



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

Planning Commission Staff Report

Project Type:	7 th Partial Amended Site Development Plan
Meeting Date:	November 25, 2013
From:	Jessica Henry Project Planner
Location:	Northwest corner of Olive Boulevard and Arrowhead Estates Lane (15201 Olive Boulevard)
Applicant:	Friendship Village of West County
Description:	Friendship Village of West County (15201 Olive Boulevard): 7 th Partial Amended Site Development Plan, Amended Landscape Plan, Amended Lighting Plan, Architectural Elevations and an Architect's Statement of Design for a 34.5 acre tract of land zoned "R4" Residence District with a "CUP" Conditional Use Permit at the northwest corner of Olive Boulevard and Arrowhead Estates Lane (17S320445).

PROPOSAL SUMMARY

Civil Engineering Design Consultants, on behalf of Friendship Village of West County, has submitted a 7th Partial Amended Site Development Plan, Amended Landscape Plan, and Amended Lighting Plan for Planning Commission review. The project is located on a 34.5 acre tract of land zoned "R4" Residence District with a "CUP" Conditional Use Permit at the northwest corner of Olive Boulevard and Arrowhead Estates Lane

The request is for approval of eighteen (18) metal halide post light fixtures. Additionally, minor changes to the location of an internal sidewalk and the inclusion of a patio seating area and pergola are included on the plan. The 6th Partial Amended Site Development Plan, Amended Landscape Plan, Amended Lighting Plan, Architectural Elevations and Architect's Statement of Design were approved by the Planning Commission on June 25th, 2012. At that time, light fixtures were approved in conjunction with the campus expansion.

LAND USE AND ZONING HISTORY OF SUBJECT SITE

The subject tract was zoned "NU" Non-Urban District by St. Louis County prior to the incorporation of the City of Chesterfield.

The site was granted CUP #264 from St. Louis County in 1973 for a "full life retirement center". The permit was amended by St. Louis County in March 1988 to increase the number of beds allowed in the

nursing facility and to add setbacks for an addition. In August 1989, the City of Chesterfield City Council approved CUP #02 which allowed for limited service and retail commercial uses. In 2008, CUP #02 was repealed with the approval of City of Chesterfield CUP #29 which added additional property to the existing lot governed by the CUP.

A Boundary Adjustment Plat was approved by City Council in February of 2008 to add the additional lots into the development. The original Site Development Plan for the site has been amended multiple times for additions to the existing building, additional villas and for parking.

In January 2012, the site was rezoned to an "R4" Residence District and the existing CUP was reestablished within that district as CUP #35. CUP #35 was repealed and replaced with CUP #36 to allow for additional units within the development, additional square footage for the accessory commercial uses and changes to the landscape requirements.

On June 25th, 2012, the Planning Commission approved the 6th Partial Amended Site Development Plan in order to permit the construction of a new thirty (30) unit independent living addition with underground parking and three (3) independent living villas.

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Direction	Land Use	Zoning							
North	Residential	"NU" Non-Urban District							
South	Residential	"R4" and "R3" Residence District							
East	St. Louis County Park and Residential	"PS" Park and Scenic and "R3"							
		Residence District							
West	Residential	"NU" Non-Urban District and "R4"							
		Residence District							

Land Use and Zoning of Surrounding Properties:



STAFF ANALYSIS

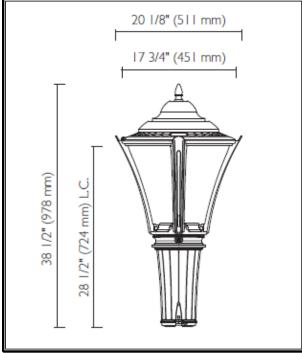
The request is for approval of eighteen (18) metal halide post light fixtures in conjunction with a modification to the location of a sidewalk. A Lighting Plan has been submitted with light fixtures that provide lighting for the internal roadways in the development in addition to fixtures for the pedestrian areas. The change request is only for the eighteen (18) metal halide post light fixtures located along the internal roadways and parking areas; all other fixtures will remain as approved on the 6th Partial Amended Site Development Plan. The eighteen (18) fixtures are decorative and are not shielded. City of Chesterfield Ordinance 2228 provides the following exemption for Fixture Design:

13: Exemptions

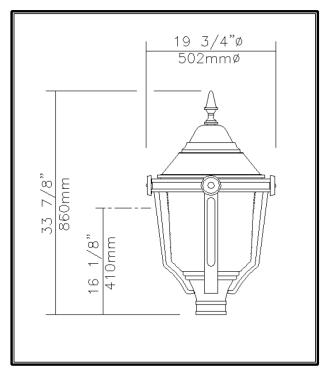
2) Fixture design exemptions. The Planning Commission may approve decorative light fixtures as an alternative to shielded fixtures when it can be proven that there will be no off-site glare light trespass in excess of 0.5 foot candle and the proposed fixtures will improve the appearance of the site.

The proposed lighting is all within the confines of the site and no light trespass will occur. Additionally, there is no change in light levels as approved on the 6th Partial Amended Site Development Plan.

City of Chesterfield CUP #36 restricts light standards to a height of sixteen feet. Although the light post shown on the lighting cut sheet attached to this report is fifteen feet in height, the post is available at a thirteen (13) foot height as a special order, which the applicant proposes to use as noted on the letter provided. A manufacturer cut sheet is not available for the special order height; however, the motion to approve includes the condition that the thirteen (13) foot special order light post be used in order to comply with CUP # 36.



6th ASDP— Approved Metal Halide Light Fixture



7th ASDP— Proposed Metal Halide Light Fixture

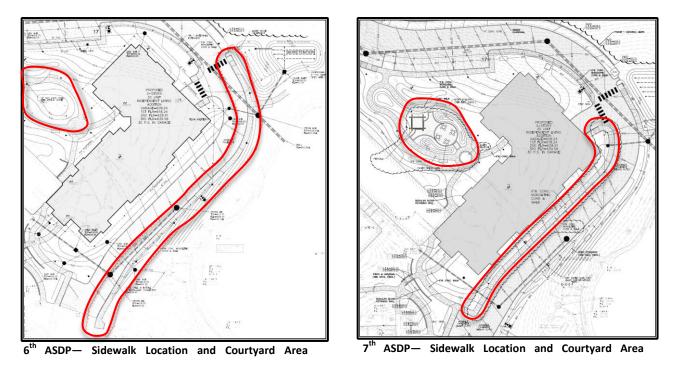
Zoning

The subject site is zoned "R4" Residence District. The submittal was reviewed against the requirements of City of Chesterfield CUP #36, and all applicable Zoning Ordinance requirements. The submittal as presented adheres to CUP #36 and all applicable Zoning Ordinance requirements.

Pedestrian Circulation

The existing vehicular circulation makes a loop through the site with parking locations at the various entrances to different structures. As part of the previously approved 6th Partial Amended Site Development Plan, the existing road is being expanded and new internal sidewalks and parking spaces are provided.

The changes proposed on the 7th Partial Amended Site Development Plan maintain pedestrian connections to the other buildings on the site and connections to the existing pathways and trails. However, as shown below, one internal sidewalk is being moved from the far side of an internal roadway and is instead placed alongside the building. Additionally, the landscaped entry courtyard and water feature are being expanded and a pergola is being added to the south side of the new addition.



Landscaping

An Amended Landscape Plan was required since the relocation of the sidewalk affected a small area of the previously approved landscaping. The Amended Landscape Plan meets all requirements of the City of Chesterfield Tree Preservation and Landscape Requirements. The City Arborist has reviewed the Landscape Plan and had no additional comments.

DEPARTMENTAL INPUT

Staff has reviewed the 7th Partial Amended Site Development Plan, Amended Landscape Plan, and Amended Lighting Plan and has found the application to be in conformance with City of Chesterfield CUP #36, and all other applicable Zoning Ordinance requirements.

Staff recommends approval of the 7th Partial Amended Site Development Plan, Amended Landscape Plan, and Amended Lighting Plan for Friendship Village of West County.

MOTION

If the Planning Commission approves this request, Staff requests that the following motion be used pertaining to the light fixture:

- 1) "I move to approve (or deny) the 7th Partial Amended Site Development Plan, Amended Landscape Plan, and Amended Lighting Plan for Friendship Village of West County with the condition that the light standards shall not exceed sixteen (16) feet in height when measured from the bottom of the light post to the top of the light fixture..." (Conditions may be added, eliminated, altered or modified)
- Cc: Aimee Nassif, Planning and Development Services Director
- Attachments: Letter from Volz, Inc. regarding light pole height 7th Partial Amended Site Development Plan Amended Landscape Plan Lighting Cut Sheets Amended Lighting Plan



RECEIVED City of Chesterfield

NOV 1 5 2013

Department of Public Services

MEMO

То:	Jessica	From	m:	Michael F. Vo	orwerk, P.E.	
Company:	City of Chesterfield	Re:				
Fax:		Dat	e:	11-15-13		
Project:	Friendship Village	Tim	ne:			
Job No:	1092	Pag	es:			
Urgent	For Review	For Comment	[] I	Please Reply	🛛 Per Your 🛛	Request

Jessica

The pole that has been provided is available as a 13' pole (as a special order) which is not a standard pole height according to the manufacturer's representative. Please let me know if you need anything else.

