNING DEPARTMENT. THE TPF MUST BE IN PLACE AND BE INSPECTED BY THE CITY OF ROCHESTER HILLS PRIOR TO THE START OF ANY EARTHWORK OR CONSTRUCTION OPERATIONS. IT IS THE DEVELOPER'S RESPONSIBILITY TO CONTACT THE CITY PLANNING DEPARTMENT AT 1-248-656-4660 TO SCHEDULE A TPF INSPECTION. THE TPF SHALL REMAIN IN PLACE THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS OR UNTIL THE CITY AUTHORIZES THE REMOVAL OR ISSUES A FINAL CERTIFICATE OF OCCUPANCY, WHICHEVER OCCURS FIRST.
2. UPON COMPLETION OF GRADING AND THE INSTALLATION OF THE INFRASTRUCTURE A SECOND INSPECTION OF THE TPF AND THE TREES DESIGNATED FOR PRESERVATION IS REQUIRED BY THE CITY OF ROCHESTER HILLS PRIOR TO THE START OF ANY ADDITIONAL CONSTRUCTION. IT IS THE DEVELOPER'S RESPONSIBILITY TO CONTACT THE CITY PLANNING DEPARTMENT AT 1-248-656-4660 TO SCHEDULE THIS TPF INSPECTION.
3. UPON COMPLETION OF ALL CONSTRUCTION AND PRIOR TO THE REMOVAL OF THE CITY OF ROCHESTER HILLS MUST INSPECT ALL TREES DESIGNATED TO BE PRESERVED. THE LANDSCAPE PERFORMANCE BOND WILL NOT BE RELEASED UNTIL THIS INSPECTION IS COMPLETE AND ALL RELATED ISSUES ARE RESOLVED. IT IS THE DEVELOPER'S RESPONSIBILITY TO CONTACT THE CITY PLANNING DEPARTMENT AT 1-248-656-4660 TO SCHEDULE THIS INSPECTION.
4. A FINAL INSPECTION BY THE CITY OF ROCHESTER HILLS IS REQUIRED AT THE END OF THE WARRANTY AND MAINTENANCE PERIOD. THE LANDSCAPE MAINTENANCE BOND WILL NOT BE RELEASED UNTIL THIS INSPECTION IS COMPLETE AND ALL RELATED ISSUES ARE RESOLVED. IT IS THE DEVELOPER'S RESPONSIBILITY TO CONTACT THE CITY PLANNING DEPARTMENT AT 1-248-656-4660 TO SCHEDULE THIS INSPECTION.
5. THE TREE CONSERVATION ORDINANCE PROHIBITS ANY CONSTRUCTION OR DEVELOPMENT ACTIVITIES WITHIN THE DRIP LINE OF AND REGULATED TREES NOT APPROVED FOR REMOVAL, INCLUDING BUT NOT LIMITED TO LAND CLEARING, GRUBBING, TRENCHING, GRADING OR FILLING, NO PERSON SHALL PLACE ANY SOLVENTS, BUILDING MATERIALS, CONSTRUCTION EQUIPMENT, SOIL DEPOSITS, OR HARMFUL MATERIALS WITHIN THE DRIP LINE LIMIT OF TREES DESIGNATED FOR PRESERVATION.
6. PROPOSED GRADES ARE TO MATCH THE EXISTING ELEVATIONS OUTSIDE THE LIMITS OF THE TPF. NO GRADING EITHER CUT OR FILL IS PERMITTED WITHIN THE DRIP LINE OF ANY TREE DESIGNATED FOR PRESERVATION.
7. DURING THE CONSTRUCTION PROCESS NO PERSON SHALL ATTACH ANY DEVICE OR WIRE/CABLE/CORD/ROPE TO AN EXISTING TREE DESIGNATED TO BE PRESERVED.
8. ALL UTILITY SERVICE REQUEST MUST INCLUDED NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE THE TPF.
9. SWALES SHALL BE ROUTED TO AVOID THE AREA WITHIN THE DRIP LINE OF THE ANY TREE DESIGNATED FOR PRESERVATION. SWALES SHALL BE CONSTRUCTED SO AS NOT TO DIRECT ANY ADDITIONAL FLOW INTO THE DRIP LINE A TREE DESIGNATED FOR PRESERVATION.
10. IF TREE PROTECTION CANNOT BE MAINTAINED FOR A TREE THROUGHOUT ENTIRE PERIOD REQUIRED, THE REPLACEMENT OF THAT TREE WILL BE REQUIRED ON AND INCH FOR INCH BASIS PRIOR TO THE ISSUANCE OF THE CERTIFICATE OF OCCUPANCY.
11. REGULATED TREES LOCATED OFF-SITE ON ADJACENT PROPERTIES THAT MAY BE AFFECTED BY CONSTRUCTION OPERATIONS MUST BE PROTECTED AS DEFINED HERE IN.
12. THE TPF SHALL CONSIST OF 4 FOOT HIGH ORANGE SNOW FENCING TO BE INSTALLED AROUND THE DRIP LINE OF ALL TREE DESIGNATED TO BE SAVED. THIS FENCING SHALL BE SUPPORTED BY 6 FOOT METAL T-BAR POSTS 5 FEET ON CENTER AND DRIVEN A MINIMUM OF 24" INTO GROUND. THE TPF FENCING SHALL REMAIN UPRIGHT AND SECURELY IN PLACE FOR THE REQUIRED TIME AS SPECIFIED ABOVE.



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**Project** Villas at Shadow Pines  
 Rochester Hills  
 Oakland County  
 Michigan

Designed/Drawn	RN/MP/BC
Checked/Approved	RN
Job #	28-2013
File	
Date/Revisions	Issued For
1/27/2014	Preliminary PUD Review
3/4/2014	Preliminary PUD Revision

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 Sheet

SHADOW PINES PLANT LIST::

KEY	QTY.	SIZE	BOTANICAL / COMMON NAME	ROOT
<b>Shade Trees</b>				
AF	14	3" cal	Acer x freemanii 'Celzam' / Autumn Blaze Maple	B&B
CO	8	3" cal	Cellis occidentalis / Common Hackberry	B&B
EU	6	3" cal	Eucommia ulmoides / Hardy Rubber Tree	B&B
GB	3	3" cal	Ginkgo biloba 'Autumn Gold' / Autumn Gold Maidenhair Tree	B&B
GT	21	3" cal	Gleditsia t. inermis 'Skycole' / Skyline Honey Locust	B&B
MG	9	3" cal	Melasequoia glyptostroboides / Dawn Redwood	B&B
PCo	8	6" cal	Platanus x acerifolia 'Columbia' / Columbia London Plane Tree	B&B
QA	4	3" cal	Quercus alba / White Oak	B&B
QB	7	3" cal	Quercus bicolor / Swamp White Oak	B&B
QR	3	3" cal	Quercus rubra / Red Oak	B&B
QS	2	3" cal	Quercus shumardii / Shumard Oak	B&B
TC	12	3" cal	Tilia cordata 'Corzam' / Corzam Linden	B&B
UP	10	3" cal	Ulmus x 'Pioneer' / Pioneer Elm	B&B
<b>Evergreen Trees</b>				
AB	16	10'ht, 5'sp	Abies concolor / Concolor White Fir	B&B
PA	12	10'ht, 5'sp	Picea abies / Norway Spruce	B&B
PG	12	10'ht, 5'sp	Picea glauca var. densata / Black Hills Spruce	B&B
PS	14	10'ht, 5'sp	Picea glauca / White Spruce	B&B
PE	12	10'ht, 5'sp	Pinus resinosa / Red Pine	B&B
PE	23	10'ht, 5'sp	Pinus strobus / Eastern White Pine	B&B
TS	9	10'ht, 5'sp	Tsuga canadensis / Canadian Hemlock	B&B
<b>Ornamental Trees</b>				
AC	6	2" cal	Amelanchier canadensis / Shadblow Serviceberry	B&B
AG	2	2" cal	Amelanchier canadensis / Autumn Brilliance Serviceberry	B&B
BN	6	2" cal	Betula nigra / River Birch	B&B
CC	2	2" cal	Crataegus c. inermis 'Cruzan' / Cruzam Hawthorn	B&B
MP	5	2" cal	Malus 'Prairifire' / Prairifire Crab	B&B
MS	5	2" cal	Malus 'Snowdrift' / Snowdrift Crab	B&B
PC	4	2" cal	Pyrus c. 'Cleveland Select' / Cleveland Select Pear	B&B
<b>Shrubs</b>				
AA	20	30"ht, 24" sp	Aronia arbutifolia 'Brilliantissima' / Brilliant Red Chokeberry	Cont.
AE	14	30"ht, 24" sp	Aronia melanocarpa elata / Glossy Black Chokeberry	Cont.
BD	10	30"ht, 24" sp	Buddleia d. 'Sun Gold' / 'Sun Gold' Butterfly Bush	Cont.
CA	31	30"ht, 24" sp	Cornus alba 'Regzam' / Red Grome Dogwood	Cont.
CL	9	30"ht, 24" sp	Clethra a. 'Ruby Spice' / Ruby Spice Summersweet	Cont.
CR	7	30"ht, 24" sp	Cornus racemosa / Gray DogwoodRed Chokeberry	Cont.
EA	18	30"ht, 24" sp	Euonymus alata 'Compacta' / Dwarf Burningbush	Cont.
HV	9	30"ht, 24" sp	Hamamelis x i. 'Girard's Orange' / Girard's Orange Witch Hazel	Cont.
IV	19	30"ht, 24" sp	Itea virginia / Virginia Sweetspire	Cont.
VD	14	30"ht, 24" sp	Viburnum dentatum / Arrowwood Viburnum	Cont.
<b>Planting Materials</b>				
			Topsoil Installed	UNIT
			Shredded Hardwood Mulch Installed	CY
			Terra Sorb or Approved Equal	LBS
<b>Lawn</b>				
			Seed	SF
			Sod (owner's option)	SY
<b>Wetlands</b>				
			Wetlands Seed Mix	LBS

