VII.B.

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 Section Plan

Meeting Date: October 27, 2014

From: John Boyer
Senior Planner

Location: 700 Chesterfield Parkway West

Applicant: Civil Design Inc.

Description: **Monsanto 9th ASDSP:** An Amended Site Development Section Plan, Amended Landscape Plan, Amended Tree Stand Delineation, Amended Tree Preservation Plan, Amended Lighting Plan, Architectural Elevations and Architect's Statement of Design for a 200.51 acre tract of land zoned "C-8" Planned Commercial District located on the north side of Chesterfield Pkwy West, approximately 2,000 feet east of City Center Dr.

PROPOSAL SUMMARY

The request is for construction of a 402,600 square-foot four-storied research building, 150,930 square-foot greenhouse addition and a 32,737 square-foot Headhouse addition to the 200+ acre Monsanto campus. The subject site is zoned "C-8" Planned Commercial District and is governed under the terms and conditions of City of Chesterfield Ordinance 258.

ZONING HISTORY OF SUBJECT SITE

In 1979, St. Louis County Ordinance 9002 was approved which rezoned the site from "NU" Non-Urban and "R-3" Residence District to the "C-8" Planned Commercial District. This original ordinance was amended by St. Louis County numerous times (Ordinances 10,573, 10,688, and 10,986). In March 1989, Ordinance 258 was approved by the City of Chesterfield amending previous County ordinances. Ordinance 258 is the current ordinance authority for this site.

Multiple concept and section plans have been approved previously by the City of Chesterfield and St. Louis County for this site under Pfizer and now Monsanto as these companies have grown. There are currently nine buildings approved at this site, totaling 1,520,878 square feet. Current ordinance authority limits total building square footage to 2,660,000 square feet. The addition of these proposed three structures would bring the total square footage to 2,107,145.

SURROUNDING ZONING

Direction	Land Use	Zoning
North	Vacant Agricultural	"FPNU" Flood Plain Non-Urban District
South	Multi-Family Residences	"R-6A/PEU" Residence/Planned Environmental Unit
East	Residential	"NU" Non-Urban District
West	Commercial/Hotel	"PC" Planned Commercial District

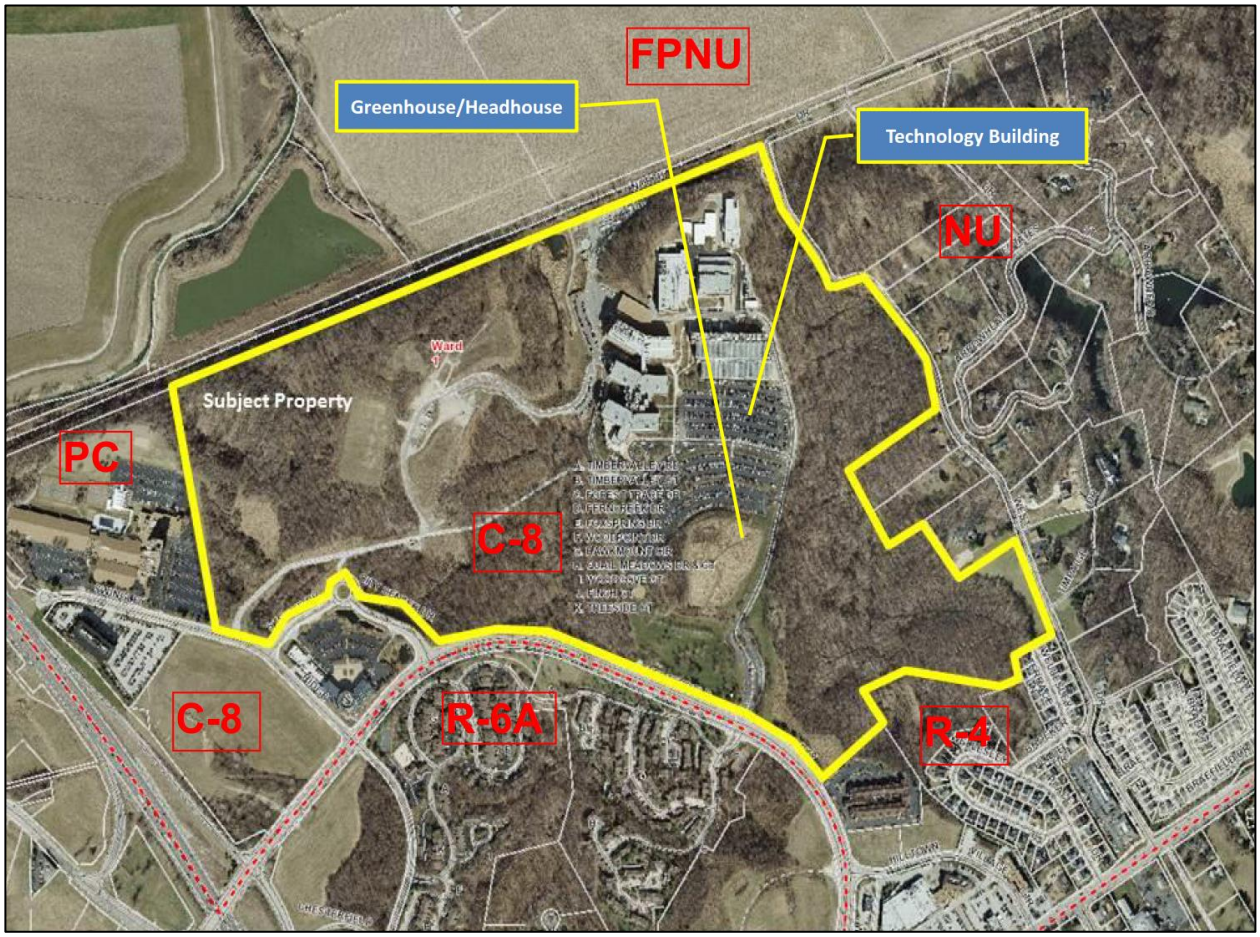


Figure 1: Site Photo with Surrounding Zoning

STAFF ANALYSIS

Zoning

The subject site is currently zoned "C-8" Planned Commercial District under the terms and conditions of City of Chesterfield Ordinance Number #258. The submittal was reviewed against the requirements of Ordinance Number #258 and all applicable Zoning Ordinance requirements and found compliant with all City of Chesterfield requirements.

Site Relationship

The proposed structures are planned to be situated interior to the 200+ acre tract. The Greenhouse/Headhouse is planned directly over and attached to the previously approved parking garage, whereas the Technology Building is planned north of the parking garage and planned

Greenhouse/Headhouse. The site has a great deal of topographical relief throughout the site with few flat areas, typical of properties along river bluffs. Specifically to the area of proposed construction, the site "falls-off" as one moves from south to north towards the river bottoms which essentially conceals the proposed structures from public views. The below Figure 2 provides a rendering of the proposal on how these structures nestle into the adjacent topography. Left of the proposed Headhouse/Greenhouse, represented below in the rendering, is the highpoint for the site.

Figure 2: Conceptual Construction of Proposed Buildings

Traffic Access & Circulation

No changes in access points are proposed associated with these improvements. All access will utilize existing site entrance and internal drives. Additional sidewalk extensions connecting to internal pedestrian points are planned.

Parking

A total of 161 surface parking spaces are planned with this submittal. The proposed Technology building is being placed upon existing 488 surface parking spaces which are planned to be removed. A majority of the parking for these structures is provided within the recently approved parking garage which was approved in 2013 and will provide 1,727 parking spaces. Planned parking is in compliance with Monsanto's current ordinance authority.

Architectural Elevations

Above in Figure 2, the three proposed structures can be seen in context with the site. As mentioned earlier on page 3, the topography of the construction site falls off as you move north, or from left to right on the rendering. The most southern planned structure, the Headhouse, is a 32,737 square-foot one-story structure which is, as described by the Design Team, "nestled into the hillside" to limit the structure's visual impact. In the above Figure 2 just to the left of the Headhouse is a landscaped hill which provides buffering of this structure to the south, also the highpoint for the site. This structure has a predominantly brick façade matching the existing buildings within the campus.

The Greenhouse is directly north of the Headhouse and is situated partially above the recently approved parking garage structure. The 150,930 square-foot structure is comprised of mostly tilt-up concrete panels

matching the parking garage underneath and glass which will incorporate the greenhouse portion of the roof. The Greenhouse, which is built on top of the approved parking garage, is planned to blend into the same hillside as the Headhouse. While the site's grade is falling away at this point, the Greenhouse is maintaining a similar height as the Headhouse. By nestling these structures into the hillside, Monsanto is concealing the bulk of these structures and building within the context of the site utilizing the existing topography.

The last structure planned associated with this Amended Site Development Section Plan is the 402,600 square-foot four-story building known as the Technology Building located directly north of the Greenhouse/parking garage. This structure is planned where an existing surface parking lot is currently located. Building materials are a mix of brick and glass, with the rear or north portion of the building being predominantly brick and the southern section glass. Per the Architectural Design Statement, this transition in design/materials is to shift from the existing campus to the north, which is brick, to a more modern glass structure on the southern frontage of the structure to architecturally indicate the modern image of Monsanto. Height of the Technology building is similar to the existing structures within the facility and visually appears the same as the Greenhouse to the south.

All proposed structures within this Amended Site Development Section Plan will be connected via enclosed walkways, which can be viewed on the provided elevations and renderings as well as an example below on Figure 3. These connections facilitate coordination and physically link these buildings to the existing campus.

Figure 3: Rendering for the Technology Building showing walkway connection with approved Parking Garage

Elevations associated with this planned development were reviewed by the Architectural Review Board (ARB) on July 10, 2014. ARB recommended for approval 6-0 to the Planning Commission with a condition to provide a sight line study of mechanical equipment planned for the Headhouse on the south elevation. This study has been reviewed by Staff associated with this submittal. Per the Study, no mechanical units can be seen from public exposures due to the vegetation on site, distance to public roads, and more importantly the topography of the site adjacent to the proposed structures. All the planned structures are proposed

interior to the site with the closest being the Headhouse, approximately 750 feet north of Chesterfield Parkway, placed predominantly behind a vegetated hill concealing its view from public frontages as well as most sight lines interior to the site. Associated with this submittal, the Sight Line Study has also been included for Planning Commission review.

Landscaping and Screening

Landscaping is planned in association with the proposed development as required by the City of Chesterfield Unified Development Code. In addition to the proposed landscaping, existing woodlands around the perimeter of the site are not to be disturbed insulating this site from its neighbors and limiting public view points.

Lighting

A combination of pole standards, accent pole lighting, building lighting via wall packs and recessed lighting is planned associated with the project. All lighting is compliant with foot-candle standards of the UDC. The accent pole lighting, listed as SA lights, is a 12 foot accent light which will provide area lighting around the internal drive and plaza areas adjacent to the Technology Building. According to the detail sheets provided on this light, the top and bottom of the fixture are shielded; however, light will extend outward. This light is similar to a bollard light; however, the height of this light is taller than the standard 4 foot bollard light. A detail of this light can be seen to the right in Figure 4. While all site lighting is included for review, accent lighting is ultimately required to be approved by the Planning Commission as directed by the City Lighting standards. All proposed lighting fully complies with City of Chesterfield requirements.

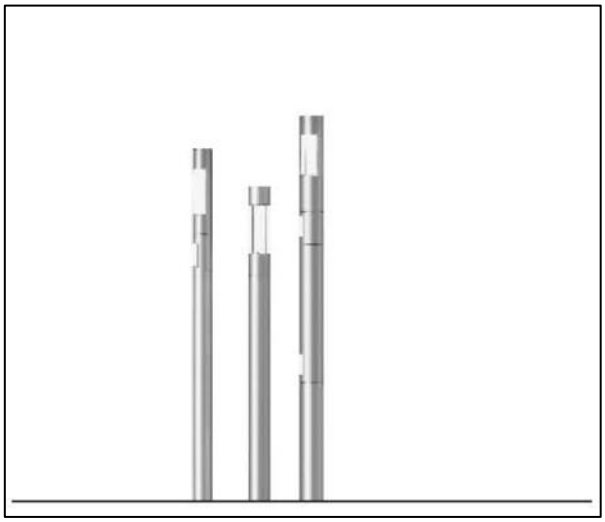


Figure 4: SA Accent Pole Light

Associated with the proposed Greenhouse, the Applicant has identified that lighting shades are planned to prevent horizontal and vertical light leaving the structure in the evening. As described, these shades act similarly to cut-off optics on a street lamp.

DEPARTMENT INPUT

Staff has reviewed the Amended Site Development Section Plan, Amended Landscape Plan, Amended Tree Stand Delineation, Amended Tree Preservation Plan, Amended Lighting Plan, Architectural Elevations and Architect's Statement of Design. Staff has found the application to be in conformance with the site specific ordinance, Comprehensive Plan and all other applicable City of Chesterfield requirements. Staff recommends approval of the proposal as presented.

MOTION

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

1) "I move to approve (or deny) the Amended Site Development Section Plan, Amended Landscape Plan, Tree Stand Delineation, Amended Tree Preservation Plan, Amended Lighting Plan, Architectural Elevations, and Architect's Statement of Design for Monsanto 9th ASDSP."

2) "I move to approve the Amended Site Development Section Plan, Amended Landscape Plan, Tree Stand Delineation, Amended Tree Preservation Plan, Amended Lighting Plan, Architectural Elevations, and Architect's Statement of Design for Monsanto 9th ASDSP…" (Conditions may be added, eliminated, altered or modified)

CC: Aimee Nassif, Planning and Development Services Director

Attachments: Architect's Statement of Design
Amended Site Development Section Plan
Amended Landscape Plan
Amended Tree Preservation Plan
Tree Stand Delineation
Architectural Elevations
Amended Lighting Plan
Sight Line Study

9TH AMENDED SITE DEVELOPMENT SECTION PLAN

NEW TECHNOLOGY BUILDING, GREENHOUSE, AND HEADHOUSE

MONSANTO

MONSANTO COMPANY
CV CAMPUS
700 CHESTERFIELD PARKWAY WEST
CHESTERFIELD, MO 63017

CONSULTANT

CIVIL DESIGN, INC.
1552 S. 7TH STREET
ST. LOUIS, MO 63104
PHONE 314-863-5570
FAX: 314-863-5578

APPLICANT

MONSANTO COMPANY
700 CHESTERFIELD PARKWAY WEST
CHESTERFIELD, MO
63017

OWNERS OF RECORD

MONSANTO COMPANY
800 NORTH LINDBERGH BLVD.
ST. LOUIS, MO
63167

PROJECT CONTACTS

CONTACT TYPE:	COMPANY NAME:	CONTACT PHONE:	STREET ADDRESS:	
CITY/ZONING:	CITY OF CHESTERFIELD	(636) 537-4000	690 CHESTERFIELD PARKWAY WEST	CHESTERFIELD, MO 63017
STORM/SANITARY:	METROPOLITAN ST. LOUIS SEWER DISTRICT (MSD)	(314) 768-6200	2350 MARKET ST.	ST. LOUIS, MO 63103
ELECTRIC:	AMEREN MISSOURI	(866) 992-6619	1901 CHOUTEAU AVE.	ST. LOUIS, MO 63166
NATURAL GAS:	LACLEDE GAS COMPANY	(314) 621-6960	720 OLIVE ST.	ST LOUIS, MO 63101
WATER:	MISSOURI AMERICAN WATER COMPANY	(866) 430-0820	727 CRAIG RD.	ST. LOUIS, MO 63141

LOT DATA

	REQUIRED/PERMITTED	PROVIDED
ZONING	C-8/PLANNED COMMERCIAL	
REQ. MINIMUM LOT AREA (ACRES)	1.0	200.51
EXISTING LOT AREA (ACRES)	200.51	
MIN. FRONT YARD SETBACK	50'	510' (PARKING GARAGE)
MIN. SIDE YARD SETBACK	200'	223' (MM)
MIN. REAR YARD SETBACK	50'	230' (MM)
MAX. BUILDING COVERAGE (BUILDING FOOTPRINTS)	25%	9.1% (APPROX. 795,000 S.F.)
MAX. IMPERVIOUS COVERAGE	45%	18.6%
% OPENSPACE	30%	72.3%
MAX. BUILDING HEIGHT	660' MSL	622'-2" MSL
FIRE DISTRICT	MONARCH FIRE PROTECTION	
SCHOOL DISTRICT	PARKWAY SCHOOL DISTRICT	

EMPLOYEE CALCULATIONS

EXISTING CAMPUS EMPLOYEES	1515
ADDITIONAL EMPLOYEES DUE TO IMPROVEMENTS	660
TOTAL CAMPUS EMPLOYEES AFTER IMPROVEMENTS	2175

PARKING CALCULATIONS

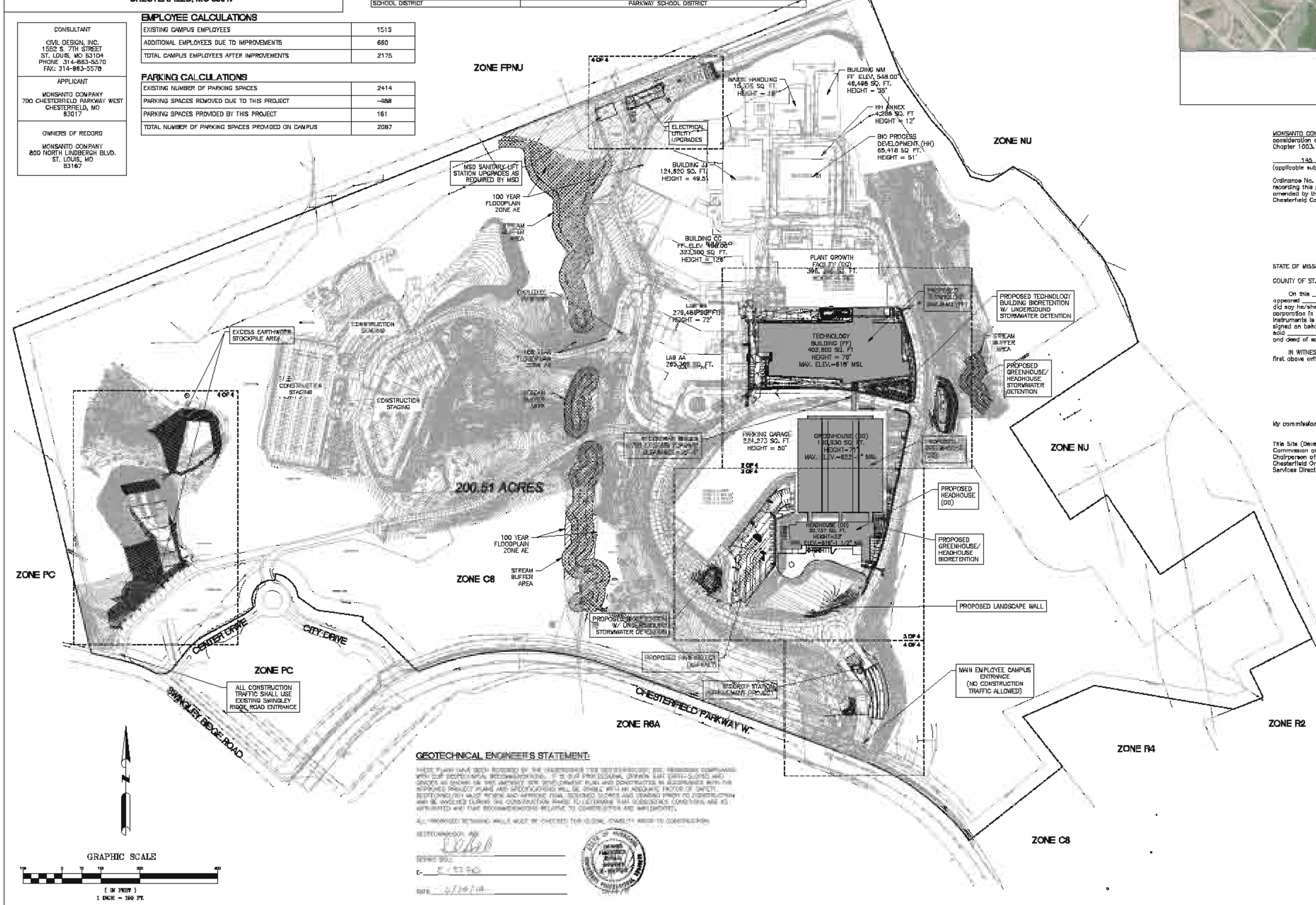
EXISTING NUMBER OF PARKING SPACES	2414
PARKING SPACES REMOVED DUE TO THIS PROJECT	-488
PARKING SPACES PROVIDED BY THIS PROJECT	161
TOTAL NUMBER OF PARKING SPACES PROVIDED ON CAMPUS	2087

GENERAL SITE NOTES

1. ALL ELEVATIONS ARE BASED ON ST LOUIS COUNTY BENCHMARK SYSTEM AND ARE REFERENCED TO BM 12-162: 595.81' - SQUARE ON THE CENTER OF NOSE ISLAND, 30' NORTH OF THE CENTERLINE OF SWINGLEY RIDGE DRIVE AND 5' EAST OF THE CENTERLINE OF CHESTERFIELD VILLAGE PARKWAY.
2. THE MAJORITY OF THIS PROPERTY LIES WITHIN ZONE X (500 YEAR FLOOD PLAIN). ZONE AE (100-YEAR BASE FLOOD ELEVATIONS) DELINEATED PER THE FLOOD INSURANCE RATE MAPS, COMMUNITY PANEL NO. 29189C0145 H, 145 OF 420 AND COMMUNITY PANEL NO. 29189C0140 H, 140 OF 420, EFFECTIVE DATE AUGUST 2, 1995 (LOMR-F ISSUED BY FEMA OCTOBER 13, 2004)
3. THIS PROPERTY LIES WITHIN THE FOLLOWING CLASSIFICATIONS –
   HYDROLOGIC SOIL GROUPS: "C"
   SLOPE GRADIENT: 15 PERCENT OR GREATER
   SOIL MAP: MENFRO SILT LOAM, 20 TO 45 PERCENT SLOPES (2F) AND
   MENFRO SILT LOAM, 9 TO 14 PERCENT SLOPES (2D)
   DRAINAGE CLASS: WELL DRAINED
4. CONSTRUCTION ACCESS FOR THE PROJECT WILL BE THROUGH THE SWINGLEY RIDGE ACCESS ROAD.
5. WASHDOWN AREA WILL BE PROVIDED FOR THIS PROJECT AREA.
6. ALL NEW UTILITY LINES SHALL BE LOCATED UNDERGROUND.
7. ALL PROPOSED BUILDING SIGNAGE WILL REQUIRE SEPARATE PERMIT.

PROJECT LOCATION MAP

NOT TO SCALE



GEOTECHNICAL ENGINEERS STATEMENT:

MONSANTO COMPANY, the owner of the property shown on this plan for and in consideration of being granted a permit to develop property under the provisions of Chapter 1003.

145 (applicable subsection), "C-8" (present zoning) of the City of Chesterfield

Ordinance No. 624, do hereby agree and declare that said property from the date of recording this plan shall be developed only as shown thereon, unless said plan is amended by the Planning Commission, or voided or vacated by order of the City of Chesterfield Council.

