

CITY OF BLOOMINGTON



**September 12, 2011 @ 4:30 p.m.
CITY HALL - HOOKER
CONFERENCE ROOM #245**

**CITY OF BLOOMINGTON
PLAT COMMITTEE AGENDA**

Sept. 12, 2011 at 4:30 p.m.

***Hooker Conference Room, #245**

ROLL CALL

MINUTES TO BE APPROVED: Feb. 14, 2011

REPORTS, RESOLUTIONS, AND COMMUNICATIONS:

**PUD-22-11 Patterson Pointe
420 Patterson Dr.**
Final plat approval for a 7-lot subdivision in the Patterson Pointe PUD.
(Case Manager: James Roach)

End of Agenda

Next meeting: Oct. 10, 2011

**BLOOMINGTON PLAT COMMITTEE
STAFF REPORT
LOCATION: 420 S. Patterson Drive**

**CASE #: PUD-22-11
DATE: September 12, 2011**

PETITIONER: Patterson Pointe, LLC
2920 McIntyre Dr., Bloomington

COUNSEL: Smith Neubecker and Associates, Inc.
PO Box 518, Bloomington

REQUEST: The petitioner is requesting a final plat for Phase 1 of the Patterson Pointe PUD. This includes five lots and two common area lots.

BACKGROUND:

Area: 13.39 acres
Current Zoning: PUD
GPP Designation: Community Activity Center and Adams Street/Patterson Drive Subarea
Existing Land Use: New Tech High School, vacant
Proposed Land Use: Multi-family, school and future mixed use
Surrounding Uses:
North – Commercial (Westplex PUD)
West – Medical offices (Landmark PUD)
East – Commercial, industrial, vacant land
South – Mixed use (Landmark PUD)

REPORT SUMMARY: The Patterson Pointe PUD was created in 2010 (PUD-29-09). The overall property is approximately 18.32 acres, bounded by W. 3rd Street to the north, S. Adams Street to the east, and the Landmark PUD to the south and west. The property had been used for many decades as the location of the Rogers Group and later Rogers Building Supply (RBS).

The Plan Commission approved a PUD Final Plan and Preliminary Plat (case #PUD-14-11) in June. The Final Plan included the following items:

1. Construction of a 61 unit, 80 bedroom affordable senior housing apartment building
2. Site work to bring New Tech High School into compliance with UDO standards
3. Stream channel restoration
4. Layout and design of all public streets
5. Traffic signal at “Old” 3rd St. and Patterson Dr.
6. General site clearing and grading
7. Preliminary Plat approval for a seven lot subdivision with 2 common areas

Since June, the petitioner has removed most of the structure from the north 2/3rd of the property. The southern 5.93 acres are still owned by Rogers/Adams Crossing LLC. Only the northern 13.39 acres is included in this phase 1 plat.

The Petitioner is proposing a 5 lot subdivision with two common areas. Lot 5 includes the existing New Tech High School. Lot 3 will be developed with senior apartments as approved by the Final Plan. Lots 1 and 2 will be development with mixed use building and Lot 4 will be developed as apartments. Lots 1, 2 and 4 have not received Final Plan approval. The two common areas include the creek to be restored as well as pedestrian paths and stormwater and utility lines.

Final Plat Issues:

Common Area and Facilities Maintenance Plan: Common areas will be owned by a lot owners association, who will be responsible for the ongoing maintenance of the newly create riparian corridors, as required by the UDO. A facilities maintenance plan has been prepared and is include in the packet. This has been reviewed by Staff and found to be adequate. The future Covenants, Commitments and Restrictions and Operating Agreement documents will include required language concerning lot ownership and responsibilities in case the lot owners association become insolvent, as required by the UDO.

Right-of-way: All required right-of-way for Adams St. and Patterson Dr. will be dedicated with this plat. More right-of-way than is required by the Thoroughfare Plan is being dedicated on Patterson Drive so that the proposed school bus pull off lane and sidewalk are located entirely within the right-of-way. Right-of-way is also being dedicated for the main internal drive that connects Patterson Drive to 3rd St. This right-of-way is wider than 50 feet to accommodate street parking on both sides of the street as well as turn lanes and sidewalks.

Two future streets are shown on the plat as access easements. These streets can not be built at this time because they require the inclusion of land that is a part of phase 2, which the petitioner does not yet own. These access easements will be dedicated as right-of-way with phase 2 and an amendment to phase 1.

Finally, a short section of right-of-way is being dedicated off of Adams St. This section of right-of-way will initially just serve the entrance to the New Tech High School. This street section requires the inclusion of land currently owned by Stonebelt. The petitioner and Stonebelt have reached an agreement on the purchase of this land, but the transaction has not yet taken place.

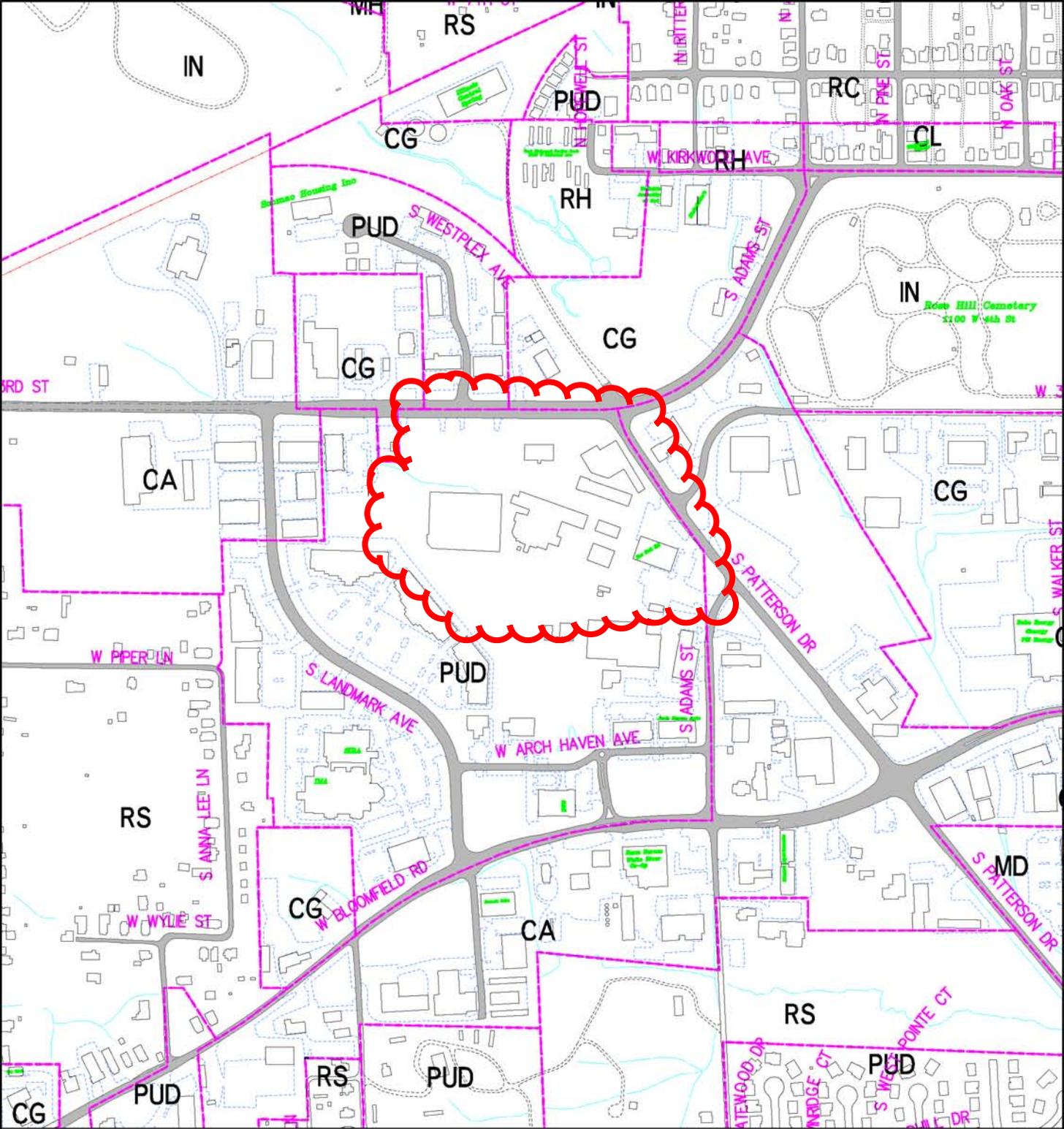
Utilities: A utility plan has been submitted to CBU and has been conceptually approved. All existing and new easements for utilizes are shown on the plat have been reviewed by CBU.