TYPICAL BUILDING "A" PRELIMINARY PLANT MATERIAL SCHEDULE:

TOT.	QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT
<b>ORNAMENTAL TREE</b>						
	1	MP	Malus 'Prairifire'	Prairifire Crab	2" Cal.	B&B
	1	SR	Syringa reticulata 'Ivory Silk'	Ivory Silk Tree Lilac	2" Cal.	B&B
<b>SHRUBS</b>						
	20	BM	Buxus Microphylla 'Wintergreen'	Wintergreen Littleleaf Boxwood	24" Ht.	Cont.
	5	HM	Hydrangea m. 'Glowing Embers'	Glowing Embers Hydrangea	24" Ht.	Cont.
	6	PG	Potentilla fruticosa 'Goldfinger'	Goldfinger Potentilla	24" Ht.	Cont.
	5	PJ	Pieris japonica	Japanese Andromeda	24" Ht.	Cont.
	4	RF	Rosa 'The Fairy'	The Fairy Rose	24" Ht.	Cont.
	5	RM	Rosa 'Meivahyn'	Knockout Rose	24" Ht.	Cont.
	4	SB	Spiraea x b. 'Anthony Waterer'	Anthony Waterer Spiraea	30" Ht.	Cont.
	4	SJ	Spiraea japonica 'Little Princess'	Little Princess Spiraea	24" Ht.	Cont.
	1	SP	Syringa patula 'Miss Kim'	Miss Kim Lilac	30" Ht.	Cont.
	1	TA	Thuja occidentalis 'Wintergreen'	Wintergreen Arborvitae	30" Ht.	Cont.
	14	TM	Taxus x media 'Everlow'	Everlow Yew	24" Sp.	Cont.
	12	TW	Taxus x media 'Wardii'	Wards Yew	24" Ht.	Cont.
	5	VC	Viburnum Carlesii	Korean Spice Viburnum	8" Ht.	Cont.
<b>PERENNIALS</b>						
	65	CG	Coreopsis grandiflora 'Early Sunrise'	Early Sunrise Coreopsis	18" Ht.	Cont.
	54	HH	Hemerocallis 'Happy Returns'	Happy Returns Daylily	18" Ht.	Cont.
	15	NF	Nepeta faassenii 'Walker's Low'	Walker's Low Catmint	18" Ht.	Cont.
<b>MATERIALS</b>						
				Mulch (To Be Determined By Contractor)		CY
				Plant Mix (To Be Determined By Contractor)		CY
				Terra Sorb (Or Approved Equal)		LBS
				Edging		LF
				Pavers - Unilock Hollandstone		SF
				Color: Sandstone		
<b>LAWN</b>						
				Seed		SF
				Sod (owner's option)		CY

TYPICAL BUILDING "B" PRELIMINARY PLANT MATERIAL SCHEDULE:

TOT.	QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT
<b>ORNAMENTAL TREE</b>						
	1	MJ	Malus 'Jewelcole'	Red Jewel Crab	2" Cal.	B&B
<b>SHRUBS</b>						
	5	BM	Buxus Microphylla 'Wintergreen'	Wintergreen Littleleaf Boxwood	24" Ht.	Cont.
	4	HM	Hydrangea m. 'Glowing Embers'	Glowing Embers Hydrangea	24" Ht.	Cont.
	6	PJ	Pieris japonica	Japanese Andromeda	24" Ht.	Cont.
	9	RF	Rosa 'The Fairy'	The Fairy Rose	24" Ht.	Cont.
	10	RM	Rosa 'Meivahyn'	Knockout Rose	24" Ht.	Cont.
	22	SJ	Spiraea japonica 'Little Princess'	Little Princess Spiraea	24" Ht.	Cont.
	1	SP	Syringa patula 'Miss Kim'	Miss Kim Lilac	30" Ht.	Cont.
	9	TM	Taxus x media 'Everlow'	Everlow Yew	24" Sp.	Cont.
	10	TW	Taxus x media 'Wardii'	Wards Yew	24" Ht.	Cont.
	3	VC	Viburnum Carlesii	Korean Spice Viburnum	5" Ht.	Cont.
	3	WF	Weigela florida 'Minuet'	Minuet Weigela	24" Ht.	Cont.
<b>PERENNIALS</b>						
	36	CG	Coreopsis grandiflora 'Early Sunrise'	Early Sunrise Coreopsis	18" Ht.	Cont.
	11	CV	Coreopsis verticillata 'Moonbeam'	Moonbeam Coreopsis	18" Ht.	Cont.
	53	HH	Hemerocallis 'Happy Returns'	Happy Returns Daylily	18" Ht.	Cont.
	22	NF	Nepeta faassenii 'Walker's Low'	Walker's Low Catmint	18" Ht.	Cont.
<b>MATERIALS</b>						
				Mulch (To Be Determined By Contractor)		CY
				Plant Mix (To Be Determined By Contractor)		CY
				Terra Sorb (Or Approved Equal)		LBS
				Edging		LF
				Pavers - Unilock Hollandstone		SF
				Color: Sandstone		
<b>LAWN</b>						
				Seed		SF
				Sod (owner's option)		CY

ENTRANCE PRELIMINARY PLANT MATERIAL SCHEDULE:

