



# AGENDA

for the

CITY OF WILDWOOD'S

## PLANNING AND ZONING COMMISSION

City Hall Council Chambers · [16860 Main Street](#)

**May 2, 2016 - Monday**

**7:30 P.M.**

Action Items on Tonight's Agenda -----> Two (2) Public Hearings, One (1) Letter of Recommendation, Two (2) Information Reports, and One (1) Correspondence Item.

- I. Welcome To Attendees And Roll Call Of Commission Members
- II. Review Tonight's Agenda/Questions Or Comments
- III. Approval Of Minutes Of The Meeting Of Monday, April 18, 2016

Documents: [III. APRIL 18 DRAFT MINUTES.PDF](#)

IV. Department Of Planning's Opening Remarks/Updates

V. Public Hearings – Two (2) Items For Consideration

- 1. P.Z. 27, 28, And 29-15 Valley Road Subdivision, Pulte Homes Of St. Louis, L.L.C., 16305 Swingley Road, Suite 350, Chesterfield, Missouri 63017  
A request for a change to the Master Plan's Conceptual Land Use Categories Map from the Non-Urban Residential Area to the Sub-Urban Residential Area.  
Accompanying this Master Plan change would also be an amendment to the City's Comprehensive Zoning Plan of the Charter, which is the Master Plan's Conceptual Land Use Categories Map. Additionally, requests for a change in zoning from the NU Non-Urban Residence District to the R-1 one (1) Acre Residence District, with an application of a Planned Residential Development Overlay District (PRD), have been

submitted for a 124 acre tract of land that is located west side of Valley Road, north of Peppermill Drive (Locator Numbers: 21U520284, 21U610242, and 20U210014/Street Addresses: 2443 and 2485 Valley Road and 2121 Quaethem Drive). Proposed Use: A total of one hundred sixteen (116) individual lots, with common ground, and required public space areas. (Ward Two)

Documents: [V.A. VALLEY ROAD SUBDIVISION.PDF](#)

2. P.Z. 5 And 5(A)-16 Stonecrest At Wildwood, NorthPoint Development, 5015 Nothwest Canal Street, Suite 200, Riverside, Missouri, 64150  
A request for the modification of the Town Center Plan's Regulating Plan for two (2) lots that are a 1.6 acre area of the Phase II portion of the Wildwood Town Center Project, thereby altering their current designation from "Downtown District" to "Neighborhood General District" to accommodate a change in zoning from the C-8 Planned Commercial District to the Amended C-8 Planned Commercial District for this site, all being located on the south side of State Route 100, north of Plaza Drive, and west of Fountain Place (Locator Numbers 23V220242 and 23V220233/Street Addresses 251 and 261 Plaza Derive). Proposed Use: A three (3), story senior housing facility, which would allow a maximum of eighty-one (81) units. (Ward Eight)

Documents: [V.B. STONECREST.PDF](#)

#### VI. Old Business – Three (3) Items For Consideration

1. Letters Of Recommendation – One (1) Item For Consideration
  - a. P.Z. 25-15 Laurie Taylor, 17715 Manchester Road, Wildwood, Missouri, 63038, C/O Volz, Inc., Mark Kilgore, 10849 Indian Head Industrial Boulevard, St. Louis, Missouri 63132  
A request for a Conditional Use Permit (CUP) in the NU Non-Urban Residence District for a thirty-two point one (32.1) acre tract of land that is located on the west side of Mueller Road, south of State Route 100, and north of Manchester Road (Locator Number 23X340061/Street Address: 17715 Manchester Road). Proposed Use: A large water feature – lake – (as defined by §415.030 of the City of Wildwood's Zoning Regulations), which exceeds one (1) acre in overall size – one point seven four (1.74) acres. (Ward One)

Documents: [VI.A. LAURIE TAYLOR.PDF](#)

- a.1. Public Comments On Recommendation

#### 2. Information Reports – Two (2) Items For Consideration

- a. P.Z. 5-16 City Of Wildwood Planning And Zoning Commission C/O Department Of Planning, 16860 Main Street, Wildwood, Missouri  
A request to review and consider the addition of residential land uses as permitted activities within the 'Downtown and Workplace Districts' designation under the 'Regulating Plan' of the City's Town Center Plan. Currently, these two (2) land use designations do not allow residential uses, whether single family or multiple family types. Recently, a number of inquiries have been made about this change. (Wards One, Four, Five, Seven, and Eight)

Documents: [VI.C. DOWNTOWN AND WORKPLACE DISTRICTS.PDF](#)

- a.1. Public Comments On Recommendation

#### VII. New Business – One (1) Item For Consideration

1. Correspondence Items – One (1) Item For Consideration

- a. P.Z. 8-16 James Thurman, 930 Kingsridge Court, Wildwood, Missouri, 63021, C/O Sport Court St. Louis, 343 Great Oaks Drive, Labadie, Missouri 63055, is seeking the review and action of the Planning and Zoning Commission on the requested installation of an outdoor game court that is twenty-six (26) feet by thirty-four (34) feet in size, which is to be located at 930 Kingsridge Court, Wildwood, Missouri (Locator Number 24T110296); R-1A 22,000 square foot Residence District, with a Planned Environment Unit (PEU). This request is to be reviewed in accordance with Chapter 415.120 R-1A 22,000 square foot Residence District Regulations of the City of Wildwood Zoning Code, which establishes standards and requirements for outdoor game courts relating to their consideration by the Planning and Zoning Commission. The proposed game court is to be situated to the east of the single family residence located on the subject property. The Department will have a recommendation report prepared for consideration at this meeting for this request. (Ward Eight)

Documents: [VII.A. THURMAN OUTDOOR GAME COURT.PDF](#)

- a.1. Public Comments On Recommendation

VIII. Site Development Plans-Public Space Plans-Record Plats – No Items For Consideration

IX. Other

X. Closing Remarks And Adjournment By Chair Of Commission

**If you would like to submit a comment regarding an item on this meeting agenda, please visit the [Form Center](#).**

**CITY OF WILDWOOD, MISSOURI**  
**RECORD OF PROCEEDINGS**

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**MEETING OF THE PLANNING AND ZONING COMMISSION**  
CITY HALL, 16860 MAIN STREET, WILDWOOD, MISSOURI  
April 18, 2016

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The Planning and Zoning Commission meeting was called to order by Chair Bopp, at 7:30 p.m., on Monday, April 18, 2016, at Wildwood City Hall, 16860 Main Street, Wildwood, Missouri.

**I. Welcome to Attendees and Roll Call of Commission Members**

Chair Bopp requested a roll call be taken. The roll call was taken, with the following results:

PRESENT – (10)

Chair Bopp  
Commissioner Lee  
Commissioner Archeski  
Commissioner Bauer  
Commissioner Gragnani  
Commissioner Liddy  
Commissioner Kohn  
Council Member Manton  
Mayor Woerther

ABSENT – (0)

Other City Officials Present: Director of Planning Vujnich, Director of Public Works Brown, Planner Newberry, and City Attorney Golterman.

Chair Bopp welcomed Mr. Ed Kohn, newly appointed Planning and Zoning Commission member (Ward 3).

**II. Review Tonight's Agenda / Questions or Comments**

There were no questions or comments on the agenda.

**III. Approval of Minutes from the March 21, 2016 Meeting**

A motion was made by Council Member Manton, seconded by Commissioner Lee, to approve the minutes from the April 4, 2016 meeting. A voice vote was taken regarding the motion for approval of the minutes. Hearing no objections, Chair Bopp declared the motion approved.

**IV. Department of Planning Opening Remarks**

No opening remarks were provided.

**V. Public Hearings – Two (2) Items for Consideration**

- a) **P.Z. 24-15 Rockwood School District—Lafayette High School, c/o Dr. Karen Calcaterra, 17050 Clayton Road, Wildwood, Missouri 63011** - A request for a Conditional Use Permit (CUP) in the NU Non-Urban Residence District for the installation of sponsorship type banners on existing fencing associated with the athletic fields that are part of the Lafayette High School Campus. This campus is located on the east side of State Route 109, south of Clayton Road (Locator Number: 22V210215/Street Address: 17050 Clayton Road). **Proposed Use: Sponsorship type banners for a public use, with a minimum of two (2) operational athletic fields on the same lot. (Ward Five)**

Chair Bopp read the public hearing guidelines into the record and requested the item be read by the Department.

Planner Newberry read the request into the record.

Director Vujnich submitted into the record the Master Plan, City Charter, the City's Zoning Regulations (Chapter 415), and the Department of Planning's file on the request. Director Vujnich shared a brief slideshow of photographs showing the current athletic fields on the school's campus and provided a summary of the request.

Chair Bopp invited Dr. Karen Calcaterra, Principle at Lafayette High School, to address the Commission.

Dr. Calcaterra described the existing banners on the athletic field fences. She outlined instances the school has used banners in the past, including sponsorships from businesses, public service announcements, and promoting school events. She also explained the existing banners face the interior of the site and not the roadway.

Chair Bopp invited members of the public to comment on the item.

**Michael Winnett, representative of Tall Oaks Homeowner's Association, 16830 West Glen Farms Drive, Wildwood, Missouri**, stated the concerns of homeowners in the Tall Oaks Subdivision regarding visual intrusion of sponsorship banners and other existing activities related to the site's use as a high school onto their lots. He stated the Tall Oaks Homeowner's Association opposes the request.

Discussion was held among Commission Members about the time period Lafayette High School was constructed in relation to the construction of the surrounding subdivisions; clarification the sponsorship banners would only face the interior of the site; clarification the signs would be professionally manufactured; the number of banners being requested; and comparison of this request to the similar request recently approved for the Pond Athletic Association and its associated conditions.

Commissioner Bauer requested the Department of Planning to include, as part of its forthcoming Information Report, an inventory of the practices of surrounding schools, regarding sponsorship type banners.

Motion by Mayor Woerther, seconded by Council Member Manton, to close the public hearing. A voice vote was taken regarding the motion. Hearing no objections, Chair Bopp declared the motion approved.

- b) **P.Z. 7-16 City of Wildwood Planning and Zoning Commission, c/o Department of Planning, 16860 Main Street, Wildwood, Missouri 63040** – A request to review and consider amendments to the City of Wildwood's Zoning Ordinance – Chapter 415 of the City of Wildwood Municipal Code – for all of its "R" Residence Districts zoning designations (Chapter 415 – Sections 110 through 160), including

Chapter 415.090 NU Non-Urban Residence District, thereby adding new language to prohibit the installation of impervious surfaces and other improvements in the side yard setbacks, which are not considered structures under the Zoning Ordinance's definition of the same. **(All Wards)**

Planner Newberry read the request into the record.

Director Vujnich noted the side yard setback is typically an area that is used to manage stormwater and place utilities, as well as provide an aesthetically pleasing separation of structures between the adjoining individual lots. He explained the City's current Zoning Regulations and Grading Code do not restrict the installation of impervious surfaces or other similar improvements within the side yard setback area. Director Vujnich shared a slideshow of photographs indicating an existing issue that arose due to the installation of impervious surface in a side yard setback. Director Vujnich explained the Departments of Planning and Public Works are requesting the Planning and Zoning Commission review and consider amendments to the City of Wildwood Municipal Code to address this matter, whether through the Planned Residential Development Overlay District (PRD) process, the underlying Zoning Regulations, site-specific ordinances, or other legislative solution.

Chair Bopp invited members of the public to comment on the item.

**Greg Stine, Council Member Ward Seven (7), 16209 Trade Winds Court, Wildwood, Missouri,** stated he was commenting on behalf of citizens who were impacted by the installation of the driveway shown in the Department of Planning's presentation. He described the situation and the hardship that it has caused by the installation of the drive. He stated, after working with the Department of Planning on the issue, unfortunately, there was no solution that could be reached under the current Zoning Regulations. He asked the Planning and Zoning Commission to consider amendments to the Zoning Regulations to address this issue in the future.

Discussion was held among Commission Members about installing impervious surface in a utility easement; Metropolitan St. Louis Sewer District requirements and concerns about stormwater management; safety concerns for neighboring property owners; noise issues created by running vehicles parked on the impervious surface; aesthetics and the effect on property values; requirements to obtain a Special Use Permit to install the portion of the driveway in the right-of-way; the existing permit process for installing driveways; and the need to address this issue.

Motion by Commissioner Renner, seconded by Commissioner Liddy, to close the public hearing. A voice vote was taken regarding the motion. Hearing no objections, Chair Bopp declared the motion approved.

## **VI. Old Business – One (1) Item for Consideration**

### Information Report – One (1) Item for Consideration

- a) **P.Z. 25-15 Laurie Taylor, 17715 Manchester Road, Wildwood, Missouri, 63038, c/o Volz, Inc., Mark Kilgore, 10849 Indian Head Industrial Boulevard, St. Louis, Missouri 63132 – A request for a Conditional Use Permit (CUP) in the NU Non-Urban Residence District for a thirty-two point one (32.1) acre tract of land that is located on the west side of Mueller Road, south of State Route 100, and north of Manchester Road (Locator Number 23X340061/Street Address: 17715 Manchester Road). **Proposed Use: A large water feature – lake – (as defined by §415.030 of the City of Wildwood's Zoning Regulations), which exceeds one (1) acre in overall size – one point seven four (1.74) acres. (Ward One)****

Planner Newberry read the request into the record.

Director Vujnich noted items in the information packet provided to Commission members, including the letter from the U.S. Army Corps of Engineers, the geotechnical report for the site, and Missouri Department of Natural Resources' regulations on dams. He also referenced a graphic provided by the project's engineer depicting where the water would flow, and be stored, in the instance of a dam failure, as requested by the Planning and Zoning Commission. Director Vujnich described the characteristics of the property, abutting roadways, neighboring properties, and current zoning district designation of the site. He discussed the illegal grading and tree removal that had occurred on the site. Director Vujnich outlined the request and the design of the lake and dam. Director Vujnich stated the Department of Planning is supportive of the request, given there are several examples of existing lakes in the surrounding area, and throughout the City of Wildwood as a whole. He explained this large water feature is the first to be required to obtain a Conditional Use Permit (CUP) and outlined the benefits associated with having the ability to place conditions on such a request.

Discussion was held among Commission Members about concerns regarding the culvert that exists under State Route 100.

Tom Kelp, Kelp Construction, explained the culvert that runs under State Route 100 directs water into a tributary of Bonhomme Creek. He explained there are not any homes near the terminus of the culvert, on the north side of State Route 100.

A motion by Mayor Woerther, seconded by Commissioner Archeski, to accept the Department's recommendation to approve the Conditional Use Permit (CUP) for the 1.74 acre lake.

Chair Bopp called the question.

A roll call vote was taken, with the following results:

Ayes: Commissioner Gragnani, Commissioner Lee, Commissioner Archeski, Commissioner Liddy, Commissioner Bauer, Commissioner Renner, Commissioner Kohn, Council Member Manton, Mayor Woerther, and Chair Bopp.

Nays: None

Absent: None

Abstain: None

Whereupon, Chair Bopp declared the motion approved by a vote of 10-0.

## VII. New Business – One (1) Item for Consideration

### Correspondence Items – One (1) Item for Consideration

- a) A response to communication from Tara, L.C., c/o Julie Lafata, Daughter of Property Owner - Bruce A. Tarantola, #51 Village View Drive, Apartment # 302, Chesterfield, Missouri, 63017, which is dated March 16, 2016, regarding **P.C. 219-85, Alfred L. Hicks and the J.L. Mason of Missouri, Inc.; PC 69-93 The Jones Company Custom Homes, Inc.; and P.C. 105-93 J.H.B. Properties;** Amended Mixed Use Development Ordinance #223; south side of Highway 100, east of Manchester Road (Street Address: 16375 Pierside Lane/Locator Number: 23U140703,); seeking the authorization to allow a drive-through facility with a financial institution at this former KinderCare facility site. **(Ward Four)**

Planner Newberry read the request into the record.

Director Vujnich explained the current zoning of the site and the permitted uses included within the site-specific ordinance. He noted the site operated as Kindercare facility for approximately seventeen (17) years. The daycare closed for business in 2014, at the end of its lease. In 2014, the property owner requested additional uses. Director Vujnich explained, at that time, the Planning and Zoning Commission supported the use of the site as medical and dental office space, and general types as well, but did not support allowing a financial institution, with a drive-through facility. He stated the Department of Planning is not recommending support of this request because the installation of a drive-through would require extensive grading and there would be issues created by higher traffic volumes and the current access to the site. Finally, he stated the Department of Planning may support the request in the future, but only if a Preliminary Site Development Plan is submitted showing the installation of a drive-through facility.

Peter Newton, Hilliker Corporation, representative of the property owner, explained the only interested buyers of the site in recent years have been financial institutions. He stated all of the interested financial institutions are deterred by the site-specific ordinance, which does not permit drive-through facilities. He outlined the difficulties experienced with finding a buyer for this site, and asked the Planning and Zoning Commission to consider amending the site-specific ordinance. He also stated that it was his belief that drafting a Preliminary Site Development Plan would not be in the interest of his client or potential buyers.

Discussion was held among Commission Members about providing a Preliminary Site Development Plans before a change to the site-specific ordinance would be considered.

Motion by Mayor Woerther, seconded by Commissioner Gragnani, to accept the Department's recommendation not to approve the request.

Chair Bopp called the question.

A roll call vote was taken, with the following results:

Ayes: Commissioner Gragnani, Commissioner Lee, Commissioner Archeski, Commissioner Liddy, Commissioner Bauer, Commissioner Renner, Commissioner Kohn, Council Member Manton, Mayor Woerther, and Chair Bopp.

Nays: None

Absent: None

Abstain: None

Whereupon, Chair Bopp declared the motion approved by a vote of 10-0.

#### **VIII. Site Development Plans-Public Space Plans-Record Plats – No Items for Consideration**

#### **IX. Other – No Items for Consideration**

#### **X. Closing Remarks and Adjournment**

Director Vujnich noted tonight's meeting is Mayor Woerther's last as a member of the Planning and Zoning Commission. The Planning and Zoning Commission and the Departments of Planning and Public Works thanked Mayor Woerther for his service to the City.

Motion by Mayor Woerther, seconded by Council Member Manton, to adjourn the meeting. A voice vote was taken. Hearing no objections, Chair Bopp adjourned the meeting at 9:30 p.m.

Approved by:

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Chair – City of Wildwood Planning and Zoning Commission

Note: Recordation of the opinions, statements, and/or other meeting participation in these minutes shall not be deemed to be an acknowledgement or endorsement by the Commission of the factual accuracy, relevance, or propriety thereof.

\* If comment cards were submitted indicating they did not wish to speak at tonight's meeting, they have been attached and made part of the official record.

DRAFT

**CITY OF WILDWOOD  
NOTICE OF  
PUBLIC HEARING**  
before the Planning and Zoning Commission  
**Monday, May 2, 2016, at 7:30 p.m.**

AS A RESIDENT OR PROPERTY OWNER NEAR THE SITE THAT IS IDENTIFIED ON THIS MAILER, THE CITY OF WILDWOOD WOULD LIKE TO ENSURE YOU ARE AWARE OF THIS REQUEST/PROPOSAL BECAUSE IT IS LOCATED WITHIN 3,000 FEET OF YOUR PROPERTY. YOUR COMMENTS ARE ENCOURAGED, ALONG WITH YOUR PARTICIPATION AT THE SCHEDULED HEARING OR MEETING. THIS ITEM IS SCHEDULED FOR DISCUSSION AND ITS OUTCOME MAY IMPACT YOUR HOME, NEIGHBORHOOD, OR AREA, SO PLEASE CAREFULLY READ THE DESCRIPTION AND PARTICIPATE AT YOUR DISCRETION. THE CITY OF WILDWOOD ENCOURAGES CITIZEN INPUT AT ALL OF ITS HEARINGS OR MEETINGS AND YOUR INVOLVEMENT WILL ASSIST IT IN REACHING THE BEST DECISION POSSIBLE FOR ALL PARTIES.

\* PLEASE SEE YELLOW BOX ON OPPOSITE SIDE OF THIS MAILER FOR A LIST OF WAYS TO EITHER COMMENT ON AND/OR TRACK THIS ITEM.



Street Address of Subject Site:  
2443 and 2485 Valley Road &  
2121 Quantnam Drive

THE CITY WELCOMES AND ENCOURAGES  
YOUR COMMENTS AND PARTICIPATION IN  
ITS PUBLIC PROCESSES.

The Planning and Zoning Commission of the City of Wildwood will conduct a public hearing on **Monday, May 2, 2016, at 7:30 p.m.**, in the **City Hall Council Chambers, 16860 Main Street, Wildwood, Missouri 63040** for the purposes of obtaining testimony regarding request(s) for either the modification of zoning district designations, application of special procedures, change in the underlying regulations of the Zoning Ordinance, action on Record Plats, update on zoning matters, or amendment of the Master Plan, which will then be considered for action. This hearing is open to all interested parties to comment upon this request, whether in favor or opposition, or provide additional input for consideration. If you do not have comments regarding this request, no action is required on your part. Written comments are requested to be submitted prior to this hearing and should be addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040 or via the City's website at [www.cityofwildwood.com/comment](http://www.cityofwildwood.com/comment). The following request will be considered at this time:

**P.Z. 27, 28, and 29-15 Valley Road Subdivision, Pulte Homes of St. Louis, L.L.C., 16305 Swingley Road, Suite 350, Chesterfield, Missouri 63017** – A request for a change to the Master Plan's Conceptual Land Use Categories Map from the Non-Urban Residential Area to the Sub-Urban Residential Area. Accompanying this Master Plan change would also be an amendment to the City's Comprehensive Zoning Plan of the Charter, which is the Master Plan's Conceptual Land Use Categories Map. Additionally, requests for a change in zoning from the NU Non-Urban Residence District to the R1 one (1) acre Residence District, with an application of a Planned Residential Development Overlay District (PRD), have been submitted for a 124 acre tract of land that is located west side of Valley Road, north of Peppermill Drive (Locator Numbers: 21U5202874, 21U610242, and 20U210014/Street Addresses: 2443 and 2485 Valley Road and 2121 Quantnam Drive). **Proposed Use: A total of one hundred sixteen (116) individual lots, with common ground, and required public space areas. (Ward Two)**

**\*RESIDENT OR PROPERTY OWNER - PLEASE COMMENT ON AND/OR TRACK THIS REQUEST BY:**

- 1) Submitting a comment online by visiting: <http://www.cityofwildwood.com/comment>.
- 2) Submitting a written comment prior to the hearing and addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040.
- 3) Viewing the Planning and Zoning Commission's agenda, which is available on the City's website at: [www.cityofwildwood.com](http://www.cityofwildwood.com), the Friday before the aforementioned meeting date.

If you should have any questions regarding this information, please feel free to contact the Department of Planning at (636) 458-0440. Thank you in advance for your interest in this matter.

CITY OF WILDWOOD  
DEC 31 2015  
DEPT OF PLANNING & PARKS

P.Z. Number(s): \_\_\_\_\_  
(as assigned by department)

## PETITION

before the  
CITY OF WILDWOOD'S  
PLANNING AND ZONING COMMISSION  
FOR THE PURPOSE OF HEARING REQUESTS  
FOR ONE OR A COMBINATION OF THE FOLLOWING:  
(PLEASE CHECK THOSE ITEMS WHICH ARE APPLICABLE)

- Change in Zoning  
 Conditional Use Permit  
 Approval of a Planned District or other special procedure (C-8/M-3/PRD)

### APPLICANT/OWNER INFORMATION

Applicant's Name: Pulte Homes of St. Louis, LLC  
Mailing Address: 16305 Swingley Road, Suite 350  
Chesterfield, MO 63017  
Telephone Number, with Area Code: (636) 537-7122  
Fax Number, with Area Code: \_\_\_\_\_  
E-Mail Address: matthew.segal@pultegroup.com / benjamin.keane@pultegroup.com  
Interest in Property (Owner or Owner Under Contract):  
Owner under contract

If owner under contract, please attach a copy of the contract. (Attached.)

Owner's Name (if different than applicant):  
PWM Properties, c/o Convy Group (Mike Convy)  
Address: P.O. Box 220610, St. Louis, MO 63122  
\_\_\_\_\_  
Telephone Number, with Area Code: (314) 378-0951

SITE INFORMATION

Postal Address of the Petitioned Property(ies):

2443, 2435 Valley Rd., 2121 Quatham Dr., Wildwood, MO 63005

Locator Number(s) of the petitioned Property(ies):

21U5202874 (2443 Valley Road), 21U610242 (2485 Valley Road),

20U210014 (2121 Quatham Dr.)

Total Acreage of the Site to the Nearest Tenth of an Acre:

81.69 + 2.89 + 40.00 = +/- 124.58 Acres.

Current Zoning District Designation: "NU" - (Non-Urban)

Proposed Zoning District Designation: "R1A" - PRD

Proposed Planned District or Special Procedure: PLANNED RESIDENTIAL DEVELOPMENT (PRD) OVERLAY DISTRICT

USE INFORMATION

Current Use of Petitioned Site:

Vacant Property

Proposed Use of Site:

116 Lot Residential Subdivision

Proposed Title of Project: Valley Road Subdivision

Proposed Development Schedule (include approximate date of start and completion of the project):

To be determined.

CONSULTANT INFORMATION

Engineer's/Architect's Name: Stock & Associates Consulting Engineers, Inc., c/o George M. Stock, P.E.

Address: 257 Chesterfield Business Parkway  
Chesterfield, MO 63005

Telephone Number, with area code: (636) 530-9100

Fax Number, with area code: (636) 530-9130

E-Mail Address: george.stock@stockassoc.com/chris.mueller@stockassoc.com

Soil Scientist/Forester's Name: SCI Engineering, Inc., c/o Scott Harding, Rick Gundlach

Address: 130 Point West Blvd.  
St. Charles, MO 63301

Telephone Number, with area code: (636) 949-8200

Fax Number, with area code: (636) 949-8269

E-Mail Address: sharding@sciengineering.com / rgundlach@sciengineering.com

**ACKNOWLEDGEMENT INFORMATION**

The petitioner(s) state(s) they (he) (she) will comply with all the requirements of the city of wildwood with regard to the procedures relating to its administration of land use and development controls within its boundaries, including the payment of all applicable fees.

The petitioner(s) further represent(s) and agree(s) that they (he) (she) has (have) not made any arrangement to pay any commission, gratuity, or consideration, directly or indirectly, to any official, employee, or appointee of the City of Wildwood with respect to this application.

The petitioner(s) hereby certify(ies) that (indicate one):

- I (we) have a legal interest in the hereinabove described property.
- I am (we are) the duly appointed agent of the petitioner(s) and that all information given and represented on this application is an accurate and true statement of fact. Any misrepresentation of information on this application or accompanying information shall constitute grounds for the City of Wildwood, Missouri to terminate review of this petition and return all materials, minus any fees, associated with its review up to and through that point.

SIGNATURE: *Matthew Segal*  
 NAME (PRINTED): Matthew Segal, Land Acquisition Manager, St. Louis Division  
 ADDRESS: Pulte Homes of St. Louis, LLC  
16305 Swingley Road, Suite 350  
Chesterfield, MO 63017  
 TELEPHONE NUMBER: (636) 537-7122

[PLEASE NOTE: THE ABOVE NAMED PERSON SHALL RECEIVE ALL OFFICIAL NOTICES REGARDING THIS REQUEST, INCLUDING THE PUBLIC HEARING NOTICE.]

SUBSCRIBED AND SWORN BEFORE ME THIS  
30 DAY OF December 2015

SEAL:

SIGNED: *Daniel Stock*  
(NOTARY PUBLIC)

NOTARY PUBLIC *Daniel Stock*  
STATE OF MISSOURI.

MY COMMISSION EXPIRES 3/17/17

**FOR OFFICE USE ONLY**

1<sup>ST</sup> SUBMITTAL DATE: \_\_\_\_\_  
 FEE: \_\_\_\_\_; RECEIVED BY: \_\_\_\_\_  
 PRELIMINARY DEVELOPMENT PLAN: YES NO  
 PACKET COMPLETE: YES NO

2<sup>ND</sup> SUBMITTAL DATE: \_\_\_\_\_  
 PACKET COMPLETE: YES NO

3<sup>RD</sup> SUBMITTAL DATE: \_\_\_\_\_  
 PACKET COMPLETE: YES NO

4<sup>TH</sup> SUBMITTAL DATE: \_\_\_\_\_  
 PACKET COMPLETE: YES NO



DANIEL JOSEPH STOCK  
My Commission Expires  
March 17, 2017  
St. Louis County  
Commission #13486125



*16305 Swingley Road, Suite 350  
Chesterfield, MO 63017  
Phone: (636) 537-7122  
Email: Matthew.Segal@Pultegroup.com*

### Statement of Intent for Pulte Valley Road Subdivision

Pulte is pleased to present a unique 124.58 acre, open space, transitional zoning community that respects and embraces the natural surroundings and topography of the Valley Road and Eastern Wildwood corridor.

The site plan promotes a natural transitional land use from the greater than 1.3 units per acre density of the adjacent subdivisions to the South, while respecting the NU – 3 acre communities to the North. With a total density of .93 units per acre (116 lots on 124.58 acres). When designing the community, we limited the use of retaining walls, respected the rolling topography and waterways. Additionally, the design has a long street prior to the first home site, similar to the adjacent community to the south. All of the lots are at minimum of 15,000 square feet, and have significant spacing between them. This design allows for a new sustainable community that will cater to two different consumer demographics. Lastly, the economic development will assist the surrounding community as the majority of our homes will sell in excess of neighboring and adjacent property owners.

#### Eastern Village (New Move-up construction)

This 62 lot village will cater to move-up family consumers. It will satisfy a demand for newer homes in the Eastern Wildwood market ranging from a 2300+ square foot Ranch designed home, to a 2-story 3500+ square foot home. With Pulte LifeTested homes starting in the Mid- \$400k's to \$500k+, it will provide a move-up shopping experience that has been unavailable in the Eastern Wildwood corridor in more than a decade. These homes will have lots in excess of 15,000 square feet, have minimal retaining walls, and respect the natural topography. Additionally, they will have 3 car side-optional garage, that many move-up families desire.

#### Western Village (Maintenance Free – Ranch Homes)

This 54 lot maintenance free village will be reserved for Ranch Style homes, and will cater to the Empty-Nest consumer who wants a maintenance free lifestyle, while living in the natural beauty of Wildwood. This consumer will most likely be an existing Wildwood or Western Chesterfield resident, who chooses to age in the community they raised their family in. They will be likely downsizing from an acre or 3 acre house that typically is larger than 3,000 sq. ft. These single story homes will average around 2300 square feet, and will be priced from the low \$400k's to \$500k. The consumer will desire a single family home, their own lot, and not downsize to an attached lifestyle home (villa/duplex). The lots of these homes will also be in excess of 15,000 sq ft, and landscaping, snow removal will be maintained by the homeowner's association. This unique village will be unlike any community ever built in Wildwood, and will focus on allowing Wildwood residents to age in the community they love.

#### Open Space



In an effort to respect and promote the natural beauty of the site and the surrounding community, we are proposing to dedicate the furthest north portion of the site to be hiking trails, and a natural preservation area. The dedicated trails would be almost 3000 linear feet or greater than ½ mile of dedicated trails. Additionally, large areas of open space around the perimeter of the site give very comfortable amounts of space between existing homeowners in the adjacent zoning districts (some SU, some NU). The total open space is approximately 54.8 acres.

### Stormwater Management

Stormwater management systems are designed to meet MSD volume reduction and water quality treatment requirements. The BMPs (Best Management Practices) are enhanced with sustainable and aesthetically appealing landscaping. Bioretention Basins/Rain Gardens are proposed for treatment of Water Quality Volume, prior to discharge to dry Detention Basins. Some of the Bioretention Basins will be designed to accommodate Channel Protection and Flood Protection Volumes, as well. 15 Bioretention Basins and 6 dry Detention Basins are proposed.

The results of the Stormwater Management System, in the area of development, is as follows:

- 2-year 24-hour Postdeveloped Discharge = 3.46 cfs < 46.64 cfs predeveloped, a 92% decrease.
- 100-year 24-hour Postdeveloped Discharge = 68.24 cfs < 258.41 cfs predeveloped, a 74% decrease.

Approximately 27 acres are to be set aside as a Woodland Conservation Area on the north side of the site. No development is proposed in this area, other than hiking trails, a detention basin berm, and the existing Ameren power lines. Grading of the subdivision site has also been minimized to preserve the native woodland vegetation in and around the residential yards.

## Travis Newberry

---

**From:** noreply@cityofwildwood.com  
**Sent:** Thursday, April 28, 2016 10:20 PM  
**To:** Lynne Greene-Beldner; Ryan Thomas; Elizabeth Weiss; Kathy Arnett; Travis Newberry; Steve Vogel; Travis Newberry  
**Subject:** Online Form Submittal: Public Hearing Comment Form

### Public Hearing Comment Form

*By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.*

Request Being Considered	P.Z. 27, 28 & 29 Valley Road Subdivision
Item Description	Pulte Home Development
Position on Request	Do Not Support
General Comments	I live on Peppermill Drive in Brentmoor Subdivision off Valley Road. I am opposed to this development as it appears to be rather dense for this area and could lead to much more traffic on Valley Road. The street I live on dead ends where this development begins. I would not want to see that street go through to carry a lot of traffic.
Suggestions	It would be nice to see this land become a park. If however, the development is approved, I would like to see it separated more from our subdivision (more green space between), be a little less dense in housing, and put a gate at the end of Peppermill Drive for use by emergency vehicles only. That is, not allow normal traffic to connect via Peppermill Drive.

(Section Break)

Name	Marvin & Diana Raymond
Address	16374 Peppermill Dr.
City	Wildwood
State	MO

Zip	63005
Phone Number	636-537-1226
Email	<a href="mailto:marvinraymond@gmail.com">marvinraymond@gmail.com</a>

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## Travis Newberry

---

**From:** noreply@cityofwildwood.com  
**Sent:** Wednesday, April 27, 2016 10:59 PM  
**To:** Lynne Greene-Beldner; Ryan Thomas; Elizabeth Weiss; Kathy Arnett; Travis Newberry; Steve Vogel; Travis Newberry  
**Subject:** Online Form Submittal: Public Hearing Comment Form

### Public Hearing Comment Form

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Request Being Considered	P.Z. 27, 28 & 29 Valley Road Subdivision
Item Description	Rezoning from non-urban residential to sub-urban residential
Position on Request	Do Not Support
General Comments	<p>Prior to purchasing my property in October 2014, which backs to the proposed Pulte development, I spoke to the seller and did some additional research. I understood a previous development was turned down based on a similar rezoning efforts. Since I work with real estate developers across the country on a daily basis I knew the risk of development in my back yard. However in review of Wildwood's Master Plan prior to my home investment I realized that significant research had already been completed by many elected officials and hired professionals which specifically detailed the need to keep the non-urban residential zoning in place. Understanding the City of Wildwood's Master Plan mirrored my view regarding limiting development in this area I purchased our home. Then in later research my concern with large development behind me was put at ease once again when the 2015-2016 update to the Master Plan reconfirmed the previous research by Wildwood. In that update additional professionals were consulted which again showed that high volume development was ill advised and the non-urban residential zoning should not be changed. Items to note for this specific property is that it currently backs to a non urban residential development with lots in excess of 3 acres. Having this development proposed with 15,000 SF lots would not be consistent with the surrounding community.</p>

Further, part of the Pulte development is proposed in areas of steep terrain, which is specifically noted in the Master Plan as of high concern. With a creek running below the development on the north side, along with an existing community with septic systems and wells this would be of major concern for waste water runoff. With existing runoff issues noted currently from logging activity which has damaged existing structures in the Valley Farms subdivision, high volume development is strongly discouraged. Another item to note would be the increased traffic a 116 home development this would create. Additional sidewalks extending to the subdivision would be required. Also the intersection at Valley Rd and Clayton would need to be redesigned. Specifically, during drop off and pick up at Crestview Elementary this intersection is already heavily congested with a police officer already directing traffic and children in crosswalks. Without appropriate design this intersection could then become dangerous and would be susceptible to an unneeded tragedy. In summary, the City of Wildwood's Master Plan already outlines my argument against high residential development with strong research and opinions, which took significant time and money to complete. I would anticipate that the Planning and Zoning Department would keep to the conclusions provided in this report and deny the rezoning request of Pulte Homes.

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**Suggestions**

Keeping to the non urban residential zoning but also keeping to a minimum lot size. Limiting development to 40 homes, as currently zoned, with at least 2-3 acres per lot that keep to the natural contours of the land not disturbing steep terrain would be recommended. 100 feet of non disturbance of wildlife is currently proposed by Pulte at the boundaries. This is basically 30-35 steps from my backyard. Additional non disturbance should be required specifically to existing non urban communities that border the proposed development. A minimum of 250-300 feet is requested. Public sewer and water should be addressed for the Valley Farms subdivision Sidewalks to the development along Valley Road should be required. Revisions to the intersection at Valley Rd and Clayton Road, next to Crestview Elementary, needs to be studied thoroughly.

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(Section Break)

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<b>Name</b>	Rick Orf
<b>Address</b>	16216 Bear Valley Rd
<b>City</b>	Wildwood

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State	MO
Zip	63005
Phone Number	3143022215
Email	<a href="mailto:Rick.orf@gmail.com">Rick.orf@gmail.com</a>

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## Travis Newberry

---

**From:** frank gervascio <fgervascio@hotmail.com>  
**Sent:** Tuesday, April 26, 2016 12:53 PM  
**To:** Travis Newberry  
**Subject:** Pulte Homes

April 26, 2016

To: Travis Newberry

Thank you for the time you spent with me over the phone yesterday. This letter is in reference to the proposed Pulte Homes to build some 116 homes next to my subdivision, Brentmoor Place.

During the informal meeting with Pulte, these were some of the issues I heard raised by attending participants that I think are still a concern:

First, how is a change in the master plan zoning from non-urban residence to R-1A Residence District beneficial to currently surrounding residents. The Pulte representative gave points that participants cited were beneficial to Pulte not to residents.

Second, I heard significant concern that Pulte wants to connect to two (2) of the Brentmoor Place streets. Residents cited a concern of significant increase in traffic flow onto our subdivision streets while building was underway, as well as after completion of building.

One participant stated that the grading to Pulte Homes subdivision would be too steep for large trucks, earth movers, moving vans and the like to go up thereby shifting traffic into the Brentmoor Place subdivision.

One former resident had mentioned to me that the current grading was so steep the fire department had trouble with getting to homes off of eagle Creek in the past.

With regard to traffic flow at the informal meeting, residents, as well as Pulte representative, said they had proposed to have any connecting streets "gated" and the fire department would have access to them via "keys".

After this meeting I understood Pulte had not formally requested the gating of streets which questions integrity to further promises made.

I think the "gating" of streets to be the only wise way to control traffic flow, especially to ensure the safety of the neighborhood children.

Third, during the informal meeting residents off of Eagle Creek were quite concerned with an increase of traffic flow onto Valley Road. Especially with blind spots to the entrance of the new subdivision. As I stated to you, there did appear to be on the corner of Peppermill Drive and Valley Road a traffic counter but most of the time it had fallen to the ground counting nothing.

Four, those residents living off of Eagle Creek brought video and pictures to the informal meeting showing tremendous rain water run-off that was alarming and definitely a potential life hazard, especially to children.

Their concern was improper grading would only enhance those dangers that had been predicted by them six (6) years ago (one of the residents said he was an engineer).

It seemed to me that the Pulte "engineer" dismissed these concerns basically stating that he had assessed everything and there would be no problems.

I strongly think that before any continued thought to building of homes in this area, the City of Wildwood needs to have an independent engineering firm ( agreeable to residents ) to assess concerns of a massive rain water run-off . Anything less than that I think would result in a lack of due diligence on Wildwood's part and open to lawsuits in the event of a tragedy to human life not to mention property erosion.

Again, there were so many other concerns at this informal meeting. For example, a resident in our subdivision was concerned about maintaining the integrity of the pond/lake already in the subdivision. His concern was its subterranean collapse.

Finally, I would like to know at this meeting on Monday if Pulte Homes has made any contributions to any of Wildwood's officials from the mayor downward (a listing of names, time and dollar amounts).

Thank you for your attention to this letter

Frank Gervascio  
16255 Peppermill Drive  
Wildwood, Missouri 63005

## Travis Newberry

---

**From:** noreply@cityofwildwood.com  
**Sent:** Tuesday, April 26, 2016 9:11 AM  
**To:** Lynne Greene-Beldner; Ryan Thomas; Elizabeth Weiss; Kathy Arnett; Travis Newberry; Steve Vogel; Travis Newberry  
**Subject:** Online Form Submittal: Public Hearing Comment Form

### Public Hearing Comment Form

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Request Being Considered	P.Z. 27, 28 & 29 Valley Road Subdivision
Item Description	2443 and 2485 Valley Road and 2121 Quantham Drive
Position on Request	Do Not Support
General Comments	<p>City of Wildwood Planning Commission: The City of Wildwood is at a crossroads. There is a definite divide between some people's ideas of development and the concepts of open spaces and quality of life. It is my understanding that Pulte wants to change the zoning of a piece of land that is currently Non-Urban Residence. Pulte proposes to build over 110 houses on this piece of land. Here are some thoughts the Planning Commission might consider: 1. Pulte came in with this proposal after the City adopted its current Master Plan. While a plan is a fluid document, why have a Master Plan, if developers can come in at any time to change it? 2. Pulte will destroy one of the oldest neighborhoods in Wildwood by attaching this new neighborhood to Brentmoor Place. Pulte will remove the attractiveness of this and surrounding neighborhoods. They will no longer be quiet places, with "green spaces" surrounding some of its homes (Wynncrest has destroyed the open space on one side of Brentmoor Place already.) 3. In a recent meeting, Pulte explained to homeowners that they would get gates to help with the added traffic. It was pointed out to Pulte that this request would not be granted by the Fire department and/or ambulance services. Thus, not only would there be added traffic passing through our neighborhood during construction, by attaching the streets, there would be added</p>

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traffic passing through Brentmoor Place to this development upon its completion. 4. A councilman argued that the streets in Brentmoor Place were expected to continue. I disagree. One street in Brentmoor Place was blocked recently by a homeowner so that this house could now become a part of Wynncrest. 5. Traffic on Valley Road will increase. I don't think this road can handle much more traffic. There are many cyclists who come to ride on Valley Road. More car traffic will affect this activity, an activity that should be promoted. 6. When I asked Pulte how this neighborhood will help surrounding neighborhoods, they responded that this neighborhood would add value to our properties. I think they meant that our taxes should increase! If I wanted to sell my property, wouldn't prospective buyers want Pulte's newer homes? 7. We heard from neighbors on the north side of this property that clearing done on this property has had some dramatic effects on water/drainage already. Major changes to this land will cause major changes in the animal and plant ecosystem. Where will the animals go? In the spirit of the current Master Plan, I urge the Planning Commission not to change the zoning of this parcel of land. Thank-you. Peter Harris 2502 Peppermill Lake Ct.

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**Suggestions**

Please use the Master Plan as a guide for sensible development that does not destroy existing neighborhoods. If zoning changes are granted, please only allow a minimum number of houses.

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(Section Break)

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Name	Peter Harris
Address	2502 Peppermill Lake Ct.
City	Widlwood
State	MO
Zip	63005
Phone Number	636-532-2173
Email	<a href="mailto:pkharris1@gmail.com">pkharris1@gmail.com</a>

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Planning and Zoning Commission  
Att: Joe Vujnich (Director of Planning and Parks)  
City of Wildwood  
16860 Main Street  
Wildwood, Mo. 63040

April 23, 2016

This letter is in response to P.Z 27, 28, and 29-15 Valley Road Subdivision, Pulte Homes of St. Louis, LLC request for a change to the Master Plan's Conceptual Land Use Categories Map from the Non-Urban Residential Area to the Sub-Urban Residential Area.

The trustees of Brentmoor Place are adamantly opposed to this change in the Master Plan for the following reasons.

1. The Master Plan was just recently reviewed and approved in late 2015 for this area to remain as Non-Urban Residential Area.
2. I believe one of the priorities of the newly elected Mayor is adherence to the Master Plan, particularly in the area of rules relating to minimum lot size.
3. The Pulte subdivision plan shows the width of most of the lots to be approximately 80 feet. This is not in keeping with the lot widths of the homes on Pepper View Court that would back up to the Pulte lots. Our home lots range in width from 110 to 115 feet. As a minimum, we feel the lot widths of the Pulte homes should match the Pepper View Court home lot widths.

In addition any approval for a subdivision for this site must include the following stipulation.

1. The two streets that deadend at the end of Peppermill Drive and Peppermill Ridge should NOT be connected to the proposed subdivision. Our subdivision presently has too much traffic and too many speeders which present unsafe conditions within the subdivision. Extension of these streets into the Pulte subdivision would only exasperate the safety and speeding problems and would accelerate the deterioration of our streets. If a second access to the Pulte subdivision is required for the fire department, then the Brentmoor Subdivision recommends the use of locked gates keyed for use by the fire department or other government organizations. In an unofficial pole of the Brentmoor Place subdivision ALL are vehemently opposed to any connection of these streets to the Pulte proposed subdivision. Connection of the sidewalks between the subdivisions is not an issue.

Brentmoor Place Subdivision Trustees respectfully request your consideration in these matters.

Respectfully,  
Brentmoor Place Subdivision Trustees  
Paul Bernache  
16318 Peppermill Dr.  
636-536-2031

Heather Davis  
16380 Peppermill Dr.  
636-778-0893

Melissa Wagner  
16317 Peppermill Dr.  
636-530-1562

Cc: Ray Manton (Ward 2 City Councilmember)  
Ed Marshall (Ward 2 City Councilmember)

## Travis Newberry

---

**From:** noreply@cityofwildwood.com  
**Sent:** Wednesday, April 20, 2016 11:38 AM  
**To:** Lynne Greene-Beldner; Ryan Thomas; Elizabeth Weiss; Kathy Arnett; Travis Newberry; Steve Vogel; Travis Newberry  
**Subject:** Online Form Submittal: Public Hearing Comment Form

### Public Hearing Comment Form

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Request Being Considered	P.Z. 27, 28 & 29 Valley Road Subdivision
Item Description	<i>Field not completed.</i>
Position on Request	Do Not Support
General Comments	This proposed change is the antithesis of what Wildwood was founded for. Additionally the Revised Master Plan Non-Urban Residential portion is identified by "land area is steeply sloping, heavily vegetated, and relatively undeveloped in terms of traditional urban densities." This property is all that. Plus "existing developments of three (3) acres or more in these areas strongly weigh against any new development of higher densities in this land use designation." This would be Valley Farms. The proposed development has all of the houses clustered and a common ground of land that is around and under the power lines and thus undevelopable. This land use can not be compared to the other divisions that predate the founding of Wildwood. Compare the actual property size and common ground of Brentmoor to the Pulte plan. The connecting of the roads, Peppermill and Peppermill Ridge will drastically change the secure neighbor feel that Brentmoor Place has enjoyed for 30 plus years. If this would be approved a dangerous precedent is being set for future cheapening of Wildwood for more highly density divisions. This is not what I want.
Suggestions	Have Pulte Homes submit a proposal for a nice three (3) acre subdivision.

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(Section Break)

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Name	Robert Kipp
Address	2479 Peppermill Ridge Dr
City	Wildwood
State	MO
Zip	63005
Phone Number	636-537-5550
Email	<a href="mailto:rqkipp@charter.net">rqkipp@charter.net</a>

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## Travis Newberry

---

**From:** noreply@cityofwildwood.com  
**Sent:** Wednesday, April 20, 2016 7:18 PM  
**To:** Lynne Greene-Beldner; Ryan Thomas; Elizabeth Weiss; Kathy Arnett; Travis Newberry; Steve Vogel; Travis Newberry  
**Subject:** Online Form Submittal: Public Hearing Comment Form

### Public Hearing Comment Form

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Request Being Considered	P.Z. 27, 28 & 29 Valley Road Subdivision
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Item Description	<i>Field not completed.</i>
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Position on Request	Do Not Support
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General Comments	We live in wildwood to appreciate nature and a less congested area. Additionally, the rough terrain in the area lends itself better to larger, 3 acre or more lots as this tract is currently zoned for. Putting this many lots and homes on this tract will cause water runoff to adjoining properties and increased traffic on roads that are more rural in nature.
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Suggestions	Developing the property as currently zoned will be better suited to the terrain and will more closely blend in with some of the adjoining property while also reducing traffic load on Valley Road. Additionally this will be less disruptive to wildlife and cause less runoff.
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(Section Break)

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Name	Jan P. Bauer
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Address	16400 Forest Gate Lane
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City	Wildwood
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State	Missouri
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Zip	63011
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Phone Number 3146109946

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Email [jan.bauer@gmail.com](mailto:jan.bauer@gmail.com)

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## Travis Newberry

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**From:** noreply@cityofwildwood.com  
**Sent:** Wednesday, April 20, 2016 7:07 PM  
**To:** Lynne Greene-Beldner; Ryan Thomas; Elizabeth Weiss; Kathy Arnett; Travis Newberry; Steve Vogel; Travis Newberry  
**Subject:** Online Form Submittal: Public Hearing Comment Form

### Public Hearing Comment Form

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Request Being Considered	P.Z. 27, 28 & 29 Valley Road Subdivision
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Item Description	<i>Field not completed.</i>
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Position on Request	Do Not Support
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General Comments	The impact of adding 116 homes in this terrain would be devastating to the quality of the neighborhoods on Valley Road. The narrow two lane VALLEY ROAD is not suitable for any additional development. A similar proposal was shot down years ago. The situation has not changed.
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Suggestions	<i>Field not completed.</i>
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(Section Break)

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Name	Michael Rusert
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Address	2562 Valley Oaks Estates Drive
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City	Wildwood
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State	Missouri
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Zip	63005
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Phone Number	6362363660
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Email	<a href="mailto:mike_rusert@yahoo.com">mike_rusert@yahoo.com</a>
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## Travis Newberry

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**From:** noreply@cityofwildwood.com  
**Sent:** Wednesday, April 20, 2016 4:17 PM  
**To:** Lynne Greene-Beldner; Ryan Thomas; Elizabeth Weiss; Kathy Arnett; Travis Newberry; Steve Vogel; Travis Newberry  
**Subject:** Online Form Submittal: Public Hearing Comment Form

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Request Being Considered	P.Z. 27, 28 & 29 Valley Road Subdivision
Item Description	<i>Field not completed.</i>
Position on Request	Do Not Support
General Comments	Proposal does not conform to Master Plan; Pulte proposal deceptive ("avg lot size" inclusive of common ground vs. a true comparative to actual "avg lot size" on surrounding properties); property is critical element of Caulks Creek watershed (prior removal of trees and ground clearance led to catastrophic damage to Bear Valley and surrounding areas); homes planned to be built on site inconsistent with adjoining properties/neighborhoods; proposed "buffer" between one side of development (Brentmoor Place) insufficient in comparison to other 5 sides; preparation of land (tie/retaining walls, ponds, trails, building lots, roads, water/sewer/power) will eliminate majority of trees/established ground cover currently minimizing erosion; wildlife impact; proposed MSRP of homes to be built a misrepresentation at best, outright lie by Pulte at worst (comps inconsistent with actual selling price attained elsewhere); "cookie cutter" house plans do nothing to enhance surrounding area/city of Wildwood; proposal as submitted does nothing to enhance/improve surrounding area nor the city of Wildwood.
Suggestions	Conform to current zoning or require minimum 3 acre ACTUAL LOT SIZE and homes consistent with same. Retain majority of trees and existing topography vs. stripping home sites and adjacent areas in the interest of minimizing expense.

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(Section Break)

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Name	Neil Burns
Address	2500 Pepperfield Ct
City	Wildwood
State	MO
Zip	63005
Phone Number	6365379171
Email	<a href="mailto:neil.burns@charter.net">neil.burns@charter.net</a>

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## Travis Newberry

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**From:** noreply@cityofwildwood.com  
**Sent:** Tuesday, April 19, 2016 4:02 PM  
**To:** Lynne Greene-Beldner; Ryan Thomas; Elizabeth Weiss; Kathy Arnett; Travis Newberry; Steve Vogel; Travis Newberry  
**Subject:** Online Form Submittal: Public Hearing Comment Form

### Public Hearing Comment Form

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Request Being Considered	P.Z. 27, 28 & 29 Valley Road Subdivision
Item Description	<i>Field not completed.</i>
Position on Request	Do Not Support
General Comments	<p>Our family is opposed to the change in zoning to allow the development of 116 home sites on the property adjacent to our subdivision, Brentmoor. Valley Road is a dangerous road with blind curves at every turn. There have been several injury accidents at the curve adjacent to the proposed development. We reside at the back of our subdivision, close to the dead end of Peppermill Rd. which we understand the developers wish to open up to access the new subdivision. The families in this subdivision enjoy a peaceful, quiet, kid-friendly neighborhood. Construction traffic and then resident traffic into the new subdivision through our streets would negatively impact our property values and quality of life, as well as seriously impact safety, as we have a number of children who both walk and ride their bikes on the subdivision streets, which have never been through streets since the inception of the neighborhood. It is categorically unfair to ask residents of our subdivision and neighboring streets to experience the countless negative impacts a higher density development brings with it simply to line the pockets of the developer and land owner. This is not what the master plan envisioned for Wildwood, and it would do a grave injustice to the families in this community.</p>
Suggestions	Maintain the current zoning.

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(Section Break)

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Name	Melinda Maxson
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Address	16358 Peppermill Dr.
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City	Wildwood
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State	MO
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Zip	63005
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Phone Number	314-609-2792
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Email	<a href="mailto:mmaxson72@gmail.com">mmaxson72@gmail.com</a>
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**Chris Mueller**

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**From:** King, Brenda J <BKing2@ameren.com>  
**Sent:** Friday, December 04, 2015 1:19 PM  
**To:** Chris Mueller  
**Cc:** Jaksetic, Jim J  
**Subject:** FW: New residential subdivision Wildwood 5466 Ameren  
**Attachments:** 2015-12-03SITE.PDF; 2015-12-03AERIAL.PDF

Chris –

Please see comments and requests from Ameren Transmission Maintenance regarding the new residential subdivision in Wildwood.

Regards,

.....  
**BRENDA J. KING**  
Sr. Real Estate Representative  
Real Estate  
T 314-554-2483  
C 314-488-5483  
F 314-554-2570  
E [bking2@ameren.com](mailto:bking2@ameren.com)

.....  
**Ameren Missouri**  
1901 Chouteau (MC 700)  
St. Louis, MO 63103  
[www.ameren.com](http://www.ameren.com)  
**Please consider the environment before printing this e-mail.**



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**From:** Jaksetic, Jim J  
**Sent:** Friday, December 04, 2015 1:14 PM  
**To:** King, Brenda J  
**Cc:** Grass, Terry L  
**Subject:** FW: New residential subdivision Wildwood 5466 Ameren

Brenda,

I reviewed the attached development plans for new residential subdivision plans Wildwood 5466 that shows the dam for the detention 1 encroaching on the easement. There is a deep ravine where the fill for the proposed detention pond dam would be placed. There would remain adequate vertical clearance between the proposed fill elevation of 625 at the south edge of the existing easement for the dam and both the 34.5 kV distribution line and the 138 kV transmission lines. The drawing shows no grading near and under the 345 kV lines also on the easement.

Ameren Transmission Maintenance Department request final grading plans for the dam to be submitted for review. Ameren Maintenance Department representative will be available to discuss grading logistics when working near energized power lines with the grading contractor prior to start of construction of the detention pond dam.

Please pass my comments on to Chris Mueller at Stock and associates.

If you have any questions, please contact me.

Thanks,

**JIM JAKSETIC**

Career Engineer

Transmission

T 314-554-2703

F 314-206-0797

E [jjaksetic@ameren.com](mailto:jjaksetic@ameren.com)

.....

**Ameren Services**

1901 Chouteau Avenue

PO Box 66149, MC658

St. Louis, MO 63166-6149

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## MONARCH FIRE PROTECTION DISTRICT

13725 Olive Blvd., Chesterfield, MO 63017-2640

Phone: 314.514.0900 Fax: 314.514.0696

[www.monarchfpd.org](http://www.monarchfpd.org)

December 23, 2015

Chris Mueller  
Stock and Associates  
257 Chesterfield Business Pkwy.  
Chesterfield, MO 63005

RE Valley Road

Dear Mr. Mueller:

I have reviewed the Site Development Plan for the project mentioned above. This project is being reviewed for compliance with the 2009 International Fire Code as adopted by Ordinance 31 *The Fire Prevention Code* of the Monarch Fire Protection District. Please make note of the following:

1. Street widths are acceptable as shown.
2. Please see the attached Policy 2009-1 for turning radii requirements.
3. In accordance with Section B105.1 of the 2009 International Fire Code as adopted by Monarch Fire District, the minimum required fire flow will be 2,000 gpm at a residual pressure of 20 psi. This is based on the information provided regarding the proposed size and construction type of the largest anticipated building. A fire flow of 2,000 gpm at a residual pressure of 20 psi will allow for a building with a fire-flow calculation area of up to 6,200 sq. ft.
4. In accordance with Section C105.1, the maximum spacing between fire hydrants shall be 350 feet, and the maximum distance from a fire hydrant to any point on the street shall be 175 feet.

If you have any questions, please call me at 514-0900 ext. 313, or email me at [herin.r@monarchfpd.org](mailto:herin.r@monarchfpd.org).

Yours in Firesafety,

A handwritten signature in cursive script that reads "Roger N. Herin".

Roger N. Herin, MCP  
Fire Marshal



## Chris Mueller

---

**From:** Dave Phipps <daveph@metrowest-fire.org>  
**Sent:** Wednesday, November 25, 2015 2:53 PM  
**To:** Chris Mueller  
**Subject:** RE: 5466 Valley Road - Fire

Chris,

Streets width and turning radius looks good, fire flow is 1500 GPM at 20 PSI, fire hydrant spacing is 600 feet.

David E. Phipps  
Fire Marshal  
Metro West Fire Protection District  
(636) 821-5806

**From:** Chris Mueller [<mailto:chris.mueller@stockassoc.com>]  
**Sent:** Wednesday, November 25, 2015 11:14 AM  
**To:** Dave Phipps <daveph@metrowest-fire.org>  
**Cc:** [benjamin.keane@pultegroup.com](mailto:benjamin.keane@pultegroup.com); George Stock <[george.stock@stockassoc.com](mailto:george.stock@stockassoc.com)>  
**Subject:** 5466 Valley Road - Fire

Dave,  
Per my voicemail, on behalf of Pulte Homes, we respectfully request review of the attached multi-page exhibit for a proposed 120-lot residential subdivision. I noticed the site is divided between Metro West and Monarch Fire Districts near the Ameren high-tension power lines. How do we get this resolved?  
Thank you,  
Chris

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March 1, 2016

Mr. George Stock, PE  
Stock & Associates, Inc.  
257 Chesterfield Business Parkway  
St. Louis, Missouri 63005

RE: Traffic Impact Study  
Valley Road Subdivision  
Wildwood, Missouri  
516-0024-OTE

Dear Mr. Stock:

Lochmueller Group has completed the following traffic impact study for the proposed development of a residential subdivision in Wildwood, Missouri. A total of 116 home sites are proposed on a currently undeveloped tract located along the west side of Valley Road between the Brentmoor Place subdivision and Bear Valley Road. A preliminary site plan (by others) is illustrated in **Exhibit 1**.

The proposed subdivision would have a single point of access onto Valley Road just north of Peppermill Drive. Proposed stub street connections to the Brentmoor Place subdivision would be gated and available for emergency access purposes only, and therefore did not factor into this analysis.

The purpose of this study was to forecast the amount of traffic that would be generated by the proposed subdivision, identify the impact of those trips upon the subdivision's entrance intersection with Valley Road, and determine the need for supporting roadway and/or traffic control improvements at that location or at the adjacent intersection of Valley Road and Peppermill Drive.

Traffic conditions were evaluated during the morning and afternoon commuter peak hours on a typical weekday. The study area included the intersections of Valley Road with Peppermill Drive and the proposed subdivision entrance. Existing conditions and forecasted conditions including the proposed subdivision were evaluated and then compared to identify potential traffic impacts. The methodology employed by this study, along with its findings and conclusions, are discussed in greater detail in the following sections.

### ***Existing Conditions***

Valley Road is a two-lane roadway with a curvilinear alignment that traverses mostly rolling terrain. A typical section provides 20 to 22 feet of pavement width and ditch drainage. The



roadway is classified as a collector, meaning that its primary function is to provide local access and distribute local traffic to intersecting arterial roadways, such as Clayton Road and Kehrs Mill Road. Valley Road has a posted speed limit of 30 miles per hour and is maintained by the City of Wildwood.

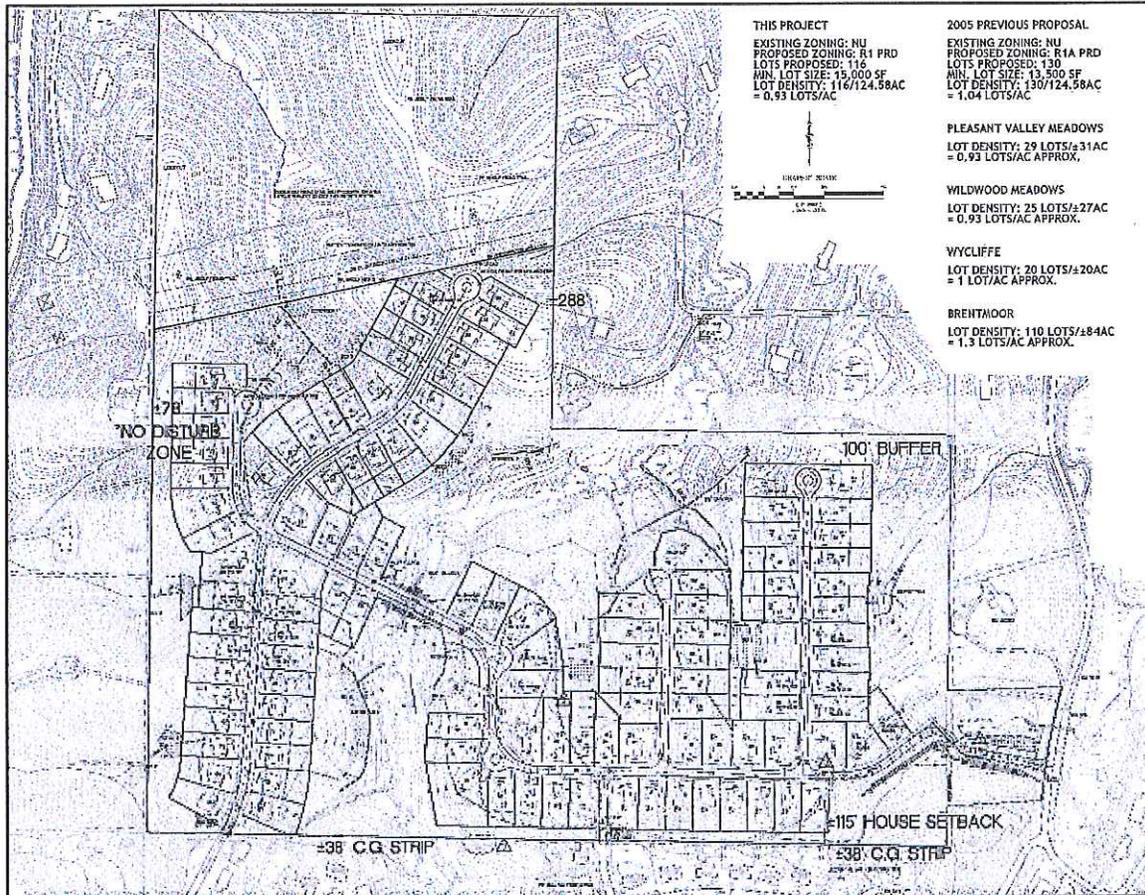


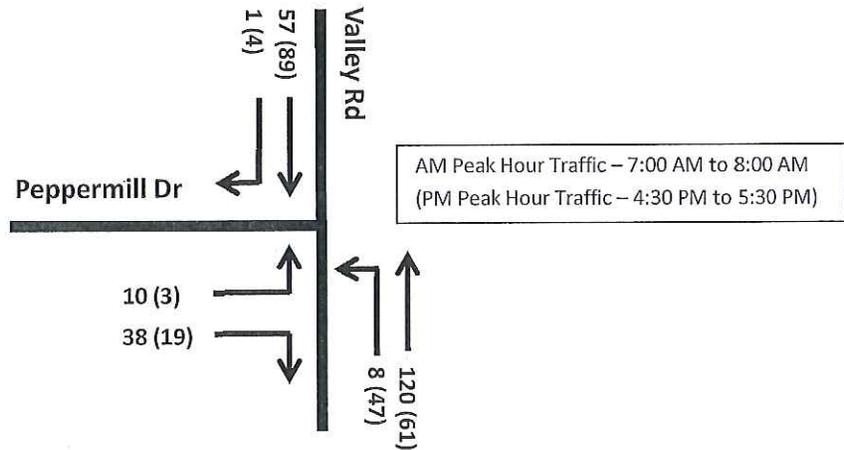
Exhibit 1: Preliminary Site Plan (by others)

To quantify existing traffic volumes, a turning movement count of the intersection of Valley Road and Peppermill Drive was performed during the weekday morning (7:00 to 9:00 a.m.) and afternoon (4:00 to 6:00 p.m.) peak periods on a typical weekday. From the count, it was determined that the morning and afternoon peak hours of traffic occur from 7:00 to 8:00 a.m. in the morning and from 4:30 to 5:30 p.m. in the afternoon.

These peak periods for traffic on Valley Road would coincide with the peak trip generation for the proposed subdivision. Therefore, if traffic from the subdivision can be accommodated at these times, it can be reasoned that adequate capacity would be available to accommodate its



traffic throughout the remainder of the day. Existing traffic volumes are summarized in **Exhibit 2**.



**Exhibit 2: Existing Traffic Volumes**

As shown, a total of 188 and 157 vehicles per hour pass by the site on Valley Road during the morning and afternoon peak hours, respectively. Volumes are heavier in the northbound direction during the morning and southbound during the afternoon. Based on this count, Valley Road carries just under 2,000 vehicles over the course of a full weekday.

Existing operating conditions were quantified based on the performance of the intersection of Valley Road and Peppermill Drive. Intersections are the most commonly evaluated roadway component, since roadway capacity is typically dictated by the number of vehicles that can be served at intersections.

The analysis was completed using Synchro 7, which is a commonly used traffic analysis tool based on the “Highway Capacity Manual” (HCM), published in 2010 by the Transportation Research Board. The HCM quantifies transportation system performance using Levels of Service (LOS). There are six levels of service ranging from LOS A (“free flow”) to LOS F (“oversaturated”). LOS C is commonly used for design purposes and represents a roadway with volumes utilizing 70 to 80 percent of its capacity. LOS D is generally considered acceptable for peak period conditions and is an appropriate target LOS for this study.

Levels of service criteria vary depending upon the roadway component being evaluated. For unsignalized intersections, which are the focus of this study, the criteria are based on control delay as summarized in **Table 1**.



**Table 1: Unsignalized Intersection Level of Service Thresholds**

Level of Service	Delay (sec/veh)
A	0-10
B	> 10-15
C	> 15-25
D	> 25-35
E	> 35-50
F	> 50

The existing operating conditions at the study intersections are summarized in **Table 2**. For intersections with partial (side-street) stop control, such as Valley Road and Peppermill Drive, delay is calculated for the minor movements only (Peppermill Drive approach and Valley Road left-turns), since through traffic on the major road is not required to stop. Overall intersection delay and levels of service are not reported. As shown, the minor movements at the intersection currently operate favorably at LOS A during both peak hours.

**Table 2: Existing Operating Conditions**

Intersection & Movements	Level of Service (delay in seconds)	
	AM Peak Hour	PM Peak Hour
<b>Valley Road at Peppermill Drive (unsignalized)</b>		
Northbound Left-Turn	A (7.4)	A (7.6)
Eastbound Approach	A (9.4)	A (9.2)

XX (XX) – Level of Service (average delay per vehicle)

### ***Trip Generation and Directional Distribution***

The proposed subdivision would consist of 116 single-family home sites. The number of trips that would be generated by the subdivision was forecasted using data provided in the Trip Generation Manual, Ninth Edition, published by the Institute of Transportation Engineers (ITE). This manual is a standard resource for transportation engineers and is based on a compilation of nationwide studies documenting the traffic-generating characteristics of various land uses.

Based on data for Land Use Code: 210 Single-Family Detached Housing, the proposed subdivision would generate approximately 91 total trips during the morning peak hour and 120 total trips during the afternoon peak hour. This traffic forecast is summarized in **Table 3**.



**Table 3: Trip Generation Forecast**

Land Use	Weekday AM Peak Hour			Weekday PM Peak Hour		
	In	Out	Total	In	Out	Total
Single-Family Detached Homes	23	68	91	76	44	120

Given existing traffic patterns in the area informed by the turning movements into and out of the Brentmoor Place subdivision, the majority of the site's traffic would be oriented to/from the south on Valley Road. The following directional distribution percentages were assumed for the site-generated trips:

- To/From North on Valley Road.....15%
- To/From South on Valley Road.....85%

Site-generated traffic volumes are depicted in **Exhibit 3**. The site-generated volumes were aggregated with existing traffic volumes to produce a forecast of traffic including the proposed subdivision in **Exhibit 4**.

***Proposed Subdivision Access***

Access into and out of the subdivision would be provided via a single street connection to Valley Road, located approximately 200 feet north of Peppermill Drive. Although Valley Road is maintained by the City of Wildwood, Missouri Department of Transportation (MoDOT) "Access Management Guidelines" were consulted in determining an appropriate configuration for the Valley Road intersection with the subdivision's entrance.

Based on the subdivision's forecasted trip generation, the subdivision street should provide one lane for entering traffic and one lane for exiting traffic at Valley Road. The need for a dedicated left-turn lane on Valley Road was considered on the basis of warrants criteria specified in the "Access Management Guidelines". The criteria indicating when an auxiliary lane should be considered are based on nomographs, which depict minimum volume requirements. A turn lane should be considered when the data point reflecting peak hour volumes lies to the right of the nomograph's boundary line.

**Exhibit 5** illustrates the warrant analysis for a dedicated northbound left-turn lane on Valley Road at the subdivision's entrance. As shown, data points for both the morning and afternoon peak hour volumes lie well to the left of the boundary lines. Therefore, a dedicated northbound left-turn lane is not warranted at the proposed entrance in accordance with MoDOT's "Access Management Guidelines". Accordingly, the remainder of this analysis assumed Valley Road would have a single lane in each direction at the subdivision's entrance.

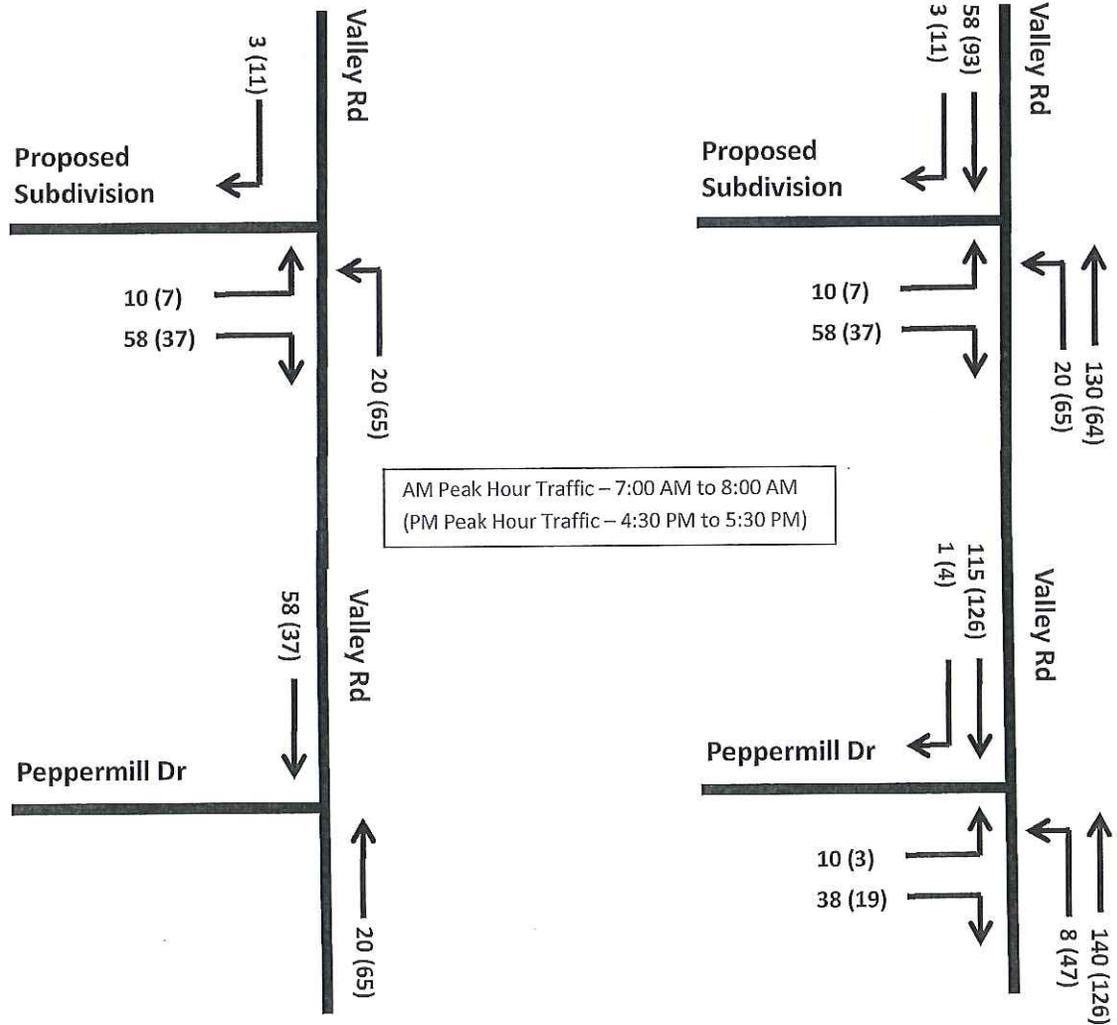


Exhibit 3: Site-Generated Traffic Volumes

Exhibit 4: Forecasted Traffic Volumes

In addition, the prevailing sight distance at the proposed subdivision entrance intersection with Valley Road was field verified and determined to exceed the sight distance requirements published by the American Association of State Highway and Transportation Officials (AASHTO) in *A Policy on the Geometric Design of Highways and Streets, 2004 Edition* ("Green Book"). Based on the 30 mph speed limit on Valley Road, intersection sight distance of 335 feet is required. Field measurements confirmed that motorists turning into or out of the site would have visibility in excess of 335 feet to complete all turning maneuvers.

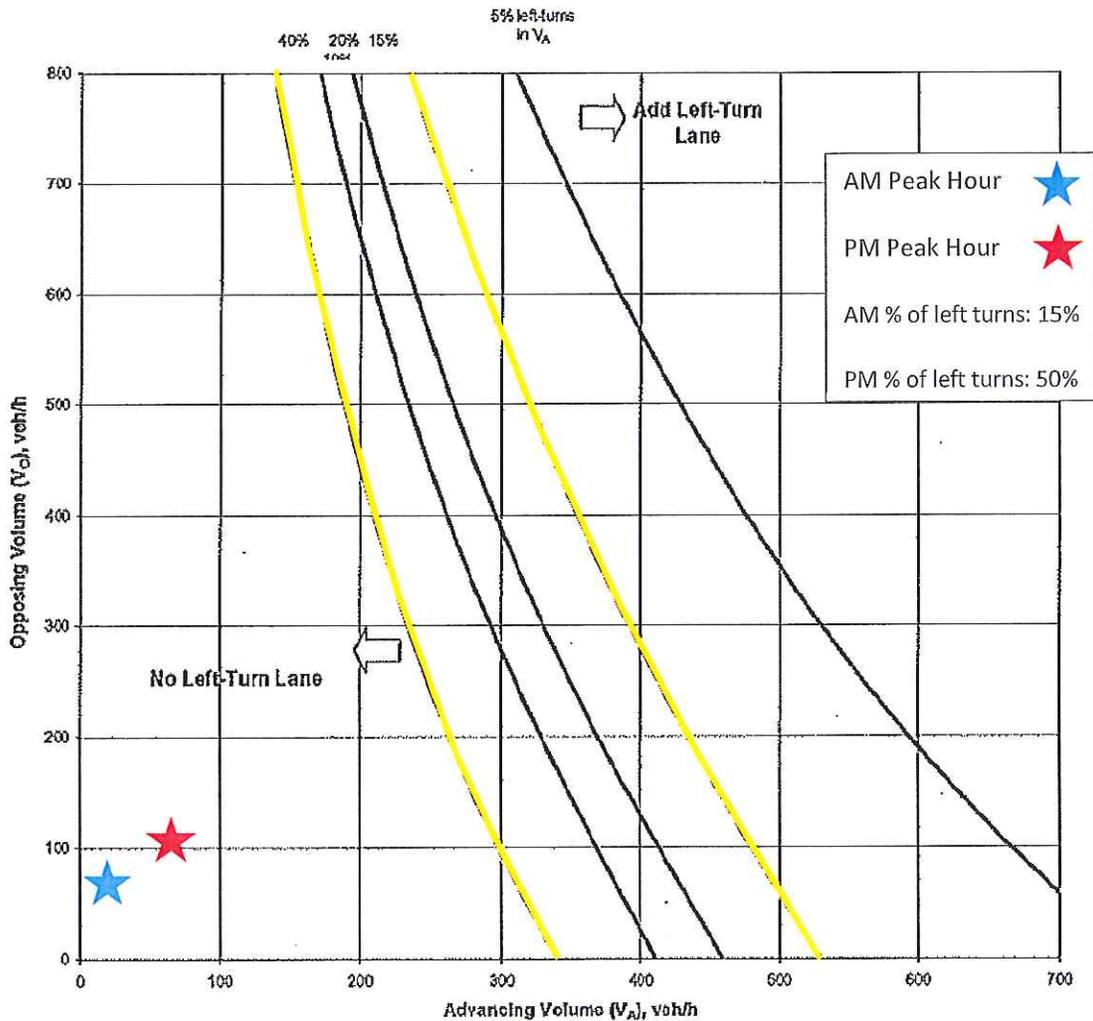


Exhibit 5: Left-Turn Lane Warrant Analysis for Valley Road

**Forecasted Conditions**

Forecasted conditions were evaluated to determine if roadway improvements would be needed to support the proposed subdivision. Forecasted operating conditions, summarized in Table 4, were analyzed using the same methodology applied to existing conditions.

As shown, the subdivision’s main entrance intersection with Valley Road would operate efficiently at LOS A, and the trips generated by the proposed subdivision would have a negligible effect on the adjacent intersection of Valley Road and Peppermill Drive. In light of these findings, the proposed subdivision would not impact traffic on Valley Road, and therefore off-site transportation improvements would not be needed in conjunction with the proposed development.