Stormwater: A stormwater plan has been submitted to CBU and is under review. Future phases of the PUD must incorporate stormwater detention and water quality features. Final approval of the stormwater plan is required prior to release of any permits.

Public Improvements: This phase of the PUD includes construction of two streets, associated sidewalks, utility work and street trees. Sidewalk is already in place along parts of 3rd St. and Paterson Dr. Some of this will be maintained until a Final Plan is approved for the remaining lots. Also required with this phase is installation of the traffic signal at Patterson Dr. and “Old” 3rd St. A condition of approval of the PUD Final Plan stated “The petitioner shall either construct or bond for the traffic signal and pedestrian improvements at 3rd and Patterson prior to recording of the Final Plat. “

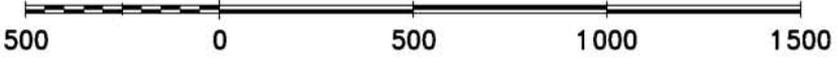
RECOMMENDATION: Staff recommends approval of PUD-20-11 with the following conditions.

1. Approved per terms and conditions of Final Plan/Preliminary Plat # PUD-14-11 and Preliminary Plan # PUD-29-09.
2. Prior to release of a grading permit, the following items are required:
 - a. The street tree plan must be reviewed and approved by the City’s Urban Forester
 - b. A copy of a permit or a letter stating no permit is required from IDNR and/or IDEM concerning the daylighting of the creek
 - c. Final CBU approval is required prior to issuance of a grading permit.
 - d. Final design and signal synchronization must be approved by City Engineering and Traffic Division prior to issuance of a grading permit.
3. The future Final Plat for Phase 2 shall include a commitment to dedicate right-of-way for the private street to the south and the easement stub to the southwest if adjacent properties provide street connections in the future.
4. Prior to recording of the Plat, the petitioner shall either remove the property current owned by Stonebelt from the document, provide a signature block for signing by representatives of Stonebelt, or have ownership of the property.
5. Covenants, Commitments and Restrictions and Operating Agreement must be reviewed by staff for compliance with UDO and must be recorded in conjunction with the Final Plat.
6. Street names and addresses for lots must be approved by the City and added to plat prior to recording.
7. Retaining walls immediately adjacent to the common area shall either be located within the common area or be included in drainage easements.



PUD-22-11
Location Map

By: roachja
6 May 11



City of Bloomington
Planning

6
Scale: 1" = 500'

For reference only; map information NOT warranted.



August 17, 2011.....revised 8/31/11

Stephen L. Smith P.E., L.S.
Daniel Neubecker L.A.
Steven A. Brehob, B.S.Cn.T.

City of Bloomington Plat Committee
c/o Jim Roach
City of Bloomington Plan Department
401 N Morton St, Ste 160
Bloomington IN 47404

Re: Patterson Pointe Subdivision
Final Plat Expansion and Amendment

Dear Jim and Plat Committee members,

We are seeking approval to expand and amend the final plat for Patterson Point Subdivision to create right of ways, lots and common areas for the Patterson Ponte PUD development.

Common areas A and B are shown on the final plat. These areas will be owned and maintained by a lot owners association. All owners within the subdivision and the expanded subdivision will be members of the association and share responsibility and liability for the common areas. An Operating Agreement and Covenants, Commitments and Restrictions will be recorded with the final plat that provide for this ownership and maintenance. The documents will include or reference the attached "Storm water facilities maintenance manual".

The Developer, Patterson Pointe LLC is the initial Owner of the Common Areas and will be the Owner until the stream restoration is complete and the Common Area is deeded to the Patterson Pointe Owner association.

The documents will also provide that in the event the Association becomes insolvent, ceases to exist, or for any reason fails or refuses to perform its obligations then the individual owners will assume that responsibility and liability. The documents will also allow the City or other appropriate governmental authority perform or have performed any necessary work or maintenance upon such facilities, in the event the owners and/or the Association fails to act, and allow the City or other authority to recover its cost by assessing same to the lot owners and by placing a lien upon any lot where payment is not made in a timely manner. The documents will also include easement definitions the same as defined in the Unified Development Ordinance.

PUD-22-11
Petitioner's Statement



The Stone Belt Board has approved the transfer of 0.025 acres of land to Patterson Pointe LLC for platting as right of way, subject to legal and financial releases. A copy of the e-mail exchange on this issue between Mark Figg and Ward Brown is attached.

The following items are being submitted with this application;

- Application letter/petitioners statement
- Application form and application fee
- Plat drawings: full sized, reduced and digital
- Facilities Plan
- E-mail with Stone Belt

Please contact our office if any additional items are required to process this final plat amendment.

Very truly yours,

Stephen Smith
Smith Neubecker & Assoc., Inc.
Engineer for the Petitioner

Cc; file
Encl;

PUD-22-11
Petitioner's Statement

The real estate described on this plat shall be and is hereby subject to the terms and conditions of the Facilities, Easements, Covenants, Restrictions, and Association for the project property, joined in the Office of the Recorder of Monroe County, Indiana.

