



# III. B.

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Phone: 636-537-4000 • Fax 636-537-4798 • www.chesterfield.mo.us

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## Architectural Review Board Staff Report

**Project Type:** Site Development Plan

**Meeting Date:** May 12, 2016

**From:** Jessica Henry, AICP  
Project Planner

**Cc:** Aimee Nassif, Planning & Development Services Director

**Location:** 18382 Chesterfield Airport Road

**Applicant:** Archimages on behalf of Energy Marketing 709, LLC.

**Description:** **The Wedge McGrath Plaza (Energy Express)**: A Site Development Plan, Landscape Plan, Lighting Plan, Architectural Elevations and Architect's Statement of Design for a 5.26 acre tract of land zoned "PC" Planned Commercial District located on the south side of Chesterfield Airport Road west of its intersection with Wings of Hope Boulevard.

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### **PROPOSAL SUMMARY**

The request is for a convenience store with fast food restaurant with drive-thru, two fuel pump islands, drive-thru car wash, and retail building located within The Wedge development. The proposed convenience store and fast food restaurant building is 7,240 square feet in size, with an adjacent stand-alone carwash that is 3,000 square feet in size. The proposed retail building is 10,000 square feet in size. The Wedge development is zoned "PC" Planned Commercial District and is governed under the terms and conditions of City of Chesterfield Ordinance 2880. The exterior building materials will be comprised of EIFS, stone, brick, and aluminum and glass storefronts. The roof of the structures will primarily be a flat roof with a parapet wall; however, there is a batten seam metal roof on a portion of the convenience store building.

### **HISTORY OF SUBJECT SITE**

The site was zoned "NU" Non-Urban District prior to the incorporation of the City of Chesterfield. The convenience store/service station structure was built in 1960 and was zoned "NU" Non-Urban District with the adoption of the 1965 St. Louis County Zoning Ordinance. The three large

parcels that are currently in existence were each granted a change in zoning from the “NU” Non-Urban District to the “C-8” Planned Commercial District in 1993. In November of 2014 the City Council approved Ordinance 2820 which unified the parcels under one comprehensive planned district ordinance.



## **STAFF ANALYSIS**

### **General Requirements for Site Design:**

#### **A. Site Relationships**

The subject site is located on the south side of Chesterfield Airport Road west of its intersection with Wings of Hope Boulevard. The western portion of the subject site is vacant, and many of the surrounding properties have never been developed. Across Chesterfield Airport Road to the north is the Comfort Inn & Suites hotel, and the west is the Chesterfield Blue Valley development.

#### **B. Circulation System and Access**

As the proposed development will be constructed in one phase on a unified parcel, all buildings and uses on the site will be permitted circulation throughout the site. Due the amount of activity on the site--namely, a full-service car wash with a dual lane drive-thru, two gas station pump islands, convenience store, drive-thru fast food restaurant, multiple retail spaces, independent vacuum stations, and an ATM—the internal circulation patterns remain under review by Staff.

Two access points are provided along Chesterfield Airport Road and two along Old Olive Street Road. However, the type and design of these accesses remains under review by Staff.

In addition to the sidewalk along Chesterfield Airport Road and Olive Street Road, internal crosswalks provide pedestrian circulation to the buildings within the development. The accessible spaces are located adjacent to the building entries.

### **C. Topography**

The existing grade of the property is nearly flat. Minimal changes to the existing topography are planned.

### **D. Retaining Walls**

Retaining walls are not proposed as part of this project.

## **General Requirements for Building Design:**

### **A. Scale**

The applicant is proposing three single story buildings and two gas pump island canopies. The height of these structures ranges from 19.5' to 29.0' in height.

The buildings are oriented with front façades and prominent entry elements facing Chesterfield Airport Road. The use of black metal awnings, masonry bases with stone cap, and provision of windows brings a human scale to the buildings.

### **B. Design**

The three buildings feature a cohesive design, utilizing the same light fixtures, neutral brick and EIFs colors, black metal awning elements, and window tints. Stone detailing around the entry elements is utilized on each of the building to provide architectural detailing and clean transitions between materials. However, the primary different in design is that the convenience store and car wash utilize a significant amount of adhered stone which is lacking from the retail building. The retail building has a split-faced CMU block base in lieu of the stacked adhered stone base of the other buildings. Carrying the stone over would provide a greater degree of design continuity and integration to the proposed development.

The applicant has treated the buildings as being "four sided," with the same degree and quality of materials being utilized on all four façades, including on the car wash building which is consistent with the Architectural Review Standards for the Chesterfield Valley.

### **C. Materials and Color**

As previously mentioned, the convenience store and carwash buildings will be primarily comprised of brick and stone, EIFS, glass and aluminum storefronts, and black metal awnings and roof elements. The retail store also utilizes these materials with the exception of the stone and

metal roof components. The neutral color palette and significant use of stone and brick corresponds to recently constructed buildings in the surrounding area.

The car wash canopy features a metal batten seam roof that corresponds to the central roof element on the convenience store. Stone pedestals are proposed in order to match the car wash and convenience store.

The proposed gas pump island canopies are typical commercial metal structures in the corporate color of the gasoline brand that will be sold on the site. The larger eight pump island is designated for use by standard vehicles, and the smaller three pump island will be for over-sized vehicles.

The Dumpster enclosures are proposed to be constructed of the same brick utilized throughout the site.

#### **D. Landscape Design and Screening**

The request includes landscaping required by the City of Chesterfield Tree Preservation and Landscape Requirements. Accordingly, trees will be planted throughout the parking area in addition to the provision of street trees along all three site frontages. Smaller landscape beds containing shrubs and perennials are located throughout the site. Landscape beds containing annual seasonal plantings are proposed around the monument signs and entrances. The dumpster enclosures are screened on three sides by plantings.

Several bio-retention areas are proposed on the site; these rain gardens will be planted with native plantings. These rain gardens will be designed to MSD standards and will help capture storm water runoff from the site.

Although not shown in the architectural rendering, an ATM is proposed in a parking island containing a strip of shrubs. Additionally, four vacuum stations are shown within a parking block along the Chesterfield Airport Road frontage. Given the visibility of these items from Chesterfield Airport Road, care should be given to provide a maximum amount of screening via the adjacent landscape buffer. Landscape buffers must contain a combination of deciduous, evergreen trees, ornamental trees and shrubs. Areas of the buffer that lack dense landscaping will be identified by Staff and additional augmentation will be requested.

Electrical units on the rear of the buildings will be screened by the adjacent landscape buffer along old Olive Street Road. However, in order to ensure that this screening is adequate, taller and denser plantings will be required by Staff.

The roof-mounted mechanical units will be screened with metal panels painted to match the exterior building colors. Given the sizeable portions of the units that extend beyond the parapet, a sight-line study to determine visibility of the metal screens may be necessary. Staff would appreciate specific input on this particular item from the ARB.

### **E. Signage**

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

### **F. Lighting**

The lighting plan proposes the typical fully shielded, full cut-off pole mounted parking lot light fixtures and building entry wall mounted light fixtures. Additionally, typical canopy light fixtures are proposed on each of the pump island canopies. Each of these fixtures meets City code requirements.

### **DEPARTMENTAL INPUT**

Staff is requesting recommendations from the ARB on the Site Development Plan, Landscape Plan, Lighting Plan, Architectural Elevations and Architect's Statement of Design. Be advised, this project is still going through development review by City Staff and will not proceed to the Planning Commission until all outstanding items have been addressed. All recommendations made by the ARB will be included in Staff's report to the Planning Commission.

### **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 Plan, Landscape Plan, Lighting Plan, Architectural Elevations and Architect's Statement of Design for The Wedge, McGrath Plaza (Energy Express), as presented, with a recommendation for approval (or denial) to the Planning Commission."
  
- 2) "I move to forward the Site Development Plan, Landscape Plan, Lighting Plan, Architectural Elevations and Architect's Statement of Design for The Wedge, McGrath Plaza (Energy Express), to the Planning Commission with a recommendation for approval with the following conditions..."

#### Attachments

1. Architectural Review Packet Submittal



**ARCHITECTURAL REVIEW BOARD**  
**Project Statistics and Checklist**

**Date of First Comment Letter Received from the City of Chesterfield** 10/07/2015

**Project Title:** The Wedge (Mc Grath Plaza) Energy Express **Location:** 18382 Chesterfield Airport Rd.

**Developer:** Steve Madras (owner/Dev) **Architect:** Archimagines- Greg Garner **Engineer:** Pickett, Ray & Siver Inc. Doug Tiemann

**PROJECT STATISTICS:**  
C-Store ±7,240 s.f.  
Car Wash ±3,000 s.f.  
Retail Building ±10,000 s.f.  
**Size of site (in acres):** ±5.26 Acres **Total Square Footage:** \_\_\_\_\_ **Building Height:** ±29'-0"

**Proposed Usage:** Retail, C-store, Fuel and Carwash

**Exterior Building Materials:** Brick, Cultured Stone, EIFS, Aluminum Storefront & Glazing, Metal Fuel Canopy

**Roof Material & Design:** Batten Seam Metal Roof Panels @ Mansard, EPDM or TPO (White) @ Low Slope Roofs

**Screening Material & Design:** Dumpster Enclosure (Brick & Cast Stone) RTU Screen (Thermo formed High Impact ABS Panels)

**Description of art or architecturally significant features (if any):** \_\_\_\_\_

**ADDITIONAL PROJECT INFORMATION:**

**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)
- 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.

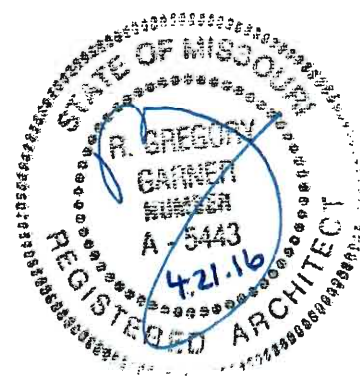
RECEIVED  
City of Chesterfield  
APR 28 2016  
Department of Public Services

# Architectural Review Board Submittal Package

[12 May 2016]

Chesterfield, Missouri

The Wedge (Mc Grath Plaza) Energy Express





## Project Description

The Energy Express project is located at the intersection of Olive Street Road and Chesterfield Airport Road in Chesterfield, Missouri. Old Olive Street Road is located along the back side of the property. The site is comprised of approximately 5.26 acres. The proposed project includes the construction of three new buildings, including a 7,420 s.f. - 29'-0" high C-Store, a 3,000 s.f. - 21'-8" high Car-wash, and a 10,000+/- s.f. - 23'-6" high Retail lease space. There will also be a 19'-6" high canopy over the automobile fuel pump island and a 21'-0" high canopy over a separate commercial fuel pump island.

To address concerns of the adjoining airport, the tallest building is 29'-0" high, well under the height of the existing trees adjacent to the property and multi-story hotel across the street.

The site is relatively flat with only a one to three foot rise and fall across the property to achieve proper site drainage.

## Site Relationship

The Scale and Fenestration of the proposed structures are compatible with neighboring use groups and surrounding buildings. The buildings are oriented with the most articulate facades and public accessible portions of the buildings addressing the Chesterfield Airport Road. As designed, this project does not impair or interfere with any surrounding properties or developments.

Parking for business patrons is provided adjacent to the public buildings. Parking areas will be required to provide landscape islands and trees as required by the Tree Preservation and Landscape Manual requirements. Sidewalks provided at these parking areas delineate and separate the pedestrian and vehicular traffic, and in no way does this design impair or interfere with any surrounding properties or developments.

The orientation of the building was derived by several influencing factors, including FAA sightline criteria, grades of transitioning ramps due to newly established flood plain elevation datums, and aircraft clearance recommendations.

## Circulation System and Access

Bicycle circulation is not addressed.

The Amended Site Development Plan exceeds the minimum 35% open space requirements and parking and loading spaces for the proposed uses.

The floor area ratio (FAR) for the site is 0.15 (including pump canopy) which is below the required maximum of 0.55.

Sidewalks are provided along the Chesterfield Airport Road and relocated Olive Street Road and internal sidewalks are provided connecting proposed structures to allow for safe pedestrian access to each building within the site.

A 30-foot wide landscape buffer, parking and building setback is provided along the entire portion of Chesterfield Airport Road and relocated Olive Street Road. A 20 foot wide parking setback is provided along the dead end portion Old Olive Street Road along the southern boundary.

Landscape islands are shown in parking areas and will be provided as required by the Tree Preservation and Landscape Manual requirements. Bio-retention areas will also be located in landscaped island where possible and in green space areas at the east and west edges of the property.

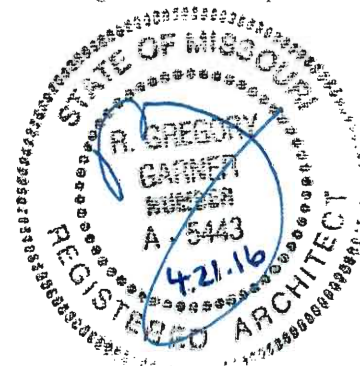
The proposed hours of operation will be the same as those of the businesses on the surrounding properties, namely, Comfort Inn to the northeast, and the Gas Station/Outlet Mall to the west, which contain no limitation on the hours of operation. This is consistent with existing uses and there is no residentially zoned property adjacent to or in the vicinity of the site.

## Topography

Due to the adjacent airport and FAA requirements pertaining to minimizing obstructions of sight lines. The flat nature of this site and the low heights of the building and landscaping, has not caused any sightline issues.

## Retaining Wall

Because of the flatness of the site, retaining walls are not required.



## General Requirements Addressing Building Design

### A. Building Scale:

Building height is consistent with adjacent and neighboring properties.

### B. Design:

The scale of this project is appropriate and consistent with the adjacent buildings and surrounding area. The material finishes and colors selected for this project reflect those used on the adjacent area buildings uniting the new building with the existing context. All exposed mechanical rooftop units will be screened with panels matching the theme of the building colors.

### C. Colors:

- All proposed buildings have colors that are considered natural earth tones.
- The lower portion of all the buildings are masonry veneer products consisting of burgundy colored brick, light tan colored splitfaced block, light tan colored cast stone and different earth tone colored stones.
- Aluminum store front will be black.
- Glazing color will be a tinted grey.
- Exterior Insulation Finish System (E.I.F.S.) are light tan colors of Almond and Birch.
- Metal roof and Awnings will be matte black.

### D. Landscape design and screening:

- All new landscaping will compliment the site. FAA regulations restricts certain types of plants to be incorporated into the design due to height limitations.
- Building landscape buffers are introduced in limited areas.
- Parking landscaping utilized per city requirements.
- Masonry dumpster enclosure screen wall has brick veneer to minimize visual acuity.
- Roof top units screened by metal panels matching proposed building exterior wall colors.

### E. Signage:

- Wall mounted Signage will be located on the North exterior wall and potentially the West wall. All signage will be designed and approved under a separate review process.

### F. Lighting:

- New wall pack mounted lighting will be incorporated in the design and be located on all exterior walls of the building for safety as well as for site lighting. -Refer to site lighting plans.
- There is no up-lighting permitted.

### Specific Requirements for the Chesterfield Valley:

#### Facades:

- All facades have been designed to an equal level of detail and quality of the nearest adjacent structure based upon functionality.

#### Storage:

- Not Applicable.

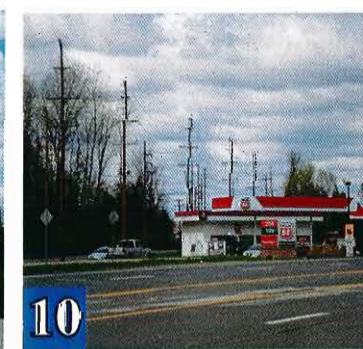
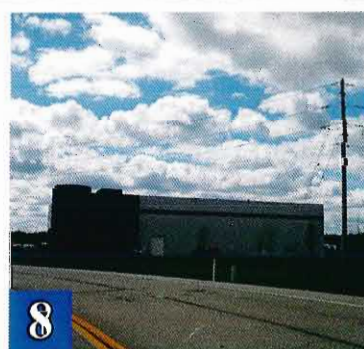
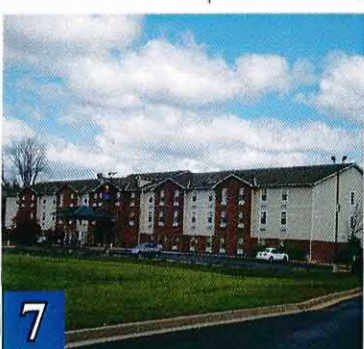
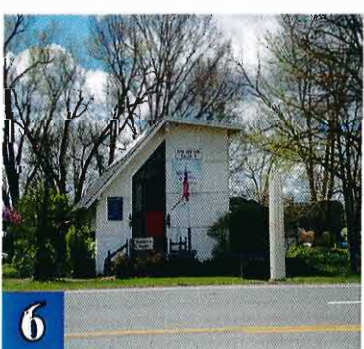
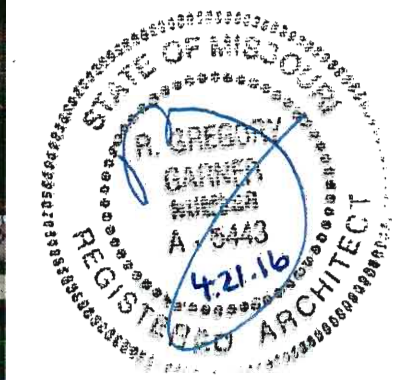
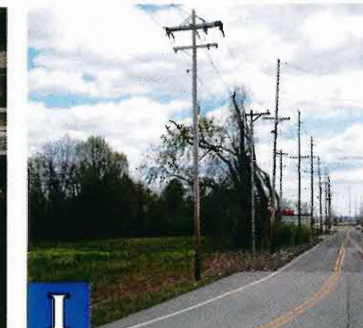
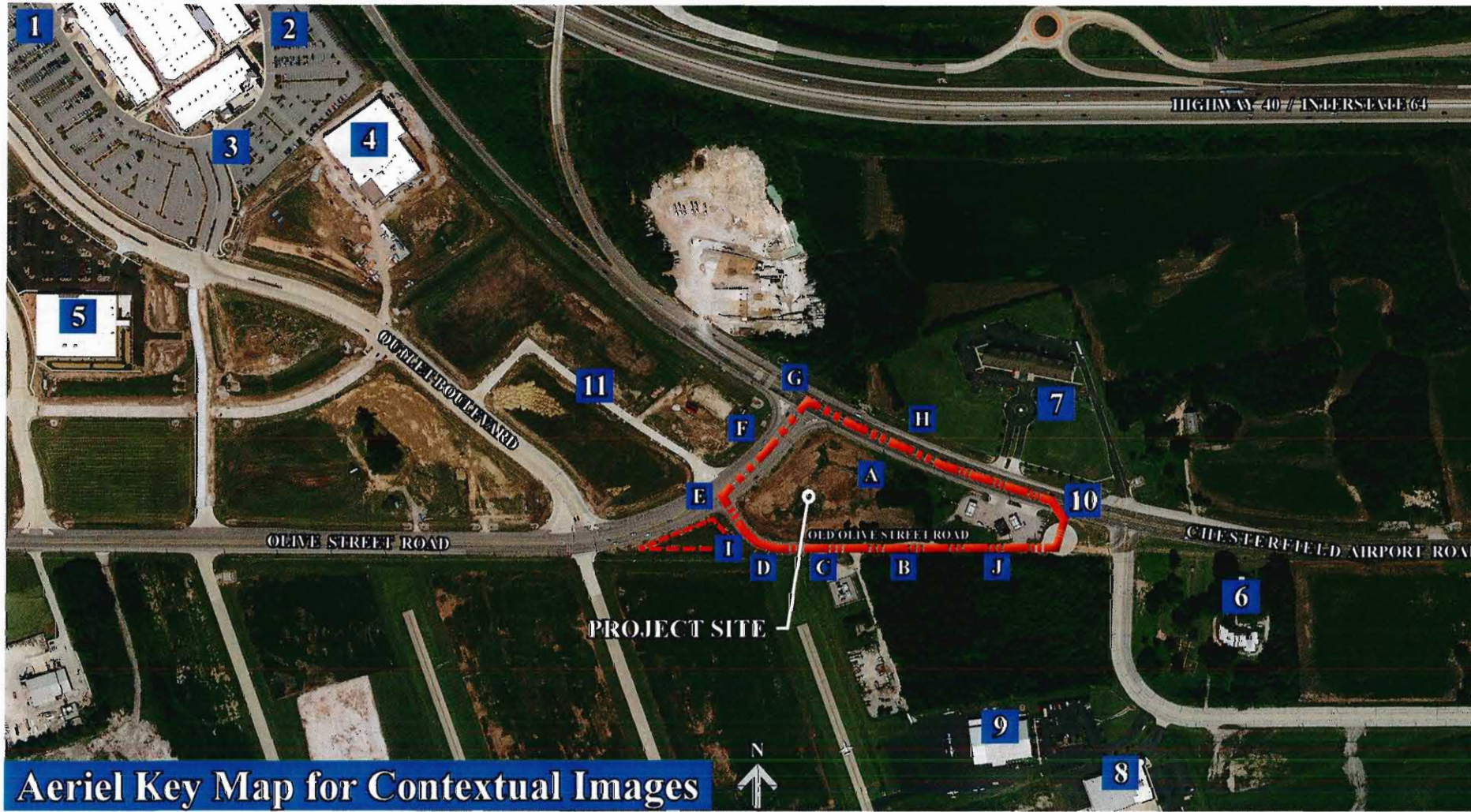
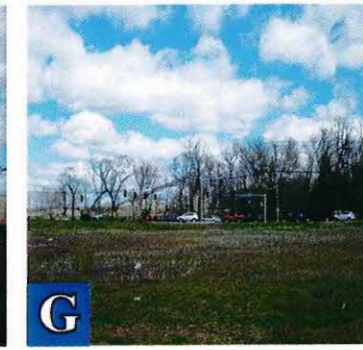
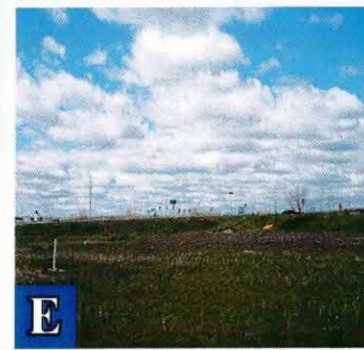
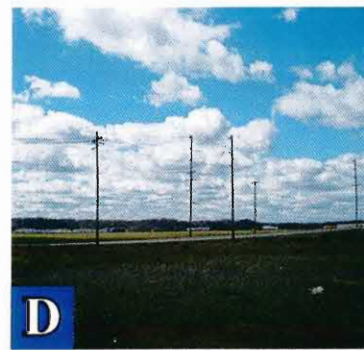
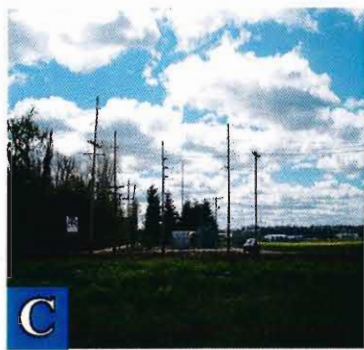
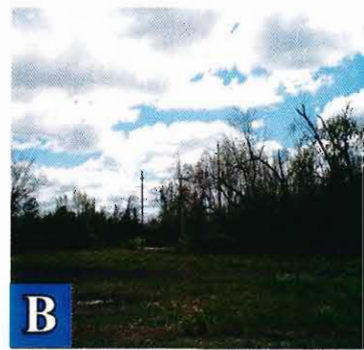
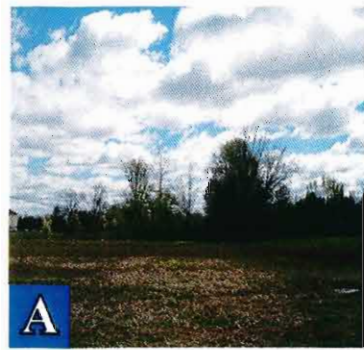
#### Utilities:

