



III. B.

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

Architectural Review Board Staff Report

Project Type: Site Development Section Plan

Meeting Date: March 10, 2016

From: Jessica Henry, AICP
Project Planner

CC: Aimee Nassif, Planning & Development Services Director

Location: Southeast corner of Ladue Road and Greentrails Drive.

Applicant: St. Charles Engineering & Surveying, Inc. on behalf of Onofrio Serra

Description: **Trails West Village of Greentrails, Lot 270 B:** A Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations and an Architect's Statement of Design for a 3.6 acre tract of land zoned "C-8" Planned Commercial District, located at the southeast corner of Ladue Road and Greentrails Drive.

PROPOSAL SUMMARY

The request is for a Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations and an Architect's Statement of Design for a new retail center to be located on Lot 270 B of the Trails West Village of Greentrails subdivision. Although this subdivision is primarily residential in nature, Lot 270, outlined in yellow on the image on the following page, is zoned "C-8" Planned Commercial District. Accordingly, the applicant is proposing to construct a 4,000 square foot building with four separate entries to tenant spaces. The proposed building is to be constructed of brick veneer, split-face CMU, dark bronze metal roof and fascia, stone coping tile, and a dark bronze anodized aluminum and glass storefront.

HISTORY OF SUBJECT SITE

In December of 1966, St. Louis County rezoned the subject site from the "NU" Non-Urban District to the "C-8" Planned Commercial District via Ordinance 4165 and established the permitted uses as being all permitted uses in the "C-2 and "C-3" Shopping Districts. In June of 1969, Ordinance 5084 amended the previous ordinance to limit the permitted uses to "C-2" Shopping District permitted uses as well as one neighborhood gasoline service station. On February 4th, 1985, St. Louis County approved Ordinance 11,900 which amended St. Louis County Ordinance 5084 and 4165 which had governed the site.

On November 20, 1989, The City of Chesterfield approved Ordinance 378 which amended portions of the sign requirements for the site. Additionally, the original Lot 270 was split into Lots A and B in 1986, with Lot A being further subdivided into Lot A1 and A2 in 2007, as shown in the image below. Lot 270 B is presently vacant with remaining portions of a parking area that are in disrepair.



STAFF ANALYSIS

General Requirements for Site Design:

A. Site Relationships

The subject site is located within the small commercial development that comprises the southeast quadrant of the intersection of Ladue Road and South Greentrails Drive. The three lots within the development share cross access, and Lots 270 A1 and A2 currently contain a neighborhood service station and commercial retail building, respectively.

B. Circulation System and Access

The subject site has direct access from South Greentrails Drive as well as access from Ladue Road via the shared internal drive. No changes to the location of these access points are proposed. Internal circulation to each lot within the development will remain, and minor changes within the lots and to the shared drive areas are proposed in an effort to facilitate and improve circulation.

C. Topography

The subject site will be graded to maximize the building and parking area. This will result in a height differential from grade and a CMU block wall and elevated walkway is proposed along the rear elevation to address this differential. Additionally, there is a significant slope down to a creek along the southern property line. The creek is protected via a required 25 foot buffer from the top of the bank.

D. Retaining Walls

A concrete retaining wall is proposed along the parking area adjacent to the creek buffer mentioned above. Additionally, as discussed above, a CMU wall with an elevated walkway is proposed along the rear elevation of the building.

General Requirements for Building Design:

A. Scale

The proposed single story building is 14' 8" in height and is designed to the pedestrian scale, with a split-face CMU base around all four sides of the building. The metal roof and fascia provide an overhang over the glass storefront entries. The scale of the building is consistent with the surrounding development.

B. Design

The building is rectangular shaped and evenly divided into four storefronts. Apart from the metal roof and fascia element, the building lacks articulation. The applicant has provided material variation and architectural interest via the use of reveal bands and a brick soldier course within the upper brick portion of the building. A stone sweep band is sandwiched between the brick veneer and CMU.

In the Architectural Elevations and rendering, the parapet is shown as being extended around the building. However, the Architect's Statement of Design states "there will be no parapet on the rear of the building." The inclusion of a parapet wall on the rear façade as shown in the elevations would provide consistency to the design on all sides while also providing screening to the lower portion of the roof top mechanical units.

C. Materials and Color

Ordinance 378 states that submittals for buildings within this development should "*show the architectural character of the neighborhood and how the buildings blend in and complement the surrounding residential neighborhood.*" In an effort to meet this requirement, the applicant is proposing to utilize brick veneer on all four elevations of the single-story building. The proposed colors are appropriate for the neighborhood character. However, the metal fascia, flat roof, and use of CMU block are not typical to residential neighborhoods and traditional neighborhood design.

A glass storefront is proposed, with the bottom panel called out as "bronze insulated panel" on the Architectural Elevations. However, the call-out is visibly inconsistent with the actual elevations and rendering, which clearly show a glass panel. Staff does not have a concern with these panels being either glass or a bronze insulated panel considering both materials/colors are used elsewhere on the building; however, the inconsistency must be addressed prior to Planning Commission.

The proposed dumpster enclosure utilized the same CMU split face block with a wooden gate enclosure.

D. Landscape Design and Screening

As required by the UDC, a thirty foot landscape buffer and berm planted with trees, shrubs, and ornamental grasses is provided along the South Greentrails Drive frontage. This will serve to buffer the adjacent residential area from the commercial use of the site and to provide screening from headlights. Additional trees and plantings are located within the parking area in accordance with City code.

The applicant is proposing a screen unit for the roof-mounted mechanical equipment. Although this screen unit is shown as being constructed of wood on both the Architectural Elevations and rendering, the checklist included in the submittal packets indicates that the screen “will use the standing steel material instead of wood.” This information was not presented to Staff prior to receipt of the meeting packet and depending on the design could be a concern.

Regarding roof top screening of equipment, the City’s Architectural Review Design Standards state the following:

- *Screen rooftop equipment on all visible sides with materials that are an integral part of the architecture. Parapet walls or screen walls shall be treated as an integral part of the architecture and shall not visually weaken the design of the structure.*

Due to the residential nature of the surrounding development, Staff requested that a sight-line study be provided related to the proposed mechanical screening; however, the applicant has elected not to provide this document. The roof-top screening, including the apparent change in material, remains under review by Staff and input on this item from the Architectural Review Board is encouraged.

Proposed Architectural Elevation—Front and Rear Elevations



E. Signage

Signage is not part of the proposal before Architectural Review Board and will be reviewed separately by Staff.

F. Lighting

The applicant is proposing nine wall mounted light fixtures and seven pole mounted fixtures. Each of these fixtures is utilitarian in nature and features fully-shielded, full cut-optics as required by the UDC.

DEPARTMENTAL INPUT

Staff has reviewed the Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations and Architect's Statement of Design and has found several inconsistencies and issues with the submittal, as discussed throughout this report.

This project is still under review by City Staff and will not proceed to the Planning Commission until all outstanding items have been addressed. Staff has issued comments to the applicant regarding the concerns in this report throughout the review process which has been conducted over approximately 12 months. Despite these comments, the applicant has requested to be placed on the agenda for ARB review and Staff is therefore presenting this to the board with the acknowledgement of Staff concerns noted throughout this report. All recommendations made by the ARB will be included in Staff's report to the Planning Commission.

Staff requests action on the Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations and Architect's Statement of Design for Trails West Village of Greentrails, Lot 270 B.

MOTION

The following options are provided to the Architectural Review Board for consideration relative to this application:

- 1) "I move to forward the Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations and Architect's Statement of Design for Trails West Village of Greentrails, Lot 270 B, as presented, with a recommendation for approval (or denial) to the Planning Commission."
- 2) "I move to forward the Site Development Section Plan, Landscape Plan, Lighting Plan, Architectural Elevations and Architect's Statement of Design for Trails West Village of Greentrails, Lot 270 B, to the Planning Commission with the following recommendations..."

Attachments

1. Architectural Review Packet Submittal



ARCHITECTURAL REVIEW BOARD
Project Statistics and Checklist

Date of First Comment Letter Received from the City of Chesterfield January 28, 2015

Project Title: 116 Greentrails Drive Location: Ladue Road and Greentrails Drive

Developer: Onofrio + Lucrezia Serra Architect: Derut Associates Engineer: St. Charles Engineering & Surveying, Inc

PROJECT STATISTICS:

Size of site (in acres): 1.11Ac Total Square Footage: 4,000 Building Height: 14' - 8"

Proposed Usage: Commercial, Retail and Restaurant Space

Exterior Building Materials: CMU Base + Brick top in front and sides, cmu on the back

Roof Material & Design: Bronze standing metal awning on front and sides EPDM on roof

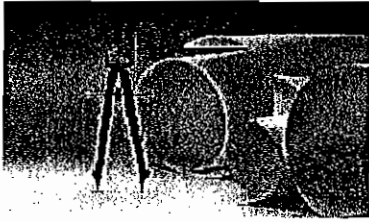
Screening Material & Design: Screening as designed to match surrounding area and will use the standing steel material instead of wood

Description of art or architecturally significant features (if any): Architectural features to reflect the existing fabric of the area

ADDITIONAL PROJECT INFORMATION: Front and two sides will have standing metal awning + roof top screening will be of same material

Checklist: Items to be provided in an 11" x 17" format

- Color Site Plan with contours, site location map, and identification of adjacent uses.
- Color elevations for all building faces.
- Color rendering or model reflecting proposed topography.
- Photos reflecting all views of adjacent uses and sites.
- Details of screening, retaining walls, etc.
- Section plans highlighting any building off-sets, etc. (as applicable) N/A
- Architect's Statement of Design which clearly identifies how each section in the Standards has been addressed and the intent of the project.
- Landscape Plan.
- Lighting cut sheets for any proposed building lighting fixtures. (as applicable)
- Large exterior material samples. (to be brought to the ARB meeting)
- Any other exhibits which would aid understanding of the design proposal. (as applicable)
- Pdf files of each document required.



DERU and Associates

ARCHITECTS

ENGINEERS

CODE COMPLIANCE

PLAN REVIEW

COMMISSIONING

**116 GREEN TRAIL S.
CHESTERFIELD, MO**



ARCHITECTURAL OVERVIEW

The proposed retail building is a one story masonry structure with a flat membrane roof combined with metal in the front. The building footprint is measured 100'-0" x 40'-0" with a total of 4000 gross square feet. The structure is designed to accommodate four commercial retail units. Each unit is 860 SF of 23'-11 1/4" x 38'-2 1/2" net. The total net area is 3404 SF combined. Each unit is equipped with an ADA accessible restroom, a storefront system and a rear exit door as additional means of egress.

The existing buildings in the commercial strip are an eye sore; they are in terrible shape. However, the commercial strip is located in a piece of land that is surrounded by a well-maintained housing community. It is the only commercial center in the area and it is also well-traveled by the community families and people from other areas. Therefore, the newly proposed retail building will function as the heart of the retail center to complement the existing businesses in meeting the commercial needs of the community residents and the travelers from other areas. It will provide a unique and exciting opportunity, as it will not only enhance the look of the area, but it will help the existing businesses in getting new clients.

Although the existing commercial buildings are not well-maintained, the new building and the proposed services will attract people to their business, which will motivate the existing owners to improve the appearance of their buildings. The new building and the proposed services will appeal to a range of age group including young families and empty nesters and seniors. It is highly expected that based on the needs of the area, the people in the community will be excited and very enthusiastic about the new building and its use in the area. The following are the partial architectural features of the new building:

2020 North Broadway, St. Louis, MO 63102 Telephone: 314-574-5770

WALLS:

The exterior of the building is designed to reflect the architectural fabric of the surrounding area with quality materials to enhance its appearance. The front and the two sides of the building will be built with brick veneer (SIOUX CITY BRICK CAMBRIDGE COLONIAL that will be provided with three reveal bands and one soldier band. The brick will be rested on stone sweep band (INDIANA BLUFF SAWN) with a 3' -0" high split-face CMU watertable wall (NATURAL). The parapet will be built of the same material with stone coping reflecting the sweep band material and color. The rear of the building will be built with split-face CMU wall, reflecting the same color as the watertable wall on the three sides. There will be no parapet on the rear of the building. The retaining walls will be built with CMU (CHARCOAL) to create contrast between the building and the site.

