AGENDA

for the

CITY OF WILDWOOD'S

PLANNING AND ZONING COMMISSION

City Hall Council Chambers · 16860 Main Street

April 18, 2016 -- Monday

7:30 P.M.

Action Items on Tonight's Agenda ----------> Two (2) Public Hearings, One (1) Information Report, 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 4, 2016

Documents: III APRIL 4, 2016 MINUTES.PDF

IV. Department Of Planning's Opening Remarks/Updates

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

1. 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)

   Documents: V.A. LAFAYETTE HIGH - CUP BANNERS.PDF

2. 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)

   Documents: V.B. SIDE YARD SETBACKS.PDF

VI. Old Business – One (1) Item For Consideration

1. Information Reports – 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 CUP LAKE.PDF

   a.1. Public Comments On Recommendation

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

1. 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. Propertie

      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)

      Documents: VII.A. DRIVE THRU CORR.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

MEETING OF THE PLANNING AND ZONING COMMISSION
CITY HALL, 16860 MAIN STREET, WILDWOOD, MISSOURI
April 4, 2016

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)	ABSENT – (1)
Chair Bopp	Commissioner Renner
Commissioner Lee	
Commissioner Archeski	
Commissioner Bauer	
Commissioner Gragnani	
Commissioner Liddy	
Council Member Manton	
Mayor Woerther	

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, Kelpe 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 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.

<u>Information Reports – One (1) Item for Consideration</u>

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 Derive). **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.

DRAFT

WILDWOOD

PLANNING AND ZONING COMMISSION
CITY OF WILDWOOD, MISSOURI
PUBLIC HEARING PRIMER

April 18, 2016 Executive Session
Prepared by the Department of Planning
"Planning Tomorrow Today"

PETITION NUMBER:	P.Z. 24-15
PETITIONER:	Rockwood School District—Lafayette High School, c/o Dr. Karen Calcaterra, 17050 Clayton Road, Wildwood, Missouri 63011
REQUEST:	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. **Proposed Use: Sponsorship type banners for a public use, with a minimum of two (2) operational athletic fields on the same lot.**
LOCATION:	East side of State Route 109, south of Clayton Road (Locator Number: 22V210215/Street Address: 17050 Clayton Road)
ZONING:	NU Non-Urban Residence District
WARD:	Five

BACKGROUND >>> The City of Wildwood recently made changes to its NU Non-Urban Residence District Regulations to accommodate sponsorship banners for certain fundraising purposes in association with institutional uses that are situated in this zoning district designation. In this discussion, two (2) specific locations were referenced as potential users of this application, which included Pond Athletic Association (PAA) and Lafayette High School, both of which had some types of banners displayed at their athletic stadiums over the years, all of which became illegal in the City of Wildwood with its incorporation. Pond Athletic Association (PAA) removed its banners, when contacted by the City, while the high school continued to display them at its facility, on and off over the years. It is important to note that, during the athletic association's 50th anniversary year, the City's Board of Adjustment granted temporary rights for sponsorship banners to celebrate this landmark event.

The City's new regulations for sponsorship banners are provided below in the bolded text:

Chapter 415. Zoning Regulations - Section 415.090. "NU" Non-Urban Residence District Regulations.

A. Scope Of Provisions. This Section contains the district regulations of the "NU" Non-Urban Residence District. These regulations are supplemented and qualified by additional general regulations appearing elsewhere in this Chapter, which are incorporated as part of this Section by reference. The "NU" Non-Urban Residence District of the City of Wildwood encompasses areas within which rough natural topography, geological conditions or location in relation to urbanized areas creates practical difficulties in providing and maintaining public roads and public or private utility services and facilities. The "NU" Non-Urban Residence District, therefore, shall promote the protection and existence of a large-lot rural development pattern.

C. Conditional Land Use And Development Permits Issued By The Commission. The following land uses and developments may be permitted under conditions and requirements specified in Section 415.500 "Conditional Use Permits", except the specified home occupations described below which must adhere to simplified process defined in Subsections (H) and (I) of this Section:

1. Administrative offices and educational facilities.
2. ***Banners: sponsorship types for both public and not-for-profit uses, with a minimum of two (2) operational athletic fields on the same lot. [Ord. No. 415.090 §1, 4-13-2015]***
3. Bed and breakfast establishments.
4. Blacksmiths.
5. Cemeteries, including mortuaries operated in conjunction with the cemetery.
6. Child care centers, nursery schools and day nurseries.
7. Clubs, private not-for-profit.
8. (Reserved)
9. (Reserved)
10. Fairgrounds.
11. Feed or grain storage, commercial or cooperative.
12. Foster homes for handicapped children.
13. Golf courses, including practice driving tees on the same premises. Miniature golf courses and independent practice driving tees are excluded.
14. (Reserved)
15. Group homes for the elderly.
16. (Reserved)
17. Home occupations permitted by Section 415.090(H).
18. Large water features.
19. Local public utility facilities, provided that any installation, other than poles and equipment attached to the poles, shall be:
    a. Adequately screened with landscaping, fencing or walls or any combination thereof; or
    b. Placed underground; or
    c. Enclosed in a structure in such a manner so as to blend with and complement the character of the surrounding area.
    d. All plans for screening these facilities shall be submitted to the Department of Planning for review. No building permit or installation permit shall be issued until these plans have been approved by the Department of Planning.
20. Mortuaries.
21. Mulching plants for trees, wood or wood waste, but not including any assembly or manufacture of a product.
22. Nursing homes, including assisted care living facilities (overall density of assisted care units is a function of permitted beds).
23. Police and fire stations.
24. Post offices and other government buildings.
25. Public utility facilities, other than local public utility facilities.
26. Radio, television and communication transmitting, receiving or relay towers and facilities, subject to the provisions of the Model Telecommunications Code.
27. Recreational camps and camping facilities.
28. Recreational land uses, commercial or not-for-profit.
29. Residential substance abuse treatment facilities.
30. Retreats operated by educational or other not-for-profit entities.

31. Riding stables, kennels and veterinary clinics.
32. (Reserved)
33. Salesrooms (retail and wholesale), when established as an accessory use to commercial gardens, plant nurseries and greenhouses, for the sale of nursery products and related items for use in preserving the life and health of such products, hand tools and plant containers. The preceding items shall not include power-driven equipment, lawn and garden furniture nor decorative accessories and fencing; however, bulk sale of sand, gravel, mulch, railroad ties or similar materials may be permitted. The salesroom may occupy all or a portion of a building.
34. Satellite dishes (additional to provisions of Section 415.380(R)).
35. Sewage treatment facilities, other than facilities permitted as an accessory use.
35a. Solar panels, all ground-mounted types. All roof-mounted types, if said installations are visible from an adjoining/adjacent street(s). [Ord. No. 2028 §§1 — 2, 4, 8-25-2014]
36. Specialized private schools.
37. (Reserved)

CURRENT REQUEST >>> Lafayette High School would like to retain its current sponsorship banners that are displayed at the athletic stadium throughout much of the year. The banners are placed facing into the stadium, on the perimeter fencing, and, in the past, been white in color, with lettering and logos on the front side of them. These banners advertise local businesses, which pay to be placed at this location. The specific request that was advertised by the Department of Planning for this consideration is as follows:

> **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)**

NEXT STEPS >>> At tonight's public hearing, the Department of Planning is seeking input on this matter in preparation of a recommendation to address this advertised matter. If any of the Commission members should have questions or comments in this regard, please feel free to contact at the Department of Planning at (636) 458-0440. Thank you for your review of this information in preparation of tonight's hearing on this topic.

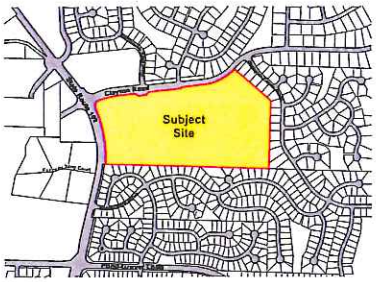
WILDWOOD

16860 Main Street
Wildwood, MO 63040

CITY OF WILDWOOD
NOTICE OF
PUBLIC HEARING
before the Planning and Zoning Commission
Monday, April 18, 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:
17050 Clayton Road, Wildwood, Missouri 63011

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 18, 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.** The following request will be considered at this time:

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)**

***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,** 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.

Travis Newberry

From: noreply@cityofwildwood.com
Sent: Thursday, April 14, 2016 7:37 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

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. 24-15 Rockwood School District—Lafayette High School (CUP - Banners)
Item Description	*Field not completed.*
Position on Request	Do Not Support
General Comments	I do not support this item if the banners do not face the athletic field and if they are left up when there is not a game being played.
Suggestions	I do support this item if the banners face the athletic field and if they are only on display when there is a game being played.
	(Section Break)
Name	Bryan Aston
Address	520 Dartmouth Crossing
City	Wildwood
State	MO
Zip	63011
Phone Number	314-363-9693
Email	baston@mlpllc.com

Email not displaying correctly? View it in your browser.

Travis Newberry

From: noreply@cityofwildwood.com
Sent: Tuesday, April 12, 2016 3:27 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. 24-15 Rockwood School District—Lafayette High School (CUP - Banners)
Item Description	Lafayette High School - Banners on Fences
Position on Request	Do Not Support
General Comments	The proposal appears to be open to any fence associated with athletic fields. That is too broad and can contain too much neighborhood visual pollution. There is a reasonable balance somewhere between 0% use and every square inch has banners, but nothing is clearly defined in the postcard request as to which fences, and what is acceptable for the neighborhoods and what is not. In addition, there are old remnants of prior banners stuck on fences that looks unkempt and disrespectful to the community. Also, there is plenty of trash and ground debris that is not well kept all around the property. Prior to asking for conditional uses like this, a step back must be taken to see what impression is being left by leaders at LHS in regards to the community they are in.
Suggestions	*Field not completed.*
	(Section Break)
Name	Tim Tomasic
Address	2217 Oak Crest Manor Lane
City	Wildwood

State	MO
Zip	63011
Phone Number	314-707-6280
Email	ttomasic@trane.com

Email not displaying correctly? View it in your browser.

Travis Newberry

From: noreply@cityofwildwood.com
Sent: Wednesday, April 06, 2016 5:24 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. 24-15 Rockwood School District—Lafayette High School (CUP - Banners)
Item Description	Lafayette HS CUP - Banners
Position on Request	Do Not Support
General Comments	We oppose the banners b/c they look trashy and will be (are, actually) another in a series of increasing intrusions on our home.
Suggestions	In the last year or so: new loud speakers (and I mean loud), new lights, increased band practices. It may not seem like a big deal, until you have to deal with it all of the time within a couple hundred feet.
	(Section Break)
Name	Dan & Cindy Rohr
Address	2304 Gross Point Ln
City	Wildwood
State	MO
Zip	63011
Phone Number	636-458-9006
Email	Dan.rohr@yahoo.com

Email not displaying correctly? View it in your browser.

P.Z. Number(s): 24-15
(as assigned by department)

CITY OF WILDWOOD

PETITION

NOV 18 2015

before the

CITY OF WILDWOOD'S
PLANNING AND ZONING COMMISSION

DEPT OF PLANNING & PARKS

FOR THE PURPOSE OF HEARING REQUESTS
FOR ONE OR A COMBINATION OF THE FOLLOWING:
(PLEASE CHECK THOSE ITEMS WHICH ARE APPLICABLE)

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

APPLICANT/OWNER INFORMATION

Applicant's Name: Lafayette High School - Rockwood School District
Mailing Address: 17050 Clayton Road
Wildwood, Missouri 63011
Telephone Number, with Area Code: 636-733-4114
Fax Number, with Area Code:
E-Mail Address: calcaterrakaren@rsdmo.org
Interest in Property (Owner or Owner Under Contract):
Associate Principal - Karen Calcaterra

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

Owner's Name (if different than applicant):
Rockwood School District
Address: 111 East North Street
Eureka, Missouri 63025
Telephone Number, with Area Code: 636-733-2000

SITE INFORMATION

Postal Address of the Petitioned Property(ies):
17050 Clayton Road
Wildwood, Missouri 63011

Locator Number(s) of the petitioned Property(ies):
22V210215

Total Acreage of the Site to the Nearest Tenth of an Acre:
51.20

Current Zoning District Designation: NU Non-Urban Residence District

Proposed Zoning District Designation: NU Non-Urban Residence District

Proposed Planned District or Special Procedure: Conditional Use Permit (CUP)

USE INFORMATION

Current Use of Petitioned Site: Public High School

Proposed Use of Site: Same

Proposed Title of Project: Sponsorship Banners at Athletic Fields

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

CONSULTANT INFORMATION

Engineer's/Architect's Name: Not Applicable

Address:

Telephone Number, with area code:

Fax Number, with area code:

E-Mail Address:

Soil Scientist/Forester's Name: Not Applicable

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: [signature]

NAME (PRINTED): JOAN SHAUGHNESSY

ADDRESS: 17050 CLAYTON RD.
WILDWOOD, MO 63011

TELEPHONE NUMBER: 636-733-4113

[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 21st DAY OF September 20 15.

SEAL: D. HAGEMEIER
NOTARY PUBLIC-NOTARY SEAL
STATE OF MISSOURI
ST. LOUIS COUNTY
COMMISSION #12521932
MY COMMISSION EXPIRES 6/10/2016

SIGNED: [signature]
(NOTARY PUBLIC)

NOTARY PUBLIC D Hagemeier,
STATE OF MISSOURI.

MY COMMISSION EXPIRES 6-10-16.

FOR OFFICE USE ONLY

1ST SUBMITTAL DATE: 11-18-15
FEE: _____; RECEIVED BY: KA
PRELIMINARY DEVELOPMENT PLAN: YES ~~NO~~
PACKET COMPLETE: (YES) NO

2ND SUBMITTAL DATE: _____
PACKET COMPLETE: YES NO

3RD SUBMITTAL DATE: _____
PACKET COMPLETE: YES NO

4TH SUBMITTAL DATE: _____
PACKET COMPLETE: YES NO

Real Estate Information

Property Sketch

22V210215 - 2015 - Card 1

Ownership and Legal Information: 22V210215 - 2015

Locator No.	Tax Year	Tax District	City Code	Site Code	Destination Code
22V210215	2015	110WE	107	1626	

Owner's Name:	Rockwood R-6 School District		
Taxing Address:	17050 Clayton Rd Ballwin, MO 63011		
Care-Of Name:			
Mailing Address:	*Same as the taxing address.*		
Subdivision Book - Page:			
Assessor's Book - Page:	10 - 0898		
City Name:	Wildwood		
Subdivision Name:	Ephriam Barber Estate		
Legal Description:	Lot Pts 16 & 17, S Pt 22V210206 2 23 90 **Important:** This is a brief legal description and is not meant for use in recorded legal documents.		
Lot Number:		**Block Number:**	
Lot Dimensions:		**Total Acres:**	51.20
Tax Code - Description:	H - School District (Tax Exempted)	**Land Use Code:**	681
Deed Document Number:		**Deed Type:**	
Deed Book and Page:	**Book:** 08360 **Page:** 0163	**Trash District:**	Not Applicable
Deed Index List:	View Deed Index Information Recorded With Locator Number 22V210215		
School District:	Rockwood	**County Council District:**	7

Assessment Information: 22V210215 - All Available Years

	Year	Property Class	Appraised Values				Assessed Values		
			Land	Improv.	Total	%	Land	Improv.	Total
⊟	2015	Residential:	421,400	31,220,800	31,642,200	19%	80,070	5,931,950	6,012,020
		Agriculture:				12%			
		Commercial:				32%			
		Total:	421,400	31,220,800	31,642,200		80,070	5,931,950	6,012,020
⊟	2014	Residential:	10,698,900	10,685,700	21,384,600	19%	2,032,790	2,030,280	4,063,070
		Agriculture:				12%			
		Commercial:				32%			
		Total:	10,698,900	10,685,700	21,384,600		2,032,790	2,030,280	4,063,070
⊞	2013	Total:	10,698,900	10,685,700	21,384,600		2,032,790	2,030,280	4,063,070
⊞	2012	Total:	10,698,900	10,718,900	21,417,800		2,032,790	2,036,590	4,069,380
⊞	2011	Total:	10,698,900	10,718,900	21,417,800		2,032,790	2,036,590	4,069,380
⊞	2010	Total:	10,698,900	10,738,800	21,437,700		2,032,790	2,040,370	4,073,160
⊞	2009	Total:	10,698,900	10,738,800	21,437,700		3,423,650	3,436,420	6,860,070
⊞	2008	Total:	10,698,900	30,808,000	41,506,900		3,423,650	9,858,560	13,282,210
⊞	2007	Total:	10,698,900	30,808,000	41,506,900		3,423,650	9,858,560	13,282,210
⊞	2006	Total:	4,114,900	28,830,100	32,945,000		1,316,770	9,225,630	10,542,400
⊞	2005	Total:	4,114,900	28,830,100	32,945,000		1,316,770	9,225,630	10,542,400
⊞	2004	Total:	4,114,900	23,610,900	27,725,800		1,316,770	7,555,490	8,872,260

Dwelling Information: 22V210215 - 2015 - Card 1

No dwelling information was found for this property and tax year.

Sales Information: 22V210215 - All Available Years

Sale Date	Sale Price	Sale Type	Sale Validity Code - Name	Book - Page
There is no sales information available for this parcel.				

Other Buildings and Yard Information: 22V210215 - 2015

Description	Year Built	Units	Total Area	Grade	Condition
School Gymnasium	2002	1	8,970	C	Average
School Gymnasium	2002	1	4,500	C	Average
Con Paving	2000	1	3,120	C	Average
School	2000	1	16,884	C	Average
School	2000	1	3,120	C	Average
School Gymnasium	1999	1	12,376	C	Average
Utility Bldg Mtl-Stone Cml	1999	1	450	C	Average
Utility Bldg Mtl-Stone Cml	1999	1	1,440	C	Average
School	1998	3	24 x 64 = 1,536 ft^2	C	Average

School	1992	1	20 x 25 = 500 ft^2	C	Average
School	1991	1	10,728	C	Average
School	1991	1	84,334	C	Average
School	1991	1	44,252	C	Average
School	1991	1	84,334	C	Average
School Gymnasium	1991	1	11,520	C	Average
School Gymnasium	1991	1	12,480	C	Average

Property Sketch Image: 22V210215 - 2015 - Card 1

The property sketch of the dwelling or building, if any, is not available for this tax year and card number, possibly because the property is vacant land.

Property Sketch Information: 22V210215 - 2015 - Card 1

Key	Area	Description	Floor
No propety sketch details were found for this tax year and card number.			

Listed below are all the available online documents for this parcel.

Documents: 22V210215 - All Available Years

Tax Year	Document Title	Date	View
There are no online documents available for this parcel.			

Information on this page is current as of Friday, September 18, 2015.

Close Window

St. Louis County Parcel Map

September 21, 2015

Parcel Selected

1:2,400

0 0.0275 0.055 0.11 mi

0 0.045 0.09 0.18 km

St. Louis County GIS Service Center

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WILDWOOD

PUBLIC HEARING PRIMER

PREPARED FOR THE

PLANNING AND ZONING COMMISSION'S APRIL 18, 2016 PUBLIC HEARING

Department of Planning
April 18, 2016 Executive Session
City Hall Council Chambers
"Planning Tomorrow Today"

Request: **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. **(Wards - All)**

Background: The City of Wildwood has a number of subdivisions developed with the use of a Planned Environment Unit (PEU - St. Louis County) or the Planned Residential Development Overlay District (PRD - City of Wildwood). These overlay districts allow the developer, eventual homebuyer, and the local government to address the use of property more in keeping with its characteristics versus compliance to a one size fits all residential zoning district designation approach. The use of these overlay districts has been across all areas of Wildwood, rural to Town Center.

One of the key components of the use of the overlay district procedure is the ability to modify the setback distances for structures and buildings to allow for them to match the minimum lot sizes that are also accommodated, thereby creating a more compact development featuring greater contiguous open spaces. In more traditional subdivisions, those outside the non-urban residence district, side yard setback distances can be five (5) to (6) feet in width, thereby allowing ten (10) feet between dwellings. These side yard setback areas are critical in their function as well, given they receive much of the stormwater runoff from the areas of the dwelling's impervious surfaces, along with the installation of needed utilities for the purposes of electric, water, sewer, telecommunications, and others. Therefore, the use of these areas needs to be carefully controlled to preserve their designed functions.

Over the last year, a number of homeowners have installed or requested the right to use these side yard setback areas and others for new improvements. These improvements include a range of flat work, landscaping, and stormwater improvements. Collectively, some of the improvements work within the narrow areas of the side yard setbacks, but not always.

An example of this situation that has created issues is the more recent trend of adding flatwork for an additional driveway pad in the side yard setback area. In recent instances, this driveway approach causes a number of issues for the abutting property owner, such as alterations of stormwater runoff, increase in noise, and degradation of

aesthetics. These situations have led to an increase in questions and complaints to the City about such. These questions and complaints were reviewed and given no clear or concise interpretation of the multiple codes governing and controlling setback areas of a lot, resulting in responses being less than desirable to these parties. Accordingly, the Department believes the best approach is to have the Planning and Zoning Commission review the matter of how the use of certain setback areas of a lot should be treated, if at all.

Key Areas of Study: The key areas of this discussion include the following items:

1. The need or lack thereof for a legislative solution to the use of the setback areas for typically exempt improvements, such as fences, walls, light standards, and flatwork.
2. The methods to manage or protect these setback areas from use and/or development.
3. The consideration of increasing the allowable minimum setbacks authorized by the City's Planned Residential Development Overlay District (PRD) procedure, if approved on a site, thereby ensuring certain distances are preserved between dwellings for necessary utility installations and stormwater management, but also, homeowner installed improvements as well.
4. The integration of the Grading Code requirements into the Zoning Ordinance, so as consistency exists between the two (2) sets of regulations.

This list may not be all-inclusive to the number of items that might exist, but represents a starting point for discussion on this matter at tonight's public hearing. With this discussion and input from the public and the Planning and Zoning Commission, the Department then can prepare its report on this request. Again, this request is being presented due to a recent number of incidents relating to the use of side yard setback areas in more traditional subdivisions for improvements that were never expected to occur there. However, with changing demands on households, particularly the number of vehicles potentially associated with a single residence having children of a driving age, the availability of space on a lot is at a premium in some locations within the City. This situation is leading to the need to consider this matter and action by the Planning and Zoning Commission in this regard.

Applicable Regulations: Below are listed some representative examples of the exceptions provided relative to the use of setback areas on lots. The examples from the City's Zoning Ordinance are cited from the Miscellaneous Regulations and the NU Non-Urban Residence District for residential lots, but all the "R" Residence Districts contain similar provisions relative to setback areas. Therefore, the NU Non-Urban Residence District is used in this context as a representative sample.

Chapter 415.380, Section L. - Miscellaneous Regulations Yards To Be Open To Sky—Exceptions. Every part of a required yard shall be open to the sky, unobstructed except as follows:

1. Ordinary projections of skylights, sills, belt courses, cornices and ornamental features projecting not to exceed twelve (12) inches;
2. Ordinary projecting of chimneys and flues, not to exceed seventy-two (72) inches in width, projecting not to exceed twenty-four (24) inches;
3. Roof overhangs projecting not to exceed eighteen (18) inches, except that roof overhangs on the south side of a building may project forty-eight (48) inches into a side or rear yard, but no closer than forty-eight (48) inches to a property line;
4. Canopy overhangs for service stations projecting a maximum of eighteen (18) inches into required front yards;

5. Slab type porches or paved terraces having a maximum height of not more than twelve (12) inches above ground elevation at any point may project into any yard except that the projection into the front yard shall not exceed ten (10) feet;
6. In all "R" Residence Districts air-conditioning units extending into side or rear yards a maximum of thirty (30) inches, with air-conditioning units including mounting pedestals not to exceed forty-eight (48) inches in height above ground elevation within said side or rear yards;
7. Driveways, ramps, sidewalks and parking lots as otherwise permitted by this Chapter.

Chapter 415.090, Section G. of the NU Non-Urban Residence District Regulations

3. ***Minimum yard requirements—general.***

A. *Front yard.* No structure shall be allowed within fifty (50) feet of any roadway right-of-way line or large lot roadway easement.
B. *Side and rear yard.* No structure shall be allowed within thirty (30) feet of any property line other than a roadway right-of-way line or large lot roadway easement.

4. ***Specific yard requirements and exceptions.***

A. Notwithstanding any other provisions of this Chapter, on corner lots no structure or plant material exceeding three (3) feet in height above the elevation of the street pavement is allowed within the sight distance triangle.
B. Boundary walls or fences, six (6) feet or less in height, are allowed within the minimum yard requirements.
C. Permitted information signs, six (6) feet or less in height are allowed within the minimum front yard setback.
D. Permitted directional signs, three (3) feet or less in height, are allowed within the minimum front yard setback or sight distance triangle.
E. A permitted freestanding business sign may be located no closer than twenty-five (25) feet from any roadway right-of-way line.
F. Light standards for street lighting or at points of ingress and egress, but not including parking lot lighting, are allowed within the minimum front yard setback when approved by the Department of Planning. Light standards for parking lot lighting are allowed no closer than twenty-five (25) feet of any side or rear yard line which adjoins property in the "NU" Non-Urban Residence, "PS" Park and Scenic or any "R" Residence District.

Next Steps: At tonight's public hearing, the City Attorney and the Department of Planning are seeking input on this matter in preparation of a recommendation on whether to amend the Zoning Ordinance to address this advertised matter. If any of the Commission members should have questions or comments in this regard, please feel free to contact the City Attorney (Rob Golterman) at (314) 444-7500 or the Department of Planning at (636) 458-0440. Thank you for your review of this information in preparation of tonight's hearing on this topic.

AGENDA ITEM **OLD BUSINESS**

WILDWOOD

INFORMATION REPORT

Prepared by Department of Planning
April 18, 2016 Executive Session
"Planning Tomorrow Today"

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 - TBD
Report:	Attachment A
Conditions:	Attachment B
Plan Sheets:	Attachment C
Background Information:	Attachment D
Ward:	One

Recommendation: The Department of Planning is recommending the Planning and Zoning Commission grant the requested permit for this large water feature and dam.

In the report, evidence is provided indicating the following:

1. This large water feature is being engineered to the highest available standards.
2. The design of the large water feature and dam will be required to comply to all of the recommendations from the participating review agencies and other authorities.
3. The owner of the property will be required to provide an on-going, long-term maintenance plan for this large water feature and dam to ensure its integrity and safety.
4. The Department's recommendation is also premised upon the petitioner meeting all of the conditions contained in Attachment B of this Information Report.