- New utility services are underground.

#### Parking:

- Property not adjacent or along I-64 corridor.

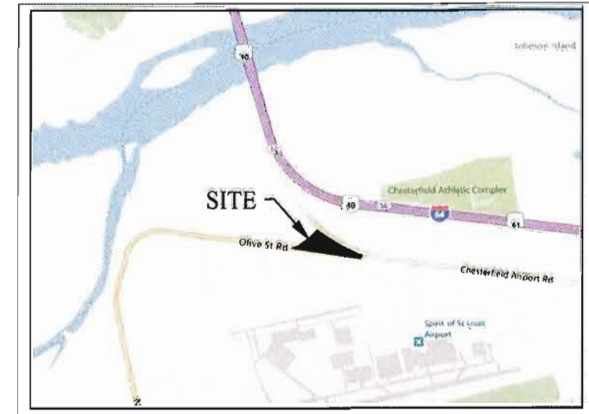




# Energy Marketing 2nd Amended Site Development Plan

A tract of land being Lot 2 and Outlot A of McGrath Plaza, part of Lot 6 of the Subdivision of R. H. Stevens Farm and part of U. S. Survey 102, Township 45 North - Range 3 East, St. Louis County, Missouri

- LEGEND
- UTILITY POLE
  - ⊙ LIGHT STANDARD
  - MANHOLE
  - ⊙ TREE
  - ⊙ WATER VALVE
  - ⊙ WATER METER
  - TREE LINE
  - CONC. PVMT.
  - SIGN
  - OVERHEAD UTILITY
  - FENCE
  - SEWER CLEANOUT
  - ELECTRIC BOX
  - ⊙ BOLLARD
  - GUY WIRE



LOCATION MAP

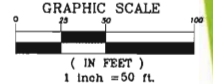
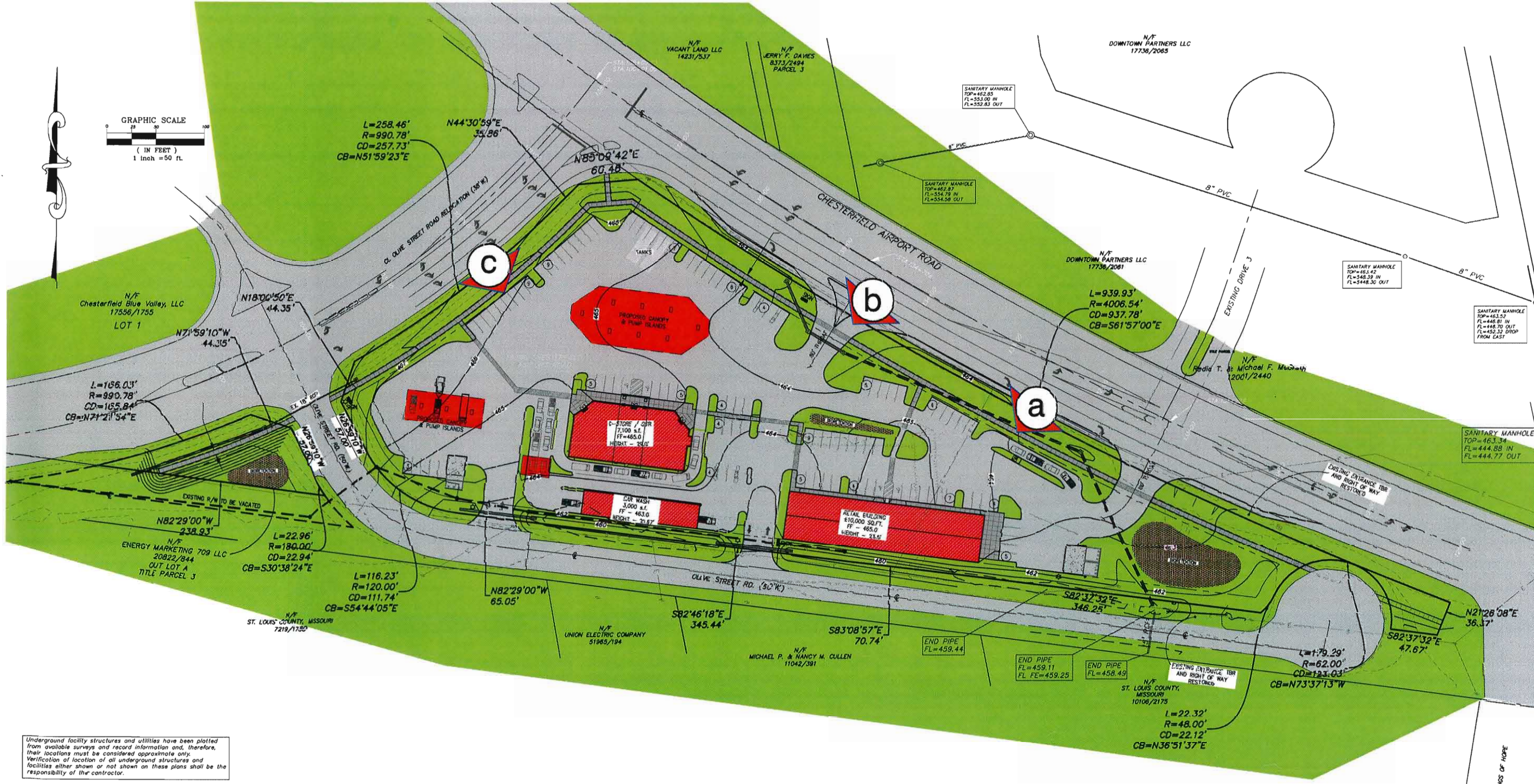
**PICKETT, RAY & SILVER INC.**  
 CIVIL ENGINEERING, LAND SURVEYING,  
 AND NATURAL RESOURCES SERVICES  
 St. Peters, Missouri  
 3027 W. Hwy 76, Suite B  
 Branson, MO 65616  
 Phone (636) 397-1211 Fax (636) 397-1104  
 www.prs.com 1-800-708-3918

## Energy Marketing

A tract of land being Lot 2 and Outlot A of McGrath Plaza, part of Lot 6 of the Subdivision of R. H. Stevens Farm and part of U. S. Survey 102, Township 45 North - Range 3 East, St. Louis County, Missouri

Prepared For:  
**Energy Marketing 709 LLC**

2130 Kleban Avenue  
 St. Louis, MO 63121-5505  
 314-885-7700



Underground facility structures and utilities have been plotted from available surveys and record information and, therefore, their locations must be considered approximate only. Verification of location of all underground structures and facilities either shown or not shown on these plans shall be the responsibility of the contractor.

| NO. | DATE | REVISIONS DESCRIPTION |
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| ENGINEERS AUTHENTICATION   | DATE     |
| KARL A. SCHOENIKER<br>PROFESSIONAL ENGINEER<br>LICENSE # PE-2003015039<br>MISSOURI | 04/18/16 |

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| DRAWN     | DWD               | DATE | 04/18/16 |
| CHECKED   | DST               | DATE | 04/18/16 |
| PROJECT # | 09056.EMKT.00R    |      |          |
| TASK #    | 1 FIELD BOOK 1287 |      |          |

|                         |        |
|-------------------------|--------|
| SITE DEVELOPMENT PLAN   |        |
| 18423 OLIVE STREET ROAD |        |
| SHEET                   | 1 OF 1 |

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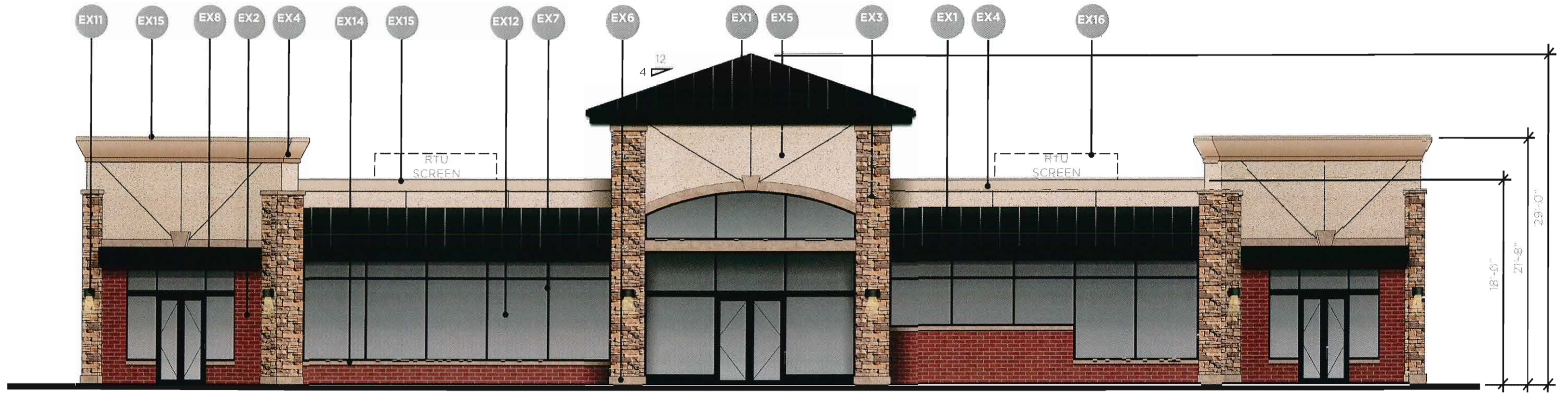


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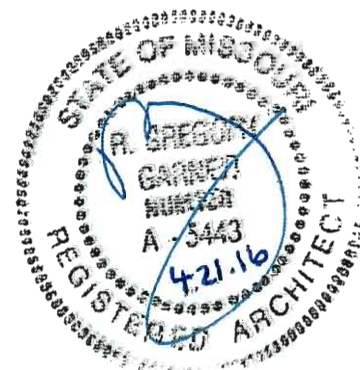
CSTORE - FRONT

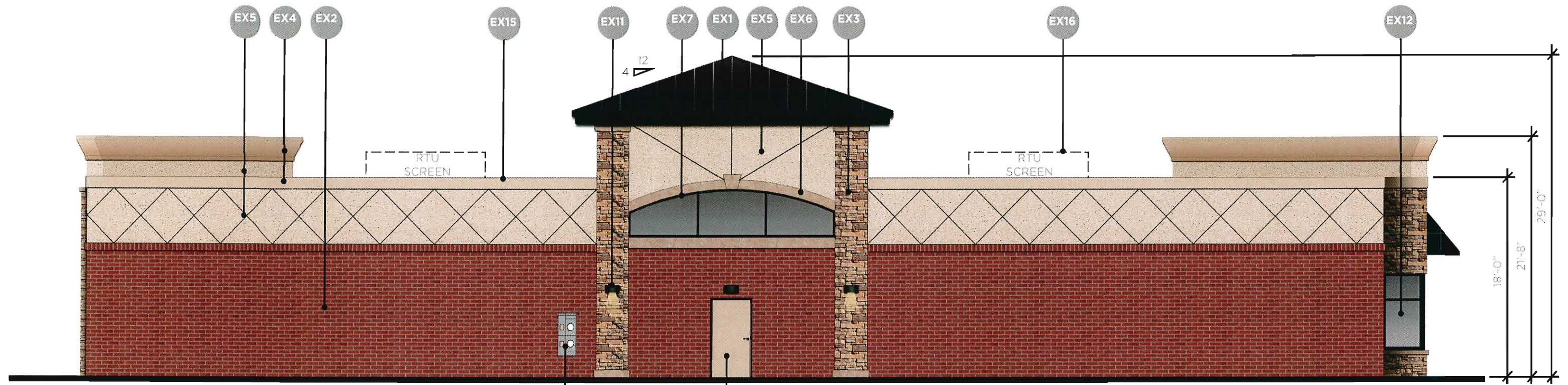
LEGEND

- |   |   |
|---|---|
| <p><b>EX1</b> Batten Seam Panel Roof System (Color: Matte Black). 24 Gauge Smooth with Battens at 16" O.C.</p> <p><b>EX2</b> Facebrick Veneer (Color: Haverford). 3 5/8"W x 2 1/4"H x 7 5/8"L.</p> <p><b>EX3</b> Adhered Stone - Mountain Ledge Panels (Color: Pioneer).</p> <p><b>EX4</b> Exterior Insulation Finish System (Color: Almond).</p> <p><b>EX5</b> Exterior Insulation Finish System (Color: Birch).</p> <p><b>EX6</b> Adhered Stone - Snapped Edge Wainscot Sill &amp; Base, Ashlar Cut Heads &amp; Keystone (Color: Buckskin).</p> <p><b>EX7</b> Aluminum Storefront with 1" insulated glazing. (Color: Black Anodized Aluminum).</p> <p><b>EX8</b> Metal Awning. Metal color to match EX1.</p> <p><b>EX9</b> Exterior/Commercial Grade Paint. Paint color to match EX4.</p> | <p><b>EX10</b> Split-Faced Concrete Masonry Units (Color: Light Tan).</p> <p><b>EX11</b> Outdoor Wall Mount Lighting - ENC Entry Round Clean LED - Down Lighting.</p> <p><b>EX12</b> 1" Insulated tinted windows (Color: Grey)</p> <p><b>EX13</b> Fuel Canopies Manufactured by Arning Companies, Inc.</p> <p><b>EX14</b> Cast Stone. (Color - Light Tan)</p> <p><b>EX15</b> Metal Coping (Color - Match adjacent finish color)</p> <p><b>EX16</b> Plastic RTU Screen (Color - Light Tan)</p> |
|---|---|



CSTORE - DRIVE THRU SIDE





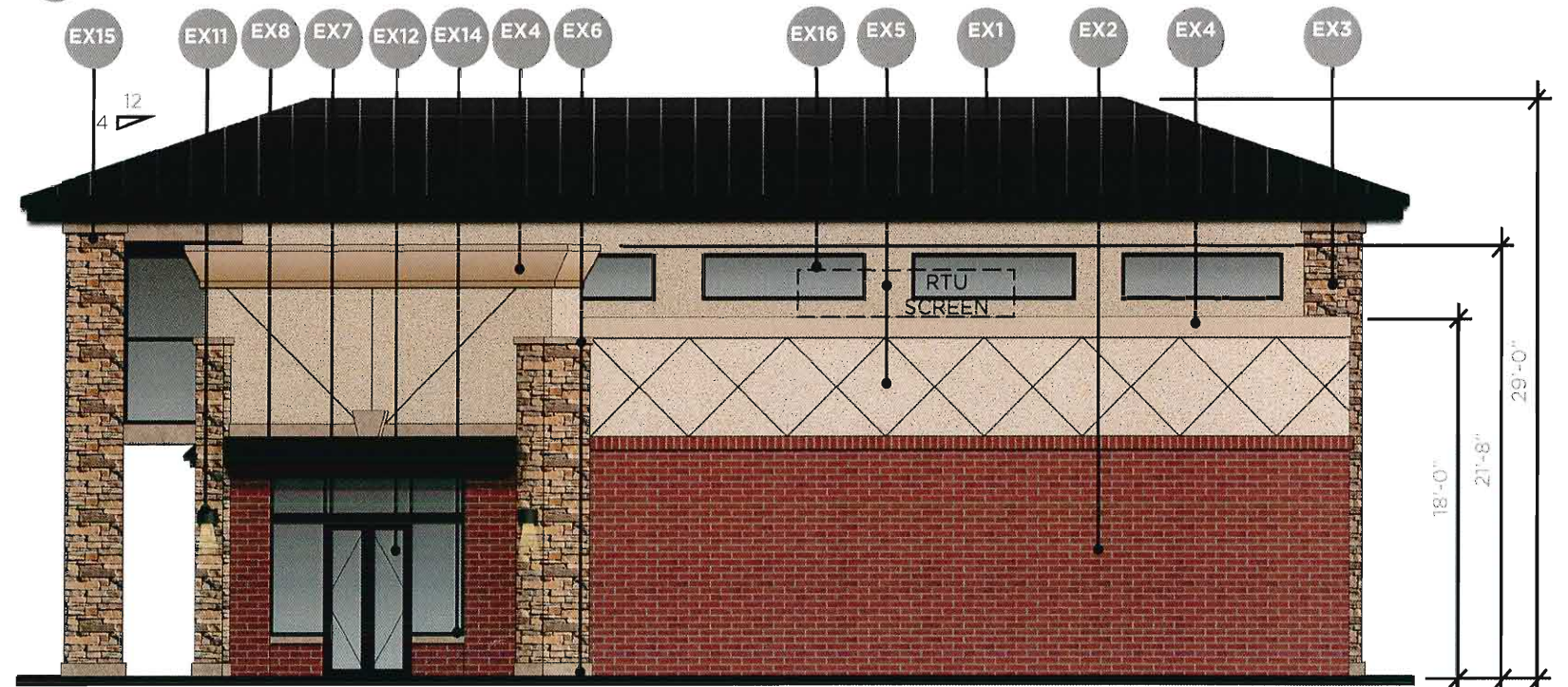
CSTORE - BACK

ELECTRICAL  
METER PANEL

EX9

LEGEND

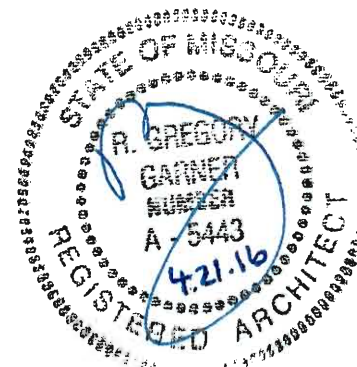
- EX1** Batten Seam Panel Roof System (Color: Matte Black). 24 Gauge Smooth with Battens at 16" O.C.
- EX2** Facebrick Veneer (Color: Haverford). 3 5/8"W x 2 1/4"H x 7 5/8"L.
- EX3** Adhered Stone - Mountain Ledge Panels (Color: Pioneer).
- EX4** Exterior Insulation Finish System (Color: Almond).
- EX5** Exterior Insulation Finish System (Color: Birch).
- EX6** Adhered Stone - Snapped Edge Wainscot Sill & Base, Ashlar Cut Heads & Keystone (Color: Buckskin).
- EX7** Aluminum Storefront with 1" insulated glazing. (Color: Black Anodized Aluminum).
- EX8** Metal Awning. Metal color to match EX1.
- EX9** Exterior/Commercial Grade Paint. Paint color to match EX4.
- EX10** Split-Faced Concrete Masonry Units (Color: Light Tan).
- EX11** Outdoor Wall Mount Lighting - ENC Entri Round Clean LED - Down Lighting.
- EX12** 1" Insulated tinted windows (Color: Grey)
- EX13** Fuel Canopies Manufactured by Arning Companies, Inc.
- EX14** Cast Stone. (Color - Light Tan)
- EX15** Metal Coping (Color - Match adjacent finish color)
- EX16** Plastic RTU Screen (Color - Light Tan)