TOT.	QTY.	KEY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT
<b>ORNAMENTAL TREE</b>						
	5	TG	Tilia cordata 'Greenspire'	Greenspire Linden	4" Cal.	B&B
<b>SHRUBS</b>						
	21	BM	Buxus Microphylla 'Wintergreen'	Wintergreen Littleleaf Boxwood	24" Ht.	Cont.
	122	PH	Pennisetum Alopecuroides 'Hamelin'	'Hamlin' Dwarf Fountain Grass	24" Ht.	Cont.
	5	SB	Spiraea x b. 'Anthony Waterer'	Anthony Waterer Spiraea	30" Ht.	Cont.
	24	TM	Taxus x Media 'Everlow'	Everlow Yew	24" Sp.	Cont.
	18	VN	Viburnum Opulus 'Nanum'	Dwarf European Cranberrybush	24" Ht.	Cont.
	104	RM	Rosa 'Meivahyn'	Knockout Rose	24" Ht.	Cont.
<b>PERENNIALS</b>						
	68	AW	Aster 'Wood's Light Blue'	'Wood's Light Blue' Aster	12" O.C.	1 Gal. Cont.
	215	CP	Carex Pennsylvania	Pennsylvania Sedge	12" O.C.	1 Gal. Cont.
	422	HSS	Heuchera 'Silver Scrolls'	Little Princess Spiraea	18" O.C.	1 Gal. Cont.
	421	LM	Liriope Muscari 'Big Blue'	'Big Blue' Lily-Turf	12" O.C.	1 Gal. Cont.
	90	RF	Rudbeckia Fulgida 'Goldsturm'	Black Eyed Susan	18" O.C.	1 Gal. Cont.
	212	VS	Veronica Spicata 'Red Fox'	Red Fox Veronica	10" O.C.	1 Gal. Cont.
<b>ANNUALS</b>						
	76			Seasonal Plantings- To be determined	12" O.C.	1 Gal. Cont.
<b>MATERIALS</b>						
				Mulch (To Be Determined By Contractor)		CY
				Plant Mix (To Be Determined By Contractor)		CY
				Terra Sorb (Or Approved Equal)		LBS
				Edging		LF
				Pavers - Unilock Hollandstone		SF
				Color: Sandstone		
<b>LAWN</b>						
				Seed		SF
				Sod (owner's option)		CY

ADDITIONAL NOTES:

\* All landscape areas to have an automatic irrigation system. Irrigation Plan will be provided by John Deere Irrigation Distributor for the final PUD approval.

Irrigation will occur between the hours of midnight and 5 a.m. Irrigation of all landscape areas including buffer areas and street trees.

IRRIGATION SYSTEM:  
The irrigation will be designed for each building and the adjacent common areas.  
Contractor to coordinate to provide irrigation for all landscape areas.

242,642 S.F. Total Site Square Footage for Seed  
or  
26,960 S.Y. Total Site Square Yards for Seed Cost  
Cost approx. \$0.85 per yard or \$22,916.00 Total



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PH: 586.219.2212

Project: Villas at Shadow Pines  
Rochester Hills  
Oakland County  
Michigan

Design/Drawn	RN/MP/BC
Checked/Approved	RN
Job #	28-2013
File	
Date/Revisions	Issued For
1/27/2014	Preliminary PUD Review
3/4/2014	Preliminary PUD Revision

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SHADOW PINES PLANT LIST::

KEY	QTY.	SIZE	BOTANICAL / COMMON NAME	UNIT PRICE	TOTAL
<b>SHADE TREES</b>					
AF	14	3" cal	Acer x freemanii 'Celzam' / Autumn Blaze Maple		
CO	8	3" cal	Celtis occidentalis / Common Hackberry		
EU	6	3" cal	Eucommia ulmoides / Hardy Rubber Tree		
GB	3	3" cal	Ginkgo biloba 'Autumn Gold' / Autumn Gold Maidenhair Tree		
GT	21	3" cal	Gleditsia l. inermis 'Skycole' / Skyline Honey Locust		
MG	9	3" cal	Metasequoia glyptostroboides / Dawn Redwood		
PCo	8	6" cal	Platanus x acerifolia 'Columbia' / Columbia London Plane Tree		
QA	4	3" cal	Quercus alba / White Oak		
QB	7	3" cal	Quercus bicolor / Swamp White Oak		
QR	3	3" cal	Quercus rubra / Red Oak		
QS	2	3" cal	Quercus shumardii / Shumard Oak		
TC	12	3" cal	Tilia cordata 'Corzam' / Corzam Linden		
UP	10	3" cal	Ulmus x 'Pioneer' / Pioneer Elm		

Evergreen Trees

AB	16	10"ht, 5"sp	Abies concolor / Concolor White Fir		
PA	12	10"ht, 5"sp	Picea abies / Norway Spruce		
PG	12	10"ht, 5"sp	Picea glauca var. densata / Black Hills Spruce		
PS	14	10"ht, 5"sp	Picea glauca / White Spruce		
PR	12	10"ht, 5"sp	Pinus resinosa / Red Pine		
PE	23	10"ht, 5"sp	Pinus strobus / Eastern White Pine		
TS	9	10"ht, 5"sp	Tsuga canadensis / Canadian Hemlock		

ORNAMENTAL TREES

AC	6	2" cal	Amelanchier canadensis / Shadblow Serviceberry		
AG	2	2" cal	Amelanchier canadensis / Autumn Brilliance Serviceberry		
BN	6	2" cal	Betula nigra / River Birch		
CC	2	2" cal	Crataegus c. inermis 'Cruzan' / Cruzan Hawthorn		
MP	5	2" cal	Malus 'Prairifire' / Prairifire Crab		
MS	5	2" cal	Malus 'Snowdrift' / Snowdrift Crab		
PC	4	2" cal	Pyrus c. 'Cleveland Select' / Cleveland Select Pear		

SHRUBS

AA	20	30"ht, 24" sp	Aronia arbutifolia 'Brilliantissima' / Brilliant Red Chokeberry		
AE	14	30"ht, 24" sp	Aronia melanocarpa elata / Glossy Black Chokeberry		
BD	10	30"ht, 24" sp	Buddleia d. 'Sun Gold' / 'Sun Gold' Butterfly Bush		
CA	31	30"ht, 24" sp	Cornus alba 'Regnzam' / Red Grome Dogwood		
CL	9	30"ht, 24" sp	Clethra a. 'Ruby Spice' / Ruby Spice Summersweet		
CR	7	30"ht, 24" sp	Cornus racemosa / Gray Dogwood/Red Chokeberry		
EA	18	30"ht, 24" sp	Euonymus alata 'Compacta' / Dwarf Burningbush		
HV	9	30"ht, 24" sp	Hamamelis x i. 'Girard's Orange' / Girard's Orange Witch Hazel		
IV	19	30"ht, 24" sp	Itea virginia / Virginia Sweetspire		
VD	14	30"ht, 24" sp	Viburnum dentatum / Arrowwood Viburnum		

MATERIALS

+/-	Topsoil Installed
+/-	Shredded Hardwood Mulch Installed
+/-	Terra Sorb or Approved Equal

LAWN

+/-	Seed
+/-	Sod (owner's option)

WETLANDS

+/-	Wetlands Seed Mix
-----	-------------------

OTHER

+/-	(Specify as needed)
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TYPICAL BUILDING "A" PRELIMINARY PLANT MATERIAL SCHEDULE:

TOT.	QTY.	KEY	BOTANICAL NAME	COMMON NAME	UNIT PRICE	TOTAL
<b>ORNAMENTAL TREE</b>						
1	MP	Malus 'Prairifire'	Prairifire Crab			
1	SR	Syringa reticulata 'Ivory Silk'	Ivory Silk Tree Lilac			
<b>SHRUBS</b>						
20	BM	Buxus Microphylla 'Wintergreen'	Wintergreen Littleleaf Boxwood			
5	HM	Hydrangea m. 'Glowing Embers'	Glowing Embers Hydrangea			
6	PG	Potentilla fruticosa 'Goldfinger'	Goldfinger Potentilla			
5	PJ	Pieris japonica	Japanese Andromeda			
4	RF	Rosa 'The Fairy'	The Fairy Rose			
5	RM	Rosa 'Meivahyn'	Knockout Rose			
4	SB	Spiraea x b. 'Anthony Waterer'	Anthony Waterer Spiraea			
4	SJ	Spiraea japonica 'Little Princess'	Little Princess Spiraea			
1	SP	Syringa patula 'Miss Kim'	Miss Kim Lilac			
1	TA	Thuja occidentalis 'Wintergreen'	Wintergreen Arborvitae			
14	TM	Taxus x media 'Everlow'	Everlow Yew			
12	TW	Taxus x media 'Wardii'	Wards Yew			
5	VC	Viburnum Carlesii	Korean Spice Viburnum			
<b>PERENNIALS</b>						
65	CG	Coreopsis grandiflora 'Early Sunrise'	Early Sunrise Coreopsis			
54	HH	Hemerocallis 'Happy Returns'	Happy Returns Daylily			
15	NF	Nepeta faassenii 'Walker's Low'	Walker's Low Catmint			
<b>MATERIALS</b>						
+/-	Mulch (To Be Determined By Contractor)					
+/-	Plant Mix (To Be Determined By Contractor)					
+/-	Terra Sorb (Or Approved Equal)					
+/-	Edging					
+/-	Pavers - Unilock Hollandstone Color: Sandstone					
<b>LAWN</b>						
+/-	Seed					
+/-	Sod (owner's option)					
<b>OTHER</b>						
+/-	(Specify as needed)					