(Signature) ____________________

____
Print Name

STATE OF MISSOURI)
) SS.
COUNTY OF ST. LOUIS)

On this ______day of ____________________ A.D., 2014, before me personally appeared ____________________ to me known, who, being by me sworn in, did say he/she is the ____________________, of the MONSANTO COMPANY a corporation in the State of Missouri, and that the seal affixed to the foregoing instruments is the corporate seal of said corporation, and that said instrument was signed on behalf of said corporation by authority of its Board of Directors, and that said ____________________ acknowledged said instrument to be the free act and deed of said corporation.

IN WITNESS WHEREOF, I have signed and sealed the foregoing the day and year first above written.

____
Notary Public

____
Print Name

My commission expires:__________.

This Site (Development) Plan was approved by the City of Chesterfield Planning Commission and duly verified on the _____day of ______________ 2014, by the Chairperson of said Commission, authorizing the recording of this Site Plan pursuant to Chesterfield Ordinance Number 200, as attested to by the Planning and Development Services Director and the City Clerk.

____
Aimee Nassif,
Planning and Development Services Director

____
Vickie Hass
City Clerk

CDI CIVIL DESIGN, INC.
1552 South 7th Street
St. Louis, MO 63104
314.863.5570
WBE / DBE
Missouri State Certificate of Authority

Stamp

10-08-2014

MONSANTO

Site: CV	Monsanto Project No.: ECZ00018	Sheet Number: 1 OF 4

9th AMENDED SITE DEVELOPMENT SECTION PLAN OVERALL SITE PLAN

Drawn By	DATE	Checked By	DATE	Approved By	DATE
W. THORPE		N. OSMAN		J. PAUK	

SIZE	Drawing Name	REV
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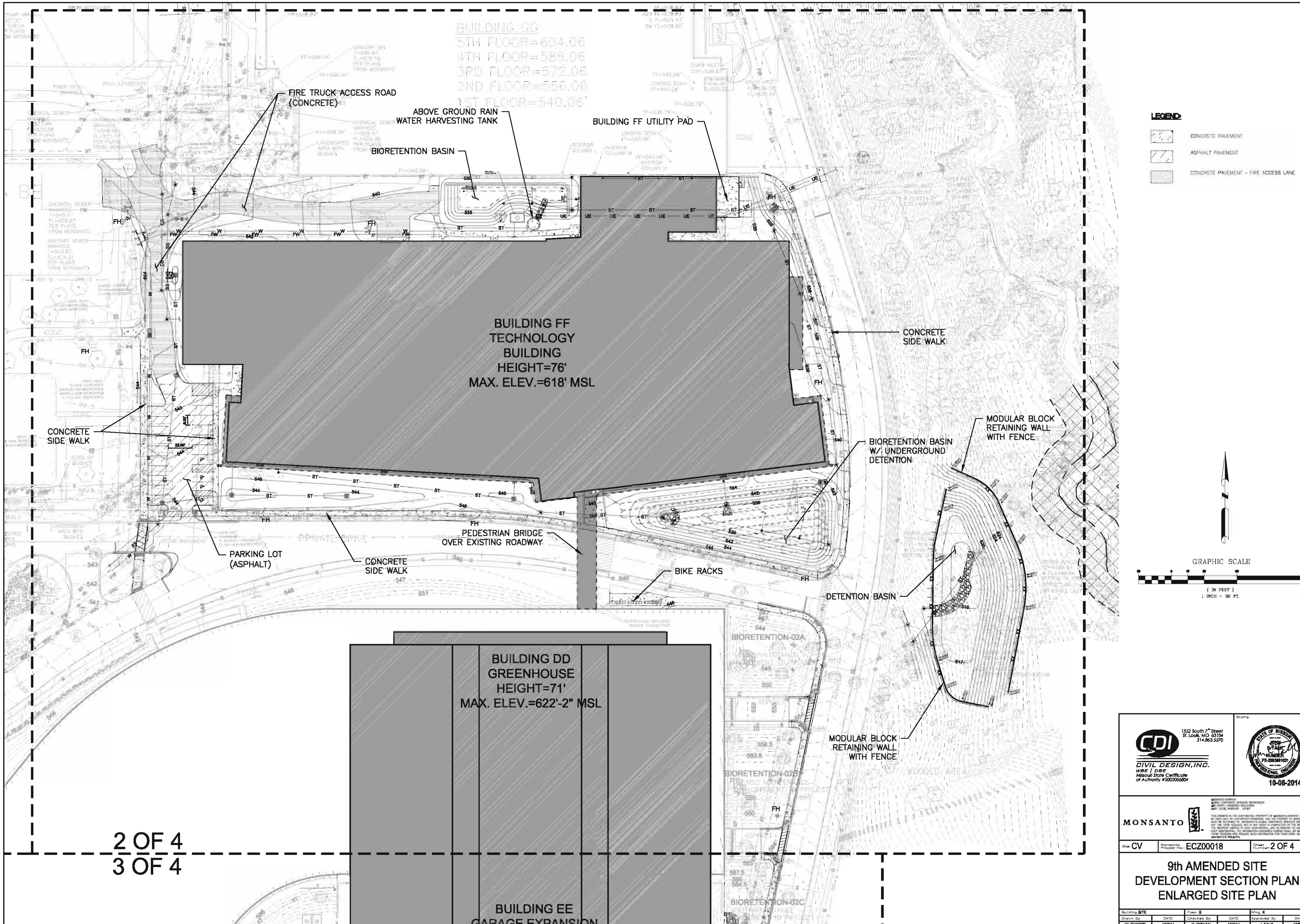

CDI CIVIL DESIGN, INC.
1552 South 7th Street
St. Louis, MO 63104
314.863.5570
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Missouri State Certificate of Authority #2002006804

Stamp
STATE OF MISSOURI — JOHN E. FALK — NUMBER PE-2003001031 — PROFESSIONAL ENGINEER
10-08-2014

MONSANTO

Site: CV	Monsanto Project No.: ECZ00018	Sheet Number: 2 OF 4

9th AMENDED SITE DEVELOPMENT SECTION PLAN ENLARGED SITE PLAN

Building SITE		Floor S		Wing X	
Drawn By	DATE	Checked By	DATE	Approved By	DATE
W. THORPE	10/7/14	N. COWAN	10/7/14	J. FALK	10/8/14
Consultant CIVIL DESIGN, INC.		Consultant Project No. R1000		SCALE 1" = 30'	

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REV	By	Description
-	WET / Date 10/8/14	ISSUED FOR APPROVAL

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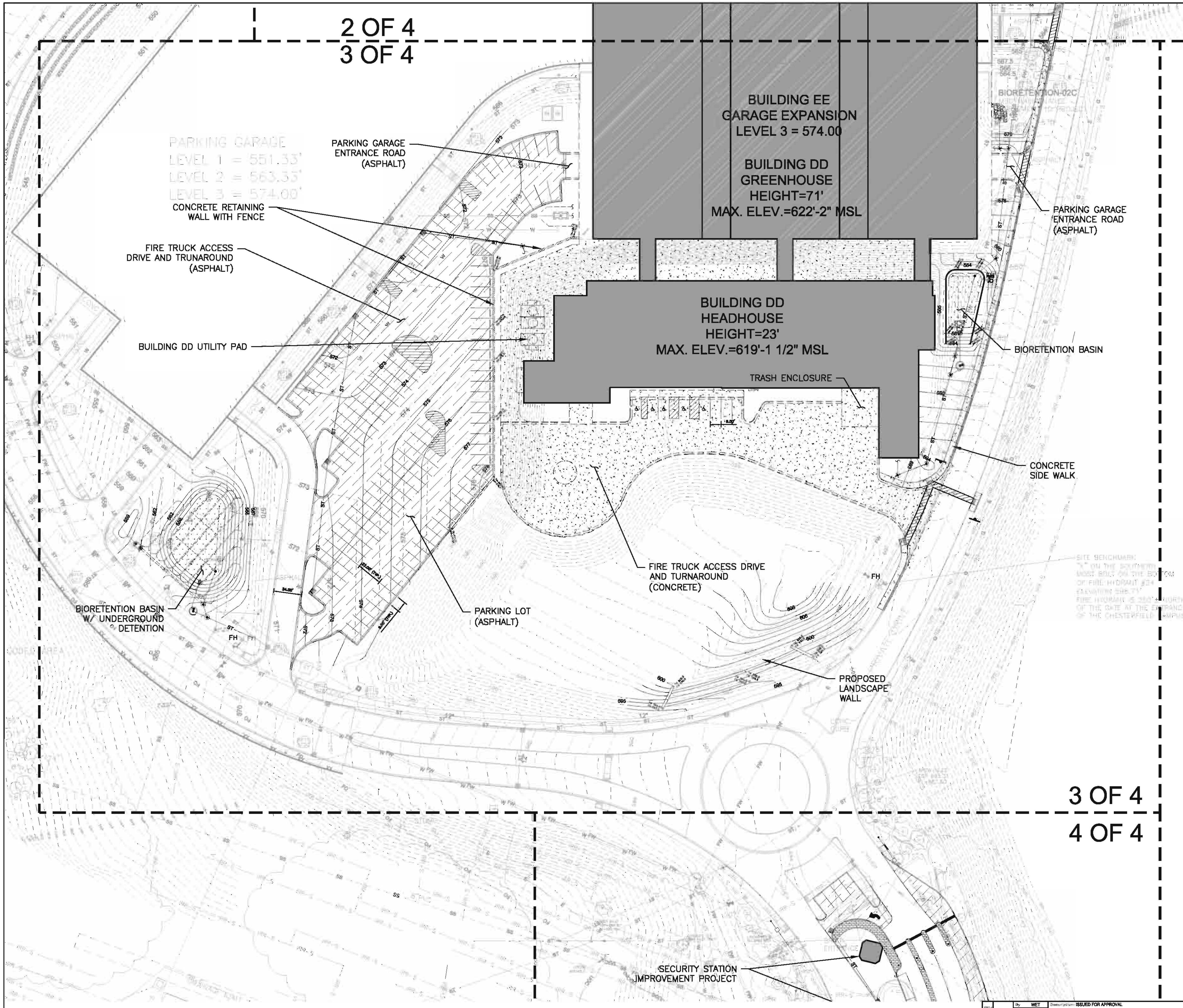

1552 South 7th Street
St. Louis, MO 63104
314.863.5570

CIVIL DESIGN, INC.
WBE | DBE
Missouri State Certificate of Authority #2002006804

Stamp: STATE OF MISSOURI — JOHN E. FALK — NUMBER PE-2003001031 — PROFESSIONAL ENGINEER — 10-08-2014

MONSANTO

Site: CV	Monsanto Project No.: ECZ00018	Sheet Number: 3 OF 4

9th AMENDED SITE DEVELOPMENT SECTION PLAN ENLARGED SITE PLAN

Building SITE		Floor S		Wing X	
Drawn By	DATE	Checked By	DATE	Approved By	DATE
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-	Date 10/8/14	

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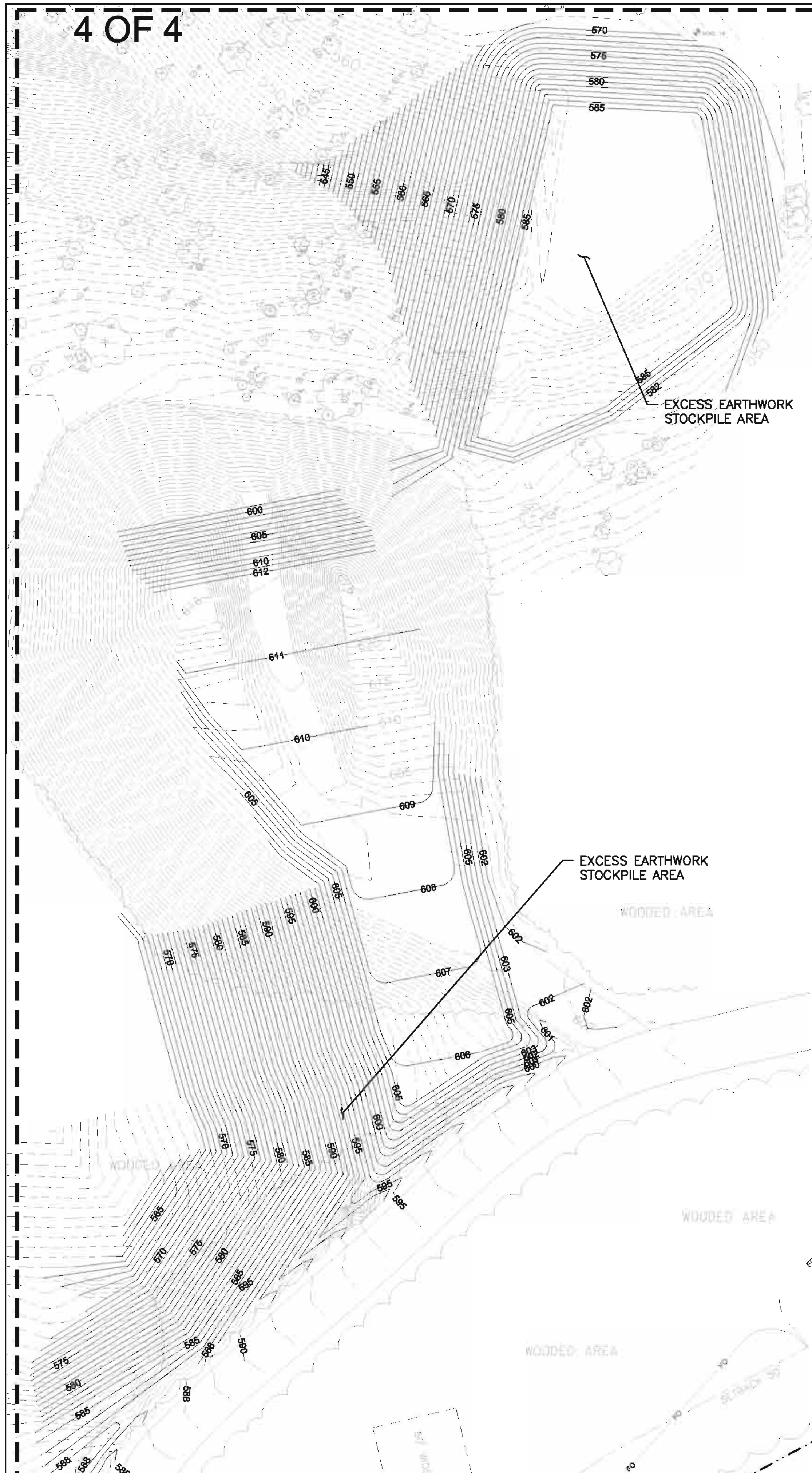

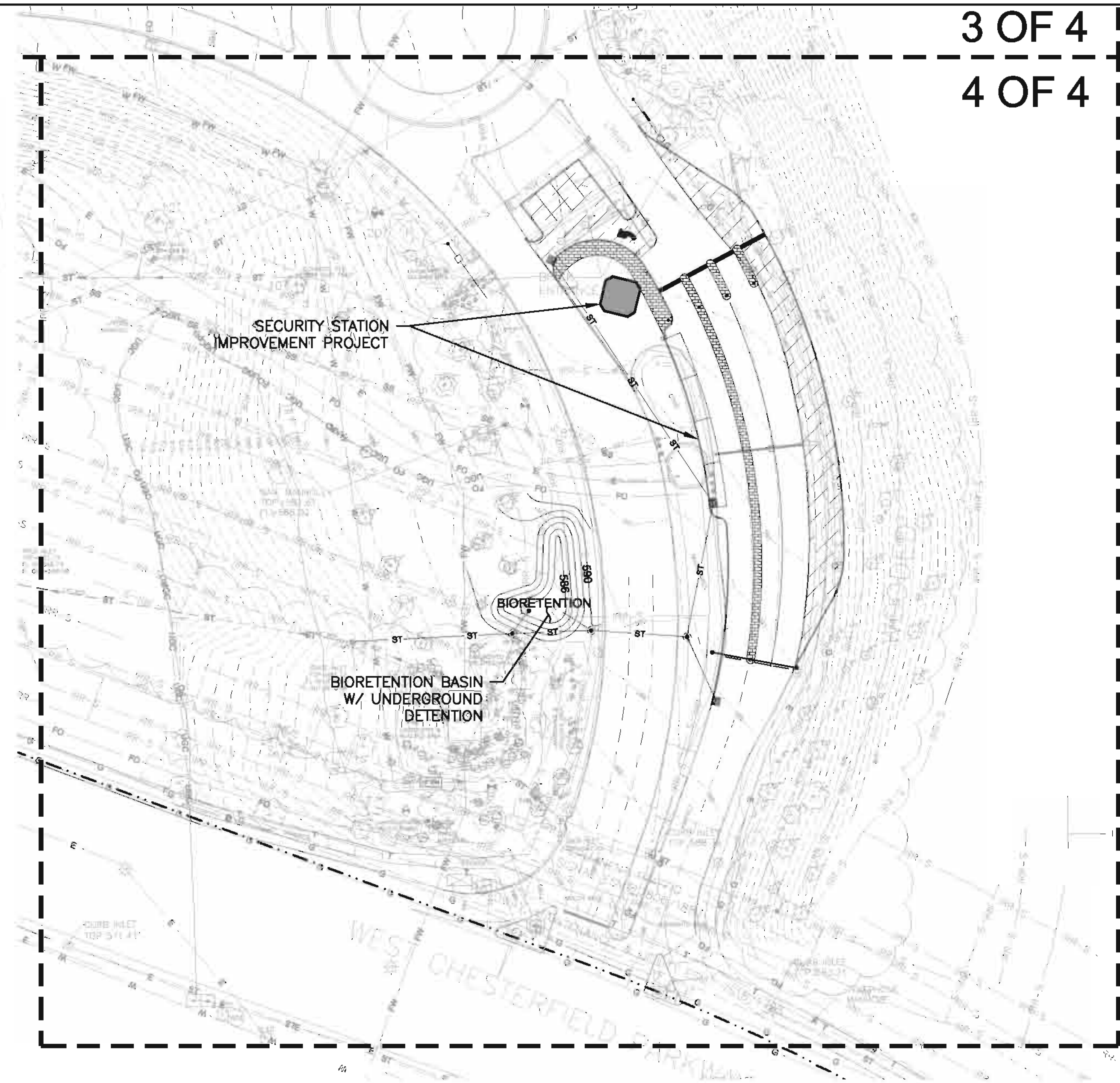

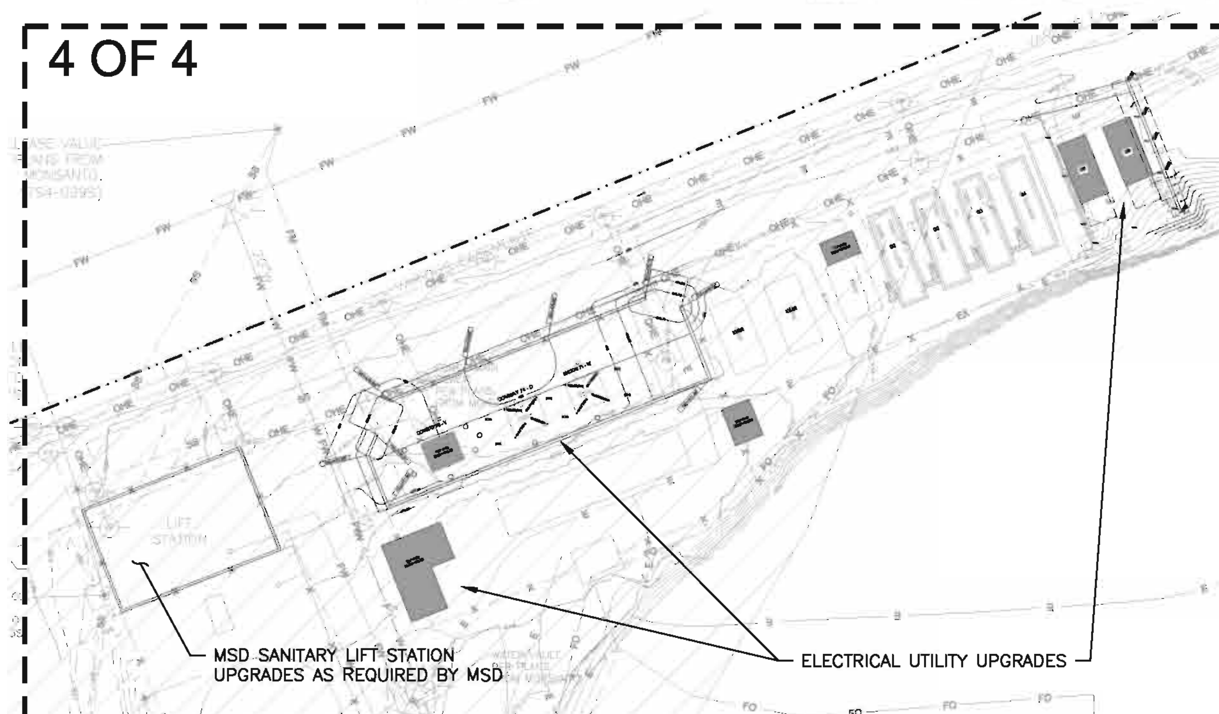

GRAPHIC SCALE

(IN FEET)
1 INCH = 30 FT.