CSTORE - SIDE



EXTERIOR ELEVATIONS CSTORE  
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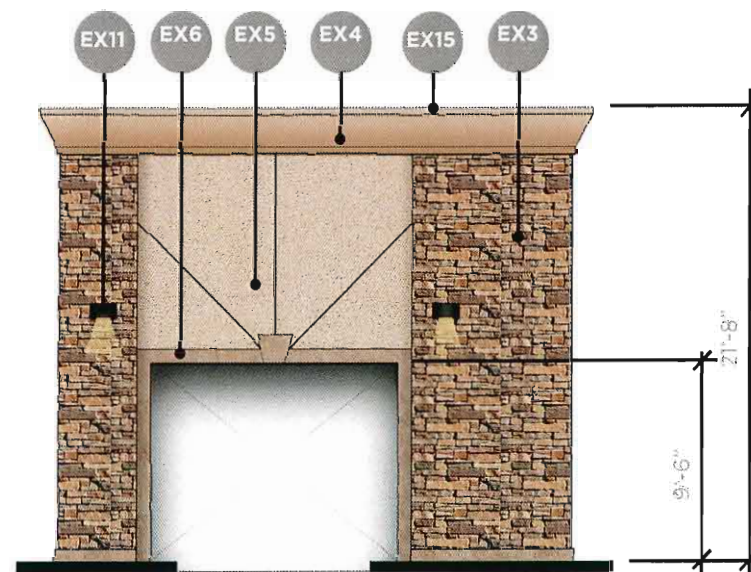




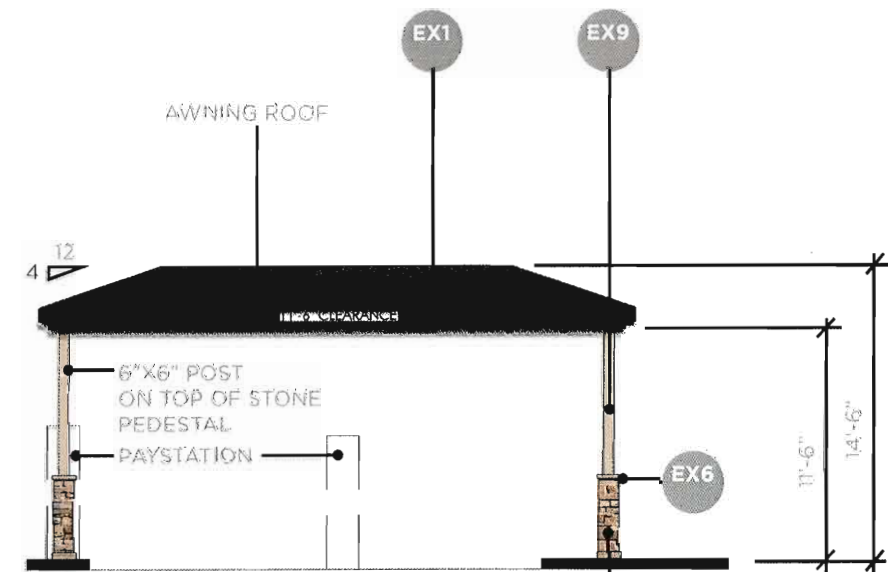
CAR WASH - FRONT SIDE

LEGEND

- EX1** Batten Seam Panel Roof System (Color: Matte Black). 24 Gauge Smooth with Battens at 16" O.C.
- EX2** Facebrick Veneer (Color: Haverford). 3 5/8"W x 2 1/4"H x 7 5/8"L.
- EX3** Adhered Stone - Mountain Ledge Panels (Color: Pioneer).
- EX4** Exterior Insulation Finish System (Color: Almond).
- EX5** Exterior Insulation Finish System (Color: Birch).
- EX6** Adhered Stone - Snapped Edge Wainscot Sill & Base, Ashlar Cut Heads & Keystone (Color: Buckskin).
- EX7** Aluminum Storefront with 1" insulated glazing. (Color: Black Anodized Aluminum).
- EX8** Metal Awning. Metal color to match EX1.
- EX9** Exterior/Commercial Grade Paint. Paint color to match EX4.
- EX10** Split-Faced Concrete Masonry Units (Color: Light Tan).
- EX11** Outdoor Wall Mount Lighting - ENC Entry Round Clean LED - Down Lighting.
- EX12** 1" Insulated tinted windows (Color: Grey)
- EX13** Fuel Canopies Manufactured by Arning Companies, Inc.
- EX14** Cast Stone. (Color - Light Tan)
- EX15** Metal Coping (Color - Match adjacent finish color).
- EX16** Plastic RTU Screen (Color - Light Tan)



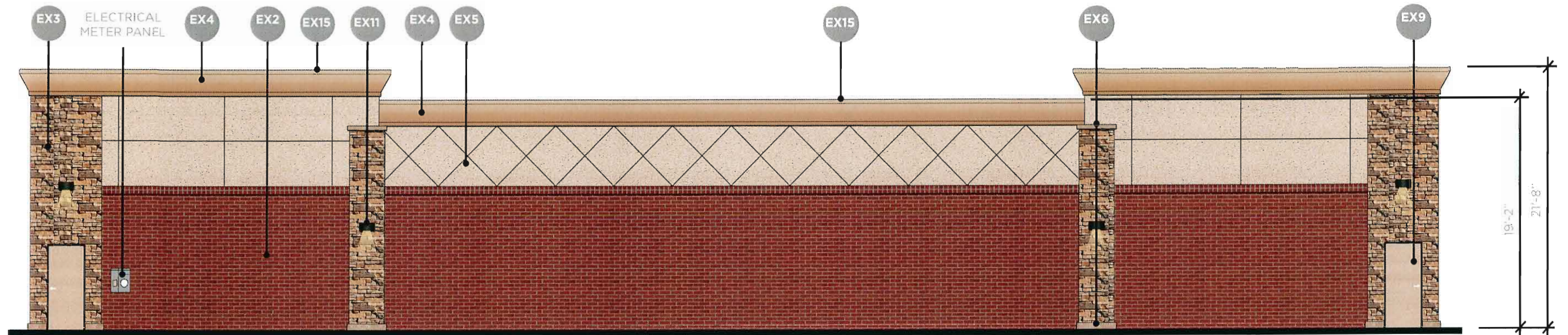
CAR WASH - ENTRY



CAR WASH - CANOPY



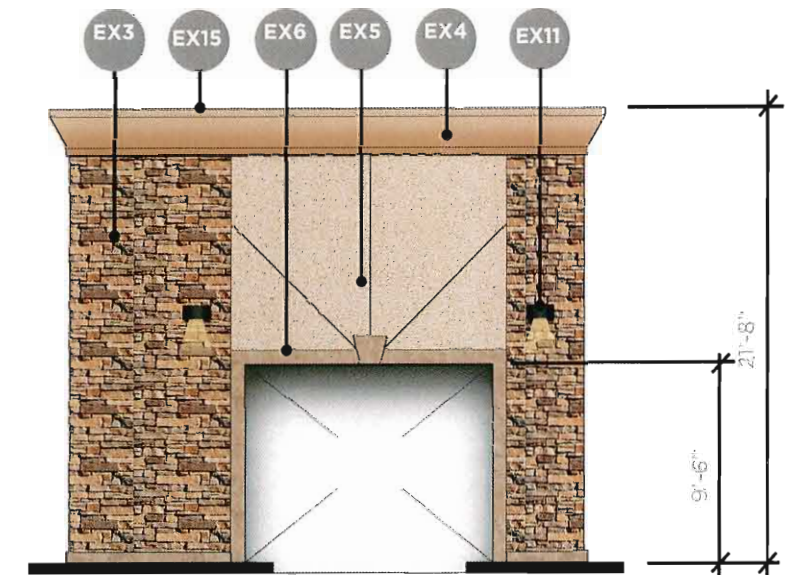




CAR WASH - BACK SIDE

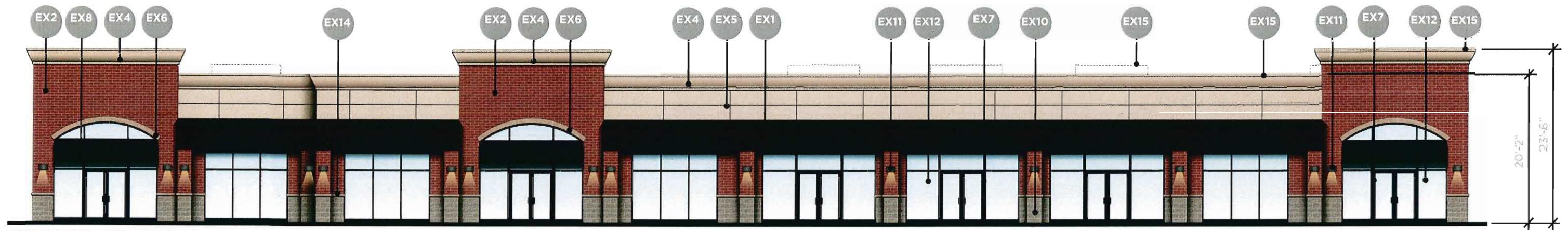
LEGEND

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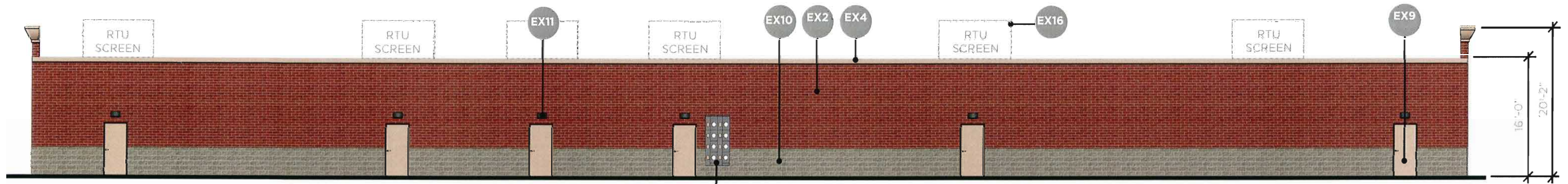


CAR WASH - EXIT

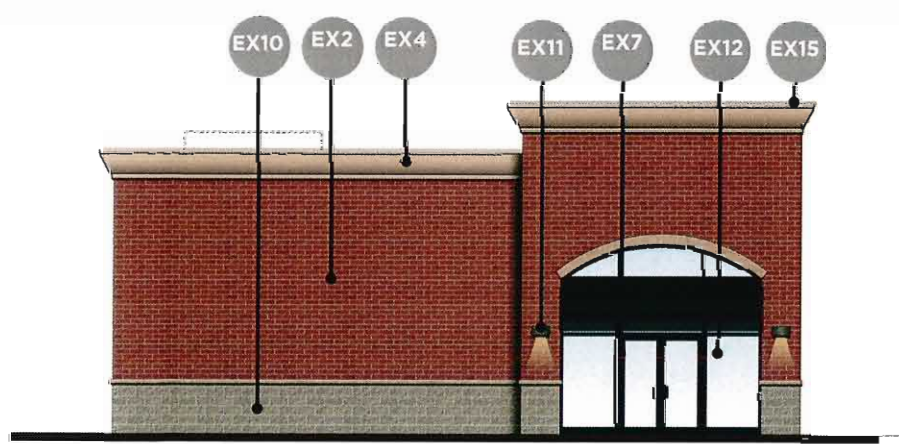




LEASE SPACE - FRONT

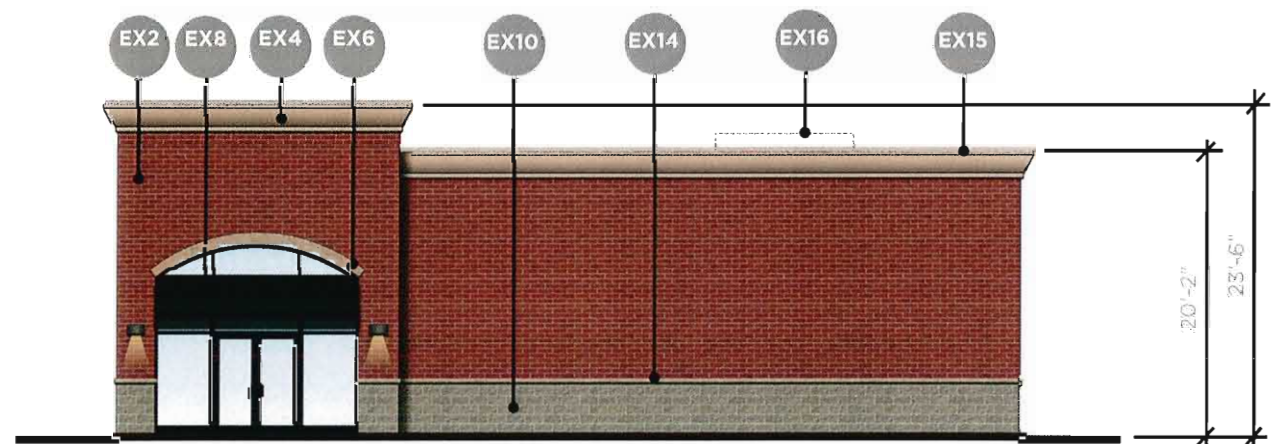


LEASE SPACE - BACK



LEASE SPACE - SIDE VIEW

ELECTRICAL METER PANEL



LEASE SPACE - SIDE VIEW

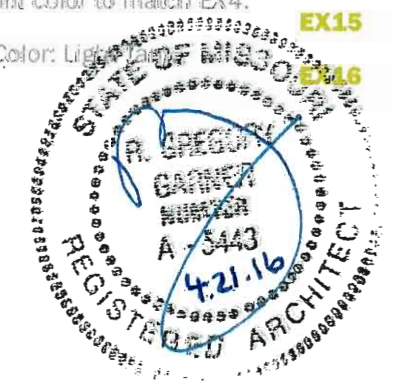
LEGEND

- |  |   |   |
|--|---|---|
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| <b>EX2</b> Facebrick Veneer (Color: Haverford).<br>3 5/8"W x 2 1/4"H x 7 5/8"L.                            | <b>EX7</b> Aluminum Storefront with 1" insulated glazing.<br>(Color: Black Anodized Aluminum).                  | <b>EX12</b> 1" Insulated tinted windows (Color: Grey)                                   |
| <b>EX3</b> Adhered Stone - Mountain Ledge Panels (Color: Pioneer).   | <b>EX8</b> Metal Awning. Metal color to match EX1.  | <b>EX13</b> Fuel Canopies Manufactured by Arning Companies, Inc.                        |
| <b>EX4</b> Exterior Insulation Finish System (Color: Almond).  | <b>EX9</b> Exterior/Commercial Grade Paint. Paint color to match EX4.   | <b>EX14</b> Cast Stone. (Color - Light Tan)   |
| <b>EX5</b> Exterior Insulation Finish System (Color: Birch).   | <b>EX10</b> Split-Faced Concrete Masonry Units (Color: Light Tan)   | <b>EX15</b> Metal Coping (Color - Match adjacent finish color)                          |
|  |   | <b>EX16</b> Plastic RTU Screen (Color - Light Tan)                                      |