**Table 4: Forecasted Operating Conditions with Proposed Subdivision**

Intersection & Movements	Level of Service (delay in seconds)	
	AM Peak Hour	PM Peak Hour
<b>Valley Road at Proposed Subdivision Entrance</b>		
Northbound Left-Turn	A (7.4)	A (7.6)
Eastbound Approach	A (9.1)	A (9.3)
<b>Valley Road at Peppermill Drive</b>		
Northbound Left-Turn	A (7.6)	A (7.7)
Eastbound Approach	B (10.1)	A (9.7)

XX (XX) – Level of Service (average delay per vehicle)

**Conclusion**

Lochmueller Group completed the preceding traffic impact study for a proposed residential subdivision in Wildwood, Missouri. A total of 116 home sites are proposed on a currently undeveloped tract located along the west side of Valley Road between the Brentmoor Place subdivision and Bear Valley Road. The proposed subdivision would have a single point of access onto Valley Road just north of Peppermill Drive.

The purpose of this study was to forecast the amount of traffic that would be generated by the proposed subdivision, identify the impact of those trips upon the subdivision’s entrance intersection with Valley Road, and determine the need for supporting roadway and/or traffic control improvements at that location or at the adjacent intersection of Valley Road and Peppermill Drive.

The proposed subdivision would be expected to generate a total of approximately 91 and 120 trips during the morning and afternoon peak hours, respectively. In terms of off-site impacts, the proposed subdivision would not impact traffic on Valley Road, and therefore off-site transportation improvements would not be needed in conjunction with the proposed development.

The subdivision’s main entrance intersection with Valley Road would provide adequate sight distance to accommodate all turning maneuvers in and out of the subdivision. Additionally, the need for a dedicated left-turn lane on Valley Road at the subdivision entrance was considered in accordance with MoDOT’s “Access Management Guidelines”. Forecasted traffic volumes would not satisfy the warrants criteria, and therefore a left-turn lane would not be warranted on Valley Road at the subdivision’s main entrance.

We trust that you will find this report useful in evaluating the traffic impacts associated with the proposed development. Please do not hesitate to contact me at (314) 621-3395 if you have any questions or comments regarding this information.

Mr. George Stock, PE  
March 1, 2016  
Page 9



Sincerely,  
**Lochmueller Group, Inc.**

A handwritten signature in black ink that reads "Christopher W. Beard".

Christopher W. Beard, PE, PTOE  
Manager of Transportation Planning, Associate



**Metropolitan St. Louis  
Sewer District**

2350 Market Street  
St. Louis, MO 63103

March 24, 2016

Stock and Associates  
Attn: Mr. Chris Mueller, P.E.  
257 Chesterfield Business Parkway  
St. Louis, MO 63005

RE: Valley Road Subdivision  
Basic Conceptual Review of Preliminary Development Plans  
MSD Ref. No. D-363-00

Dear Mr. Mueller:

MSD has completed a **basic conceptual review** of preliminary plans for a proposed 116 lot single family residential subdivision located at 2443 & 2485 Valley Road and 2121 Quaethem Dr. in the City of Wildwood.

Project Overview

The project is located in the Caulks Creek watershed and Missouri River WWTP service area (Caulks Creek sanitary sub shed). Based on historical aerial photography, the approximately 124.58 ac subject tract is heavily wooded and was previously occupied by a residence, shed/barn, ponds, and a driveway. Access to the site is off of the west side of Valley Road and terminal roads within the Brentmoor Place Plat One (P.B. 190 Pg 43) and Brentmoor Place Plat Two (P.B. 209 Pg 60) subdivisions that abut the southern boundary of the development. The site is very rugged, consisting of numerous concentrated tributaries that channelize and convey runoff to the north, west, and eastern boundaries of the site.

The nearest sanitary sewer is located within the Pepper Mill Ridge ROW, which is adjacent to the south central portion of the site.

Pulte Homes proposes to construct 116 ~ 15,000 square foot minimum single family lots, along with public streets, cul-de-sacs, sidewalks, utilities, sewers, and common ground areas on the property. A sanitary sewer lift station is proposed within a centralized location of the development that would pump into manhole 21U2-001S located within the Pepper Mill Ridge ROW. Storm water management is proposed within numerous bioretention basins and detention basins, situated in the areas throughout the site where the runoff naturally concentrates today.

Stormwater Management

Given the quantity of land disturbance and additional runoff proposed by this preliminary plan, post-construction storm water quality BMPs will be required. Runoff generated by all disturbed areas shall be treated. Information provided on the site plan and submittal sheet indicate a 5% existing impervious area. For an existing site impervious footprint of less than 20%, this site is designated as "new development" for the purpose of evaluating BMP performance and

compliance with the Phase II permit. Water quality strategies and practices that provide for volume reduction shall be employed such that the site's post developed runoff condition mimics its preconstruction runoff condition. Site specific continuous simulation modeling (utilizing RECARGA, EPA SWMM, etc.) may be used to evaluate BMP runoff volume reduction per the intention you indicate in the preliminary storm water management facilities report submitted for review.

An existing natural resource inventory map was completed by SCI and provided in the preliminary Stormwater Management Facilities Report. This map identified tributaries, drainage ways, test pit location, and other map unit designations to be preserved. Please clarify the designation of the map units (i.e. what does Map Unit A6ca represent?) on the map when it is submitted with the project's formal stormwater management facilities report.

The natural resource inventory should also be expanded to assess and acknowledge the presence or absence of wetlands, streams, floodplains, and Karst; the nature of the existing topography (i.e. slopes exceeding 20%), the extents of vegetated cover and preservation, and the existing property use and surrounding property use. The extent of these features should be summarized in a table presented on the map. Please refer to MSD's Site Design Guidance document for preparation guidelines. Note that a project that affects wetlands or waters of the U.S. or State (jurisdictional waters) will likely be accompanied by an additional assessment of the feature as required by U.S. Army Corps of Engineers and/or Missouri Department of Natural Resources under the Clean Water Act section 401/404 permitting requirements. MSD will require documentation that the project has satisfied 401/404 permitting requirements necessary to begin construction prior to issuing formal plan approval, or, documentation from the appropriate agency confirming that the project's development activities are exempt.

Channel Protection (extended detention of the runoff originating from the 1yr 24 hour storm) is required. Detention is required such that the site's post developed flow rates resulting from the 2yr 24 hr and 100yr 24 hour storms are within the limits prescribed by MSD for the Caulks Creek Watershed (0.2 CFS/ac for the 2yr-24 hr storm and 1.4 cfs/ac for the 100yr-24 hour storm).

Nested bioretention basins (to manage water quality, channel protection, and detention) may be utilized when the drainage area tributary to the biocell is less than five acres. Pretreatment in the form of forebays are necessary for point discharges for which the tributary acreage exceeds 2.5 acres. Alternatives to a forebay may be used for pretreatment for basins receiving point discharges and managing an area less than 2.5 acres. Typical details and guidance for nested bioretention, along with appropriate pretreatment features can be accessed from MSD's BMP Toolbox at the following link: <http://www.stlmsd.com/what-we-do/stormwater-management/bmp-toolbox/stormwater-quality/bioretention/nested-bioretention>

Bioretention Basins "C", "D", "E", "F", "G", "N" and Detention basins "2", "3", and "6" appear to have limited access. Grades and common ground/easement configuration shall provide for sufficient accessibility to these bioretention and detention basins for maintenance. Fence placement shall not inhibit maintenance equipment ingress/egress if access corridors will be provided between lots. Basins that require retaining walls shall be supported by a design by a geotechnical engineer registered in Missouri, and shall be configured to allow sloped access to the basin on at least one accessible side. Walls supporting an embankment within the basin should be monolithic and watertight in order to prevent seepage.

The Sheet Flow to Buffer Credit (as outlined in Section 5.4 of the 2000 Maryland Stormwater Design Manual) may be implemented to manage runoff originating from the rear yards. This could potentially reduce the footprint of some of the bioretention basins (which in turn could allow for more accessible configurations) or even eliminate the necessity for some of the

bioretention basins if each of the requirements outlined in the credit can be achieved. Final plans will need to depict preservation limits and final grading for each lot that will benefit from the credit.

Site grading shall provide overland flow paths such that proposed homes will not be subject to overland flooding. Where swales are proposed, cross sections and open channel calculations should be provided with the formal design submittal in order to demonstrate their adequacy. The grading plan shall also provide for a sufficient overland flow path for conditions in which the proposed storm sewer system becomes blocked or surcharged. If topography will not allow for an overland flow path, designated ponding areas shall be provided based on the 100yr-24 hour storm and identified on the improvement plans. The finish floor/low sills of the proposed homes shall be positioned above the 100yr-24 hour high water ponding elevation and overland conveyance limits.

The existing storm sewer culvert that crosses beneath Valley Road is unmapped and not part of MSD's storm sewer system. Connecting the new public sewer to it as part of a continuously enclosed system will require that the storm culvert be dedicated to MSD as a public sewer and conform to public sewer standards. In order to facilitate dedication, the developer would need to do the following:

- The hydraulic capacity of the culvert shall be analyzed. If in the existing configuration it lacks capacity, it will require upsizing.
- Provide MSD with easements (with working room rights) for the sewer. Additional easement will be required downstream for working room and a properly placed and adequately sized outlet revetment.
- Provide MSD with a CCTV inspection of the existing sewer for review. Please contact Brian Dunn (314-335-2072) prior to doing so.
- MSD will review the findings of the inspection. Any deficiencies found in the line would need to be corrected by the developer under the permit for this project.

A cursory review of the stormwater management facilities report was conducted. The following observations were noted based on a review of the Pond Pack Inputs, MEP spreadsheet, and information on the plans:

- The minimum time of concentration was assumed for each post developed subarea. MSD takes no exception to this as this factors towards a larger peak discharge for each detention basin to manage.
- Basins are designed to release at or below the Caulks Creek Release Rates for their tributary area. Reach routes should link each basin's outflow to a common Q junction node identified at the property line where releases from multiple basins converge within a tributary. While the individual basins will be designed to release per the Caulk's Creek watershed release rates, the timing of their individual releases shall be such that their collective impact does not exceed the predeveloped release rates at the site boundary.
- Provide hydrographs with the report.
- Control structure input assumptions will be reviewed based on details provided in the improvement plans. If design for CPv is done via spreadsheet and the Maryland Manual Appendix D procedure, intermediate weir placement on the overflow structure shall be above the elevation of maximum ponding depth used to size the CPv orifice. MSD Rules and Regulations allow for a minimum 1.5" orifice with internal protection.
- 100yr – 24 hour Low Flow blocked calculations and pond routing summaries should be included in the report. Maximum ponding depth in dry detention basins shall not exceed 8 feet unless justified and supported by a design signed and sealed by a professional engineer registered in the State of Missouri with demonstrated expertise in geotechnical engineering.

- The MEP spreadsheet must demonstrate that BMP performance achieves sufficient volume reduction such that the site's post developed runoff condition mimics its preconstruction runoff condition. Continuous simulation modeling may be done to determine site specific BMP efficiencies for use in the MEP spreadsheet.
- Further review and comments will be provided during formal review.

### Sanitary

The sanitary pump station proposed to service this development shall comply with MSD's latest Pump Station Design Requirements (PSDR) in place at the time of development. The District's hydraulic model of the existing sanitary sewer system extends to the development's proposed sanitary sewer service point of connection. A review of the model indicates that the receiving gravity system has sufficient capacity to serve the 116 homes proposed by the development. Per the PSDR, the manhole receiving the force main connection, and a minimum five gravity manholes downstream will need to be lined.

An existing pump station (P-773 Brentmoor) located between Lots 54 and 55 in Brentmoor Plat 2 currently services the homes located upgradient from the southwest boundary of this development. Easement corridor shall be provided within this development to facilitate future abandonment of the Brentmoor pump station, and subsequent reroute into the proposed public gravity system provided by this development. In addition, the pump station site proposed on this development shall be configured with sufficient easement and usable area to allow for future retention expansion to accommodate the homes served by the Brentmoor pump station.

Easement corridor shall also be provided within the development to one day abandon the newly proposed pump station should the downstream properties to the north develop and extend gravity sewers. MSD understands that the project is in a very preliminary phase. As the development's site design and layout stabilizes, the District will work with you to determine an appropriate easement route that is collectively compatible with the development and MSD's future planning efforts.

Sewers and manholes shall be located out of the zone of influence of nearby buildings and retaining walls. Working room shall be provided, including a six foot diameter flat area centered at the manhole structures (Sanitary and Storm).

In accordance with the Local Plumbing Codes, proposed homes with fixture elevations lower than the rim elevation of the next upstream sanitary manhole shall have sanitary backwater valves. Note that facilities equipped with backwater valves will be inoperable until the conditions actuating the valve have been subsided.

### Other Items

A Maintenance Agreement is required to ensure long term maintenance and operations of all storm water BMPs and detention basins.

A subdivision plat will be required showing the new property lines. Easements will be required for new public storm and sanitary sewers, including a perimeter easement for each lot. The BMP reserve areas required for all storm water Best Management Practices should be shown on the improvement plans and established on the record plat and the Maintenance Agreement. BMP reserve areas shall not encroach upon MSD maintained sewers or easements.

Natural areas, if intended to be preserved as buffers for stormwater management credits shall be protected by a BMP Reserve Area, acceptable conservation easement, or other enforceable instrument that ensures perpetual protection of the proposed area.

Encroachments upon MSD easements and facilities, specifically by retaining walls and their tie back systems shall be avoided. If public sewers are to be routed through the crossing connecting the east and west villages, the crossing shall be of sufficient width to provide this separation from MSD facilities should maintenance or capital improvements to District assets be necessary in the future.

The connection fee for this project will be determined during the formal plan review. The current single family rate is \$1072/residence.

The project is located within the Caulks Creek Surcharge area, assessed at \$2750/acre. Based on this current plan, the surcharge applies to the total site acreage excluding the approximately 40 ac tract located at 2121 Quaethem Dr., noted to be dedicated hiking trail and preservation area, subject to City and Ameren Review.

The project proposes offsite public sewer construction. Proof of a general liability certificate will be required of the contractor prior to pulling permits from the District. In addition to the offsite nature of both the storm and sanitary sewer construction, existing easements may be utilized if the easement language allows MSD temporary use of adjacent ground for working room. New easements allowing for working room will be necessary if the language for the existing easements considered for utilization do not provide for this.

#### Limitations of Conceptual Review

Formal MSD review, approval, and permits are required prior to construction.

Unless otherwise indicated, any requirements mentioned in the conceptual review should be addressed during the formal P-job plan review process. Conceptual review is normally done only once. Any new questions or other additional changes to the originally submitted plans should normally be resolved during formal plan review.

Conceptual review is subject to the requirements of detailed review of final design plans and is subordinate to the review and approval of said final design plans. This project is not currently under review of final project plans.

Sincerely,



Jason Peterein, P.E.  
Principal Engineer  
Engineering/Planning-Development Review

DEC 31 2015

## REAL ESTATE SALE CONTRACT

DEPT OF PLANNING &amp; PARKS

This Real Estate Sale Contract (this "**Contract**") is entered into between **PWM PROPERTIES, LLC**, a Missouri limited liability company ("**Seller**"), and **PULTE HOMES OF ST. LOUIS, LLC**, a Nevada limited liability company ("**Buyer**").

WHEREAS, Seller is the owner of approximately 124.58 acres of real property located at 2443 and 2485 Valley Road and 2121 Quaethem Drive (locator # 20U210014, 21U520284, and 21U610242) in the City of Wildwood ("**City**"), St. Louis County ("**County**"), Missouri, legally described on **Exhibit "A"**, attached hereto and incorporated herein by this reference (the "**Land**"); and

WHEREAS, Seller desires to sell the Property, and Buyer desires to acquire such Property from Seller, on the terms and conditions set forth in this Contract.

NOW, THEREFORE, in consideration of the premises and the mutual covenants of the parties hereinafter expressed, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is hereby agreed as follows:

1. **Purchase and Sale.** Seller agrees to sell and Buyer agrees to purchase the Land together with (a) all improvements thereon, (b) Seller's rights, title and interest in all minerals, rights and appurtenances belonging or pertaining thereto, (c) all right, title and interest of Seller in and to all strips, gores, easements, leases, rights of ingress or egress, streets, alleys and other rights-of-way abutting, adjoining or benefiting the Land or improvements, and (d) all right, title and interest of Seller in and to all applications, permits, plats, plans, governmental approvals, soils and engineering reports, reimbursements for costs or fees paid relating to the Land, development fees, development fee waivers or other entitlements from any applicable governmental authority relating to the Land, utility service commitments or allocations, and all other rights and benefits relating to the development of the Land, if any of the foregoing is applicable and in Seller's ready possession and to the extent transferrable (the Land and the improvements, rights, title, interests and appurtenances described in clauses (a) through (d) above are collectively referred to as the "**Property**").
2. **Purchase Price.** At Closing (as hereinafter defined), Buyer will pay, in immediately available funds, a purchase price of [REDACTED] (the "**Purchase Price**").
3. **Earnest Money Deposit.** Within five (5) business days following the Effective Date (defined below), Buyer will deliver to St. Louis Title Company (the "**Title Company**"), 7701 Forsyth Boulevard, Suite 200, Clayton, Missouri 63105 Attention: John Schaefer, Phone (314) 480-4575 and Facsimile (314) 480-4576 the sum of [REDACTED] to be held by the Title Company as the earnest money deposit (the "**Deposit**"). The Title Company will hold the Deposit in a federally insured, interest-bearing account and the Deposit shall include all interest earned thereon. At Closing, the Deposit will be credited towards the Purchase Price pursuant to the terms of this Contract.
4. **Seller's Delivery of Documents.** Within five (5) days after the Effective Date, Seller will deliver to Buyer copies of all leases and occupancy agreements, surveys, market studies, environmental reports, preliminary and/or final plats, engineering and construction plans, wetland studies, hydrology studies, flood and flood plain studies, soil studies, utility agreements and commitments pertaining to the condition, use, development or proposed development of the Property or that would require the owner of the Property to perform any executory commitment or obligation (including, but not limited to, approvals and acceptance letters from Governmental Authorities (as defined below), special assessments, tax statements, judgments and orders) which have been prepared by or at the direction of Seller with respect to the Property and are currently in Seller's ready possession (collectively, the "**Property Documents**"). Buyer acknowledges that Seller is providing such information solely as an accommodation to Buyer and Seller makes no representation or warranty regarding the completeness or accuracy of such information nor reliance on any such information.

- f. **Title Policy.** At Closing, the Title Company will furnish to Buyer, at Buyer's cost, an owner's policy of title insurance based on the Title Commitment in a form acceptable to Buyer (the "Title Policy"); Buyer shall determine whether the form of Title Policy is satisfactory to Buyer during the Review Period. Seller shall satisfy all monetary liens, assessments and encumbrances affecting the Property (other than any of the foregoing arising from Buyer's actions) at or prior to Closing. The Title Policy will be issued by the Title Company, will be in the amount of the total Purchase Price and will insure Buyer's fee simple title to the Property subject to no exceptions other than the Permitted Exceptions, except that (i) the printed exception relating to restrictions will be amended to describe the specific recording information of any restrictive covenants affecting the Property that have been approved by the Buyer or deleted, (ii) any exception as to the rights of parties in possession will be deleted, (iii) the exception as to the lien for taxes and standby fees will be limited to the year of Closing and subsequent years, and subsequent assessments for prior years due to change in land usage or ownership and (iv) if Buyer has not elected to obtain a Survey, the Title Policy will be subject to printed exceptions which require a survey for deletion. Buyer shall be responsible for all endorsements to the Title Policy requested.
6. **Inspection of Property** From the Effective Date until [REDACTED] days after the Effective Date (the "Inspection Period"), and, if Buyer does not terminate this Contract, from the end of the Inspection Period until the Closing, Buyer shall, at its sole cost and expense, have the right to enter upon the Land and to make all inspections, tests, studies and investigations of the condition of the Property which it may deem necessary, all of which inspections and preparations shall be undertaken at Buyer's expense; provided, however, Buyer may not perform any invasive environmental testing or Phase II investigation without the prior written approval of Seller. Buyer shall be able to conduct soil testing (including soil borings) as part of Buyer's due diligence without obtaining Seller's prior consent. Buyer shall have the right, at Buyer's expense, to have Seller's soils tests and/or environmental reports, to the extent there are any delivered to Buyer, updated and reissued to Buyer and to have reliance letters issued to Buyer by the engineers who issued same, at Buyer's cost. Buyer shall not permit any liens to attach to the Land by reason of the exercise of such rights. After completing its investigation of the Property, if Buyer does not consummate the purchase of the Property, Buyer will repair any damage to the Land caused by Buyer or its agents, employees or contractors or arising from any entry or exercise of Buyer's rights under this Section and restore the Land to substantially the same condition in which it existed on the Effective Date. Buyer shall provide information and plans if it desires to perform any soil borings, test pits and other feasibility studies which require the use of heavy equipment or which by its nature may cause some damage to the terrain, trees, shrubs, and other vegetation on the Land. Because hunting occurs on the Property, Seller will provide Buyer at least forty-eight (48) hours prior notice of hunting activities on the Property and Buyer shall provide Seller at least forty-eight (48) hours prior notice of any due diligence activities on site. Buyer will hold Seller harmless from and indemnify Seller against any and all damages, liens, expenses and liability occasioned by or arising from any claim asserted against Seller related to or caused by such inspections, tests, studies, entry or other activities of Buyer, its agents, contractors or employees on the Property or under the rights in this Section. This section will survive a termination of this Contract.
7. **Feasibility Period.** Buyer will have the period from the Effective Date until the date [REDACTED] days after the Effective Date (the "Feasibility Period"), in which to review and examine the Property for Buyer's intended use and to seek, at Buyer's sole expense, the satisfaction of the conditions described in Section 8 below (collectively, the "Development Requirements"). If Buyer has been unable to satisfy all of the Development Requirements during the Feasibility Period, then Buyer shall have the option, but not the obligation, to extend the Feasibility Period for one (1) [REDACTED] days in order to satisfy such Development Requirements. Buyer may exercise such right to extend the Feasibility Period by delivering written notice thereof to Seller prior to the expiration of the Feasibility Period and by depositing in escrow with the Title Company the nonrefundable amount of [REDACTED] the "Extension Payment"). In the event that the Closing does not occur, the Extension Payment shall be immediately delivered to Seller except in the event of Seller's default. If the Closing occurs as provided in this Contract, the Extension Payment shall be a credit against the purchase price. Notwithstanding anything to the contrary contained in this Contract, at any time prior to the expiration of the Feasibility Period (or extended Feasibility Period if applicable), Buyer may terminate this Contract if, for any reason and in its sole discretion, Buyer determines that the Property or Buyer's intended use of the Property is not acceptable to Buyer by delivering written notice thereof to Seller. If Buyer so terminates this Contract on or before the expiration of the Feasibility Period, as extended, (i) the Deposit will be refunded to Buyer, (ii) the Extension Payment, if made, shall be delivered to Seller, (iii) Buyer shall return all copies of all Property Documents, (v) Buyer shall pay all costs incurred by the Title Company

and (v) executing any document that obligates the owner of the Property after the date of Closing and/or recording any document against the Property without the prior written consent of Buyer, such consent not to be unreasonably withheld. During such period, Seller will use reasonable efforts to cause the Property to be maintained in substantially the condition as of the Effective Date, except for force majeure or other acts beyond the control of Seller and Seller will observe all applicable laws, ordinances, regulations and restrictions affecting the Property. The obligations of Seller under this section shall survive the Closing for a period of thirty six (36) months.

10. **Closing; Closing Date.** The closing of the purchase and sale transaction described herein (the "Closing") shall occur through an escrow established with the offices of Title Company on the date (the "Closing Date") that is no more than thirty (30) days after the expiration of the Feasibility Period on a date mutually agreed upon by the parties. If the Closing Date should fall after the 15<sup>th</sup> day of the third calendar month in any fiscal quarter of Buyer, then Buyer may elect in its sole discretion, upon at least fifteen (15) days prior written notice to Seller, to extend the Closing Date to the first day of the next calendar fiscal quarter of Buyer. As used herein, "Closing" means the act of conveying title to the Property to Buyer concurrently with the delivery of the Purchase Price to Seller. The Closing shall be held at the office of the Title Company, unless otherwise designated by Seller and Buyer.
11. **Conditions to Closing of Buyer.** In addition to the performance by Seller hereunder, the obligation of Buyer to purchase the Property is subject to the satisfaction, as of the Closing Date or the date referenced below, of the following conditions (the "Conditions to Closing"), any of which may be waived in whole or in part by Buyer in writing at or before Closing:
  - a. **Compliance with Representations, Warranties and Covenants.** The representations and warranties of Seller set forth herein will be true on the Closing Date with the same force and effect as if such representations and warranties were made on and as of the Closing Date, and Seller's covenants shall have been performed in accordance with the terms of this Contract.
  - b. **No Moratorium.** There will be no general moratorium or similar restriction imposed by any Governmental Authority or utility supplier with respect to the issuance of building permits lasting longer than six (6) months for the Property, or sanitary sewer, water or electricity connections with respect thereto.
  - c. **Title Policy.** The Title Company is unconditionally prepared upon the Closing to issue to the Buyer the Title Policy or a marked Commitment for the Property on the terms and conditions provided by this Contract.
  - d. **Assignment of Seller's Development Rights.** Seller shall assign, or cause to be assigned, any Development rights to Buyer, if applicable.
  - e. **Parties in Possession.** Seller shall provide written notice to the tenants in possession of the Property, if any, terminating their tenancy at least a month prior to the Closing Date. All parties in possession of the Property, if any, shall be removed from the Property as a condition precedent to Closing.

If the Conditions to Closing are not satisfied at or prior to Closing, Buyer shall have the right, but not the obligation, to terminate this Contract and obtain a refund of the Deposit or extend the Closing until the Conditions to Closing are satisfied, provided that such extension shall not extend the Closing Date beyond eighteen (18) months following the Effective Date. If the failure to Close is due to Seller's default under this Contract, Buyer may pursue any remedies available to Buyer as set forth in Section 17 herein.

12. **Conditions to Closing of Seller.** In addition to the performance by Buyer hereunder, the obligation of Seller to sell the Property is subject to the satisfaction as of the Closing Date of the following conditions (the "Seller's Conditions to Closing"), any of which may be waived in whole or in part by Seller in writing at or before Closing:
  - a. **Compliance with Representations, Warranties and Covenants.** The representations and warranties of Buyer set forth herein will be true on the Closing Date with the same force and effect as if such

- Survey
- The premium for any title policy endorsements requested by Buyer
- Preparation and recording of Deed
- One-half of any escrow fee
- Attorney fees of Buyer
- Any other expenses customarily charged to the Buyer

14. **Representations and Warranties.**

- a. **Seller's Representations and Warranties.** Seller represents and warrants to Buyer as follows as of the Effective Date and as of the date of the Closing:
- i) **Authority.** Seller's execution and delivery of this Contract and consummation of the transaction contemplated by this Contract are within Seller's authority and capacity and all requisite action has been taken to make this Contract a valid and binding obligation of Seller in accordance with its terms.
  - ii) **No Legal Bar.** Seller's execution of this Contract and consummation of the transaction contemplated hereby does not and will not (i) result in a breach of or default under any indenture, agreement, instrument or obligation to which Seller is a party and which affects all or any portion of the Property, including all trust agreements, or (ii) to Seller's knowledge, violate any applicable law.
  - iii) **No Litigation or Actions.** There are no actions, suits, proceedings, or investigations pending against the Property or, to Seller's actual knowledge, threatened against the Property or any portion thereof, or any pending or, to Seller's actual knowledge, threatened condemnation, federal forfeiture action or similar proceeding affecting the Property or any portion thereof, nor is Seller aware of any event which could give rise to a federal forfeiture action concerning the Property.
  - iv) **Title.** Seller is the holder of record fee simple title to the Property, free and clear of all liens, claims, encumbrances and restrictions except those which are filed of record against the Property or other Permitted Exceptions. To Seller's actual knowledge, no circumstance or event exists that may allow any Governmental Authority to seize the Property under any civil or criminal law authorizing seizure or forfeiture.
  - v) **No Hazardous Materials.** To Seller's actual knowledge, without independent inquiry, (i) the environmental condition of the Property is not in violation of any Governmental Requirements, and (ii) the soil, surface water and ground water of or on the Property do not contain Hazardous Materials (as defined below) in violation of Governmental Requirements. Except as provided in Exhibit "C" attached hereto and incorporated herein by this reference ("**Seller's Disclosure**"), neither Seller nor, to the actual knowledge of Seller without independent inquiry or investigation, any other person has ever caused any Hazardous Materials to be treated, placed, held, located or disposed of on, under or at the Property, or any part thereof, and the Property has never been used (whether by Seller or, to the best of Seller's actual knowledge, by any other person) as a treatment, dump, disposal or storage (whether permanent or temporary) site for any Hazardous Materials. Except as provided in Exhibit C attached hereto and incorporated herein, to Seller's actual knowledge without independent inquiry, there are no underground storage tanks located on or under the Property. Seller has not received any summons, citation, directive or other communication, written or oral, from any Governmental Authority concerning any release, spill, leak or dumping of Hazardous Materials on the Property. For the purposes of this Contract, "Hazardous Materials" means any hazardous, toxic or dangerous waste, substance, contaminant or material defined as such in (or for purposes of) the Comprehensive Environmental Response, Compensation, and Liability Act, any so-called "Superfund" or "Superlien" law, or any other Governmental Requirements regulating, relating to, or imposing liability or standards of or for conduct concerning, any hazardous, toxic or dangerous waste,

implied warranties or representations of any nature of Seller with respect to the Property's fitness for a particular purpose, merchantability, profitability, or ability to be developed in any manner. Buyer acknowledges and agrees that, except for the express covenants, warranties and representations of Seller contained in this Contract, Seller has not made, does not make, and specifically disclaims any representations, warranties, covenants, agreements, or guaranties of any kind or character whatsoever with respect to the Property, whether express or implied, oral or written, past, present or future. Buyer waives and releases Seller from all obligations, liabilities, claims, liens or encumbrances, demands, losses, damages, causes of action, costs and expenses (including reasonable attorneys' fees), ("Claims") pertaining to the Property (except for Claims from the express covenants, warranties and representations of Seller specifically contained in this Contract and which are brought during the one-year survival period after Closing), including without limitation all of the following concerning or with respect to (a) the value, nature, quality or condition of the Property; (b) the income to be derived from the Property; (c) the suitability of the Property for any activities and uses which Buyer or anyone else may conduct thereon; (d) the compliance of or by the Property or its operation with any laws, rules, ordinances or regulations of any applicable governmental authority or body including without limitation environmental compliance; (e) the habitability, merchantability, marketability, profitability or fitness for a particular purpose of the Property; and (f) any other condition or matter with respect to the Property. This provision shall survive the Closing.

15. **Condemnation.** If before Closing, all or any portion of the Property or any rights or easements therein will be taken by condemnation or rights of eminent domain or like process, or will be threatened therewith, and the same, in Buyer's reasonable opinion, would have a materially adverse impact upon Buyer's proposed development of the Property, Buyer will, within thirty (30) days after having received notice thereof from Seller, elect in writing to either (a) continue this Contract in full force and effect, notwithstanding such taking or threatened taking, in which case Buyer will be required to continue the purchase of the Property, (b) delete the portion of the Property condemned or threatened to be condemned from this Contract, with a proportionate reduction in the Purchase Price, or (c) terminate this Contract, whereupon the Deposit delivered to the Title Company shall be refunded to Buyer, regardless of whether such funds were previously distributed to the Seller. Failure of Buyer to make a written election as aforesaid will constitute an election to continue this Contract.
16. **Real Estate Commission.** Buyer and Seller hereby represent that they have not engaged the services of any broker or finder in connection with this Contract or the transaction contemplated hereby, except that Seller represents that Seller has engaged or utilized the services of Tom Shaw Realtors (the "Broker") and at Closing Seller shall be responsible for the payment of a commission to Broker pursuant to a separate agreement between Seller and Broker. Seller hereby agrees to indemnify, defend and hold harmless Buyer from and against any and all claims, losses, damages, costs or expenses of any kind or character arising out of or resulting from any agreement, arrangement or understanding made or alleged to have been made by Seller or on its behalf with any broker or finder in connection with this Contract or the transaction contemplated hereby, including Broker. Buyer hereby agrees to indemnify, defend and hold harmless Seller from and against any and all claims, losses, damages, costs or expenses of any kind or character arising out of or resulting from any agreement, arrangement or understanding made or alleged to have been made by Buyer or on its behalf with any broker or finder in connection with this Contract or the transaction contemplated hereby, excluding Broker. This section shall survive Closing.
17. **Seller's Default.** If Seller fails to fulfill any of its obligations hereunder and does not cure such failure within ten (10 days) after receipt of written notice thereof from Buyer, then Seller will be in default under this Contract and Buyer may either (a) enforce specific performance of this Contract, or (b) terminate this Contract by written notice delivered to Seller, in which event the Deposit delivered into Escrow shall be immediately returned to Buyer. Notwithstanding any provision herein and without limiting Buyer's rights in the preceding sentence, if Buyer terminates the Contract pursuant to section (b) in the preceding sentence, Buyer shall be entitled to recover actual, out of pocket damages incurred by Buyer (but excluding consequential, special, exemplary or punitive damages) for Seller's breach of this Contract in an amount not to exceed \$300,000. This Section shall survive Closing for a period of thirty-six (36) months.
18. **Buyer's Default.** If Buyer fails to fulfill any of its obligations hereunder and does not cure such failure within ten (10 days) after receipt of written notice thereof from Seller, then Buyer will be in default under this Contract

Michael C. Convy  
Convy Group, LLC  
P.O. Box 220610  
St. Louis, MO 63122  
(314) 378-0951 Cell  
Email: [convygroup@aol.com](mailto:convygroup@aol.com)

Catherine Phillips  
Lewis Rice LLC  
600 Washington Suite 2500  
St. Louis, MO 63101  
Phone: 314 444 7680  
Fax: 314 612 7680  
Email: [cphillips@lewisrice.com](mailto:cphillips@lewisrice.com)

If to Buyer: Pulte Homes of St. Louis, LLC  
17107 Chesterfield Airport Road, Suite 120  
Chesterfield, Missouri 63005  
Attn: Matt Segal  
Phone: (636) 537-7122  
Fax: (636) 537-9952  
Email: [Matthew.Segal@Pultegroup.com](mailto:Matthew.Segal@Pultegroup.com)

With a copy to: PulteGroup, Inc.  
Legal Department  
1900 E. Golf Road, Suite 300  
Schaumburg, Illinois 60173  
Attn: Kristina M. Dalman, Esq.  
Phone: (847) 230-5411  
Fax: (847) 969-9395  
Email: [Tina.Dalman@Pultegroup.com](mailto:Tina.Dalman@Pultegroup.com)

Any party may change its address, email address or facsimile or telephone number for the purpose of this paragraph by giving written notice of such change to each of the other parties in the manner herein provided. To be effective, such notice of change must expressly state that it is given for the purpose of changing the notice provisions of this Contract.

- e. **Entire Agreement.** This Contract and attached Exhibits embodies the entire agreement (and supersedes any letter of intent) between the parties and cannot be varied except by the written agreement of the parties.
- f. **Attorneys' Fees.** If any legal action is commenced by any party to enforce any provision of this Contract, the losing party (as determined by a court of competent jurisdiction) will pay to the prevailing party all actual expenses incurred by the prevailing party, including costs and reasonable attorneys' fees. The prevailing party is the party who receives substantially the relief sought whether by judgment, summary judgment, dismissal, settlement or otherwise.
- g. **Dates.** If the final day of a period or a date of performance under this Contract falls on a Saturday, Sunday or legal holiday, then the final day of any such period or any such date of performance will be deemed to fall on the next day which is not a Saturday, Sunday or legal holiday.
- h. **Counterparts.** This Contract may be executed in several original counterparts, each of which and all together will constitute this Contract in its entirety.

Seller shall complete and deliver to Buyer the questionnaire in the form attached to this Contract as **Exhibit "B"**. Buyer shall keep all non-public information provided by Seller pursuant to this paragraph confidential and shall not disclose such information to any third party except (i) to Buyer's attorneys, accountants and authorized agents, (ii) as necessary to comply with rules, orders or pronouncements of the Financial Accounting Standards Board, or (iii) as required by law.

- t. **Facsimile/Electronic Execution.** This Contract may be signed and transmitted electronically or by facsimile machine or telecopier; the signature of any person on an electronically or facsimile transmitted copy hereof shall be considered an original signature; and an electronically or facsimile transmitted copy hereof shall have the same binding effect as an original signature on an original document. At the request of any party hereto, any electronic, facsimile or telecopy copy of this Contract shall be re-executed in original form. No party hereto may raise the use of electronic mail, a facsimile machine or telecopier or the fact that any signature was transmitted through the use of electronic mail or a facsimile or telecopier as a defense to the enforcement of this Contract or any amendment or other document executed in compliance with this section.
  - u. **Signage.** After the expiration of the Feasibility Period (and provided this Contract is not earlier terminated by Buyer or Seller), Buyer shall have the right to place a marketing sign on the Property in compliance with all applicable sign regulations, such sign to be approved in advance by Seller, which approval will not be unreasonably conditioned or withheld.
20. **Tax Deferred Exchange.** At Closing, Seller shall be permitted to assign, via an assignment form reasonably acceptable to Buyer, Seller's interest under this Contract to a Qualified Intermediary (as such term is defined in Section 1031 of the Internal Revenue Code) in accordance with the provisions of Section 1031 of the Internal Revenue Code to permit Seller to treat the transaction contemplated herein as a tax deferred exchange. Seller's ability to cause the transaction contemplated herein to qualify for deferment of taxes pursuant to I.R.S. Section 1031 is not a condition to closing. Buyer's only obligation with respect to a tax-deferred exchange is that Buyer agrees that Seller may direct that the closing funds be paid directly to another party and assign this Contract to a Qualified Intermediary provided that: (a) the Qualified Intermediary assumes all of Seller's obligations herein, subject to the limitation of liability set forth below; (b) Seller is not relieved of any obligations or liabilities under this Contract; and (c) the Property is deeded directly from the Seller to Buyer. To limit the liability of the Qualified Intermediary, Buyer agrees (and the assignment document may provide) that the liability of the Qualified Intermediary for Qualified Intermediary's failure to perform Seller's obligations herein shall be borne solely by Seller, rather than the Qualified Intermediary; provided, however, Buyer shall have the right to bring an action for specific performance to prevent the Qualified Intermediary from performing an act in breach of this Contract or to cause the Qualified Intermediary to cure an act performed by the Qualified Intermediary that is a breach of this Contract. The foregoing sentence does not limit or waive any rights that Buyer may have against Seller. After an assignment to a Qualified Intermediary, no further assignments are permitted. Any assignment other than as specifically permitted herein is null and void. Buyer shall not be obligated to take title to any other property nor spend any money or assume any liability greater than that contemplated in this Contract.

*[The remainder of this page intentionally left blank.]*

**TITLE COMPANY ACKNOWLEDGMENT**

The undersigned Title Company acknowledges its receipt of an executed copy of this Contract as of the date set forth below, agrees that it is the "reporting person" for purposes of Section 6045(e) of the Internal Revenue Code of 1986, as amended, and agrees to comply with the terms of this Contract applicable to Title Company, including the obligation to hold and disburse the Deposit in accordance herewith.

**ST. LOUIS TITLE COMPANY**

By:   
Name: Betsy Guye-Fritz  
Title: Escrow Officer  
Date: 4/27/15

7701 Forsyth Boulevard, Suite 200  
Clayton, Missouri 63105  
Telephone: (314) 480-4575  
Facsimile: (314) 480-4576  
Attn: John Schaefer

*Betsy Guye-Fritz*

EXHIBIT "B"

Variable Interest Entity Questionnaire

In connection with that certain Real Estate Sale Contract (the "Contract") dated \_\_\_\_\_, between PULTE HOMES OF ST. LOUIS, LLC, a Nevada limited liability company ("Buyer") and PWM PROPERTIES, LLC, a Missouri limited liability company (collectively "Seller") for the purchase and sale of the real property described in the Contract (the "Property"), Seller agreed to complete and deliver this questionnaire to Buyer in order for Buyer to comply with the Financial Accounting Standards Board requirements related to variable interest entities ("VIEs") as required by Accounting Standards Codification 810.

1. Seller is (check one):  
 an individual (Note: if Seller is an individual skip questions 2 and 3 below.)  
 a corporation (C or S)  
 a limited liability company  
 a partnership (general or limited)  
 a trust  
 other (please specify): \_\_\_\_\_

2. Does Seller own any assets other than the land subject to the Contract?

Yes  No

If yes, does the estimated fair market value of the Property being sold by Seller make up more than fifty percent (50%) of the estimated fair market value of all the assets of Seller?

Yes  No

3. Does Seller have any project specific debt or other financing structures related solely to the Property being sold to Buyer?

Yes  No

If yes, at the time the Contract was entered into, what percentage of the Property being sold to Buyer was financed by project specific debt or other financing structures related solely to the Property?

\_\_\_\_\_

Seller has read this questionnaire and the related responses and acknowledges that the information provided in this questionnaire is accurate and complete to the best of Seller's knowledge.

PWM PROPERTIES, LLC, a Missouri limited liability company

By: anna wright mullins  
Name: ANNA MULLINS  
Title: MEMBER/MANAGER

Date: \_\_\_\_\_

**STOCK & ASSOCIATES**  
**Consulting Engineers, Inc.**

CITY OF WILDWOOD

MAR 08 2016

DEPT. OF PLANNING & PARKS

STORMWATER MANAGEMENT FACILITY:  
CONCEPTUAL CALCULATIONS REPORT

Valley Road Subdivision  
2443, 2485 Valley Road, 2121 Quaethem Drive  
Wildwood, Missouri 63005

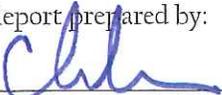
Prepared For:  
Pulte Homes of St. Louis, LLC  
16305 Swingley Ridge Road, Suite 350  
Chesterfield, MO 63017  
Attn: Benjamin Keane, ph 636-537-7126, cel 314-565-6000  
[benjamin.keane@pultegroup.com](mailto:benjamin.keane@pultegroup.com)

Prepared By:  
Stock & Associates Consulting Engineers, Inc.  
257 Chesterfield Business Parkway  
St. Louis, Missouri 63005  
Ph. 636-530-9100  
Fax 636-530-9130  
Contact: Mr. George M. Stock, P.E.

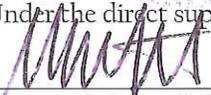
3-2-2016  
STOCK JOB #: 214-5466



Report prepared by:

  
Chris Mueller E-29788  
Associate

Under the direct supervision of:

  
George M. Stock E-25116  
President

257 CHESTERFIELD BUSINESS PARKWAY • ST. LOUIS, MO 63005 • (636) 530-9100  
Fax (636) 530-9130 • E-MAIL ADDRESS: [general@stockassoc.com](mailto:general@stockassoc.com)

1. EXECUTIVE SUMMARY

2. INTRODUCTION

Evaluation of existing conditions

1. Discussion of existing site conditions. The existing site consists of approximately 124 acres. A soil survey map (attached) indicates that the existing site mainly consists of Goss, Menfro, and Winfield Silt Loams, Hydrologic Soil Group "C". The existing site contains an abandoned asphalt driveway, powerlines, and mostly woods.

2. Determination of whether site is new development or redevelopment. Per the MSD MEP Water Reduction spreadsheet this site is to be considered "new development".

3. Determination of minor watershed and whether release rate or zero differential detention requirements apply. The site flows north to Caulks Creek, a "release rate" watershed.

2-year, 24-hour detention release rate: 0.2 cfs/ac.

100-year, 24-hour detention release rate: 1.4 cfs/ac.

4. Determination of any special conditions that warrant mitigation. Not aware of any special conditions.

Evaluation of proposed conditions

1. Development use. A 116-lot single family residential subdivision is proposed at this site. A public sanitary lift station and forcemain is proposed as part of this development. The proposed minimum size of the subdivision lots is 15,000 s.f. (1/3 acre); therefore the impervious coverage is equivalent to 40% (MSD 4.030.01.2). CN used is 86, assuming disturbed soils having a Hydrologic Soil Group of D.

2. Total disturbed acres. ±70 acres approximate.

3. Differential runoff for 15-year 20-minute storm.

- o Predeveloped runoff: +/-124 acres x 1.70 cfs/ac (5% imperviousness) = 211 cfs
- o Postdeveloped runoff: 51 acres x 2.39 cfs/ac (40% imperviousness) = 122 cfs
- o Postdeveloped runoff: 73 acres x 1.70 cfs/ac (5% imperviousness) = 124 cfs
- o Total Postdeveloped runoff = 246 cfs
- o Differential runoff = 246 - 211 = 35 cfs

4. Description of stormwater management facilities proposed, with BMP Drainage Area Map. Water Quality is proposed due to site disturbance of more than 1 ac (4.080.01.2.a).

The bioretention basins are proposed for treatment of Water Quality volume prior to discharge to the stormwater detention basins. Some of the bioretention basins will be "stacked" to accommodate Channel Protection and Flood Protection Volumes.

A Woodland Conservation Area of approximately 27 acres is proposed in the northwest portion of the site.

3. WATER QUALITY/CHANNEL PROTECTION/FLOOD PROTECTION  
Hydrology  
 I. Sizing of stormwater quality BMPs

SUMMARY OF BIORETENTION WATER QUALITY VOLUMES  
 DATE: 3-1-2016

BIORETENTION	RQD. WQ VOLUME (CF)	PROVIDED WQ VOLUME (CF)
A	5,454	8,959
B	5,051	8,709
C	3,813	7,032
D	3,047	8,250
E	2,625	11,488
F	2,350	10,910
G	6,943	9,398
H	5,578	7,044
I	5,494	9,786
J	2,195	5,433
K	4,047	5,770
L	5,815	7,426
M	5,733	7,426
N	3,653	5,369
O	2,364	15,673

Rock check dams are to be used in lieu of forebays, as per Woods of Ladue P-0029796-00, Creekside at Mason P-0030152-00, and Wildwood Trail P-0030298-00.

A Woodland Conservation Area of approximately 27 acres is proposed in the northwest portion of the site. No development other than hiking trails and a detention basin berm are proposed. Existing Ameren electric power lines are to remain in place.

Volume reduction calculations

Due to the project being "new development", the BMP's installed are required to reduce the volume of discharged rainfall to the site's pre-construction condition to the maximum extent practicable. We respectfully request credit for setting aside the Woodland Conservation Area to prevent additional development of this portion of the site.

MSD Water Reduction Spreadsheets were used to analyze runoff reduction. RECARGA is proposed to be used for each bioretention basin to determine runoff reduction credits, during final engineering.

2. Sizing of channel protection volume

Channel Protection is required per MSD (Amendment No. 1, 4.080.02.3.c.), "To protect channels from erosion, a 24-hour extended detention of the one-year, 24-hour storm event shall be required at all sites that do required Flood Volume Detention (Qp)."

SUMMARY OF CHANNEL PROTECTION VOLUMES

DATE: 3-1-2016

BASIN	REQUIRED CP VOLUME (CF)	PROVIDED CP VOLUME (CF)	CP HWL ELEVATION
1	29,773	46,174	618
2	20,751	43,386	620
3	18,760	23,958	626
4	14,824	16,553	632
5	67,589	92,391	615
6	10,796	14,593	614
E	6,361	11,488	1.5'
F	5,885	10,910	1.5'
O	6,389	15,673	1.5'

3. Flood protection volume

Detention basins and "stacked" bioretention basins are proposed to attenuate the flow from the basins to below the existing conditions peak flowrates and maximum allowable release rates (Caulks Creek Watershed). See appendix for plans, drainage areas, and Pondpack routings.

SUMMARY OF FLOOD PROTECTION DETENTION

DATE: 3-2-2016

BASIN	TRIBUTARY ACRES	EXISTING 2YR 24HR (CFS)	2YR 24HR (0.2 CFS/AC) ALLOWABLE (CFS)	DETAINED PEAK OUT 2YR 24HR (CFS)
1	11.24	6.86	2.25	0.40
2	7.83	5.86	1.57	0.22
3	7.07	5.32	1.41	0.45
4	5.30	3.59	1.06	0.56
5	23.02	16.83	4.60	1.26
6	4.31	3.21	0.86	0.42
E	2.27	1.70	0.45	0.09
F	2.12	1.55	0.42	0.06
O	2.28	1.72	0.46	0.00
Total =		46.64	13.09	3.46

Post Discharge = 3.46 cfs < 46.64 cfs predeveloped

BASIN	EXISTING 100YR 24HR (CFS)	100YR 24HR (1.4 CFS/AC) ALLOWABLE (CFS)	DETAINED PEAK OUT 100YR 24HR (CFS)
1	38.50	15.74	4.70
2	32.01	10.96	5.08
3	29.45	9.90	8.79
4	19.96	7.42	7.01
5	93.44	32.23	31.06
6	17.79	6.03	5.91
E	9.34	3.18	1.69
F	8.45	2.97	1.58
O	9.47	3.19	2.42
	258.41	91.62	68.24

Post Discharge = 68.24 cfs < 258.41 cfs predeveloped

#### Hydraulic Calculations

1. Pipe sizing/hydraulic grade line calculations.  
See forthcoming Improvement Plans for the hydraulic calculations spreadsheets.
2. Any special structures. Not applicable.
3. Flow velocities/erosion/revetment calculations. See forthcoming bioretention detail sheets, hydraulic grade line calculation spreadsheets in the forthcoming Improvement Plans.

#### Bear Valley Road Culvert Study

Downstream of the proposed Valley Road Subdivision is Valley Farms Subdivision. CMP culverts are located at the Bear Valley Road crossing inside Valley Farms Subdivision. The creek flowing through the culverts collects stormwater runoff from the south.

We have been notified via discussions with residents on 2-4-2016 at Crestview Middle School (Town Hall meeting presented by Pulte Homes, LLC) that an existing culvert had been clogged and was recently replaced. Per a site visit by Stock and Associates on 2-22-2016, an existing 33" HDPE (clogged per visual inspection at upstream end) and two (2) newer-looking 36" CMP pipes cross Bear Valley Road.

Assuming a flowline of around 10' from the road to the flowline of the 1 - 33" HDPE pipe, with a freeboard of 1', calculated capacity (before it was clogged) =

$$HW/D \times D = HW$$

$$HW/D \times 2.75 = 9$$

$$HW/D = 3.3$$

$$\text{Capacity} = 70 \text{ cfs}$$

Assuming flowlines of around 7' from the road to the flowline of the 2 – 36" CMP pipes, with a freeboard of 1', calculated capacity =

$$HW/D \times D = HW$$

$$HW/D \times 3 = 6$$

$$HW/D = 2$$

$$\text{Capacity} = 60 \text{ cfs/pipe} \times 2 \text{ pipes} = 120 \text{ cfs}$$

Per preliminary Pondpack software calculations, the Existing/predeveloped 100-year 24-hour peak flowrate to the culverts is 533 cfs. The postdeveloped peak flowrate is calculated to be 408 cfs.

In response to neighbors' concerns about their street flooding in the past, we reviewed what they would need to have in place to manage the existing conditions:

Box culverts to handle the existing peak flowrate (533 cfs) have been sized:

Try two (2) – 8'W x 5'H concrete box culverts:

Assuming flowlines of around 7' from the road to the flowline of the culverts, with a freeboard of 1', calculated capacity =

$$HW/D \times D = HW$$

$$HW/D \times 5 = 6$$

$$HW/D = 1.2$$

$$\text{Capacity} = 36 \text{ cfs/ft} \times 8'W \times 2 \text{ culverts} = 576 \text{ cfs} > 533 \text{ cfs calculated runoff.}$$

Box culverts to handle the postdeveloped peak flowrate (408 cfs) have been sized, as a comparison:

Try two (2) – 6'W x 5'H concrete box culverts:

Assuming flowlines of around 7' from the road to the flowline of the culverts, with a freeboard of 1', calculated capacity =

$$HW/D \times D = HW$$

$$HW/D \times 5 = 6$$

$$HW/D = 1.2$$

$$\text{Capacity} = 36 \text{ cfs/ft} \times 6'W \times 2 \text{ culverts} = 432 \text{ cfs} > 408 \text{ cfs calculated runoff.}$$

A sample creek channel section was analyzed via Hydraflow software within Autocad, just near the existing 33" HDPE culvert opening. The channel capacity was calculated to be approximately 651 cfs.

## Appendix

1. Existing site resources map, 11"x17" (Predeveloped Drainage Area Maps): *Included in plan sheets below.*
2. BMP Drainage Area Map, 11"x17": *Included in plan sheets below.*
3. Infiltration Tests/Borings/Geotech report – not applicable
4. BMP Reserve Area Plat – separate documents, not in report
5. Proprietary BMP Cut-Sheets and O&M Manuals – not applicable
6. Structural Calculations – not applicable
7. Planting Plan, dated: *forthcoming during Final Engineering.*
8. Other:
  - USGS map, 1 p.
  - FIRM map, 1 p.
  - Table 4-5 Watershed Release Rates, 1 p.
  - Soil Maps (offsite and onsite areas), 12 p.
  - Runoff Curve Numbers for Urban Areas, Table 2-2a, 1 p.
  - Runoff Curve Numbers for Other Agricultural Lands, Table 2-2c, 1 p.
  - Water Quality (Bioretention) Spreadsheets, 15 p.
  - Channel Protection Spreadsheets, 9 p.
  - Volume Reduction Spreadsheets, 6 p.
  - Bear Valley Road exhibits, 5 p.
  - Pondpack Output - Predeveloped
  - Pondpack Output - Postdeveloped
  - Natural Resource Map - Existing by SCI, 11/2015, 11"x17", 2 p.
  - Natural Resource Map - Proposed by SCI, 2/2016, 11"x17", 2 p.
  - Preliminary Development Plans: - 11"x17": C1-8



## WILDWOOD

March 30, 2016

Pulte Homes of St. Louis, LLC  
Attn: Matthew Segal  
16305 Swingley Road, Suite 350  
Chesterfield, MO 63017

Re: Preliminary Development Plan for Valley Road Subdivision – An amendment to the Master Plan’s Conceptual Land Use Categories Map and a change in zoning from NU Non-Urban Residence District to the R-1A 22,000 Square Foot Residence District, with a Planned Residential Development Overlay District.

Dear Mr. Segal:

The Department of Planning has completed its second review of the Preliminary Development Plan that has been submitted for the 124.58 acre tract of land located west of Valley Road, north of Peppermill Drive. This review compared the compliance of this plan and related components to the Zoning Ordinance requirements for residential developments of this type. In this comparison, a number of items were found that need to be addressed before the plan can be scheduled for a public hearing before the Planning and Zoning Commission. These items can be summarized as follows:

1. Please remove the owner and City scripts from Sheet C1, at this time. **Completed.**
2. Please omit Note #21 from Sheet C1. **Completed.**
3. Please include the Natural Resource Protection Standards, as part of the full-sized set of plan sheets. **Completed.**
4. Please provide comments from Metropolitan St. Louis Sewer District (MSD), as soon as they are available. **3-24-16 Basic Conceptual Review Letter is attached. In discussions with Jason Peterein of MSD, there are no substantive effects to the plan.**
5. The Department of Public Works has received the ‘Traffic Impact Study’ and it is currently under review. **Understood.**
6. The inclusion of the alternate street connections and proposed gates shown on Sheet C2 for Peppermill Drive and Peppermill Ridge Drive is acceptable, but, please be advised, the Departments of Planning and Public Works are requesting the extension of the existing stub streets. **Understood.**
7. The ‘Traffic Impact Study’ states, “Proposed stub street connections to the Brentmoor Place Subdivision would be gated and available for emergency access purposes only and, therefore, did not factor into this analysis.” Please note, again, the Departments of Planning and Public Works are requesting the extension of the existing stub streets. **Understood.**
8. Please consider providing traffic calming features at several points along the proposed east-west street. **Completed. "Chokers" shown at Lots 25 & 60, as recommended by Lochmueller Group. C3.**
9. Please justify the two (2), seventy-five foot (75’) turning radii just to the west of the entrance from Valley Road. **Street has been adjusted to 150’ centerline turning radii. C3, C4.**

10. Please be advised any street grade greater than eight percent (8%) will be submitted to special review requirements, as directed by the Department of Public Works. **Understood.**
11. Please be advised only fifty percent (50%) of the total required public space can be credited from privately-held common ground (2.32 acres/101,059 square feet). Therefore, other public space **C1, C6.** dedications must be added. **The "Public Space" chart has been adjusted. The Wildwood Trail Public Space Plan is attached as an example of the Bioretention Area and Cul-De-Sac Island Credits we are using.**
12. Please add a Natural Resource Protection foundation setback line to the 'Typical Lot Details' on Sheet C2. **Completed. C4.**
13. Please provide details of the improvements associated with the proposed trailhead. **Completed. C2.**
14. Please provide dimensions, details, and cross-sections, where applicable, of the proposed hiking trails located in the northwest portion of the site. **Completed. C2.**
15. Please identify all proposed retaining walls by height and materials, along with the color of the block. **Completed. C2, C4.**
16. Please show the extent of the existing tree harvest that has been conducted by others on the site in recent years, including haul roads, staging areas, etc. **Per onsite visits and aerial photography research by SCI, no tree harvest information was found.**

Once the revisions are completed, please resubmit three (3) full sets of the revised Preliminary Development Plan, and other requested items, to the Department of Planning for further review. Please be advised this submittal will need to be reviewed before a public hearing is scheduled at the City's Planning and Zoning Commission, which will occur no earlier than May 2, 2016.

If you should have any questions or comments regarding this information, please feel free to contact the Department of Planning at (636) 458-0440. Thank you for your cooperation in this matter.

Sincerely,  
CITY OF WILDWOOD

  
Joe Vujnich, Director  
Department of Planning

Cc: The Honorable Timothy Woerther, Mayor  
Council Members Manton and Marshall, Ward 2  
Ryan S. Thomas, P.E., City Administrator  
Rick Brown, P.E. and P.T.O.E., Director of Public Works  
Kathy Arnett, Assistant Director of Planning and Parks  
Travis Newberry, Planner  
Chris Mueller, Stock and Associates Consulting Engineers, Inc.

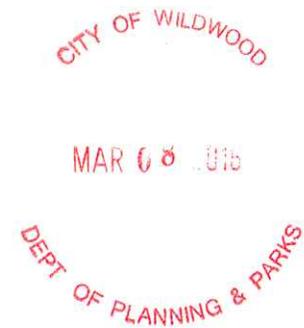
Stock Responses  
Dated 3-07-2016  
Stock No. 214-5466



## WILDWOOD

January 29, 2016

Pulte Homes of St. Louis, LLC  
Attn: Matthew Segal  
16305 Swingley Road Suite 350  
Chesterfield, MO 63017



Re: Preliminary Development Plan for Valley Road Subdivision – Change in zoning from NU Non-Urban Residence District to the R-1A 22,000 Square Foot Residence District with a Planned Residential Development Overlay District

Dear Mr. Segal,

The Department of Planning has completed its initial review of the Preliminary Development Plan that has been submitted for the 124.58 acre tract of land located west of Valley Road and north of Peppermill Drive. This review compared the compliance of this plan and related components to the Zoning Ordinance requirements for residential developments of this type. In this comparison, a number of items were found that need to be addressed before the plan can be submitted to the Planning and Zoning Commission for its review and action. These items can be summarized as follows:

1. Please be advised the request for R-1A 22,000 square foot Residence District zoning category is contrary to the City's Master Plan and its designation of future land use for the overall site. The current land use designation, under the Master Plan Conceptual Land Use Categories Map is Non-Urban Residential Area, which limits density to one (1) unit for every three (3) acres. Therefore, a Master Plan change is needed for this design to the Conceptual Land Use Category Map of the Master Plan for it. It is important to note that, even if the property's designation is changed to the Suburban Residential Area designation of the Master Plan, the requested zoning district designation associated with this submittal is too great. The Suburban Residential Area designation limits density to one (1) unit per acre. A separate letter is required for these changes to the Master Plan and must explain, in detail, the benefits derived from such changes to the larger Wildwood community. **(A "Statement of Intent" is attached. A revised "Home Exhibit" book is attached).**
2. Please be advised that a left turn lane will be required on Valley Road to accommodate the access point that is planned onto this roadway. The design of this additional lane will be provided to the developer by the City's Department of Public Works. Additionally, the issue of sight distance at this same location is a component of this design and needs to be considered, as part of this site's use of Valley Road. **(Traffic Impact Study is attached).**
3. Please be advised the Department appreciates the reduction in grading at the front of the subdivision, at the entry/exit from Valley Road, but would note some concerns with a fifteen (15) percent grade in certain locations along it. This percentage is almost twice the amount typically

considered acceptable for public streets. This matter will be discussed, as part of the review of this request. **(The proposed entry off Valley Road has been reduced to 12%, up to the 1st cul-de-sac street - C2).**

4. Please provide preliminary comments from the two (2) fire districts, the Metropolitan St. Louis Sewer District (MSD), Ameren Missouri, and the U.S. Army Corp of Engineers regarding this design and associated development of this site. **(Fire, Ameren attached. MSD, Corps forthcoming).**
5. Please provide the required Natural Resource Protection Standards information, including "Final Resource Protection Line" on the applicable lots, accompanying foundation setbacks (15 feet), table, and report from the qualified soil scientist in this regard. The Department assumes the depiction on Sheet C2 by the green dot pattern indicates common ground, not protected area, since many of the stormwater features are located within it and are planned to be graded. **(Natural Resource Exhibits are Attached).**
6. Please be advised the calculation and depiction of required public space, under the City's Public Space Requirements of the Zoning Ordinance, is not correct or in the appropriate format for consideration. Please revise and see attached table for information. **(Addressed - C1).**
7. Please be advised, as a preliminary design of the development's grading profiles are understandably not finalized, but the Department would note that certain lots, i.e. 11, 12, 13, 14, 15, 16, 21, 22, 69, 70, 71, 108, 109, 110, 111, 112, 113, 114, 115, and 116, create concerns regarding how the dwellings and associated improvements will be placed upon them and function thereafter for the residents. **(Please see the Examples Grading Exhibit - C2).**
8. Please see the attached sheet for additional comments regarding this submittal. **(Addressed)**
9. Please provide the property's outboundary dimensions and an accompanying legal description from best available sources that corresponds to it. **(Addressed - C1, C3).**
10. Please provide zoning district designations, ownership information, locator numbers, and size of all abutting parcels of ground around the entire perimeter of the subject site. **(Addressed - C3).**
11. Please be advised the extension of utilities from surrounding subdivisions, and through existing residential lots that abut this property, must be identified and will be addressed, as part of any change in zoning district designation of it, if approved. **(Understood).**
12. Please revise the provided parking calculations, given the Department does not believe each of these dwellings will have just one (1) parking space in the garage. **(Addressed - C1).**
13. Please revise the Title Block to indicate this plan as a "Preliminary Development Plan," not a Sketch Plan. **(Addressed - C1).**
14. Please revise Note #3 to read "No grade shall exceed 3:1 slope. Unless otherwise noted and approved by the City of Wildwood, and supported by the approved geotechnical report." **(Addressed - Note 7).**
15. Please add a note to Pertinent Data identifying the Police for this site as St. Louis County Police – Wildwood Precinct. **(Addressed - C1).**

Once the revisions are completed, please resubmit three (3) full sets of the revised Preliminary Development Plan, and other requested items, to the Department of Planning for further review. Please be advised that additional comments will follow after this resubmittal, given the extent of information that will be necessary as part of the Master Plan conceptual land use change and the rezoning.

If you should have any questions or comments regarding this information, please feel free to contact the Department of Planning at (636) 458-0440. Thank you for your cooperation in this matter.

Sincerely,

CITY OF WILDWOOD

*Kathy Arnett for JV*

Joe Vujnich, Director

Department of Planning

Cc: The Honorable Timothy Woerther, Mayor  
Council Members Manton and Marshall, Ward 2  
Ryan S. Thomas, P.E., City Administrator  
Rick Brown, P.E. and P.T.O.E., Director of Public Works  
Kathy Arnett, Assistant Director of Planning and Parks  
Travis Newberry, Planner  
Chris Mueller, Stock and Associates Consulting Engineers, Inc.

CITY OF WILDWOOD  
PLAN/PLAT REVIEW CHECKLIST

*\*\*\*Please note: All checked items must be responded to on plan's resubmittal\*\*\**

P. Z. # 27-15 DEVELOPMENT NAME Valley Road Subdivision

~~\_\_\_~~ Provide Missouri Department of Transportation Conceptual Approval.

Provide Metropolitan St. Louis Sewer District Conceptual Approval.

Forthcoming. A Conceptual Storm Report is Attached.

\_\_\_ Submit a Flood Plain Study to the Department of Public Works.

\_\_\_ Submit a Geotechnical Study to the Department of Public Works.

\_\_\_ A Professional Engineer and Engineer preparing geotechnical report must sign and seal the mylar.

\_\_\_ Submit a street stub study to the Department of Public Works.

NOTE: Developer shall install a street extension sign at roadway terminus which reads "THIS STREET TO BE EXTENDED AS PART OF FUTURE DEVELOPMENT"

\_\_\_ Submit steep grade verification to Department of Public Works.

\_\_\_ Add all ordinance conditions to the Site Development Plan, including TGA language.

\_\_\_ Identify pavement and right-of-way width along \_\_\_\_\_.

\_\_\_ Show and dimension all improvements, i.e., existing and new right-of-way and pavement, sidewalks, TSCL, etc.

\_\_\_ Provide Temporary Slope Construction License (TSCL) as directed by the Department of Public Works.

\_\_\_ Provide photos per Section 30 of the Department of Public Works "Design Criteria Handbook."

\_\_\_ Provide verification of required sight distance at all access points.

\_\_\_ Please add as a note: Entrance, street intersection, cul-de-sac shall be constructed to City of Wildwood standards.

Indicate Driveways with on-site turnaround capabilities as directed by the Department of Public Works. (See note 21, C1).

Show sight triangle at intersection/median. No plants, trees, signs, etc. shall be placed in this area as to restrict sight distance. (Addressed - Note 22, C1, C3).

\_\_\_ Show and note all sidewalks will be constructed to City of Wildwood ADA standards.

Provide easement for sidewalk conforming to City of Wildwood ADA standards adjacent to right-of-way.

Clarify if grading is proposed. If so, show and note grading per City of Wildwood standards. (Addressed-Note 7, C1)

CITY OF WILDWOOD  
PLAN/PLAT REVIEW CHECKLIST  
PAGE 3

- Provide a Landscaping Plan and Legend. (Attached).
- Provide a rendering of all Proposed Signs, which identifies their Size, Height and Location on the Plan.
- Locate all Easements - Existing and Proposed.
- Identify all Light Standards - Location and Height.
- Identify any Other Structures (Fences, Canopies, etc.) - with Dimensions.

\*\*If you should have any questions regarding the information provided on these sheets, please feel free to contact the Department of Planning at 636-458-0440\*\*

Number of Parking Spaces (Provided):	_____ Spaces
Standard for Public Space Calculation:	1,742.4 square feet per new single-family dwelling (4 acres per 100 single-family dwelling units)
Amount of Required Public Space	_____ Square feet
Amount of Provided Public Space	_____ Square feet
⇒ Multiple Use Trail	_____ Square feet
⇒ Underground Detention Area	_____ Square feet
⇒ Public Land Dedication	_____ Square feet
⇒ Privately-Held Common Ground	_____ Square feet
⇒ Other	_____ Square feet
List Installed Improvements	Total Number (list below on lines)
⇒ Picnic Tables	_____
⇒ Benches	_____
⇒ Trash Receptacles	_____
⇒ Bicycle Racks	_____
⇒ Other	_____
Other Public Space Items (if provided)	_____
Fee In Lieu (if applicable)	_____

# VALLEY ROAD SUBDIVISION PRELIMINARY DEVELOPMENT PLAN

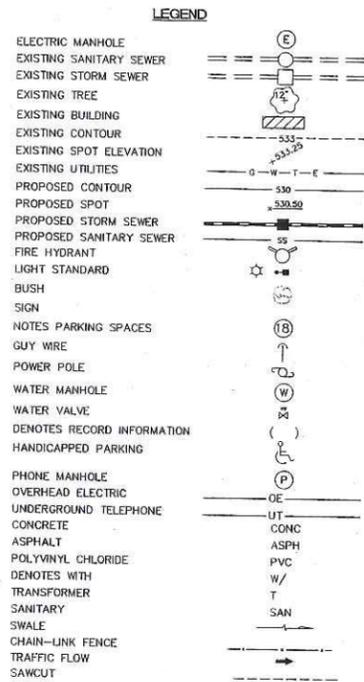
R-1, 1 Acre Residence District, with a Planned  
Residential Development (PRD) Overlay District, Ordinance # \_\_\_\_\_

A TRACT OF LAND BEING THE SW 1/4 OF THE SE 1/4 OF SECTION 19, PART OF NW 1/4 OF  
SECTION 29, AND THE NW 1/4 OF THE NW 1/4 OF SECTION 30  
TOWNSHIP 44 NORTH, RANGE 3 EAST  
CITY OF WILDWOOD, ST. LOUIS COUNTY, MISSOURI

## SHEET INDEX

C1	TITLE SHEET
C2	DETAILS
C3	PRELIMINARY DEVELOPMENT PLAN
C4	ENLARGED PLAN AREAS
C5	FINE GRADING EXAMPLE PLAN
C6	DISTURBANCE PLAN
L-1-2	LANDSCAPE PLANS BY LOOMIS (3-4-2016)

FIG. 1 NATURAL RESOURCE PLAN (DISTURBED) BY SCI (2/2016)  
FIG. 3 NATURAL RESOURCE MAP BY SCI (11/2015)



### PERTINENT DATA

OWNER	Pulte Homes of St. Louis, LLC
OWNER UNDER CONTRACT	Pulte Homes of St. Louis, LLC
SITE LOCATOR ADDRESS	21150204 (2443 VALLEY RD) 21150202 (2443 VALLEY RD) 20210014 (2121 QUANTHEM DR) WILDWOOD, MO 63025
EXISTING ZONING	R-1 (R-1 RESIDENCE DISTRICT WITH P-1 (PLANNED RESIDENTIAL DEVELOPMENT (PRD) OVERLAY DISTRICT
WARD	21150204 (2443 VALLEY RD) 21150202 (2443 VALLEY RD) 20210014 (2121 QUANTHEM DR) CALKINS CREEK P.O. 31, GINO 1942, G022 MARKARCH FIRE (212 QUANTHEM) METRO WEST (2443 VALLEY RD) ROCKWOOD MISSOURI AMERICAN WATER CO. AMEREN MISSOURI LAKESIDE GAS COMPANY METROPOLITAN ST. LOUIS SEWER DISTRICT CHARTER COMMUNICATIONS ST. LOUIS COUNTY - WILDWOOD PRECINCT
WATER SHED	WILDMEN'S FIRE DISTRICT
SCHOOL DISTRICT	ROCKWOOD
ELECTRIC SERVICE	AMEREN MISSOURI
GAS SERVICE	LAKESIDE GAS COMPANY
SEWER SERVICE	METROPOLITAN ST. LOUIS SEWER DISTRICT
CABLE	CHARTER COMMUNICATIONS
POLICE	ST. LOUIS COUNTY - WILDWOOD PRECINCT

### PROPERTY DESCRIPTION

A tract of land being part of Sections 19, 29 and 30 in Township 44 North, Range 3 East of the Fifth Principal Meridian, City of Wildwood, St. Louis County, Missouri and being more particularly described as follows:

BEGINNING at an iron pipe marking the common corner of Sections 19, 29 and 30 in Township 44 North, Range 3 East of the Fifth Principal Meridian, City of Wildwood, St. Louis County, Missouri; thence along the common line between Sections 29 and 30 South 07 degrees 49 minutes 49 seconds West, 825.27 feet to a point; thence leaving said line North 87 degrees 34 minutes 29 seconds East, 379.69 feet to a point on the Western right-of-way line of Valley Road (40 feet wide); thence in a Southern direction along said Western line along a curve to the left having a radius of 920.00 feet, an arc length of 62.73 feet, the chord of which bears South 17 degrees 58 minutes 15 seconds West, a chord distance of 62.71 feet to a point; thence continuing along a curve to the left having a radius of 920.00 feet, an arc length of 150.83 feet, the chord of which bears South 11 degrees 19 minutes 15 seconds West, a chord distance of 150.66 feet to a point; thence South 06 degrees 37 minutes 27 seconds West, a chord distance of 150.66 feet to a point; thence leaving said Western right-of-way line South 86 degrees 24 minutes 52 seconds West, 316.00 feet to a point on the aforesaid common line between Sections 29 and 30 thence along said line South 00 degrees 34 minutes 49 seconds West, 103.37 feet to a stone marking the Southeast corner of the Northeast Quarter of the Northeast Quarter of the Southeast Quarter of the Northeast Quarter of the Northeast Quarter of the Northeast Quarter and the Southern line of the Northeast Quarter of Section 30 North 89 degrees 05 minutes 30 seconds West, 2951.59 feet to a Stone marking the Southwest corner of the Northwest Quarter of the Northeast Quarter of Section 30, thence along the Western line of said Northwest Quarter of the Northeast Quarter of Section 30 North 00 degrees 40 minutes 28 seconds East, 1325.13 feet to an old oak marking the North Quarter Corner of Section 30, being the South Quarter Corner of Section 19; thence along the Western line of the Southwest Quarter of the Southeast Quarter of Section 19 North 00 degrees 35 minutes 52 seconds East, 1333.18 feet to an iron pipe marking the Northwest corner of said Southwest Quarter of the Southeast Quarter of Section 19; thence along the Northern line of said Southwest Quarter of the Southeast Quarter South 89 degrees 17 minutes 27 seconds East, 1326.94 feet to an iron pipe marking the Northeast corner of the Southwest Quarter of the Southeast Quarter of Section 19; thence along the Eastern line of said Southwest Quarter of the Southeast Quarter of Section 19 South 00 degrees 41 minutes 39 seconds West, 1334.46 feet to an iron pipe marking the Southeast corner of the Southwest Quarter of the Southeast Quarter of Section 19, said corner being on the common line between Sections 19 and 30; thence along said common line South 89 degrees 12 minutes 39 seconds East, 1324.69 feet to the Point of beginning and containing 5,415,053 square feet or 124.313 acres more or less as per a survey by Stock & Associates Consulting Engineers, Inc. during January, 2016.

### ABBREVIATIONS

C.O.	- CLEANOUT
DB	- DEED BOOK
EL	- ELECTRIC
FL	- FLOWLINE
FT	- FEET
FO	- FOUND
GR	- GRASS
M.H.	- MANHOLE
N/P	- NOW OR FORMERLY
PL	- PLAT BOOK
P.C.	- PAGE
P.O.B.	- POINT OF BEGINNING
P.O.C.	- POINT OF COMMENCEMENT
P.V.C.	- POLYVINYL CHLORIDE PIPE
R.C.P.	- REINFORCED CONCRETE PIPE
SD	- SQUARE
T	- TELEPHONE
V.C.P.	- VERIFIED CLAY PIPE
W	- WATER
W.M.	- RIGHT-OF-WAY WIDTH
W.S.	- WALK BOX

### ABBREVIATIONS

W	- WATER	DB	- DEED BOOK
E	- ELECTRIC	PB	- PLAT BOOK
OE	- OVERHEAD ELECTRIC	PG	- PAGE
UE	- UNDERGROUND ELECTRIC	(-W)	- RIGHT-OF-WAY WIDTH
G	- GAS	(REC)	- RECORD INFORMATION
T	- TELEPHONE	FT	- FEET
TBR	- TO BE REMOVED	N/F	- NOW OR FORMERLY
TBR & R	- TO BE REMOVED AND REPLACED	FND	- FOUND
U/P	- USE IN PLACE	SD	- SQUARE
ATG	- ADJUST TO GRADE	CO	- CLEANOUT
BC	- BACK OF CURB	MH	- MANHOLE
FC	- FACE OF CURB	AI	- AREA INLET
TW	- TOP OF WALL	CI	- CURB INLET
BW	- BOTTOM OF WALL	YD	- YARD DRAIN
PVMT	- PAVEMENT	PVC	- POLYVINYL CHLORIDE PIPE
ASPH	- ASPHALT	RCP	- REINFORCED CONCRETE PIPE
CONC	- CONCRETE	GMP	- CORRUGATED METAL PIPE
GRND	- GROUND	VCP	- VERIFIED CLAY PIPE
FF	- FINISHED GRADE	CL	- CLAY PIPE
FG	- FINISHED FLOOR	FL	- FLOWLINE
LL	- LOWER LEVEL	TS	- TAILSTAKE
TT	- TOP OF TURF	ELEV. EL	- ELEVATION
TC	- TOP OF CURB	PROP. PR	- PROPOSED
SG	- SUBGRADE	EXIST. EX	- EXISTING
MG	- METHANE GAS	TYP	- TYPICAL
		BMP	- BEST MANAGEMENT PRACTICES
		SWPPP	- SWPPP

### NOTES

- EXISTING SURVEY INFORMATION FROM AVAILABLE RECORD INFORMATION AND SUBJECT TO AN ACTUAL TOPOGRAPHIC AND BOUNDARY SURVEY.
- THIS PLAN IS FOR THE EXCLUSIVE USE OF PULTE HOMES. IT IS NOT INTENDED TO BE USED FOR CONSTRUCTION BUT RATHER FOR CONCEPT AND QUANTITY TAKE-OFFS. NO UTILITY RESEARCH OR COORDINATION HAS BEEN PERFORMED BY STOCK & ASSOCIATES.
- THIS PLAN IS SUBJECT TO ALL LOCAL, STATE AND FEDERAL REGULATIONS. THERE HAS BEEN LIMITED WETLAND DELINEATION, GEOTECHNICAL AND ENVIRONMENTAL DATA PROVIDED TO THIS ENGINEER PRIOR TO DESIGNING THIS PLAN.
- NO UTILITY MEETINGS HAVE BEEN PERFORMED TO VERIFY EXISTING OR PROPOSED UTILITY FACILITIES AS WELL AS CONFIRMATION OF DESIGN REQUIREMENTS FOR THIS SITE. ALL PROPOSED UTILITY CONNECTIONS AND SITE DESIGN ELEMENTS ARE SUBJECT TO REVIEW & APPROVAL BY EACH RESPECTIVE AGENCY HAVING JURISDICTION OVER THIS SITE.
- ALL IMPROVEMENTS SHOWN ARE SUBJECT TO CHANGE PENDING FINAL ENGINEERING AND APPROVALS OF GOVERNING AGENCIES AND UTILITY COMPANIES.
- STORMWATER BASINS AND SANITARY LIFT STATION LOCATIONS SHOWN ARE CONCEPTUAL AND ARE SUBJECT TO CHANGE DURING FINAL SITE DESIGN AND ENGINEERING REVIEWS.
- NO GRADE SHALL EXCEED 3:1 SLOPE UNLESS OTHERWISE NOTED AND APPROVED BY THE CITY OF WILDWOOD, AND SUPPORTED BY THE APPROVED GEOTECHNICAL REPORT.
- SIGNAGE AND STREET LIGHTING PER THE CITY OF WILDWOOD REQUIREMENTS.
- STORMWATER POLLUTION PREVENTION MEASURES TO BE IN ACCORDANCE WITH CITY OF WILDWOOD AND MSD REQUIREMENTS.
- SUBJECT PROPERTY LIES WITHIN FLOOD ZONE 'X' (AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN) ACCORDING TO THE NATIONAL FLOOD INSURANCE RATE MAP NUMBER 29199C0276K WITH AN EFFECTIVE DATE OF FEBRUARY 4, 2015.
- ALL PROPOSED UTILITIES TO BE INSTALLED UNDERGROUND AND LOCATED WITHIN EASEMENTS.
- STORMWATER MANAGEMENT SHALL BE IN ACCORDANCE WITH CITY OF WILDWOOD AND MSD REQUIREMENTS.
- ALL CONSTRUCTION MATERIALS, MEANS AND METHODS SHALL BE IN ACCORDANCE WITH CITY OF WILDWOOD REQUIREMENTS.
- SITE LIGHTING SHALL COMPLY WITH SECTIONS 415.450 "OUTDOOR LIGHTING" AND 420.320 "STREET LIGHTING". DEVELOPER SHALL PROVIDE AMEREN PLANS TO CITY.
- ALL SIDEWALKS SHALL BE IN ACCORDANCE WITH CITY OF WILDWOOD, AND ADA STANDARDS.
- MAXIMUM BUILDING HEIGHT IS 3 STORIES, OR 45 FEET (415.120.F.1.).
- ENTRANCE, STREET INTERSECTION, CURB-DE-SAC SHALL BE CONSTRUCTED TO CITY OF WILDWOOD.
- STORMWATER SHALL BE DISCHARGED AT AN ADEQUATE NATURAL DISCHARGE POINT. SNKHOLES ARE NOT ADEQUATE NATURAL DISCHARGE POINTS.
- PROPOSED STREETS SHALL BE PUBLIC, WITH 26' WIDE PAVEMENT, WITHIN A 40' RIGHT-OF-WAY.
- NO PLANTS, TREES, SIGNS, ETC. SHALL BE PLACED IN THE SITE TRIANGLE AT THE STREET INTERSECTIONS TO RESTRICT SIGHT DISTANCE.
- NO PLANTS, TREES, SIGNS, ETC. SHALL BE PLACED IN THE INTERSECTION SIGHT TRIANGLES AS TO RESTRICT SIGHT DISTANCE.