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Missouri State Certificate of Authority #2002006804
1552 South 7th Street
St. Louis, MO 63104
314.863.5570

Stamp: STATE OF MISSOURI — JOHN E. FALK — NUMBER PE-2003001031 — PROFESSIONAL ENGINEER
10-08-2014

MONSANTO

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Building SITE		Floor S		Wing X	
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Consultant CIVIL DESIGN, INC.		Consultant Project No. R1000		SCALE 1" = 30'	

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-	WET / Date 10/8/14	ISSUED FOR APPROVAL

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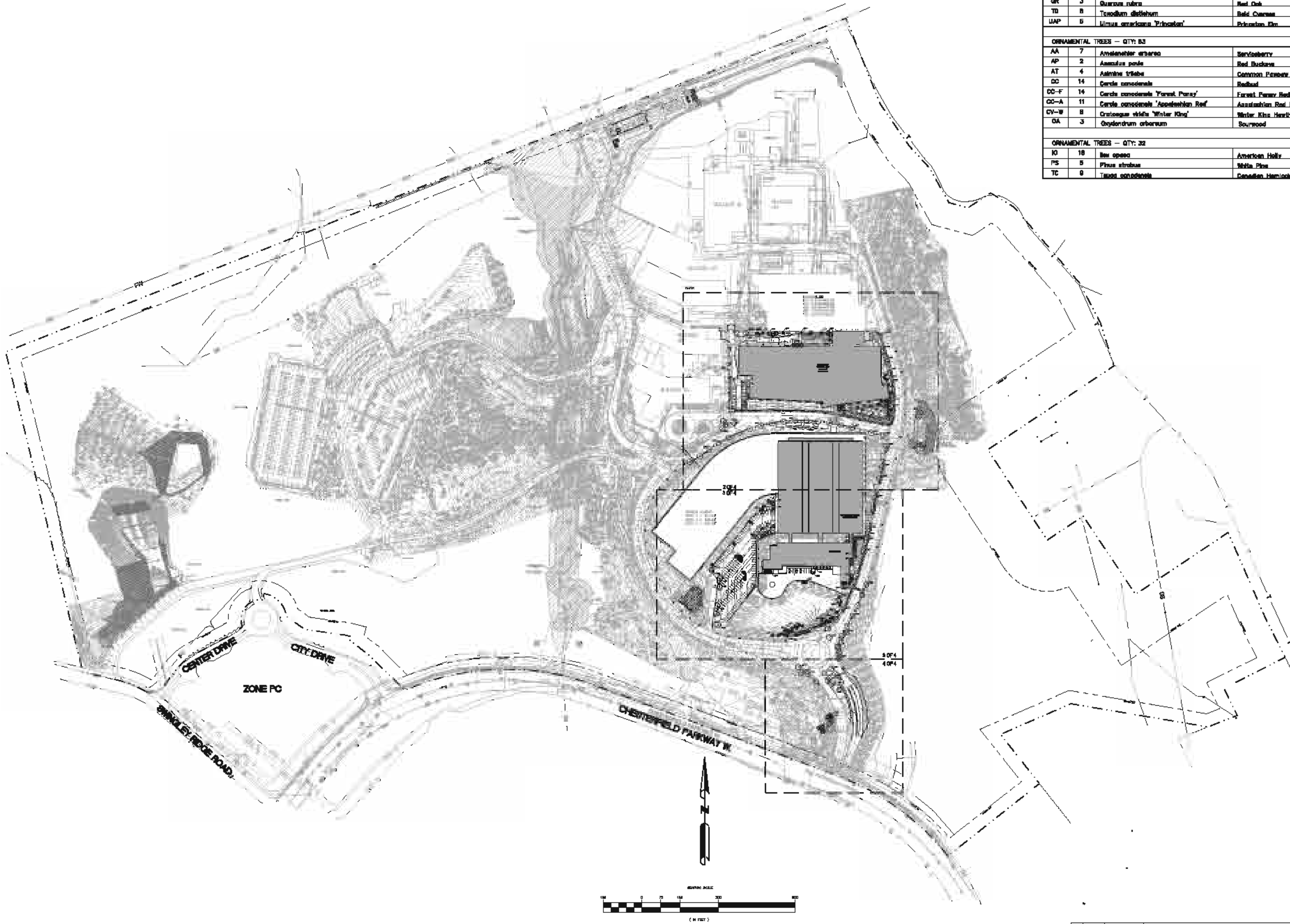
PLANT SCHEDULE ASDSP #9

SYMBOL	QTY	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	COMMENTS
CANOPY TREES — QTY: 63						
ARB	4	Acer rubrum 'Bowhall'	Bowhall Maple	2 1/2" cal.	AS SHOWN	
ARO	5	Acer rubrum 'October Glory'	October Glory Red Maple	2 1/2" cal.	AS SHOWN	
ASF	8	Acer saccharum 'Fall Fiesta'	Fall Fiesta Sugar Maple	2 1/2" cal.	AS SHOWN	
ASG	10	Acer saccharum 'Green Mountain'	Green Mountain Sugar Maple	2 1/2" cal.	AS SHOWN	
CK	4	Cladrastis kentukea	Yellowwood	2 1/2" cal.	AS SHOWN	
GT-S	3	Gleditsia triacanthos inermis 'Skyline'	Skyline Thornless Honeylocust	2 1/2" cal.	AS SHOWN	
GD	8	Gymnocladus dioicus	Kentucky Coffee Tree	2 1/2" cal.	AS SHOWN	
NS	11	Nyssa sylvatica	Black Gum	2 1/2" cal.	AS SHOWN	
QM	2	Quercus muehlenbergii	Chinkapin Oak	2 1/2" cal.	AS SHOWN	
QB	4	Quercus bicolor	Swamp White Oak	2 1/2" cal.	AS SHOWN	
QR	3	Quercus rubra	Red Oak	2 1/2" cal.	AS SHOWN	
TD	8	Taxodium distichum	Bald Cypress	2 1/2" cal.	AS SHOWN	
UAP	5	Ulmus americana 'Princeton'	Princeton Elm	2 1/2" cal.	AS SHOWN	
ORNAMENTAL TREES — QTY: 63						
AA	7	Amelanchier arborea	Serviceberry	2 1/2" cal.	AS SHOWN	
AP	2	Aesculus pavia	Red Buckeye	2 1/2" cal.	AS SHOWN	
AT	4	Asimina triloba	Common Pawpaw	2 1/2" cal.	AS SHOWN	
CC	14	Cercis canadensis	Redbud	2 1/2" cal.	AS SHOWN	
CC-F	14	Cercis canadensis 'Forest Pansy'	Forest Pansy Redbud	2 1/2" cal.	AS SHOWN	
CC-A	11	Cercis canadensis 'Appalachian Red'	Appalachian Red Redbud	2 1/2" cal.	AS SHOWN	
CV-W	8	Crataegus viridis 'Winter King'	Winter King Hawthorn	2 1/2" cal.	AS SHOWN	
OA	3	Oxydendrum arboreum	Sourwood	2 1/2" cal.	AS SHOWN	
ORNAMENTAL TREES — QTY: 32						
IO	18	Ilex opaca	American Holly	6' high	AS SHOWN	
PS	5	Pinus strobus	White Pine	6' high	AS SHOWN	
TC	9	Tsuga canadensis	Canadian Hemlock	6' high	AS SHOWN	



PLANT LEGEND

- CANOPY TREES
- ORNAMENTAL TREES
- EVERGREEN & CONIFER TREES

LIGHT LEGEND

- SA - HESS LIGHT STANDARDS
- SB - GULLWING LIGHT STANDARDS

CIVIL DESIGN, INC.
WBE / DBE
Missouri State Certificate of Authority

Key Plan

Stamp: STATE OF MISSOURI — SUE A. WIEST — LANDSCAPE ARCHITECT

MONSANTO

Site CV | Monsanto Project No.: | Sheet Number: 1 OF 4

9th AMENDED SITE DEVELOPMENT SECTION PLAN

Building -		Floor -		Wing -	
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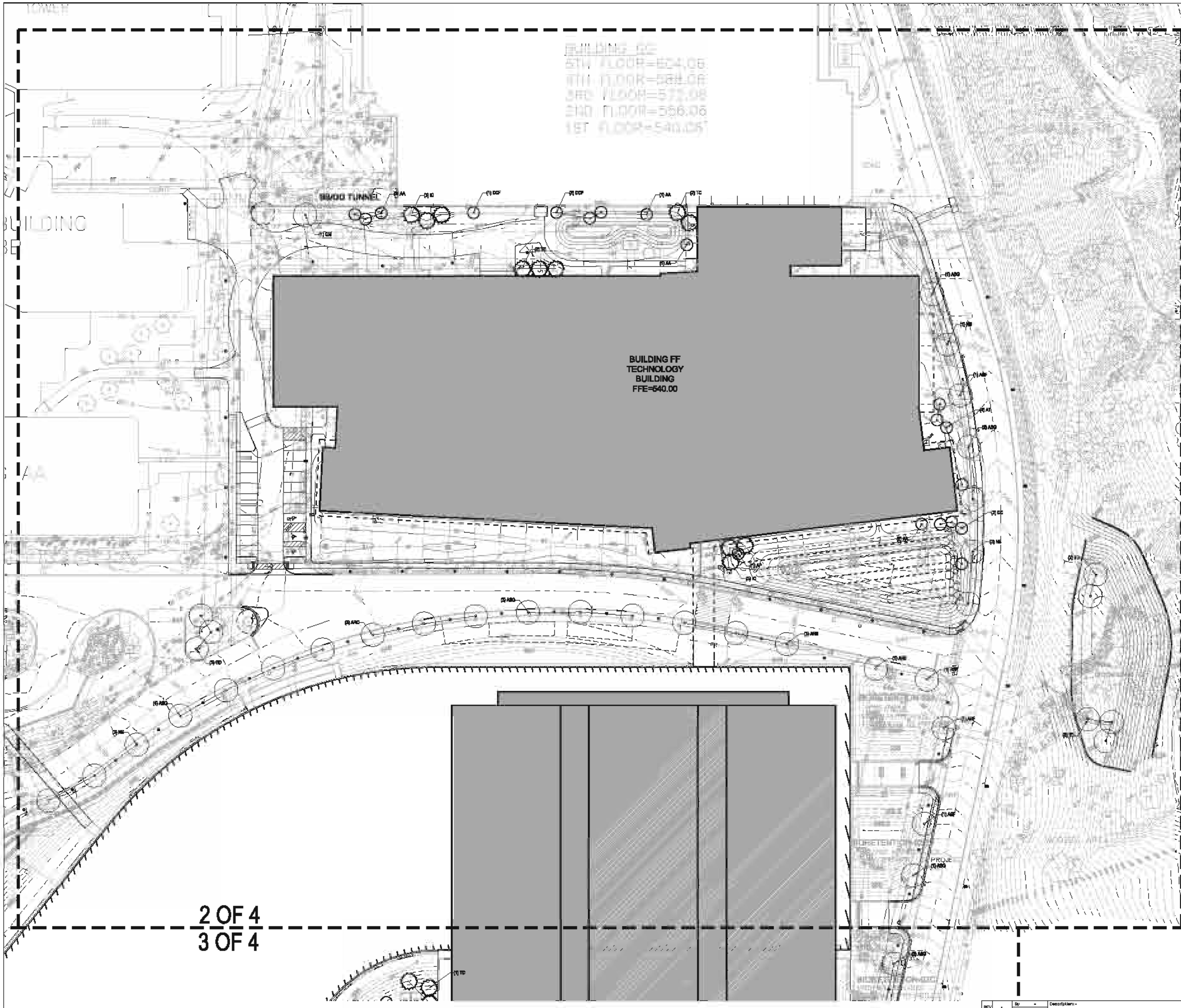

CIVIL DESIGN, INC.

Key Plan

Stamp: STATE OF MISSOURI — SUE A. WIEST — LANDSCAPE ARCHITECT

MONSANTO

Site: CV | Monsanto Project No.: | Sheet Number: 2 OF 4

9th AMENDED SITE DEVELOPMENT SECTION PLAN

Building -		Floor -		Wing -	
Drawn By	DATE	Checked By	DATE	Approved By	DATE
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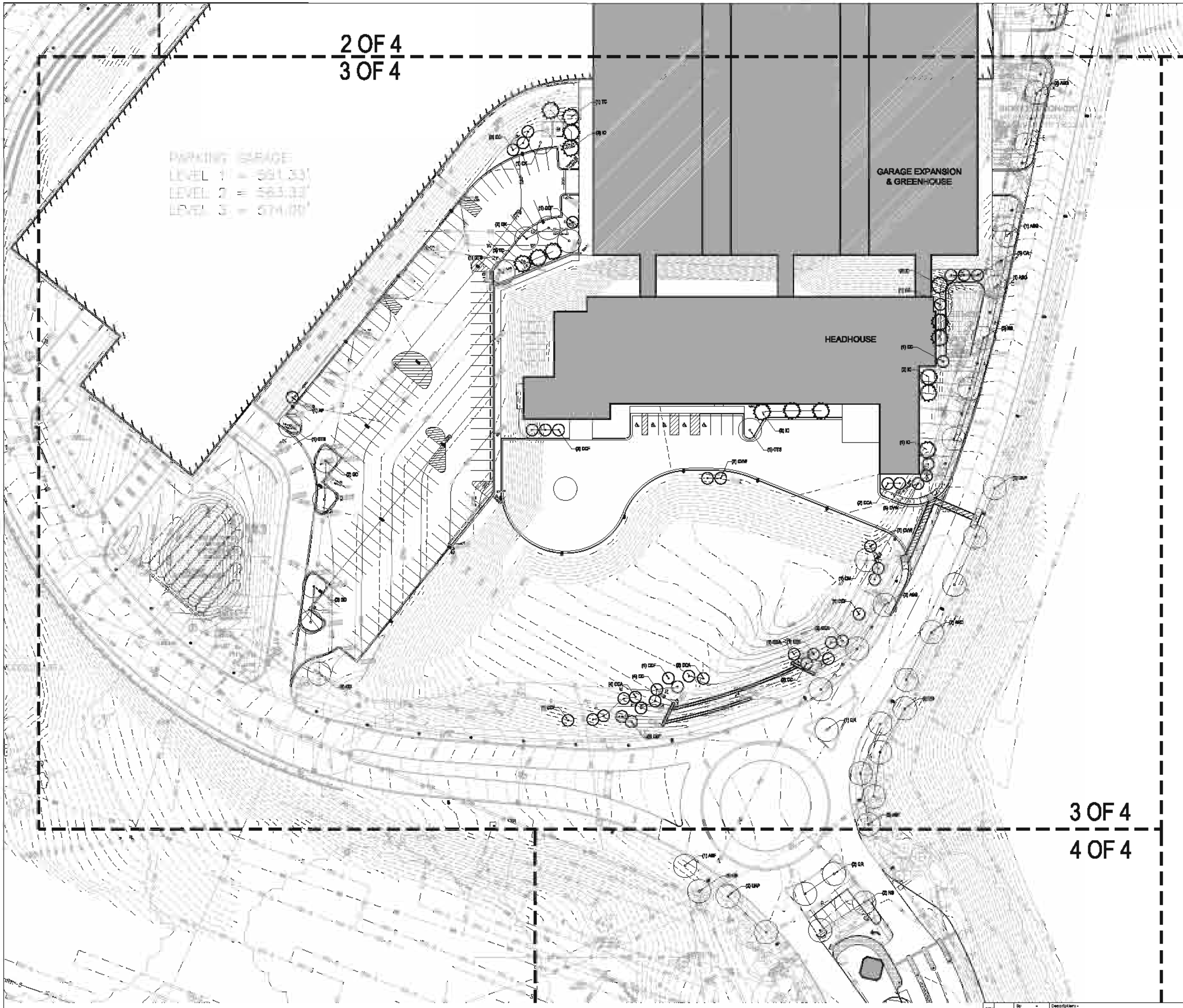


Key Plan

Stamp: STATE OF MISSOURI — SUE A. WIEST — LANDSCAPE ARCHITECT

MONSANTO

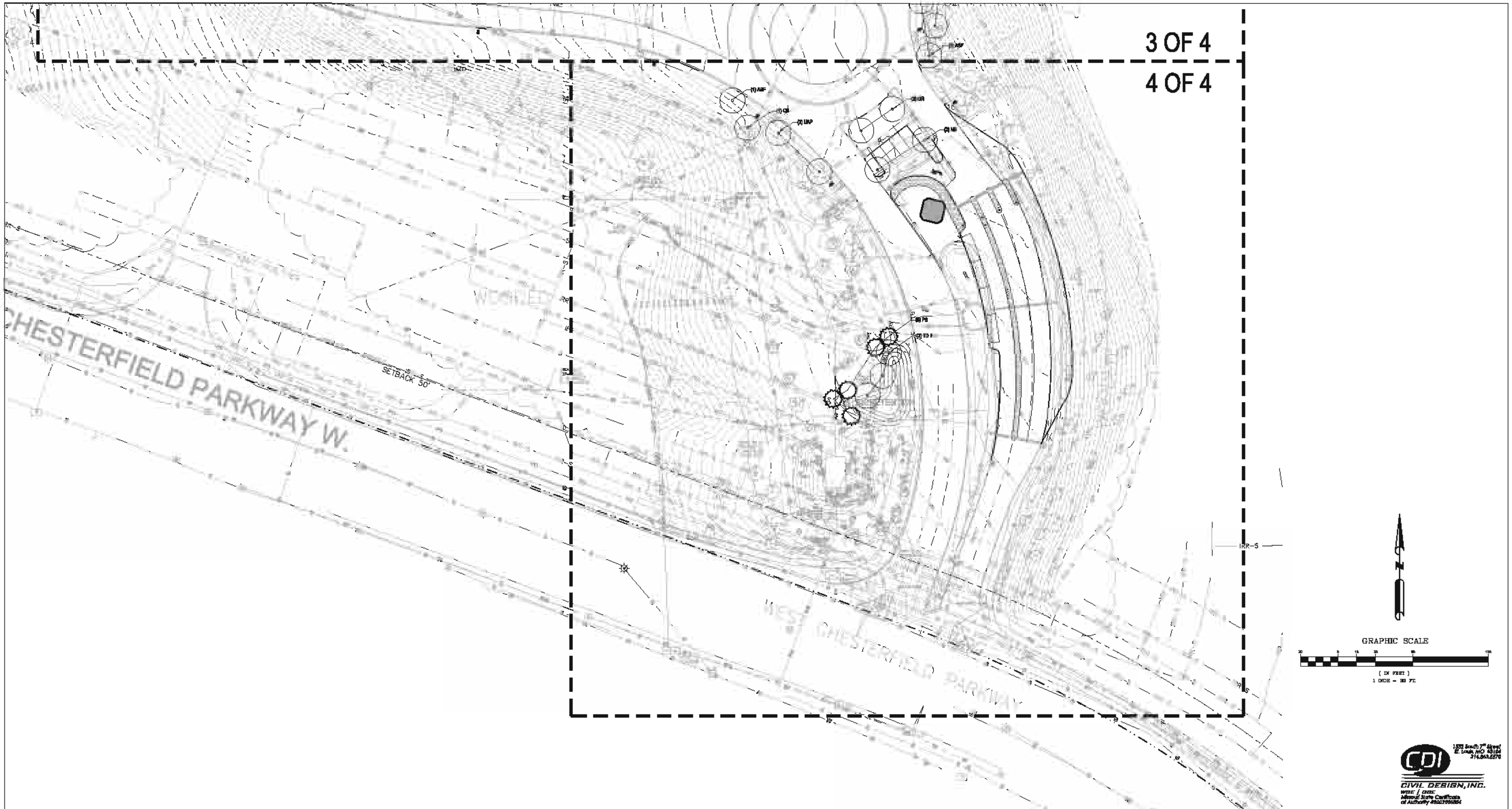
Area CV	Monsanto Project No.:			Sheet Number: 3 OF 4	

9th AMENDED SITE DEVELOPMENT SECTION PLAN

Building -		Floor -		Wing -	
Drawn By	DATE	Checked By	DATE	Approved By	DATE
				-	-

SIZE	Drawing Name	REV
ARCH E1	ENLARGED PLANTING PLAN	-

PRINTS ISSUED TO FIELD BY   DATE   REV-



STATE OF MISSOURI
SUE A. WIEST
LANDSCAPE ARCHITECT

MONSANTO

Site: CV | Monsanto Project No. - | Sheet Number: 4 OF 4

9th AMENDED SITE DEVELOPMENT SECTION PLAN

Building -		Floor -		Wing -	
Drawn By	DATE	Checked By	DATE	Approved By	DATE
				-	-

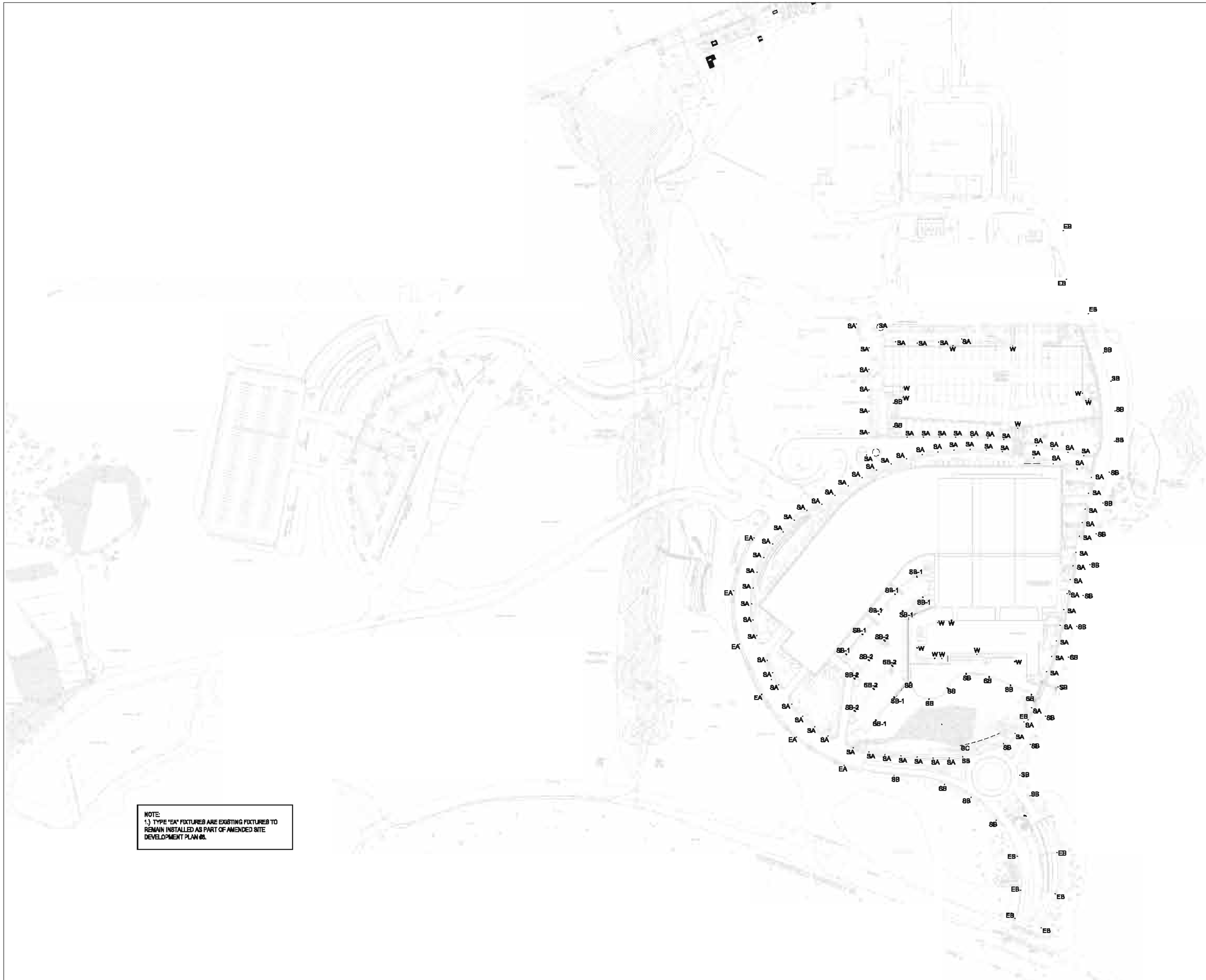
Size: ARCH E1

Drawing Name: ENLARGED PLANTING PLAN

REV: -

PRINTS ISSUED TO FIELD BY CIVIL DESIGN, INC. DATE REV-

P:\1407.02-Monsanto ASDP8\Working\CAD\DTLS asdp9_SHEET 1-4



NOTE:
1.) TYPE "EA" FIXTURES ARE EXISTING FIXTURES TO REMAIN INSTALLED AS PART OF AMENDED SITE DEVELOPMENT PLAN #8.