Thanks

Michael F. Vorwerk, P.E. Civil Engineer

> 11402 Gravois Road • Suite 100 • Saint Louis, Missouri 63126 p314.729.1400 • f 314.729.1404 •www.cedc.net

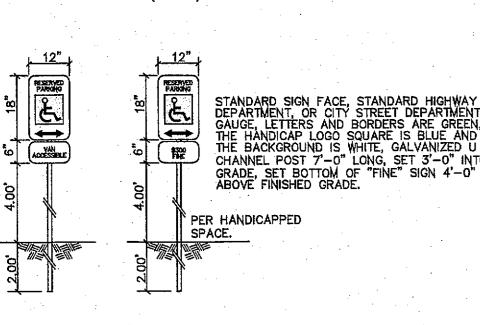


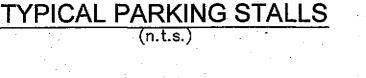
402 Gravois Road Suite 100 Saint Louis, Missouri 63126 Fax: 314.729.1404

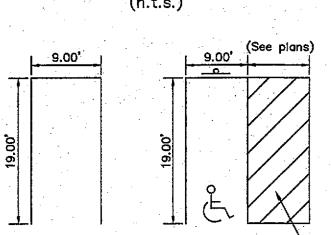
PREPARED FOR: FRIENDSHIP VILLAGE CHESTERFIELD 15201 OLIVE BOULEVARD CHESTERFIELD, MISSOURI 63017 PH. (636) 532-1515

HANDICAP PARKING SIGN

(n.t.s.)









LIGHT STANDARD

.

EXISTING STORM SEWER	=
PROPOSED STORM SEWER	ST ST
EXISTING SANITARY SEWER	
PROPOSED SANITARY SEWER	22 22
RIGHT-OF-WAY	
EASEMENT	· · · · · · · · · · · · · · · · · · ·
CENTERLINE	· · · · · · · · · · · · · · · · · · ·
EXISTING TREE	[12]
EXISTING SPOT ELEVATION	× 433.28
PROPOSED SPOT ELEVATION	<u>433.28</u>
SWALE	
TO BE REMOVED	T.B.R.
TO BE REMOVED & RELOCATED	T.B.R.& R.
TO BE USED IN PLACE	U.1.P.
ADJUST TO GRADE	A.T.G.
BACK OF CURB	B.C.
FACE OF CURB	F.C.
WATER MAIN	
GAS MAIN	G G
UNDERGROUND TELEPHONE	
OVERHEAD WIRE	0.H 0.H.
UNDERGROUND ELECTRIC	E E
FIRE HYDRANT	X
POWER POLE	С ЧИ
WATER VALVE	
·. ·	

LEGEND

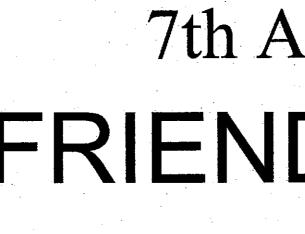
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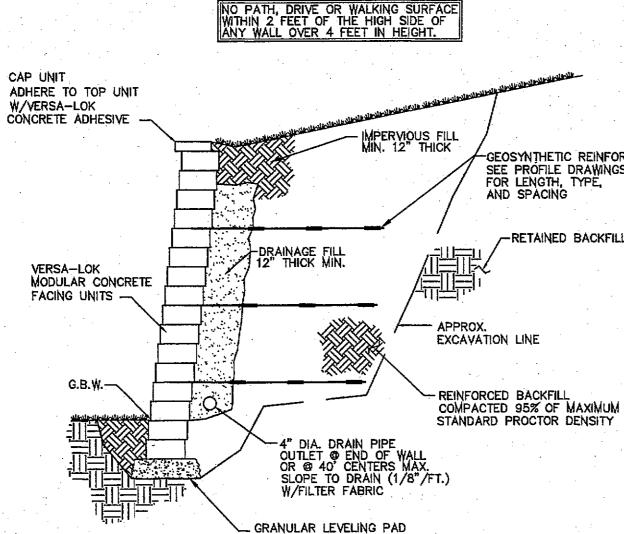
-STRIPING FOR ACCESSIBLE

PARKING TO BE BLUE

EXISTING CONTOURS

PROPOSED CONTOURS





6" THICK MIN. TYPICAL SECTION-REINFORCED RETAINING WALL

MODULAR CONCRETE UNIT SCALE: NONE

STRUCTURAL CALCULATIONS TO BE PROVIDED BY WALL MANUFACTURER OR STRUCTURAL ENGINEER. PERMITS FOR WALL TO BE OBTAINED BY CONTRACTOR.

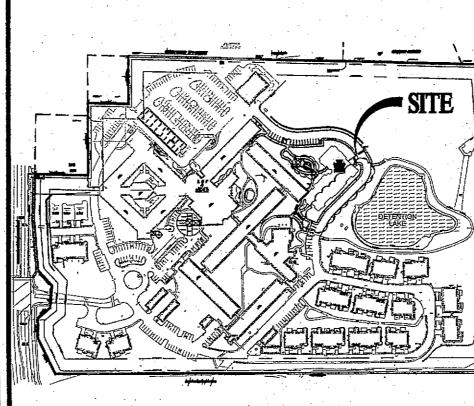
7th AMENDED (Partial) SITE DEVELOPMENT PLAN FRIENDSHIP VILLAGE OF CHESTERFIELD

LOT A OF FRIENDSHIP VILLAGE OF WEST COUNTY BOUNDARY ADJUSTMENT PLAT CITY OF CHESTERFIELD ST. LOUIS COUNTY, MISSOURI

> COUNT MONSANTO CAMPUS

> > LOCATION MAP

NOT TO SCALE



KEY MAP

NOT TO SCALE

PROPERTY DATA

- OWNER ADDRESS LOCATOR NO. ACREAGE EXISTING ZONING M.S.D. P-NO. M.S.D. BASE MAP SCHOOL DISTRICT SEWER DISTRICT WATER SHED FEMA MAP
- = FRIENDSHIP VILLAGE OF WEST COUNTY = 15201 OLIVE BOULEVARD
- = 17S320445
- = 34.57 AC±
- = "R-4" W/C.U.P. #36
- = 15793-06 = 17S3
- = PARKWAY
- = METROPOLITAN ST. LOUIS SEWER DISTRICT = MISSOURI RIVER
- = 29189C0145 (SUBJECT PROPERTY LIES WITHIN UNSHADED ZONE 'X' (AREAS DETERMINED TO BE OUTSIDE THE 500 YEAR FLOOD PLAIN)

UTILITIES AND REVIEW AGENCIES

ELECTRIC COMPANY AMERENUE-ELLISVILLE DISTRICT 280 OLD STATE ROAD ELLISVILLE, MO 63021 ATTN: ENGINEERING

PH. (314) 992-8992

PHONE COMPANY 402 NORTH THIRD STREE ST. CHARLES, MO 63301 ATTN: ENGINEERING PH. (636) 949-4228

GAS COMPANY LACLEDE GAS COMPANY ROOM 1408 720 OLIVE STREET ST. LOUIS, MO 63101 ATTN: MIKE LANGAN

PH. (314) 342-0702 WATER COMPANY MISSOURI AMERICAN WATER CO.

1050 RESEARCH BLVD. ST. LOUIS, MO 63132 ATTN: ENGINEERING PH. (314) 996-2464

CABLE_TELEVISION CHARTER COMMUNICATIONS 41 CHARTER COMMONS TOWN & COUNTRY, MO 63017 ATTN: MAPPING & DESIGN DEPT. PH. (636) 220-2174 FIRE DISTRICT MONARCH FIRE PROTECTION DISTRICT 13725 OLIVE BLVD. CHESTERFIELD, MO 63017 ATTN: FIRE MARSHAL PH. (314) 514-0900 SEWER AUTHORITY METROPOLITAN ST. LOUIS SEWER DISTRICT 2350 MARKET STREET ST. LOUIS, MO 63103 PH. (314) 768-6200 HWY. DEPARTMENT MISSOURI DEPARTMENT TRANSPORTATION 1590 WOODLAKE DRIVE

CHESTERFIELD, MO 63017 ATTN: DAVID BRUNJES PH. (314) 565-6715

LEGAL DESCRIPTION

Lot A of Friendship Village of West County Boundary Adjustment Plat, according to the plat thereof recorded in Plat Book 356 page 143 of the St. Louis County Records. And being more particulary described in the following:

A TRACT OF LAND CONSISTING OF TWO TRACTS OF LAND IN PART OF LOTS 1 AND 2 OF THE HUGO ESSEN FARM IN U.S. SURVEYS 154 AND 157, TOWNSHIP 45 NORTH, RANGE 4 EAST, LESS AND EXCEPTING THOSE PORTIONS TAKEN FOR RIGHT OF WAY PURPOSES, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT A SET 1/2" X 18" REBAR WITH CAP STAMPED "MARLER L.S. 347-D" (TYPICAL), MARKING