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 Department of Planning has reviewed the request, along with support from the Department of Public Works. In reviewing this request, the Department of Planning 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 Department 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 elevation, is lower than the roadway surface of State Route 100 (see attached detail). Therefore, the dam's water on release would be trapped between the dam structure 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 Department that a dam constructed on this property for a lake can be accomplished with a minimum level of risk to surrounding properties.

However, the Department 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 Department 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 Department is recommending the Planning and Zoning Commission grant the requested Conditional Use Permit (CUP) for this large water feature and includes conditions to achieve a safe and functional outcome to its existence in the City. 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 Department'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 Department does believe the large water feature can be constructed on this site with minimal impacts and threats to the area.

SUMMARY AND RECOMMENDATION >>> The Department has provided in its Information Report on the request the reasons for its support of 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 Department is recommending the Planning and Zoning Commission grant 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
Plan Sheets

CITY OF WILDWOOD
APR 14 2016
DEPT OF PLANNING & PARKS

DV

From: **David Volz** dvolz@volzinc.com
Subject: RE: Taylor
Date: April 14, 2016 at 3:02 PM
To: Joe Vujnich JVujnich@cityofwildwood.com
Cc: Laurie Taylor sales@compuspace-usa.com, Tom Kelpe tkelpe@kelpe.com

Joe,
Attached is the lake exhibit. I went out there and it's a 30-inch pipe under Highway 100, but the exhibit assumes it's 100% blocked.

A few comments:

- If the pipe under Highway 100 is blocked, and that the dam completely fails in one slug of water; we could store 130% of the lake volume at an elevation 6 feet below the shoulder of the highway.
- As a unintentional bonus, the proposed lake will provide 1-foot of detention storage; so it will actually help the drainage under the highway.
- If the lake overflow structure was blocked, a 100-year 24-hour storm (7.2-inches) would be completely contained within the lake.

For the meeting on Monday night I plan to bring a color version maybe at a 1:1 scale that's does not exaggerate the slope.

Thanks,
Dave

PS, how was the GO-STL run?

From: Joe Vujnich [mailto:JVujnich@cityofwildwood.com]
Sent: Thursday, April 14, 2016 12:00 PM
To: David Volz
Subject: Re: Taylor

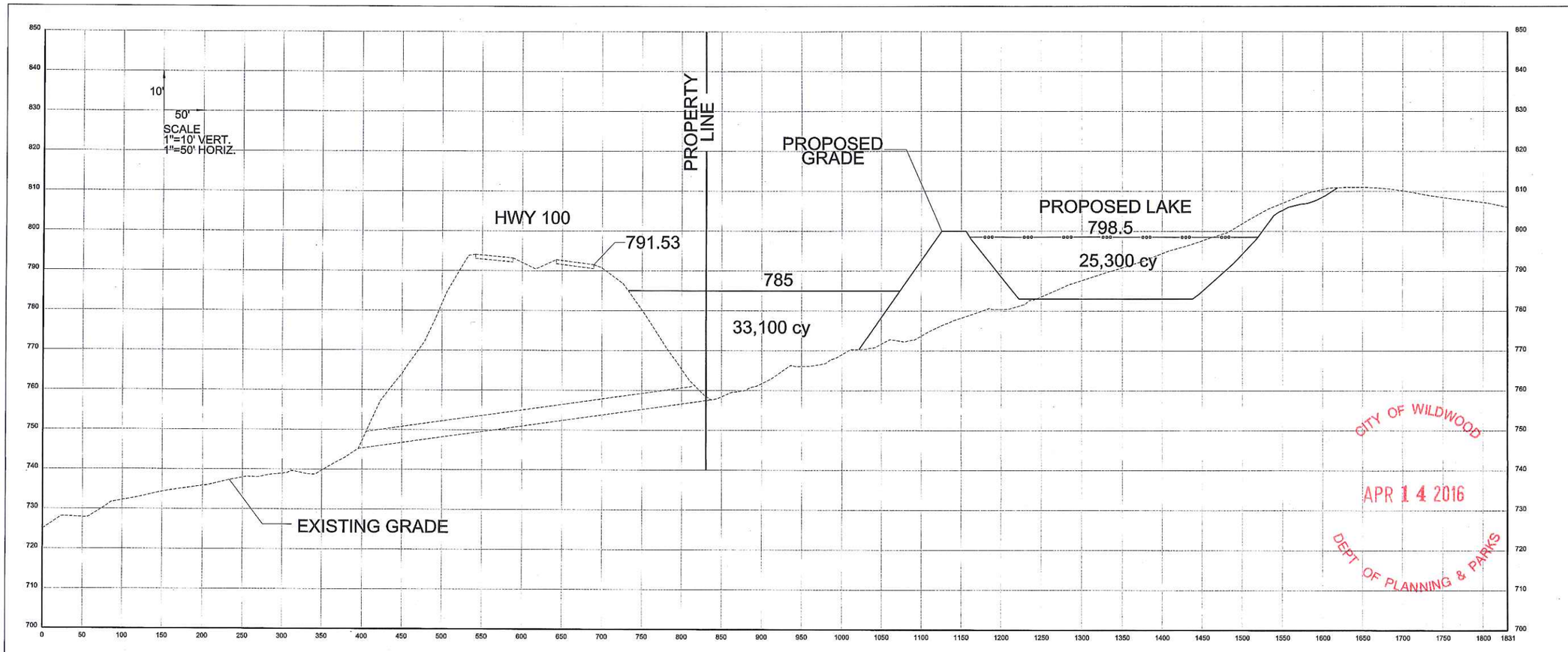
Thanks Dave.

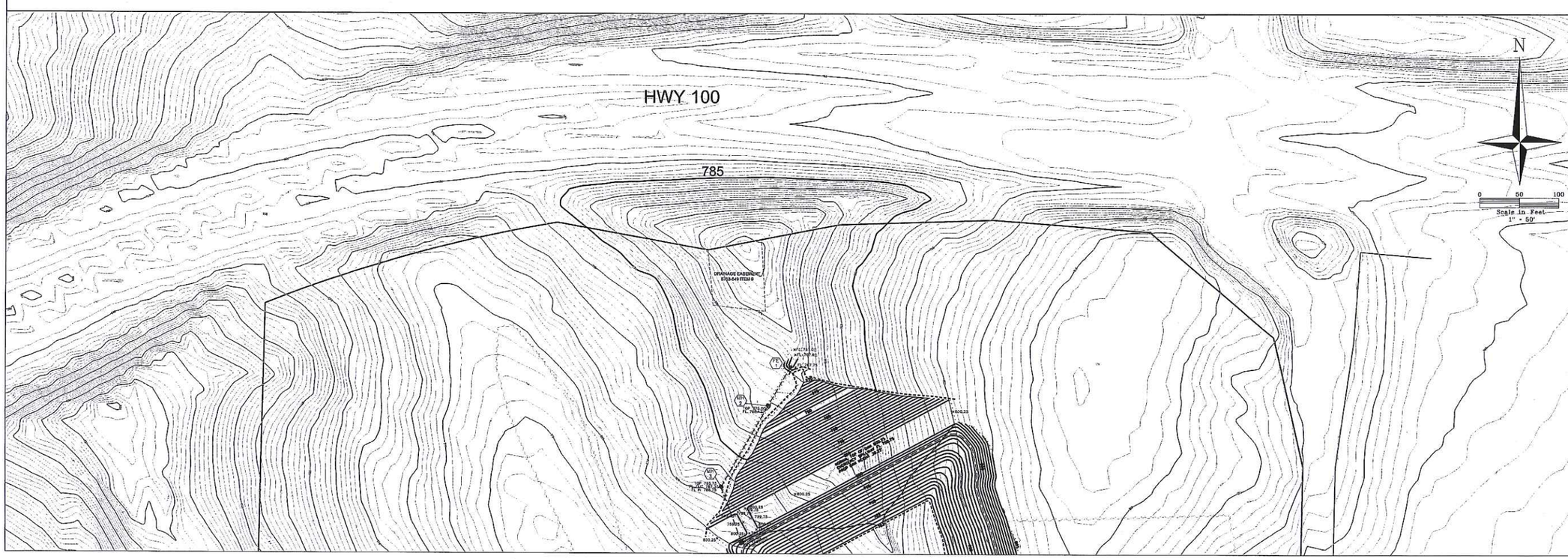
Joe

On Apr 14, 2016, at 10:20 AM, David Volz <dvolz@volzinc.com> wrote:

Joe,
I'm still working on this, but wanted to give you a preview of the downstream study we are doing on Laurie Taylor's dam. I heard it will be on the agenda on Monday, so I will get the final product to you later today.

The volume of the propose lake is 25,300 cubic yards, and the storage volume at an elevation six feet below the pavement of Highway 100 is 33,100 cubic yards. So assuming the culvert under the Highway is completely blocked, and that the dam completely fails in one slug of water, we have 130% storage at an elevation 6 feet below





Ms. Laurie Taylor
17715 Manchester Rd
St. Louis, Mo 63038
314-805-1321

STATE OF MISSOURI
4-14-16
TIMOTHY JOSEPH MEYER
NUMBER
E-24665
PROFESSIONAL ENGINEER

Timothy J. Meyer
Professional Engineer
E-24665

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17715 MANCHESTER ROAD

WILDWOOD, MO 63038

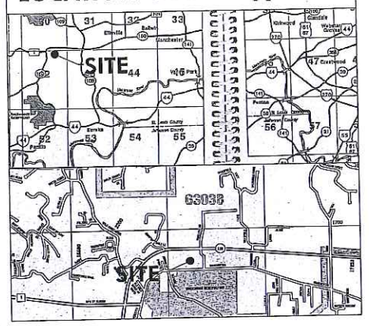
DAM EXHIBIT

APRIL 14, 2016

SHEET 1

PRELIMINARY DEVELOPMENT PLAN
17715 MANCHESTER ROAD

LOCATION MAP N NTS



LEGEND

CO	CLEAN OUT
CMP	CORRUGATED METAL PIPE
E.M.	ELECTRIC METER
F.F.	FINISHED FLOOR
	FIRE HYDRANT
	GRATE INLET
	GAS METER
G.V.	GAS VALVE
G.W.	GUY WIRE
	LIGHT STANDARD
M.H.	MANHOLE
T.P.	TELEPHONE PEDESTAL
U.M.H.	UTILITY MANHOLE
	UTILITY POLE
VCP	VITRIFIED CLAY PIPE
RCP	REINFORCED CONCRETE PIPE
	WATER METER
W.V.	WATER VALVE
	YARD LIGHT
-G-	GAS LINE
-OU-	OVERHEAD UTILITIES
-SS-	SANITARY SEWER
-T-	TELEPHONE LINE
-W-	WATER LINE
-X-	FENCE
TBR	TO BE REMOVED
TBR&R	TO BE REMOVED AND REPLACED
U/P	USE IN PLACE

BENCHMARKS:

SITE BENCHMARK •1 LARGE NAIL EL 814.60

TIE •1: 84' FROM 24" TREE
TIE •2: 113' FROM 30" TREE

BOTH TREES ARE IMMEDIATELY WEST OF PROPOSED HOUSE

SHEET INDEX

C1 COVER
C2 SITE GRADING PLAN
C3 EXISTING DRAINAGE AREA MAP
C4 DRAINAGE AREA MAP
C5 STORM SEWER PROFILES & DETAILS
C6 SWPPP
C7 SWPPP DETAILS & NOTES
C8 TREE PRESERVATION PLAN

N

100 0 100 200
Scale in Feet
1" = 100'

NOTE: THIS VIEW IS AN OVERALL VIEW. FOR MORE DETAIL SEE OTHER SHEETS.

CALL MISSOURI ONE CALL SYSTEMS INC. TWO FULL WORKING DAYS IN ADVANCE OF STARTING WORK.

MISSOURI ONE-CALL 1-800-344-7483

CONTRACTOR TO BE RESPONSIBLE FOR TRAFFIC CONTROL AND STREET RESTORATION

CONSTRUCTION DISCLAIMER

VOLZ INC. AND THE UNDERSIGNED ENGINEER HAVE NO RESPONSIBILITY FOR SERVICES PROVIDED BY OTHERS TO IMPLEMENT THE 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. VOLZ INC. HAS NO RESPONSIBILITY TO VERIFY THE FINAL IMPROVEMENTS AS SHOWN ON THIS PLAN UNLESS SPECIFICALLY ENGAGED AND AUTHORIZED TO DO SO BY THE OWNER OR CONTRACTOR.

STORM WATER MANAGEMENT AND LAND DISTURBANCE NOTE:

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 STORM WATER 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.

UTILITY DISCLAIMER

THE UNDERGROUND UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, OR NONEXISTENCE, SIZE, TYPE, NUMBER, OR LOCATION OF THESE OR OTHER UTILITIES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD, SHOWN OR NOT SHOWN, PRIOR TO ANY GRADING, EXCAVATION, OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319, RSMO.

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CITY OF WILDWOOD
MAR 31 2016
DEPT OF PLANNING & PARKS

REVISED
02-04-2016
02-16-2016
3-30-2016

CLIENT:
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314-805-1321

VOLZ Incorporated
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Authority #203

MARK E. KILGORE
Professional Engineer
E-2000150026

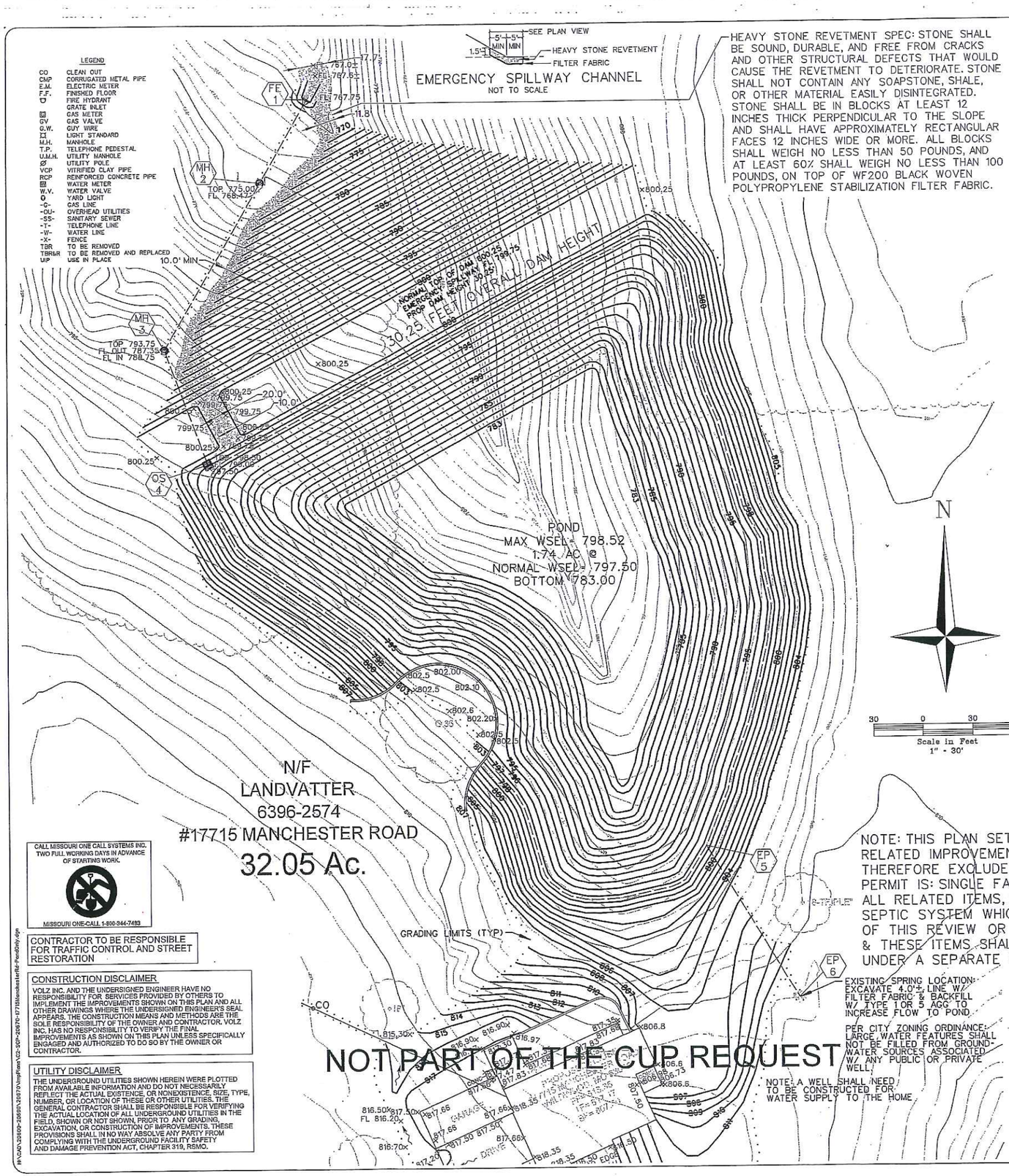
PROJECT ADDRESS:
17715 MANCHESTER ROAD
WILDWOOD, MO 63038

COVER

Design By: MK
Drawn By: MK
Checked By: MK
Project # 26670

11-03-2015

C1



HEAVY STONE REVETMENT SPEC: STONE SHALL BE SOUND, DURABLE, AND FREE FROM CRACKS AND OTHER STRUCTURAL DEFECTS THAT WOULD CAUSE THE REVETMENT TO DETERIORATE. STONE SHALL NOT CONTAIN ANY SOAPSTONE, SHALE, OR OTHER MATERIAL EASILY DISINTEGRATED. STONE SHALL BE IN BLOCKS AT LEAST 12 INCHES THICK PERPENDICULAR TO THE SLOPE AND SHALL HAVE APPROXIMATELY RECTANGULAR FACES 12 INCHES WIDE OR MORE. ALL BLOCKS SHALL WEIGH NO LESS THAN 50 POUNDS, AND AT LEAST 60% SHALL WEIGH NO LESS THAN 100 POUNDS, ON TOP OF WF200 BLACK WOVEN POLYPROPYLENE STABILIZATION FILTER FABRIC.

EARTHWORK CALCULATIONS:
CUT 19,100 CY
FILL 16,400 CY
NET: 2,700 CY CUT
ADJUST BOTTOM OF POND
AS NEEDED TO BALANCE

NOTE: THIS PLAN SET IS FOR POND-RELATED IMPROVEMENTS ONLY & THEREFORE EXCLUDED FROM THIS PERMIT IS: SINGLE FAMILY RESIDENCE & ALL RELATED ITEMS, INCLUDING WELL & SEPTIC SYSTEM WHICH ARE NOT PART OF THIS REVIEW OR AUTHORIZATION & THESE ITEMS SHALL BE APPLIED FOR UNDER A SEPARATE PERMIT

EXISTING SPRING LOCATION: EXCAVATE 4.0'±, LINE W/ FILTER FABRIC & BACKFILL W/ TYPE 1 OR 5 AGG TO INCREASE FLOW TO POND.

PER CITY ZONING ORDINANCE: LARGE WATER FEATURES SHALL NOT BE FILLED FROM GROUND-WATER SOURCES ASSOCIATED W/ ANY PUBLIC OR PRIVATE WELL.

NOTE: A WELL SHALL NEED TO BE CONSTRUCTED FOR WATER SUPPLY TO THE HOME.

CALL MISSOURI ONE CALL SYSTEMS INC. TWO FULL WORKING DAYS IN ADVANCE OF STARTING WORK.

MISSOURI ONE-CALL 1-800-344-7483

CONTRACTOR TO BE RESPONSIBLE FOR TRAFFIC CONTROL AND STREET RESTORATION

CONSTRUCTION DISCLAIMER

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REVISED
02-04-2016
3-30-2016

CITY OF WILDWOOD
MAR 31 2016
DEPT OF PLANNING & PARKS

CLIENT:
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MARK T. KILGORE
Professional Engineer
E-2000150036
3-30-2016

PROJECT ADDRESS:
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WILDWOOD, MO 63038

SITE GRADING PLAN

Design By: MK
Drawn By: MK
Checked By: MK
Project # 206870

11-03-2015
C2

LEGEND

CO	CLEAN OUT
CMP	CORRUGATED METAL PIPE
E.M.	ELECTRIC METER
F.F.	FINISHED FLOOR
	FIRE HYDRANT
	GRATE INLET
	GAS METER
GV	GAS VALVE
G.W.	GUY WIRE
	LIGHT STANDARD
M.H.	MANHOLE
T.P.	TELEPHONE PEDESTAL
U.M.H.	UTILITY MANHOLE
Ø	UTILITY POLE
VCP	VITRIFIED CLAY PIPE
RCP	REINFORCED CONCRETE PIPE
	WATER METER
W.V.	WATER VALVE
	YARD LIGHT
-G-	GAS LINE
-OU-	OVERHEAD UTILITIES
-SS-	SANITARY SEWER
-T-	TELEPHONE LINE
-W-	WATER LINE
-X-	FENCE
TBR	TO BE REMOVED
TBR&R	TO BE REMOVED AND REPLACED
UIP	USE IN PLACE

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CITY OF WILDWOOD
MAR 31 2016
DEPT OF PLANNING & PARKS

REVISED

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MARK K. VILGORE
NUMBER
E-2000150025
12-16-2015
MARK K. VILGORE
Professional Engineer
E-2000150026

PROJECT ADDRESS:
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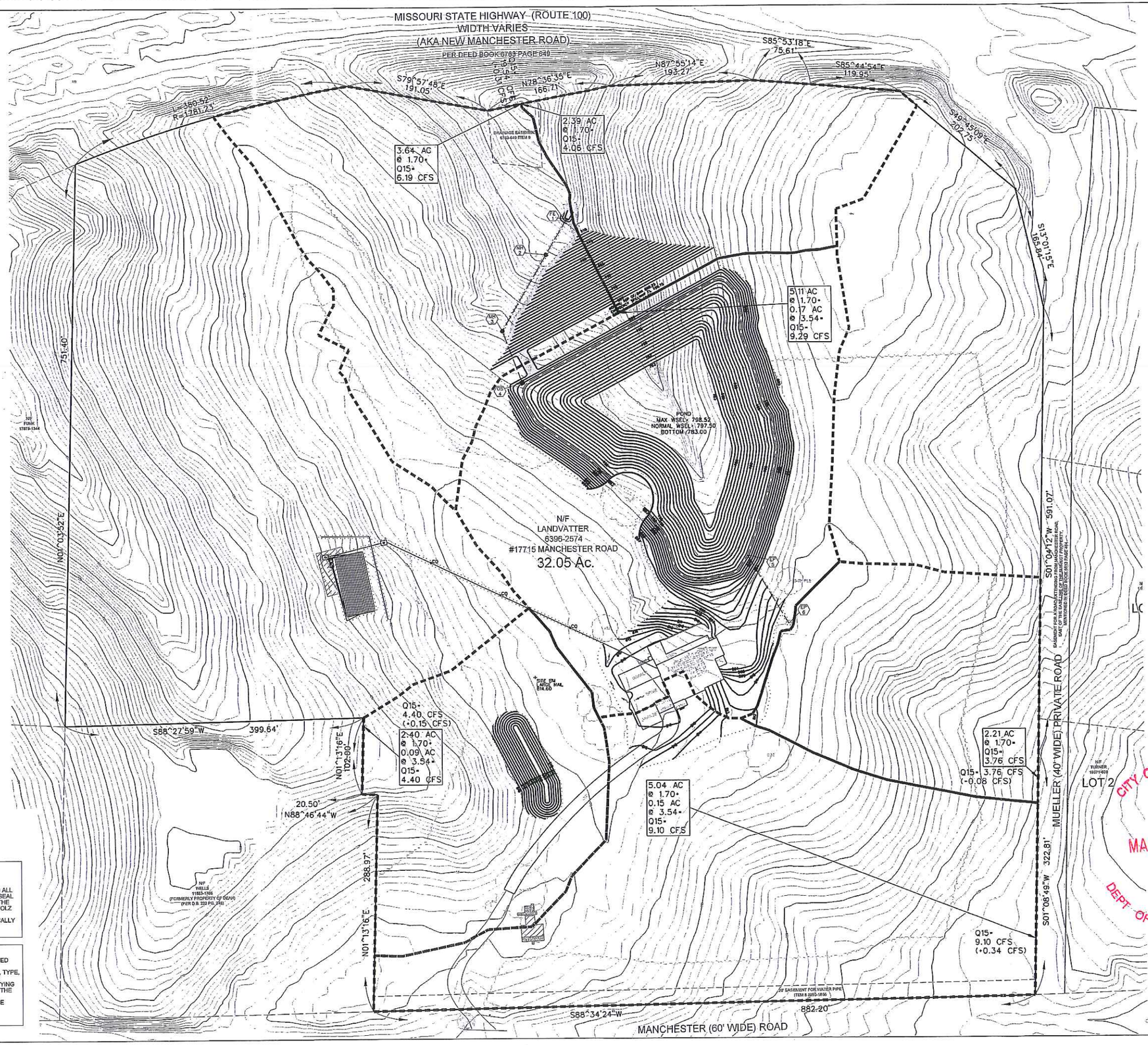
EXISTING DRAINAGE AREA MAP

Design By: MK
Drawn By: MK
Checked By: MK
Project # 20670

11-03-2015

C3



LEGEND

CO	CLEAN OUT
CMP	CORRUGATED METAL PIPE
E.M.	ELECTRIC METER
F.F.	FINISHED FLOOR
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-X-	FENCE
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TBR&R	TO BE REMOVED AND REPLACED
UIP	USE IN PLACE

NOTE: FLOWS SHOWN ARE RATIONAL METHOD CALCULATIONS & DO NOT TAKE INTO ACCOUNT THE FLOW REDUCTION DUE TO RETENTION / DETENTION

N

60 0 60 120

Scale in Feet
1" = 60'

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Authority #203

MARK L. KILGORE
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E-2000150026

PROJECT ADDRESS:
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WILDWOOD, MO 63038

PROPOSED DRAINAGE AREA MAP

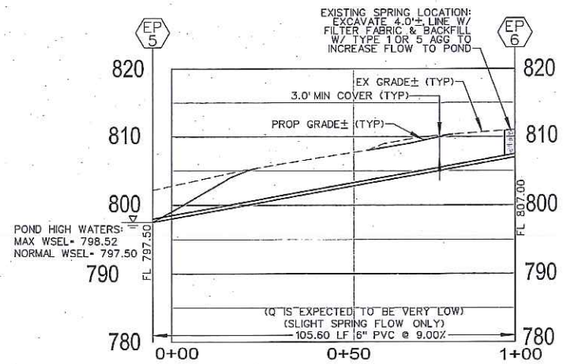
Design By: MK
Drawn By: MK
Checked By: MK
Project # 20670