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WBE / DBE
Missouri State Certificate of Authority #2002006804
1552 South 7th Street
St. Louis, MO 63104
314.268.5570

Key Plan

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MONSANTO

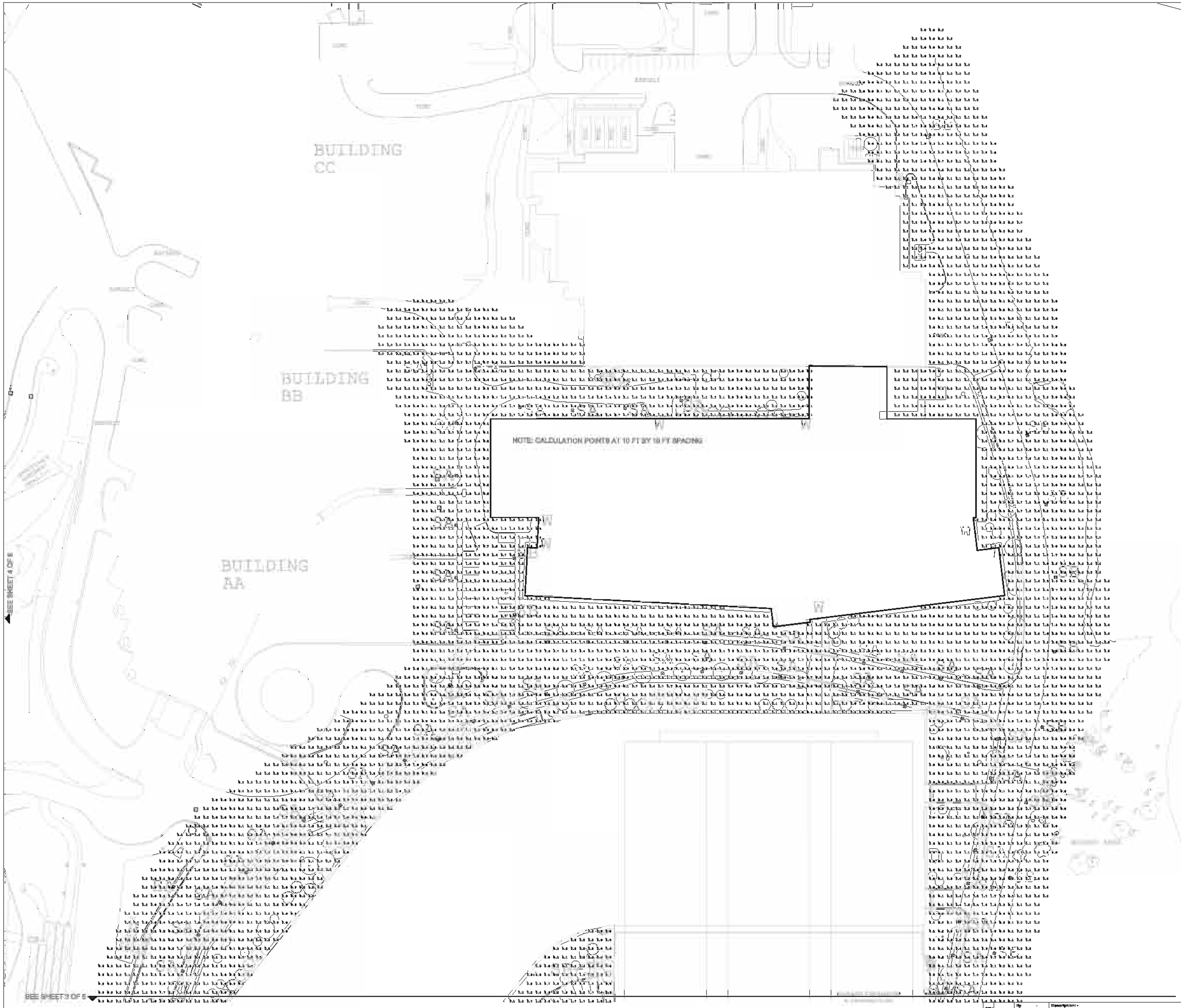
Site CV	Monsanto Project No.: -
Sheet Number: 1 OF 5	

9th AMENDED SITE DEVELOPMENT SECTION PLAN

Building -		Floor -		Wing -	
Drawn By	DATE	Checked By	DATE	Approved By	DATE
E.ARRAS	10/06/2014	R.KURTZ	10/06/2014	-	-
Consultant CIVIL DESIGN, INC.		Consultant Project No. R1000.08		SCALE 1" = 100'	

SIZE	Drawing Name	REV
ARCH E1	OVERALL SITE LIGHTING PLAN	-

PRINTS ISSUED TO FIELD BY CIVIL DESIGN, INC. DATE 10/08/2014 REV -



CDI CIVIL DESIGN, INC.

MONSANTO

Site: CV | Monsanto Project No.: - | Sheet Number: 2 OF 5

9th AMENDED SITE DEVELOPMENT SECTION PLAN

Building -		Floor -		Wing -	
Drawn By	DATE	Checked By	DATE	Approved By	DATE
E.ARRAS	10/06/2014	R.KURTZ	10/06/2014	-	-
Consultant CIVIL DESIGN, INC.		Consultant Project No. R1000.06		SCALE 1" = 40'	

SIZE	Drawing Name	REV
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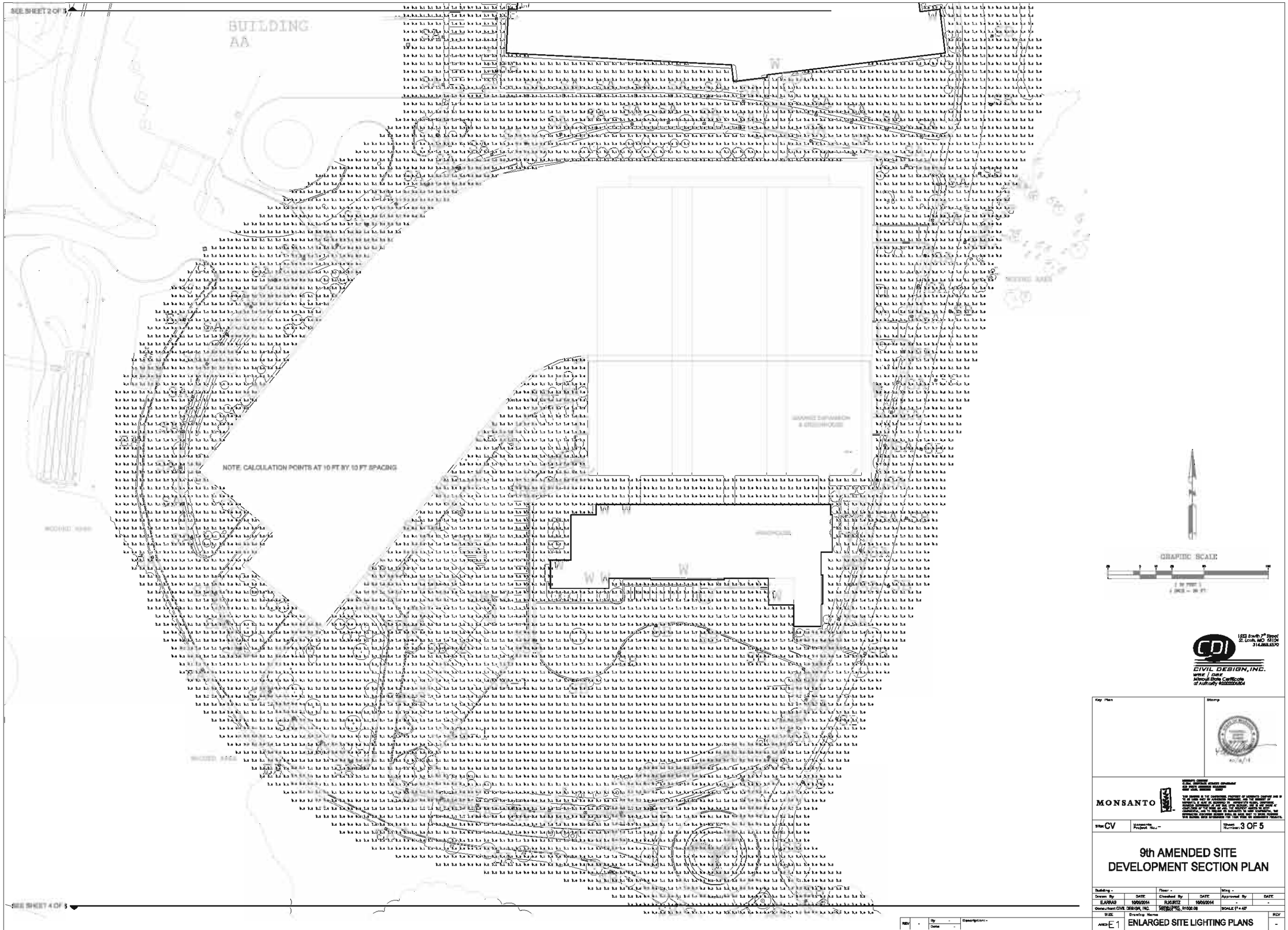
PRINTS ISSUED TO FIELD BY CIVIL DESIGN, INC. DATE 10/08/2014 REV -



1833 South 7th Street
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Missouri State Certificate of Authority #2003000404

Key Plan

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MONSANTO

Site CV | Monsanto Project No.: – | Sheet Number: 3 OF 5

9th AMENDED SITE DEVELOPMENT SECTION PLAN

Building -		Floor -		Wing -	
Drawn By	DATE	Checked By	DATE	Approved By	DATE
EARIAS	10/08/2014	RJURITZ	10/08/2014	-	-

Consultant CIVIL DESIGN, INC. | Project No. R1008.08 | SCALE 1" = 40'

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REV - | By - | Done - | Description: -

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Plotted 10/8/2014 12:31 PM

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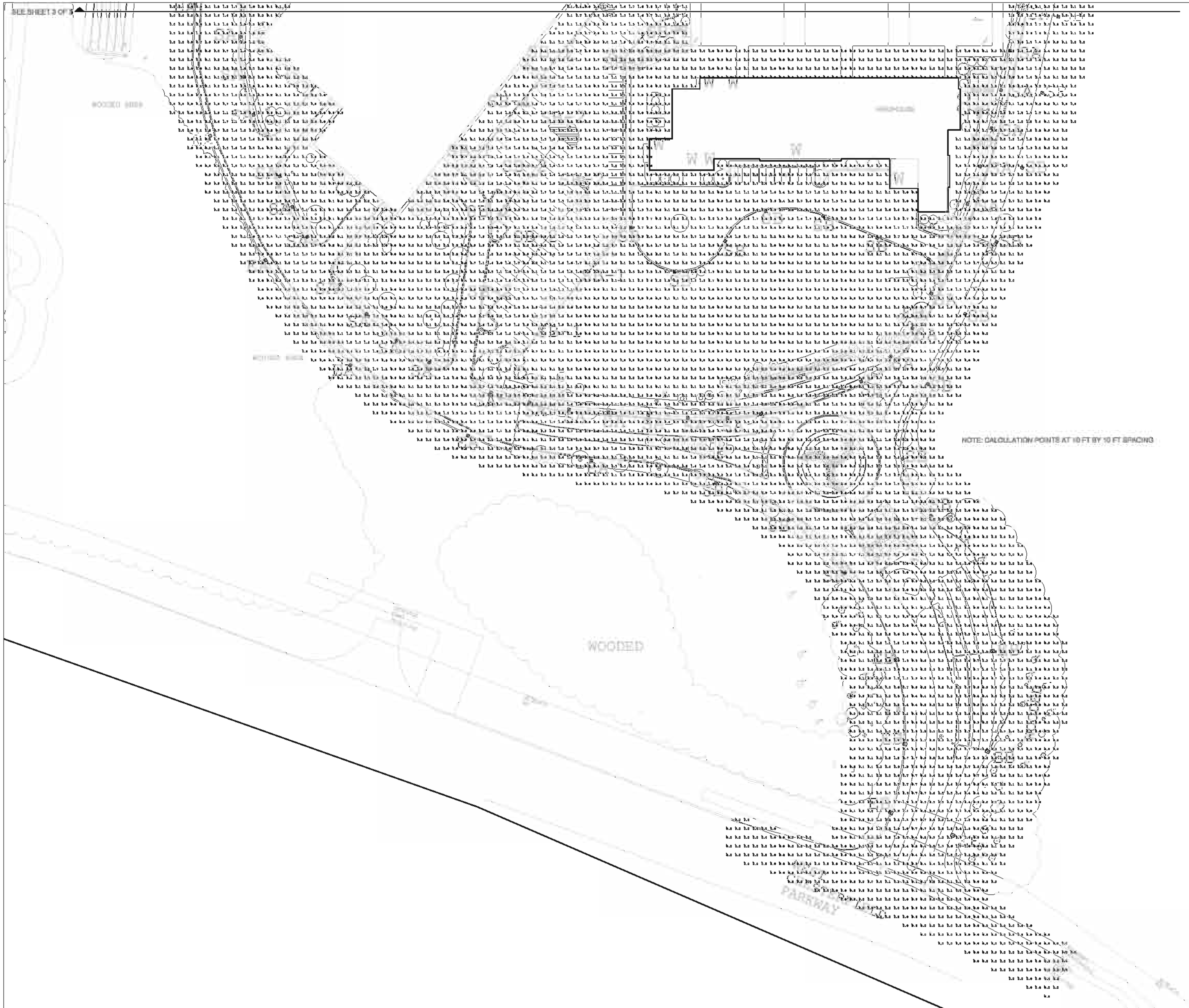

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Missouri State Certificate of Authority #2002006804

Key Plan	Stamp

MONSANTO

Site CV	Monsanto Project No.: -	Sheet Number: 4 OF 5

9th AMENDED SITE DEVELOPMENT SECTION PLAN

Building -		Floor -		Wing -	
Drawn By	DATE	Checked By	DATE	Approved By	DATE
EARRAS	10/09/2014	RJKURTZ	10/09/2014	-	-
Consultant CIVIL DESIGN, INC.		Consultant Project No. R1000.08		SCALE 1" = 40'	

SIZE	Drawing Name	REV
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REV	-	By - / Date -	Description: -

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Plotted 10/8/2014 12:30 PM

PRINTS ISSUED TO FIELD BY CIVIL DESIGN, INC. DATE 10/09/2014 REV -

Issue Date: 5/2/2014

Revisions: A - 06/17/14, B - 06/24/14, C-07/23/14, D - 09/25/14, E - 10/08/14

Monsanto-Area Site Development Plan

LIGHTING FIXTURE SCHEDULE

Page 1

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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] 277		[illegible]
EA	[illegible]	[illegible]	N/A	[illegible]	[illegible]	N/A		
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]

Issue Date: 5/2/2014

Revisions: A - 06/17/14, B - 06/24/14, C-07/23/14, D - 09/25/14, E - [illegible]

Monsanto-Area Site Development Plan

LIGHTING FIXTURE SCHEDULE

Page 2

TYPE	MANUFACTURER CATALOG NUMBER	LUMINAIRE DESCRIPTION	LAMP CODE	LAMPS/ UNIT	MAXIMUM WATTS/ UNIT	VOLTS	NOTES	REV
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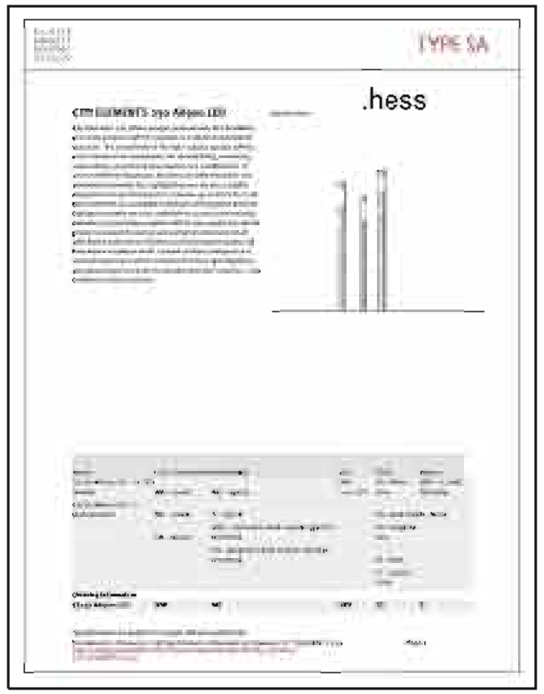
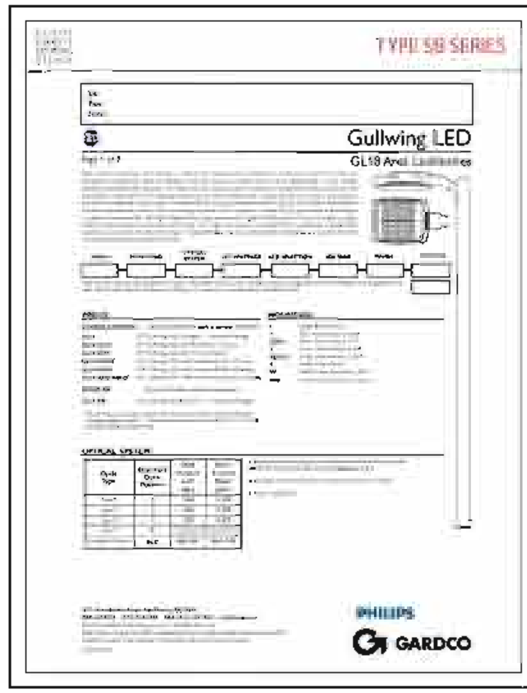
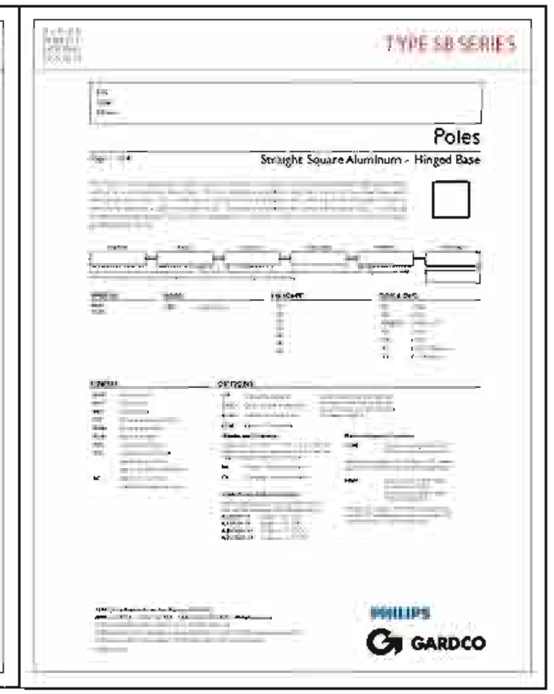
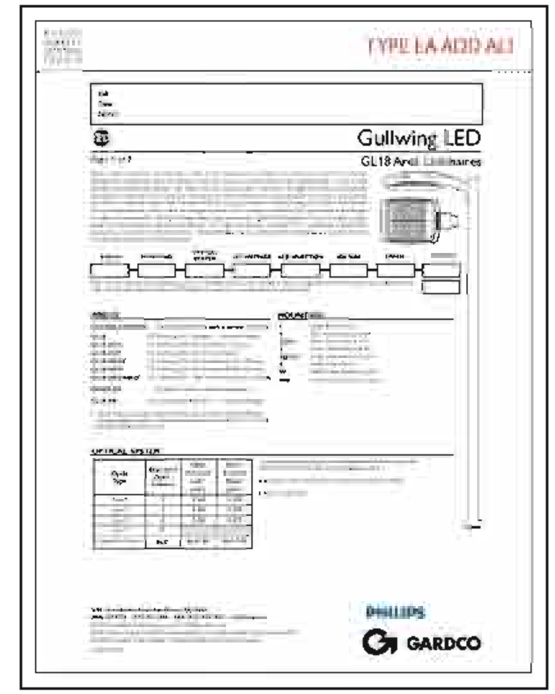
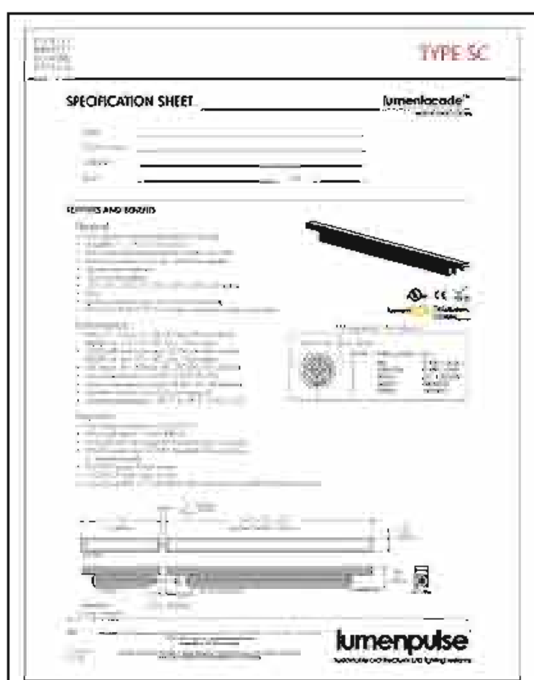
W	[illegible]	[illegible]	[illegible]	N/A	12	120 [illegible]		C

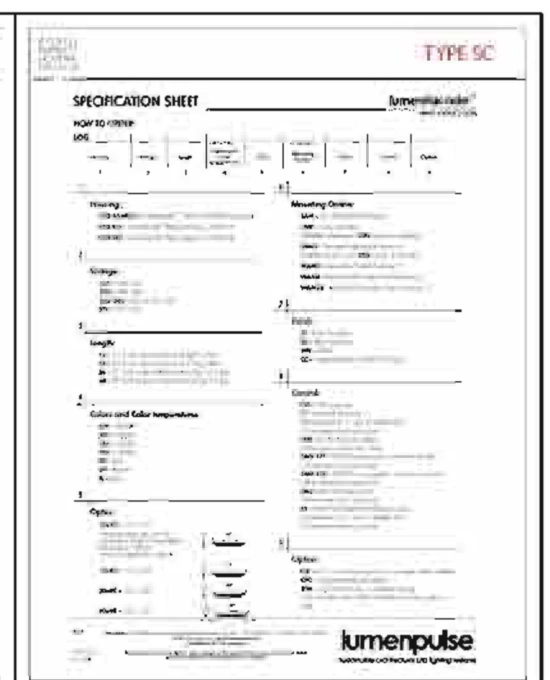












CIVIL DESIGN, INC.

