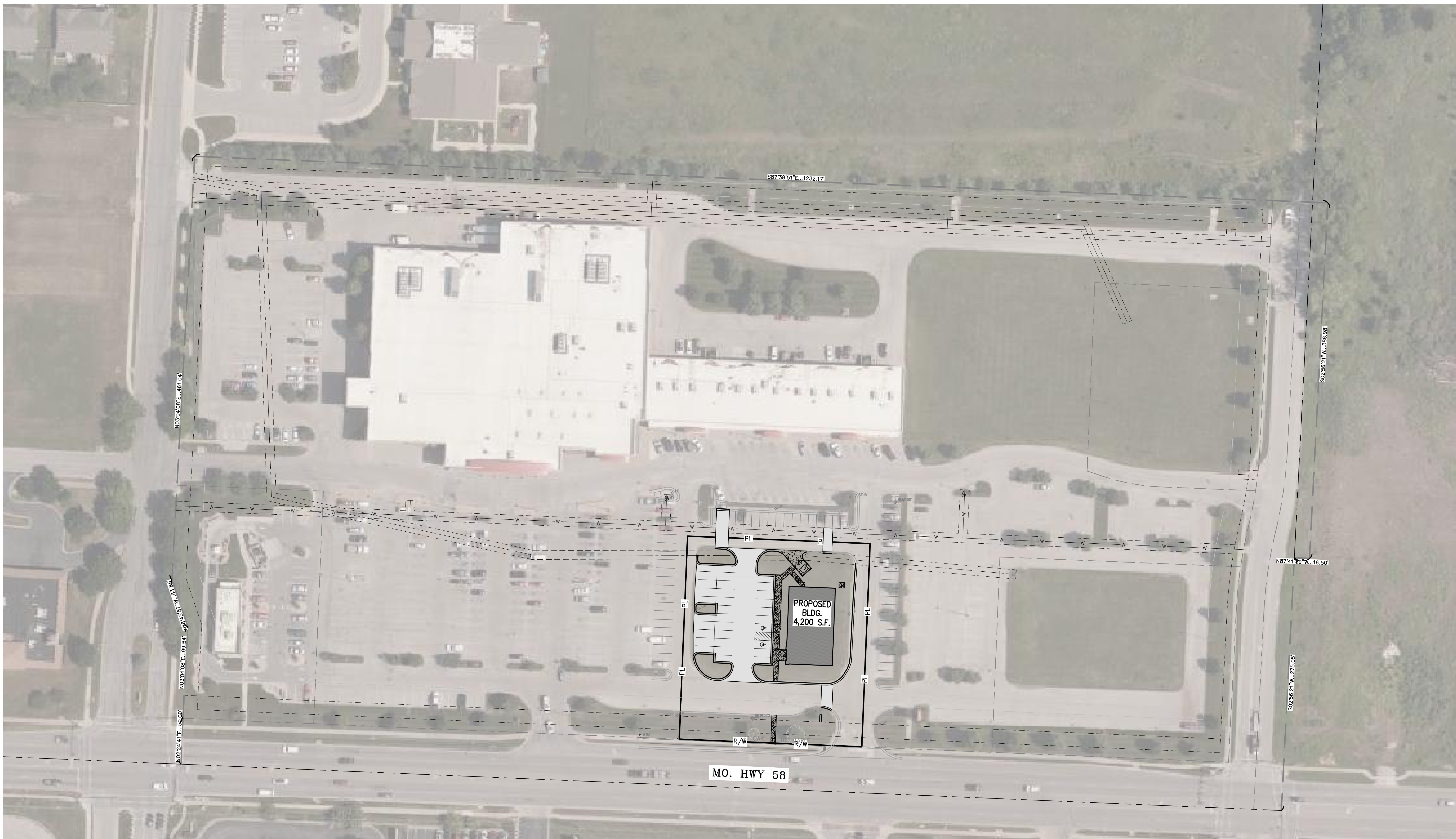


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UTILITY NOTES:
 VISUAL INDICATIONS OF UTILITIES ARE AS SHOWN. UNDERGROUND LOCATIONS SHOWN, AS FURNISHED BY THEIR LESSORS, ARE APPROXIMATE AND SHOULD BE VERIFIED IN THE FIELD AT THE TIME OF CONSTRUCTION. FOR ACTUAL FIELD LOCATIONS OF UNDERGROUND UTILITIES CALL 811.