THE SOUTHWESTERN CORNER OF PROPERTY NOW OR FORMERLY OF FRIENDSHIP VILLAGE OF WEST COUNTY PER DEED BOOK 13864 PAGE 1987 OF THE ST. LOUIS COUNTY LAND RECORDS. BEING A POINT ON THE NORTHWESTERN CORNER OF AN EXCEPTION FOR RIGHT OF WAY PURPOSES RECORDED IN DEED BOOK 8828 THE ST. LOUIS COUNTY LAND RECORDS; THENCE ALONG THE SOUTHWESTERN PROPERTY RIENDSHIP VILLAGE PROPERTY, AND IT'S EXTENSION, WHICH IS THE PROPERTY LINE OF ANOTHER TRACT OF LAND OF FRIENDSHIP VILLAGE OF WEST COUNTY, LISTED WITH THE TAX ASSESSOR AS DEED BOOK 8484 PAGE 2019, NORTH 30 DEGREES 31 MINUTES 42 SECONDS WEST A DISTANCE OF 175.75 FEET TO A POINT FROM WHICH A FOUND IRON PIPE WITH CAP STAMPED "L.S. 134-D" BEARS SOUTH OC DEGREES 43 MINUTES WEST A DISTANCE OF 0.11 FEET; THENCE ALONG THE FRIENDSHIP VILLAGE TRACT LISTED AS DEED BOOK 8484 PAGE 2019, SOUTH 57 DEGREES 46 MINUTES 10 SECONDS WEST A DISTANCE OF 242.96 FEET TO A POINT FROM WHICH A FOUND 3/4 INCH IRON PIPE BEARS NORTH 16 DEGREES 00 MINUTES EAST A DISTANCE OF 0.13 FEET; THENCE NORTH 30 DEGREES 35 MINUTES 40 SECONDS WEST A

DISTANCE OF 134.92 FEET TO A FOUND 3/4 INCH IRON PIPE; THENCE SOUTH 57 DEGREES 43 MINUTES 34 SECONDS WEST A DISTANCE OF 159.39 FEET TO A SET REBAR, FROM WHICH A FOUND 3/4 INCH IRON PIPE BEARS SOUTH 57 DEGREES 10 MINUTES WEST A DISTANCE OF 1.97 FEET; THENCE NORTH 30 DEGREES 32 MINUTES 03 SECONDS WEST A DISTANCE OF 1184.67 FEET TO A SET REBAR, FROM WHICH A FOUND "U" POST BEARS SOUTH 47 DEGREES 23 MINUTES EAST A DISTANCE OF 0.49 FEET; THENCE NORTH 53 DEGREES 49 MINUTES 20 SECONDS EAST A DISTANCE OF 1033.70 FEET TO A SET REBAR; THENCE SOUTH 32 DEGREES 06 MINUTES 20 SECONDS EAST A DISTANCE OF 1503.73 FEET TO A POINT IN THE NORTHWESTERN RIGHT OF WAY LINE OF OLIVE BOULEVARD (VARIABLE WIDTH) ALSO KNOWN AS HIGHWAY 340, FROM WHICH A FOUND 5/8 INCH REBAR BEARS NORTH 32 DEGREES 06 MINUTES WEST A DISTANCE OF 0.28 FEET; THENCE ALONG THE SAID NORTHWESTERN RIGHT OF WAY LINE OF SAID OLIVE BOULEVARD SOUTH 32 DEGREES 30 MINUTES 32 SECONDS WEST A DISTANCE OF 132.25 FEET TO A POINT FROM WHICH A FOUND IRON ROD WITH CAP STAMPED "L.S. 134-D" BEARS NORTH 21 DEGREES 49 MINUTES WEST A DISTANCE OF 0.12 FEET; THENCE SOUTH 58 DEGREES 18 MINUTES 50 SECONDS WEST A DISTANCE OF 66.98 FEET TO A POINT FROM WHICH A FOUND 5/8 INCH REBAR BEARS NORTH 24 DEGREES 05 MINUTES EAST A DISTANCE OF 0.10 FEET; THENCE NORTH 72 DEGREES 06 MINUTES 11 SECONDS WEST A DISTANCE OF 53.16 FEET TO A FOUND 5/8 INCH REBAR; THENCE SOUTH 61 DEGREES 49 MINUTES 45 SECONDS WEST A DISTANCE OF 75.01 FEET TO A POINT FROM WHICH A FOUND 5/8 INCH REBAR BEARS NORTH 06 DEGREES OI MINUTES WEST A DISTANCE OF 0.13 FEET; THENCE SOUTH 16 DEGREES 21 MINUTES 14

SECONDS WEST A DISTANCE OF 68.59 FEET TO A FOUND 5/8 INCH REBAR; THENCE SOUTH 53 DEGREES 21 MINUTES 49 SECONDS WEST A DISTANCE OF 172.33 FEET TO A POINT FROM WHICH A FOUND RIGHT OF WAY MARKER BEARS NORTH 22 DEGREES 41 MINUTES EAST A DISTANCE OF 0.16 FEET; THENCE SOUTH 59 DEGREES OF MINUTES 29 SECONDS WEST A DISTANCE OF 151.14 FEET TO THE POINT OF BEGINNING. CONTAINING 1.506,235 SQUARE FEET. OR 34.57 ACRES, MORE OR LESS, AS SURVEYED BY MARLER SURVEYING CO., INC. DURING THE MONTH OF MARCH, 2007.

-GEOSYNTHETIC REINFORCEMENT

SEE PROFILE DRAWINGS FOR LENGTH, TYPE, AND SPACING

-RETAINED BACKFIL

THE WALL MANUFACTURER SHALL OBTAIN A COPY OF THE GEOTECHNICAL REPORT 'J019632.04 REVISED' AS PREPARED BY GEOTECHNOLOGY, INC. AND COMPLY WITH THE REQUIREMENTS OUTLINED IN REPORT.



County (

City Clerk

Friendship Village of West County, the owner of the property shown of this plan for and ir onsideration of being granted a permit to develop property under the provisions of Chapter 003._____, of City of Chesterfield Conditional Use Permit #36, do hereby agree and declare that said property from the date of recording the plan shall be developed only as shown thereon, unless said plan is amended by the Planning Commission, or voided o vacated by order of ordinance of the City of Chesterfield Council

State of ······ _____ day of _____ A.D., 20__, before me personally appeared Officer of Corporation to me known, who, being by me sworn in, did say that he/she is the _____

of Friendship Village of West County, a corporation in the State of Missouri, and that the seal affixed to the foregoing instruments is the corporate seal of said Corporation, and that said instrument was signed on behalf of said corporation by authority of its Board of Directors, and the said ______acknowledged said instrument to be the Directors, and the said _____ (Officer of Corporation) free act and deed of said corporation.

in Testimony Whereof, I have hereunto set my hand and affixed my Notarial Seal at my , the day and year last above written Office in (County and State) My term expires_____

(Notary Public) This 7th Amended (Partial) Site Development Plan was approved by the City of Chesterfield Planning Commission and duly verified on the _____ day of _____ 2013, by the Chairperson of said Commission, authorizing the recording of the Amended Site Plan pursuant to Chesterfield Ordinance Number 200 as attested by the Planning and Development Services Director and the City Clerk.

PROJECT BENCHMARK

Planning and Development Services Director

St. Louis County Benchmark 12-157 Elev.: 638.32' "Sq." on the curb at center of rounding along island; 60' West of centerline of Olive Street Road and 5' North of centerline of Chesterfield Village Parkway.

SITE BENCHMARKS

Site Benchmark # 1 Elev. 634.10' top of 1/2" iron pipe with cap
"L.S. 134—D" as shown on plan.
<u>Site Benchmark # 2</u> Elev. 631.73' "O" in open on Fire Hydrant as
shown on plan.
Site Benchmark # 3 Elev. 627.87' "O" in open on Fire Hydrant as
shown on plan.
Site Benchmark # 4 Elev. 624.92' P.K. Nail in asphalt curb as
shown on plan.
Site Benchmark # 5 Elev. 627.70' P.K. Nail in asphalt curb as
shown on plan.
Site Benchmark # 6 Elev. 620.18' 60-D Nail as shown on plan.