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Missouri State Certificate of Authority #000000000

Key Plan

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MONSANTO

Site: CV | Monsanto Project No.: | Sheet Number 5 OF 5

9th AMENDED SITE DEVELOPMENT SECTION PLAN

Building -		Floor -		Wing -	
Drawn By	DATE	Checked By	DATE	Approved By	DATE
[illegible]	[illegible]	[illegible]	[illegible]	-	-
Consultant CIVIL DESIGN, INC.		Consultant Project No. [illegible]		SCALE [illegible]	

SIZE	Drawing Name	REV
ARCH E1	LIGHTING SCHEDULE + CUTS	-

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9TH ASDSP: TREE PRESERVATION PLAN

CIVIL ABBREVIATIONS

ASPH	ASPHALT	OHE	OVERHEAD ELECTRIC
BC	BACK OF CURB	ORD	ORDINANCE
BIT	BITUMINOUS	PB	PLAT BOOK
BK	BOOK	PC	POINT OF CURVATURE
BM	BENCHMARK	PCA	PORTLAND CONCRETE ASSOCIATION
BOP	BEGINNING OF PROJECT	PCC	PORTLAND CEMENT CONCRETE
BW	BOTTOM OF WALL	PCH	PIPE CULVERT HEADWALLS
CL	CENTERLINE	PG	PAGE
CI	CURB INLET	PI	POINT OF INTERSECTION
CJ	CONSTRUCTION JOINT	PIV	POST INDICATOR VALVE
CMP	CORRUGATED METAL PIPE	PL	PROPERTY LINE
CO	CLEANOUT	PP	POWER POLE
CONC	CONCRETE	PROP	PROPOSED
CPR	COPPER PIPE	PSI	POUNDS PER SQUARE INCH
CS	COMBINED SEWER	PT	POINT OF TANGENT
CT	COOLING TOWER	PVC	POINT OF VERTICAL CURVE, POLYVINYL CHLORIDE PIPE
D	DEGREE OF CURVE		
DI	DUCTILE IRON PIPE	PVI	POINT OF VERTICAL INTERSECTION
DIA	DIAMETER	PVMT	PAVEMENT
DIM	DIMENSION	PVT	POINT OF VERTICAL TANGENT
DND	DO NOT DISTURB	R, RAD	RADIUS
DS	DOWNSPOUT	RCP	REINFORCED CONCRETE PIPE
DW	DOMESTIC WATER	RD	ROADWAY
ELEC	ELECTRIC	ROW	RIGHT OF WAY
ELEV	ELEVATION	RTE	ROUTE
EOP	EDGE OF PAVEMENT	SP	SPACES
EX, EXIST	EXISTING	SPEC	SPECIFICATION
EJ	EXPANSION JOINT	SS, SA	SANITARY SEWER
ET	ELECTRIC TRANSFORMER	ST	STORM SEWER
FF	FINISH FLOOR	STA	STATION
FH	FIRE HYDRANT	STL	STEEL PIPE
FL	FLOW LINE	TBA	TO BE ABANDONED
FO	FIBER OPTIC	TBA&F	TO BE ABANDONED AND FILLED
FP	FIRE PROTECTION	TBR	TO BE REMOVED
FW	FIRE WATER	TBR&R	TO BE REMOVED AND REPLACED
G	NATURAL GAS	TBR&S	TO BE REMOVED AND SALVAGED
GM	GAS METER	TC	TOP OF CURB
GV	GAS VALVE	TELE	TELEPHONE
HORIZ	HORIZONTAL	TI	TOP OF INLET
ID	INSIDE DIAMETER	TW	TOP OF WALL
INV	INVERT	TYP	TYPICAL
L	LENGTH OF CURVE	UG	UNDERGROUND
MAX	MAXIMUM	UGE	UNDERGROUND ELECTRIC
MH	MANHOLE	UGT	UNDERGROUND TELEPHONE
MIN	MINIMUM	UIP	USE IN PLACE
MISC	MISCELLANEOUS	VAC	VACATED
MON	MONUMENT	VCP	VITRIFIED CLAY PIPE
N	NORTH	VERT	VERTICAL
NIC	NOT IN CONTRACT	W	WATER
NO	NUMBER	W/	WITH
NTS	NOT TO SCALE	WM	WATER METER
OC	ON CENTER	WV	WATER VALVE
OD	OUTSIDE DIAMETER	WWF	WELDED WIRE FABRIC
OH	OVERHEAD	UNO	UNLESS NOTED OTHERWISE

CIVIL LEGEND

EXISTING:

PROPOSED:

PROPERTY INFORMATION

PROPERTY ADDRESS:

700 CHESTERFIELD PARKWAY WEST
CHESTERFIELD, MO 63017

ST. LOUIS COUNTY LOCATOR # 17S210094

GENERAL NOTES

1. THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS/INSPECTIONS/ETC. IN ORDER TO COMPLETE THIS PROJECT. THE COST ASSOCIATED WITH ALL PERMITS/INSPECTIONS/ETC. SHALL BE INCLUDED IN THE CONTRACT AMOUNT.

2. ALL CONSTRUCTION ACTIVITIES SHALL COMPLY WITH APPLICABLE OSHA REGULATIONS.

CIVIL DRAWING INDEX

PROJECT CONTACTS

CONTACT TYPE:	COMPANY NAME:	CONTACT PHONE:	STREET ADDRESS:	
CITY/ZONING:	CITY OF CHESTERFIELD	(636) 537-4000	690 CHESTERFIELD PARKWAY WEST	CHESTERFIELD, MO 63017

PROJECT LOCATION MAP

NOT TO SCALE

CIVIL DESIGN, INC.
1552 South 7th Street
St. Louis, MO 63104
314.863.3370

Stamp

STATE OF MISSOURI
SUE A. WEST
LANDSCAPE ARCHITECT
10-06-2014

MONSANTO

Site: CV | Monsanto Project No. ECZ00018 | Sheet Number C001

CIVIL GENERAL INFORMATION

Building SITE		Floor 0		Wing X	
Drawn By	DATE	Checked By	DATE	Approved By	DATE
W. THORPE	10/7/14	L. COWAN	10/7/14	-	-
Consultant CIVIL DESIGN, INC.		Consultant Project No. R1000		SCALE -	

SIZE: ARCH E1 | Drawing Name: ECZ00018-CV-SITE-S-X-CX-GEN-001 | REV: -

REV - | By WET | Date 10/6/14 | Description: ISSUED FOR APPROVAL

PRINTS ISSUED TO FIELD BY CIVIL DESIGN, INC. DATE 10/6/14 REV.

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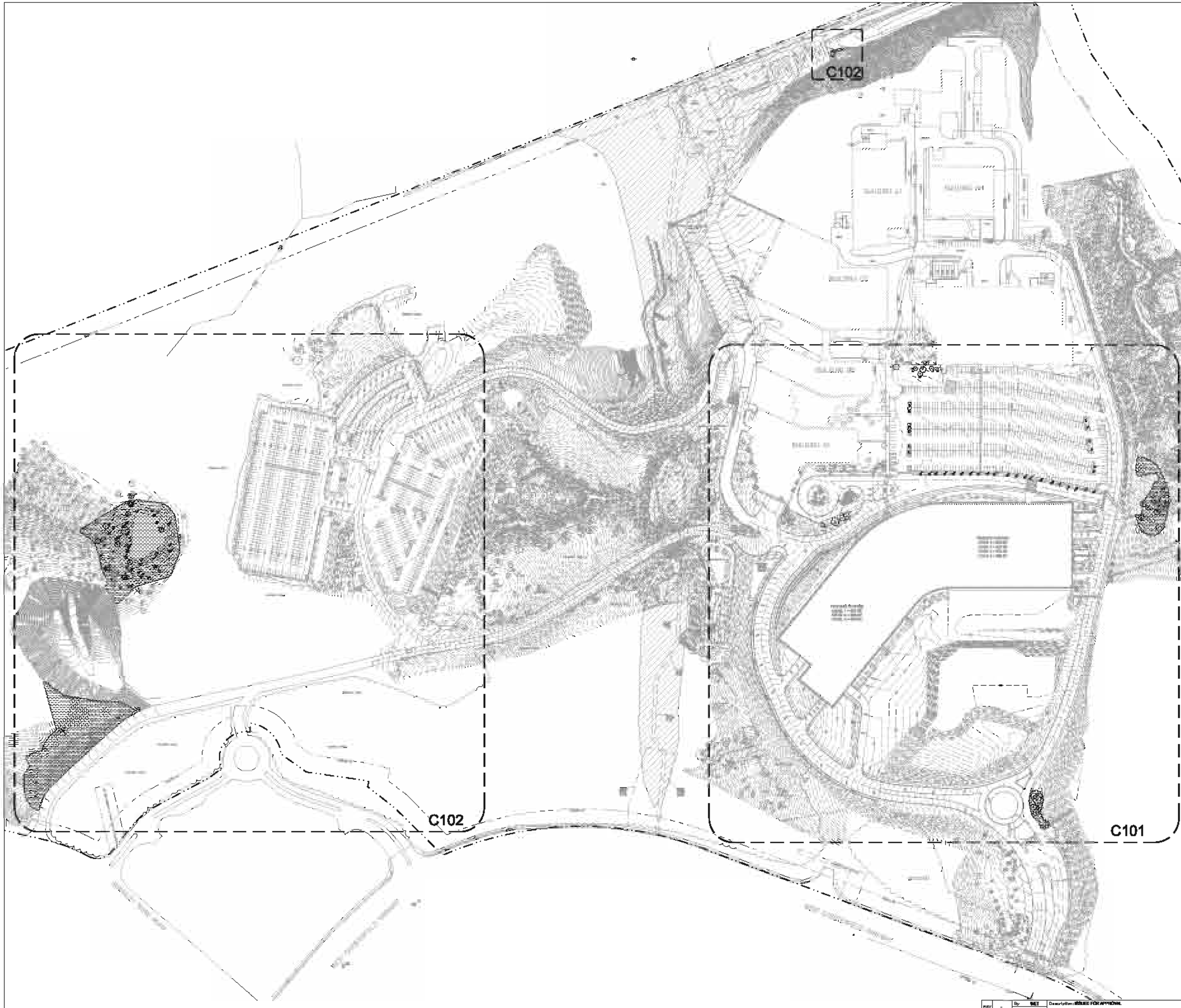

DEMOLITION NOTES:

1. UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS AND THEREFORE THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. IT IS POSSIBLE THAT THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN OR SHOWN. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE THEIR EXISTENCE AND EXACT LOCATION PRIOR TO CONSTRUCTION.

2. THE STREETS AND AREAS SURROUNDING THIS SITE CONTAIN LARGE AMOUNTS OF BOTH PEDESTRIAN AND VEHICLE TRAFFIC. ALL NECESSARY CARE SHALL BE TAKEN BY THE CONTRACTOR TO ENSURE THE SAFETY OF THE GENERAL PUBLIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING AND MAINTAINING SAFE AND EFFICIENT PROJECT LIMITS THE CONTRACTOR SHALL FOLLOW ALL FEDERAL, STATE, AND LOCAL GUIDELINES WITH REGARDS TO CONSTRUCTION SAFETY THROUGHOUT THE ENTIRE DURATION OF THE PROJECT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY BREACHES OF SAFETY OR DESTRUCTION OF PROPERTY RELATED TO THE CONSTRUCTION OF THIS PROJECT.

3. ALL DEMOLITION DEBRIS SHALL BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF ACCORDING TO ALL FEDERAL, STATE, AND LOCAL REGULATIONS.

4. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS NOT TO DAMAGE ANY EXISTING SITE FEATURES TO REMAIN IF ANY DAMAGE OCCURS, THE CONTRACTOR SHALL CONTACT THE OWNER'S REPRESENTATIVE IMMEDIATELY. THE CONTRACTOR SHALL REPAIR ALL DAMAGED ITEMS TO THE SATISFACTION OF THE OWNER AT NO ADDITIONAL COST.

5. FOR ALL TREES WITHIN REMOVAL AREA AND/OR SHOWN TO BE REMOVED, CONTRACTOR SHALL REMOVE TREE DOWN TO 36" ABOVE EXISTING GRADE. STUMP REMOVAL WILL OCCUR BY OTHERS.

6. CONTRACTOR SHALL TAKE EXTRA PRECAUTION WHEN REMOVING TREES NEAR EXISTING PARKING AREAS COORDINATE WITH OWNER'S REPRESENTATIVE.

CANOPY REMOVAL CALCULATIONS:

TOTAL AREA OF PROPERTY: 200.51 ACRES

ESTIMATE OF EXISTING TOTAL TREE CANOPY ON PROPERTY= 112.91 ACRES
30% MINIMUM REQUIRED CANOPY TO BE PRESERVED* = 35.26 ACRES

TREE CANOPY REMOVAL:

NON-WOODED CANOPY REMOVAL	= 12,545 SF
WOODED CANOPY REMOVAL (C101)	= 17,029 SF
WOODED CANOPY REMOVAL (C102)	= 98,479 SF
TOTAL CANOPY REMOVAL	= 128,053 SF (2.94 ACRES)

TOTAL TREE CANOPY ON PROPERTY UPON PROJECT COMPLETION = 109.97 ACRES

SEE SHEETS C101 & C102 FOR FURTHER INFORMATION

*BASED ON INITIAL SITE TREE CANOPY AREA

TREE DATA COLLECTED BY:

SKIP KINCAID
SENIOR CONSULTING URBAN FORESTER
DAVEY RESOURCE GROUP
ISA BOARD CERTIFIED MASTER ARBORIST (MW-0155BM)
skip.kincaid@davey.com

Skip Kincaid

DEMOLITION LEGEND:

WOODED CANOPY AREA TO BE REMOVED

GRAPHIC SCALE
(IN FEET)
1 INCH = 100 FT.

CIVIL DESIGN, INC.
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STATE OF MISSOURI
SUE A. WIEST
LANDSCAPE ARCHITECT
10-09-2014

MONSANTO

Site: CV | Monsanto Project No.: ECZ00018 | Sheet Number: C100

OVERALL TREE PRESERVATION PLAN

Building SITE		Floor 0		Wing X	
Drawn By	DATE	Checked By	DATE	Approved By	DATE
W. THORPE	10/7/14	N. COWAN	10/7/14	-	-

SIZE: ARCH E1 | Drawing Name: ECZ00018-CV-SITE-S-X-CX-PXX-100 | REV: -

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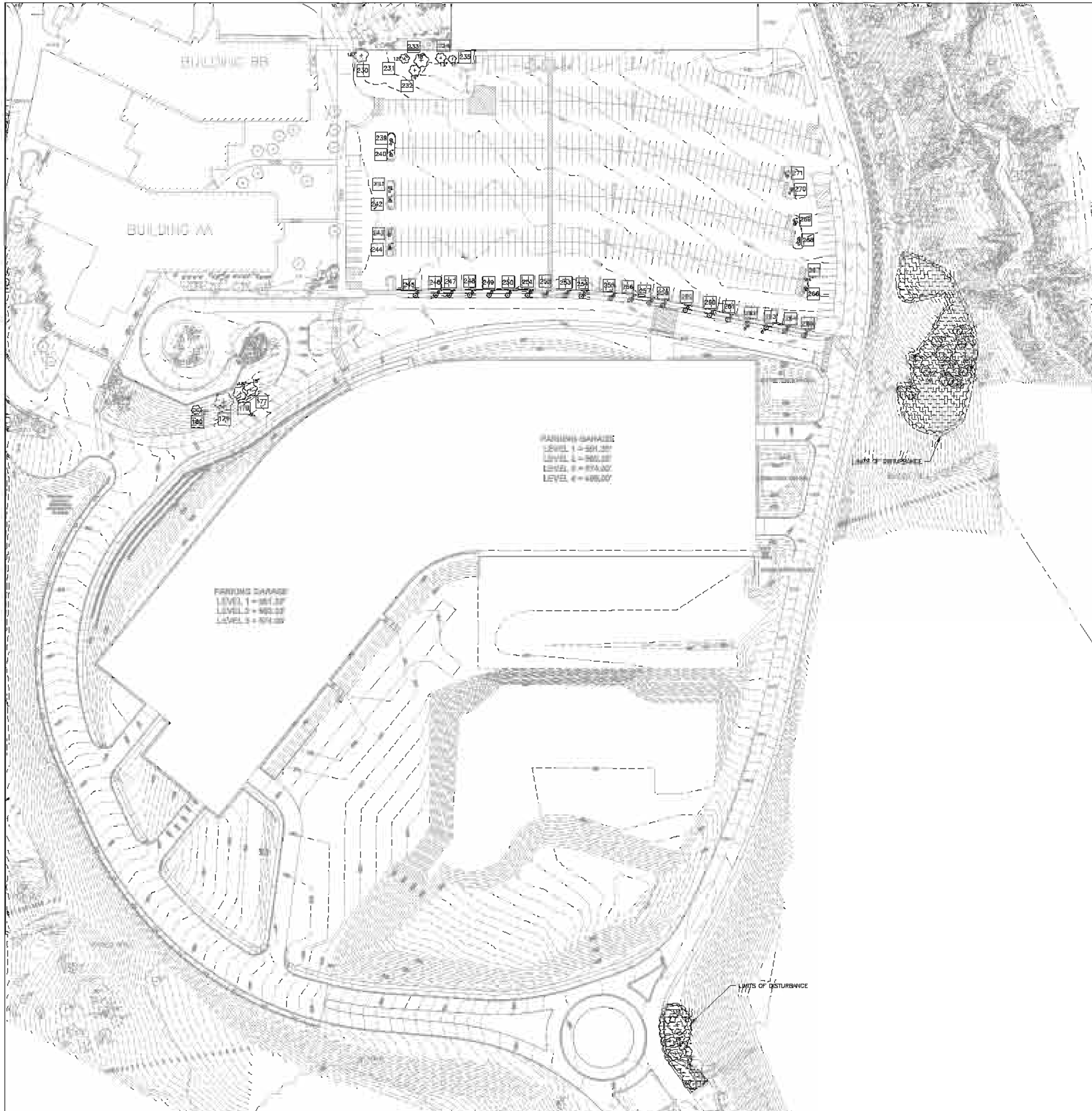

LEGEND:

WOODED CANOPY AREA TO BE REMOVED

1 TREES AWAITING APPROVAL TO BE REMOVED (SEE TABLE)

NOTE:

EXTENT OF WOODED CANOPY REMOVAL AREA SHALL HAVE SILT FENCING THAT WILL SERVE AS TREE PROTECTION FENCE

GRAPHIC SCALE

(IN FEET)
1 INCH = 50 FT.

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STATE OF MISSOURI
SUE A. WIEST
NUMBER
LANDSCAPE ARCHITECT
10-08-2014

MONSANTO

Site: CV | Monsanto Project No. ECZ00018 | Sheet Number C101

TREE PRESERVATION PLAN - EAST

Building SITE	Floor S	Wing X	
Drawn By	DATE	Checked By	DATE	Approved By	DATE
W. THORPE	10/7/14	N. COWAN	10/7/14	-	-
Consultant CIVIL DESIGN, INC.	Consultant Project No. R1000	SCALE 1" = 50'	

SIZE ARCH E1 | Drawing Name ECZ00018-CV-SITE-S-X-CX-PXX-101 | REV -

REV - | By WET | Date 10/8/14 | Description: ISSUED FOR APPROVAL

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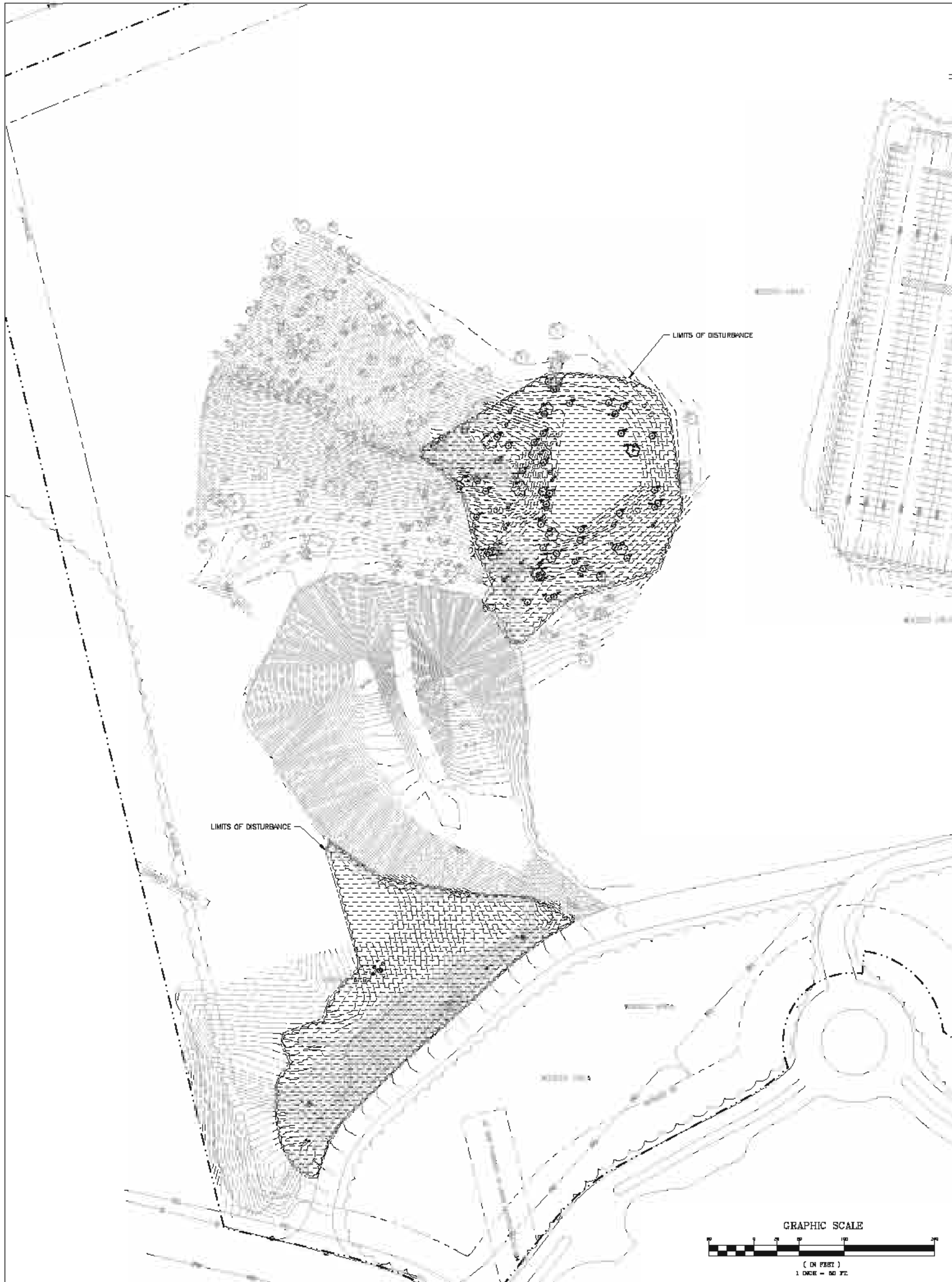

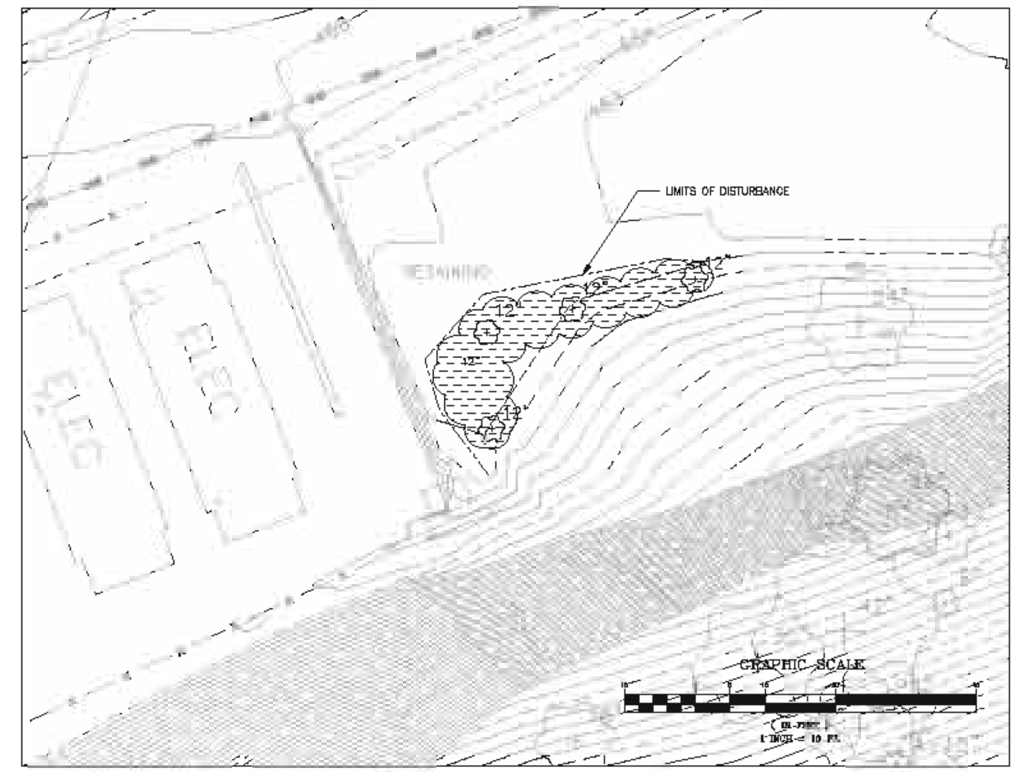

LEGEND:

WOODED CANOPY AREA TO BE REMOVED

NOTE:

EXTENT OF WOODED CANOPY REMOVAL AREA SHALL HAVE SILT FENCING THAT WILL SERVE AS TREE PROTECTION FENCE.