TYPICAL BUILDING "B" PRELIMINARY PLANT MATERIAL SCHEDULE:

TOT.	QTY.	KEY	BOTANICAL NAME	COMMON NAME	UNIT PRICE	TOTAL
<b>ORNAMENTAL TREE</b>						
1	MJ	Malus 'Jewelcole'	Red Jewel Crab			
<b>SHRUBS</b>						
5	BM	Buxus Microphylla 'Wintergreen'	Wintergreen Littleleaf Boxwood			
4	HM	Hydrangea m. 'Glowing Embers'	Glowing Embers Hydrangea			
6	PJ	Pieris japonica	Japanese Andromeda			
9	RF	Rosa 'The Fairy'	The Fairy Rose			
10	RM	Rosa 'Meivahyn'	Knockout Rose			
22	SJ	Spiraea japonica 'Little Princess'	Little Princess Spiraea			
1	SP	Syringa patula 'Miss Kim'	Miss Kim Lilac			
9	TM	Taxus x media 'Everlow'	Everlow Yew			
10	TW	Taxus x media 'Wardii'	Wards Yew			
3	VC	Viburnum Carlesii	Korean Spice Viburnum			
3	WF	Weigela florida 'Minuet'	Minuet Weigela			
<b>PERENNIALS</b>						
36	CG	Coreopsis grandiflora 'Early Sunrise'	Early Sunrise Coreopsis			
11	CV	Coreopsis verticillata 'Moonbeam'	Moonbeam Coreopsis			
53	HH	Hemerocallis 'Happy Returns'	Happy Returns Daylily			
22	NF	Nepeta faassenii 'Walker's Low'	Walker's Low Catmint			
<b>MATERIALS</b>						
+/-	Mulch (To Be Determined By Contractor)					
+/-	Plant Mix (To Be Determined By Contractor)					
+/-	Terra Sorb (Or Approved Equal)					
+/-	Edging					
+/-	Pavers - Unilock Hollandstone Color: Sandstone					
+/-	Seed					
+/-	Sod (owner's option)					
<b>OTHER</b>						
+/-	(Specify as needed)					

ENTRANCE PRELIMINARY PLANT MATERIAL SCHEDULE:

TOT.	QTY.	KEY	BOTANICAL NAME	COMMON NAME	UNIT PRICE	TOTAL
<b>ORNAMENTAL TREE</b>						
5	TG	Tilia cordata 'Greenspire'	Greenspire Linden			
<b>SHRUBS</b>						
21	BM	Buxus Microphylla 'Wintergreen'	Wintergreen Littleleaf Boxwood			
122	PH	Pennisetum Alopecuroides 'Hamelin'	'Hamlin' Dwarf Fountain Grass			
5	SB	Spiraea x b. 'Anthony Waterer'	Anthony Waterer Spiraea			
24	TM	Taxus x Media 'Everlow'	Everlow Yew			
18	VN	Viburnum Opulus 'Nanum'	Dwarf European Cranberrybush			
104	RM	Rosa 'Meivahyn'	Knockout Rose			
<b>PERENNIALS</b>						
68	AW	Aster 'Wood's Light Blue'	'Wood's Light Blue' Aster			
215	CP	Carex Pennsylvania	Pennsylvania Sedge			
422	HSS	Heuchera 'Silver Scrolls'	Little Princess Spiraea			
421	LM	Liriope Muscari 'Big Blue'	'Big Blue' Lily-Turf			
90	RF	Rudbeckia Fulgida 'Goldsturm'	Black Eyed Susan			
212	VS	Veronica Spicata 'Red Fox'	Red Fox Veronica			
<b>ANNUALS</b>						
76		Seasonal Plantings- To be determined				
<b>MATERIALS</b>						
+/-	Mulch (To Be Determined By Contractor)					
+/-	Plant Mix (To Be Determined By Contractor)					
+/-	Terra Sorb (Or Approved Equal)					
+/-	Edging					
+/-	Pavers - Unilock Hollandstone Color: Sandstone					
<b>LAWN</b>						
+/-	Seed					
+/-	Sod (owner's option)					
<b>OTHER</b>						
+/-	(Specify as needed)					

ADDITIONAL NOTES:

242,642 S.F. Total Site Square Footage for Seed  
or  
26,960 S.Y. Total Site Square Yards for Seed Cost  
Cost approx. \$0.85 per yard or \$22,916.00 Total

UNIT "A" PLANTINGS	\$
x 8 BUILDINGS	\$
UNIT "B" PLANTINGS	\$
x 6 BUILDINGS	\$
Total of ALL BUILDINGS	\$
ENTRANCE PLANTINGS	\$
BUFFER, REPLACEMENT & LANDSCAPE REQUIREMENTS	\$
GRAND TOTAL	\$



DesignTeam+  
975 E. Maple Road, Suite 210  
Birmingham, Michigan 48009

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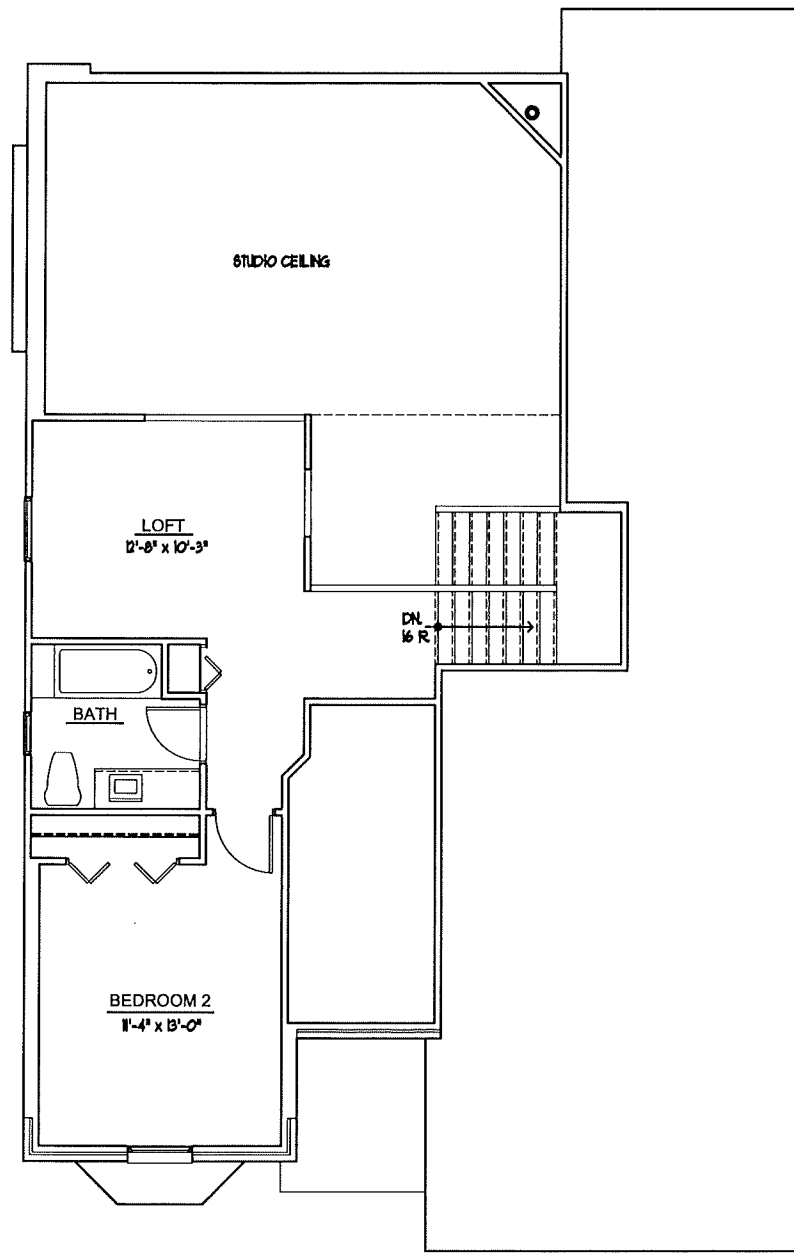
info@designteamplus.com  
Seek Shadow Pines L.L.C.  
14955 Technology Dr.  
Shelby Township, MI  
48315  
PH: 586.219.2212