PREPARED & SUBMITTED BY:

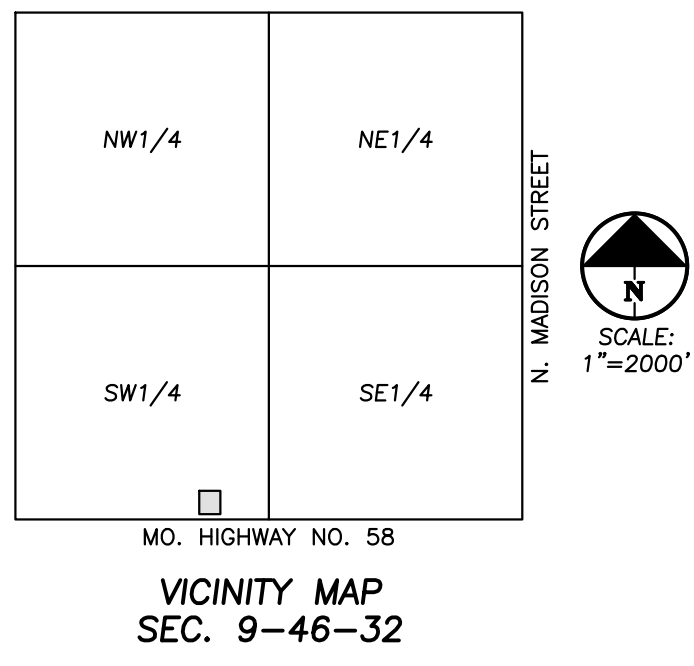
PHELPS ENGINEERING, INC.
 1270 N. WINCHESTER
 OLATHE, KS 66061
 913-393-1155 OFFICE
 913-393-1166 FAX
 CONTACT: JUDD CLAUSSEN, P.E.

DEVELOPER:

FORESIGHT REAL ESTATE SERVICES, LLC
 105 NORTH STEWART COURT, SUITE 225
 LIBERTY, MO 64068
 CONTACT: JOHN DAVIS

OWNER:

RAYMORE GROUP, LLC
 3955 W. 83RD STREET
 PRAIRIE VILLAGE, KS 66208
 CONTACT: KYLIE STOCK

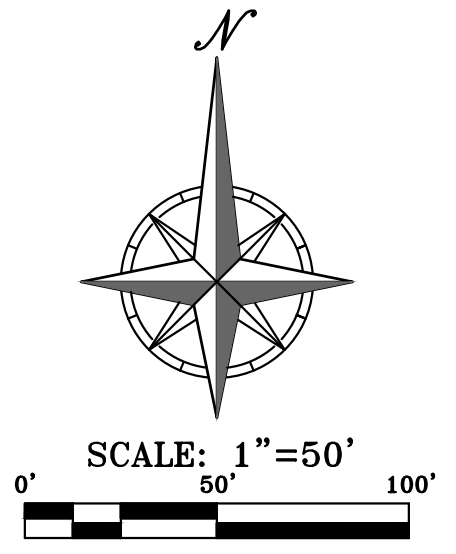


LEGEND

— PL —	PROPERTY LINE
- - LL - -	LOT LINE
- - R/W - -	RIGHT-OF-WAY
=====	2' CURB & GUTTER
=====	6" CURB
— B/L —	BUILDING SETBACK LINE
[Solid Grey Box]	ASPHALT PAVEMENT
[Dotted Box]	PROPOSED BUILDING
[Cross-hatched Box]	CONCRETE PAVEMENT
[Stippled Box]	CONCRETE SIDEWALK

LEGAL DESCRIPTION:

LOT 3, RAYMORE MARKET CENTER, A SUBDIVISION OF LAND IN THE CITY OF RAYMORE, CASS COUNTY, MISSOURI.
GROSS AREA = ±1.0068 ACRES / ± 43,856 SQ.FT.