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St. Louis, MO 63104
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WBE / DBE
Missouri State Certificate of Authority #2002006804

Stamp
STATE OF MISSOURI
SUE A. WIEST
NUMBER LA-2004007815
LANDSCAPE ARCHITECT
10-08-2014

MONSANTO

Site: CV | Monsanto Project No.: ECZ00018 | Sheet Number: C102

TREE PRESERVATION PLAN - WEST

Building SITE		Floor 0		Wing X	
Drawn By	DATE	Checked By	DATE	Approved By	DATE
W. THORPE	10/7/14	N. COWAN	10/7/14	-	-
Consultant CIVIL DESIGN, INC.		Consultant Project No. R1000		SCALE SEE PLAN SHEET	

SIZE	Drawing Name	REV
ARCH E1	ECZ00018-CV-SITE-S-X-CX-PXX-102	-

REV	By	Description
-	By: SKT Date: 10/8/14	ISSUED FOR APPROVAL

PRINTS ISSUED TO FIELD BY CIVIL DESIGN, INC. DATE 10/8/14 REV-

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MONSANTO CHESTERFIELD CAMPUS
Woodland Descriptions and Canopy Area Calculations

DAVEY RESOURCE GROUP
A Division of The Davey Tree Expert Company

Woodland	Description	Canopy Area (acres)
1	Small to medium sized trees (10-14 inch diameter) with monarchs (>20 inch diameter along steep drainages. Overstory is primarily white oak, red oak, and white ash.	1.481
2	Medium sized trees (15-18 inch diameter) with monarchs (>20 inch diameter along steep drainages. Overstory is primarily white oak, red oak, and white ash.	0.807
3	Small to medium sized trees (10-14 inch diameter) with monarchs (>20 inch diameter along steep drainages. Overstory is primarily white oak, red oak, and white ash.	3.257
4	Medium sized trees (15-18 inch diameter) with monarchs (>20 inch diameter along steep drainages. Overstory is primarily white oak, red oak, and white ash.	0.784
5	Young woodland with 6-12 inch diameter trees and a few sacttered larger trees (12-20 inch diameter of ash and elm. Understory includes paw paw and heavy invasive honeysuckle.	10.834
6	Young woodland with 6-12 inch diameter trees and a few sacttered larger trees (12-20 inch diameter of ash and elm. Understory includes paw paw and heavy invasive honeysuckle.	2.929
7	Young woodland with 6-12 inch diameter trees and a few sacttered larger trees (12-20 inch diameter of ash and elm. Understory includes paw paw and heavy invasive honeysuckle.	5.353
8	Mature stand of hardwoods with monarchs (>20 inch diameter) on north slope and along drainages. Species include white oak, red oak, basswood.	12.720
9	Mature stand of hardwoods with monarch (>20 inch diameter) species of red oak, sugar maple, basswood and hickory.	6.875
10	Young woodland with 6-10 inch diameter trees and a few sacttered larger trees (12-20 inch diameter of ash and elm. Understory includes heavy invasive honeysukle.	12.688
11	Closely spaced ornamental trees (6-10 inch diameter) providing a buffer along main entry and along Chesterfield Parkway.	2.420
12	A remnant woodland serving as a buffer and erosion control just south of parking lots. Small diameter trees (6-10 inch diameter) of elm and ash.	1.530
13	Mature stand of hardwoods with monarchs (>20 inch diameter) on north slopes and along drainages. Species include white oak, red oak, basswood and hickory.	50.245
	TOTAL	**111.923**

= Approximate study area (200.510 acres)
= Mapped tree and tree number
= Monarch tree and tree number are trees in woodlands (W1-W13)
= Mapped tree with canopy spread for trees in non-woodland areas
W4 = Woodlands (111.923 acres)
= Non-woodlands (88.587 acres)

Woodland Canopy Area	111.92 acres
Non-Woodland Canopy Area	1.18 acres
Total Canopy On-Site	**113.10 acres**

Prepared by
DAVEY RESOURCE GROUP
A Division of The Davey Tree Expert Company

Prepared for
Civil Design, Inc.

Tree Stand Delineation Map
700 Chesterfield Parkway
198 Acres, Chesterfield, Missouri

Tree Stand Delineation prepared by:
Skip Kincaid, ISA Board Certified Master Arborist (MW-0155BM)

Tree data used to produce this map were collected in March and June 2013 and revised April 11, 2014

Tree Stand Delineation mapping prepared by: Ken Christensen, ISA Board Certified Arborist (A-0690)

Sheet **1** of **2**

TREE DATA - 700 Chesterfield Parkway, Chesterfield, MO

Data collected March 2013 and June 2013 by Skip Kincaid

Senior Consulting Urban Forester
Davey Resource Group
ISA Board Certified Master Arborist (MW-0155BM)
skip.kincaid@davey.com

DAVEY RESOURCE GROUP
A Division of The Davey Tree Expert Company

Tree Number	Common Name	Diameter[1] (at 4.5 ft above ground)	Condition Rating	Monarch Tree?	Canopy Spread	Canopy Area	Woodland Tree
177	Linden, Littleleaf	11	Fair	No	30	707	No
178	Pagodatree	14	Good	No	30	707	No
179	Ash, white	14	Good	No	30	707	No
180	Ash, white	12	Good	No	30	707	No
181	Pine, Austrian	12	Fair	No	30	707	No
182	Maple, Red	9	Fair	No	20	314	No
183	Honeylocust	9	Fair	No	20	314	No
184	Ash, white	17	Good	No	30	707	No
185	Ash, white	16	Good	No	30	707	No
186	Redbud	10	Fair	No	20	314	No
187	Oak, Pin	12	Fair	No	30	707	No
188	Honeylocust	14	Good	No	30	707	No
189	Honeylocust	12	Good	No	30	707	No
190	Honeylocust	12	Good	No	30	707	No
191	Honeylocust	12	Good	No	30	707	No
192	Honeylocust	12	Good	No	30	707	No
193	Honeylocust	12	Good	No	30	707	No
194	Redbud	10	Fair	No	20	314	No
195	Redbud	11	Fair	No	20	314	No
196	Redbud	12	Good	No	30	707	No
197	Honeylocust	10	Good	No	25	491	No
198	Honeylocust	10	Good	No	25	491	No
199	Plum, Purpleleaf	8	Good	No	16	201	No
200	Oak, Pin	11	Fair	No	25	491	No
201	Honeylocust	8	Fair	No	25	491	No
202	Honeylocust	12	Good	No	30	707	No
203	Honeylocust	9	Fair	No	20	314	No
204	Ash, white	18	Good	No	30	707	No
205	Linden, Littleleaf	12	Fair	No	20	314	No
206	Maple, Amur	8	Fair	No	20	314	No
207	Honeylocust	14	Fair	No	30	707	No
208	Birch, River	11	Fair	No	30	707	No
209	Ash, white	8	Fair	No	30	707	No
210	Linden, Littleleaf	12	Fair	No	30	707	No
211	Honeylocust	10	Good	No	30	707	No
212	Honeylocust	10	Good	No	30	707	No
213	Honeylocust	10	Good	No	30	707	No
214	Honeylocust	9	Good	No	30	707	No
215	Honeylocust	10	Good	No	30	707	No
216	Honeylocust	10	Good	No	30	707	No
217	Honeylocust	9	Good	No	30	707	No
218	Elm, hybrid	4	Good	No	12	113	No
219	Elm, hybrid	4	Good	No	12	113	No
220	Elm, hybrid	4	Good	No	12	113	No
221	Elm, hybrid	4	Good	No	12	113	No
222	Elm, hybrid	4	Good	No	12	113	No
223	Elm, hybrid	4	Good	No	12	113	No
224	Birch, River	3	Good	No	10	79	No
225	Elm, hybrid	2	Good	No	10	79	No
226	Elm, hybrid	2	Good	No	10	79	No
227	Elm, hybrid	2	Good	No	10	79	No
228	Elm, hybrid	2	Good	No	10	79	No
229	Elm, hybrid	2	Good	No	10	79	No
230	Ash, Green	16	Good	No	30	707	No
231	Maple, Red	10	Fair	No	20	314	No
232	Maple, Red	14	Fair	No	30	707	No
233	Pear, Callery	18	Fair	No	40	1257	No
234	Oak, Red	14	Fair	No	30	707	No
235	Dogwood, Flowering	3	Fair	No	10	79	No
236	Ash, Green	16	Good	No	30	707	No
237	Ash, Green	18	Fair	No	30	707	No
238	Plum, Purpleleaf	6	Fair	No	20	314	No
239	Ash, white	8	Fair	No	20	314	No
240	Ash, white	8	Fair	No	20	314	No
241	Ash, white	8	Fair	No	20	314	No
242	Ash, white	8	Fair	No	20	314	No
243	Ash, white	8	Fair	No	20	314	No
244	Ash, white	8	Fair	No	20	314	No
245	Ash, white	6	Fair	No	15	177	No
246	Ash, white	6	Fair	No	15	177	No
247	Ash, white	6	Fair	No	15	177	No
248	Ash, white	6	Fair	No	15	177	No
249	Ash, white	6	Fair	No	15	177	No
250	Ash, white	6	Fair	No	15	177	No
251	Ash, white	6	Fair	No	15	177	No
252	Ash, white	6	Fair	No	15	177	No
253	Ash, white	6	Fair	No	15	177	No
254	Ash, white	6	Fair	No	15	177	No
255	Ash, white	6	Fair	No	15	177	No
256	Ash, white	6	Fair	No	15	177	No
257	Ash, white	6	Fair	No	15	177	No
258	Ash, white	6	Fair	No	15	177	No
259	Ash, white	6	Fair	No	15	177	No
260	Ash, white	6	Fair	No	15	177	No
261	Ash, white	6	Fair	No	15	177	No
262	Ash, white	6	Fair	No	15	177	No
263	Ash, white	6	Fair	No	15	177	No
264	Ash, white	6	Fair	No	15	177	No
265	Ash, white	6	Fair	No	15	177	No
266	Ash, white	6	Fair	No	15	177	No
267	Ash, white	6	Fair	No	15	177	No
268	Ash, white	6	Fair	No	15	177	No
269	Ash, white	6	Fair	No	15	177	No
270	Ash, white	6	Fair	No	15	177	No
271	Ash, white	6	Fair	No	15	177	No
272	Ash, white	6	Fair	No	15	177	No
277	Elm, hybrid	6	Good	No	15	177	No
278	Honeylocust	12	Good	No	40	1257	No
279	Ash, white	12	Good	No	40	1257	No
280	Honeylocust	8	Good	No	25	491	No
281	Pear, Callery	14	Fair	No	30	707	No
282	Honeylocust	16	Fair	No	30	707	No
283	Goldenraintree	10	Fair	No	20	314	No
284	Goldenraintree	10	Fair	No	20	314	No
285	Honeylocust	14	Fair	No	30	707	No
286	Crabapple	12	Good	No	30	707	No
287	Oak, Pin	11	Good	No	30	707	No
288	Oak, Pin	14	Good	No	30	707	No
289	Honeylocust	14	Good	No	30	707	No
290	Honeylocust	12	Good	No	25	491	No
291	Honeylocust	12	Good	No	25	491	No
292	Honeylocust	14	Good	No	30	707	No
293	Honeylocust	14	Good	No	30	707	No
294	Ash, white	12	Good	No	25	491	No
295	Linden, Littleleaf	10	Good	No	25	491	No
296	Maple, Red	10	Good	No	25	491	No
297	Oak, Red	50	Good	Yes	0	0	Yes
298	Oak, Red	38	Fair	Yes	0	0	Yes
299	Ash, Green	22	Fair	Yes	0	0	Yes
300	Hickory, Bitternut	28	Fair	Yes	0	0	Yes
301	Oak, White	30	Fair	Yes	0	0	Yes
302	Oak, White	36	Good	Yes	0	0	Yes
303	Ash, Green	28	Good	Yes	0	0	Yes
304	Oak, White	32	Good	Yes	0	0	Yes
305	Oak, White	40	Good	Yes	0	0	Yes
306	Oak, White	30	Fair	Yes	0	0	Yes
307	Oak, Red	21	Good	Yes	0	0	Yes
308	Oak, Shingle	22	Fair	Yes	0	0	Yes
309	Oak, White	22	Fair	Yes	0	0	Yes
310	Maple, Sugar	26	Good	Yes	0	0	Yes
311	Oak, White	31	Fair	Yes	0	0	Yes
312	Oak, White	24	Fair	Yes	0	0	Yes
313	Cottonwood	22	Fair	Yes	0	0	Yes
314	Ash, Green	22	Poor	No	0	0	Yes
315	Oak, White	26	Poor	No	0	0	Yes
316	Maple, Sugar	28	Fair	Yes	0	0	Yes
317	Ash, Green	22	Poor	No	0	0	Yes
318	Maple, Sugar	33	Fair	Yes	0	0	Yes
319	Maple, Sugar	26	Fair	Yes	0	0	Yes
320	Oak, White	30	Fair	Yes	0	0	Yes
321	Maple, Sugar	28	Good	Yes	0	0	Yes
322	Maple, Sugar	28	Good	Yes	0	0	Yes
323	Oak, White	36	Poor	No	0	0	Yes
324	Oak, Red	34	Fair	Yes	0	0	Yes
325	Oak, Red	32	Fair	Yes	0	0	Yes
326	Maple, Sugar	24	Fair	Yes	0	0	Yes
327	Maple, Sugar	26	Poor	No	0	0	Yes
328	Maple, Sugar	22	Poor	No	0	0	Yes
329	Sugarberry	28	Good	Yes	0	0	Yes
330	Sugarberry	24	Good	Yes	0	0	Yes
331	Maple, Sugar	26	Good	Yes	0	0	Yes
332	Maple, Sugar	22	Good	Yes	0	0	Yes
333	Sugarberry	26	Good	Yes	0	0	Yes
334	Basswood	24	Fair	Yes	0	0	Yes
335	Maple, Sugar	24	Good	Yes	0	0	Yes
336	Oak, White	28	Fair	Yes	0	0	Yes
337	Ash, Green	30	Poor	No	0	0	Yes
338	Walnut, Black	28	Good	Yes	0	0	Yes
339	Maple, Sugar	23	Good	Yes	0	0	Yes
340	Ash, Green	28	Fair	Yes	0	0	Yes
341	Oak, White	24	Fair	Yes	0	0	Yes
342	Ash, Green	27	Fair	Yes	0	0	Yes
343	Maple, Sugar	26	Fair	Yes	0	0	Yes
344	Maple, Sugar	26	Fair	Yes	0	0	Yes
345	Ash, Green	30	Fair	Yes	0	0	Yes
346	Sycamore	38	Fair	Yes	0	0	Yes
347	Sycamore	34	Fair	Yes	0	0	Yes
348	Cottonwood	28	Fair	Yes	0	0	Yes
349	Maple, Sugar	26	Good	Yes	0	0	Yes
350	Maple, Sugar	26	Good	Yes	0	0	Yes
351	Maple, Sugar	28	Good	Yes	0	0	Yes
352	Maple, Sugar	28	Fair	Yes	0	0	Yes
353	Maple, Sugar	22	Fair	Yes	0	0	Yes
354	Oak, White	24	Good	Yes	0	0	Yes
355	Maple, Sugar	26	Good	Yes	0	0	Yes
356	Kentucky Coffeetree	26	Good	Yes	0	0	Yes
357	Oak, Red	36	Good	Yes	0	0	Yes
358	Maple, Sugar	22	Fair	Yes	0	0	Yes
359	Maple, Sugar	30	Good	Yes	0	0	Yes
360	Basswood	30	Good	Yes	0	0	Yes
361	Maple, Sugar	22	Fair	Yes	0	0	Yes
362	Maple, Sugar	28	Good	Yes	0	0	Yes
363	Sycamore	30	Fair	Yes	0	0	Yes
364	Oak, Red	26	Fair	Yes	0	0	Yes
365	Basswood	28	Fair	Yes	0	0	Yes
366	Maple, Sugar	22	Fair	Yes	0	0	Yes
367	Maple, Sugar	24	Fair	Yes	0	0	Yes
368	Oak, Red	40	Fair	Yes	0	0	Yes
369	Oak, Red	30	Good	Yes	0	0	Yes
370	Maple, Sugar	22	Good	Yes	0	0	Yes
371	Hickory, Bitternut	22	Good	Yes	0	0	Yes
372	Oak, Red	28	Fair	Yes	0	0	Yes
373	Oak, Red	38	Fair	Yes	0	0	Yes
374	Oak, Red	32	Fair	Yes	0	0	Yes
375	Hickory, Bitternut	26	Good	Yes	0	0	Yes
376	Oak, Red	28	Good	Yes	0	0	Yes
377	Ash, Green	26	Fair	Yes	0	0	Yes
378	Maple, Sugar	24	Poor	No	0	0	Yes
379	Maple, Sugar	28	Poor	No	0	0	Yes
380	Basswood	22	Fair	Yes	0	0	Yes
381	Ash, Green	22	Fair	Yes	0	0	Yes
382	Basswood	22	Fair	Yes	0	0	Yes
383	Ash, Green	50	Poor	No	0	0	Yes
384	Hickory, Bitternut	22	Fair	Yes	0	0	Yes
385	Basswood	30	Fair	Yes	0	0	Yes
386	Basswood	22	Fair	Yes	0	0	Yes
387	Basswood	22	Fair	Yes	0	0	Yes
388	Maple, Sugar	30	Fair	Yes	0	0	Yes
389	Basswood	22	Fair	Yes	0	0	Yes
390	Maple, Sugar	22	Fair	Yes	0	0	Yes
391	Ash, Green	26	Fair	Yes	0	0	Yes
392	Cottonwood	22	Fair	Yes	0	0	Yes
393	Basswood	22	Fair	Yes	0	0	Yes
394	Kentucky Coffeetree	28	Good	Yes	0	0	Yes
395	Walnut, Black	24	Fair	Yes	0	0	Yes
396	Basswood	22	Fair	Yes	0	0	Yes
397	Hickory, Bitternut	28	Fair	Yes	0	0	Yes
398	Oak, White	32	Good	Yes	0	0	Yes
399	Walnut, Black	22	Good	Yes	0	0	Yes
400	Hickory, Bitternut	24	Fair	Yes	0	0	Yes
401	Ash, Green	32	Fair	Yes	0	0	Yes
402	Cottonwood	34	Fair	Yes	0	0	Yes
403	Hickory, Bitternut	26	Fair	Yes	0	0	Yes
404	Oak, White	26	Fair	Yes	0	0	Yes
405	Maple, Sugar	28	Fair	Yes	0	0	Yes
406	Basswood	34	Fair	Yes	0	0	Yes
407	Basswood	26	Fair	Yes	0	0	Yes
408	Ash, Green	28	Fair	Yes	0	0	Yes
409	Hickory, Bitternut	24	Fair	Yes	0	0	Yes
410	Oak, Red	32	Fair	Yes	0	0	Yes
411	Oak, White	38	Fair	Yes	0	0	Yes
412	Cherry, Black	24	Good	Yes	0	0	Yes
413	Kentucky Coffeetree	24	Good	Yes	0	0	Yes
414	Ash, Green	26	Fair	Yes	0	0	Yes
415	Ash, Green	28	Fair	Yes	0	0	Yes
416	Oak, Red	24	Good	Yes	0	0	Yes
417	Cherry, Black	26	Fair	Yes	0	0	Yes
418	Ash, Green	25	Fair	Yes	0	0	Yes
419	Elm, American	32	Fair	Yes	0	0	Yes
420	Cherry, Black	22	Poor	No	0	0	Yes
421	Ash, Green	24	Fair	Yes	0	0	Yes
422	Ash, Green	24	Fair	Yes	0	0	Yes
423	Oak, White	30	Good	Yes	0	0	Yes
424	Ash, Green	28	Fair	Yes	0	0	Yes
425	Ash, Green	22	Fair	Yes	0	0	Yes
426	Cherry, Black	30	Good	Yes	0	0	Yes
427	Basswood	44	Fair	Yes	0	0	Yes
428	Basswood	42	Fair	Yes	0	0	Yes
429	Cherry, Black	30	Poor	No	0	0	Yes
430	Oak, Red	36	Good	Yes	0	0	Yes
431	Basswood	24	Good	Yes	0	0	Yes
432	Cherry, Black	24	Good	Yes	0	0	Yes
433	Oak, Red	34	Good	Yes	0	0	Yes
434	Walnut	26	Good	Yes	0	0	Yes
435	Ash, Green	24	Fair	Yes	0	0	Yes
436	Ash, Green	22	Fair	Yes	0	0	Yes
437	Basswood	26	Fair	Yes	0	0	Yes
438	Basswood	38	Poor	No	0	0	Yes
439	Ash, Green	24	Fair	Yes	0	0	Yes
440	Basswood	26	Fair	Yes	0	0	Yes
441	Ash, Green	24	Fair	Yes	0	0	Yes
442	Oak, Red	24	Good	Yes	0	0	Yes
443	Ash, Green	32	Fair	Yes	0	0	Yes
444	Maple, Sugar	30	Good	Yes	0	0	Yes
445	Oak, White	24	Good	Yes	0	0	Yes
446	Ash, Green	24	Good	Yes	0	0	Yes
447	Basswood	22	Fair	Yes	0	0	Yes
448	Basswood	22	Fair	Yes	0	0	Yes
449	Ash, Green	34	Fair	Yes	0	0	Yes
450	Hackberry	26	Good	Yes	0	0	Yes
451	Basswood	30	Good	Yes	0	0	Yes
452	Ash, Green	22	Good	Yes	0	0	Yes
453	Basswood	36	Fair	Yes	0	0	Yes
454	Cherry, Black	24	Fair	Yes	0	0	Yes
455	Maple, Sugar	24	Fair	Yes	0	0	Yes
456	Oak, White	26	Fair	Yes	0	0	Yes
457	Basswood	26	Fair	Yes	0	0	Yes
458	Ash, Green	30	Poor	No	0	0	Yes
459	Walnut	34	Poor	No	0	0	Yes
460	Ash, Green	28	Fair	Yes	0	0	Yes
461	Maple, Sugar	28	Good	Yes	0	0	Yes
462	Oak, White	24	Good	Yes	0	0	Yes
463	Hickory, Bitternut	27	Fair	Yes	0	0	Yes
464	Ash, Green	27	Fair	Yes	0	0	Yes
465	Cottonwood	27	Fair	Yes	0	0	Yes
466	Hickory, Bitternut	27	Fair	Yes	0	0	Yes
467	Oak, White	27	Fair	Yes	0	0	Yes
468	Maple, Sugar	27	Fair	Yes	0	0	Yes
469	Basswood	36	Poor	No	0	0	Yes
470	Hickory, Bitternut	24	Good	Yes	0	0	Yes
471	Oak, Red	34	Good	Yes	0	0	Yes
472	Maple, Sugar	24	Fair	Yes	0	0	Yes
473	Maple, Sugar	28	Good	Yes	0	0	Yes
474	Oak, White	28	Good	Yes	0	0	Yes
475	Maple, Sugar	30	Fair	Yes	0	0	Yes
476	Maple, Sugar	24	Fair	Yes	0	0	Yes
477	Maple, Sugar	24	Fair	Yes	0	0	Yes
478	Oak, White	24	Fair	Yes	0	0	Yes
479	Oak, White	28	Fair	Yes	0	0	Yes
480	Ash, Green	26	Fair	Yes	0	0	Yes
481	Maple, Sugar	26	Fair	Yes	0	0	Yes
482	Maple, Sugar	24	Poor	No	0	0	Yes
483	Ash, Green	26	Fair	Yes	0	0	Yes
484	Oak, White	24	Good	Yes	0	0	Yes
485	Oak, White	34	Fair	Yes	0	0	Yes
486	Oak, White	24	Fair	Yes	0	0	Yes
487	Maple, Sugar	32	Fair	Yes	0	0	Yes
489	Oak, White	34	Good	Yes	0	0	Yes
491	Oak, White	26	Fair	Yes	0	0	Yes
497	Maple, Sugar	26	Fair	Yes	0	0	Yes
498	Maple, Sugar	22	Fair	Yes	0	0	Yes
501	Maple, Sugar	30	Fair	Yes	0	0	Yes
502	Maple, Sugar	22	Fair	Yes	0	0	Yes
503	Hickory, Bitternut	26	Good	Yes	0	0	Yes
504	Ash, Green	22	Fair	Yes	0	0	Yes
505	Hackberry	26	Fair	Yes	0	0	Yes
506	Ash, Green	22	Fair	Yes	0	0	Yes
507	Oak, Red	22	Fair	Yes	0	0	Yes
508	Oak, Red	24	Fair	Yes	0	0	Yes
509	Oak, Red	22	Good	Yes	0	0	Yes
510	Oak, White	40	Good	Yes	0	0	Yes
511	Cottonwood	32	Fair	Yes	0	0	Yes
512	Cottonwood	26	Fair	Yes	0	0	Yes
513	Cottonwood	34	Fair	Yes	0	0	Yes
514	Cottonwood	40	Fair	Yes	0	0	Yes
515	Sycamore	24	Fair	Yes	0	0	Yes
516	Oak, White	30	Good	Yes	0	0	Yes
517	Oak, Red	30	Fair	Yes	0	0	Yes
518	Oak, Red	34	Fair	Yes	0	0	Yes
519	Oak, Red	26	Good	Yes	0	0	Yes
520	Oak, Red	36	Good	Yes	0	0	Yes
521	Oak, Red	22	Good	Yes	0	0	Yes
522	Oak, Red	22	Fair	Yes	0	0	Yes
523	Oak, White	28	Good	Yes	0	0	Yes
524	Oak, Red	33	Poor	No	0	0	Yes
525	Walnut, Black	30	Good	Yes	0	0	Yes
526	Ash, Green	26	Poor	No	0	0	Yes
527	Ash, Green	28	Fair	Yes	0	0	Yes
528	Kentucky Coffeetree	24	Good	Yes	0	0	Yes
529	Maple, Sugar	30	Good	Yes	0	0	Yes
530	Ash, Green	26	Good	Yes	0	0	Yes
531	Oak, White	30	Good	Yes	0	0	Yes
532	Oak, Red	34	Fair	Yes	0	0	Yes
533	Oak, White	28	Good	Yes	0	0	Yes
534	Oak, Red	26	Good	Yes	0	0	Yes
535	Oak, Red	28	Good	Yes	0	0	Yes
536	Oak, Red	26	Good	Yes	0	0	Yes
537	Oak, Red	28	Good	Yes	0	0	Yes
538	Oak, Red	28	Good	Yes	0	0	Yes
539	Basswood	26	Good	Yes	0	0	Yes
540	Oak, Red	28	Fair	Yes	0	0	Yes
541	Oak, Red	26	Fair	Yes	0	0	Yes
542	Ash, Green	26	Fair	Yes	0	0	Yes
543	Oak, Red	32	Poor	No	0	0	Yes
544	Oak, Red	30	Poor	No	0	0	Yes
545	Oak, White	24	Good	Yes	0	0	Yes
546	Hickory, Bitternut	26	Good	Yes	0	0	Yes
547	Oak, Red	34	Poor	No	0	0	Yes
548	Oak, White	30	Fair	Yes	0	0	Yes
549	Maple, Sugar	30	Fair	Yes	0	0	Yes
550	Oak, Red	26	Good	Yes	0	0	Yes
551	Oak, Red	28	Good	Yes	0	0	Yes
552	Sycamore	50	Poor	No	0	0	Yes
553	Oak, Red	34	Good	Yes	0	0	Yes
554	Ash, Green	24	Good	Yes	0	0	Yes
555	Oak, Red	28	Good	Yes	0	0	Yes
556	Basswood	30	Good	Yes	0	0	Yes
557	Oak, White	28	Good	Yes	0	0	Yes
558	Ash, Green	22	Good	Yes	0	0	Yes
559	Ash, Green	36	Poor	No	0	0	Yes
560	Ash, Green	26	Fair	Yes	0	0	Yes
561	Basswood	26	Fair	Yes	0	0	Yes
562	Basswood	24	Poor	No	0	0	Yes
563	Oak, Red	22	Fair	Yes	0	0	Yes
564	Ash, Green	26	Fair	Yes	0	0	Yes
565	Maple, Sugar	26	Fair	Yes	0	0	Yes
566	Maple, Sugar	28	Fair	Yes	0	0	Yes
567	Maple, Sugar	29	Fair	Yes	0	0	Yes
568	Maple, Sugar	29	Fair	Yes	0	0	Yes
569	Hickory, Bitternut	29	Good	Yes	0	0	Yes
570	Ash, Green	29	Fair	Yes	0	0	Yes
571	Hackberry	29	Fair	Yes	0	0	Yes
572	Oak, Red	28	Good	Yes	0	0	Yes
573	Oak, Red	34	Fair	Yes	0	0	Yes
574	Oak, Red	26	Good	Yes	0	0	Yes
575	Cherry, Black	22	Poor	No	0	0	Yes
576	Ash, Green	24	Fair	Yes	0	0	Yes
577	Oak, Red	20	Fair	Yes	0	0	Yes
578	Oak, White	28	Fair	Yes	0	0	Yes
579	Ash, Green	28	Fair	Yes	0	0	Yes
580	Cherry, Black	22	Fair	Yes	0	0	Yes
581	Cherry, Black	30	Good	Yes	0	0	Yes
582	Basswood	30	Fair	Yes	0	0	Yes
583	Basswood	32	Good	Yes	0	0	Yes
584	Oak, Red	28	Good	Yes	0	0	Yes
585	Basswood	24	Good	Yes	0	0	Yes
586	Oak, Red	28	Fair	Yes	0	0	Yes
587	Basswood	28	Fair	Yes	0	0	Yes
588	Ash, Green	26	Fair	Yes	0	0	Yes
589	Oak, Red	28	Poor	No	0	0	Yes
590	Oak, Red	30	Fair	Yes	0	0	Yes
591	Oak, White	24	Good	Yes	0	0	Yes
592	Hickory, Bitternut	24	Good	Yes	0	0	Yes
593	Oak, White	26	Fair	Yes	0	0	Yes
594	Oak, White	26	Fair	Yes	0	0	Yes
595	Oak, White	24	Fair	Yes	0	0	Yes
596	Maple, Sugar	26	Fair	Yes	0	0	Yes
597	Oak, Red	24	Poor	No	0	0	Yes
598	Oak, White	46	Fair	Yes	0	0	Yes
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602	Maple, Sugar	28	Fair	Yes	0	0	Yes
603	Oak, Red	33	Fair	Yes	0	0	Yes
604	Maple, Sugar	26	Fair	Yes	0	0	Yes
605	Oak, White	30	Fair	Yes	0	0	Yes
606	Basswood	28	Good	Yes	0	0	Yes
607	Basswood	28	Good	Yes	0	0	Yes
608	Oak, White	36	Poor	No	0	0	Yes
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610	Oak, Red	32	Fair	Yes	0	0	Yes
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612	Basswood	28	Fair	Yes	0	0	Yes
613	Cottonwood	22	Fair	Yes	0	0	Yes
614	Maple, Sugar	28	Good	Yes	0	0	Yes
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616	Maple, Sugar	22	Fair	Yes	0	0	Yes
617	Ash, Green	26	Fair	Yes	0	0	Yes
618	Cottonwood	26	Fair	Yes	0	0	Yes
619	Basswood	22	Fair	Yes	0	0	Yes
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623	Walnut	34	Poor	No	0	0	Yes
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625	Maple, Sugar	28	Good	Yes	0	0	Yes
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627	Oak, White	22	Good	Yes	0	0	Yes
628	Basswood	24	Good	Yes	0	0	Yes
629	Maple, Sugar	22	Fair	Yes	0	0	Yes
630	Ash, Green	22	Fair	Yes	0	0	Yes
631	Ash, Green	26	Fair	Yes	0	0	Yes
632	Hickory, Bitternut	26	Good	Yes	0	0	Yes
633	Pear, Callery	16	Fair	No	12	113	No
634	Pear, Callery	18	Fair	No	12	113	No
635	Pear, Callery	14	Fair	No	12	113	No
636	Pear, Callery	18	Fair	No	12	113	No
637	Pear, Callery	8	Fair	No	8	50	No
638	Linden, Littleleaf	12	Fair	No	12	113	No