11-03-2015

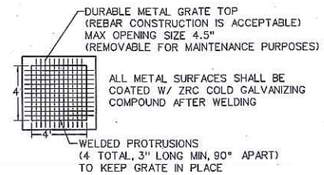
C4

REVISED
02-29-2016
3-30-2016

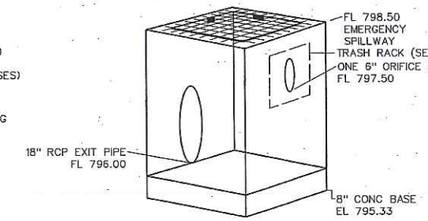
REFERENCE METROPOLITAN ST. LOUIS SEWER DISTRICT (MSD)
STANDARD CONSTRUCTION SPECIFICATIONS FOR
SEWERS AND DRAINAGE FACILITIES
FOR ALL STORM SEWER CONSTRUCTION



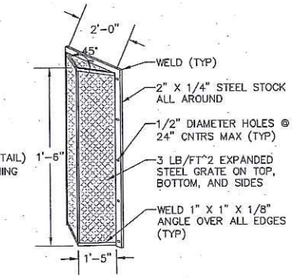
STORM SEWER PROFILE
SCALE: 1"= 20' HOR, 1"= 10' VERT



GRATED TOP PLAN
SCALE: 1"= 5' HOR & VERT



OPENINGS & EXIT
NO SCALE



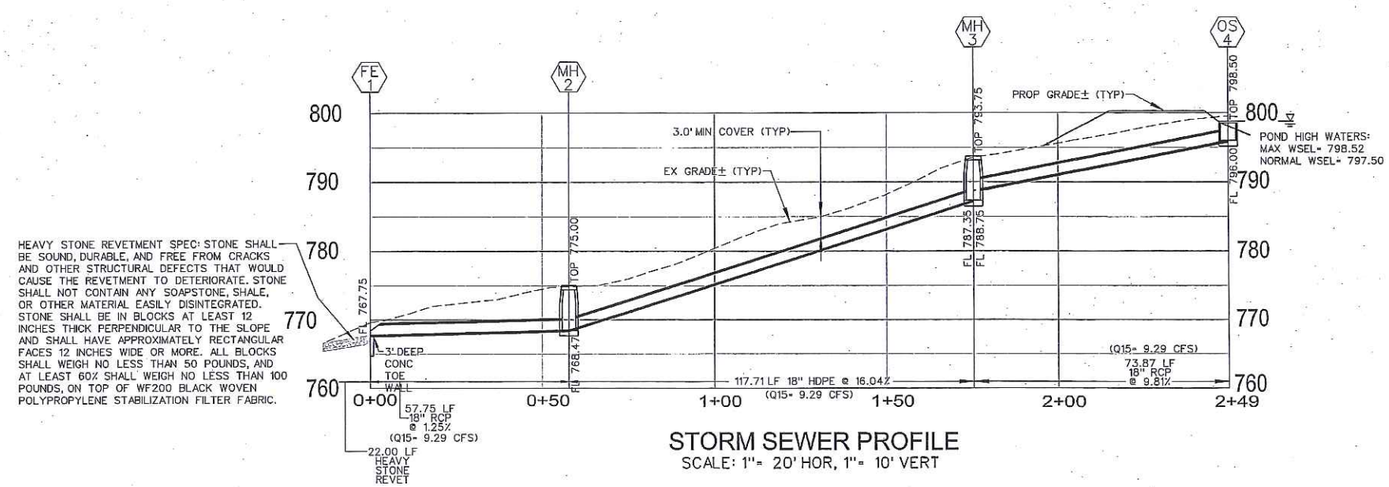
NOTES FOR TRASH RACK

1. TRASH RACK SHALL BE CENTERED OVER OPENING.
2. STEEL TO CONFORM TO ASTM A-36.
3. ALL SURFACES SHALL BE COATED WITH ZRC COLD GALVANIZING COMPOUND AFTER WELDING.
4. TRASH RACK SHALL BE FASTENED TO THE WALL WITH 1/2" MASONRY ANCHORS. TRASH RACK SHALL BE REMOVABLE.

OUTLET STRUCTURE

REINFORCEMENT NOT SHOWN FOR CLARITY
BASE, WALLS & REINFORCEMENT SHALL BE
PER TYPICAL MSD AREA INLET

TRASH RACK DETAIL
NO SCALE



STORM SEWER PROFILE
SCALE: 1"= 20' HOR, 1"= 10' VERT

St Charles County Government
Hydraulic Review Output Data
H:\CAD\20600-20699\20670\SWM\20670-17715ManchesterRd-Q15Hyd-11-10-2015.txt
11/10/2015
Calculations Under Full Flow

	Upp Str	Low Str	PL	S	Upp FL LN	Low FL LN	PS	Upp ST EL	Depth HY GR	Upp HY EL	Low HY EL	Hydr Grade	FR Head	VEL	VEL Head	Junc Loss	Turn Loss	Curve Loss	STR Grade	Inl Cap	DR Area	P.L	Q	TQ	Pipe Cap	Remarks
1	OS 4	MH 3	74	18	796.00	788.75	9.81	798.50	1.96	796.54*	790.25	0.00780	0.58	5.26	0.43	0.00	0.00				5.28	1.76	9.29	9.29	32.60	Q15
2	MH 3	MH 2	118	18	787.35	768.47	16.04	793.75	5.92	787.83*	769.97	0.00780	0.92	5.26	0.43	0.00	0.00						0.00	9.29	42.07	Q15
3	MH 2	FE 1	68	18	768.47	767.75	1.25	775.00	6.06	769.94	769.25	0.00780	0.46	5.26	0.43	0.00	0.24	0.00					0.00	9.29	11.74	Q15

St Charles County Government
Hydraulic Review Output Data
H:\CAD\20600-20699\20670\SWM\20670-17715ManchesterRd-Q100Hyd-11-10-2015.txt
11/10/2015
Calculations Under Full Flow

	Upp Str	Low Str	PL	S	Upp FL LN	Low FL LN	PS	Upp ST EL	Depth HY GR	Upp HY EL	Low HY EL	Hydr Grade	FR Head	VEL	VEL Head	Junc Loss	Turn Loss	Curve Loss	STR Grade	Inl Cap	DR Area	P.L	Q	TQ	Pipe Cap	Remarks
1	OS 4	MH 3	74	18	796.00	788.75	9.81	798.50	1.86	796.64*	790.25	0.01420	1.05	7.08	0.78	0.78	0.00	0.00			5.28	2.37	12.52	12.52	32.90	Q100
2	MH 3	MH 2	118	18	787.35	768.47	16.04	793.75	5.84	787.91*	770.50	0.01420	1.67	7.08	0.78	0.00	0.00	0.00					0.00	12.52	42.07	Q100
3	MH 2	FE 1	68	18	768.47	767.75	1.25	775.00	4.50	770.50	769.25	0.01420	0.62	7.08	0.78	0.00	0.43	0.00					0.00	12.52	11.74	Q100

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STATE OF MISSOURI
MARK L. KILGORE
NUMBER E-2000150026
12-16-2015
PROFESSIONAL ENGINEER
MARK L. KILGORE
Professional Engineer
E-2000150026

PROJECT ADDRESS:
17715 MANCHESTER ROAD
WILDWOOD, MO 63038

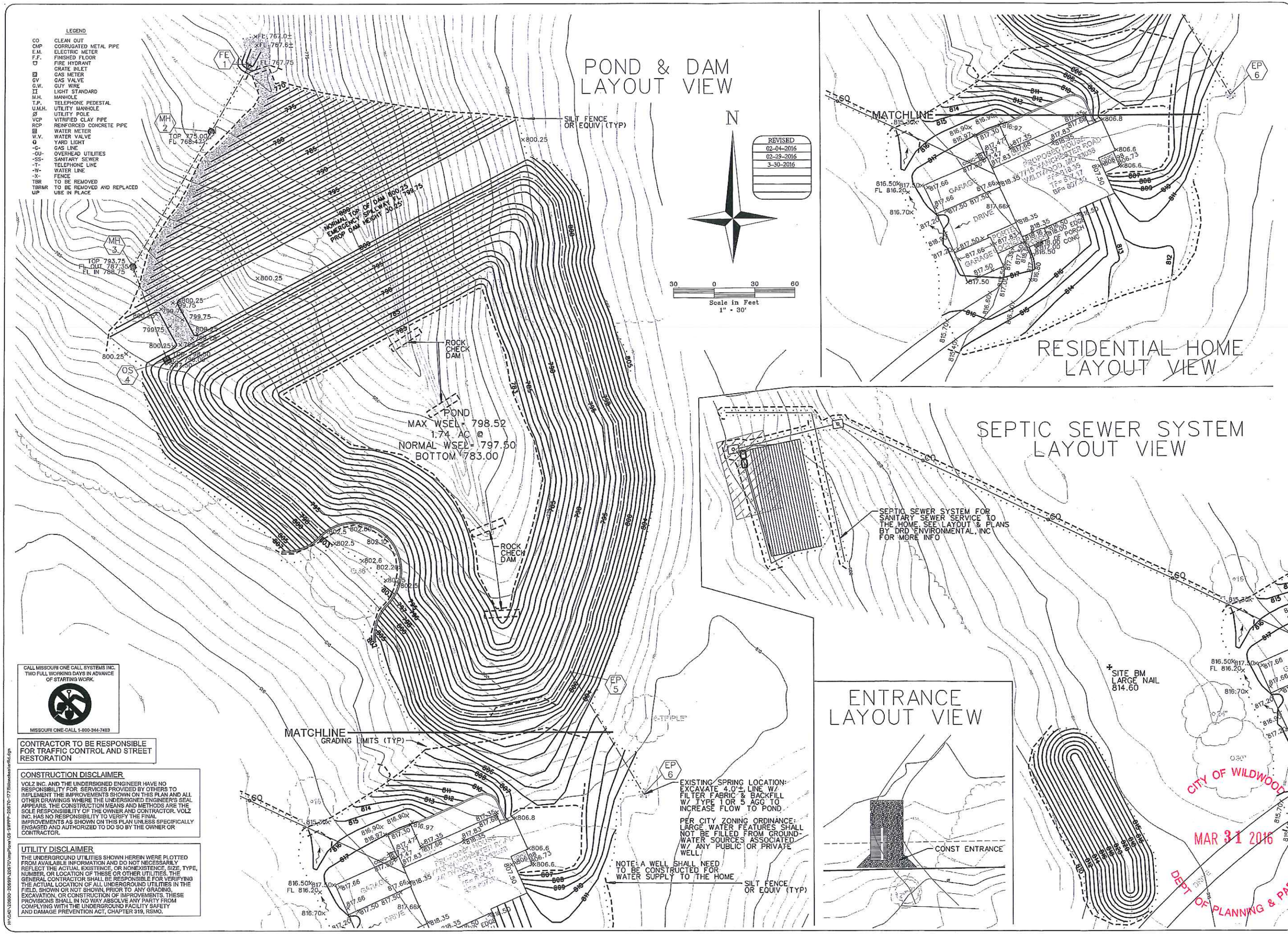
CITY OF WILDWOOD
MAR 31 2016
DEPT OF PLANNING & PARKS

#	REVISED

STORM SEWER PROFILES & DETAILS

Design By: MK
Drawn By: MK
Checked By: MK
Project # 20670

11-03-2015
C5



LEGEND

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MARK L. KILGORE
NUMBER
E-2000150026
3-30-2016
REGISTERED PROFESSIONAL ENGINEER

MARK L. KILGORE
Professional Engineer
E-2000150026

PROJECT ADDRESS:
17715 MANCHESTER ROAD
WILDWOOD, MO 63038

SWPPP

Design By: MK
Drawn By: MK
Checked By: MK
Project # 20670

11-03-2015
C6

SEEDING

PHYSICAL DESCRIPTION - Establishment of vegetation by spreading grass seed designed to protect exposed soil from erosion by eliminating direct impact of precipitation and slowing overland flow rates. Once established, the vegetative cover will also filter pollutants from the runoff. Use only perennial vegetation for final stabilization.

WHERE BMP IS TO BE INSTALLED - To exposed soil after a phase of rough or finish grading has been completed, or areas where no activity will occur for 30 days.

CONDITIONS FOR EFFECTIVE USE OF BMPs

Type of Flow:	Sheet flow
Contributing Slope Length:	30 feet maximum for 3:1 slopes 50 foot maximum for slope between 3:1 and 10:1 100 foot maximum for slopes under 10%
Minimum Rates:	See attached chart(s)
Acceptable Dates:	See attached chart

WHEN BMP IS TO BE INSTALLED - Immediately after rough or finished grading is completed.

INSTALLATION / CONSTRUCTION PROCEDURES

- ✓ Install upstream BMP's to protect area to be seeded.
- ✓ Rough grade area and remove all debris larger than 1-inch in diameter and concentrated areas of smaller debris.
- ✓ Install stabilization grids, if needed.
- ✓ Mix soil amendments (lime, fertilizer, etc.) into top 3 to 6 inches of soil as needed.
- ✓ Plant seed ¼ to ½ inch deep.
- ✓ Roll lightly to firm surface.
- ✓ Cover seeded area with mulch unless seeding completed during optimum spring and summer dates.
- ✓ Install additional stabilization (netting, bonded fiber matrix, etc.) as required.
- ✓ Water immediately - enough to soak 4 inches into soil without causing runoff.
- ✓ If contract / permit allows seeding to be used for final stabilization, only perennial vegetation seeds shall be used.
- ✓ For additional information see Sections 805 and 806.50 of St. Louis County's Standard Specification for Road and Bridge Construction.

O&M PROCEDURES:

- ✓ Inspect every week and after every storm
- ✓ Protect area from vehicular and foot traffic
- ✓ Reseed areas that have not sprouted within 21 days of planting.
- ✓ Repair damaged or eroded areas and reseed and stabilize as needed
- ✓ Do not mow until 4 inches of growth occurs
- ✓ During the first 4 months, mow no more than ⅓ the grass height
- ✓ Re-fertilize during 2nd growth season

SITE CONDITIONS FOR REMOVAL - Does not require removal, but temporary seeding can be removed immediately prior to work returning to an area

SEEDING REQUIREMENTS

Dates for Seeding

Permanent Seeding	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Tall Fescue			O	O	O			O	O			
Smooth Brome			O	O	O			O	O			
Fescue & Brome			O	O	O	O	O		O	O		
Fescue, Rye & Bluegrass	A	A	O	O	O	P	P	O	O	P	P	A

Temporary Seeding	Jan	Feb	March	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Rye or Sudan	A	A	O	O	O	O	O	O	O	O	A	A
Oats		A	O	O	O	O	O	O	O			

O = Optimum seeding dates
A = Acceptable seeding dates
P = Permitted seeding dates with mowing 2 months later - Initially use 50% of seed and 75% of fertilizer. Reseed with additional 50% seed and remaining fertilizer.

Minimum Fertilizer and Seeding Rates

Permanent Seeding*	Pounds per acre	Pounds Per 1000 sq. ft.
Tall Fescue	300	7.0
Smooth Brome	200	4.5
Mixture # 1	200	5.7
Mixture # 2	210	4.8

Mixture # 1 = Tall Fescue @ 150 pounds per acre and Brome @ 100 pounds per acre.
Mixture # 2 = Tall Fescue @ 100 pounds per acre; Perennial Rye grass @ 100 pounds per acre; and Kentucky Blue grass @ 10 pounds per acre.
* = Seeding rate for slopes in excess of 20% (5:1), shall be 10 pounds per 1000 sq. ft.

Temporary Seeding	Pounds per acre	Pounds Per 1000 sq. ft.
Rye or Sudan	150	3.5
Oats	200	5.5

Fertilizer	Permanent Seeding (pounds per acre)	Temporary Seeding (pounds per acre)
Nitrogen	45	30
Phosphate	65	20
Potassium	65	30
Lime - Dolo	600	600

EMA = Effective erosion/sediment control material per State evaluation of quantified rock.

CHECK DAM

PHYSICAL DESCRIPTION - A small dam built within a drainage swale or temporary diversion channel designed to pond water and cause sediment to settle out. Dams can be constructed of rock, sand bags, filter rolls / wattles, triangular dikes, or gravel bags. Silt fence shall not be used to construct check dams.

WHERE BMP IS TO BE INSTALLED - At intervals along drainage swales or channels. The top of the downstream check dam should be level with the base of the upstream check dam.

CONDITIONS FOR EFFECTIVE USE OF BMPs

Type of Flow:	Moderate concentrated flow
Contributing Area:	Maximum of 2 acres
Channel Slope:	Maximum of 2%

WHEN BMP IS TO BE INSTALLED - Prior to disturbance of natural vegetation in contributing drainage area; immediately after construction of drainage way.

For additional information see Section 806.30 of St. Louis County's Standard Specification for Road and Bridge Construction.

INSTALLATION / CONSTRUCTION PROCEDURES

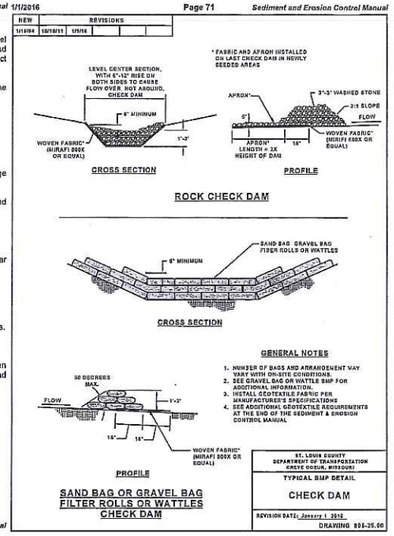
- ✓ Grade drainage way and compact area of check dam.
- ✓ Place rock, sand bags, filter rolls / wattles or gravel bags to required configuration perpendicular to flow.

O&M PROCEDURES

- ✓ Inspect every week and after every storm.
- ✓ Remove trash and leaf accumulation.
- ✓ Remove sediment buildup once it reaches ½ depth of check dam or 12" depth, whichever is less.
- ✓ Restore dam structure to original configuration to protect banks.
- ✓ Replace rock on upstream face of dam if ponding does not drain in reasonable timeframe.

SITE CONDITIONS FOR REMOVAL - Remove after contributing drainage areas have been adequately stabilized and vegetation is adequately established in drainage way. Re-grade and vegetate area of check dam.

TYPICAL DETAIL - 806-35.00



TYPICAL DETAILS - Minimum seeding rates and acceptable dates for work attached.

INSTALLATION / CONSTRUCTION PROCEDURES

- ✓ Excavate diversion area except for area of upstream connection.
- ✓ Compact as required to place diversion properly.
- ✓ Install pipe bedding or channel lining as required.

SILT FENCE

PHYSICAL DESCRIPTION - Silt fences are used as temporary perimeter controls, appropriate to the BMP, at sites where construction activities will disturb the soil. They can also be used on the interior of the site. A silt fence consists of a length of filter fabric stretched between anchoring posts spaced at regular intervals along the site at low and down slope areas. The filter fabric should be entrenched in the ground. When installed correctly and inspected frequently, silt fence can be an effective barrier to silt leaving the site in storm water runoff.

WHERE BMP IS TO BE INSTALLED - Silt fences apply to construction sites with relatively small drainage areas. They are appropriate in areas where runoff will occur as low-level flow, not exceeding 0.5 c.f.s. The drainage area for silt fences should not exceed 0.25 acre per 100-foot fence length (100 square feet per foot of fence). The slope length above the fence should not exceed 100 feet (NAHB, 1995). The fence should be designed to withstand the runoff from a 10-year peak storm event.

CONDITIONS FOR EFFECTIVE USE OF BMPs - Spacing of parallel lengths of silt fence along slopes is relative to slope steepness as follows:

Type of Flow:	Sheet flow only.
Contributing Slope Length:	30-foot maximum for 3:1 slopes. 50 foot maximum for slopes between 3:1 and 10:1. 100 foot maximum for slopes under 10%.

For additional information see Section 806.70 of St. Louis County's Standard Specification for Road and Bridge Construction.

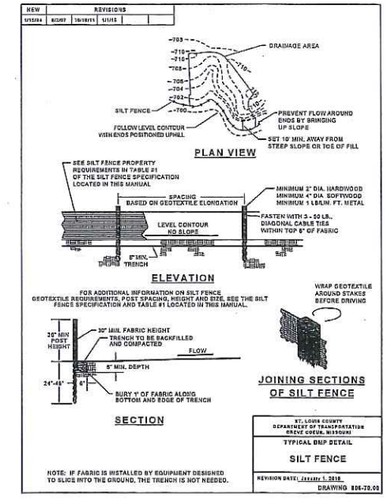
WHEN BMP IS TO BE INSTALLED - Prior to disturbance of natural vegetation and at intervals during construction of fill slopes. Install on the perimeter of the site (where storm water exits the site) prior to disturbance of natural vegetation, ground material stockpiles and interior to the site along slopes, at the base of slopes and at intervals during construction of slopes.

INSTALLATION / CONSTRUCTION PROCEDURES

- ✓ Drive post for fence line.
- ✓ Dig trench to required dimensions in front of posts for fabric burial.
- ✓ Attach wire mesh to posts.
- ✓ Attach fabric to posts, allowing required length below ground level to run fabric along bottom of trench
- ✓ Backfill and compact soil in trench to protect and anchor fabric.

If a standard-strength fabric is used, it can be reinforced with wire mesh behind the filter fabric. This increases the effective life of the fence. The maximum life expectancy for synthetic fabric silt fences is about 6 months, depending on the amount of rainfall and runoff.

The stakes used to anchor the filter fabric should be wood or metal. Wooden stakes should have minimum dimensions of 2 by 2 inches if a hardwood like oak is used. Stakes from soft woods like No. 2 Southern Pine, should have minimum dimensions of 4 by 4 inches. When using steel (standard U, T, L or C shape sections) posts in place of wooden stakes, they should weigh no less than 1.0 lb/linear foot. If metal posts are used, attachment points are needed for fastening the filter fabric with wire ties. Posts should be least 5 feet long and driven or placed at a slight upstream angle into the ground to a



minimum depth of 18 inches. Depth shall be increased to a minimum of 22 inches if fence is placed on a slope of 3:1 or greater. When the post embedment depth is impossible to obtain, the posts shall be adequately secured to prevent overturning of the fence due to sediment loading.

Erect silt fence in a continuous fashion from a single roll of fabric to eliminate gaps in the fence. If a continuous roll of fabric is not available, overlap the fabric from both directions only at stakes or posts. Overlap at least 6 inches.

The Geosynthetic filter fabric and wire mesh (when applicable) shall be no less than 30 inches above ground and are stapled or wired to the upslope side of the post. Staples should be a 17-gauge wire and ¾ inch long. Excavate a trench to bury the bottom of the fabric fence in a "J" configuration at least 6 inches below the ground surface. The trench shall be backfilled with native soil and the soil compacted over the geotextile. This helps to prevent gaps from forming near the ground surface. Gaps would make the fencing useless as a sediment barrier.

The height of the fence posts should be 38 inches (22-inch embedment) to 42 inches (18-inch embedment) above the original ground surface. If standard-strength fabric is used with 14-gauge steel wire with a mesh spacing of 6 inches by 6 inches (or a prefabricated polymeric mesh of equivalent strength), space the posts no more than 4 feet apart. If extra-strength fabric is used without wire mesh reinforcement, space the posts no more than 4 feet apart with woven or 6 feet apart with non-woven geosynthetic.

Alternate Construction:	Install fence by slicing it into ground with specialized equipment. Install posts at reduced spacing indicated on detail.

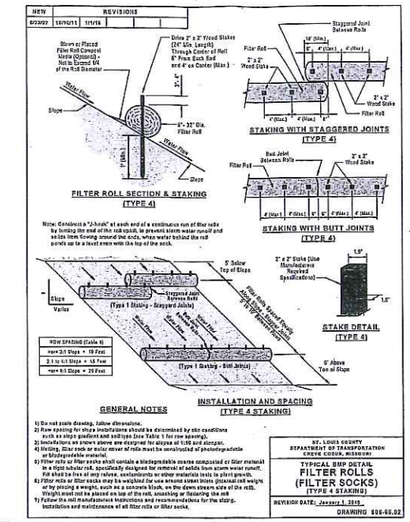
LIMITATIONS - Do not install silt fences along areas where rocks or other hard surfaces will prevent you from uniformly anchoring the fence posts and entrenching the filter fabric. Installing fences in such an area greatly reduces their effectiveness and can create runoff channels leading offsite. Silt fences are not suitable for areas where large amounts of concentrated runoff are likely. Fence shall not be used when slope is 1:1 or greater and water flow rates exceed 2 cubic feet per minute. Open, windy areas present a maintenance challenge, too, because high winds can make the filter fabric deteriorate faster. Do not install silt fences across streams, ditches, or waterways (Sinclair et al., 1988).

When the pores of the fence fabric become clogged with sediment, pools of water are likely to form on the uphill side of the fence. Setting and design of the silt fence should account for this. Take care to avoid unnecessarily diverting stormwater from these pools, causing further erosion damage.

MAINTENANCE CONSIDERATIONS - Inspect silt fences regularly and frequently, as well as after each rainfall event, to make sure that they are intact and that there are no gaps where the fence meets the ground or tears along the length of the fence. If you find gaps or tears, repair or replace the fabric immediately. Remove accumulated sediments from the fence base when the sediment reaches one-third to one-half the fence height. Remove sediment more frequently if accumulated sediment is creating noticeable strain on the fabric and the fence might fail from a sudden storm event. When you remove the silt fence, remove the accumulated sediment, dress the area disturbed to give it a pleasing appearance and vegetate all bare areas as well.

O&M PROCEDURES

- ✓ Inspect every week and after every storm.
- ✓ Remove sediment buildup deeper than ⅓ the fence height or 12", whichever is less.
- ✓ Replace torn of clogged fabric; repair loose fabric.



- ✓ Repair unstable or broken posts.
- ✓ Stabilize any areas susceptible to undermining.
- ✓ Extend fence or add additional row(s) of fence if necessary to provide adequate protection.

