



690 Chesterfield Pkwy W • Chesterfield MO 63017-0760
Phone: 636-537-4000 • Fax 636-537-4798 • www.chesterfield.mo.us

Planning Commission Staff Report

Project Type: Amended Site Development Concept Plan

Meeting Date: March 23, 2015

From: John Boyer
Senior Planner

Location: 111 St. Luke's Center Drive

Applicant: Stock & Associates Consulting Engineers, Inc.

Description: St. Luke's Hospital Northwest Campus 2nd ASDCP: An Amended Site Development Concept Plan, Amended Concept Landscaping Plan, Amended Tree Stand Delineation and Amended Tree Preservation Plan for a 38.28 acre tract of land zoned "MU" Medical Use District located northwest of the intersection of South Woods Mill Road and Brookings Park Drive.

PROPOSAL SUMMARY

The request is for the approval of an Amended Site Development Concept Plan for the northwest campus. The subject site is zoned "MU" Medical Use District and is governed under the terms and conditions of City of Chesterfield Ordinance 2796. Associated with this request is the submission of an Amended Site Development Section Plan (5th ASDSP) for the construction of a 102,459 square foot medical building.

ZONING HISTORY OF SUBJECT SITE

The subject property was originally zoned "NU" Non-Urban District. In 2005, the portion of the site governed under Ordinance 2224 was rezoned to "MU" Medical Use District. The northern section of the subject property (Parcel D) was rezoned from "NU" Non-Urban and "R-1" Residence District to "MU" via ordinance 2372 in 2006. In 2007, a Board of Adjustment variance request was granted by the City of Chesterfield from Ordinance 2372 to allow a 25 foot front yard setback along Woods Mill Rd. in lieu of the required 50 foot setback. In 2008, Ordinance 2499 was approved which repealed Ordinance 2372. This ordinance amended parking standards and setbacks for the northern portion of the site. Recently, Ordinance 2796 was approved by the City of Chesterfield which repealed Ordinance 2499 and placed the entire northwest campus under one ordinance. Multiple Site Development Plans, Concept and Section Plans have been amended since 2006.

SURROUNDING ZONING

| Direction | Land Use | Zoning |
|-----------|--|--|
| North | Residence | “NU” Non-Urban District |
| South | Assisted and Independent Living Facility | “R1” Residence District |
| East | Residential | “R1” Residence District with a “PEU” Planned Environment Unit Procedure |
| West | Residential | “R1A” Residence District with a “PEU” Planned Environment Unit Procedure |



Figure 1: Aerial and Zoning

STAFF ANALYSIS

A Site Development Concept Plan shows a conceptual layout of a development planned to be constructed in phases. An Amended Site Development Concept Plan is required for this project due to the change in additional buildings and additional property added via Ordinance 2796 which was not included on the previous concept plan. This addition does not substantially comply with the approved Amended Site Development Concept Plan, necessitating the amendment. A total of 8 structures are planned on this Amended Site Development Concept Plan. As documented on the above Aerial photo in Figure 1 on page 2, two medical buildings currently exist. As proposed with

this concept plan, the northern structure is planned to be removed in the future and replaced by a proposed parking garage.

Associated with Ordinance 2796, a total of 834,000 square feet of medial structures is planned and documented on this concept plan for a total of 0.50 floor-area ratio. This square footage does not include parking garage structures, nor does City Code require structured or parking surfaces in these calculations. Upon proposed build-out, a total of 5 new medical buildings, 3 parking garages and 1 new surface parking lot will be constructed in phases.

Table 1 below depicts the existing and proposed medical and parking garage structures heights, finished floor elevations (adjacent grade in mean sea level of the floor) and stories for clarification. While all proposed medical buildings, minus existing Building A, are 94 feet in height, the stories proposed vary slightly at 5 and 6 stories. A maximum height of 98 feet was approved via Ordinance 2796.

Table 1: Building Heights

| Proposed Buildings | Proposed Height (feet) | Proposed Finished Floor Elevations (mean sea level) | Stories |
|---------------------------------|-------------------------------|--|----------------|
| Medical Building “A” (existing) | 80’ | 548’ | 5 |
| Medical Building “B” | 94’ | 548’ | 5 |
| Medical Building “C” | 94’ | 548’ | 6 |
| Medical Building “D” | 94’ | 532’ | 5 |
| Medical Building “E” | 94’ | 530’ | 6 |
| Medical Building “F” | 94’ | 516’ | 6 |
| <i>Parking Garage “G”</i> | 58’ | 548’ | 5 |
| <i>Parking Garage “H”</i> | 58’ | 536.5’ | 5 |
| <i>Parking Garage “I”</i> | 58’ | 522’ | 6 |

Zoning

The subject site is currently zoned “MU” Medical Use District under the terms and conditions of City of Chesterfield Ordinance Number 2796. The submittal was reviewed against the requirements of Ordinance Number 2796 and all applicable Unified Development Code requirements and found compliant with all requirements.

Comprehensive Plan

The subject site is located within Ward 1 of the City of Chesterfield. The City of Chesterfield Land Use Plan indicates this parcel is within the Residential Single Family land use designation. Hospitals and ancillary uses are available for review within the residential districts of the City’s Unified Development Code. This subject site is not located in any sub-area identified by the Comprehensive Plan Policies; therefore there are no additional development guidelines for this site.

Transportation

Associated with this plan a Transportation Improvement Study (TIS) was required. This TIS was accepted by all agencies; the City of Chesterfield, St. Louis County Department of Highways and Traffic and the Missouri Department of Transportation. Due to the complexity of this study, information detailing specific improvements accepted by the TIS for this plan can be found in the

attached supplemental memo from Staff under Phases 2A, 2B and 3 starting on page 1 of the memo in lieu of a full description in this report.

Landscaping

Included within the Amended Site Development Concept Plan is a proposed Amended Concept Landscape Plan. A Conceptual Landscape Plan depicts placement of future street trees for a development for the City's review. This plan identifies placement of street trees along S. Woods Mill Road. Additional frontages along this development on Brookings Park Drive have existing street trees as required under previous plan approvals. The Conceptual Landscape Plan meets all requirements of the City of Chesterfield's Unified Development Code. The City Arborist has reviewed the Conceptual Landscape Plan and had no additional comments.

DEPARTMENT INPUT

Staff has reviewed the 2nd Amended Site Development Concept Plan, Amended Concept Landscaping Plan, Amended Tree Stand Delineation and Amended Tree Preservation Plan and has found the proposal to be in compliance with the site specific ordinance, Comprehensive Plan and all City Code requirements. Staff recommends approval of the 2nd Amended Site Development Concept Plan.

MOTION

The following options are provided to the Planning Commission for consideration relative to this application:

- 1) "I move to approve (or deny) the 2nd Amended Site Development Concept Plan, Amended Concept Landscaping Plan, Amended Tree Stand Delineation and Amended Tree Preservation Plan for St. Luke's."
- 2) "I move to approve the 2nd Amended Site Development Concept Plan, Amended Concept Landscaping Plan, Amended Tree Stand Delineation and Amended Tree Preservation Plan for St. Luke's, with the following conditions..." (Conditions may be added, eliminated, altered or modified)

CC: Aimee Nassif, Planning and Development Services Director

Attachments: 2nd Amended Site Development Concept Plan
Amended Concept Landscape Plan
Amended Tree Stand Delineation
Amended Tree Preservation Plan
Supplemental Transportation Memo

Memorandum

Planning & Development Services Division



To: Planning Commission

From: John Boyer, Senior Planner

Date: March 18, 2015

RE: **St. Luke's Hospital – Supplemental Transportation Memo**

Associated with the review of the Amended Site Development Concept Plans for the Main and Northwest Campus as well as the review of the Site Development Section Plan for the Northwest Campus, the City required the submittal of a Transportation Improvement Study (TIS) to be reviewed and accepted by all agencies affected. A TIS is a study which identifies recommended roadway improvements to be proposed which will handle anticipated traffic due to the planned construction. The TIS takes into account current traffic conditions, future roadway improvements as well as planned growth for the area. A TIS was completed and accepted by all agencies in 2006 for St. Luke's; however, this TIS was determined to be out dated by the City of Chesterfield and the applicant was required to provide an updated study.

Agencies required for this review were the City of Chesterfield, St. Louis County Department of Highways and Traffic and the Missouri Department of Transportation (MoDOT). The applicant, St. Luke's, hired a Transportation Engineer to develop the TIS for the agencies' review. After several months of meetings and correspondence with all parties, the TIS submittal has now been accepted by all agencies. By accepting the findings of the applicant's TIS, all agencies have accepted the proposed improvements to address future traffic generated by this development. Acceptance and review of the TIS is made by City Staff, in addition with the other agencies' professional staff.

For informational purposes only, Staff has provided you with a summary of each phase of road improvements associated with the TIS categorized the St. Luke's development proposal into 3 total phases; Phase 2A, Phase 2B and Phase 3. A brief summary of the proposed improvements are as follows;

- **Phase 2A:** Phase 2A is the area covered under the St. Luke's Hospital Northwest Campus 5th Amended Site Development Section Plan, or 102,499 square feet of medical structure additions. See Figure 1 on page 2 of this memo for depiction of the road improvements for Phase 2A.
 - **Woods Mill and Brooking Park**
 - This intersection is currently a four-way stop. A three-way stop will be provided.
 - In addition to the intersection change from four-way to three-way, a westbound right-turn is required and the existing westbound left lane will be converted to a dedicated left lane.
 - **Hwy 141 and Brooking Park**
 - The southbound right turn lane will be extended.
 - The eastbound and westbound lanes of Brooking Park will be re-configured for a 1 thru, 2 left-turn and 1 right turn lanes.
 - A signalized eastbound right-turn onto Hwy 141.