Prepared by
DAVEY RESOURCE GROUP
A Division of The Davey Tree Expert Company

Prepared for
Civil Design, Inc.

Tree Stand Delineation Map
700 Chesterfield Parkway
198 Acres, Chesterfield, Missouri

Tree Stand Delineation prepared by: Skip Kincaid, ISA Board Certified Master Arborist (MW-0155BM)

Tree data used to produce this map were collected in March and June 2013 and revised April 11, 2014

Tree Stand Delineation mapping prepared by: Ken Christensen, ISA Board Certified Arborist (A-0690)

VIEW 1

VIEW 5

VIEW 2

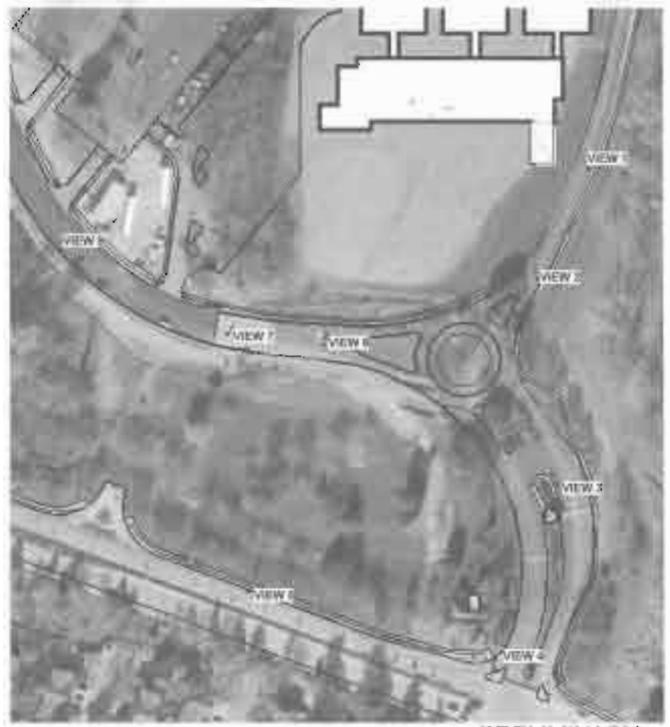
VIEW 6

VIEW 3

VIEW 7

VIEW 4

VIEW 8



VIEW LOCATION PLAN
NOT TO SCALE

PRELIMINARY
NOT FOR CONSTRUCTION

Burns & McDonnell
425 South Woods Mill Road
St. Louis, MO 63017
Phone (314) 682-1500

Burns & McDonnell
Professional Architectural Corporation
MO Certificate of Authority #000089
Professional Engineering Corporation
MO Certificate of Authority #000165
Date Prepared: 07/23/14

DAVID STEVEN RIUMM
ARCHITECT
MO LICENSE NUMBER A-8613

MONSANTO

CV | EC000133 | A-905A

GREENHOUSE EXPANSION AND MODERNIZATION SIGHT LINE STUDY

THE VIEWS SHOWN ON THIS SHEET ARE THREE-DIMENSIONAL COMPUTER GENERATED RENDERINGS MEANT TO APPROXIMATE (AS CLOSELY AS POSSIBLE, BUT NOT PRECISELY) VIEWS OF THE TERRAIN, VEGETATION AND STRUCTURES THAT WILL BE SEEN FROM A TYPICAL VEHICLE DRIVING THROUGH THE MONSANTO CAMPUS AFTER CONSTRUCTION OF THE SITEWORK, MEADHOUSE AND GREENHOUSE HAVE BEEN COMPLETED.

D

1. Overview

   The proposal is for a 105,000 square foot research Greenhouse which sits atop a parking garage currently under construction. Immediately south of the Greenhouse is the 33,000 square foot Headhouse facility which provides support space for the Greenhouse functions. The site is situated directly north of the main security entrance for Monsanto's Chesterfield Valley Campus.

   The design of the Greenhouse/Headhouse facility is largely an exercise in "form follows function." The Greenhouse itself is arranged to maximize useable research space for the clients as well as provide the necessary access to the future Technology building planned for the site directly north of the parking garage. It is limited by the size of the parking garage on which it sits as well as the site constraints of the Headhouse to the south. The Greenhouse plan is organized into three ranges which each consist of twelve individual zones connected by a north/south corridor. Open space is provided in between each range and around the perimeter of the Greenhouse for maintenance access. The Headhouse connects to the Greenhouse via a 36' extension of the three range corridors. This separation minimizes the shading effects of the Headhouse on the Greenhouse space. The Headhouse building is one large L-shaped volume derived from the functional layout of interior spaces which relate directly to the individual greenhouse zones.

2. Site Relationships and Access

   The Greenhouse/Headhouse facility has a direct relationship to the parking garage on which it sits. The proposal utilizes the same precast concrete panels as the parking garage to create a seamless transition between the two projects. Pedestrian access to the Greenhouse/Headhouse facility occurs within the parking garage via stairs located at the north and south ends of the garage.

   The project site features a dramatic drop in elevation from the south to the north. This limits vehicular access and loading areas for the Headhouse to the south. In order to minimize the visual effects of locating service areas on the south façade of the Headhouse, the building took on an L-shaped arrangement. This works to hide the loading dock function from the current Monsanto Drive while still providing an attractive southern façade visible upon campus entry.

3. Exterior Elements and Scale

   The Headhouse is sited atop a hill which overlooks the rest of the Chesterfield Valley Campus. The one story design keeps the building scale from dominating the landscape and gives the impression of being nestled in the hillside.

   The Headhouse exterior utilizes materials common to the Chesterfield Valley Campus. In order to emphasize the horizontal nature of the building plan, the exterior walls feature horizontal banding in light and dark brick. The banding brings the proportion of the walls down to a human scale.

The long strip windows with integrated metal canopies also work to emphasize the horizontal while serving the practical functions of views, shade and shelter.

The Greenhouse exterior is again derived from function. It consists of delicate metal framing and glazing at the walls and roof. The transparency of the Greenhouse adds a feeling of lightness to the heavy concrete parking garage below.

4. Landscape Design and Screening

   Several techniques are used to screen various elements from the rest of the landscape. First, the volumetric organization of the Headhouse works to hide the loading dock on the south façade and the cooling towers at the northwest corner. Also, these elements are further screened by patterned concrete walls with access gates. The walls are designed to match the concrete panels of the parking garage. Finally, the rooftop equipment is screened by the 44" parapet of the Headhouse. This parapet also acts as a guardrail providing a level of safety for rooftop maintenance.

5. Light Pollution Mitigation

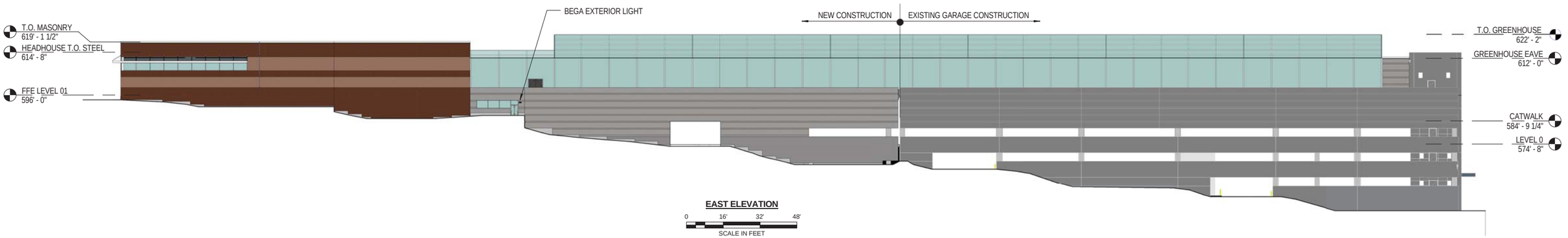
   Light pollution reduction shades will be applied in all of the newly constructed greenhouse spaces as a means of light pollution mitigation. These shades are installed to prevent vertical and horizontal light from leaving the greenhouse structures to a level below the fixture reflector similar to cut-off optics on a street lamp thereby reducing the direct light leaving the interior spaces.

David S. Krumm, AIA, NCARB

MONSANTO

Chesterfield Village

Greenhouse / Headhouse



EAST ELEVATION

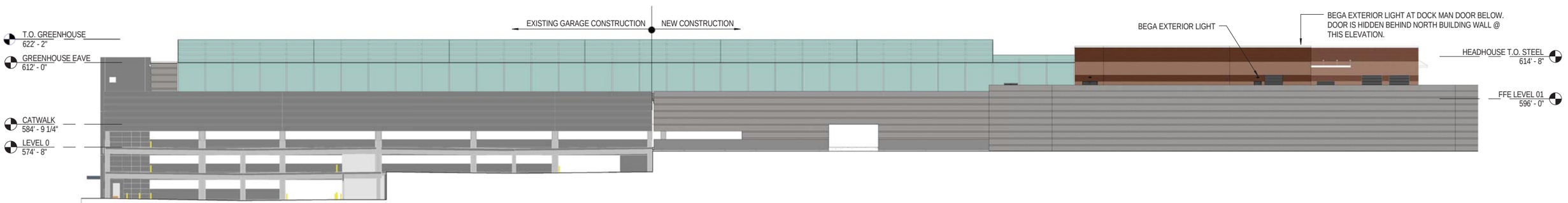
0 16' 32' 48'

SCALE IN FEET

SOUTH ELEVATION

0 16' 32' 48'

SCALE IN FEET



NORTH ELEVATION

0 16' 32' 48'

SCALE IN FEET

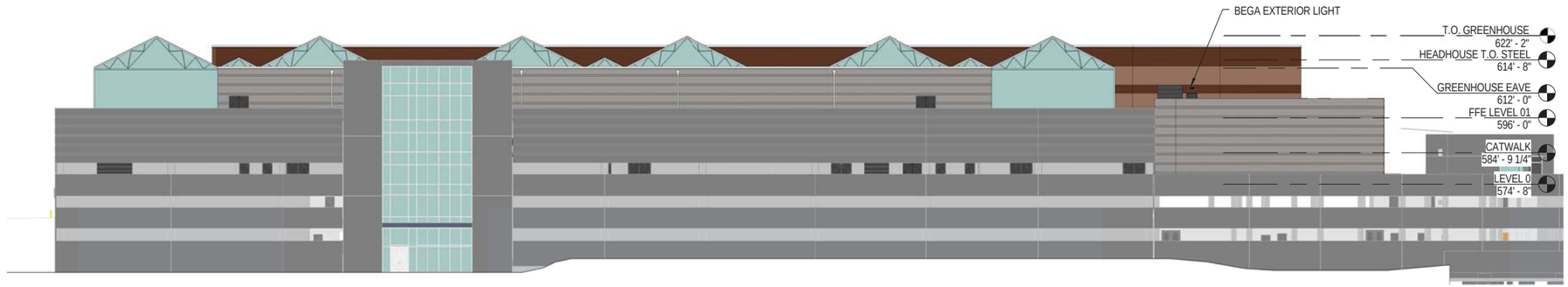
STATE OF MISSOURI
DAVID
STEVEN
KRUMM
NUMBER
A-6613
ARCHITECT

6.18.17

EXTERIOR ELEVATIONS

MONSANTO GREENHOUSE EXPANSION AND MODERNIZATION

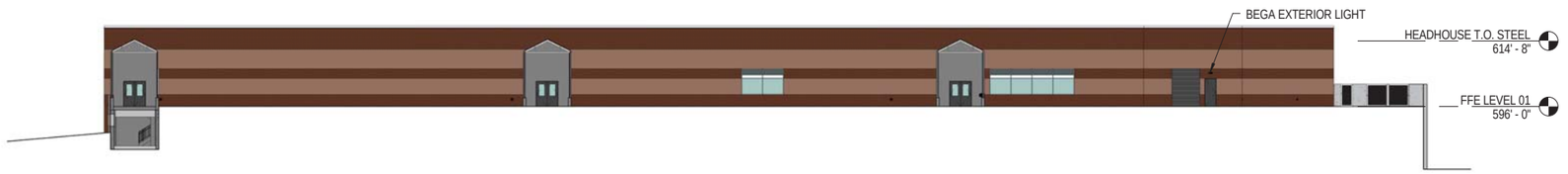
Burns & McDonnell
SINCE 1898



NORTH ELEVATION

0 16' 32' 48'

SCALE IN FEET



NORTH HEADHOUSE ELEVATION

0 16' 32' 48'