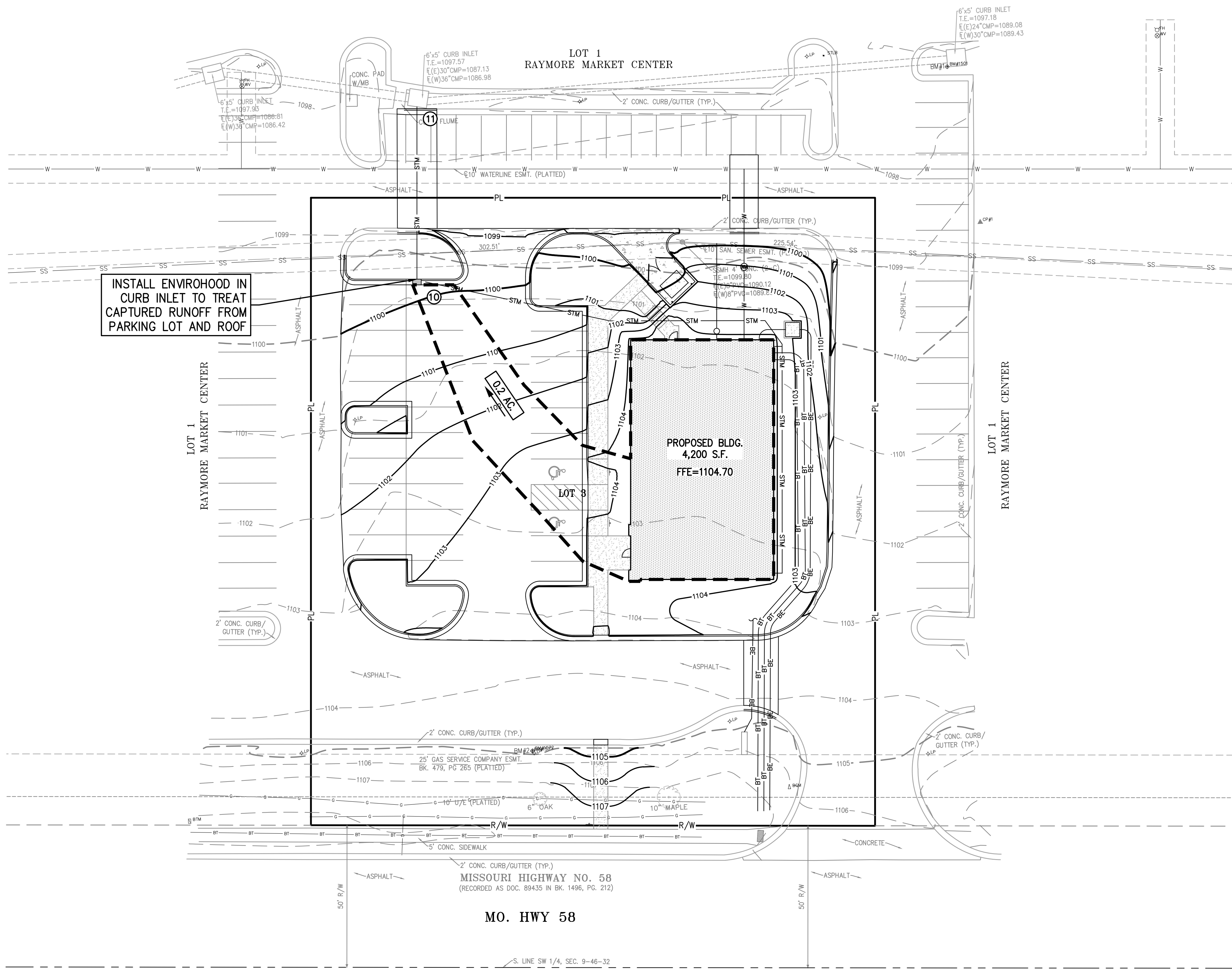
PHELPS ENGINEERING, INC.
 1270 N. Winchester
 Olathe, Kansas 66061
 (913) 393-1155
 Fax (913) 393-1166
 www.phelpsenr.com



OVERALL SITE PLAN
 HEARTLAND DENTAL
 LOT 3, RAYMORE MARKET CENTER
 RAYMORE, CASS COUNTY, MISSOURI

PROJECT NO.	201117	No.	Date	By	App.
DATE: 12-3-2020	DRAWN: SNH				
CHECKED: DAF	APPROVED: JDC				
CORPORATE AUTHORIZATION					
LAND SURVEYING - LS-82					
ENGINEERING - E-361					
CERTIFICATE OF AUTHORIZATION					
LAND SURVEYING-200700128					
ENGINEERING-200700308					

SHEET
 C0



INSTALL ENVIROHOOD IN CURB INLET TO TREAT CAPTURED RUNOFF FROM PARKING LOT AND ROOF

PROPOSED BLDG.
4,200 S.F.

MO. HWY 58

STORM DRAINAGE CALCULATIONS

DESIGN CRITERIA: K25 = 1.1; K100 = 1.25; n = 0.018 (RCP); STORM FREQUENCY = 10 YEAR; A.I. = AREA INLET; J.B. = JUNCTION BOX; C.I. = CURB INLET; C.C. = CURB CUT; G.I. = GRATE INLET; HEIGHT OF STRUCTURE = RIM ELEV. MINUS FLOWLINE OUT.