PUD-22-11 Final Plat

AND BOARD OF PUBLIC WORKS provided by Chapter 174, Acts of 1947, and the Indiana State Board of Public Works, and the approval of the City of Bloomington as follows:

Approved by the Board of Public Works at a meeting held: Charlotte Ziefow, President James McLanahan, Vice President Frank N. Hrisomolou, Secretary

Approved by the City Plan Commission of a meeting held: Tom Wiscosan, Director of Planning LOT 6 Landermark Business Center P.C.C. No. 248

JACK BAKER, President of Plan Commission The undersigned, Per View, LLC, an Indiana Limited Liability Company, by its duly authorized officer, has caused this plat to be recorded in the Office of the Recorder of Monroe County, Indiana, in accordance with this plat. The within plat shall be known and designated as PATTERSON POINTE MEMORIAL 1.

IN WITNESS WHEREOF, Per View, LLC, an Indiana Limited Liability Company, by its duly authorized officer, has hereunto executed this ... day of ... 2011.

Per View, LLC Member STATE OF INDIANA 1551 COUNTY OF MONROE Before me, a Notary Public in and for the State of Indiana and Monroe County, personally appeared ...

IN WITNESS WHEREOF, Maria Chaska, County School Corporation, by its duly authorized officer, has hereunto executed this ... day of ... 2011.

IN WITNESS WHEREOF, Jennifer Butler, an Indiana Limited Liability Company, by its duly authorized officer, has hereunto executed this ... day of ... 2011.

IN WITNESS WHEREOF, Jennifer Butler, an Indiana Limited Liability Company, by its duly authorized officer, has hereunto executed this ... day of ... 2011.



LEGAL DESCRIPTION: A part of lots 4, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.



NOTES: 1. ALL corners are to be marked with 0 3/4" x 2" capped rebar.

ALSO all of Lot 1 and the remainder of Patterson Pointe Subdivision Final Plat. As shown in Plat Cab. No. 248, Envelope 98 in the Office of the Recorder of Monroe County, Indiana.

IN WITNESS WHEREOF, Jennifer Butler, an Indiana Limited Liability Company, by its duly authorized officer, has hereunto executed this ... day of ... 2011.

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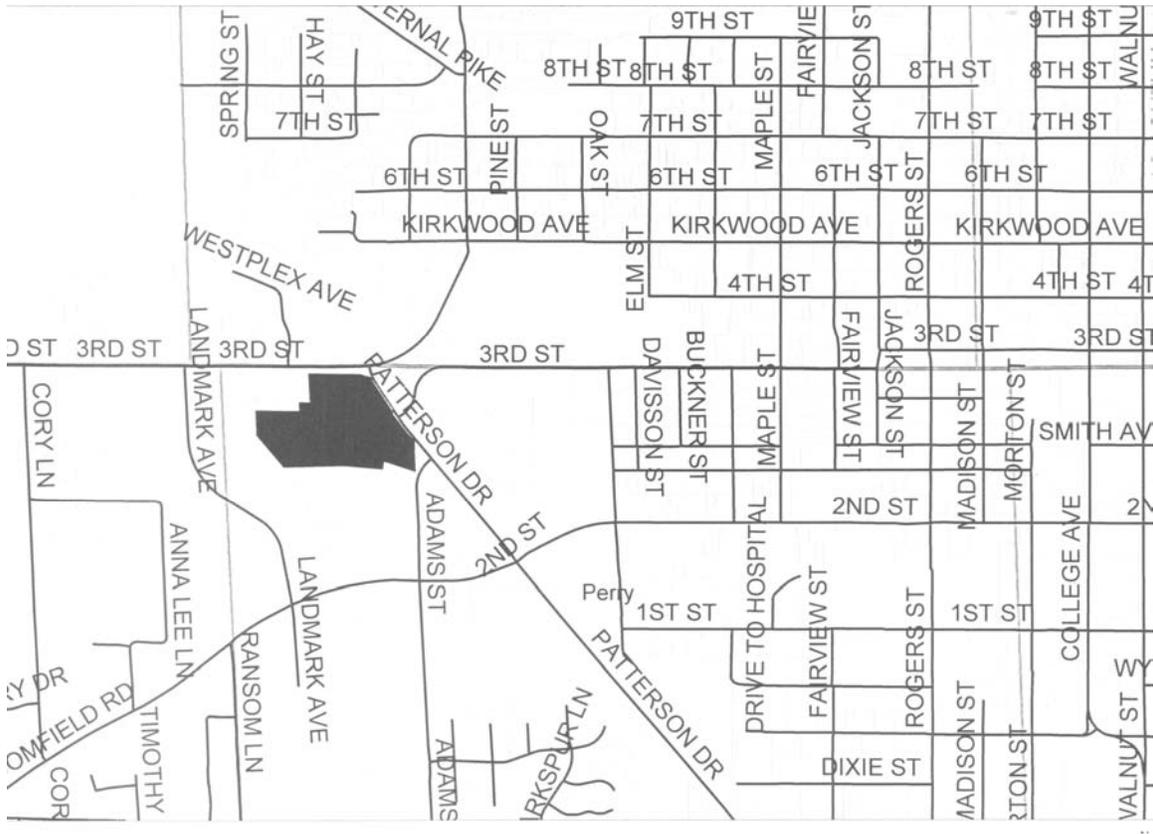
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PATTERSON POINTE, FINAL PLAT, EXPANSION & AMENDMENT 2 PREPARED BY: SMITH NEUBECKER & ASSOCIATES, INC., 453 S. CLARIZZ BLVD., BLOOMINGTON, INDIANA 47401

**STORMWATER FACILITIES AND MAINTENANCE
MANUAL
FOR
STORMWATER QUALITY AND STREAM RESTORATION AREA
PATTERSON POINTE PUD**



Owner:

Developer; Patterson Pointe, LLC.

5005 N. SR 37 Business

Bloomington, IN 47408

317-919-2020

Contact – Mark Figg

In the future;

Patterson Pointe Owners Association, Inc.

Prepared by:

Smith Neubecker & Associates, Inc.

453 S. Clarizz Boulevard

Bloomington, IN. 47401

Project Description

The Patterson Pointe PUD will include restoration of a natural stream channel as part of the site development project. The stream will be developed by removing an existing 36" RCP storm culvert that bisects the northern portion of the site and creation of natural over bank areas in a park like setting. This area will provide water quality enhancement for the existing degraded channel as well as enhancement for stormwater runoff from the development site. Rain garden areas will also be located within the area to reduce the number of point source discharges to the new channel.

Stream Channel Restoration BMP

The location of the restoration area is shown on Exhibit A and is Common Area A and B on the recorded plat. There are several key components of the stream restoration plan; channel area, streamside zone, fringe zone and intermediate zone. Exhibit B shows the location of each zone and a typical cross section through the channel.