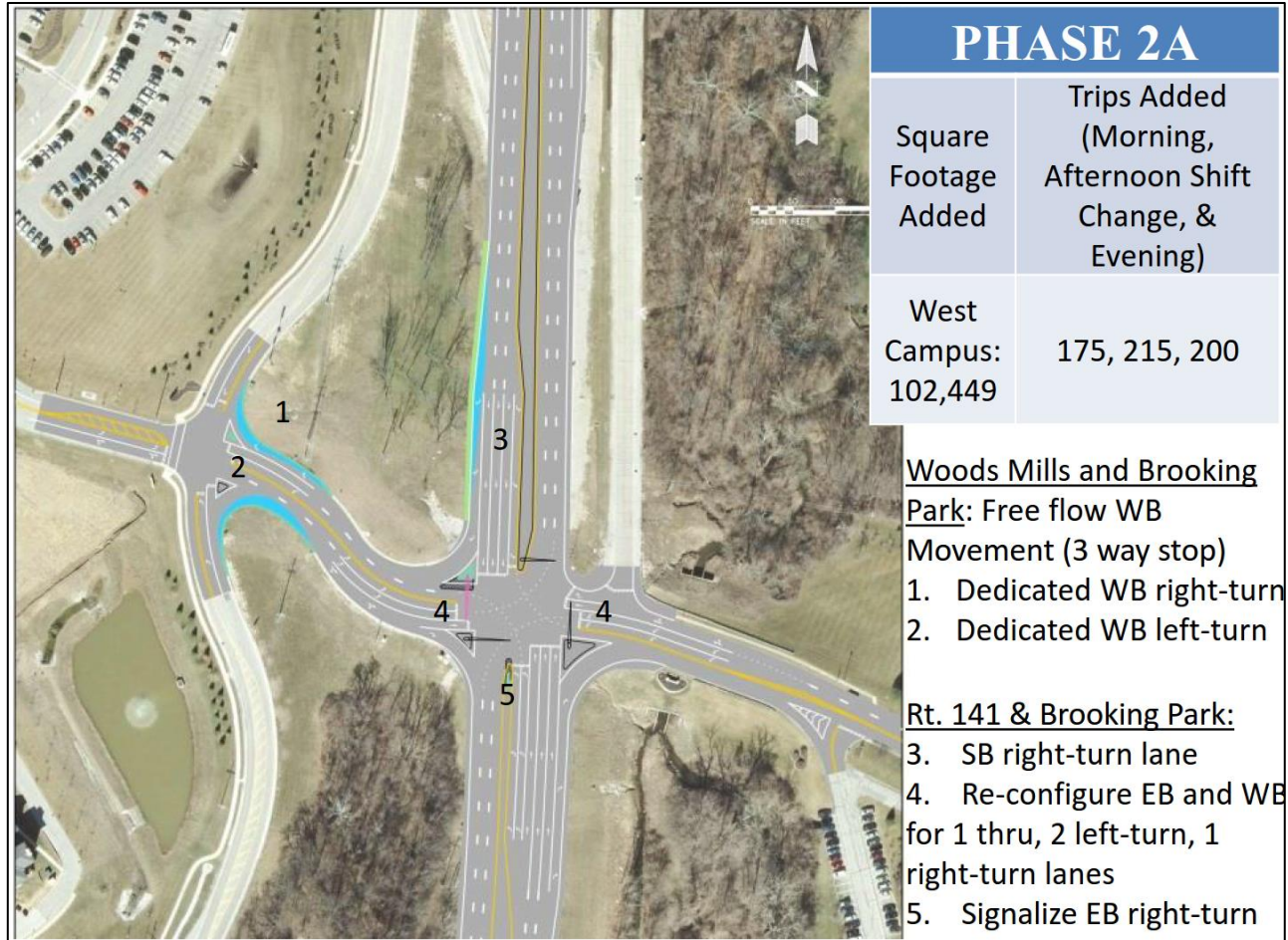


Figure 1: Phase 2A

- **Phase 2B:** Phase 2B would cover the proposed build-out of the Main Campus under the 2nd Amended Site Development Concept Plan consisting of 111,000 square feet of medical structure additions and the future construction of 93,351 square feet of future medical structures identified on the Northwest Campus 2nd Amended Site Development Concept Plan. Construction of these medical structures will be required to be depicted on future Amended Site Development Section Plans as the Site Development Concept Plans only show conceptual improvements planned to be built in phases. See below Figure 2 below and Figure 3 on page 4 for depiction of these improvements.
 - **Hwy 141 and Conway**
 - Extend the west-bound right-turn lane for a bay length and taper (Figure 2).
 - **Hwy 141 and Brooking Park**
 - Extend the south-bound left-turn deceleration lane and storage bay (Figure 3 on page 4).

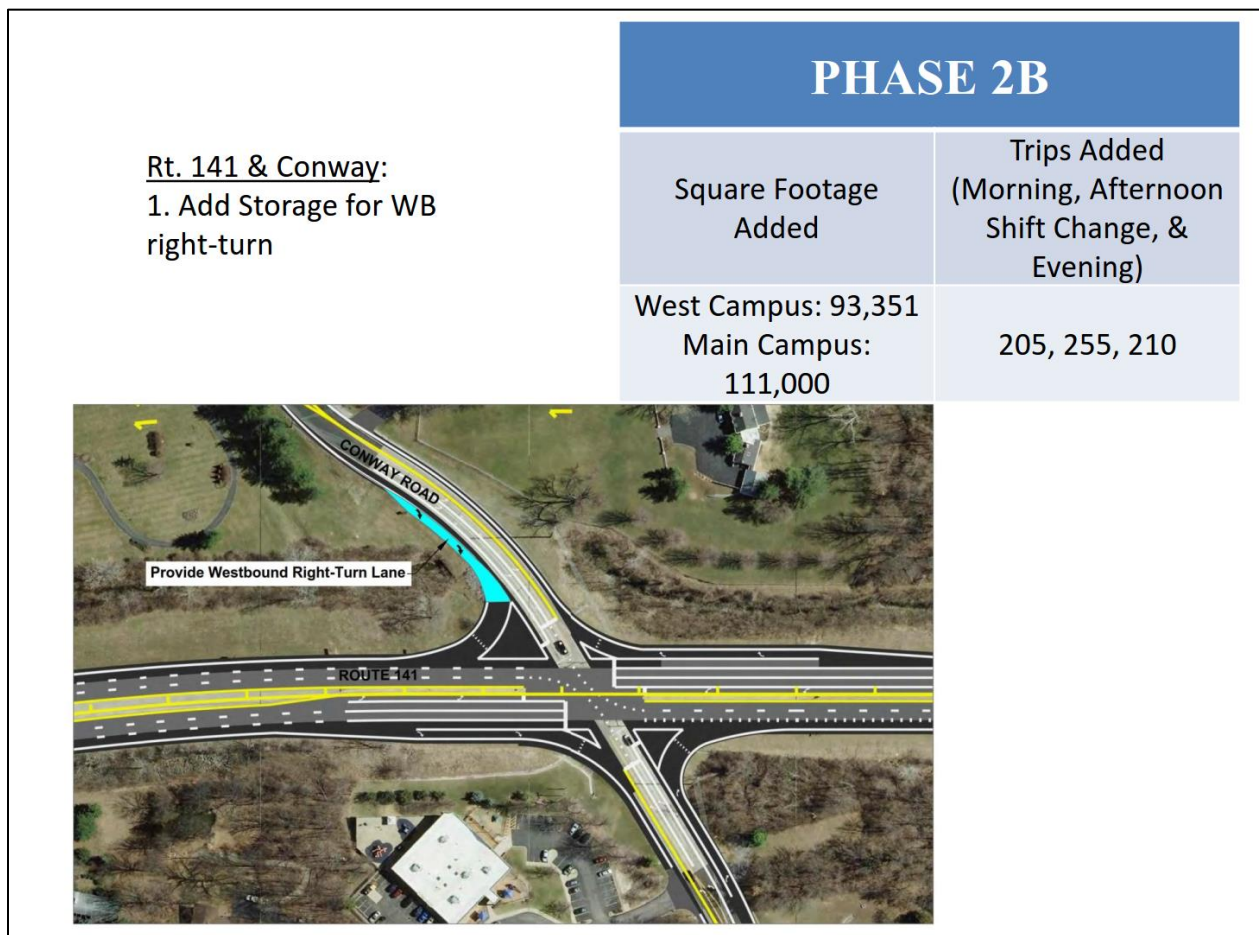


Figure 2: Phase 2B Conway Improvement

PHASE 2B

Rt. 141 & Brooking

Park:

1. Extend southbound left-turn lane on Hwy 141

Square Footage
Added

Trips Added
(Morning, Afternoon
Shift Change, &
Evening)

West Campus: 93,351
Main Campus:
111,000

205, 255, 210



Figure 3: Phase 2B Hwy 141 and Brooking Park

- **Phase 3:** Phase 3 would complete the planned build-out for the Northwest campus on the 2nd Amended Site Development Concept Plan, or 471,025 square feet of medical structures. See Figure 4 for depiction of these improvements
 - **Woods Mill and Brooking Park**
 - A roundabout including two circulating lanes and multi-lane approaches.
 - **Hwy 141 and Brooking Park**
 - Add storage for the eastbound right-turn on to Hwy 141 from Brooking Park.