No.	Structure	I. RUNOFF						III. PIPE DESIGN													REMARKS			
		INCREMENTAL		CUMULATIVE		SYSTEM TIME OF CONCENTRATION "Tc" AT STRUCTURE (MIN)	RAINFALL INTENSITY "Ia" / "I100" (IN/HR)	ANTECEDENT PRECIPITATION FACTOR "Kc1" / "K100"	RUNOFF "Qc1" / "Q100" (CFS)	STRUCTURE			PIPE							Pipe Material				
		RUNOFF COEFFICIENT "C"	AREA "A" (ACRES)	C x A	AREA "A" (ACRES)					C x A	Upstream Structure Number	Downstream Structure Number	Upstream Structure Rim Elevation	Diameter "D" (IN)	Length "L" (FT)	Upstream Invert Elevation	Downstream Invert Elevation	Slope "S" (FT/FT)	Travel Time in Pipe "TT" (min)			Velocity Full Vc (FPS)	Runoff Qc1 (CFS)	Runoff Qc2 (CFS)
1	10	0.90	0.20	0.18	0.20	0.18	5.00	8.53	1.10	1.7	10	11	1100.10	15	61.00	1095.40	1089.30	0.1000	0.06	16.8	1.7	2.3	20.4	HDPE

UTILITY NOTES:
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ENVIROHOOD STRUCTURE

The Nyloplast® EnviroHood™ is an innovative stormwater management device attached to the inside of a catch basin or manhole designed to prevent the outflow of floating debris and oil.

The need for cleaner stormwater has caused municipal leaders to demand forward thinking solutions to improve their overall water quality. The EnviroHood offers lower installed costs and less intrusive installations than competitive devices.

ENGINEERED FOR OPTIMAL PERFORMANCE

The innovative design incorporates the same proven corrugation technology used in ADS 15" pipe products. This delivers maximum strength to weight ratio and ensures the structure is capable of supporting the hydraulic forces of a rainfall event.

FEATURES & BENEFITS:

- Made from High Density Polyethylene (HDPE) for lightweight and sturdy design
- Completed design eliminates flat surfaces and provides increased structural capacity
- Effective low-cost solution for storm water treatment
- Easy to clean
- Highly corrosion-resistant for long service life

NYLOPLAST ENVIROHOOD SPECIFICATION

SCOPE
This specification describes the EnviroHood for use in stormwater conveyance systems.

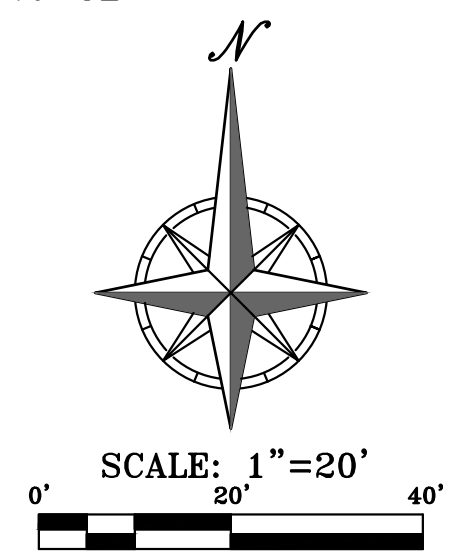
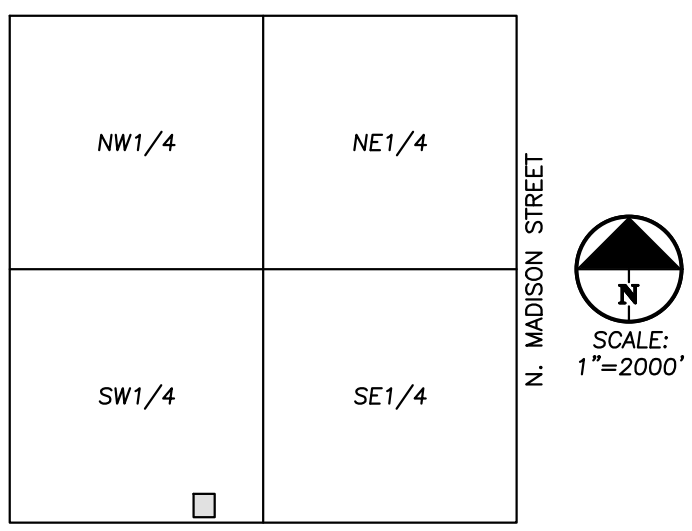
REQUIREMENTS

- All hoods shall be constructed of polyethylene.
- The size and position of the hood shall be determined by the outlet pipe size as per manufacturer's recommendation.
- The bottom of the hood shall extend downward a minimum distance of 6" (15 cm) for pipes < 12" (30 cm).
- Installation hardware and instructions shall be provided by manufacturer.
- Installation shall be in accordance with Nyloplast installation procedures and those issues by local building/construction regulations.