Project  
Villas at  
Shadow Pines  
Rochester Hills  
Oakland County  
Michigan

Designed/Drawn	RH/MP/BC
Checked/Approved	RH
Job #	28-2013
File	
Date/Revisions	Issued For
1/27/2014	Preliminary PLD Review
4/7/2014	Cost Estimate

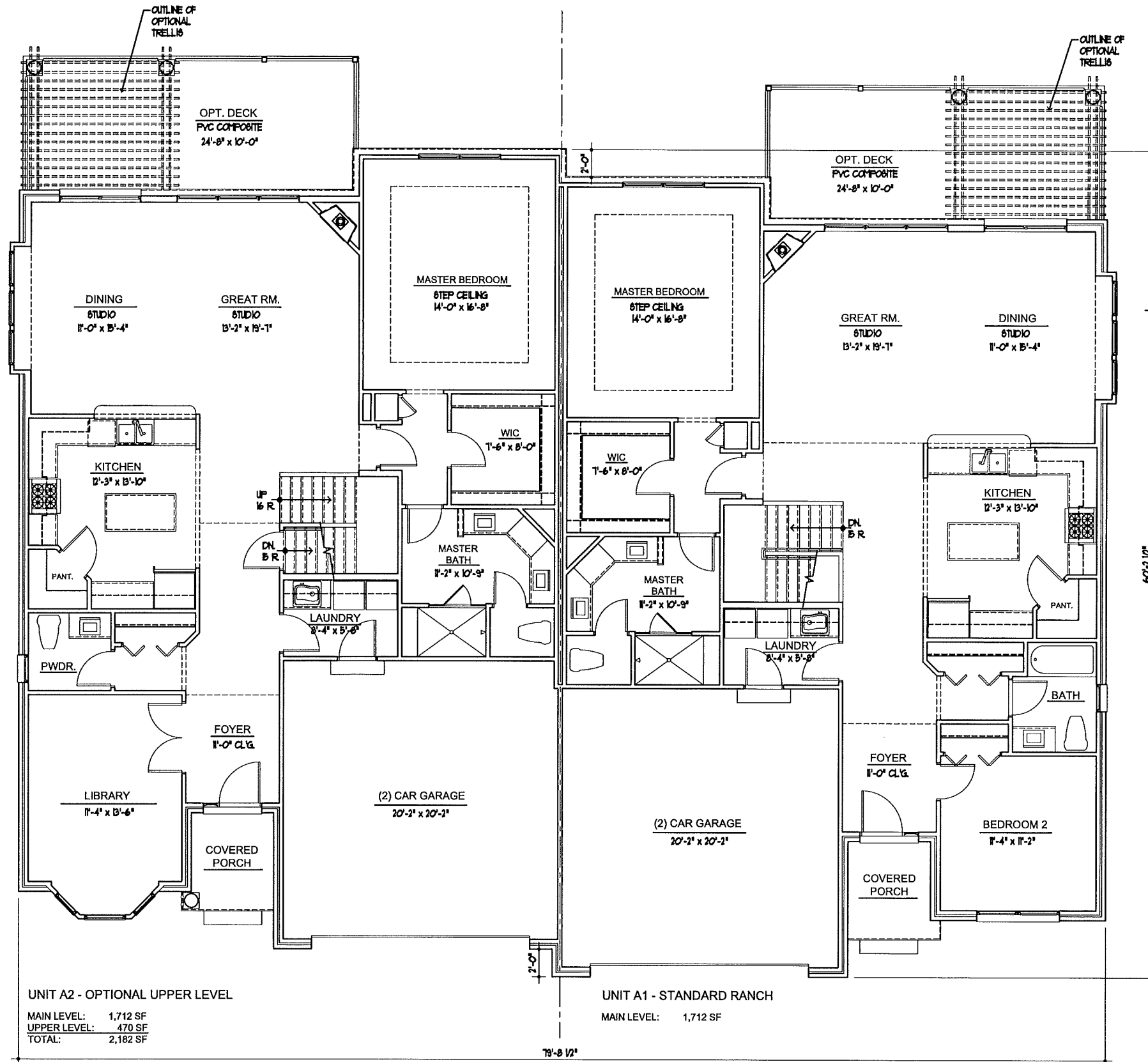






1/A1.0 floor plan - optional upper level - building a

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



UNIT A2 - OPTIONAL UPPER LEVEL

MAIN LEVEL: 1,712 SF  
UPPER LEVEL: 470 SF  
TOTAL: 2,182 SF

UNIT A1 - STANDARD RANCH

MAIN LEVEL: 1,712 SF

1/A1.0 floor plan - main level - building a

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

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**preview**  
ARCHITECTURE + PLANNING, L.L.C.  
570 East Snell Road  
Ph 248.303.1446

PROJECT:  
A Multi-Family Project  
Villas at Shadow Pines  
Rochester Hills Michigan

CLIENT:  
Shadow Pines, LLC  
21872 23 Mile Road  
Macomb Township, MI 48042

NO	DESCRIPTION	DATE
4	MECHANICAL APPROVAL, RESIDENTIAL	02/04/14
5	SITE PLAN APPROVAL, RESIDENTIAL	02/03/14
2	SITE PLAN APPROVAL, RESIDENTIAL	02/04/14
1	SITE PLAN APPROVAL, RESIDENTIAL	02/03/14