SCALE

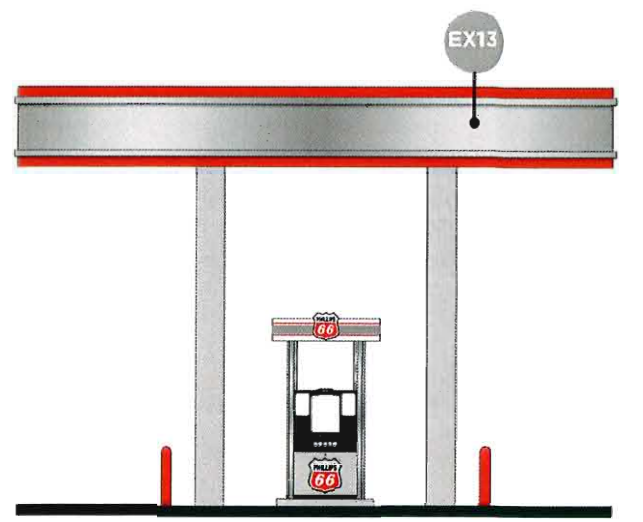


EXTERIOR ELEVATIONS LEASE SPACE  
1599 | ENERGY EXPRESS | MAY 12, 2016

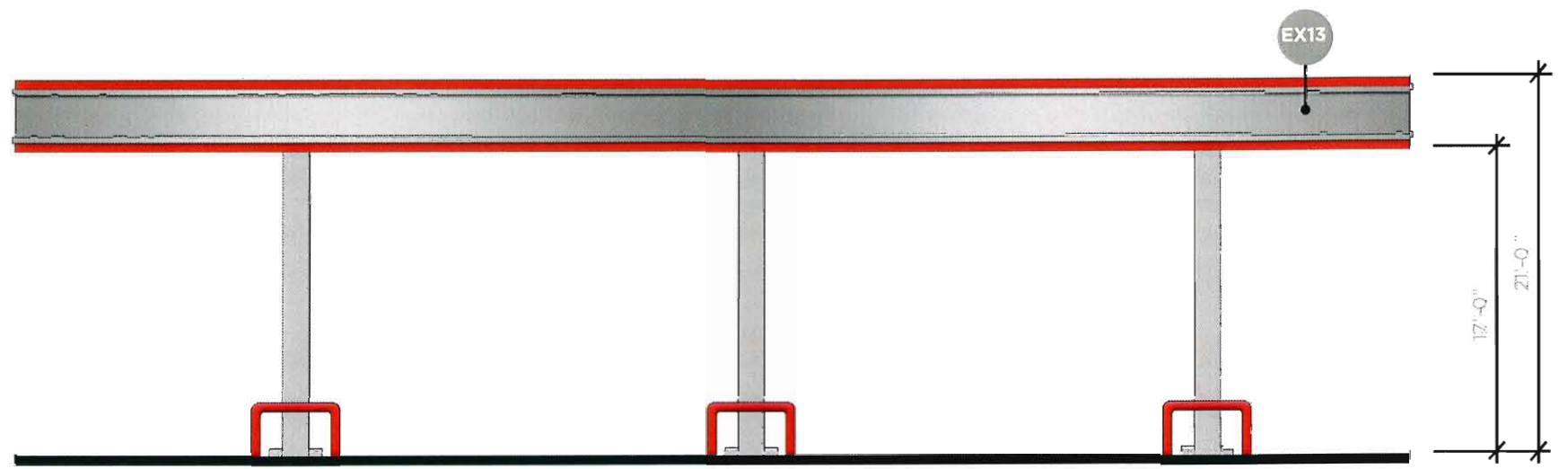


Archimages  
architecture | interiors

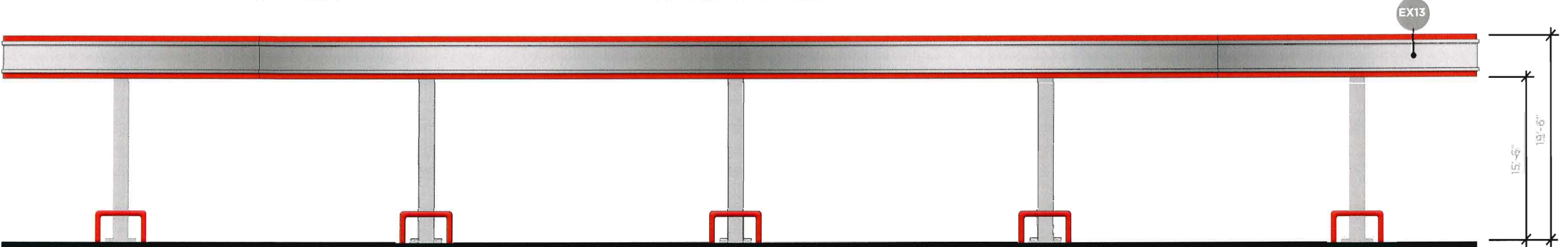




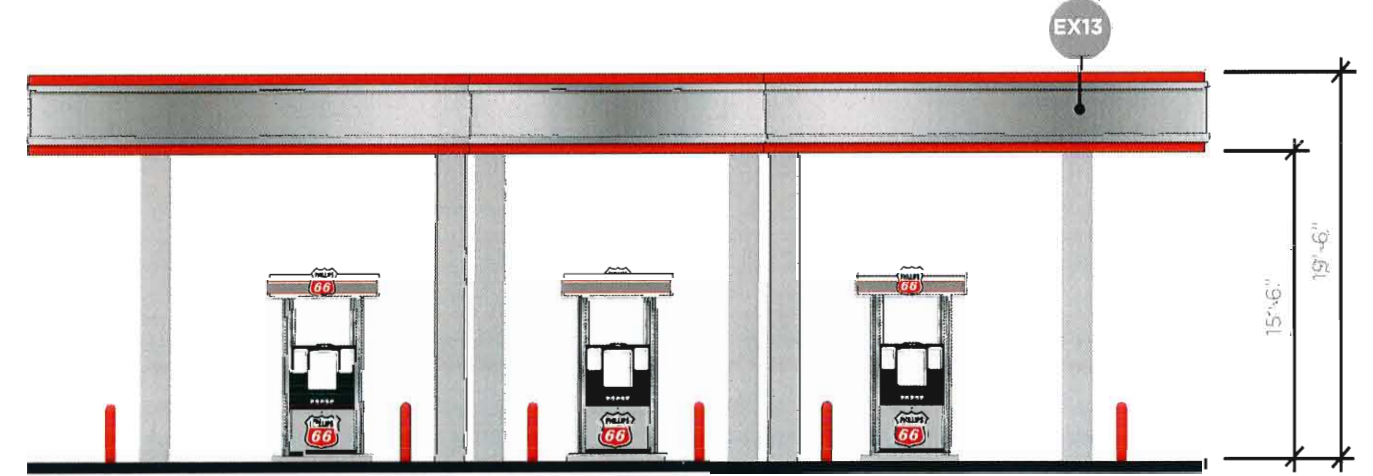
COMMERCIAL FUELING CANOPY - SIDE



COMMERCIAL FUELING CANOPY - FRONT



GAS CANOPY - FRONT

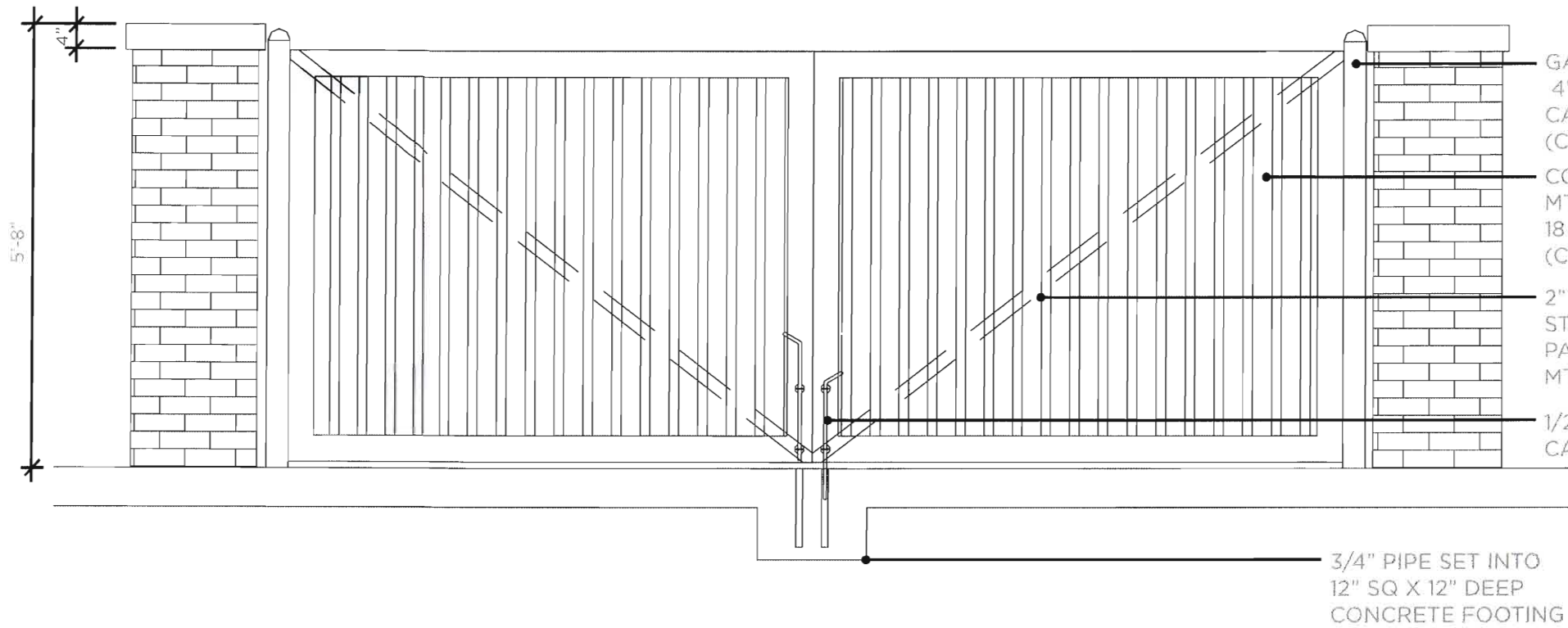


GAS CANOPY - SIDE

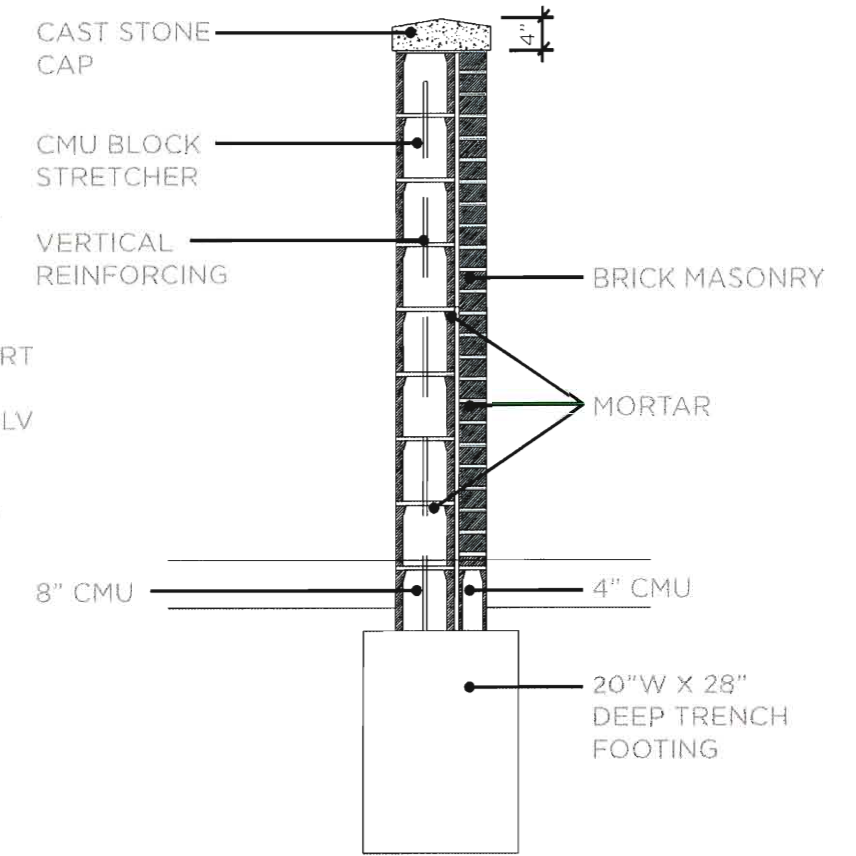
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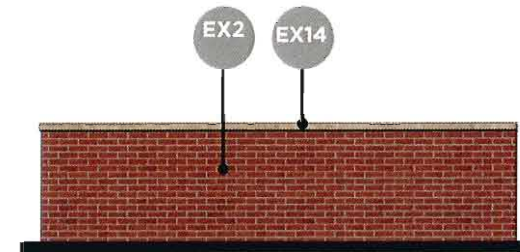
DUMPSTER GATE - DETAIL



DUMPSTER WALL - DETAIL 1 3/4" THICK

LEGEND

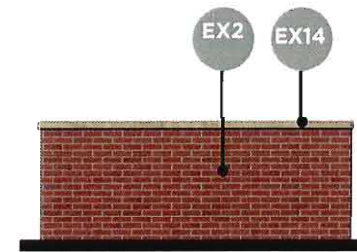
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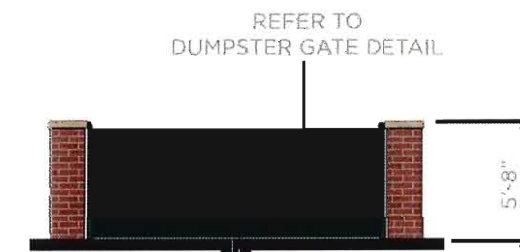
DUMPSTER - SIDE 30X15



DUMPSTER - FRONT 30X15



DUMPSTER - SIDE 18X15



DUMPSTER - FRONT 18X15





PLANNING AND DEVELOPMENT SERVICES DIVISION

SCRIPT FOR A SITE DEVELOPMENT PLAN

PROPERTY DESCRIPTION

A tract of land being Lot 2 of McGrath Plaza, a subdivision according to the plat thereof recorded in Plat Book 325, Pages 11 and 12 of the St. Louis County Records...

Beginning at the most Northern corner of said Lot 2 of McGrath Plaza, said point being on the South right-of-way line of Chesterfield Airport Road; thence Eastwardly along said South right-of-way line of Chesterfield Airport Road along a curve to the left having a radius of 4006.54 feet...

PROPERTY DESCRIPTION OUT LOT A

A tract of land being Out Lot A of McGrath Plaza, a subdivision according to the plat thereof recorded in Plat Book 325, Pages 11 and 12 of the St. Louis County Records...

Beginning at the most Western corner of said Out Lot A of McGrath Plaza, said point being on the North right-of-way line of Olive Street Road, 60 feet wide; thence along the boundary line of said Out Lot A the following courses and distances: along a curve to the left having a radius of 990.78 feet...

ENERGY MARKETING 709, LLC, the owner 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 03-04.C, "PC" Planned Commercial District of City of Chesterfield Unified Development Code...

(Signature) Steven J. Madras
(Name typed) Steven J. Madras

STATE OF MISSOURI )
COUNTY OF ) SS.

On this \_\_\_ day of \_\_\_\_\_, A.D., 20\_\_\_, before me personally appeared \_\_\_\_\_, to me known, who, being by me sworn in, did say

that he/she is the \_\_\_\_\_ of Energy Marketing 709, LLC, a limited liability company organized and existing under the laws of the state of Missouri, and that the foregoing instrument was signed on behalf of said limited liability company by authority of its members and that said

\_\_\_\_\_ acknowledged said instrument to be the free act and deed of said company.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Notarial seal in the County and State aforesaid, the day and year last above written.

NOTARY PUBLIC

Please Print Name

My Commission Expires:

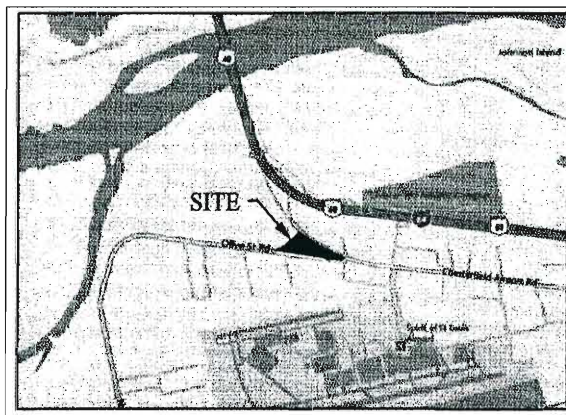
This Site Development Plan was approved by the City of Chesterfield Planning Commission and duly verified on the \_\_\_ day of \_\_\_\_\_, 20\_\_\_, by the Chairperson of said Commission, authorizing the recording of this Site Development Plan pursuant to Chesterfield Ordinance Number 200, as attested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

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

Vicki Hass, City Clerk
City of Chesterfield, Missouri

Energy Marketing
2nd Amended Site Development Plan

A tract of land being Lot 2 and Outlot A of McGrath Plaza, part of Lot 6 of the Subdivision of R. H. Stevens Farm and part of U. S. Survey 102, Township 45 North - Range 3 East, St. Louis County, Missouri



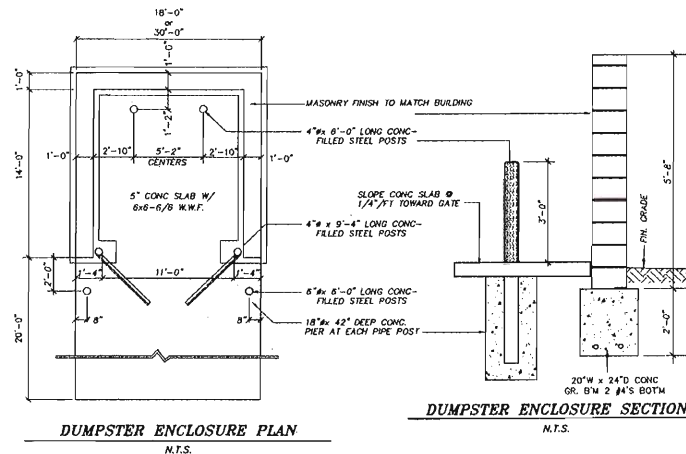
LOCATION MAP

SHEET INDEX

- 1. COVER SHEET AND NOTES
2. 2nd AMENDED SITE DEVELOPMENT PLAN
3. LIGHTING PLAN

ST. LOUIS COUNTY GENERAL NOTES

- All proposed improvements shall be constructed to St. Louis County Standards.
No slopes within St. Louis County right-of-way shall exceed 3 (horizontal) to 1 (vertical).
Storm water shall be discharged at an adequate natural discharge point. Siltsheds are not adequate discharge points.



STATEMENT OF COMPLIANCE WITH THE GEOTECHNICAL REPORT

Gateway Geotechnical, LLC and the undersigned engineer have not prepared these plans. The seal of the undersigned professional engineer has been affixed at the request of the City of Chesterfield and is a professional opinion to indicate that the undersigned has reviewed the plans and that in his opinion the grading and improvements relative 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 geological report for the development dated March 2016.

Gateway Geotechnical, LLC 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.

Gateway Geotechnical, LLC

T. Michael McMillan, PE, D.GE
PE# E-15825

GENERAL NOTES

- 1. CURRENT ZONING: "PC", PLANNED COMMERCIAL
2. PROPERTY INFO: PARCEL ID - 17W820246
18382 CHESTERFIELD AIRPORT ROAD
CHESTERFIELD, MO 63005

PARKING CALCULATION

Table with 2 columns: PROPOSED USE and PARKING REQUIREMENT/PROVIDED. Rows include Gas Station and Convenience Store, Quick Serve Restaurant, Car Wash, and Retail Stores.

IMPERVIOUS AREA

Table with 2 columns: Category and Area. Rows include Pavement (118,835 sq.ft.), Buildings (20,100 sq.ft.), Sidewalks (10,445 sq.ft.), and Total (149,380 sq.ft.).

PERVIOUS AREA

Table with 2 columns: Category and Area. Rows include Lawn & Islands (72,420 sq.ft.), Bioretention Areas (7,288 sq.ft.), and Total (79,708 sq.ft.).

OPEN SPACE REQUIREMENT

Table with 2 columns: Category and Area. Rows include Landscape Buffer (54,521 SF) and Interior Landscape Area (35,312 SF).

FLOOR AREA RATIO (FAR)

Table with 2 columns: USE and SQ. FT. Rows include Convenience Store W/Gas (7,100), Canopy (9,923), Car Wash (3,000), Retail Center (10,000), Total Building Area (30,023), Total Property Area (229,088), Floor Area Ratio (FAR) (0.131), and Maximum FAR Allowed (0.550).

PICKETT, RAY & SILVER, INC. CIVIL ENGINEERING, LAND SURVEYING, AND NATURAL RESOURCES SERVICES. 3027 W. Hwy 76, Suite B Branson, Mo 65616

Energy Marketing A tract of land being Lot 2 and Outlot A of McGrath Plaza, part of Lot 6 of the Subdivision of R. H. Stevens Farm and part of U. S. Survey 102, Township 45 North - Range 3 East, St. Louis County, Missouri. Prepared For: Energy Marketing 709 LLC

REVISIONS table with columns: NO., DATE, DESCRIPTION.

ENGINEERS AUTHENTICATION stamp for Douglas S. Tiemann, Professional Engineer, License # C-23545.

Table with columns: DRAWN, CHECKED, DATE. Values include DWD, DST, 12/15/15.