STRUCTURE TYPE	OUTLET COVERED	PART NUMBER	GENERAL DIMENSIONS IN INCH
48" (120 cm) Round Concrete	up to 30" (76 cm)	SE23048R	39.2 (100) x 14.8 (380) x 17.3 (440) 20.0 (508)
48" (120-135 cm) Round Concrete	up to 24" (61 cm)	SE2448R	41.7 (1060) x 14.8 (380) x 16.5 (70) 26.5 (700)
54" (60" (135-150 cm) Round Concrete	up to 30" (76 cm)	SE3054R	48.7 (1220) x 20.5 (500) x 30.5 (770) 33.1 (850)
54" (60" (135-150 cm) Round Concrete	up to 24" (61 cm)	SE2454R	39.2 (100) x 11.8 (300) x 17.2 (440) 26.4 (680)
60" (150 cm) Round Concrete	up to 24" (61 cm)	SE2460R	43.8 (1100) x 13.3 (400) x 26.5 (700) 37.0 (940)
60" (150 cm) Round Concrete	up to 30" (76 cm)	SE3060R	48.8 (1220) x 26.3 (680) x 36.5 (950) 34.8 (890)
72" (180 cm) Round Concrete	up to 30" (76 cm)	SE3072R	58.8 (1480) x 26.3 (680) x 36.5 (950) 34.8 (890)
72" (180 cm) Round Concrete	up to 24" (61 cm)	SE2472R	43.8 (1100) x 13.3 (400) x 26.5 (700) 37.0 (940)
72" (180 cm) Round Concrete	up to 36" (91 cm)	SE3672R	63.8 (1620) x 26.3 (680) x 36.5 (950) 34.8 (890)
72" (180 cm) Round Concrete	up to 42" (107 cm)	SE4272R	68.8 (1740) x 26.3 (680) x 36.5 (950) 34.8 (890)
72" (180 cm) Round Concrete	up to 48" (122 cm)	SE4872R	73.8 (1860) x 26.3 (680) x 36.5 (950) 34.8 (890)
72" (180 cm) Round Concrete	up to 54" (137 cm)	SE5472R	78.8 (2000) x 26.3 (680) x 36.5 (950) 34.8 (890)

For more information on EnviroHood and other ADS products, please contact our Customer Service Representatives at 1-800-811-8110

Advanced Drainage Systems, Inc.
4645 Freeman Blvd., Willard, OH 43085
1-800-811-8110 www.ads-pipe.com



DRAINAGE MAP
HEARTLAND DENTAL
LOT 3, RAYMORE MARKET CENTER
RAYMORE, CASS COUNTY, MISSOURI

PHILIPS ENGINEERING, INC.
1370 N. Winchester
Olathe, Kansas 66061
(913) 393-1155
Fax: (913) 393-1165
www.philipsengineering.com