SITING AND DESIGN CONSIDERATIONS - The material for silt fences should be a porious sheet of synthetic fabric such as polypropylene, nylon, and polyester or polyethylene yarn. Choose the material based on the minimum synthetic fabric requirements shown in Table 1 below.

Table 1- Temporary Silt Fence Property Requirements

Physical Property	Test Method	Units	MARV Geotextile Requirements — Unsupported Silt Fence: Supported Silt Fence [2]	Unsupported Silt Fence: Woven Elongation ≤ 50% [1]	Unsupported Silt Fence: Non-Woven Elongation ≤ 50% [1]
Post Spacing (Maximum)		feet	4	4	6
Height of Wire / Polymer Fence (Minimum)		Inches	30	—	—
Grab Strength (Minimum): Machine Direction	ASTM D 4632	pounds	90	125	125
Cross Machine Direction			90	100	100
Permittivity (Minimum)	ASTM D 4491	sec^{-1}	0.05	0.05	0.05
Apparent Opening Size (AOS) [3]	ASTM D 4751	Sieve Number	30	30	30
Ultraviolet Stability (Minimum) (retained strength)	ASTM D 4355		70% after 500 h of exposure		

Notes:

MARV Minimum Average Roll Value

[1] Elongation measured in accordance with ASTM D 4632

[2] Silt Fence Support - 14-gauge steel wire with a mesh spacing of 6 inches by 6 inches (or a prefabricated polymeric mesh of equivalent strength)

[3] Maximum Average Roll Value

SITE CONDITIONS FOR REMOVAL - After permanent vegetation of slope is established. Remove fence and post, re-grade trench area and vegetate.

TYPICAL DETAIL - 806-70.0

CONSTRUCTION ENTRANCE

PHYSICAL DESCRIPTION - A stabilized entrance to a construction site designed to minimize the amount of sediment tracked from the site on vehicles and equipment. Stabilization generally consists of aggregate over geogrid and geosynthetic material. Mud and sediment fall off of tires as they travel along the stabilized entrance; however, additional measures in the form of a washdown area should also be included on site. The stabilized entrance also distributes the axle load of vehicles over a larger area; thereby mitigating the rutting impact vehicles normally have on unpaved areas. See additional information in the "Construction Site Access Requirements" section of this manual.

WHERE BMP IS TO BE INSTALLED - At locations where it is safe for construction vehicles and equipment to access existing streets – preferably at location of future streets or drives.

CONDITIONS FOR EFFECTIVE USE OF BMPs

Drainage:	Ditches or pipes, if needed, sized for 15 year, 20 minute storm; HGL 6" below surface of entrance

WHEN BMP IS TO BE INSTALLED - First order of work, along with washdown area, prior to vehicles or equipment accessing unpaved areas.

INSTALLATION / CONSTRUCTION PROCEDURES

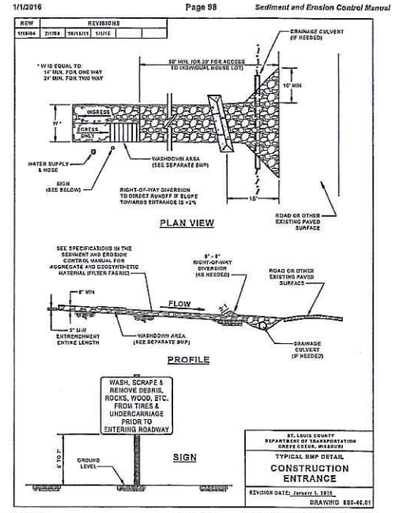
- ✓ Grade and compact area of construction entrance.
- ✓ Install culvert under entrance if needed to maintain positive drainage.
- ✓ Place geosynthetic material next to compacted soil, lay geogrid on top of this, and cover with aggregate, forming diversion across entrance if needed to direct runoff away from roadway.
- ✓ See Washdown Station BMP for additional steps.

O&M PROCEDURES:

- ✓ Immediately remove any mud or debris tracked onto paved surfaces.
- ✓ Remove sediment and clods of dirt from construction entrance continuously.
- ✓ Replace rock if necessary to maintain clean surface.
- ✓ Repair settled areas.

SITE CONDITIONS FOR REMOVAL - Remove when vehicles and equipment will no longer access unpaved areas.

TYPICAL DETAIL - 806-46.01



WASHDOWN STATION

PHYSICAL DESCRIPTION - An area located at construction entrances designed to wash sediment from the tires and undercarriage of exiting vehicles and prevent sediment from being tracked onto existing roadways.

WHERE BMP IS TO BE INSTALLED - Across or immediately adjacent to exit paths from unpaved construction sites.

CONDITIONS FOR EFFECTIVE USE OF BMPs

Drainage:	Downstream BMPs sized to treat dirty runoff from washdown station

WHEN BMP IS TO BE INSTALLED - First order of work, along with construction entrance, prior to vehicles or equipment accessing unpaved areas.

INSTALLATION/CONSTRUCTION PROCEDURES

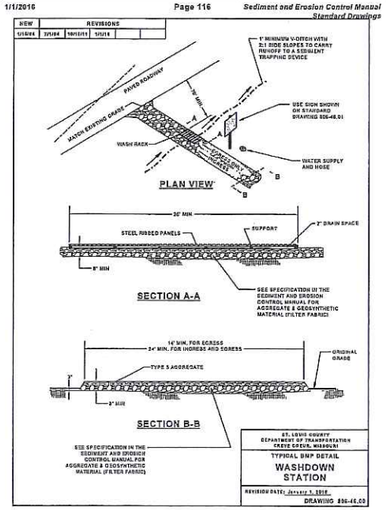
- ✓ Grade and compact area for drainage under washdown pad.
- ✓ Install steel-ribbed plate on frame or other support to allow a 2" drain space.
- ✓ Grade and vegetate downstream BMPs (V-ditch shown on detail).
- ✓ Install water supply and hose.
- ✓ Post sign in advance of station indicating that all exiting vehicles and equipment must use station prior to exiting site.

O&M PROCEDURES:

- ✓ Remove sediment daily.
- ✓ Repair settled areas.
- ✓ Replace rock if necessary to maintain clean surface.

SITE CONDITIONS FOR REMOVAL - Remove when vehicles and equipment will no longer access unpaved areas.

TYPICAL DETAIL - 806-46.00



REVISED
02-04-2016

CALL MISSOURI ONE CALL SYSTEMS INC.
TWO FULL WORKING DAYS IN ADVANCE OF STARTING WORK.
MISSOURI ONE-CALL 1-800-344-7483

CONTRACTOR TO BE RESPONSIBLE FOR TRAFFIC CONTROL AND STREET RESTORATION

CONSTRUCTION DISCLAIMER

VOLZ INC. AND THE UNDERSIGNED ENGINEER HAVE NO RESPONSIBILITY FOR SERVICES PROVIDED BY OTHERS TO IMPLEMENT THE 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. VOLZ INC. HAS NO RESPONSIBILITY TO VERIFY THE FINAL IMPROVEMENTS AS SHOWN ON THIS PLAN UNLESS SPECIFICALLY ENGAGED AND AUTHORIZED TO DO SO BY THE OWNER OR CONTRACTOR.

UTILITY DISCLAIMER

THE UNDERGROUND UTILITIES SHOWN HEREIN WERE PLOTTED FROM AVAILABLE INFORMATION AND DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, OR NONEXISTENCE, SIZE, TYPE, NUMBER, OR LOCATION OF THESE OR OTHER UTILITIES. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND UTILITIES IN THE FIELD, SHOWN OR NOT SHOWN, PRIOR TO ANY GRADING, EXCAVATION, OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319, RSMO.

CITY OF WILDWOOD
MAR 31 2016
DEPT OF PLANNING & PARKS

CLIENT:
MS. LAURIE TAYLOR
17715 MANCHESTER RD
ST. LOUIS, MO 63038
314-905-1321

VOLZ Incorporated
ENGINEERS
LAND PLANNING
LAND SURVEYING
TRANSPORTATION
CONST. MANAGEMENT
10848 Indian Head Ind'l. Blvd.
St. Louis, Missouri 63132
314.426.5212 Main
314.890.1250 Fax
www.volzinc.com
Authority #203

MARK L. KILGORE
2000150026
E-2-04-2016
MISSOURI
PROFESSIONAL ENGINEER
MARK L. KILGORE
Professional Engineer
E-2000150026

PROJECT ADDRESS:
17715 MANCHESTER ROAD
WILDWOOD, MO 63038

SWPPP DETAILS & NOTES

Design By: MK
Drawn By: MK
Checked By: MK
Project # 20070
11-03-2015
C7

H:\CAD\20600-20699\20670\VolzFiles\C7-SWPPFiles\20670-C7TMdandsetsRd.dgn

GENERAL NOTES:

ZONING DISTRICT:	NU NON-URBAN
SITE AREA:	32.05 AC
WOODED AREA:	20.70 AC
TREE CANOPY REQ'D:	30% OF 20.70= 6.21 AC
CLEARING LIMITS:	4.14 AC TOTAL FOR 2016
TREE CANOPY SAVED:	16.56 AC= 80.0%
TREE CANOPY PLANTED:	0
TREE CANOPY PROVIDED:	16.56 AC= 80.0%
PROPOSED UNITS:	ONE (1) SINGLE FAMILY RESIDENCE

TREE PROTECTION NOTES:

1. PRE-CONSTRUCTION MEETING, HELD ON-SITE TO INCLUDE A PRESENTATION OF TREE PROTECTION MEASURES TO OPERATORS, CONSTRUCTION SUPERVISORS, DEVELOPER'S REPRESENTATIVE, AND CITY ZONING INSPECTORS.

2. CLEARING LIMITS SHALL BE ROUGH STAKED BY DEVELOPER IN ORDER TO FACILITATE LOCATION FOR TRENCHING & FENCING INSTALLATION.

3. NO CLEARING OR GRADING SHALL BEGIN IN AREAS WHERE TREE TREATMENT & PRESERVATION MEASURES HAVE NOT BEEN COMPLETED.

4. THE SEQUENCE OF TREE TREATMENT & PRESERVATION MEASURES SHALL BE:
   - A. ROOT PRUNING TRENCHING
   - B. TREE PROTECTION FENCING
   - C. TREE PRUNING & CHEMICAL TREATMENT
   - D. AERATION SYSTEMS INSTALLED
   - E. SIGN INSTALLATION

*NRP FENCING MUST BE INSTALLED BEFORE A ZONING AUTHORIZATION WILL BE RELEASED.

DATE OF CALCULATION OF LAND DISTURBANCE AS REQUESTED BY CITY OF WILDWOOD: CALCULATED ON NOV 23±, 2015. CALCULATION IS FOR ULTIMATE MAX DISTURBANCE IN EXPECTED 2016 CONSTRUCTION

N

60 0 60 120 180

Scale in Feet
1" = 60'

CALL MISSOURI ONE CALL SYSTEMS INC. TWO FULL WORKING DAYS IN ADVANCE OF STARTING WORK.

MISSOURI ONE-CALL 1-800-344-7483

REVISED
02-04-2016
02-29-2016
3-30-2016

CONTRACTOR TO BE RESPONSIBLE FOR TRAFFIC CONTROL AND STREET RESTORATION

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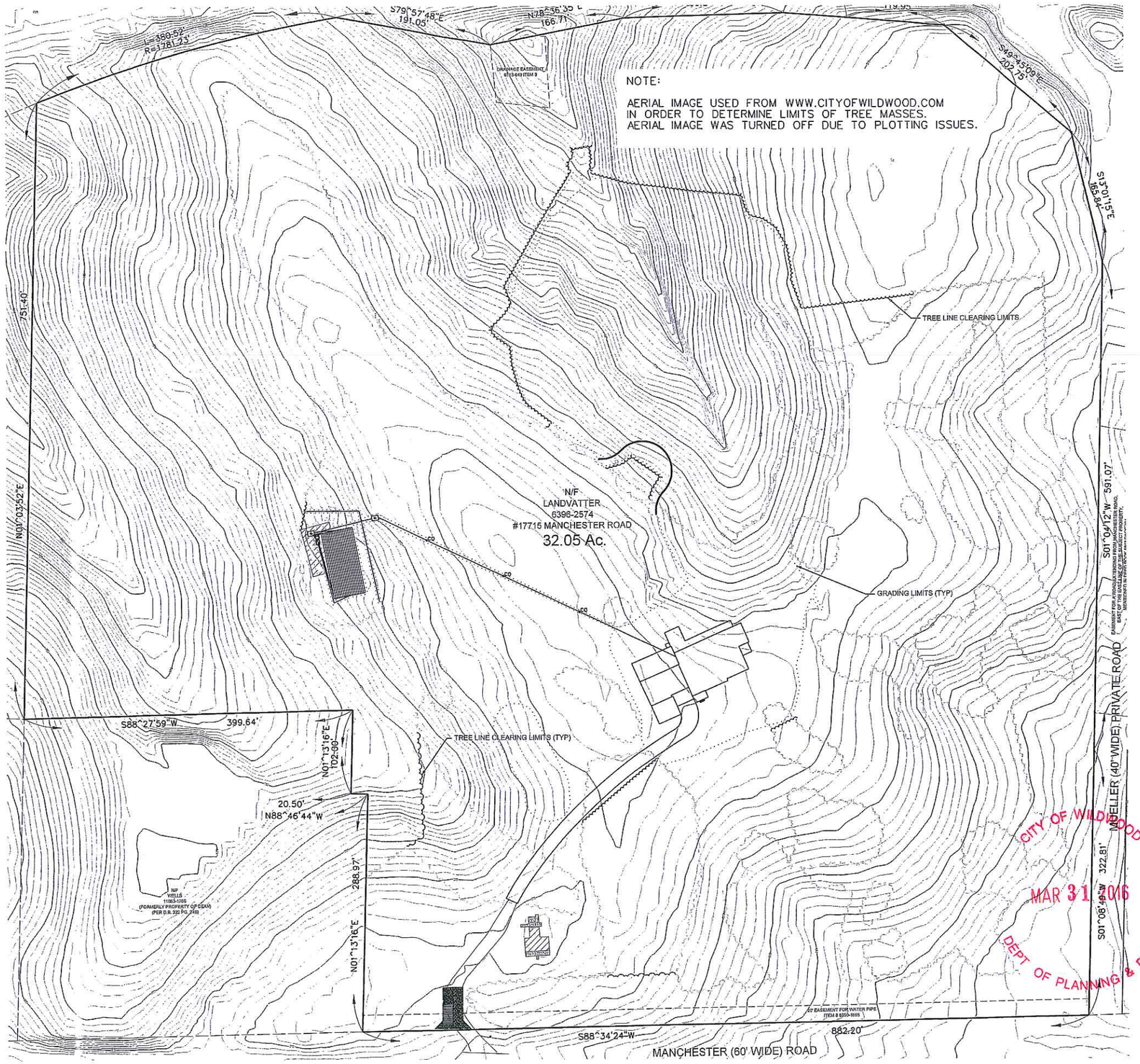

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Authority #203

MARK L. KILGORE
NUMBER
E-2000150026
3-31-2016
MARK L. KILGORE
Professional Engineer
E-2000150026

PROJECT ADDRESS:
17715 MANCHESTER ROAD
WILDWOOD, MO 63038

TREE PRESERVATION PLAN

11-23-2015

C8

Design By: MK
Drawn By: MK
Checked By: MK
Project # 20670

I:\VOLZ\20600-20699\20670\Img\Plans\C8-TreePresPlan-20670-17715ManchesterRd.dgn

ATTACHMENT D
Background Information

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

PETITION

CITY OF WILDWOOD
NOV 30 2015
DEPT OF PLANNING & PARKS

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
X 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.

(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: 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: ROBERT VOLZ MY COMMISSION EXPIRES August 8, 2016 NOTARY SEAL #12551969 ST. CHARLES COUNTY NOTARY PUBLIC, STATE OF MISSOURI

SUBSCRIBED AND SWORN BEFORE ME THIS 23rd 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

1ST SUBMITTAL DATE: 11-30-15
FEE: $250 ; RECEIVED BY: KA
PRELIMINARY DEVELOPMENT PLAN: (YES) NO
PACKET COMPLETE: (YES) NO

2ND SUBMITTAL DATE: _____
PACKET COMPLETE: YES NO

3RD SUBMITTAL DATE: _____
PACKET COMPLETE: YES NO

4TH SUBMITTAL DATE: _____
PACKET COMPLETE: YES NO

Travis Newberry

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>
To: "mkilgore" <mkilgore@volzinc.com>
Cc: "terri@cityofwildwood.com" <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]
Sent: Wednesday, March 30, 2016 4:48 PM
To: Dave Phipps <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
Phone: (314) 890-1223 direct
Cell: (314) 345-0531
Fax: (314) 890-1250

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

REPLY TO
ATTENTION OF:

RECEIVED
FEB 03 2016
20670
By

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/f?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>
Sent: 1/27/2016 9:33:23 AM
To: "mkilgore" <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

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
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>
To: "mkilgore" <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

From: mkilgore [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
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>
To: "mkilgore" <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

From: mkilgore [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
Phone: (314) 890-1223 direct
Cell: (314) 345-0531
Fax: (314) 890-1250

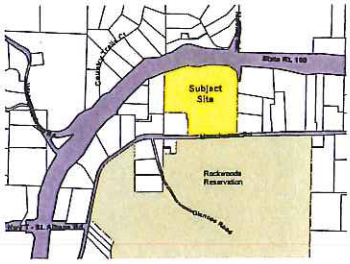
WILDWOOD

16860 Main Street
Wildwood, MO 63040

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**. 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**, 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

MEETING OF THE PLANNING AND ZONING COMMISSION
CITY HALL, 16860 MAIN STREET, WILDWOOD, MISSOURI
April 4, 2016

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)	ABSENT – (1)
Chair Bopp	Commissioner Renner
Commissioner Lee	
Commissioner Archeski	
Commissioner Bauer	
Commissioner Gragnani	
Commissioner Liddy	
Council Member Manton	
Mayor Woerther	

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, Kelpe 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 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.

<u>Information Reports – One (1) Item for Consideration</u>

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 Derive). **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

www.JacobiEngineer.com

JACOBI GEOTECHNICAL ENGINEERING, INC.

798 Hoff Road O'Fallon, Missouri 63366-1920 (636) 978-7112 (636) 978-7113

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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Triaxial Tests

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STATE OF MISSOURI
CARL L. JACOBI
NUMBER PE-020950
PROFESSIONAL ENGINEER

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 though 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 1×10^{-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.

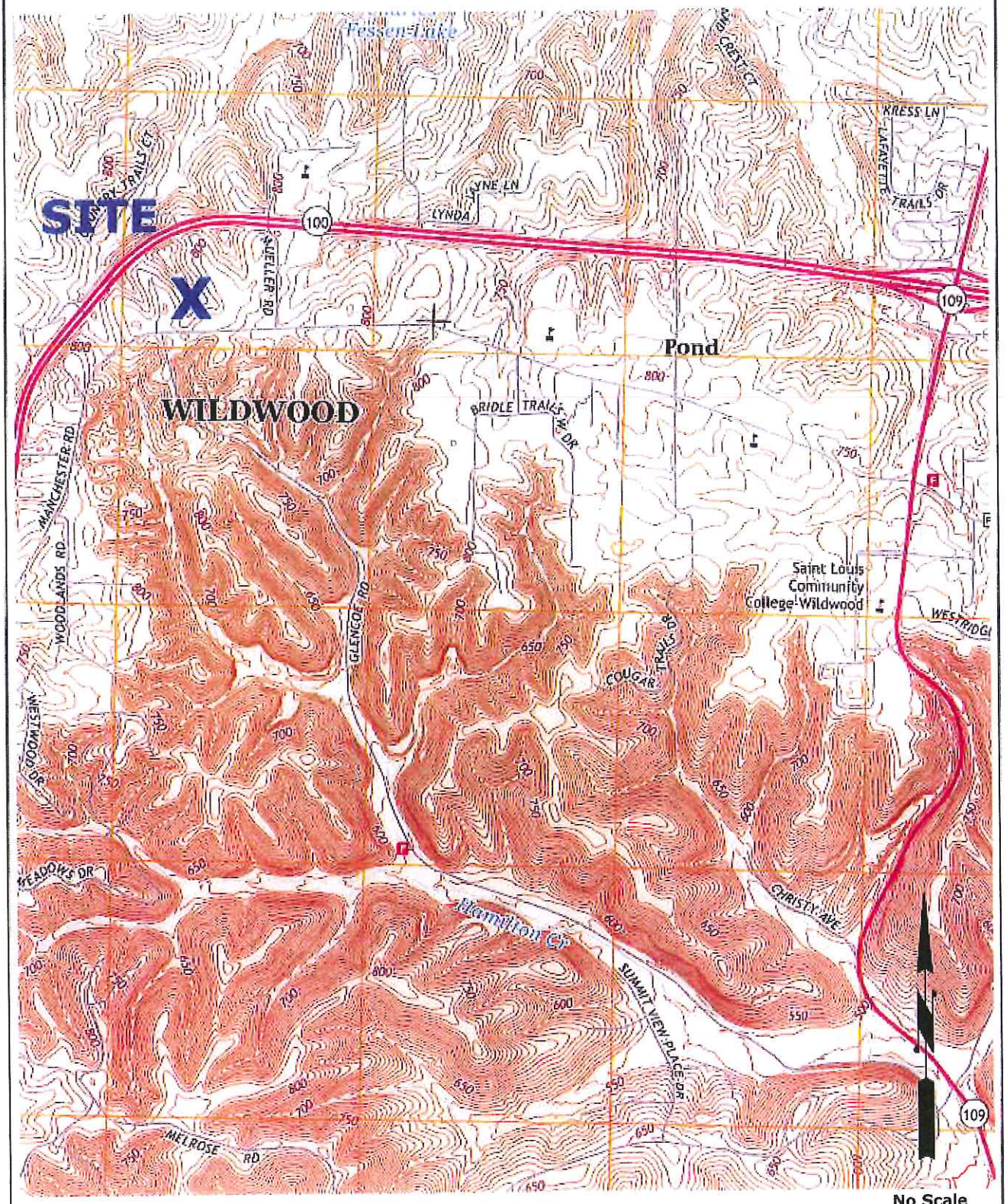
6.4 Embankment Compaction

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.

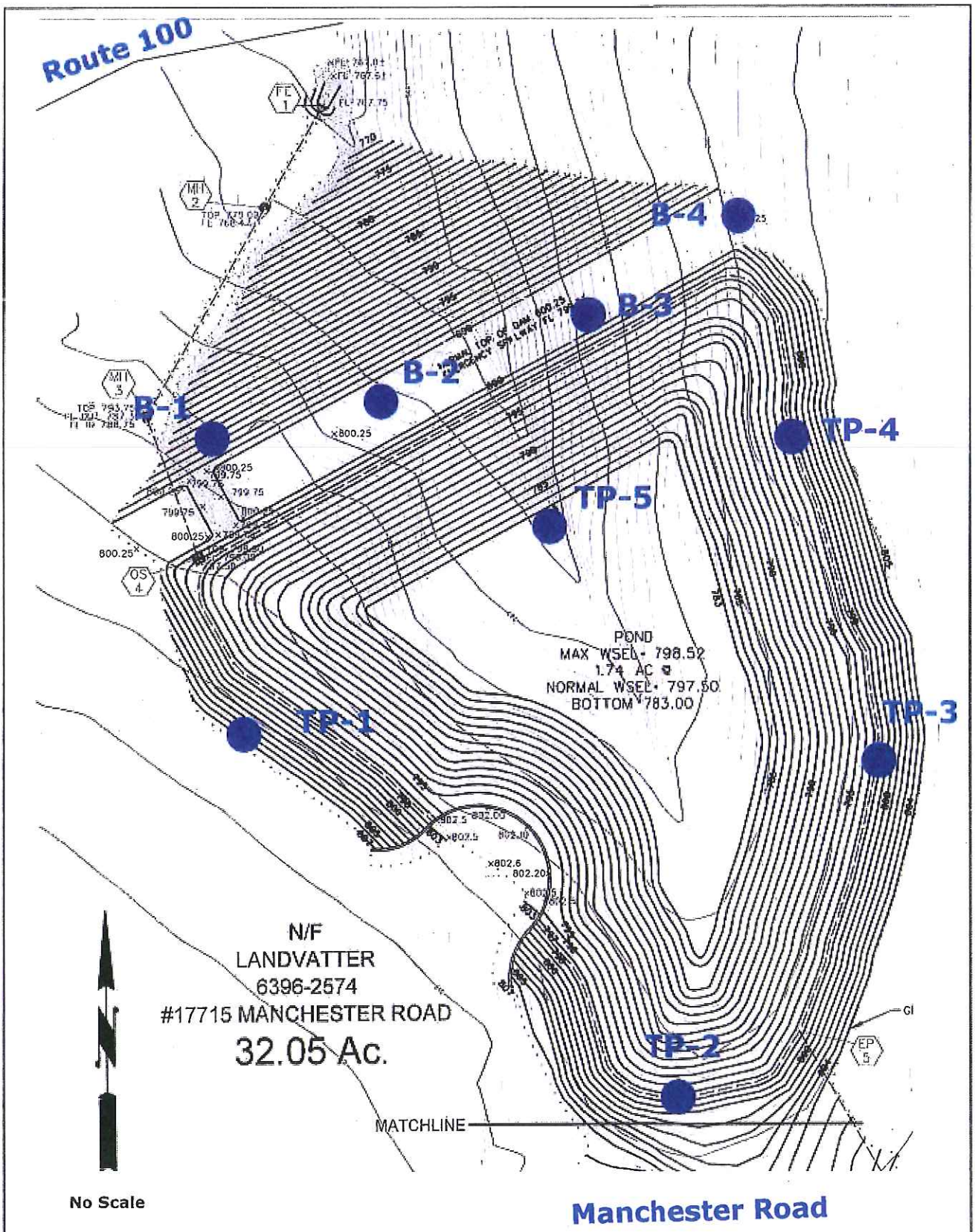


No Scale

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



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
					CL	Brown, lean, SILTY CLAY					
		ST 1	20/24				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				
					CL	Brown, lean, SILTY CLAY, with gravel and rock fragments					
		SS 4		18-19-50/4		WEATHERED ROCK and CHERT fragments	2				
10	780										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					0
		SS 1		3-4-6		Brown, lean, SILTY CLAY	29				
		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	771										10
		SS 5		50/6		WEATHERED ROCK, with rock fragments and some shaley clay	14				
		SS 6		50/4			10				
15	766										15
		SS 7		50/5			7				
20	761										20
		SS 8		50/3			8				
25	756										25
						1 in. to 7 in thick ROCK layers or cobbles below 26.5 feet					
		SS 9		50/1.5			8				
30	751										30
		SS 10		50/2			16				
35	746										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
35	746					WEATHERED ROCK					35
						Auger refusal at 37.0 feet					
40	741										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	782										5
		SS 3		31-50/3			5				
						9 in. ROCK layer					
		SS 4		50/3		WEATHERED ROCK and rock fragments	6				
10	777										10
		SS 5		50/3			6				
						Boring terminated at 12.5 feet					
15	772										15
20	767										20
25	762										25
30	757										30
35	752										35

Remarks:

JACOBI GEOTECHNICAL ENGINEERING, INC
BORING LOG NO. B-4

PROJECT NAME: Laurie Taylor Lake and Dam Design	**PROJECT NO. 16010**
LOCATION: Wildwood, Missouri	**GROUND EL.: 801+/-**
DRILLER: Midwest Drilling Inc. / **DRILL: 550X** / **METHOD: 4 inch CFA**	**HOLE DEPTH (ft): 33.5**
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	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	791										10
		SS 5		28-50/2		WEATHERED ROCK, with rock fragments and shaley clay	3				
		SS 6		50/3			6				
15	786										15
		SS 7		50/3			6				
		SS 8		50/2			6				
20	781										20
		SS 9		50/2			6				
25	776										25
		SS 10		50/1.5		1 in to 4 in. thick ROCK layers or cobbles below 26.5 feet	7				
30	771										30
						Auger refusal at 33.5 feet					
35	766										35

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					5 in. Topsoil						0
		BS 1			CL	Brown, lean, SILTY CLAY	32					
5	801	BS 2			CL	Brown, lean, SILTY CLAY, with heavy gravel	16					5
10	796	BS 3		2.5	CH	Red and gray, fat, CLAY, with heavy gravel and heavy sand	11					10
		BS 4			SC	Red, fat, CLAYEY SAND, with gravel	7					
15	791					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 Denisty (pcf)	Qu - Shear Strength (ksf)	Depth
0	803					8 in. Topsoil						0
					CL	Brown, lean, SILTY CLAY						
		BS 1					25					
5	798											5
					CL/CH	Brown with gray, lean to fat, SILTY CLAY						
		BS 2		1.5	CH	Red and gray, fat, CLAY, with gravel and sand	20					
10	793											10
					CH	Tan and gray, fat, CLAY, with heavy gravel and sand						
				2.0								
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 Denisty (pcf)	Qu - Shear Strength (ksf)	Depth
0	803				CH	Brown, fat, CLAY						0
		BS 1					25					
					CH	Brown, fat, CLAY, with gravel						
5	798											5
					CH	Brown, fat, CLAY, with heavy gravel						
					CH	Red and gray, fat, CLAY, with gravel and sand						
10	793											10
		BS 2		2.0			9					
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 Denisty (pcf)	Qu - Shear Strength (ksf)	Depth
0	804					6 in. Topsoil						0
		BS 1			CH	Brown, fat, CLAY	24	50	23			
5	799	BS 2			CH	Brown, fat, CLAY, with rock	24					5
					CH	Brown, fat, CLAY, with heavy rock and sand						
10	794	BS 3			CH	Red and gray, fat, CLAY, with sand and heavy gravel	9	47	19			10
15	789					Test pit terminated at 16.0 feet						15
20	784											20
25	779											25
30	774											30
35	769											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 Denisty (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				CH	Gray and tan, fat, CLAY, with rock, gravel, and trace sand						5
		BS 2		3.0			11					
						with rock, gravel, and sand						
		BS 3		3.0	CH	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

JACOBI GEOTECHNICAL ENGINEERING, INC.