SURVEYOR'S CERTIFICATION

This is to certify that this Plat is a correct representation of all existing and proposed land divisions. STE OF MIS Marler Surveying Company, Inc. MISSOURI CORP. NO. L.S. 347-D 11-11-13

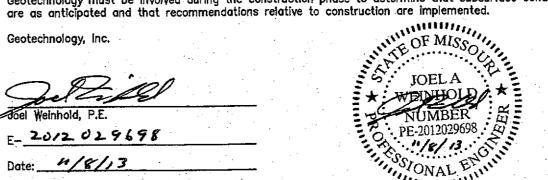
NUMBER PLS-2002014104 **\$~0~3**

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DAVID J. NAEGER

GEOTECHNICAL ENGINEER'S NOTE These plans have been reviewed by the undersigned for Geotechnology, inc. regarding compliance with our geotechnical recommendations. It is our professional opinion that earth slopes and grades constructed In accordance with the plans and specifications will be stable with an adequate factor of safety. Geotechnology must be involved during the construction phase to determine that subsurface conditions

Geotechnology, Inc. Jel Lifel doel Weinhold, P F- 2012 02969 Date: 4/8/13



INDEX OF SHEETS

SD2

TITLE SHEET

AMENDED SITE DEVELOPMENT PLAN

GENERAL NOTES

- 1.) ALL UTILITIES SHOWN HAVE BEEN LOCATED BY THE ENGINEER FROM AVAILABLE RECORDS. THEIR LOCATION SHOULD BE CONSIDERED APPROXIMATE. THE CONTRACTOR HAS THE RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES, PRIOR TO CONSTRUCTION, TO HAVE EXISTING UTILITIES FIELD LOCATED. THE CONTRACTOR SHALL BE ON RECORD WITH THE MISSOURI ONE CALL SYSTEM.
- 2.) ALL ELEVATIONS IN AREAS OF PROPOSED PARKING IMPROVEMENTS ARE BASED ON M.S.D. BENCHMARK
- 3.) BOUNDARY AND TOPOGRAPHIC SURVEY BY MARLER SURVEYING COMPANY
- 4.) PROPOSED CONTOURS SHOWN ARE FINISHED ELEVATIONS ON PAVED AREAS.
- 5.) GRADING & STORM WATER PER M.S.D. STANDARD SPECIFICATIONS & THE CITY OF CHESTERFIELD STANDARDS.
- 6.) DRIVE ENTRANCES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF CHESTERFIELD.
- 7.) SEEDING, SODDING, MULCHING AND PLANTINGS FOR ALL DISTURBED AREAS SHALL BE SPECIFIED ON THE LANDSCAPE PLAN.
- 8.) SIDEWALKS ALONG THE ACCESSIBLE ROUTE SHALL NOT HAVE A SLOPE EXCEEDING 1'V: 20'H. SLOPES GREATER THAN 1'V: 20'H MUST BE DESIGNED AS A RAMP.
- 9.) SIDEWALKS, CURB RAMPS, RAMPS AND ACCESSIBLE PARKING SPACES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT APPROVED "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES" (ADAAC) ALONG WITH THE REQUIRED GRADES, CONSTRUCTION MATERIALS, SPECIFICATIONS AND SIGNAGE. ANY CONFLICT OCCURS BETWEEN THE ADAAC GUIDELINES AND THE INFORMATION ON THE PLANS, THE ADAAC GUIDELINES SHALL TAKE PRECEDENCE AND THE CONTRACTOR SHALL NOTIFY THE PROJECT
- ENGINEER PRIOR TO ANY CONSTRUCTION 10.) SETBACKS PER ZONIN BUILDING FRONT SIDE = 20' REAR = 20'
- 11.) SUBJECT PROPERTY LIES WITHIN UNSHADED FLOOD ZONE "X" (AREAS DETERMINED TO BE OUTSIDE THE 500 YEAR FLOOD PLAIN) ACCORDING TO THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAP FOR ST. LOUIS COUNTY, MISSOURI AND INCORPORATED AREAS. THE MAP IS IDENTIFIED AS MAP NO. 29189C0145 H WITH AN EFFECTIVE DATE OF AUGUST 2, 1995
- 12.) NO ON-SITE ILLUMINATION SOURCE SHALL BE SO SITUATED THAT LIGHT IS CAST DIRECTLY ON ADJOINING PROPERTIES OR PUBLIC ROADWAYS ILLUMINATION LEVELS SHALL COMPLY WITH THE PROVISIONS OF SECTION 1005.320 STREET AND PARKING AREA LIGHTING OF THE CITY OF CHESTERFIELD SUBDIVISION ORDINANCE.
- 13.) APPROVAL OF THIS PLAN DOES NOT CONSTITUTE APPROVAL OF SIGNAGE. SIGN APPROVAL IS A SEPARATE PROCESS.
- 14.) ALL PROPOSED IMPROVEMENTS WITHIN R.O.W. SHALL BE CONSTRUCTED TO ST. LOUIS COUNTY, CITY OF CHESTERFIELD, OR MODOT STANDARDS.
- 15.) ALL GRADING AND DRAINAGE TO BE IN CONFORMANCE WITH ST. LOUIS COUNTY, CITY OF CHESTERFIELD AND M.S.D. STANDARDS.
- 16.) NO SLOPES WITHIN COUNTY RIGHT-OF-WAY SHALL EXCEED 3 (HORIZONTAL) TO 1 (VERTICAL)
- 17.) STORM WATER SHALL BE DISCHARGED AT AN ADEQUATE NATURAL DISCHARGE POINT. SINKHOLES ARE NOT ADEQUATE DISCHARGE POINTS.
- 18.) CONTRACTOR TO COORDINATE CONSTRUCTION PARKING WITH OWNER. VO PARKING ALLOWED IN OLIVE BOULEVARD RIGHT OF WAY.

PARKING CALCULATIONS

ARKING REQUIRED	
GROUP HOMES FOR ELDERLY (APARTMENTS): 285 @ 1 SPACE PER APARTMENT NURSING HOME (HEALTH CENTER):	=285 SPACES
117 BEDS @ 1 SPACE PER 3 BEDS DWELLINGS, MULTIPLE-FAMILY, ROW HOUSES,	= <u>39 SPACES</u> 324 SPACES
OR OTHER GROUP HOUSE ARRANGEMENTS (VILLAS)	

39 @ 1.75 SPACES PER LIVING UNIT

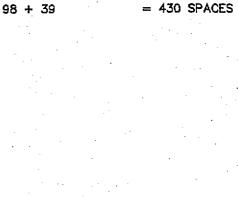
=: 69 SPACES = 393 SPACES

TOTAL PARKING REQUIRED: 324 + 69 PARKING PROVIDED (9'x19'):

SURFACE PARKING GARAGE PARKING

= 293 SPACES = 98 SPACES = <u>39 SPACES</u> 430 SPACES

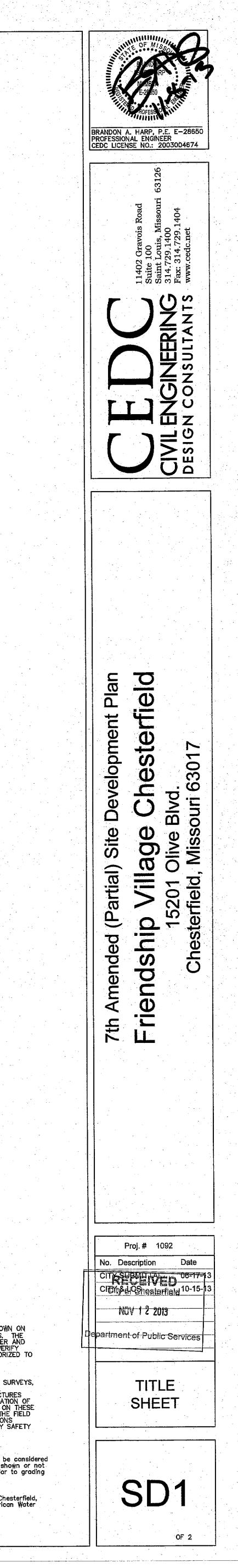
TOTAL SPACES PROVIDED: 293 + 98 + 39 (INCLUDES 17 HANDICAP SPACES)