**PLANNING
ENGINEERING
IMPLEMENTATION**

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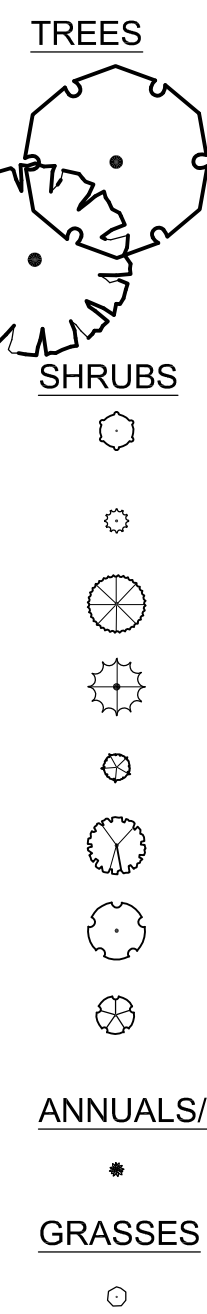
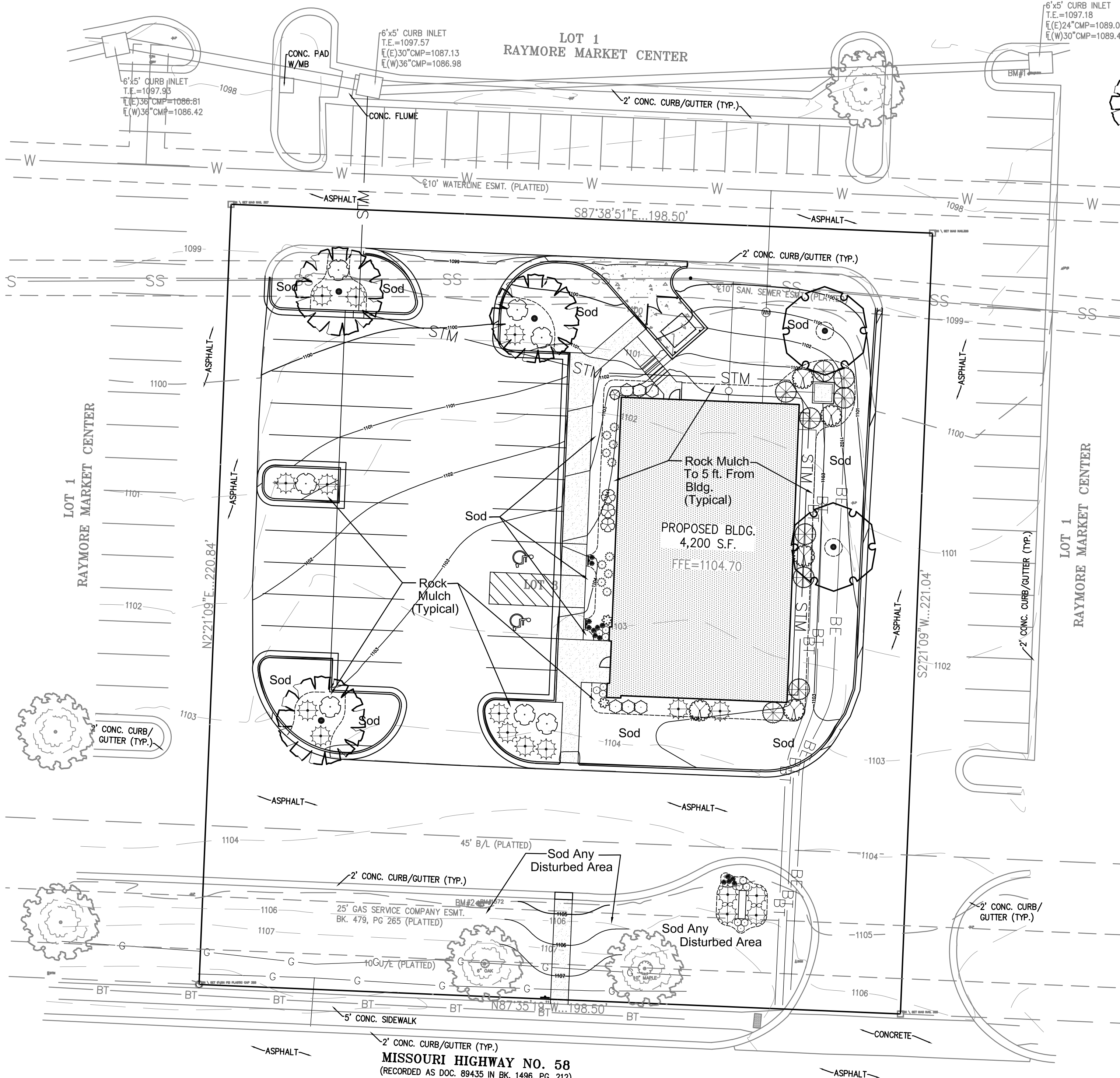
PROJECT NO. 201117
DATE: 12-3-2020
DRAWN: SNH
CHECKED: DAF
APPROVED: JDC
DATE OF AUTHORIZATION: 12/3/20
LAND SURVEYING - LS-82
ENGINEERING - E-361
DATE OF AUTHORIZATION: 12/3/20
LAND SURVEYING: 200701028
ENGINEERING: 200303038