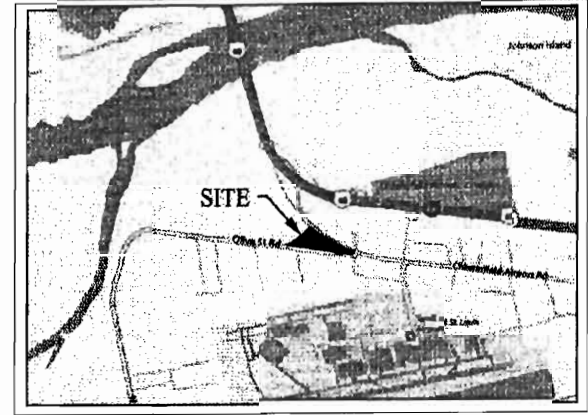
SITE DEVELOPMENT PLAN 18423 OLIVE STREET ROAD SHEET 1 OF 3

04/26/2016 \*\*\* NOT FOR CONSTRUCTION \*\*\* SITE PLAN FOR CITY APPROVAL

# Energy Marketing 2nd Amended Site Development Plan

A tract of land being Lot 2 and Outlot A of McGrath Plaza,  
part of Lot 6 of the Subdivision of R. H. Stevens Farm and  
part of U. S. Survey 102, Township 45 North - Range 3 East,  
St. Louis County, Missouri

- LEGEND**
- UTILITY POLE
  - LIGHT STANDARD
  - MANHOLE
  - TREE
  - WATER VALVE
  - WATER METER
  - TREE LINE
  - CONC. P.V.M.
  - SIGN
  - OVERHEAD UTILITY
  - FENCE
  - SEWER CLEANOUT
  - ELECTRIC BOX
  - BOLLARD
  - GUY WIRE



**PICKETT, RAY & SILVER INC.**  
 CIVIL ENGINEERING, LAND SURVEYING,  
 AND NATURAL RESOURCES SERVICES  
 ST. PETERS  
 22 Richmond Center Court  
 St. Peters, MO 63376  
 Phone (636) 397-1211 Fax (636) 397-1104  
 www.prs3.com 1-800-708-3818

**Energy Marketing**  
 A tract of land being Lot 2 and Outlot A of McGrath Plaza,  
 part of Lot 6 of the Subdivision of R. H. Stevens Farm and  
 part of U. S. Survey 102, Township 45 North - Range 3 East,  
 St. Louis County, Missouri  
 Prepared For:  
**Energy Marketing 709 LLC**  
 3130 Kessler Avenue  
 St. Louis, MO 63121-5505  
 314-383-7000

| NO. | DATE | DESCRIPTION |
|-----|------|-------------|
|     |      |             |
|     |      |             |
|     |      |             |
|     |      |             |

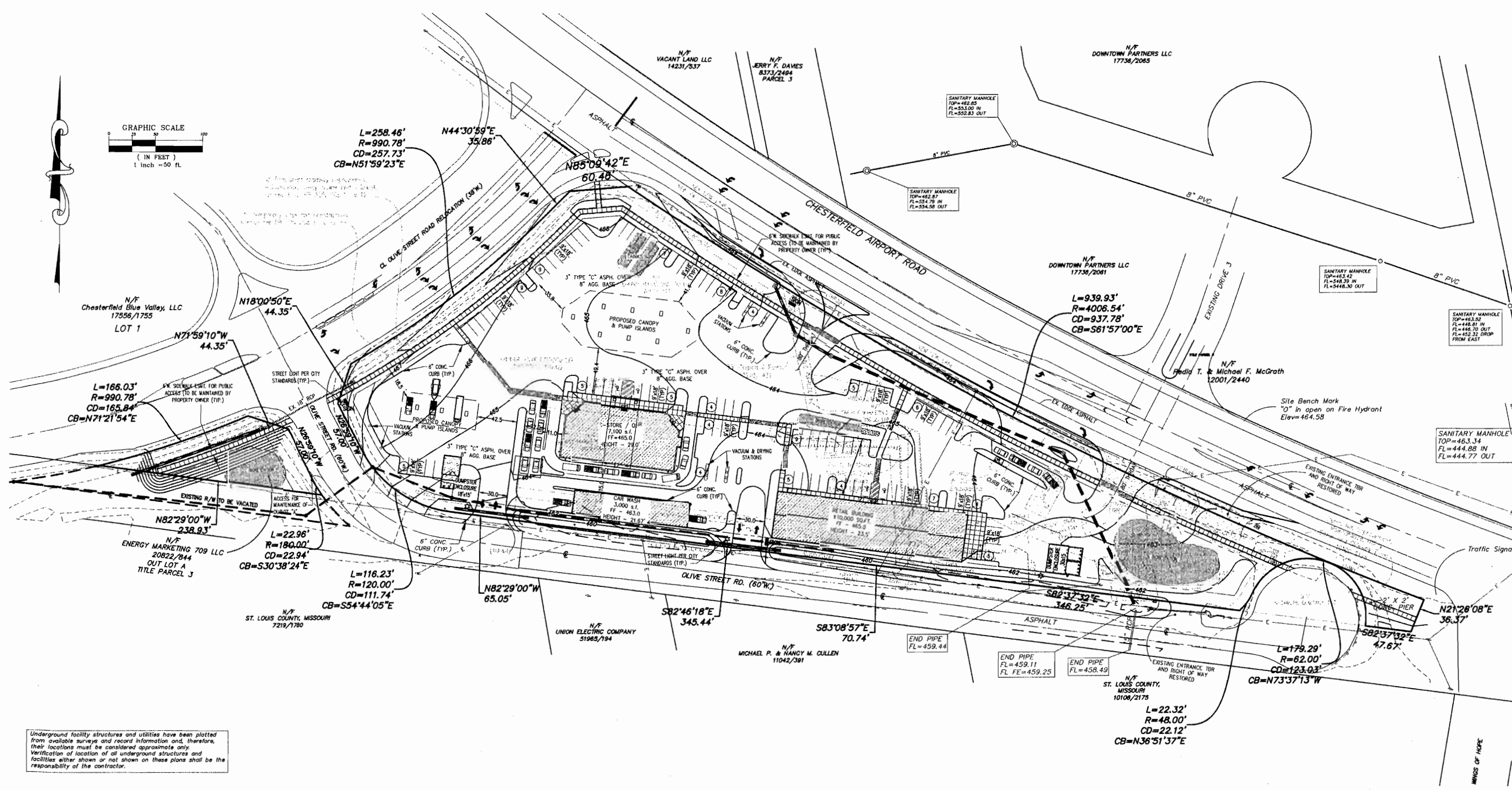
**ENGINEERS AUTHENTICATION**  
 The responsibility for professional engineering  
 practice on this project is hereby certified to the set of  
 plans authenticated by the seal, signature and date  
 hereunder. I understand that I am responsible for  
 all engineering plans prepared in the project and  
 any modifications thereto after the date herein  
 recommended.

DOUGLAS S. TEMM  
 PROFESSIONAL ENGINEER  
 LICENSE# E-23345

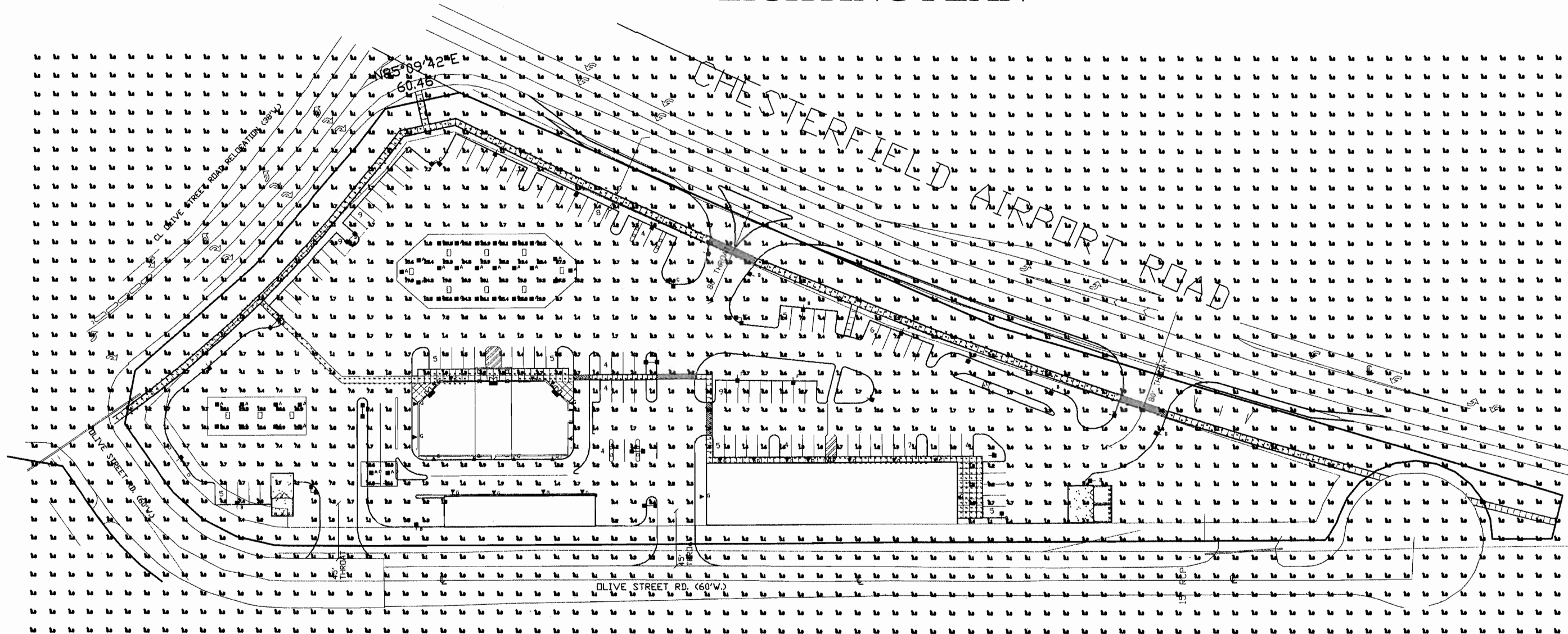
|           |     |                   |          |
|-----------|-----|-------------------|----------|
| DRAWN     | DWD | DATE              | 12/15/15 |
| CHECKED   | DST | DATE              | 12/15/15 |
| PROJECT # |     | 09056.EMKT.00R    |          |
| TASK #    |     | 1 FIELD BOOK 1287 |          |

**SITE DEVELOPMENT PLAN**  
 18423 OLIVE STREET ROAD  
 SHEET **2** OF **3**  
 © Copyright 2015 by Pickett, Ray & Silver Inc.

04/26/2016 \*\*\* NOT FOR CONSTRUCTION \*\*\* SITE PLAN FOR CITY APPROVAL



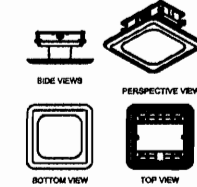
# Energy Marketing LIGHTING PLAN



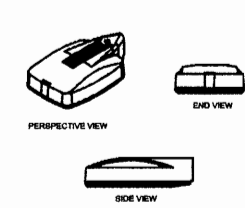
| Symbol   | Qty | Label | Arrangement    | Description   | LLF   | Lumens/Lamp | Arr. Lum. Lumens | Arr. Watts |
|----------|-----|-------|----------------|---|-------|-------------|------------------|------------|
| [Symbol] | 34  | A     | SINGLE         | CRUS-SC-LED-VLV-CV                                  | 1.000 | N.A.        | 8842             | 78.7       |
| [Symbol] | 17  | B     | SINGLE         | XPT3-FT-LED-128-350-CV-UE-HSS-SINGLE-18'POLE+2'BASE | 1.000 | N.A.        | 8067             | 144        |
| [Symbol] | 4   | C     | 2 @ 90 DEGREES | XPT3-FT-LED-128-350-CV-UE-HSS-D90-18'POLE+2'BASE    | 1.000 | N.A.        | 16134            | 288        |
| [Symbol] | 5   | D     | D180           | XPT3-FT-LED-128-350-CV-UE-HSS-D180-18'POLE+2'BASE   | 1.000 | N.A.        | 16134            | 288        |
| [Symbol] | 1   | E     | D180           | XPT3-FT-LED-128-350-CV-UE-D180-18'POLE+2'BASE       | 1.000 | N.A.        | 26672            | 286        |
| [Symbol] | 4   | F     | SINGLE         | XPT3-FT-LED-128-350-CV-UE-SINGLE-18'POLE+2'BASE     | 1.000 | N.A.        | 13336            | 143        |
| [Symbol] | 25  | G     | SINGLE         | XPWS3-WV-LED-28-350-CV-UE                           | 1.000 | N.A.        | 3161             | 34         |

| Label                       | CalcType    | Units | Avg   | Max  | Min  | Avg/Min | Max/Min |
|-----------------------------|-------------|-------|-------|------|------|---------|---------|
| ALL CALC POINTS             | Illuminance | Fc    | 1.16  | 27.5 | 0.0  | N.A.    | N.A.    |
| INTERIOR WALKWAYS           | Illuminance | Fc    | 4.68  | 12.2 | 0.2  | 23.40   | 61.00   |
| PERIMETER WALKWAYS          | Illuminance | Fc    | 0.66  | 6.9  | 0.0  | N.A.    | N.A.    |
| CAR WASH PAY CANOPY SUMMARY | Illuminance | Fc    | 16.38 | 21.1 | 12.6 | 1.30    | 1.67    |
| DIESEL CANOPY SUMMARY       | Illuminance | Fc    | 20.38 | 23.3 | 12.6 | 1.62    | 1.85    |
| GAS CANOPY SUMMARY          | Illuminance | Fc    | 21.42 | 27.5 | 8.4  | 2.55    | 3.27    |
| NORTH ENTRANCE/EXIT SUMMARY | Illuminance | Fc    | 3.24  | 8.4  | 0.2  | 16.20   | 42.00   |
| PARKING AREA SUMMARY        | Illuminance | Fc    | 3.64  | 16.8 | 0.1  | 36.40   | 168.00  |
| SOUTH ENTRANCE/EXIT SUMMARY | Illuminance | Fc    | 2.50  | 4.3  | 0.9  | 2.78    | 4.78    |

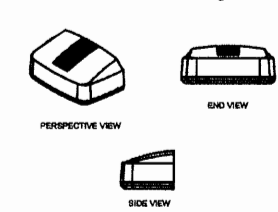
CRUS-SC-LED  
LED CANOPY LIGHT - LEGACY



XPTS3  
LED Area Light



XPWS3  
LED Wall Mount Light



Based on the information provided, all dimensions and luminaire locations shown represent recommended positions. The engineer and/or architect must determine the applicability of the layout to existing or future field conditions.

This lighting plan represents illumination levels calculated from laboratory data taken under controlled conditions in accordance with the Illuminating Engineering Society (IES) approved methods. Actual performance of any manufacturer's luminaires may vary due to changes in electrical voltage, tolerance in lamps/LED's and other variable field conditions. Calculations do not include obstructions such as buildings, curbs, landscaping, or any other architectural elements unless noted.



Total Project Watts  
Total Watts = 9423,799

Lighting Proposal LD-126601-5  
ENERGY EXPRESS  
CHESTERFIELD AIRPORT ROAD  
CHESTERFIELD, MO  
DATE: 04-15 11:55 AM '16 SHEET 3 OF 3  
SCALE: 1"=40'

### LED CANOPY LIGHT - LEGACY™ (CRUS)



**LED LIGHTING FACTS**  
Department of Energy has verified representative product test data and results in accordance with its Lighting Facts Program. Visit [www.lightingfacts.com](http://www.lightingfacts.com) for specific catalog strings.

**HOUSING** - Low profile, durable die-cast aluminum construction, providing a reliable weather-tight seal.  
**LEDS** - Features an array of select, mid-power, high brightness, high efficiency LED chips; 5000K color temperature, 70 CRI (nominal).  
**DRIVER CURRENT** - Choice of Very Low Wattage (VLW), Low Wattage (LW), Super Saver (SS), High Output (HO) or Very High Output (VHO).  
**OPTICS / DISTRIBUTION** - Choice of Symmetrical or Asymmetrical, which directs light through a clear tempered glass lens, to provide a uniform distribution of light to vertical and horizontal surfaces.  
**OPTICAL UNIT** - Features an ultra-dim 2/8" profile die-cast housing with a flat glass lens. Unit is water-resistant, sealed to an IP67 rating. Integral designed heat sink does not trap dirt and grime, ensuring cool running performance over the life of the fixture.  
**PRESSURE STABILIZING VENT** - Luminare assembly incorporates a pressure stabilizing vent breather to prevent seal fatigue and failure.  
**HAZARDOUS LOCATION** - Designed for lighter than air list applications. Product is suitable for Class 1 (Division 2) only when properly installed per LSI installation instructions (consult factory).  
**DRIVER** - State-of-the-art driver technology superior energy efficiency and optimum light output. Driver components are fully encased in potting for moisture resistance. Complies with IEC and FCC standards, 0-10V dimming supplied standard with all drive currents.  
**DRIVER HOUSING** - Die-cast aluminum, vent located rated driver/mechanical enclosure is elevated above canopy deck to prevent water entry, provide easy "lock-out" connection of primary wiring and contributes to attaining the lowest operating temperatures available. Seals to optical housing via one-piece molded silicone gasket.  
**OPERATING TEMPERATURE** - -40°C to 50°C (-40°F to +122°F)  
**ELECTRICAL** - Universal voltage power supply, 120-277 VAC, 50/60 Hz input. Drivers feature two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Scenario 1, Location Category C.  
**FINISH** - Standard color is white and is finished with LSI's DuraGrip® polyester powder coat process. DuraGrip withstands extreme weather changes without cracking or peeling.  
**INSTALLATION** - One person installation. No additional sealant required. Installs in a 12" or 18" deck pan. Deck penetration consists of a 4" hole, simplifying installation and water sealing. Unit is designed to quickly retrofit into existing Scootdeck (®) hole as well as openings for Encore and Encore Top Access and is recommended for the SIGCITA without having to relocate the conduit. Retro panels are available for existing Encore (see back page) as well as kits for recessed and P2X installations (see separate spec sheets). Support brackets are provided standard, to prevent sagging of deck.  
**SHIPPING WEIGHT** - 27 pounds (single pack), 48 pounds (double pack).  
**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.  
**WARRANTY** - Limited 5-year warranty.  
**LISTING** - UL and ETL listed to UL 1598, UL 8750 and other U.S. and international safety standards. Suitable for wet locations.  
**PHOTOMETRICS** - Please visit our web site at [www.lsi-industries.com](http://www.lsi-industries.com) for detailed photometric data.  
**Notes:**  
1. This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.  
2. For more information on our products, visit [www.lsi-industries.com](http://www.lsi-industries.com)

**Light Output - CRUS**

| Drive Current          | # of LEDs | Lumens (lm) |     | Watts |     | LPW |    |
|------------------------|-----------|-------------|-----|-------|-----|-----|----|
|                        |           | IC          | AC  | IC    | AC  | IC  | AC |
| VLW - Very Low Watt    | 8842      | -           | -   | 78    | -   | 112 | -  |
| LW - Low Watt          | 12871     | 8746        | 88  | 83    | 124 | 105 | -  |
| SS - Super Saver       | 12554     | 11518       | 114 | 111   | 119 | 104 | -  |
| HO - High Output       | 19533     | -           | 132 | -     | 141 | -   | -  |
| VHO - Very High Output | 22418     | 17262       | 159 | 157   | 141 | 110 | -  |

### LED CANOPY LIGHT - LEGACY™ (CRUS)

**LUMINAIRE ORDERING INFORMATION**

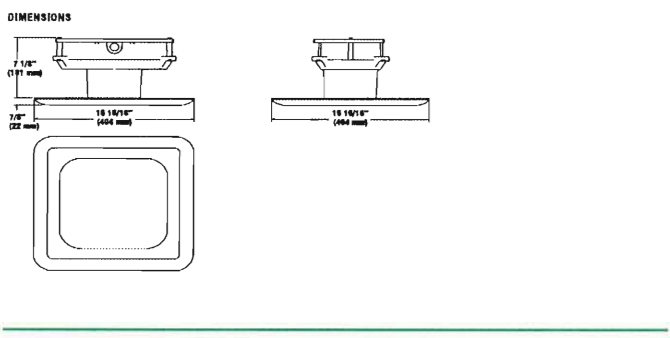
Project: CRUS SC LED HO 50 UE WHT

| Part # | Distribution                              | Light Source | Drive Current  | Color Temperature | Input Voltage                                   | Finish                                     | Options |
|--------|---|--------------|--|-------------------|---|--|---------|
| CRUS   | IC - Flared Symmetrical AC - Asymmetrical | LED          | VLW - Very Low Watt<br>LW - Low Watt<br>SS - Super Saver<br>HO - High Output<br>VHO - Very High Output | 50 - 5000K        | UE - Universal Voltage (120-277V)<br>347 - 480V | WHT - White<br>BLK - Bronze<br>BLX - Black |         |

**FOOTNOTES:**  
1. AC distribution utilizes a reflector which alters the beam from a standard S distribution.

**ACCESSORY ORDERING INFORMATION** (Accessories are sold separately)

| Description   | Order Number | Description  | Order Number |
|---|--------------|--|--------------|
| Retro Panel - IC / AC / SS / HO / VHO for 1P Deck Panel | 32096        | 1" Hole Plug and Silicone Gasket for 2P Retro Panel                | 130240       |
| Retro Panel - SS / HO / VHO for 2P Deck Panel           | 32097        | 1" Conduit (G5) w/ Hole Plug and (1) 1/2" or 1/4" of Size of Cable | 34762        |
| AC/DC 500 Cover Panel (no holes)                        | 34761        |  |              |
| AC/DC 100 Cover Panel (no holes)                        | 34762        |  |              |



**Light Output - CRUS**

| Drive Current          | # of LEDs | Lumens (lm) |     | Watts |     | LPW |    |
|------------------------|-----------|-------------|-----|-------|-----|-----|----|
|                        |           | IC          | AC  | IC    | AC  | IC  | AC |
| VLW - Very Low Watt    | 8842      | -           | -   | 78    | -   | 112 | -  |
| LW - Low Watt          | 12871     | 8746        | 88  | 83    | 124 | 105 | -  |
| SS - Super Saver       | 12554     | 11518       | 114 | 111   | 119 | 104 | -  |
| HO - High Output       | 19533     | -           | 132 | -     | 141 | -   | -  |
| VHO - Very High Output | 22418     | 17262       | 159 | 157   | 141 | 110 | -  |

### LED AREA LIGHTS - PATRIOT® (XPT3)



**LED LIGHTING FACTS**  
Department of Energy has verified representative product test data and results in accordance with its Lighting Facts Program. Visit [www.lightingfacts.com](http://www.lightingfacts.com) for specific catalog strings.