DOORS AND WINDOWS:

Each unit entrance will receive a storefront system made out of 2"x5" Dark Bronze Anodize Aluminum. The bottom of the each storefront system will be provided with Bronze Insulated Panel instead of glass. The rear door will be made out of hollow core metal with metal frame painted to match the grey wall.

ROOF:

The roof structure will be flat covered with membrane roofing, which will be sloped to the rear of the building. Gutter and downspouts will be provided at the rear to channel the water. The front of the building will receive a dark bronze metal roof and fascia with formed battens 2' -0" O.C.

ROOF SCREEN:

The mechanical condensing units will be located on the roof and rested on a curb. A wood screening system will be built to screen the condensing unit from view. The screen will be painted grey to match the CMU.

EXTERIOR STAIR and HANDRAIL:

Exterior stair will be made out of concrete with tubular metal handrail on both sides. Handrails will be provided where platform elevation is higher than 1' -0"

SITE:

The site will be graded to provide maximum usable area for the building and parking. Accessible parking stalls will be located at the front of the building with an accessible ramp to allow wheelchair access into the building. Sidewalk will be provided on all four sides of the building to provide access from all corners of the site.

_____, the owner(s) of the property shown on this plan for and in consideration of being granted approval of said plan to develop property under the provisions of Section 03 _____ of City of Chesterfield Unified Development Code, 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 City of Chesterfield, or voided or vacated by order of ordinance of the City of Chesterfield Council.

(Signature): _____
(Name Typed): _____

State of _____ }
County of _____ } SS.
On this _____ day of _____ A.D., 20____ before me personally appeared _____ (Officer of Corporation) to me known, who, being by me sworn in, did say that he/she is the _____ of _____ (Name of Corporation) corporation in the State of _____ 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 the said _____ (Officer of Corporation) acknowledged said instrument to be the free act and deed of said corporation.

State of _____ }
County of _____ } SS.
On this _____ day of _____ A.D., 20____ before me personally appeared _____ (Individual) and _____ (Wife) his wife, to me known to be the person(s) described in, and who executed the foregoing instrument, and acknowledged that he, she or they executed the same as his, her, or their free act and deed. In Testimony Whereof, I have hereunto set my hand and affixed my Notarial Seal at my Office in _____ (County and State) the day and year last above written. My term expires _____ (Notary Public)

This Site Development Plan was approved by the City of Chesterfield Planning Commission and duly verified on the _____ day of _____ 20____ by the Chairperson of said Commission, authorizing the recording of this Site Development Plan pursuant to Chesterfield Ordinance Number 200, as attested to by the Planning and Development Services Director and the City Clerk.

Aimee Massi, AICP
Planning and Development Services Director
City of Chesterfield, Missouri

Vickie Hess, City Clerk
City of Chesterfield, Missouri

SURVEYOR'S CERTIFICATE

THIS IS TO CERTIFY THAT ST. CHARLES ENGINEERING AND SURVEYING, INC. AT THE REQUEST AND FOR THE EXCLUSIVE USE OF ONOFRIO & LUCRETIA SERRA DURING THE MONTH OF JUNE, 2014 EXECUTED A BOUNDARY & TOPOGRAPHIC SURVEY OF '116 GREENTRAILS DRIVE', TOWNSHIP 45 NORTH, RANGE 4 EAST, ST. LOUIS COUNTY, MISSOURI. THIS SURVEY WAS PREPARED IN ACCORDANCE WITH CHAPTER 18, MISSOURI MINIMUM STANDARDS FOR URBAN PROPERTY BOUNDARY SURVEYS (20 CSR 20.30-18.010-18.110).

RICHARD KEITH SEDGWICK MO. P.L.S. #2002014094 DATE _____

COMPLIANCE WITH GEOTECHNICAL REPORT

_____, AND THE UNDERSIGNED ENGINEER HAVE NOT PREPARED THE PLAN ON THIS SHEET. THE SEAL OF THE UNDERSIGNED PROFESSIONAL ENGINEER HAS BEEN AFFIXED AT THE REQUEST OF _____ AND IS A PROFESSIONAL OPINION TO INDICATE THAT THE UNDERSIGNED HAS REVIEWED THE PLANS AND THAT IN HIS OPINION THE GRADING AND IMPROVEMENTS RELATED TO SLOPE CONSTRUCTION AS SHOWN ON THE PLANS, AS WELL AS THE FOUNDATIONS, ARE COMPATIBLE WITH THE SOIL AND GEOLOGIC CONDITIONS AT THE SITE AS DESCRIBED IN THE GEOTECHNICAL REPORT FOR THE DEVELOPMENT DATED _____.

_____, AND THE UNDERSIGNED ASSUME NO RESPONSIBILITY FOR SERVICES BY OTHERS (PURSUANT TO RSMO 327.411).

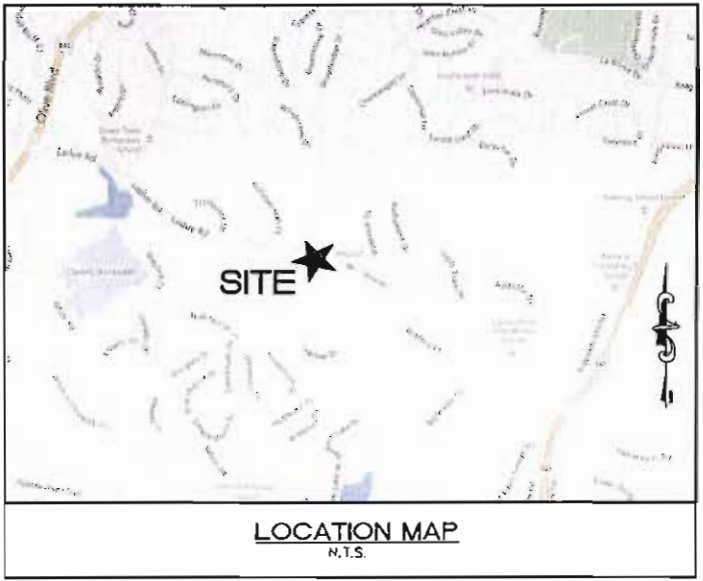
CONSTRUCTION MEANS AND METHODS FOR IMPLEMENTATION OF THE GRADING PLAN SHALL BE LEFT TO THE DEVELOPER/CONTRACTOR. OBSERVATIONS OF THE DEVELOPER/CONTRACTOR'S COMPLIANCE WITH THE APPLICABLE SPECIFICATIONS SHALL BE IDENTIFIED AND VERIFIED IN WRITING.

NAME _____ DATE _____



UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING AND/OR CONSTRUCTION OF IMPROVEMENTS.

AMENDED SITE DEVELOPMENT SECTION PLAN
116 GREENTRAILS DRIVE
LOT B OF THE RESUBDIVISION OF LOT 270 OF TRAILS
WEST SECTION OF GREEN TRAILS SUBDIVISION
TOWNSHIP 45 NORTH, RANGE 4 EAST
ST. LOUIS COUNTY, MISSOURI



PERVIOUS / IMPERVIOUS DIFFERENTIAL CALCULATION

EXISTING
IMPERVIOUS-----0.53 AC
PERVIOUS-----0.58 AC

PROPOSED
IMPERVIOUS-----0.63 AC
PERVIOUS-----0.48 AC

DIFFERENTIAL
IMPERVIOUS-----(+0.10 AC)
PERVIOUS-----(-0.10 AC)

15YR. - 20 MIN. DIFFERENTIAL CALCULATION

EXISTING
IMPERVIOUS-----0.53 AC X 3.54 = 1.87 CFS
PERVIOUS-----0.58 AC X 1.70 = 0.99 CFS

PROPOSED
IMPERVIOUS-----0.63 AC X 3.54 = 2.23 CFS
PERVIOUS-----0.48 AC X 1.70 = 0.82 CFS

DIFFERENTIAL
-----(+0.19 CFS)

UTILITY & SERVICE PROVIDERS

WATER: MISSOURI AMERICAN WATER COMPANY
727 CRAIG ROAD
ST. LOUIS, MISSOURI 63141
314-822-5846

SANITARY SEWER: METROPOLITAN ST. LOUIS SEWER DISTRICT
2350 MARKET STREET
ST. LOUIS, MISSOURI 63103
314-768-6200

ELECTRIC: AMEREN CORPORATION
PO BOX 68149
ST. LOUIS, MISSOURI 63168
314-342-1111

GAS: LAQLEDE GAS COMPANY
3950 FOREST PARK
ST. LOUIS, MISSOURI 63108
314-636-5417

FIRE PROTECTION: MONARCH FIRE PROTECTION DISTRICT
13725 OLIVE BLVD.
CHESTERFIELD, MISSOURI 63017
314-514-0900

CABLE TV: CHARTER COMMUNICATIONS
941 CHARTER COMMONS DRIVE
TOWN & COUNTRY, MISSOURI 63017
636-270-2175

TELEPHONE: AT&T
13075 MANCHESTER ROAD, 3RD FLOOR
DES PERES, MISSOURI 63631
636-220-2175

BENCHMARK

ST. LOUIS COUNTY BENCHMARK
12-142 ELEVATION 223.93 - "SQ." IN THE CENTER OF AN ISLAND AT SEABROOK DRIVE (WEST ENTRANCE TO LADUE TRAILS); 10' NORTH OF THE CENTERLINE OF WESTBOUND LANES OF LADUE ROAD.

SITE BENCHMARK

ELEVATION 516.20 - "OLD IRON PIPE" AT THE SOUTHEAST CORNER OF THE INTERSECTION OF GREENTRAILS DRIVE AND LADUE ROAD. 30' EAST OF CENTERLINE OF GREENTRAILS DRIVE.

INDEX OF SHEETS

COVER SHEET-----1
SITE PLAN-----2
LIGHTING PLAN-----3-7
SITE PHOTOS-----8-9

GENERAL NOTES:

- PROPERTY OWNER: ONOFRIO & LUCRETIA SERRA
- SITE ADDRESS: 116 GREENTRAILS DRIVE CHESTERFIELD, MISSOURI 63017
- ST. LOUIS COUNTY PARCEL ID NUMBER: 17R320372
- AREA OF TRACT: 1.11 AC
- CURRENT/PROPOSED ZONING: CB
- REQUIRED SETBACKS:
30' PARKING & LANDSCAPE - GREENTRAILS
40' FRONT - GREENTRAILS
40' SIDE - ALONG SOUTH PROPERTY LINE
0' REAR - LOT B EAST PROPERTY LINE
- PROPOSED USE:
2,000 SF=RETAIL
2,000 SF=RESTAURANT
- PARKING & LOADING REQUIREMENTS AND PROVISIONS PER CITY OF CHESTERFIELD THE UNIFIED DEVELOPMENT CODE:
4 SPACES PER 1000 SF OF RETAIL SPACE
2000 SF RETAIL X 4 SPACES PER 1000 SF= 8 SPACES
12 SPACES PER 1000 SF OF RESTAURANT SPACE
2000 SF RESTAURANT X 12 SPACES PER 1000 SF= 24 SPACES
TOTAL PARKING REQUIRED: 32 SPACES
TOTAL PARKING PROVIDED: 32 SPACES
- PER F.I.R.M. RATE MAP PANEL 29189C0145 M, THIS PARCEL LIES IN ZONE "X" AREAS DETERMINED TO BE OUTSIDE OF THE 500 YEAR FLOODPLAIN HAVING AN EFFECTIVE DATE OF AUGUST 2, 1995.
- AREA OF DISTURBANCE: 0.75 AC
- PROPOSED RESTAURANT SHALL BE A SIT DOWN RESTAURANT
- SIGN APPROVAL IS A SEPARATE PROCESS
- ALL PROPOSED UTILITIES SHALL BE PLACED UNDERGROUND

LEGEND

(S)	SANITARY STRUCTURE	B.C.	BACK OF CURB
(S)	STORM STRUCTURE	T.C.	TOP OF CURB
(P)	POWER POLE	T.W.	TOP OF WALL
(L)	LIGHT STANDAND	TYP.	TYPICAL
(C)	CURB INLET	-572-	EXISTING CONTOUR
(C)	DOUBLE CURB INLET	-318-	PROPOSED CONTOUR
(G)	GRATE INLET (EXISTING)	(---)	TREE LINE
(A)	AREA INLET (EXISTING)	E.O.A.	EDGE OF ASPHALT
(O)	DOUBLE AREA INLET	E.O.C.	EDGE OF CONCRETE
(M)	WATER METER	(---)	SIGN
(V)	WATER VALVE	(---)	CONCRETE PAVEMENT
(S)	WATER SHUT OFF	(---)	ASPHALT PAVEMENT
(C)	CAS VALVE		
(O)	CLEAN OUT		
(T)	TELEPHONE HANNOHOLE		
(I)	IRON PIPE		
(H)	HYDRANT		
(UT)	UNDERGROUND TELEPHONE (EXISTING)		
(UE)	UNDERGROUND ELECTRIC (EXISTING)		
(UG)	UNDERGROUND GAS LINE (PROPOSED)		
(OE)	OVERHEAD ELECTRIC LINC		
(WL)	WATER LINE		