### LOT COUNTS

GRAND TOTAL = 116 LOTS, MIN. 15,000 MINIMUM S.F./EACH

### BULK LOT DENSITY COMPARED TO SOUTH SUBDIVISIONS:

DENSITY = 116 LOTS/124.313 AC = 0.93 LOTS/AC  
COMPARE TO EXISTING SOUTHERN ADJACENT SUBDIVISIONS:  
BRENTWOOD PLATS 1, 2, & 3:  
43,647 + 20,097 + 20,681 = 84,425 AC  
DENSITY = 110 LOTS/84,425 AC = 1.30 LOTS/AC > 0.93 LOTS/AC PROPOSED, O.K.

### DENSITY CALCULATIONS:

PER CITY OF WILDWOOD MUNICIPAL CODE SECTION "R1" 415.111.G.1.e., "PRD" 415.510.L.2.

TOTAL SITE AREA 124.313 AC  
= TOTAL RIGHT-OF-WAY AREA 7.57 AC  
= 116.74 AC

116.74 AC/(1 AC/Lot DISTRICT DENSITY) = 116 MAXIMUM LOTS ALLOWED  
VS. 116 LOTS PROPOSED AT 15,000 SF MIN. ACTUAL LOT SIZE

### PARKING CALCULATIONS:

PER CITY OF WILDWOOD MUNICIPAL CODE SECTION 415.340  
2 SPACE/DWELLING UNIT IS EXPECTED, AS A MINIMUM IN THE GARAGES.  
116 DWELLING UNITS x 2 SPACE/DWELLING UNIT = 232 SPACES REQUIRED  
232 TOTAL SPACES PROVIDED

### SURVEYOR'S CERTIFICATION

THIS IS TO CERTIFY THAT STOCK & ASSOCIATES CONSULTING ENGINEERS, INC. HAS PREPARED THIS SITE PLAN FROM RECORD INFORMATION AND DOES NOT REPRESENT A PROPERTY BOUNDARY SURVEY. THIS SITE PLAN IS A CORRECT REPRESENTATION OF ALL EXISTING AND PROPOSED LAND DIVISIONS.

DANIEL EHLHANN, MISSOURI L.S. NO. 2218

5

City Public Space Requirements Chart  
(Date: 4-8-2016)

Number of Parking Spaces (Provided):	232	Square Feet
Standard for Public Space Calculation:	1,712.5 square feet per new single-family dwelling (4 acres per 100 single-family dwellings)	
Amount of Required Public Space:	232,130	Square Feet
Maximum Public Space Allowed from Common Ground = 50%	101,099	Square Feet
Amount of Provided Public Space:	1,281,514	Square Feet
Multiple Use (1st)		Square Feet
Underground Detention Area		Square Feet
Public Land Dedication		Square Feet
Private/Shared Common Ground		Square Feet
Other (Non-Residential Landscaping)	1,179,800	Square Feet
Other (Residential Areas)	201,714	Square Feet
Other (Cable-stayed or 50%)	7,812	Square Feet
Total Provided Public Space:	1,281,514	Square Feet
Left Included Improvements	Total Number (List below on sheet)	
1. Trees (Add)		
2. Benches (At Overlooks/Triples)	10	Each
3. Trash Receptacles		
4. Bicycle Racks		
5. Other (Signage at Overlooks)		
Other Public Space Items (if provided) (See in list if applicable)		

DRAWING FILE: C:\DRAWINGS\2016\PRELIMINARY\PLANS\44686\BASE.dwg LAYOUT: DOTTILE PLOTTED: Apr 08, 2016 - 12:46pm PLOTTED BY: dms.munroe

PREPARED FOR:  
**PULTE HOMES OF ST. LOUIS, LLC**  
16305 SWINGLEY RIDGE ROAD, SUITE 350  
CHESTERFIELD, MISSOURI 63017  
Phone: (636) 537-7122  
Fax: (636) 537-9952

UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS, RECORDS AND INFORMATION, AND, THEREFORE DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NON-EXISTENCE, SIZE, TYPE, NUMBER, OR LOCATION OF THESE FACILITIES, STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING

STOCK AND ASSOCIATES CONSULTING ENGINEERS, INC. AND THE UNDERSIGNED ENGINEER HAVE NO RESPONSIBILITY FOR IMPROVEMENTS SHOWN ON THIS PLAN AND ALL OTHER DRAWINGS WHERE THE UNDERSIGNED ENGINEER'S SEAL APPEARS. THE CONSTRUCTION MEANS AND METHODS ARE THE SOLE RESPONSIBILITY OF THE OWNER AND CONTRACTOR. STOCK AND ASSOCIATES CONSULTING ENGINEERS, INC. HAS NO RESPONSIBILITY TO VERIFY FINAL IMPROVEMENTS AS SHOWN ON THIS PLAN UNLESS SPECIFICALLY ENGAGED AND



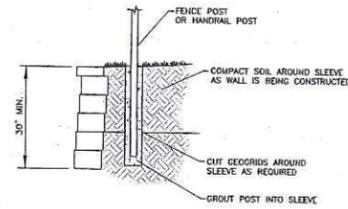
PREPARED BY:  
**STOCK & ASSOCIATES**  
Consulting Engineers, Inc.  
257 Chesterfield Business Park  
St. Louis, MO 63005 PH: (636) 537-9900 FAX: (636) 537-9900  
www.stockandassociates.com  
Web: www.stockandassociates.com

PRELIMINARY DEVELOPMENT PLAN FOR:  
**VALLEY ROAD SUBDIVISION**  
2443, 2445 VALLEY ROAD, 2121 QUANTHEM DRIVE, WILDWOOD, MO 63025



REVISIONS:  
1. 1-10-2016 CITY MEETING  
2. 2-4-2016 PRESENTATION  
3. 3-7-2016 CITY SUBMITTAL  
4. 3-11-2016 ESTIMATE  
5. 4-8-2016 CITY SUBMITTAL

DRAWN BY: C.A.M. CHECKED BY: G.M.S.  
DATE: 12/23/2015 JOB NO: 214-5466  
M.S.D. P. # BASE MAP: SW 210  
S.L.C. MAP # HAT 537P - #  
SCALE: #  
SHEET NO.:  
TITLE SHEET

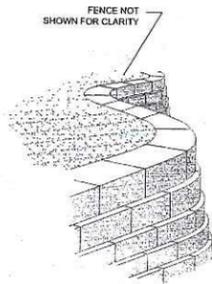


-PLACE SONOTUBE IN FILL AS BACKFILL IS BEING COMPACTED.  
-THE FENCE DESIGN AND SUITABILITY IS THE RESPONSIBILITY OF OTHERS & SHALL BE PART OF WALL SHOP DRAWINGS.

**FENCE DETAIL**  
NOT TO SCALE

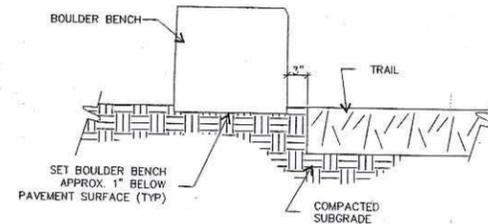
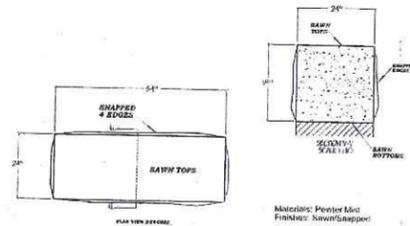
DETAIL COURTESY OF "ASPEN CONSULTANTS, 12/05/2003, 636-349-2225".

CONTRACTOR SHALL VERIFY IF FENCE WILL BE REQUIRED WITH CITY.

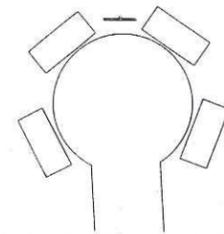


THE ABOVE INFORMATION IS A CONCEPT ONLY. ACTUAL DESIGN OF RETAINING WALL SHALL BE BY A LICENSED PROFESSIONAL ENGINEER & SUBMITTED TO STOCK AND ASSOCIATES FOR GENERAL COMPLIANCE W/ GRADING PLAN.

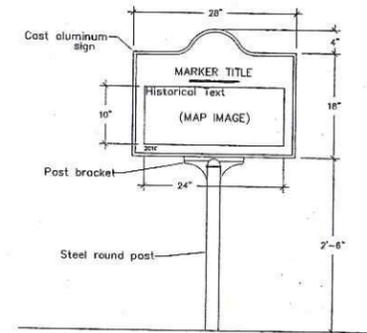
EARTHWORKS, INC.  
PH: 573-547-9087  
FAX: 573-547-6007



**BOULDER BENCH (AT TRAIL LOOKOUTS)**



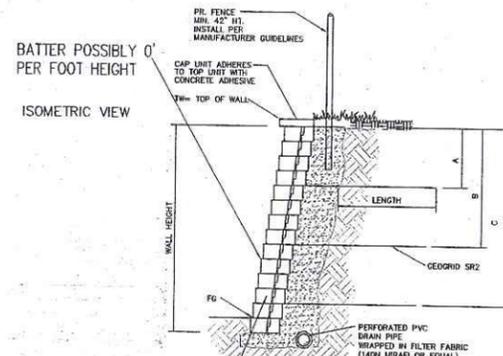
**TYPICAL BENCH LAYOUT**



**SIGNAGE (AT TRAIL LOOKOUTS)**

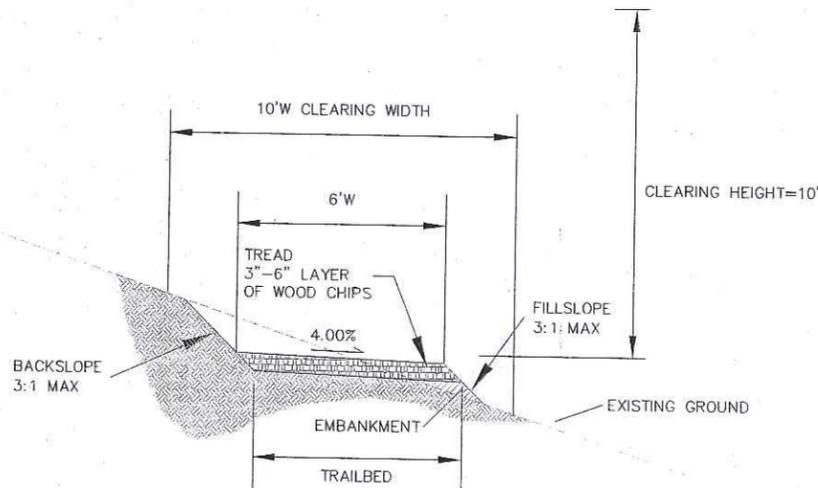
**RETAINING WALL NOTES:**

- 1.) ALL CONSTRUCTION SHALL BE PER THE MANUFACTURERS RECOMMENDATION. GLOBAL & FOUNDATION STABILITY SHALL BE VERIFIED BY PROJECT GEOTECHNICAL ENGINEER & SUBMITTED TO STOCK & ASSOCIATES PRIOR TO INSTALLATION. FOOTING & COMPACTION TESTING SHALL BE PERFORMED BY PROJECT GEOTECHNICAL ENGINEER.
- 2.) THE WALL PROFILE INFORMATION IS FOR CONCEPT ONLY. DETAILED SHOP DRAWINGS FOR THE PROPOSED RETAINING WALL SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER IN THE STATE OF MISSOURI SPECIALIZING IN RETAINING WALL DESIGN. DRAWINGS SHALL BE SUBMITTED TO STOCK & ASSOCIATES FOR GENERAL COMPLIANCE WITH GRADING PLAN PRIOR TO WALL CONSTRUCTION.
- 3.) VERIFY ALTERNATE WALL SYSTEMS WITH OWNER.
- 4.) SHOP DRAWINGS & STABILITY ANALYSES SHALL BE SUBMITTED BY WALL DESIGNER TO COUNTY PRIOR TO WALL CONSTRUCTION.
- 5.) GEOTECHNICAL ENGINEER SHALL DESIGN RETAINING WALL IN RELATION TO LOADS AND FOOTINGS OF BUILDINGS. DEPTH OF RETAINING WALL FOOTINGS SHALL BE DESIGNED TO PREVENT NO STEEPER THAN 1:1 ZONE OF INFLUENCE TO BOTTOM OF ADJACENT SEWERS AND WATERLINES (UTILITIES).



VERSA-LOK "STANDARD" RETAINING WALL UNITS OR CLIENT-APPROVED BRAND. COLOR: TAN.

**SEGMENTAL BLOCK RETAINING WALL DETAILS**

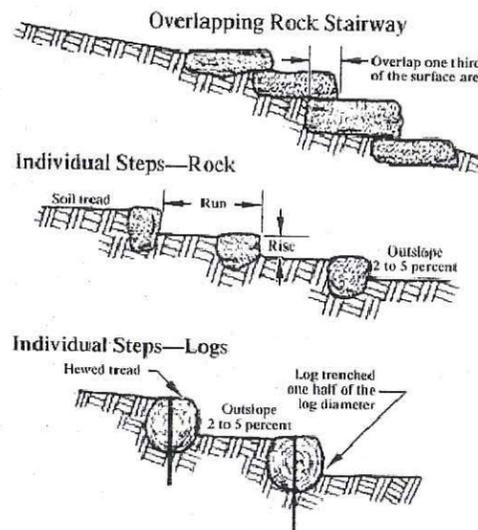


**TRAIL GRADE GUIDELINES:**

1. LIMIT SUSTAINED GRADE (1000' OR MORE) TO 10% OR LESS.
2. LIMIT STEEP GRADES UP TO 25% TO 50 YARDS.
3. PREFERRED GRADE IS 2 TO 6%.
4. RULE OF THUMB: 1/3 LEVEL, 1/3 UPHILL AND 1/3 DOWNHILL.
5. LOG STEPS MAY BE USED FOR SHORT, STEEP SLOPES.

**CLEARING NOTES:**

1. PICK ROUTE WHICH REQUIRES THE MINIMUM AMOUNT OF CLEARING.
2. REMOVE FALLEN TREES, BRUSH AND ROCK FROM THE TREAD.
3. ESTABLISH THE TRAIL CLEARANCE WIDTH AND HEIGHT.
4. CUT SHRUBS AND SMALL TREES FLUSH WITH THE GROUND TO PREVENT TRIPPING AND TO REDUCE STUMP SPROUTING.
5. LIMIT VEGETATION REMOVAL TO 2" DIAMETER OR LESS.
6. PRUNE OVERHANGING BRANCHES CLEANLY AT THE BRANCH COLLAR ON THE TREE TRUNK OR WHERE A BRANCH FORKS.
7. REMOVE LARGE ROCKS AND FALLEN LOGS FROM THE TRAIL.



STEP DETAILS COURTESY OF UNITED STATES DEPARTMENT OF AGRICULTURE, UNITED STATES FOREST SERVICE, TRAIL PUBLICATIONS, TRAIL CONSTRUCTION AND MAINTENANCE NOTEBOOK: ADDITIONAL TRAIL ELEMENTS. <http://www.fs.fed.us/r-d/pubs/trailpubs/html/07232806/page12.htm>

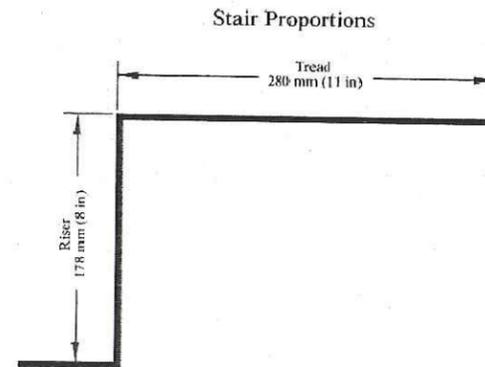


Figure B1—A general rule of thumb for stairs: twice the riser plus the tread should equal 635 to 686 millimeters (25 to 27 inches).

**HIKING TRAIL DETAILS**

PREPARED BY:

**STOCK & ASSOCIATES**  
Consulting Engineers, Inc.  
257 Chesterfield Business Park Way  
St. Louis, MO 63005 PH: (636) 530-8100 FAX: (636) 530-8100  
e-mail: general@stockinc.com  
Web: www.stockinc.com

PRELIMINARY DEVELOPMENT PLAN FOR:

**VALLEY ROAD SUBDIVISION**

244-3, 2485 VALLEY ROAD, 2121 QUATHEN DRIVE, WILDWOOD, MO 63005



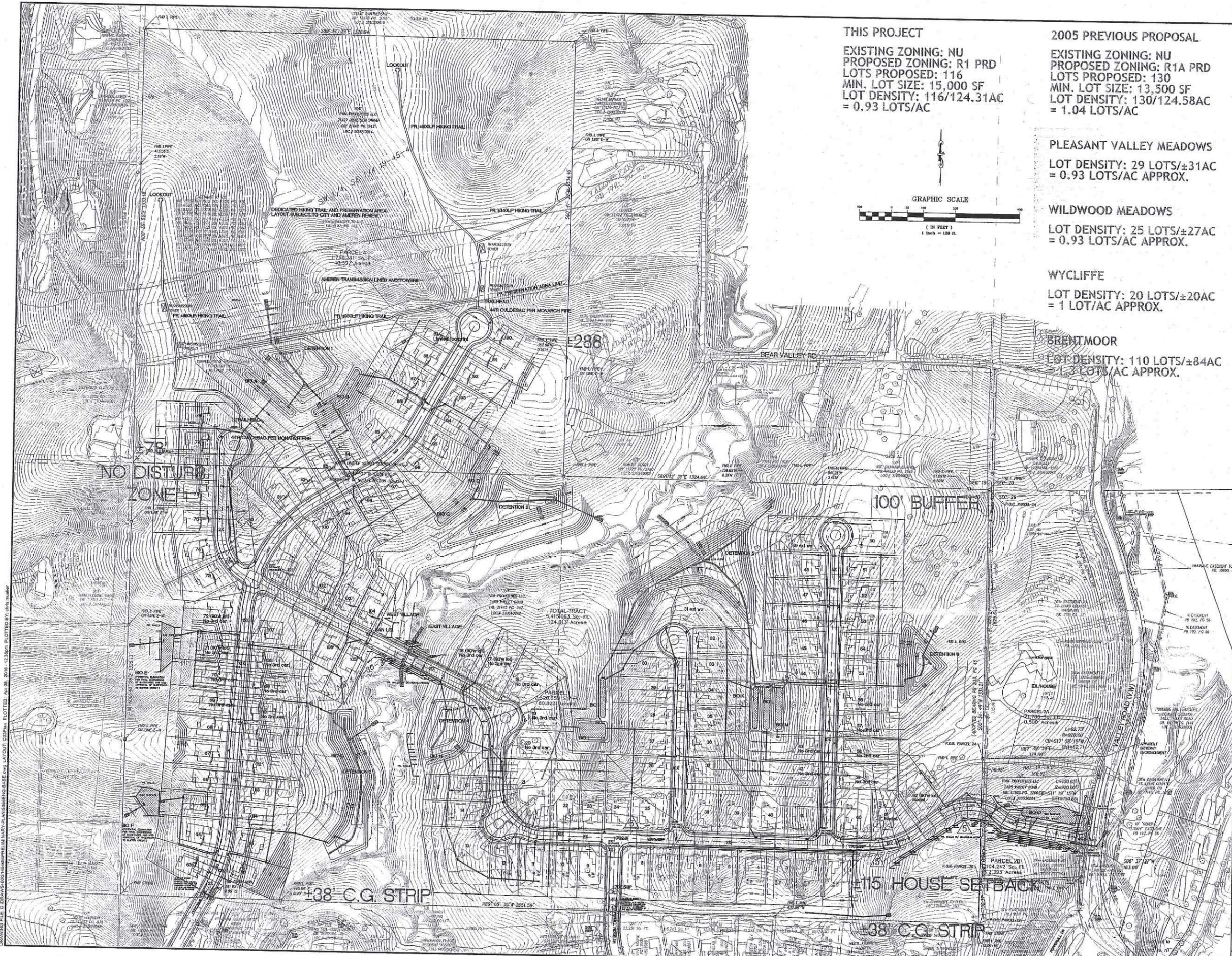
GEORGE M. STOCK-25116  
Civil Engineer  
CERTIFICATE OF AUTHORITY  
NUMBER: 8006

REVISIONS:

1	1-10-2016 CITY MEETING
2	2-4-2016 PRESENTATION
3	3-7-2016 CITY SUBMITTAL
4	3-11-2016 ESTIMATE
5	4-8-2016 CITY SUBMITTAL

DRAWN BY: C.M.A.	CHECKED BY: G.M.S.
DATE: 12/21/2015	JOB NO: 214-5465
SHEET #: 2	TOTAL SHEETS: 20/21
S.L.C. NO. #	REV. SUP. #
M.D.A. #	

5 DETAILS



**THIS PROJECT**  
 EXISTING ZONING: NU  
 PROPOSED ZONING: R1 PRD  
 LOTS PROPOSED: 116  
 MIN. LOT SIZE: 15,000 SF  
 LOT DENSITY: 116/124.31AC  
 = 0.93 LOTS/AC

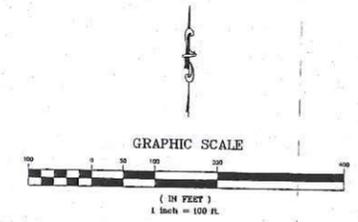
**2005 PREVIOUS PROPOSAL**  
 EXISTING ZONING: NU  
 PROPOSED ZONING: R1A PRD  
 LOTS PROPOSED: 130  
 MIN. LOT SIZE: 13,500 SF  
 LOT DENSITY: 130/124.58AC  
 = 1.04 LOTS/AC

**PLEASANT VALLEY MEADOWS**  
 LOT DENSITY: 29 LOTS/±31AC  
 = 0.93 LOTS/AC APPROX.

**WILDWOOD MEADOWS**  
 LOT DENSITY: 25 LOTS/±27AC  
 = 0.93 LOTS/AC APPROX.

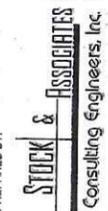
**WYCLIFFE**  
 LOT DENSITY: 20 LOTS/±20AC  
 = 1 LOT/AC APPROX.

**BRENTMOOR**  
 LOT DENSITY: 110 LOTS/±84AC  
 = 1.3 LOTS/AC APPROX.



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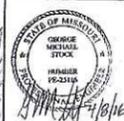
PREPARED BY:



PRELIMINARY DEVELOPMENT PLAN FOR:

**VALLEY ROAD SUBDIVISION**

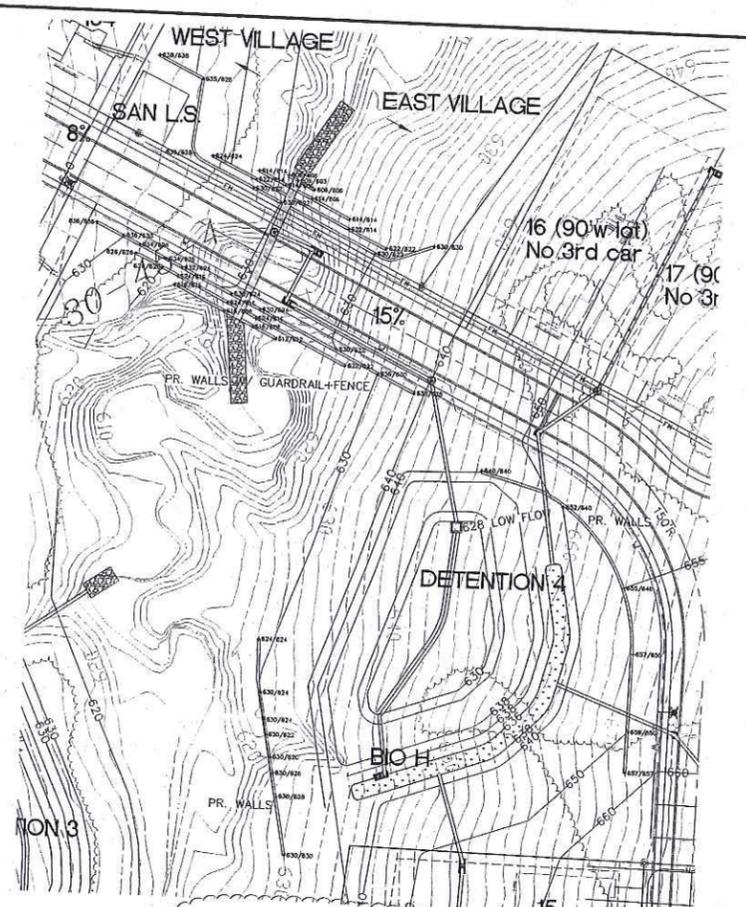
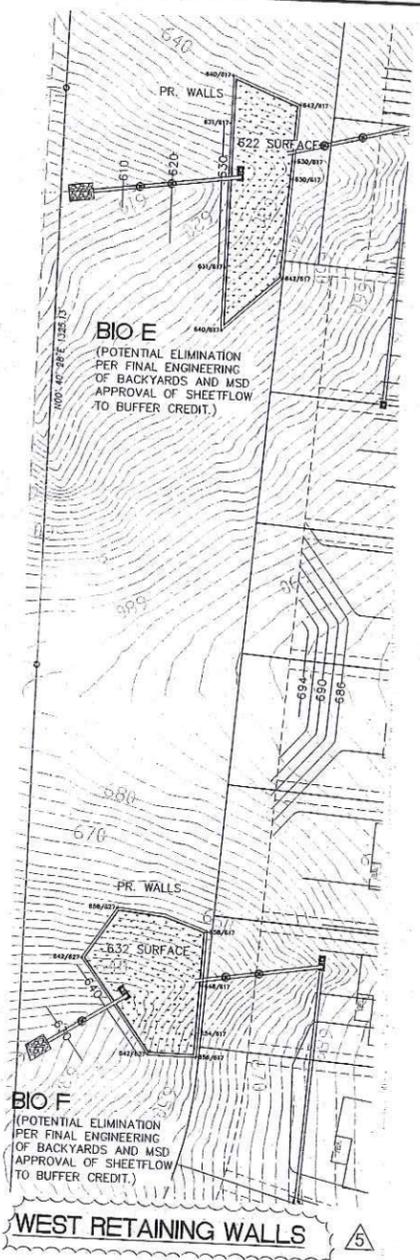
2443, 2485 VALLEY ROAD, 2121 QUATHEN DRIVE, WILDWOOD, MD 21005



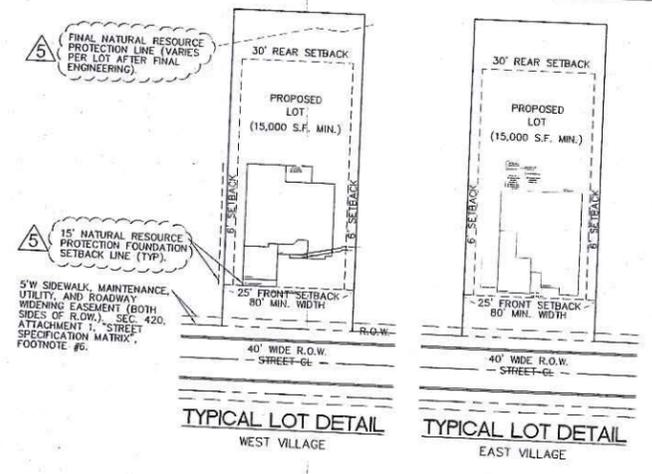
REVISIONS:  
 1 1-13-2018 CITY MEETING  
 2 2-4-2018 PRESENTATION  
 3 3-7-2018 CITY SUBMITTAL  
 4 3-14-2018 ESTIMATE  
 5 4-8-2018 CITY SUBMITTAL

DRAWN BY: CAM  
 DATE: 1/23/2018  
 DESIGNED BY: JMS  
 DATE: 1/23/2018  
 CHECKED BY: JMS  
 DATE: 1/23/2018  
 SHEET NO.: C3

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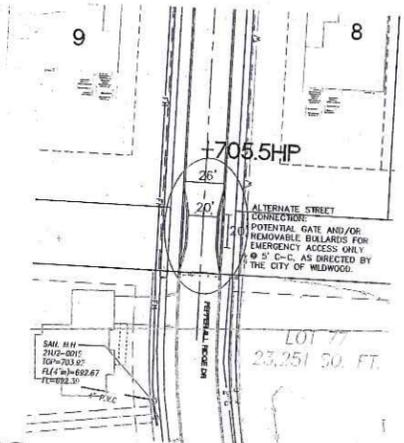
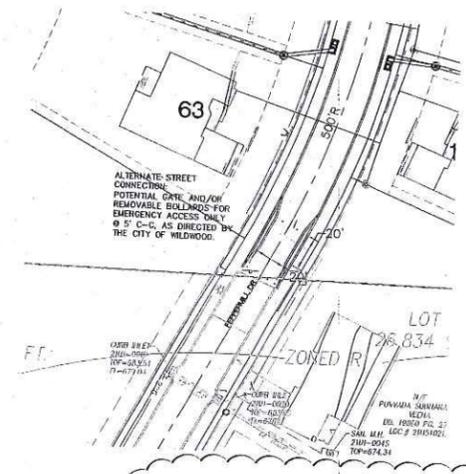


**MIDDLE RETAINING WALLS**

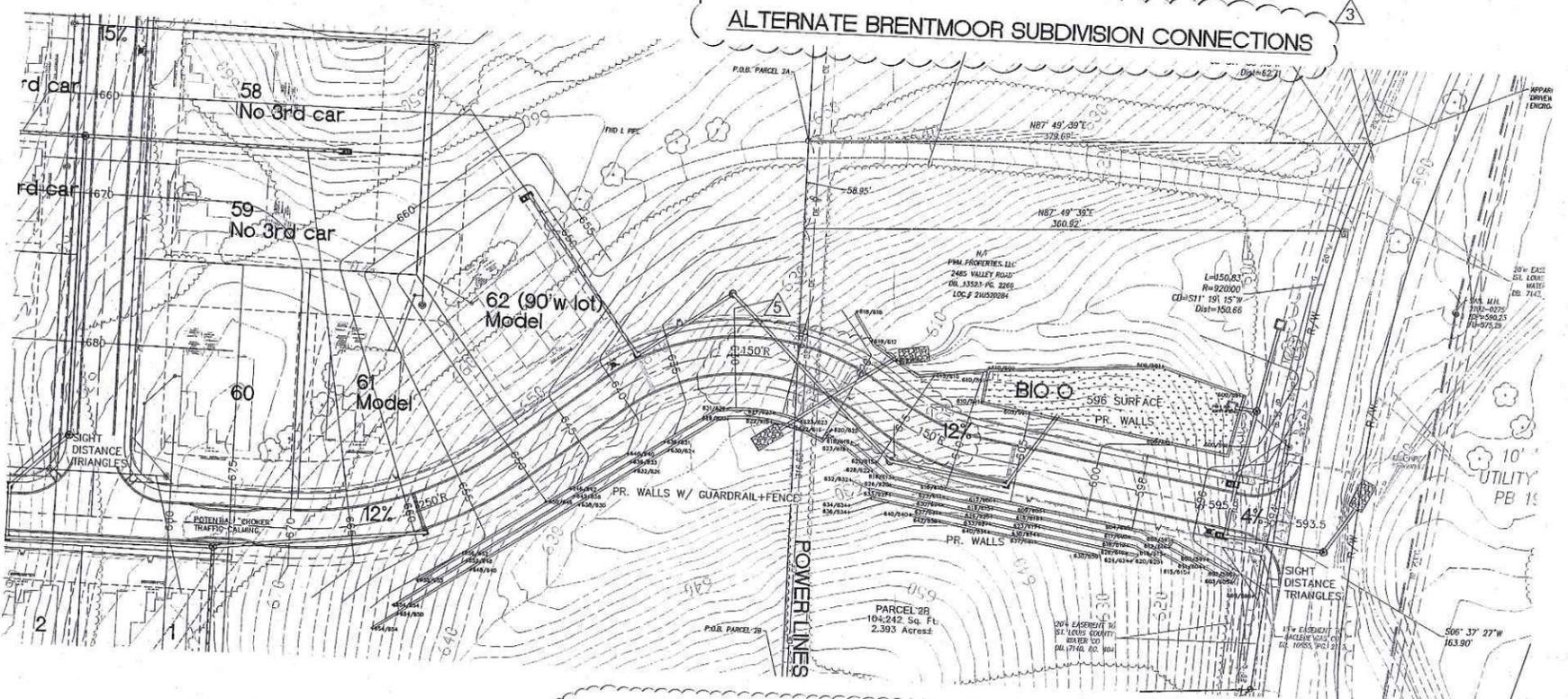


**TYPICAL LOT DETAIL WEST VILLAGE**

**TYPICAL LOT DETAIL EAST VILLAGE**

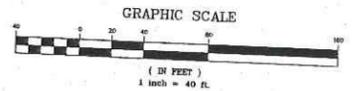


**ALTERNATE BRENTMOOR SUBDIVISION CONNECTIONS**



**PROPOSED VALLEY ROAD ENTRANCE AND EAST WALLS**

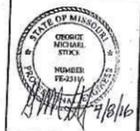
EXAMPLE KEY: 611/605 = TOP OF WALL/FINISH GRADE AT TOE OF WALL (IN BIORETENTIONS, FINISH GRADE IS PRIOR TO ADDING SPECIAL SOILS.)



PREPARED BY:  
**STOCK & ASSOCIATES**  
 Consulting Engineers, Inc.  
 297 Chesterfield Business Parkway  
 St. Louis, MO 63005 PH: (636) 520-5000 FAX: (636) 520-5000  
 Web: www.stockinc.com

PRELIMINARY DEVELOPMENT PLAN FOR  
**VALLEY ROAD SUBDIVISION**

2443, 2485 VALLEY ROAD, 2121 QUATHAM DRIVE, WILDWOOD, MO 63005



GEORGE H. STOCK & ASSOCIATES  
 CIVIL ENGINEERS  
 CERTIFICATE OF AUTHORITY  
 NUMBER: 000000

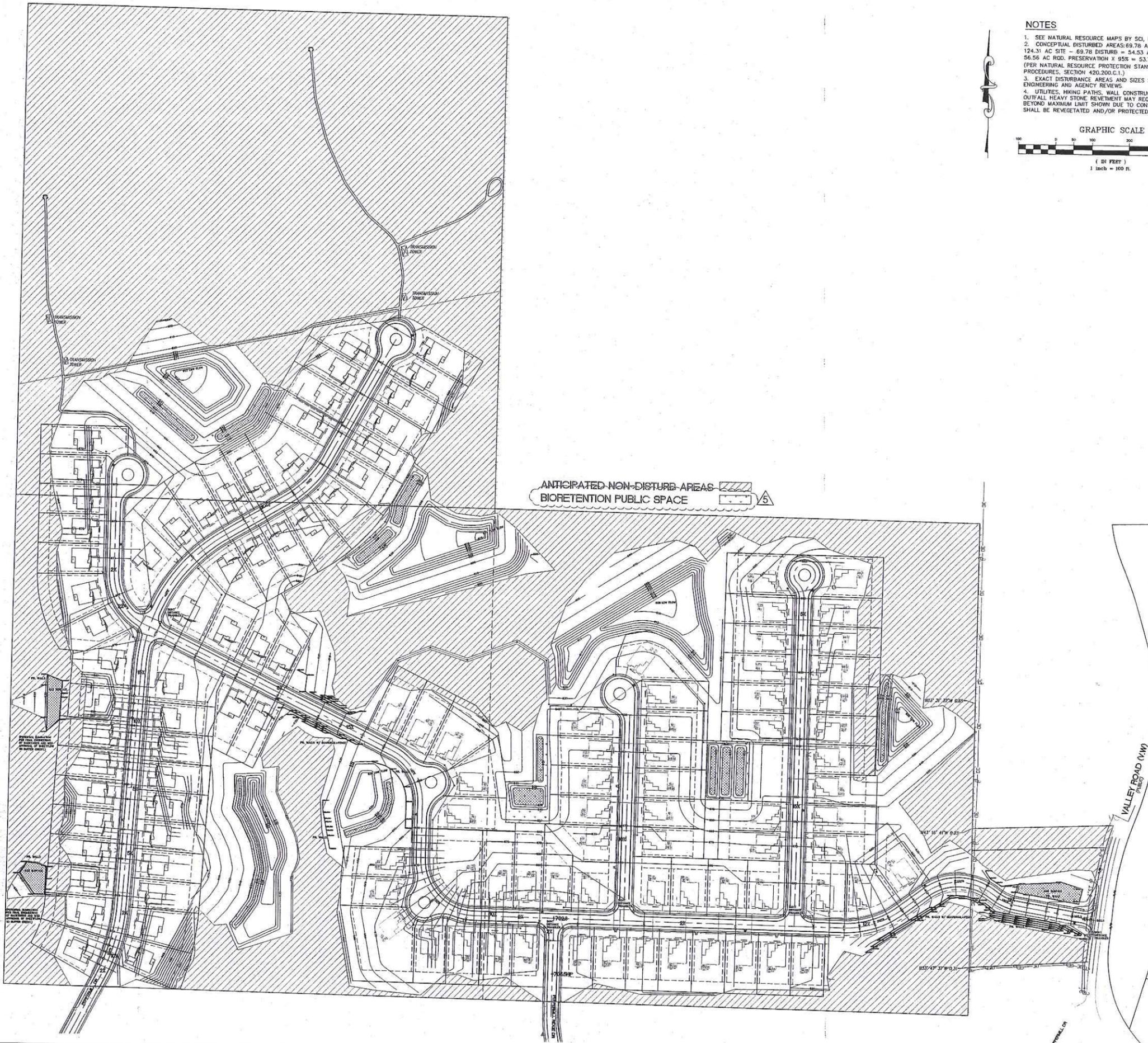
- REVISIONS:
- 1-12-2016 CITY MEETING
  - 2-4-2016 PRESENTATION
  - 3-7-2016 CITY SUBMITTAL
  - 3-11-2016 ESTIMATE
  - 4-6-2016 CITY SUBMITTAL

DRAWN BY: C.J.M.	CHECKED BY: G.H.S.
DATE: 12/15/2015	JOB NO: 2145466
SHEET # 2	SHEET TOTAL: 200, 281
S.L.C. HST #:	NAT SUP. #:
REVISION #:	

SHOWN: ENLARGED PLAN AREAS

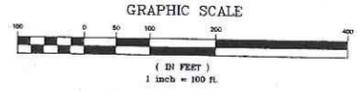


DRAWING FILE: Q:\DRAWING\2016\146466\PRELIMINARY\PLANS\666\BASE.dwg LAYOUT: CONSTRUCTION PLOTTED: Apr 08, 2016 - 12:51pm PLOTTED BY: jhls.mw



**NOTES**

1. SEE NATURAL RESOURCE MAPS BY SCI, RCD, 2-24-2016.
2. CONCEPTUAL DISTURBED AREAS: 69.78 AC  
124.51 AC SITE - 69.78 DISTURB = 54.53 AC NON-DISTURB  
56.58 AC RCD, PRESERVATION X 95% = 53.73 AC MIN NEEDED, O.K.  
(PER NATURAL RESOURCE PROTECTION STANDARDS AND PROCEDURES, SECTION 420.200.C.1.)
3. EXACT DISTURBANCE AREAS AND SIZES SUBJECT TO CHANGE DURING FINAL ENGINEERING AND AGENCY REVIEWS.
4. UTILITIES, HIKING PATHS, WALL CONSTRUCTION, CONSTRUCTION ACCESS, PIPE OUTFALL HEAVY STONE REVEMENT MAY REQUIRE ADDITIONAL DISTURBANCE BEYOND MAXIMUM LIMIT SHOWN DUE TO CONSTRUCTION. DISTURBED AREAS SHALL BE REVEGETATED AND/OR PROTECTED TO PREVENT EROSION.



207 Chesterfield Business Parkway  
St. Louis, MO 63114  
TEL: 314.433.8800 FAX: 314.433.8801  
e-mail: general@stockandassociates.com  
Web: www.stockandassociates.com

**STOCK & ASSOCIATES**  
Consulting Engineers, Inc.

PREPARED BY:

PRELIMINARY DEVELOPMENT PLAN FOR:  
**VALLEY ROAD SUBDIVISION**

2445, 2485 VALLEY ROAD, 2121 QUATHAM DRIVE, WILDWOOD, MO 63005



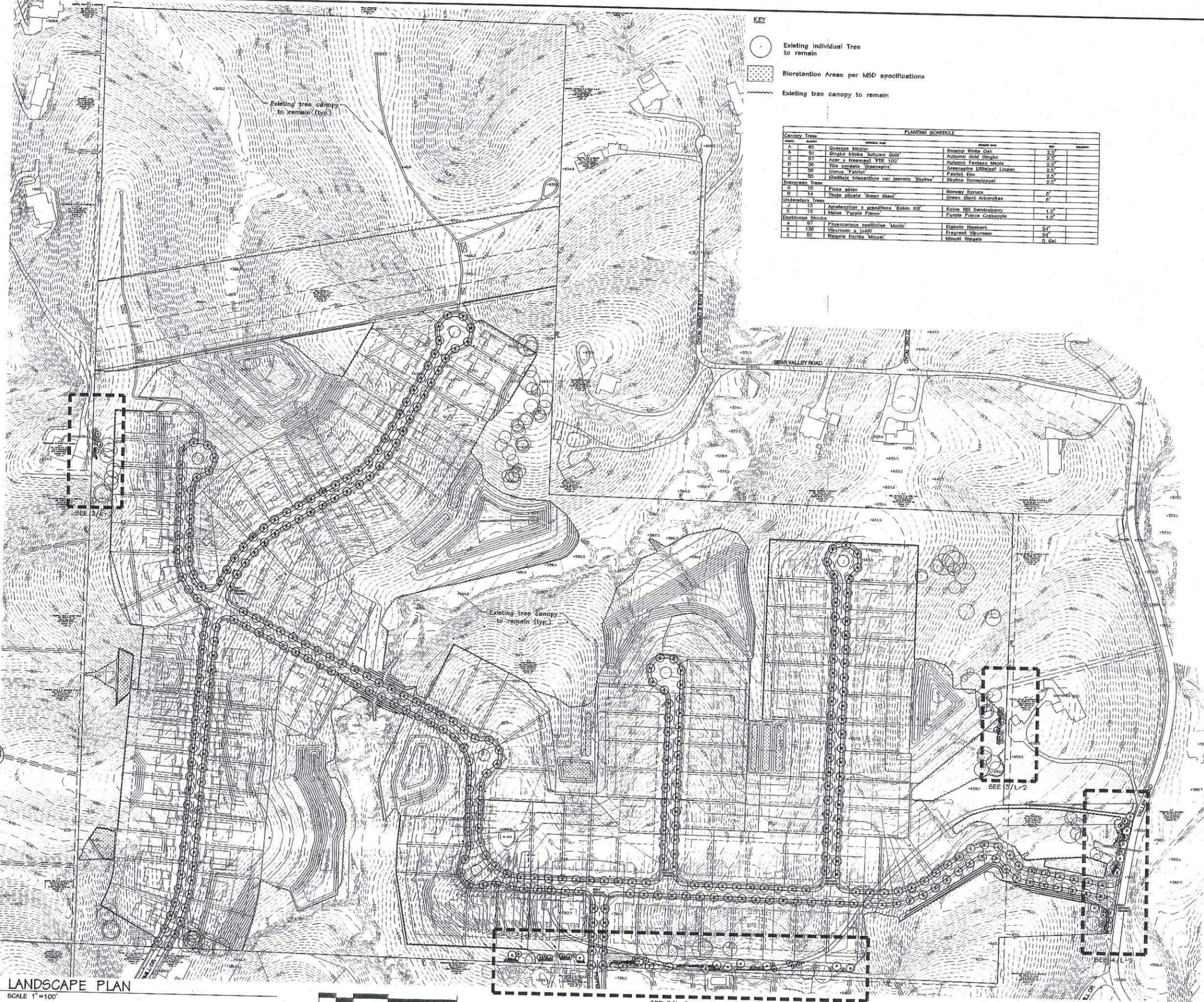
GEORGE M. ERICKSON  
Civil Engineer  
Certificate of Authority  
Number: 2194

- REVISIONS:
- 1 1-12-2016 CITY MEETING
  - 2 2-4-2016 PRESENTATION
  - 3 3-2-2016 CITY SUBMITTAL
  - 4 3-11-2016 ESTIMATE
  - 5 4-8-2016 CITY SUBMITTAL

DRAWN BY: C.J.M.	CHECKED BY: G.M.S.
DATE: 1/23/2016	JOB NO: 214-5466
U.S.N. P.#	BASE MAP #
S.L.C. MAP #	MAP S.U.P. #
REAR #	

SHEET TITLE:  
DISTURBANCE PLAN

SHEET NO.:  
C6



- KEY**
- Existing Individual Tree to remain
  - Bioretention Areas per MSD specifications
  - Existing tree canopy to remain

**PLANTING SCHEDULE**

GROUP	PLANT	QUANTITY	NOTES
Canopy Trees	A 65 Quercus bicolor	2.5'	Swamp White Oak
	D 51 Graco Blume Autumn Gold	2.5'	Autumn Gold Shingle
	C 57 Acer x freemanii FTP 102	2.5'	Autumn Fantasy Maple
	D 56 Tilia cordata Greenaspire	2.5'	Greenaspire Littleleaf Linden
	E 55 Ulmus 'Patrol'	2.5'	Patrol Elm
	F 55 Gleditsia triacanthos var. inermis Skyline	2.5'	Skyline Honeylocust
Evergreen Trees	G 15 Picea abies	0'	Norway Spruce
	H 14 Thuja plicata Green Giant	0'	Green Giant Arborvitae
Understory Trees	I 13 Amelanchier x grandiflora Robin Hill	1.0'	Robin Hill Serviceberry
	K 10 Malus 'Purple Prince'	1.0'	Purple Prince Crabapple
Deciduous Shrubs	L 100 Fraxinocarpus opulifolius Monto	24'	Diablo Ninebark
	M 100 Viburnum x lutei	24'	Fragrant Viburnum
	C 52 Weigela florida Minuet	5 Gal	Minuet Weigela

Jerald Saunders - Civil Engineer  
 MO License # LA-007  
 Consultants:

**Valley Road Subdivision**  
**Wildwood, Missouri**

Pulte Homes

Revisions:

Date	Description	No.

Drawn: BB  
 Checked: J5  
**Ioomis Associates**  
  
 Landscape Architects/Planners  
 10000 N. Highway 70, Suite 100  
 Overland Park, MO 66210  
 Phone: (913) 666-8800  
 Fax: (913) 666-8801  
 Missouri State Certificate of Authority # JAC 0000101

Sheet Title: Landscape Plan  
 Sheet No: L-1  
 Date: 02/05/16  
 Job #: 935.016

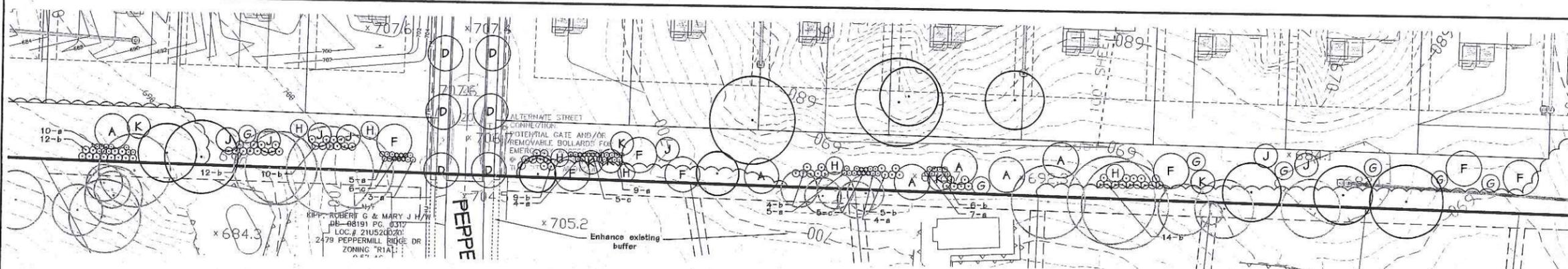
**LANDSCAPE PLAN**  
 SCALE 1"=100'



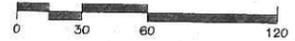
SEE 2/L-2

SEE 4/L-2

SEE 3/L-2

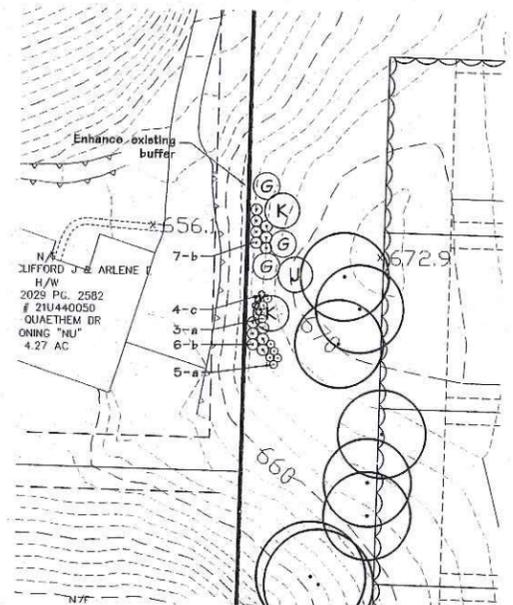


2 BUFFERYARD B  
SCALE 1"=30'

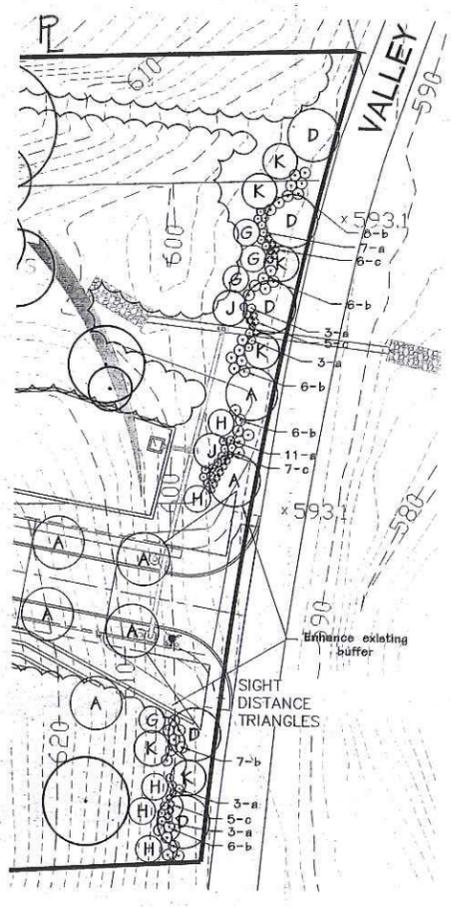


KEY  
 Existing Individual Tree to remain  
 Existing tree canopy to remain

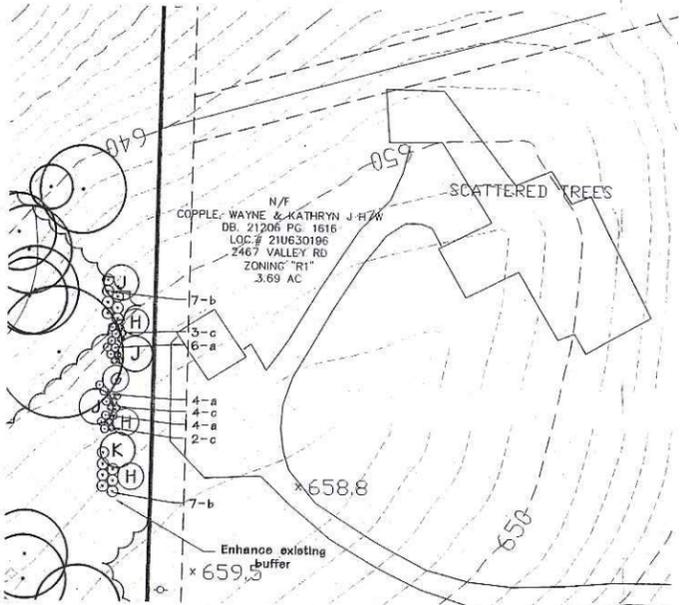
PLANTING SCHEDULE					
Code	Quantity	Species	Size	Notes	Volume
<b>Canopy Trees</b>					
A	60	Quercus bicolor	2.5'		
B	51	Ginkgo biloba 'Autumn Gold'	2.5'	Swamp White Oak	
C	87	Acer x freemanii 'FIR 102'	2.5'	Autumn Gold Ginkgo	
D	30	Tilia cordata 'Greenpire'	2.5'	Autumn Fantasy Maple	
E	50	Liriodendron 'Patriot'	2.5'	Greenpire Littleleaf Linden	
F	50	Gleditsia triacanthos var. inermis 'Skyline'	2.5'	Patriot Elm	
G	15	Picea abies	2.5'	Blue Spruce	
H	14	Thuja plicata 'Green Giant'	2.5'	Green Giant Arborvitae	
<b>Understory Trees</b>					
J	15	Amelanchier x grandiflora 'Robin Hill'	1.5'	Robin Hill Serviceberry	
K	15	Malus 'Purple Prince'	1.5'	Purple Prince Crabapple	
<b>Deciduous Shrubs</b>					
a	97	Physocarpus opulifolius 'Monro'	24"	Diablo Ninebark	
b	130	Viburnum x tiddii	24"	Fragrant Viburnum	
c	62	Wegelia florida 'Munat'	5 Gal	Munet Weigela	



3 BUFFERYARD C  
SCALE 1"=30'



1 BUFFERYARD A  
SCALE 1"=30'



4 BUFFERYARD D  
SCALE 1"=30'



Jerald Saunders - Landscape Architect  
MO License # LA-007

Consultants:

Valley Road Subdivision  
Wildwood, Missouri

Pulte Homes

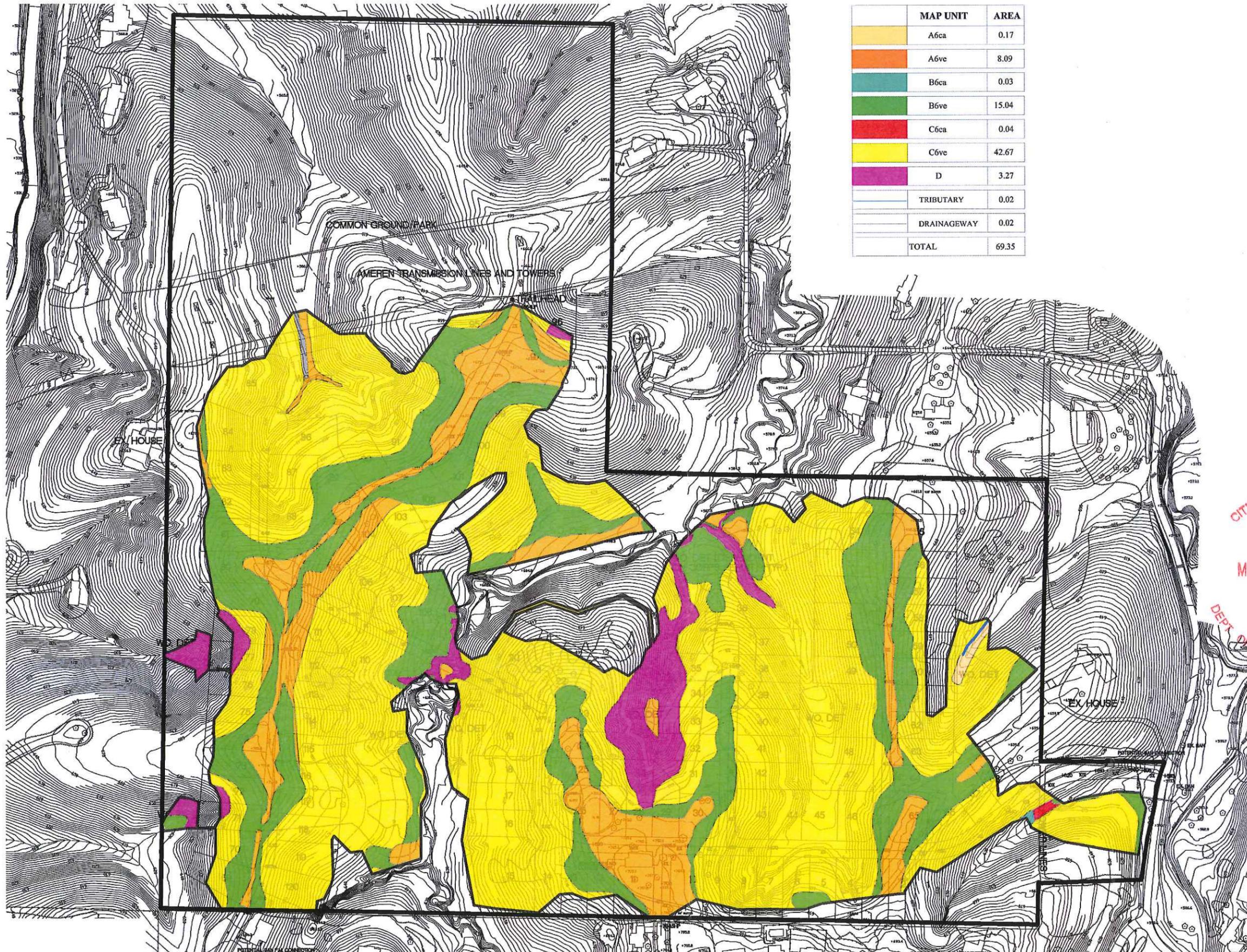
Revisions:

Date	Description	No.

Drawn: BB  
Checked: JS

**loomisAssociates**  
 Landscape Architects/Planners  
 2025 Park Drive, Suite 100  
 Wildwood, MO 64091  
 Phone: 660.633.0077  
 Email: info@loomisassociates.com

Sheet Title: Landscape Plan  
 Sheet No: L-2  
 Date: 02/05/16  
 Job #: 935.016



	MAP UNIT	AREA
	A6ca	0.17
	A6ve	8.09
	B6ca	0.03
	B6ve	15.04
	C6ca	0.04
	C6ve	42.67
	D	3.27
	TRIBUTARY	0.02
	DRAINAGEWAY	0.02
	TOTAL	69.35

CITY OF WILDWOOD  
MAR 08 2016  
DEPT. OF PLANNING & PARKS

GENERAL NOTES/LEGEND

PROJECT NAME

PULTE - VALLEY ROAD  
WILDWOOD, MISSOURI

NATURAL RESOURCE MAP



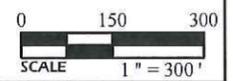
JOB NUMBER  
2015-0339.39

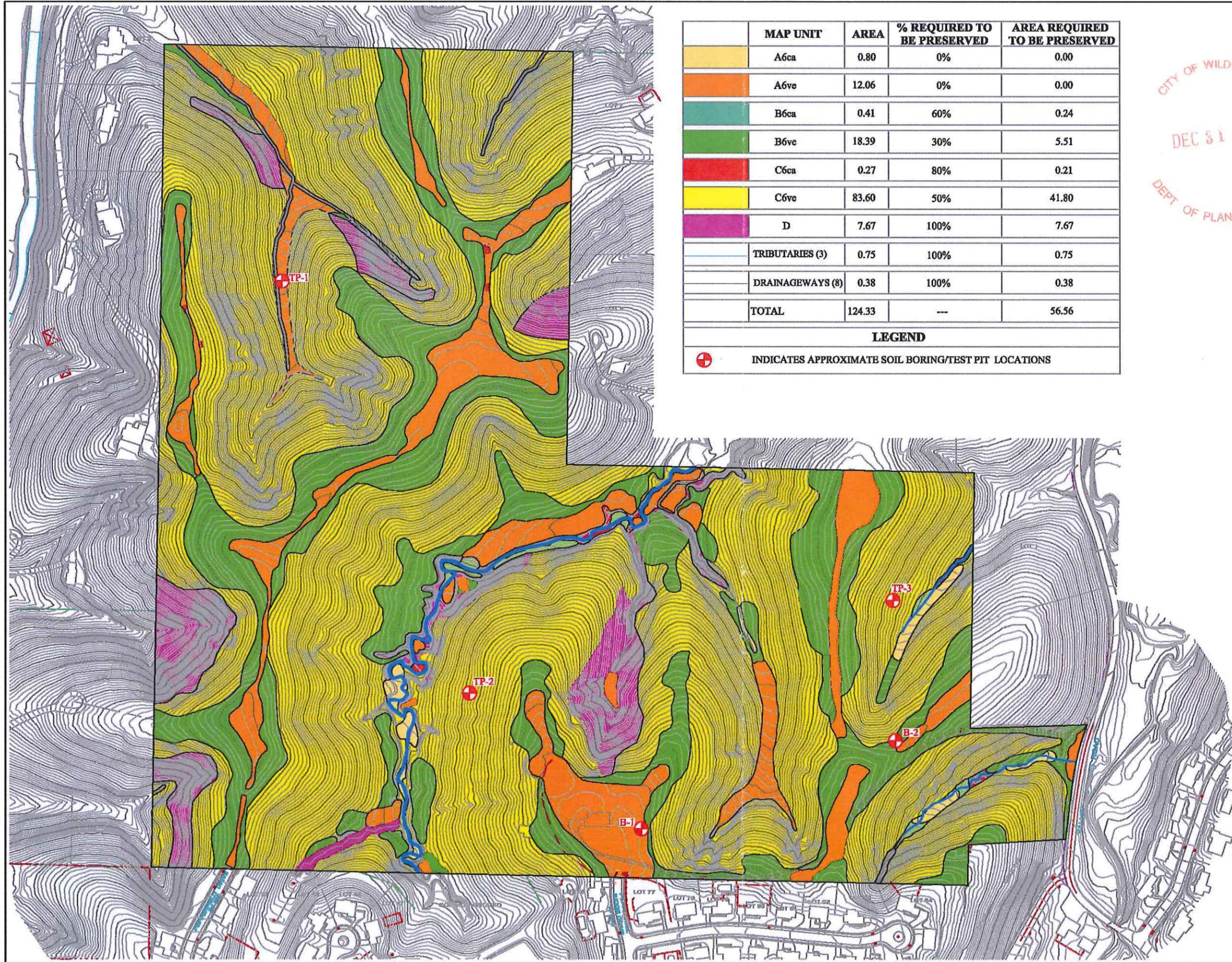
DATE  
02/2016

DRAWN BY  
LAP

CHECKED BY  
SDH

FIGURE  
1





	MAP UNIT	AREA	% REQUIRED TO BE PRESERVED	AREA REQUIRED TO BE PRESERVED
	A6ca	0.80	0%	0.00
	A6ve	12.06	0%	0.00
	B6ca	0.41	60%	0.24
	B6ve	18.39	30%	5.51
	C6ca	0.27	80%	0.21
	C6ve	83.60	50%	41.80
	D	7.67	100%	7.67
	TRIBUTARIES (3)	0.75	100%	0.75
	DRAINAGEWAYS (8)	0.38	100%	0.38
	<b>TOTAL</b>	<b>124.33</b>	<b>---</b>	<b>56.56</b>

**LEGEND**

INDICATES APPROXIMATE SOIL BORING/TEST PIT LOCATIONS

CITY OF WILDWOOD  
 DEC 31 2015  
 DEPT. OF PLANNING & PARKS



**General Notes/Legend**

SLOPE PERCENTAGES AND CATEGORIES PROVIDED BY COLE & ASSOCIATES.

BASED ON UNDATED PLAN PROVIDED ELECTRONICALLY ON AUGUST 25, 2004 FROM COLE & ASSOCIATES, INC. DIMENSIONS AND LOCATIONS ARE APPROXIMATE. ACTUAL MAY VARY. DRAWING SHALL NOT BE USED OUTSIDE THE CONTEXT OF THE REPORT FOR WHICH IT WAS GENERATED.

**PROJECT NAME**  
 PULTE- VALLEY ROAD  
 WILDWOOD, MISSOURI

**NATURAL RESOURCE MAP**

N  
 W E S

**SCALE**  
 1" = 300'

**JOB NUMBER**  
 2015-0339.39

**DATE**  
 11/2015

**DRAWN BY** LAP

**CHECKED BY** SDH

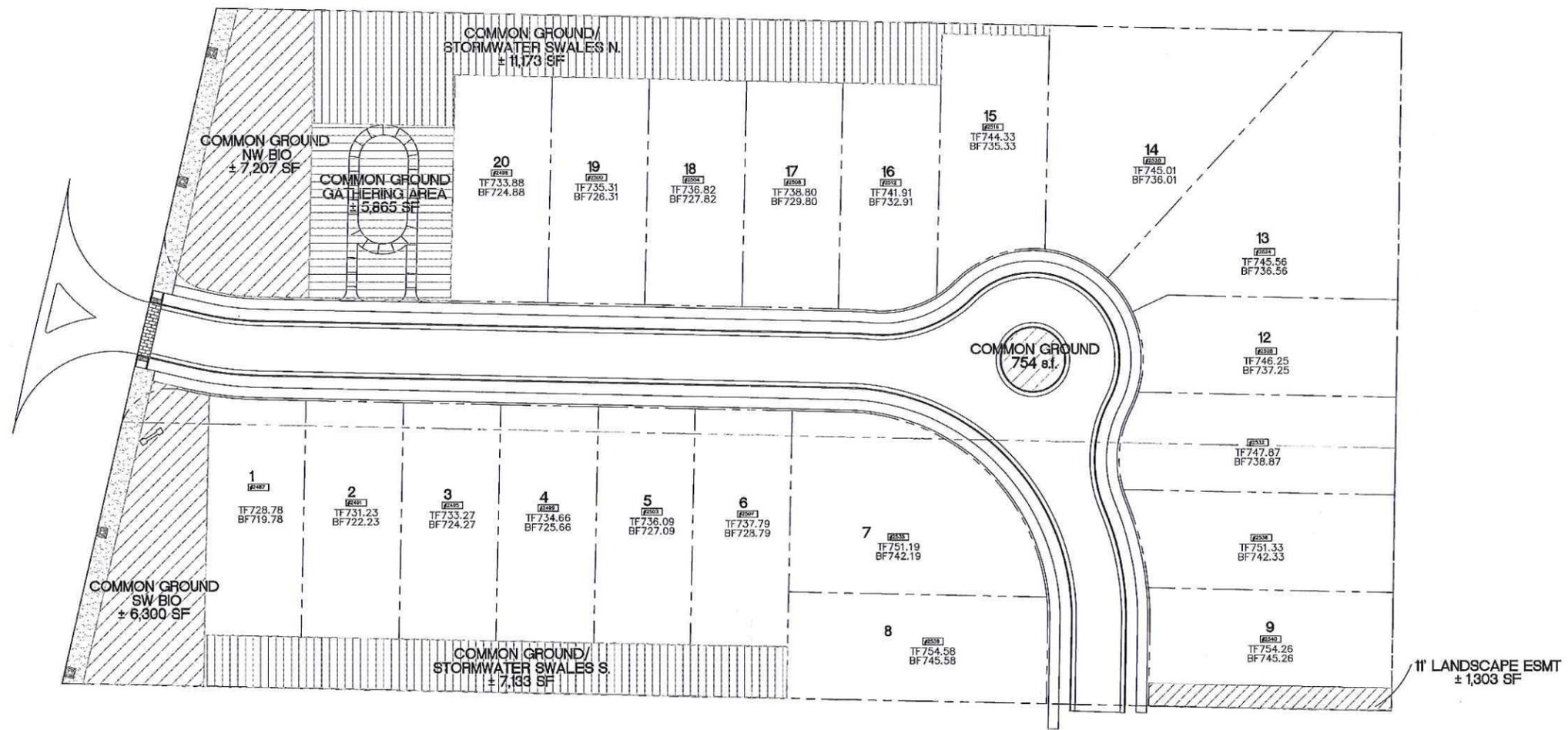
**FIGURE**  
 3

DRAWING FILE: C:\DRAWING\2020\213222\11P\ANS\5221-BASE-current.dwg LAYOUT: SDP-04 PLOTTED: Mar 19, 2015 - 9:12am PLOTTED BY: lshh.stock

6

5221 WILDWOOD TRAIL  
 DATE: 3-18-15  
 PUBLIC SPACE CHART

Number of Parking Spaces (Provided)	40 Spaces
Number of Single-family dwellings proposed	20 Dwellings
Standard for Public Space Calculation	1,742.20 Square Feet/Single-family dwelling (4 acres per 100 single-family dwelling units)
Amount of Required Public Space	34,848 Square Feet
Amount of Provided Public Space	39,819 Square Feet
11' W. Landscape Easement- South in Lot 9	1,303 S.F. X 100% = 1,303 Square Feet
Culdesac Island	754 S.F. X 50% = 3,770 Square Feet
SW Bio Area	6,300 S.F. X 100% = 6,300 Square Feet
NW Bio Area	7,207 S.F. X 100% = 7,207 Square Feet
Common Ground Gathering Area	5,865 S.F. X 50% = 2,933 Square Feet
Common Ground/Stormwater Swales (N&S)	18,306 S.F. X 100% = 18,306 Square Feet
<b>Total=</b>	<b>39,819 Square Feet</b>



PREPARED BY:  
**STOCK & ASSOCIATES**  
 Consulting Engineers, Inc.  
 257 Chesterfield Business Parkway  
 Suite 1000, Wildwood, MO 63040  
 503-910-0100 FAX 503-910-8000  
 Email: general@stockassoc.com  
 Web: www.stockassoc.com

**WILDWOOD TRAIL SUBDIVISION**  
 2516 & 2520 HIGHWAY 109  
 WILDWOOD, MISSOURI 63040

GEORGE M. STOCK E-25116  
 CIVIL ENGINEER  
 CERTIFICATE OF AUTHORITY  
 NUMBER: 000996

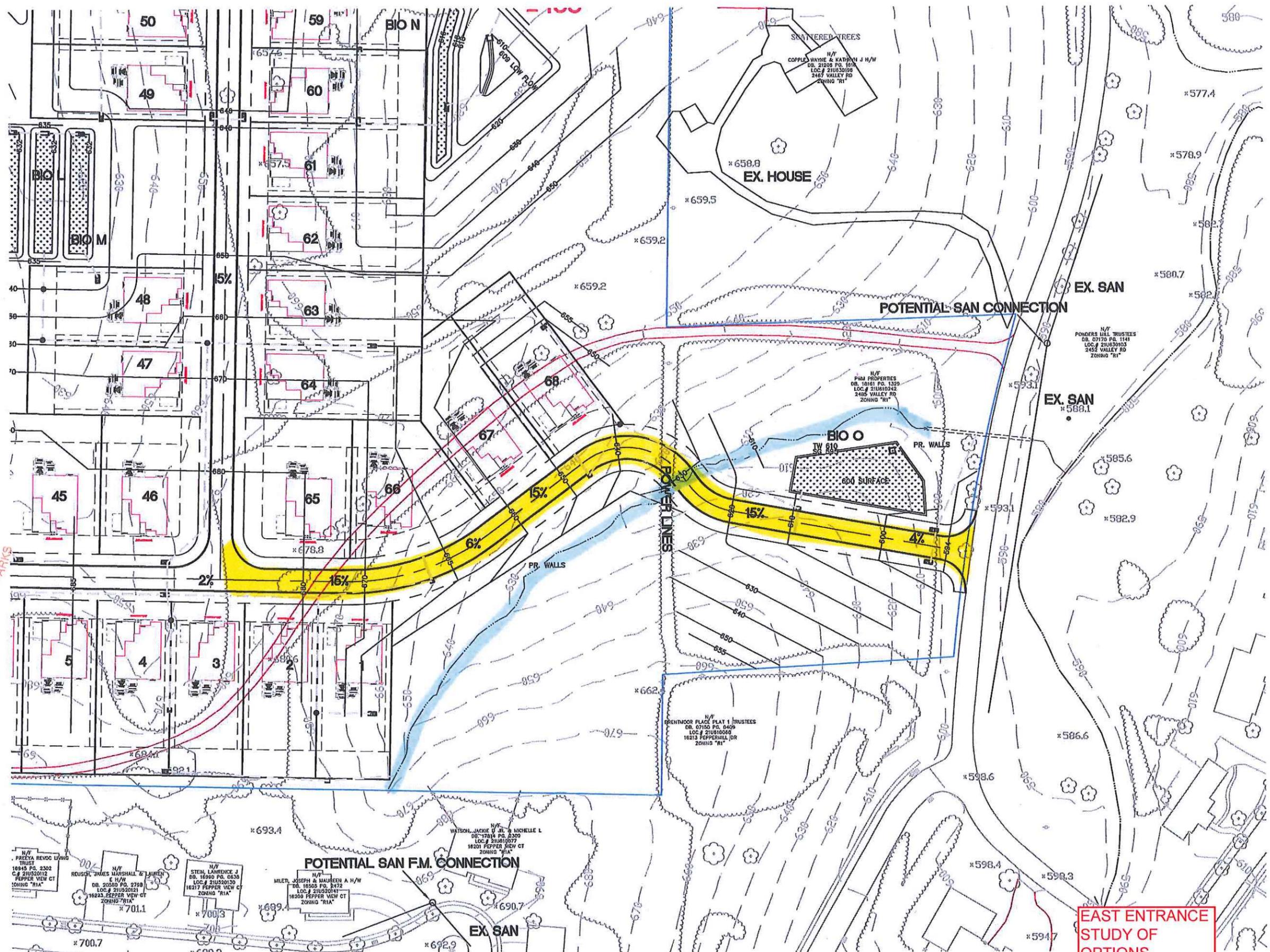
REVISIONS:

1	12-15-2014	CITY SDP COMMENTS
2	1-15-2015	CITY SDP COMMENTS
3	1-27-2015	MSD SUBMITTAL
4	3-11-2015	CITY SDP COMMENTS
5	3-18-2015	MSD SUBMITTAL
6	3-18-2015	CITY SDP COMMENTS

DRAWN BY:	C.A.M.	CHECKED BY:	G.M.S.
DATE:	11/24/2014	JOB NO.:	213-5221
MSD #:	P-0030298-00	BASE MAP #:	24-V

SHEET TITLE:  
**PUBLIC SPACE PLAN**  
 SHEET NO.:  
**SDP4**

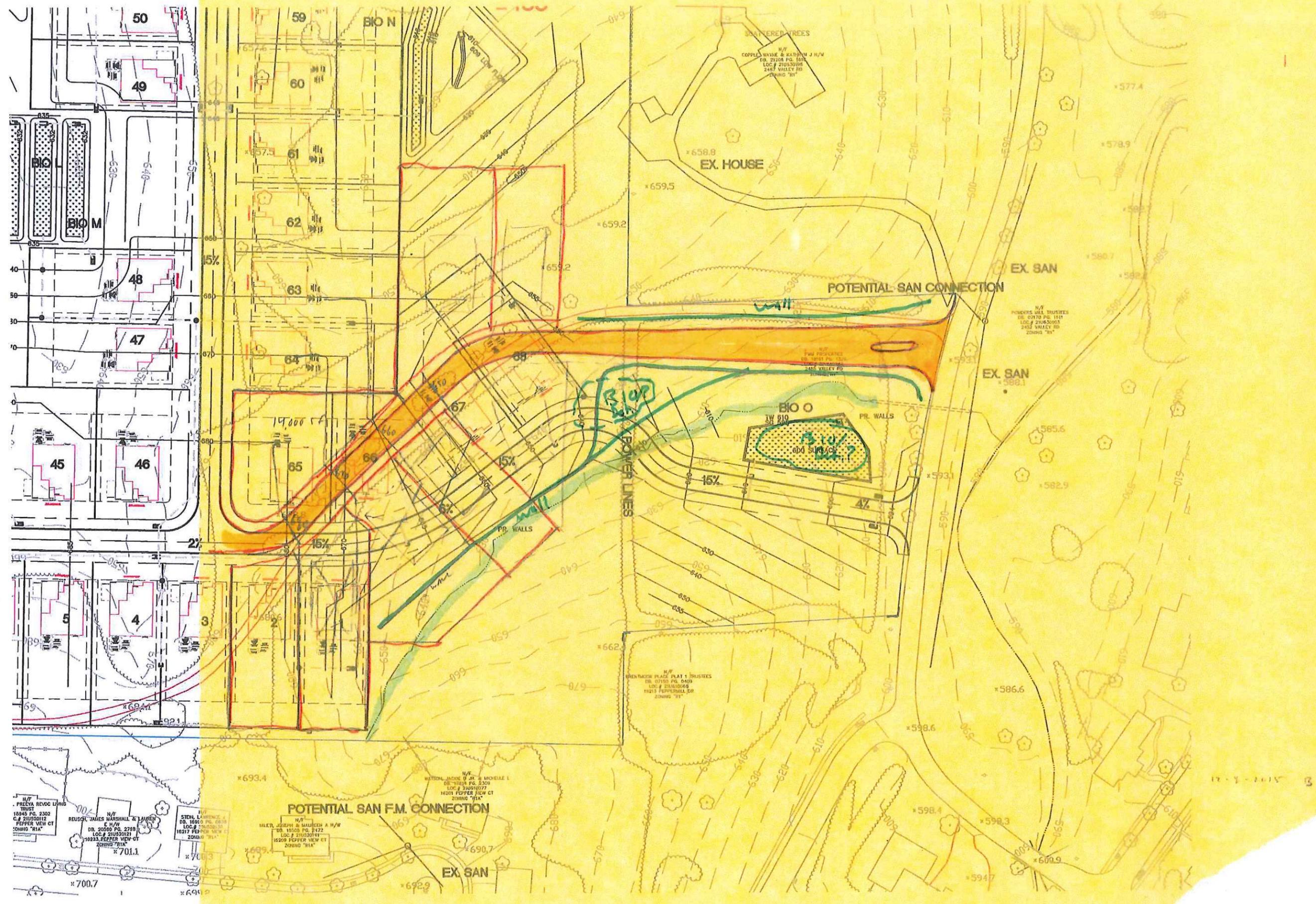
CITY OF WILDWOOD  
DEC 31 2015  
DEPT OF PLANNING & PARKS