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

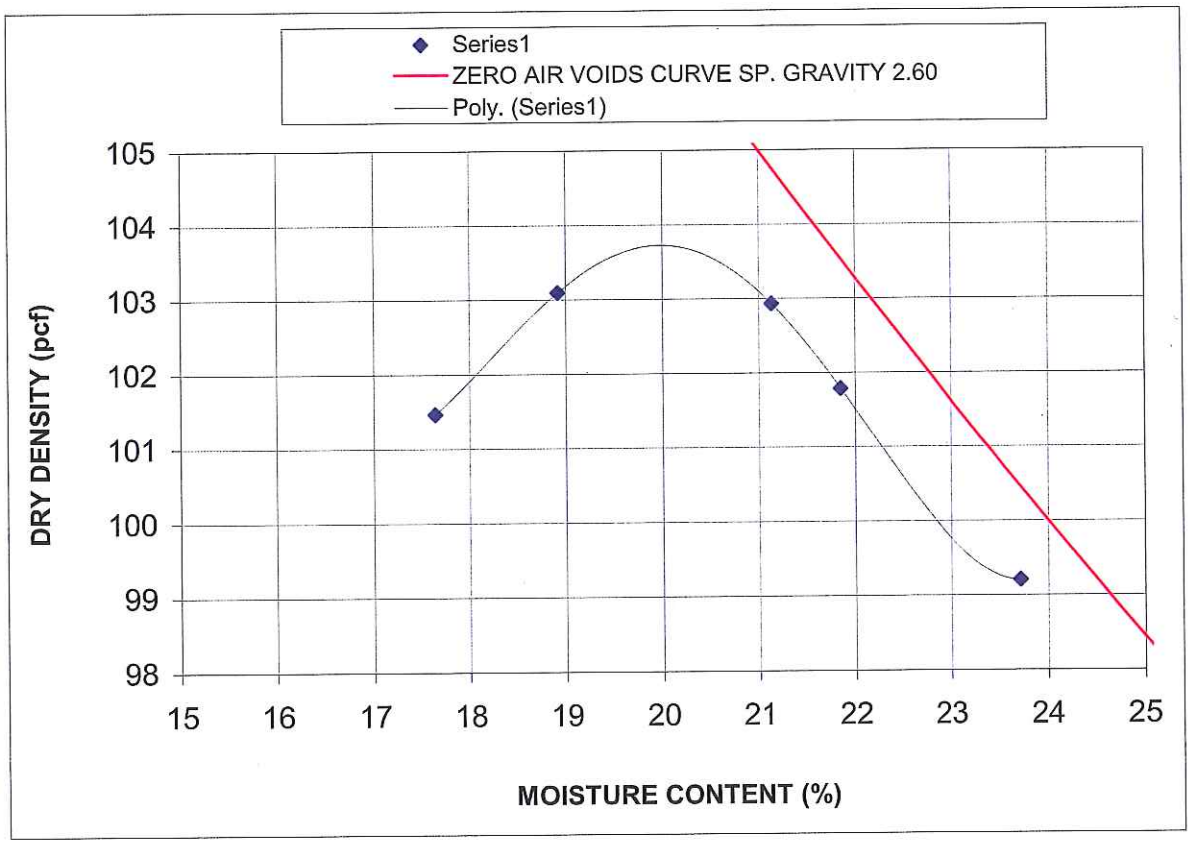
SOIL/AGGREGATE INFORMATION

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

798 HOFF RD OFALLON, MO 63366-1920 PHONE: (636) 978-7112 FAX: (636) 978-7113 www.jacobiengineer.com

JACOBI GEOTECHNICAL ENGINEERING, INC.

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

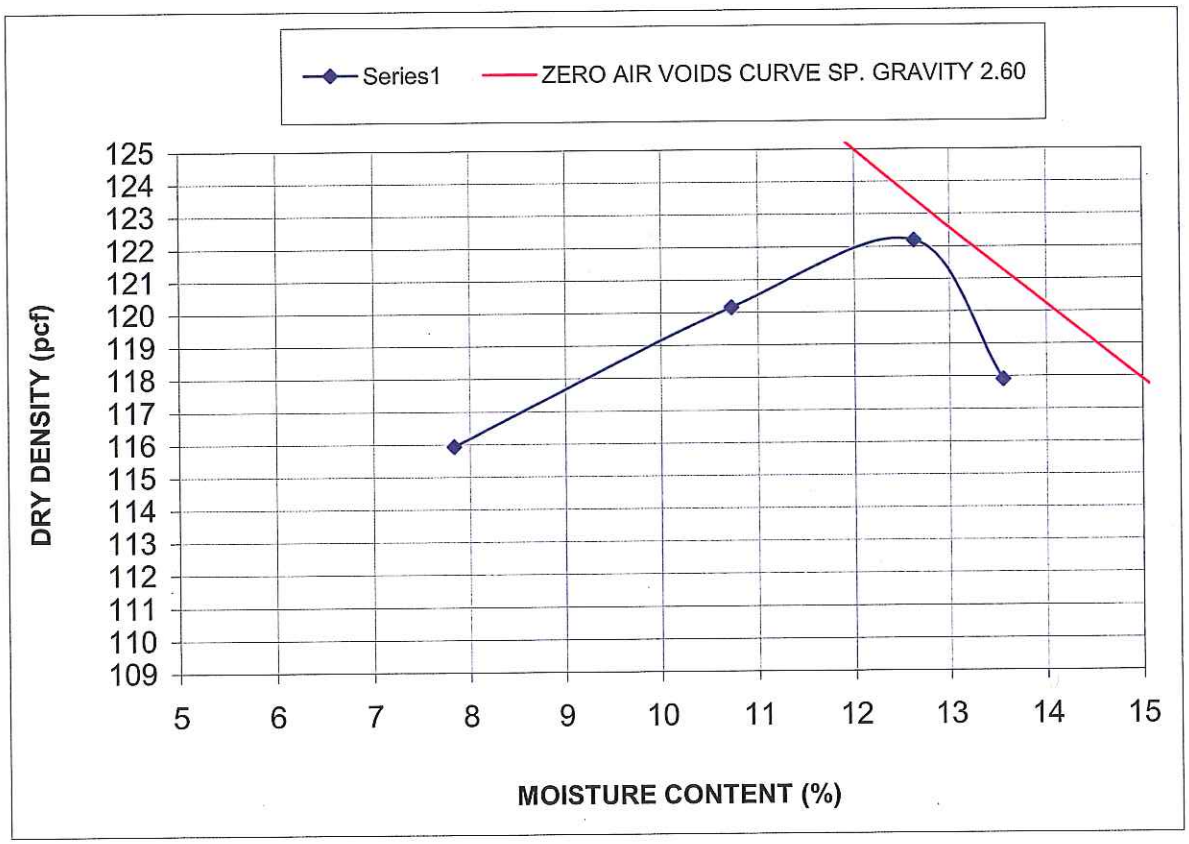
SOIL/AGGREGATE INFORMATION

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 %



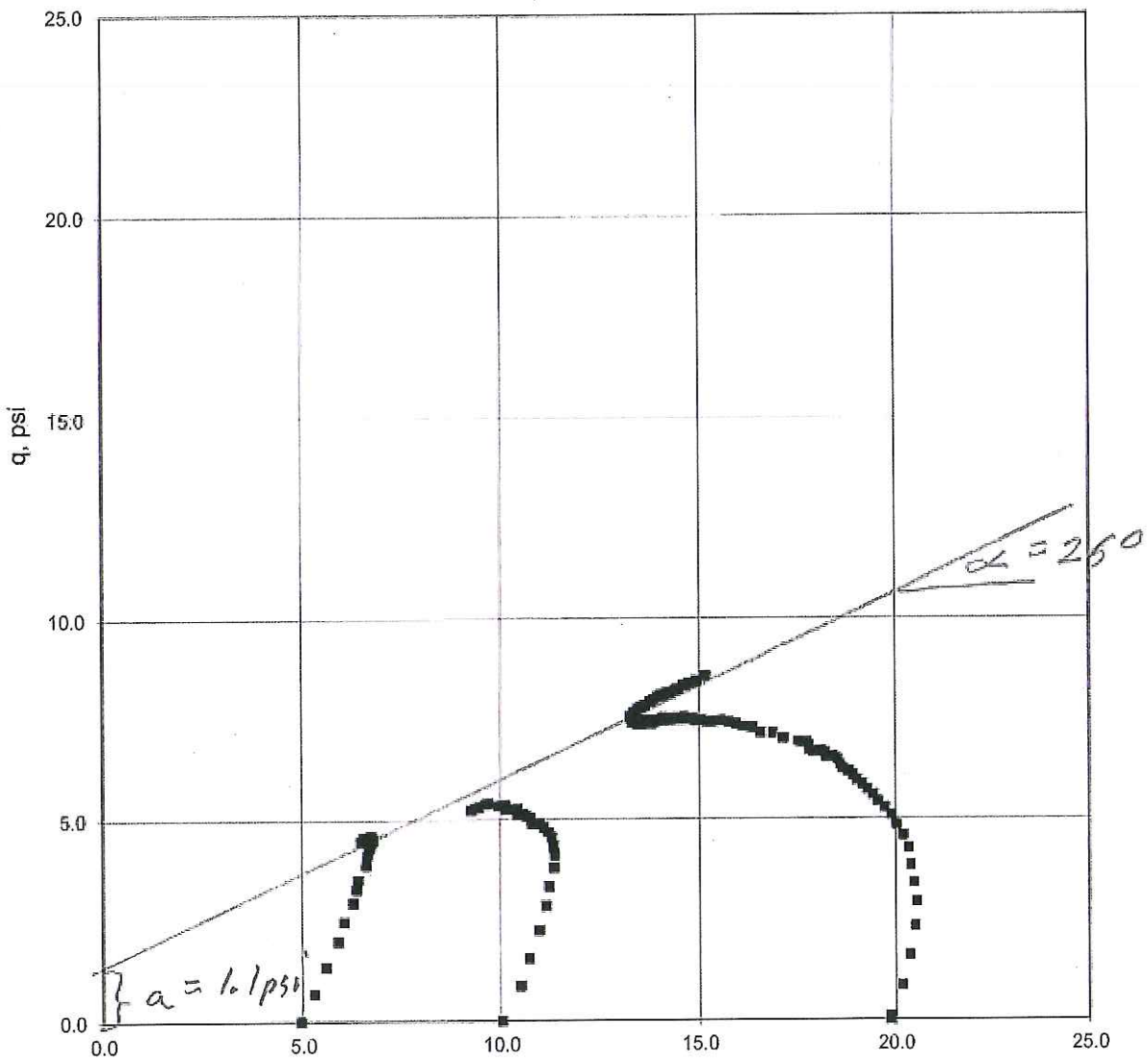
Remarks: #353B

798 HOFF RD OFALLON, MO 63366-1920 PHONE: (636) 978-7112 FAX: (636) 978-7113 www.jacobiengineer.com

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



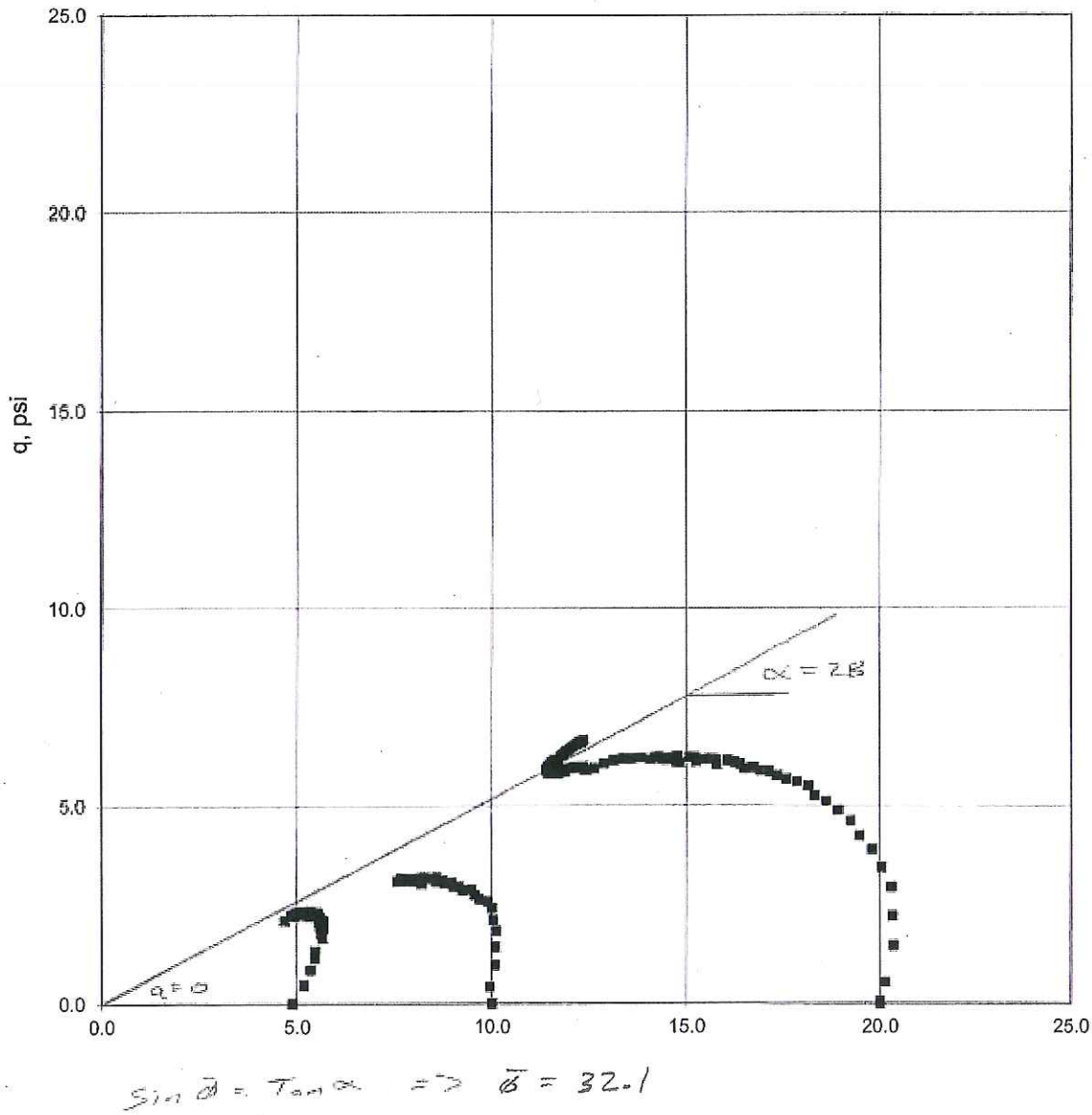
$\sin \bar{\phi} = \tan \bar{\alpha} \Rightarrow \bar{\phi} = 29.3^\circ$

$\bar{c} = \dfrac{a}{\cos \bar{\phi}} \Rightarrow \bar{c} = 1.26 \text{ psi} = 182 \text{ psf}$

Consolidated-Undrained Triaxial Compression Test

Taylor Dam
Wildwood, Missouri

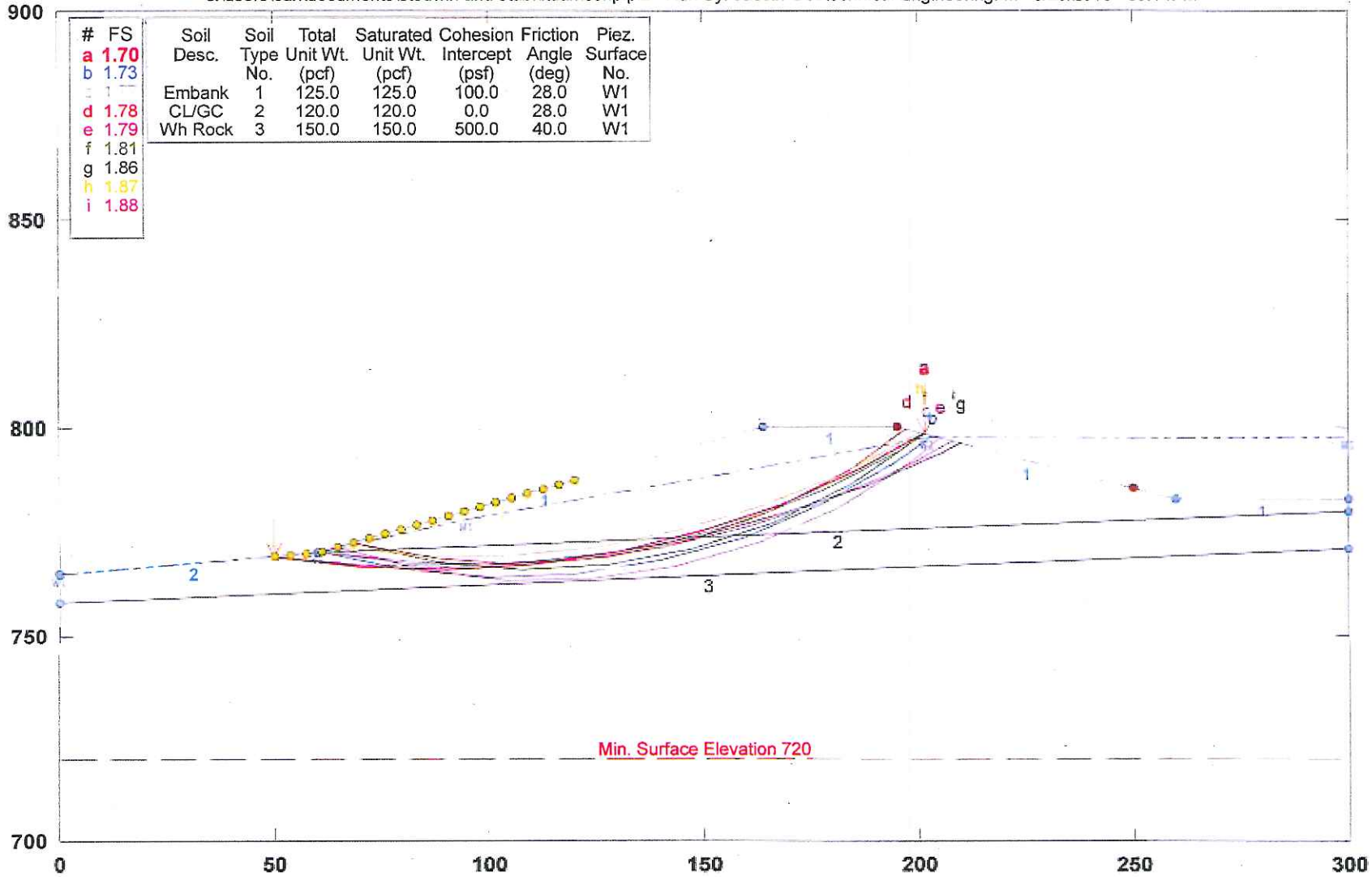
Borrow Area: TP-4, Sample P-2
Dry Unit Weight ≈115.5 pcf; Moisture Content ≈11.1%
Confining Pressures: 5, 10 and 20 psi



APPENDIX D

Laurie Taylor Dam #16010 Steady Seepage - Normal Pool

c:\users\carl\documents\stedwin and stabl\ltdamssnp.pl2 Run By: Jacobi Geotechnical Engineering. In 3/29/2016 05:14PM

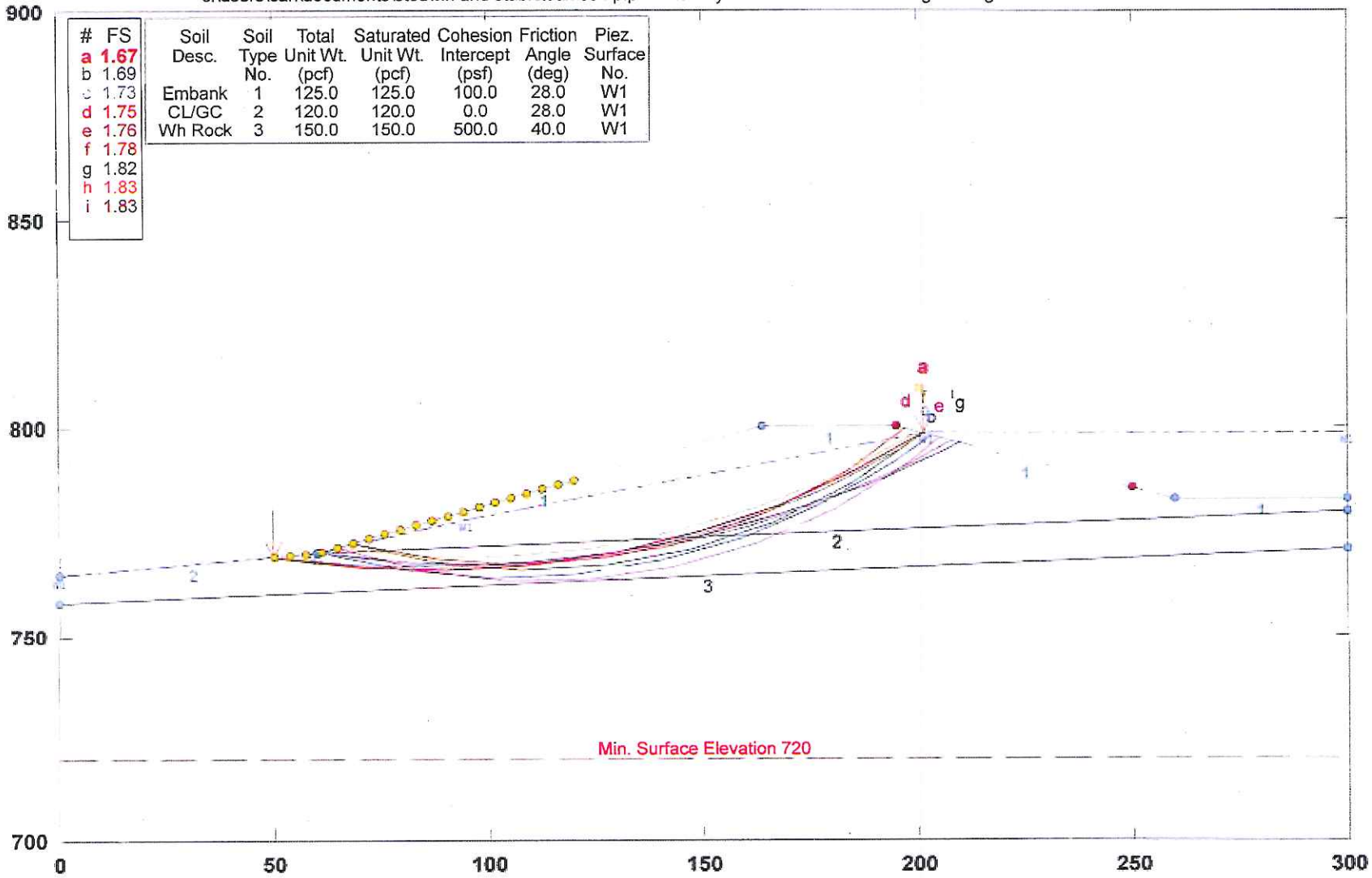


STABL6H FSmin=1.70

Safety Factors Are Calculated By The Modified Bishop Method

Laurie Taylor Dam #16010 Steady Seepage - Maximum Pool

c:\users\carl\documents\stedwin and stabl\ltdamssmp.pl2 Run By: Jacobi Geotechnical Engineering. In 3/29/2016 05:15PM