Stormwater runoff flowing into the site from the existing degraded stream will follow the newly created meandering channel across the site from west to east. The channel will become encapsulated at the eastern edge of the site where it flows back into the existing 36" RCP. Two Pool Berms and an associated riffle will be created in the middle of the channel. The berms will cause ponding of water during low flows, which provide for habitat as well as extended detention for settlement of suspended particles.

Stormwater runoff from development project areas north of the restoration area will be collected in a storm sewer system which utilizes a "weeper pipe" to evenly discharge stormwater runoff over the area north of the channel. Runoff will then sheet flow through the selected plant material in the intermediate zone, fringe zone and streamside zone before entering the stream channel. Native plants in each zone have been selected for the benefits that they provide for water quality enhancement by sheet flow through their zone as well as to replicate a natural floodplain area. Exhibit C lists the plant material located in each zone.

Rain Garden Post Construction BMP

There are 3 rain garden features located south of the channel. Their location is shown on Exhibit D. Rain gardens have been located at storm sewer pipe discharge locations to limit the number of point source discharge locations to the stream channel. Each rain garden will consist of a Plunge Pool at the pipe outlet location to dissipate energy, and infiltration bed with an underdrain pipe and an emergency overflow weir. Details of the plunge pool are shown on Exhibit E.

Stormwater runoff discharged from the storm sewer system within the development area south of the stream channel restoration area will predominately be directed to the rain gardens. Low flows will infiltrate into the rain garden bottom and be collected by the underdrain pipe and conveyed to the channel. Higher flows will pond up within the rain

garden areas and discharge through the emergency overflow weir. Each rain garden causes an extended detention time, which permits for settlement of suspended particles. Runoff, which is routed through the emergency overflow weir, will sheet flow through the selected plan material in the intermediate zone, fringe zone and streamside zone before entering the stream channel features located around the site.

Stream Channel Restoration Monitoring

Stream monitoring reports must be submitted each year and continue for a minimum of three years after work installation is complete. The inspection for the report should be done in late August or early September. The report must include appropriate pictures of vegetative plantings; a narrative must describe the activity accomplished to date, acres planted, number planted, list of species planted on site, and estimated survival (volunteers should not be included in survival counts, only planted specimens). It is the responsibility of the owner to prepare the annual monitoring report and to ensure success of the restoration program. These reports are to be submitted to the **City of Bloomington Planning Department** and to the Indiana Department of Environmental Management (IDEM if required by IDEM) each year.

At least six permanent monitoring locations shall be established to evaluate the restoration success. These locations will quantify trees, shrubs, seed mixes, weed and erosion control and riffle structures. Within a 30' radius of each monitoring location, herbaceous species, trees and shrubs should be identified and used to evaluate coverage percentages. An analysis of the vegetation contained within the monitoring locations should be provided in the report.

The first year submittal is to include an as-built plan of the initial installation. Monitoring must follow the process presented in the Indiana Department of Natural Resources (IDNR) forested habitat mitigation/restoration (FHMR) planting guidelines. The reports should include discussions of the hydrology, plant community development at the site, methods used to evaluate success of the installation and should include success criteria. The report should include photographs representing the success and or failure of the installation at points where evaluation sampling takes place. The report should document any failure to meet success criteria, with recommendations for corrections.

Success Criteria for monitoring:

The following species (and any other invasive species as defined in the City of Bloomington Unified Development Ordinance) are not allowed in any quantity in the restoration area and shall be removed promptly after they have been observed;

- *Alliaria petiolata* (Garlic Mustard)
- *Celastrus orbiculatus* (Oriental Bittersweet)
- *Cirsium arvense* (Canada Thistle)
- *Elaeagnus umbellata* (Autumn Olive)
- *Euonymus fortunei* (Purple Wintercreeper)
- *Lonicera japonica* (Japanese Honeysuckle)

- *Lonicera sp* (Bush Honeysuckle)
- *Typha species* (Cattails)
- *Phalaris arundinacea* (Reed Canary Grass)
- *Polygonum cuspidatum* (Japanese Knotweed)
- *Rosa Multiflora* (Multiflora Rose)
- *Sorghum halepense* (Johnson Grass)
- *Lythrum salicaria* (Purple Loosestrife)
- *Phragmites australis* (Common Reed)
- *Myriophyllum spicatum* (Eurasian Water Milfoil)

Native vegetation survival, including planted seed mix, trees and shrubs shall have a 80% survival rate within the restoration area. Invasives listed above or volunteer plants should not be counted. Bare ground areas shall not exceed 5% and shall be repaired promptly when observed.

Stream Restoration Contingency Plan

At the end of the first year after installation, the owner or contractor shall replace all plant material, as needed, to meet the monitoring plan and success criteria requirement percentages listed above. This shall include any plant material that is found to not be true to its botanical name or is not alive or in good condition. Any bare ground or erosion control and associated plant cover failures must be corrected and brought into compliance with the original plan promptly after it is observed. Any areas that exceed the maximums listed above for invasive species shall also be corrected. The owner or contractor is required to perform any corrections promptly after the situation is observed.

Operation and Maintenance

Maintenance responsibilities for the stream channel, rain gardens, plunge pools, pool berms and weeper pipes will be the responsibility of the Owner. The stream channel should be inspected on a quarterly basis and after any significant rain event until the vegetation has become established. Re-seeding, mowing or burning of the vegetative cover may be required until the material becomes established. Any such work should be performed by a contractor experienced in native species establishment and maintenance such as JF New, Spence Restoration, Ecologic, or under their direct supervision. Following establishment of vegetative cover, the stream restoration area and drainage features should be inspected on a biannual. Accumulated sediment within the rain gardens, plunge pool and weeper pipe should be removed and deposited off site in a legal manner. Any erosion of the stream bank, rain gardens or plant zones should be repaired and the area re-seeded. With the appropriate ground cover for it's location.

Changes in Ownership

This facility plan shall run with the land. Changes in ownership shall result in the transfer of ownership and maintenance responsibilities. Any change in ownership should be

documented in this Facilities Plan. It shall be the responsibility of the owner to notify the City of Bloomington of any change in ownership of the property.

Right-of Entry

The owner hereby gives the City of Bloomington the right-of-entry over and across the property to inspect the stormwater basin.