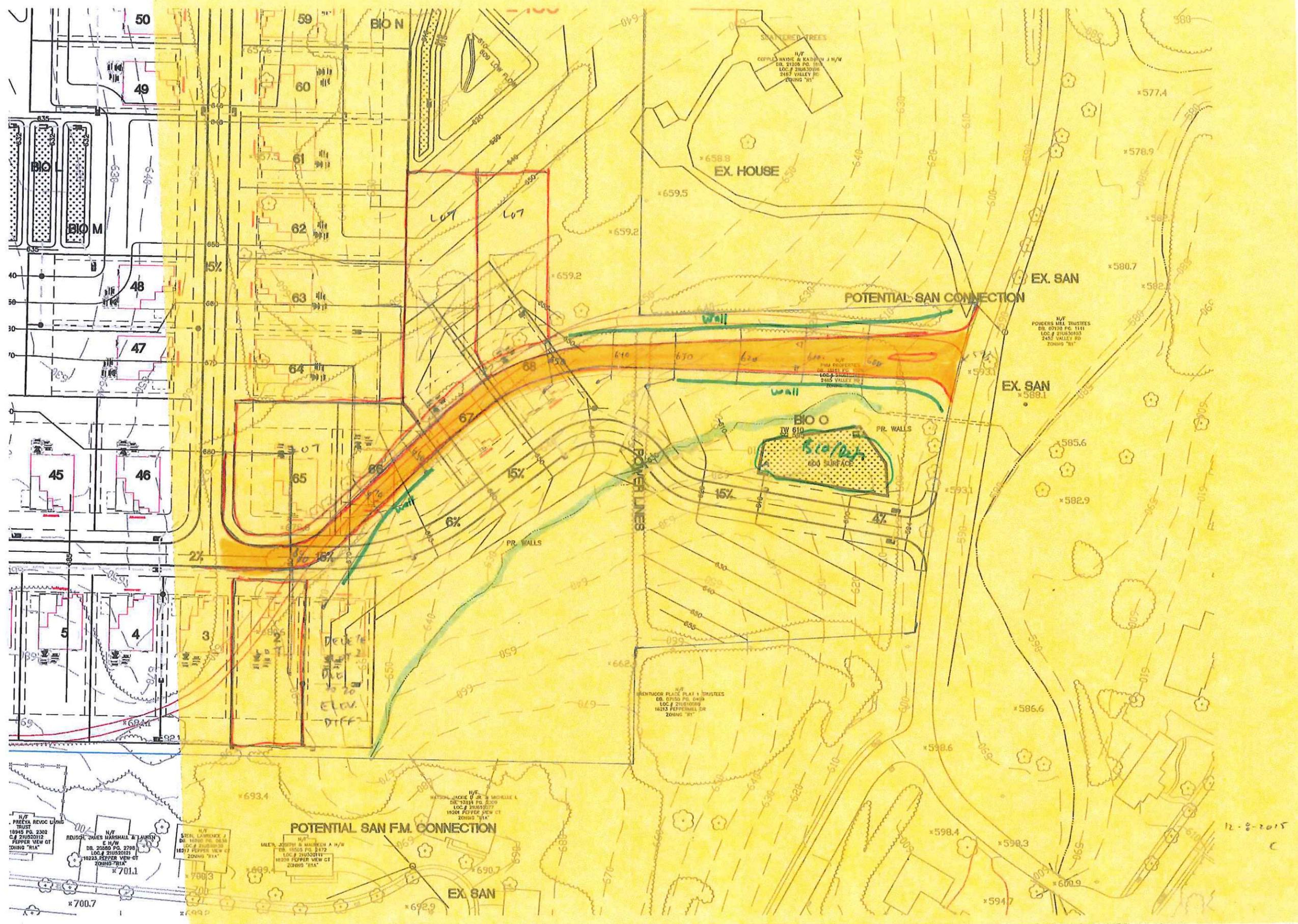


EAST ENTRANCE  
STUDY OF  
OPTIONS,  
12-8-2015

12-8-2015 CURRENT







N/T  
PREEVA REVOC LUMB  
TRUST  
18945 PG. 2302  
C. & J. 21082012  
PEPPER VIEW CT  
ZONING "R1A"  
\*700.7

N/T  
REUSGL, JAMES MARSHALL & LAUREN  
E. H/W  
DB. 20580 PG. 2798  
LOC. # 21082012  
18223 PEPPER VIEW CT  
ZONING "R1A"  
\*701.1

N/T  
STERN, LAWRENCE A.  
DB. 19933 PG. 3472  
18217 PEPPER VIEW CT  
ZONING "R1A"  
\*700.3

POTENTIAL SAN F.M. CONNECTION

N/T  
MELTZ, JOSEPH & MARREESH A. H/W  
TR. 18553 PG. 3472  
LOC. # 21082012  
18209 PEPPER VIEW CT  
ZONING "R1A"  
\*699.4

N/T  
WATSON, JACKIE D. & MICHELLE L.  
DB. 22281 PG. 2300  
LOC. # 21081277  
19204 PEPPER VIEW CT  
ZONING "R1A"  
\*693.4

EX. SAN  
\*692.9

N/T  
VENTUOR PLACE PLAT 1 TRUSTEES  
DB. 07150 PG. 0418  
LOC. # 21081088  
18213 PEPPERVIEW DR  
ZONING "R1"  
\*662

N/T  
HAY PROPERTIES  
DB. 18452 PG. 2445  
LOC. # 21081003  
2445 VALLEY RD  
ZONING "R1"  
\*593.1

N/T  
COPPLE, WAYNE & RANDY W. H/W  
DB. 21205 PG. 1811  
LOC. # 21081006  
2447 VALLEY RD  
ZONING "R1"  
\*658.8

N/T  
PONDERS MIL TRUSTEES  
DB. 07110 PG. 1141  
LOC. # 21081003  
2445 VALLEY RD  
ZONING "R1"  
\*588.1

EX. SAN  
\*588.1

EX. SAN  
\*580.7

\*585.6

\*582.9

\*586.6

\*598.6

\*598.4

\*598.3

\*600.9

\*594.7

\*577.4

\*578.9

\*580.7

\*582.9

\*585.6

\*582.9

\*585.6

\*582.9

\*586.6

\*598.6

\*598.4

\*598.3

\*600.9

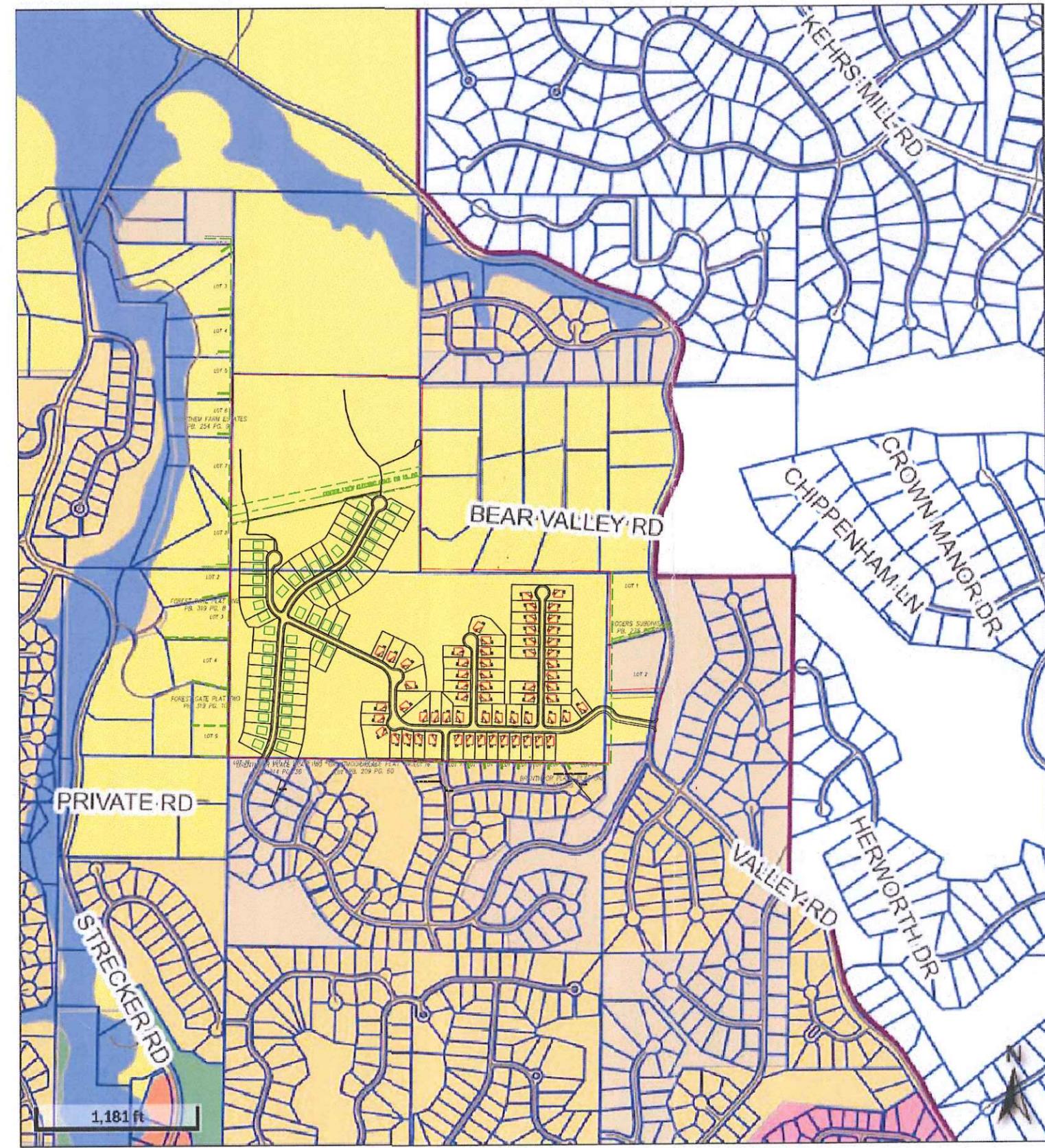
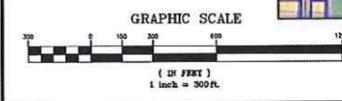
\*594.7

\*594.7

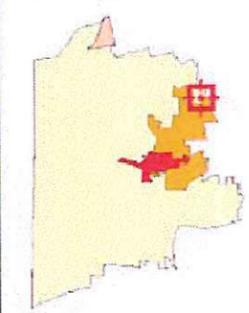
\*594.7

12-8-2015

DRAWING FILE: C:\DANS\60216\60216\PRELIMINARY\2015\2015-11-18\2015-11-18.dwg LAYOUT: Zoning PLOTTED BY: dmulvaney



Overview



CITY OF WILDWOOD  
DEC 31 2015  
DEPT OF PLANNING & PARKS

Legend

- City Limits
- Street Centerlines
- Parcels
- Zoning Districts**
- C1
- C2
- C8
- FPC8
- FPM3
- FPNU
- FPPS
- FPR1
- FPR1A
- FPR3
- M3
- MXD
- NU
- PS
- R1
- R1A
- R2
- R3
- R4
- R6
- R6A

PREPARED BY:

**STOCK & ASSOCIATES**  
Consulting Engineers, Inc.  
257 Chestnoll Business Parkway  
St. Louis, MO 63105 PH: (314) 351-3000 FAX: (314) 351-0000  
www.stockandassociates.com  
info@stockandassociates.com

SKETCH PLAN:

**VALLEY ROAD SUBDIVISION**

2443, 2485 VALLEY ROAD, 2121 QUATHEM DRIVE, WILDWOOD, MO 63005



REVISIONS:

NO.	DATE	DESCRIPTION

DRAWN BY: C.A.J. CHECKED BY: G.M.  
DATE: 12/31/2015 JOB NO: 214-4468  
SCALE: 1" = 300' BASE MAP # 200-210  
SHEET # 21 OF 21  
SHEET TITLE: CITY ZONING MAP EXHIBIT  
SHEET NO.: Z1



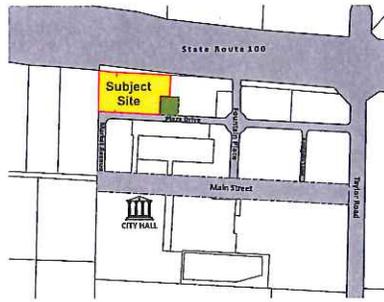
WILDWOOD

16860 Main Street  
Wildwood, MO 63040

**CITY OF WILDWOOD  
NOTICE OF  
PUBLIC HEARING**  
before the Planning and Zoning Commission  
**Monday, May 2, 2016, at 7:30 p.m.**

AS A RESIDENT OR PROPERTY OWNER NEAR THE SITE THAT IS IDENTIFIED ON THIS MAILER, THE CITY OF WILDWOOD WOULD LIKE TO ENSURE YOU ARE AWARE OF THIS REQUEST/PROPOSAL BECAUSE IT IS LOCATED WITHIN 1,500 FEET OF YOUR PROPERTY. YOUR COMMENTS ARE ENCOURAGED, ALONG WITH YOUR PARTICIPATION AT THE SCHEDULED HEARING OR MEETING. THIS ITEM IS SCHEDULED FOR DISCUSSION AND ITS OUTCOME MAY IMPACT YOUR HOME, NEIGHBORHOOD, OR AREA, SO PLEASE CAREFULLY READ THE DESCRIPTION AND PARTICIPATE AT YOUR DISCRETION. THE CITY OF WILDWOOD ENCOURAGES CITIZEN INPUT AT ALL OF ITS HEARINGS OR MEETINGS AND YOUR INVOLVEMENT WILL ASSIST IT IN REACHING THE BEST DECISION POSSIBLE FOR ALL PARTIES.

\* PLEASE SEE YELLOW BOX ON OPPOSITE SIDE OF THIS MAILER FOR A LIST OF WAYS TO EITHER COMMENT ON AND/OR TRACK THIS ITEM.



**Street Addresses of Subject Site:  
251 and 261 Plaza Drive**

THE CITY WELCOMES AND ENCOURAGES  
YOUR COMMENTS AND PARTICIPATION IN  
ITS PUBLIC PROCESSES.

The Planning and Zoning Commission of the City of Wildwood will conduct a public hearing on **Monday, May 2, 2016, at 7:30 p.m.**, in the **City Hall Council Chambers, 16860 Main Street, Wildwood, Missouri 63040** for the purposes of obtaining testimony regarding request(s) for either the modification of zoning district designations, application of special procedures, change in the underlying regulations of the Zoning Ordinance, action on Record Plats, update on zoning matters, or amendment of the Master Plan, which will then be considered for action. This hearing is open to all interested parties to comment upon this request, whether in favor or opposition, or provide additional input for consideration. If you do not have comments regarding this request, no action is required on your part. Written comments are requested to be submitted prior to this hearing and should be addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040 or via the City's website at [www.cityofwildwood.com/comment](http://www.cityofwildwood.com/comment). The following request will be considered at this time:

**P.Z. 5 and 5(a)-16, Stonecrest at Wildwood, NorthPoint Development, 5015 Northwest Canal Street, Suite 200, Riverside, Missouri, Missouri 64150** – A request for the modification of the Town Center Plan's Regulating Plan for two (2) lots that are a 1.6 acre area of the Phase II portion of the Wildwood Town Center Project, thereby altering their current designation from "Downtown District" to "Neighborhood General District" to accommodate a change in zoning from the C-8 Planned Commercial District to the Amended C-8 Planned Commercial District for this site, all being located on the south side of State Route 100, north of Plaza Drive, and west of Fountain Place (Locator Numbers 23V220242 and 23V220233/Street Addresses 251 and 261 Plaza Drive). **Proposed Use: A three (3), story senior housing facility, which would allow a maximum of eighty one (81) units. (Ward Eight)**

**\*RESIDENT OR PROPERTY OWNER - PLEASE COMMENT ON AND/OR TRACK THIS REQUEST BY:**

- 1) Submitting a comment online by visiting: <http://www.cityofwildwood.com/comment>.
- 2) Submitting a written comment prior to the hearing and addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040.
- 3) Viewing the Planning and Zoning Commission's agenda, which is available on the City's website at: [www.cityofwildwood.com](http://www.cityofwildwood.com), the Friday before the aforementioned meeting date.

If you should have any questions regarding this information, please feel free to contact the Department of Planning at (636) 458-0440. Thank you in advance for your interest in this matter.

P.Z. Number(s): \_\_\_\_\_  
(as assigned by department)

# PETITION

before the  
**CITY OF WILDWOOD'S  
PLANNING AND ZONING COMMISSION**  
FOR THE PURPOSE OF HEARING REQUESTS  
FOR ONE OR A COMBINATION OF THE FOLLOWING:  
*(PLEASE CHECK THOSE ITEMS WHICH ARE APPLICABLE)*



- Change in Zoning
- Conditional Use Permit
- Approval of a Planned District or other special procedure (C-8/M-3/PRD)

**APPLICANT/OWNER INFORMATION**

Applicant's Name: NorthPoint Development  
 Mailing Address: 5015 NW Canal Street, Suite 200  
Riverside, MO 64150  
 Telephone Number, with Area Code: (816) 888-7391  
 Fax Number, with Area Code: \_\_\_\_\_  
 E-Mail Address: mark@northpointkc.com  
 Interest in Property (Owner or Owner Under Contract):  
Owner under Contract

If owner under contract, please attach a copy of the contract.

Owner's Name (if different than applicant):  
Wildwood Crossing, Inc.  
 Address: 8027 Forsyth Blvd.  
Saint Louis, MO 63105  
 Telephone Number, with Area Code: 314-727-8881

SITE INFORMATION

Postal Address of the Petitioned Property(ies):

251 and 261 Plaza Dr.  
Wildwood, MO 63040

Locator Number(s) of the petitioned Property(ies):

23V220194 and

Total Acreage of the Site to the Nearest Tenth of an Acre:

Consolidated Lot 1: 1.6 Ac.

Current Zoning District Designation: C-8 Planned Commercial District

Proposed Zoning District Designation: Amended C-8 Planned Commercial

Proposed Planned District or Special Procedure:

USE INFORMATION

Current Use of Petitioned Site:

Vacant

Proposed Use of Site:

Residence

Proposed Title of Project: Stonecrest at Wildwood Town Center

Proposed Development Schedule (include approximate date of start and completion of the project):

Construction Schedule: 07/01/16 to 07/01/17

CONSULTANT INFORMATION

Engineer's/Architect's Name: Stock & Associates Consulting Engineers, Inc.

Address: 257 Chesterfield Business Parkway  
Chesterfield, MO 63005

Telephone Number, with area code: (636) 530-9100

Fax Number, with area code: (636) 530-9130

E-Mail Address: ryan.schriber@stockasoc.com

Soil Scientist/Forester's Name: SCI Engineering, Inc.

Address: 130 Point West Blvd.  
St. Charles, MO 63301

Telephone Number, with area code: (636) 949-8200

Fax Number, with area code: (636) 949-8269

E-Mail Address: serter@sciengineer.com

**ACKNOWLEDGEMENT INFORMATION**

The petitioner(s) state(s) they (he) (she) will comply with all the requirements of the city of wildwood with regard to the procedures relating to its administration of land use and development controls within its boundaries, including the payment of all applicable fees.

The petitioner(s) further represent(s) and agree(s) that they (he) (she) has (have) not made any arrangement to pay any commission, gratuity, or consideration, directly or indirectly, to any official, employee, or appointee of the City of Wildwood with respect to this application.

The petitioner(s) hereby certify(ies) that (indicate one):

- ( ) I (we) have a legal interest in the hereinabove described property.
- (X) I am (we are) the duly appointed agent of the petitioner(s) and that all information given and represented on this application is an accurate and true statement of fact. Any misrepresentation of information on this application or accompanying information shall constitute grounds for the City of Wildwood, Missouri to terminate review of this petition and return all materials, minus any fees, associated with its review up to and through that point.

SIGNATURE: *[Handwritten Signature]*

NAME (PRINTED): GEORGE H STOCK

ADDRESS: 257 Chesterfield Business Parkway  
Chesterfield, MO 63005

TELEPHONE NUMBER: (636) 530-9100

[PLEASE NOTE: THE ABOVE NAMED PERSON SHALL RECEIVE ALL OFFICIAL NOTICES REGARDING THIS REQUEST, INCLUDING THE PUBLIC HEARING NOTICE.]

SUBSCRIBED AND SWORN BEFORE ME THIS  
24 DAY OF March, 2016.

SEAL:

SIGNED: *[Handwritten Signature]*  
(NOTARY PUBLIC)

NOTARY PUBLIC Daniel SM  
STATE OF MISSOURI.

MY COMMISSION EXPIRES 3/17/17

**FOR OFFICE USE ONLY**

1<sup>ST</sup> SUBMITTAL DATE: \_\_\_\_\_  
 FEE: \_\_\_\_\_; RECEIVED BY: \_\_\_\_\_  
 PRELIMINARY DEVELOPMENT PLAN: YES NO  
 PACKET COMPLETE: YES NO

2<sup>ND</sup> SUBMITTAL DATE: \_\_\_\_\_  
 PACKET COMPLETE: YES NO

3<sup>RD</sup> SUBMITTAL DATE: \_\_\_\_\_  
 PACKET COMPLETE: YES NO

4<sup>TH</sup> SUBMITTAL DATE: \_\_\_\_\_  
 PACKET COMPLETE: YES NO



DANIEL JOSEPH STOCK  
My Commission Expires  
March 17, 2017  
St. Louis County  
Commission # 3486125

**STOCK & ASSOCIATES**  
**Consulting Engineers, Inc.**



April 13, 2016

**Via E-Mail: (joe@cityofwildwood.com)**

City of Wildwood  
16860 Main Street  
Wildwood, MO 63040

Attention: Mr. Joe Vujnich, Director-Department of Planning & Parks

Re: City Review Letter for 251 and 261 Plaza Drive – (Lots 1 and 2 of Wildwood Town Center-Plat Two) (Stonecrest at Wildwood) – Ordinance #1175 (Stock Project No. 216-5763)

Dear Joe:

Pursuant to your Departmental Letter dated April 5, 2016 and our subsequent meeting on Monday, April 11, 2016, we offer the following:

Comment 1 requests a letter:

On behalf of the Petitioner, we respectfully request that the City of Wildwood Planning and Zoning Commission consider a change to the “Regulating Plan” for Town Center from “Downtown District” to “Neighborhood General District” for 251 and 261 Plaza Drive / Lots 1 and 2 of the Wildwood Town Center Plat Two, recorded in Plat Book 356, Pages 485 and 486. The “Neighborhood General District” allows residential living, and was at one time the District covering the subject property.

Should you have any questions or comments, please feel free to contact me at (636) 530-9100.

Sincerely,

A handwritten signature in blue ink, appearing to read "George M. Stock".

George M. Stock, P.E., President

CC: Mr. Travis Newberry – City Planner – City of Wildwood ([travis@cityofwildwood.com](mailto:travis@cityofwildwood.com))  
Mr. Mark Pomerence – VP-Operations ([mpomerence@northpointkc.com](mailto:mpomerence@northpointkc.com))  
Mr. Bill Biermann – Stonecrest Senior Living, LLC ([bill@wmbiermannco.com](mailto:bill@wmbiermannco.com))  
Mr. Scott Haley – KP Development Scott Haley ([shaley@kpstl.com](mailto:shaley@kpstl.com))  
Mr. Donald Rosemann, President/CEO – Rosemann ([drosemann@rosemann.com](mailto:drosemann@rosemann.com))  
Mr. Ryan Schriber, P.E., Associate ([ryan.schriber@stockassoc.com](mailto:ryan.schriber@stockassoc.com))

**257 CHESTERFIELD BUSINESS PARKWAY • ST. LOUIS, MO 63005 • (636) 530-9100**  
**Fax (636) 530-9130 • E-MAIL ADDRESS: [general@stockassoc.com](mailto:general@stockassoc.com)**



## WILDWOOD

April 5, 2016

NorthPoint Development  
Attn: Mark Pomerence  
5015 Northwest Canal Street  
Suite 200  
Riverside, Missouri 64150

Re: Initial Review Application Packet for 251 and 261 Plaza Drive, in Wildwood Town Center

Dear Mr. Pomerence:

The Department of Planning has completed its initial review of the Preliminary Development Plan for the planned development of these two (2) lots in the Town Center Area of Wildwood. These two (2) lots are located on the north side of Plaza Drive, at Market Avenue. The plan was compared to the Zoning Ordinance requirements for a residential project seeking a Planned Residential Development Overlay District (PRD), the Town Center Plan, and the existing site-specific ordinance that governs these two (2) lots, along with the remainder of the development site. The results of this review indicated a number of items that need to be addressed and include the following:

1. Please be advised a letter must be submitted to the Planning and Zoning Commission requesting a Regulating Plan change to the Town Center Plan, since the properties' current designation is "Downtown District", which does not allow residential uses, to the "Neighborhood General District". The "Neighborhood General District" does authorize this type of building and associated units.
2. Please address the following items, highlighted on the attached sheet:
  - A. Please consider providing access control here during City events.
  - B. Please clarify what occurs in this space between the building and the parking island. In this clarification, consider how a pedestrian might interact with this space.
  - C. Please extend the pedestrian improvements to the edge of the building here.
  - D. Please describe and identify the use of the space behind the garden wall here.
3. Please be advised these two (2) lots are part of the Crossings Community Improvement District and have different taxing and assessment requirements than other properties located elsewhere in the City's Town Center Area. If you should have any questions in this regard, the Wildwood City Attorney, Rob Golterman, can assist. Mr. Golterman can be reached at 314-444-7600.
4. Please relocate the building, dumpster, and drive aisle, so they are not located in the forty foot (40') side yard setback.
5. Please clarify if any public use areas are planned for the site.
6. Please add corresponding outboundary survey measurements, referenced in the property description, to the plan.
7. Please provide dimensions for all parking spaces, including the accessible parking provided as a component of the circular drive.
8. Please provide dimensions for the radius of the circular drive and landscaped island.
9. Please indicate the extension of the fence and columns, along the norther boundary of the site, are to match the existing fence and columns to the east.
10. Please indicate the height and materials for all proposed retaining walls and garden walls, including the color of the block.

11. Please provide dimensions and typical cross-section, including radius and taper details, for the proposed curb cut and drive aisle accessing the dumpster area.
12. Please clarify if any services, other than the trash service, will be utilizing the drive aisle accessing the dumpster area.
13. Please provide a "Lighting Plan" for the new parking areas and circular drive, and note the plan will meet the City of Wildwood's Outdoor Lighting Requirements.
14. Please provide a "Landscape Plan", prepared by a certified landscape architect.
15. Please provide a gated screen for the dumpster, constructed of materials consistent with the primary structure.
16. Please correct the Parking Data Table to identify on-street on Plaza Drive, and not Main Street.
17. Please provide comments on this Preliminary Development Plan from the Missouri Department of Transportation (MODOT).
18. Please provide comments on this Preliminary Development Plan from the Metro West Fire Protection District.
19. Please provide comments on this Preliminary Development Plan from the Metropolitan St. Louis Sewer District (MSD), including verification of Permit #25457, referenced on Sheet C1, regarding offsite stormwater detention.

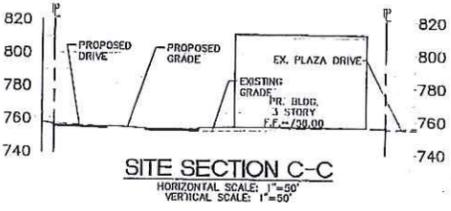
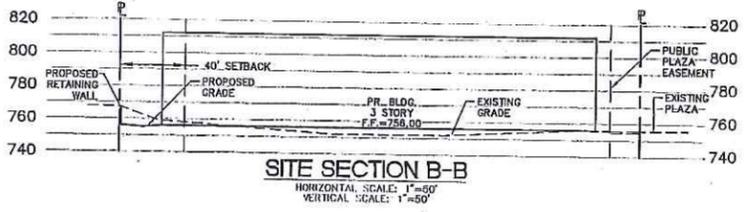
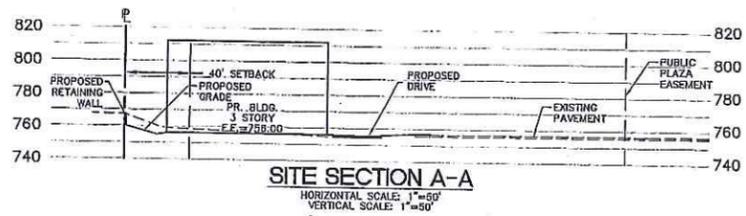
Once the comments relating to the Preliminary Development Plan have been addressed with the requested revisions, please resubmit three (3) copies of it, and email a PDF version, to the Department of Planning for further review. Please note additional comments may follow in this regard, once the City again reviews the revised plan sheets. If you should have any questions in this regard, please feel free to contact the Department of Planning at (636) 458-0440. Thank you for your interest in the City of Wildwood.

Sincerely,  
CITY OF WILDWOOD

Joe Vujnich, Director  
Department of Planning and Parks

Cc: The Honorable Timothy Woerther, Mayor  
The Honorable City Council of the City of Wildwood  
Ryan S. Thomas, P.E., City Administrator  
Rob Golterman, City Attorney  
Rick Brown, P.E. and P.T.O.E., Director of Public Works  
Kathy Arnett, Assistant Director of Planning and Parks  
Travis Newberry, Planner  
George Stock, Stock and Associates





ALL DIMENSIONS ARE TO CENTER UNLESS OTHERWISE NOTED. MAP NO. 216-1-5763. ILLUSTRATED BY SWINNEY AND ASSOCIATES.

257 Chestnutfield Business Parkway  
 St. Louis, MO 63005 PH: (636) 530-5100 FAX: (636) 530-5100  
 e-mail: george@stockandassociates.com  
 Web: www.stockandassociates.com

**STOCK & ASSOCIATES**  
 Consulting Engineers, Inc.

PREPARED BY:

PRELIMINARY DEVELOPMENT PLAN FOR:

**STONECREST AT WILDWOOD**  
 251 PLAZA DR.  
 WILDWOOD  
 MO

DATE: \_\_\_\_\_

MAR 4 2016  
 GEORGE M. STOCK E-25116  
 CIVIL ENGINEER  
 CERTIFICATE OF AUTHORITY  
 NUMBER: 000996

REVISIONS:


DATE	R.E.S.	DATE	G.M.S.
03.04.16		216-5763	
S.D. #		BASE MAP #	
S.L.C. REF #		MAP SUP. #	
MO. #	MO-00		

SHEET TITLE:  
**PRELIMINARY DEVELOPMENT PLAN**

SHEET No.:  
**C2**



City of Wildwood's Town Center Plan within the right-of-way of Taylor Road and be approved by the Department of Public Works.

k. Access to this development from Taylor Road shall be limited to one (1) commercial entrance designed in accordance with the City of Wildwood's Street Specifications of the Town Center and be as directed by the Department of Public Works. This entrance along Taylor Road shall maintain a minimum distance of two hundred (200) feet from State Route 100 (as measured from edge of proposed pavement of State Route 100 to the centerline of the access point) and be restricted to a right-of-way configuration.

l. Dedicate all the right-of-way, easements, and licenses within the subject site as necessary for the improvement of the proposed Taylor Road as directed by the Department of Public Works.

m. Provide the necessary infrastructure and conditions for the continuation of the traffic signals at the Taylor Road/Main Street intersection as directed by the Department of Public Works. The installation of this equipment and infrastructure will be a creditable charge against the developer's required Traffic Generation Assessment contribution to the East Area Fund of the City of Wildwood and based upon a fair share determination of the overall improvement cost at this intersection.

Miscellaneous Roadway Requirements

n. Sidewalks shall be required on all public and private streets and provide for a continuous and logical layout of this pedestrian network. Design and construction requirements for all sidewalks within the entire development shall be as established in the Street Specifications and Streetcure Elements of the Town Center Plan. Approval of their location, design, and material shall be by the Planning and Zoning Commission and the Architectural Review Board as part of the Site Development Plan review process.

o. Provide cross access easement and temporary slope construction license, or other appropriate legal instrument or agreement guaranteeing permanent access between this site and adjacent properties, as directed by the Departments of Planning and Public Works. Any contractor utilizing these easements or license must be required to replace all improvements, plantings, or other items damaged or disturbed to their original condition and restore the entire area to its pre-development condition. This replacement and restoration shall be accomplished in sixty (60) days or less from the completion of construction as determined by the City of Wildwood.

p. Parking lot aisles, where possible, should intersect the main and minor driveways at right angles and be logically located opposite minor driveways and other parking lot aisles. Minor driveways shall not intersect the main east-west drive aisle closer than two hundred (200) feet of the centerline of the proposed Taylor Road right-of-way.

q. Installation of identification signage and landscaping shall be reviewed by the Department of Public Works for sight distance considerations and approved prior to installation.

City of Wildwood's Town Center Plan within the right-of-way of Taylor Road and be approved by the Department of Public Works.

k. Access to this development from Taylor Road shall be limited to one (1) commercial entrance designed in accordance with the City of Wildwood's Street Specifications of the Town Center and be as directed by the Department of Public Works. This entrance along Taylor Road shall maintain a minimum distance of two hundred (200) feet from State Route 100 (as measured from edge of proposed pavement of State Route 100 to the centerline of the access point) and be restricted to a right-of-way configuration.

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q. Installation of identification signage and landscaping shall be reviewed by the Department of Public Works for sight distance considerations and approved prior to installation.

w. All stormwater facilities shall be appropriately landscaped and comply with the Chapter 410 of the City of Wildwood's Codified Ordinances and its accompanying Tree Manual. Wetlands plantings must be used at appropriate locations within the basins themselves as directed by the Department of Public Works, if applicable.

x. All new landscaping materials shall meet the following criteria: Deciduous Trees - two and one-half (2 1/2) inch minimum caliper; Evergreen Trees - six (6) inch minimum height; and Shrubs - twenty-four (24) inch minimum height.

y. Replanting of trees shall conform to the requirements of Chapter 410 of the City of Wildwood's Codified Ordinances and its accompanying Tree Manual to achieve a minimum amount of thirty (30) percent canopy area on this site. Tree selection and location shall be reviewed and noted "as-planted" by the Planning and Zoning Commission and the Architectural Review Board as part of the Site Development Plan review process. Street tree planting patterns must be based on and comply with the Town Center Streetscape Design.

z. A Registered Landscape Architect shall prepare and sign all Landscape Plans for this development.

Lighting Requirements

aa. Light standards shall not exceed sixteen (16) feet in height. No on-site illumination source shall be so situated that light is cast directly on adjoining properties or public roadways. Illumination levels shall comply with the provisions of the City of Wildwood's Zoning Ordinance - Chapter 415.050 "Outdoor Lighting Requirements." A Lighting Plan shall be submitted in conjunction with the Site Development Plan indicating compliance to these requirements. The Planning and Zoning Commission shall approve the location of all light standards and their design and appearance as part of the Site Development Plan review process.

Sign Regulations

bb. All signage shall be in accordance with the requirements of the City of Wildwood's Town Center Architectural Guidelines, subject to the following:

- 1. A total of three (3) freestanding monument style signs shall be allowed within the boundaries of the Assessed C-8 Planned Commercial District and C-8 Planned Commercial District (Phase I and Phase II combined). One (1) of these signs shall be located at the access point into this development from Taylor Road and cannot exceed fifty (50) square feet in overall size. This Taylor Road sign shall be integrated, and be a part of the gateway structure to be constructed along the proposed State Route 100 bridge and cannot exceed seventy-five (75) square feet in overall size, nor ten (10) feet in height, as measured from adjoining roadway grade. The location of all signage shall be as approved by the Planning and Zoning Commission on the Site Development Plan.

Verification Prior to Building Permit

Subsequent to approval of a Site Development Plan, and prior to issuance of any building permit, the following requirements shall be met:

- 1. Prior to issuance of foundation or building permits, all approvals from the Department of Public Works, the Missouri Department of Transportation, the Missouri Department of Natural Resources, the U.S. Army Corps of Engineers (if applicable), and the Metropolitan St. Louis Sewer District must be received by the Department of Planning.

Verification Prior to Occupancy Permit

Subsequent to approval of a Site Development Plan, and prior to issuance of any occupancy permit, the following requirements shall be met:

- 1. Final improvements and right-of-way dedication shall be completed, or the appropriate easement established, prior to the issuance of any occupancy permit. If development planning is interrupted, said work, right-of-way dedications, and/or easement conveyances shall be noted upon those areas of appropriate, regulations, administrative, and/or other applicable laws. The delay due to completion of final improvements.

General Development Conditions

- 1. A grading permit is required prior to any grading on the site. No change in watersheds shall be permitted. Stormwater discharge control to the form of detention control measures is required.

Table with 5 columns: Building ID, Required Spaces (per City Code), Location(s) of Parking Spaces, TGA Credits, and TGA Credit. Rows include buildings G, O, H, I, JK, L, M, N and a Total row.

As this development is located within a most fund area established by the City of Wildwood, any portion of the traffic generation assessment contribution, which remains, following completion of road improvements required by the development shall be retained in the appropriate trust fund.

The amount of this required contribution, if not submitted by January 1, 2016, shall be adjusted on that date out on the first day of January in each succeeding year thereafter in accordance with the construction cost index as determined by the City of Wildwood Department of Public Works.

Verification Prior to Approval of the Site Development Plan

Prior to the approval of the Site Development Plan, the petitioner shall:

- 1. Submit to the Planning and Zoning Commission an engineering plan approved by the Department of Public Works and the Metropolitan St. Louis Sewer District showing that adequate handling of the associated drainage of this site is provided. The developer is required to provide adequate stormwater systems in accordance with the City of Wildwood and Metropolitan St. Louis Sewer District Standards.

Geotechnical Report

Provide a geotechnical report covering development and grading required by improvements associated with this site, as directed by the Department of Public Works. Said report shall verify the suitability of existing and proposed soils and geologic conditions, which are susceptible to erosion, landslides, and/or other hazards. A statement of compliance with this report, utility relocation and adjustments, and construction plans shall be designed to conform to the requirements and conditions of the Geotechnical Report.

Recommendations

Within sixty (60) days of approval of the Site Development Plan by the Planning and Zoning Commission, the approved plan shall be recorded with the St. Louis County Recorder of Deeds.

2. The three (3) authorized monument signs shall additionally comply with the City of Wildwood Zoning Code, Section 1003.161 Sign Regulations for the C-2 Shopping District, where consistent and applicable to this type of signage.

3. Notwithstanding any other approval by the contrary, all wall signs shall additionally comply with the City of Wildwood Zoning Ordinance - Chapter 415.020 Sign Regulations for the C-2 Shopping District, and all signage shall be externally illuminated according to the Town Center Plan's Architectural Guidelines, or may be backlit, if otherwise in compliance with the City of Wildwood Zoning Ordinance - Chapter 415.020 Sign Regulations for the C-2 Shopping District. Signs may only be located on the north, south, and east elevations of this building (Building 2), as identified by this ordinance.

4. No advertising, temporary, or portable signs shall be authorized in this Assessed C-8 District and C-8 District development (Phase I and II) unless a sign is authorized in the site plan as may comply with the C-2 Shopping District Regulations of the City of Wildwood Zoning Ordinance and the Town Center Plan's Architectural Guidelines.

Miscellaneous Conditions

cc. All bush areas shall be enclosed with a six (6) foot high eight-ply wood (with gate) and be appropriately landscaped around its perimeter, if applicable. The location and design of these enclosures shall be shown on the Site Development Plan and approved by the Planning and Zoning Commission and the Architectural Review Board. The design of this enclosure shall reflect the appearance, character, and style, in terms of its color, material, and composition, of the approved architecture of the individual building it serves and adjoins in terms of location.

dd. Handicap parking and access requirements shall comply with Section 312.4 of the City of Wildwood Building Code.

ee. All rooftop mechanical equipment shall be screened from view on all sides of the building's facade in an architecturally consistent manner in terms of color and style of the individual building where they are to be constructed. Screening shall be reviewed and considered by the Architectural Review Board at the time of the recording of the plan.

ff. The design, color, material, and location of all garden and screen walls or fences shall be consistent with the requirements of the Town Center Plan's Architectural Guidelines and shall be shown on the Site Development Plan for review and action by the Planning and Zoning Commission and the Architectural Review Board.

gg. All deliveries and trash pick-up vehicles must occur the site from State Route 100, not Manchester Road. No deliveries or trash pick-up shall exceed the hours of 11:00 p.m. and 6:00 a.m., seven (7) days per week.

hh. Improvements associated with public infrastructure, such as roadways, sidewalks, and second points, shall comply with general design principles that will provide for safe and efficient movement of traffic in and around these areas and improve overall circulation in the area. These improvements shall be reviewed and approved by the Department of Public Works.

Final Construction

1. If cost and time constraints occur during a season not favorable for immediate establishment of a permanent stormwater control, a final grading annual, such as Rye or Sudan Grass, shall be installed to prevent erosion.

2. Failure to comply with any or all the conditions of this ordinance shall be adequate cause for the revocation of a permit by the Planning and Zoning Commission.

3. The Zoning Enforcement Officer of the City of Wildwood, Missouri, shall enforce the conditions of this ordinance in accordance with the Site Development Plan approved by the City of Wildwood Planning and Zoning Commission.

4. Any other applicable zoning, subdivision, or other regulations or requirements of the City, whether in effect at the adoption of this ordinance or as may be hereinafter adopted, shall further apply to the development of this property as authorized by this Assessed C-8 Planned Commercial and C-8 Planned Commercial District Ordinance, except as may be provided by this ordinance, which shall be deemed a waiver of any subdivision, zoning, or other development regulations on the City of Wildwood shall be void by implication or reference.

5. Substantial construction shall begin within ninety (90) days of the approval of the Site Development Plan for the parcel of ground governed by this Assessed C-8 Planned Commercial and C-8 Planned Commercial District Ordinance. Construction shall be deemed to have commenced with the final grading and installation of roadway necessary for the lot connected with the final grading and installation of installation of the sanitary and storm sewer.

6. As portions of the Main Street roadway improvements may require the acquisition of additional right-of-way and easement from private property, the normal sequence of design, right-of-way acquisition, and construction shall commence immediately upon approval of the requested rezoning. If the developer is unable to acquire the necessary right-of-way and easements through negotiation with the particular property owners involved, the City of Wildwood may, at its sole discretion, authorize the acquisition of the same through eminent domain proceeding. The cost of acquisition, negotiation, administration, and associated costs shall be borne by the City of Wildwood shall be paid by the developer.

7. This zoning approval is conditioned on compliance with the Zoning Code, Subdivision and Development Regulations, and all applicable laws of the City. Such additional regulations shall be supplemental to the requirements herein and no modification of any applicable regulations shall result from the Assessed C-8 Planned Commercial and C-8 Planned Commercial District Ordinance, except where this ordinance has expressly modified such regulations by reference to the applicable provision authorizing such modification.

8. The passage and approval of this ordinance shall constitute the necessary development approval authorizing the Director of Public Works to issue a grading permit in accordance with the procedure and requirements of Chapter 425 of the City's Municipal Code, but not before Condition 1 (C) has been met by the developer.

5. The developer shall grant the right to the City of Wildwood to utilize areas, buildings, and structure for the installation of wireless systems and related equipment through the granting of appropriate easements for service to this site.

Traffic Generation Assessment Fee Contribution

The developer shall contribute to the East Area Corridor Traffic Generation Assessment Road Trust Fund established by Chapter 140 of the City's Codified Ordinances. This contribution shall not exceed an amount established by multiplying the proposed parking spaces by the following rate schedule.

Table with 2 columns: Type of Development and Required Contribution. Rows include Apartment/Condominiums, General Office, Quality Restaurant, General Retail, Shopping Centers, High-Turnover, Sit-Down Restaurants, Bank, Medical Offices, Hotel, and Loading Space.

(Parking spaces as required by Chapter 415.210 of the City of Wildwood Zoning Ordinance.)

If types of development proposed differ from those listed, rates shall be provided by the Department of Planning.

A minimum of two hundred twenty-six (226) parking spaces within Phase I of this overall project shall be assessed the required Traffic Generation Assessment Fee under the schedule described above for the East Area Corridor Traffic Generation Assessment Road Trust Fund. A minimum of six hundred six (606) parking spaces within Phase II of this overall project shall be assessed the required Traffic Generation Assessment Fee under the schedule described above for the East Area Corridor Road Traffic Generation Assessment Road Trust Fund. Allocations of these spaces shall be based upon the required parking spaces within these phases. Changes in use may require reallocation or different parking requirements. Any final parking allocation shall be further reflected on the final site plan and subdivision plans, including any cross-access locations or other recording of parking rights and responsibilities that may be required due to placement of required off-site parking as to a subdivided lot within this development.

Note: Changes to the current ordinance language are shown in bold and underlined type. Deleted text is shown by a double-line through five.

Section 1003.161. This ordinance shall be in full force and effect on and after its passage and approval.

This bill was passed and approved this 11th day of February, 2009 by the Council of the City of Wildwood, Missouri after having been read by title, and in full, (on 12) three times prior to its passage.

Presidents Officer: Timothy W. Smith, Mayor

City Clerk: Timothy W. Smith, Mayor

Vertical sidebar containing project title 'STONECREST AT WILDWOOD', address '251 PLAZA DR. WILDWOOD, MO', and contact information for 'STOCK & ASSOCIATES Consulting Engineers, Inc.' including phone and website details.

Professional Engineer seal for George M. Stock, No. 25116, State of Missouri, dated March 4, 2016.

REVISIONS table with columns for revision number, description, and date.

PROPERTY DESCRIPTION: A tract of land being Adjusted Lot 1 and Adjusted Lot 2 of 'Wildwood Town Center Plat Two', a subdivision filed for record in Plat Book 358, Pages 485 and 486 of the St. Louis County, Missouri records, and being part of the Southeast Quarter of Section 11 in Township 44 North, Range 3 East of the Fifth Principal Meridian, St. Louis County, Missouri and being more particularly described as follows:

BEGINNING at the Southwest corner of Adjusted Lot 1 of 'Wildwood Town Center Plat Two', a subdivision filed for record in Plat Book 358, Page 485 and 486 of the St. Louis County Records; thence along the Western line of said Adjusted Lot 1 North 00 degrees 50 minutes 00 seconds East, 211.49 feet to the Northwest corner thereof; thence along the Northern line of Adjusted Lot 1 and Adjusted Lot 2 the following: South 83 degrees 02 minutes 27 seconds East, 52.39 feet to a point; thence South 87 degrees 18 minutes 21 seconds East, 319.04 feet to the Northeast corner of Adjusted Lot 2; thence along the Eastern line of Adjusted Lot 2 South 02 degrees 41 minutes 19 seconds West, 111.43 feet to a point; thence North 87 degrees 18 minutes 21 seconds West, 48.00 feet to a point; thence South 02 degrees 41 minutes 19 seconds West, 36.05 feet to a point on the Northern right-of-way line of Plaza Drive; thence along said Northern right-of-way line North 87 degrees 18 minutes 21 seconds West, 318.41 feet to the Point of Beginning and containing 71,001 square feet or 1.646 acres more or less as per calculations by Stock & Associates Consulting Engineers, Inc. during February, 2010.

OWNER'S SCRIPT: This plan was approved by the City of Wildwood's Planning and Zoning Commission in accordance with the provisions of Section 1003.161 of the Zoning Code. This plan shall be developed under the conditions herein prescribed by Ordinance 2009-001 which was approved by the City Council of the City of Wildwood, Missouri on 02/11/09.

OWNER'S SCRIPT: In connection with a change in zoning for the following described property from (Prior zoning) to (Present Zoning).

OWNER'S SCRIPT: I, Lynne Greene-Baldner, City Clerk of the City of Wildwood, St. Louis County, Missouri do hereby certify the Partially Amended Site Development Plan submitted for this commercial development is required under Ordinance 2009-001, which was approved by the City Council on 02/11/09. Said ordinance of the same appears on record in my office as testimony whereof, I hereunto now set my hand and affix the official seal of the City of Wildwood, Missouri, St. Louis County on this 02/11/09 day of February, 2009.

OWNER'S SCRIPT: In connection with a change in zoning for the following described property from (Prior zoning) to (Present Zoning).

OWNER'S SCRIPT: My commission expires: \_\_\_\_\_



# WILDWOOD

May 2, 2016

The Honorable City Council  
The City of Wildwood, Missouri  
16860 Main Street  
Wildwood, Missouri 63040

## Council Members:

The Planning and Zoning Commission has completed its review of the requested Conditional Use Permit (CUP) application that was submitted to it for a large water feature (1.7 acre lake), and prepared the following recommendation report in that regard. This recommendation report, which includes an associated action, reflects the Planning and Zoning Commission's vote to grant the permit, which is now being forwarded to the City Council for its consideration. This recommendation and action were completed in accordance with the requirements of Chapter 89 of Missouri Revised Statutes, the City's Charter, and those regulations of the City relating to public notice and publications (Chapter 415.560 of the City of Wildwood Zoning Ordinance). This recommendation and action are as follows:

**Petition No.:** P.Z. 25-15  
**Petitioner:** Laurie Taylor, 17715 Manchester Road, Wildwood, Missouri, 63038, c/o Volz, Inc., Mark Kilgore, 10849 Indian Head Industrial Boulevard, St. Louis, Missouri 63132  
**Request:** A request for a Conditional Use Permit (CUP) in the NU Non-Urban Residence District for a thirty-two point one (32.1) acre tract of land. **Proposed Use: A large water feature – a lake – (as defined by §415.030 of the City of Wildwood's Zoning Regulations), which exceeds one (1) acre in overall size – one point seven four (1.74) acres.**  
**Location:** West side of Mueller Road, south of State Route 100, and north of Manchester Road (Locator Number 23X340061/Street Address: 17715 Manchester Road).  
**Public Hearing Date:** April 4, 2016  
**Date and Vote On Information Report:** April 18, 2016 - Approval to Grant the Permit by a vote of 10 to 0 (Voting Aye - Renner, Lee, Archeski, Kohn, Gragnani, Bauer, Liddy, Manton, Woerther, and Bopp)  
**Date and Vote On Letter of Recommendation:** May 2, 2016 - TBD  
**Report:** Attachment A  
**Conditions:** Attachment B  
**Plan Sheets:** Attachment C  
**Background Information:** Attachment D  
**Ward:** One

Copies of the City of Wildwood Master Plan, Parks and Recreation Plan, Action Plan for Parks and Recreation 2007, Model Telecommunications Ordinance, Zoning Ordinance, and Charter are all on file with the City Clerk's Office.

Respectfully submitted,  
**CITY OF WILDWOOD PLANNING AND ZONING COMMISSION**

R. Jon Bopp, Chair

ATTEST:

Joe Vujnich, Director  
Department of Planning

Cc:           The Honorable Timothy Woerther, Mayor  
              Ryan S. Thomas, P.E. City Administrator  
              Rob Golterman, City Attorney  
              Rick Brown, P.E. and P.T.O.E., Director of Public Works  
              Travis Newberry, Planner  
              Laurie Taylor, Property Owner  
              Tom Kelp, Contractor  
              Dave Volz, Volz Engineering

# ATTACHMENT A - REPORT

**BACKGROUND AND ZONING HISTORY >>>** The site of this request is a 32.05 acre site that is located on the north side of Manchester Road, east of its intersection with Glencoe Road. This lot has frontage on State Route 100 and Mueller Road as well. Given the size of this lot, the frontages have significant lengths, which are as follows:

1. State Route 100 (public) - 1,350 feet
2. Manchester Road (public) - 882 feet
3. Mueller Road (private) - 1,080 feet

These right-of-ways define the three (3) sides of the subject site. The site forms a rectangle and is a single lot of record.

Descriptions of these roadways are as follows:

1. State Route 100 (public) - State Route 100 is an arterial roadway maintained by the Missouri Department of Transportation (MoDOT). The width of this roadway is four (4) lanes, with additional turn bays at the intersection with Mueller Road. The design of this roadway provides for limited access to it, with traffic volumes being high, and speeds substantial. The alignment of the roadway is east/west, bisecting the City in two (2) unequal halves, and it serves a diverse land use pattern of residential, commercial, recreational, and institutional activities along its entire length through the City of Wildwood. This roadway has an interstate design along petitioners' frontage. This roadway provides for inter-county traffic movements.
2. Manchester Road (public) - Manchester Road is a City-maintained roadway, which includes two (2) driving lanes and limited improvements along this site's frontage. These improvements include stabilized shoulders, earthen ditches, and signage, with striping. The roadway lacks sidewalks and other turn lanes for service to the current use of this property (residence). Manchester Road is the City's main east-west arterial roadway, which extends from its eastern boundary to Route 100 several miles to the west. The roadway serves a mix of land uses, including commercial, residential, institutional, and recreational activities. Traffic volumes along the roadway range from a high of approximately 7,000 vehicles per day on the east end of Manchester Road to less than 2,000 vehicles per day on the westernmost end.

Beyond Manchester Road's integral role as a major transportation corridor in Wildwood, it is also a major historic asset to the community. Manchester Road was part of the original Historic Route 66 between the years 1926 to 1932. Route 66 provided a continuous link between Chicago, Illinois and Los Angeles, California. Manchester Road remains an important part of this community and is one of the historic assets the City's Historic Preservation Commission is attempting to protect as part of its overall mission. Additionally, other local, State, and national organizations are making concerted efforts to maintain the roadway within its historical context. Markers are located along Manchester

Road throughout the City reflecting this designation. One (1) is located to the west of the subject site.

3. Mueller Road (private) - this private roadway is forty (40) feet in width, with a narrow gravel roadway located within it. The roadway provides a connection between State Route 100 on the north and Manchester Road on the south. The roadway provides access to no more than four (4) properties, but currently two (2) of them, including the petitioner's site, utilize Manchester Road for ingress/egress into them. The roadway has a north/south orientation and traffic volumes are very low. The surrounding land use pattern along its 1,080 feet of length is low-density residential.

The physical characteristics of the site are varied. The site is rolling, with the slope of it toward the northwest corner of property. Overall relief is approximately sixty (60) feet. Approximately one-half of the site is wooded and, for the most part, these woodlands are located in the north half of the property, while the remainder is grass, some of which has been planted in the last calendar year. The current owner of the property has been active in addressing the condition of it, since it has been vacant for many years. These actions have led to a number of issues that caused a Stop Work Order to be issued. The Stop Work Order was due to extensive clearing in the area of the requested lake.

The property, as noted, has been vacant for a number of years and received very limited maintenance and its appearance was poor. The current owner recently removed the original residence. Additionally, the current owner also removed a small outbuilding as well. At this time, the property does not have any existing buildings and structures located upon it.

The property is currently zoned NU Non-Urban Residence District and has been since the incorporation of the City in 1995. This zoning district designation allows a limited range of uses, of which single family dwellings on lots of three (3) acres or greater in size are most prevalent. The surrounding land use pattern in the vicinity of the subject site is rural, but consistent with the allowable uses of the NU Non-Urban Residence District. This land use pattern can be described as follows:

**To the North:** Abutting in this direction is State Route 100, an arterial roadway. Beyond the roadway is a seven (7) lot residential subdivision named the Oaks at Wildwood. These seven (7) lots are zoned NU Non-Urban Residence District and six (6) of them have single family dwellings located upon them at this time. To the northeast of the subject site, and across State Route 100, is the West County Community Church. This place of worship is zoned NU Non-Urban Residence District, with a Planned Residential Development Overlay District (PRD). This property has the sanctuary building, a youth center, athletic fields, a lake, a centralized wastewater treatment system, and parking.

**To the South:** Adjoining in this direction is Manchester Road. Across this City roadway is Rockwoods Reservation, a Missouri Department of Conservation property. This site is zoned PS Park and Scenic District.

**To the West:** Adjacent in this direction is a small parcel of ground, with a dwelling located upon it. This lot is zoned NU Non-Urban Residence District and forms a notch out of the

subject site in its southwest corner. Abutting the subject site's western boundary is a group of lots, all zoned NU Non-Urban Residence District, that have single family dwellings located on four (4) of the five (5) properties.

**To the East:** Located in this direction are several large parcels of ground that are used for single family dwellings. These lots are zoned NU Non-Urban Residence District and were part of a four (4) lot subdivision approved by the City of Wildwood. One (1) of these four (4) lots is vacant and it occupies the intersection of State Route 100 and Mueller Road

**CURRENT REQUEST >>>** The petitioner, Laurie Taylor, is requesting to construct a 1.75 acre lake on a portion of the 32.05 acre subject site. The lake will have the following characteristics:

1. The lake will have a dam height of thirty point five (30.5) feet.
2. The lake's depth will be fourteen (14) feet.
3. The back slope of the dam in association with the constructed lake will be 3.5:1.
4. The overflow of water from the lake will be piped to the downstream drainage feature and includes a number of structures and pipes for this purpose.
5. The design of the dam includes a thirty (30) foot access path on its top.
6. The height of the dam does not require this construction to meet Missouri Department of Natural Resource dam requirements.
7. The location of the dam in the relative watershed provides approximately five (5) acres of runoff to it.
8. The property has a natural spring located upon it, which drains to the north, and will be directed into the lake for use to fill and maintain its normal pool elevation of 797 feet above mean sea level.
9. The design of the lake and dam provide a minimum of four (4) feet of freeboard to protect overtopping in high volume storm events.
10. The lake's location on this property provides an ample supply of clay materials for use in its construction.
11. The dam will be planted in ground cover to protect its slopes from erosion.

The area of the proposed lake has already been partially disturbed without a permit, so some of the planned tree removal has taken place in the subject area of the water feature.

**ANALYSIS >>>** The Planning and Zoning Commission has reviewed the request, along with receiving support from the City's Department of Public Works. In reviewing this request, the Planning and Zoning Commission would note that it is the first large water feature to be subject to the new regulations governing an installation in the City of Wildwood. These regulations were created to protect the natural environment of Wildwood and properties that would be located downstream from large water impoundments in a karsted area of this State. Specifically, placement of large water features in the main channel of named watersheds and using groundwater sources to fill and maintain them appeared to be contrary to the goals, objectives, and policies of the City's Master Plan. Accordingly, large water features were then to be designated as a conditional type of use in the NU Non-Urban Residence District, thereby providing a greater level of control over their placement, design, use, and maintenance.

In the case of this request, the Commission would note the following items in this regard:

1. The height of the dam is below the thirty-five (35) foot standard set by the State of Missouri for its permitting requirements, but, through the City's permit process, all pertinent requirements of Department of Natural Resources can be included for integration into the dam and lake's design, engineering, and maintenance.
2. The highest point on the dam, at a mean sea level, is at a greater elevation than the roadway surface of State Route 100 (see attached detail). However, given intervening terrain between the two (2) aforementioned features, the dam's water on release would be trapped between it and existing grade abutting the roadway.
3. The design of the lake and dam provides for water storage capacity beyond that of the current natural system, which will provide some relief to the State's current system of stormwater management along the edge of its right-of-way and the subject site.
4. The materials to be used for the dam's construction appear to provide satisfactory characteristics for this purpose, based upon the attached Geotechnical Report.
5. The use of the existing spring on the site will supplement the five (5) acre drainage area to be used for filling and maintaining the proposed lake.
6. The planning/engineering of this water feature includes a spillway from the top of the dam, which parallels along its western side. At the top of the dam, an outfall structure, with associated piping, are to be installed to divert water as well, in the event of a major storm event or catastrophe.

These items indicate to the Commission that a dam constructed on this property for a lake can be accomplished with a minimum level of risk to surrounding properties.

However, the Commission does believe this large water feature must be subject to the highest standards that exist in current law and meet them in all aspects of its design, operation, and on-going maintenance. If these standards are applied to a lake of this size, the Commission has the opinion the impact from it and any emergency associated with it can be minimized and have a limited impact on properties. Accordingly, the Planning and Zoning Commission believes that granting the requested Conditional Use Permit (CUP) for this large water feature meets the requirements of the Zoning Ordinance, but is including the certain conditions along with this action to achieve a safe and functional outcome for its existence in the City.

Specifically, this support is premised on the following reasons:

1. The dam is relatively small in size and depth.
2. The placement of the lake in the center of the property allows for any emergency issue or problem to occur first upon it, and not downstream properties.
3. The design of the lake and the characteristics of the site can accommodate a major catastrophic failure and not threaten immediate downstream properties.
4. The installation of lakes reflects a longstanding history in Wildwood of building such water features and many of them exist from past actions by other property owners. Therefore, this request is not unusual in that regard.

5. The petitioner has provided engineered plans, a Geotechnical Report, and other items in support of this request, which is indicative of the level of planning and engineering being used in the consideration of this large water feature.

Incumbent to the Commission's support is the property owner agreeing to the conditions of the recommended permit and meeting a regular, thorough maintenance and inspection program for the dam and lake to ensure its long-term stability and integrity. With this condition included in the proposed permit, the Commission does believe the large water feature can be constructed on this site with minimal impacts and threats to the area.

**SUMMARY AND RECOMMENDATION >>>** The Commission has provided in its Letter of Recommendation upon this request the reasons for its support for the granting of this Conditional Use Permit (CUP). These reasons focus on the large water feature being engineered to the highest available standards, compliance to recommendations from all participating review agencies and other authorities during its construction, and on-going, long-term maintenance of it to ensure its integrity and safety. Accordingly, the Planning and Zoning Commission hereby grants the requested permit for this large water feature, based upon its adherence to the conditions contained in Attachment B of this Information Report.

## **ATTACHMENT B - CONDITIONS**

### **1. PERMITTED USES**

This Conditional Use Permit (CUP) shall authorize a large water feature, as defined by Chapter 415.030 Definitions of the City of Wildwood's Zoning Ordinance.

### **2. LOT, SIZE, AND USE REQUIREMENTS**

- a. The authorized large water feature shall not exceed 1.75 acres in overall size.
- b. The height of the dam shall not exceed thirty-one (31) feet, as measured from final finish grade at the base of it, outside the water impoundment area.
- c. The depth of the lake, at normal pool elevation, shall not exceed fourteen (14) feet.
- d. The extent of land disturbance in association with the construction of this large water feature shall be as authorized by the Planning and Zoning Commission on the Site Development Plan.
- e. The large water feature authorized by this permit, although created by the construction of a dam that is less than thirty-five (35) feet in height, shall meet all Missouri Department of Natural Resources (MDNR) requirements for design, engineering, and on-going maintenance, including inspection frequencies and criteria. These requirements will be reviewed and acted upon by the Planning and Zoning Commission, as part of the Site Development Plan process, and as directed by the Department of Public Works.

### **3. PLAN SUBMITTAL REQUIREMENTS**

Within twelve (12) months of the Conditional Use Permit (CUP) being granted by the Planning and Zoning Commission, and prior to any further site disturbance, the operator shall submit to the Planning and Zoning Commission for their review and approval a Site Development Plan. Where due cause is shown by the operator, this time interval may be extended once by the Planning and Zoning Commission in accord with requirements of Chapter 415.510 of the City of Wildwood Zoning Ordinance. Said Site Development Plan shall include, but not be limited to, the following information:

- a. Outboundary plat and legal description of the property.
- b. Location and extent of all existing improvements, including all buildings and accessory structures, along with the planned large water feature and all improvements in association with it.
- c. A general plan indicating setback lines along the perimeter of the subject tract of land and surrounding property lines and related improvements within two hundred (200) feet of this site's boundaries, i.e. curb cut and access locations, stormwater facilities, and utility installations and easements.
- d. Location of all roadways adjacent to the property, including required roadway right-of-way dedication and pavement widening, with existing and proposed improvements and trails, and general location, size, right-of-way, and pavement width of all interior drives.
- e. Existing and proposed contours at vertical intervals of not more than two (2) feet.
- f. General location of sanitary sewer and stormwater facilities.
- g. A Landscape Plan including, but not limited to, the location, size, and general type of plant materials to be used in accord with the City of Wildwood's Chapter 410 and accompanying Tree Manual.
- h. An inventory of the percent of tree canopy or individual trees to be retained on the site indicated on a Tree Preservation Plan completed in accordance with the City of Wildwood Chapter 410 Tree Preservation and Restoration Code and accompanying Tree Manual.
- i. Location of all existing and proposed easements.
- j. All other information not mentioned above, but required on a preliminary plat in accord with Chapter 420.060 of the City of Wildwood Subdivision and Development Regulations.
- k. A Stormwater Pollution Prevention Plan (SWPPP) for the site, which shall include the developer's signature and acknowledgment of its requirements.
- l. A maintenance plan for this large water feature that is based on annual inspections and reports to be submitted to the City of Wildwood's Department of Planning. This plan shall indicate all steps and procedures that will be used to maintain the large water feature and ensure its stability and safety.

### **4. SITE DEVELOPMENT PLAN DESIGN CRITERIA**

The above Site Development Plan shall adhere to the following specific design criteria:

## **Large Water Feature Setbacks**

- a. No large water feature and related improvements shall be located within the following setbacks:
  - i. One hundred eighty (180) feet from the State Route 100 right-of-way.
  - ii. Four hundred (400) feet from any side yard property line of the site.
  - iii. Six hundred (600) feet from the right -of-way of Manchester Road.

## **Landscape Requirements**

- b. Landscaping shall adhere to all requirements of Chapter 410 of the City's Tree Preservation and Restoration Code and its accompanying Sustainable Plantings Guide and Tree Manual, including the submittal of a Tree Preservation Plan, in conjunction with the Site Development Plan. All roadway frontages shall be appropriately landscaped, as required by Chapter 410 Tree Preservation and Restoration Code, and be approved by the Planning and Zoning Commission on the Site Development Plan.
- c. The areas of existing vegetation within the Conditional Use Permit (CUP) boundaries identified as to be retained shall be marked on the site prior to the commencement of any disturbance in accord with the City of Wildwood's Chapter 410. These areas shall be indicated on the Site Development Plan submitted to the City of Wildwood for Planning and Zoning Commission review and approval. Existing mature tree canopy shall be preserved in accordance with the requirements of City of Wildwood's Chapter 410 Tree Preservation and Restoration Code. Initial clearing and grubbing of the site shall be limited to the installation of any new building and structure.
- d. All disturbed areas of the site shall be restored in compliance to the City's Sustainable Plantings Guide and Tree Manual by a combination of ground cover, landscaping, berms, natural stones, and other means to address stormwater runoff and erosion, as well as improve overall site aesthetics. The restoration of disturbed areas shall be indicated on the required Landscape Plan and acted upon by the Planning and Zoning Commission.
- e. A registered Landscape Architect shall prepare, submit, and sign all plan(s).

## **Miscellaneous Conditions**

- f. The hours of construction and grading activity in association with this large water feature shall be limited to 7:00 a.m. to 6:00 p.m. Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturday. No development (grading and construction) activity shall be authorized on Sundays.
- g. All retaining walls exceeding three (3) feet in height per section or crossing individual property lines shall be constructed of an appropriate inter-locking concrete block system or boulders. The Planning and Zoning Commission, as part of the Site Development Plan review process, shall review and act upon said materials and design.

- h. The generalized location of all utility easements for proposed service to this development shall be as approved by the Planning and Zoning Commission on the Site Development Plan.
- i. All utilities serving this site shall be installed underground in accord with the requirements of the City of Wildwood's Subdivision and Development Regulations. Any existing easements located on the subject site, which are not being utilized, shall be vacated under the standard procedures of the City of Wildwood Subdivision and Development Regulations.
- j. The property owner, or any assignee or successor, shall provide annual maintenance of this authorized large water feature on the subject property, with such being in accordance with State regulations for the same. A plan for this maintenance and upkeep shall be provided to the Planning and Zoning Commission, as part of the required Site Development Plan. Preventative maintenance shall be authorized on an as-need basis, along with any repairs, but does require an engineered plan be submitted to the City of Wildwood's Department of Public Works for review and action. This plan will then be submitted to the Planning and Zoning Commission for receipt and filing.

## **5. VERIFICATIONS PRIOR TO APPROVAL OF THE SITE DEVELOPMENT PLAN**

Prior to approval of the Site Development Plan, the developer shall provide the following:

### **Stormwater Improvements**

- a. Submit to the Planning and Zoning Commission an engineering plan approved by the City of Wildwood Department of Public Works showing that adequate handling of the stormwater drainage of the site is provided.
  - i. The developer is required to provide adequate stormwater systems in accordance with the City of Wildwood standards.
  - ii. All stormwater shall be discharged at an adequate natural discharge point.
  - iii. The developer of this site shall be solely responsible to provide the necessary mechanisms, as part of the Site Development Plan/Improvement Plan process, to implement "best management practices" for stormwater management/water quality and the construction of related facilities. Minimally, these practices/facilities should include rain gardens, vegetated swales, and other options to substantially reduce the amount of stormwater discharging from the subject site.
  - iv. The developer shall provide adequate detention and/or hydrologic calculations for review and approval of all stormwater that will encroach on City of Wildwood rights-of-way.

### **Stormwater Pollution Prevention Plan**

- b. Prior to any land disturbance on this subject site, submit a Stormwater Pollution Prevention Plan, as part of the Site Development Plan review process, indicating compliance to Federal, State, and local requirements regarding the management of stormwater runoff to prevent siltation and erosion, both on-site and upon downstream properties.

## **6. RECORDING**

Within sixty (60) days of granting of the Conditional Use Permit (CUP) by the Planning and Zoning Commission, the approved permit language and legal description of the property shall be recorded with the St. Louis County Recorder of Deeds.

## **7. VERIFICATION PRIOR TO PERMITS**

### **Notification to Department of Planning**

- a. Subsequent to approval of the Site Development Plan, and prior to issuance of any grading or permit, all approvals from the Missouri Department of Transportation (MoDOT), the Department of Public Works, the U.S. Army Corp of Engineers, the Missouri Department of Natural Resources (MDNR), and the Metro West Fire Protection District must be received by the Department of Planning.

### **Nuisance Bond**

- b. Provide to the City of Wildwood a bond, letter of credit, or cash deposit in the amount of three thousand dollars (\$3,000.00) for use to undertake any inspections or maintenance of the large water feature and dam, if the property and improvements are not maintained in accordance with said conditions of this permit. The City shall hold this deposit and it will be pre-authorized by the owner/operator, in writing, to exercise its use, if violations are noted and not abated in a timely manner.

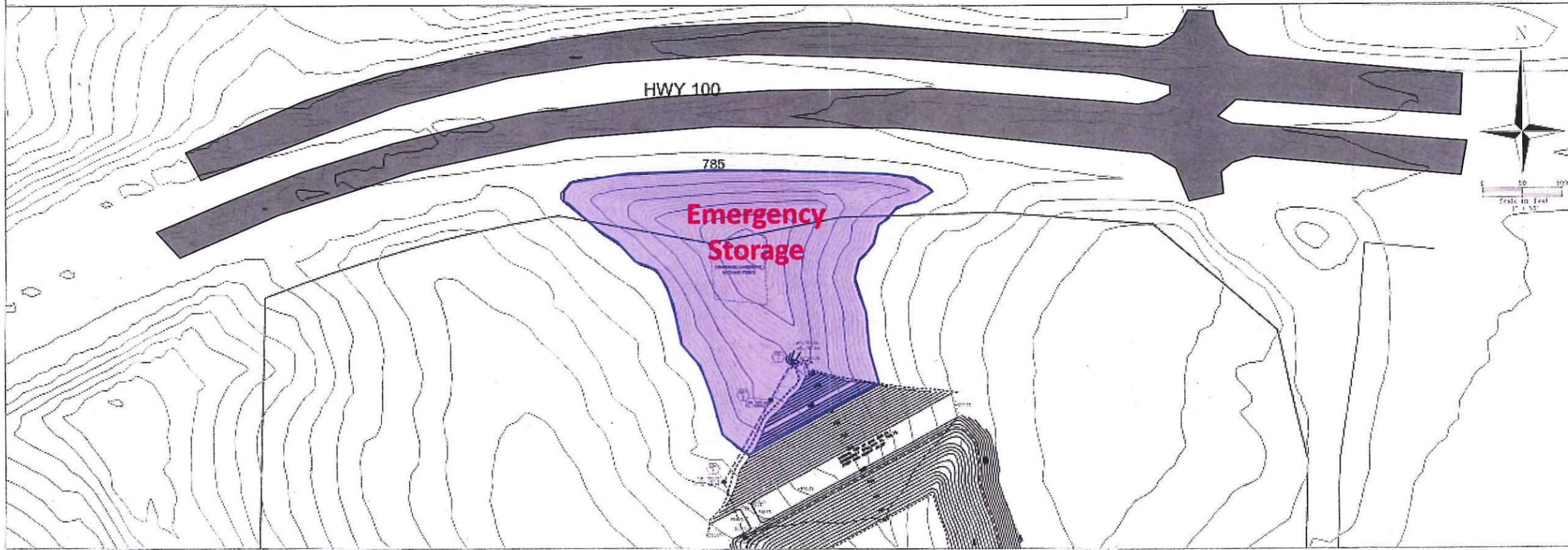
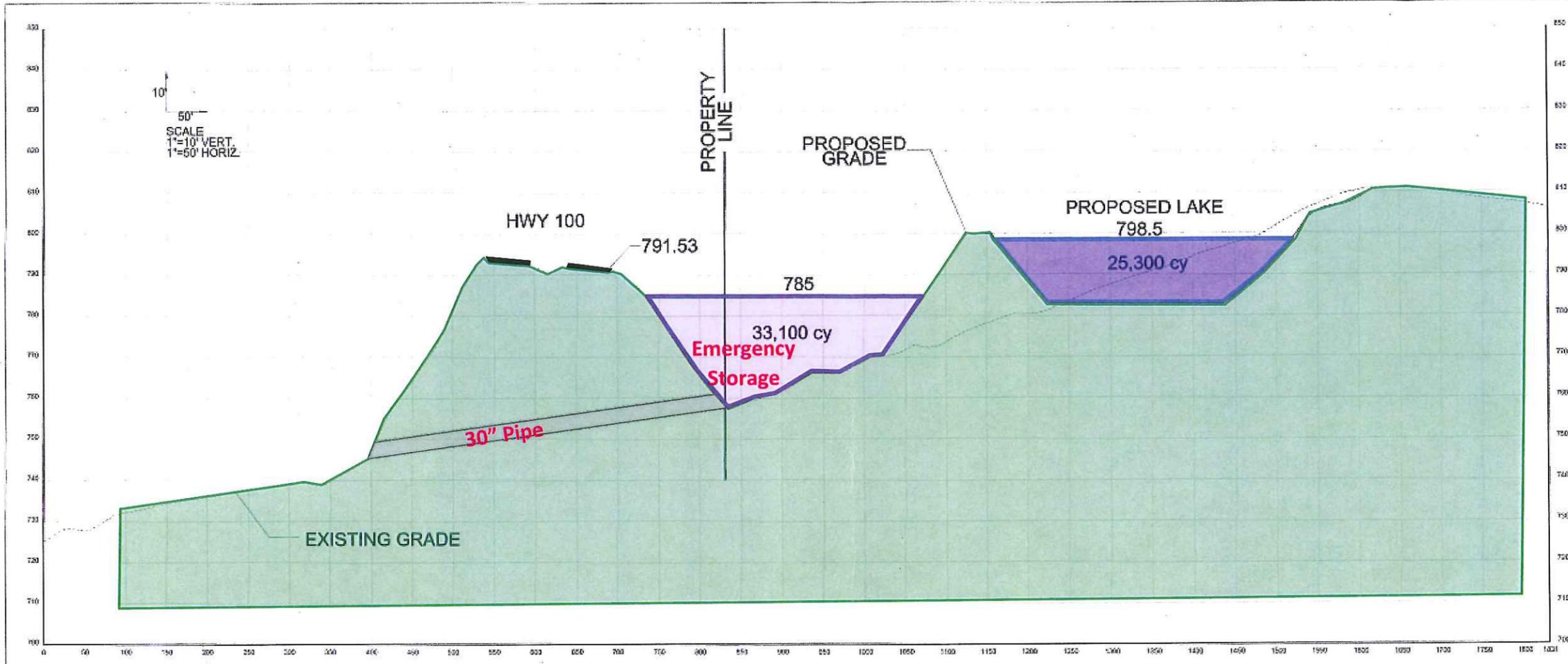
## **8. GENERAL DEVELOPMENT CONDITIONS**

- a. Provide adequate temporary off-street parking for construction employees. Parking on non-surfaced areas shall be prohibited in order to eliminate the condition whereby mud from construction and employee vehicles is tracked onto the pavement causing hazardous roadway and driving conditions.
- b. A grading permit is required prior to any grading on the site. Interim stormwater drainage controls in the form of siltation control measures are required and must comply with the Stormwater Pollution Prevention Plan for this development (SWPPP). The developer shall be solely responsible for obtaining any temporary slope and construction licenses needed to address the installation of public and private improvements on this site that require the use of adjoining parcels of ground that are not under their ownership or control.
- c. The petitioner shall be responsible for obtaining all necessary permits from the Department of Natural Resources Clean Water Commission as they relate to the development of this tract of land.
- d. The developer is advised that utility companies will require compensation for relocation of their utility facilities within public right-of-way. The developer should also be aware of extensive delays in

utility company relocation and adjustments. Such delays will not constitute a cause to allow occupancy prior to completion of infrastructure improvements.