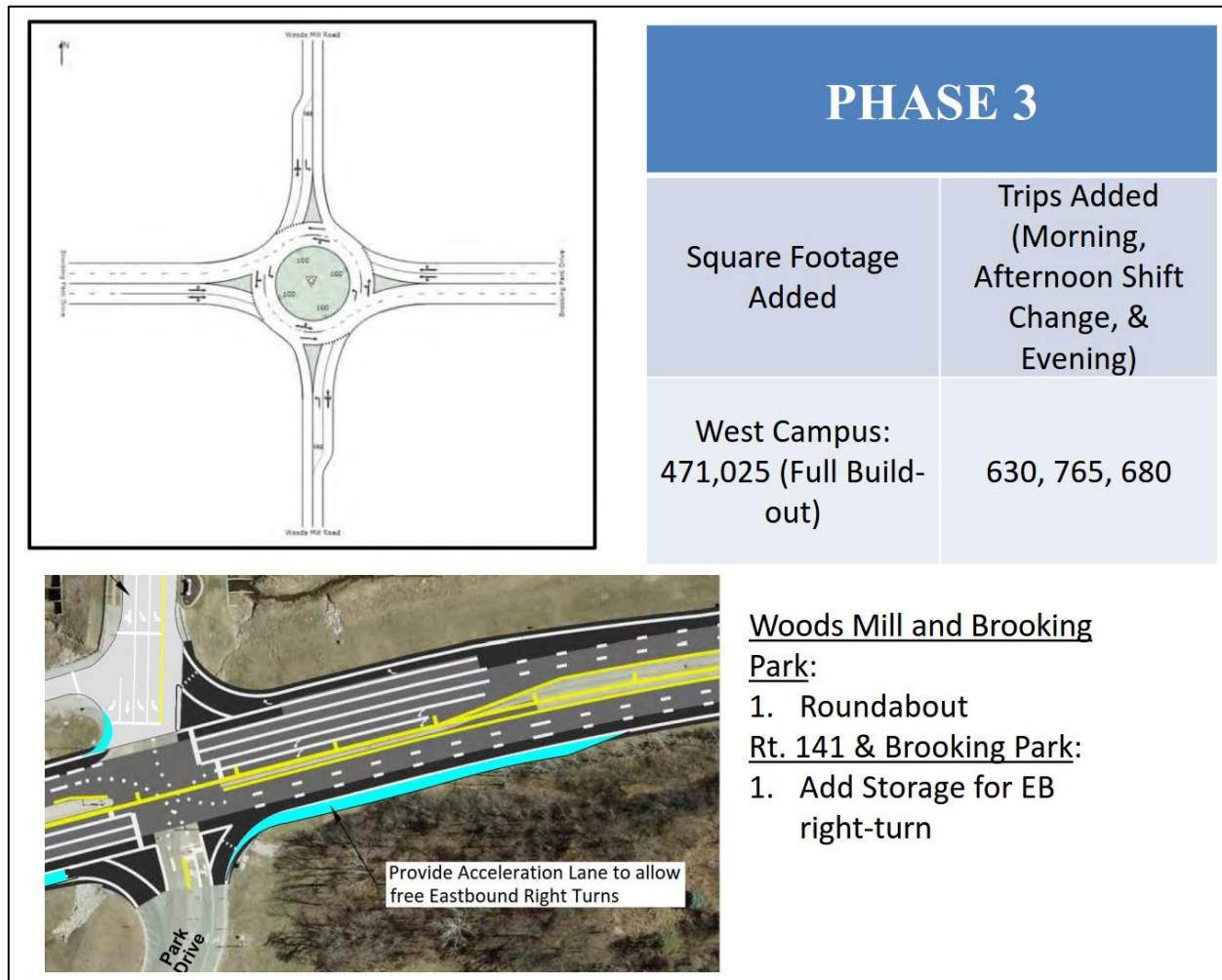


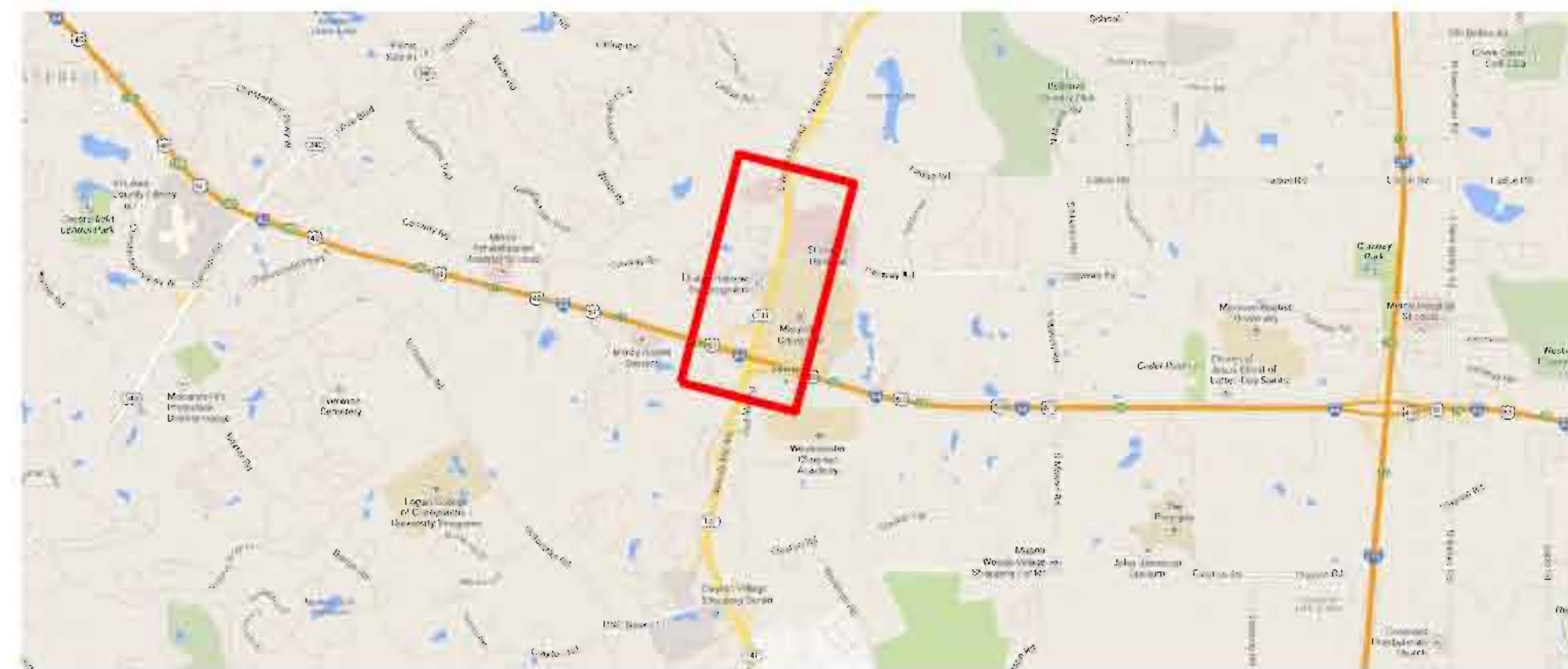
Figure 4: Phase 3

In addition the Missouri Department of Transportation (MoDOT) currently has under construction a \$7 million project for Hwy 141 Phase 2 improvements. Exhibit 1 attached to this memo depicts planned Phase 2 MoDOT improvements. MoDOT Phase 2 improvements include the area from I-64 to St. Luke's Hospital Drive. Proposed improvements consist of;

- 1 northbound and southbound lane from St. Luke's Hospital to I-64.
- 2 additional left turn lanes on Hwy 141 for eastbound/westbound I-64 ramps.
- Improve the Hwy 141 and Conway Road intersection;
 - One additional thru lane on Hwy 141 each direction,
 - Additional right-turn lane on Hwy 141 each direction for movement onto Conway (east and westbound).
- Improve the Hwy 141 and Brooking Park intersection by adding lanes in each direction on Hwy 141 to allow for right turn movements east and west into St. Luke's.

Once St. Luke's Phase 2A and MoDOT Hwy 141 Phase 2 are completed, all agencies have required a new TIS which updates traffic information for the proposed St. Luke's Phase 2B and Phase 3 analyzing if additional road improvements are warranted and study existing road performance and conditions. The agencies would then re-evaluate St. Luke's remaining phase improvements against new traffic data on Hwy 141, Woods Mill Road, Conway Road and Ladue Road. Additional recommendations could be made associated with this required update and future plan submittals would document these recommendations.





This information herein is for informational purposes only as Traffic Studies are reviewed and accepted by City Staff, St. Louis County Department of Highways and Traffic and the Missouri Department of Transportation. Due to the three separate St. Luke's plans on the agenda for your consideration as separate agenda items, we are providing this memo to give comprehensive road improvement information to supplement the provided Concept and Section Plan reports. No further action is required on the accepted TIS by the Planning Commission.



Route 141 Lane Additions St. Louis County, Missouri

Route 141 and I-64 Interchange

Legend

-  Proposed Widening
-  Existing Pavement / Overlay
-  Retaining Wall
-  Ramp / Auxiliary Lane Removal