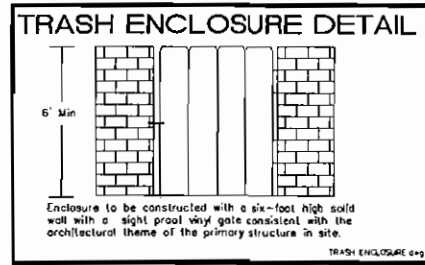
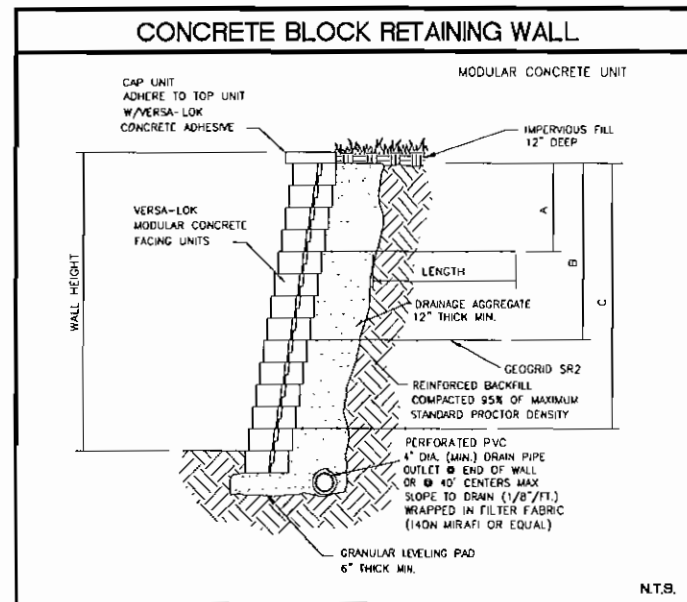
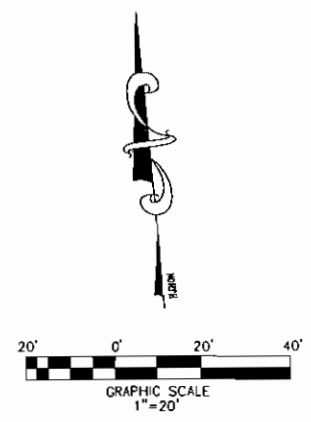
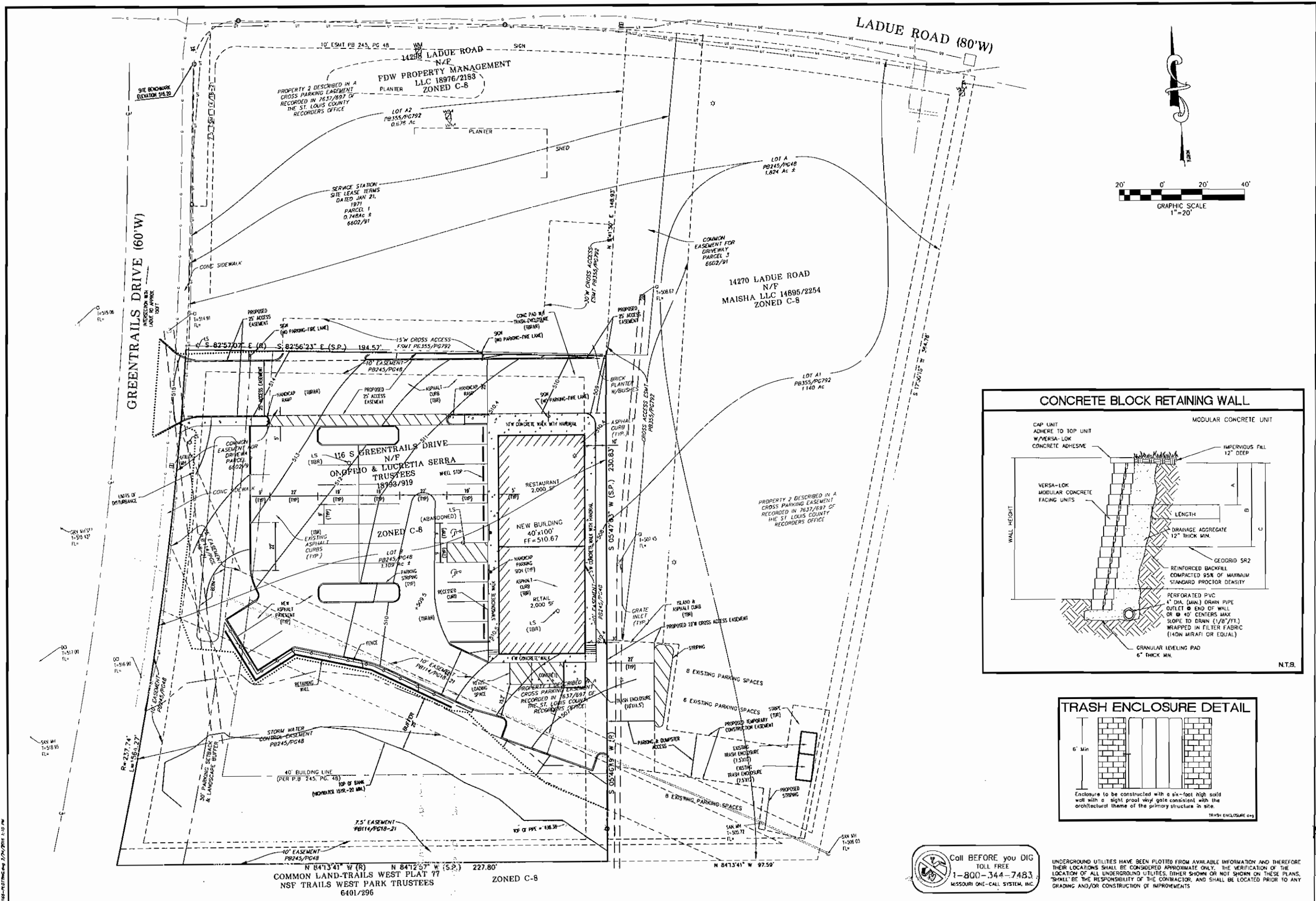


AMENDED SITE DEVELOPMENT SECTION PLAN 116 S GREENTRAILS DRIVE COVER SHEET

ST. CHARLES ENGINEERING & SURVEYING, INC.
801 S. FIFTH STREET, SUITE 202
ST. CHARLES, MO 63301
TEL: (636) 947-0607 FAX: (636) 947-2448
ST. CHARLES ENGINEERING AND SURVEYING, INC.
FOR PROFESSIONAL ENGINEERING CORPORATION
MISSOURI STATE CERTIFICATE OF AUTHORITY - 0016147

02/09/2015 CITY COMMENTS
04/06/2015 CITY COMMENTS
04/17/2015 CITY COMMENTS
06/15/2015 CITY COMMENTS
07/14/2015 CITY COMMENTS
10/27/2015 CITY COMMENTS
11/18/2015 CITY COMMENTS
12/23/2015 CITY COMMENTS
02/24/2016 CITY COMMENTS

ORDER NO. 13-0166
DATE 06/27/14
1



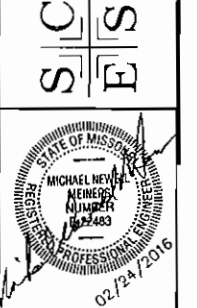
Call BEFORE you DIG
TOLL FREE
1-800-344-7483
MISSOURI ONE-CALL SYSTEM, INC.

UNDERGROUND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE INFORMATION AND THEREFORE THEIR LOCATIONS SHALL BE CONSIDERED APPROXIMATE ONLY. THE VERIFICATION OF THE LOCATION OF ALL UNDERGROUND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR, AND SHALL BE LOCATED PRIOR TO ANY GRADING AND/OR CONSTRUCTION OF IMPROVEMENTS.

DATE	CITY COMMENTS
02/09/2015	CITY COMMENTS
04/06/2015	CITY COMMENTS
04/17/2015	CITY COMMENTS
06/15/2015	CITY COMMENTS
07/14/2015	CITY COMMENTS
10/27/2015	CITY COMMENTS
11/18/2015	CITY COMMENTS
12/23/2015	CITY COMMENTS
02/24/2016	CITY COMMENTS

AMENDED SITE DEVELOPMENT
SECTION PLAN
116 S GREENTRAILS DRIVE
SITE PLAN

ST. CHARLES ENGINEERING & SURVEYING, INC.
801 S. FIFTH STREET SUITE 202
ST. CHARLES, MO 63301
TEL: (636) 947-0607 FAX: (636) 947-2448
ST. CHARLES ENGINEERING AND SURVEYING, INC.
PROFESSIONAL ENGINEERING CORPORATION
MISSOURI STATE CERTIFICATE OF AUTHORITY - 001647

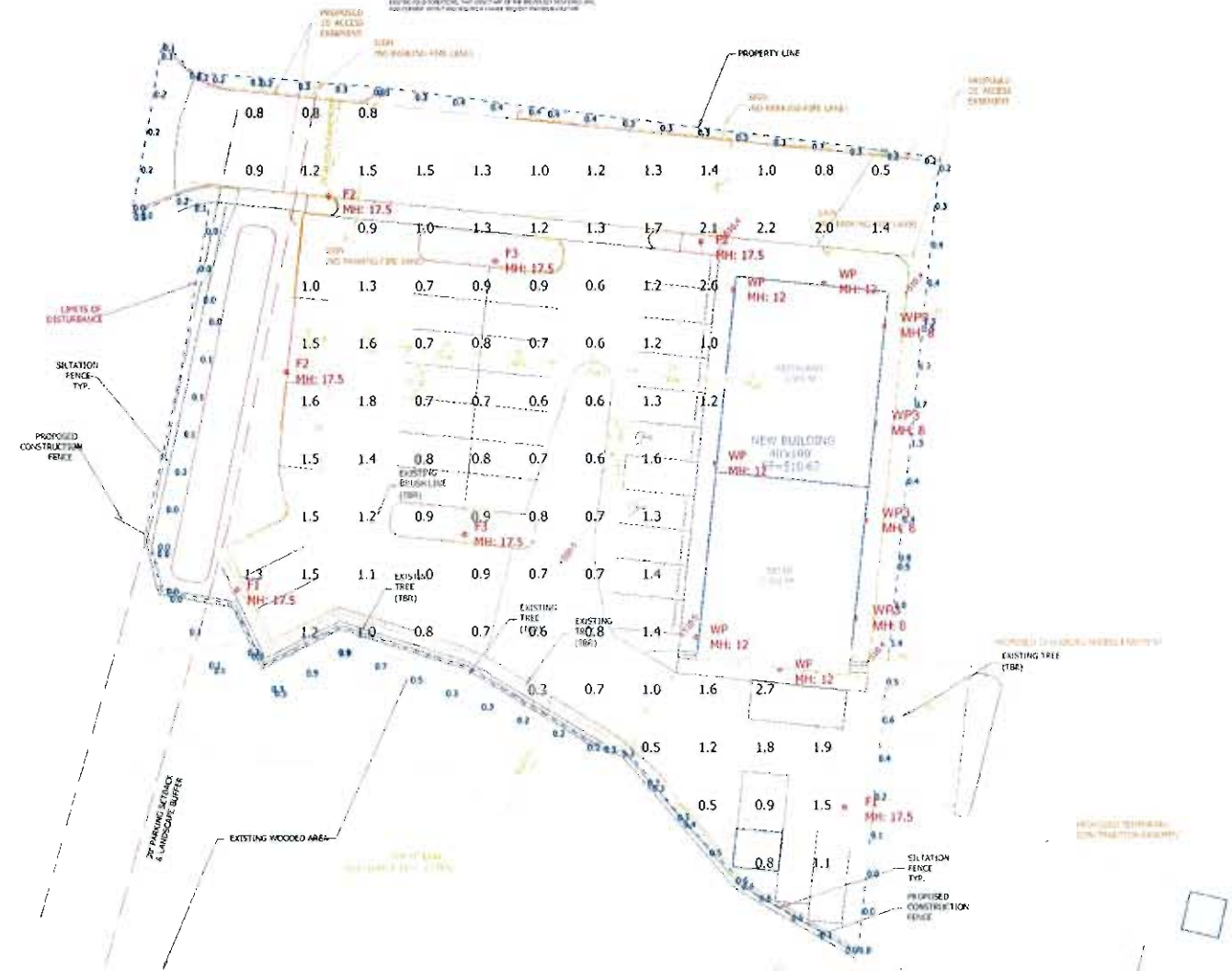


ORDER NO.
13-0166
DATE
06/27/14
2

POLE FIXTURES MOUNTED ON 15' POLE & 2.5' BASE
LIGHT LEVEL CALCULATED ON PARKING SURFACE

Calculation Summary						
Label	Calc Type	Units	Avg	Max	Min	Avg/Min
PARKING LOT	Illuminance	Fc	1.12	2.7	0.3	3.73
SPILL LIGHT	Illuminance	Fc	0.34	1.5	0.0	N.A.