- e. If cut and fill operations occur during a season not favorable for immediate establishment of a permanent ground cover, a fast germinating annual, such as Rye or Sudan Grasses, shall be utilized to prevent erosion. This restoration must occur within thirty (30) days of the conclusion of preliminary grading as determined by the Director of Public Works.
- f. Failure to comply with any or all of the conditions of this ordinance shall be adequate cause for revocation of permits by issuing City of Wildwood Departments or Commissions.
- g. The Zoning Enforcement Officer of the City of Wildwood, Missouri, shall enforce the conditions of this ordinance in accord with the Site Development Plan approved by the Planning and Zoning Commission and the Department of Planning. The owner/operator must acknowledge in writing that access to this site for inspection purposes by personnel of the City of Wildwood shall be authorized and, if refused, such action is grounds for revocation of said permit by the City.
- h. Any other applicable zoning, subdivision, or other regulations or requirements of the City shall further apply to the development of this property, as authorized by this Conditional Use Permit (CUP), except as may be provided by law. Nothing herein shall be deemed a waiver of any subdivision, zoning, or other development regulation of the City whether by implication or reference.
- i. This zoning approval is conditioned on compliance with the Zoning Ordinance, Subdivision and Development Regulations, and all applicable laws of the City. Such additional regulations are supplemental to the requirements herein and no modification of any applicable regulations shall result from this Conditional Use Permit (CUP), except where this ordinance has expressly modified such regulations by reference to the applicable provision authorizing such modification.
- j. This Conditional Use Permit (CUP) shall be authorized for a period of seven (7) years, with renewals based upon compliance to the requirements of the same. Renewal requests shall be the responsibility of the owner/operator to submit to the City and must be provided a minimum two (2) months in advance of each renewal for consideration and action by the Planning and Zoning Commission following this initial period of time. Renewals shall be on a seven (7) year basis as well.

**ATTACHMENT C**  
**Preliminary Development Plan**



Ms. Linda Taylor  
 12715 Manchester Rd  
 Wildwood, MO 63038  
 314-585-1321



Timothy S. Meyer  
 Professional Engineer  
 E-54565

**VOLZ**  
 Incorporated  
 51 East Maple Street  
 St. Louis, Missouri 63102  
 314-436-0200  
 314-893-1250 Fax  
 www.volz.com

**17715 MANCHESTER ROAD**  
 WILDWOOD, MO 63038

DAM EXHIBIT  
 APRIL 14, 2016  
 SHEET 1

**ATTACHMENT D**  
**Background Information**

P.Z. Number(s): 25-15  
(as assigned by department)

# PETITION

before the  
**CITY OF WILDWOOD'S  
PLANNING AND ZONING COMMISSION**  
FOR THE PURPOSE OF HEARING REQUESTS  
FOR ONE OR A COMBINATION OF THE FOLLOWING:  
(PLEASE CHECK THOSE ITEMS WHICH ARE APPLICABLE)

CITY OF WILDWOOD  
NOV 30 2015  
DEPT OF PLANNING & PARKS

- Change in Zoning
- Conditional Use Permit
- Approval of a Planned District or other special procedure (C-8/M-3/PRD)

### APPLICANT/OWNER INFORMATION

Applicant's Name: Volz, Inc. - Mark Kilgore, P.E. c/o Owner

Mailing Address: 10849 Indian Head Industrial Blvd.  
St. Louis, MO 63132

Telephone Number, with Area Code: 314-426-6212

Fax Number, with Area Code: 314-890-1250

E-Mail Address: mkilgore@volzinc.com

Interest in Property (Owner or Owner Under Contract):  
Owner's Engineer / Consultant / Representative

If owner under contract, please attach a copy of the contract.

Owner's Name (if different than applicant):  
Ms. Laurie Taylor

Address: P.O. Box 4064  
Chesterfield, MO 63006-4064

Telephone Number, with Area Code: 314-805-1321

email: ltaylor@compuspace-usa.com

SITE INFORMATION

Postal Address of the Petitioned Property(ies):

17715 Manchester Road  
Wildwood, MO 63038

Locator Number(s) of the petitioned Property(ies):

23X340061

Total Acreage of the Site to the Nearest Tenth of an Acre:

32.1 AC

Current Zoning District Designation: NU Non Urban

Proposed Zoning District Designation: NU Non Urban with a C.U.P.

Proposed Planned District or Special Procedure: \_\_\_\_\_

USE INFORMATION

Current Use of Petitioned Site:

Single Family Residential

Proposed Use of Site:

Single Family Residential  
with 1.74 Acre pond

Proposed Title of Project:

17715 Manchester Road

Proposed Development Schedule (include approximate date of start and completion of the project):

2016 start and end

CONSULTANT INFORMATION

Engineer's/Architect's Name:

Volz, Inc

Address:

10849 Indian Head Industrial Blvd

Telephone Number, with area code:

314-426-6212

Fax Number, with area code:

314-890-1250

E-Mail Address:

mkilgore@volzinc.com

Soil Scientist/Forester's Name: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone Number, with area code: \_\_\_\_\_

Fax Number, with area code: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

ACKNOWLEDGEMENT INFORMATION

The petitioner(s) state(s) they (he) (she) will comply with all the requirements of the city of wildwood with regard to the procedures relating to its administration of land use and development controls within its boundaries, including the payment of all applicable fees.

The petitioner(s) further represent(s) and agree(s) that they (he) (she) has (have) not made any arrangement to pay any commission, gratuity, or consideration, directly or indirectly, to any official, employee, or appointee of the City of Wildwood with respect to this application.

The petitioner(s) hereby certify(ies) that (indicate one):

- I (we) have a legal interest in the hereinabove described property.
- I am (we are) the duly appointed agent of the petitioner(s) and that all information given and represented on this application is an accurate and true statement of fact. Any misrepresentation of information on this application or accompanying information shall constitute grounds for the City of Wildwood, Missouri to terminate review of this petition and return all materials, minus any fees, associated with its review up to and through that point.

SIGNATURE: Mark Kilgore  
 NAME (PRINTED): Mark Kilgore  
 ADDRESS: Volz Inc.  
10849 Indian Head Industrial Blvd.  
St. Louis, MO 63132  
 TELEPHONE NUMBER: 314-426-6212

[PLEASE NOTE: THE ABOVE NAMED PERSON SHALL RECEIVE ALL OFFICIAL NOTICES REGARDING THIS REQUEST, INCLUDING THE PUBLIC HEARING NOTICE.]

SEAL:



SUBSCRIBED AND SWORN BEFORE ME THIS 23<sup>rd</sup> DAY OF NOV, 2015

SIGNED: [Signature]  
(NOTARY PUBLIC)

NOTARY PUBLIC Robert Volz  
STATE OF MISSOURI.

MY COMMISSION EXPIRES 8-8-16

FOR OFFICE USE ONLY

1<sup>ST</sup> SUBMITTAL DATE: 11-30-15  
 FEE: \$250; RECEIVED BY: KA  
 PRELIMINARY DEVELOPMENT PLAN:  YES NO  
 PACKET COMPLETE:  YES NO

2<sup>ND</sup> SUBMITTAL DATE: \_\_\_\_\_  
 PACKET COMPLETE: YES NO

3<sup>RD</sup> SUBMITTAL DATE: \_\_\_\_\_  
 PACKET COMPLETE: YES NO

4<sup>TH</sup> SUBMITTAL DATE: \_\_\_\_\_  
 PACKET COMPLETE: YES NO

## Travis Newberry

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**From:** mkilgore <mkilgore@volzinc.com>  
**Sent:** Thursday, March 31, 2016 4:33 PM  
**To:** Travis Newberry  
**Subject:** Approval for 17715 Manchester from Fire Department

----- Forwarded Message -----

**From:** "Dave Phipps" <[daveph@metrowest-fire.org](mailto:daveph@metrowest-fire.org)>  
**To:** "mkilgore" <[mkilgore@volzinc.com](mailto:mkilgore@volzinc.com)>  
**Cc:** "terri@cityofwildwood.com" <[terri@cityofwildwood.com](mailto:terri@cityofwildwood.com)>  
**Sent:** 3/31/2016 1:18:16 PM  
**Subject:** RE: 17715 Manchester: submittal for approval from Fire Department

Mark,

The Bureau of Fire Prevention has review the delopment plan for 17715 Manchester Rd. there are no additional fire district requirements.

David E. Phipps  
Fire Marshal  
Metro West Fire Protection District  
(636) 821-5806

**From:** mkilgore [mailto:[mkilgore@volzinc.com](mailto:mkilgore@volzinc.com)]  
**Sent:** Wednesday, March 30, 2016 4:48 PM  
**To:** Dave Phipps <[daveph@metrowest-fire.org](mailto:daveph@metrowest-fire.org)>  
**Subject:** 17715 Manchester: submittal for approval from Fire Department

Mr. Phipps,

It seems a no-brainer to me, but the City of Wildwood wants your Department's approval on this plan. It is an existing residence to be removed and replaced. No new entrances. Thank you.

Sincerely,

Mark Kilgore, P.E.  
Volz Inc.  
10849 Indian Head Industrial Blvd.  
St. Louis, MO 63132  
[mkilgore@volzinc.com](mailto:mkilgore@volzinc.com)  
Phone: (314) 890-1223 direct  
Cell: (314) 345-0531  
Fax: (314) 890-1250



REPLY TO  
ATTENTION OF:

DEPARTMENT OF THE ARMY  
ST. LOUIS DISTRICT CORPS OF ENGINEERS  
1222 SPRUCE STREET  
ST. LOUIS, MISSOURI 63103-2833



February 1, 2016

Regulatory Branch  
File Number: MVS-2015-889

Ms. Laurie Taylor  
PO Box 4064  
Chesterfield, Missouri 63006

Dear Ms. Taylor:

We have reviewed your project plans, dated December 7, 2016, submitted on your behalf by Volz Inc., for the project known as *17715 Manchester Road*. The project exists within a 32.05-acre tract that is proposed to have clearing and grading activities for construction of a private residence and water feature. According to the project plans, a 1.75-acre pond will be built onsite, which includes construction of a 30 foot high dam. The pond is expected to be a maximum of 14 feet deep.

The proposed project is located north of Manchester Road and south of Hwy 100, in the City of Wildwood. More specifically, the project is located in Section 3, Township 44 North, Range 3 East, St. Louis County, Missouri. The approximate geographic coordinates of the site are 38.5849297296676° north, -90.6760398682621° east.

The property was visited by the Corps on January 27, 2016. During the site visit, the Corps determined that clearing and grading activities have already been conducted within the footprint of the proposed lake. Immediately to the south of the lake footprint, on the top of the slope is a small pond/seep feature (less than .02-acre). Although the small area is saturated in the general direction of the proposed lake, there is no confined channel flow or tributary features associated with the pond/seep feature. The area may be a remnant farm pond or livestock wallowing hole that was excavated down to the relatively shallow water table. The drainage within the lake impact site is completely graded and no longer has natural features. Several rock grade control structures have been placed in the drainage at this location to stabilize the highly erodible onsite soils. The natural drainage downstream of the impact site is an approximate 4-foot wide channel with cobble and rock substrate and appears to be a jurisdictional water of the United States.

Due to the amount of disturbance that has occurred and the position of the drainage in the watershed, a survey of the natural site conditions was deemed impractical. The impacts that have already occurred to the upper portion of the drainage within the lake footprint are not being regulated by this office at this time.

Based upon a review of the U.S. Geological Survey 7.5-minute topographical map, historic Google Maps imagery, soil survey, National Wetland Inventory maps and the submittal on December 7, 2016, we have determined that the drainage feature did not contain bed, bank, and an ordinary high water mark (OHWM) in this location and the channel is not considered a waters of the United States. As a result of this determination, a **Department of the Army, Section 404 permit is not required** for this project. This determination is applicable only to the permit program administered by the Corps of Engineers. It does not eliminate the need to obtain other Federal, state or local approvals before beginning work.

You are reminded that although your proposal does not need a Section 404 permit, based on your submitted plans, any revisions to your proposal, or impacts to the downstream drainage, may be subject to Section 404. **Any expansion of the footprint of the existing clearing and grading or any future impacts proposed to previously undisturbed areas would require permit review prior to the commencement of work.** Any impacts to waters of the United States are to be avoided and would require subsequent authorization from this office.

If you have any questions please contact me at (314) 331-8579. Please refer to file number **MVS-2015-889**. I am forwarding a copy of this letter, without enclosures, to Mr. Mark Kilgore, Volz. The St. Louis District Regulatory Branch is committed to providing quality and timely service to our customers. In an effort to improve customer service, please take a moment to go to our Customer Service Survey found on our web site at [http://corpsmapu.usace.army.mil/cm\\_apex/?p=regulatory\\_survey](http://corpsmapu.usace.army.mil/cm_apex/?p=regulatory_survey).

Sincerely,

Jennifer L. Skiles

Jennifer L. Skiles  
Missouri Project Manager  
Regulatory Branch

**Subject:** RE: Q to MODOT: MODOT approval being sought.. or is it not needed? Re: Laurie Taylor property 17715 Manchester Road  
**From:** "JOHN \\\\"JAY JAY\\\\" BRADEN" <[John.Braden@modot.mo.gov](mailto:John.Braden@modot.mo.gov)>  
**Sent:** 1/27/2016 9:33:23 AM  
**To:** "mkilgore" <[mkilgore@volzinc.com](mailto:mkilgore@volzinc.com)>

Mark,

Sorry for not getting back to you sooner. As long as there is no need to do any work in MoDOT right of way MoDOT has no concerns with this request. No construction access to the sight will be allowed from MO 100, and if there is a need to do any work within MoDOT right of way a permit will be required. If you have any questions feel free to contact me.

## Jay-Jay Braden

**Missouri Department of Transportation**  
Sr. Traffic Specialist - SW St. Louis County  
601 Salt Mill Road, Chesterfield, MO 63017  
**Fax:** 573.522.6491 **Mobile:** 314.380.0074  
[www.modot.mo.gov/stlouis/news\\_and\\_information/Permits.htm](http://www.modot.mo.gov/stlouis/news_and_information/Permits.htm)

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**From:** mkilgore [<mailto:mkilgore@volzinc.com>]  
**Sent:** Wednesday, January 27, 2016 9:17 AM  
**To:** JOHN "JAY JAY" BRADEN  
**Cc:** 'Laurie Taylor'  
**Subject:** Q to MODOT: MODOT approval being sought.. or is it not needed? Re: Laurie Taylor property 17715 Manchester Road

Jay-Jay,

Are we approved or do we need approval? We are not touching any MODOT ROW or pavement. You said you were going to have somebody at MODOT look at our drainage calcs. That is the last I heard from you which was a month ago.

Thank you.

Sincerely,

Mark Kilgore, P.E.  
Volz Inc.  
10849 Indian Head Industrial Blvd.  
St. Louis, MO 63132  
[mkilgore@volzinc.com](mailto:mkilgore@volzinc.com)  
Phone: (314) 890-1223 direct  
Cell: (314) 345-0531  
Fax: (314) 890-1250

----- Original Message -----

From: "JOHN \\\\"JAY JAY\\\\" BRADEN" <[John.Braden@modot.mo.gov](mailto:John.Braden@modot.mo.gov)>  
To: "mkilgore" <[mkilgore@volzinc.com](mailto:mkilgore@volzinc.com)>  
Sent: 12/30/2015 11:08:27 AM  
Subject: RE: 12-30-15 - C1toC8-17715ManchesterRd-20670-12-28-2015

No Manchester is not ours, just 100.

## Jay-Jay Braden

Missouri Department of Transportation  
Sr. Traffic Specialist - SW St. Louis County  
601 Salt Mill Road, Chesterfield, MO 63017  
Fax: 573.522.6491 Mobile: 314.380.0074  
[www.modot.mo.gov/stlouis/news\\_and\\_information/Permits.htm](http://www.modot.mo.gov/stlouis/news_and_information/Permits.htm)

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**From:** mkilgore [mailto:[mkilgore@volzinc.com](mailto:mkilgore@volzinc.com)]  
**Sent:** Wednesday, December 30, 2015 11:08 AM  
**To:** JOHN "JAY JAY" BRADEN  
**Subject:** Re: 12-30-15 - C1toC8-17715ManchesterRd-20670-12-28-2015

Jay-Jay,

Thank you. Is Manchester Road belonging to MODOT? We plan to have a construction entrance there.

Sincerely,

Mark Kilgore, P.E.  
Volz Inc.  
10849 Indian Head Industrial Blvd.  
St. Louis, MO 63132  
[mkilgore@volzinc.com](mailto:mkilgore@volzinc.com)  
Phone: (314) 890-1223 direct  
Cell: (314) 345-0531  
Fax: (314) 890-1250

----- Original Message -----

From: "JOHN \\\\"JAY JAY\\\\" BRADEN" <[John.Braden@modot.mo.gov](mailto:John.Braden@modot.mo.gov)>  
To: "mkilgore" <[mkilgore@volzinc.com](mailto:mkilgore@volzinc.com)>  
Sent: 12/30/2015 10:02:16 AM  
Subject: 12-30-15 - C1toC8-17715ManchesterRd-20670-12-28-2015

Mark,

This is my area, I am going to have our design department look at the drainage calcs, pending their review everything else looks OK. You will need to get a permit from MODOT if there is

any need to work within MoDOT right of way (I have attached a request for permit form just in case). If You have any further question feel free to contact me via email.

## Jay-Jay Braden

### Missouri Department of Transportation

Sr. Traffic Specialist - SW St. Louis County  
601 Salt Mill Road, Chesterfield, MO 63017

**Fax:** 573.522.6491 **Mobile:** 314.380.0074

[www.modot.mo.gov/stlouis/news\\_and\\_information/Permits.htm](http://www.modot.mo.gov/stlouis/news_and_information/Permits.htm)

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**From:** mkilgore [mailto:[mkilgore@volzinc.com](mailto:mkilgore@volzinc.com)]

**Sent:** Monday, December 28, 2015 4:46 PM

**To:** JOHN "JAY JAY" BRADEN

**Subject:** C1toC8-17715ManchesterRd-20670-12-28-2015

Jay-Jay,

Attached are electronic plans for a project in Wildwood, MO. Is that your jurisdiction?

The City of Wildwood insists that you take a look at these plans. I'm not sure why: we are going to be lessening runoff due to retention.

At any rate, please let me know if you would like hard copies and how many, to get approval or a statement that no review is necessary.

Thank you.

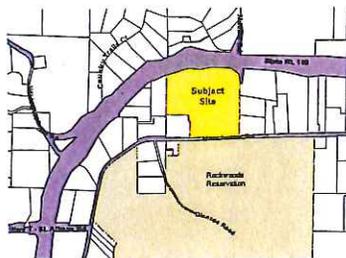
Sincerely,

Mark Kilgore, P.E.  
Volz Inc.  
10849 Indian Head Industrial Blvd.  
St. Louis, MO 63132  
[mkilgore@volzinc.com](mailto:mkilgore@volzinc.com)  
Phone: (314) 890-1223 direct  
Cell: (314) 345-0531  
Fax: (314) 890-1250

**CITY OF WILDWOOD  
NOTICE OF  
PUBLIC HEARING**  
before the Planning and Zoning Commission  
**Monday, April 4, 2016 at 7:30 p.m.**

AS A RESIDENT OR PROPERTY OWNER NEAR THE SITE THAT IS IDENTIFIED ON THIS MAILER, THE CITY OF WILDWOOD WOULD LIKE TO ENSURE YOU ARE AWARE OF THIS REQUEST/PROPOSAL BECAUSE IT IS LOCATED WITHIN 3,000 FEET OF YOUR PROPERTY. YOUR COMMENTS ARE ENCOURAGED, ALONG WITH YOUR PARTICIPATION AT THE SCHEDULED HEARING OR MEETING. THIS ITEM IS SCHEDULED FOR DISCUSSION AND ITS OUTCOME MAY IMPACT YOUR HOME, NEIGHBORHOOD, OR AREA, SO PLEASE CAREFULLY READ THE DESCRIPTION AND PARTICIPATE AT YOUR DISCRETION. THE CITY OF WILDWOOD ENCOURAGES CITIZEN INPUT AT ALL OF ITS HEARINGS OR MEETINGS AND YOUR INVOLVEMENT WILL ASSIST IT IN REACHING THE BEST DECISION POSSIBLE FOR ALL PARTIES.

\* PLEASE SEE YELLOW BOX ON OPPOSITE SIDE OF THIS MAILER FOR A LIST OF WAYS TO EITHER COMMENT ON AND/OR TRACK THIS ITEM.



Street Addresses of Subject Sites:  
17715 Manchester Road, Wildwood, Missouri  
63038

THE CITY WELCOMES AND ENCOURAGES  
YOUR COMMENTS AND PARTICIPATION IN  
ITS PUBLIC PROCESSES.

The Planning and Zoning Commission of the City of Wildwood will conduct a public hearing on **Monday, April 4, 2016, at 7:30 p.m.**, in the **City Hall Council Chambers, 16860 Main Street, Wildwood, Missouri 63040** for the purposes of obtaining testimony regarding request(s) for either the modification of zoning district designations, application of special procedures, change in the underlying regulations of the Zoning Ordinance, action on Record Plats, update on zoning matters, or amendment of the Master Plan, which will then be considered for action. This hearing is open to all interested parties to comment upon this request, whether in favor or opposition, or provide additional input for consideration. If you do not have comments regarding this request, no action is required on your part. Written comments are requested to be submitted prior to this hearing and should be addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040 or via the City's website at [www.cityofwildwood.com/comment](http://www.cityofwildwood.com/comment). The following request will be considered at this time:

**P.Z. 25-15 Laurie Taylor, 17715 Manchester Road, Wildwood, Missouri, 63038, c/o Volz, Inc., Mark Kilgore, 10849 Indian Head Industrial Boulevard, St. Louis, Missouri 63132** – A request for a Conditional Use Permit (CUP) in the NU Non-Urban Residence District for a thirty-two point one (32.1) acre tract of land that is located on the west side of Mueller Road, south of State Route 100, and north of Manchester Road (Locator Number 23X340061/Street Address: 17715 Manchester Road). **Proposed Use: A large water feature – lake – (as defined by §415.030 of the City of Wildwood's Zoning Regulations), which exceeds one (1) acre in overall size – one point seven four (1.74) acres. (Ward One)**

**\*RESIDENT OR PROPERTY OWNER - PLEASE COMMENT ON AND/OR TRACK THIS REQUEST BY:**

- 1) Submitting a comment online by visiting: <http://www.cityofwildwood.com/comment>.
- 2) Submitting a written comment prior to the hearing and addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040.
- 3) Viewing the Planning and Zoning Commission's agenda, which is available on the City's website at: [www.cityofwildwood.com](http://www.cityofwildwood.com), the Friday before the aforementioned meeting date.

If you should have any questions regarding this information, please feel free to contact the Department of Planning at (636) 458-0440. Thank you in advance for your interest in this matter.

**CITY OF WILDWOOD, MISSOURI**  
**RECORD OF PROCEEDINGS**

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**MEETING OF THE PLANNING AND ZONING COMMISSION**  
CITY HALL, 16860 MAIN STREET, WILDWOOD, MISSOURI  
April 4, 2016

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The Planning and Zoning Commission meeting was called to order by Chair Bopp, at 7:30 p.m., on Monday, April 4, 2016, at Wildwood City Hall, 16860 Main Street, Wildwood, Missouri.

**I. Welcome to Attendees and Roll Call of Commission Members**

Chair Bopp requested a roll call be taken. The roll call was taken, with the following results:

PRESENT – (8)

Chair Bopp  
Commissioner Lee  
Commissioner Archeski  
Commissioner Bauer  
Commissioner Gragnani  
Commissioner Liddy  
Council Member Manton  
Mayor Woerther

ABSENT – (1)

Commissioner Renner

Other City Officials Present: Director of Planning Vujnich, Planner Newberry, and City Attorney Golterman.

**II. Review Tonight's Agenda / Questions or Comments**

There were no questions or comments on the agenda.

**III. Approval of Minutes from the March 21, 2016 Meeting**

A motion was made by Commissioner Lee, seconded by Mayor Woerther, to approve the minutes from the March 21, 2016 meeting. A voice vote was taken regarding the motion for approval of the minutes. Hearing no objections, Chair Bopp declared the motion approved.

**IV. Department of Planning Opening Remarks**

No opening remarks were provided.

**V. Public Hearings – One (1) Item for Consideration**

- a) **P.Z. 25-15 Laurie Taylor, 17715 Manchester Road, Wildwood, Missouri, 63038, c/o Volz, Inc., Mark Kilgore, 10849 Indian Head Industrial Boulevard, St. Louis, Missouri 63132** – A request for a Conditional Use Permit (CUP) in the NU Non-Urban Residence District for a thirty-two point one (32.1) acre tract of land that is located on the west side of Mueller Road, south of State Route 100, and north of Manchester Road (Locator Number 23X340061/Street Address: 17715 Manchester

Road). **Proposed Use: A large water feature – lake – (as defined by §415.030 of the City of Wildwood’s Zoning Regulations), which exceeds one (1) acre in overall size – one point seven four (1.74) acres. (Ward One)**

Chair Bopp read the public hearing guidelines into the record and requested the item be read by the Department.

Planner Newberry read the request into the record.

Director Vujnich provided a brief summary of the request and shared a slideshow of photographs taken on the site, as well as historical aerial photographs showing the extent of tree removal and grading that has already occurred on the site.

Chair Bopp invited members of the public to comment on the item.

**David Volz, 10849 Indian Head Industrial Boulevard, St. Louis, Missouri, Volz Inc.**, described the components of the request, including the size and location of the lake; the height of the dam; and the history and current status of the existing natural spring.

**Harold Burrough, 211 North Broadway, St. Louis, Missouri, Bryan Cave LLP**, cited the Conditional Use Permit (CUP) Application Packet review letter from the Departments of Planning and Public Works, which was dated March 30, 2016, and stated he did not think the request for a twenty foot (20') wide trail easement was relevant in the context of the current request.

**Butch Oberkramer, 180 Haas Road, Eureka, Missouri, Kelp Contracting**, described his experience constructing dams similar to the type proposed in this request and explained components of its proposed design, in relation to the soil analysis provided.

**Laurie Taylor, 2000 Sundowner Ridge Drive, Wildwood, Missouri**, stated she is the property owner and briefly described her plans for the property. She discussed the location of the proposed lake in relation to State Route 100 and explained the history and current status of the existing natural spring.

**Glen DeHart, 2347 Ossenfort Road, Wildwood, Missouri, Council Member Ward One**, stated he does not think there are any concerns regarding the request and asked the Planning and Zoning Commission to act favorably on it.

**Nathan Muenks, 17824 Mueller Road, Wildwood, Missouri**, stated he is in favor of the request. He stated his knowledge of the existing natural spring and the preexisting structure on the site. He stated his concern for allowing construction access on Mueller Road, and asked that construction access be restricted from the private road.

Discussion was held among Commission Members about the design of the proposed overflow; the status of the existing natural spring; the tree clearing that had already occurred on the site; the possible existence of sinkholes on the site; the proposed size of the lake; and the potential of the dam failing and the consequences of such a failure, particularly in relation to the proposed lake’s proximity to State Route 100.

Dave Volz, Volz Inc., representative of the petitioner, said his firm would investigate issues regarding the potential failure of the dam and provide a report to the Planning and Zoning Commission.

Commissioner Archeski requested the Department of Planning include a condition that outlines maintenance requirements for the proposed dam.

Motion by Mayor Woerther, seconded by Council Member Manton, to close the public hearing. A voice vote was taken regarding the motion. Hearing no objections, Chair Bopp declared the motion approved.

## **VI. Old Business – Three (3) Items for Consideration**

### Letters of Recommendation – Two (2) Items for Consideration

- a) **P.Z. 3-16 City of Wildwood Planning and Zoning Commission c/o Department of Planning, 16860 Main Street, Wildwood, Missouri** – A request for the Planning and Zoning Commission’s review and action on the 2016 update of the City of Wildwood’s Master Plan. The updated Master Plan has been under review by the Master Plan Advisory Committee (MPAC) since January 2015 and its members have acted favorably on this draft and are submitting it for consideration herein. The Master Plan establishes goals, objectives, and policies for the protection of the environment, application of planning techniques for land use and development purposes, allocation of resources and services, prioritization of transportation and infrastructure improvements, provision of public space and recreational amenities within the community, and economic development. Along with these goals, objectives, and policies, the Master Plan establishes types and densities/intensities of land use for every parcel of ground within the boundaries of the City of Wildwood. The City’s Charter requires this plan to be updated every ten (10) years, and was last updated in 2006. **(Wards – All)**

Planner Newberry read the request into the record.

Director Vujnich explained the current version of the 2016 update of the Master Plan was presented to the Planning and Zoning Commission at its March 21, 2016 meeting and the Commission acted favorably on it. Director Vujnich stated the Department of Planning is recommending the Commission act favorably to approve the draft Letter of Recommendation, thereby adopting the 2016 update of the Master Plan.

Chair Bopp invited members of the public to comment on the request.

**Greg Stine, 16209 Trade Winds Court, Wildwood Missouri, Council Member Ward Seven**, made himself available to any questions from Commission Members regarding the Master Plan, given his role on the volunteer committee overseeing the update as a City Council liaison.

A motion by Mayor Woerther, seconded by Commissioner Archeski, to adopt this version of the Master Plan – 2016 Update, as presented.

No discussion was held among Commission Members.

Chair Bopp called the question.

A roll call vote was taken, with the following results:

Ayes: Commissioner Gragnani, Commissioner Lee, Commissioner Archeski, Commissioner Liddy, Commissioner Bauer, Council Member Manton, Mayor Woerther, and Chair Bopp.

Nays: None

Absent: Commissioner Renner

Abstain: None

Whereupon, Chair Bopp declared the motion approved by a vote of 8-0.

- b) **P.Z. 24-14 Centaur Station, (Michael Phelan), 18833 Cliffview Lane, Wildwood, Missouri, 63005 c/o Department of Planning, City of Wildwood, Missouri, 16860 Main Street, Wildwood, Missouri 63040**– A request, in response to a communication from Michael Phelan, which is dated October 16, 2015, regarding **P.Z. 24-14 Centaur Station**, noting his intent to not proceed with the placement of the historic building on the City’s registry, thereby seeking the revocation of the Landmark and Preservation Area (LPA) that was approved by the City Council on December 8, 2014 and governs these two (2) tracts of land; west side of Centaur Road, north of Wild Horse Creek Road (Locator Numbers: 19X410082 and 19Y620026/Street Addresses: 107 and 109 Centaur Road); Landmark and Preservation Area (LPA) in the Floodplain Non-Urban Residence District. **(Ward One)**

Director Vujnich explained the Information Report for this revocation request was presented to the Commission at its March 21, 2016 meeting and the Commission acted favorably on it. Director Vujnich presented the draft Letter of Recommendation and stated the Department is recommending the Commission act favorably on this request.

Motion by Mayor Woerther, seconded by Council Member Manton, to revoke the Landmark and Preservation Area.

No discussion was held among Commission Members.

Chair Bopp called the question.

A roll call vote was taken, with the following results:

Ayes: Commissioner Gagnani, Commissioner Lee, Commissioner Archeski, Commissioner Liddy, Commissioner Bauer, Council Member Manton, Mayor Woerther, and Chair Bopp.

Nays: None

Absent: Commissioner Renner

Whereupon, Chair Bopp declared the motion approved by a vote of 8-0.

#### Information Reports – One (1) Item for Consideration

- c) **P.Z. 18-15 Villas of Wildwood Senior Residences, c/o Scott Puffer, Gardner Capital Development, Inc., 8000 Maryland Avenue, Suite 910, Clayton, Missouri 63105** – A request for the modification of the Town Center Plan’s Regulating Plan for two (2) lots that are a 3.7 acre area of Phase II of the Wildwood Town Center Project, thereby altering their current designation from “Downtown” District to “Neighborhood General” District to accommodate a change in zoning from the C-8 Planned Commercial District to the Amended C-8 Planned Commercial District for this same area of the site, being located on the south side of State Route 100, north of Plaza Drive, and west of Fountain Place (Locator Numbers 23V220242 and 23V220233/Street Addresses 251 and 261 Plaza Drive). **Proposed Use: A three (3), story senior housing facility, which would allow a maximum of forty-eight (48) units. (Ward Eight)**

Planner Newberry read the request into the record.

Director Vujnich referenced the letter from Joel Oliver, dated March 10, 2016, requesting to withdraw

this proposal. Director Vujnich asked the Commission to accept this request.

Motion by Commissioner Gragnani, seconded by Commissioner Archeski, to accept the request to withdraw the proposal.

No discussion was held among Commission Members.

Chair Bopp called the question.

A roll call vote was taken, with the following results:

Ayes: Commissioner Gragnani, Commissioner Lee, Commissioner Archeski, Commissioner Liddy, Commissioner Bauer, Council Member Manton, Mayor Woerther, and Chair Bopp.

Nays: None

Absent: Commissioner Renner

Whereupon, Chair Bopp declared the motion approved by a vote of 8-0.

## VII. New Business – One (1) Item for Consideration

### Correspondence Items – One (1) Item for Consideration

- a) A response to a correspondence from Michael Manlin, MRM Manlin Development Group, dated December 18, 2015, regarding **P.Z. 15, 16, and 17-14 Bordeaux Estates at Wildwood – Plat Two**; R1-A 22,000 square foot Residence District, with a Planned Residential Development Overlay District (PRD); west side of East Avenue, south of Manchester Road; which seeks modifications to the governing site-specific ordinance, thereby allowing front entry garages in the Town Center Area, along with modifications to materials and other design components associated with this three (3) lot residential subdivision. **(Ward Eight)**

Planner Newberry read the request into the record.

Director Vujnich described the long zoning history of the site. Director Vujnich explained the one (1) acre property has been part of the Town Center Area since its beginning, in 1998. He explained the site's Town Center designation has changed twice over the past several years, the most recent modification occurring in 2014, at the request of the current petitioner. In 2014, the City adopted a site-specific ordinance to allow the construction of three (3) single family residences on individual lots, on the condition that certain Town Center neighborhood design standards and architectural guidelines be applied, including side-entry garages, thirty (30) year architectural shingles, fiber cement siding, and street specifications. Director Vujnich explained the current request from Mr. Manlin is for relief from these conditions of the governing ordinance for the site. Director Vujnich stated the Department of Planning is not recommending support of this request, based on the analysis provided in the Department's report.

Motion by Commissioner Gragnani, seconded by Mayor Woerther, to accept the Department's recommendation not to approve the request.

Chair Bopp invited members of the public to comment on the request.

**Gabe DuBois, 148 Chesterfield Industrial Boulevard, Suite G, Chesterfield, Missouri, representative of the Petitioner,** shared the site plan for the proposed three (3) lots and photographs of homes in the existing Bordeaux Estates Subdivision. He explained Mr. Manlin was approached by the Bordeaux Estates Subdivision Homeowners Association and was asked to request the change. He explained Bordeaux Estates Subdivision residents would like the homes to be built on this site to be similar to the existing homes in their development.

**Victor Grabowski, 16905 Bordeaux Estates Court, Wildwood, Missouri, Trustee of Bordeaux Estates Subdivision Homeowners Association,** stated his concern with having three (3) homes at the entrance of Bordeaux Estates Subdivision that have a different design than the existing residences in Bordeaux Estates Subdivision. He also expressed his concern about the placement of a monument sign for Bordeaux Estates Subdivision.

**Mike Kresko, 2648 East Avenue, Wildwood, Missouri, Trustee of Bordeaux Estates Subdivision Homeowners Association,** stated he would like the three (3) new homes to have a similar design as the existing residences in Bordeaux Estates Subdivision, particularly having front-entry garages. He also expressed his concern about the placement of a monument sign for Bordeaux Estates Subdivision. He asked the Commission to support the residents' request.

**Steve Peterson, 2641 East Avenue, Wildwood, Missouri,** stated the design standards for the three (3) homes will take away from the attractiveness of the neighborhood and the requested exceptions should be made.

**Roger Fischer, 2647 East Avenue, Wildwood, Missouri,** expressed his support for the request.

**Paul Reinisch, 2644 East Avenue, Wildwood, Missouri,** stated the required design standards are too high and would discourage people from building homes on the site. He stated front-entry garages should be allowed. He stated the three (3) homes would be out of context with the existing neighborhood.

**Karen Calcaterra, 16913 Bordeaux Estates Court, Wildwood, Missouri,** stated front-entry garages should be allowed, as they were in the Cambury Subdivision. She asked the Commission to support the request.

**Nick Ritter, 1617 Vintage Ridge Court, Wildwood, Missouri,** stated front entry-garages should be allowed, as they were in the Cambury Subdivision.

The following citizens did not wish to speak, but would like their comments included in the official record (see the attachment for copies of their comment cards):

**John Schalda, 2629 East Avenue, Wildwood, Missouri,** "I support the development's request to allow construction on the three lots in question to match the current homes in Bordeaux Estates. The lots are a natural extension of the subdivision and share more common aspects with it than with old Town Center."

**Lisa Iovino, 2629 East Avenue, Wildwood, Missouri,** "I support the request made by the residents of Bordeaux Estates to allow the additional three (3) lots to conform to the same zoning as the rest of the subdivision. This will maintain the look of our small neighborhood, creating a consistent look. If the three (3) lots remain in Town Center, it will detract from our subdivision and our city, creating a "patchwork" or "infill" look."

**Denise Fischer, 2647 East Avenue, Wildwood, Missouri,** “I wish to keep the new houses in the same respect as the current homes. Eliminate the side-entry garage for front entrance. Also allow the exterior of the house to include vinyl siding, as opposed to Hardie Siding.”

**Julie Matthews, 16909 Bordeaux Estate Court, Wildwood, Missouri,** “I would like to seek modification to allow front entry garages and keep style of homes already existing in Bordeaux Estates area.”

Discussion was held among Commission Members about current Town Center requirements for the site; the location of future monument sign; requirements of the existing site-specific ordinance; history of the Site Development Plan approval; examples of front-entry garages in the Town Center Area; and more clarification on the history of zoning changes for this site.

Director Vujnich restated the Department’s recommendation and outlined the options the Commission has at this time.

Commissioner Lee asked if the Site Development Plan could be changed to consider alternate placement of the garages. Mr. Gabe DuBois, representative of the petitioner, stated he could consider changes to the Site Development Plan.

Motion by Commissioner Liddy, seconded by Commissioner Lee, to postpone a decision to allow the Department of Planning to meet with Mr. Manlin and his engineer to consider alternate placement of the garages.

Chair Bopp called the question.

A voice vote was taken regarding the motion to postpone a decision. The voice vote lacked a majority, with the Chair requesting a roll call.

Chair Bopp called the question.

A roll call vote was taken, with the following results:

Ayes: Commissioner Lee, Commissioner Archeski, Commissioner Liddy.

Nays: Commissioner Bauer, Commissioner Gragnani, Council Member Manton, Mayor Woerther, Chair Bopp.

Absent: Commissioner Renner

Abstain: None

Whereupon, Chair Bopp declared the motion failed by a vote of 3-5

Chair Bopp called the previous question to approve the Department’s report (motion by Commissioner Gragnani, seconded by Mayor Woerther).

A roll call vote was taken, with the following results:

Ayes: Commissioner Gragnani, Commissioner Lee, Commissioner Archeski, Commissioner Liddy, Commissioner Bauer, Council Member Manton, Mayor Woerther, and Chair Bopp.

Nays: None

Absent: Commissioner Renner

Whereupon, Chair Bopp declared the motion approved by a vote of 8-0.

## **VIII. Site Development Plans-Public Space Plans-Record Plats – No Items for Consideration**

**IX. Other – One (1) Item for Consideration – No Action Required**

- a) **An update by the Department of Planning on the sewage treatment issue identified as part of the consideration of P.Z. 19-15 1971 Pond Road, Payne Family Homes L.L.C., 10407 Baur Boulevard, Suite B, St. Louis, Missouri, 63132** – A request for the application of a Planned Residential Development Overlay District (PRD), within the NU Non-Urban Residence District for a 78.0 acre tract of land that is located on the north side of State Route 100, west of Pond Road (Locator Number: 23W520053/Street Address: 1971 Pond Road). **Proposed Use: A total of twenty-six (26) individual lots, with common ground, and required public space areas. Lots would range in size from one (1) acre to four and one-half (4.5) acres. (Ward One)**

Planner Newberry read the request into the record.

Director Vujnich updated the Commission on the Department's progress investigating the sewage treatment issue identified as part of the consideration of P.Z. 19-15 1971 Pond Road and presented a potential alternative system that had been provided by the petitioner (Payne Family Homes).

Discussion was held among Commission Members regarding examples of where this potential alternative system is already in use within the region.

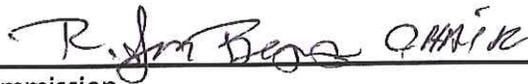
No action was required on this request.

**X. Closing Remarks and Adjournment**

Motion by Mayor Woerther, seconded by Commissioner Archeski, to adjourn the meeting. A voice vote was taken. Hearing no objections, Chair Bopp adjourned the meeting at 9:45 p.m.

Approved by:

Secretary – City of Wildwood Planning and Zoning Commission



Note: Recordation of the opinions, statements, and/or other meeting participation in these minutes shall not be deemed to be an acknowledgement or endorsement by the Commission of the factual accuracy, relevance, or propriety thereof.

\* If comment cards were submitted indicating they did not wish to speak at tonight's meeting, they have been attached and made part of the official record.

**Exploration of Subsurface Conditions  
and  
Lake and Dam Design Recommendations**

**LAURIE TAYLOR LAKE AND DAM DESIGN  
WILDWOOD, MISSOURI**

**March 2016**

**Laurie Taylor  
Owner**

**Volz, Inc.  
Civil Engineer/Surveyor**

**JGE #16010.1**

**JACOBI GEOTECHNICAL ENGINEERING, INC.**  
798 Hoff Road  
O'Fallon, Missouri 63366-1920  
636-978-7112



**JACOBI**

**GEOTECHNICAL ENGINEERING, INC.**

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O'Fallon, Missouri 63366-1920

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(636) 978-7113

www.JacobiEngineer.com

March 31, 2016

Ms. Laurie Taylor  
PO Box 4064  
Chesterfield MO 63006-4064

RE: Geotechnical Evaluation  
Laurie Taylor Lake and Dam Design  
Wildwood, Missouri  
JGE #16010.1

Dear Ms. Taylor:

Enclosed is our report, **Exploration of Subsurface Conditions and Lake and Dam Design Recommendations - Laurie Taylor Lake and Dam Design - Wildwood, Missouri**, dated March 2016.

We appreciate the opportunity to be of service to you on this project. If you have any questions or comments concerning this report, please call.

Very truly yours,

**Jacobi Geotechnical Engineering, Inc.**



Carl L. Jacobi, P.E.  
Principal

Distribution: Ms. Laurie Taylor - Original and 1 copy (email)  
Mr. Tim Meyer, Volz, Inc. - 1 copy (email)

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Figure 1 - Location Plan

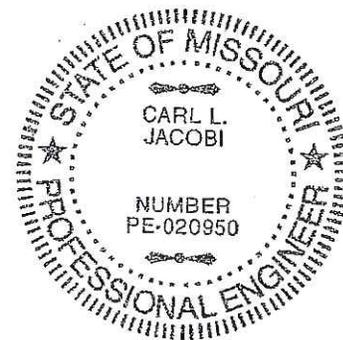
Figure 2 - Site Plan

Appendix A – Boring Log Legend and Nomenclature  
Boring Logs – B-1 through B-4

Appendix B – Test Pit Log Legend and Nomenclature  
Test Pit Logs – TP-1 through TP-5

Appendix C – Standard Proctor Tests  
Triaxial Tests

Appendix D – PCSTABLE Analyses



**Exploration of Subsurface Conditions  
and  
Lake and Dam Design Recommendations**

**Laurie Taylor Lake and Dam Design  
Wildwood, Missouri**

**1.0 INTRODUCTION**

We are pleased to submit this report containing our geotechnical evaluation of your proposed earth dam. Our report and work prepared by Volz, Inc. should be submitted to the City of Wildwood to obtain the necessary permits to construct the dam. Our work was provided in general accordance with our proposal dated January 21, 2016.

**2.0 PROJECT AND SITE DESCRIPTION**

The project site is 17715 Manchester Road in Wildwood, Missouri. The parcel is between Old Manchester Road on the south and Highway 100 on the north. The Location Plan, Figure 1, depicts the project location with respect to the surrounding roads.

A 1.75-acre lake will be built in a draw near the center of the 32-acre tract. Manchester Road is immediately downstream of the lake. According to Improvement Plans by Volz, Inc. dated November 3, 2015, the dam will be about 31 feet in height (measured from top of dam to toe of the downstream embankment fill) and will be about 340 feet long. The dam will have about 3.5 horizontal to 1 vertical (3.5h:1v) slopes for the downstream face. The upstream dam face and the cuts around the basin will have 3h:1v slopes above the normal pool elevation and 4h:1v slopes below. Cuts up to about 12 feet will be made into the sides of the draw for borrow for the dam. A portion of the Volz plan is reproduced as the Site Plan, Figure 2.

The dam crest is at El. 800.25 and the primary drop-inlet spillway will have a top at El. 797.50 (the normal pool) and an open channel emergency overflow spillway is at about El. 799.75. Both spillways are on the right side of the dam (when standing below the dam and reservoir).

Our scope of services includes a field exploration, laboratory testing, and engineering analysis to evaluate the borrow material and stability of the dam slopes under normal pool and maximum pool conditions. Settlement and seepage concerns will also be addressed, if appropriate.

The surveying, civil engineering, hydrologic and hydraulic issues and any permit applications will be addressed by Volz.

Dams higher than 35 feet must be permitted by Missouri DNR, but since this dam is only 31 feet, no state permits are required. However, we analyzed the dam's slope for stability under the same conditions as would be needed for a state dam. We also addressed settlement and seepage concerns with the embankment and foundation soils.

**3.0 FIELD EXPLORATION**

We explored the dam and foundation soils and borrow by drilling four borings (B-1 through B-4) and excavating five test pits (TP-1 through TP-5). We established the boring and test

pit locations in the field at the approximate locations shown on the Site Plan. Elevations were estimated from the Improvement Plans.

Continuous-flight augers powered by a CME-550X drill rig were used to advance the borings to auger refusal at depths of 37 and 33.5 feet or depths of 12.5 to 17.5 feet after penetrating 5 feet of hard weathered rock. Standard penetration tests (SPT) were performed at 2.5- and 5-foot intervals throughout the soil overburden. The standard penetration test provides a guide to soil strength and a disturbed sample for laboratory testing. Four thin-walled Shelby tube samples were obtained in place of the SPT intervals. The borings were backfilled with bentonite chips at the conclusion of drilling.

A Case 590 backhoe was used for the test pits. The test pits were extended to refusal or a maximum depth of about 15 feet. An engineer from JGE guided the excavators, prepared logs of the test pits, and collected disturbed samples. Pocket penetrometer tests were made on the test pit soil samples at selected locations. The test pits were backfilled before leaving.

#### **4.0 LABORATORY TESTING**

The samples from the field exploration program were transported to our laboratory for classification and testing. We determined the moisture content of each cohesive sample. We determined the dry density of intact Shelby tube samples. Atterberg limits tests were performed on selected samples to quantify the plasticity characteristics of the soil.

Two standard Proctor (ASTM D 698) moisture-density relationships were performed on the borrow materials. Two multi-stage consolidated-undrained triaxial tests (with pore pressure measurement) were conducted on borrow samples compacted to approximately 95 percent of the standard Proctor maximum dry density.

The nature and thickness of the soils encountered and the results of the field sampling and testing, and most laboratory testing are shown on the enclosed Borings Logs in Appendix A or Test Pit Logs in Appendix B. Our Boring or Test Pit Log Legend and Nomenclature sheets, in front of the appropriate appendix, can be used to interpret the logs. The standard Proctor test and triaxial test results are presented in Appendix C.

#### **5.0 SUBSURFACE CONDITIONS**

Presented herein is the general description of the soils encountered. Detailed information regarding the soil types and interpretive soil stratigraphy is presented on the Boring and Test Pit Logs.

Four to six inches of topsoil was present at most of the exploration locations that were not previously cleared. The soils at the dam, B-1 through B-4, consisted of one to six feet of relatively rock-free low to medium plastic, silty clay. This material is underlain by medium to high plastic, silty clay or clay with various amounts of gravel. Weathered rock began between about 7 to 12 feet below the surface. TP-5 excavated in the bottom of the draw near the toe of the dam, revealed similar soil as the borings and had refusal at 10.5 feet.

The test pits along the reservoir edges, TP-1 through TP-4, encountered 4 to 9 feet of primarily rock-free high plastic clay over high plastic clay with various amounts of gravel, which were found to the termination depths of 15 or 16 feet.

The moisture contents of the rock-free soils varied from 15 to 32 percent but were usually in the mid to upper twenties. These soils are medium-stiff in consistency. The moisture

contents of the rocky soils varied considerably based on their rock content and were generally very stiff to hard.

Auger refusal was encountered in B-2 at 37.0 feet and B-4 at 33.5 feet after penetrating 23 to 26 feet of hard weathered rock. B-1 and B-3 were terminated at depths of 17.5 and 12.5 feet, respectively, after penetrating about 5 feet of hard weathered rock. The weathered rock, while not causing refusal of the auger, was very hard, drilled very slowly, and the carbide teeth on the bit had to be replaced often. Refusal is a designation applied to any material that cannot be further penetrated by the drilling auger without extensive effort and is usually indicative of a very hard or very dense material, such as boulders or bedrock. Published information shows the bedrock is likely the Mississippian age cherty limestone at the lower elevations and Pennsylvanian age shale at the upper elevations.

Groundwater was not encountered by the driller at the time of drilling. Groundwater levels may not establish themselves in a drilled boring even after several days. Groundwater is subject to seasonal and climatic variations and may be present at different depths at a future date. We do not expect that groundwater will impact the project.

## **6.0 EMBANKMENT AND RESERVOIR CONSIDERATIONS AND RECOMMENDATIONS**

### **6.1 Stability Analysis**

A stability analysis was performed on the downstream slope of the dam using the computer program PCSTABL. We modeled the dam cross-section at the maximum height based on the topography provided by Volz. Soil parameters for the fill materials and natural soils were conservatively based on field data and laboratory tests.

Four conditions were assessed for the stability analysis, as shown in the following table. The minimum factors of safety required by MDNR for the four conditions are also provided in the table. Our stability analysis of the four conditions resulted in factors of safety were greater than the minimums established by MDNR. Output files of the stability analysis, which depict the 10 critical failure surfaces, are included in Appendix D.

For the earthquake condition, our analysis was performed using a seismic load of 10% of gravity.

Case	Water Elevation	Computed Factor of Safety	MDNR Minimum Factor of Safety
Steady Seepage – Full Reservoir	797.50	1.70	1.5
Steady Seepage – Maximum Reservoir	798.52	1.67	1.3
Steady Seepage – Full Reservoir/Earthquake	797.50	1.15	1.0
End of Construction – Full Reservoir	797.50	2.44	1.4

### **6.2 Settlement**

Our exploration indicates that thick deposits of soft, compressible soils are not present beneath the dam, and in general the soils in this area are relatively stiff. As such, it is our opinion that settlement of the dam due to compression of the underlying soils should be very small. We expect that the maximum settlement of the embankment fill, including the foundation and internal compression, will be less than about 6 inches.

### **6.3 Seepage**

The embankment borrow will largely consist of plastic, silty clay or clay with some gravel. We expect either material will have a permeability of  $1 \times 10^{-7}$  centimeters per second or lower when properly compacted. As such, we do not expect excessive seepage to occur through the dam section.

We recommend removing the organic materials from the dam area. An anti-seepage trench 10 feet wide and 5 feet deep should be cut under the crest of the dam and for the full length of the dam prior to placing any fill. The side slope of the trench should be no steeper than 1.5h:1v.

Based on our observations of the lake basin, it appears that suitable materials are in place for impounding water. However, since weathered rock may be present in the deeper cuts of the basin slopes, we recommend at least two feet of primarily gravel-free soil be placed as a cap where the weathered rock is less than three feet below the surface. The entire basin area should be scarified to a depth of 12 inches and compacted with a sheepsfoot roller after grading.

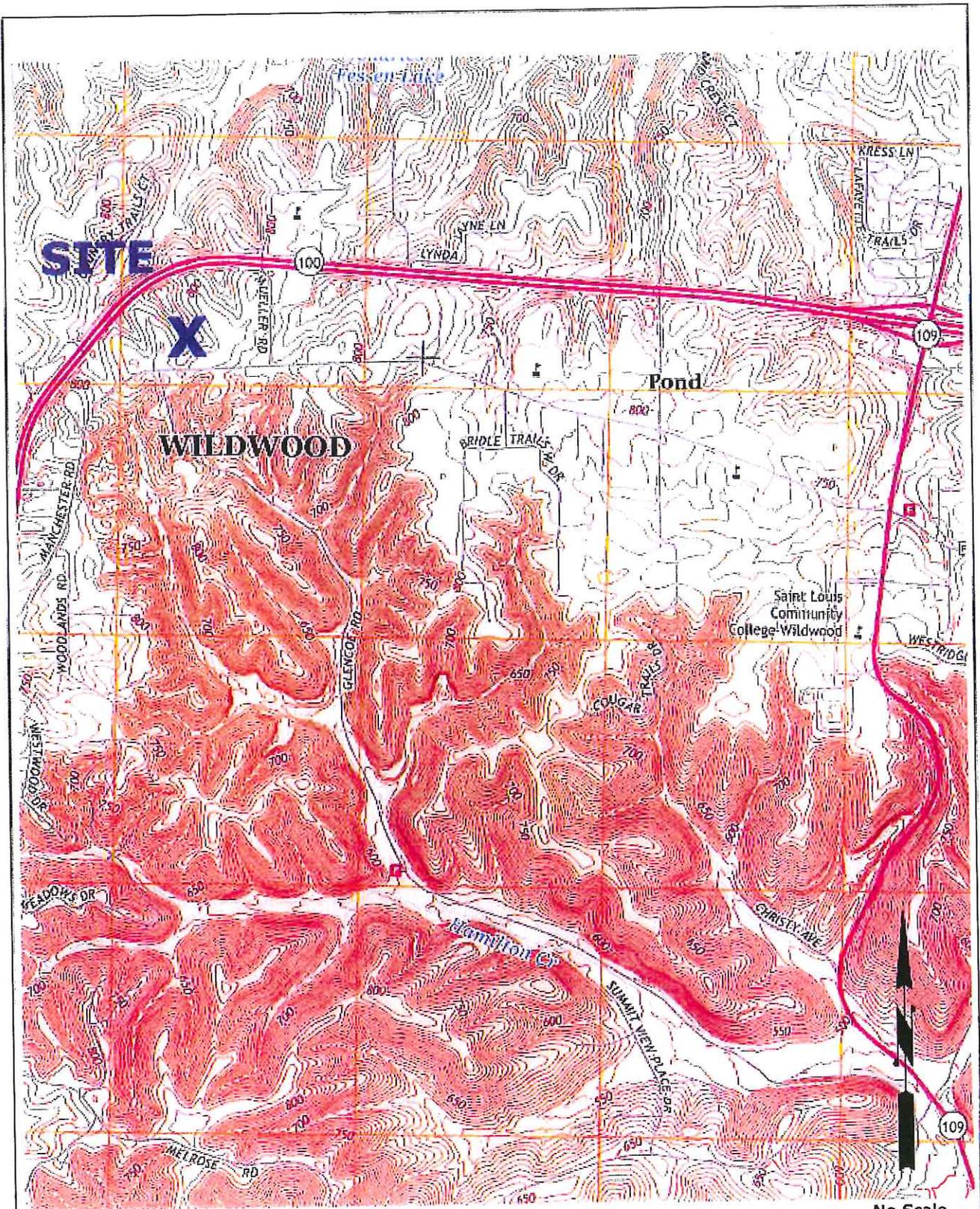
### **6.4 Embankment Compaction**

Fill should be placed in 8-inch loose lifts and compacted with a sheepsfoot roller to a minimum dry density of 95 percent of the material's standard Proctor maximum dry density (ASTM D698). Field density tests should be performed on each lift of fill to check that proper compaction is being achieved.

## **7.0 CONCLUSIONS AND LIMITATIONS**

Our analyses indicate that the dam slopes as proposed have acceptable factors of safety for slope stability. The dam embankment materials must be properly compacted and we do not expect that excessive seepage will occur through the dam section. We also expect that sufficient natural clay soils are present throughout the lake basin to inhibit excessive seepage loss through the underlying more permeable weathered bedrock materials.

The opinions and conclusions contained herein are based on four test borings, five test pits, review of available plans, our observations and analyses, and regionally accepted practice. We should be notified if any of the information contained herein is incorrect or incomplete.



Location Plan based on USGS Eureka 2015 Topographic Map

JACOBI GEOTECHNICAL  
ENGINEERING, INC.

LOCATION PLAN

Laurie Taylor Lake and Dam Design

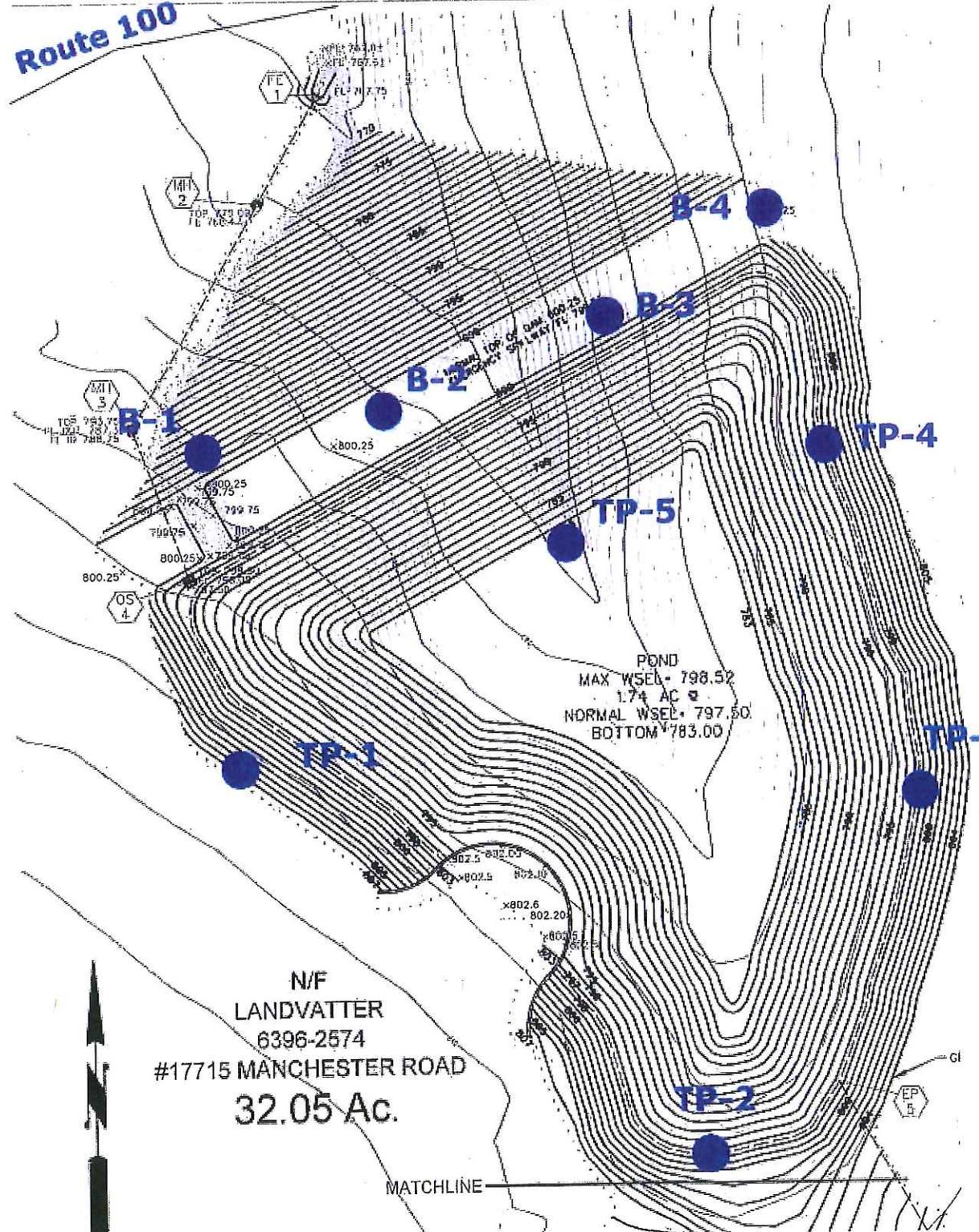
Wildwood, Missouri

16010

March 2016

Figure 1

Route 100



N/F  
 LANDVATTER  
 6396-2574  
 #17715 MANCHESTER ROAD  
 32.05 Ac.



No Scale

MATCHLINE

Manchester Road

Site Plan based on plan by Volz Incorporated

JACOBI GEOTECHNICAL ENGINEERING, INC.	
SITE PLAN	
Laurie Taylor Lake and Dam Design	
Wildwood, Missouri	
16010	March 2016

Figure 2

## APPENDIX A

# JACOBI GEOTECHNICAL ENGINEERING, INC.

## BORING LOG LEGEND AND NOMENCLATURE

**Depth** - Depth below ground surface, in feet.

**Elevation** - Referenced to msl, city, or site datum, in feet.

**Type No.** - Sample type and number designated by the following:

**SS** - Split spoon; disturbed sample from standard penetration test. Obtained by driving 2-inch O. D. split-spoon sampler. Blow counts for three 6-inch increments reported (ASTM D 1586). N-value is the sum of the second and third blow counts.

**ST** - Shelby tube sampler; undisturbed, obtained by pushing 3-inch-diameter, thin walled tube sampler (ASTM D 1587).

**CS** - Continuous sampler; undisturbed, obtained by split barrel sampler during auger advancement.

**AS** - Auger samples; disturbed, obtained from auger cuttings or wash water return.

**NX** - Nx rock core sample; nominal 2-inch-diameter, obtained by diamond core bit sampler, percent recovery and RQD reported (ASTM D 2113). **Note:** RQD indicates the ratio of the total length of segments greater than 4 inches to the total length drilled.

**SV** - Shear vane test; obtained by pushing a 2-inch-diameter vane then torquing, shear strength in existing and remolded states reported (ASTM D 2573).

**Recovery** - Reported in inches as a ratio of the length of sample recovered to the total length pushed, driven, or cored.

**Blows per 6 inches** - The number of blows per 6 inches of sampler penetration when driven by a 140-pound hammer 30 inches (ASTM D 1586). **Note:** To avoid damaging the equipment driving is limited to 50 blows per 6-inch increment.

**USCS** - Unified Soil Classification System; designates letter symbols for soil types (ASTM D 2487 & D 2488).

**Soil Description** - Describes soil according to the Unified Soil Classification System (ASTM D 2488 & D 2488), indicates constituents and characteristics. Solid lines between descriptions indicate approximate change between soil types and the transition may be gradual.



**Water level** - Ground water detected by drillers at the time of drilling.

### Laboratory Test Results

**Moisture %** - Moisture content expressed as a percentage of the dry unit weight (ASTM D 2216).

**Liquid Limit and Plastic Limit** - Index tests performed for classifying fine-grained components of soils (ASTM D 4318).

**Dry Density** - Obtained from Shelby tube or continuous samplers, reported in pounds per cubic foot (pcf).

**Shear Strength** - Results reported in kips per square foot (ksf) determined by Unconfined Compression Test unless preceded by PP or TV.

**Unconfined Compression Test** - Shear strength obtained from Shelby tube or continuous samplers (ASTM D 2166).

**PP - Penetrometer** - Approximates shear strength of unconfined compressive test.

**TV - Torvane** - Miniature vane used in determining approximate shear strength.

# JACOBI GEOTECHNICAL ENGINEERING, INC

## BORING LOG NO. B-1

**PROJECT NAME:** Laurie Taylor Lake and Dam Design

**PROJECT NO.** 16010

**LOCATION:** Wildwood, Missouri

**GROUND EL.:** 790+/-

**DRILLER:** Midwest Drilling Inc.

**DRILL:** 550X

**METHOD:** 4 inch CFA

**HOLE DEPTH (ft):** 17.5

**DRILL DATE:** 3-4-16

Depth	Elevation	Type No.	Recovery (in./in.)	Blows Per 6"	USCS	Soil Description	Moisture (%)	Liquid Limit	Plastic Limit	Dry Density (pcf)	Shear Strength (ksf)	Depth
0	790					4 in. Topsoil						0
		ST 1	20/24		CL	Brown, lean, SILTY CLAY	27			95		
		ST 2	6/14				15			95		
5	785											5
		SS 3		24-50/5	CL	Brown, lean, SILTY CLAY, with trace gravel and rock fragments	6					
		SS 4		18-19-50/4	CL	Brown, lean, SILTY CLAY, with gravel and rock fragments	2					
10	780					WEATHERED ROCK and CHERT fragments						10
		SS 5		38-50/3			3					
		SS 6		50/2			3					
15	775											15
		SS 7		50/2			3					
						Boring terminated at 17.5 feet						
20	770											20
25	765											25
30	760											30
35	755											35

Remarks:

# JACOBI GEOTECHNICAL ENGINEERING, INC

## BORING LOG NO. B-2

**PROJECT NAME:** Laurie Taylor Lake and Dam Design

**PROJECT NO.** 16010

**LOCATION:** Wildwood, Missouri

**GROUND EL.:** 781+/-

**DRILLER:** Midwest Drilling Inc.

**DRILL:** 550X

**METHOD:** 4 inch CFA

**HOLE DEPTH (ft):** 37.0

**DRILL DATE:** 3-2-16

Depth	Elevation	Type No.	Recovery (in./in.)	Blows Per 6"	USCS	Soil Description	Moisture (%)	Liquid Limit	Plastic Limit	Dry Density (pcf)	Shear Strength (ksf)	Depth
0	781				CL	1 in. Topsoil Brown, lean, SILTY CLAY	29					0
		SS 1		3-4-6								
		ST 2	6/6									
5	776				CL	Brown, lean, SILTY CLAY, with gravel						5
		SS 3		6-6-11	CH	Brown and gray, fat, CLAY, with trace sand and gravel	17					
		SS 4		8-11-16	CH	Reddish brown, fat, CLAY, with gravel and weathered rock	12					10
10	771					WEATHERED ROCK, with rock fragments and some shaley clay	14					
		SS 5		50/6								
		SS 6		50/4			10					15
15	766											
		SS 7		50/5			7					20
20	761											
		SS 8		50/3			8					25
25	756											
		SS 9		50/1.5		1 in. to 7 in thick ROCK layers or cobbles below 26.5 feet	8					30
30	751											
		SS 10		50/2			16					35
35	746											

Remarks:

# JACOBI GEOTECHNICAL ENGINEERING, INC

## BORING LOG NO. B-2

**PROJECT NAME:** Laurie Taylor Lake and Dam Design

**PROJECT NO.** 16010

**LOCATION:** Wildwood, Missouri

**GROUND EL.:** 781+/-

**DRILLER:** Midwest Drilling Inc.

**DRILL:** 550X

**METHOD:** 4 inch CFA

**HOLE DEPTH (ft):** 37.0

**DRILL DATE:** 3-2-16

Depth	Elevation	Type No.	Recovery (in./in.)	Blows Per 6"	USCS	Soil Description	Moisture (%)	Liquid Limit	Plastic Limit	Dry Density (pcf)	Shear Strength (ksf)	Depth
35	746					WEATHERED ROCK						35
40	741					Auger refusal at 37.0 feet						40
45	736											45
50	731											50
55	726											55
60	721											60
65	716											65
70	711											70

Remarks:

## JACOBI GEOTECHNICAL ENGINEERING, INC BORING LOG NO. B-3

**PROJECT NAME: Laurie Taylor Lake and Dam Design**

**PROJECT NO: 16010**

**LOCATION: Wildwood, Missouri**

**GROUND EL.: 787+/-**

**DRILLER: Midwest Drilling Inc.**

**DRILL: 550X**

**METHOD: 4 inch CFA**

**HOLE DEPTH (ft): 12.5**

**DRILL DATE: 3-3-16**

Depth	Elevation	Type No.	Recovery (in./in.)	Blows Per 6"	USCS	Soil Description	Moisture (%)	Liquid Limit	Plastic Limit	Dry Density (pcf)	Shear Strength (ksf)	Depth
0	787					Brown, lean, SILTY CLAY						0
		SS 1		14-21-33	CL	Brown, lean, SILTY CLAY, with sand and weathered rock and gravel	7					
		SS 2		13-15-50/3	CH	Light gray and tan, fat, SHALEY CLAY, with rock fragments and weathered rock	13					5
5	782											
		SS 3		31-50/3			5					
						9 in. ROCK layer						
		SS 4		50/3		WEATHERED ROCK and rock fragments	6					10
10	777											
		SS 5		50/3			6					
						Boring terminated at 12.5 feet						15
15	772											
												20
20	767											
												25
25	762											
												30
30	757											
												35
35	752											

Remarks:

# JACOBI GEOTECHNICAL ENGINEERING, INC

## BORING LOG NO. B-4

<b>PROJECT NAME:</b> Laurie Taylor Lake and Dam Design			<b>PROJECT NO.</b> 16010
<b>LOCATION:</b> Wildwood, Missouri			<b>GROUND EL.:</b> 801+/-
<b>DRILLER:</b> Midwest Drilling Inc.	<b>DRILL:</b> 550X	<b>METHOD:</b> 4 inch CFA	<b>HOLE DEPTH (ft):</b> 33.5
<b>DRILL DATE:</b> 3-4-16			

Depth	Elevation	Type No.	Recovery (in./in.)	Blows Per 6"	USCS	Soil Description	Moisture (%)	Liquid Limit	Plastic Limit	Dry Density (pcf)	Shear Strength (ksf)	Depth
0	801					4 in. Topsoil						0
		SS 1		3-3-3	CH	Brown, fat, CLAY	26					
		ST 2	20/20				13			93		
5	796				CL	Brown, lean, SILTY CLAY, with trace gravel						5
		SS 3		8-11-6			11					
		SS 4		32-21-17	CL	Brown, lean, SILTY CLAY, with weathered rock, sand and gravel	4					10
		SS 5		28-50/2		WEATHERED ROCK, with rock fragments and shaley clay	3					
15	786						6					15
		SS 7		50/3			6					
		SS 8		50/2			6					20
20	781											
		SS 9		50/2			6					25
25	776											
		SS 10		50/1.5		1 in to 4 in. thick ROCK layers or cobbles below 26.5 feet	7					30
30	771											
						Auger refusal at 33.5 feet						35
35	766											

Remarks:

**APPENDIX B**

# JACOBI GEOTECHNICAL ENGINEERING, INC.

## TEST PIT LOG LEGEND AND NOMENCLATURE

**Depth** - Depth below ground surface, in feet.

**Elevation** - Referenced to msl, city, or site datum, in feet.

**Type No.** - Sample type and number designated by the following:

**DT** - Drive tube sampler; relatively undisturbed, obtained by driving 2-inch-diameter, thin walled tube sampler

**BS** - Bag samples; disturbed, obtained from cuttings

**USCS** - Unified Soil Classification System; designates letter symbols for soil types (ASTM D 2487 & D 2488)

**Soil Description** - Describes soil according to the Unified Soil Classification System (ASTM D 2488 & D 2488), indicates constituents and characteristics. Solid lines between descriptions indicate approximate change between soil types and the transition may be gradual.