Stormwater BMP Inspection Report

Stormwater BMP Location _____

Date of Inspection _____

Company Name _____

Street Address _____

City, State, ZIP _____

Phone _____

Inspector _____

Vegetation quality _____

Invasives present Y N

Species and location _____

Removed Y N Method _____

Erosion present Y N

Location and description _____

Structural damage Y N

Location and description _____

Outlet clear Y N

Floatable debris Y N

Accumulated sediment Y N

Oil present Y N

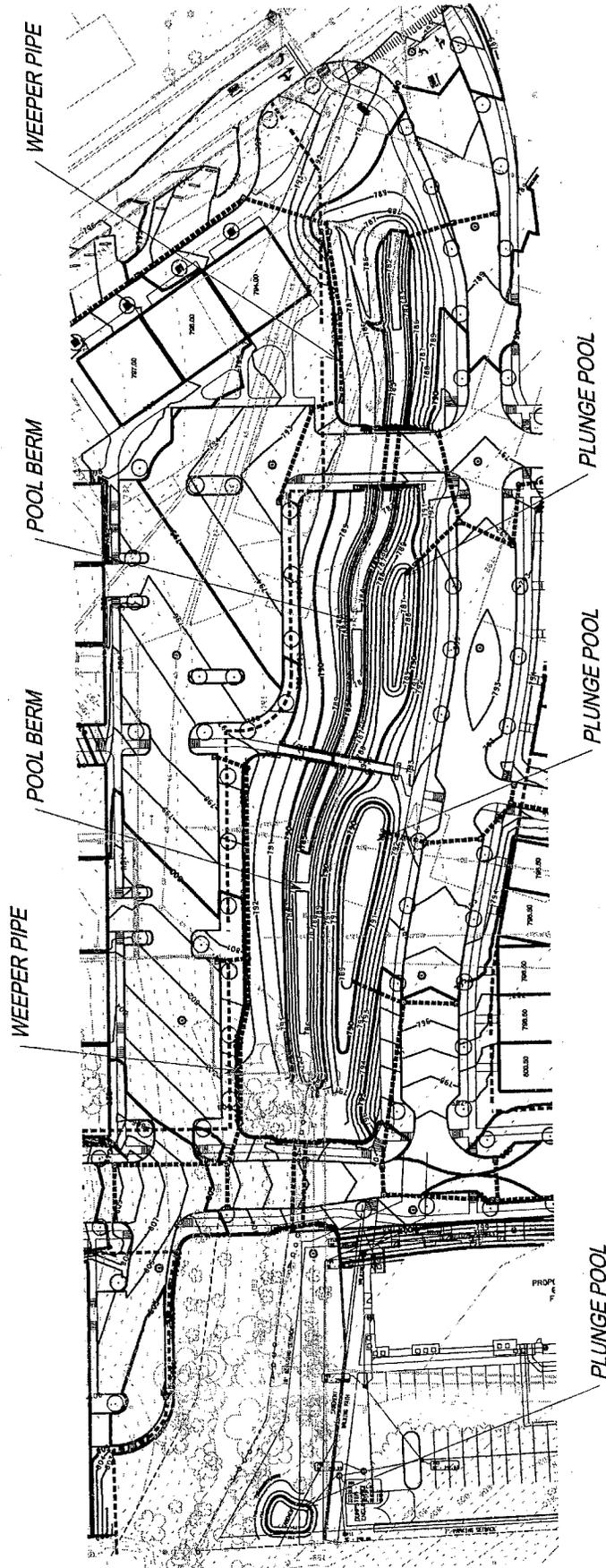
Trash Y N

Additional comments or actions to be taken Time Frame

Exhibit A
Stream Restoration Area

EXHIBIT A

SMITH NEUBECKER & ASSOCIATES, INC.
453 S. CLARIZZ BOULEVARD
BLOOMINGTON, INDIANA, 47401
TELEPHONE: (812) 336-6536
FAX: (812) 336-0513
WWW.SNAINC.COM



STREAM RESTORATION AREA

NO SCALE

Exhibit B
Channel Typical Section

Exhibit C
Native Plant Material

Fringe Zone Plants				
Tree Plant List				
Common Name	Scientific Name	Class	Wetland Indicator	Container Size
Black gum	<i>Nyssa sylvatica</i>	lg tree	FAC	3 gallon
Bur oak	<i>Quercus macrocarpa</i>	lg tree	FAC-	3 gallon
Shagbark hickory	<i>Carya ovata</i>	lg tree	FACU	3 gallon
White oak	<i>Quercus alba</i>	lg tree	FACU	3 gallon
Shellbark hickory	<i>Carya laciniosa</i>	lg tree	FACW	3 gallon
Total Large Trees = 25				
Hackberry	<i>Celtis occidentalis</i>	med lg tree	FAC-	3 gallon
Swamp white oak	<i>Quercus bicolor</i>	med lg tree	FACW+	3 gallon
Total Medium-Large Trees = 31				
Shingle oak	<i>Quercus imbricaria</i>	med tree	FAC-	3 gallon
Ohio buckeye	<i>Aesculus glabra</i>	med tree	FAC+	3 gallon
Cockspur hawthorn	<i>Crataegus crus-galli</i>	small tree	FAC	3 gallon
Ironwood	<i>Carpinus caroliniana</i>	understory tree	FAC	3 gallon
Redbud	<i>Cercis canadensis</i>	understory tree	FACU	3 gallon
Total Small to Medium Trees = 60				
Shrub Plant List				
Common Name	Scientific Name	Class	Wetland Indicator	Container Size
American filbert	<i>Corylus americana</i>	shrub	FACU-	1 Gallon
Smooth hydrangea	<i>Hydrangea arborescens</i>	shrub	FACU-	1 Gallon
Common spicebush	<i>Lindera benzoin</i>	shrub	FACW-	1 Gallon
Total Shrubs = 15				
Herbaceous Riparian Seed List				
Common Name	Scientific Name	Class	Wetland Indicator	Seed Rate (ounces/ac)
Side-Flowering Aster	<i>Aster lateriflorus</i>	wildflower	FACW-	4.00
Larger Straw Sedge	<i>Carex normalis</i>	sedge	FACW	2.00
Northern Sea Oats	<i>Chasmanthium latifolium</i>	grass	FACW	8.00
Honewort	<i>Cryptotaenia canadensis</i>	wildflower	FAC	6.00
American Beakgrass	<i>Diarrhena americana</i>	grass	FACU	8.00
Canada Wild Rye	<i>Elymus canadensis</i>	grass	FAC-	24.00
Riverbank Wild Rye	<i>Elymus riparius</i>	grass	FACW	24.00
Virginia Wild Rye	<i>Elymus virginicus</i>	grass	FACW-	32.00
White Snakeroot	<i>Eupatorium rugosum</i>	wildflower	FACU	1.00
False Sunflower	<i>Heliopsis helianthoides</i>	wildflower	FAC-	6.00
Bottlebrush Grass	<i>Hystrix patula</i>	grass	FACU	6.00
Orange Jewelweed	<i>Impatiens capensis</i>	wildflower	FACW	10.00
White Grass	<i>Leersia virginica</i>	grass	FACW	2.00
Great Blue Lobelia	<i>Lobelia siphilitica</i>	wildflower	FACW+	0.50
Virginia Blue Bells	<i>Mertensia virginica</i>	wildflower	FACW	16.00
Hairy Sweet-Cicely	<i>Osmorhiza claytonii</i>	wildflower	FACU	0.50
Switch Grass	<i>Panicum virgatum</i>	grass	FAC+	6.00
Wild Blue Phlox	<i>Phlox divaricata</i>	wildflower	FACU	4.00
Green-Headed Coneflower	<i>Rudbeckia laciniata</i>	wildflower	FACW+	4.00
Three-Lobed Coneflower	<i>Rudbeckia triloba</i>	wildflower	FAC-	2.00
Late Goldenrod	<i>Solidago gigantea</i>	wildflower	FACW	2.00
Prairie Cordgrass	<i>Spartina pectinata</i>	grass	FACW+	7.00
Total Ounces/Acre				175.00