Luminaire Schedule							
Symbol	Qty	Label	Arrangement	Lum. Watts	Total Watts	LUF	Description
F1	2	F1	SINGLE	30	60	1,000	GLEON-AE-01-LED-E1-SL4-530-HSS
F2	3	F2	SINGLE	30	90	1,000	GLEON-AE-01-LED-E1-SL2-530-HSS
F3	2	F3	SINGLE	38	76	1,000	GLEON-AE-01-LED-E1-SHQ-700
WP	5	WP	SINGLE	27	135	1,000	ISW-B01-LED-E1-BL4
WP3	4	WP3	SINGLE	7	28	1,000	XTORIA

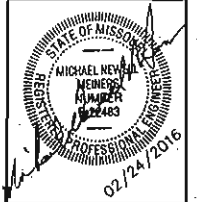
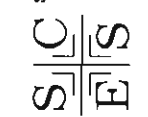


Project	116 GREENTRAILS DRIVE	Scale	
Client		Date	2/2/2016
		Project No.	

02/24/2016	CITY COMMENTS

AMENDED SITE DEVELOPMENT
SECTION PLAN
116 S GREENTRAILS DRIVE
LIGHTING PLAN

ST. CHARLES ENGINEERING & SURVEYING, INC.
801 S. FIFTH STREET, SUITE 202
ST. CHARLES, MO 63301
TEL: (636) 947-0607 FAX: (636) 947-2448
ST. CHARLES ENGINEERING AND SURVEYING, INC.
PROFESSIONAL ENGINEERING CORPORATION
MISSOURI STATE CERTIFICATE OF AUTHORITY - 001647

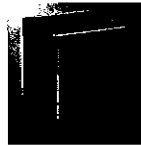


ORDER NO.	13-0166
DATE	06/27/14
	3

NOT TO SCALE

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COOPER LIGHTING



SSS SQUARE STRAIGHT STEEL

Catalog #	SSS-4-A-175-S-F-A	Type	POLE
Project	GREEN TRAILS	Date	11/24/2015
Comments	FIXTURE MOUNTED AT 17.9 ON POLE		
Prepared by	G. DiMAGGIO		

FEATURES
 • ASTM Grade steel base plate with ASTM A368 base coat
 • Stand hole assembly 3" x 5/8" and 6" pole, and 2" x 4" on 4" pole
 • 10.3V mounting heights
 • Drilled at various heights

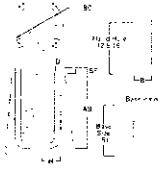
ORDERING INFORMATION

SAMPLE NUMBER 8555451110

Product Family	Blank Size (Inches)	Watt (Watts)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Mounting Height (Feet)	Mounting Type	Mounting Height (Feet)	Mounting Type	Mounting Height (Feet)
SSS Square	4	A-175	10.3	Base	Black	2-2.5" OD Tee/rod Long	10.3	Base	10.3	Base	10.3
SSS Square	5.5	A-175	10.3	Base	Black	3-3.12" OD Tee/rod Long	10.3	Base	10.3	Base	10.3
SSS Square	8	A-175	10.3	Base	Black	4-4.0" OD Tee/rod Long	10.3	Base	10.3	Base	10.3

Product Family	Blank Size (Inches)	Watt (Watts)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Mounting Height (Feet)	Mounting Type	Mounting Height (Feet)	Mounting Type	Mounting Height (Feet)
SSS Square	4	A-175	10.3	Base	Black	2-2.5" OD Tee/rod Long	10.3	Base	10.3	Base	10.3
SSS Square	5.5	A-175	10.3	Base	Black	3-3.12" OD Tee/rod Long	10.3	Base	10.3	Base	10.3
SSS Square	8	A-175	10.3	Base	Black	4-4.0" OD Tee/rod Long	10.3	Base	10.3	Base	10.3

DIMENSIONS



Cooper Lighting
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McGRAW-EDISON

Catalog #	ISW-B01-LED-E1-8L4-8Z	Type	WP
Project	GreenTrails	Date	11/24/2015
Comments	Mounted at 12'		
Prepared by	J. DiMaggio		

DESCRIPTION

The IMPACT Elite family of cast wall luminaires is the ideal companion to site design. Incorporating multiple lightBAR™ technology, Impact Elite provides outstanding uniformity and energy efficiency. Customized for a rugged construction, the Impact Elite is a versatile fixture and is suitable for a variety of mounting heights. It is also suitable for use in a variety of environments, including outdoor applications.

SPECIFICATION FEATURES

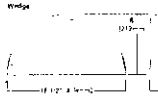
Construction
 Heavy wall, die cast aluminum housing and recessed hinged door frame for precise tolerance control and repeatability. Hinged door uses for clean mating with housing surface and provides access to the main switch(es).

Optics
 Choice of six patented high efficiency AccuLED Optics™ that maximize light collection and direction distribution onto the application region. Each optical optic is precision manufactured via injection molding. When precisely arranged and sealed to the housing, BL Optics offer backlight control to decrease wall brightness while the optional light glow provides soft illumination to highlight architectural features. Offered standard in 4000K.

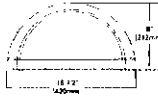
Electrical
 LED drivers are mounted to the cast aluminum back casting for superior heat sinking and protection. LED operates from 120-240V 50/60Hz or 277V 50/60Hz. Single standard with Cooper Lighting premium color and high maintenance expected at 60,000 hours. The Impact Elite Wall Series LED luminaire is suitable for operation at 40°C to 43°C ambient temperature. It is also suitable for use in a variety of environments, including outdoor applications. Emergency options for 20°C ambient temperature and optional occupancy sensor available.

Mounting
 Cast and zinc plated light bar mounting attachment for 1.5" dia.

STANDARD DIMENSIONS



STANDARD DIMENSIONS WITH BACK BOX



COOPER Lighting
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1.2" dia. of wall with the Impact Elite. High impact polycarbonate lens. Impact Elite is a rugged construction, the Impact Elite is a versatile fixture and is suitable for a variety of mounting heights. It is also suitable for use in a variety of environments, including outdoor applications.

Finish
 Cast aluminum housing is finished with a powder coat finish. Standard colors include black, bronze, grey, white, black granite, and granite. Impact Elite is available in a variety of finishes. Custom color finishes are available. Contact your local McGraw-Edison representative for more information.

Warranty
 Four year warranty.

ISW IMPACT ELITE LED WEDGE

1-2 LightBARs
 Solid State LED
 WALL MOUNT LUMINAIRE

DESIGNLIGHTS

CERTIFICATION DATA
 UL Listed
 ENEC Listed
 CE Marked
 RoHS Compliant
 90-95

ENERGY DATA
 Maximum LED Drive
 20 W/Power Factor
 100% Total Harmonic Distortion
 100 W/Power Factor
 100 W/Power Factor
 100 W/Power Factor
 100 W/Power Factor

SHIPPING DATA
 Approximate Net Weight
 18 lbs (8.2 kg)

ADDITIONAL INFORMATION
 2015 04 15 10:31 AM
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SSS SQUARE STRAIGHT STEEL

Mounting Height (Feet)	Blank Size (Inches)	Watt (Watts)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Mounting Height (Feet)	Mounting Type	Mounting Height (Feet)	Mounting Type	Mounting Height (Feet)
10	SSS4A05	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
15	SSS4A10	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
20	SSS4A15	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
25	SSS4A20	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
30	SSS4A25	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
35	SSS4A30	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
40	SSS4A35	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
45	SSS4A40	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
50	SSS4A45	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
55	SSS4A50	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
60	SSS4A55	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
65	SSS4A60	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
70	SSS4A65	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
75	SSS4A70	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
80	SSS4A75	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
85	SSS4A80	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
90	SSS4A85	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
95	SSS4A90	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
100	SSS4A95	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63

Mounting Height (Feet)	Blank Size (Inches)	Watt (Watts)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Mounting Height (Feet)	Mounting Type	Mounting Height (Feet)	Mounting Type	Mounting Height (Feet)
10	SSS4A05	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
15	SSS4A10	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
20	SSS4A15	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
25	SSS4A20	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
30	SSS4A25	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
35	SSS4A30	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
40	SSS4A35	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
45	SSS4A40	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
50	SSS4A45	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
55	SSS4A50	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
60	SSS4A55	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
65	SSS4A60	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
70	SSS4A65	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
75	SSS4A70	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
80	SSS4A75	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
85	SSS4A80	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
90	SSS4A85	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
95	SSS4A90	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63
100	SSS4A95	0.130	10.12	II	412	4	3.4 x 2.5 x 3	181	27	17	63

Cooper Lighting
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POWER AND LUMENS BY BAR COUNT

Number of LightBARs	Power (Watts)	Lumen (lm)	Power (Watts)	Lumen (lm)	Power (Watts)	Lumen (lm)	Power (Watts)	Lumen (lm)
1	13.0	1300	13.0	1300	13.0	1300	13.0	1300
2	26.0	2600	26.0	2600	26.0	2600	26.0	2600
3	39.0	3900	39.0	3900	39.0	3900	39.0	3900
4	52.0	5200	52.0	5200	52.0	5200	52.0	5200
5	65.0	6500	65.0	6500	65.0	6500	65.0	6500
6	78.0	7800	78.0	7800	78.0	7800	78.0	7800
7	91.0	9100	91.0	9100	91.0	9100	91.0	9100
8	104.0	10400	104.0	10400	104.0	10400	104.0	10400
9	117.0	11700	117.0	11700	117.0	11700	117.0	11700
10	130.0	13000	130.0	13000	130.0	13000	130.0	13000

LUMEN MULTIPLIER

Mounting Height (Feet)	Lumen Multiplier	Power (Watts)	Lumen (lm)
10	1.0	13.0	1300
15	1.0	13.0	1300
20	1.0	13.0	1300
25	1.0	13.0	1300
30	1.0	13.0	1300
35	1.0	13.0	1300
40	1.0	13.0	1300
45	1.0	13.0	1300
50	1.0	13.0	1300
55	1.0	13.0	1300
60	1.0	13.0	1300
65	1.0	13.0	1300
70	1.0	13.0	1300
75	1.0	13.0	1300
80	1.0	13.0	1300
85	1.0	13.0	1300
90	1.0	13.0	1300
95	1.0	13.0	1300
100	1.0	13.0	1300

ORDERING INFORMATION

Product Family	Blank Size (Inches)	Watt (Watts)	Mounting Height (Feet)	Base Type	Finish	Mounting Type	Mounting Height (Feet)	Mounting Type	Mounting Height (Feet)	Mounting Type	Mounting Height (Feet)
ISW-B01-LED-E1-8L4-8Z	4	A-175	10.3	Base	Black	2-2.5" OD Tee/rod Long	10.3	Base	10.3	Base	10.3
ISW-B01-LED-E1-8L4-8Z	5.5	A-175	10.3	Base	Black	3-3.12" OD Tee/rod Long	10.3	Base	10.3	Base	10.3
ISW-B01-LED-E1-8L4-8Z	8	A-175	10.3	Base	Black	4-4.0" OD Tee/rod Long	10.3	Base	10.3	Base	10.3

STANDARD DIMENSIONS



STANDARD DIMENSIONS WITH BACK BOX

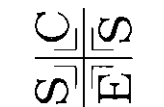


COOPER Lighting
 www.cooperlighting.com

02/24/2016 CITY COMMENTS

AMENDED SITE DEVELOPMENT SECTION PLAN
 116 S GREENTRAILS DRIVE
 LIGHTING PLAN

ST. CHARLES ENGINEERING & SURVEYING, INC.
 601 S. FIFTH STREET, SUITE 202
 ST. CHARLES, MO 63301
 TEL: (636) 947-0607 FAX: (636) 947-2448
 ST. CHARLES ENGINEERING AND SURVEYING, INC.
 MISSOURI STATE CERTIFICATE OF AUTHORITY - 0001647



ORDER NO. 13-0166
 DATE 05/27/14

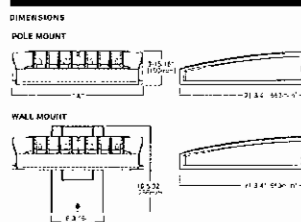
4

DESCRIPTION
The Gleason™ LED luminaire delivers exceptional performance in a highly scalable, low profile design. Patented high efficiency AcaciaLED Optima™ system provides uniform and energy-efficient illumination in walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated.