**Water level** - Ground water detected at the time of excavating

### Shear Strength Test Results

**Shear Strength** - Results reported from either field or laboratory tests in kips per square foot (ksf), determined by Pocket Penetrometer Test unless preceded by CP or TV

**PP** - Pocket Penetrometer - Approximates shear strength of unconfined compressive test

**CP** - Static Cone Penetrometer - Approximates shear strength of unconfined compressive test

**TV** - Torvane - Miniature vane used in determining approximate shear strength

### Laboratory Test Results

**Moisture %** - Moisture content expressed as a percentage of the dry unit weight (ASTM D 2216)

**Liquid Limit and Plastic Limit** - Index tests performed for classifying fine-grained components of soils (ASTM D 4318)

**Dry Density** - Obtained from Shelby tube or continuous samplers, reported in pounds per cubic foot (pcf)

# JACOBI GEOTECHNICAL ENGINEERING, INC

## TEST PIT NO. TP-1

**PROJECT NAME:** Laurie Taylor Lake and Dam Design

**PROJECT NO.** 16010

**LOCATION:** Wildwood, Missouri

**GROUND EL.:** 806+/-

**EQUIPMENT:** CASE 590 Backhoe

**HOLE DEPTH (ft):** 15.0

**DATE:** 2-12-2016

**LOGGER:** M. Schultz

Depth	Elevation	Type No.	Recovery (in./in.)	Pocket Penetrometer (tsf)	USCS	Soil Description	Moisture (%)	Liquid Limit	Plastic Limit	Dry Denisty (pcf)	Qu - Shear Strength (ksf)	Depth	
0	806	BS 1		2.5	CL	5 in. Topsoil Brown, lean, SILTY CLAY	32					0	
5	801				BS 2	CL	Brown, lean, SILTY CLAY, with heavy gravel	16					5
10	796				BS 3	CH	Red and gray, fat, CLAY, with heavy gravel and heavy sand	11					10
15	791				BS 4	SC	Red, fat, CLAYEY SAND, with gravel	7					15
						Test pit terminated at 15.0 feet						15	
20	786											20	
25	781											25	
30	776											30	
35	771											35	

Remarks:

## JACOBI GEOTECHNICAL ENGINEERING, INC TEST PIT NO. TP-2

**PROJECT NAME:** Laurie Taylor Lake and Dam Design

**PROJECT NO.** 16010

**LOCATION:** Wildwood, Missouri

**GROUND EL.:** 803+/-

**EQUIPMENT:** CASE 590 Backhoe

**HOLE DEPTH (ft):** 15.0

**DATE:** 2-12-2016

**LOGGER:** M. Schultz

Depth	Elevation	Type No.	Recovery (in./in.)	Pocket Penetrometer (tsf)	USCS	Soil Description	Moisture (%)	Liquid Limit	Plastic Limit	Dry Density (pcf)	Qu - Shear Strength (ksf)	Depth
0	803					8 in. Topsoil						0
		BS 1			CL	Brown, lean, SILTY CLAY	25					
5	798				CL/CH	Brown with gray, lean to fat, SILTY CLAY						5
		BS 2		1.5	CH	Red and gray, fat, CLAY, with gravel and sand	20					10
10	793			2.0	CH	Tan and gray, fat, CLAY, with heavy gravel and sand						10
15	788					Test pit terminated at 15.0 feet						15
20	783											20
25	778											25
30	773											30
35	768											35

Remarks:

# JACOBI GEOTECHNICAL ENGINEERING, INC

## TEST PIT NO. TP-3

**PROJECT NAME:** Laurie Taylor Lake and Dam Design

**PROJECT NO.** 16010

**LOCATION:** Wildwood, Missouri

**GROUND EL.:** 803+/-

**EQUIPMENT:** CASE 590 Backhoe

**HOLE DEPTH (ft):** 15.0

**DATE:** 2-12-2016

**LOGGER:** M. Schultz

Depth	Elevation	Type No.	Recovery (in./in.)	Pocket Penetrometer (tsf)	USCS	Soil Description	Moisture (%)	Liquid Limit	Plastic Limit	Dry Density (pcf)	Qu - Shear Strength (ksf)	Depth
0	803	BS 1			CH	Brown, fat, CLAY	25					0
5	798				CH	Brown, fat, CLAY, with gravel						5
					CH	Brown, fat, CLAY, with heavy gravel						
10	793	BS 2		2.0	CH	Red and gray, fat, CLAY, with gravel and sand	9					10
15	788				Test pit terminated at 15.0 feet							15
20	783											20
25	778											25
30	773											30
35	768											35

Remarks:

# JACOBI GEOTECHNICAL ENGINEERING, INC

## TEST PIT NO. TP-4

**PROJECT NAME:** Laurie Taylor Lake and Dam Design

**PROJECT NO.** 16010

**LOCATION:** Wildwood, Missouri

**GROUND EL.:** 804+/-

**EQUIPMENT:** CASE 590 Backhoe

**HOLE DEPTH (ft):** 16.0

**DATE:** 2-12-2016

**LOGGER:** M. Schultz

Depth	Elevation	Type No.	Recovery (in./in.)	Pocket Penetrometer (tsf)	USCS	Soil Description	Moisture (%)	Liquid Limit	Plastic Limit	Dry Density (pcf)	Qu - Shear Strength (ksf)	Depth
0	804					6 in. Topsoil Brown, fat, CLAY	24	50	23			0
		BS 1			CH							
5	799					Brown, fat, CLAY, with rock	24					5
		BS 2			CH							
						Brown, fat, CLAY, with heavy rock and sand						
		BS 3			CH							
10	794					Red and gray, fat, CLAY, with sand and heavy gravel	9	47	19			10
15	789											15
20	784											20
25	779											25
30	774											30
35	769					Test pit terminated at 16.0 feet						35

Remarks:

## JACOBI GEOTECHNICAL ENGINEERING, INC TEST PIT NO. TP-5

**PROJECT NAME:** Laurie Taylor Lake and Dam Design

**PROJECT NO.** 16010

**LOCATION:** Wildwood, Missouri

**GROUND EL.:** 779+/-

**EQUIPMENT:** CASE 590 Backhoe

**HOLE DEPTH (ft):** 10.5

**DATE:** 2-12-2016

**LOGGER:** M. Schultz

Depth	Elevation	Type No.	Recovery (in./in.)	Pocket Penetrometer (tsf)	USCS	Soil Description	Moisture (%)	Liquid Limit	Plastic Limit	Dry Density (pcf)	Qu - Shear Strength (ksf)	Depth
0	779				ML/CL	Dark brown and gray, lean, CLAYEY SILT to SILTY CLAY						0
		BS 1		1.0			26	30	21			
5	774	BS 2		3.0	CH	Gray and tan, fat, CLAY, with rock, gravel, and trace sand	11					5
		BS 3		3.0	CH	with rock, gravel, and sand Gray with tan, fat, SHALEY CLAY, with chert fragments and trace organics	11					
10	769	BS 4				CHERT with LIMESTONE	8					10
						Refusal at 10.5 feet						
15	764											15
20	759											20
25	754											25
30	749											30
35	744											35

Remarks:

## APPENDIX C

### PROCTOR ANALYSIS DATA SHEET

#### GENERAL INFORMATION

PROJECT NAME:	Laurie Taylor Dam	TESTED BY:	PD
JGE JOB NUMBER:	16010	CALCULATED BY:	ND
TEST DATE:	03/01/16	CHECKED BY:	MJS 3-11

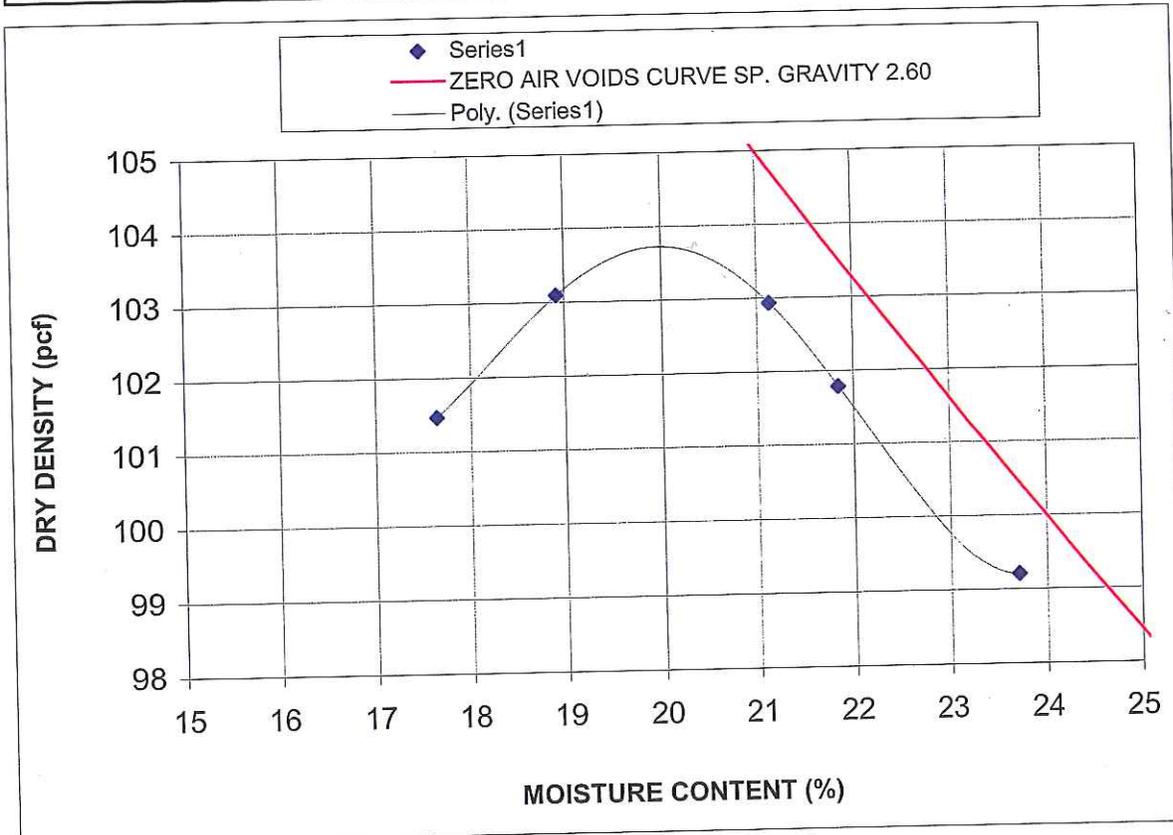
#### SOIL/AGGREGATE INFORMATION

BORROW AREA:	TP-4	LIQUID LIMIT:	50		
NATURAL MOISTURE:		PLASTIC LIMIT:	23		
SPECIFIC GRAVITY:	2.60	Assumed:	Yes	PLASTICITY INDEX:	27
PROCTOR NUMBER:	P#1	USCS:	CH		
SAMPLE DESCRIPTION:	Brown Clay				

#### TESTING INFORMATION

ASTM STANDARD USED:	STANDARD PROCTOR (ASTM D 698)	RAMMER:	PM-2
PROCTOR MOLD SIZE:	4 Inch Diameter Mold	MOLD NUMBER:	M-1
METHOD USED:	A	STRAIGHTEDGE:	SE-1
		PREPARATION METHOD:	Wet

MAXIMUM DRY DENSITY:	103.5 pcf
OPTIMUM MOISTURE CONTENT:	20.0 %



Remarks: #353A

## PROCTOR ANALYSIS DATA SHEET

### GENERAL INFORMATION

PROJECT NAME:	Laurie Taylor Dam	TESTED BY: PD
JGE JOB NUMBER:	16010	CALCULATED BY: ND
TEST DATE:	02/29/16	CHECKED BY: MJS

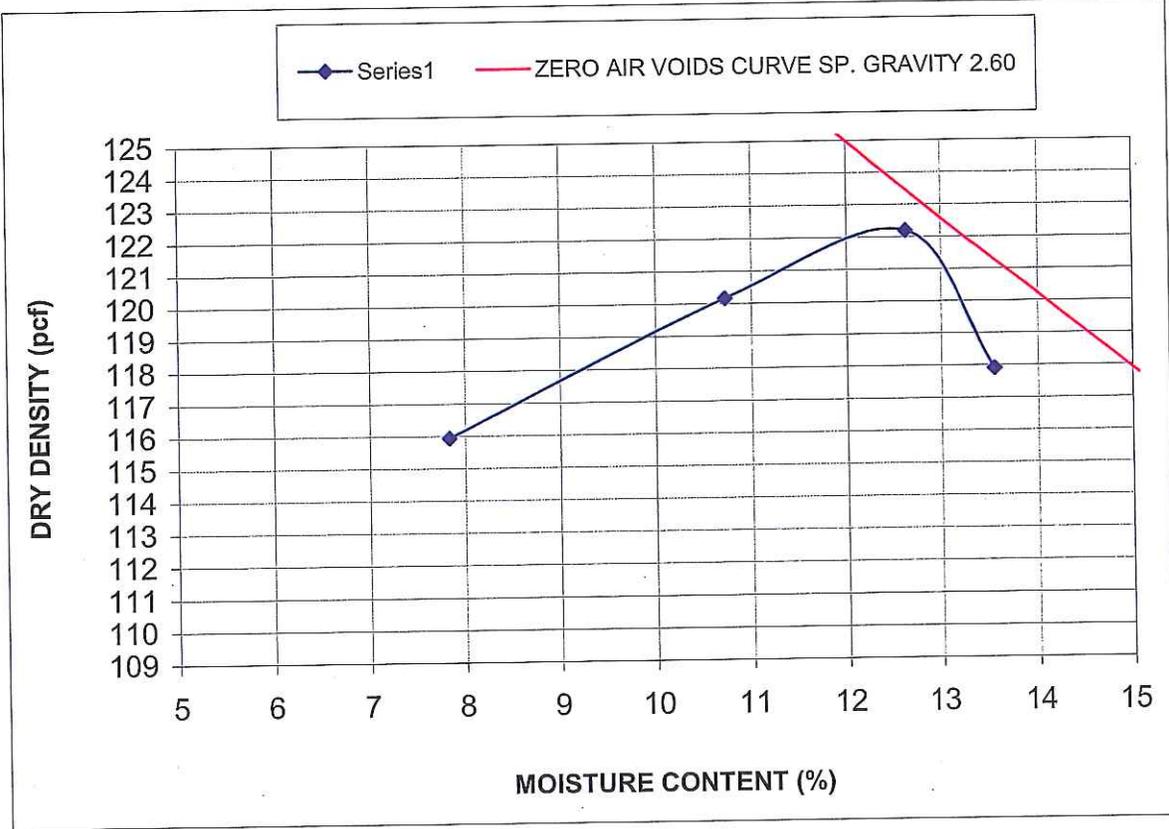
### SOIL/AGGREGATE INFORMATION

BORROW AREA:	TP-4 BS-3	LIQUID LIMIT: 47
NATURAL MOISTURE:		PLASTIC LIMIT: 19
SPECIFIC GRAVITY:	2.60      Assumed: Yes	PLASTICITY INDEX: 27
PROCTOR NUMBER:	P#2	USCS: CL/CH
SAMPLE DESCRIPTION: Red Clay with sand and Rocks		

### TESTING INFORMATION

ASTM STANDARD USED: STANDARD PROCTOR (ASTM D 698)	RAMMER: PM-2
PROCTOR MOLD SIZE: 4 Inch Diameter Mold	MOLD NUMBER: M-1
METHOD USED: A	STRAIGHTEDGE: SE-1
	PREPARATION METHOD: Wet

MAXIMUM DRY DENSITY:	122.0 pcf
OPTIMUM MOISTURE CONTENT:	12.5 %

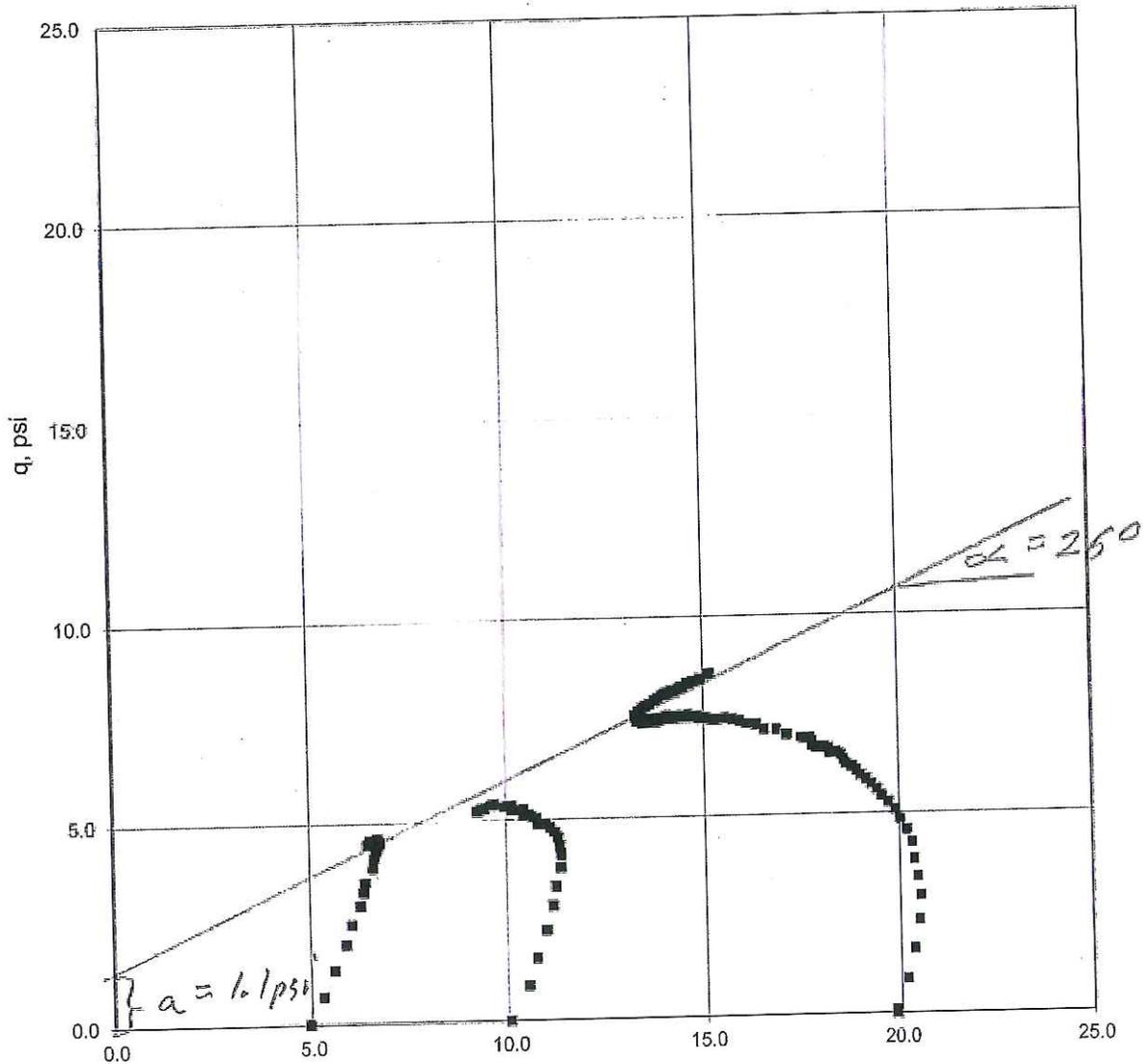


Remarks: #353B

# Consolidated-Undrained Triaxial Compression Test

Taylor Dam  
Wildwood, Missouri

Borrow Area: TP-4, Sample P-1  
Dry Unit Weight 97.6 pcf; Moisture Content 21.3%  
Confining Pressures: 5, 10 and 20 psi



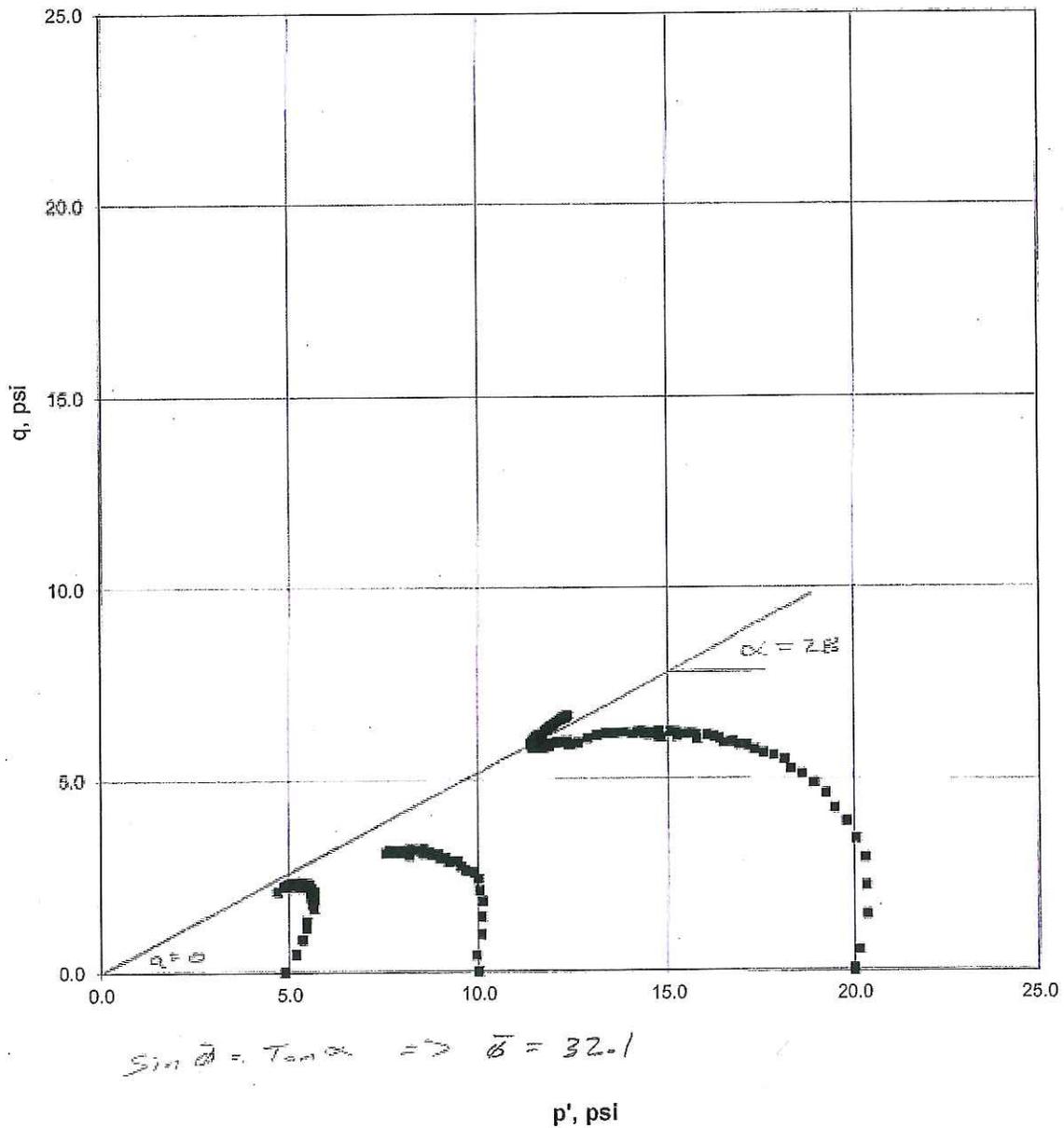
$$\sin \bar{\phi} = \tan \alpha \Rightarrow \bar{\phi} = 29.3^\circ$$

$$\bar{c} = \frac{a}{\cos \bar{\phi}} \Rightarrow \bar{c} = 1.26 \text{ psi} = 182 \text{ psf}$$

# Consolidated-Undrained Triaxial Compression Test

Taylor Dam  
Wildwood, Missouri

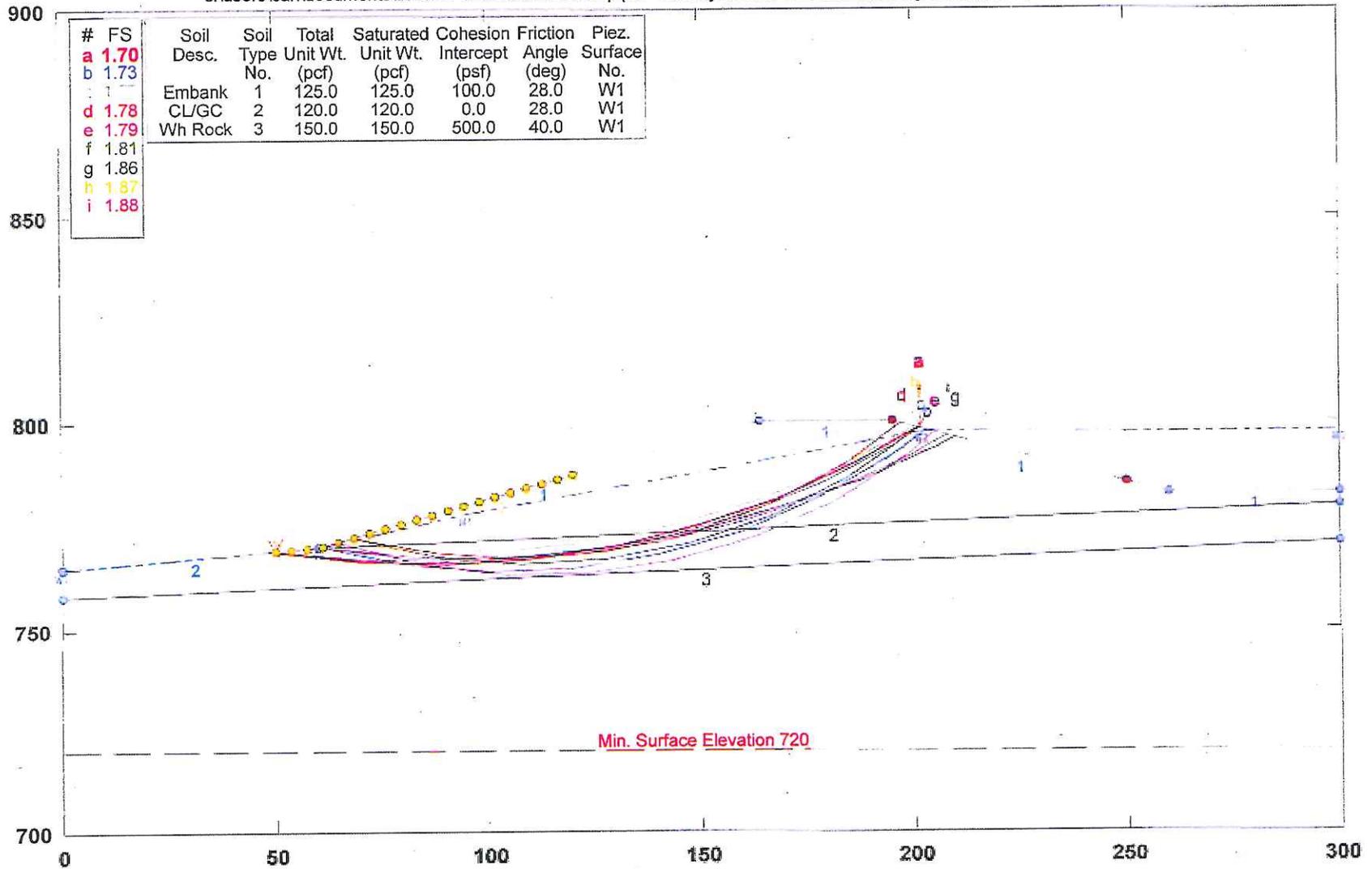
Borrow Area: TP-4, Sample P-2  
Dry Unit Weight  $\approx 115.5$  pcf; Moisture Content  $\approx 11.1\%$   
Confining Pressures: 5, 10 and 20 psi



## **APPENDIX D**

# Laurie Taylor Dam #16010 Steady Seepage - Normal Pool

c:\users\carl\documents\stedwin and stabl\ldamssnp.pl2 Run By: Jacobi Geotechnical Engineering, In 3/29/2016 05:14PM

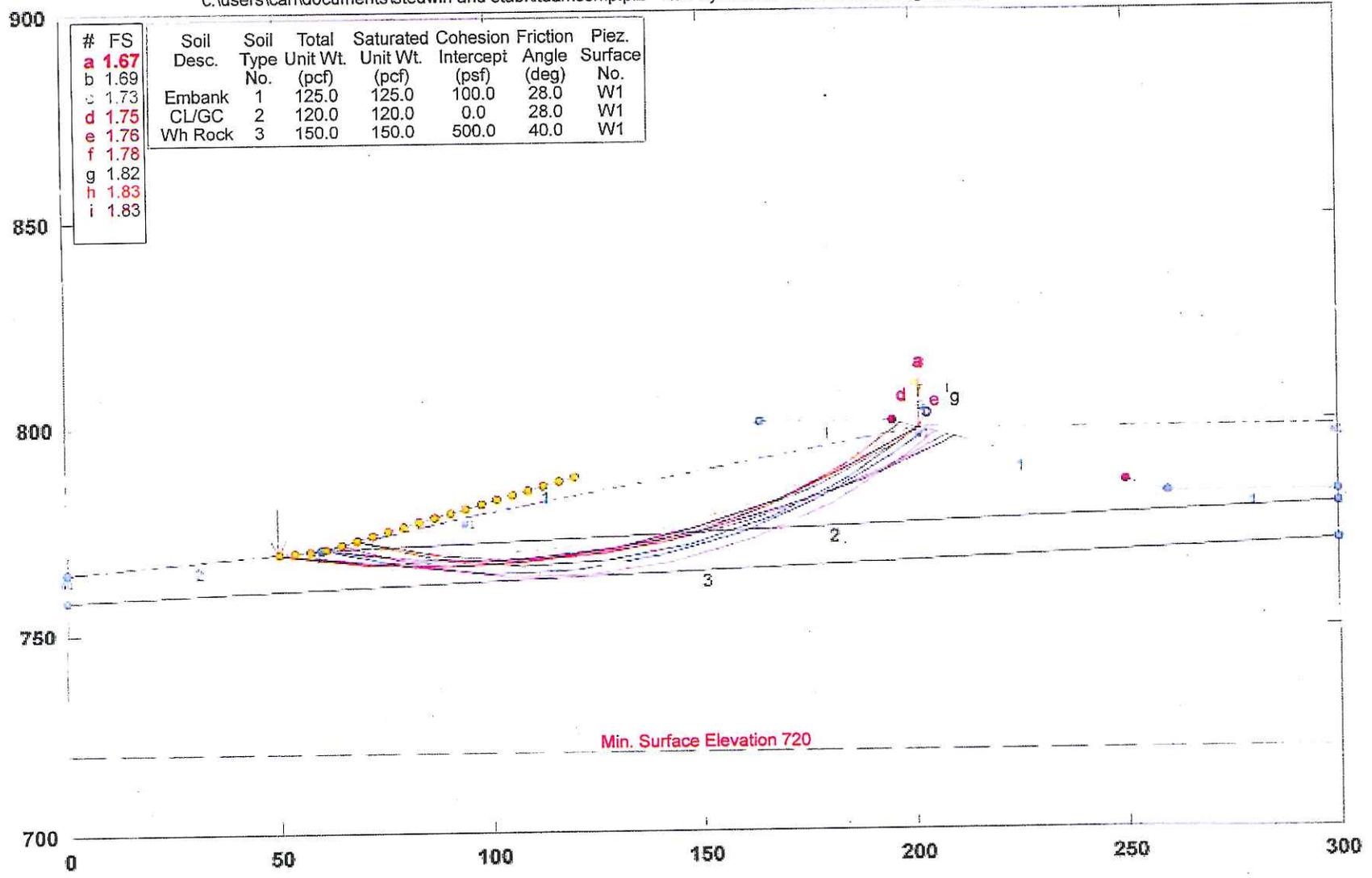


STABL6H FSmin=1.70

Safety Factors Are Calculated By The Modified Bishop Method

# Laurie Taylor Dam #16010 Steady Seepage - Maximum Pool

c:\users\carl\documents\stedwin and stabl\tdamssmp.pl2 Run By: Jacobi Geotechnical Engineering, Inc 3/29/2016 05:15PM

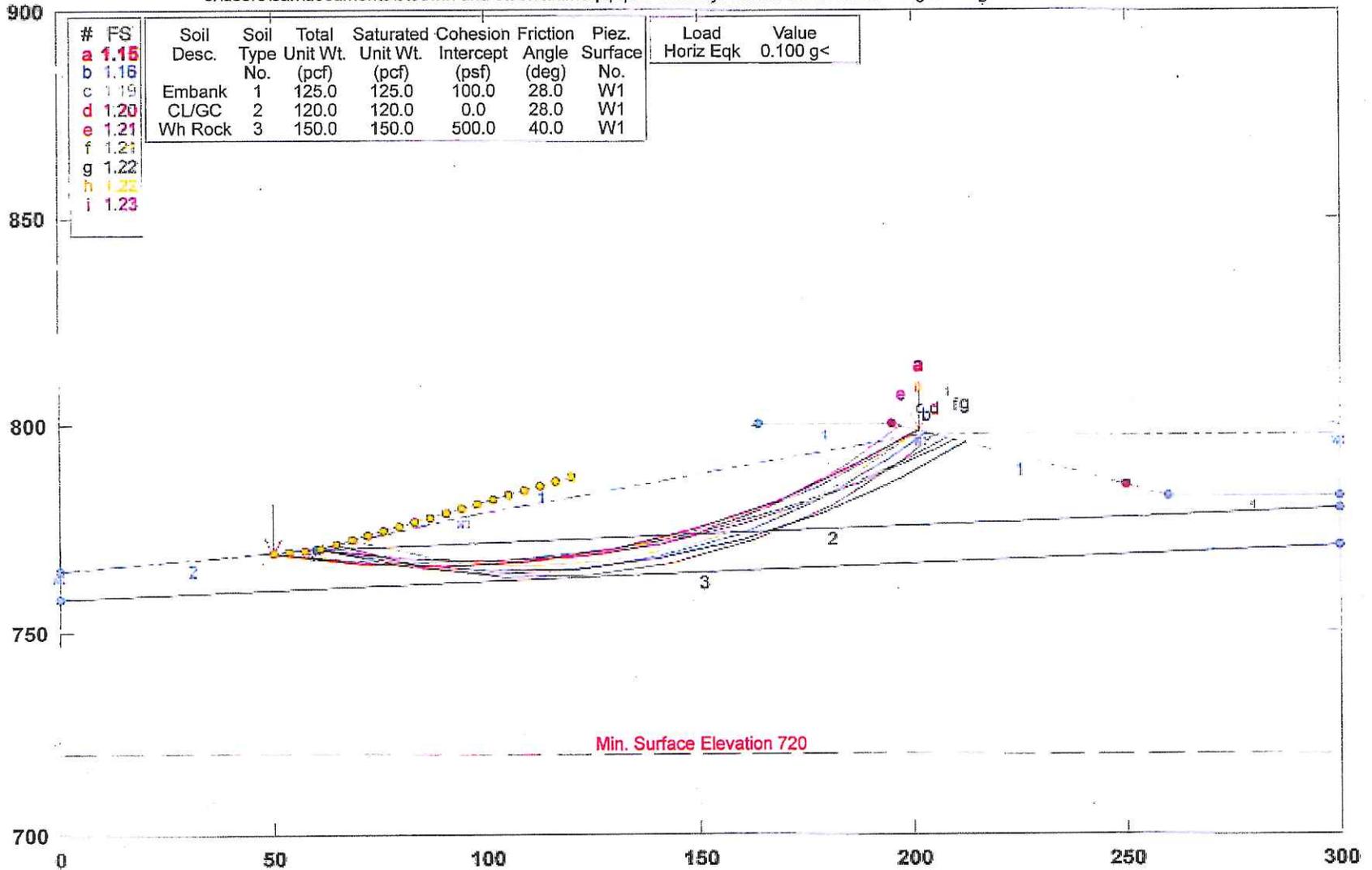


#	FS	Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
a	1.67							
b	1.69							
c	1.73	Embank	1	125.0	125.0	100.0	28.0	W1
d	1.75	CL/GC	2	120.0	120.0	0.0	28.0	W1
e	1.76	Wh Rock	3	150.0	150.0	500.0	40.0	W1
f	1.78							
g	1.82							
h	1.83							
i	1.83							

STABL6H FSmin=1.67  
 Safety Factors Are Calculated By The Modified Bishop Method

# Laurie Taylor Dam #16010 Steady Seepage Normal Pool - Earthquake

c:\users\carl\documents\stedwin and stabl\tdameqnp.pl2 Run By: Jacobi Geotechnical Engineering, Inc 3/30/2016 11:01AM



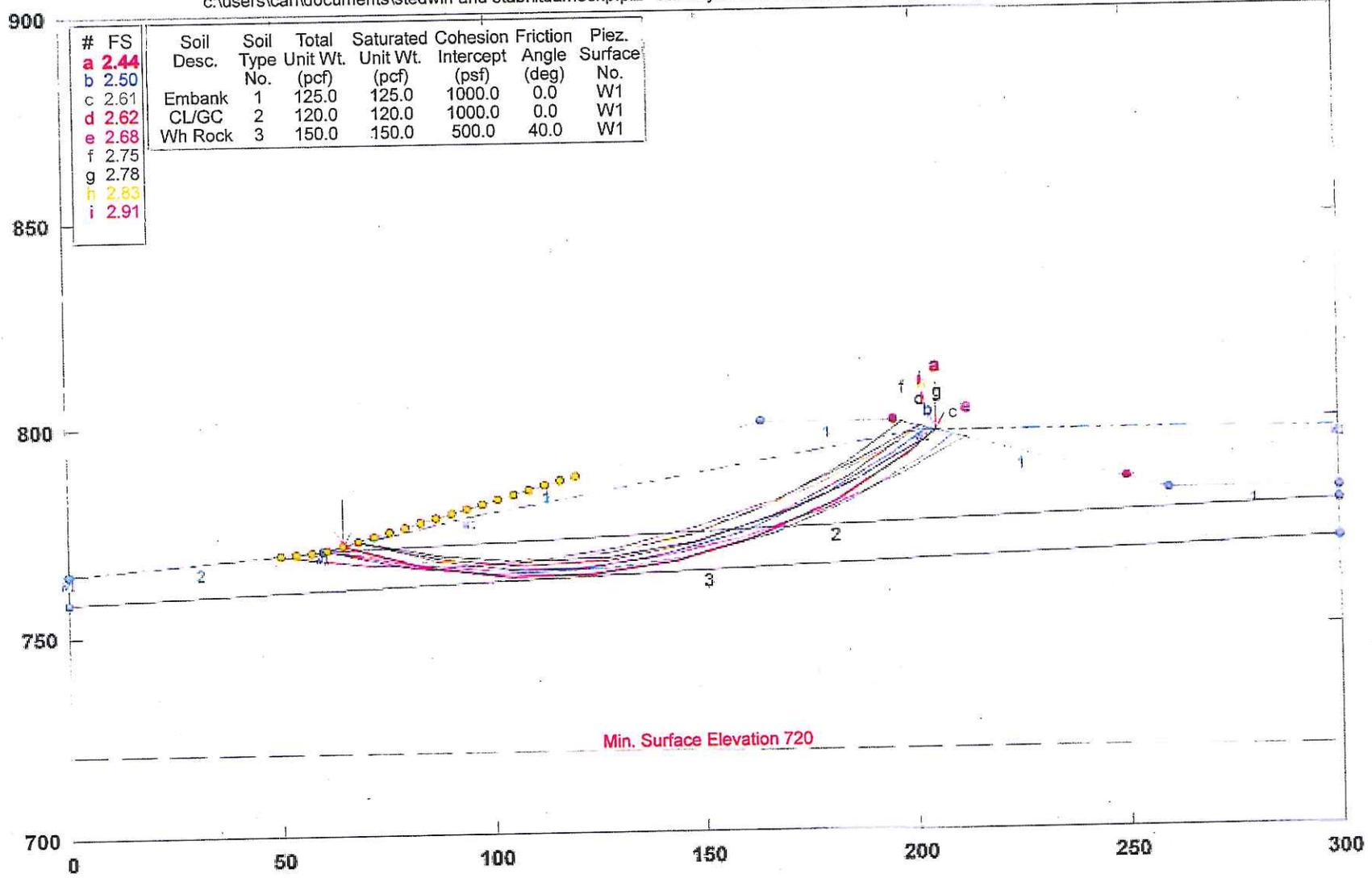
Min. Surface Elevation 720

STABL6H FSmin=1.15

Safety Factors Are Calculated By The Modified Bishop Method

# Laurie Taylor Dam #16010 End of Construction - Normal Pool

c:\users\carl\documents\stedwin and stabl\ldamecnp.pl2 Run By: Jacobi Geotechnical Engineering, Inc 3/30/2016 10:59AM



STABL6H FSmin=2.44  
 Safety Factors Are Calculated By The Modified Bishop Method



## WILDWOOD

March 30, 2016

Volz, Inc.  
ATTN: Mark Kilgore, P.E.  
10849 Indian Head Industrial Boulevard  
St. Louis, MO 63132

Re: P.Z. 25-15 Laurie Taylor; a request for a Conditional Use Permit (CUP) in the NU Non-Urban Residence District for a large water feature, which has a surface area in excess of one (1) acre, and is located at the northwest corner of Manchester Road and Mueller Road.

Dear Mr. Kilgore:

The Departments of Planning and Public Works have completed their second review of your application for the consideration of a Conditional Use Permit (CUP) in the NU Non-Urban Residence District, at the above-referenced location. This review centered on the plan's compliance with the applicable sections of the City's Zoning Ordinance, and its related requirements, and design criteria of the City of Wildwood. In this comparison, a number of items were identified that must be addressed. These items are as follows:

1. Please edit the title block to read, "Preliminary Development Plan", instead of "Improvement Plans".
2. Please edit the "Stormwater Management and Land Disturbance Note" to read as follows:

"Proposed area of land disturbance = 4.2 acres. A Land Disturbance Permit from MODNR shall be obtained. Any future land disturbance or impervious area increase on this site, beyond these activities, may require additional stormwater management per City of Wildwood regulations. Said imposition of these additional management requirements shall be at the discretion of the City of Wildwood Department of Public Works."

3. On Sheet C2, please add a note, "Not Part of CUP Request", in emboldened text superimposed on the single family residence – appearing twice on Sheet C2 – and the septic sewer system.
4. Please move the proposed construction entrance and wash down area out of the City of Wildwood's right-of-way.
5. Please note if the clearing work has already been completed for the 4.14 acres of total clearing limits for 2016, referred to in the General Notes on Sheet C8.
6. Given the extent of previous land disturbance, please verify the accuracy of the aerial image used to determine the limits of tree masses.
7. Please provide comments from Metro West Fire Protection District.
8. Please provide a landscaping plan, prepared by a certified landscape architect.
9. Please indicate a minimum twenty foot (20') wide trail easement on the eastern property line, to be dedicated to the City of Wildwood for public use.
10. Please provide a geotechnical report.

Once the revisions are completed, please resubmit three (3) full-size sets, as well as a digital copy, of the revised Preliminary Development Plan and other requested items for further review. This item is scheduled for a public hearing before the Planning and Zoning Commission on April 4, 2016.

If you should have any questions or comments in this regard, please feel free to contact the Departments of Public Works and/or Planning at (636) 458-0440.

Sincerely,  
CITY OF WILDWOOD

Sincerely,  
CITY OF WILDWOOD

Joe Vujnich, Director  
Department of Planning and Parks

Rick Brown, P.E., P.T.O.E., Director  
Department of Public Works

CC: The Honorable Timothy Woerther, Mayor  
Council Members Glen DeHart and Larry McGowen, Ward One  
Ryan Thomas, P.E., City Administrator  
Rob Golterman, City Attorney  
Mike Hartwig, Assistant City Engineer  
Kathy Arnett, Assistant Director of Planning  
Travis Newberry, Planner



## WILDWOOD

December 23, 2015

Volz, Inc.  
ATTN: Mark Kilgore, P.E.  
10849 Indian Head Industrial Boulevard  
St. Louis, MO 63132

Re: P.Z. 25-15 Laurie Taylor; a request for the application of a Conditional Use Permit (CUP) in the NU Non-Urban Residence District for a water feature, which has a surface area in excess of one (1) acre, and is located at the northwest corner of Manchester Road and Mueller Road.

Dear Mr. Kilgore:

The Departments of Planning and Public Works have completed their initial review of your application for the consideration of a Conditional Use Permit (CUP) in the NU Non-Urban Residence District, at the above-referenced location. This review centered on the plan's compliance with the applicable sections of the City's Zoning Ordinance and its related requirements and design criteria of the City of Wildwood. In this comparison, a number of preliminary items were discovered that must be addressed before the item can be scheduled for public hearing before the City's Planning and Zoning Commission. These items are as follows:

Sheet C1:

1. Please add a note in the 'Stormwater Management and Land Disturbance Note' Section that states a disturbance permit from Missouri Department of Natural Resources will be obtained.

Sheet C2:

2. Please add a note stating the Single Family Residence, and all accessory items, including a well and septic system, are not part of this review and authorization for these items will be sought under a separate permit.
3. Please note that, in the City's Zoning Ordinance large water features, such as the one proposed, may not be filled from ground water resources associated with any public or private well. This water feature will need to be filled by other means and the note referencing such on the plans needs to be amended to reflect this change.
4. Please provide details on the rock type, size, depth, etc. proposed along the north and west areas of the grading for the dam.
5. Please provide the overall height of the dam.

Sheet C8:

6. Please provide the date of calculation for land disturbance used in the General Notes, given the past activity on this site.

General:

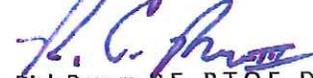
7. Please advise if any geotechnical review has been completed on the proposed area of the pond, as well as the dam composition.
8. Please provide a copy of the structural analysis completed of the proposed dam and ensure it is signed and sealed by an appropriate engineer.
9. Please submit a set of these plans to the Missouri Department of Transportation, whose right-of-way is immediately downstream from the proposed dam and water feature, for review and comment.
10. Please provide comments from the Missouri Department of Natural Resources relative to the dam design.

Once the revisions are completed, please resubmit three (3) full-size sets, as well as a digital copy, of the revised Preliminary Development Plan and other requested items for further review. Please be advised that additional comments may follow after this resubmittal, given the extent of information that is being requested, as part of the Conditional Use Permit process. If you should have any questions or comments in this regard, please feel free to contact the Departments of Public Works and/or Planning at (636) 458-0440.

Sincerely,  
CITY OF WILDWOOD

  
Joe Vujnich, Director  
Department of Planning and Parks

Sincerely,  
CITY OF WILDWOOD

  
Rick Brown, P.E., P.T.O.E., Director  
Department of Public Works

CC: The Honorable Timothy Woerther, Mayor  
Council Members Glen DeHart and Larry McGowen, Ward One  
Ryan Thomas, P.E., City Administrator  
Rob Gotterman, City Attorney  
Mike Hartwig, Assistant City Engineer  
Kathy Arnett, Assistant Director of Planning  
Travis Newberry, Planner

## Travis Newberry

---

**From:** noreply@cityofwildwood.com  
**Sent:** Friday, March 18, 2016 12:26 PM  
**To:** Lynne Greene-Beldner; Ryan Thomas; Elizabeth Weiss; Kathy Arnett; Travis Newberry; Steve Vogel; Travis Newberry  
**Subject:** Online Form Submittal: Public Hearing Comment Form

### Public Hearing Comment Form

*By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.*

---

Request Being Considered	P.Z. 25-15 Laurie Taylor 17715 Manchester Road
Item Description	<i>Field not completed.</i>
Position on Request	Support
General Comments	We are neighbors (2433 Glencoe Road, Wildwood) and would like to register our full support and approval of this plan for a variance for a 1.74 acre lake on the Taylor property at 17715 Manchester Road.
Suggestions	<i>Field not completed.</i>

(Section Break)

---

Name	Martha Grace Reese and Cyrus N. White
Address	2433 Glencoe Road
City	Wildwood
State	MO
Zip	63038
Phone Number	636.273.1070
Email	<a href="mailto:MarthaGraceReese@gmail.com">MarthaGraceReese@gmail.com</a>

Email not displaying correctly? [View it in your browser.](#)

**ATTACHMENT A**  
**Preliminary Development Plan**



**Rules of**  
**Department of Natural Resources**  
**Division 22—Dam and Reservoir Safety Council**  
**Chapter 1—Organization, Definitions**  
**and Immunity**

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Title 10—DEPARTMENT OF  
NATURAL RESOURCES

Division 22—Dam and Reservoir  
Safety Council

Chapter 1—Organization, Definitions  
and Immunity

10 CSR 22-1.010 General Organization

*PURPOSE: This rule complies with section 536.023, RSMo which requires each agency to adopt as a rule a description of its operation and the methods where the public may obtain information or make submissions or requests.*

(1) Section 236.410, RSMo established a Dam and Reservoir Safety Council of Missouri. The council consists of seven (7) members appointed by the governor with the advice and consent of the senate. The council holds a minimum of four (4) regular meetings each year and special meetings and hearings as the council chairman may deem necessary.

(2) The Missouri dam and reservoir safety law, rules, regulations, guidelines and standards provide for the construction management and operation of dams and reservoirs in a manner which will provide adequate protection of public safety, life or property. To achieve this purpose the council has statutory powers as listed in sections 236.405 and 236.415, RSMo for policy making, adopting rules, standards and guidelines and issuing of permits.

(3) The Department of Natural Resources is authorized under section 236.405, RSMo to administer and enforce all rules, standards and guidelines adopted by the council and to assist the council in achieving its statutory duties. The department has designated the dam and reservoir safety program as the agency within the department responsible for administering the dam and reservoir safety law. The director of the Department of Natural Resources appoints a chief engineer who is the dam and reservoir safety program director and a staff, as provided in section 236.405, RSMo. The chief engineer and staff provide day-to-day operation of the dam and reservoir safety program.

(4) The dam and reservoir safety program performs administrative and technical functions including: review permit applications and recommend approval or denial of applications; inspect dams and reservoirs; enforce the law and all rules, standards and guidelines adopted pursuant to Chapter 236, RSMo; employ necessary staff; develop facts as may

be required by the council; recommend rules, standards and guidelines required by Chapter 236, RSMo; mitigate or eliminate unsafe dam or reservoir conditions; and other functions as described in sections 236.420 to 236.500, RSMo.

(5) Requests for permit applications, requirements or other permit information, copies of these rules and the dam and reservoir safety law, dam inspections and technical information and assistance, requests for public hearings and any other submissions are to be made to the Department of Natural Resources, Dam and Reservoir Safety Program, P.O. Box 250, Rolla, MO 65401.

*AUTHORITY: Chapter 236, RSMo 1986. Original rule filed April 14, 1981, effective Aug. 13, 1981.*

*Original authority: 236.405, RSMo 1979 and 236.415, RSMo 1979.*

10 CSR 22-1.020 Definitions

*PURPOSE: The following terms when used in rules, standards and guidelines adopted by the Dam and Reservoir Safety Council pursuant to the dam safety law shall have the meaning respectively ascribed to them by this section.*

*PUBLISHER'S NOTE: The secretary of state has determined that the publication of the entire text of the material which is incorporated by reference as a portion of this rule would be unduly cumbersome or expensive. Therefore, the material which is so incorporated is on file with the agency who filed this rule, and with the Office of the Secretary of State. Any interested person may view this material at either agency's headquarters or the same will be made available at the Office of the Secretary of State at a cost not to exceed actual cost of copy reproduction. The entire text of the rule is printed here. This note refers only to the incorporated by reference material.*

(1) Agency engineer means an experienced engineer, not necessarily registered as a professional engineer in Missouri, who works for an engineering division of a state or federal agency regularly engaged in dam and reservoir design and construction for soil and water conservation or irrigation or relating to wildlife conservation.

(2) Agricultural dam means any dam, the primary use of which is to impound water for

use in irrigation, livestock watering or commercial fish rearing and sale.

(3) Alterations, repairs, or either means alterations or repairs as affect the safety of a dam or reservoir, or public safety, life or property.

(4) Appurtenant works means the structures or materials incident to or annexed to dams which are built or maintained in connection with dams and which are used primarily in connection with their proper operation, maintenance or functioning. This includes, without limitation, structures as spillways, either in the dam or separate therefrom; the reservoir rim; low level outlet works; and water conduits such as tunnels, pipelines or penstocks, either through a dam or its abutments.

(5) Area capacity curves means graphic curves which show the relationship between reservoir surface area and the storage capacity of the reservoir at given elevations.

(6) Chief engineer means the head of the dam and reservoir safety program of the Department of Natural Resources or his/her representative.

(7) Commercial fish rearing reservoir means a reservoir which was designed specifically for fish rearing purposes and the primary use is to provide water for commercial fish rearing and sale to other parties in a for profit venture. This does not include activities such as sport fishing.

(8) Construction permit means a written authorization issued by the council giving the owner the right to construct, alter, enlarge, reduce, repair or remove a dam or reservoir or appurtenances thereto, with conditions that are necessary to adequately protect the public safety, life, property, the dam or reservoir.

(9) Conventional dam means any dam other than an industrial water retention dam.

(10) Council delegate or authorized representative means an individual, usually the chief engineer, authorized by the council to act in its behalf.

(11) Crest or dam crest means the top surface of the dam.

(12) Crest elevation or dam crest elevation means the lowest elevation of the crest exclusive of the spillway(s).

(13) Dam means any artificial or man-made barrier which does or may impound water and which impoundment has or may have a surface area of fifteen (15) or more acres of water at the water storage elevation or which is thirty-five feet (35') or more in height from the natural bed of the stream or watercourse or lowest point on the toe of the dam (whichever is lower) up to the crest elevation, together with appurtenant works. Sections 236.400 to 236.500 shall not apply to any dam which is not or will not be in excess of thirty-five feet (35') in height or to any dam or reservoir licensed and operated under the Federal Power Act.

(14) Dam and Reservoir Safety Council referred to as the council means seven (7) members appointed by the governor for purposes of implementing the dam safety law.

(15) Dangerous dam or reservoir is a dam or reservoir which is in an advanced state of deterioration so that if deterioration continues, the threat of dam failure and flooding would be substantial.

(16) Department means the Department of Natural Resources.

(17) Downstream environment zone means the area downstream from a dam that would be affected by inundation in the event the dam failed when filled to the emergency spillway crest elevation or to the dam crest elevation, in the absence of an emergency spillway.

(18) Earthquake intensity means Modified Mercalli intensity which is used to describe the degree of shaking a dam will experience.

(19) Enforcement order means a written directive issued by the council or the chief engineer to the owner of a dam for correction of defects in the dam or reservoir which have been determined to make the structure a threat to public safety, life or property. The order will contain specific actions with which the owner must comply to remove the threat the dam or reservoir poses to public safety, life or property.

(20) Enlargement means any change in or addition to an existing dam or reservoir, which raises the height of the dam, increases the watershed for the reservoir or raises the water storage elevation of the water impounded by the dam or reservoir.

(21) Environmental class means a classification of the downstream environment zone based on the contents of that zone (see 10

CSR 22-2.040(1)). Class I represents the most severe threat to public safety, life or property and Class III represents the least threat.

(22) Factor of safety means the resultant of the summation of the forces resisting failure divided by the summation of the driving forces tending to cause failure.

(23) Freeboard means the difference in elevation between the dam crest elevation and the water storage elevation in the reservoir.

(24) Height or height of dam means the difference in the elevation of either the natural bed of the stream or watercourse or the lowest point on the toe of the dam (whichever is lower) and the dam crest elevation.

(25) Industrial building means a permanent, enclosed structure used by groups of workers usually involved in some type of manufacturing, processing or industrial related process.

(26) Industrial water retention dam means a dam used to retain the solids transported as water-borne industrial byproducts and the associated water. This includes, but is not limited to, tailings dams, slime impoundments and settling ponds.

(27) Inundation means water, two feet (2') or more deep, over the general level of the submerged ground affected outside the stream channel.

(28) Inspection means scheduled and unscheduled examinations of a dam and reservoir with the primary objective of making safety observations and recording them in a written description.

(29) Irrigation reservoir means a reservoir whose primary use is to provide water for the irrigation of agricultural lands for the production of grains, hay, pasture, fruits, vegetables and animal feeds which are for sale or to be used by the owner.

(30) Law means the dam and reservoir safety law, as contained in Chapter 236, RSMo and all rules, standards and guidelines adopted thereto.

(31) Liquefaction is a condition where a soil will undergo continued deformation at a constant low residual stress or with low residual resistance, due to the build-up and maintenance of high pore water pressures, which reduce the effective confining pressure to a very low value.

(32) Livestock watering reservoir means a reservoir whose primary use is to provide water for livestock which are raised for breeding or marketing purposes.

(33) Maintenance means the proper keeping of all aspects of a dam or reservoir and appurtenances thereto, that pertain to safety, in a state of repair and working order as necessary to comply with the law and any permit issued thereunder and to protect public safety, life or property.

(34) Modification(s) means changes or revisions to the design, construction, maintenance, operation or repair or the alteration, enlargement, reduction, removal or natural physical changes that may occur to a dam or reservoir that were not included in the approved plans for the construction permit, or changes or revisions to a dam or reservoir where a registration or safety permit is in effect or required hereunder, if the changes or revisions would endanger public safety, life or property as a result of creating a potential failure in the dam or reservoir; except that modification(s) do not mean or include approved anticipated enlargements, outlined by design plans and specifications submitted and approved with the original application for a construction, safety or registration permit for industrial water retention dams and reservoirs.

(35) Observable defects are those defects which would be detectable by an experienced professional engineer making an on-site visual inspection of the dam in accordance with current engineering, geologic and construction practices.

(36) Owner or dam owner means a person who owns, controls, operates, maintains, manages or proposes to construct a dam or reservoir including: the state and its departments, institutions, agencies and political subdivisions, but not the United States government; a municipal or quasi-municipal corporation; a district; a public utility; a natural person, firm, partnership, association, corporation, political subdivision or legal entity; the duly authorized agents or leasees, or trustees of any of the foregoing; or receivers or trustees appointed by any court for any of the foregoing.

(37) Permanent dwelling means a dwelling occupied at least ninety (90) days a year.

(38) Permit means construction, safety or registration permit.

(39) Permit applicant or applicant means an owner who applies for a construction, safety or registration permit.

(40) Probable maximum acceleration means the horizontal acceleration developed at a dam as a result of an earthquake with a probability of occurrence similar to the probable maximum precipitation. The probable maximum acceleration is readily available from a Corps of Engineers Report entitled Earthquake Potential of the St. Louis District—Ground Motion Supplement which is on file with the chief engineer of the Dam and Reservoir Safety Program.

(41) Probable maximum precipitation or PMP means the precipitation that may be expected from the most severe combination of critical meteorologic conditions that are reasonably possible in an area. The PMP is readily available from the National Weather Service in Hydrometeorological Report 51, Probable Maximum Precipitation Estimates, United States East of the 105th Meridian.

(42) Public building means a permanent, enclosed structure used by groups of the general public but not necessarily owned by the public.

(43) Registration permit means a permit issued for a period not to exceed five (5) years by the council to the owner of a dam or reservoir in existence or in the progress of construction on August 13, 1981 or which becomes subject to the law for the dams and reservoirs by a change in factors or circumstances subsequent to that date. Permits shall only be issued for dams which are in a properly maintained condition or which have made and complied with recommendation for corrections of observed defects of the dam or reservoir and have been examined and approved in accordance with the law.

(44) Reservoir means any basin, including the water, which contains or will contain the maximum amount of water impounded by a dam.

(45) Safety permit means a permit issued to the owner of a dam for a period of five (5) years, or less if safety considerations so require, by the council indicating that the dam meets the requirements of the law, and containing conditions as to operations, maintenance and repair as are necessary to adequately protect public safety, life and the dam or reservoir.

(46) Seepage means the migration of water through a dam or foundation.

(47) Significant modification means changes, alteration or modifications to an existing dam or changes to the construction documents for a new dam. Those include, but are not limited to: changes in the location of the dam or reservoir, changes in the storage capacity or drainage area, changes in the capacity of the spillway system, modification of the embankment slopes, changes in the height of the dam or structure, or the use of different construction methods or procedures than those submitted with the permit application.

(48) Spillway means any passageway, channel or structure, open or closed or both, designated expressly or primarily to discharge excess water from a reservoir after the water storage elevation has been reached.

(49) Spillway design flood or SDF means the specified flood discharge that may be expected from the most severe combination of critical meteorologic and hydrologic conditions that are reasonably possible in an area and for which the dam and reservoir are designed. The SDF is derived from the rainfall values given in Table 5.

*(Editor's Note: For Table 5 see 10 CSR 22-3.020)*

(50) Stability means the properties of a dam or reservoir that cause it when disturbed from a condition of equilibrium to develop forces or moments that restore the original condition.

(51) Starter dam means a pervious or impervious dam constructed as the first phase in the building of an industrial water retention dam and reservoir.

(52) Storage means the volumetric capacity of the reservoir below the water storage elevation or other selected reference on the dam.

(53) Stream means any river, creek or channel, having well-defined banks, in which water flows for substantial periods of the year to drain a given area.

(54) Tailings means the material generated by a mining/milling operation which is deposited in slurry form in an impoundment for storage, disposal, or both.

(55) Tailings dam means an existing dam or reservoir used for the impoundment or retention of tailings or a proposed, existing or newly constructed dam and reservoir for which the anticipated or contemplated use is the impoundment or retention of tailings.

(56) Toe or toe of slope means the line of the fill (dam embankment) slope where it intersects the natural ground.

(57) Water means water, other liquids or tailings.

(58) Watercourse means a valley, swale, depression or other low place in the topography occupied by flowing water during conditions of runoff.

(59) Water storage elevation means that elevation of water surface at the principal spillway which could be obtained by the dam or reservoir were there no outflow and were the reservoir full of water.

(60) Watershed means the area that contributes or may contribute surface water to a reservoir.

*AUTHORITY: sections 236.405, RSMo Supp. 1993 and 236.415, RSMo 1986.\* Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985. Amended: Filed Sept. 1, 1993, effective May 9, 1994.*

*\*Original authority: 236.405, RSMo 1979, amended 1933 and 236.415, RSMo 1979.*

#### 10 CSR 22-1.030 Immunity of Officers

*PURPOSE: The purpose of this rule is to restate the immunity from damages provided in section 236.475, RSMo (1986).*

(1) In the absence of willful and wanton misconduct, no action shall be brought against the council, the chief engineer or his/her agents, department employees or private individuals employed as consultants by the department for the recovery of damages caused by the partial or total failure of any dam or reservoir or through the use or operation of any dam or reservoir upon the ground that the person is liable by virtue of any of the following: the approval of a dam or reservoir or permits therefore; the issuance or enforcement of orders relating to maintenance, operation or repair of a dam or reservoir; control or regulation of a dam or reservoir; measures taken to protect against failure during an emergency; or denial of a permit.

*AUTHORITY: section 236.475, RSMo 1986.\* Original rule filed April 14, 1981, effective Aug. 13, 1981.*

*\*Original authority: 236.475, RSMo 1979.*

**Rules of**  
**Department of Natural Resources**  
**Division 22—Dam and Reservoir Safety Council**  
**Chapter 2—Permits**

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Title 10—DEPARTMENT OF  
NATURAL RESOURCES  
Division 22—Dam and Reservoir  
Safety Council  
Chapter 2—Permits

10 CSR 22-2.010 Who Needs a Permit

*PURPOSE: This rule identifies those persons who need to obtain a permit for their dam and reservoir and to identify those persons who do not need to obtain a permit for their dam and reservoir.*

(1) The owner of a proposed new dam thirty-five feet (35') or more in height is required to obtain a construction permit and a safety permit for his/her dam and reservoir. The owner of an existing dam thirty-five feet (35') or more in height is required to obtain a registration permit within the time set forth in 10 CSR 22-2.020(2).

(2) By definition, the United States government is not considered an owner. Therefore, no federal dam and reservoir is regulated by sections 236.400—236.500, RSMo and no permits are required.

(3) Agricultural dams are exempted from all permit requirements as long as the agricultural dam and reservoir continue to be used primarily for agricultural purposes (see 10 CSR 22-1.020(2)). The owners of agricultural dams and reservoirs over thirty-five feet (35') in height must notify the council of their reliance on this exemption and their basis for application of this exemption to their dams. If an agricultural dam and reservoir is constructed after the effective date of the law, but subsequently becomes subject to the provisions of the law, the owner shall provide, prior to obtaining a registration permit, evidence that the dam meets the construction permit criteria in effect at the time the dam was constructed.

(4) Dams and reservoirs licensed and operated under the Federal Power Act are exempted from all permit requirements.

(5) Dams and reservoirs that were designed by and the construction monitored by an agency engineer (see 10 CSR 22-1.020(1)) do not need a construction permit but a set of plans shall be filed with the chief engineer prior to the initiation of any construction activity. These dams and reservoirs are required to have a registration or safety permit subsequent to construction.

(6) Industrial water retention dams (see 10 CSR 22-1.020(27)) and reservoirs regulated by another state agency or federal agency are exempted from all permit requirements. For the exemption to apply, the industrial water retention dam and reservoir must be subject to safety inspections by the other state agency or federal agency and standards used must be at least as stringent as those required by the law. In addition, the owner must notify the council that another agency is regulating his/her dam and reservoir and explain the basis for the exemption to apply.

*AUTHORITY: sections 236.400, 236.415, 236.435, 236.440 and 236.465, RSMo 1986 and 236.405, RSMo Supp. 1993.\* Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985. Amended: Filed Sept. 1, 1993, effective May 9, 1994.*

*\*Original authority: 236.400, 236.415, 236.435, 236.440 and 236.465, RSMo 1979 and 236.405, RSMo 1979, amended 1993.*

10 CSR 22-2.020 Types of Permits

*PURPOSE: This rule describes the three types of permits and their uses that the Dam and Reservoir Safety Council will issue.*

(1) There are three (3) types of permits—registration permits, construction permits and safety permits and each one is intended to regulate a separate and distinct type of activity. A dam and reservoir will have only one (1) type of permit in effect at any given time although they may have more than one (1) type of permit during their existence.

(2) Registration permits (see 10 CSR 22-1.020(44)) apply to and are required for the continued operation of a dam and reservoir that was in existence or in the process of being constructed on the effective date of this section, August 13, 1981. A registration permit also applies to and is required for structures which become subject to the provisions of the dam and reservoir safety law that were in existence prior to the date that they became subject to the law. Registration permits may be issued for a time period up to five (5) years. The owner of a dam and reservoir on the effective date of the law shall obtain his/her first registration permit in accordance with the height of his/her dam. For dam heights of thirty-five feet (35') to less than fifty feet (50'), fifty feet to seventy feet (50'–70') and over seventy feet (70'+'), the maximum time to obtain the first registration permit is respectively within nine (9) years,

four (4) years and two (2) years from the effective date of this section, August 13, 1981.

(3) Construction permits (see 10 CSR 22-1.020(8)) apply to the construction of a new dam and reservoir, the alteration, enlargement, reduction, repair or removal of a new or existing dam, reservoir or appurtenances. New dams are dams for which construction commences after the effective date of this section, August 13, 1981. For dams which were under construction on August 13, 1981, construction must be completed by August 13, 1987 or the owner will be required to obtain a construction permit. If completed prior to August 13, 1987, the owner will be required to obtain a registration permit as outlined in 10 CSR 22-2.020(2). A construction permit may be issued for any reasonable length time period required to complete construction and it may contain appropriate restrictions placed on the owner for construction and operation of the dam and reservoir during that period. At the conclusion of construction, a safety or registration permit shall be obtained by the owner.

(4) Safety permits (see 10 CSR 22-1.020(48)) apply to the operation of a dam and reservoir constructed pursuant to a construction permit. The safety permit is not a guarantee of the dam and reservoir's safety and does not alter the owner's liability; it is simply an operating permit. If a dam and reservoir were not subject to the provisions of the law when they were constructed but subsequently become subject to the provisions of the law, the owner shall obtain a registration permit, not a safety permit. Safety permits may be issued for a time period up to five (5) years, and they may contain appropriate conditions for the operation and safety of the dam and reservoir.

*AUTHORITY: sections 236.400, 236.415, 236.435, 236.440 and 236.465, RSMo 1986 and 236.405, RSMo Supp. 1993.\* Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985. Amended: Filed May 15, 1987, effective Sept. 15, 1987.*

*\*Original authority: 236.400, 236.415, 236.435, 236.440 and 236.465, RSMo 1979 and 236.405, RSMo 1979, amended 1993.*

### 10 CSR 22-2.030 Types of Dams and Reservoirs

*PURPOSE:* This rule describes the two fundamentally different types of dams and reservoirs that will be required to obtain permits from the Dam and Reservoir Safety Council.

(1) There are two (2) types of dams and reservoirs, conventional dams and reservoirs and industrial water retention dams and reservoirs. The two (2) types of dams and reservoirs are distinguished on the basis of their reservoir contents and the length of the time period during which active dam building occurs.

(2) Conventional dams and reservoirs (see 10 CSR 22-1.020(9)) are dams and reservoirs used for purposes other than tailings, slime, settling or other similar industrial water retention purposes. A conventional dam is constructed in one (1) relatively continuous operation over a short time span (compared to the design life of the reservoir). Filling and use of the reservoir occurs after construction is completed.

(3) Industrial water retention dams and reservoirs (see 10 CSR 22-1.020(27)) are dams and reservoirs used for the purpose of storing solids and the water associated with the particular industrial process such as tailings, slime and other similar industrial materials. An industrial water retention dam may be constructed in phases and steps or continuously, over a long period of time (compared to the design life of the reservoir). Filling and use of the reservoir may occur during most phases of construction. An industrial water retention dam and reservoir in existence or under construction on the effective date of 10 CSR 22-2.020(2), August 13, 1981, shall obtain a registration permit which may include approval to make enlargements. The owner of any such dam and reservoir shall apply for and obtain new construction and/or registration permits for any modifications to that dam and reservoir other than enlargements covered by an existing permit. A construction permit is required and shall be obtained by the owner, for the initial construction phase of any new industrial water retention dam and reservoir built after the effective date of 10 CSR 22-2.020(3), August 13, 1981. Upon completion of the initial construction phase, the owner shall apply for a safety permit for the operation and enlargement of the new dam and reservoir.

*AUTHORITY:* sections 236.405, RSMo Supp. 1993 and 236.415, 236.435, 236.440 and

236.465, RSMo 1986.\* Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985.

\*Original authority: 236.405, RSMo (1979), amended 1993 and 236.415, 236.435, 236.440 and 236.465, RSMo (1979).

### 10 CSR 22-2.040 Classes of Downstream Environment

*PURPOSE:* This rule describes the three environmental classes for the downstream environmental zone that will be used by the Dam and Reservoir Safety Council when considering permits.

(1) The downstream environment zone is the area downstream from a dam that would be affected by inundation in the event the dam failed. Inundation is defined as water, two feet (2') or more deep over the general level of the submerged ground affected outside the stream channel. Based on the content of the downstream environment zone, three (3) environmental classes are defined. They are: class I, which contains ten (10) or more permanent dwellings or any public building; class II, which contains one to nine (1-9) permanent dwellings, or one (1) or more campgrounds with permanent water, sewer and electrical services or one (1) or more industrial buildings; and class III, which is everything else.

(2) Spillway design standards are based on the environmental class of the downstream environment zone of a dam and reservoir. The standards become more stringent for lower environmental class numbers. If conditions change in the downstream environment zone and it becomes necessary to change the environmental class of the dam and reservoir, the owner must then meet the standards and criteria for the new environmental class of the dam and reservoir. A dam and reservoir may be in only one (1) environmental class at a given time.

(3) Inundation, the downstream environmental zone and the associated environmental class are analyzed, assuming the dam fails with the reservoir at the emergency spillway crest elevation or the dam crest elevation in the absence of an emergency spillway. If the spillway standards for class I are used, the failure analysis does not have to be performed. If a failure analysis is made, the contents of the downstream environment zone used to determine the environmental class are

only the features that would be inundated by the flooding resulting from the dam failure.

*AUTHORITY:* sections 236.405, RSMo Supp. 1993 and 236.415, 236.435, 236.440 and 236.465, RSMo 1986.\* Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985.

\*Original authority: 236.405, RSMo 1979, amended 1993 and 236.415, 236.435, 236.440 and 236.465, RSMo 1979.

### 10 CSR 22-2.050 Issuing First Permit

*PURPOSE:* This rule describes the procedure for issuing the first permit to a dam and reservoir owner for a particular dam and reservoir.

(1) A permit will be issued or a letter will be sent to the owner with comments within forty-five (45) days after the receipt of a properly prepared application or after the completion of any hearings or record period conducted by the council in connection with the application, whichever is later. The council, upon hearing the recommendations of the chief engineer, shall approve or deny the permit application.

(2) A permit will be issued if a complete and proper application has been submitted and the dam and reservoir comply with the law.

(A) A registration permit may be denied if it is determined that the owner has not complied with the experienced professional engineer's or agency engineer's inspection recommendations.

(B) A construction permit may be denied if there is insufficient information to determine that the proposed construction, alteration, enlargement, reduction or removal of a dam or reservoir would not endanger public safety, life or property or otherwise would comply with the law.

(C) A safety permit may be denied if it is determined that there are violations of the construction permit or the law.

(D) If revisions have been made which vary substantially from the provisions of the construction permit, the owner must show that the revisions do not endanger public safety, life or property before a safety permit will be issued.

(3) Conditions contained in a construction permit shall include that the construction work must be under the responsible charge of an experienced professional engineer and the records be kept and made available as

required by the chief engineer including, without limitation, for the foundation excavation and inspection and placement of backfill in the core trench. It is not necessary for the engineer in responsible charge to be on-site continuously. During construction, the council or its delegate, the chief engineer, may make periodic site inspections the purpose of inspecting and securing conformity of construction with the approved plans and specifications and the owner shall permit, upon reasonable notice, the person entry upon its property to make such inspections. The owner may be required to perform, at its own expense, reasonable work or tests as are necessary to provide sufficient information to enable the council to determine that there is conformity. Usually, testing will be limited to verification of embankment compaction, concrete strengths and other similar requirements. It is expected that the tests will be required where the owner's inspection records are lacking.

(4) Any significant modifications from a construction permit or approved plans makes the permit void and requires the owner to obtain a new permit. Significant modification to the plans and specifications must be prepared by an experienced professional engineer. The council or its delegate will follow the same evaluation procedures for the modifications as used with issuance of the original construction permit. Special attention will be given to these modification requests to provide a quick decision.

(5) The owner of a dam and reservoir that is removed under a construction permit must notify the council or its delegate when this work is completed and in conformity with the provisions of the construction permit. The council or its delegate will then issue a final approval to relieve the owner of the requirement to have a permit upon a showing that the requirements of the law for removal have been satisfied.

(6) Approval by the council for a construction permit becomes invalid within one (1) year, unless work on the construction has begun within that period, except that the owner may be excused from beginning work for a period of time that the work is prevented by flood, shortage of materials or regulation of government which cannot be met for reasons over which the owner has no control or other causes beyond the owner's control. The same applies to construction of approved modifications contained in the conditions of a registration or safety permit for industrial water

retention dams unless the conditions specify a different time schedule.

**AUTHORITY:** sections 236.400, 236.415, 236.435, 236.440 and 236.465, RSMo 1986 and 236.405, RSMo Supp. 1993.\* Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985.

\*Original authority: 236.400, 236.415, 236.435, 236.440 and 236.465, RSMo 1979 and 236.405, RSMo 1979, amended 1993.

#### 10 CSR 22-2.060 Issuing Permit Renewals

**PURPOSE:** This rule describes the procedure for renewing a permit.

(1) The owner of a permitted dam and reservoir must apply for the renewal of the permit not less than sixty (60) days prior to expiration of that permit. Before any permit may be renewed, the chief engineer must determine that the dam and reservoir are essentially as described in the latest permit and approved plans; they satisfy the law; and that no inspection conducted in connection with the permit renewal reveals any defect which would threaten public safety, life or property. The council, or its delegate will issue another permit within forty-five (45) days of the receipt of a complete and proper application unless it is determined that the dam and reservoir are not as described in the latest permit and approved plans; not properly maintained; do not satisfy the law; or that the defects are not corrected.

(2) The council may require the owner to furnish a certification by an experienced professional engineer or an agency engineer that the dam and reservoir are as described in the latest permit and approved plans; are properly maintained; satisfy the law; and have all defects corrected.

**AUTHORITY:** sections 236.405, RSMo Supp. 1993 and 236.415, 236.440 and 236.465, RSMo 1986.\* Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985.

\*Original authority: 236.405, RSMo 1979, amended 1993 and 236.415, 236.440 and 236.465, RSMo 1979.

#### 10 CSR 22-2.070 Modifications not Requiring Permit Changes (Rescinded January 1, 1985)

**AUTHORITY:** sections 236.405, 236.415, 236.435, 236.440, and 236.465, RSMo

Supp. 1980. Original rule filed April 14, 1981, effective Aug. 13, 1981. Rescinded: Filed June 14, 1984, effective Jan. 1, 1985.

#### 10 CSR 22-2.080 Revoking Permit

**PURPOSE:** This rule describes the reasons for revoking a permit.

(1) Approval of the council or its delegate, the chief engineer, shall be obtained for modifications that substantially alter or adversely affect the safety or stability of the dam or reservoir. Modifications, without the approval of the council or its delegate, the chief engineer, are cause for suspension or revocation of any permit. If the chief engineer finds that the condition of the dam and reservoir has deteriorated substantially from those conditions present when the permit was issued, or that has defects which adversely affect the safety or stability of the dam and reservoir or threatens public safety, life or property, s/he shall revoke the permit. If a permit is suspended or revoked, the dam owner will be in violation of the law and may be subject to prosecution for a misdemeanor.

(2) If the chief engineer determines that a dam or reservoir constitutes a threat to public safety, life or property, s/he may order its removal or take any other actions necessary to reduce or eliminate the threat. Failure of a dam owner to alter or remove his/her dam and reservoir as directed, when it is found to be a threat to public safety, life or property, will result in revocation of the permit and, if necessary, removal of the dam or any other action necessary to reduce or eliminate the threat to public safety, life or property by the state at the owner's expense.

**AUTHORITY:** sections 236.405, RSMo Supp. 1993 and 236.415, 236.445, 236.495 and 236.500, RSMo 1986.\* Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985.

\*Original authority: 236.405, RSMo 1979, amended 1993 and 236.415, 236.445, 236.495 and 236.500, RSMo 1979.

#### 10 CSR 22-2.090 Transferring Permit

**PURPOSE:** This rule describes the procedure for transferring a permit when ownership changes.

(1) Permits issued pursuant to 10 CSR 22-2.050 and 10 CSR 22-2.060 are transferable only as provided in section 236.460, RSMo.

If ownership or other transfer of interest in the dam and reservoir changes, the former owner must notify the chief engineer of the sale or transfer and the permit will be transferred to the new owner after determination that the transfer will not endanger the public safety, life, property, the dam or reservoir. The permit holder of record will be held responsible for maintaining compliance with these rules and standards. If the former owner does not have the permit transferred, the new owner may submit the appropriate application and documents necessary to obtain a new permit. The new owner, in this case, must also show proof of ownership. The old owner's responsibilities of ownership under the law will not be extinguished until the permit is transferred to an eligible owner. Nothing in these regulations shall be construed to eliminate the liability of the previous owner for damages or injuries caused by a dam failure, nor a new operator who has not obtained a permit nor had an existing permit transferred to his/her name.

*AUTHORITY: sections 236.405, RSMo Supp. 1993 and 236.415, and 236.460, RSMo 1986.\* Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective, Jan. 1, 1985.*

*\*Original authority: 236.405, RSMo 1979, amended 1993 and 236.415 and 236.460, RSMo 1979.*

#### 10 CSR 22-2.100 Appeal of Action on Permits

*PURPOSE: This rule describes the procedure for appealing the results of any action taken with regard to a permit.*

(1) Permits revoked or denied are subject to council appeal. All parties shall be afforded an opportunity for hearing before the council for review of denial or revocation decisions, if request is made within thirty (30) days after notice is served personally or by certified or registered mail upon the parties or their agents. Except for emergency action, further legal action shall not be taken until after the hearing and council decision.

(2) The record of hearing shall include all written testimony, data, records, etc., as well as all oral proceedings recorded stenographically or by other means that will preserve the testimony. Rules of discovery, evidence and privilege as applied in civil cases in the circuit courts shall be followed.

(3) A final decision will be in writing, and the party or its agents will be notified per-

sonally or by registered or certified mail of the final decision. A copy of any opinion in support of this decision will be furnished upon request. Decisions are subject to judicial review pursuant to provisions of section 236.480, RSMo.

*AUTHORITY: sections 236.405, RSMo Supp. 1993 and 236.415, 236.425, 236.440, 236.445, 236.470 and 236.480, RSMo 1986.\* Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985.*

*\*Original authority: 236.405, RSMo 1979 amended 1993 and 236.415, 236.425, 236.440, 236.445, 236.470 and 236.480, RSMo 1979.*

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Rules of  
**Department of Natural Resources**  
Division 22—Dam and Reservoir Safety Council  
Chapter 3—Permit Requirements

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Title 10—DEPARTMENT OF  
NATURAL RESOURCES  
Division 22—Dam and Reservoir  
Safety Council  
Chapter 3—Permit Requirements

## 10 CSR 22-3.010 General Information

*PURPOSE: The purpose of this rule is to provide general information about permit requirements.*

(1) Requirements for existing or proposed dams and reservoirs must allow for variations in conditions and materials from site-to-site. Therefore, this rule and 10 CSR 22-3.020—10 CSR 22-3.050 describe the minimum general requirements which are consistent with current engineering, geologic, construction, operation and maintenance practices, necessary to obtain permits from the Dam and Reservoir Safety Council.

(2) These rules are not intended to define the only requirements for a dam and reservoir to comply with the law or sound engineering, geologic and construction practices, to be used in detailed site investigation or in the specific design and construction of individual dams. The detailed and specific information that outlines current and prudent engineering, geologic and construction practices is available in technical literature. Determinations by the Dam and Reservoir Safety Council, after hearing the recommendations of the chief engineer of the acceptability of a design and adequacy of plans, specifications and construction must be made, by necessity, on a case-by-case basis. Therefore, it is recommended that applicants unfamiliar with the way these rules are applied contact the council or the chief engineer prior to commencing extensive work or plan development.

(3) Adherence to the law does not guarantee the safety of any dam or reservoir or relieve the owner of any liability in the event of dam failure.

(4) A permit application form along with a copy of the laws, rules, standards and guidelines relating to dam and reservoir safety can be obtained free from the Department of Natural Resources, Division of Geology and Land Survey, Dam Safety Program, P.O. Box 250, Rolla, MO 65401. Persons seeking this and/or other information on dams in Missouri should address their inquiry to the chief engineer.

*AUTHORITY: sections 236.400, 236.405, 236.415, 236.435, 236.440 and 236.465,*

*RSMo 1986.\* Original rule filed April 14, 1981, effective Aug. 13, 1981.*

*\*Original authority: 246.400, RSMo 1979; 236.405, RSMo 1979, amended 1993, 1995; 236.415, RSMo 1979, amended 1995; 236.435, RSMo 1979; 236.440, RSMo 1979; and 236.465, RSMo 1979.*

## 10 CSR 22-3.020 General Requirements

*PURPOSE: The purpose of this rule is to itemize the basic requirements and standards that apply to all permits.*

(1) The permit application must contain information required by the council and the chief engineer including, but not limited to, the following information: type of permit being applied for; name of owners; mailing address of owners; telephone number(s) of owners; name of dam; name of reservoir; coordinate location of the dam centerline at the maximum section; purpose or use of dam and reservoir; name, address and telephone number of the experienced professional engineer or agency engineer who has provided or will provide required technical assistance; and the downstream environment zone environmental class for the dam and reservoir. The owners must complete all applicable investigations required in 10 CSR 22-3.0202—10 CSR 22-3.050 before filing a permit application. All permit applications must be filed with the chief engineer at the address listed in 10 CSR 22-3.010(4).

(2) The owner must provide a determination of an environmental class for each dam and reservoir. The method, data and assumptions used by the owner to determine environmental class shall conform to practices reputable and in current use in the engineering, geologic and construction professions or the chief engineer may reject the owner's classification. If an owner chooses not to have this done by an experienced professional engineer or an agency engineer, the chief engineer will assign the dam and reservoir to environmental class I or s/he may assign the dam and reservoir to another environmental class if s/he has justification to do so.

(3) The anticipated consequences of a dam failure with respect to public safety, life and property damage are important considerations in establishing acceptable methods for specific investigations and sites. Methods used in exploration design, construction and maintenance must be in accordance with good engineering practices reputable and in current use in the engineering, geologic and construction professions.

(4) When the owner is applying for a construction permit, the required design factors of safety for slope stability for earth and rock conventional dams which are given in Table 1 shall be met. The required design factors of safety for concrete conventional dams are given in Table 2. The required design factors of safety for slope stability for industrial water retention dams are given in Table 3. Owners shall meet these requirements in the design of new dams prior to the issuance of the permit. Owners shall also meet these requirements when substantial changes are proposed to the height or slope of an existing conventional dam or structure prior to the issuance of the construction permit (see the following tables).

(5) For new dams constructed wholly or partially of cohesionless materials (such as sands and silts) or having a foundation of cohesionless materials, earthquake loading may result in the build-up of pore water pressures and a loss of strength. Engineers shall take this pore pressure increase and loss of strength into account when performing their stability analysis, but the degree to which liquefaction may affect the factor of safety for slope stability shall be left up to the engineer's best judgment. Bedrock accelerations and earthquake intensities are listed in Table 4.

(6) New dams constructed wholly of cohesive materials (such as clays) and having a foundation of cohesive materials or rock, can be expected to withstand significant earthquake shaking if it can be shown that other required design factors of safety for slope stability are met. Therefore, only new dams located in Bollinger, Butler, Cape Girardeau, Dunklin, Mississippi, New Madrid, Pemiscot, Ripley, Scott, Stoddard and Wayne Counties must meet the requirements for slope stability during earthquake loading while dams located in other counties do not unless 10 CSR 22-3.030(5) applies to them. Bedrock accelerations and earthquake intensities are listed in Table 4.