Streamside Zone Plants				
Tree Plant List				
Common Name	Scientific Name	Class	Wetland Indicator	Container Size
Shellbark hickory	<i>Carya laciniosa</i>	lg tree	FACW	3 gallon
Sweet gum	<i>Liquidambar styraciflua</i>	lg tree	FACW	3 gallon
Shumard oak	<i>Quercus shumardii</i>	lg tree	FACW-	3 gallon
Total Large Trees = 20				
Sugarberry	<i>Celtis laevigata</i>	med lg tree	FACW	3 gallon
Red Maple	<i>Acer rubrum</i>	med lg tree	FAC	3 gallon
Swamp white oak	<i>Quercus bicolor</i>	med lg tree	FACW+	3 gallon
Total Medium-Large Trees = 12				
Pagoda dogwood	<i>Cornus alternifolia</i>	small tree	along streams	3 gallon
Cockspur hawthorn	<i>Crataegus crus-galli</i>	small tree	FAC	3 gallon
Ironwood	<i>Carpinus caroliniana</i>	understory tree	FAC	3 gallon
Total Small to Medium Trees = 25				
Shrub Plant List				
Common Name	Scientific Name	Class	Wetland Indicator	Container Size
American bladdernut	<i>Staphylea trifolia</i>	shrub	FAC	1 Gallon
Black chokeberry	<i>Aronia melanocarpa</i>	shrub	FACW-	1 Gallon
Gray dogwood	<i>Cornus racemosa</i>	shrub	FACW-	1 Gallon
Common Ninebark	<i>Physocarpus opulifolius</i>	shrub	FACW-	1 Gallon
Total Shrubs = 96				
Herbaceous Riparian Seed List				
Common Name	Scientific Name	Class	Wetland Indicator	Seed Rate (ounces/ac)
Panicled Aster	<i>Aster lanceolatus</i>	wildflower	FACW	4.00
False Nettle	<i>Boehmeria cylindrica</i>	wildflower	OBL	0.50
Blue-Joint Grass	<i>Calamagrostis canadensis</i>	grass	OBL	1.00
Shoreline Sedge	<i>Carex hyalinolepis</i>	sedge	OBL	4.00
Lakebank Sedge	<i>Carex lacustris</i>	sedge	OBL	4.00
Fox Sedge	<i>Carex vulpinoidea</i>	sedge	OBL	4.00
Northern Sea Oats	<i>Chasmanthium latifolium</i>	grass	FACW	8.00
Riverbank Wild Rye	<i>Elymus riparius</i>	grass	FACW	24.00
Virginia Wild Rye	<i>Elymus virginicus</i>	grass	FACW-	48.00
Spotted Joe-Pye-Weed	<i>Eupatorium maculatum</i>	wildflower	OBL	4.00
Fowl Manna Grass	<i>Glyceria striata</i>	grass	OBL	2.00
Soft Rush	<i>Juncus effusus</i>	rush	OBL	0.25
Rice Cut Grass	<i>Leersia oryzoides</i>	grass	OBL	2.00
Virginia Blue Bells	<i>Mertensia virginica</i>	wildflower	FACW	10.00
Green-Headed Coneflower	<i>Rudbeckia laciniata</i>	wildflower	FACW+	12.00
Wool-Grass	<i>Scirpus cyperinus</i>	bulrush	OBL	0.25
River Bulrush	<i>Scirpus fluviatilis</i>	bulrush	OBL	12.00
Cup-Plant	<i>Silphium perfoliatum</i>	wildflower	FACW-	4.00
Late Goldenrod	<i>Solidago gigantea</i>	wildflower	FACW	4.00
Blue Vervain	<i>Verbena hastata</i>	wildflower	FACW+	16.00
Total Ounces/Acre				164.00

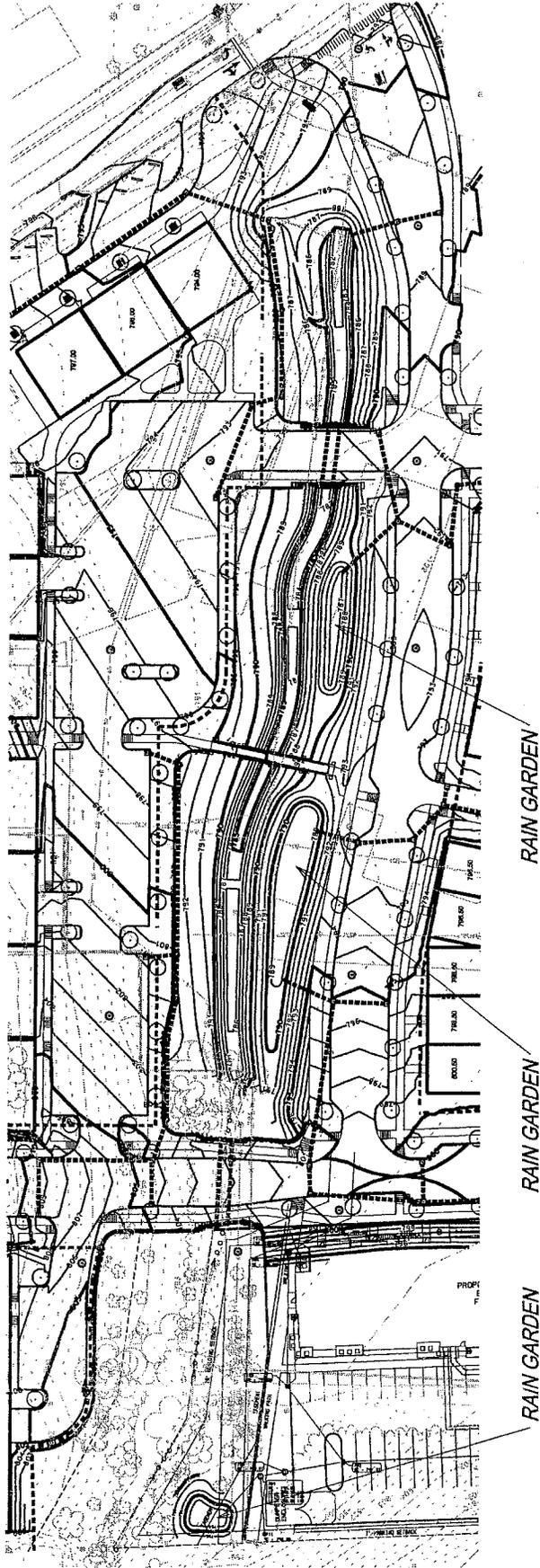
Prairie Cordgrass	<i>Spartina pectinata</i>	grass	FACW+	7.00
American Germander	<i>Teucrium canadense</i>	wildflower	FACW-	4.00
Blue Vervain	<i>Verbena hastata</i>	wildflower	FACW+	16.00
Total Ounces/Acre				162.50