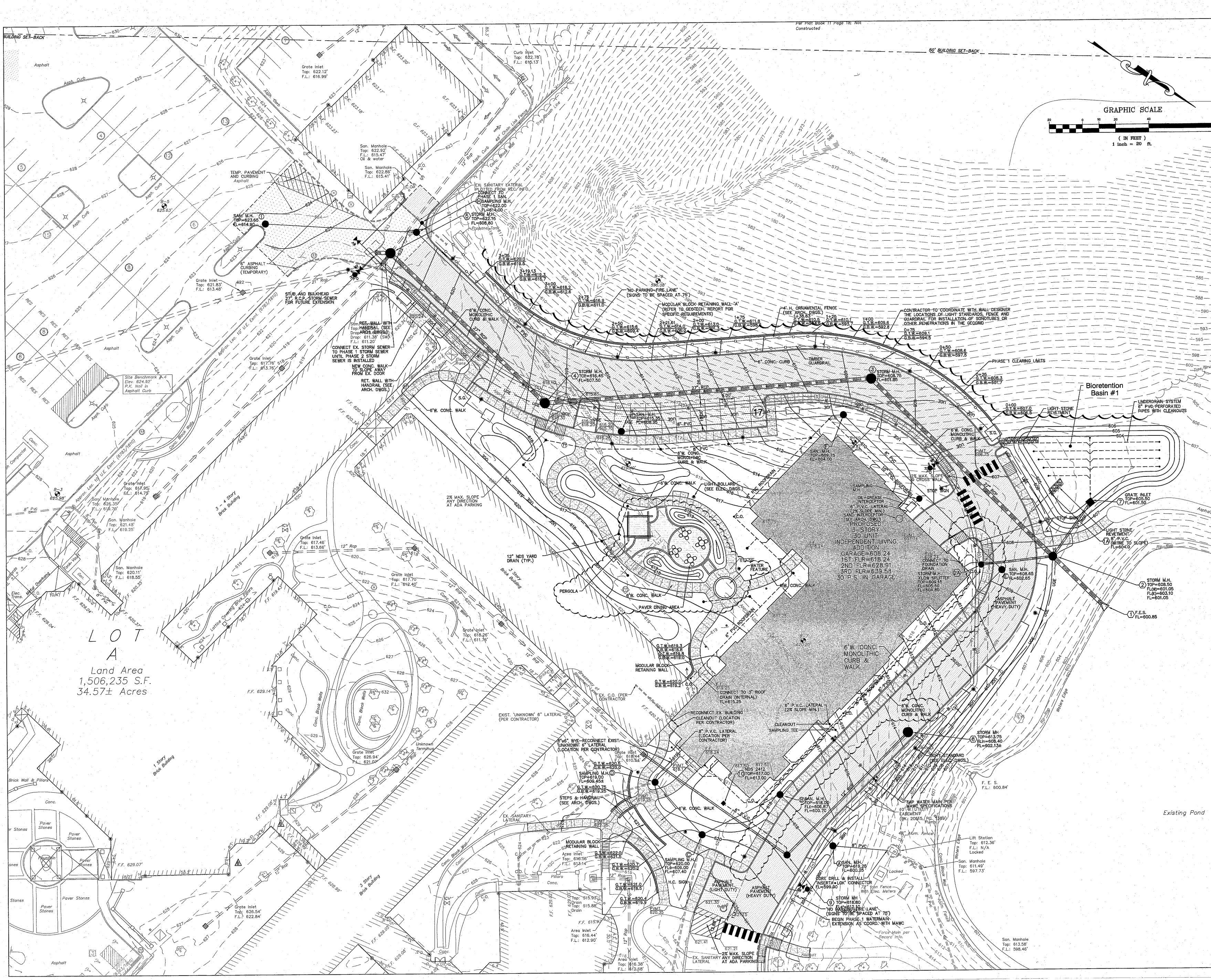


NOTE: CIVIL ENGINEERING DESIGN CONSULTANTS, INC. AND THE UNDERSIGNED ENGINEER HAVE NO RESPONSIBILITY FOR SERVICES PROVIDED BY OTHERS TO IMPLEMENT THE IMPROVEMENTS SHOWN ON THIS PLAN AND ALL OTHER DRAWINGS WHERE THE UNDERSIGNED ENGINEER'S SEAL APPEARS. THE CONSTRUCTION MEANS, METHODS & MATERIALS ARE THE SOLE RESPONSIBILITY OF THE OWNER AND CONTRACTOR. CIVIL ENGINEERING DESIGN CONSULTANTS, INC. HAS NO RESPONSIBILITY TO VERIFY FINAL IMPROVEMENTS AS SHOWN ON THIS PLAN UNLESS SPECIFICALLY ENGAGED AND AUTHORIZED TO DO SO BY THE OWNER OR CONTRACTOR. UTILITY NOTE: UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS, RECORDS AND INFORMATION, AND, THEREFORE DO NOT NECESSARILY REFLECT THE ACTUAL EXISTENCE, NON-EXISTENCE, SIZE, TYPE, NUMBER, OR LOCATION OF THESE FACILITIES, STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ACTUAL LOCATION OF ALL UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES, EITHER SHOWN OR NOT SHOWN ON THESE PLANS. THE UNDERGROUND FACILITIES, STRUCTURES, AND UTILITIES SHALL BE LOCATED IN THE FIELD PRIOR TO ANY GRADING, EXCAVATION OR CONSTRUCTION OF IMPROVEMENTS. THESE PROVISIONS SHALL IN NO WAY ABSOLVE ANY PARTY FROM COMPLYING WITH THE UNDERGROUND FACILITY SAFETY AND DAMAGE PREVENTION ACT, CHAPTER 319 RSMO.

NOTE: The underground utilities have been plotted from available sources and their locations must be considered approximate only. The verification of the actual locations of all underground utilities, either shown or not shown on this drawing, shall be the responsibility of the contractor and shall be located prior to grading or construction of improvements. MISSOURI ONE CALL TICKET NUMBER 112300421

The Utilities Contacted by Missouri One Call were Ameren Missouri, Att Distribution, City of Chesterfield, Charter communications, Laclede Gas Company, Lightcore, a Century Link Co., Missouri American Water Co., Modot District 6,Parkway School District and Metropolitan St. Louis School District.

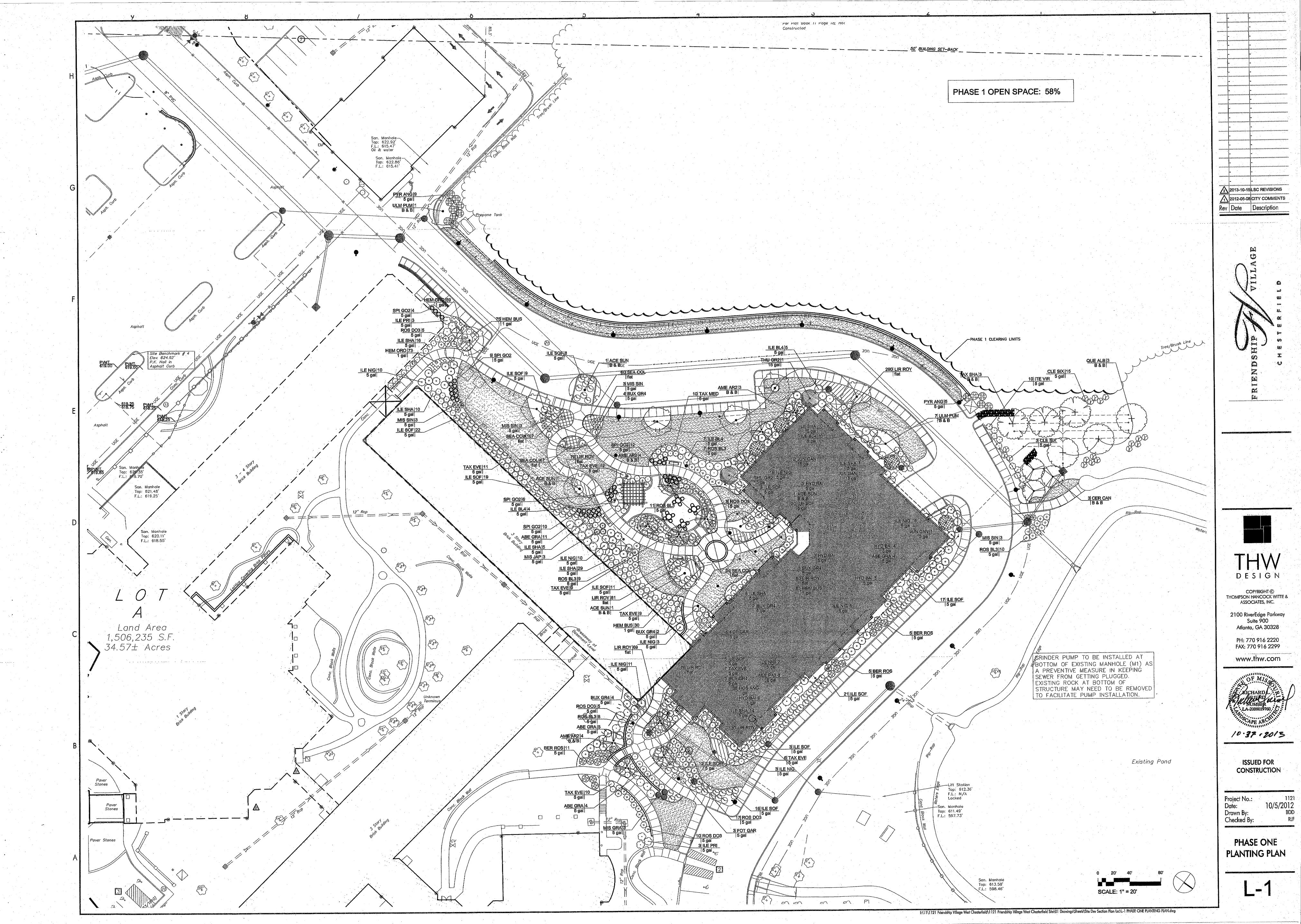




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BRANDON A. HARP, P.E. E-28650 PROFESSIONAL ENGINEER CEDC LICENSE NO.: 2003004674 (D S **LEERIN** SULTAN CIVIL lan sterfield Ω /elopment 301 9 ശ 0 m **/illage** Ite 0 tial) 520 erfiel O Ū, Friendship Amend 5 C 7th Proj. # 1092 Date No. Description 06-17-13 CITY SUBMITTAL CITY & LCS 10-15-13 Amended Site Development Plan SD2 OF 2