Table 1—Required Design Factors of Safety for Slope Stability Earth and Rock Conventional Dams

Loading Condition	Factor of Safety
End of construction, full reservoir*	1.4
Steady seepage, full reservoir*	1.5
Steady seepage, maximum reservoir**	1.3
Sudden draw down, from full to empty reservoir (if applicable)	1.2
Earthquake***, steady seepage, full reservoir*	1.0

\*Full reservoir means water level is at the water storage elevation.

\*\*Maximum reservoir means water level is at maximum water level attained during the spillway design flood or at the dam crest elevation, whichever is lower.

\*\*\*Earthquake loading will vary according to dam location in relation to seismic source zones and downstream environmental zones. (See Table 4).

Table 2—Required Design Factors of Safety Concrete Conventional Dams

Failure Mode	Loading Condition	Factor of Safety
Overturning	full reservoir*	1.5
	maximum reservoir**	1.3
Sliding	full reservoir*	1.5
	maximum reservoir**	1.3
Structural integrity	full reservoir*	1.5
	maximum reservoir**	1.3
Earthquake*** any mode	full or maximum reservoir* & **	1.0

\*Full reservoir means water level is at the water storage elevation.

\*\*Maximum reservoir means water level is at maximum level attained during the spillway design flood.

\*\*\*Earthquake loading will vary according to dam location in relation to seismic source zones and downstream environmental zones. (See Table 4).

Table 3—Required Design Factors of Safety for Slope Stability Industrial Water Retention Dams

Loading Condition	Factor of Safety
Starter dam, end of construction, full reservoir*	1.4
Any other stage of construction, full reservoir*, steady seepage	1.3
Any other stage of construction, maximum reservoir*, steady seepage	1.0
Completed dam, full reservoir*, steady seepage	1.5
Completed dam, maximum reservoir**, steady seepage	1.3
Earthquake***, steady seepage, full reservoir*	1.0

\*Full reservoir means water level is at the water storage elevation.

\*\*Maximum reservoir means water level is at the maximum level attained during the spillway design flood or at the dam crest elevation, whichever is lower.

\*\*\*Earthquake loading will vary according to dam location in relation to seismic source zones and downstream environmental zones. (See Table 4).

(7) The required spillway design flood, which shall allow for flood storage in the reservoir, is to be derived by using the precipitation values given in Table 5 and shall apply to both new and existing dams.



Table 4—Required Design Acceleration For Earthquake Design

Dam Type	Stage of Construction	Special Descriptions	Environmental Class			
			I	II	III	
Conventional or Industrial	Completed	New dams less than 50 feet in height	.75PMA*	.5PMA*	.25PMA*	
		New dams greater than 50 feet in height**	.75PMA*	.5PMA*	.4PMA*	
Industrial	Starter dam	New dams**	.5PMA*	.2PMA*	.1PMA*	
	dam is completed	After starter dam is finished and before final New dams**	.75PMA*	.5PMA*	.2PMA*	
	<b>Zone</b>	<b>PMA*</b>	<b>Intensity**</b>			
	A	0.31 g	IX—X			
	B	0.28 g	IX			
	C	0.26 g	VIII—IX			
	D	0.23 g	VIII			
	E	0.20 g	VII—VIII			
	F	0.17 g	VII			
<b>ZONE A</b>	<b>ZONE B</b>	<b>ZONE C</b>	<b>ZONE D</b>	<b>ZONE E</b>	<b>ZONE E (cont.)</b>	<b>ZONE F</b>
Dunklin	Bollinger	Carter	Crawford	Audrain	Lewis	Adair
Mississippi	Butler	Howell	Dent	Barry	Lincoln	Andrew
New Madrid	Cape Girardeau	Iron	Douglas	Barton	Linn	Atchison
Pemiscot	Ripley	Madison	Franklin	Bates	Livingston	Buchanan
	Scott	Oregon	Jefferson	Benton	McDonald	Clay
	Stoddard	Perry	Ozark	Boone	Macon	Clinton
	Wayne	Reynolds	Phelps	Caldwell	Maries	Davis
		St. Francois	Pulaski	Callaway	Marion	Dekalb
		Ste. Genevieve	St. Louis	Camden	Miller	Gentry
		Shannon	St. Louis City	Carroll	Moniteau	Grundy
			Taney	Cass	Monroe	Harrison
			Texas	Cedar	Montgomery	Holt
			Washington	Chariton	Morgan	Mercer
			Wright	Christian	Newton	Nodaway
				Clark	Osage	Platte
				Cole	Pettis	Putnam
				Cooper	Pike	Schuyler
				Dade	Polk	Sullivan
				Dallas	Ralls	Worth
				Gasconade	Randolph	
				Greene	Ray	
				Henry	St. Charles	
				Hickory	St. Clair	
				Howard	Saline	
				Jackson	Scotland	
				Jasper	Shelby	
				Johnson	Stone	
				Knox	Vernon	
				Laclede	Warren	
				Lafayette	Webster	
				Lawrence		

\* PMA is Probable Maximum Acceleration of bedrock which is determined as a fraction of the acceleration of gravity (g = 32.2 fps<sup>2</sup>) for the six zones in Missouri (see 10 CSR 22-1.020(41)).

\*\* See 10 CSR 22-2.020(3) for clarification.

\*\*\* Modified Mercalli Intensity.



Table 5—Required Spillway Design Flood Precipitation Values

Dam Type	Stage of Construction	Special Descriptions	Environmental Class		
			I	II	III
Conventional or Industrial	Completed	Any existing dam**	.75PMP*	.5PMP*	100 Yr.****
	New dam less than 50 feet in height***		.75PMP*	.5PMP*	100 Yr.****
	New dam greater than 50 feet in height		.75PMP*	.5PMP*	100 Yr.*****
Industrial	Starter dam	Any	.5PMP*	.2PMP*	.1PMP*
	After starter dam is finished and before final dam is completed	Any	.75PMP*	.5PMP*	.2PMP*

\*PMP is Probable Maximum Precipitation.

\*\*Existing dam means a dam which was completed by August 13, 1981 or which was started prior to August 13, 1981 and completed by August 13, 1987.

\*\*\*See 10 CSR 22-2.020(3) for clarification.

\*\*\*\*100 Yr. is the 100 year frequency rainfall event.

*AUTHORITY:* sections 236.400, 236.405, 236.415, 236.435, 236.440 and 236.465, RSMo 1986.\* Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985. Amended: Filed Aug. 15, 1988, effective Jan. 1, 1989. Amended: Filed May 15, 1990, effective Nov. 30, 1990.

\*Original authority: 236.400, RSMo 1979; 236.405, RSMo 1979, amended 1993, 1995; 236.415 RSMo 1979, amended 1995; 236.435, RSMo 1979; 236.440, RSMo 1979; and 236.465, RSMo 1979.

### 10 CSR 22-3.030 Registration Permit Requirements

*PURPOSE:* The purpose of this rule is to itemize the requirements for a registration permit.

(1) In addition to the basic requirements for all permits listed in 10 CSR 22-3.020(1), (2), (3) and (7), the registration permit application for a conventional dam and reservoir must include certification by an experienced professional engineer or an agency engineer that the dam and reservoir have been inspected in accordance with the law and that the owner has compiled engineer's recommendations to correct the observed defects and an inspection report, as required by the law. The engineer must further show that the spillway can safely pass the spillway design flood derived from Table 5 and submit a report describing the correction of all observed defects and the description of an operation and maintenance program to be followed while the registration permit is in effect.

(A) The inspection of a dam and reservoir for a registration permit is intended to detect observable defects. The procedure to determine observable defects normally will be a surface examination by an experienced professional engineer or an agency engineer. The inspection must include all surface examinations necessary to determine if observable defects exist that affect the stability of the dam and reservoir or the adequacy of the spillway. Judgment of the structural stability and an evaluation of the spillway capacity must be made. Judgment shall be based upon the engineer's experience, training and knowledge of similar dams and in accordance with practices reputable and in current use in the engineering, geologic and construction professions.

1. Observed defects which may require correction, evaluated on the basis of current engineering, geologic and construction practices, include but are not limited to: slides; slopes as steep as or steeper than those on

similar types of dams and constructed of similar materials which have experienced slope stability problems; piping of fines; seepage that exits in an uncontrolled fashion on the downstream slope of or from the downstream foundation of the dam; unusual zones of softness and irregular settlement; erosion on the upstream or downstream slope of the dam; spillways that are calculated to be inadequate for the design flood; spillways that are eroded or otherwise in poor condition and cracks in the embankment or structure.

2. Observed defects that are in an advanced state of deterioration must be immediately reported by the inspecting engineer to the owner and to the chief engineer.

(B) Proper maintenance and operation of a dam and reservoir are critical to the continuing safety of a dam and reservoir and to public safety, life and property. A maintenance program shall be required and shall include the following items: erosion control on the embankment; monitoring emergency spillway flow rates; vegetation control; spillway maintenance; emergency action plans; maintenance and monitoring of seepage observation devices, if any; and maintenance and monitoring of instruments used, if any, to observe the stability of the dam.

(C) Visits for the purpose of observation of maintenance and operation may be made by the council, the chief engineer or a member of the chief engineer's staff. Visits will be at any reasonable time following reasonable notice, except that in the case of an emergency threatening public safety, life or property, no notice shall be required and inspection may be at any time. Owners shall permit entry to its property for persons to perform the inspections.

(D) The application need not state, nor is it necessary to show, that the dam is a safe dam. The intent of the registration permit is to show that the dam is performing adequately and that there are no observable indications that the dam is unsafe.

(2) In addition to the basic requirements for all permits listed in 10 CSR 22-3.020(1), (2), (3) and (7), the registration permit application for an industrial water retention dam and reservoir shall include certification by an experienced professional engineer or an agency engineer that the dam and reservoir have been inspected in accordance with the law and that the owner has complied with the engineer's recommendations to correct observed defects and an inspection report, as required by the law. The engineer must further show that the spillway can safely pass the spillway design flood derived from Table 5 and submit a report describing the correction

of any observed defects, the operation and maintenance program to be made a part of the registration permit and the phased, stepped and/or continuous construction of the dam.

(A) The inspection of an industrial water retention dam and reservoir for a registration permit is intended to detect observable defects. The procedure to determine observable defects normally will be a surface examination by an experienced professional engineer or an agency engineer. The inspection must include all surface examinations necessary to determine if observable defects exist that affect the stability of the dam and reservoir or the adequacy of the spillway. Judgment of the structural stability and an evaluation of the spillway capacity must be made. Judgment shall be based upon the engineer's experience, training and knowledge of similar dams and in accordance with practices reputable and in current use in the engineering, geologic and construction professions.

1. Observed defects which may require correction, evaluated on the basis of current engineering, geologic and construction practices, include but are not limited to slides; slopes as steep as or steeper than those on similar types of dams and constructed of similar materials which have experienced slope stability problems; piping of fines; seepage that exits in an uncontrolled fashion on the downstream slope of or from the downstream foundation of the dam; unusual zones of softness and irregular settlement; erosion on upstream or downstream slope of the dam; spillways that are calculated to be inadequate for the design flood; spillways that are eroded or otherwise in poor condition and cracks in the embankment or structure.

2. Observed defects that are in an advanced state of deterioration must be immediately reported by the inspecting engineer to the owner and to the chief engineer.

(B) Proper maintenance and operation of a dam and reservoir are critical to the continuing safety of a dam and reservoir and the protection of public safety, life and property. A maintenance program shall be required and shall include the following items: erosion control on the embankment; monitoring of storm runoff; vegetation control; spillway maintenance; emergency action plans; maintenance and monitoring of seepage observation devices, if any; and maintenance and monitoring of instruments used, if any, to observe the stability of the dam.

(C) The council or chief engineer may require the owner to submit a report describing the phased, stepped and/or continuous construction of an industrial water retention dam and reservoir, containing information on

the materials used, method of transport and placement of materials, the sequence and placement location of materials, spillway changes to be made, the anticipated final dimensions and configuration of the dam and the name, address and telephone number of the person(s) in responsible charge of this work.

(D) Visits for the purpose of inspecting during construction or enlargement or observation of maintenance and operation may be made by the council, the chief engineer or a member of the chief engineer's staff. Visits will be at any reasonable time following reasonable notice, except that in the case of an emergency threatening public safety, life or property, no such notice shall be required and inspection may be made at any time. Owners shall permit entry to its property for persons to perform inspection.

(E) It shall not be necessary for the owner to retain an experienced professional engineer or an agency engineer continuously during the entire permit period unless there is modification(s) in the construction method described in the permit application. However, personnel with adequate supervision and training in methods of safe construction, maintenance and operation of dams must be provided to insure that the construction maintenance and operation of the dam and reservoir are carried out as described.

(F) The registration permit will be the only permit required for an industrial water retention dam and reservoir that was in existence prior to the effective date listed in 10 CSR 22-2.020(2) unless it is to be reduced or removed. If the dam or reservoir is to be reduced or removed, a construction permit will be required. Other changes will require the owner to obtain a new registration permit.

(G) The applicant need not state, nor is it necessary to show, that the dam is a safe dam. The intent of the registration permit is to show that the dam is performing adequately and that there are no readily observable indications that the dam is unsafe and that phased, stepped and/or continuous construction of the dam will meet the requirements of the law.

*AUTHORITY: sections 236.400, 236.405, 236.415, 236.420, 236.425, 236.440 and 236.465, RSMo 1986. \* Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985.*

*\*Original authority: 236.400, RSMo 1979; 236.405, RSMo 1979, amended 1993, 1995; 236.415, RSMo 1979, amended 1995; 236.420, RSMo 1979; 236.425, RSMo 1979; 236.440, RSMo 1979; and 236.465, RSMo 1979.*

#### 10 CSR 22-3.040 Construction Permit Requirements

*PURPOSE: The purpose of this rule is to itemize the requirements for a construction permit.*

(1) In addition to the basic requirements for all permits listed in 10 CSR 22-3.030, the construction permit application for a conventional dam and reservoir shall be prepared under the direction of and certified by an experienced professional engineer and shall be in accordance with practices reputable and appropriate in the engineering, geologic and construction professions.

(A) The following requirements shall apply to and the following information shall be provided by the owner:

1. Up-to-date topographic map(s) showing the location of the proposed or existing dam, the upstream watershed, the reservoir and the downstream environment zone. The topographic map(s) of the project area must be at a scale appropriate to the size of the project area. An up-to-date United States Geological Survey topographic map is considered a minimum;

2. Exploration records and results including the location of all exploration, especially in the area of the core trench, the method(s) used to explore the site, a record of what was found, the method(s) used to obtain samples and the number of samples taken;

3. Testing records and results including information on the care and treatment of samples, types of tests performed on samples or in situ, reference(s) to or the procedures used in testing and the test results. Physical and mechanical properties of foundation and construction materials must include the information source for these values especially if they are not the results of testing;

4. The geotechnical design procedure(s) or method(s) shall be identified and referenced or described so that they may be reviewed and the applicability verified. This shall include all assumptions made. The geotechnical procedure(s) or design results shall include the minimum computed factors of safety and they must meet or exceed the required design factors of safety (see 10 CSR 22-3.020(4)). The geotechnical design information shall be presented for the foundation, core trench and dam embankment. Earthquake loading must be analyzed as outlined in 10 CSR 22-3.020(5) and (6);

5. The structural design procedure(s) or method(s) shall be identified and referenced or described so that they may be reviewed and their applicability verified. Design results for concreted dams and concrete

structures appurtenant to embankment dams shall provide for and show an adequate factor of safety for normal and maximum loading conditions of compression, tension, shear, torsion, buckling, sliding and overturning;

6. Hydrologic information used to evaluate the watershed, reservoir, spillway and downstream environment zone including the watershed area, rainfall rate and duration, antecedent moisture conditions, time of concentration, area capacity curves, description of spillway elevation(s), type(s), dimensions, locations, cross section and profiles, dam crest elevation and the downstream valley cross sections;

7. The hydrologic/hydraulic design procedure(s) or method(s) used shall be identified and referenced or described so that they may be reviewed and their applicability verified. This shall include all assumptions made. The hydrologic/hydraulic procedure(s) or design results shall include the reservoir inflow hydrograph, the reservoir outflow hydrograph, the spillway discharge capacity, the freeboard at the maximum water storage elevation and the environmental class of the dam. The dam shall be capable of safely containing or discharging the required design flood (see 10 CSR 22-3.020(5));

8. Location and design of diversion channels or other structures to control stream flow during or after construction shall be provided if failure of these channels or other structures would affect hydrologic conditions of the dam. Stream diversion systems used during construction shall be designed to provide protection to the dam and the safety of the public;

9. Construction control and inspection procedures shall be used during the construction of a new dam and reservoir or modification of an existing dam and reservoir. Construction control and inspection procedures should include compaction testing and density testing;

10. Procedures shall be used for record-keeping and monitoring throughout the construction or modification process to provide information about any construction progress and conditions that may cause difficulties during construction;

11. The location of and protective measures used in conjunction with all drain lines, sewer lines, utilities or other structures that pass through or under the dam;

12. Topographic surveys showing the location of baselines, centerlines and other horizontal and vertical control points sufficiently accurate to locate the proposed construction and to define the volume of storage in the reservoir;



13. Two (2) sets of plans and specifications including—

A. Graphic scales shall be provided for all scaled drawings;

B. The title, which shall be identical on the plans and the specifications, shall include: the name of the dam; the name of the owner; whether the work shows an existing dam, a proposed dam or an enlargement, repair or alteration of the dam or reservoir; the county(ies) the dam and reservoir are in; the location of the dam by quarter section, section, township and range or by geodetic coordinates; and each sheet shall have in an appropriate title block the name of the dam as well as the sheet number in relation to the total, for example, sheet one (1) of twelve (12); and

C. Certifications by the experienced professional engineer and the owner shall be placed near the lower right-hand corner of the title sheet (first sheet) of the drawings. The certifications shall be similar to those presented in figures 1 and 2 (see figures 1 and 2); and

Figure 1

Certification by Experienced Professional Engineer

I hereby certify that these plans for the (insert the correct word or words choosing from: existing; construction of the; repair of the; enlargement of the; or alteration of the

\_\_\_\_\_ Dam were prepared by me (or under my direct supervision) for the owners thereof.

Name of Dam

\_\_\_\_\_  
Firm Name

\_\_\_\_\_  
Registered Engineer

(Seal)

Figure 2

Certification by Owner

I, \_\_\_\_\_, owner, whose Post Office Address is

Name of Owner

\_\_\_\_\_, Zip \_\_\_\_\_, do

Owner's Address

hereby accept and approve these plans.

\_\_\_\_\_  
Owner

14. If a construction permit is requested to convert a dam to a retaining or retarding structure, the procedure to be followed in making the conversion shall be described by the owner; and

15. The procedures set up for regular inspection by the owner. The owner shall develop an emergency action plan, inspect his/her dam regularly and as necessary to protect public safety, life and property. A list of items to be inspected, a time schedule for these inspections and a form for reporting the results shall be established.

(B) The council or chief engineer may require the following action and information from the owner:

1. Procedures set up to provide regular maintenance and minor repairs to the dam and reservoir after construction and to continue or start recordkeeping and monitoring work so that the dam and reservoir are maintained in a safe condition and a complete history of its performance is available;

2. Location and types of instrumentation, drainage and/or seepage control facilities. Monitoring equipment and drainage and seepage control facilities are recommended for all dams and reservoirs, however, depending on conditions, they may be mandatory items if necessary to accomplish the purposes of the law;

3. The downstream environment zone warning procedure to be used if dam failure is a threat. A downstream environment zone warning system is recommended for all dams and reservoirs, however, depending on conditions, it may be necessary to accomplish the purposes of the law. This would consist of the current name(s) of the dam and reservoir owners representative(s) responsible for giving notification of a threat of failure and the current phone numbers of appropriate local police and other persons having emergency assistance authority;

4. Upstream slope protection from wave action; and

5. Additional actions or information as required to protect public safety, life and property and to accomplish the purposes of the law.

(C) Visits for the purpose of inspecting during or after construction or observation of operation and maintenance may be made by the council, the chief engineer or a member of the chief engineer's staff. Visits will be at any reasonable time following reasonable notice, except that in the case of an emergency threatening public safety, life or property, no notice shall be required and inspection may be made at any time. Owners shall permit entry to their property for persons to perform inspections.

(2) In addition to the basic requirements for all permits listed in 10 CSR 22-3.020, the construction permit application for an industrial water retention dam and reservoir shall be prepared under the direction of and certified by an experienced professional engineer and shall be in accordance with practices reputable and appropriate in the engineering, geologic and construction professions.

(A) The engineer who plans and designs an industrial water retention dam and reservoir or its modification shall assess the sequence, timing, method of placement and stability control program during construction from the beginning of the starter dam or modification through the life of the structure and after operation ceases or until the dam and reservoir no longer need a permit.

(B) Adequate records, as required by best practices in the geologic and engineering professions, shall be kept and made available to the council or chief engineer for the construction, maintenance and operation procedures. Adequate instrumentation and monitoring of seepage water shall be provided where necessary. Any significant settling or movement in the foundation of the dam should be measured if possible. Trained personnel and adequate supervision shall be provided to insure the construction and operation of the dam and reservoir are carried out to specifications.

(C) The following requirements shall apply to and the following information shall be provided by the owner:

1. A description of the system used to deposit tailings on the dam;

2. Up-to-date topographic map(s) showing the location of the proposed dam, the upstream watershed, the reservoir and the downstream environment zone. The topographic map(s) of the project area must be at a scale appropriate to the size of the project area. An up-to-date United States Geological Survey topographic map is considered minimum;

3. The location(s) of surface and underground mine workings if these workings would cause, would contribute to the cause or would be affected in the event of failure;

4. Exploration records and results including the location of all exploration, especially in the area of the core trench, the method(s) used to explore the site, a record of what was found, the method(s) used to obtain samples and the number of samples taken;

5. Testing records and results including information on the care and treatment of samples, types of tests performed on samples or in situ, reference(s) to or the procedures used in testing and the test results. Physical and mechanical properties of foundation and con-

struction materials must include the information source for these values especially if they are not the results of testing;

6. The geotechnical design procedure(s) or method(s) shall be identified and referenced or described so that they may be reviewed and their applicability verified. This shall include all assumptions made. The geotechnical procedure(s) or design results shall include the minimum computed factors of safety and they must meet or exceed the required design factors of safety (see 10 CSR 22-3.020(4)). The geotechnical design information shall be presented for the foundation core trench and dam embankment. Earthquake loading must be analyzed as outlined in 10 CSR 22-3.020(5) and (6).

7. Type and physical properties of the liquid and solid materials to be used in construction of the dam and contained in the reservoir;

8. The changes created in the downstream environment zone as the dam and reservoir become incrementally larger;

9. The embankment changes and new factors of safety for stability as the dam and reservoir become incrementally larger;

10. If a starter dam is used, whether it will be pervious or impervious;

11. The expected crest elevation, dam configuration, spillway elevation and the size and configuration of each successive stage of the dam shall be included;

12. Anticipated storage volume of solid or semisolid materials and of liquids at the completion of the dam;

13. The structural design procedure(s) or method(s) shall be identified and referenced or described so that they may be reviewed and their applicability verified. Design results for concrete dams and concrete structures appurtenant to embankment dams shall provide for and show an adequate factor of safety for normal and maximum loading conditions of compression, tension, shear, torsion, buckling, sliding and overturning;

14. Hydrologic information used to evaluate the watershed, reservoir, spillway and downstream environment zone including the watershed area, rainfall rate and duration, antecedent moisture conditions, time of concentration, area capacity curves, description of spillway elevation(s), type(s), dimensions, locations, cross sections and profiles, dam crest elevation and the downstream valley cross sections;

15. Hydrologic/hydraulic design procedure(s) or method(s) used shall be identified and referenced or described so that they may be reviewed and their applicability verified. This shall include all assumptions made. The

hydrologic/hydraulic procedure(s) or design results shall include the reservoir inflow hydrograph, the reservoir outflow hydrograph, the spillway discharge capacity, the freeboard at the maximum water storage elevation and the environmental class of the dam. The dam shall be capable of safely containing or discharging the required design flood (see 10 CSR 22-3.020(5));

16. The hydrologic changes, the spillway alterations proposed and the freeboard changes as the dam becomes incrementally larger;

17. Location and design of diversion channels or other structures to control stream flow during or after construction shall be provided if failure of these channels or other structures would affect the stability or hydrologic conditions of the dam. Stream diversion systems used during construction shall be designed to provide protection to the dam and to protect public safety, life and property;

18. Location and design of any diversion channels or other structures to control runoff or reclaimed water;

19. Construction control and inspection procedures shall be determined by the engineer and used during the construction of a new dam and reservoir or modification of an existing dam and reservoir. Construction control and inspection procedures shall include compaction testing and density testing and any other quality control measures used to insure compliance with the construction specifications;

20. Procedures shall be used for record-keeping and monitoring throughout the construction, enlargement or modification process to provide information about any construction progress and conditions that may cause difficulties during construction;

21. The location of and protective measures used in conjunction with all drain lines, sewer lines, utilities or other structures that pass through or under the dam;

22. Topographic surveys showing the location of baselines, centerlines and other horizontal and vertical control points sufficiently accurate to locate the proposed construction and to define the volume of storage in the reservoir at each planned stage of construction;

23. Two (2) sets of plans and specifications including:

A. Graphic scales shall be provided for all scaled drawings;

B. The title, which shall be identical on the plans and the specifications, shall include: the name of the dam; the name of the owner; whether the work shows an existing dam, a proposed dam or an enlargement, repair or alteration of the dam and reservoir;

the county(ies) the dam and reservoir are in; the location of the dam by quarter section, section, township and range or by geodetic coordinates; and each sheet shall have in an appropriate title block the name of the dam as well as the sheet number in relation to the total, for example, sheet one (1) of twelve (12); and

C. Certification by the experienced professional engineer and the owner shall be placed near the lower right-hand corner of the title sheet (first sheet) of the drawing. The certifications shall be as presented in figures 1 and 2 (see figures 1 and 2 preceding);

24. If a construction permit is requested to convert a dam to a retaining or retarding structure, the procedure to be followed in making the conversion shall be described by the owner; and

25. The procedure set up for regular inspection by the owner. The owner shall develop an emergency action plan, inspect his/her dam and reservoir regularly and as necessary to protect public safety, life and property. A list of items to be inspected, a time schedule for these inspections and a form for reporting the results shall be established by the council or chief engineer. Items that shall receive maintenance to and/or inspections on a daily basis during periods of active dam enlargement include: the spigots or cyclones; the decant lines; the position of the water pool in relation to the spillway, decant intake and crest of the tailings dam; drain lines checked for quantity of water and sediment; the embankment observed for visual defects such as slides or significant seepage changes; the spillway shall be checked to verify that it has not become blocked.

(D) The council or chief engineer may require the following action and information from the owner:

1. Procedures set up to provide regular maintenance and minor repairs to the dam and reservoir during construction and enlargement so that the dam and reservoir are maintained in a safe condition and a complete history of its performance is available;

2. Location and types of instrumentation, drainage and/or seepage control facilities. Monitoring equipment and drainage and seepage control facilities are recommended for all dams and reservoirs, however, depending on conditions they may be mandatory items if necessary to accomplish the purposes of the law; a list of items to be inspected, a time schedule for these inspections and a form for reporting the results shall be established by the council or chief engineer;

3. The downstream environment zone warning procedure to be used if dam failure is a threat. A downstream environment zone

warning system is recommended for all dams and reservoirs, however, depending on conditions, it may be necessary to accomplish the purposes of the law. This would consist of the current name(s) of the dam and reservoir owners representative(s) responsible for giving notification of a threat of failure and the current phone numbers of appropriate local police and other persons having emergency assistance authority;

4. Upstream slope protection from wave action; and

5. Additional actions or information as required to protect public safety, life and property and to accomplish the purposes of the law.

(E) Visits for the purpose of inspecting during or after construction or observation of operation and maintenance may be made by the council, the chief engineer or member of the chief engineer's staff. Visits will be at any reasonable time following reasonable notice, except that in the case of an emergency threatening public safety, life or property, no notice shall be required and inspection may be made at any time. Owners shall permit entry to their property for the persons to perform inspections.

(F) Drawings to show changes shall be submitted when changes are made to the original plans including, without limitation, changes in incremental dam crest heights, spillway locations and cross sections.

*AUTHORITY: sections 236.400, 236.405, 236.415, 236.420, 236.425, 236.435, 236.440 and 236.465, RSMo 1986.\* Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985.*

*\*Original authority: 236.400, RSMo 1979; 236.405, RSMo 1979, amended 1993, 1995; 236.415, RSMo 1979, amended 1995; 236.420, RSMo 1979; 236.425, RSMo 1979; 236.435, RSMo 1979; 236.440, RSMo 1979; and 236.465, RSMo 1979.*

#### 10 CSR 22-3.050 Safety Permit Requirements

*PURPOSE: The purpose of this rule is to itemize the requirements for a safety permit.*

(1) In addition to the basic requirements for all permits listed in 10 CSR 22-3.020, the safety permit application for a conventional dam and reservoir shall include:

(A) Notification of the completion of construction and application for the first safety permit for the dam and reservoir shall be provided by the owner. The experienced professional engineer or agency engineer who was

in responsible charge of the construction work shall certify that the construction was substantially in accordance with the approved plans and specifications. If revisions have been made which vary considerably from the provisions of the construction permit, it must be shown that the revisions do not endanger public safety, life or property. This subsection shall not be construed to excuse any person from the requirement to notify the council or chief engineer of modifications or revisions prior to commencing the actions and to obtain the required permits or authorization thereof;

(B) Notification of completion shall be within two (2)-months' time after completion of construction; and

(C) As-built drawings shall be submitted.

(2) In addition to the basic requirements for all permits listed in 10 CSR 22-3.020, the application for a safety permit for an industrial water retention dam and reservoir shall include:

(A) Notification of completion of the starter dam or the initial phase of construction shall be prepared by or under the supervision of an experienced professional engineer and shall indicate that construction was performed in accordance with the provisions of the construction permit.

(B) Notification of the completion of construction and application for the first safety permit for the dam and reservoir shall be provided by the owner. The experienced professional engineer who was in responsible charge of the construction work shall certify that the construction was substantially in accordance with the approved plans and specifications. If revisions have been made which vary considerably from the provisions of the construction permit, it must be shown that the revisions do not endanger public safety, life or property. This subsection shall not be construed to excuse any person from the requirement to notify the council or chief engineer or modifications or revisions prior to commencing the actions and to obtain the required permits or authorization therefore;

(C) Notification of completion shall be within two (2)-months time after completion of construction; and

(D) As-built drawings shall be submitted.

(3) Visits for the purpose of observation of operation and maintenance procedures may be made by the council, the chief engineer or a member of their staff. Visits will be at any reasonable time following reasonable notice, except that in the case of an emergency threatening public safety, life or property, no notice shall be required and inspection may

be made at any time. Owners shall permit entry to their property for such persons to perform the inspections.

*AUTHORITY: sections 236.400, 236.405, 236.415, 236.420, 236.425, 236.440 and 236.465, RSMo 1986.\* Original rule filed April 14, 1981, effective Aug. 13, 1981. Amended: Filed June 14, 1984, effective Jan. 1, 1985.*

*\*Original authority: 236.400, RSMo 1979; 236.405, RSMo 1979, amended 1993, 1995; 236.415, RSMo 1979, amended 1995; 236.420, RSMo 1979; 236.425, RSMo 1979; 236.440, RSMo 1979; and 236.465, RSMo 1979.*

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Rules of  
**Department of Natural Resources**  
 Division 22—Dam and Reservoir Safety Council  
 Chapter 4—Action Taken by Council  
 and Chief Engineer

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Title 10—DEPARTMENT OF  
NATURAL RESOURCES  
Division 22—Dam and Reservoir  
Safety Council  
Chapter 4—Action Taken by Council  
and Chief Engineer

10 CSR 22-4.010 Emergency Action

*PURPOSE: The purpose of the rule is to define the way emergency action is taken.*

(1) In performing his/her duties, the chief engineer shall determine by inspection whether a dam or reservoir constitutes a threat to public safety, life or property. If it is determined that a dam is in an advanced state of deterioration and in such condition that continued deterioration could cause failure of the dam, the chief engineer may classify the dam as dangerous to public safety, life or property. If the chief engineer or council further determines that there is not sufficient time to issue an enforcement order to the owner to correct the hazard, or to take other legal action, the chief engineer may take any appropriate action necessary for emergency protection of public safety, life or property. The type of action depends upon the state of progression of the deterioration, the physical layout of the dam, reservoir and inundation zone below the dam, and the resources available to the chief engineer or council at the time of the emergency.

(2) The chief engineer or council, upon determining that a dam or reservoir is dangerous and constitutes a substantial threat of failure and flooding, may request the attorney general or a prosecuting attorney to take any legal steps necessary for the protection of public safety, life or property. Action may be brought in any county where the defendant or defendant's principal place of business is located or where the dam or reservoir is located. Nothing in this section shall preclude the chief engineer or council from taking immediate action under 10 CSR 22-4.010(1) with respect to any dam or reservoir that has been classified as dangerous to public safety, life or property.

*AUTHORITY: sections 236.400, 236.405, 236.420, 236.425 and 236.455, RSMo 1986.\* Original rule filed June 14, 1984, effective Jan. 1, 1985.*

*\*Original authority: 236.400, RSMo 1979; 236.405, RSMo 1979, amended 1993, 1995; 236.420, RSMo 1979; 236.425, RSMo 1979; and 236.455, RSMo 1979.*

10 CSR 22-4.020 Enforcement Orders and Enforcement Procedures

*PURPOSE: The purpose of this rule is to identify the procedure to be taken for the issuance of enforcement orders.*

(1) Enforcement orders shall be prepared by the chief engineer or council in cases where a dam or reservoir contains serious defects which pose a threat to public safety, life or property. Enforcement orders shall be sent to a dam owner by certified mail or served personally.

(2) If an owner does not initiate corrective actions to his/her dam and reservoir within thirty (30) days of the issuance of an enforcement order by the chief engineer or council, the council may request the attorney general or a prosecuting attorney to apply to the circuit court having jurisdiction to enforce compliance. Nothing in this section shall preclude the chief engineer from taking immediate action under 10 CSR 22-4.010(1) with respect to any dam or reservoir s/he has classified as dangerous to public safety, life or property.

*AUTHORITY: sections 236.400, 236.405, 236.410, 236.415, 236.445 and 236.450, RSMo 1986.\* Original rule filed June 14, 1984, effective Jan. 1, 1985.*

*\*Original authority: 236.400, RSMo 1979; 236.405, RSMo 1979, amended 1993, 1995; 236.410, RSMo 1979, amended 1992; 236.415, RSMo 1979, amended 1995; 236.445, RSMo 1979; and 236.450, RSMo 1979.*



# WILDWOOD

PLANNING AND ZONING COMMISSION  
CITY OF WILDWOOD, MISSOURI

## INFORMATION REPORT

May 2, 2016 Executive Meeting

Prepared by the Department of Planning

**PETITION NUMBER:** P.Z. 5-16  
**PETITIONER:** City of Wildwood Planning and Zoning Commission c/o Department of Planning, 16860 Main Street, Wildwood, Missouri  
**REQUEST:** A request to review and consider the addition of residential land uses as permitted activities within the 'Downtown and Workplace Districts' designations under the 'Regulating Plan' of the City's Town Center Plan. Currently, these two (2) land use designations do not allow residential uses, whether single family or multiple family types. Recently, a number of inquiries have been made about this change.  
**LOCATION:** Town Center Area  
**ZONING:** Multiple Commercial and Residential Districts, including the NU Non-Urban Residence District  
**PUBLIC HEARING DATE:** March 21, 2016  
**VOTE ON INFORMATION REPORT:** May 2, 2016 - TBD  
**REPORT:** Attachment A  
**BACKGROUND INFORMATION:** Attachment B  
**SCHOOL DISTRICT:** Rockwood  
**FIRE DISTRICT:** Metro West  
**WARDS:** One, Four, Five, Seven, and Eight

**RECOMMENDATION:**

### <<< ATTACHMENT A >>>

<<< **INTRODUCTION** >>> Over the course of the last eighteen (18) months, the City has received a number of inquiries and actual submittals from different development interests for high-density residential proposals in the areas of the "Downtown and Workplace Districts" of the Town Center. These requests have involved properties that are designated for "Downtown or Workplace District" uses, not residential types in nature. With the completion of the update of the Town Center Plan in 2013, these districts do not authorize any type of stand-alone residential use, but rather commercial types only. In most instances, the interested party is advised of the conflict between his/her requested use and the Regulating Plan of the Town Center Plan and typically request what options exist for consideration.

Some of these inquiries have led to informal and formal submittals of projects, but none of them have yet to be acted upon by the Planning and Zoning Commission. The decision to proceed in submitting a formal application to the City is premised on many factors, but certainly one such major consideration is whether the application must also seek a change to the Town Center Plan's Regulating Plan, along with the modification in zoning and/or the application of the special procedures permit or a planned district of the City's Zoning Ordinance. This additional step in the process and the importance of this plan to the City often discourage an interested party from proceeding beyond its initial discussions with City staff. Given the City's recent stated desire to focus on providing more rooftops in the Town Center Area, the Department thought it appropriate to have a discussion about this matter and its potential benefits along with the possible drawbacks for this special area of the City. If residential uses would be allowed in the "Downtown and Workplace Districts" of the Town Center Area, certain proposals considered by the City could then be reviewed and acted upon due to consistency with the Regulating Plan.

**<<< CURRENT REQUEST >>>** The Department of Planning is presenting to the Planning and Zoning Commission a request to consider changes to the list of permitted uses associated with the Town Center Plan. These changes would affect the land use categories that are reflected upon the Town Center Plan's Regulating Plan. The Regulating Plan assigns a land use category to all properties located within the Town Center Boundary. This land use category defines the allowable activities that can be considered by any property owner or an interested party for a site. The specific advertisement is as follows:

*P.Z. 5-16 City of Wildwood Planning and Zoning Commission c/o Department of Planning, 16860 Main Street, Wildwood, Missouri – A request to review and consider the addition of residential land uses as permitted activities within the 'Downtown and Workplace Districts' designation under the 'Regulating Plan' of the City's Town Center Plan. Currently, these two (2) land use designations do not allow residential uses, whether single family or multiple family types. Recently, a number of inquiries have been made about this change. (Wards One, Four, Five, Seven, and Eight)*

**<<< DISCUSSION OF PERTINENT POINTS >>>** The Department had identified certain considerations that are noted above in this report that have prompted the presentation of this request to the Planning and Zoning Commission for its review and discussion. The Department would note that a number of important discussion points have also been identified relative to changes of these types for consideration, which were reviewed at the public hearing on this matter. These considerations include the following:

1. The loss of available acreage for future, and sustainable, commercial development in Town Center and City of Wildwood, whether under the "Downtown or Workplace District" regulations.
2. The alterations of land use at the street frontages, not behind buildings fronting the same. Potentially, if such were to be considered, residences could be placed across the street from commercial activities, but not in the defined pattern sought by New Urbanism principles.
3. The integration of differing land uses elsewhere beyond just the fronting streets.
4. The potential increase in population at key commercial locations in Town Center Area.
5. The integration of ground floor retail or commercial uses, as part of any residential development proposal in the "Downtown and Workplace Districts."
6. The fiscal impacts of such changes on taxes, assessments, collections, etc.

These considerations will be the focus of the Department's analysis of this request and provide the basis for its recommendation to the Planning and Zoning Commission on the same.

## <<< ANALYSIS >>>

In reviewing these six (6) considerations that have been identified above, the Department believes each must provide a positive community benefit from their potential change or incorporation to support adding residential activities into what have been, since the update of the Town Center Plan, traditional commercial areas. Along with these six (6) considerations, the Planning and Zoning Commission members were asked by the Department of Planning to provide their respective opinions on this matter, so as this input could be used for the development of the recommendation. The Planning and Zoning Commission's comments can be summarized below:

1. New Urbanism encourages a mixing of land uses and would prohibiting residential activities in these two (2) land use categories be inconsistent with such (See Consideration #3)?
2. Live/Work units have not had success in Wildwood, as well as other locations in the metropolitan area (see Consideration #5).
3. Define and segregate the types of residential housing types that might be considered in the "Downtown and Workplace" Districts, i.e. live/work; rowhouses, multiple-story apartment buildings; etc. (see Consideration #?)
4. Leave "Downtown" District as-is, given any changes would cause a loss of commercial acreage overall in the Town Center Area (see Consideration #1).

These comments must also be addressed, as part of the responses to the aforementioned six (6) considerations.

**CONSIDERATION #1 – LOSS OF COMMERCIALY DESIGNATED LAND IN TOWN CENTER** – Currently within the Town Center Area, the overall size of the "Downtown and Workplace" Districts combined are 241 acres. Of the 880 acres of Wildwood that defines the Town Center Area, the "Downtown and Workplace" Districts represent over twenty-five (25) percent of it. This total represents a slight reduction from the original acreage that was intended to set aside for commercial activities in the originally adopted Town Center Plan in 1998. Therefore, any change to the land use of a "Downtown or Workplace" District property would reduce the extent of commercial land uses in Town Center, unless some retail, restaurant, service, office, or other similar activity were to be required as part of its authorization. Additionally of these 241 acres, approximately one-half (½) of it is already developed, leaving a limited amount of properties for these types of uses.

However, the reason the amount of commercially designated property in the Town Center Area Boundary was reduced with the plan's update in 2013 related to a number of independent studies conducted with Great Streets Project and by the East-West Gateway Council of Governments about the oversupply of commercially designated properties in the Manchester Road Corridor, and region, and how its absorption into active use areas would be many decades in the making, if ever. Acknowledging a need to provide a population for Wildwood's existing businesses, more residential land uses were programmed into the plan, which meant certain properties that had been designated for commercial activities were now residential, i.e. Spanos Property and Slavik Tract. Accordingly, the City has already reduced the available commercial space in Town Center Area, based upon projections of needed square footages for the future.

Rather than considering the loss of commercial land area in terms of acreage, the Department believes a more appropriate approach would be to understand such from the perspective of strategic locations of the properties that are designated "Downtown and Workplace" Districts within the Town Center boundary. Therefore, a second or third tier property that is designated one (1) of these two (2) districts,

with no direct access would not necessarily be as strategic as another that does not have these characteristics. Utilizing this approach, the Department would note that some of the properties abutting State Route 100, with poor visibility from the roadway, and limited access, may not be best designated as “Downtown or Workplace” Districts, but rather a residential designation. Despite such, the more appropriate approach would be to change the land use designation of the property under the Town Center Plan, instead of adding residential uses to the two (2) land use designations, given this approach is more consistent with the original document that had more land use categories and a more diverse geographic application of them than currently in place.

**CONSIDERATION #2 – ALTERATIONS OF LAND USE AT THE STREET FRONTAGES** – Many of the referenced inquiries for residential uses in these two (2) commercial land use designations have been along Main Street and Manchester Road. Both of these streets have existing commercial uses in place and, in the instance of Manchester Road, for many decades. Therefore, if these residential inquiries were to be favorably considered, the land use pattern, as defined by the Town Center Plan, would change at the street and not behind the fronting building. This requirement was part of the original Town Center Plan and has been adhered to in the City’s land use decision-making processes for the Town Center Area.

It is the opinion of the Department this requirement should not be varied. Regardless, if residential uses are allowed in a commercial land use designation of the Town Center Plan, as requested here, the corresponding property on the opposite side of the street should be the same designation as well. Ensuring that non-complementary uses are not facing each other across the same street is appropriate and preserves the character of the roadway and its functional characteristics as well, such as on-street parking, commercial lighting and signage, and extended hours of activity and operation, which often conflict with residential uses in certain settings. Maintaining this design requirement is paramount to the Department, particularly along State Routes 100 and 109, Main Street, Eatherton Road, and Taylor Road. The Department would note such an application along Manchester Road could be varied, given its historical significance and the diversity of land uses that have always existed along its length in Wildwood.

**CONSIDERATION #3 – INTEGRATION OF LAND USES BEYOND FRONTING STREETS** - The Town Center Area has always been the location in the City where a range of uses could be considered within the same block and, in some instances, the same building. In the original Town Center Plan, and now in the updated version, land use decisions were to be made in the context of the one-half mile diameter, typical neighborhood. Within that defined area, all land uses allowed by the Town Center Plan’s Regulating Plan could be considered for placement, based upon changing the pattern behind the buildings fronting the abutting streets, creating the desired streetscapes, incorporating the required street specifications, and managing stormwater. Therefore, land use was to be a mix and complementary to each block, lot, and building.

To accomplish this outcome, the City created a hierarchy of streets, based upon the understanding that certain streets, given their intended designs had more importance in creating the character of Town Center. Therefore, on these street frontages and associated properties, the application of land use and design standards and architectural guidelines was mandatory, while on secondary streets latitude could be provided to accommodate the placement of necessary infrastructure, utilities, and support services, such as trash enclosures, drive-through facilities, and the like. In making this determination, the City identified Taylor Road, Main Street, Eatherton Road, and State Route 109 as primary streets, while State Route 100 as secondary. Also, as part of this designation process, the City noted that Manchester Road, given its historical pattern, could be both, depending on circumstances and the characteristics of the individual properties and surrounding neighborhood.

With this action, the Department does not believe those streets identified as primary could have land use changes occur at the frontages, so where commercial land use patterns exist, such should be retained, but where not, again, land use designations should be considered for modifications. Accordingly, adding residential uses to the “Downtown and Workplace” District designations, where a commercial pattern has been established is not supported by the Department.

**CONSIDERATION #4 – INCREASE IN POPULATION NEAR BUSINESS CORE** – Population growth creates many positive aspects, including more individuals to utilize existing and future commercial businesses in Town Center. Additionally, population growth brings a vibrancy and excitement to a community. Therefore, adding residential units in the Town Center Area is a goal of Wildwood, and its officials. Acknowledging these positives and the desire of the City to undertake a more proactive approach to developing business opportunities in Wildwood, population growth is needed.

The Department believes by, following the recommendations provided herein, i.e. maintain current commercial areas that have been established by mirroring land use patterns across common primary streets and modifying land use designations, where appropriate, to allow for more residential in the live/work scenario, growing the City’s population base can be achieved within its Town Center. Given the past actions of the City in the update of the Town Center Plan in 2013, population growth due to more residentially designated land area is already occurring in this special location of Wildwood.

**CONSIDERATION #5 – LIVE/WORK BUILDINGS AND AREAS IN WILDWOOD** –

When first adopted in 1998, the Town Center Plan contained a district termed “Neighborhood Center” that was intended to provide a land use option of first and second floor commercial activities, with residential uses on all floors thereafter. Although not required, second floor uses for commercial activities was not as critical as the first floor being dedicated to such and having that presence on the abutting street. Having retail, services, and restaurants on the street level, with residential thereafter, was a hallmark of the long-popular Main Street pattern of most small towns in rural America. This concept, however, in the City's context of the Town Center, was always controversial and not supported by the development community from its inception. Many in the development community noted such would never be adaptable or popular in suburban St. Louis.

The Department’s research in this regard does not substantiate this claim of not being workable in the St. Louis Region. In considering other live/work settings in the St. Louis Region and contacting the appropriate parties in those cities, the following was determined:

**Park Plaza - Edwardsville, Illinois**

Commercial	49,350 square feet (7,000 office/42,350 retail)
Commercial Occupancy	95%
Commercial Tenants	<p>A wide mix of restaurants, retail, boutique shops, personal services, and offices</p> <ul style="list-style-type: none"> <li>• National and regional chains – Massage Lux, CVS (with drive-thru), Gliks, Wasabi Sushi, Chavas Mexican Restaurant, Subway</li> <li>• U.S. Marines recruiting office.</li> <li>• Locally owned – Olive Oils and More, Bin 51 (wine and specialty liquor), 1818 Chophouse, Global Brew, Hair Studios @ Park Plaza, Select Physical Therapy</li> </ul>
Residential	<ul style="list-style-type: none"> <li>• Renter occupied lofts that are priced at the highest end of the rental market in Edwardsville</li> <li>• 29,750 square feet</li> <li>• 35 units</li> </ul>
Residential Occupancy	100%

**Notes:**

- This development has a common misconception that the retail units aren't successful. The developer stated the residential component has been 90% to 100% occupied, since the project was completed.
- Based on my observations, the commercial component is successful and holds mostly long-term tenants. Locally owned boutique shops have been successful, despite competing with an extraordinary number of big box retailers located in Edwardsville.
- The City Planner, Scott Hanson, said there are several commercial property owners who want to use the second and third stories as residential and have approached the City regarding such. The City currently requires the equivalent of our conditional use permit to allow residential units above retail.

**The Boulevard - Richmond Heights, Missouri**

Commercial Occupancy	80%-90%
Commercial Tenants	<ul style="list-style-type: none"> <li>• A wide mix of restaurants, retail, boutique, personal services, and offices</li> <li>• Office space is only permitted on the second story</li> </ul>
Residential	<ul style="list-style-type: none"> <li>• Renter occupied apartments that are priced at the highest end of the rental market</li> <li>• 74 units</li> </ul>
Residential Occupancy	100%

**Notes:**

- The developer of the project, Pace Development, is planning a second phase, with similar mix of uses and residential on the upper stories.
- Professional office space is only permitted on the second story.
- David Reary, the Building/Zoning Commissioner for the City, stated the project has been extremely successful.

**Hanley Station - Brentwood, Missouri**

Commercial	<ul style="list-style-type: none"> <li>• 2 buildings with retail (4,000 square feet and 7,000 square feet)</li> <li>• 123 room hotel</li> <li>• 3 freestanding restaurants</li> <li>• Parking garage</li> </ul>
Commercial Occupancy	<ul style="list-style-type: none"> <li>• Retail and Restaurant – 100%</li> <li>• Hotel – 85% (2014)</li> </ul>
Commercial Tenants	Not a broad mix, resembles strip type development in regards to the commercial tenants
Residential	150 condominiums in three buildings (38 units/56 units/56units)
Residential Occupancy	100% occupancy · 118 units are owner-occupied · 32 units are rental units

**Notes:**

- This project may not a great example of “New Urbanism”, but was included due to the condominiums are largely owner-occupied, which was a discussion point among Commission members. Additionally, owner-occupied units are next to several restaurants.

**Streets of St. Charles - St. Charles, Missouri**

Commercial	500,000 square feet of commercial (250,000 square feet restaurant and retail/ 250,000 square feet professional office space)
Commercial Tenants	<ul style="list-style-type: none"> <li>• A good mix, mostly restaurants, but includes a movie theatre, college campus (Art Institute of St. Louis), a few personal services, and a gas station</li> <li>• The plan allows for 2 hotels</li> </ul>
Residential	<ul style="list-style-type: none"> <li>• 309 renter-occupied units</li> </ul>
Residential Occupancy	75+%

**Notes:**

- This project was originally planned by Whittaker Homes and has lost some of its “New Urbanism” components over the years.
- The planner at the City said it was overall a successful project.
- Office space is only permitted on the second floor.

When the Town Center Plan was updated in 2013, the “Neighborhood Center” District was combined into the “Neighborhood General” District, thereby still retaining the option for first and second floor commercial activities, but recognizing the residential component is principle in Wildwood, even in its Town Center Area. This action, however, was undertaken in conjunction with limiting residential uses in the “Downtown and Workplace” Districts, and thereby established two (2) main residential land use areas for all of Town Center Area, which Included the “Neighborhood General and Edge” Districts. Again, the “Neighborhood General” District does allow commercial activities, but always in conjunction with residential uses, such as condominiums, apartments, rowhouses, and villas. No distinction is made with regards to the types of housing options that can be considered in this land use designation, when done in conjunction with commercial activities.

The Department believes the live/work design of buildings remains a viable approach to land use in the City’s Town Center Area. Given the “Neighborhood General” District designation accommodates such, the Department believes instead of adding residential uses to the “Downtown and Workplace” Districts, property designations should be considered for change, when appropriate under an analysis of surrounding land use, proximity to certain streets, and impacts.

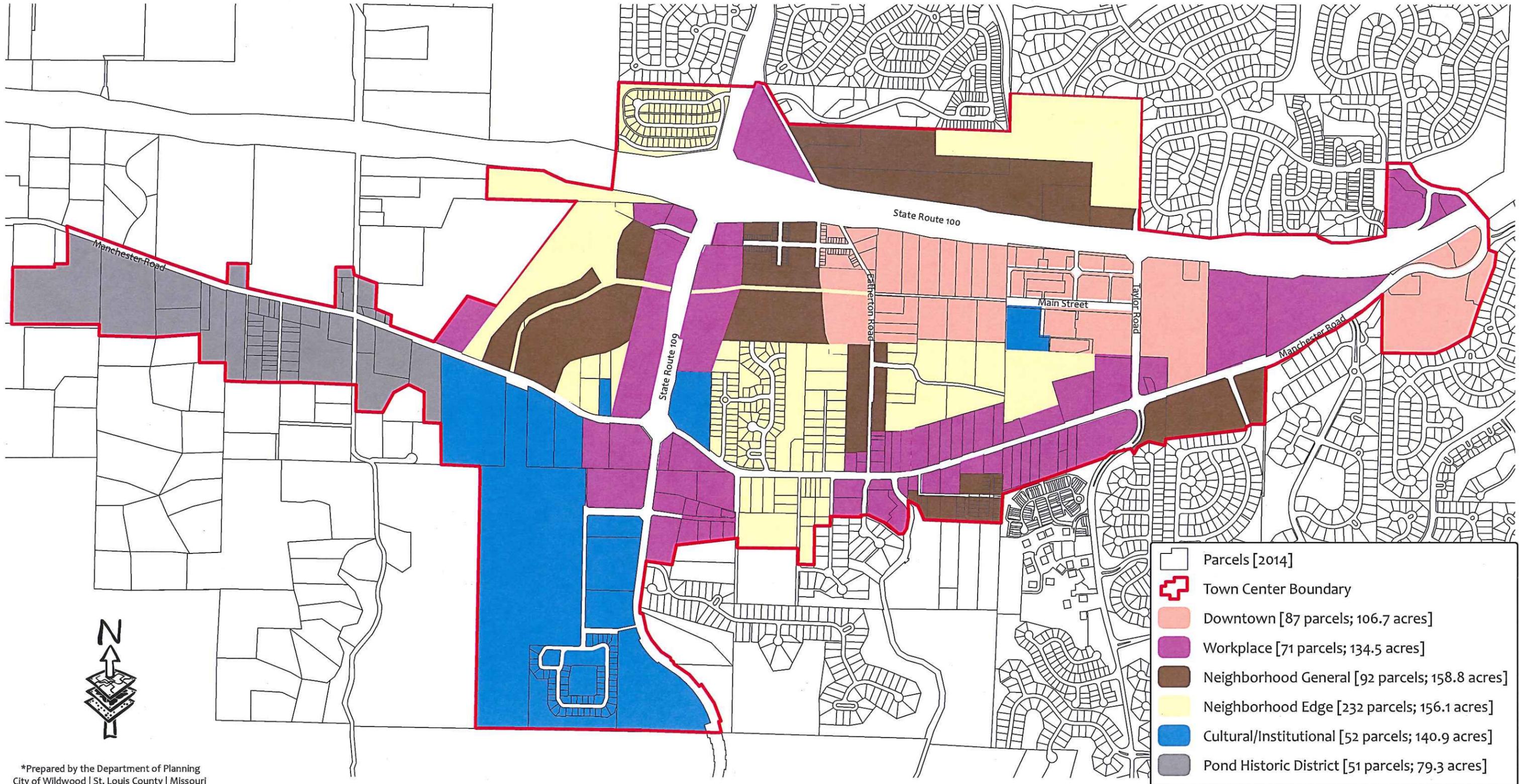
**CONSIDERATION #6 – FISCAL IMPACTS** – Protecting the core “Downtown and Workplace” District designation properties along the City’s primary streets in the Town Center Area is fiscally responsible, given the benefits derived from this type of activity on revenue generation. Certainly, residential users pay taxes, fees, and other considerations, but commercial land use is critical in this regard to most communities. Therefore, again, the Department believes that certain locations in the Town Center Area that front onto the City’s system of primary streets or are part of a commercial core location must be preserved and not altered to accommodate residential activities. Again, where conditions allow, changes to the “Downtown and Workplace” District designations on secondary streets and Manchester Road could be considered, where the ramifications are less onerous in this regard.

**<<< SUMMARY AND CONCLUSION >>>**

In this report, the Department of Planning is not recommending the blanket allowance for residential activities in the Town Center Area’s “Downtown and Workplace” District designations, but rather an acknowledgement that where conditions are appropriate, the more suitable approach would be to consider land use designation changes to the Town Center Plan’s Regulating Plan. Accommodating this approach allows the land use designations on both sides of the system of streets to be matched and/or retained, while respecting the components of primary and secondary street descriptions established in 1998. Therefore, based upon these considerations, the Department is not recommending any change to the permitted land uses in the “Downtown and Workplace” District designations of the Regulating Plan of the Town Center Plan.

**ATTACHMENT B**  
**Background Information**

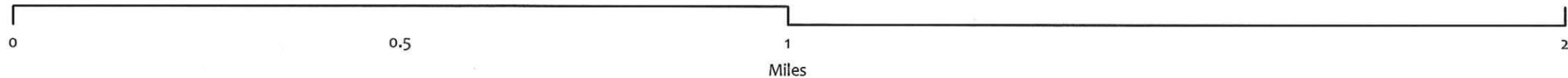
# Town Center Regulating Plan Map



	Parcels [2014]
	Town Center Boundary
	Downtown [87 parcels; 106.7 acres]
	Workplace [71 parcels; 134.5 acres]
	Neighborhood General [92 parcels; 158.8 acres]
	Neighborhood Edge [232 parcels; 156.1 acres]
	Cultural/Institutional [52 parcels; 140.9 acres]
	Pond Historic District [51 parcels; 79.3 acres]



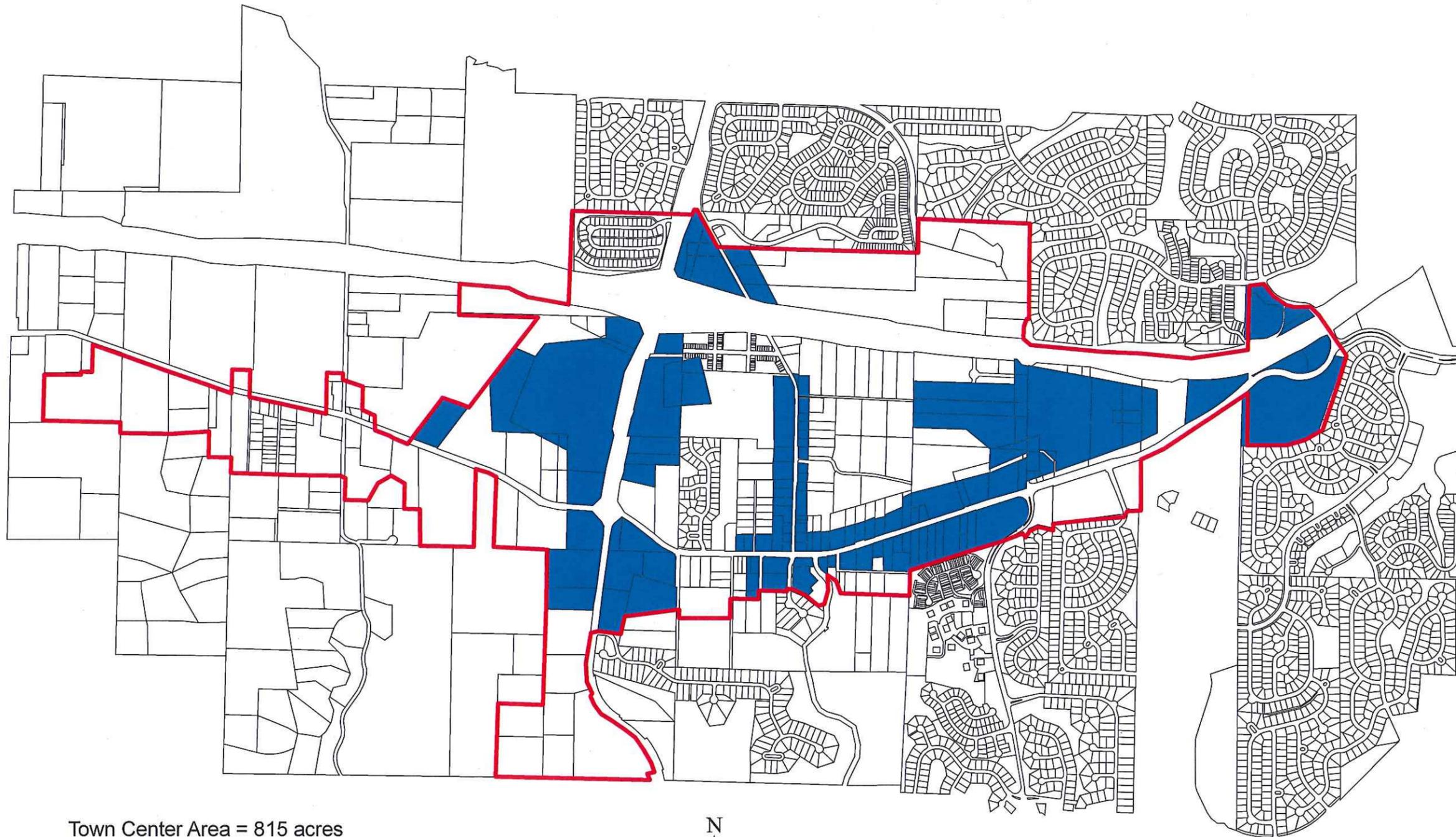
\*Prepared by the Department of Planning  
 City of Wildwood | St. Louis County | Missouri  
 10yr Update Final Approval: 12/2013 Rvs: 4/2016





WILDWOOD

# Town Center Properties with Commercial, Work Place, or Neighborhood Center Land Use Designations



Town Center Area = 815 acres  
Town Center Properties = 416  
Number of Commercial, Work Place  
or Neighborhood Center Properties = 142  
Acreage of selected properties = 261.30



Public Notice posted in accordance with  
610 RSMO 1994, as amended,  
by Liz Weiss  
City Clerk

NOTICE OF PUBLIC HEARING  
before the  
CITY OF WILDWOOD  
Planning and Zoning Commission  
March 21, 2016 - 7:30 p.m. (Monday)

The Planning and Zoning Commission of the City of Wildwood will conduct a public hearing on **Monday, March 21, 2016, at 7:30 p.m., in the City Hall Council Chambers, 16860 Main Street, Wildwood, Missouri 63040** for the purposes of obtaining testimony regarding request(s) for either the modification of zoning district designations, application of special procedures, change in the underlying regulations of the Zoning Ordinance, action on Record Plats, update on zoning matters, or amendment of the Master Plan, which will then be considered for action. This hearing is open to all interested parties to comment upon this request, whether in favor or opposition, or provide additional input for consideration. If you do not have comments regarding this request, no action is required on your part. Written comments are requested to be submitted prior to the hearing and addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040 or via the City's website at [www.cityofwildwood.com/comment](http://www.cityofwildwood.com/comment). The following request will be considered at this time:

**P.Z. 5-16 City of Wildwood Planning and Zoning Commission c/o Department of Planning, 16860 Main Street, Wildwood, Missouri** – A request to review and consider the addition of residential land uses as permitted activities within the 'Downtown and Workplace Districts' designation under the 'Regulating Plan' of the City's Town Center Plan. Currently, these two (2) land use designations do not allow residential uses, whether single family or multiple family types. Recently, a number of inquiries have been made about this change. **(Wards Seven and Eight)**

By Order of the Planning and Zoning Commission  
On March 3, 2016  
By Liz Weiss  
City Clerk

*The City of Wildwood is working to comply with the American with Disabilities Act mandates. Individuals who require accommodation to attend a meeting should contact City Hall, (636) 458-0440, at least 48 hours in advance.*

**CITY OF WILDWOOD, MISSOURI**  
**RECORD OF PROCEEDINGS**

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**MEETING OF THE PLANNING AND ZONING COMMISSION**

CITY HALL, 16860 MAIN STREET, WILDWOOD, MISSOURI

March 21, 2016

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The Planning and Zoning Commission meeting was called to order by Chair Bopp, at 7:30 p.m., on Monday, March 21, 2016, at Wildwood City Hall, 16860 Main Street, Wildwood, Missouri.

**I. Welcome to Attendees and Roll Call of Commission Members**

Chair Bopp requested a roll call be taken. The roll call was taken, with the following results:

**PRESENT – (7)**

Chair Bopp  
Commissioner Lee  
Commissioner Archeski  
Commissioner Renner  
Commissioner Gragnani  
Commissioner Liddy  
Mayor Woerther

**ABSENT – (2)**

Commissioner Bauer  
Council Member Manton

Other City Officials Present: Director of Planning Vujnich, Planner Newberry, and City Attorney Golterman.

**II. Review Tonight's Agenda / Questions or Comments**

There were no questions or comments on the agenda.

**III. Approval of Minutes from the February 1, 2016 Meeting**

A motion was made by Mayor Woerther, seconded by Commissioner Archeski, to approve the minutes from the March 7, 2016 meeting. A voice vote was taken regarding the motion for approval of the minutes. Hearing no objections, Chair Bopp declared the motion approved.

**IV. Department of Planning Opening Remarks**

No opening remarks were provided.

**V. Public Hearings – One (1) Item for Consideration**

- a) **P.Z. 5-16 City of Wildwood Planning and Zoning Commission c/o Department of Planning, 16860 Main Street, Wildwood, Missouri** – A request to review and consider the addition of residential land uses as permitted activities within the 'Downtown and Workplace Districts' designation under the 'Regulating Plan' of the City's Town Center Plan. Currently, these two (2) land use designations do not allow residential uses, whether single family or multiple family types.

Recently, a number of inquiries have been made about this change. (**Wards One, Four, Five, Seven, and Eight**)

Chair Bopp read the public hearing guidelines into the record and requested the item be read.

Planner Newberry read the request into the record.

Director Vujnich explained, that over the past eighteen (18) months, the Department of Planning has received a number of proposals to develop multiple family residences in the 'Downtown and Workplace Districts' of the Town Center Area. These proposals have included senior living facilities, as well as market-rate apartments. Director Vujnich explained, when these submittals occur, the Department advises petitioners they will need to request change to the 'Neighborhood General District'. Director Vujnich presented pertinent points the Department identified for discussion by the Planning and Zoning Commission.

Chair Bopp invited members of the public to comment on the item.

**Ernesto Segura, 190 Carondelet Plaza, Suite 600, Clayton, Missouri 63105, representative of Wildwood Crossing Inc.**, encouraged the Planning and Zoning Commission to include the allowance of multiple family residential and mixed-use options in the 'Downtown and Workplace Districts' within the Town Center Area, citing the demand for such and the challenge of making a change in zoning request.

**Dr. John Gragnani, 1510 Scofield Valley Lane**, opposes any changes to allow multiple family residences in the 'Downtown and Workplace Districts' within the Town Center Area and stated those districts should remain solely commercial.

Discussion was held among Commission Members about requiring a Conditional Use Permit (CUP); being selective about where multiple family residences would be allowed within the 'Downtown and Workplace Districts' within the Town Center Area; requiring commercial uses on the first (1<sup>st</sup>) and, possibly, second (2<sup>nd</sup>) floors; the potential conflict of adding rooftops, but taking away from commercial opportunities; the preference of renter-occupied units versus owner-occupied units in mixed use scenarios; separating the types of multiple family development in the Land Use Activity/Land Use Designations Table; and examples of mixed use developments in the St. Louis Region.

Motion by Mayor Woerther, seconded by Commissioner Archeski, to close the public hearing. A voice vote was taken regarding the motion. Hearing no objections, Chair Bopp declared the motion approved.

## **VI. Old Business – Two (2) Items for Consideration**

### Information Reports – One (1) Item for Consideration

- a) **P.Z. 3-16 City of Wildwood Planning and Zoning Commission c/o Department of Planning, 16860 Main Street, Wildwood, Missouri** – A request for the Planning and Zoning Commission's review and action on the 2016 update of the City of Wildwood's Master Plan. The updated Master Plan has been under review by the Master Plan Advisory Committee (MPAC) since January 2015 and its members have acted favorably on this draft and are submitting it for consideration herein. The Master Plan establishes goals, objectives, and policies for the protection of the environment, application of planning techniques for land use and development purposes, allocation of

resources and services, prioritization of transportation and infrastructure improvements, provision of public space and recreational amenities within the community, and economic development. Along with these goals, objectives, and policies, the Master Plan establishes types and densities/intensities of land use for every parcel of ground within the boundaries of the City of Wildwood. The City's Charter requires this plan to be updated every ten (10) years, and was last updated in 2006. **(Wards – All)**

Planner Newberry read the request into the record.

Director Vujnich explained the process that had been used in updating the Master Plan and commended the volunteer Master Plan Advisory Committee for its diligent work. He explained major changes and additions to the 2006 version of the Master Plan. Director Vujnich summarized the results of the public hearing held at the Planning and Zoning Commission's March 7, 2016, meeting. He stated the Department of Planning is recommending the Commission adopt this version of the Updated 2016 Master Plan.

**Tom Cummings, Payne Family Homes, 10407 Bauer Boulevard, 63132**, did not wish to speak at tonight's meeting, but submitted a letter to the Planning and Zoning Commission, dated March 21, 2016 (*attached to these minutes*).

A motion by Commissioner Archeski, seconded by Commissioner Renner, to adopt this version of the Master Plan – 2016 Update, as presented.

No discussion was held among Commission Members.

Chair Bopp called the question.

A roll call vote was taken, with the following results:

Ayes: Commissioner Gragnani, Commissioner Lee, Commissioner Archeski, Commissioner Renner, Commissioner Liddy, Mayor Woerther, and Chair Bopp.

Nays: None

Absent: Commissioner Bauer and Council Member Manton

Abstain: None

Whereupon, Chair Bopp declared the motion approved by a vote of 7-0.

#### Information Reports – One (1) Item for Consideration

- b) **P.Z. 24-14 Centaur Station, (Michael Phelan), 18833 Cliffview Lane, Wildwood, Missouri, 63005 c/o Department of Planning, City of Wildwood, Missouri, 16860 Main Street, Wildwood, Missouri 63040**– A request, in response to a communication from Michael Phelan, which is dated October 16, 2015, regarding **P.Z. 24-14 Centaur Station**, noting his intent to not proceed with the placement of the historic building on the City's registry, thereby seeking the revocation of the Landmark and Preservation Area (LPA) that was approved by the City Council on December 8, 2014 and governs these two (2) tracts of land; west side of Centaur Road, north of Wild Horse Creek Road (Locator Numbers: 19X410082 and 19Y620026/Street Addresses: 107 and 109 Centaur Road); Landmark and Preservation Area (LPA) in the Floodplain Non-Urban Residence District. **(Ward One)**

Planner Newberry read the request into the record.

Director Vujnich explained the request to revoke this Landmark and Preservation Area (LPA), which currently allows for commercial uses in the Floodplain Non-Urban Residence District (FPNU). The revocation request is a result of the petitioner failing to pursue the placement of the site, and associated elements, on the City's Historic Registry, as well as missing a number of other deadlines outlined in the governing ordinance.

No discussion was held among Commission Members.

Motion by Commissioner Gragnani, seconded by Mayor Woerther, to revoke the Landmark and Preservation Area.

Chair Bopp called the question.

A roll call vote was taken, with the following results:

Ayes: Commissioner Gragnani, Commissioner Lee, Commissioner Archeski, Commissioner Renner, Commissioner Liddy, Mayor Woerther, and Chair Bopp.

Nays: None

Absent: Commissioner Bauer and Council Member Manton

Abstain: None

Whereupon, Chair Bopp declared the motion approved by a vote of 7-0.

#### **VII. New Business – No Items for Consideration**

#### **VIII. Site Development Plans-Public Space Plans-Record Plats – Two (2) Items for Consideration**

##### Site Development Plans – Two (2) Items for Consideration

- a) A report, with recommendation, regarding the City of Wildwood's **Community Park - Phase 2 Project**; PS Park and Scenic District; publicly owned land located in the northwest quadrant of State Route 100 and State Route 109; thereby recommending the approval the design and engineering plans for the installation of an extension of the park's interior roadway (from Bonhomme Creek to the western extension of Pond-Grove Loop Road), parking spaces, a companion trail, and the initial stages of the needed preparation of the Great Meadow Area. **(Ward One)**

Planner Newberry read the request into the record.

Director Vujnich noted some work on this project had already begun and apologized for the tardiness of submitting the Site Development Plan to the Planning and Zoning Commission for its consideration. He also noted the project had been reviewed by a number of boards and commissions in the City. He highlighted the components of the Site Development Plan and the grant that is partially funding the project.

Discussion was held among Commission Members about allowing room for a turnaround at the gate and the prevention of people using the park as a cut-through between State Route 100 and State Route 109.

Motion by Mayor Woerther, seconded by Commissioner Renner, to approve the Site Development Plan.

Chair Bopp called the question.

A roll call vote was taken, with the following results:

Ayes: Commissioner Gragnani, Commissioner Lee, Commissioner Archeski, Commissioner Renner, Commissioner Liddy, Mayor Woerther, and Chair Bopp.

Nays: None

Absent: Commissioner Bauer and Council Member Manton

Abstain: None

Whereupon, Chair Bopp declared the motion approved by a vote of 7-0.

- b) A report, with recommendation, regarding **P.Z. 21, 22, and 23-14 - Stone Mill Subdivision (formerly Lombardo Homes of St. Louis, L.L.C.), now Whalen Custom Homes**; R1-A 22,000 square foot Residence District, with a Planned Residential Development Overlay District (PRD), for an eight (8) acre property; west side of Center Avenue, south of Manchester Road (Street Address: 2710 West Avenue/Locator Number: 24V420010); thereby recommending the approval of the Site Development Plan (SDP) and associated materials and documents to allow for the parcel of ground's use for twelve (12) single family dwellings on individual lots, common ground, and required public space. **(Ward Eight)**

Planner Newberry read the request into the record.

Director Vujnich described the request for a Master Plan amendment, change in zoning, and the application of a Planned Residential Development Overlay District (PRD). He highlighted components of the Site Development Plan, including lot sizes and densities; side-entry garages; improvements to Center Avenue; dedicated public space; Phase I and Phase II Environmental Assessments, which was provided to Commission Members for tonight's meeting; and the non-disturbed buffer areas on the site's western and southern boundaries. Director Vujnich noted the compliance of the plan and stated the Site Plan Subcommittee had endorsed it as well at its March 7, 2016 meeting. He recommended the Planning and Zoning Commission act favorably on the Site Development Plan.

Motion by Commissioner Archeski, seconded by Mayor Woerther, to approve the Site Development Plan.

Chair Bopp called the question.

A roll call vote was taken, with the following results:

Ayes: Commissioner Gragnani, Commissioner Lee, Commissioner Archeski, Commissioner Renner, Commissioner Liddy, Mayor Woerther, and Chair Bopp.

Nays: None

Absent: Commissioner Bauer and Council Member Manton

Abstain: None

Whereupon, Chair Bopp declared the motion approved by a vote of 7-0.

#### **IX. Other – No Items for Consideration**

#### **X. Closing Remarks and Adjournment**

Director Vujnich briefly discussed a letter that was sent to Paul Morris, with Missouri Department of Natural Resources (MDNR), dated March 17, 2016, regarding waste water treatment concerns.

Motion by Mayor Woerther, seconded by Commissioner Archeski, to adjourn the meeting. A voice vote was taken. Hearing no objections, Chair Bopp adjourned the meeting at 9:10 p.m.

Approved by: *F. An Bopp* CHAIR  
Secretary – City of Wildwood Planning and Zoning Commission

Note: Recordation of the opinions, statements, and/or other meeting participation in these minutes shall not be deemed to be an acknowledgement or endorsement by the Commission of the factual accuracy, relevance, or propriety thereof.

\* If comment cards were submitted indicating they did not wish to speak at tonight's meeting, they have been attached and made part of the official record.



## WILDWOOD

### Recommendation Report on an Outdoor Game Court

Prepared by Department of Planning

for the

City of Wildwood Planning and Zoning Commission

May 2, 2016 Executive Meeting

*"Planning Tomorrow Today"*

#### ***Nature of Request –***

P.Z. 8-16 James Thurman, 930 Kingsridge Court, Wildwood, Missouri, 63021, c/o Sport Court St. Louis, 343 Great Oaks Drive, Lebadie, Missouri 63055, is seeking the review and action of the Planning and Zoning Commission on the requested installation of an outdoor game court that is twenty-six (26) feet by thirty-four (34) feet in size, which is to be located at 930 Kingsridge Court, Wildwood, Missouri (Locator Number 24T110296); R-1A 22,000 square foot Residence District, with a Planned Environment Unit (PEU). This request is to be reviewed in accordance with Chapter 415.120 R-1A 22,000 square foot Residence District Regulations of the City of Wildwood Zoning Code, which establishes standards and requirements for outdoor game courts relating to their consideration by the Planning and Zoning Commission. The proposed game court is to be situated to the east of the single family residence located on the subject property. The Department will have a recommendation report prepared for consideration at this meeting for this request. **(Ward Eight)**

#### ***Introduction –***

The Department of Planning is in receipt of an application from James Thurman, which requests the authorization to install an outdoor game court on a residential lot located in Crowne Pointe Estates Subdivision. The application was submitted to the City for its review and consideration, given all outdoor game courts must be acted upon by the Planning and Zoning Commission. The requirements for review were adopted by the City Council in April 2013 and intended to provide a framework for addressing lighting, landscaping, and aesthetics, along with managing the flight of projectiles i.e. balls, pucks, etc., while implementing standards for their placement to protect in-place stormwater management facilities and verifying their compliance with zoning performance standards for noise and peace disturbance in their use.

Principle to this request is the review of the existing site conditions and the proposed outdoor game court's layout, design, associated landscaping, and other components of it. This review is intended to determine whether this outdoor game court request is appropriate and in compliance with the criteria established for such on properties zoned R-1A 22,000 square foot Residence District, with a Planned Environment Unit (PEU), and, if approved, impacts are contained to the tract of land under consideration or negligible enough upon adjoining properties to be considered acceptable.

#### ***General Site and Area Conditions –***

1. This 12,150 square feet site is located on the east side of Kingsridge Court, near the terminus of Eaglesridge Drive, in the Crown Estates Subdivision. The site is zoned in the R-1A 22,000 square foot Residence District, with a Planned Environment Unit (PEU).

2. The single family dwelling is located at an elevation level with Kingsridge Court. The elevation steeply drops, approximately three (3) or four (4) feet to a relatively flat yard, just east of the rear building line of the single family dwelling.
3. The adjacent properties have the following characteristics:
  - North:** Single family dwelling, with an in-ground pool, with a fence
  - South:** Single family dwelling
  - East:** Two (2) single family dwellings
  - West:** Kingsridge Court, a public roadway that serves this development
4. The site has a ten (10) foot wide utility easement, which contains existing Metropolitan St. Louis Sewer District (MSD) sanitary sewer lines, and is located in the easternmost third of the site.
5. A stormwater inlet is located on the property line, with the lot to the south, and located in the easternmost third of the site.
6. The structure setbacks for this site are eight (8) feet for the side yard areas, fifteen (15) feet for the rear yard area, and twenty (20) feet for the front yard area.