**SMARTTEC™** - LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature.  
**OCCUPANCY SENSING (IMS)** - Optional integral passive infrared motion sensor activates switching of luminaire light levels. High level light is activated and increased to full bright in 1-2 seconds upon detection of motion. Low light level (30% maximum drive current) is activated when target zone is absent of motion activity for ~2 minutes and ramps down (10-15 seconds) to low level to allow eyes time to adjust. Sensor is located on the rear of optical assembly. Sensor optic has a detection cone of approximately 45°. Examples of detection - occurs 30' from a 30' mounting height pole; occurs 20' from a 20' mounting height pole.  
**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.  
**LEDS** - Select high-brightness LEDs in Cool White (5000K) or Neutral White (4000K) color temperature, 70 CRI.  
**DISTRIBUTION/PERFORMANCE** - Type 3, 5 and FT. Exceptional uniformity with full output creates bright environment at lower light levels. Improved backlight cutoff minimizes light trespass.  
**HOUSING** - One-piece, die-cast aluminum in a mid-rail-vented, rectangular shape with mounting arm cast in as an integral part of the housing. All hardware is stainless steel or electro-coated plastic steel. Fixture IP65 rated.  
**OPTICAL UNIT** - Clear tempered optical grade flat glass lens sealed to die-cast aluminum door assembly. Secured to housing with stainless steel ring bracket. Integral over-center latch allows easy tool-less access to driver. Optic provided with catch mechanism to limit driver movement. One-piece extruded silicone gasket seals optical assembly against the housing.  
**INSTALLATION** - Use with 5" traditional drilling pattern. Integral cast mounting arm is flat for square pole applications. Use round pole adaptor (RPPC) to mount to round poles. RPPC must be ordered separately. Extruded 6" arm extension is available (but not required for 90" or 120" mounting configurations).  
**ELECTRICAL** - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277VAC (UE-5000Hz input) and 347-480VAC. Optional hotlock photocell receptacle is available. Photocell must be ordered separately.  
**DRIVER** - Available in 350mA and 450mA drive currents. (Drive currents are factory programmed). Components are fully encased in potting material for IP65 moisture resistance. Driver complies with FCC 47 CFR part 15 RFEMNI standard.  
**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F)  
**FINISH** - Features are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling.  
**WARRANTY** - LSI LED fixtures carry a limited 5-year warranty.  
**PHOTOMETRICS** - Please visit our web site at [www.lsi-industries.com](http://www.lsi-industries.com) for detailed photometric data.  
**SHIPPING WEIGHT** (in carton) - 50 lbs / 25.4 Kg  
**LISTING** - ETL listed to U.S. and Canadian safety standards. Suitable for wet locations. For a list of the specific products in this series that are DLC Listed, please consult the LED Lighting section of our website or the Design Lights website at [www.designlights.org](http://www.designlights.org).  
**Notes:**  
1. This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.  
2. For more information on our products, visit [www.lsi-industries.com](http://www.lsi-industries.com)

**Light Output - XPT3**

| Drive Current | # of LEDs | Lumens (lm) |      | Watts |     | LPW |    |
|---------------|-----------|-------------|------|-------|-----|-----|----|
|               |           | IC          | AC   | IC    | AC  | IC  | AC |
| 350mA         | 128       | 1950        | 1910 | 1200  | 144 | -   | -  |
| 450mA         | 128       | 1950        | 1460 | 1080  | 138 | -   | -  |
| 350mA         | 128       | 1170        | 1160 | 1260  | 141 | -   | -  |
| 450mA         | 128       | 1340        | 1300 | 1470  | 158 | -   | -  |

### LED AREA LIGHTS - PATRIOT® (XPT3)

**LUMINAIRE ORDERING INFORMATION**

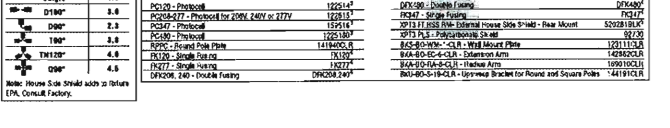
Project: XPT3 FT LED 128 450 CW UE WHT PCR

| Part #   | Distribution                                   | Light Source | # of LEDs | Drive Current | Color Temperature                                     | Input Voltage                                 | Finish   | Options  |
|----------|--|--------------|-----------|---------------|---|---|--|--|
| XPT3-LED | 5 - Type 3<br>6 - Type 4<br>FT - Forward Throw | LED          | 128       | 350-450mA     | CW - Cool White (5000K)<br>NW - Neutral White (4000K) | UE - Universal Voltage (120-277V)<br>347-480V | BLK - Black<br>BLX - Bronze<br>GFF - Graphite<br>MCP - Metallic Silver<br>PFL - Platinum Plus<br>DVC - Silver Verde Green<br>WHT - White | PCR - Photocell Control<br>18 - Terminal Block<br>IMS - Integral Motion Sensor |

**FOOTNOTES:**  
1. This is a non-flicker capable LED. For retrofit applications in which the original metal halide product was rated and LED fixture will not have a flicker-free operation, consult factory.  
2. Photocell must be ordered separately - see Accessories.  
3. Factory standard DIM is not required.  
4. Fixing must be located in the lead wire of pole.  
5. Back only. Round Pole Brackets are in Item CRN.

**ACCESSORY ORDERING INFORMATION** (Accessories are sold separately)

| Description | Order Number | Description            | Order Number |
|-------------|--------------|------------------------|--------------|
| Single      | 1.0          | 120-277V - Single Pole | 130240       |
| 2 Pole      | 2.0          | 120-277V - 2 Pole      | 130241       |
| 3 Pole      | 3.0          | 120-277V - 3 Pole      | 130242       |
| 4 Pole      | 4.0          | 120-277V - 4 Pole      | 130243       |
| 5 Pole      | 5.0          | 120-277V - 5 Pole      | 130244       |
| 6 Pole      | 6.0          | 120-277V - 6 Pole      | 130245       |
| 7 Pole      | 7.0          | 120-277V - 7 Pole      | 130246       |
| 8 Pole      | 8.0          | 120-277V - 8 Pole      | 130247       |
| 9 Pole      | 9.0          | 120-277V - 9 Pole      | 130248       |
| 10 Pole     | 10.0         | 120-277V - 10 Pole     | 130249       |



### FUEL CANOPY LIGHTS

**LED PATRIOT® WALL SOURCE (XPWS)**

US Patent 7898405, 7902290, 8002428 and CAN 2736187 & 2756157 and MX Patent 29621 and US Patents 7,936,793 and 7,936,794 are US & Int'l. Patents pending.  
**SMARTTEC™** - LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature.  
**ENERGY SAVING CONTROL OPTIONS** - DIM- 0-10 volt dimming enabled with controls by others.  
**OPTIONAL INTEGRAL MOTION SENSOR** - Passive infrared motion sensor activates switching of luminaire light levels. High level light is activated when assembly enter target zone and increased to full bright in 1-2 seconds. Low light level (30% of maximum drive current) is activated when target zone is absent of motion activity for ~2 minutes and gradually ramped down (10 seconds) to low level. Sensor detection range 110° horizontal x 53° vertical x 10 meters maximum distance.  
**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.  
**LEDS** - Available with 28 or 48 select high-brightness LEDs in Cool White (5000K) or Neutral White (4000K) color temperature, 70 CRI.  
**OPTICS/DISTRIBUTIONS** - Ultra-high efficiency reflectors provide three distributions. Choose from Wide Throw (WT), Forward Throw (FT) or Wall Wash (WW).  
**HOUSING** - One-piece die-cast aluminum housing is smoothly contoured rectangular shape. Mounting hardware is stainless steel or electro-coated plastic steel. Housing and optical unit are sealed with extruded silicone gasket, supply conductors with insulated EPDM bushing.  
**WALL MOUNTING** - Clear tempered optical-grade flat glass lens sealed to the aluminum optic housing creates an IP65 rated unit. Pressure stabilizing breather allows super-drip protection while preventing cycling from building up internal pressures and vacuum that can stress optical unit seals.  
**OPTICAL UNIT** - Clear tempered optical-grade flat glass lens sealed to the aluminum optic housing creates an IP65 rated unit. Pressure stabilizing breather allows super-drip protection while preventing cycling from building up internal pressures and vacuum that can stress optical unit seals.  
**WALL MOUNTING** - Optimized steel universal wall mounting plate easily installs directly to 4" octagonal or square junction box. EPDM gasket is supplied to be installed between mounting plate and junction box, sealing junction box from entrance of water. Universal plate permits fixture to be mounted in uplighting (indoor only) or downlighting position.  
**POLE MOUNTING** - XPMA (for square) or XPMAA (for round) allows mounting to poles in single and DR90 configurations. Use with 3" reduced drilling pattern.  
**ELECTRICAL** - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277VAC (50/60Hz input) or 347-480VAC.  
**DRIVER** - Available in 350mA and 450mA drive currents. (Drive currents are factory programmed). Components are fully encased in potting material for IP65 moisture resistance. Driver complies with IEC and FCC standards. Driver can be easily accessed.  
**EMERGENCY OPTIONS** - Optional integral emergency battery-back-up options are available. 98 option operates in 0°C to 50°C ambient temperature and CWBS operates in -20°C to 60°C ambient temperature. When primary AC power failure occurs, both options operate 10 LEDs for minimum of 90 minutes.  
**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F)  
**FINISH** - Features are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling.  
**WARRANTY** - LSI LED fixtures carry a limited 5-year warranty.  
**PHOTOMETRICS** - Please visit our web site at [www.lsi-industries.com](http://www.lsi-industries.com) for detailed photometric data.  
**SHIPPING WEIGHT** (in carton) - 30 lbs / 13.6 Kg  
**LISTING** - ETL listed to ANSI/UL1598, UL8750 and other U.S. and international safety standards. Suitable for wet locations in downlight position. Optional Class 1 Division 2 (groups A, B, C & D) hazardous location rating is available (Select HL option). For a list of the specific products in this series that are DLC Listed, please consult the LED Lighting section of our website or the Design Lights website at [www.designlights.org](http://www.designlights.org).  
**Notes:**  
1. This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.  
2. For more information on our products, visit [www.lsi-industries.com](http://www.lsi-industries.com)

Also available in traditional light sources

Project Name: \_\_\_\_\_ Fixture Type: \_\_\_\_\_ 10/21/15  
Catalog #: \_\_\_\_\_ LSI INDUSTRIES INC.

### BUILDING LIGHTS

**LED PATRIOT® WALL SOURCE (XPWS)**

US Patent 7898405, 7902290, 8002428 and CAN 2736187 & 2756157 and MX Patent 29621 and US Patents 7,936,793 and 7,936,794 are US & Int'l. Patents pending.  
**SMARTTEC™** - LSI drivers feature integral sensor which reduces drive current, when ambient temperatures exceed rated temperature.  
**ENERGY SAVING CONTROL OPTIONS** - DIM- 0-10 volt dimming enabled with controls by others.  
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**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.  
**LEDS** - Available with 28 or 48 select high-brightness LEDs in Cool White (5000K) or Neutral White (4000K) color temperature, 70 CRI.  
**OPTICS/DISTRIBUTIONS** - Ultra-high efficiency reflectors provide three distributions. Choose from Wide Throw (WT), Forward Throw (FT) or Wall Wash (WW).  
**HOUSING** - One-piece die-cast aluminum housing is smoothly contoured rectangular shape. Mounting hardware is stainless steel or electro-coated plastic steel. Housing and optical unit are sealed with extruded silicone gasket, supply conductors with insulated EPDM bushing.  
**WALL MOUNTING** - Clear tempered optical-grade flat glass lens sealed to the aluminum optic housing creates an IP65 rated unit. Pressure stabilizing breather allows super-drip protection while preventing cycling from building up internal pressures and vacuum that can stress optical unit seals.  
**OPTICAL UNIT** - Clear tempered optical-grade flat glass lens sealed to the aluminum optic housing creates an IP65 rated unit. Pressure stabilizing breather allows super-drip protection while preventing cycling from building up internal pressures and vacuum that can stress optical unit seals.  
**WALL MOUNTING** - Optimized steel universal wall mounting plate easily installs directly to 4" octagonal or square junction box. EPDM gasket is supplied to be installed between mounting plate and junction box, sealing junction box from entrance of water. Universal plate permits fixture to be mounted in uplighting (indoor only) or downlighting position.  
**POLE MOUNTING** - XPMA (for square) or XPMAA (for round) allows mounting to poles in single and DR90 configurations. Use with 3" reduced drilling pattern.  
**ELECTRICAL** - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277VAC (50/60Hz input) or 347-480VAC.  
**DRIVER** - Available in 350mA and 450mA drive currents. (Drive currents are factory programmed). Components are fully encased in potting material for IP65 moisture resistance. Driver complies with IEC and FCC standards. Driver can be easily accessed.  
**EMERGENCY OPTIONS** - Optional integral emergency battery-back-up options are available. 98 option operates in 0°C to 50°C ambient temperature and CWBS operates in -20°C to 60°C ambient temperature. When primary AC power failure occurs, both options operate 10 LEDs for minimum of 90 minutes.  
**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F)  
**FINISH** - Features are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling.  
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**PHOTOMETRICS** - Please visit our web site at [www.lsi-industries.com](http://www.lsi-industries.com) for detailed photometric data.  
**SHIPPING WEIGHT** (in carton) - 30 lbs / 13.6 Kg  
**LISTING** - ETL listed to ANSI/UL1598, UL8750 and other U.S. and international safety standards. Suitable for wet locations in downlight position. Optional Class 1 Division 2 (groups A, B, C & D) hazardous location rating is available (Select HL option). For a list of the specific products in this series that are DLC Listed, please consult the LED Lighting section of our website or the Design Lights website at [www.designlights.org](http://www.designlights.org).  
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Project Name: \_\_\_\_\_ Fixture Type: \_\_\_\_\_ 10/21/15  
Catalog #: \_\_\_\_\_ LSI INDUSTRIES INC.

### LIGHT STANDARDS

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US Patent 7898405, 7902290, 8002428 and CAN 2736187 & 2756157 and MX Patent 29621 and US Patents 7,936,793 and 7,936,794 are US & Int'l. Patents pending.  
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**OPTIONAL INTEGRAL MOTION SENSOR** - Passive infrared motion sensor activates switching of luminaire light levels. High level light is activated when assembly enter target zone and increased to full bright in 1-2 seconds. Low light level (30% of maximum drive current) is activated when target zone is absent of motion activity for ~2 minutes and gradually ramped down (10 seconds) to low level. Sensor detection range 110° horizontal x 53° vertical x 10 meters maximum distance.  
**EXPECTED LIFE** - Minimum 60,000 hours to 100,000 hours depending upon the ambient temperature of the installation location. See LSI web site for specific guidance.  
**LEDS** - Available with 28 or 48 select high-brightness LEDs in Cool White (5000K) or Neutral White (4000K) color temperature, 70 CRI.  
**OPTICS/DISTRIBUTIONS** - Ultra-high efficiency reflectors provide three distributions. Choose from Wide Throw (WT), Forward Throw (FT) or Wall Wash (WW).  
**HOUSING** - One-piece die-cast aluminum housing is smoothly contoured rectangular shape. Mounting hardware is stainless steel or electro-coated plastic steel. Housing and optical unit are sealed with extruded silicone gasket, supply conductors with insulated EPDM bushing.  
**WALL MOUNTING** - Clear tempered optical-grade flat glass lens sealed to the aluminum optic housing creates an IP65 rated unit. Pressure stabilizing breather allows super-drip protection while preventing cycling from building up internal pressures and vacuum that can stress optical unit seals.  
**OPTICAL UNIT** - Clear tempered optical-grade flat glass lens sealed to the aluminum optic housing creates an IP65 rated unit. Pressure stabilizing breather allows super-drip protection while preventing cycling from building up internal pressures and vacuum that can stress optical unit seals.  
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**ELECTRICAL** - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277VAC (50/60Hz input) or 347-480VAC.  
**DRIVER** - Available in 350mA and 450mA drive currents. (Drive currents are factory programmed). Components are fully encased in potting material for IP65 moisture resistance. Driver complies with IEC and FCC standards. Driver can be easily accessed.  
**EMERGENCY OPTIONS** - Optional integral emergency battery-back-up options are available. 98 option operates in 0°C to 50°C ambient temperature and CWBS operates in -20°C to 60°C ambient temperature. When primary AC power failure occurs, both options operate 10 LEDs for minimum of 90 minutes.  
**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F)  
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**PHOTOMETRICS** - Please visit our web site at [www.lsi-industries.com](http://www.lsi-industries.com) for detailed photometric data.  
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2. For more information on our products, visit [www.lsi-industries.com](http://www.lsi-industries.com)

Project Name: \_\_\_\_\_ Fixture Type: \_\_\_\_\_ 11/29/15  
Catalog #: \_\_\_\_\_ LSI INDUSTRIES INC.