SHEET TITLE:  
FLOOR PLANS - BUILDING A

PROJECT NUMBER:  
2013-127

DRAWN BY:  
KMB

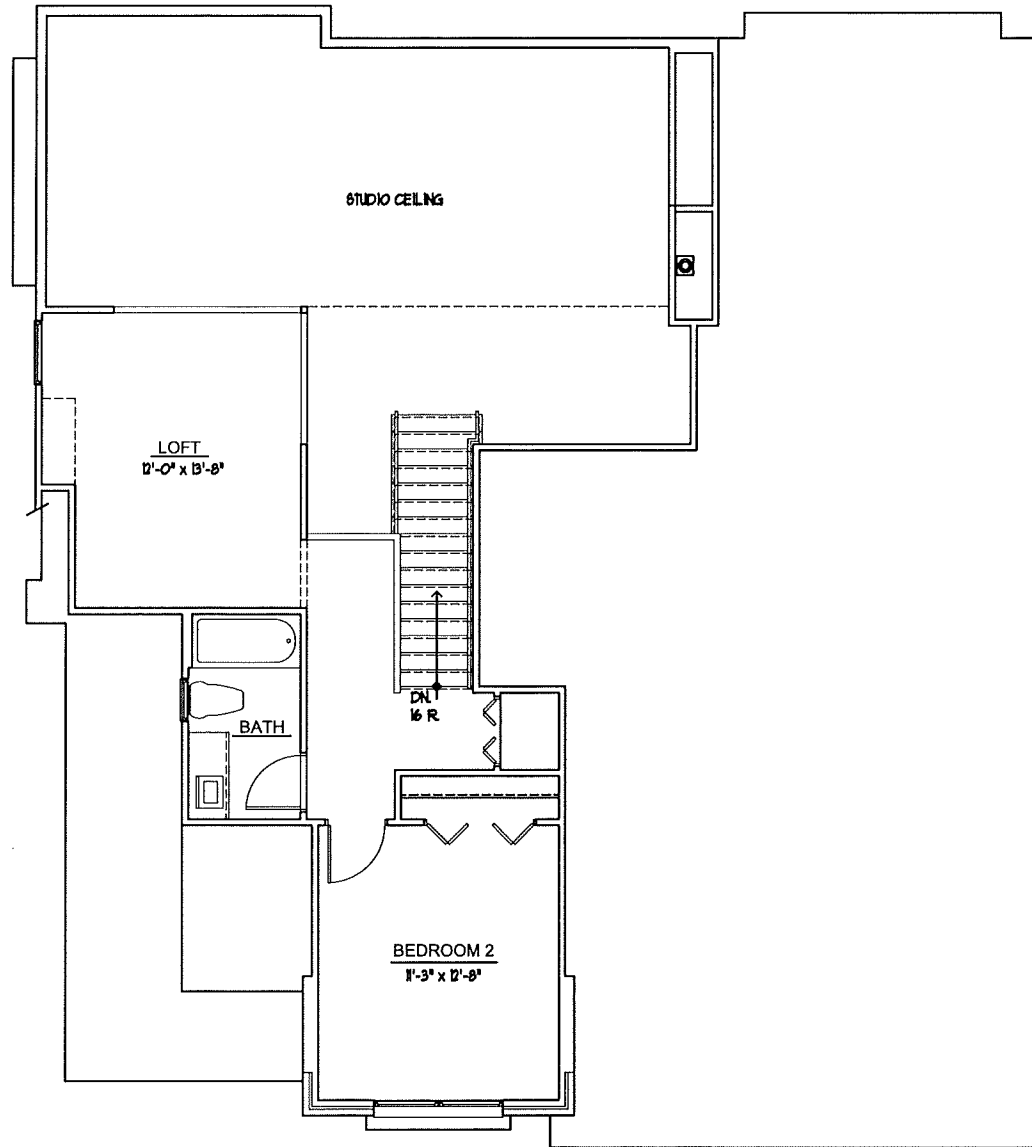
CHECKED BY:  
KMB

SHEET NUMBER:  
**A 1.0**

Fort Collins, Colorado  
Rochester, Michigan

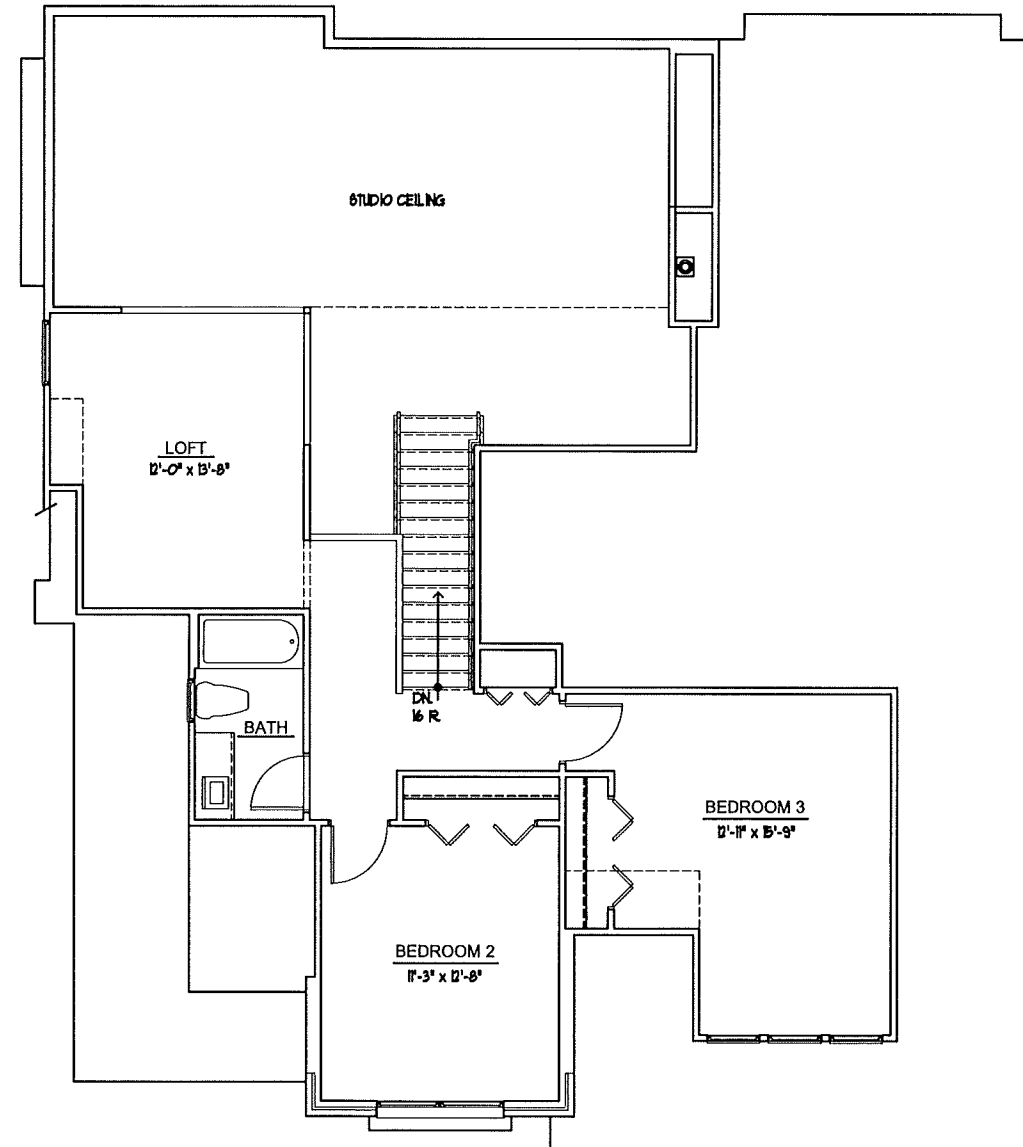






1/A1.2 floor plan - optional upper level 1 - building b

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



2/A1.2 floor plan - optional upper level 2 - building b

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

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**preview**  
 ARCHITECTURE + PLANNING, L.L.C.  
 570 East Snell Road - Rochester - Michigan - 48306  
 Ph 248.303.1446  
 Fort Collins, Colorado  
 Rochester, Michigan

PROJECT:

A Multi-Family Project  
 Villas at  
 Shadow Pines  
 Rochester Hills  
 Michigan

CLIENT:

Shadow Pines, LLC  
 21872 23 Mile Road  
 Macomb Township, MI 48042

NO	DESCRIPTION	DATE
4	TECHNICAL APPROVAL REVISIONAL	CMAN
3	REV PLAN APPROVAL RE-REVISIONAL	CMAN
2	REV PLAN APPROVAL RE-REVISIONAL	CMAN
1	REV PLAN APPROVAL REVISIONAL	CMAN