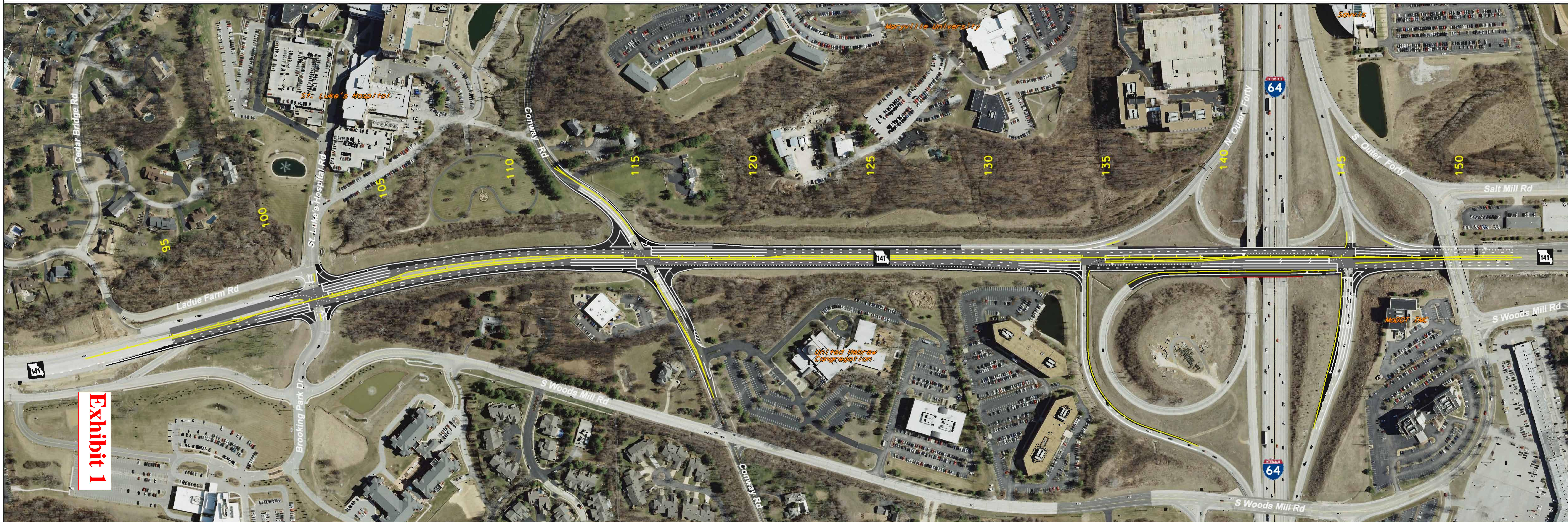
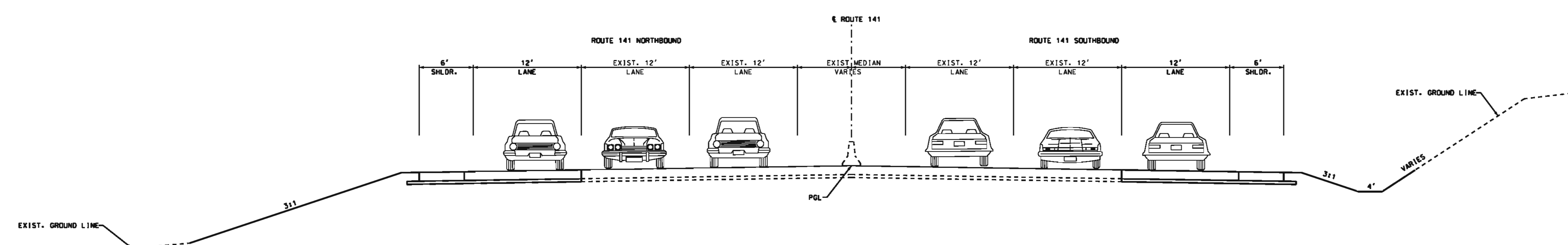
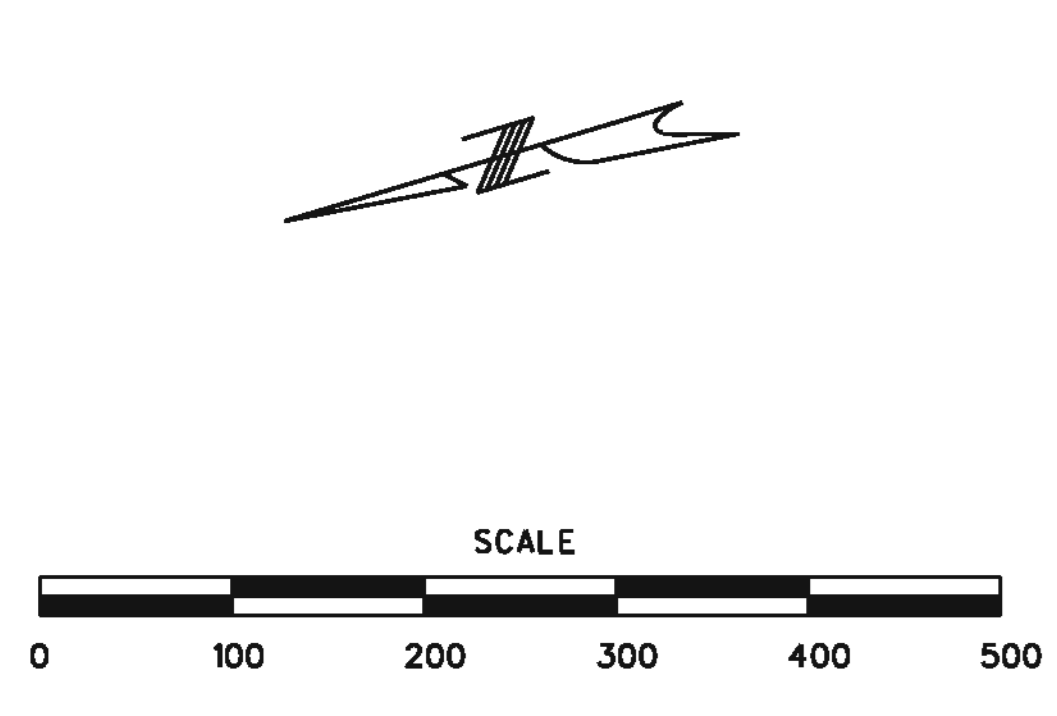


Exhibit 1



Route 141 Typical Section



PREPARED BY:

SITE DEVELOPMENT CONCEPT PLAN FOR:

St. Luke's Hospital
 WEST CAMPUS
 232 SOUTH WOODSMILL ROAD
 CITY OF CHESTERFIELD, MISSOURI

DATE: March 16, 2015



GEORGE M. STOCK E-29116
 CIVIL ENGINEER
 CERTIFICATE OF AUTHORITY
 NUMBER: 000996

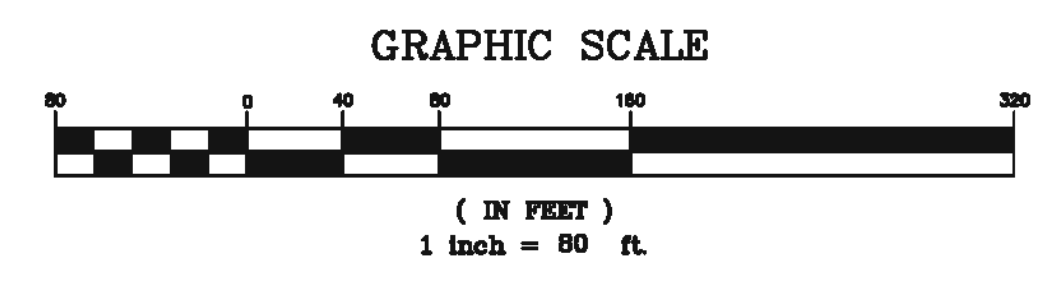
REVISIONS:

| Issue Date | 07.31.14 |
|---------------|----------|
| City Comments | 09.18.14 |
| City Comments | 10.08.14 |
| Traffic Study | 02.27.15 |

| | | | |
|-------|----------|-----------|------------|
| DATE | 07/31/14 | JOB NO. | 213-5155.1 |
| SCALE | AS SHOWN | SHEET NO. | 18Q |
| DATE | 07/31/14 | DATE | 07/31/14 |
| SCALE | AS SHOWN | SCALE | AS SHOWN |

SHEET TITLE:
CONCEPT SITE PLAN

SHEET NO.:
3

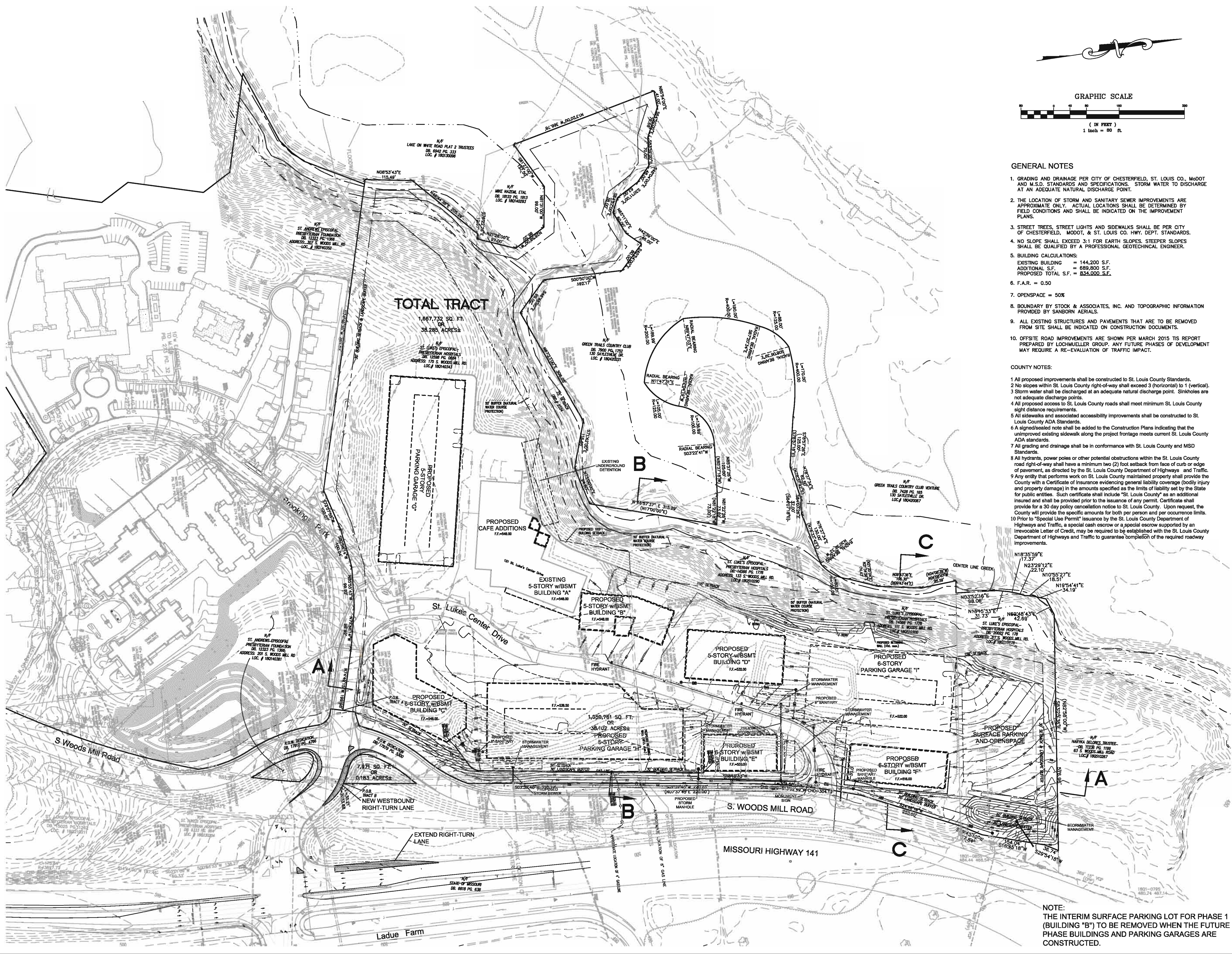


GENERAL NOTES

1. GRADING AND DRAINAGE PER CITY OF CHESTERFIELD, ST. LOUIS CO., MDDOT AND M.S.D. STANDARDS AND SPECIFICATIONS. STORM WATER TO DISCHARGE AT AN ADEQUATE NATURAL DISCHARGE POINT.
2. THE LOCATION OF STORM AND SANITARY SEWER IMPROVEMENTS ARE APPROXIMATE ONLY. ACTUAL LOCATIONS SHALL BE DETERMINED BY FIELD CONDITIONS AND SHALL BE INDICATED ON THE IMPROVEMENT PLANS.
3. STREET TREES, STREET LIGHTS AND SIDEWALKS SHALL BE PER CITY OF CHESTERFIELD, MDDOT, & ST. LOUIS CO. HWY. DEPT. STANDARDS.
4. NO SLOPE SHALL EXCEED 3:1 FOR EARTH SLOPES. STEEPER SLOPES SHALL BE QUALIFIED BY A PROFESSIONAL GEOTECHNICAL ENGINEER.
5. BUILDING CALCULATIONS:
 EXISTING BUILDING = 144,200 S.F.
 ADDITIONAL S.F. = 689,800 S.F.
 PROPOSED TOTAL S.F. = 834,000 S.F.
6. F.A.R. = 0.50
7. OPENSOURCE = 50%
8. BOUNDARY BY STOCK & ASSOCIATES, INC. AND TOPOGRAPHIC INFORMATION PROVIDED BY SANBORN AERIALS.
9. ALL EXISTING STRUCTURES AND PAVEMENTS THAT ARE TO BE REMOVED FROM SITE SHALL BE INDICATED ON CONSTRUCTION DOCUMENTS.
10. OFFSITE ROAD IMPROVEMENTS ARE SHOWN PER MARCH 2015 TRS REPORT PREPARED BY LOCHMUELLER GROUP. ANY FUTURE PHASES OF DEVELOPMENT MAY REQUIRE A RE-EVALUATION OF TRAFFIC IMPACT.