### LIGHT STANDARDS

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**LEDS** - Available with 28 or 48 select high-brightness LEDs in Cool White (5000K) or Neutral White (4000K) color temperature, 70 CRI.  
**OPTICS/DISTRIBUTIONS** - Ultra-high efficiency reflectors provide three distributions. Choose from Wide Throw (WT), Forward Throw (FT) or Wall Wash (WW).  
**HOUSING** - One-piece die-cast aluminum housing is smoothly contoured rectangular shape. Mounting hardware is stainless steel or electro-coated plastic steel. Housing and optical unit are sealed with extruded silicone gasket, supply conductors with insulated EPDM bushing.  
**WALL MOUNTING** - Clear tempered optical-grade flat glass lens sealed to the aluminum optic housing creates an IP65 rated unit. Pressure stabilizing breather allows super-drip protection while preventing cycling from building up internal pressures and vacuum that can stress optical unit seals.  
**OPTICAL UNIT** - Clear tempered optical-grade flat glass lens sealed to the aluminum optic housing creates an IP65 rated unit. Pressure stabilizing breather allows super-drip protection while preventing cycling from building up internal pressures and vacuum that can stress optical unit seals.  
**WALL MOUNTING** - Optimized steel universal wall mounting plate easily installs directly to 4" octagonal or square junction box. EPDM gasket is supplied to be installed between mounting plate and junction box, sealing junction box from entrance of water. Universal plate permits fixture to be mounted in uplighting (indoor only) or downlighting position.  
**POLE MOUNTING** - XPMA (for square) or XPMAA (for round) allows mounting to poles in single and DR90 configurations. Use with 3" reduced drilling pattern.  
**ELECTRICAL** - Two-stage surge protection (including separate surge protection built into electronic driver) meets IEEE C62.41.2-2002, Location Category C. Available with universal voltage power supply 120-277VAC (50/60Hz input) or 347-480VAC.  
**DRIVER** - Available in 350mA and 450mA drive currents. (Drive currents are factory programmed). Components are fully encased in potting material for IP65 moisture resistance. Driver complies with IEC and FCC standards. Driver can be easily accessed.  
**EMERGENCY OPTIONS** - Optional integral emergency battery-back-up options are available. 98 option operates in 0°C to 50°C ambient temperature and CWBS operates in -20°C to 60°C ambient temperature. When primary AC power failure occurs, both options operate 10 LEDs for minimum of 90 minutes.  
**OPERATING TEMPERATURE** - -40°C to +50°C (-40°F to +122°F)  
**FINISH** - Features are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling.  
**WARRANTY** - LSI LED fixtures carry a limited 5-year warranty.  
**PHOTOMETRICS** - Please visit our web site at [www.lsi-industries.com](http://www.lsi-industries.com) for detailed photometric data.  
**SHIPPING WEIGHT** (in carton) - 30 lbs / 13.6 Kg  
**LISTING** - ETL listed to ANSI/UL1598, UL8750 and other U.S. and international safety standards. Suitable for wet locations in downlight position. Optional Class 1 Division 2 (groups A, B, C & D) hazardous location rating is available (Select HL option). For a list of the specific products in this series that are DLC Listed, please consult the LED Lighting section of our website or the Design Lights website at [www.designlights.org](http://www.designlights.org).  
**Notes:**  
1. This product, or selected versions of this product, meet the standards listed below. Please consult factory for your specific requirements.  
2. For more information on our products, visit [www.lsi-industries.com](http://www.lsi-industries.com)

Project Name: \_\_\_\_\_ Fixture Type: \_\_\_\_\_ 11/29/15  
Catalog #: \_\_\_\_\_ LSI INDUSTRIES INC.

### BUILDING LIGHTS

**LIGHT FIXTURE CUT SHEETS**  
1599 | ENERGY EXPRESS | MAY 12, 2016



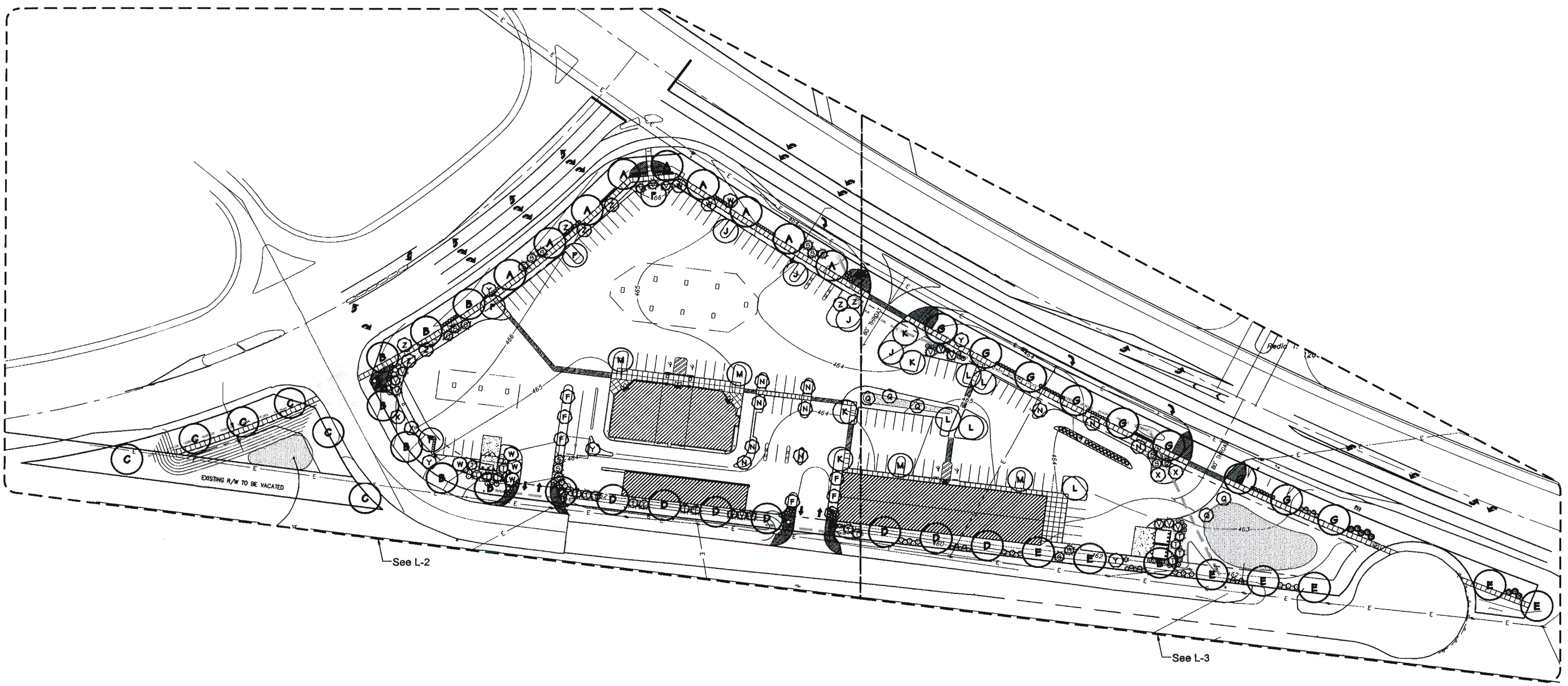


Jerald Saunders - Landscape Architect  
MO License # LA-007

Consultants:

# The Wedge

Chesterfield, Missouri



Revisions:

| Date    | Description   | No. |
|---------|---------------|-----|
| 4/15/16 | City Comments |     |
| 4/26/16 | Plan Changes  |     |
|         |               |     |
|         |               |     |
|         |               |     |
|         |               |     |
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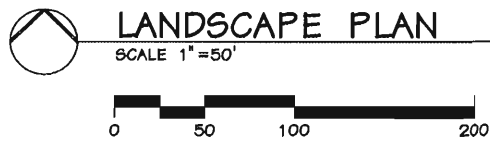
Drawn: KP  
Checked: JS

**loomisAssociates**

landscape architects/planners  
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Loomis Associates Inc.  
Missouri State Certificate of Authority #: LAC #000019

|              |                |
|--------------|----------------|
| Sheet Title: | Landscape Plan |
| Sheet No:    | L-1            |
| Date:        | 04/15/16       |
| Job #:       | 957.001        |



Open Space: 39.4%

Prepared For:  
Steve Madras  
Energy Marketing  
2130 Kienlen Ave.  
St. Louis MO 63121  
(314) 383-3700

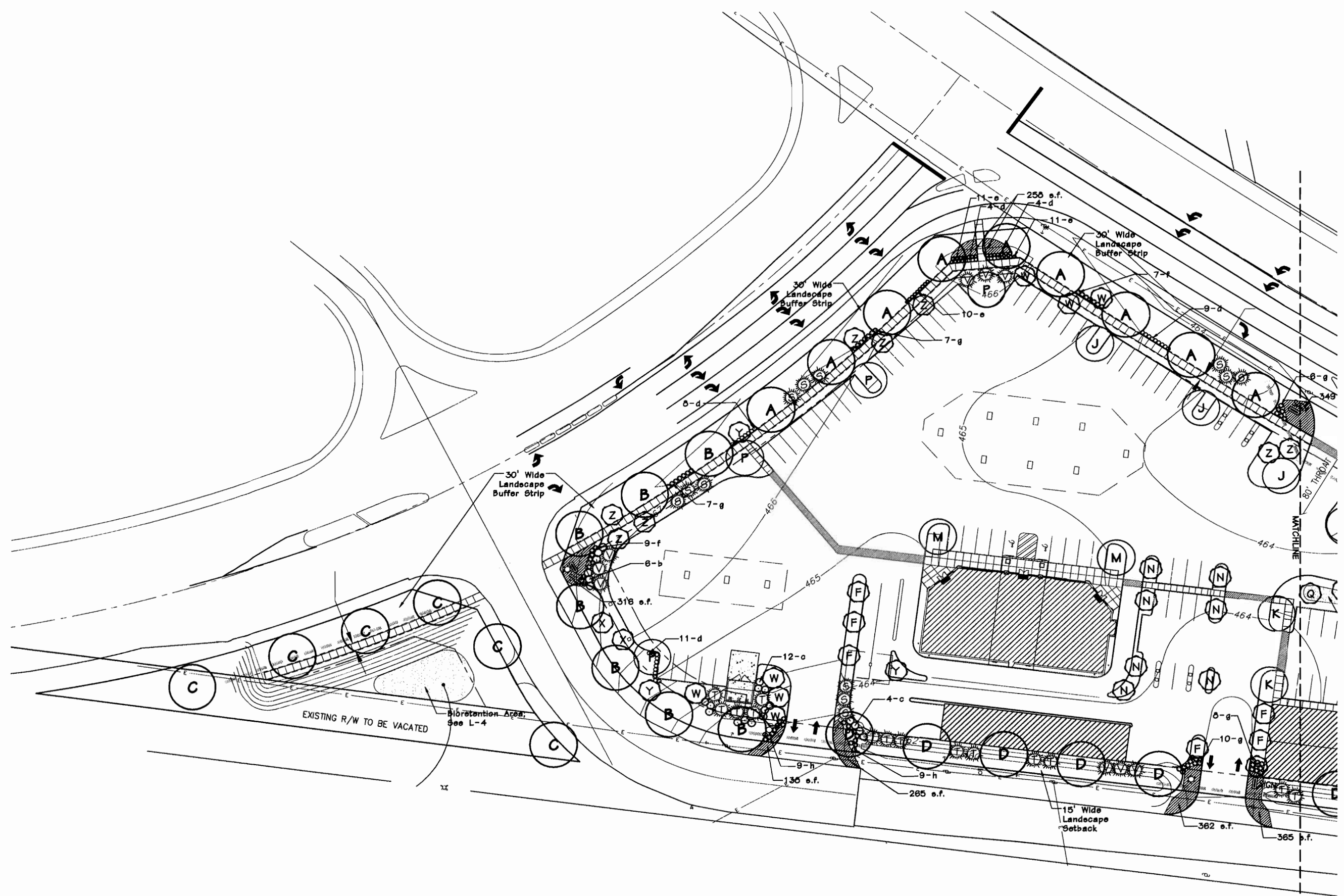


Jerald Saunders - Landscape Architect  
MO License # LA-007

Consultants:

# The Wedge

Chesterfield, Missouri



Revisions:

| Date     | Description   | No. |
|----------|---------------|-----|
| 09/22/15 | Plan Revision |     |
| 02/10/16 | Plan Revision |     |
| 4/15/16  | City Comments |     |
| 4/28/16  | Plan Changes  |     |

Drawn: KP  
Checked: JS

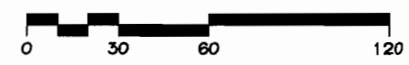
**loomisAssociates**

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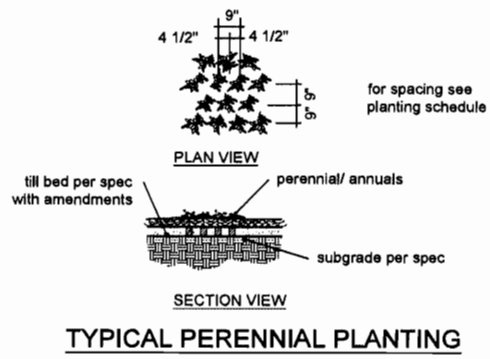
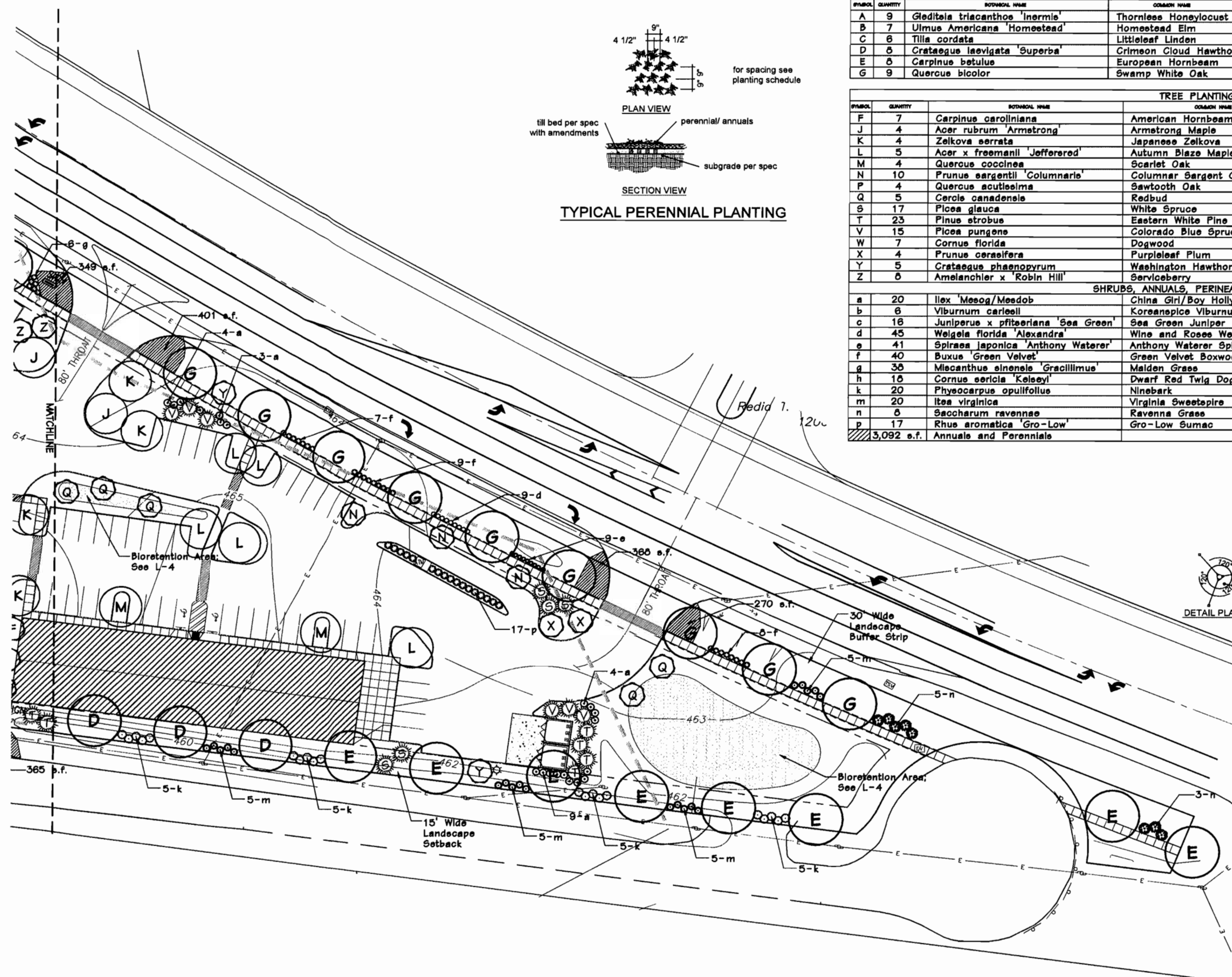
Loomis Associates Inc.  
Missouri State Certificate of Authority #: LAC #000019

|              |                       |
|--------------|-----------------------|
| Sheet Title: | Landscape Plan - West |
| Sheet No:    | L-2                   |
| Date:        | 04/10/15              |
| Job #:       | 957.001               |

**LANDSCAPE PLAN - WEST**  
SCALE 1"=30'



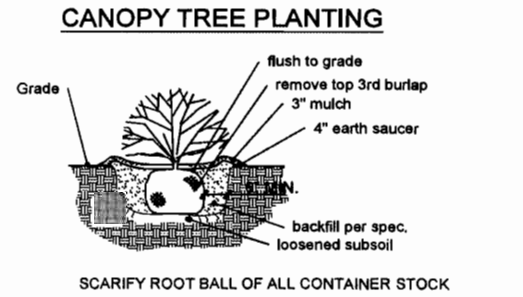
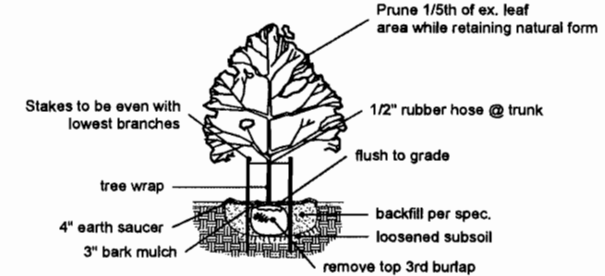
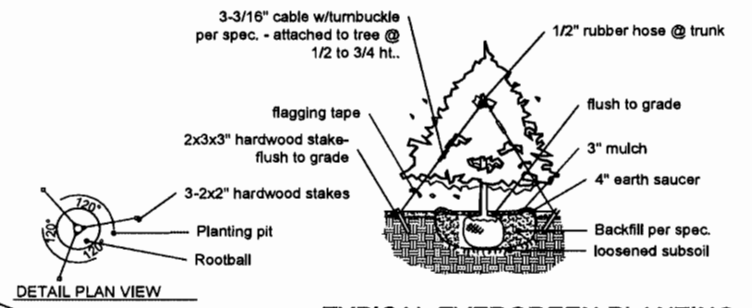
Prepared For:  
Steve Madras  
Energy Marketing  
2130 Kienlen Ave.  
St. Louis MO 63121  
(314) 383-3700



| STREET TREE PLANTING SCHEDULE |          |  |                        |        |            |               |             |            |
|-------------------------------|----------|--|------------------------|--------|------------|---------------|-------------|------------|
| SYMBOL                        | QUANTITY | BOTANICAL NAME                         | COMMON NAME            | SIZE   | REMARKS    | MATURE HEIGHT | GROWTH RATE | SIZE CLASS |
| A                             | 9        | <i>Gleditsia triacanthos</i> 'Inermis' | Thornless Honeylocust  | 2 1/2" | Canopy     | 45'+          | FAST        | LARGE      |
| B                             | 7        | <i>Ulmus Americana</i> 'Homestead'     | Homestead Elm          | 2 1/2" | Canopy     | 60-80'        | MED/FAST    | LARGE      |
| C                             | 6        | <i>Tilia cordata</i>                   | Littleleaf Linden      | 2 1/2" | Canopy     | 45'+          | SLOW/MED    | LARGE      |
| D                             | 6        | <i>Crataegus laevigata</i> 'Superba'   | Crimson Cloud Hawthorn | 2 1/2" | Ornamental | 15-25'        | MED.        | SMALL      |
| E                             | 6        | <i>Carpinus betulus</i>                | European Hornbeam      | 2 1/2" | Canopy     | 35-40'        | SLOW/MED    | MEDIUM     |
| G                             | 9        | <i>Quercus bicolor</i>                 | Swamp White Oak        | 2 1/2" | Canopy     | 45'+          | MED.        | LARGE      |