McGRAW-EDISON		TYPE	
Product	GreenTrails	Code	F2
Comments	Mounted at 17.5'	Date	11/24/2015
Prepared by	J. DiMaggio		

SPECIFICATION FEATURES
Construction
Extruded aluminum driver enclosure thermally isolated from light sources for optimal thermal performance. Heavy wall die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patented interlocking housing and heat sink provides stability with superior structural rigidity. 3G vibration tested. Optional hood-top hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

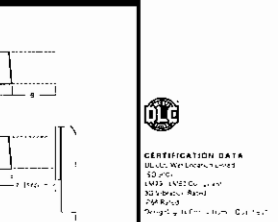
Optics
Choice of 16 patented, high efficiency AcaciaLED Optima. The optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AcaciaLED Optima create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (40-2750 CCT) and minimum 30 CRI. Optional 5000K CCT and 7000K CCT. For the ultimate level of spill light control, an optional focus wide shield accessory can be field or factory installed. The house shield is designed to seamlessly integrate with the SL2, SL3, SL4 or AFL optics.



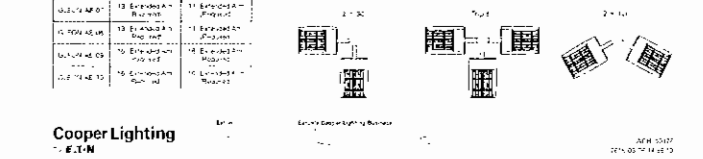
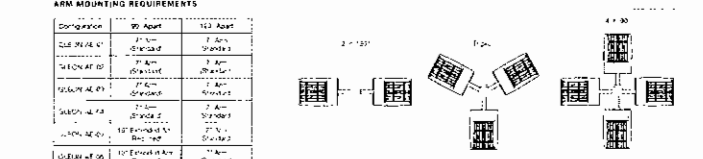
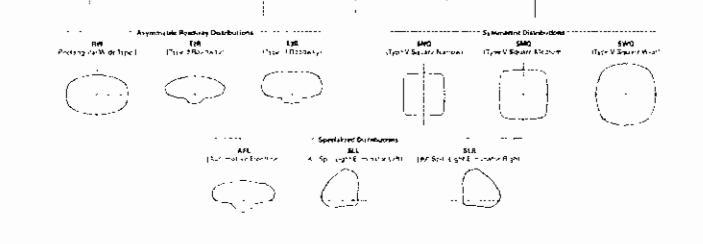
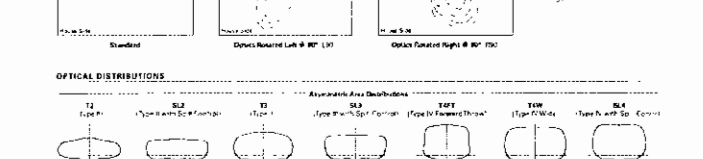
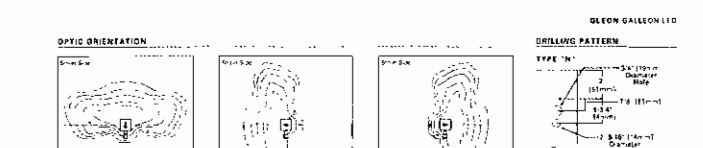
Cooper Lighting
F-1-N

Optical Orientation
Standard, Downward Look 90° (L90), Downward Right 90° (R90)

OPTICAL DISTRIBUTIONS
Asymmetric Area Distributions: Type 1, Type 2, Type 3, Type 4, Type 5, Type 6, Type 7, Type 8, Type 9, Type 10, Type 11, Type 12, Type 13, Type 14, Type 15, Type 16, Type 17, Type 18, Type 19, Type 20, Type 21, Type 22, Type 23, Type 24, Type 25, Type 26, Type 27, Type 28, Type 29, Type 30, Type 31, Type 32, Type 33, Type 34, Type 35, Type 36, Type 37, Type 38, Type 39, Type 40, Type 41, Type 42, Type 43, Type 44, Type 45, Type 46, Type 47, Type 48, Type 49, Type 50, Type 51, Type 52, Type 53, Type 54, Type 55, Type 56, Type 57, Type 58, Type 59, Type 60, Type 61, Type 62, Type 63, Type 64, Type 65, Type 66, Type 67, Type 68, Type 69, Type 70, Type 71, Type 72, Type 73, Type 74, Type 75, Type 76, Type 77, Type 78, Type 79, Type 80, Type 81, Type 82, Type 83, Type 84, Type 85, Type 86, Type 87, Type 88, Type 89, Type 90, Type 91, Type 92, Type 93, Type 94, Type 95, Type 96, Type 97, Type 98, Type 99, Type 100, Type 101, Type 102, Type 103, Type 104, Type 105, Type 106, Type 107, Type 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Cooper Lighting
F-1-N



NOMINAL POWER AND LUMENS (200MM)

Number of Light Sources	1	2	3	4	5	6	7	8	9	10
Power (W)	10	20	30	40	50	60	70	80	90	100
Lumens (lm)	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000

NOMINAL POWER AND LUMENS (200MM) (continued)

Optics	1	2	3	4	5	6	7	8	9	10
Optics 1	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
Optics 2	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
Optics 3	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
Optics 4	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
Optics 5	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
Optics 6	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
Optics 7	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
Optics 8	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
Optics 9	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
Optics 10	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000



NOMINAL POWER AND LUMENS (200MM)

Number of Light Sources	1	2	3	4	5	6	7	8	9	10
Power (W)	10	20	30	40	50	60	70	80	90	100
Lumens (lm)	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000

NOMINAL POWER AND LUMENS (200MM)

Number of Light Sources	1	2	3	4	5	6	7	8	9	10
Power (W)	10	20	30	40	50	60	70	80	90	100
Lumens (lm)	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000

ORDERING INFORMATION

Product Name	Optics	Number of Light Sources	Light Type	Output	Dimensions	Color	Mounting
GreenTrails	Optics 1	1	LED	10W	100mm x 100mm	White	Standard
GreenTrails	Optics 2	2	LED	20W	100mm x 100mm	White	Standard
GreenTrails	Optics 3	3	LED	30W	100mm x 100mm	White	Standard
GreenTrails	Optics 4	4	LED	40W	100mm x 100mm	White	Standard
GreenTrails	Optics 5	5	LED	50W	100mm x 100mm	White	Standard
GreenTrails	Optics 6	6	LED	60W	100mm x 100mm	White	Standard
GreenTrails	Optics 7	7	LED	70W	100mm x 100mm	White	Standard
GreenTrails	Optics 8	8	LED	80W	100mm x 100mm	White	Standard
GreenTrails	Optics 9	9	LED	90W	100mm x 100mm	White	Standard
GreenTrails	Optics 10	10	LED	100W	100mm x 100mm	White	Standard

Cooper Lighting F-1-N

Temperature	Lumen Multiplier
25°C	1.00
30°C	0.95
35°C	0.90
40°C	0.85
45°C	0.80

Cooper Lighting F-1-N

Temperature	LM-21 Lumens	Photometric LM (lm)
25°C	100%	100%
30°C	95%	95%
35°C	90%	90%
40°C	85%	85%
45°C	80%	80%

Cooper Lighting F-1-N

Temperature	Lumen Multiplier
25°C	1.00
30°C	0.95
35°C	0.90
40°C	0.85
45°C	0.80

02/24/2016 CITY COMMENTS

AMENDED SITE DEVELOPMENT
 SECTION PLAN
 116 S GREENTRAILS DRIVE
 LIGHTING PLAN

ST. CHARLES ENGINEERING & SURVEYING, INC.<



LOT B SOUTHEAST VIEW



LOT B EAST VIEW TO LOT A1



LOT B NORTHWEST VIEW



LOT B WEST VIEW



SOUTH GREENTRAILS DRIVE



CREEK SOUTH OF LOT B



NORTH GREENTRAILS DRIVE



HOME NORTHWEST OF LOT B



HOME WEST OF LOT B



LOT A1 EAST VIEW



LOT A1 NORTH VIEW



LOT A1 SOUTHEAST VIEW

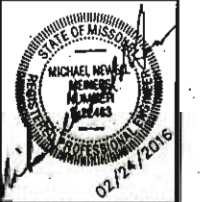
02/24/2016 CITY COMMENTS

AMENDED SITE DEVELOPMENT
SECTION PLAN
116 S GREENTRAILS DRIVE

SITE PHOTOS

ST. CHARLES ENGINEERING & SURVEYING, INC.
801 S. FIFTH STREET, SUITE 202
ST. CHARLES, MO 63301
TEL: (636) 947-0607 FAX: (636) 947-2448
ST. CHARLES ENGINEERING AND SURVEYING, INC.
PROFESSIONAL ENGINEERING CORPORATION
MISSOURI STATE CERTIFICATE OF AUTHORITY - 001647

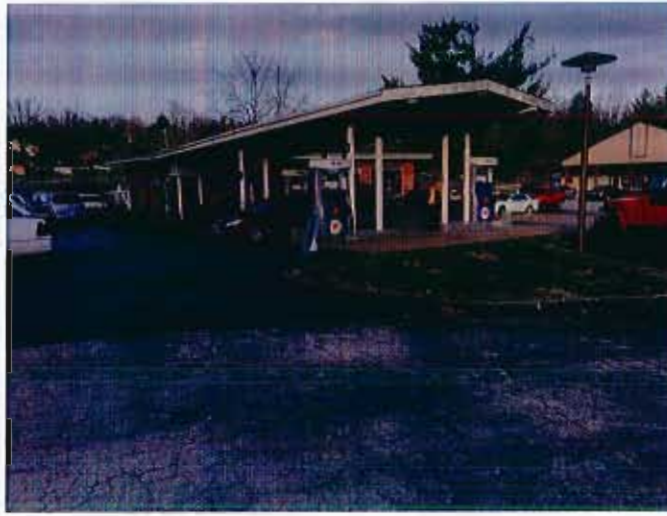
SIC
EIS



ORDER NO.
18-0166
DATE
02/27/16



LOT A1 NORTHEAST VIEW



LOT A2 NORTHEAST VIEW



LOT A2 NORTHWEST VIEW



LOT A2 SOUTHEAST VIEW

02/24/2016 CITY COMMENTS

AMENDED SITE DEVELOPMENT
SECTION PLAN
116 S GREENTRAILS DRIVE

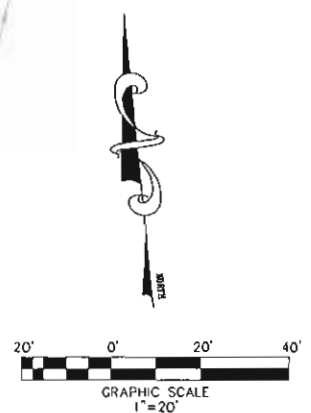
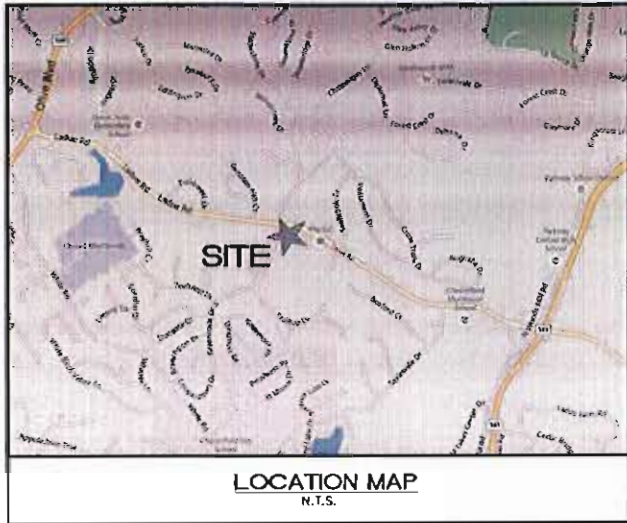
SITE PHOTOS