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PLANT SCHEDULE

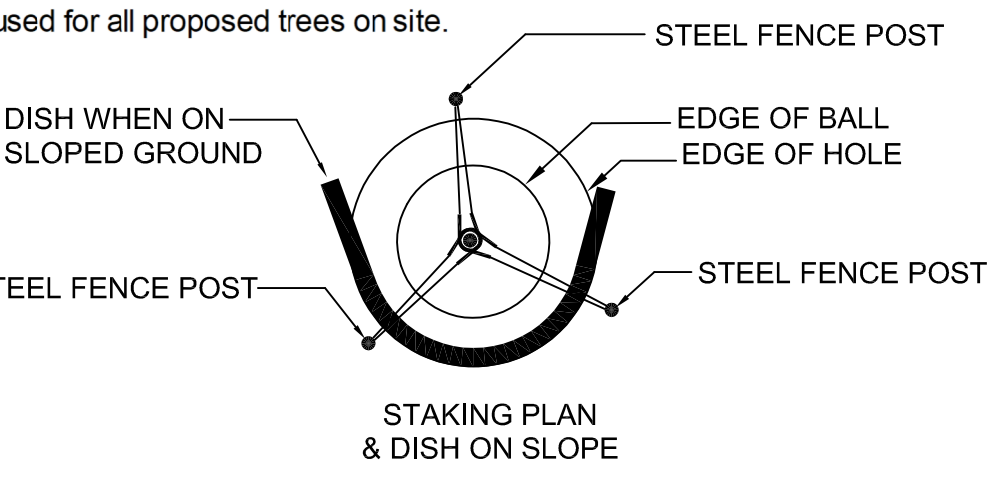