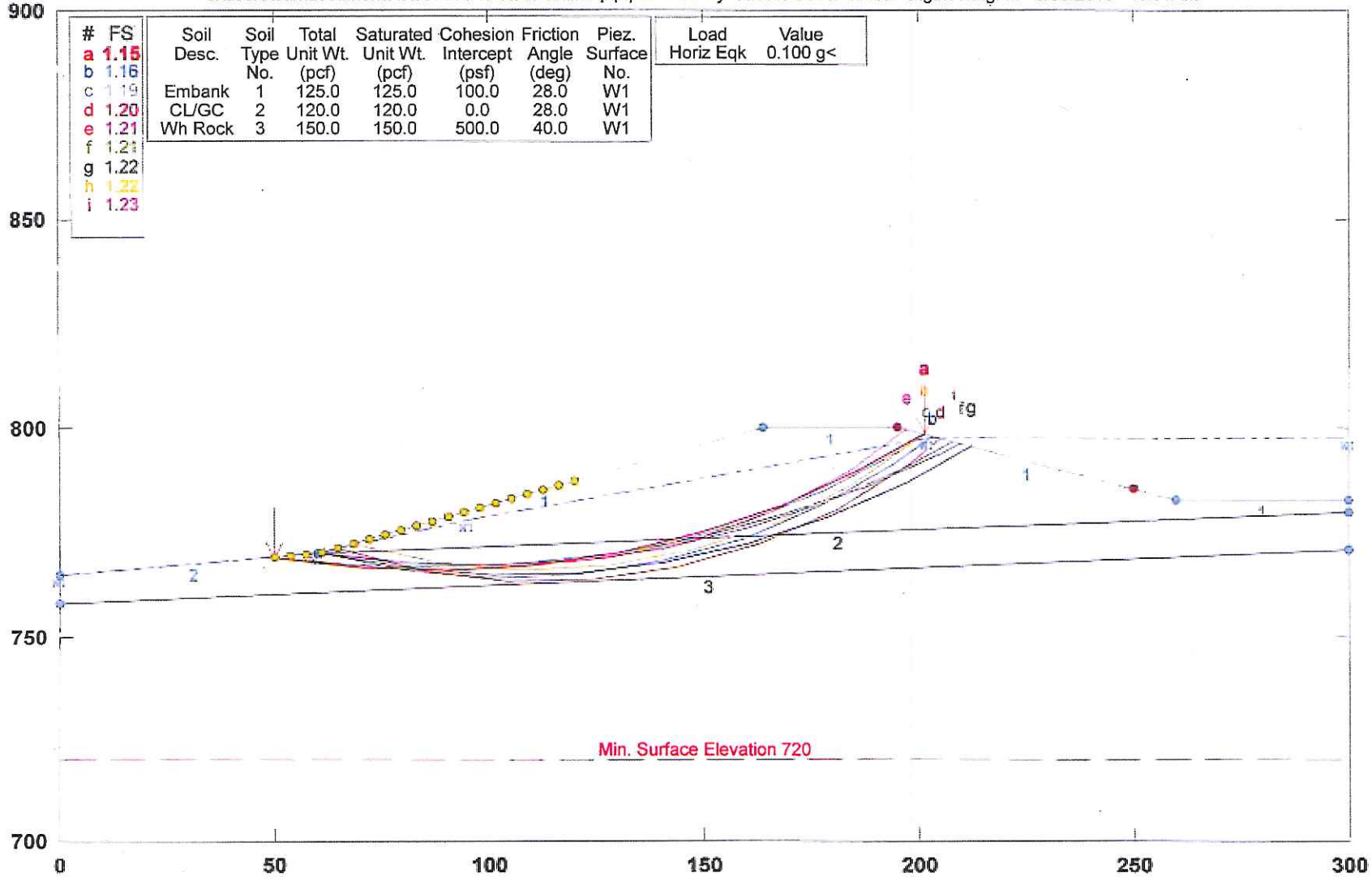


STABL6H FSmin=1.67

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\ltdameqnp.pl2 Run By: Jacobi Geotechnical Engineering. In 3/30/2016 11:01AM

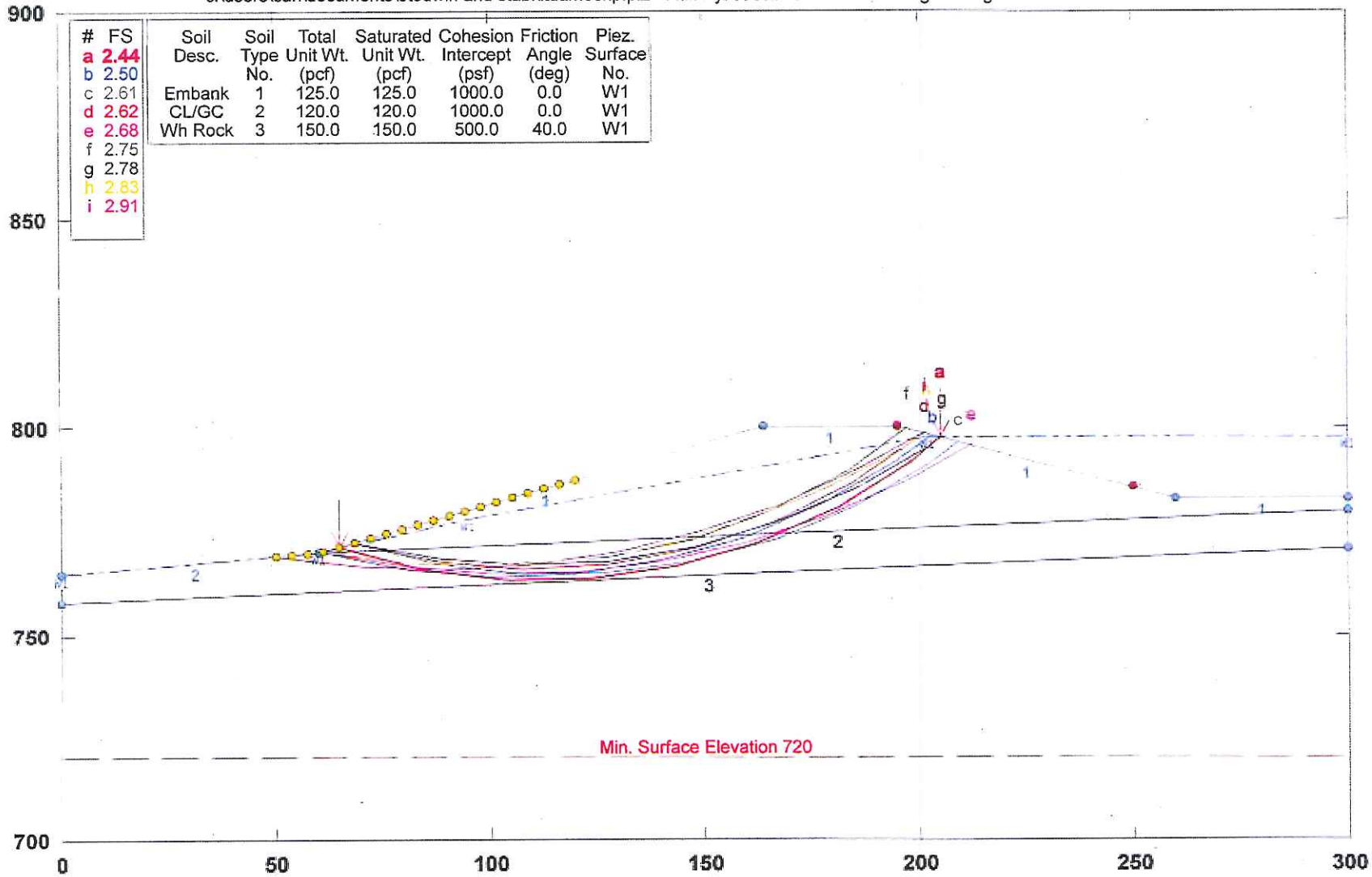


STABL6H FSmin=1.15

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\ltdamecnp.pl2 Run By: Jacobi Geotechnical Engineering. In 3/30/2016 10:59AM



Soil Desc.	Soil Type No.	Total Unit Wt. (pcf)	Saturated Unit Wt. (pcf)	Cohesion Intercept (psf)	Friction Angle (deg)	Piez. Surface No.
Embank	1	125.0	125.0	1000.0	0.0	W1
CL/GC	2	120.0	120.0	1000.0	0.0	W1
Wh Rock	3	150.0	150.0	500.0	40.0	W1

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

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 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 Golterman, 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	*Field not completed.*
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	*Field not completed.*
	(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	MarthaGraceReese@gmail.com

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

Title		Page
10 CSR 22-1.010	General Organization	3
10 CSR 22-1.020	Definitions	3
10 CSR 22-1.030	Immunity of Officers	5

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
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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 personally 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.*

Rules of
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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	Environmental Class II	Environmental Class 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*

Zone	PMA*	Intensity**
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

ZONE A	ZONE B	ZONE C	ZONE D	ZONE E	ZONE E (cont.)	ZONE F
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 fps2) 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	Environmental Class II	Environmental Class 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 recordkeeping 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
Name of Dam

direct supervision) for the owners thereof.

_____
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 construction 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 recordkeeping 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.*

Rules of
Department of Natural Resources
Division 22—Dam and Reservoir Safety Council
Chapter 4—Action Taken by Council and Chief Engineer

Title		Page
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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

April 18, 2016

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

Re: A request from Mary Lafata, the daughter of the property owner, which is dated March 16, 2016 that seeks an amendment of the existing governing ordinance for this site to allow for an expansion of the allowable uses upon it, given current interests, and the addition of drive-through lanes in conjunction with any allowable financial institution (**St. Louis County's P.C. 219-85 Alfred L. Hicks and J.L. Mason of Missouri, Inc.**)

Location: Southeast corner of State Route 100 and Pierside Lane
Zoning: Amended Mixed-Use Development District (AMXD)
Ward: Four

Council Members:

INTRODUCTION - The Planning and Zoning Commission is in receipt of a letter from the daughter of the owner of this 1.22 acre tract of land that is located on the southeast corner of State Route 100 and Pierside Lane. The property owner's letter is dated March 16, 2016 and seeks the Planning and Zoning Commission's review of the site-specific ordinance that governs this location, with the intent for its amendment to allow for a drive-through facility to be authorized in conjunction with a requested financial institution. This site is part of the larger mixed-use development called the Harbors at Lake Chesterfield. Based upon this request, the Planning and Zoning has reviewed the files and related materials relative to this site and has developed a recommendation in this regard. Accordingly, acting at its April 18, 2016 Executive Session, and by vote of --- to ---, the Planning and Zoning Commission hereby submits the following report for the City Council for its use in considering and acting upon this matter.

BACKGROUND – For the purposes of review, St. Louis County's P.C. 219-85 Alfred L. Hicks and J.L. Mason of Missouri, Inc. was the first application of a new St. Louis County district designation identified as the Mixed-Use Development District, which was intended to provide a zoning mechanism to encourage the development of communities at a neighborhood level by mixing all types of housing choices, with neighborhood commercial activities, and institutional and recreational amenities as well. In this case, single family detached and attached, along with apartment units, were authorized as part of this project, while also including several areas of commercial activity, and other services, such as a child care center. In total, the site-specific ordinance approved by St. Louis County for this project authorized the following:

a. 295 detached single family dwellings on individual lots of varying sizes;
b. 401 multiple family dwellings, including attached and multiple story types;

c. 110,000 square feet of commercial space, including a supermarket and in-line retail, and additional uses, which were a convenience store with gas pumps, a medical office building, a bank, with drive-through facilities, and an outbuilding that currently houses two (2) restaurants and a medical office; and
d. A childcare center, a private school, a subdivision clubhouse, including a pool and tennis courts, and common ground, which include Lake Chesterfield.

This project began development long before Wildwood was incorporated, with the majority of the single family detached housing completed by 1995. The apartments (Carriage Place) and the Schnucks Wildwood Crossing Center were started after the City's incorporation and were reviewed by it. This project was the most successful of a few of the mixed-use developments St. Louis County had authorized over the last two (2) decades of it being part of its Zoning Ordinance. Others never materialized or the commercial component was never started.

Since the incorporation of the City, there have been two (2) major changes within the development that required the amendment of the governing ordinance or a rezoning. The first of these two (2) major changes involved the commercial center, where Schnucks Markets was the major anchor tenant. After construction had started on this large development, changes were requested to address signage requirements, while seeking certain improvements to the internal circulation layout of parking and drive aisles, the location of other improvements, and modifications to the landscaping and buffering scheme to improve the transition from commercial uses to residential activities. Both the Planning and Zoning Commission and City Council supported these changes and acted upon them in April 1996. Key in this support by both of these decision making bodies was the proposed modifications to the ordinance's signage allowances, which led to allowable pylon signs being changed to monument types, which was more in keeping with the emerging standards for the planned Town Center Area.

The second major change relating to this development involved the Mobil facility on Manchester Road. This facility was part of the original development of the project, but had a very small kiosk for service purposes and a limited number of pump islands for use. This design reflected current trends in the middle part of the 1980's. With changes in the gasoline and convenience industry, this facility needed to be updated and the owner sought such a change in 2008. This change would include a large convenience store (from approximately an 800 square foot kiosk to a 3,000+ square foot convenience store), along with the addition of more pump islands and a double-bay car wash facility.

To accomplish this change to the facility and address the requirements of the Town Center Plan, since this development would constitute a complete rebuild of the site, the property had to be rezoned to the C-8 Planned Commercial District. As part of this planned district, the increased use of the site for buildings and structures could be accommodated, while integrating the requirements of the Town Center Plan's Workplace District into the design of its improvements as well. These improvements would include the reconstruction of Manchester Road to include all required streetscape improvements.

The Planning and Zoning Commission and the City Council concurred with the redevelopment of this facility and supported the planned changes to the site. The Commission and City Council's support was premised on the facility's long history at this location and the competitive nature of this type of business, which necessitated an upgrade to this facility. Additionally, it was noted in the approval of the rezoning of the project it would utilize the standards and guidelines of the Town Center Plan, which would lead to an improved appearance, at what many identify as the main entry into the City from the east.

Along with these two (2) major land use considerations that have occurred over the last eighteen (18) years, other projects have been undertaken, along with a few major improvements in the vicinity, which are summarized below:

1. The only authorized fast-food restaurant, with a drive-through facility, was constructed shortly after the commercial center on the outlot to the north of the Schnucks Supermarket.
2. The proposed school lot, which was located on the southeast corner of Pierside Lane and Waterfront Way, was constructed and called Apple Hill Academy.
3. The development of one (1) of the outlots along Manchester Road was approved for Electro Savings Credit Union. This lot was restricted by the governing ordinance to office uses or a financial institution, with drive-through facilities, due to its proximity to the nearby residential homesites.
4. The large lake drained on two (2) occasions, costing homeowners in the subdivision thousands of dollars to repair.
5. The City of Wildwood began conversion of Manchester Road, along this development's frontage, to the Town Center required streetscape components that exist at the Mobil on the Run facility and further west on the same roadway. Once completed the desired streetscape will exist from State Route 100 on the east to State Route 109 on the west.

Additionally, over the last thirty (30) years, certain residential areas were altered to accommodate changes in unit types, primarily from attached to detached types, with a mix of dwelling and lot sizes. An example of such a change was the development of the property, where the Cove at Lake Chesterfield now exists.

In 2014, the property owner, where the former Kindercare Child Care Center was located, sought a change to the governing ordinance to allow this site to be utilized for other activities beyond its current restriction, which limited it to a child care center. The Kindercare facility had been in place for approximately seventeen (17) years, but closed in June 2014, when its lease expired. The owner has engaged a broker to assist with its re-occupancy, but no tenant has been found. In the property owner's letter submitted with the 2014 request, it was noted that interest had been expressed in the building, but not for a child care center, but rather offices, both professional and medical/dental, a financial institution, with drive-through facilities, and a dog grooming business. It was the property owner's intent to seek more latitude in the use of this site than currently allowed.

The Planning and Zoning Commission considered this request and believed an additional, low-intensity commercial use or uses could be considered reasonable on this site. This support was premised on a number of factors, which included the following:

1. The lot is adjoined by an apartment complex and three (3) arterial streets, which include State Route 100, Manchester Road, and Pierside Lane. Across Pierside Lane is the rear of several residential properties, which must be protected from any intensification of use on this site. Notwithstanding these residential uses to the south, the site is somewhat isolated in this regard.
2. The site's elevation is lower than surrounding properties, thereby mitigating some of the typical impacts associated with parking and lighting of non-residential properties.
3. The amount of parking and limited size of the building does create a number of design parameters that will limit any user of the site to a low-intensity type, such as offices.
4. The design of the building, which will principally remain unchanged, is one (1) story in height and surrounded by mature trees, which provides a low impact appearance within the area.
5. The surrounding roadway system can accommodate a low-intensity use, with limited hours of operation, given its extent and access allowances. The lot is also located at a signalized intersection, which lends to its use for a limited non-residential user.
6. The site is served by all utilities and will not create a burden on this overall network.
7. The removal of the playground areas, if authorized for a different use, other than a child care center, such as offices, would inevitably reduce the level of noise in the area.

8. The increase in the allowable uses of the site will potentially bring a new tenant to a currently vacant building, which is an improvement over the current situation.
9. The Amended MXD Mixed-Use Development District zoning can accommodate this change, given its original intent was to place commercial users on the northwestern end of the larger tract of land that became the Harbors at Lake Chesterfield. The property is not part of the Town Center Area and, therefore, remains governed by the existing ordinance for the larger Harbors at Lake Chesterfield Subdivision.

Given these factors, the Planning and Zoning Commission recommended this site be considered for expanded uses, but of a low-intensity nature. The Commission supported all types of offices, including medical and dental, along with professional types. However, it did not support retail activity at this location, since such typically requires more parking area than is currently available at the site (offices – 3 spaces per 1,000 gross floor feet of area versus retail – 4 spaces per 1,000 gross floor feet of area). Additionally, given the site's dimensions and grades, the Commission did not support the use of the property for a financial institution, with drive-through facilities. It was the Commission's belief the installation of a drive-through facility would require mass grading of the site and the removal of many of the mature trees that are located upon it. Additionally, the current access situation into and out of the site would appear inappropriate for a facility that generates a high-level of trips.

This recommendation was then forwarded to the City Council for its consideration and a public hearing was held on the matter on October 27, 2014. At the hearing, the City Council reviewed the report from the Planning and Zoning Commission and concurred with its findings. The City Council did also note the site was very visible at this particular intersection and having a tenant in the space would be important to all parties. The ordinance amendment was approved by the City Council on November 10, 2014. With the approval of this amendment, the list of allowable uses on the site was increased to include office uses, both professional and medical and dental types, but not the petitioner's requested financial institution, with a drive-through facility. As noted in the current petitioner's letter, no occupancy has occurred since the change to the ordinance governing this site was approved.

CURRENT REQUEST –

Information developed for this current request, a review of St. Louis County records indicates the lot is 1.22 acres in size and the building located upon it is 6,300 square feet in area. Along with the building is a parking lot that accommodates eighteen (18) spaces. Given the property's long use for a child care center, two (2) playground areas are located to the south and west of the building, abutting Manchester Road and Pierside Lane. Additionally, the following characteristics exist on the site as well:

1. The site is served by all utilities.
2. The site's access is from Pierside Lane only, with two (2) curb cuts onto it. One (1) of these curb cuts is designed as a right-in/right-out only.
3. The site has several grade changes in association with it, which required the use of retaining walls to support the lot's use, particularly along its north and west boundaries.
4. The site has a single monument sign in place along the west side of the building, facing Manchester Road.
5. Numerous large trees exist on the site, which appear to have been planted at the time of the building's construction - 1989.

The petitioner has submitted a letter to the City of Wildwood seeking the reconsideration of a financial institution, with drive-through facilities, at this location. This request is similar to the other filed with the City in 2014 for this same site. According to the letter, despite the additional uses, no buyer or tenant has been found for the space and most interest appears to be for a financial institution, with drive-through facilities. This interest has generated the current request and the desire of the owner to find an occupant for this vacant building.

ANALYSIS –

The Planning and Zoning Commission appreciates the desire of the current owner of this property to find a buyer or tenant for it. The City concurs that a vacant building, at such a prominent location, is problematic and should be addressed. In 2014, the Planning and Zoning Commission, and then the City Council, agreed to allow all types of offices on this site, which included medical and dental types, which added substantial opportunity to its future use. However, the Planning and Zoning Commission was cautious in its choice of uses that could be offered from the site, so as to respect the original mixed-use district plan for the Harbors at Lake Chesterfield Project, while protecting the entry/exit area into this large residential community from potential issues that are typically associated with certain activities.

Additionally, the same factors exist in April 2016 that were in place approximately two (2) years ago, which precluded the City from supporting the allowance for a financial institution, with a drive-through facility, at this location. These factors can be summarized again at this time:

1. The site's dimensions and grades do not lend themselves well to a design for a financial institution, with drive-through facilities.
2. The installation of a drive-through facility would require mass grading of the site and the removal of many of the mature trees that are located upon it.
3. The current access situation into and out of the site would appear inappropriate for a facility that generates a high-level of trips.

Without the benefit of a design and plan to offset these considerations and investigate the functionality of such at this location, the Commission remains opposed to allowing a financial institution, with a drive-through facility, at this location. It is also interesting that, with the advent of online banking services, many financial institutions are radically changing their respective uses of sites, often significantly reducing the extent of space necessary for a building and depending more on drive-through facilities, with automated teller machines (ATM) for service at specific locations. Therefore, a concern of the Commission, given the current trends in banking, is the site would become several bays of drive-through lanes. These lanes would be in close proximity of nearby single detached dwellings that are located on the lots to the south (across Pierside Lane), such would not be acceptable either, given automated teller machines (ATM) operate twenty-four (24) hours per day, seven (7) days per week. Given these factors, the Planning and Zoning Commission is not recommending a change to the governing site-specific ordinance for this property.

SUMMARY AND RECOMMENDATION –

The Planning and Zoning Commission has determined the addition of the requested use would be difficult to accommodate on the site and create impacts on surrounding properties that are not suitable. Without the benefit of a design and plan to determine if these concerns and considerations can be addressed, the Commission cannot support this change. Accordingly, the Commission is not recommending the Amended Mixed Use Development District Ordinance be modified at this time for the requested additional use on the site and drive-through facilities in association with it. If any of the City Council Members should have questions or comments, or need additional information on this request, please feel free to contact the Department of Planning at (636) 458-0440. Thank you for your consideration of this information.

Respectfully submitted,
CITY OF WILDWOOD PLANNING AND ZONING COMMISSION

R. Jon Bopp, Chair

ATTEST:

Joe Vujnich, Director
Department of Planning and Parks

Cc: The Honorable Timothy Woerther, Mayor
Ryan S. Thomas, P.E., City Administrator
Rob Golterman, City Attorney
Bruce Tarantoca, Property Owner and Petitioner
Julie Lafata, Tara, L.L.C.
Peter Newton, Hilliker Corporation
Julie Ellison, Subdivision Manager – Harbors at Lake Chesterfield Subdivision

To: Joe Vujnich Wildwood, Mo.
From: Tara L. C.

March 16, 2016

Dear Joe,

We are writing in regard to the former Kindercare property located at 16375 Pierside Lane, Wildwood, Mo. The property has been vacant and for sale for 2 1/2 years now. We have had multiple companies interested in purchasing the property but as soon as they find out about the restrictions for the property they are no longer interested. We have considerably lowered the price and to no avail. Our realtor (Hilliker) thinks that it is not the price of the property that is holding up a sale but the zoning.

Originally, Bill # 183 ordinance # 17566 section 1C #3 dated 1995 by Councilman Quinn stated that the property did in fact allow for a financial facility with a drive through. Kindercare was essentially a drive through as the parents drove in one entrance to drop off/pick up their children and out a separate exit. Also, the building directly across Manchester has the same scenario as Kindercare....a corner lot surrounded by apartments and it has a financial company with a drive through built on it. We are asking that you reconsider and lift the restriction for drive throughs on financial institutions.

In Bill #2061 Ordinance # 2061 dated Nov 2014 the planning board itself mentioned multiple times that an occupied building is much preferred than a vacant one, especially in this high visibility area. We couldn't agree more especially since we have had several acts of vandalism at our property.

We respectfully request your reconsideration.

Thank you, Julie Lafata

Bruce A. Tarantola 1-504-919-5637 Tara L.C.
Julie Lafata 1-913-980-9491 Tara L.C.
Peter Newton 314-781-0001 Hilliker

CITY OF WILDWOOD
MAR 22 2016
DEPT OF PLANNING & PARKS

Travis Newberry

From: noreply@cityofwildwood.com
Sent: Thursday, April 14, 2016 2:13 PM
To: Lynne Greene-Beldner; Ryan Thomas; Elizabeth Weiss; Kathy Arnett; Travis Newberry; Steve Vogel
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	*Field not completed.*
Item Description	proposal for 16375 Pierside Lane - financial institution
Position on Request	Do Not Support
General Comments	I do not want a bank with a drive through or any bank at that corner. Let's develop that for something useful to the community, even a food place is better than a bank. We have enough banks and i don't want one at the entrance to my subdivision!
Suggestions	*Field not completed.*
	(Section Break)
Name	karen walker
Address	266 beacon point lane
City	wildwood
State	mo
Zip	63040
Phone Number	636-236-1039
Email	kagow@yahoo.com

WILDWOOD

16860 Main Street
Wildwood, MO 63040

CITY OF WILDWOOD
NOTICE OF
PUBLIC HEARING
before the City Council
Monday, April 25, 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:
16375 Pierside Lane
Wildwood, MO 63040

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

The City Council of the City of Wildwood will conduct a public hearing on **Monday, April 25, 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 City Council, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040 or via the City's website at **www.cityofwildwood.com/comment.** The following request will be considered at this time:

A response to a correspondence from Tara L.C., c/o Julie Lafata, 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; south side of State Route 100, east of Manchester Road (Locator Number: 23U140703/Street Address: 16375 Pierside Lane); which seeks modifications to the site-specific governing ordinance (Ordinance #2061) of this property relative to permitted uses, specifically the addition of a drive-through facility in association with a financial institution. **(Ward Four)**

***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 City Council, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040.
3) Viewing the City Council's agenda, which is available on the City's website at: **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.