Intermediate Zone Plants				
Tree Plant List				
Common Name	Scientific Name	Class	Wetland Indicator	Container Size
Black gum	<i>Nyssa sylvatica</i>	lg tree	FAC	3 gallon
Black Walnut	<i>Juglans nigra</i>	lg tree	FACU	3 gallon
Shagbark hickory	<i>Carya ovata</i>	lg tree	FACU	3 gallon
Sugar maple	<i>Acer saccharum</i>	lg tree	FACU	3 gallon
White oak	<i>Quercus alba</i>	lg tree	FACU	3 gallon
Tulip tree	<i>Liriodendron tulipifera</i>	lg tree	FACU+	3 gallon
Sweet gum	<i>Liquidambar styraciflua</i>	lg tree	FACW	3 gallon
Total Large Trees = 12				
Bitternut hickory	<i>Carya cordiformis</i>	med lg tree	FAC	3 gallon
Red Maple	<i>Acer rubrum</i>	med lg tree	FAC	3 gallon
Hackberry	<i>Celtis occidentalis</i>	med lg tree	FAC-	3 gallon
American basswood	<i>Tilia americana</i>	med lg tree	FACU	3 gallon
Sugarberry	<i>Celtis laevigata</i>	med lg tree	FACW	3 gallon
Black cherry	<i>Prunus serotina</i>	med lg tree	UPL	3 gallon
Total Medium-Large Trees = 19				
Shingle oak	<i>Quercus imbricaria</i>	med tree	FAC-	3 gallon
Kentucky coffeetree	<i>Gymnocladus dioicius</i>	med tree		3 gallon
Pagoda dogwood	<i>Cornus alternifolia</i>	small tree	along streams	3 gallon
American plum	<i>Prunus americana</i>	small tree	UPL	3 gallon
Cockspur hawthorn	<i>Crataegus crus-galli</i>	small tree	FAC	3 gallon
Ironwood	<i>Carpinus caroliniana</i>	understory tree	FAC	3 gallon
Total Small to Medium Trees = 33				
Shrub Plant List				
Common Name	Scientific Name	Class	Wetland Indicator	Container Size
American filbert	<i>Corylus americana</i>	shrub	FACU-	1 Gallon
Smooth hydrangea	<i>Hydrangea arborescens</i>	shrub	FACU-	1 Gallon
Gray dogwood	<i>Cornus racemosa</i>	shrub	FACW-	1 Gallon
Common winterberry	<i>Ilex verticillata</i>	shrub	FACW+	1 Gallon
Total Shrubs = 45				
Herbaceous Riparian Seed List				
Common Name	Scientific Name	Class	Wetland Indicator	Seed Rate (ounces/ac)
Panicled Aster	<i>Aster lanceolatus</i>	wildflower	FACW	2.00
Side-Flowering Aster	<i>Aster lateriflorus</i>	wildflower	FACW-	2.00
Larger Straw Sedge	<i>Carex normalis</i>	sedge	FACW	2.00
Northern Sea Oats	<i>Chasmanthium latifolium</i>	grass	FACW	8.00
Canada Wild Rye	<i>Elymus canadensis</i>	grass	FAC-	24.00
Riverbank Wild Rye	<i>Elymus riparius</i>	grass	FACW	24.00
Boneset	<i>Eupatorium perfoliatum</i>	wildflower	FACW+	1.00
False Sunflower	<i>Heliopsis helianthoides</i>	wildflower	FAC-	6.00
Bottlebrush Grass	<i>Hystrix patula</i>	grass	FACU	6.00
Yellow Jewelweed	<i>Impatiens pallida</i>	wildflower	FACW	24.00
White Grass	<i>Leersia virginica</i>	grass	FACW	2.00
Great Blue Lobelia	<i>Lobelia siphilitica</i>	wildflower	FACW+	0.50
Virginia Blue Bells	<i>Mertensia virginica</i>	wildflower	FACW	10.00
Switch Grass	<i>Panicum virgatum</i>	grass	FAC+	6.00
Wild Blue Phlox	<i>Phlox divaricata</i>	wildflower	FACU	4.00
Green-Headed Coneflower	<i>Rudbeckia laciniata</i>	wildflower	FACW+	4.00
Three-Lobed Coneflower	<i>Rudbeckia triloba</i>	wildflower	FAC-	2.00
Cup-Plant	<i>Silphium perfoliatum</i>	wildflower	FACW-	6.00
Late Goldenrod	<i>Solidago gigantea</i>	wildflower	FACW	2.00