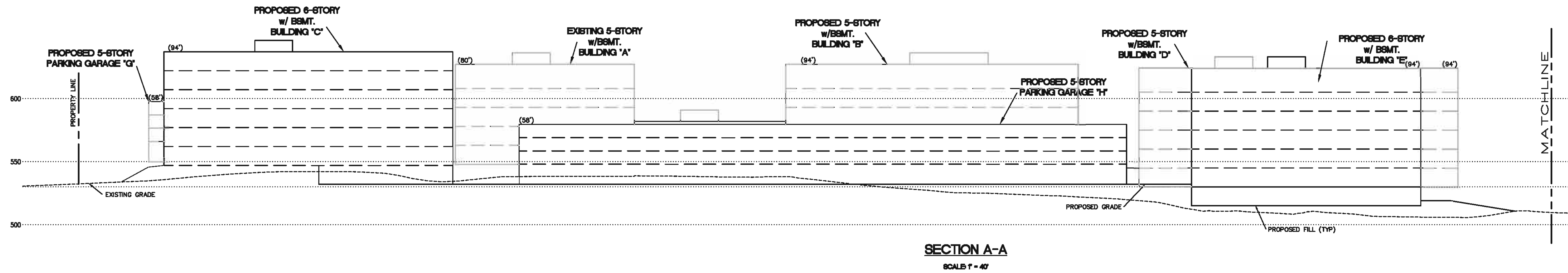
COUNTY NOTES:

- 1 All proposed improvements shall be constructed to St. Louis County Standards.
- 2 No slopes within St. Louis County right-of-way shall exceed 3 (horizontal) to 1 (vertical).
- 3 Storm water shall be discharged at an adequate natural discharge point. Sinkholes are not adequate discharge points.
- 4 All proposed access to St. Louis County roads shall meet minimum St. Louis County sight distance requirements.
- 5 All sidewalks and associated accessibility improvements shall be constructed to St. Louis County ADA Standards.
- 6 A signed/sealed note shall be added to the Construction Plans indicating that the unimproved existing sidewalk along the project frontage meets current St. Louis County ADA standards.
- 7 All grading and drainage shall be in conformance with St. Louis County and MSD Standards.
- 8 All hydrants, power poles or other potential obstructions within the St. Louis County road right-of-way shall have a minimum two (2) foot setback from face of curb or edge of pavement, as directed by the St. Louis County Department of Highways and Traffic.
- 9 Any entity that performs work on St. Louis County maintained property shall provide the County with a Certificate of Insurance evidencing general liability coverage (bodily injury and property damage) in the amounts specified as the limits of liability set by the State for public entities. Such certificate shall include "St. Louis County" as an additional insured and shall be provided prior to the issuance of any permit. Certificate shall provide for a 30 day policy cancellation notice to St. Louis County. Upon request, the County will provide the specific amounts for both per person and per occurrence limits.
- 10 Prior to "Special Use Permit" issuance by the St. Louis County Department of Highways and Traffic, a special cash escrow or a special escrow supported by an Irrevocable Letter of Credit, may be required to be established with the St. Louis County Department of Highways and Traffic to guarantee completion of the required roadway improvements.

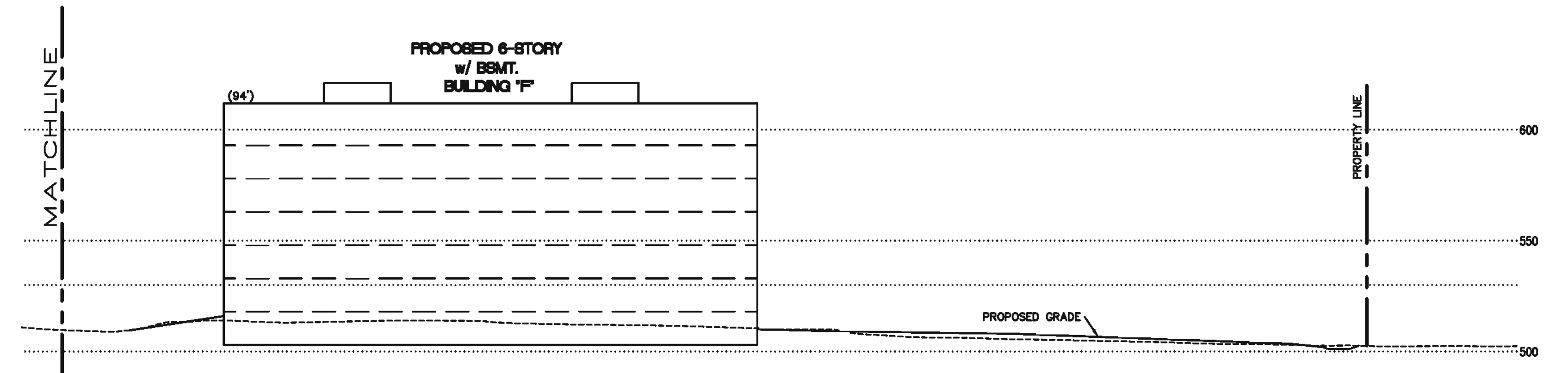


NOTE:
 THE INTERIM SURFACE PARKING LOT FOR PHASE 1 (BUILDING "B") TO BE REMOVED WHEN THE FUTURE PHASE BUILDINGS AND PARKING GARAGES ARE CONSTRUCTED.

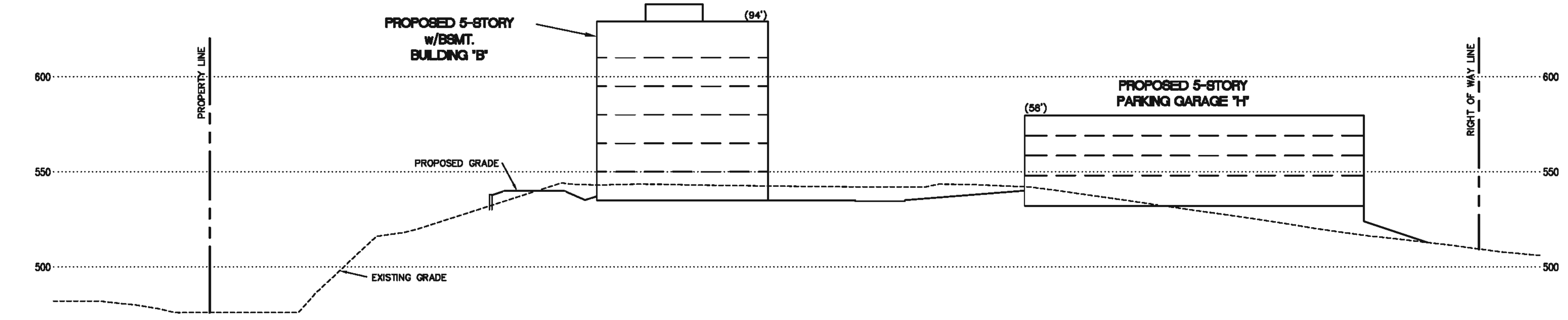
ALL RIGHTS RESERVED. THIS DOCUMENT IS THE PROPERTY OF STOCK & ASSOCIATES, INC. AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF STOCK & ASSOCIATES, INC.



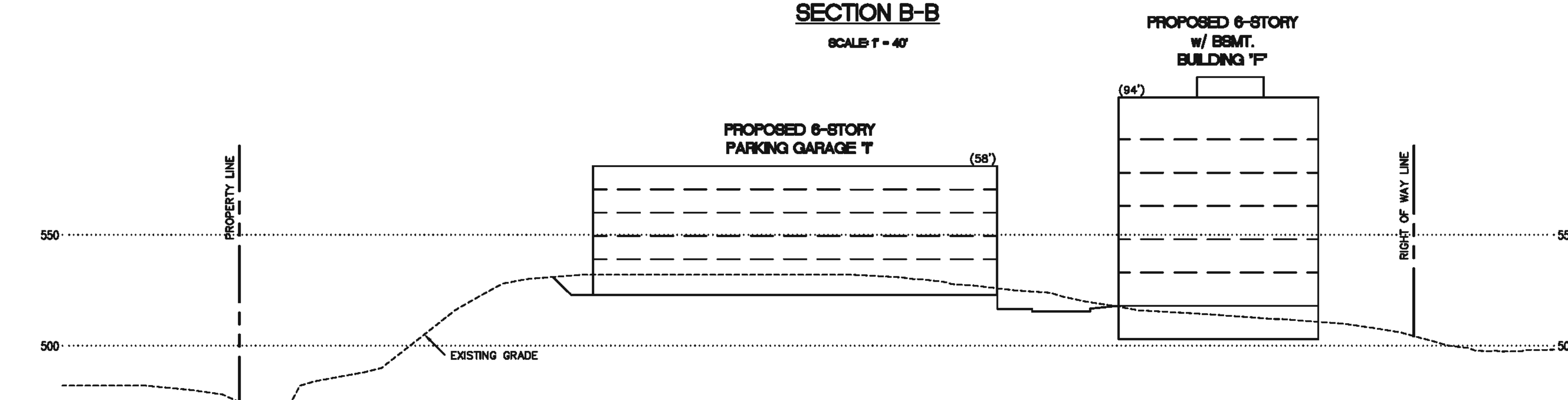
SECTION A-A
SCALE 1" = 40'