SCALE IN FEET

STATE OF MISSOURI
DAVID STEVEN KRUMM
NUMBER A-6613
ARCHITECT

6.18.17

EXTERIOR ELEVATIONS

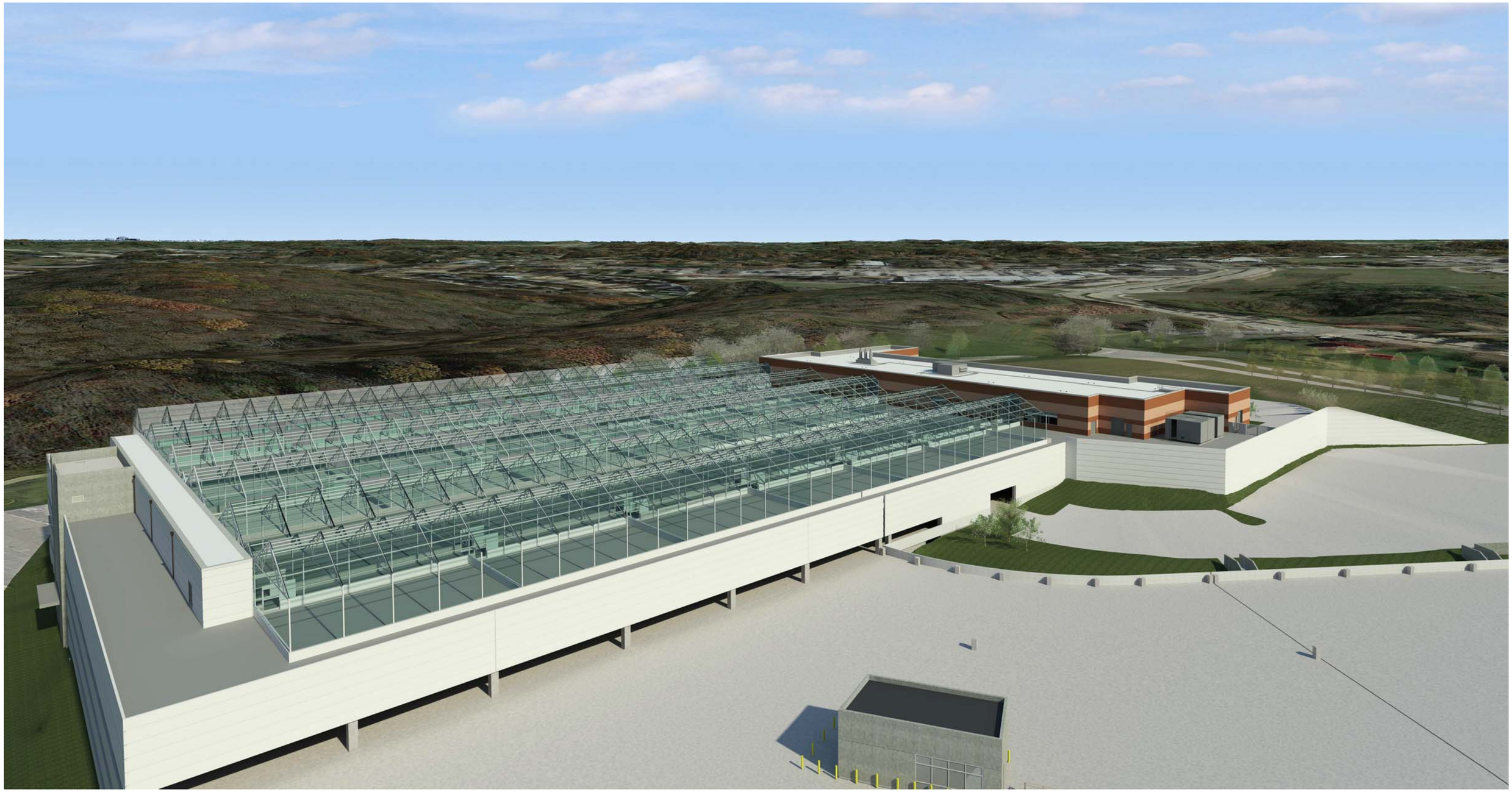
MONSANTO GREENHOUSE EXPANSION AND MODERNIZATION

Burns & McDonnell SINCE 1898

ARCHITECTURAL RENDERING - SOUTHEAST VIEW

MONSANTO GREENHOUSE EXPANSION AND MODERNIZATION

Burns & McDonnell SINCE 1898



ARCHITECTURAL RENDERING - NORTHWEST VIEW

MONSANTO GREENHOUSE EXPANSION AND MODERNIZATION

Burns & McDonnell SINCE 1898

ARCHITECTURAL RENDERING - SOUTHEAST VIEW
MONSANTO GREENHOUSE EXPANSION AND MODERNIZATION

Burns & McDonnell SINCE 1898

ARCHITECTURAL RENDERING - SOUTHWEST VIEW
MONSANTO GREENHOUSE EXPANSION AND MODERNIZATION

Burns & McDonnell SINCE 1898

Architectural Review Board

Architect's Statement

Site Layout

A. Physical Features
    a. The site of Monsanto's proposed Chesterfield Village Technology Building poses no significant challenges to the building's design. The current site is made up almost entirely of parking spaces, the grade of which ranges from 546' on the Northwest corner to 540' at the south east end.
    b. The building elevation was set by the adjacent building GG, so as to align with the internal circulation of the campus. The use of the existing loading dock is required.
B. Vegetation
    a. The minimal amount of vegetation within the site lot lines provide modest context; we will retain existing trees where applicable and use plants and grasses associated with the existing landscaping. Landscaping between GG and the new Tech Building will be designed as an expansion of adjacent courtyards.
    b. The landscaping will add some native grasses, as well as some shade tolerant flowering trees.
    c. The landscaping will be coordinated with the new Garage and Greenhouse/Headhouse projects to create an overall design that is fully coordinated within the site masterplan.
    d. Immediately south of the Tech Building, the addition of linear ground cover will echo the building to create a more modern landscape.
    e. The site will include a retention basin at the south east corner, to be planted with native grasses in accordance with state guidelines.
C. Site Relationships
    a. The new Tech Building is sited directly south of building GG, to which it is connected via a three story "bridge." It is also located directly north of the new Garage, currently under construction. It is also connected to the garage via a fourth floor bridge. This connection serves as the main entry to the building. There are no significant entries to the building on the ground floor.
D. Pedestrian and vehicular circulation and orientation
    a. As a continuation of the existing campus, the Tech Building builds on the clear and safe circulation pattern already in use on the site. Pedestrian zones are clearly marked as they cross the vehicular traffic areas while stairs, plantings and landscape continue to provide the pleasant environment that exists on the site today.
    b. Existing parking spaces displaced by this building will be compensated for in the new parking garage, currently under construction. New visitor spaces and handicap accessible parking will be added immediately west of the Tech Building.
    c. Fire lane access is required to the north of the Tech Building. This is accomplished with a hard-scaped road that leads to the north from the west visitor parking lot.

d. Service traffic remains as-is on the east drive, as the Tech Building will use the existing building GG loading dock.

Building

1. All Structures
    a. General Architectural guidelines
        i. The design of the Tech Building grows from the existing buildings on the campus. Conceived as a series of integrated "bars", the building articulates each programmatic element from the laboratory functions to the Regulatory office. The laboratory "bar" directly mimics the existing building GG in scale, material and use of linear "ribbon" window. As one moves south, the building presents itself as more modern, utilizing floor to ceiling curtainwall, ultimately expressing the office program as a modern aluminum and glass "bar."
        ii. As the program for the building is dense with function, the laboratory functions are separated from the Regulatory offices by an atrium, which divides the building into two discrete volumes, allowing light to penetrate the interior offices.
    b. Scale
        i. As the continuation of the existing context, the building's form responds to the adjacent buildings. Strong linear elements are of the same scale and shape. The south "bar" of the building bends in shape to directly respond to buildings AA through CC.
        ii. Landing well within code restrictions, the building height remains in context with the surrounding buildings. Care was taken to not shade the building GG whose rooftop greenhouses remain in use.
        iii. The floor to floor height of the building is design to accommodate modern laboratory HVAC requirements. Connections to GG and the new garage will be ramped.
    c. Design
        i. The concept of this building creates both a building that fits into its campus as a part of the masterplan, as well as a modern one that expresses the contemporary culture of the forward-thinking corporation.
            1. Being respectful of the adjacent buildings and the courtyard created, the building gradually morphs from an exact copy of the GG building to the north, to a more modern office building to the south, becoming the new image for Monsanto research.
            2. As the new image of the campus, the south façade is ultimately clad in a "shield" of structurally glazed curtainwall. Conceived as an allegory to the Monsanto mission to help the agricultural community, the mosaic of

glass patterns evoke the rational plots of farmed land and the cultivated crops within.

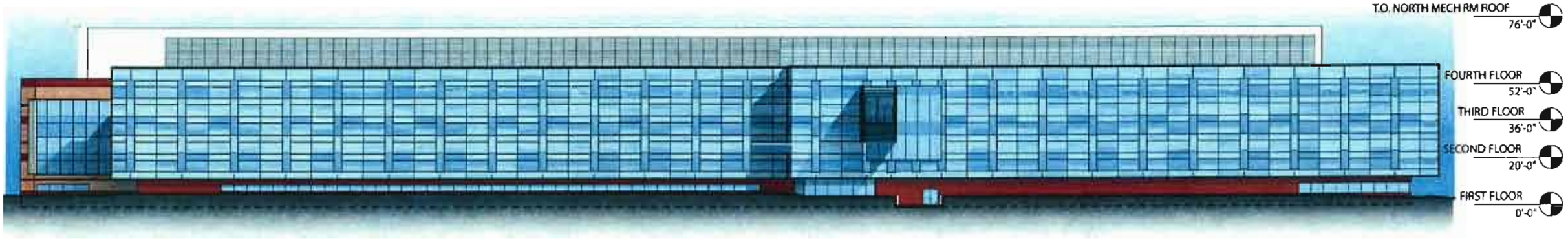
d. Materials/Colors
    i. The buildings north façade is made entirely of existing materials, using the two colors of brick (as seen on the other existing buildings) in a banded pattern. The ribbon windows utilize the exact same profiles and glass patterning.
    ii. The glass utilized differs from the campus as newer technology of higher performance. Using a tinted substrate, the low-e coating with an additional room side low-e coating provide maximum insulation while allowing considerable light to the building occupants. The building uses darker, tinted glass in an effort to more closely align with most of the existing buildings.
    iii. Ceramic frit is utilized to mitigate solar gains on the south façade, creating privacy for those in offices along the exterior and mosaic described above.
    iv. The mullion colors are a dark, metallic grey to relate more to the existing buildings.
e. LEED Initiatives
    i. The Tech Building is registered with the USGBC using the LEED 2009 rating system, with a project certification goal of LEED Silver. The team plans to achieve this goal by employing various strategies across all LEED rating system categories, while focusing in particular on energy savings and water reclamation. Project strategies include:
        1. A comprehensive rainwater harvesting system that will provide flushing for water closets and urinals as well as for cooling tower make-up water
        2. Stormwater quality and quantity control
        3. Native landscaping that does not require irrigation
        4. High-performance building envelope
        5. Chilled beam cooling for general office areas
        6. LED lighting along with daylight harvesting and automated shading
        7. High efficiency chillers, pumps, and air-handling equipment
        8. Reduced plug loads and temperature set points for general office areas
        9. Low-flow plumbing fixtures

05.28.14

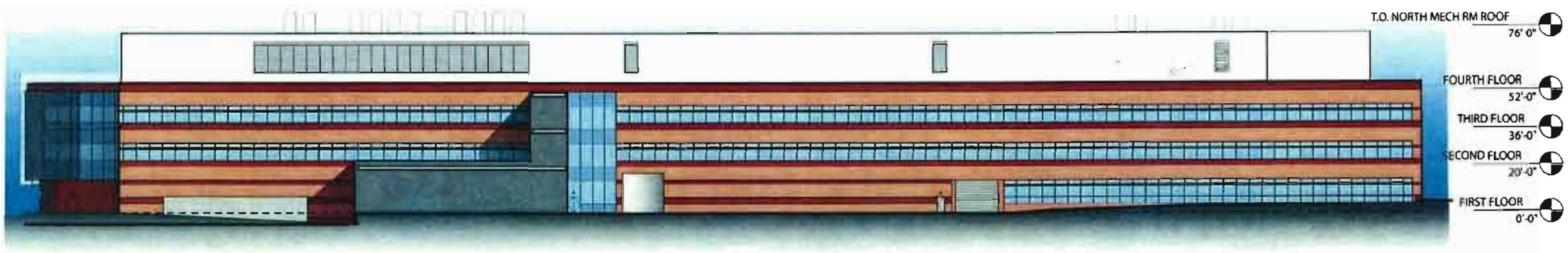
MONSANTO

Chesterfield Village

Technology /
Laboratory Building

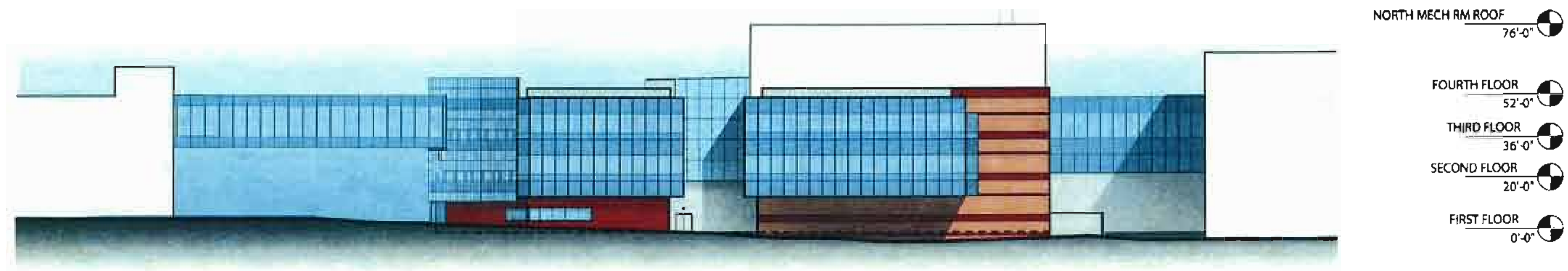


SOUTH ELEVATION

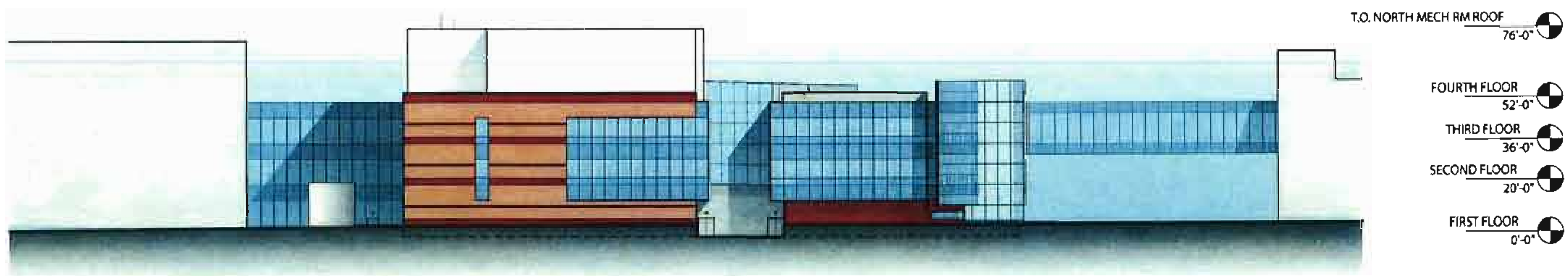


NORTH ELEVATION

08-OCT-2014



EAST ELEVATION



WEST ELEVATION

08-Oct-2014

Plan Diagrams

- Site Aerial

Plan Diagrams

- Northwest View from existing NRB

Plan Diagrams

- Southwest corner

Plan Diagrams

- Southeast Corner

Plan Diagrams

- Northeast Corner

Plan Diagrams

- Existing Dark Brick
- WatsonTown Cayuga
- Building CC and JJ
- CV Tech Building

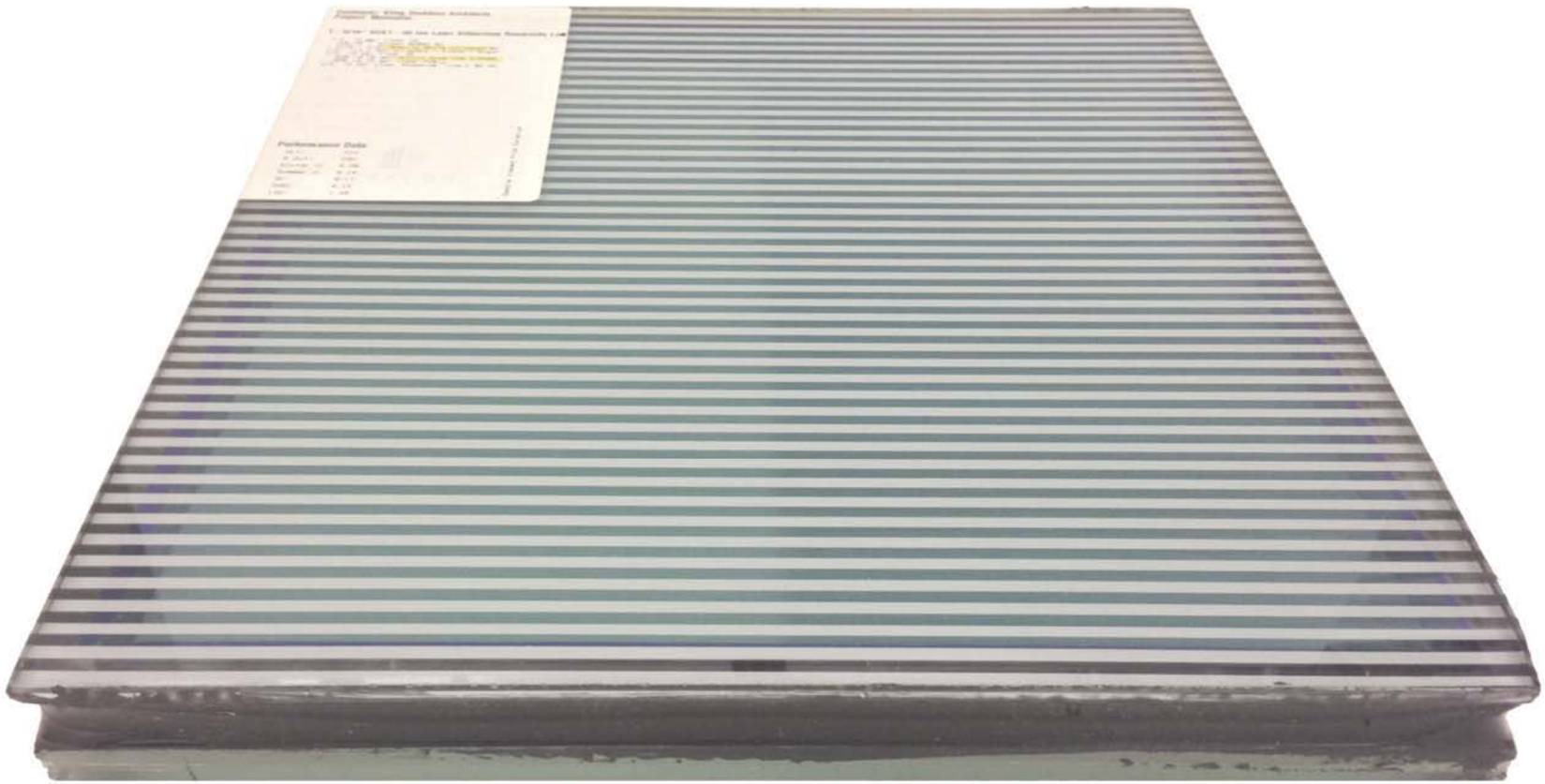
Plan Diagrams

- Proposed Light Brick
- GlenGerry Allington
- CV Tech Building

Plan Diagrams

- Glass - Vision
- Viracon VNE29-63

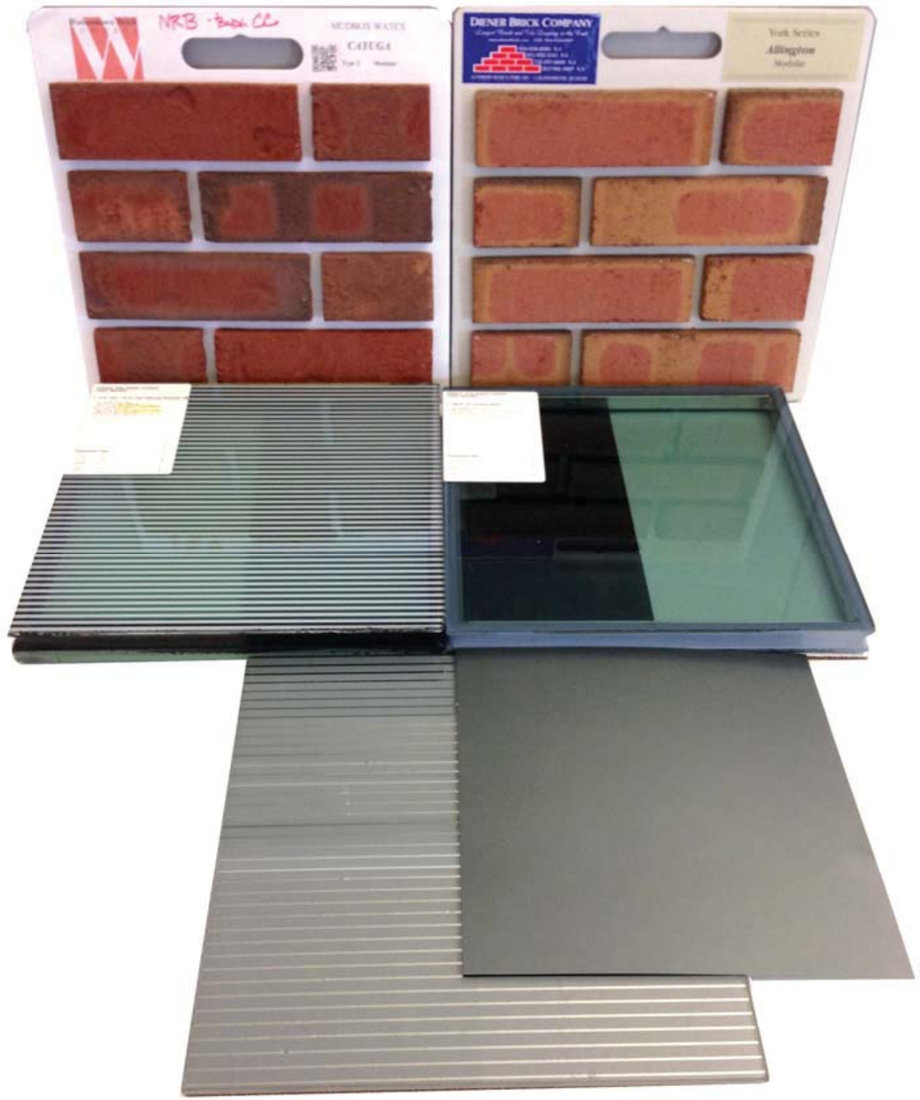
Plan Diagrams



- Glass - Fritted
- Viracon VNE29-63

Plan Diagrams

- Glass – Shadow Box
- Viracon VNE29-63
- Viracon VP1-13 w/ simulated acid etch backpanel



Plan Diagrams

- Full Palette