Exhibit D
Rain Garden Area

EXHIBIT D

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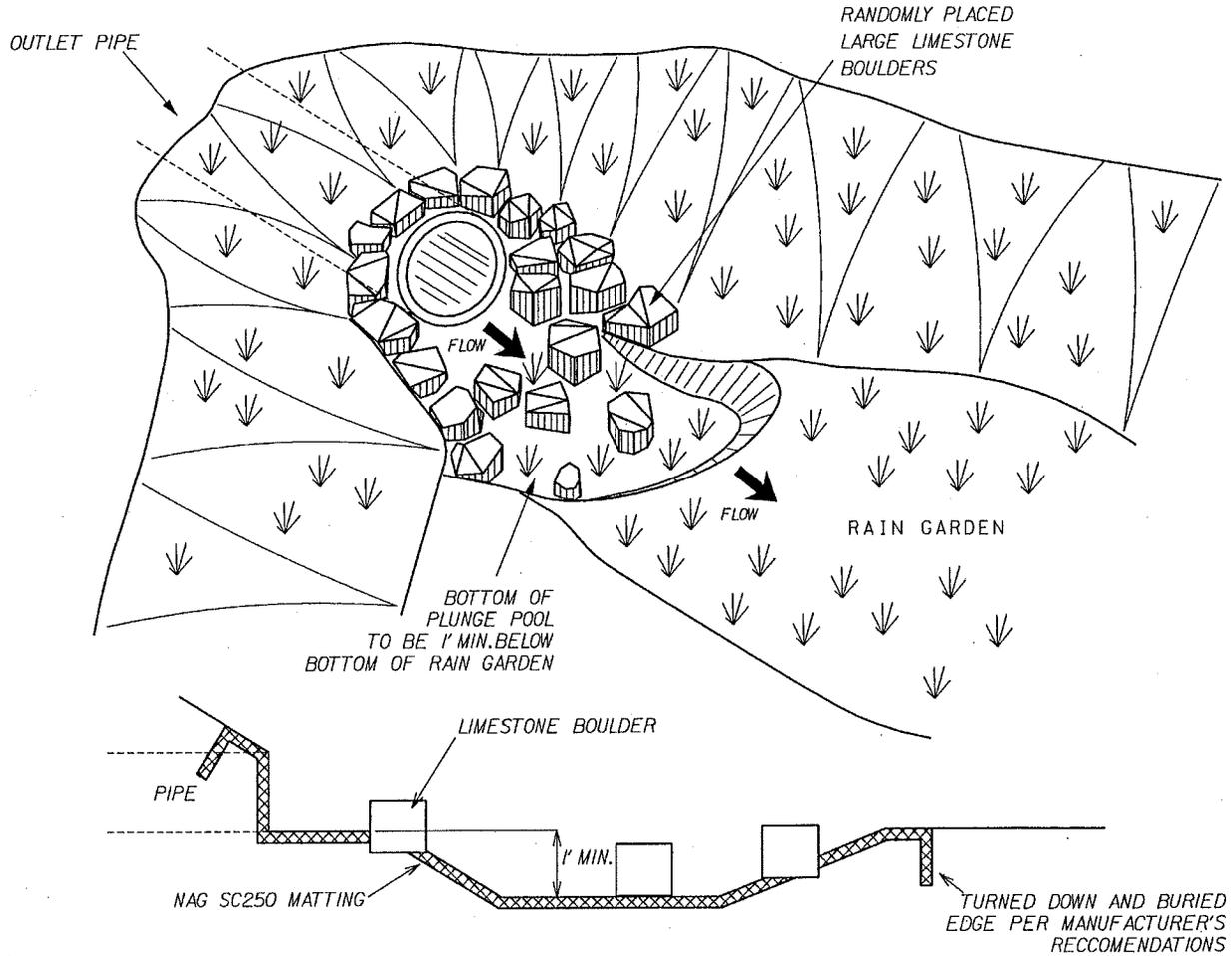


RAIN GARDEN AREAS

NO SCALE

Exhibit E
Plunge Pool Detail

EXHIBIT E



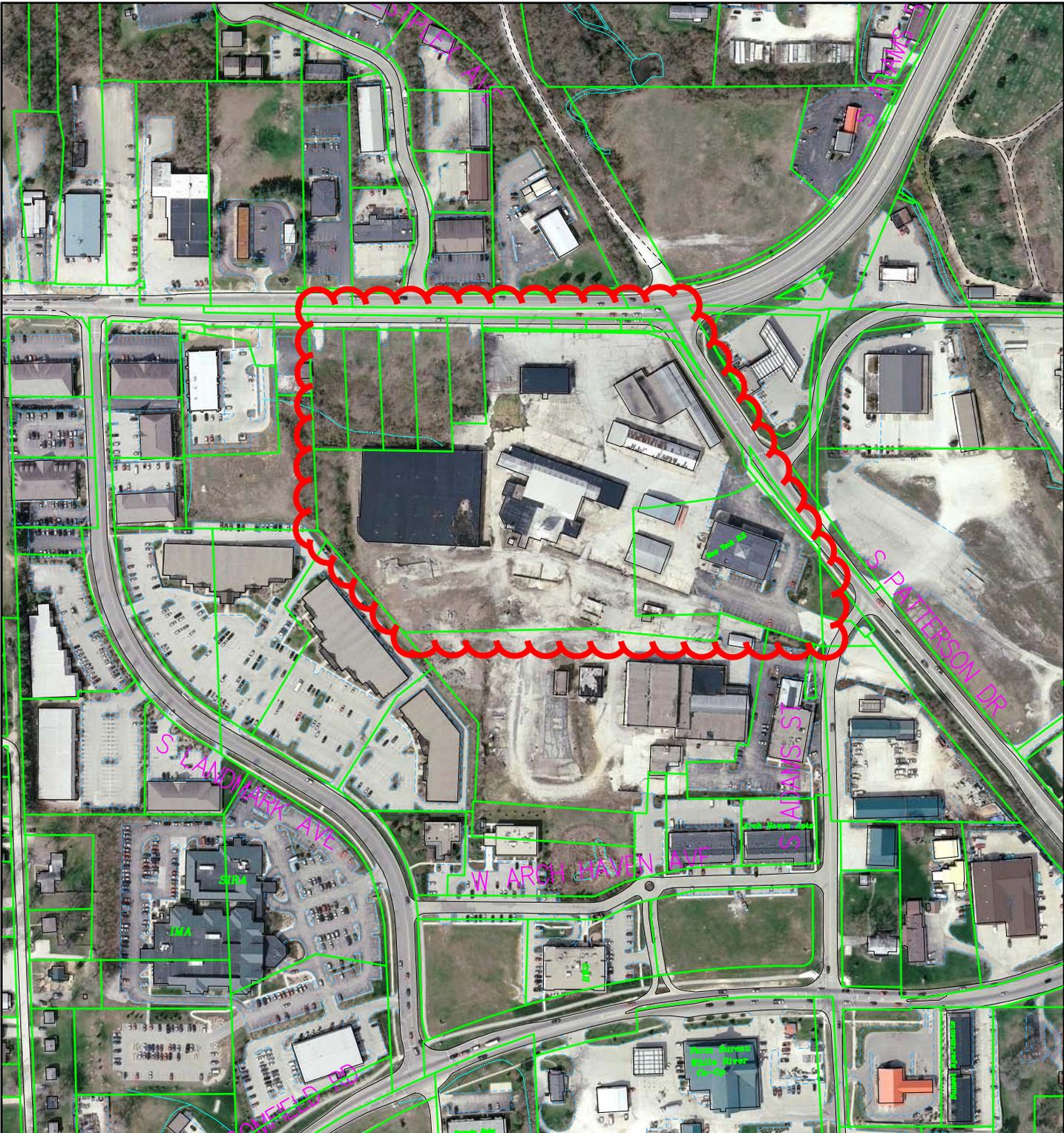
PLUNGE POOL DETAIL

NO SCALE

SMITH NEUBECKER & ASSOCIATES, INC.

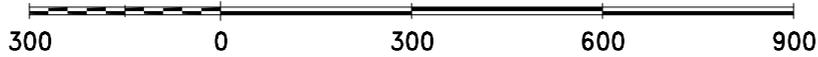


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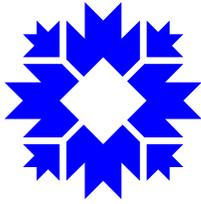


PUD-22-11
2010 Aerial Photo

By: roachja
6 May 11



City of Bloomington
Planning



Scale: 1" = 300'

For reference only; map information NOT warranted.