| TREE PLANTING SCHEDULE |          |                                      |                         |      |            |               |                  |             |            |
|------------------------|----------|--------------------------------------|-------------------------|------|------------|---------------|------------------|-------------|------------|
| SYMBOL                 | QUANTITY | BOTANICAL NAME                       | COMMON NAME             | SIZE | REMARKS    | MATURE HEIGHT | HEIGHT IN 10 YRS | GROWTH RATE | SIZE CLASS |
| F                      | 7        | <i>Carpinus caroliniana</i>          | American Hornbeam       | 2.5" | Ornamental | 20'-35'       | 15'              | Medium      | Small      |
| J                      | 4        | <i>Acer rubrum</i> 'Armstrong'       | Armstrong Maple         | 2.5" | Deciduous  | 35'-45'       | 30'              | Fast        | Large      |
| K                      | 4        | <i>Zelkova serrata</i>               | Japanese Zelkova        | 2.5" | Deciduous  | 45'+          | 30'              | Fast        | Large      |
| L                      | 5        | <i>Acer x freemanii</i> 'Jeffersred' | Autumn Blaze Maple      | 2.5" | Deciduous  | 45'+          | 25'              | Fast        | Large      |
| M                      | 4        | <i>Quercus coccinea</i>              | Scarlet Oak             | 2.5" | Deciduous  | 45'+          | 10'              | Med./Fast   | Large      |
| N                      | 10       | <i>Prunus sargentii</i> 'Columnaris' | Columnar Sargent Cherry | 2.5" | Ornamental | 30'-40'       | 15'              | Medium      | Medium     |
| P                      | 4        | <i>Quercus scutellima</i>            | Sawtooth Oak            | 2.5" | Deciduous  | 45'+          | 20'              | Medium      | Large      |
| Q                      | 5        | <i>Cercis canadensis</i>             | Redbud                  | 2.5" | Ornamental | 25'-30'       | 12'              | Fast        | Medium     |
| S                      | 17       | <i>Picea glauca</i>                  | White Spruce            | 6"   | Evergreen  | 35'-40'       | 20'              | Medium      | Medium     |
| T                      | 23       | <i>Pinus strobus</i>                 | Eastern White Pine      | 6"   | Evergreen  | 35'-40'       | 20'              | Fast        | Large      |
| V                      | 15       | <i>Picea pungens</i>                 | Colorado Blue Spruce    | 6"   | Evergreen  | 35'-40'       | 20'              | Medium      | Medium     |
| W                      | 7        | <i>Cornus florida</i>                | Dogwood                 | 2.5" | Ornamental | 15'-25'       | 15'              | Slow/Med.   | Small      |
| X                      | 4        | <i>Prunus cerasifera</i>             | Purpleleaf Plum         | 2.5" | Ornamental | 15'-25'       | 15'              | Medium      | Small      |
| Y                      | 5        | <i>Crataegus phaenopyrum</i>         | Washington Hawthorn     | 2.5" | Ornamental | 20'-30'       | 12'              | Medium      | Small      |
| Z                      | 6        | <i>Amelanchier x 'Robin Hill'</i>    | Serviceberry            | 2.5" | Ornamental | 25'-30'       | 10'              | Slow/Med.   | Medium     |

| SHRUBS, ANNUALS, PERINEALS PLANTING SCHEDULE |          |  |                         |        |         |               |             |            |
|--|----------|--|-------------------------|--------|---------|---------------|-------------|------------|
| SYMBOL                                       | QUANTITY | BOTANICAL NAME                             | COMMON NAME             | SIZE   | REMARKS | MATURE HEIGHT | GROWTH RATE | SIZE CLASS |
| a  | 20       | <i>Ilex 'Meeg/Meedob</i>                   | China Girl/Boy Holly    | 5 gal. |         |               |             |            |
| b  | 6        | <i>Viburnum carleil</i>                    | Koreanpice Viburnum     | 5 gal. |         |               |             |            |
| c  | 18       | <i>Juniperus x pfitzeriana</i> 'Sea Green' | Sea Green Juniper       | 5 gal. |         |               |             |            |
| d  | 45       | <i>Weigela florida</i> 'Alexandra'         | Wine and Roses Weigela  | 5 gal. |         |               |             |            |
| e  | 41       | <i>Spiraea japonica</i> 'Anthony Waterer'  | Anthony Waterer Spiraea | 5 gal. |         |               |             |            |
| f  | 40       | <i>Buxus florida</i>                       | Green Velvet Boxwood    | 5 gal. |         |               |             |            |
| g  | 36       | <i>Miscanthus sinensis</i> 'Gracillimus'   | Malden Grass            | 5 gal. |         |               |             |            |
| h  | 18       | <i>Cornus sericea</i> 'Keasey'             | Dwarf Red Twig Dogwood  | 5 gal. |         |               |             |            |
| k  | 20       | <i>Physocarpus opulifolius</i>             | Ninebark                | 5 gal. |         |               |             |            |
| m  | 20       | <i>Itea virginica</i>                      | Virginia Sweetpire      | 5 gal. |         |               |             |            |
| n  | 6        | <i>Saccharum ravennae</i>                  | Ravenna Grass           | 5 gal. |         |               |             |            |
| p  | 17       | <i>Rhus aromatica</i> 'Gro-Low'            | Gro-Low Sumac           | 5 gal. |         |               |             |            |
| 3,092 s.f. Annuals and Perennials            |          |  |                         |        |         |               |             |            |



LANDSCAPE PLAN - EAST  
SCALE 1"=30'

STATE OF MISSOURI  
JERALD A. SAUNDERS  
LANDSCAPE ARCHITECT  
4/26/16  
Jerald Saunders - Landscape Architect  
MO License # LA-007

Consultants:

The Wedge  
Chesterfield, Missouri

| Revisions: |               |     |
|------------|---------------|-----|
| Date       | Description   | No. |
| 09/22/15   | Plan Revision |     |
| 02/10/16   | Plan Revision |     |
| 4/15/16    | City Comments |     |
| 4/26/16    | Plan Changes  |     |

Drawn: KP  
Checked: JS

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Sheet Title: Landscape Plan - East  
Sheet No: L-3  
Prepared For: Steve Madras, Energy Marketing, 2130 Kienten Ave., St. Louis MO 63121, (314) 383-3700  
Date: 04/10/15  
Job #: 957.001

Revisions:

| Date    | Description   | No. |
|---------|---------------|-----|
| 4/15/16 | City Comments |     |
| 4/26/16 | Plan Changes  |     |
|         |               |     |
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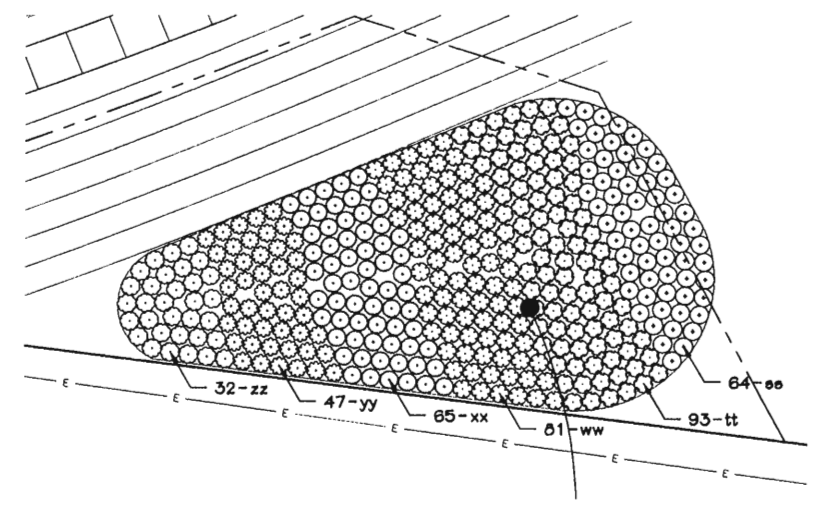
Drawn: KP  
 Checked: JS

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

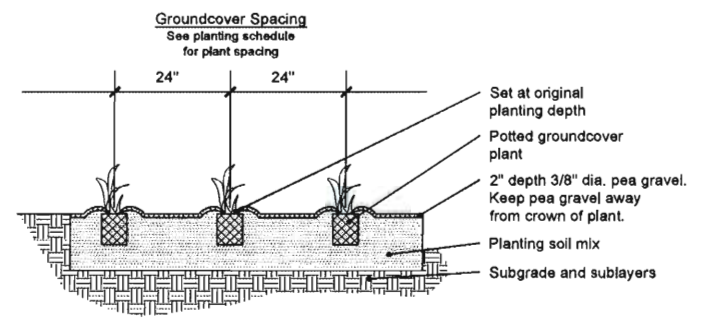
Sheet Title: Bioretention Planting Plan

Sheet No: L-4

Date: 02/10/16  
 Job #: 957.001



2 BIORETENTION AREA #2  
 L-3 SCALE 1"=10'



- Notes:
1. Remove spent flowers prior to planting.
  2. Loosen root mass at bottom of rootball.
  3. Top of rootball stripped of 1/4" surface growing media and covered with 1/4" landscape bed mix plus surface mulch.

BIORETENTION PLANT SPACING SECTION

TABLE 1: PLANTING, WATER, AND MULCH REQUIREMENTS

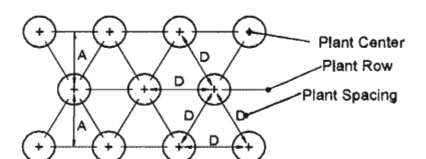
| WATER AVAILABILITY   | REQUIRED PLANTING PERIOD              | MINIMUM CONTAINER SIZE   | WATER REQUIREMENT FIRST 3 WEEKS   | WATER REQUIREMENT AFTER 3 WEEKS*                     | MAXIMUM MULCH DEPTH****           |
|--|---------------------------------------|--|---|--|-----------------------------------|
| No ability to water after initial planting   | Late Feb.-April only                  | 2.25'x3.75' or larger (plug)   | Water each plug immediately after planting  |  | 1.5" for plugs                    |
| Manual watering with standard sprinkler  | Late Feb.-Early June<br>Sept.-October | 4.5'x5' (quart) or larger in summer and fall   | 1" (60 min) every 4 days  | 1" (60 min) every 7 days until plants established*** | 1.5" for plugs<br>2.5" for quarts |
| Automatic Irrigation (set to water more frequently than normal during first two months after planting) | Late Feb.-Early Oct.                  | 2.25'x3.75' (plug) or larger in spring<br>4.5'x5' (quart) or larger in summer and fall | 1" (60 min) every 4 days in spring and fall<br>1" (60 min) every 3 days in summer | 1" (60 min) every 7 days until plants established*** | 1.5" for plugs<br>2.5" for quarts |

\*This water amount includes natural rainfall. If you get a 1/2 inch of natural rain, then you will need to add a 1/2 inch of water to meet the 1 inch requirement.  
 \*\*Requires transport of water to the planting site in large containers and pouring enough water onto each plant (after planting) to moisten the entire planting pit.  
 \*\*\*Plants are established when roots have grown out of the container soil and into the native soil by 3-5 inches. This normally takes 3-4 months for most perennials and grasses and up to 6-7 months for trees and shrubs.  
 \*\*\*\*Shredded leaf compost is recommended for use with perennials and grasses. Mulch is recommended for tree and shrub plantings at a depth of 3 inches.

PLANT SPACING TABLE

| SPACING 'D' | ROW 'A' | NUMBER OF PLANTS/SQ.FT. |
|-------------|---------|-------------------------|
| 30"         | 26"     | .18                     |
| 24"         | 20.6"   | .25                     |
| 18"         | 15.6"   | .45                     |
| 15"         | 13"     | .64                     |
| 12"         | 10.4"   | 1.00                    |
| 10"         | 8.66"   | 1.44                    |
| 6"          | 6.93"   | 2.25                    |

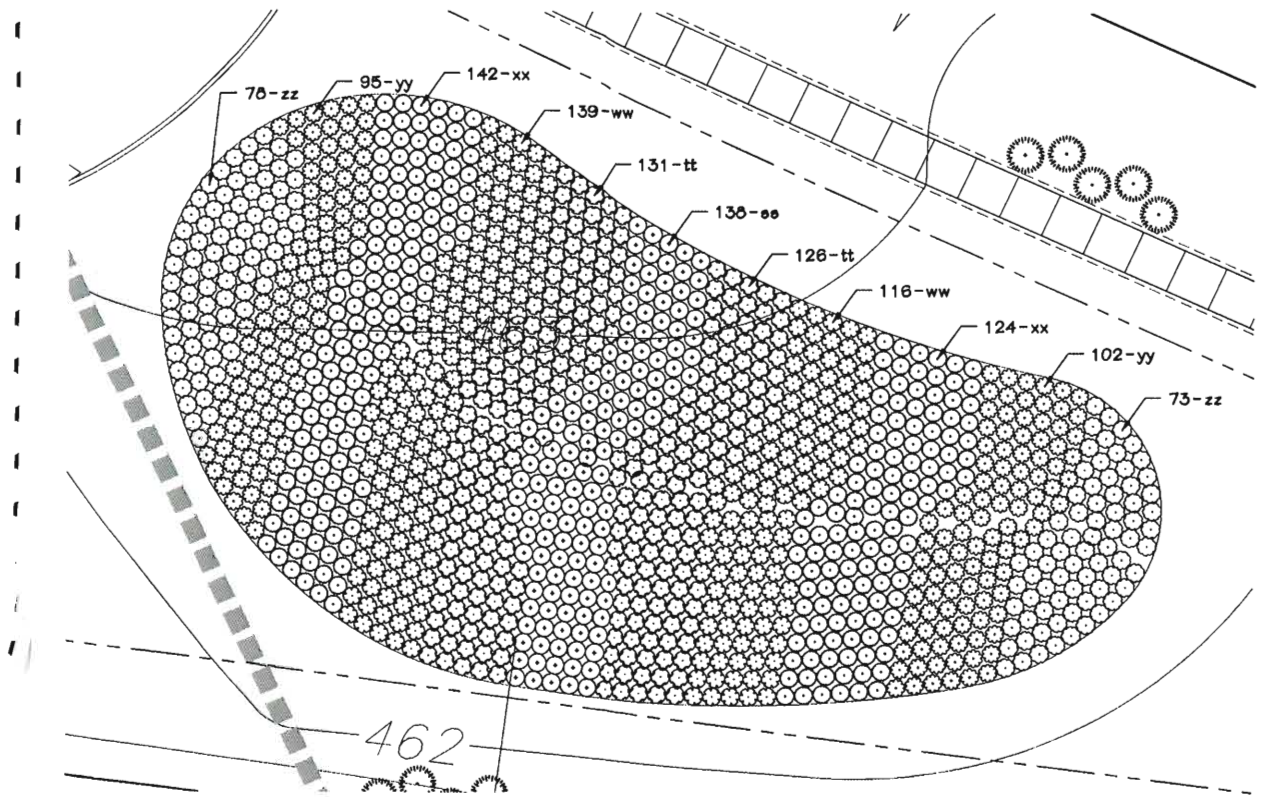
Note: Plant quantities to be determined by multiplying area (sq.ft.) by number of plants/sq.ft. for required spacing. Table and diagram taken from "Landscape Guide for Stormwater Best Management Practice Design" by MSD with a revised date of May 2, 2012.



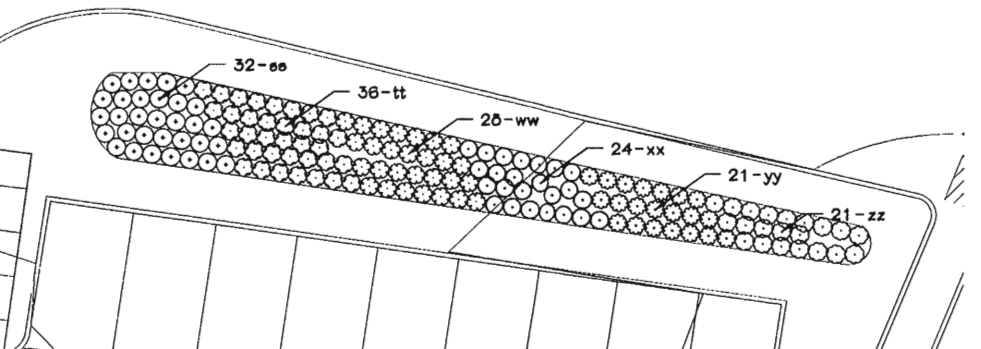
BIORETENTION PLANT SPACING

BIORETENTION PLANTING SCHEDULE

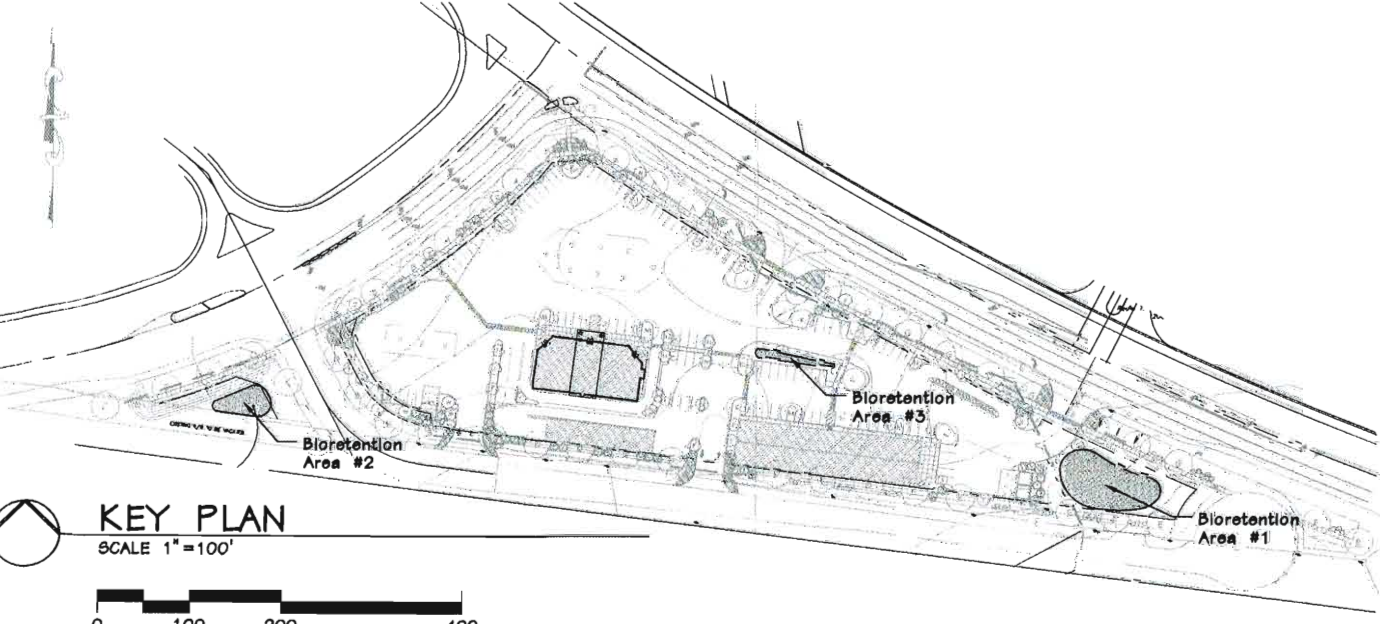
| SYMBOL | QUANTITY | BOTANICAL NAME          | COMMON NAME     | SIZE        | REMARKS  |
|--------|----------|-------------------------|-----------------|-------------|----------|
| ee     | 234      | Chaemanthium latifolium | River Oats      | Type 36 DCP | 24" o.c. |
| tt     | 366      | Juncus effusus          | Common Rush     | Type 36 DCP | 24" o.c. |
| ww     | 364      | Carex vulpinoidea       | Fox Sedge       | Type 36 DCP | 24" o.c. |
| xx     | 355      | Lobelia cardinalis      | Cardinal Flower | Type 36 DCP | 24" o.c. |
| yy     | 265      | Carex muskingumensis    | Palm Sedge      | Type 36 DCP | 24" o.c. |
| zz     | 204      | Iris fulva              | Copper Iris     | Type 36 DCP | 24" o.c. |



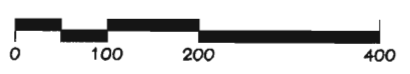
1 BIORETENTION AREA #1  
 L-3 SCALE 1"=10'



3 BIORETENTION AREA #3  
 L-3 SCALE 1"=10'



KEY PLAN  
 SCALE 1"=100'



Prepared For:  
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