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			PLANT SCHE	DULE												· · · · · · · · · · · · · · · · · · ·	
			TREES	CODE		BOTANICAL NAME		CONT			FIELD5			Slow	Moderate	Fast	PLANTING NOTES
				ACE SUN	4	Acer rubrum 'Red Sunset'	Red Sunset Maple	ВКВ	3"Cal	14`-16`	45`+	Deciduous				X	1. THE LANDSCAPE CONTRACTOR SHALL FAMILIARIZE THEMSELVES WIT
			2 5														CONDITIONS AND VERIFY THEM TO THEIR SATISFACTION. THE LANDSCA CONTRACTOR SHALL ACCEPT THE SITE CONDITIONS AND DO THE WORK
		H	Th	AME AR2	11	Amelanchier arborea 'Autumn Brilliance'	Downy Serviceberry	B&B	2.5"Cal	12` - 14`		Ornamental		X	x	4	WITHOUT ADDITIONAL COMPENSATION FOR POSSIBLE VARIATION FROM CONDITIONS SHOWN.
	•									· .							2. PRIOR TO CONSTRUCTION THE LANDSCAPE CONTRACTOR SHALL BE FOR LOCATING ALL UNDERGROUND UTILITIES AND SHALL AVOID DAMAG
				CER CAN	3	Cercis canadensis	Eastern Redbud	B&B	2.5"Cal					x	X		UTILITIES DURING CONSTRUCTION. SHOULD THE LANDSCAPE CONTRAC DAMAGE TO ANY UTILITIES, THEY SHALL MAKE NECESSARY REPAIRS AS
												· .					POSSIBLE WITHOUT ADDITIONAL COMPENSATION.
	•		- the second					1					·			<u> </u>	3. ALL PLANT MATERIAL SIZES AND MEASUREMENTS, INCLUDING TRUN SPREAD SIZES, CONTAINER AND ROOTBALL SIZES, QUALITY AND CONDI CONFORM TO THE STANDARD SET FORTH IN THE CURRENT ISSUE OF "A
				JUN CAN	4	Juniperus virginiana `Canaertii`	Canaerti Juniper	15 gal		8`-9`	30-40`	Evergreen			• X • •		STANDARD FOR NURSERY STOCK" (ANSI Z6.01).
	•									-							4. ALL PLANTS MUST BE HEALTHY, VIGOROUS MATERIAL, FREE OF PES
•	. •		1 cm	QUE ALB	3	Quercus alba	White Oak	B & B	2.5"Cal	14`-16`	45`+	Deciduous	···		Х		5. ALL PLANTS MUST BE CONTAINER-GROWN OR BALLED AND BURLAPF INDICATED IN THE PLANT LIST.
															·		8. ALL TREES MUST BE STRAIGHT TRUNKED AND FULL-HEADED AND ME REQUIREMENTS SPECIFIED.
	•		- yapa	TAX SHA	2	Taxodium distichum `Shawnee Brave` TM	Shawnee Brave Bald Cypress	R&R	2.5"Cal	14`-16`	45`+	Deciduous			x		7. ALL PLANTS ARE SUBJECT TO THE APPROVAL OF THE ARCHITECT BE
		G	$ \xi + \hat{\gamma} $				onawnee brave bala cyproce		2.0 00								AND AFTER INSTALLATION.
			Ly y									·					8. ALL TREES MUST BE GUYED OR STAKED AS SHOWN IN THE DETAILS.
· · · ·				THU GR2	2	Thuja standishli x plicata `Green Giant`	Green Giant Arborvitae	15 gal		10`-12`			· · ·				9. ALL PLANTING AREAS MUST BE COMPLETELY MULCHED AS SPECIFIE 10. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAIL
	· . ·																SOIL SAMPLES FROM TOPSOIL AND NATIVE OR FILL SOILS AT THE SITE / THEM TO AN APPROVED SOIL TESTING LABORATORY. THEY SHALL THEN
					8	Ulmus x 'Homestead'	Homestead Elm	B&B	3"Cal	14`-16`	60-80`	Deciduous		1	X	X	ANALYSES AND RECOMMENDATIONS FOR AMENDING THESE SOILS AND OF SPECIFIED PLANT MATERIAL.
	·													-			11. PRIOR TO MULCHING, APPLY A PRE-EMERGENT HERBICIDE (APPROV ARCHITECT) AS RECOMMENDED BY THE MANUFACTURER TO PREVENT
			SHRUBS	CODE	ΟΤΥ	BOTANICAL NAME		CONT					-	Slow	Moderate	Fast	WEED AND GRASS GROWTH.
	ана стала 1990 - Аларана 1990 - Аларана			ABE GRA		Abelia x grandiflora	Glossy Abelia	5 gal							X		12. ALL WORK WITHIN ANY R.O.W. SHALL CONFORM TO STANDARDS AND SPECIFICATIONS OF LOCAL AND/OR STATE JURISDICTIONS.
	•																13. ALL DISTURBED AREAS TO BE GRASSED OR PLANTED SHALL RECEIV
	•			AES PA3	3	Aesculus parviflora	Bottlebrush Buckeye	5 gal						1	х		APPROVED TOPSOIL (LIGHTLY COMPACTED). 14. FERTILIZATION AND SOIL AMENDMENTS FOR ALL GRASSED AREAS S
		F															LABORATORY ANALYSIS (SEE NOTE #10).
	·			BER ROS	21	Berberis thunbergii 'Rose Glow'	Rosy Glow Barberry	5 gal						X	×		15. SHRUB BEDS IN PARKING LOT ISLANDS SHALL BE MOUNTED WITH TO HEIGHT ABOVE TOP OF CURB ELEVATION.
	· · · ·	• • • •															16. TREES SHALL BE PLANTED NO CLOSER THAN FIVE (5) FEET, AND SHI
			O I	BUX GR4	18	Buxus x 'Green Mountain'	Green Mountain Boxwood	5 gal						X	X		CLOSER THAN 3-1/2 FEET FROM BACK-OF-CURB OR EDGE OF ASHPALT. 17. NO PARKING, STORAGE, OR OTHER CONSTRUCTION SITE ACTIVITIES
•				CLE SIX	18	Clethra alnifolia 'Sixteen Candles'	Summersweet Clethra	5 gal						x			WITHIN TREE PROTECTION AREAS.
	. <u>.</u> .							U gui								•	18. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL QUANTITIES THESE PLANS BEFORE PRICING THE WORK.
				FOT GAR	8	Fothergilla gardenii	Dwarf Fothergilla	5 gal			, <u> </u>			X			19. THE CONTRACTOR IS RESPONSIBLE FOR FULLY MAINTAINING ALL PL
			E:3														(INCLUDING BUT NOT LIMITED TO: WATERING, SPRAYING, MULCHING, FI OF PLANTING AREAS AND LAWNS UNTIL THE WORK IS ACCEPTED IN TO ARCHITECT.
	•			HYD BAI	22	Hydrangea macrophylla 'Endless Summer' TM	Endless Summer Hydrangea	5 gal							х	X	20, THE CONTRACTOR SHALL COMPLETELY GUARANTEE ALL PLANT MA
	•		\bigcirc	•					· · · · · · · · · · · · · · · · · · ·								PERIOD OF ONE (1) YEAR BEGINNING AT THE DATE OF TOTAL ACCEPTAL CONTRACTOR SHALL PROMPTLY MAKE ALL REPLACEMENTS BEFORE O
			Ø	ILE SOF	166	Ilex crenata 'Soft Touch'	Soft Touch Japanese Holly	5 gal		•				X			THE GUARANTEE PERIOD (AS PER DIRECTION OF THE ARCHITECT). 21. THE ARCHITECT WILL APPROVE THE STAKED LOCATION OF ALL MAJ
													-				CAL.) PLANT MATERIAL PRIOR TO INSTALLATION.
	•.			ILE NIG	79	Ilex glabra `Nigra`	Nigra Inkberry	5 gal						^			22. ALL TREES IN LEAF AFTER BEING DUG AT THE NURSERY SOURCE SH ACCLIMATED FOR TWO (2) WEEKS MINIMUM UNDER A MIST SYSTEM PRI
				ILE SHA	96	Ilex glabra `Shamrock`	Shamrock Inkberry	5 gal						x	· · · · · ·		INSTALLATION.
								0 90							· · ·		23. ANY PLANT MATERIAL WHICH DIES, TURNS BROWN, OR DEFOLIATES TOTAL ACCEPTANCE OF THE WORK) SHALL BE PROMPTLY REMOVED FR AND REPLACED WITH MATERIAL OF THE SAME SPECIES, QUANTITY, AN
				ILE BL4	26	Ilex x meserveae `Blue Princess` TM	Blue Princess Holly	5 gal						x	X		MEETING ALL PLANT LIST SPECIFICATIONS AT NO ADDITIONAL COST TO
			\odot		•												24. TREES ADJACENT TO PARKING AREAS SHALL BE PLANTED A MINIMU (FEET) FROM BACK OF CURB.
	•		\sim	ILE PRI	6	Ilex x meserveae 'Blue Prince' TM	Blue Prince Holly	5 gal						X	x		25. VEGETATION MUST BE LOCATED SO AS TO PREVENT VEHICLES FRO
			دن											· · ·			OVER OR STRIKING THEM (SEE NOTE #16 FOR MINIMUM DISTANCE). 26. NO AUGER TOOLS TO BE USED ABOVE SEGMENTAL RETAINING WALL
			\bigcirc	ITE VIR	10	Itea virginica 'Henry's Garnet'	Henry's Garnet Sweetspire	5 gal							×		DIGGING IN ORDER TO PROTECT THE GEO-GRID. ANY MODIFICATION TO FOR INSTALLATION OF PLANTS MUST BE CONSULTED AND APPROVED B
								C and		P							DESIGNER/CONTRACTOR.
		D		MIS JAP	3	Miscanthus sinensis	Japanese Silver Grass	5 gai								^	27. NO PLANTS OVER 18" IN HT. ARE TO BE PLACED WITHIN A THREE (3) A FIRE HYDRANT.
	•			MIS SIN	12	Miscanthus sinensis `Adagio`	Adagio Eulalia Grass	5 gal			·					x	28. NO PLANTING IS TO OCCUR WITHIN THREE (3) FEET OF TRANSFORM FEET IN FRONT OF TRANSFORMER DOORS.
÷			\bigotimes														29. PRIOR TO INSTALLATION OF PLANTING MATERIAL IN PLANTERS, PLA
				MIS GRA	3	Miscanthus sinensis 'Gracillimus'	Maiden Grass	5 gal								x	HOLES MUST HAVE A SCREEN MATERIAL/FILTER FABRIC AND THE BASE WITH MIN. 3" OF PEA GRAVEL.
		- * 								•							30. ALL DISTURBED AREAS NOT OTHERWISE PLANTED TO BE SEEDED.
	. *			PYR ANG	14	Pyracantha angustifolia 'Gnozam Gnome' TM	Gnome Pyracantha	5 gal								X	31. IRRIGATION SYSTEM WILL BE DESIGNED WITHIN BUDGETED ALLOW CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ARCHITECT. CONTRACT
			۲ <u>۲</u> ۲														RESPONSIBLE FOR ALL REQUIRED SLEEVING.
	• • •		\oplus	ROS BL3	45	Rosa x `Blushing Knockout`	Blushing Knockout Rose	5 gal							X		
		· .		ROS DO3	46	Poso v Double Knockout	Double Knockout Rose	5 gal	<u>.</u>					-	x		
			Đ			Rosa x `Double Knockout`		Ju Aai	1								
		C		SPI GO2	41	Spiraea japonica `Goldmound`	Goldmound Spirea	5 gal							x	x	
	, _																
	• • • • • •	. · · ·		TAX MED	10	Taxus x media `Brownii`	Brown Hybrid Yew	5 gal						X	x		
			\bigcirc					•									
	· . · · ·		0	TAX EVE	64	Taxus x media `Everlow`	Everlow Yew	5 gal						X	X		
· · · · ·	•													0			
	• •		SHRUB AREAS		QTY 190	BOTANICAL NAME Hemerocallis x `Little Business`	COMMON NAME Little Business Dayilly	CONT	· ·			-	SPACING 12" o.c.	SIOW	Moderate	X	
	ۍ.			X	100			1, 201									
	·			HEM ORO	132	Hemerocallis x `Stella de Oro`	Stella de Oro Dayilly	1 gal					12" o.c.		· · · · · · · · · · · · · · · · · · ·	x	
				X											·		
	. ·	В		HOS ANG	38	Hosta x `Blue Angel`	Blue Angel Hosta	1 gal					12" o.c.	1		-	
- - -	• •													· · ·			
· .			GROUND COVERS					CONT	•			_	SPACING	Slow	Moderate	Fast	
				LIR ROY	805	Liriope muscari 'Royal Purple'	Royal Purple Liriope	flat					12" o.c.			^	
• •				SEA COL	268	Seasonal Color	Seasonal Color	flat					12" o.c.				
			<u> </u>	TUR SOD	12,872 sf	Turf Sod	Drought Tolerant Fescue Blend	sod							X		
												· · · ·					
				· · · · · · · · · · · · · · · · · · ·							 						