ST. CHARLES ENGINEERING & SURVEYING, INC.
801 S. FIFTH STREET, SUITE 202
ST. CHARLES, MO 63301
TEL: (636) 947-0607 FAX: (636) 947-2448
ST. CHARLES ENGINEERING AND SURVEYING, INC.
PROFESSIONAL ENGINEERING CORPORATION
MISSOURI STATE CERTIFICATE OF AUTHORITY - 001647

S|C
E|S



ORDER NO.
13-0166
DATE
06/27/14



LEGEND	
	SANITARY STRUCTURE
	STORM STRUCTURE
	POWER POLE
	LIGHT STANDARD
	CURB INLET
	DOUBLE CURB INLET
	MANHOLE INLET (EXISTING)
	AREA INLET (EXISTING)
	DOUBLE AREA INLET
	WATER METER
	WATER VALVE
	WATER SHUT OFF
	GAS VALVE
	CLEAN OUT
	TELEPHONE HANDHOLE
	IRON PIPE
	HYDRANT
	— UT — UNDERGROUND TELEPHONE (EXISTING)
	— UE — UNDERGROUND ELECTRIC (EXISTING)
	— G — UNDERGROUND GAS LINE (PROPOSED)
	— OH — OVERHEAD ELECTRIC LINE
	— W — WATER LINE
	B.C. BACK OF CURB
	T.C. TOP OF CURB
	T.W. TOP OF WALL
	TYP. TYPICAL
	— EX — EXISTING CONTOUR
	— PR — PROPOSED CONTOUR
	— TL — TREE LINE
	E.O.A. EDGE OF ASPHALT
	E.O.C. EDGE OF CONCRETE SIGN
	CONCRETE PAVEMENT
	ASPHALT PAVEMENT

02/24/2016 CITY COMMENTS

AMENDED SITE DEVELOPMENT SECTION PLAN
116 S GREENTRAILS DRIVE
 SITE PLAN COLOR EXHIBIT

ST. CHARLES ENGINEERING & SURVEYING, INC.
 801 S. FIFTH STREET, SUITE 202
 ST. CHARLES, MO 63301
 TEL: (636) 947-0607 FAX: (636) 947-2448
 "A PROFESSIONAL ENGINEER AND SURVEYOR, INC."
 MISSOURI STATE ELECTRICITY BOARD REG. NO. 00000143 - 00000144

S E I S

02/24/2016

ORDER NO. 130166
 DATE 12/23/2015

1

12/23/2015 11:12 AM



LANDSCAPE ARCHITECTS
 P# 314-205-8871
 Missouri Certificate of Authority
 # 200902208

CIVIL ENGINEER
 St. Charles Engineering & Surveying
 801 S. Fifth Street, Suite 202
 St. Charles, MO 63301

116 GREENTRAILS DRIVE
 CHESTERFIELD, MISSOURI

Revisions:

No.	Description	Date
1	City Comment	4-4-2015
2	City Comment	7/14/2015
3	City Comment	9/14/2015
4	City Comment	11/18/2015
5	City Comment	12/23/2015
6	City Comment	1/14/2016



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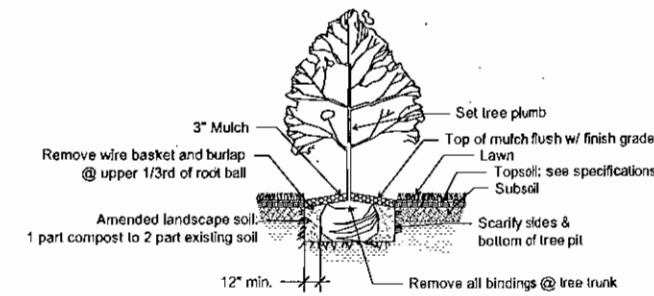
Copyright © by DERMODY & ASSOCIATES, LLC
 Issue Date: December 15, 2014
 Drawn by: EMD

Checked by:

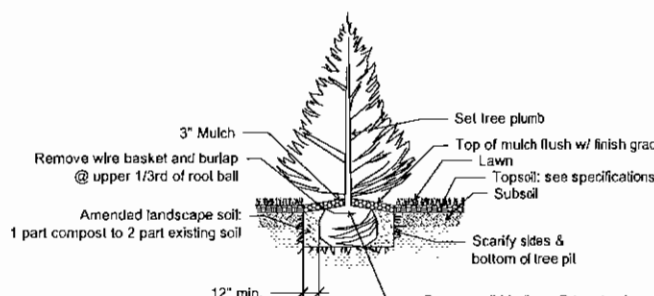
Sheet Title
Landscape Development Planting Plan

Project Number: 454.001

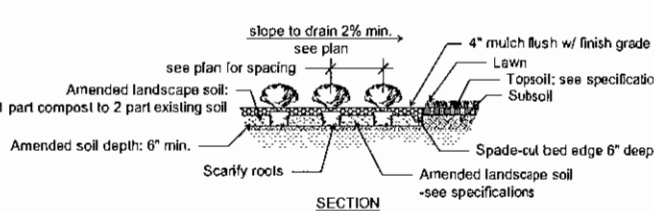
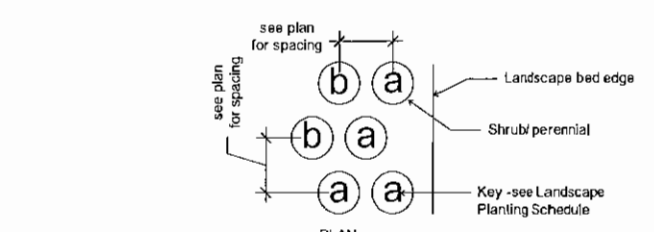
LDP -1



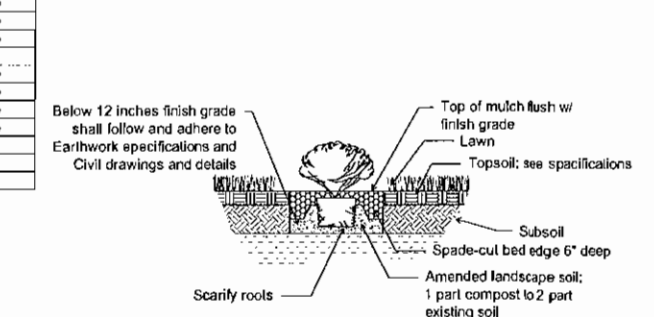
SHADE TREE PLANTING DETAIL



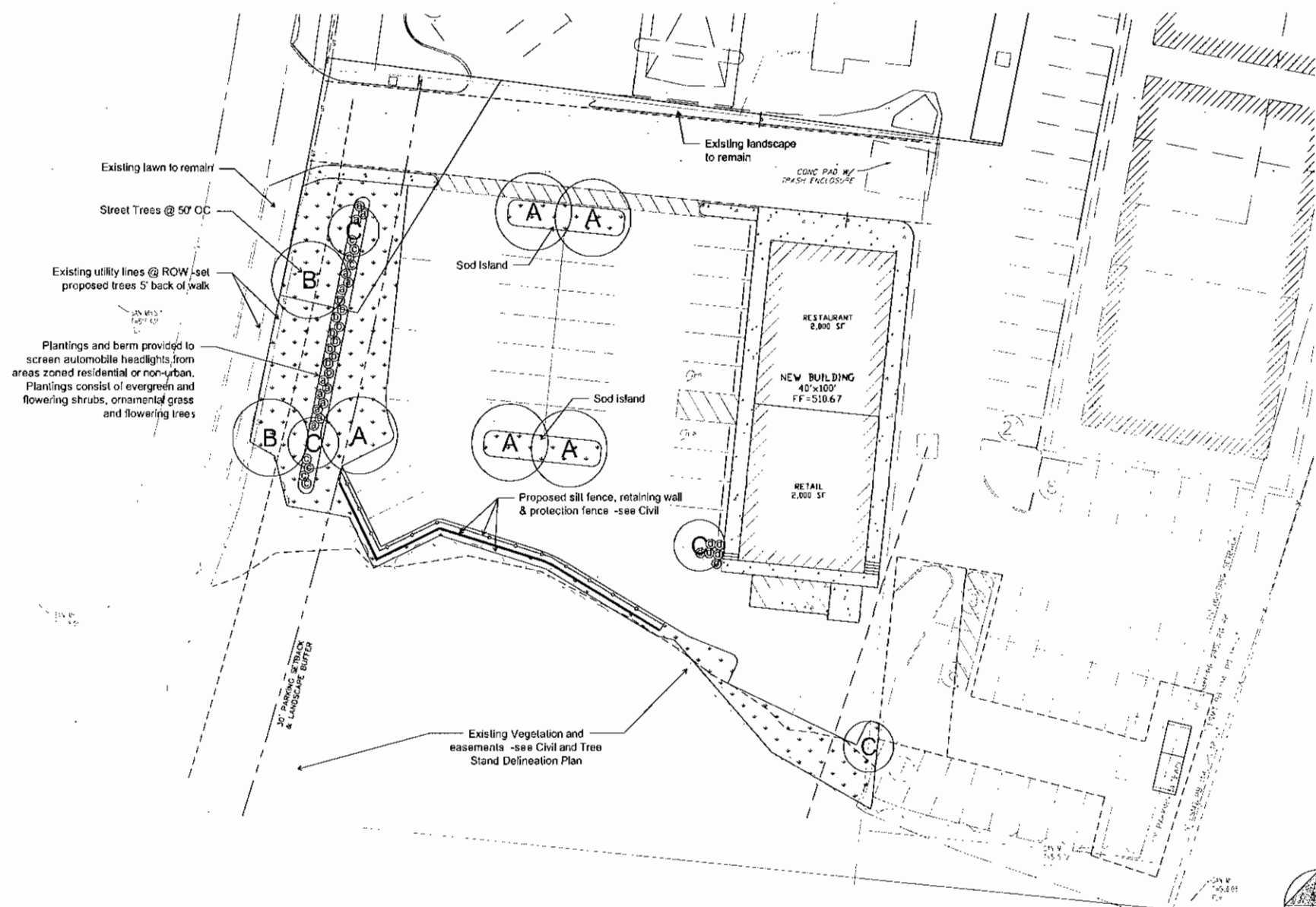
EVERGREEN TREE PLANTING DETAIL



SHRUB PLANTING DETAIL



SHRUB PLANTING DETAIL



1 Landscape Development Planting Plan

- SITE DEVELOPMENT SECTION PLAN-LANDSCAPING NOTES:**
- See Civil sheets for specific information pertaining to existing and proposed easement, ROW, utilities and boundary.
 - All trees shown on this plan are selected from TREE PRESERVATION AND LANDSCAPE REQUIREMENTS (see City of Chesterfield Unified Development Code).
 - Parking lot trees are located within 50 feet of parking stalls and 33.3% of parking lot trees species are a slow or medium growth rate (30% min. required).
 - Contractor to review and field verify existing and proposed conditions prior to installation.
 - Contractor to notify owner of any discrepancies. Contractor to coordinate and cooperate with other trades.
 - Contractor to adjust plantings accordingly, notify owner and City of Chesterfield of any changes to landscape design due to unforeseen field conditions.
 - Proposed plant material is to be selected by the contractor and approved by Owner prior to installation.
 - All planting beds and islands to receive 4 inch layer of mulch in a continuous bed. Apply a granular pre-emergent weed control prior to mulching.
 - 6\" Spade cut landscape bed areas.
 - Repair all landscape and lawn areas disturbed during and due to construction. See Civil sheets for limits of site construction.
 - Contractor is responsible for installing all plant material, seed, topsoil and mulch as shown on plan.
 - Plant Schedule is for informational purposes only. Contractor is responsible for verifying and installation of quantities on drawings.
 - Contractor to provide in-ground automatic irrigation system. Coordinate point of connection, back-flow prevent and controller location with owner's representative.
 - Lawn areas to be irrigated with 6\" pop-up spray heads with head-to-head coverage.
 - Annuals to be irrigated with 12\" pop-up spray heads with head-to-head coverage.
 - Shrubs and grasses to be irrigated with drip irrigation.
 - See Civil sheets for limits of disturbance and removal. Repair all lawn and landscape areas disturbed during construction.
 - Shrub border along parking lot will screen front of cars from roadway and residential neighborhood across from project.