SECTION A-A
SCALE 1" = 40'



SECTION B-B
SCALE 1" = 40'



SECTION C-C
SCALE 1" = 40'

PREPARED BY:
Stock & Associates
Consulting Engineers, Inc.
257 Chesterfield Business Parkway
St. Louis, MO 63103
PH: (636) 530-3000
FAX: (636) 530-3000
E-mail: general@stockandassociates.com
Web: www.stockandassociates.com

SITE DEVELOPMENT CONCEPT PLAN FOR
St. Luke's Hospital
WEST CAMPUS
232 SOUTH WOODSMILL ROAD
CITY OF CHESTERFIELD, MISSOURI

DATE: March 16, 2015



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

REVISIONS:

| | | |
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| - | Issue Date | 07.31.14 |
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| | | | |
|-----------|----------|----------------|------------|
| DRAWN BY: | J.E.F. | CHECKED BY: | G.M.S. |
| DATE: | 07/31/14 | JOB NO.: | 213-5155.1 |
| SHEET #: | - | SHEET TOTAL #: | 180 |
| SCALE: | - | DATE PLOTTED: | - |
| MARK #: | MO-00 | | |

SHEET TITLE:
SITE SECTIONS

SHEET NO.:
4

DRAWING FILE: G:\Projects\2015\20150316\20150316_Site\20150316_Site.dwg
 PLOT DATE: 07/31/14 10:00 AM
 PLOT SCALE: 1" = 40'
 PLOT SHEET: 4 of 180
 PLOT BY: J.E.F.

| Monarch Trees | | | |
|---------------|---------------|-----------|--------------|
| Tree # | Species | Rating | DBH (inches) |
| M01 | Sycamore | Good | 24 |
| M02 | Oak, White | Poor | 25.5 |
| M03 | Oak, Red | Good | 26 |
| M04 | Hackberry | Excellent | 24 |
| M05 | Sycamore | Good | 24 |
| M08 | Sycamore | Good | 34 |
| M10 | Oak, Red | Good | 24 |
| M11 | Maple, Silver | Excellent | 28 |
| M12 | Maple, Silver | Excellent | 26 |
| M13 | Oak, Black | Fair | 24 |
| M14 | Maple, Silver | Excellent | 24 |
| M35 | Maple, Silver | Excellent | 26 |
| M36 | Maple, Silver | Excellent | 28 |
| M37 | Sycamore | Good | 28 |
| M38 | Maple, Silver | Excellent | 30 |
| M39 | Sycamore | Good | 28 |
| M40 | Sycamore | Good | 35 |
| M42 | Oak, Black | Fair | 24 |
| M43 | Oak, Black | Fair | 26 |
| M44 | Oak, Black | Fair | 28 |
| M45 | Oak, Black | Fair | 31 |
| M46 | Oak, Black | Fair | 24 |
| M47 | Oak, Black | Fair | 26 |
| M48 | Cottonwood | Good | 28 |
| M49 | Sycamore | Good | 34 |
| M50 | Sycamore | Good | 34 |
| M51 | Sycamore | Good | 36 |
| M53 | Maple, Silver | Excellent | 35 |
| M54 | Persimmon | Good | 24 |
| M55 | Persimmon | Good | 24 |
| M56 | Red Oak | Good | 28 |
| M57 | Red Oak | Good | 22 |
| M58 | Red Oak | Good | 22 |
| M59 | Red Oak | Good | 32 |
| M60 | Red Oak | Good | 24 |
| M61 | Red Oak | Good | 30 |

WOODLAND DESCRIPTIONS

Woodland A - The majority of Woodland A is offsite. The portion of this woodland found on this site has mostly shingle oak as the overstory with black cherry and honeysuckle as the understorey.
Woodland area: 12,735 s.f., or 0.29 acres.

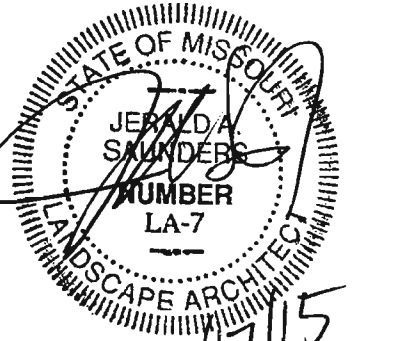
Woodland B - The woodland is a combination of gentle slopes and bottom land. Overstorey tree composition includes white and red oak on the slopes and sycamore, hackberry, silver maple and green ash in the bottoms. The understorey consists of honeysuckle, pawpaw, buckeye, blackgum, American elm and black cherry.
Woodland area: 591,239 s.f., or 13.57 acres.

| Existing Tree List | | | |
|--------------------|--------------|------|-----------|
| | Type | Size | Condition |
| 1 | Oak | 30" | Fair |
| 2 | Walnut | 12" | Fair |
| 3 | Shingle Oak | 10" | Fair |
| 4 | Cherry | 6" | Fair |
| 5 | Spruce | 10" | Fair |
| 6 | Cedar | 12" | Fair |
| 7 | Spruce | 12" | Fair |
| 8 | Spruce | 10" | Fair |
| 9 | Redbud | 10" | Fair |
| 10 | Cottonwood | 30" | Fair |
| 11 | Hackberry | 10" | Fair |
| 12 | Hackberry | 8" | Fair |
| 13 | Cedar | 10" | Fair |
| 14 | Walnut | 24" | Fair |
| 15 | Cherry | 12" | Fair |
| 16 | Cedar | 12" | Fair |
| 17 | Cedar | 12" | Fair |
| 18 | Redbud | 8" | Fair |
| 19 | Cottonwood | 30" | Fair |
| 20 | Cottonwood | 24" | Fair |
| 21 | Cottonwood | 20" | Fair |
| 22 | Cottonwood | 20" | Fair |
| 23 | Cottonwood | 20" | Fair |
| 24 | Cottonwood | 30" | Fair |
| 25 | Cottonwood | 24" | Fair |
| 26 | Cottonwood | 30" | Fair |
| 27 | Cherry | 15" | Fair |
| 28 | Pin Oak | 12" | Fair |
| 29 | Cherry | 20" | Fair |
| 32 | Pin Oak | 18" | Good |
| 33 | Pin Oak | 18" | Good |
| 34 | Shingle Oak | 18" | Good |
| 35 | Pin Oak | 17" | Good |
| 36 | Pin Oak | 14" | Fair |
| 38 | White Pine | 15" | Good |
| 39 | Pin Oak | 17" | Fair |
| 40 | Pin Oak | 8" | Good |
| 41 | Pin Oak | 21" | Good |
| 42 | White Oak | 14" | Good |
| 43 | Shingle Oak | 15" | Good |
| 44 | Sugar Maple | 15" | Good |
| 45 | Cherry | 10" | Fair |
| 46 | Shingle Oak | 24" | Poor |
| 49 | Boxelder | 9" | Fair |
| 50 | Black Oak | 9" | Good |
| 52 | White Pine | 18" | Good |
| 53 | Boxelder | 12" | Poor |
| 54 | Silver Maple | 10" | Poor |
| 55 | Silver Maple | 26" | Poor |
| 56 | Silver Maple | 26" | Poor |
| 59 | Persimmon | 16" | Fair |
| 60 | Walnut | 28" | Poor |
| 61 | Boxelder | 15" | Fair |
| 62 | Pin Oak | 24" | Good |
| 63 | Pin Oak | 16" | Fair |
| 64 | Pin Oak | 20" | Good |
| 65 | Pin Oak | 16" | Good |
| 66 | Pin Oak | 16" | Good |
| 67 | Boxelder | 20" | Fair |
| 68 | Pear | 8" | Fair |
| 69 | Pin Oak | 8" | Fair |
| 70 | Pear | 8" | Fair |
| 71 | Pear | 8" | Fair |
| 72 | Crabapple | 2" | Fair |
| 73 | Ginkgo | 5" | Fair |
| 74 | Shingle Oak | 20" | Fair |
| 75 | Ash | 4" | Fair |



TREE STAND DELINEATION - WEST CAMPUS
SCALE 1"=80'

Tree Stand Delineation Plan Prepared under direction of Douglas DeLong Certified Arborist MW- 4826A
Douglas A. DeLong



Jerald Saunders - Landscape Architect
MO License # LA-007

Consultants:

St. Luke's Hospital
West Campus
CHESTERFIELD, MISSOURI

Revisions:

| Date | Description | No. |
|----------|------------------|-----|
| 09/15/14 | City Resubmittal | 1 |
| 10/08/14 | City Comments | 2 |
| 03/10/15 | City Comments | 4 |
| 03/17/15 | City Comments | 5 |

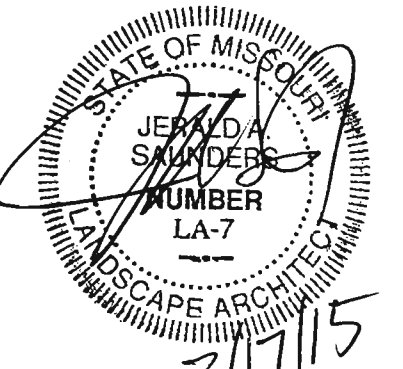
Drawn: BAR
Checked: JAS

loomisAssociates
landscape architects/planners
2000 Westwood Plaza
Chesterfield, Missouri 63005-1124
636.519.8668 fax:636.519.0779
www.loomisassociates.com
Loomis Associates Inc.
Missouri State Certificate of Authority #: LAC #00019

Sheet Title: TREE STAND DELINEATION WEST

Sheet No: TSD-W

Date: 08/01/14
Job #: 862.010



Jerald Saunders - Landscape Architect
 MO License # LA-00715
 Consultants:

COMMON GROUND
 GREEN TRAILS COUNTRY CLUB GROUNDS PLAT 8
 PB. 247, PGS. 22 & 23

N/F
 GREEN TRAILS COUNTRY CLUB
 DB. 7900 PG. 1752
 LOC. # 18Q420221

COMMON GROUND
 GREEN TRAILS COUNTRY CLUB GROUNDS PLAT 1
 PB. 219, PGS. 54-56

N/F
 GREEN TRAILS COUNTRY CLUB VENTURE
 DB. 7428 PG. 165
 LOC. # 18Q420067

| SYMBOL | QUANTITY | BOTANICAL NAME | PLANTING SCHEDULE | | | | |
|--------|----------|---------------------------------|-----------------------|--------|---------|----------|---------------|
| | | | COMMON NAME | SIZE | REMARKS | RATE | MATURE HEIGHT |
| A | 5 | Ulmus 'Homestead' | Homestead Elm | 2 1/2" | Canopy | MED/FAST | 60-80' |
| B | 5 | Acer rubrum 'Frakered' | Red Sunset Maple | 2 1/2" | Canopy | FAST | 45'+ |
| C | 5 | Tilia cordata | Littleleaf Linden | 2 1/2" | Canopy | SLOW | 45'+ |
| D | 6 | Quercus bicolor | Swamp White Oak | 2 1/2" | Canopy | MED. | 45'+ |
| E | 5 | Gleditsia triacanthos 'Inermis' | Thornless Honeylocust | 2 1/2" | Canopy | FAST | 45'+ |
| F | 5 | Platanus x acerifolia | London Planetree | 2 1/2" | Canopy | FAST | 45'+ |

EXISTING STREET TREES
 INSTALLED WITH EXISTING
 5-STORY BUILDING

Desloge Outpatient
 Service Bldg.
 144,200 s.f.