SHEET TITLE:  
**FLOOR PLANS -  
 BUILDING B**

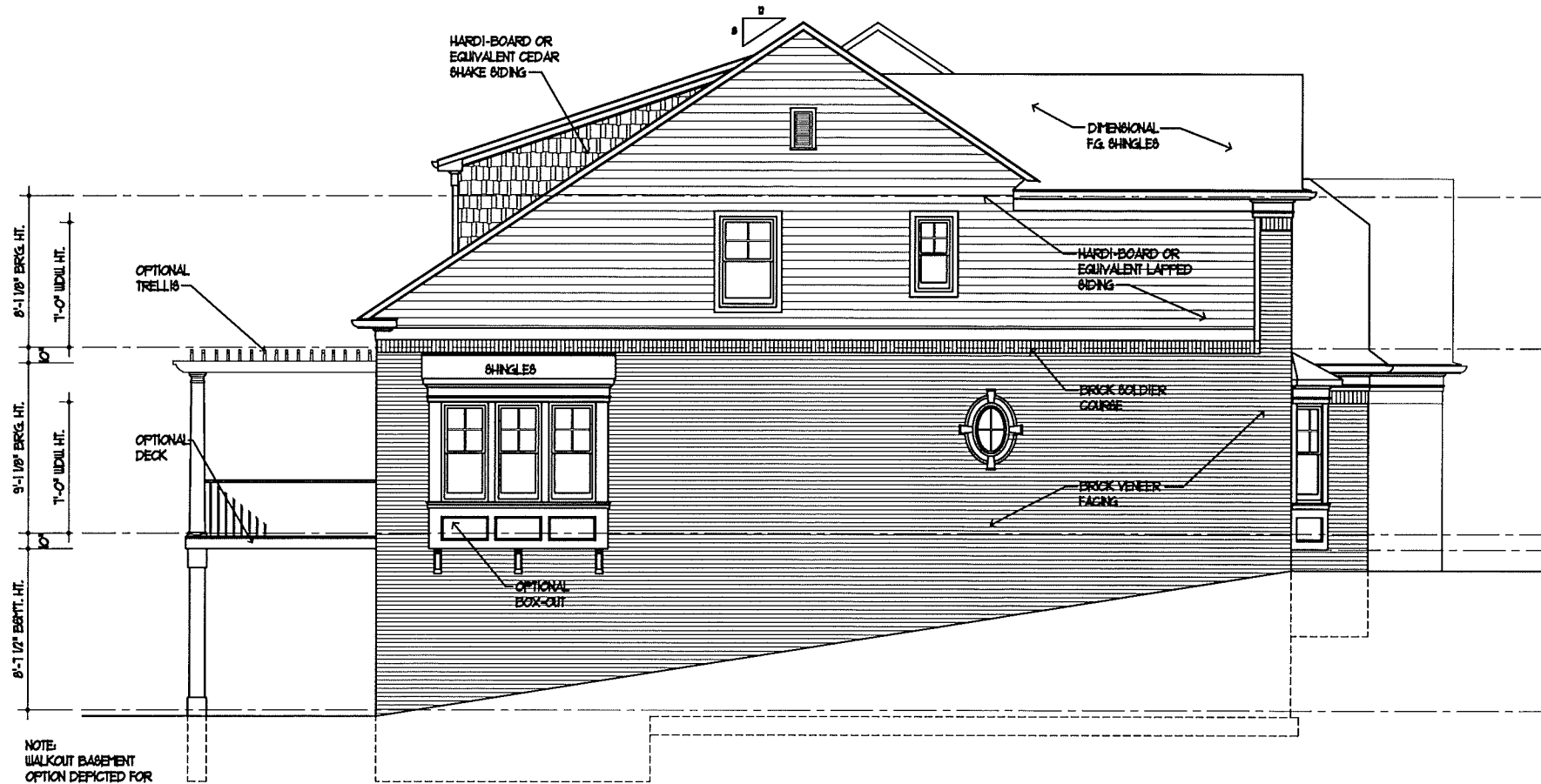
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 2013-127

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 KMB

CHECKED BY:  
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SHEET NUMBER:  
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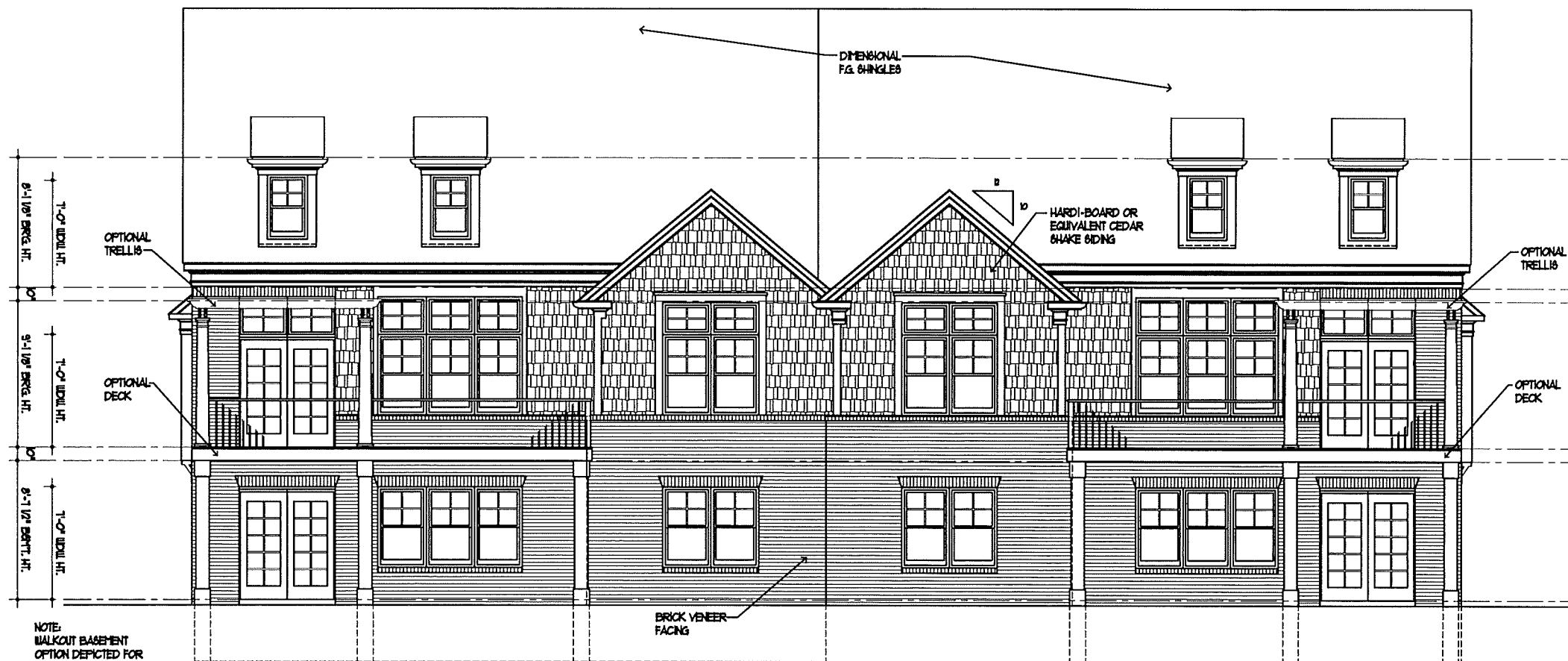




NOTE: WALKOUT BASEMENT OPTION DEPICTED FOR PRELIMINARY SUBMITTAL. FINAL GRADES OF EACH BUILDING TO BE DETERMINED.

2/A3.1 left building elevation - building a

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



NOTE: WALKOUT BASEMENT OPTION DEPICTED FOR PRELIMINARY SUBMITTAL. FINAL GRADES OF EACH BUILDING TO BE DETERMINED.

1/A3.1 rear building elevation - building a

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

**preview**  
 ARCHITECTURE + PLANNING, L.L.C.  
 570 East Snell Road - Rochester - Michigan - 48306  
 Ph. 248.303.1446

Rochester, Michigan  
 Fort Collins, Colorado

PROJECT:  
 A Multi-Family Project  
**Villas at Shadow Pines**  
 Rochester Hills Michigan

CLIENT:  
**Shadow Pines, LLC**  
 21872 23 Mile Road  
 Macomb Township, MI 48042

NO.	DESCRIPTION	DATE
4	TECHNICAL APPROVAL SUBMITTAL	02/04/14
3	SITE PLAN APPROVAL SUBMITTAL	01/08/14
2	SITE PLAN APPROVAL SUBMITTAL	01/08/14
1	SITE PLAN APPROVAL SUBMITTAL	01/08/14