SELVES WITH THE SITE E LANDSCAPE THE WORK SPECIFIED TION FROM GRADES AND

SHALL BE RESPONSIBLE DID DAMAGE TO ALL CONTRACTOR CAUSE EPAIRS AS QUICKLY AS

NG TRUNK, HEAD AND AND CONDITION SHALL SSUE OF "AMERICAN

E OF PESTS AND DISEASE.

BURLAPPED AS

O AND MEET ALL ITECT BEFORE, DURING

DETAILS. SPECIFIED.

FOR OBTAINING 5 (FIVE) THE SITE AND SUBMIT SHALL THEN OBTAIN SOILS AND FERTILIZATION

E (APPROVED BY PREVENT RECURRING

ARDS AND

L RECEIVE 4" MINIMUM OF D AREAS SHALL BE AS PER

D WITH TOPSOIL 6" MIN. IN

F, AND SHRUBS, NO ASHPALT.

ACTIVITIES ARE TO OCCUR

UANTITIES SHOWN ON

ING ALL PLANTING LCHING, FERTILIZING, ETC.) TED IN TOTAL BY THE

PLANT MATERIAL FOR A ACCEPTANCE. THE BEFORE OR AT THE END OF TECT).

FALL MAJOR (OVER 3"

OURCE SHALL BE STEM PRIOR TO

EFOLIATES (PRIOR TO EMOVED FROM THE SITE ANTITY, AND SIZE AND L COST TO OWNER.

A MINIMUM OF 12-1/2

CLES FROM HANGING NCE).

INING WALLS WHILE CATION TO THE GEO-GRID PROVED BY VERSALOCK

THREE (3) FEET RADIUS OF

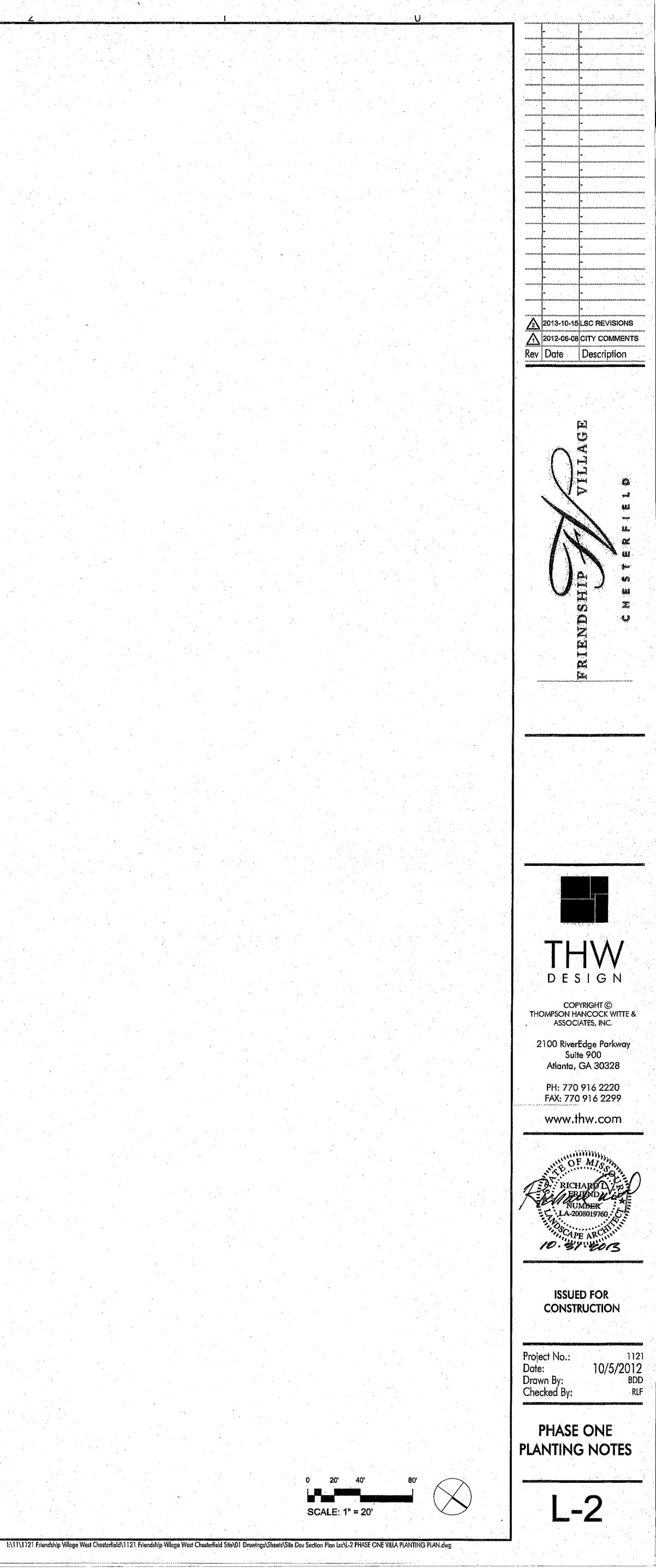
ANSFORMERS AND TEN (10)