SCOPAL
 UNDATION
 1366
 0316

Revisions:

| Date | Description | No. |
|----------|---------------|-----|
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loomisAssociates

landscape architects/planners
 200 Southland Plaza, Suite 1125
 St. Louis, MO 63102-1125
 (314) 531-8668 Fax: (314) 531-0797
 Email: info@loomisassociates.com
 Website: www.loomisassociates.com

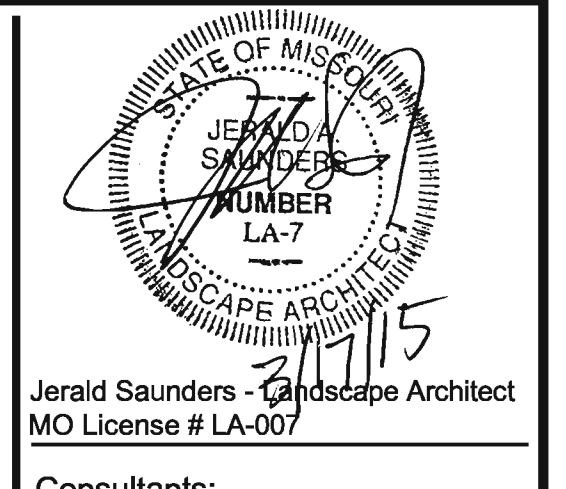
Loomis Associates Inc.
 Missouri State Certificate of Authority #: LAC-#000019

Sheet Title: Concept Landscape Plan

Sheet No: CL-1

Date: 08/01/14
 Job #: 862.010

CONCEPT LANDSCAPE PLAN - WEST CAMPUS
 SCALE 1" = 60'



Jerald Saunders - Landscape Architect
MO License # LA-007

Consultants:

**St. Luke's Hospital
West Campus**
CHESTERFIELD, MISSOURI

Tree Preservation Plan Legend:

| Symbol | Description |
|--------|-------------------------------------|
| | Woodlands to be preserved |
| | Woodlands to be removed |
| | Tree Protection Fencing |
| | Individual Tree to remain |
| | Individual Tree to be removed |
| | Existing Phase 1 Tree to remain |
| | Existing Phase 1 Tree to be removed |

| Individual Trees To Be Removed | | | |
|--------------------------------|--------------|------|-----------|
| No. | Type | Size | Condition |
| 1 | Oak | 30" | Fair |
| 2 | Walnut | 12" | Fair |
| 3 | Shingle Oak | 10" | Fair |
| 4 | Cherry | 6" | Fair |
| 5 | Spruce | 10" | Fair |
| 6 | Cedar | 12" | Fair |
| 7 | Spruce | 12" | Fair |
| 8 | Spruce | 10" | Fair |
| 9 | Redbud | 10" | Fair |
| 10 | Cottonwood | 30" | Fair |
| 11 | Hackberry | 10" | Fair |
| 12 | Hackberry | 8" | Fair |
| 13 | Cedar | 10" | Fair |
| 14 | Walnut | 24" | Fair |
| 15 | Cherry | 12" | Fair |
| 16 | Cedar | 12" | Fair |
| 17 | Cedar | 12" | Fair |
| 18 | Redbud | 8" | Fair |
| 19 | Cottonwood | 30" | Fair |
| 20 | Cottonwood | 24" | Fair |
| 21 | Cottonwood | 20" | Fair |
| 22 | Cottonwood | 20" | Fair |
| 23 | Cottonwood | 20" | Fair |
| 24 | Cottonwood | 30" | Fair |
| 25 | Cottonwood | 24" | Fair |
| 26 | Cottonwood | 30" | Fair |
| 27 | Cherry | 15" | Fair |
| 28 | Pin Oak | 12" | Fair |
| 29 | Cherry | 20" | Fair |
| 40 | Pin Oak | 6" | Good |
| 42 | White Oak | 14" | Good |
| 43 | Shingle Oak | 15" | Good |
| 44 | Sugar Maple | 15" | Good |
| 45 | Cherry | 10" | Fair |
| 46 | Shingle Oak | 24" | Poor |
| 49 | Boxelder | 9" | Fair |
| 50 | Black Oak | 9" | Good |
| 52 | White Pine | 18" | Good |
| 53 | Boxelder | 12" | Poor |
| 54 | Silver Maple | 10" | Poor |
| 55 | Silver Maple | 26" | Poor |
| 56 | Silver Maple | 26" | Poor |
| 59 | Persimmon | 16" | Fair |
| 60 | Walnut | 28" | Poor |
| 61 | Boxelder | 15" | Fair |
| 62 | Pin Oak | 24" | Good |
| 63 | Pin Oak | 16" | Fair |
| 64 | Pin Oak | 20" | Good |
| 65 | Pin Oak | 16" | Good |
| 66 | Pin Oak | 16" | Good |
| 67 | Boxelder | 20" | Fair |
| 75 | Ash | 4" | Fair |

| Individual Trees To Remain | | | |
|----------------------------|-------------|------|-----------|
| No. | Type | Size | Condition |
| 32 | Pin Oak | 18" | Good |
| 33 | Pin Oak | 18" | Good |
| 34 | Shingle Oak | 18" | Good |
| 35 | Pin Oak | 17" | Good |
| 36 | Pin Oak | 14" | Fair |
| 38 | White Pine | 15" | Good |
| 39 | Pin Oak | 17" | Fair |
| 41 | Pin Oak | 21" | Good |
| 68 | Pear | 8" | Fair |
| 69 | Pear | 8" | Fair |
| 70 | Pear | 8" | Fair |
| 71 | Pear | 8" | Fair |
| 72 | Crabapple | 2" | Fair |
| 73 | Ginkgo | 5" | Fair |
| 74 | Shingle Oak | 20" | Fair |

WOODLAND DATA
Total Project Site area - 38.28 ac. or 1,667,694 s.f.
Total Woodlands - 13.87 ac. or 603,974 s.f.
Total Individual Tree Canopy - 1.37 ac. or 59,771 s.f.
TOTAL EXISTING TREE CANOPY - 15.24 ac. or 663,745 s.f.

Total Woodlands to be removed - 22,522 s.f.
Total Individual Tree canopy to be removed - 55,984 s.f.
Total area to be removed (Max. 70%) - 78,506 s.f., or 11.83%

TREE SPECIALIST
Doug DeLong
Certified Arborist MW-4826-A
Roughly A. DeLong

TREE NOTES

Preserved woodland is delineated with bold line and gray shading.

Pre-construction meeting to be held on-site to include a presentation of tree protection measures to operators; construction supervisors; developer's representative; and city zoning inspector.

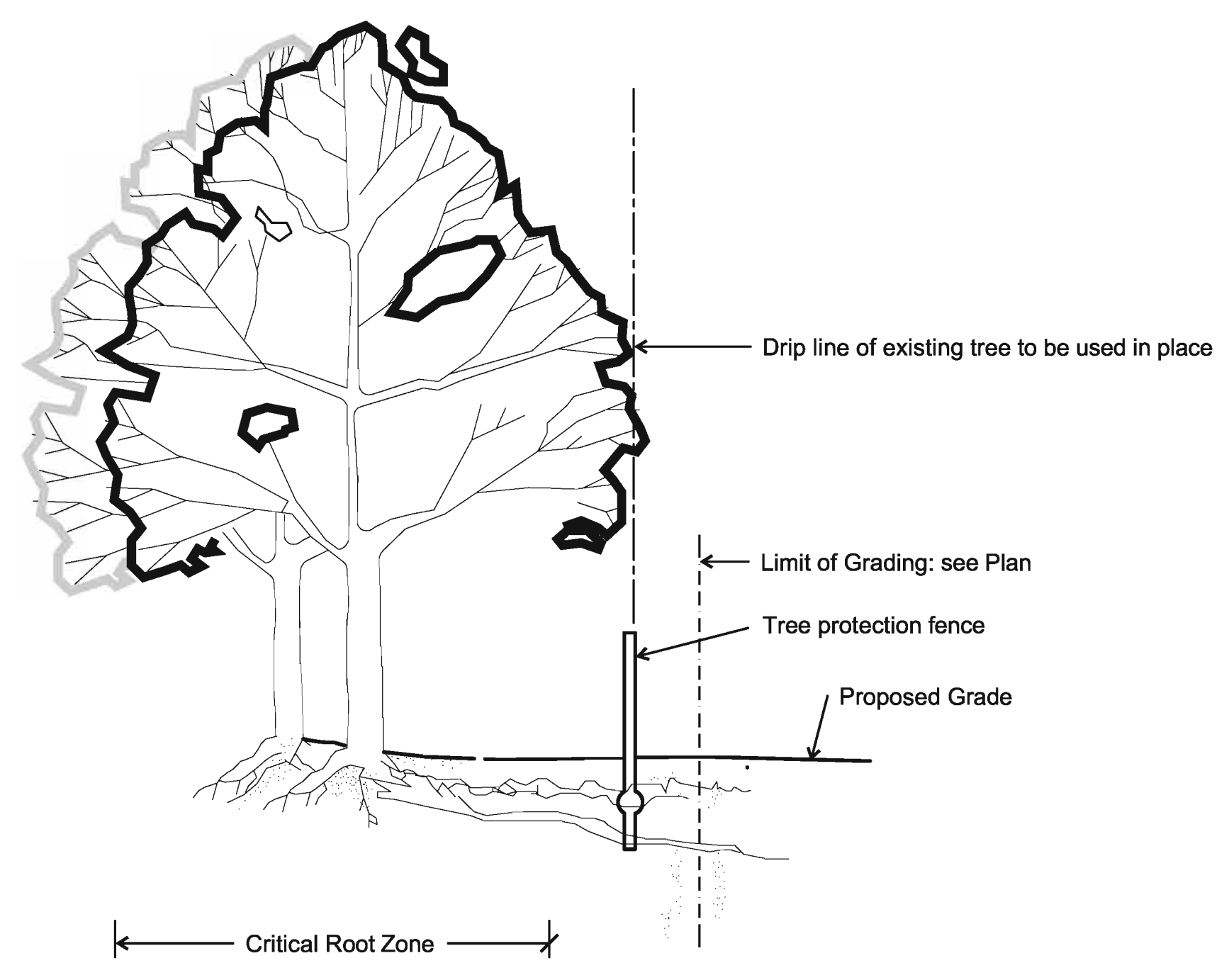
Clearing Limits to be rough staked in order to facilitate location for installation of protection fencing. No early maintenance schedule is required. No root-pruning required.
Required siltation devices to be installed along limit of disturbance line.