SHEET TITLE:  
**EXTERIOR ELEVATIONS - BUILDING A**

PROJECT NUMBER:  
 2013-127

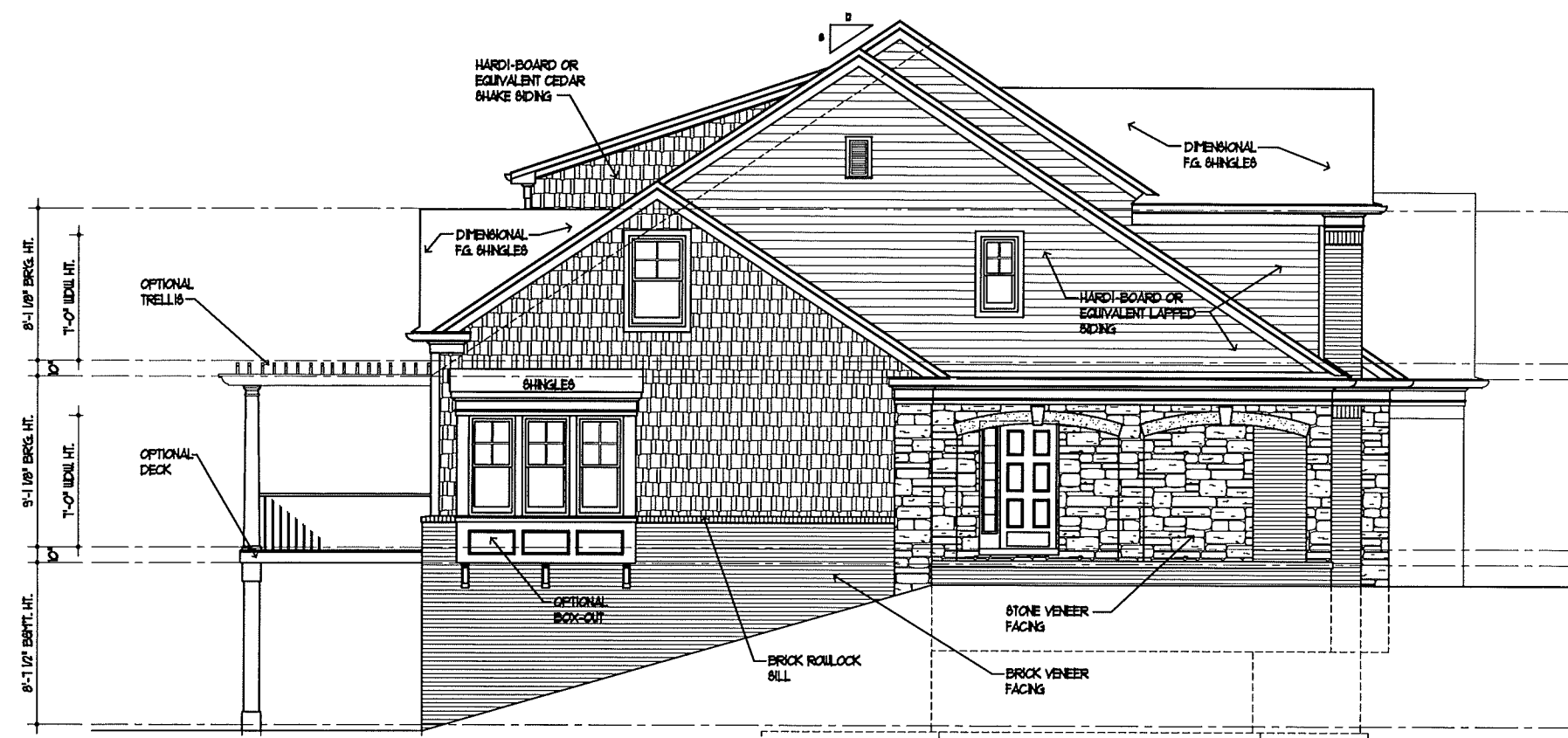
DRAWN BY:  
 KMB

CHECKED BY:  
 KMB

SHEET NUMBER:

**A 3.1**

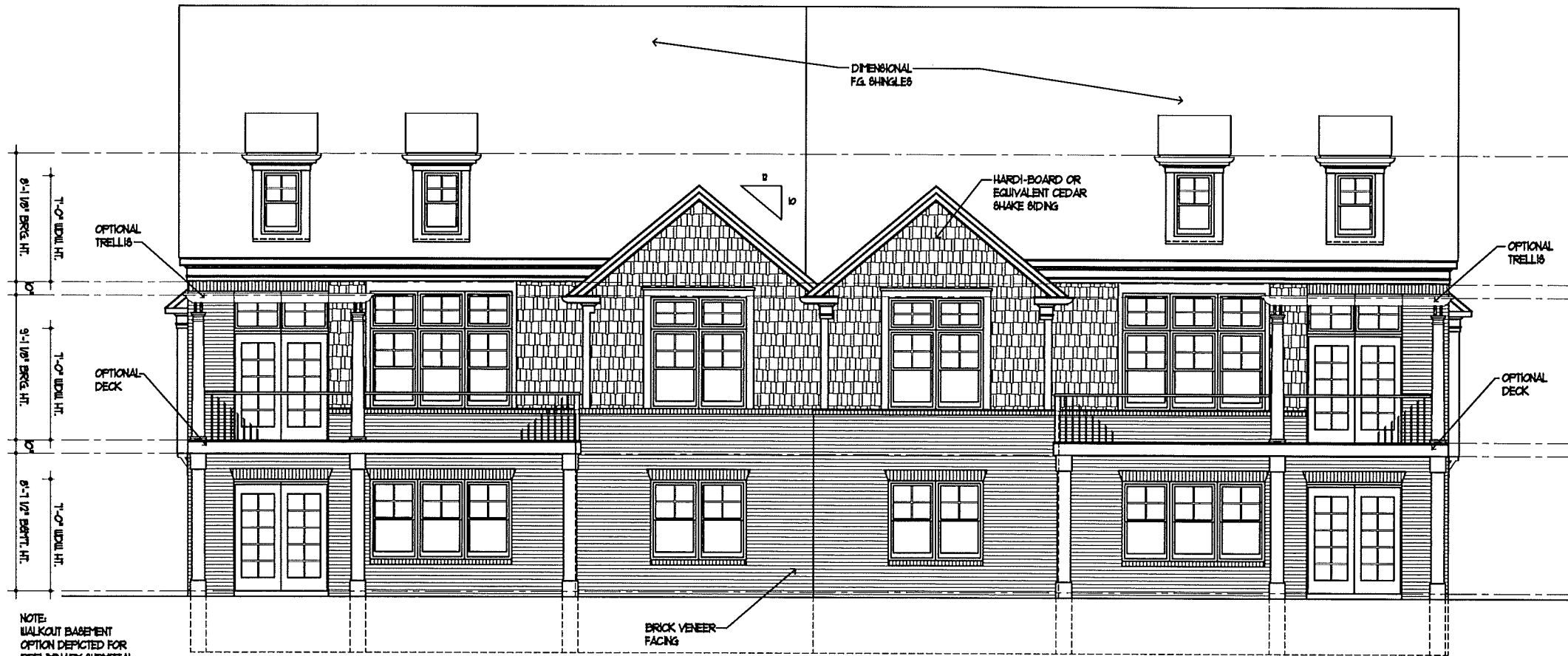




NOTE: WALKOUT BASEMENT OPTION DEPICTED FOR PRELIMINARY SUBMITTAL. FINAL GRADES OF EACH BUILDING TO BE DETERMINED.

2/A3.3 left building elevation - building b

SCALE 1/4" = 1'-0"



NOTE: WALKOUT BASEMENT OPTION DEPICTED FOR PRELIMINARY SUBMITTAL. FINAL GRADES OF EACH BUILDING TO BE DETERMINED.

1/A3.3 rear building elevation - building b

SCALE 1/4" = 1'-0"

PROJECT:  
 A Multi-Family Project  
 Villas at  
 Shadow Pines  
 Rochester Hills  
 Michigan

CLIENT:  
 Shadow Pines, LLC  
 21872 23 Mile Road  
 Macomb Township, MI 48042

NO.	DESCRIPTION	DATE
4	TECHNICAL APPROVAL SUBMITTAL	02/04/14
3	SITE PLAN APPROVAL RE-SUBMITTAL	01/08/14
2	SITE PLAN APPROVAL RE-SUBMITTAL	01/08/14
1	SITE PLAN APPROVAL SUBMITTAL	01/08/14

SHEET TITLE:  
 EXTERIOR  
 ELEVATIONS -  
 BUILDING B  
 PROJECT NUMBER:  
 2013-127  
 DRAWN BY:  
 KMB  
 CHECKED BY:  
 KMB  
 SHEET NUMBER:

**A 3.3**