BILL #2061 **ORDINANCE #2061**

AN ORDINANCE BY THE CITY COUNCIL OF THE CITY OF WILDWOOD, MISSOURI AUTHORIZING CHANGES TO AMENDED MIXED-USE DEVELOPMENT DISTRICT ORDINANCE #223, WHICH GOVERNS THE RECREATIONAL AREA OF THE LARGER HARBORS AT LAKE CHESTERFIELD SUBDIVISION, SUCH BEING LOCATED ON THE NORTHEAST CORNER OF PIERSIDE LANE AND MANCHESTER ROAD, THEREBY ALLOWING THE FORMER CHILD CARE CENTER TO BE USED FOR A RANGE OF PROFESSIONAL OFFICES, INCLUDING MEDICAL AND DENTAL TYPES, WITH SUCH ACTION BEING CONSISTENT WITH THE REPORT AND RECOMMENDATION OF THE PLANNING AND ZONING COMMISSION DATED OCTOBER 6, 2014. (Ward Four)

WHEREAS, St Louis County, Missouri approved one (1) of the first mixed-use development districts in its boundaries at this location, now in the City of Wildwood, which was intended to provide a range of uses and a mix of activities for future residents and businesses that would locate there; and

WHEREAS, this concept of life-cycle housing, with services, open space, and commercial activities, all located within a short walking distance of each other, was a very different approach to traditional development policies and practices in St. Louis County; and

WHEREAS, although a zoning district option that was available for many years, only a few applications were ever submitted and acted upon by the St. Louis County Council, with the most successful of them being the Harbors at Lake Chesterfield Subdivision; and

WHEREAS, when approved, this mixed-use development district authorized over seven hundred (700) housing units, in a mix of types and densities, a large commercial area (now anchored by Schnucks Wildwood Crossing), with several outlots, a child care center, open spaces for recreation, and, eventually, a private school; and

WHEREAS, starting in 1987, the development of the overall project took over twelve (12) years to complete and witness the intended outcome occur, with the mix of uses, types, and densities; and

WHEREAS, one (1) of the allowable uses in the termed "recreational area" of this large project was a child care center to be located at the new Pierside Lane and Manchester Road intersection, which would serve the families that purchased housing in the overall subdivision (with this facility opening in 1997); and

WHEREAS, this child care center was in constant operation until 2014, when KinderCare did not extend its lease, noting that changes in how children are cared for, before, during, and after school, had changed significantly over the last several years, leading to drops in enrollments, and a lesser need for this facility; and

WHEREAS, with this long-time tenant leaving, the owner of the facility attempted to lease it to other child care providers, but none had interest, which led this individual to seek an amendment to the governing ordinance for the overall project to provide a greater range of activities there, so as to find a tenant for the highly-visible space at this heavily-travelled intersection; and

WHEREAS, this request led to a public hearing on this matter before the Planning and Zoning Commission on October 6, 2014, where it heard the Department of Planning's report on this matter, which did recommend to allow for a few additional uses at this location, those types being limited to professional, medical, and dental offices only, thereby limiting traffic, noise, and impacts from its reuse, but still allowing it to be utilized for a child care center; and

WHEREAS, the Planning and Zoning Commission concurred with this recommendation by noting the office uses might be less intrusive in this area than the previous child care center, given its characteristics, and an occupied building was much preferred at this highly-visible location than a vacant structure; and

WHEREAS, with the completion of its review and consideration, the Planning and Zoning Commission forwarded its recommendation to the City Council for its planned public hearing, which was held on October 27, 2014, where it accepted input and comments on this proposed change; and

WHEREAS, after the public hearing concluded, the City Council discussed the matter and agreed the reuse of this building for certain types of offices was appropriate and could be accommodated on the site, which lead it to authorize the preparation of legislation for the recommended changes to the governing ordinance, as set forth by the Planning and Zoning Commission in its action on the same; and

WHEREAS, the City Council, under its authority granted by Chapter 89 of Missouri Revised Statutes, the City Charter, and local codes, hereby declares that such action on its part is appropriate, reasonable, and in the best interests of the public's health, safety, and welfare; and

WHEREAS, protecting the business base of the City of Wildwood and offering options to the owners of these properties is necessary to promote a favorable and energetic commercial environment for Wildwood.

THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF WILDWOOD, MISSOURI, AS FOLLOWS:

Section One. The City of Wildwood Zoning Ordinances and Official Zoning District Maps, which are made a part hereof, are hereby amended to reflect the changes in governing ordinance for this site, Amended Mixed-Use Development District Ordinance #223, as set forth herein, for the following described land, being identified in the legal description that is on file with the City Clerk and the Department of Planning for this parcel of ground identified by St. Louis County Locator Number 23U140703.

Section Two. The zoning authority and approval embodied in this ordinance is granted subject to compliance with the Subdivision and Development Regulations, Zoning Code, and all other City of Wildwood ordinances, rules, and regulations and the conditions of this ordinance, except as, may be modified herein, upon the requirement the development and approved Site Development Plan are carried out in accordance with the recommendation forwarded to the City Council by the Planning and Zoning Commission within the communication dated October 6, 2014, which is incorporated herein by reference as if fully set forth in this ordinance. The zoning authority granted herein is further subject to the following conditions:

1. PERMITTED USES

b. Recreation facilities and a nursery school and child care center. **The existing child care center can be converted to office uses, both professional and medical and dental types.**

2. FLOOR AREA, HEIGHT AND BUILDING REQUIREMENTS

d. The nursery school and child care center within the recreation area shall not exceed **11,400** ~~5,000~~ square feet in gross floor area. **If office uses are authorized within the existing child care center building, the following alterations shall be provided: (i.) the guard rail along the north edge of the parking lot shall be painted black or brown; (ii.) the handicap parking space shall meet all current Americans with Disability Act (ADA) requirements; and (iii.) the playground areas shall be converted to passive open space and landscaped, in accordance with the City of Wildwood's Sustainable Plantings Guide and associated Tree Manual.**

Editor's Note: Changes shown by bolded type.

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

This Bill was passed and approved this 10 day of November, 2014, by the Council of the City of Wildwood, Missouri after having been read by title, or in full, two (2) times prior to its passage.

Presiding Officer

Timothy Woerther, Mayor

ATTEST:

Lynne Greene Beldner, City Clerk

Lynne Greene Beldner, City Clerk

BILL NO. 223 ORDINANCE NO. 223

AN ORDINANCE MODIFYING AMENDED MIXED USE DEVELOPMENT DISTRICT ORDINANCE NO. 17566 BY REPEALING CERTAIN PORTIONS OF SECTION 2 THEREOF AND ENACTING IN LIEU OF THESE PORTIONS A NEW SECTION 2 WITH THESE MODIFICATIONS BEING INCORPORATED INTO ITS TEXT AS DESCRIBED BY THE PLANNING AND ZONING COMMISSION'S LETTER OF RECOMMENDATION DATED APRIL 8, 1996.

WHEREAS, on September 1, 1995, the City of Wildwood, Missouri adopted legislation accepting the current zoning district designations of properties previously adopted by St. Louis County prior to the incorporation, including all planned districts, conditional use permits, and other special procedure permits; and

WHEREAS, these zoning district designations for planned districts, conditional use permits, and other special procedure permits are governed by a site specific ordinances consisting of a list of design criteria and conditions for the development and use of said properties, which are fashioned from a Site Development Plan; and

WHEREAS, the owner of a property governed by one of these planned districts, conditional use permits, or special procedure permits is often required to amend the site specific ordinance or permit to accommodate changes in the design or operating parameters of the use on said parcel of ground requiring action by the City's Planning and Zoning Commission and Council; and

WHEREAS, the owner of one such property has petitioned the City for modifications to an existing Amended MXD Mixed Use Development District which governs the use of a 21.4 acre tract of land for a major commercial center to the property and the City's Planning and Zoning Commission has acted upon the request at its Executive Meeting of April 1, 1996 as described in the attached Letter of Recommendation; and

NOW, THEREFORE, IT BE ORDAINED BY THE CITY COUNCIL OF THE CITY OF WILDWOOD, MISSOURI , AS FOLLOWS:

Section One. The Planning and Zoning Commission of the City of Wildwood, Missouri had reviewed petitioner's request and recommended approval of the addition of two (2) monument signs at the center's main entrance with the application certain conditions to ensure the proposed expansion is compatible with existing site conditions.

Section Two. The recommendation from the Planning and Zoning Commission noted the addition of the two (2) signs was relatively minor in nature and included the commitment and agreement of the petitioner to convert all permissible signage to monument style in design while allowing for certain improvements to made to the internal circulation pattern, the location of other improvements, and the existing landscaping and buffering scheme for compatibility with the adjoining residential areas.

Section Three. The City Council of Wildwood, Missouri has held a public hearing on the changes requested by the petitioner for the purposes of seeking input from residents upon the proposal, and the accompanying Letter of Recommendation from the Planning and Zoning Commission which reflects their review, consideration, and action upon it, and the results of this hearing supported their action.

Section Four. The City Council of the City of Wildwood, Missouri hereby adopts changes to Amended MXD Mixed Use Development Ordinance No. 17566 which are in keeping with the recommendation of the Planning and Zoning Commission upon this request. Said changes are described as follows:

Road Improvements and Sidewalks

4(p) Modify existing condition to include bolded portion: The petitioner or developer of the proposed commercial area in this mixed use development which is located south of Manchester Road, west of Pierside Lane, shall contribute to the required traffic generation assessment fund an amount calculated by multiplying the contribution rate contained in the above-referenced schedule (at the 1996 figure) by the number of parking spaces which are to be provided, not required, as shown on the latest approved copy of the Site Development Plan.

Signs

4(s): Modify existing language to include bolded portion of condition: All signage for this development shall be erected in accord with Section 1003.168 Sign Regulations of the C-2 Shopping District, except all freestanding signs shall be monument in design.

4(s)2: Modify existing language to include bolded portion of condition: No more than one (1) freestanding monument sign shall be permitted for each commercial outlot south of Manchester Road.

4(s)3: Add new condition: A set of freestanding monument signs shall be authorized at the main signalized entry into this commercial center. These signs shall not exceed seventy five (75) square feet in size, nor eight (8) feet in height.

Miscellaneous Design Criteria

4(z): Modify existing language to include bolded portion of condition: Building elevations shall be as approved by the Planning and Zoning Commission for the multiple family area located along the north side of Pierside Lane (P.C. 105-93) and the commercial area, including outlots, located south of Manchester Road, west of Pierside Lane.

4(aa): Add new condition: All rooftop mechanical rooftop equipment shall be permanently and appropriately screened to complement the proposed building elevations and shall be approved as part of the required building elevations referenced in Condition 4(z.).

4(bb): Add new condition: The petitioner or developer of this commercial center shall provide the required traffic signalization and interconnect mechanisms from State Route 100, along Manchester Road, west to the main entry of the center. This signalization shall be approved by City of Wildwood and the Missouri Highway and Transportation Department.

Section Five. Except as modified herein, all other conditions shall remain in full force and effect.

Section Six. This ordinance shall be in full force and effect from and after its passage and approval.

This Bill was passed and approved this 22 day of April, 1996, by the Council of the City of Wildwood after having been read by the title or in full two times prior to passage.

PRESIDING OFFICER

ATTEST:

Lynne Greene
City Clerk

MAYOR

ATTEST:

Lynne Greene
City Clerk

BILL NO. 183, 1995

ORDINANCE NO. 17,566, 1995

Introduced by Councilman Quinn

AN ORDINANCE

AMENDING ORDINANCE NO. 17,108 AS AMENDED BY REPEALING SECTION 2 THEREOF AND ENACTING IN LIEU THEREOF A NEW SECTION 2 (P.C.219-85 Alfred L. Hicks and J.L. Mason of Missouri, Inc.; P.C.69-93 The Jones Company Custom Homes, Inc.; P.C.105-93 J.H.B. Properties).

BE IT ORDAINED BY THE COUNTY COUNCIL OF ST. LOUIS COUNTY, MISSOURI, AS FOLLOWS:

SECTION 1. Section 2 of Ordinance No. 17,108 as amended is repealed and in lieu thereof the following is adopted:

"SECTION 2. The authority and approval embodied in this ordinance is granted subject to all ordinances, rules and regulations and on condition that said development and plan be carried out in accordance with the preliminary plans filed with the St. Louis County Planning Commission and forwarded by said Planning Commission to the County Council, with a communication dated February 8, 1994, which preliminary plans are hereby approved, adopted and incorporated herein by reference as if fully set out in this ordinance and made a part of this ordinance and subject to the following conditions:

1. PERMITTED USES

This Mixed Use Development shall authorize:

a. Single family and multi-family residential uses.

b. Recreation facilities <u>and a nursery school and child care center</u> [including a multi-use retail building].

(1) Separate recreational facilities shall be provided for the multiple family area north of Pierside Lane hereby authorized by P.C. 105-93.

c. Commercial shopping area.

(1) <u>Two (2)</u> [Only one (1)] freestanding restaurants <u>only one of</u> which may be a fast food restaurant with drive through facilities, and one (1) service station with car wash and convenience store shall be permitted.

(2) Financial institutions with drive-through facilities and all permitted uses in the C-2 Shopping District, excluding advertising signs (except the one (1) authorized as noted in Condition 4.u.), shall be permitted.

(3) Any commercial outbuilding(s) located within two hundred (200) feet of a single family residential area shall be limited to financial institutions with drive-through facilities and/or office uses only.

NOTE: Matter enclosed in bold-faced brackets [thus] is not enacted and is intended to be omitted from the ordinance.

2. FLOOR AREA, HEIGHT, AND BUILDING REQUIREMENTS

Residential Development

a. A maximum of 295 single family homes shall be permitted.
b. A maximum of 401 multiple family units shall be permitted.
c. Multiple family units shall not exceed three (3) stories in height.

Recreation Area

d. The nursery school and day care center within the recreation area shall not exceed 5000 square feet in gross floor area. [The multi-use retail building within the recreation area shall not exceed 15,000 square feet in gross floor area.]

Commercial Shopping Area

e. Retail shopping facilities, excluding child care centers and outlots fronting Manchester Road [the multi-use retail building in the recreation area,] shall not exceed 110,000 square feet in area.

f. No more than three (3) commercial outlots south of Old Manchester Road shall be permitted. However, a maximum of six (6) outlots in the overall commercial shopping area shall be permitted. No commercial outbuildings located within two hundred (200) feet of the single family residential area shall exceed one (1) story in height.

g. The commercial shopping area shall include no more than seven (7) freestanding buildings, excluding the nursery school and child care center [multi-use retail building] permitted in the recreation area.

3. SITE PLAN SUBMITTAL REQUIREMENTS

Within eighteen (18) months of approval of the "MXD" Mixed Use Development District by the County Council and prior to the issuance of any building permit, the developer shall submit to the Planning Commission for their review and approval a Site Development Concept Plan. Within eighteen (18) months of the Site Development Concept Plan approval date, the developer shall submit the first Site Development Section Plan to the Department of Planning for review and approval. Where due cause is shown by the developer, time intervals may be extended by the Planning Commission.

Concept Plan

a. The Site Development Concept Plan shall include the following:

(1) Outboundary plat and legal description of the property.
(2) Location of all roadways adjacent to the property and general location, size, and pavement widths of all interior roadways.
(3) General design of the development, including approximate location and size of all buildings, recreation facilities, stormwater facilities, and parking areas.
(4) Existing and proposed contour information.
(5) Parking calculations.
(6) Zoning district lines.

Section Plans

b. Site Development Section Plans shall include the following:

(1) A general development plan, including the basic location, size, and arrangement of all buildings and recreation facilities, and roadways on and adjacent to the property.
(2) The general dimensions of all buildings and the number of individual living units and parking spaces (if any) in each building.
(3) Minimum distances between buildings and setback lines from all adjoining property limits of this development.
(4) The location and size of all parking areas and right-of-way dedications, and the pavement widths of all roadway improvements and internal drives.
(5) The location and size of all freestanding signs, lighting, fences, sidewalks, and other above ground structures except retaining walls less than three (3) feet in height per section.
(6) Existing and proposed contours at vertical intervals of not more than two (2) feet.
(7) A preliminary plan for stormwater and sanitary sewer facilities.
(8) Parking calculations.
(9) A preliminary landscape plan, including, but not limited to, the location, minimum size, and general type of all plant and other materials to be retained and added.
(10) A key map identifying the area of the Section Plan relative to this mixed use development.
(11) Size and location of any wetland areas to be retained as required by the Army Corps of Engineers.

Site Development Plan Submittal Option

c. In lieu of submitting a Site Development Concept Plan and Site Development Section Plans, the petitioner may instead submit a Site Development Plan for the entire development within eighteen (18) months of the date of approval of the P.E.U. by the County Council. Said Plan shall be submitted in accord with the combined requirements for Site Development Section and Concept Plans. The submission of Amended Site Development Plans by section of this project shall be permitted if this option is utilized.

4. SITE PLAN DESIGN CRITERIA

The above site plans shall adhere to the following specific design criteria:

Lot Sizes

a. Single family lots located northwest of Waterside Drive shall be a minimum of 9,000 square feet in area. The twenty-nine (29) clustered lots southeast of Waterside Drive and west of Waterfront Way shall be a minimum 3,500 square feet in area.

b. The single family lots located south of the lake and east of Waterfront Way shall have minimum lot sizes of 5,000 square feet and minimum lot widths of fifty (50) feet.

Building Setbacks

c. Residential buildings shall meet the following setbacks:

(1) Single family homes shall not be within twenty (20) feet of any roadway right-of-way line, except for the twenty-nine (29) clustered lots southeast of Waterside Drive and west of Waterfront Way. The homes shall not be within fifteen (15) feet of any roadway right-of-way line. The four (4) single family homes located on Charter Way Drive shall have a minimum of a thirty (30) foot rear yard setback.

(2) Multiple family units, including lakefront villas and garages, shall not be within fifteen (15) feet of any roadway right-of-way line.

(3) Multiple family units located north of Pierside Lane shall be set back a minimum of twenty (20) feet from the west property limits and forty (40) feet all other property limits.

d. Recreation area buildings, including the <u>nursery school and child care center</u> [multi-use retail building], shall not be within the following setbacks:

(1) Thirty (30) feet of any roadway right-of-way line.

e. Buildings in the commercial shopping area shall not be within the following setbacks:

(1) Fifty (50) feet of the rear property lines of abutting single family lots, except no freestanding commercial buildings and their associated drive-through facilities on outlots shall be located within one hundred (100) feet of any single residential area.

(2) Fifty (50) feet of the west property line of this development.

(3) Fifty (50) feet of any roadway right-of-way line.

Parking, Loading, and Internal Drives

f. Minimum Requirements

(1) Parking and loading requirements shall be as established in Section 1003.165 Off-Street Parking and Loading Requirements except as follows:

(a) Two (2) garage parking spaces shall be provided for each lakefront villa unit.

(b) A fifteen (15) percent parking reduction shall be permitted for the main retail building, excluding all outlots.

(c) No parking spaces shall be permitted behind the retail shopping center, excluding outlots.

(d) Two (2) parking spaces shall be provided for each multiple family unit north of Pierside Lane.

Setbacks

g. No parking or loading space in the multiple family area north of Pierside Lane shall be within the following setbacks:

(1) Forty (40) feet of the roadway right-of-way line of Pierside Lane.
(2) Fifty (50) feet of the east property lines of this development.
(3) Twenty (20) feet of the roadway right-of-way line of Manchester Road (State Highway 100).

h. No parking or loading space in the commercial shopping area shall be within the following setbacks:

(1) Fifty (50) feet of the rear property lines of abutting single family lots.
(2) Ten (10) feet of the west property line of this development.
(3) Ten (10) feet of any roadway right-of-way line.

i. All other setbacks shall be as approved by the Planning Commission on the Site Development Plan.

Access

j. Access to the development shall be limited to the following;

(1) Main Roadways

(a) Three (3) bi-directional drives to the commercial shopping area from Old Manchester Road.
(b) One (1) divided boulevard extending eastward from the Old Manchester Road/Highway 100 intersection.
(c) One (1) main roadway extending southward to the south property line from the divided boulevard.

(2) Internal Drives and Roadways

(a) One (1) bidirectional drive to the commercial area from the divided boulevard.

(b) One (1) street approach located opposite Waterside Drive and two (2) street approaches which will be restricted to right in/right out movements due tot he existing median. All access shall be located and constructed as directed by the Department of Highways and Traffic.

(c) Three (3) bi-directional drives to the single family lots from the main roadway, except for the thirty-one (31) clustered lots. These lots may access Waterside Drive as approved by the Department of Highways and Traffic.

(d) Each lakefront villa cluster, except those on the east side of the lake, shall have direct access to the main roadway.

(e) One (1) roadway extending southeast from the main roadway between the large and small lakes to the multiple family units and lakefront villas on the east side of the lakes.

(f) No direct access shall be permitted between the commercial shopping area and residential development area.

(g) No internal residential right-of-way shall be located within forty (40) feet of the eastern limits of this MXD District.

Road Improvements and Sidewalks

k. Conform to the requirements of the Missouri Highway and Transportation Department regarding Route 100 in this area.

l. Submit concept plans showing:

(1) The interim and ultimate intersection of Route 100 and Manchester Road.
(2) The entrances to the subject site as they relate to the interim and ultimate roadway system in this area.

The required concept plans shall be approved by the Missouri Highway and Transportation Department, the Department of Highways and Traffic, and the Planning Department prior to the resubmittal of the site plan by the petitioner.

m. Extend a roadway from the interchange access southeastwardly to the east property line of the site as directed by the Department of Highways and Traffic.

n. Roadway improvements to be in accordance with requirements of the St. Louis County Department of Highways and Traffic and the Missouri Highway and Transportation Department.

o. Where staged construction of the development is required, the limits of roadway construction and suitability of access required for each stage of development shall be determined by the St. Louis County Department of Highways and Traffic.

p. Contribute a traffic generation assessment established for this development based upon the following rate schedule:

Type of Development	Required Contribution
Single Family Residential	$ 450/Parking Space
Multiple Family Residential	$ 180/Parking Space
General Office	$ 275/Parking Space
[Recreational	$ 275/Parking Space]
General Retail	$ 825/Parking Space
[Supermarket	$ 825/Parking Space]
Nursery School/Child Care Center	$ 825/Parking Space
High turn-over sit-down restaurant	$ 825/Parking Space
Bank	$1,650/Parking Space
Loading Space	$1,350/Loading Space

(Parking space as required by Section 1003.165 of the St. Louis County Zoning Ordinance.)

q. Additional right-of-way dedication requirements in excess of twenty (20) feet along State and County roads shall be credited toward the petitioner's traffic generation assessment contribution. The cost of the improvements required in Conditions 4.k. and 5. may be deducted from the petitioner's traffic generation assessment contribution. Any remaining portion of the traffic generation assessment contribution shall be

deposited in the Pond-Grover (Route 100/109) Trust Fund. The petitioner's obligation for road improvements shall not exceed the amount of the required contribution.

The amount of this required contribution, if not submitted by January 1, 1986, shall be increased on that date and on the first day of January in each succeeding year thereafter in accord with the construction cost index as determined by the St. Louis County Department of Highways and Traffic.

Landscaping

r. The developer shall submit a landscape plan, either as part of the Site Development Plan or on a separate drawing to be reviewed as part of the Site Development Plan, to comply with the following:

(1) Adequate landscaping shall be provided on the site as approved by the Department of Planning on the Site Development Plan.

(a) A landscaped and bermed buffer shall be provided between the west property line and single family lots.
(b) A fifty (50) foot landscaped buffer shall be provided between the commercial shopping area and single family lots.

(c) A forty (40) foot landscaped buffer shall be provided along the east limits of this MXD District, south of the lake. This buffer shall be landscaped as approved by the Planning Commission on the Site Development Plan and said landscaping shall be consistent with approved plans for wetland mitigation by the Army Corps of Engineers.

(d) A forty (40) foot landscaped buffer shall be provided along the north side of Pierside Lane in the multiple family area. Said plantings within this buffer shall replicate those materials used within the existing strip along this roadway.

(2) All new landscaping material shall meet the following criteria:

(a) Deciduous trees - two (2) inch minimum caliper
(b) Evergreen trees - four (4) feet minimum height
(c) Shrubs - eighteen (18) inch minimum diameter
(d) Flowering trees - one and one-half (1-1/2 inch minimum caliper.

(3) Identification of all existing landscaping to be retained.

Signs

s. All signage for this development shall be erected in accord with Section 1003.168B Sign Regulations for the C-2 Shopping District.

(1) Signs in islands within roadways shall be set back a minimum of forty (40) feet from the tip of the island.

(2) No more than one (1) freestanding business sign shall be permitted for each commercial outlot south of Old Manchester Road.

(3) No freestanding business sign, except those for the commercial outlots, shall be permitted south of Old Manchester Road.

t. Sign location shall be as approved by the Planning Commission on the site development plans.

u. Only one (1) advertising sign displaying businesses within this Amended MXD District shall be permitted. Such advertising sign shall be located on the westernmost commercial outlot on the north side of Old Manchester Road. The size of this advertising sign shall be limited to either one hundred and fifty (150) square feet, if no other freestanding business sign is located on this outlot, or one hundred (100) square feet, if a freestanding business sign is maintained here.

Lighting

v. Light standards shall not exceed sixteen (16) feet in height. All light standards installed within the commercial shopping area south of Old Manchester Road shall be a shoe-box type design.

w. The location of all light standards shall be as approved by the Planning Commission on the site development plans.

Miscellaneous Design Criteria

x. All trash areas shall be enclosed with a six (6) foot high sight-proof fence.

y. Parking, circulation and other applicable site design features shall comply with Chapter 1101, Section 512.4 Physically Handicapped and Aged" of S.L.C.R.O. 1974, as amended.

z. Building elevations shall be as approved by the Planning Commission for the multiple family area located along the north side of Pierside Lane (P.C. 105-93).

5. PHASING

a. Prior to occupancy of the subject development, the petitioner shall complete the following road improvements or deposit an irrevocable letter of credit in the amount of said road improvements:

(1) Relocate and widen Manchester Road south of Route 100.