LANDSCAPE PLANTING SCHEDULE:

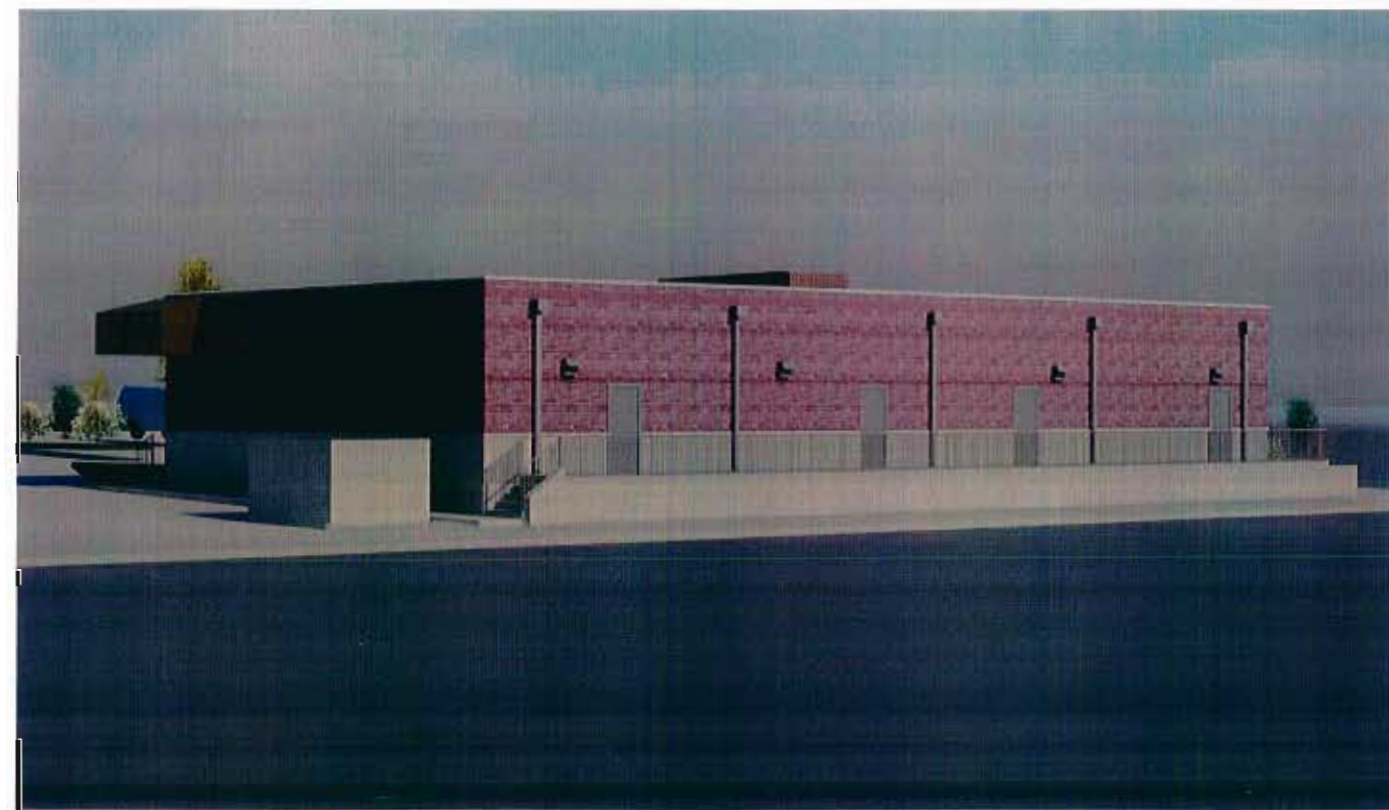
Key	Qty.	Scientific Name	Common Name	Size	Condition	Mature Height	Growth Rate	Type	PLANT TYPE	% PLANT SPECIES
A	5	Acer rubrum 'Columnare'	Upright Red Maple	2 1/2\" Cal.	B&B	45'	Fast	Parking Lot Tree	SHADE TREES	45.5%
B	2	Gleditsia triacanthos inermis 'Skyline'	Honey Locust	2 1/2\" Cal.	B&B	45'	Fast	Street Tree	SHADE TREES	18.2%
C	4	Cercis canadensis 'Forest Pansy'	Redbud - Forest Pansy	2 1/2\" Cal.	B&B	20-40'	Med	Parking Lot Tree	ACCENT TREE	36.4%
a	13	Juniperus chinensis 'Sea Green'	Boxwood	18-20\"	5 Gal.	Hedge	Slow	Buffer Planting	EVERGREEN	35.1%
b	10	Rosa 'Home Run'	Home Run Rose	2 Gal.	3 canes	48-60\"	Fast	Buffer Planting	FLOWERING	27.0%
c	8	Panicum virgatum 'Shenandoah'	Red Switch Grass	1 Gal.		36-48\"	Fast	Buffer Planting	NATIVE GRASS	21.6%
d	6	Schizachyrium scoparium	Little Blue Stem	1 Gal.		20-36\"	Fast	Parking Lot Island	NATIVE GRASS	16.2%
		900 sf Double Ground Bark Mulch								
		4,820 sf Fescue Sod								

Open Space Site Calculations

Description	Sq. Ft. Area	Site %
Property	48,520	100%
Non-Open Space Area	27,070	55.90%
Open Space	21,450	44.20%



FRONT VIEW



REAR VIEW

**GREEN TRAIL
RETAIL
STRIP**

DERU and Associates



2020 North Broadway
St. Louis, MO 63102
314-574-5770



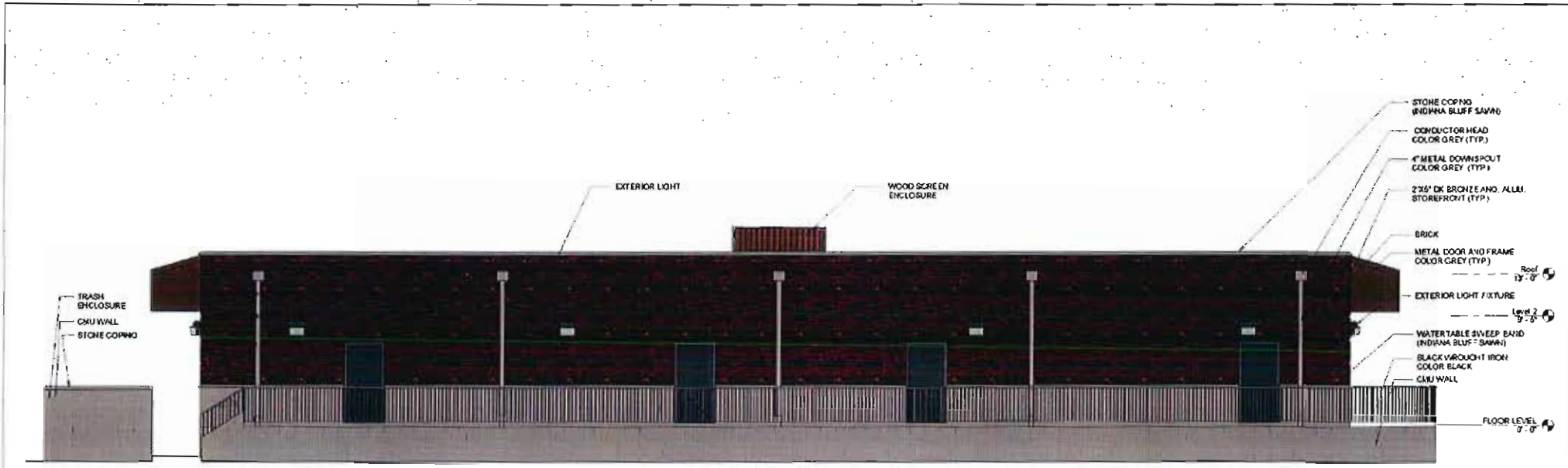
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Owner

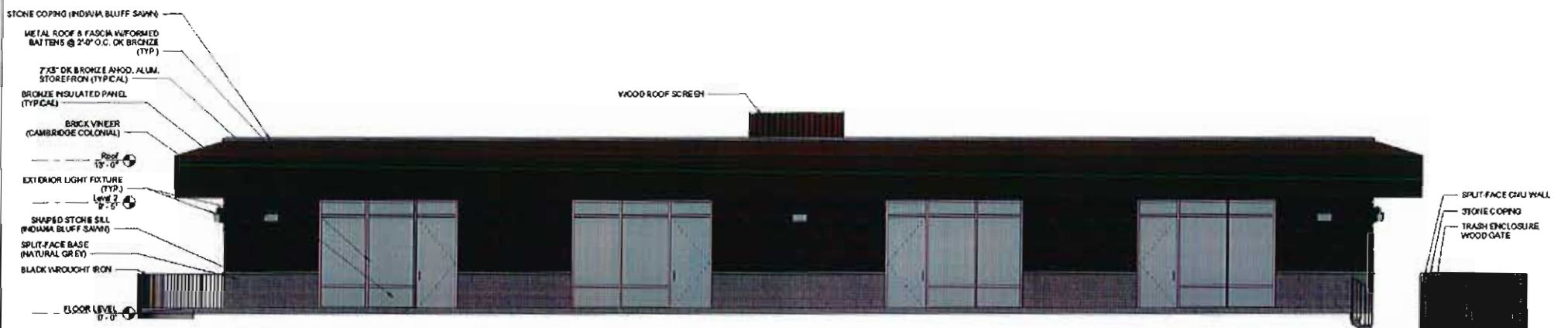
RETAIL STRIP
**FRONT AND REAR
3D VIEWS**

Project Number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker

A104
Scale



East
1/4" = 1'-0"



West
1/4" = 1'-0"