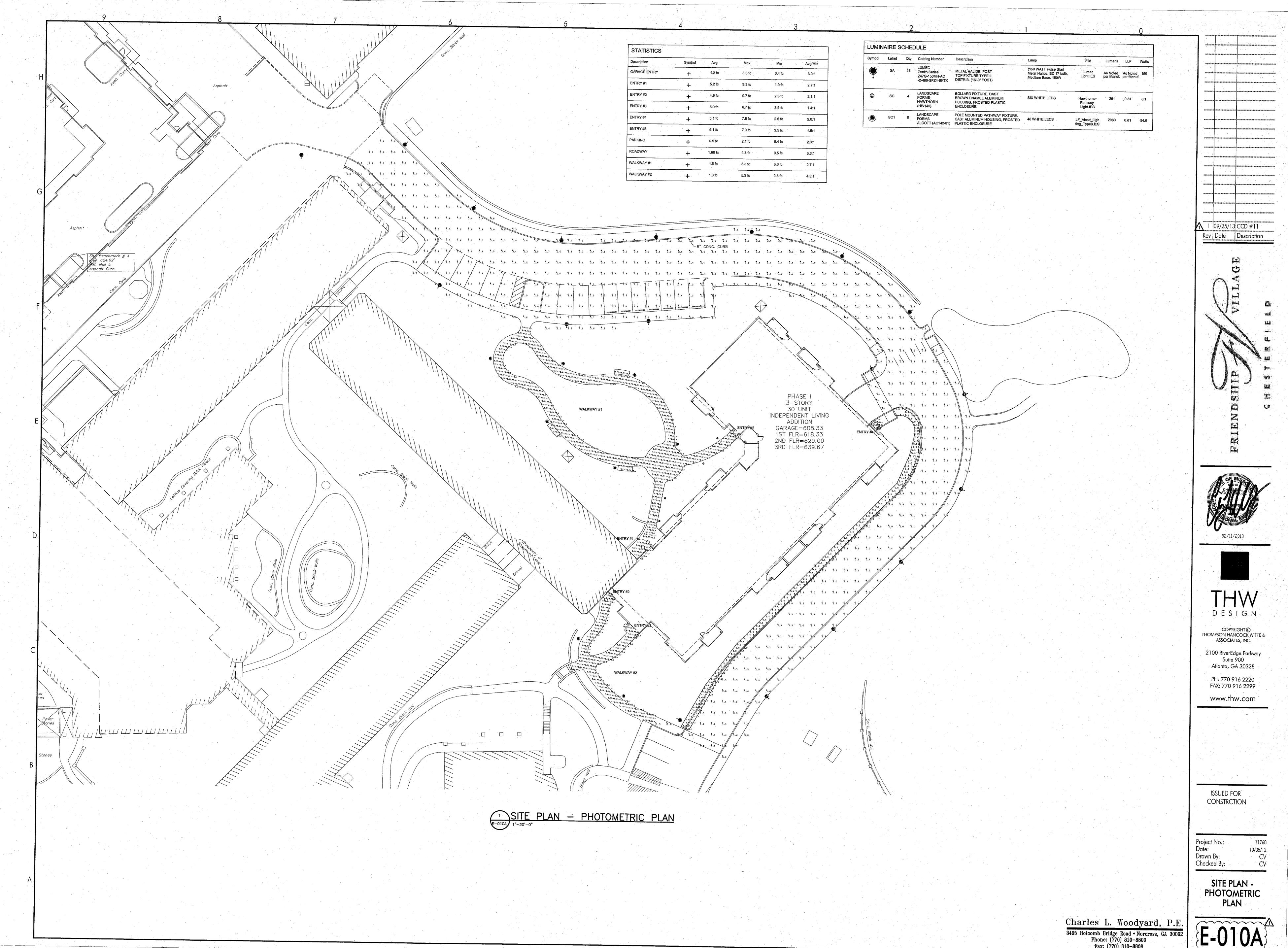
TERS, PLANTER DRAIN THE BASE IS TO BE FILLED

SEEDED.

ED ALLOWANCE.

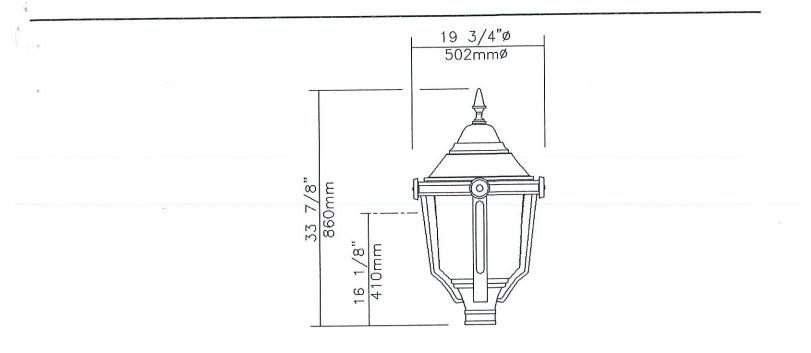
0 20' 40' SCALE: 1" = 20'



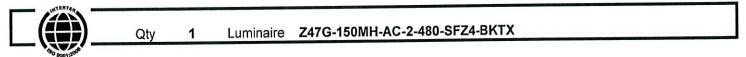


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Specification



EPA: 2.52 sq ft / weight: 26 lb (11.8 kg)



Description of Components:

Finial: Decorative cast 356 aluminum, mechanically assembled.

Hood: Spun aluminum 1100-0 ring with one clear acrylic uplight diffuser installed on the lower part of the hood, mechanically assembled on the luminaire.

Guard: In a round shape, this guard is a cast 356 aluminum with decorative arms welded to the fitter.

Access-Mechanism: Rotomatic, die-cast A360 aluminum quarter-turn mechanism with constant-pressure spring-loaded points. The mechanism shall offer toolfree access to the inside of the luminaire. An embedded memory-retentive gasket shall ensure weatherproofing. A red key on the unit shall indicate point of engagement.

Globe: (AC), Made of one-piece seamless injected-moulded clear acrylic having a prismatic exterior surface. The globe is mechanically assembled on the access-mechanism.

Lamp: (Not included), 150 Watt Pulse Start Metal Halide (ANSI Code M102 or M142), ED 17 bulb, medium base.

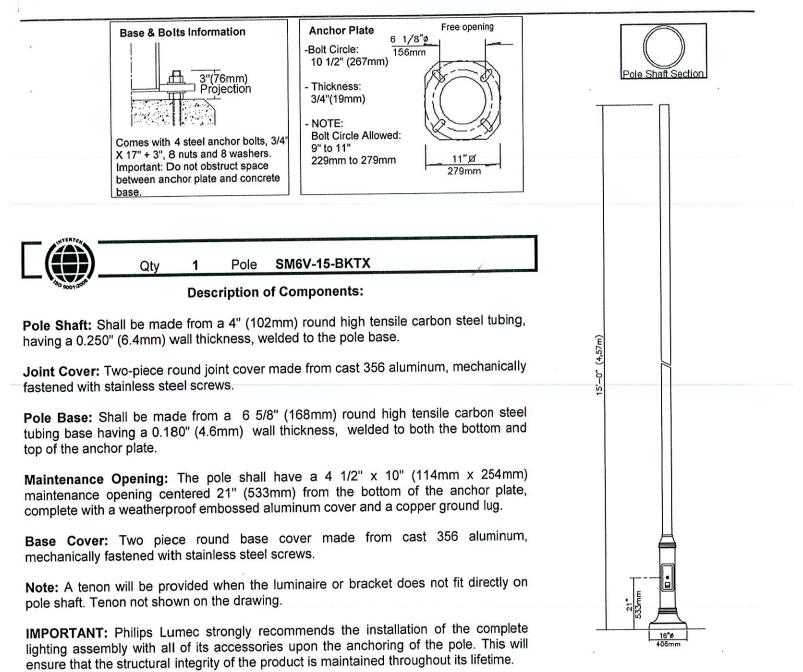
Optical System: IES type II (asymmetrical). Optical system using the luminaire globe as refractor.

Ballast: High power factor of 90%. Primary voltage 480 volts. Pulse Start Type. Lamp starting capacity -20°F(-30°C) degrees. Assembled on a unitized removable tray with quick disconnect plug.

Fitter: (SFZ4), Cast 356 aluminum c/w 4 set screws 3/8-16 UNC. Slip-fits on a 4" (102mm) outside diameter x 4" (102mm) long tenon.



Specification



PHILIPS

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Miscellaneous

Description of Components:

Wiring: Gauge (#14) TEVV/AWM 1015 or 1230 wires, 6" (152mm) minimum exceeding from luminaire.

Hardware: All exposed screws shall be stainless steel with Ceramic primer-seal basecoat to reduce seizing of the parts. All seals and sealing devices are made and/or lined with EPDM and/or silicone and/or rubber.

Finish: Color to be **black textured RAL9005TX (BKTX)** and in accordance with the AAMA 2603 standard. Application of a polyester powdercoat paint (4 mils/100 microns) with ± 1 mils/24 microns of tolerance. The Thermosetting resins provides a discoloration resistant finish in accordance with the ASTM D 2244 standard, as well as luster retention in keeping with the ASTM D 523 standard and humidity proof in accordance with the ASTM-D2247 standard.

The surface treatment achieves a minimum of 2000 hours for salt spray resistant finish in accordance with testing performed and per ASTM-B117 standard.

Quality Control: The manufacturer must provide a written confirmation of its ISO 9001-2008 and ISO 14001-2004 International Quality Standards Certification.

Mechanical resistance: In order to ensure the mechanical resistance of the poles, the reflected area should be calculated according to AASHTO standards and resists to a wind of 140 km/hr.

Web site information details: Click on any specific information details you need:

Paint finish / Warranties / ISO 9001-2008 Certification / ISO 14001-2004 Certification / CSA Pole Certification