(a) Widening shall be to five (5) lanes to include two (2) southbound through lanes, one (1) northbound left turn lane, one (1) northbound through lane and one (1) northbound right turn lane.

(2) Add an acceleration lane on Route 100 for northbound traffic on Manchester Road.

(a) The lane width would be a minimum of 300 feet in length with a 40:1 taper.

(3) Provide channelization islands on the southwest and southeast corners of Route 100 and Manchester Road-Westglen Farms Drive.

b. At forty (40) percent completion, as determined by the Department of Highways and Traffic, the petitioner shall complete the following road improvements:

(1) Traffic generation assessment funds from the Mason Development escrowed in the Pond-Grover Trust Fund shall be utilized to construct a second westbound left turn lane on Route 100 at Manchester Road.

6. VERIFICATIONS PRIOR TO PLAN APPROVAL

Prior to the approval of site plans the petitioner shall:

Stormwater

a. Submit to the Planning Commission an engineering plan approved by the Department of Highways and Traffic and the Metropolitan St. Louis Sewer District showing that adequate handling of the stormwater drainage of the site is provided.

(1) The developer is required to provide adequate stormwater systems in accordance with St. Louis County and Metropolitan St. Louis Sewer District standards.
(2) All stormwater shall be discharged at an adequate natural discharge point.
(3) Detention of differential runoff of stormwater is at the discretion of the Metropolitan St. Louis Sewer District. If required by the Metropolitan St. Louis Sewer District, it shall be provided in permanent detention facilities, such as: dry reservoirs, ponds or another acceptable alternative. The detention facilities shall be completed and in operation prior to issuance of building permits exceeding sixty percent (60%) of the approved dwelling units.

Road Improvements and Curb Cuts

b. Provide verification of approval by the St. Louis County Department of Highways and Traffic and the Missouri Highway and Transportation Department of the location of proposed curb cuts, areas of new dedication, and roadway improvements.

Flood Plain and Wetland Studies

c. A portion of this tract is located in Zone "A" of F.E.M.A.'s Flood Insurance Rate Map. An approved flood plain study will be required prior to approval of the site development plans.

d. Submit verification from the Army Corps of Engineers regarding all wetland criteria determination and/or mitigation efforts required of this developer.

7. RECORDING

The approved Site Development Plan shall be recorded with the St. Louis County Recorder of Deeds within sixty (60) days of Planning Commission approval.

8. VERIFICATION PRIOR TO BUILDING PERMITS

Subsequent to approval of site plans and prior to issuance of any building permit, except for the initial display plats, the following requirements shall be met:

Landscape Bond or Escrow

a. The developer shall furnish a two (2) year bond or escrow sufficient in amount to guarantee the installation of all landscaping as required on the Site Development Plan. Said bond or escrow shall be based on costs determined by a plant nursery and approved by the Department of Planning.

Land Subdivision

b. Comply with all applicable Subdivision Ordinance requirements affecting the development of land except as otherwise specified by this ordinance.

Sanitary Sewers

c. Provide verification to the St. Louis County Department of Public Works that adequate sanitary services are provided.

Verifications to the Department of Public Works

d. Prior to issuance of foundation or building permits, all approvals from the Department of Planning, the Department of Highways and Traffic, Metropolitan St. Louis Sewer District and the Missouri Highway and Transportation Department must be received by the Department of Public Works.

e. Prior to issuance of foundation or building permits for any lot which adjoins the common ground area and/or detention basin areas, written certification from a professional engineer which verifies these areas are graded in accordance with the approved plans, must be received by the Department of Public Works.

Traffic Generation Assessment

f. Traffic generation assessment contribution and/or credits for roadway improvements shall be deposited with St. Louis County prior to the issuance of any building permit. If development phasing is anticipated, the developer shall provide the traffic generation assessment contribution and/or credits for roadway improvements prior to issuance of any building permits for that phase or plat of development.

9. GENERAL DEVELOPMENT CONDITIONS

a. A grading permit is required prior to any grading on the site. No change in watershed shall be permitted.

b. Interim stormwater drainage control in the form of siltation control measures are required with enhanced protection in areas of heavy runoff flow.

c. Adequate temporary off-street parking for construction employees shall be provided. Parking on non-paved surfaces should 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.

d. If any public roads are proposed within this development, they must be built above the 100-year flood elevation with proper freeboard, or protected from flood damage by an approved levee. Any roads and/or drives proposed below this elevation, not protected by an approved levee, are to be private and remain private forever.

e. Additional lanes and/or widening, pavement thickness, drainage facilities, granular base, traffic control devices and other improvements may be required to accommodate heavy traffic volumes, unsuitable soil conditions, steep grades, or other conditions not apparent at this time.

f. If roadways in this petition are to be private roadways, these roadways shall remain private forever. Maintenance of private roadways shall be the responsibility of the property owner(s) or trustees forever, and shall be provided for in trust indentures recorded simultaneously with record plots.

g. 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.

h. The Zoning Enforcement Officer of St. Louis County, Missouri shall enforce the conditions of this ordinance in accord with the site development plans approved by the Planning Commission."

SECTION 2. In all other respects Ordinance No. 17,108 as amended shall remain in full force and effect.

ADOPTED: May 18, 1995

GEORGE M. CORCORAN
CHAIRMAN, COUNTY COUNCIL

APPROVED: May 18, 1995

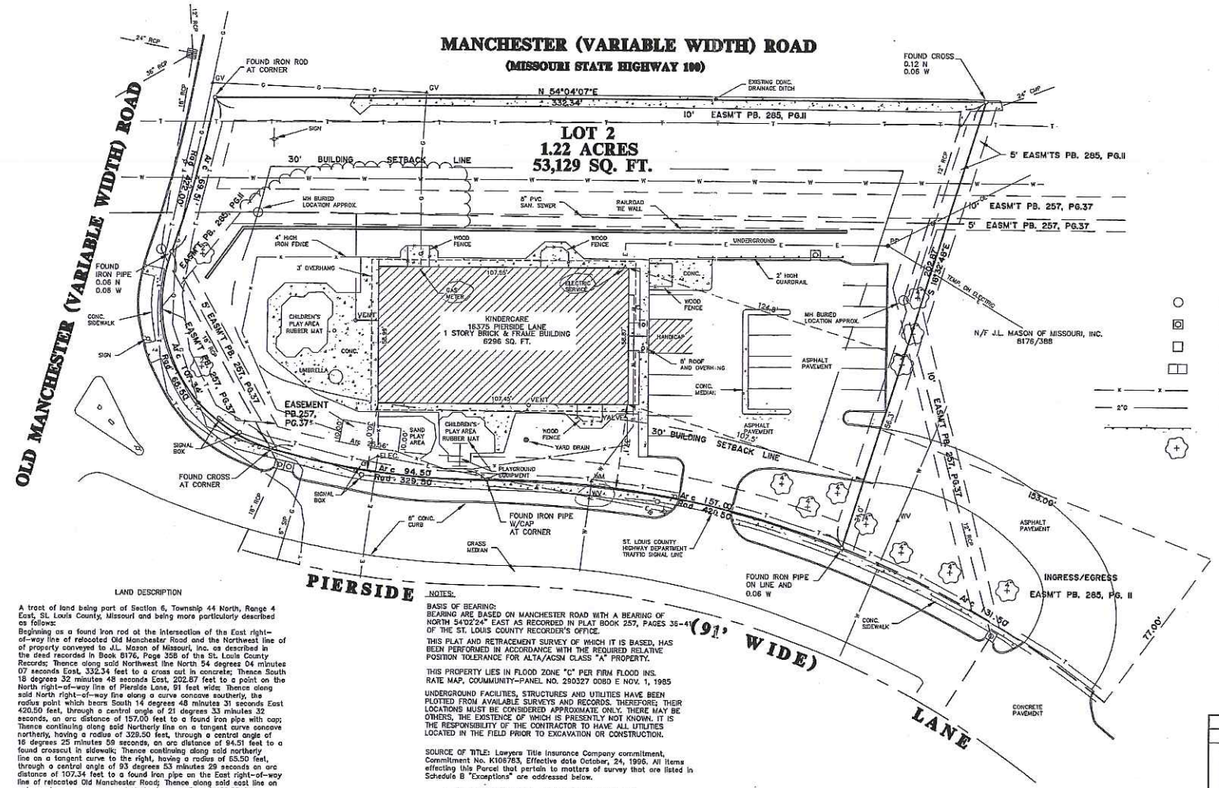
BUZZ WESTFALL
COUNTY EXECUTIVE

ATTEST: JEANETTE O. HOOK
DEPUTY ADMINISTRATIVE DIRECTOR

CITY OF WILDWOOD
SEP 26 2014
DEPT OF PLANNING & PARKS

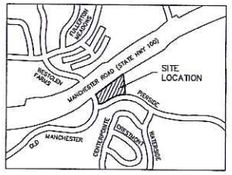
KINDER-CARE LEARNING CENTER
ALTA/ACSM SURVEY

A TRACT OF LAND BEING LOT 2 OF THE HARBORS AT LAKE CHESTERFIELD OFFICE CENTER BEING IN SECTION 6, TOWNSHIP 44 NORTH, RANGE 4 EAST, ST. LOUIS COUNTY, MISSOURI



LEGEND

EXISTING MANHOLE	UTILITY METER OR VALVE
EXISTING INLET MANHOLE	POWER POLE
EXISTING INLET	POWER POLE & GUY
EXISTING DOUBLE INLET	STREET SIGN
FENCE	FIRE HYDRANT
UNDERGROUND UTILITIES	LIGHT STANDARD
GUARD RAIL	MAIL BOX
TREE	HOUSE VENT



LOCATION MAP
NTS

LAND DESCRIPTION

A tract of land being part of Section 6, Township 44 North, Range 4 East, St. Louis County, Missouri and being more particularly described as follows:

Beginning at a found iron rod at the intersection of the East right-of-way line of relocated Old Manchester Road and the Northwest line of of property conveyed to J.L. Mason of Missouri, Inc. as described in the deed recorded in Book 8176, Page 388 of the St. Louis County Records; Thence along said Northwest line North 54 degrees 04 minutes 07 seconds East, 332.34 feet to a cross cut in concrete; Thence South 18 degrees 32 minutes 48 seconds East, 202.67 feet to a point on the North right-of-way line of Pierside Lane, 91 feet wide; Thence along said North right-of-way line along a curve concave southerly, the radius point which bears South 14 degrees 48 minutes 31 seconds East 420.50 feet, through a central angle of 21 degrees 33 minutes 32 seconds, an arc distance of 157.00 feet to a found iron pipe with cap; Thence continuing along said Northerly line on a tangent curve concave northerly, having a radius of 329.50 feet, through a central angle of 16 degrees 25 minutes 59 seconds, an arc distance of 94.51 feet to a found crosscut in sidewalk; Thence continuing along said northerly line on a tangent curve to the right, having a radius of 65.50 feet, through a central angle of 93 degrees 53 minutes 29 seconds an arc distance of 107.34 feet to a found iron pipe on the East right-of-way line of relocated Old Manchester Road; Thence along said east line on a tangent curve concave westerly having a radius of 422.00 feet through a central angle of 9 degrees 26 minutes 15 seconds, an arc distance of 69.51 feet to the point of beginning. Containing 1.220 Acres (53,129 square feet.) Being the same tract of land described as Lot 2 of The Harbors at Lake Chesterfield Office Center, according to the plat thereof recorded in Plat Book 285 page 11 of the St. Louis County Records.

NOTES:

BASIS OF BEARING:
BEARING ARE BASED ON MANCHESTER ROAD WITH A BEARING OF NORTH 54°02'24" EAST AS RECORDED IN PLAT BOOK 257, PAGES 36-4 OF THE ST. LOUIS COUNTY RECORDER'S OFFICE.

THIS PLAT AND RETRACEMENT SURVEY OF WHICH IT IS BASED, HAS BEEN PERFORMED IN ACCORDANCE WITH THE REQUIRED RELATIVE POSITION TOLERANCE FOR ALTA/ACSM CLASS "A" PROPERTY.

THIS PROPERTY LIES IN FLOOD ZONE "C" PER FIRM FLOOD INS. RATE MAP, COMMUNITY-PANEL NO. 290327 0080 E NOV. 1, 1985

UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEREFORE; THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL UTILITIES LOCATED IN THE FIELD PRIOR TO EXCAVATION OR CONSTRUCTION.

SOURCE OF TITLE: Lawyers Title Insurance Company commitment, Commitment No. K105763, Effective date October, 24, 1996. All items effecting this Parcel that pertain to matters of survey that are listed in Schedule B "Exceptions" are addressed below.

1. Item 8, Building lines, easements, covenants and restrictions according to the Subdivision Plat recorded in Plat Book 285 on Page 11. As shown on the Plat of Survey.

2. Item 9, Easement granted to Postal Telegraph Company of Missouri by instrument recorded in book 1391 page 144 and book (insufficient deed information to locate)

3. Item 10, Easement granted to Union Electric Company of Missouri by instrument recorded in book 1958 page 519 and book 2065 page 346. These easements have been released October 29, 1987 by instrument recorded in book 8223 page 1572 and book 8223 page 1671.

4. Item 11, Subject to right of direct access recited in deed recorded in Deed Book 4633 Page 346 of the St. Louis County Records

SURVEY CERTIFICATION

THIS IS TO CERTIFY TO FOUNDERS BANK, TARA L.C. BRUCE TARANTOLA, MANAGER 1st. AMERICAN TITLE INSURANCE COMPANY, THAT THIS MAP OR PLAT OF SURVEY IS BASED ON A FIELD SURVEY OF THE PROPERTY DEPICTED HEREON MADE ON NOVEMBER 11, 1996 BY ME OR DIRECTLY UNDER MY SUPERVISION IN ACCORDANCE WITH THE CURRENT "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS", JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND ACSM AND IN ACCORDANCE WITH THE CURRENT REQUIREMENTS AND STANDARDS FOR PROPERTY BOUNDARY SURVEYS ADOPTED BY THE MISSOURI BOARD OF ARCHITECTS, PROFESSIONAL ENGINEERS AND LAND SURVEYORS.

MO. REGISTERED LAND SURVEYOR
L.S. NO. 2342 JOHN A. MUEHLING

Surveyor's Seal
STATE OF MISSOURI — JOHN A. MUEHLING — NUMBER LS-2342 — REGISTERED LAND SURVEYOR
Date: 5/11/97

REV.	DATE	DESCRIPTION	BY
1	03-11-97	SURVEY CERTIFICATION (OWNER)	D.E.S.

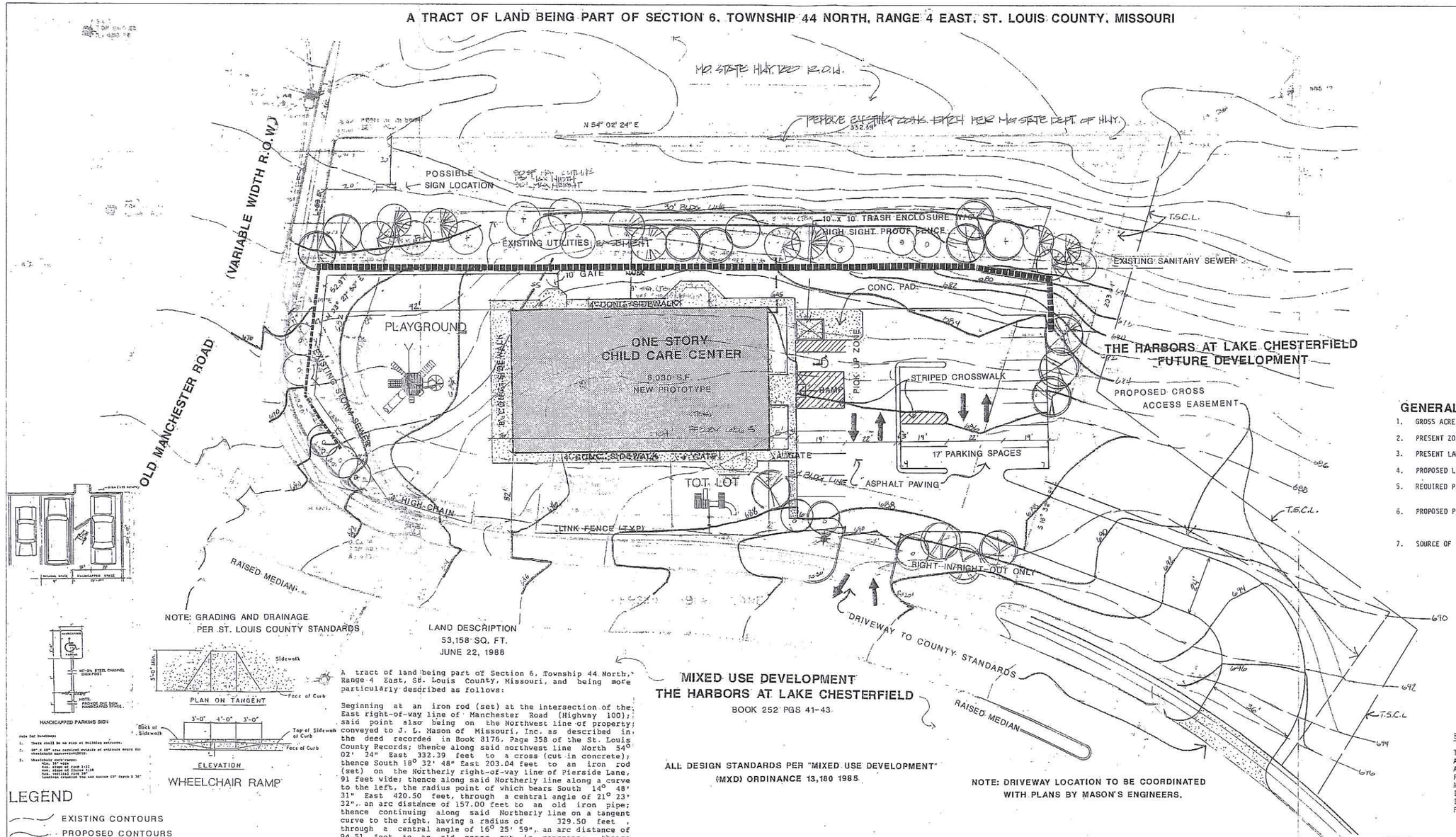
DAVID MASON & ASSOCIATES
Engineering
Architecture
Surveying
500 South Vandeventer
St. Louis, Missouri 63110
(314) 534-1030
100 W. Main Street, Suite 200
Belleville, Illinois 62220
(618) 234-7170

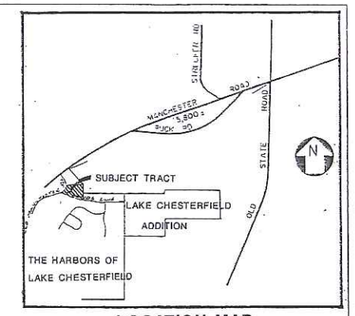
KINDER CARE – MANCHESTER ROAD
ALTA / ACSM SURVEY
ST. LOUIS COUNTY, MISSOURI
JOB NO. – 96130

Drawn	RDL/JAM
Checked	JAM
Date	NOV. 15, 1996
Sheet No	1 of 1

03/11/97 E:\96130\6130.DWG

A TRACT OF LAND BEING PART OF SECTION 6, TOWNSHIP 44 NORTH, RANGE 4 EAST, ST. LOUIS COUNTY, MISSOURI





LOCATION MAP

LOCATOR NO: 23U-12-0040 (PART OF)

APPROVED SITE DEVELOPMENT PLAN
☑ SECTION ☐ LANDSCAPE
ST. LOUIS COUNTY DEPARTMENT OF PLANNING

11-17-88 Donald E. Clark (unt)
DATE DIRECTOR OF PLANNING

P.C. 219-85 Hicks/Mason

MAP NO. 23-U ZONING MXD
AMENDED entrance

GENERAL NOTES:

1.	GROSS ACREAGE OF TRACT:	1.22 ACRES
2.	PRESENT ZONING OF TRACT:	"MXD" MIXED USE DEVELOPMENT
3.	PRESENT LAND USE:	VACANT
4.	PROPOSED LAND USE:	ONE CHILD CARE CENTER (6,032 SQ. FT.)
5.	REQUIRED PARKING:	ONE SPACE/EMPLOYEE PLUS 2 SPACE 2 + 12 EMPLOYEES = 14 SPACES
6.	PROPOSED PARKING:	15 9' X 19' SPACES 1 13" X 20" HANDICAPPED SPACE 16 TOTAL PREPOSED SPACES
7.	SOURCE OF TOPO:	FOX & COLE OUTBOUNDARY AND TOPO (6-29-88)

NOTE: GRADING AND DRAINAGE
PER ST. LOUIS COUNTY STANDARDS

LAND DESCRIPTION
53,158 SQ. FT.
JUNE 22, 1988

A tract of land being part of Section 6, Township 44 North, Range 4 East, St. Louis County, Missouri, and being more particularly described as follows:

Beginning at an iron rod (set) at the intersection of the East right-of-way line of Manchester Road (Highway 100); said point also being on the Northwest line of property conveyed to J. L. Mason of Missouri, Inc. as described in the deed recorded in Book 8176, Page 358 of the St. Louis County Records; thence along said northwest line North 54° 02' 24" East 332.39 feet to a cross (cut in concrete); thence South 18° 32' 48" East 203.04 feet to an iron rod (set) on the Northerly right-of-way line of Pierside Lane, 91 feet wide; thence along said Northerly line along a curve to the left, the radius point of which bears South 14° 48' 31" East 420.50 feet, through a central angle of 21° 23' 32", an arc distance of 157.00 feet to an old iron pipe; thence continuing along said Northerly line on a tangent curve to the right, having a radius of 329.50 feet, through a central angle of 16° 25' 59", an arc distance of 94.51 feet to an old cross cut in concrete; thence continuing along said Northerly line on a tangent curve to the right having a radius of 65.50 feet, through a central angle of 93° 53' 29" an arc distance of 107.34 feet to an old iron pipe said East right-of-way line of relocated old Manchester Road; thence along said east line on a tangent curve to the left having a radius 422.00 feet through a central angle of 9° 26' 15", an arc distance of 69.51 feet to the POINT OF BEGINNING of this description and containing 1.220 acres more or less.

MIXED USE DEVELOPMENT
THE HARBORS AT LAKE CHESTERFIELD
BOOK 252 PGS 41-43

ALL DESIGN STANDARDS PER "MIXED USE DEVELOPMENT" (MXD) ORDINANCE 13,180 1985

NOTE: DRIVEWAY LOCATION TO BE COORDINATED WITH PLANS BY MASON'S ENGINEERS.

LEGEND

- EXISTING CONTOURS
- PROPOSED CONTOURS
- EXISTING SANITARY SEWERS
- PROPOSED SANITARY SEWERS
- PROPOSED STORM SEWERS
- LIGHTING STANDARDS 16' HT. MAX.
- EXISTING TREES TO REMAIN WHERE POSSIBLE
- SUBDIVISION SIGN 50 SQ. FT. MAX. OUTLINE AREA PER FACE 15' WIDTH MAX. 30' HT. MAX.
- 4' W. CONC. SIDEWALK
- R.R. TIE RETAINING WALL
- CONC. RETAINING WALL

PLANT LIST

KEY	PLANT SPECIES	QUANTITY	SIZE
+	Fraxinus Americana Autumn Purple Ash	7	2 1/2" caliper
✓	Malus Species Royalty Crab Apple	6	1 1/2" caliper
	Quarus Palustris	11	2 1/2" caliper
○	Pinus Strobus White Pine	9	4' height
	Pinus Nigra Austrian Pine	10	4' height
	Juniperus Horizontalia Juniper	25	3 GAL

PREPARED FOR: Kinder Care

KINDER-CARE LEARNING CENTERS, INC.
MR. JOHN J. CHIURCO
2060 NORTH COLLINS SUITE 112
RICHARDSON, TX 75080 (214) 669-9393

ENGINEERING DECLARATION

THE INFORMATION ON THIS PLAT IS FROM EXISTING AVAILABLE DATA. THE ENGINEERING IS PRELIMINARY AND CONCEPTUAL AND SHALL NOT BE CONSTRUED AS THE FINAL DESIGN FOR CONSTRUCTION, BUT FOR PRELIMINARY COSTS AND CONCEPT ONLY. THIS PRELIMINARY IS SUBJECT TO CHANGE BASED ON COMPLETE FIELD INFORMATION, ENGINEERING CALCULATIONS, AND FUTURE AVAILABLE DATA.

J. DAVID WHITEHEAD, P.E.
E-16429

SURVEYOR'S CERTIFICATION

THIS IS TO CERTIFY TO KINDER-CARE LEARNING CENTERS THAT AT THEIR REQUEST DURING THE MONTH OF JULY, 1988, FOX AND COLE, INC. HAS PREPARED A PRELIMINARY PLAN FROM AVAILABLE PUBLIC RECORDS OF A TRACT OF LAND BEING PORTION OF SECTION 6, TOWNSHIP 44 NORTH, RANGE 4 EAST LOCATED IN ST. LOUIS COUNTY, MISSOURI; THAT THE RESULTS OF SAID PUBLIC RECORDS COMPILATION ARE SHOWN HEREON; THAT THIS PLAN DOES NOT REPRESENT A BOUNDARY SURVEY; AND THAT THIS PLAN IS SUBJECT TO THE RESULTS OF AN ACCURATE FIELD SURVEY CONFORMING TO CURRENT MINIMUM STANDARDS FOR BOUNDARY SURVEYS AS ESTABLISHED BY THE MISSOURI DEPARTMENT OF NATURAL RESOURCES, DIVISION OF GEOLOGY AND LAND SURVEY.

FOX & COLE, INC.

PROJECT NO. 88-168

KENNY L. KENNON, R.L.S.
MISSOURI CERT. NO. L.S. 2201

DATE: 7-19-88

STATE OF MISSOURI
KENNY L. KENNON
NUMBER LS-2201
REGISTERED LAND SURVEYOR

NOV 14 1988
DEPARTMENT OF PLANNING

0 10 20 40 60

NORTH

MANCHESTER ROAD/KINDER-CARE

PARTIAL AMENDED
SITE DEVELOPMENT SECTION PLAN

Fox & Cole

Designed By	Drawn By	Project Number	Sheet Number
DJC	DJC	88-168	1 OF 1
Checked By	Date	Revisions	
BCM	7-15-88	8-1-88 10-25-88, 11-2-88	