No clearing or grading shall begin in areas where the treatment and preservation measures have not been completed including the installation of tree protection fencing along all "Limit of Disturbance" lines shown on the map.

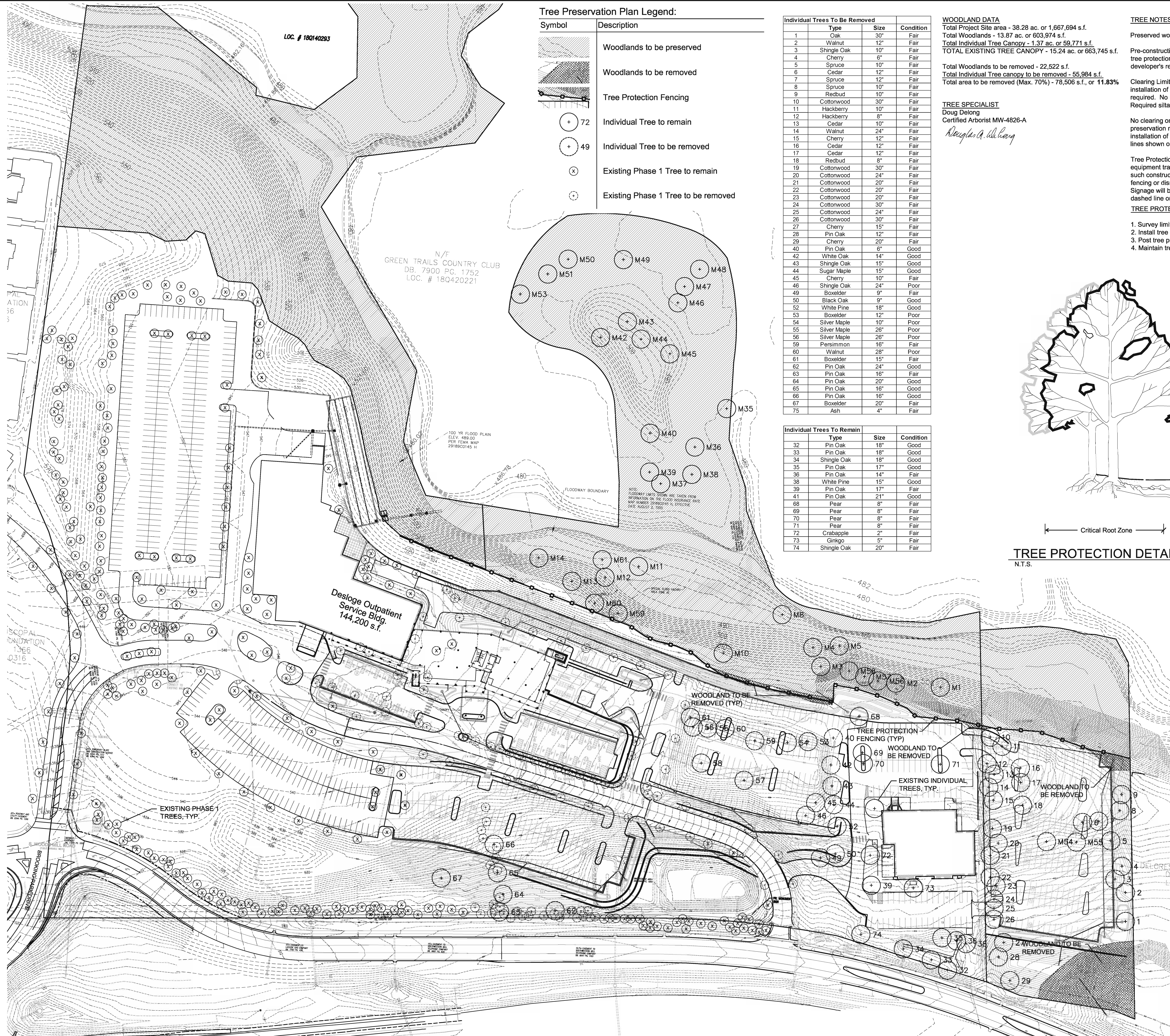
Tree Protection Fencing shall be 4-foot tall, plastic, orange fencing. No equipment traffic/parking, concrete washout, material storage or other such construction activity shall be permitted to penetrate the protection fencing or disrupt the Protected Woodland Area. Tree Protection Signage will be placed along the Protection Fencing as shown as the dashed line on the map.

TREE PROTECTION ACTION KEY SEQUENCE:

1. Survey limit of disturbance.
2. Install tree protection fencing.
3. Post tree protection signage on fence (No signs will be posted on trees).
4. Maintain tree protection area as an off-limits zone.



TREE PROTECTION DETAIL
N.T.S.



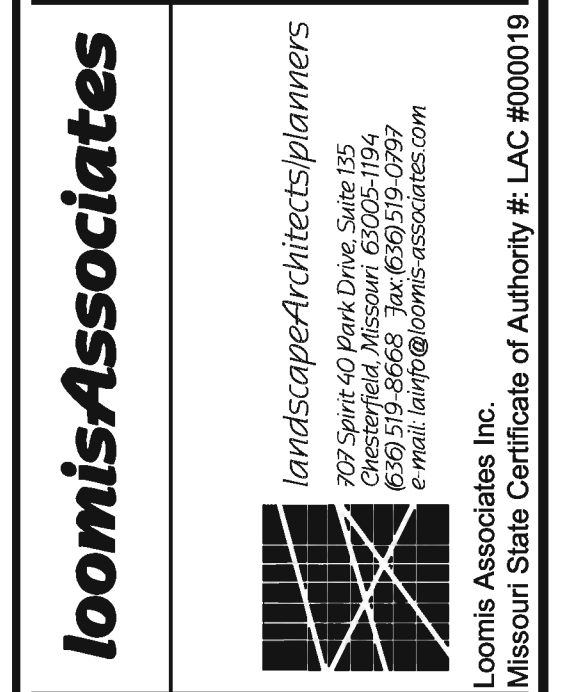
| Monarch Trees To Remain | | | |
|-------------------------|---------------|-----------|--------------|
| Tree # | Species | Rating | DBH (inches) |
| M01 | Sycamore | Good | 24 |
| M02 | Oak, White | Poor | 25.5 |
| M03 | Oak, Red | Good | 26 |
| M04 | Hackberry | Excellent | 24 |
| M05 | Sycamore | Good | 24 |
| M08 | Sycamore | Good | 34 |
| M10 | Oak, Red | Good | 24 |
| M11 | Maple, Silver | Excellent | 28 |
| M12 | Maple, Silver | Excellent | 26 |
| M13 | Oak, Black | Fair | 24 |
| M14 | Maple, Silver | Excellent | 24 |
| M35 | Maple, Silver | Excellent | 26 |
| M36 | Maple, Silver | Excellent | 28 |
| M37 | Sycamore | Good | 28 |
| M38 | Maple, Silver | Excellent | 30 |
| M39 | Sycamore | Good | 28 |
| M40 | Sycamore | Good | 35 |
| M42 | Oak, Black | Fair | 24 |
| M43 | Oak, Black | Fair | 28 |
| M44 | Oak, Black | Fair | 28 |
| M45 | Oak, Black | Fair | 31 |
| M46 | Oak, Black | Fair | 24 |
| M47 | Oak, Black | Fair | 26 |
| M48 | Cottonwood | Good | 28 |
| M49 | Sycamore | Good | 34 |
| M50 | Sycamore | Good | 34 |
| M51 | Sycamore | Good | 36 |
| M53 | Maple, Silver | Excellent | 35 |
| M56 | Red Oak | Good | 28 |
| M57 | Red Oak | Good | 22 |
| M58 | Red Oak | Good | 22 |
| M59 | Red Oak | Good | 32 |
| M60 | Red Oak | Good | 24 |
| M61 | Red Oak | Good | 30 |

| Monarch Trees To Be Removed | | | |
|-----------------------------|-----------|--------|--------------|
| Tree # | Species | Rating | DBH (inches) |
| M54 | Persimmon | Good | 24 |
| M55 | Persimmon | Good | 24 |

Revisions:

| Date | Description | No. |
|----------|---------------|-----|
| 09/15/14 | Base Revision | 1 |
| 10/08/14 | City Comments | 2 |
| 11/06/14 | Revised Plan | 3 |
| 03/10/15 | City Comments | 4 |
| 03/17/15 | City Comments | 5 |

Drawn: BAR
Checked: JAS



Sheet Title: **Tree Preservation Plan West**
Sheet No: **TPP-W**

Date: **08/01/14**
Job #: **862.010**

TREE PRESERVATION PLAN - WEST CAMPUS
SCALE 1"=60'