**GREEN TRAIL
RETAIL
STRIP**

DERU and Associates



2020 North Broadway
St. Louis, MO 63102
314-574-5770

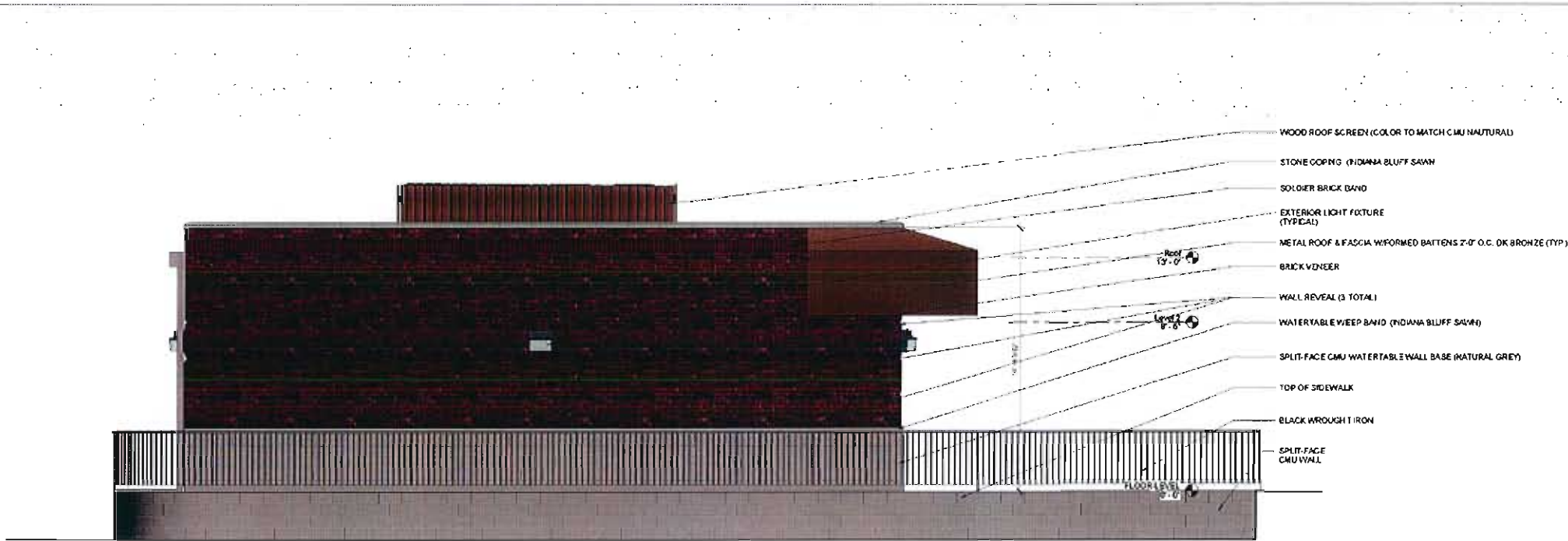
No.	Description	Date

Owner
**RETAIL STRIP
EAST AND WEST
ELEVATION**

Project Number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker

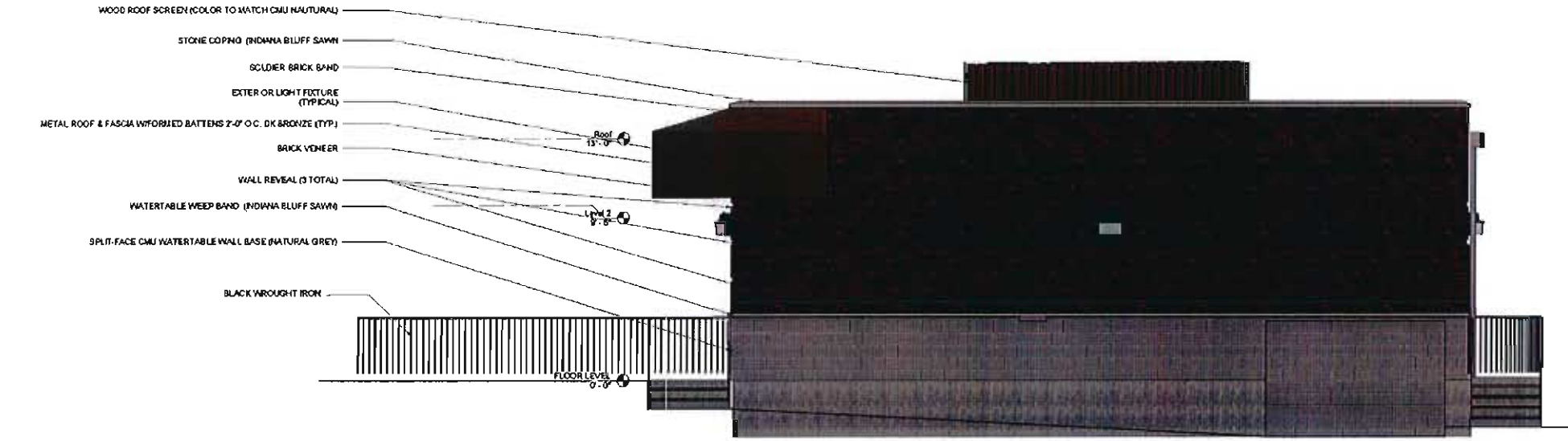
A103
Scale 1/4" = 1'-0"

2/28/2018 9:27:13 AM



- WOOD ROOF SCREEN (COLOR TO MATCH CMU NATURAL)
- STONE COPING (INDIANA BLUFF SAWN)
- SOLDIER BRICK BAND
- EXTERIOR LIGHT FIXTURE (TYPICAL)
- METAL ROOF & FASCIA W/FORMED BATTENS 2'-0" O.C. DK BRONZE (TYP)
- BRICK VENEER
- WALL REVEAL (3 TOTAL)
- WATER TABLE WEEP BAND (INDIANA BLUFF SAWN)
- SPLIT-FACE CMU WATER TABLE WALL BASE (NATURAL GREY)
- TOP OF SIDEWALK
- BLACK WROUGHT IRON
- SPLIT-FACE CMU WALL

1 North
3/8" = 1'-0"



- WOOD ROOF SCREEN (COLOR TO MATCH CMU NATURAL)
- STONE COPING (INDIANA BLUFF SAWN)
- SOLDIER BRICK BAND
- EXTERIOR LIGHT FIXTURE (TYPICAL)
- METAL ROOF & FASCIA W/FORMED BATTENS 2'-0" O.C. DK BRONZE (TYP)
- BRICK VENEER
- WALL REVEAL (3 TOTAL)
- WATER TABLE WEEP BAND (INDIANA BLUFF SAWN)
- SPLIT-FACE CMU WATER TABLE WALL BASE (NATURAL GREY)
- BLACK WROUGHT IRON

2 South
3/8" = 1'-0"

GREEN TRAIL RETAIL STRIP

DERU and Associates



2020 North Broadway
St. Louis, MO 63102
314-574-5770

No.	Description	Date

Owner

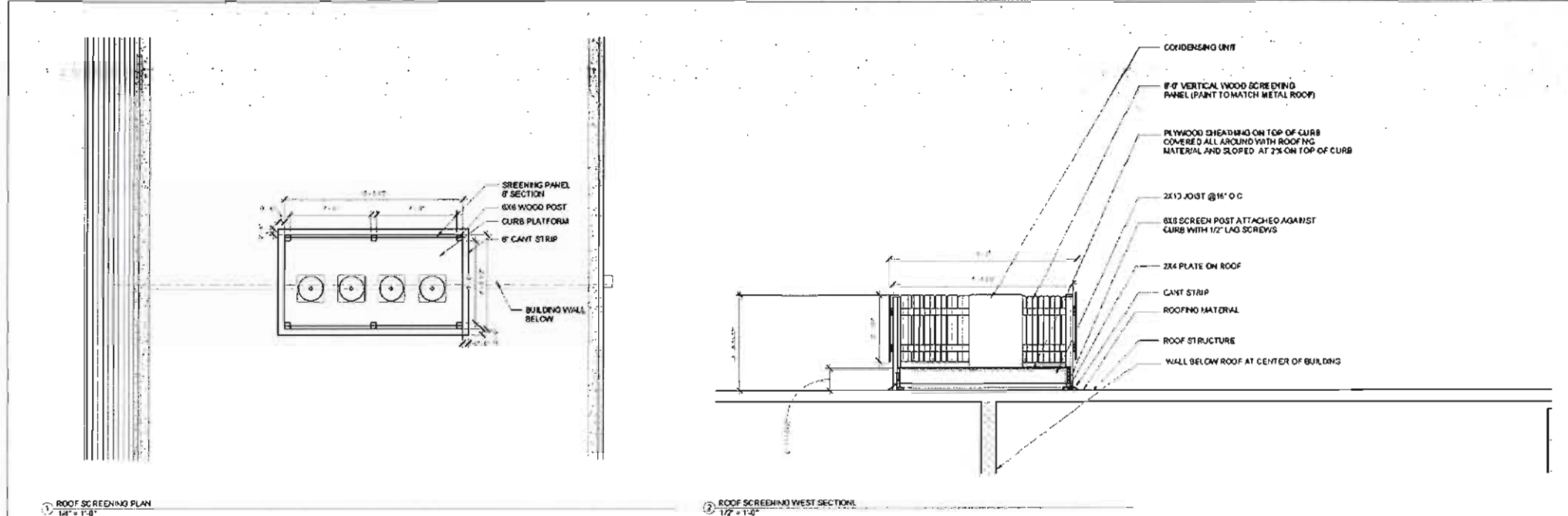
RETAIL STRIP
NORTH AND
SOUTH
ELEVATIONS

Project Number	Project Number
Date	Issue Date
Drawn By	Author
Checked By	Checker

A102

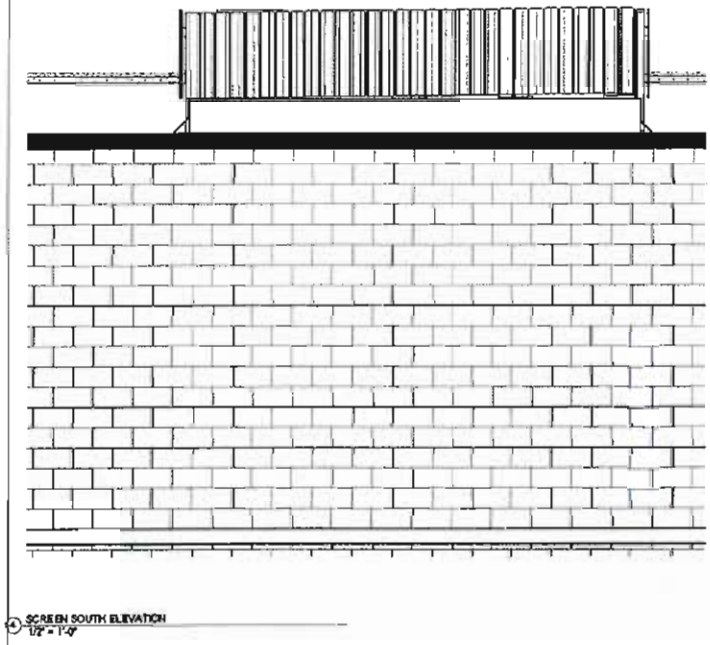
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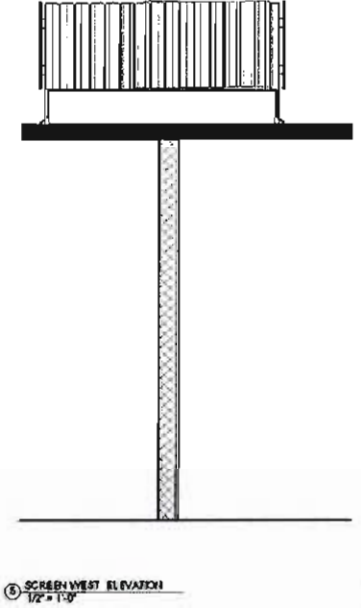


1. ROOF SCREENING PLAN
1/4" = 1'-0"

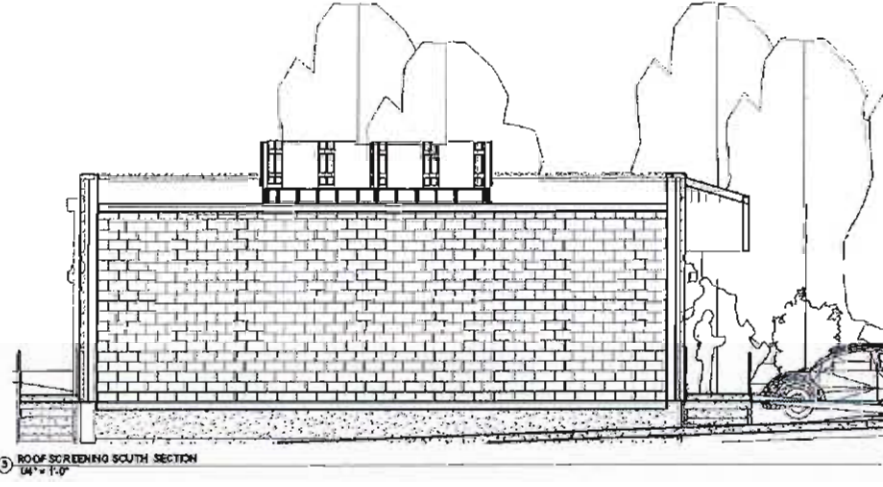
2. ROOF SCREENING WEST SECTION
1/2" = 1'-0"



4. SCREEN SOUTH ELEVATION
1/2" = 1'-0"



5. SCREEN WEST ELEVATION
1/2" = 1'-0"



3. ROOF SCREENING SOUTH SECTION
1/4" = 1'-0"



GREEN TRAIL RETAIL STRIP



DERU and Associates
 2020 North Broadway
 St. Louis, MO 63102
 314-574-5770

No	Description	Date

Owner
 RETAIL STRIP
 SCREENING
 DETAIL

Project Number	Project Number
Drawn By	Issue Date
Checked By	Author
	Checker
A105	
Scale	As indicated

2/28/2016 8:27:16 AM