**Proposed Request –**

1. The proposed game court is twenty-six (26) feet in width by thirty-four (34) feet in length, with a total size of 884 square feet.
2. The proposed game court is located behind the single family dwelling, eight (8) feet from the north property line, fifteen (15) feet from the east property line, and a portion of it is installed within the ten (10) foot wide utility easement.
3. The surface of the proposed game court is a polypropylene modular tile, installed on a concrete base. The surface is “Evergreen” in color, with a “Pearl Orange” free throw lane.
4. A proposed basketball hoop standard is black in color, and located on the east end of the outdoor game court.
5. Two (2) proposed netting assemblies, designed to prevent the expected flight of projectiles from the outdoor game court, are located on either side of the basketball hoop standard, on the east end of the game court. These two (2) netting assemblies each measure twelve (12) feet in height and eleven (11) feet in width. Both the net and the poles that are part of these assemblies are black in color.
6. The landscaping plan for the site indicates the following:
  - North:** Three (3) Green Giant Arborvitae trees and one (1) Armstrong Maple tree along most of the game court’s edge
  - South:** Four (4) White Pine trees, along the entirety of the game court’s edge
  - East:** Five (5) Green Giant Arborvitae trees and one (1) existing tree to remain
  - West:** No landscaping proposed
7. There are no light standards proposed, in conjunction with this outdoor game court.

**Notification -**

1. A sign advertising the proposed game court was placed on the property and a direct mailing was sent to property owners within a 3,000 foot radius of this lot.
2. The City of Wildwood's Department of Planning has received no comments relating to this request, at the time of the writing of its report.

### **Analysis -**

The Department of Planning has reviewed this request with regards to its compliance with the City's Zoning Ordinance and Tree Manual and Sustainable Plantings Guide and believes this request does meet several of these requirements set forth therein, however, some additional conditions need to be met. The Department is recommending the Planning and Zoning Commission act favorably on this request, with the following considerations:

1. The Department is in receipt of a form indicating approval of this project from the Crown Pointe Estates Subdivision's Architectural Review Committee.
2. The Department is in receipt of an email from Metropolitan St. Louis Sewer District (MSD) indicating no objection to the outdoor game court being installed within the ten (10) foot wide utility easement.
3. The game court will not be visible from the street, given its located behind the single family dwelling and at a lower elevation than the street.
4. The game court, associated basketball hoop, and netting assemblies are located outside of the side and rear yard setbacks.
5. The color of the game court, basketball hoop standard, and netting assemblies will blend with the surrounding areas.

The Department recommends a favorable action on this request based on the following conditions:

1. A Grading Permit is required in order to ensure the appropriate measures are taken to address any stormwater issues that may be caused by the installation of this game court, at the direction of the Department of Public Works.
2. Additional netting is required on the north edge of the game court. The additional netting is in order to prevent the expected flight of projectiles from the structure. This additional netting should be similar in color and design to the other proposed assemblies.
3. The landscaping located on the northern edge of the game court should be extended to provide a visual shield along the court's entire northern edge.
4. The proposed netting, under the requirements of the Zoning Ordinance, cannot exceed ten (10) feet in height. If this condition cannot be met, the homeowner will be required to request a variance from the City's Board of Adjustment.

### **Recommendation -**

In summary, based upon the considerations and conditions stated above, the Department believes the necessary requirements are met to ensure the outdoor game will not be an imposition on surrounding properties. The Department believes, with the addition of the above-stated conditions, the outdoor game court will not be visible from surrounding properties, projectiles will be prevented from exiting the property onto neighboring properties, and stormwater management issues will be reviewed and addressed by the Department of Public Works, through its Grading Permit process. The Department is recommending a favorable action upon this request.



WILDWOOD

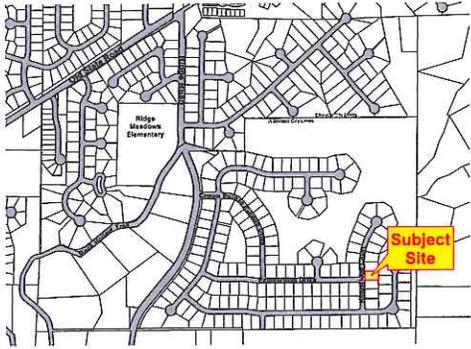
16860 Main Street  
Wildwood, MO 63040

CITY OF WILDWOOD NOTICE OF

**PUBLIC MEETING**

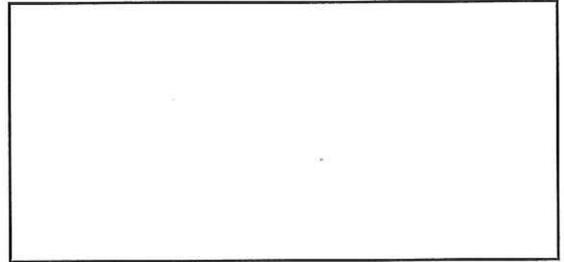
before the Planning and Zoning Commission

**MONDAY, MAY 2, 2016, at 7:30 P.M.**



Street Address of Subject  
Site:  
930 Kingsridge Court

THE CITY WELCOMES AND ENCOURAGES  
YOUR COMMENTS AND PARTICIPATION  
IN ITS PUBLIC PROCESSES.  
THANK YOU!



The Planning and Zoning Commission of the City of Wildwood will hold a meeting on **Monday, May 2, 2016, at 7:30 p.m., in the City Hall Council Chambers, 16860 Main Street, Wildwood, Missouri 63040.** At this public meeting, an item is planned for discussion and described below, which will then be taken under advisement for action either that evening or at a future date. The meeting will be open to all interested parties to comment upon this item, whether in favor or opposition, or provide additional input for discussion purposes. *If you wish to attend this public meeting and require accommodation due to disability, please contact the Department of Planning forty-eight (48) hours in advance at (636) 458-0440.* If you do not have comments regarding this item, no action is required on your part. The following item will be considered at this time:

**P.Z. 8-16 James Thurman, 930 Kingsridge Court, Wildwood, Missouri, 63021, c/o Sport Court St. Louis, 343 Great Oaks Drive, Lebadie, Missouri 63055,** is seeking the review and action of the Planning and Zoning Commission on the requested installation of an outdoor game court that is twenty-six (26) feet by thirty-four (34) feet in size, which is to be located at 930 Kingsridge Court, Wildwood, Missouri (Locator Number 24T110296); R-1A 22,000 square foot Residence District, with a Planned Environment Unit (PEU). This request is to be reviewed in accordance with Chapter 415.120 R-1A 22,000 square foot Residence District Regulations of the City of Wildwood Zoning Code, which establishes standards and requirements for outdoor game courts relating to their consideration by the Planning and Zoning Commission. The proposed game court is to be situated to the east of the single family residence located on the subject property. The Department will have a recommendation report prepared for consideration at this meeting for this request. **(Ward Eight)**

**\*RESIDENT OR PROPERTY OWNER - PLEASE COMMENT ON AND/OR TRACK THIS REQUEST BY:**

- 1) Submitting a comment online by visiting: <http://www.cityofwildwood.com/comment>.
- 2) Submitting a written comment prior to the meeting and addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040.
- 3) Viewing the meeting agenda and report, which is available on the City's website at: [www.cityofwildwood.com](http://www.cityofwildwood.com).

If you should have any questions regarding this information, please feel free to contact the Department of Planning at (636) 458-0440. Thank you in advance for your consideration in this matter.



# MUNICIPAL ZONING APPROVAL FOR PERMIT APPLICATION

WILDWOOD

**SUBMIT THIS APPROVED/COMPLETED FORM TO:**

**Department of Public Works, Permit Division  
St. Louis County Government Center (6th Floor)  
41 South Central Avenue, Clayton, Missouri 63105**

**NOTE:** With the City of Wildwood's approval, applicants for building permits must submit this form, together with four (4) copies of the plot plan approved, signed, and dated by the Municipal **Official**, to St. Louis County Department of Public Works, in order to obtain the authorization for construction to commence.

Address of Property: 930 Kingsridge Court

Subdivision Name: Crown Pointe Estates Lot #: 70

Property Owner's Name and Address:

James Thurman  
930 Kingsridge Court  
Wildwood, MO

Applicant's Name and Address:

Dionna + Austin Helfers  
343 Great Oaks Dr  
Labadie, MO 63055

Contact Person (if different than applicant): Austin Daytime Phone: (636) 541-5296

Cell: ( ) same Email: info@sportcourtsstlouis.com

**Type of Work (Check all applicable items):**

- New Residence:
  - Septic Approval? Yes \_\_\_ No \_\_\_ or Treatment Plant Connection \_\_\_
- Interior Finish
  - Level: Lower \_\_\_ Main \_\_\_ 2<sup>nd</sup> \_\_\_
- Sports Court: requires approved CUP PZC approval date: \_\_\_\_\_
- New Commercial Construction
- Private Stable
- Swimming Pool:
  - In-ground \_\_\_ Above-ground \_\_\_
- Commercial Re-Occupancy
- Propane Tank:
  - In-ground \_\_\_ Above-ground \_\_\_
- Telecommunication Equipment
- Accessory Structure: size \_\_\_\_\_
- Retaining Wall
- Temporary Trailer:
  - Sales \_\_\_ Construction \_\_\_
- Addition: type \_\_\_\_\_
- Septic: Repair \_\_\_ Replacement \_\_\_
- Tree Removal
- Deck/Porch
- Sign: Temporary \_\_\_ Permanent \_\_\_
- Business \_\_\_ Residential \_\_\_
- Demolition
- Solar: Roof \_\_\_ Ground \_\_\_
- OTHER: \_\_\_\_\_
- Generator

**MUNICIPAL OFFICE USE ONLY**

Entry Date: 4/08/2016 By: anna Locator Number: 24T110296

Fire District: metro west Municipal Zoning: \_\_\_\_\_

Fire Permit Required: Yes \_\_\_ No \_\_\_ Per County Permit Process \_\_\_ Project Located in Flood Plain: Yes \_\_\_ No \_\_\_

Additional Notes: \_\_\_\_\_

Special Use Permit required: Yes \_\_\_ No \_\_\_ SUP #: \_\_\_\_\_ Notes: \_\_\_\_\_

Grading Permit required: Yes \_\_\_ No \_\_\_ GP #: \_\_\_\_\_ Notes: \_\_\_\_\_

Grading Approval: \_\_\_\_\_ Date: \_\_\_\_\_ Final Approval by: \_\_\_\_\_

Inspection Approval: \_\_\_\_\_ Date: \_\_\_\_\_ Date Approved: \_\_\_\_\_

Type of Fee: _____	Received By (sign): _____
Amount: \$ _____ Date Collected: _____	Received By (print): _____
Receipt Number: _____	Date Received: _____

## Travis Newberry

---

**From:** Travis Newberry  
**Sent:** Friday, April 22, 2016 12:01 PM  
**To:** 'austin@sportcourtstlouis.com'; 'James Thurman'  
**Cc:** Joe Vujnich  
**Subject:** RE: Thurman Backyard Game Court - 930 Kingsridge Court

Hi Austin,

Thank you for the information. As we have discussed, please be aware of the following items:

1. The homeowner is not required to attend the Planning and Zoning Commission meeting, however it is recommended that they attend. As you may know, in the past the Commission has opted to postpone a decision because they wanted further information that only the homeowner could provide.
2. Approval from all of the subdivision Trustees is not a requirement, but in the past this was an item of discussion and a request was postponed until a letter of approval signed by all trustees was provided. Additionally, the Department of Planning does not contact Trustees for information regarding a request for a sport court. Any information in this regard must come from the petitioner/homeowner.

The meeting is scheduled for Monday, May 2<sup>nd</sup> at 7:30pm. I'll provide you and Mr. Thurman a link to the agenda when it is available next Friday afternoon.

### Travis Newberry

*Planner*

City of Wildwood  
16860 Main Street  
Wildwood, MO 63040  
[travis@cityofwildwood.com](mailto:travis@cityofwildwood.com)  
636-458-0440 x124



Please Subscribe to the City's Weekly e-News:

<http://www.cityofwildwood.com/list.aspx>

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**From:** Austin Helpers [<mailto:austin@sportcourtstlouis.com>]  
**Sent:** Tuesday, April 19, 2016 7:46 PM  
**To:** Travis Newberry  
**Cc:** 'James Thurman'  
**Subject:** FW: Thurman Backyard Game Court - 930 Kingsridge Court

Travis,

Below is the response from the homeowner (James Thurman). He is going to be out of town on business May 2, so we would like to know this is clarified?

Thank you,

Austin Helpers

Sport Court St. Louis  
Cell: 636-541-5296  
Office: 636-451-0400  
Fax: 636-590-2790  
[www.sportcourtstlouis.com](http://www.sportcourtstlouis.com)  
[www.sportcourt.com](http://www.sportcourt.com)



We are the official provider of athletic surfaces for the following organization



---

**From:** James Thurman [<mailto:jathurman13@yahoo.com>]  
**Sent:** Monday, April 18, 2016 8:54 PM  
**To:** [austin@sportcourtstlouis.com](mailto:austin@sportcourtstlouis.com)  
**Subject:** Re: Thurman Backyard Game Court - 930 Kingsridge Court

Hi Austin,

I spoke with Bill Van Oyen who actually signed my approval. His term has expired, so he is no longer a trustee. However, Bill stated that either Dick Otto or Chad Bilby, who are also noted on the Crown Pointe Estates Trustee listing which was included in the submission documents, could be contacted if needed to confirm the approval. They keep records on file. So, if Travis needs to reach anyone, he can send his request to the trustees' email address: [crownpointeestates@yahoo.com](mailto:crownpointeestates@yahoo.com).

James

---

**From:** Austin Helpers <[austin@sportcourtstlouis.com](mailto:austin@sportcourtstlouis.com)>  
**To:** [austin@sportcourtstlouis.com](mailto:austin@sportcourtstlouis.com)  
**Cc:** 'James Thurman' <[jathurman13@yahoo.com](mailto:jathurman13@yahoo.com)>  
**Sent:** Friday, April 8, 2016 12:03 PM  
**Subject:** RE: Thurman Backyard Game Court - 930 Kingsridge Court

FYI to keep you all in the loop, I talked to Travis and the CUP is not required nor the \$250 fee. I will be dropping off the 3 hard copies and filling out the zoning authorization form at City Hall this afternoon.

Thanks,  
Dionna

---

**From:** Austin Helfers [<mailto:info@sportcourtstlouis.com>]  
**Sent:** Friday, April 8, 2016 9:42 AM  
**To:** 'Travis Newberry'  
**Cc:** 'James Thurman'; [austin@sportcourtstlouis.com](mailto:austin@sportcourtstlouis.com); 'Kathy Arnett'  
**Subject:** RE: Thurman Backyard Game Court - 930 Kingsridge Court

Hi Travis,

Will do. I have a question – what is the CUP for? I don't believe that was required for the DeSarno court – did something change?

Thank you,

Dionna Helfers

Sport Court St. Louis  
Cell: 314-422-4141  
Office: 636-451-0400  
Fax: 636-590-2790  
[www.sportcourtstlouis.com](http://www.sportcourtstlouis.com)  
[www.sportcourt.com](http://www.sportcourt.com)



We are the official provider of athletic surfaces for the following organization



---

**From:** Travis Newberry [<mailto:travis@cityofwildwood.com>]  
**Sent:** Friday, April 8, 2016 7:48 AM  
**To:** [info@sportcourtstlouis.com](mailto:info@sportcourtstlouis.com)  
**Cc:** 'James Thurman'; [austin@sportcourtstlouis.com](mailto:austin@sportcourtstlouis.com); Kathy Arnett  
**Subject:** RE: Thurman Backyard Game Court - 930 Kingsridge Court

Good Morning,

Thank you for the digital version of the submittal, however, the City requires the submittal of 3 physical copies of the submittal (including the application) to City Hall at 16860 Main St., Wildwood, MO.

You can find the appropriate application here:  
<http://www.cityofwildwood.com/documentcenter/view/93>

Please complete the application and submit it along with the [fee for a Conditional Use Permit](#) of \$250.00, and 3 copies of the submittal.

Thank you and let me know if you have any questions.

**Travis Newberry**

*Planner*

City of Wildwood  
16860 Main Street  
Wildwood, MO 63040  
[travis@cityofwildwood.com](mailto:travis@cityofwildwood.com)  
636-458-0440 x124



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<http://www.cityofwildwood.com/list.aspx>

---

**From:** Austin Helfers [<mailto:info@sportcourtstlouis.com>]  
**Sent:** Thursday, April 07, 2016 11:03 AM  
**To:** Travis Newberry  
**Cc:** 'James Thurman'; [austin@sportcourtstlouis.com](mailto:austin@sportcourtstlouis.com)  
**Subject:** Thurman Backyard Game Court - 930 Kingsridge Court

Hi Travis,

Attached are all the documents regarding the backyard game court request at the Thurman residence. I thought there was a form, but I've been unable to find it on the city website.

Please let us know if you need any additional information.

Thank you,

Dionna Helfers

Sport Court St. Louis  
Cell: 314-422-4141  
Office: 636-451-0400  
Fax: 636-590-2790  
[www.sportcourtstlouis.com](http://www.sportcourtstlouis.com)  
[www.sportcourt.com](http://www.sportcourt.com)



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KINGSRIDGE CT

60ft

515

511

926

930

934

500

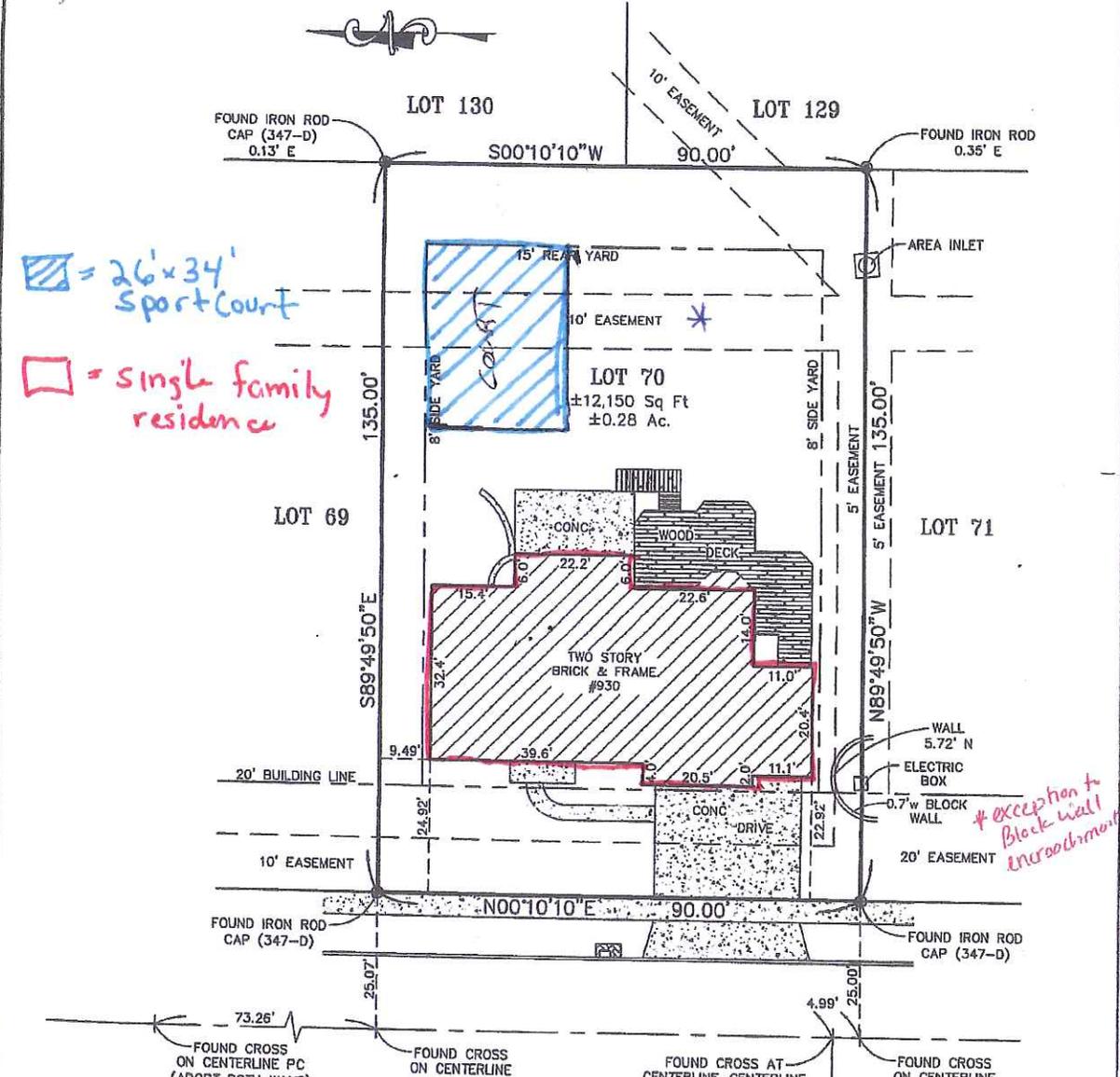
501

507

006

Thurman

"MISSOURI MINIMUM STANDARDS SURVEY"



= 26'x34' Sport Court

= single family residence

\* exception to Block wall encroachment

FOUND CROSS ON CENTERLINE PC (ADOPT BOTH WAYS)

FOUND CROSS ON CENTERLINE 0.08' S

FOUND CROSS AT CENTERLINE-CENTERLINE 0.14' S

FOUND CROSS ON CENTERLINE (ADOPT FOR LINE) 0.15' S

KINGSRIDGE (50' WIDE) COURT

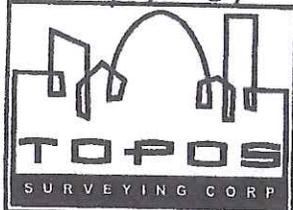
EAGLESRIDGE COURT



*Lee C. Ferrenbach, III*  
 9-14-07

- Notes:  
 (1) Source of Title: Stewart Title Guaranty Company commitment no. 199907, dated August 28, 2007  
 (2) Source of Bearings: Bearings were adopted from the record plat of Crown Pointe estates as recorded in P.B. 338 Pgs. 22-27

This is to certify that at the request of Investors Title Company we have, on the 11th day of September, 2007, made a survey on Lot 70 of Crown Pointe Estates, according to the plat thereof recorded in Plat Book 338 Pages 22 through 27 of St. Louis County Records in St. Louis County, Missouri, and that the result of said survey is represented upon this plat. This Urban Class Property Survey meets or exceeds the Current Missouri Minimum Standards for Property Boundary Surveys.



790 ST. FRANCOIS STREET  
 FLORISSANT, MISSOURI 63031  
 Phone (314) 838-5806  
 Fax (314) 838-8141

Revision: \_\_\_\_\_  
  
 Scale: 1" = 20'

Sur. by: CS Drawn by: NLO  
 Survey No. 0907-0089

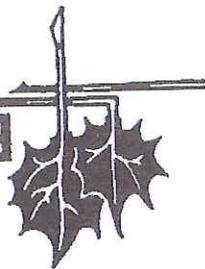
CITY OF WILDWOOD

APR 08 2016

DEPT OF PLANNING & PARKS

OF CHESTERFIELD  
 Gardens  
 where quality is foremost  
 17258 WILD HORSE CREEK ROAD  
 CHESTERFIELD, MD 63005  
 (636) 532-1033 FAX (636) 532-1258

BRIAN F ALWELL  
 (314) 641-9065  
 brian@baxtergardens.com



Ex Tree to remain

(2) Green Grand Adromonetia (B)

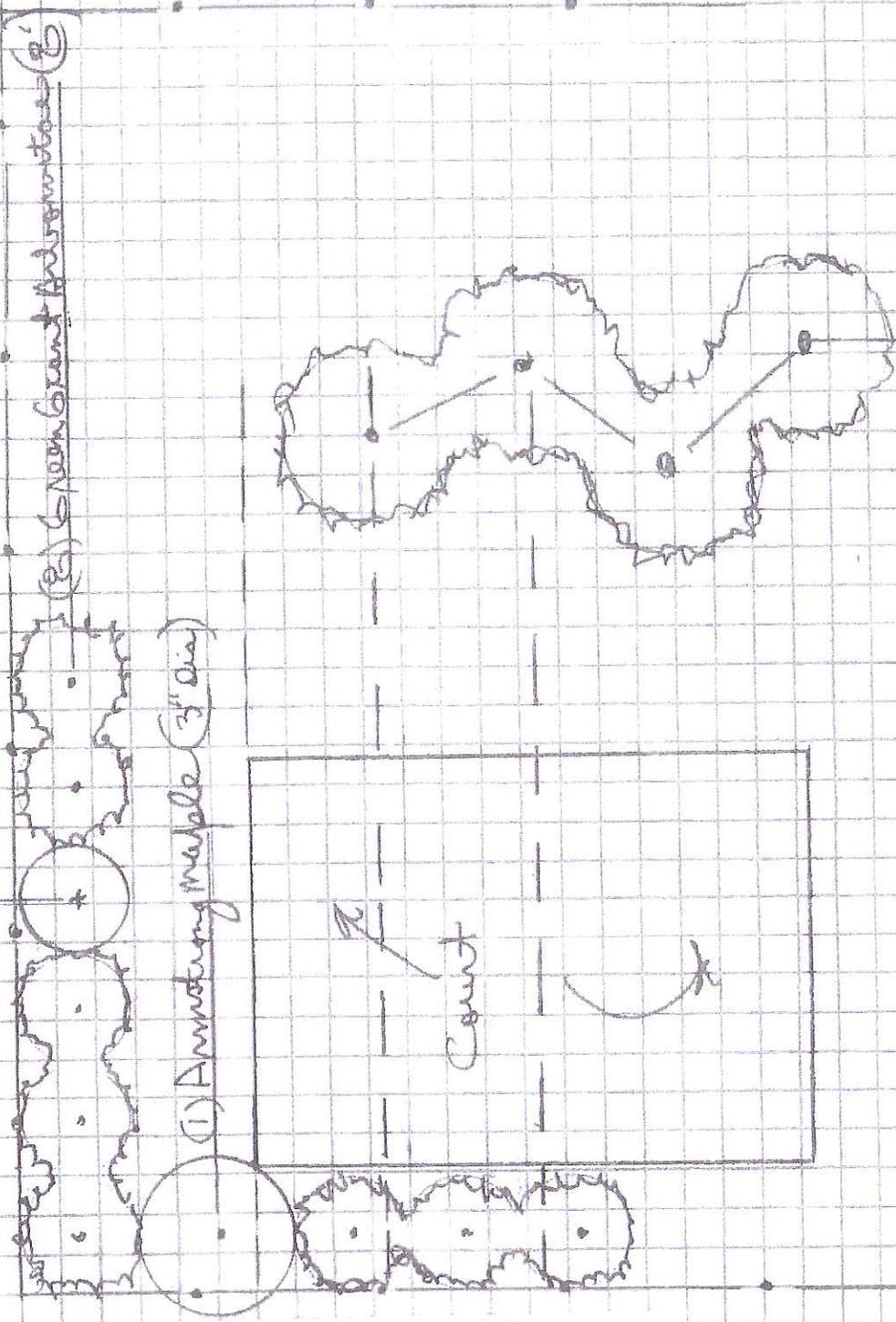
(1) Annoting Maple (3" dia)

(4) White Pine (B)

Thurman Residence  
 930 Kingsidge Ct.  
 Watauga, Mo. 63021

Designer: Brian Alwell

Scale 1" = 10 ft.





## Austin Helpers

---

**From:** James Thurman [jathurman13@yahoo.com]  
**Sent:** Monday, March 28, 2016 3:10 PM  
**To:** Austin Helpers  
**Subject:** Fwd: Concrete Pad Encroachment 930 Kingsridge Ct; MSD REF. NO. M-0328001-16

Please see the attached response from MSD.

Sent from my iPhone

Begin forwarded message:

**From:** Mike Patel <[MKPATEL@stlmsd.com](mailto:MKPATEL@stlmsd.com)>  
**Date:** March 28, 2016 at 2:21:09 PM CDT  
**To:** 'James Thurman' <[jathurman13@yahoo.com](mailto:jathurman13@yahoo.com)>  
**Subject:** RE: Concrete Pad Encroachment 930 Kingsridge Ct; MSD REF. NO. M-0328001-16

James,

We have reviewed the information and sketch regarding the location of your proposed concrete pad at 930 Kingsridge Ct, Wildwood over the existing easement [Lot 70 of Crown Pointe Estates, Locator # 24T110296].

MSD has existing sanitary sewer in the easements.

The proposed concrete pad is not considered a significant encroachment by MSD and therefore, a formal encroachment agreement will not be required by MSD.

MSD has no objection to this concrete pad.

This concurrence in no way surrenders or waives any easement rights of the Metropolitan St. Louis Sewer District with this easement.

Should demolition of the concrete pad be necessary to repair, maintain and/or install existing or future facilities, MSD will not be responsible for repairing the structure.

Please contact me if you have any further questions.

Thanks

Mike Patel  
Senior Engineer  
Metropolitan St. Louis Sewer District (MSD)  
2350 Market Street  
St. Louis, MO 63103

---

**From:** James Thurman [<mailto:jathurman13@yahoo.com>]  
**Sent:** Monday, March 21, 2016 3:06 PM  
**To:** Mike Patel  
**Subject:** Thurman: Concrete Pad Encroachment Question

Hi Mike,

As a follow-up to our discussion, I am looking to install a concrete pad in my backyard for a basketball court. A portion of the court will cover the MSD Easement. Attached is a copy of the plot plan for reference including the court location.

As previously discussed, you advised that a concrete pad is not considered an encroachment by MSD. However, the City of Wildwood requires some form of documentation from MSD stating that it is okay prior to approving my project to move forward.

Please advise if you require any additional information in consideration of this request.

Thanks in advance for your assistance.

Best Regards,  
James Thurman  
[jathurman13@yahoo.com](mailto:jathurman13@yahoo.com)  
314-420-3217

# Crown Pointe Estates

## Architectural Review Submission Form

OK  
AS  
SUBMITTED  
6-30-15

Name: JAMES + SHEREE THURMAN

Street Address: 930 KNOWLEDGE COURT

Phone: 636 527-8713

**Type of Request:**

Deck  Fence\*  Pool  Patio  Other

Color(s): GREEN BASE Material(s): CONCRETE

Description: BASKETBALL COURT:

- 26' X 34' CONCRETE SLAB \*NO LIGHT\*
- SPONS COURT SURFACE
- BASKETBALL GOAL
- BALL CONTAINMENT NET

All exterior changes made to your existing property must be submitted to the Board of Trustees; reviewed by the CPE Architectural Review Committee (ARC); and approved in writing by the CPE Board of Trustees (BT).

Please include photographs, literature, diagrams, drawings, descriptions, or text that could assist in clearly determining the nature/appearance of your project. This effort will allow the CPE ARC / BT to reply quickly and with fewer questions.

\* A property boundary survey must be included with all fence submissions.

The Architecture Review Committee / CPE Board of Trustees have 21 calendar days from date of receipt to approve or deny the submitted request.

## Contact

### Crown Pointe Estates Trustees:

Dick Otto  
Liz De Rum  
Ken Perko  
Jill Fisher  
Bill Van Oyen  
Chad Bilby

Name

Email

Address

Subject

Message

[crownpointeestates@yahoo.com](mailto:crownpointeestates@yahoo.com)



Send



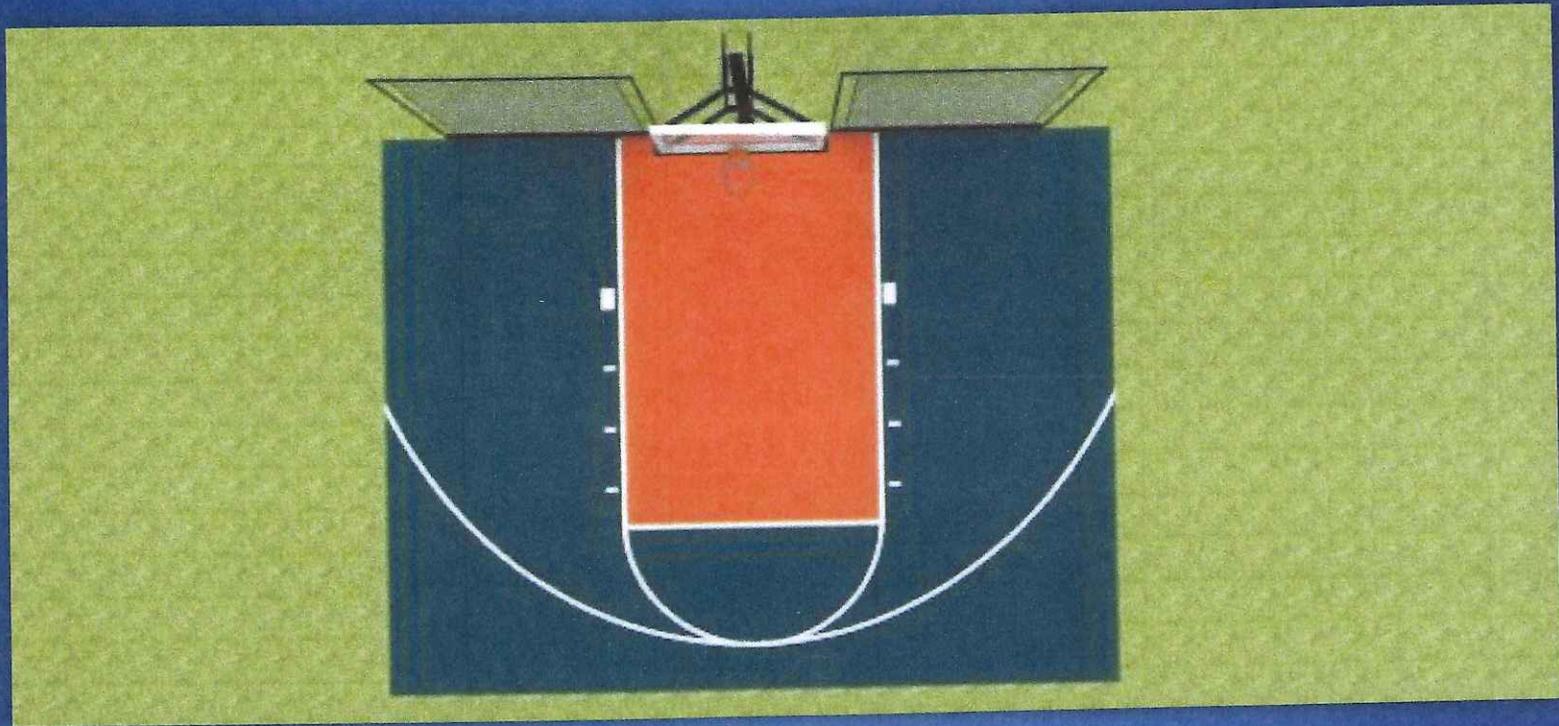
This site was created for FREE with Wix.com. It's easy, create yours now >>

© 2015 by Chad Bilby  
proudly made with [Wix.com](http://Wix.com)

Crown Pointe Estates  
Wildwood, MO 63071  
[crownpointeestates@yahoo.com](mailto:crownpointeestates@yahoo.com)

Connect online:





SPORT  
COURT  
ST. LOUIS

## Thurman Family Sport Court

DIMENSIONS

26' x 34'

COURT

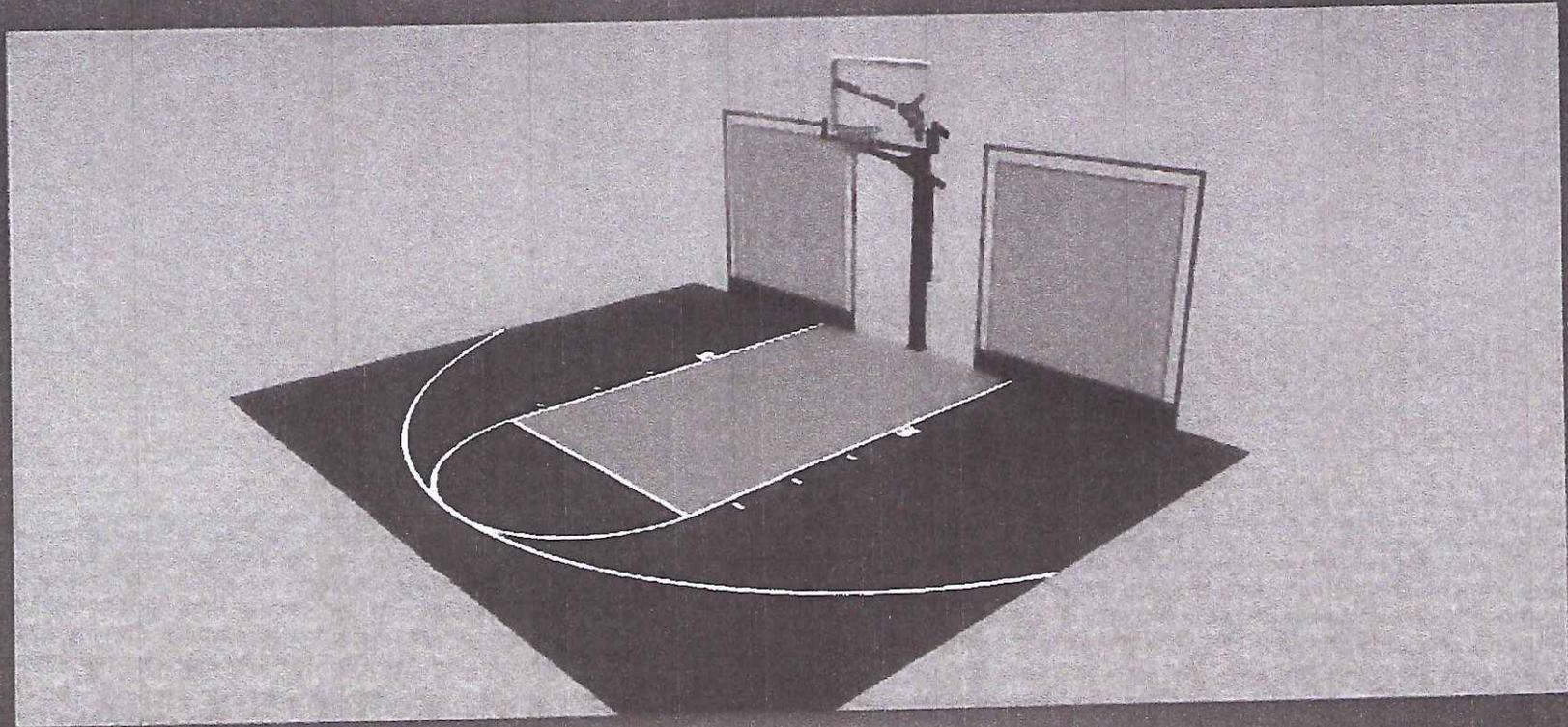
EVERGREEN

BORDER

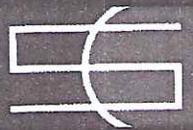
NONE

LANE

PEARL ORANGE



## Thurman Family Sport Court



SPORT  
COURT  
ST. LOUIS

DIMENSIONS

26' x 34'

COURT

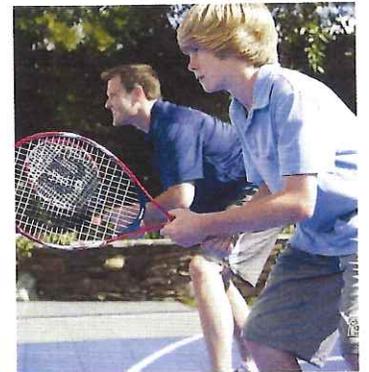
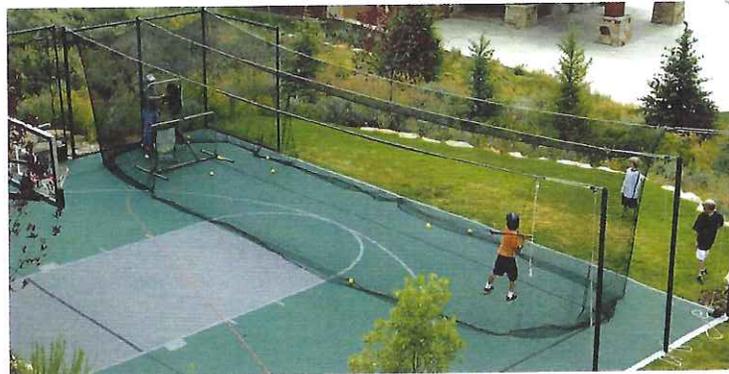
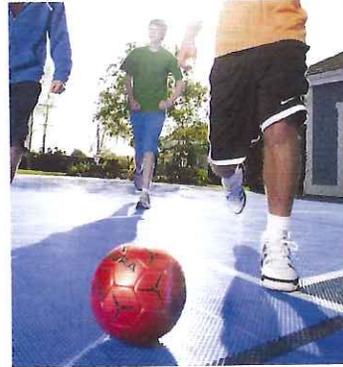
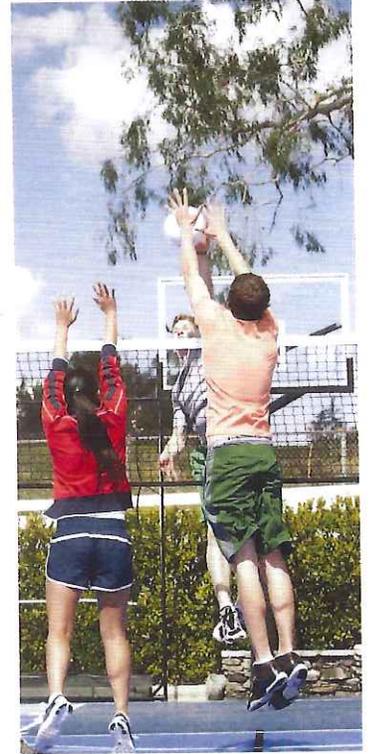
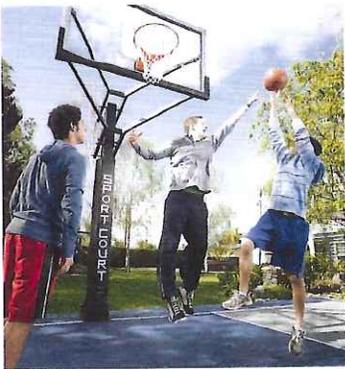
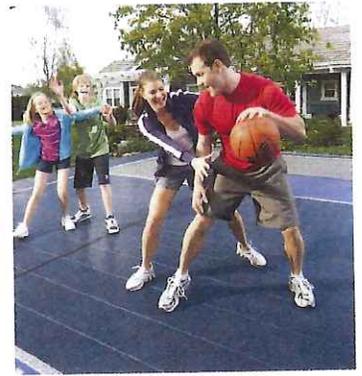
EVERGREEN

BORDER

NONE

LANE

PEARL ORANGE



# Backyard Courts

A Sport Court® backyard court lets you play almost every sport imaginable. Since 1974 Sport Court has been building custom backyard courts and turning them into places where kids can be themselves, be with their friends, and still be close to home.

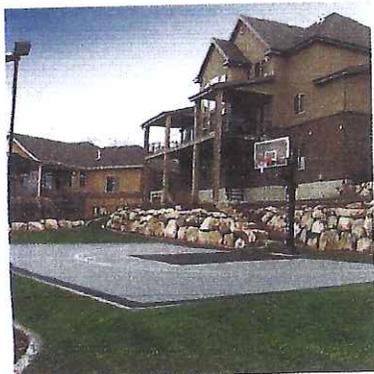
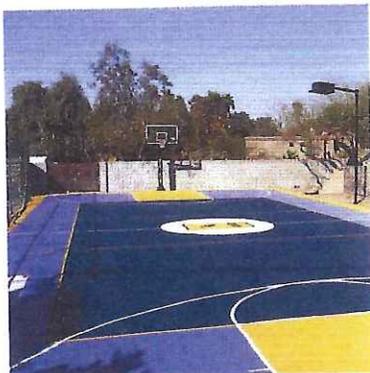
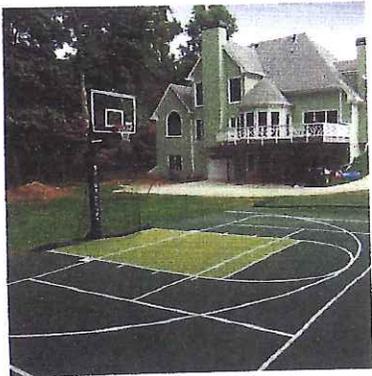
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**SPORT COURT**

WORLD'S LARGEST COURT BUILDER



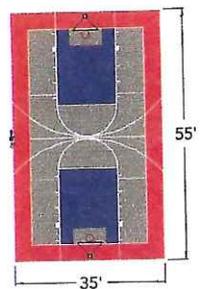
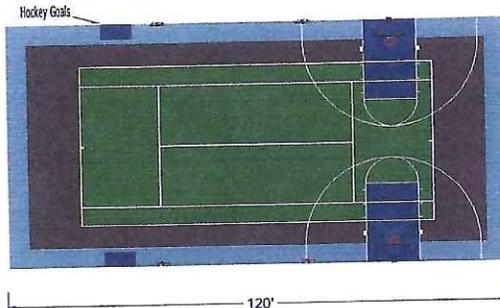
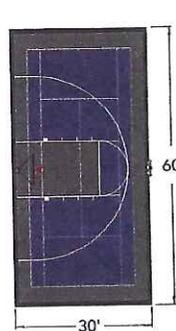
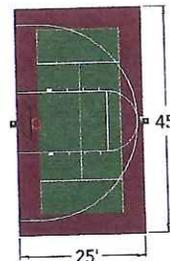
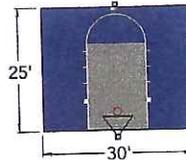
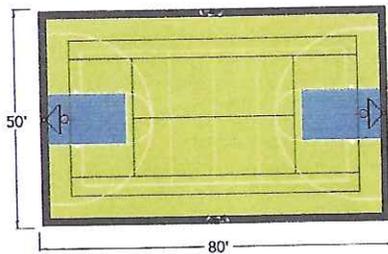
# Backyard Courts

One of the amazing aspects of your Sport Court® backyard court is its boundless versatility. There are literally dozens of games you and your family can play with all the competitive vigor of the pros. Backyards come in all shapes and sizes and so do our courts. Because we custom fit every court we install, you're sure to get a court that accommodates your yard, your family, your favorite sports and your budget.

When you decide to have a court installed in your backyard by Sport Court, you're doing more than purchasing the world's finest outdoor recreation surface and equipment, you're investing in a new family plan — focused on a lifetime of improved health and increased family time.

## Choose any court design, or Customize to Fit Your Backyard!

Here are some samples of courts that can be built in your backyard. Our experienced network of Court Builders has installed over 100,000 projects worldwide. Let one of our professionals build a dream court for you.



**SPORT COURT**

PARTNERS FOR BETTER QUALITY AND PERFORMANCE



Volleyball



Volleyball



Basketball



Futsal



Tennis



Tennis

SPORT COURT® IS NOW



Made in the U.S.A.

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Visit us at [www.sportcourt.com](http://www.sportcourt.com) or call 800-421-8112

Printed on recycled paper.

SC104 Rev. 7

# Sport Court® SlamSystems™



Highest-Quality  
basketball systems  
designed to integrate  
into your Sport Court®  
Backyard Court

## Pro Slam

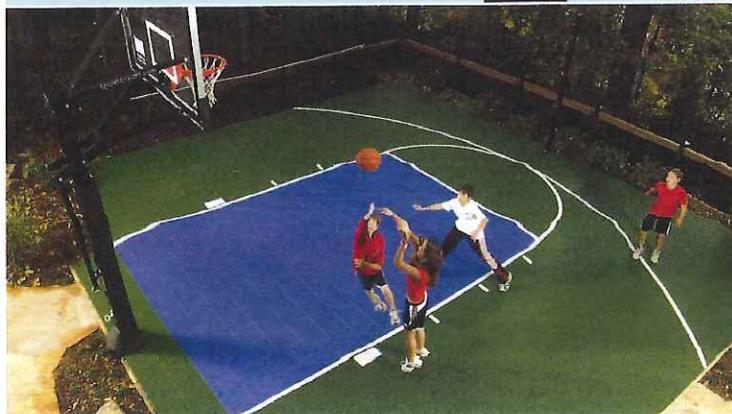
Adjustable	7' to 10'
Pole Size	6" x 6"
Backboard Size	72" with 1/2" tempered glass and arena view
Overhang	36" or 48"

## Collegiate Slam

Adjustable	7' to 10'
Pole Size	5" x 5"
Backboard Size	60" with 1/2" tempered glass and arena view
Overhang	36"

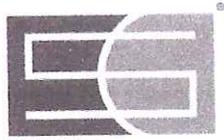
## Solid Slam

Pole Size	6" x 6"
Backboard Size	60" or 72" with 1/2" tempered glass and arena view
Overhang	36" for the 60" backboard 48" for the 72" backboard



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WORLD'S LARGEST  
COURT BUILDER

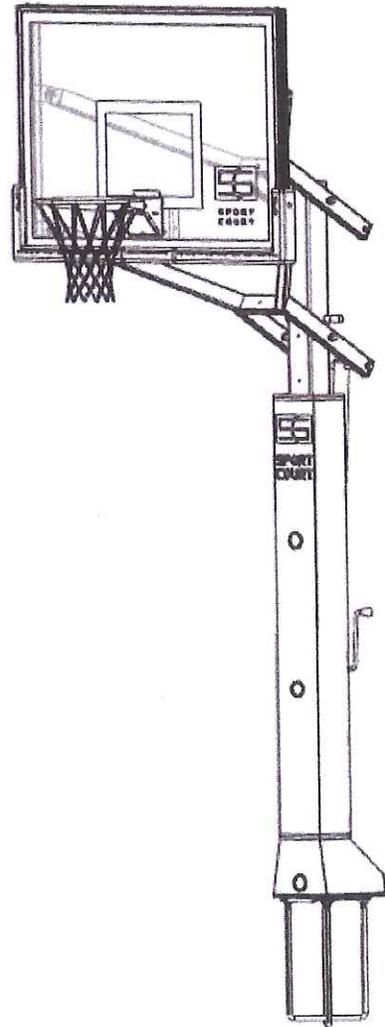


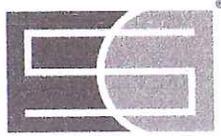
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ISO 9001:2008 and ISO 14001:2004 Certified Company

## Specification Collegiate SlamSystem™

<b>Adjustable Range:</b>	7' to 10' Height Adjustment Sticker
<b>Pole Size:</b>	5" x 5" x 3/16" Tubing
<b>Backboard Size:</b>	42" x 60" 1/2" Tempered Glass
<b>Arm Size:</b>	1.5" x 3" x 11 GA Tubing
<b>Weight:</b>	510 lbs.
<b>Wind Load:</b>	110 mph Exposure 3
<b>Overhang:</b>	36" at 10 feet Measured from front of pole to front of backboard
<b>Paint Process:</b>	High quality outdoor grade powder coat
<b>Colors:</b>	Black orange peel
<b>Net Hole Locations:</b>	Paddle Net 36" Badminton 61" Woman's Volleyball 88" Men's Volleyball 96"
<b>Standard Features:</b>	Pole/Anchor Pad, Black Backboard Pad, Black Professional Flex Rim
<b>Anchor:</b>	U-bolts – 3/4" x 24" length 9" on center bolt pattern





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ISO 9001:2008 and ISO 14001:2004 Certified Company

## Specification Rebounders

	10 X 10 Rebounder	10 X 20 Rebounder
<b>Net</b>		
Color:	Black – UV stabilized	Black – UV stabilized
Height:	8' 8"	9'
Length:	8' 8"	18'
Yarn:	#420 knotless first grade nylon	#420 knotless first grade nylon
Cord Tensile Strength:	135 lbs	135 lbs
Mesh Size:	3/4" square	3/4" square
Finishing:	Bound on all edges Black 3/4" hem	Bound on all edges Black 3/4" hem
Weight:	~2.8 lbs	~6.25 lbs
<b>Horizontal Pole</b>	(1 top, 1 bottom)	(2 top, 2 bottom)
Length:	11'	11'
Diameter:	1 5/8"	1 5/8"
Tube Thickness:	12 gauge	12 gauge
Weight:	~23 lbs	~23 lbs
<b>Vertical Pole</b>	N/A	(1 center)
Length:	N/A	7' 4 3/8"
Diameter:	N/A	1 5/8"
Tube Thickness:	N/A	12 gauge
Weight:	~13 lbs	~13 lbs
<b>End Assembly</b>	(1 left, 1 right)	(1 left, 1 right)
Dimensions	12' 1" x 8"	12' 1" x 8"
Tube Diameter:	1 5/8"	1 5/8"
Tube Thickness:	12 gauge	12 gauge
<b>Center Support, Lower</b>	N/A	14 1/4" x 36" x 12"
Dimensions:	N/A	1 7/8"
Tube Diameter:	N/A	12 gauge
Tube Thickness:	N/A	~8 lbs
Weight:	N/A	
<b>Center Support, Upper</b>	N/A	14 1/4" x 22 1/4" x 12"
Dimensions:	N/A	1 7/8"
Tube Diameter:	N/A	13 gauge
Tube Thickness:	N/A	~6 lbs
Weight:	N/A	

**Rebounder Sleeve**

Length:	14"	14"
Diameter:	1 7/8"	1 7/8"
Tube Thickness:	13 gauge	13 gauge
Weight:	~2 lbs	~2 lbs
Unit of Measure:	3 count box or 18 count box	3 count box or 18 count box

**Paint Process**

Galvanized  
High Quality Outdoor Grade Powder Coat with substrate Phosphate protection package

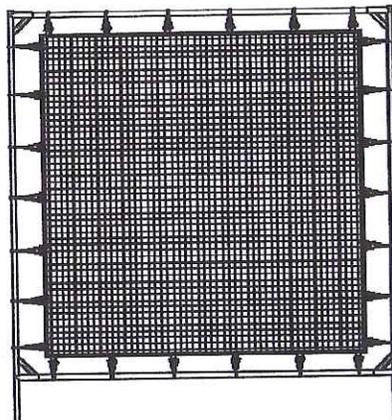
\*Rebounder sleeves are galvanized but not powder coated

**Colors**

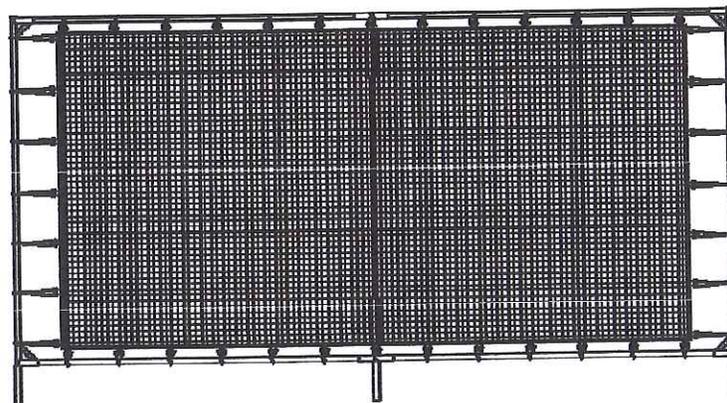
Black

**Additional Rebounder Parts**

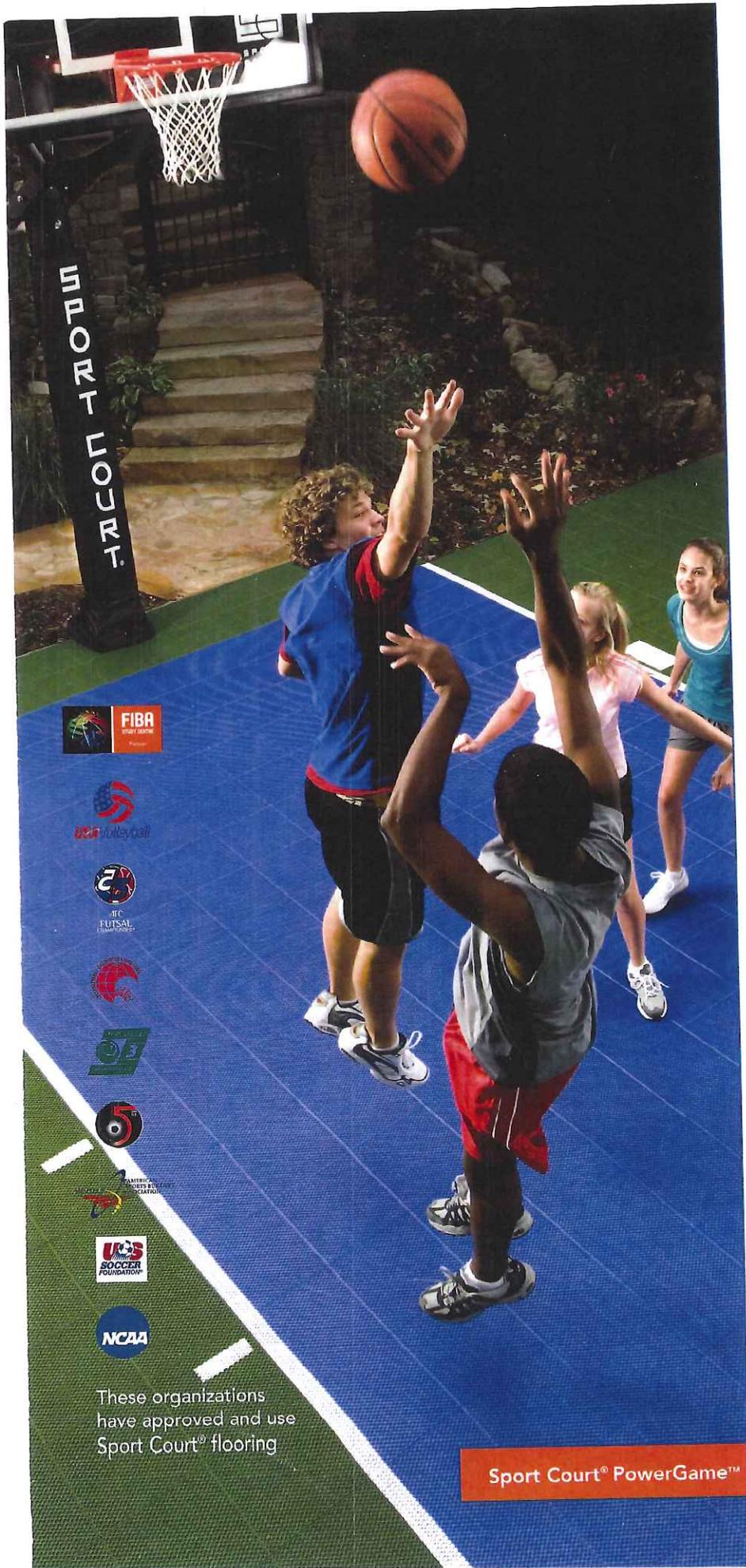
- Apron (10' or 20')
- Line marker (10' or 20')
- 1" adjustment straps
- 16" bungee cords
- 6' Net positioning straps



**10 X 10 Rebounder System**



**10 X 20 Rebounder System**



# Sport Court®

## OUTDOOR PERFORMANCE FLOORING

Sport Court® products are designed and manufactured with the highest standards of quality, safety, and performance in mind. We employ rigorous internal and third-party testing to make sure our game court products meet our tough specifications.

Whether you choose **PowerGame™** [the premier modular sports surface available today], **SportGame™** [our advanced multi-sport surface], or **SportDeck™** [our specially designed surface that's proven to be outstanding for tennis], you will soon be enjoying products that set the industry standard. The graphs on the following page will help you make the right choice for your court, based on performance analysis conducted by an independent third-party lab in accordance with American Society for Testing and Materials [ASTM] standards.

These organizations have approved and use Sport Court® flooring

Sport Court® PowerGame™



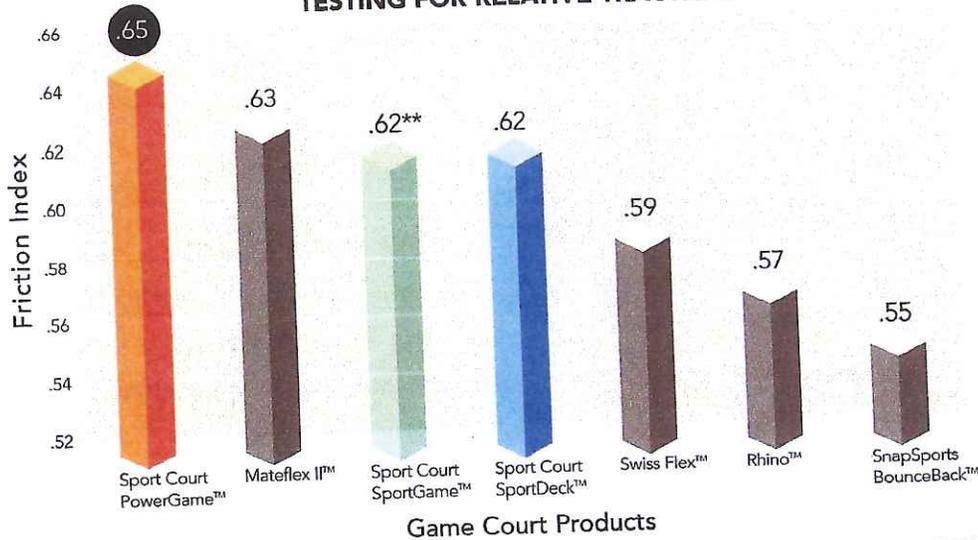
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## TRACTION | Sport Court Performance Comparison

### TESTING FOR RELATIVE TRACTION



This graph represents the amount of relative traction provided by each surface tested.

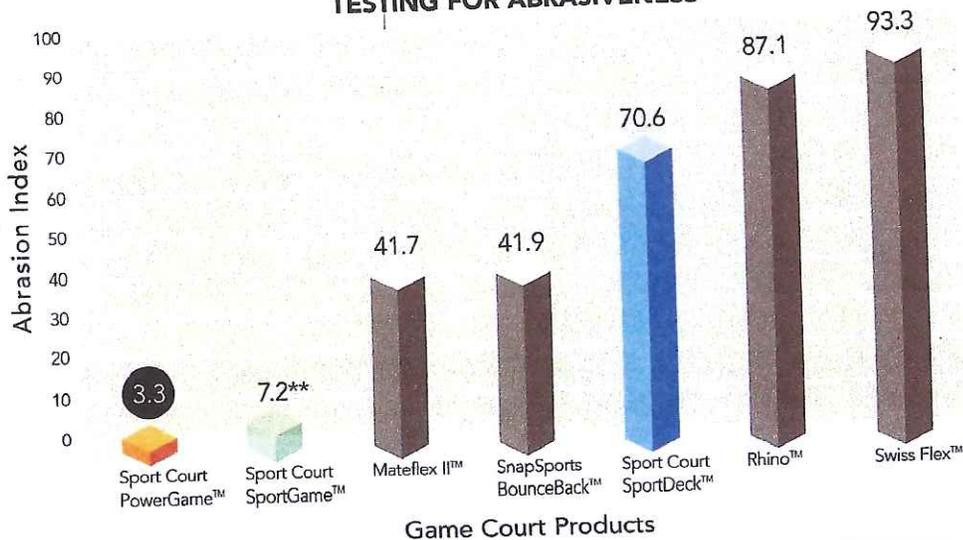
**SOURCE:** ASTM C1028\* was conducted by a certified, independent U.S. laboratory in May, 2006

\*ASTM C1028 was initially designed to measure traction on ceramic tile, but has become the standard for testing most solid surfaces. It is frequently used in slip and fall liability testing.

\*\* Test results for SportGame were derived from independent third-party results run in early 2008, due to development after initial testing.

## ABRASION | Sport Court Performance Comparison

### TESTING FOR ABRASIVENESS



This graph represents the relative abrasiveness of each surface tested.

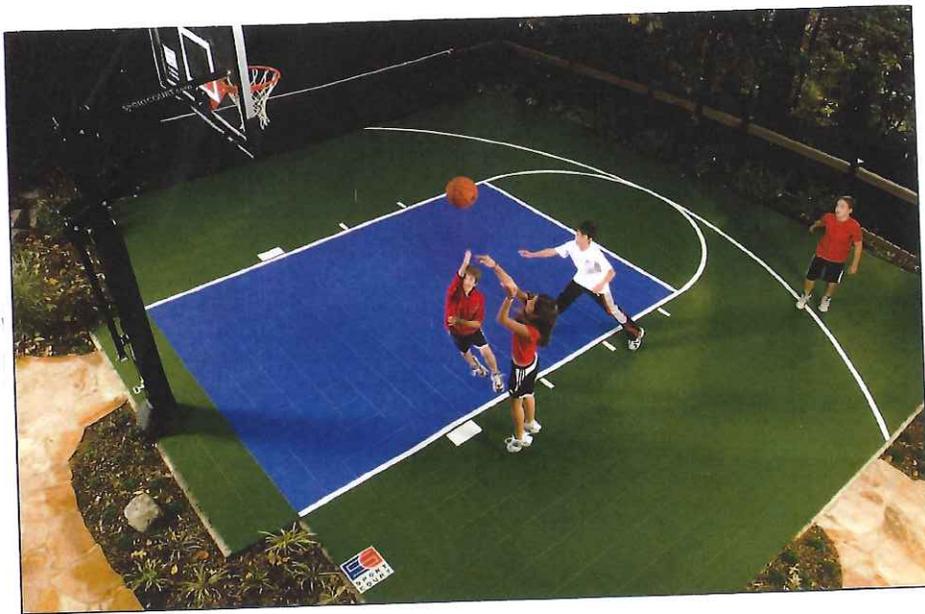
**SOURCE:** ASTM F1015\* was conducted by a certified, independent U.S. laboratory in May, 2006

\*ASTM F1015 was initially designed as a test for artificial turf. Material experts have chosen this method as a good relative measure for abrasiveness, because it measures the loss of mass of a special foam drawn across the surface.

\*\* Test results for SportGame were derived from independent third-party results run in early 2008, due to development after initial testing.

## SAFETY | PowerGame™

No tile surpassed PowerGame's patented design for absorbing shock, based on ASTM F1292, which measures the likelihood of head injury as a result of a fall. As a comparison, even a one-inch fall on concrete can result in head injury – Sport Court's PowerGame passed this test at a height of two feet!



## BENEFITS | PowerGame™

- LATERAL FORGIVENESS™** Helps reduce joint stress and fatigue
- FAST SPEED RATING** International Tennis Federation
- PATENTED DESIGN** A unique two-tiered surface provides superior ball bounce and traction
- HIGHEST SAFETY RATING** Industry leader in minimizing skin abrasion, providing surface impact protection and superior traction
- BALL RESPONSE** PowerGame provides excellent ball bounce while providing a best-in-class, comfortable surface for active and repetitive play

## SPECIFICATIONS | PowerGame™

- SYSTEM TYPE** Modular – Polypropylene
- BALL BOUNCE** ASTM F1551 sec. 32: 101.8%
- LOAD CAPACITY** 170 psi
- FRICITION** ASTM C1028: Dry / 0.65
- SHOCK ABSORPTION** ASTM F1292: Two foot drop height
- SURFACE PACE** ITF CS/01/01-05-133: 52.1 (Fast Surface)
- WEAR RESISTANCE** ASTM D4060: .31 grams
- TILE DIMENSIONS** 12" x 12" x 5/8" (30.5cm x 30.5cm x 15.8mm)



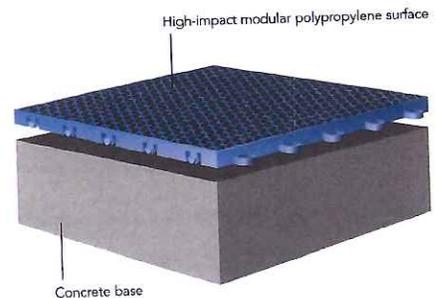
FIBA - the international governing body for basketball - has approved PowerGame for outdoor competition. Sport Court is proud to be the only manufacturer with an approved outdoor system.



PowerGame received a fast rating by the International Tennis Federation

# PowerGame™

Sport Court's patented PowerGame design provides the highest levels of performance and safety. Independent third-party testing shows that no other outdoor modular surface surpasses PowerGame's combination of surface traction, head impact protection and low skin abrasion. In only a short time on the market, PowerGame has quickly become the number-one selling outdoor sports surface for athletes of all abilities.



PowerGame™  
Sports Surface



SPORT  
COURT

**SECTION 09624 - MODULAR ATHLETIC SURFACING**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

**A. Scope**

1. The complete installation of modular athletic surfacing system including the interlocking high-impact polypropylene copolymer tile of proprietary formulation and striping.

**B. Related work specified under other sections.**

**1. CONCRETE SUBFLOORS - SECTION 03\_ \_ \_**

a. The general contractor shall furnish and install the concrete subfloors.

b. The slab shall be a medium broom finish with level tolerances of  $\pm 1/8$ " (3.2mm) in any 10' (3m) radius. Floor Flatness and Floor Levelness (FF and FL) numbers are not recognized. High spots shall be ground level and low spots filled with approved leveling compound.

c. The slab shall have a slope no more than 0.5%, or 1 inch in 16 feet, all in one plane. Optionally, concrete slab may be crowned at the court center line and sloping down at 0.5% towards the edge of the slab.

**2. GAME STANDARD INSERTS - SECTION 11\_ \_ \_**

**1.2 REFERENCES**

**A. ASTM (American Society for Testing & Materials)**

1. ASTM D 256
2. ASTM D 638
3. ASTM D 648
4. ASTM D 785
5. ASTM D 792
6. ASTM C 1028
7. ASTM G 21

**B. ISO (International Organization for Standardization)**

1. ISO 1183
2. ISO 527-1, -2
3. ISO 179
4. ISO 180
5. ISO 75B-1, -2

**C. EN (European Norm)**

1. EN 13036-4
2. EN 12235:2004
3. EN 14877:2006
4. EN 12616
5. EN ISO 5470-1

**D. ITF (International Tennis Federation)**

**1.3 SUBMITTALS**

- A. Sport Court® PowerGame™ modular athletic surfacing specifications.
- B. One sample of specified system, if requested by Architect.
- C. Sport Court modular athletic surfacing installation guide.
- D. Sport Court modular athletic surfacing care and maintenance guide.
- E. Sport Court Warranty.

**1.4 QUALITY ASSURANCE**

**A. MATERIAL SUPPLIER:**

1. Shall be Sport Court International, Inc. (manufacturer)
2. Manufacturer shall be ISO 9001:2008 and ISO 14001:2004 Certified to assure proper quality and environmental control.
3. Manufacturer shall be a Zero Waste company.
4. Manufacturer shall have produced sports surfaces for a longer period of time than their stated

## SPORT COURT® POWERGAME™

warranty.

5. Surfaces must be certified for competition by the international federations for basketball (FIBA), volleyball (FIVB), handball (IHF) and badminton (BWF).

### B. INSTALLER:

1. The complete installation of the surfacing system as described in these specifications shall be carried out by an experienced installer (Contractor), and the work shall be performed in accordance with current Sport Court installation instructions.
2. Installer (Contractor) shall be liable for all matters related to installation for a period of one year after the floor has been substantially installed and completed.
3. Successful bidder shall submit a minimum of five (5) completed modular projects of similar magnitude and complexity within the last two (2) years.
4. Bidder shall provide all sample tile and documentation.

### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Materials shall be delivered in manufacturer's original, unopened and undamaged packaging with identification labels intact.
- B. Store material on a clean, dry, and flat surface, protected from exposure to harmful weather conditions or possible damage.

### 1.6 SITE CONDITIONS

- A. In order to prevent damage and not void the warranty, installation of modular materials shall not commence until all other finishes and overhead mechanical trades have completed their work in the athletic surfacing areas.
- B. Subfloors shall be clean, dry and free from dirt, dust, oil, grease, paint, or other foreign materials.
- C. Surfacing installation shall not begin until the levelness requirements of concrete subfloors have been met.
- D. The installation area shall be closed to all traffic and activity for a period to be set by the Contractor.
- E. Environmental Limitations
  1. Comply with the Sport Court requirements.
  2. Adhere to all MSDS requirements for materials employed in the work.
  3. Protect all persons from exposure to hazardous materials at all times.
- F. After athletic surfacing is installed and the game lines painted, the area is to be closed to allow curing time for the system, typically 3-5 days. No other trades or personnel are allowed on the floor until it has been accepted by the owner.

### 1.7 WARRANTY

- A. Sport Court provides a limited warranty of fifteen (15) years on the materials it has supplied. (A copy of the full warranty, with its Terms and Exclusions, is available from the authorized Sport Court Dealer.) This 15-Year Limited Warranty is subject to the Outdoor Surface Warranty and all of its provisions. The Outdoor Surface Warranty is expressly limited to the surfacing materials (goods) supplied by Sport Court. During the period covered under the Outdoor Surface Warranty, Sport Court will repair/replace any defective tiles with the same or substantially similar product according to the schedule in the Outdoor Surface Warranty. The warranty does not cover floor damage caused (wholly or in part) by fire, winds, floods, moisture, other unfavorable atmospheric conditions or chemical action, nor does it apply to damage caused by ordinary wear, misuse, abuse, negligent or intentional misconduct, aging, faulty building construction, concrete slab separation, faulty or unsuitable subsurface or site preparation, settlement of the building walls or faulty or unprofessional installation of Sport Court surfacing systems.
- B. Sport Court shall not be liable for incidental or consequential losses, damages or expenses directly or indirectly arising from the sale, handling or use of the materials (goods) or from any other cause relating thereto, and their liability hereunder in any case is expressly limited to the replacement of materials (goods) not complying with this agreement or, at their election, to the repayment of, or crediting buyer with, an amount equal to the purchase price of such materials (goods), whether such claims are for breach of warranty or negligence. Any claim shall be deemed waived by buyer unless submitted to Sport Court in writing within 30 days from the date buyer discovered, or should have discovered, any claimed breach.

# SPORT COURT® POWERGAME™

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Sport Court PowerGame™ modular athletic surfacing shall be:
1. Grid-top design.
  2. Size: 12" x 12" x 5/8" (30.48cm x 30.48cm x 15.8mm)
  3. High-impact polypropylene copolymer suspended modules.
  4. 907 support leg structure.
  5. The tile shall have a positive locking system.
- B. Standard Colors: Bright Blue, Burgundy, Dark Blue, Evergreen, Green, Bright Red, Titanium, Sand, Gray, Clover, Brick Red, Steel Blue, Black, Open Tennis Blue, Granite, Earth, Terra-Cotta, Kiwi, Purple, Mustard, Shamrock Green, Pearl Orange, Black.
- C. Color Consistency:  $\Delta E_{CMC} < 1.0$
- D. Weight: 0.70 lbs. (315 grams)
- E. Packaging: Product is shipped in pre-assembled sheets (2x4 modules per sheet, 5 sheets per box).
- F. Material Test Results
- |                            |                              |                                |
|----------------------------|------------------------------|--------------------------------|
| 1. Rockwell hardness:      | (ASTM D 785)                 | 65 R                           |
| 2. Heat deflection:        | (ASTM D 648 @ 66 psi)        | 85°C                           |
|                            | (ISO 75B-1, -2 @ 40.45 MPa): | 73°C Unannealed                |
| 3. Tensile Yield Strength: | (ASTM D 638)                 | 3,000psi                       |
|                            | (ISO 527-1, -2)              | 20 MPa                         |
| 4. Elongation at Yield:    | (ASTM D 638)                 | 5%                             |
|                            | (ISO 527-1, -2)              | 5%                             |
| 5. Notched Izod:           | (ASTM D 256)                 | No break at 23°C               |
|                            | (ISO 180)                    | 31kJ/m <sup>2</sup>            |
| 6. Charpy Notched Impact:  | (ISO 179 @ 23°C)             | 26kJ/m <sup>2</sup>            |
| 7. Density:                | (ASTM D 792)                 | 0.902 specific gravity 23/23°C |
|                            | (ISO 1183 @ 23°C)            | 0.90 g/cm <sup>3</sup>         |
- G. Product Test Results
- |                            |                                |                 |
|----------------------------|--------------------------------|-----------------|
| 1. Friction:               | (ASTM C1028)                   | Dry: 0.65       |
|                            | (EN 13036-4)                   | Dry: 103        |
| 2. Vertical Ball Behavior: | (EN 12235:2004)                | Tennis: 93%     |
| 3. Angled Ball Behavior:   | (EN 14877:2006)                | Tennis: 50 Fast |
| 4. Permeability:           | (EN 12616)                     | >2000 mm/h      |
| 5. Flatness:               | 0.0" (0.0mm)                   |                 |
| 6. Lateral Forgiveness™:   | +0.065" / -0" (+1.65mm / -0mm) |                 |
- H. Load Bearing Capacity: 170 psi (1.17MPa)
- I. Court Pace Classification: (ITF) Category 5 - Fast
- J. Sanitary Information
1. Resistance to fungi (when tested in compliance with ASTM G-21 and MIL standard 810-D procedure 508.3). All basic organisms tested (ATCC #6205-11797) and were found to have zero growth.
  2. Resistance to the following:
    - a. Bacteria and mildew resistance
    - b. Gram-positive bacterial Staphylococcus Aureus
    - c. Gram-negative Klebsiella Pneumoniae
    - d. Pink-staining organism
    - e. STV Reticulum
    - f. Surface fungi growth prior to and following leaching
- K. Game Line Paint
1. Adhesion promoter – proprietary tile adhesion promoter as supplied by Sport Court.
  2. Paint – aliphatic polyurethane as recommended by Sport Court. Select from standard colors.

## SPORT COURT® POWERGAME™

### PART 3 - EXECUTION

#### 3.1 INSPECTION

- A. Inspect concrete slab for contamination, dryness and levelness. Report any discrepancies to the general contractor.
- B. Concrete slab shall be broom swept and dust free by the general contractor.
- C. Installer (Contractor) shall document all working conditions as specified in PART 1 – GENERAL prior to starting installation. Report any discrepancies to the general contractor.

#### 3.2 INSTALLATION

- A. Sports surface shall be installed to pre-approved layout.
- B. Tiles shall be trimmed to accommodate thermal expansion and contraction according to *Sport Court Thermal Expansion and Concrete Size Adjustment* document.
- C. Sports surface shall be clean and dust free.
- D. Game Lines
  - 1. Use only high quality masking tape approved by Sport Court.
  - 2. Lines shall be primed and painted using Sport Court proprietary adhesion promoter and recommended aliphatic polyurethane paint.
  - 3. Provide game lines as indicated on drawings.
- E. Remove all excess and waste materials from the work area. Dispose of empty containers in accordance with federal and local statutes.

**END OF SECTION 09624**