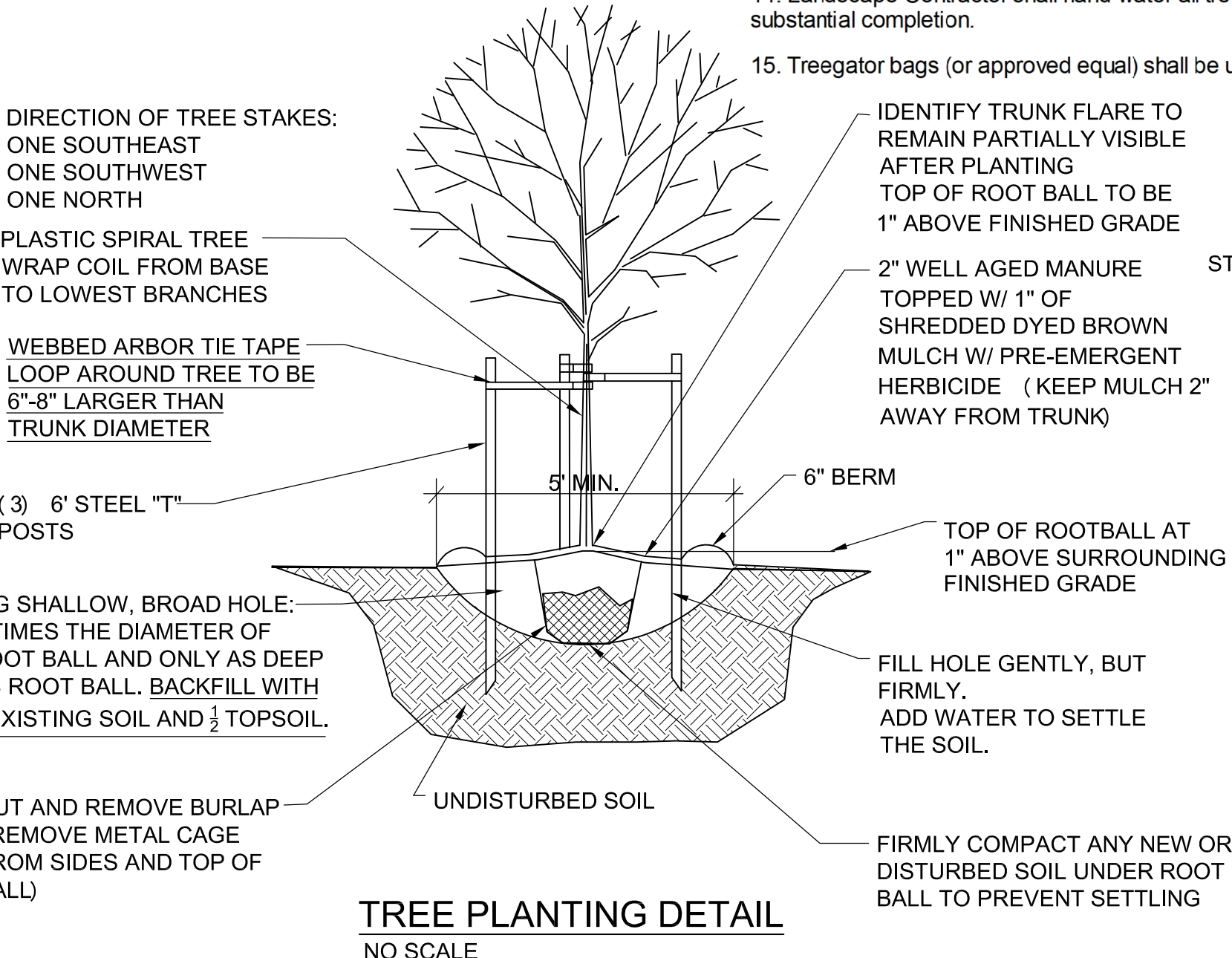
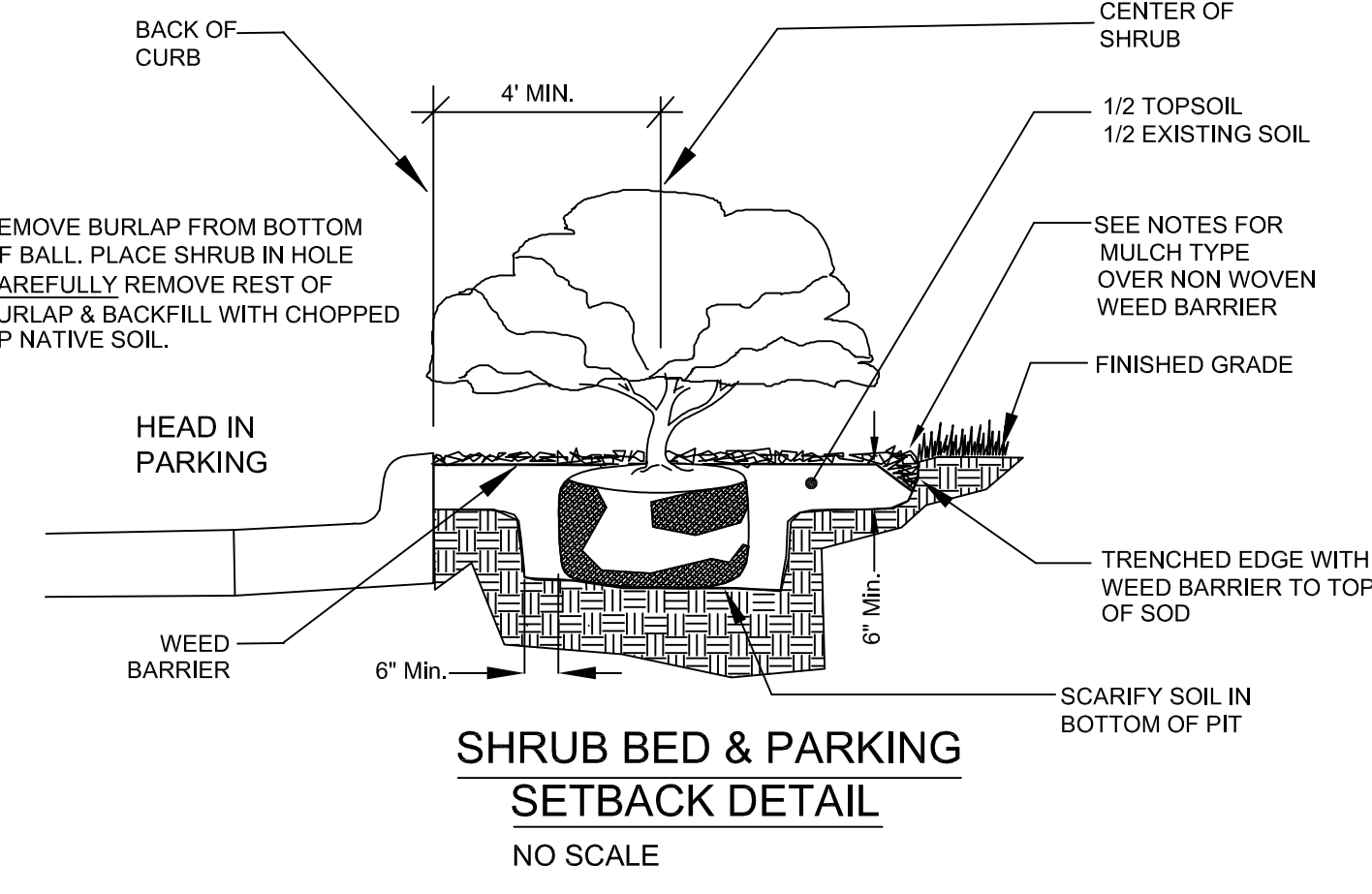
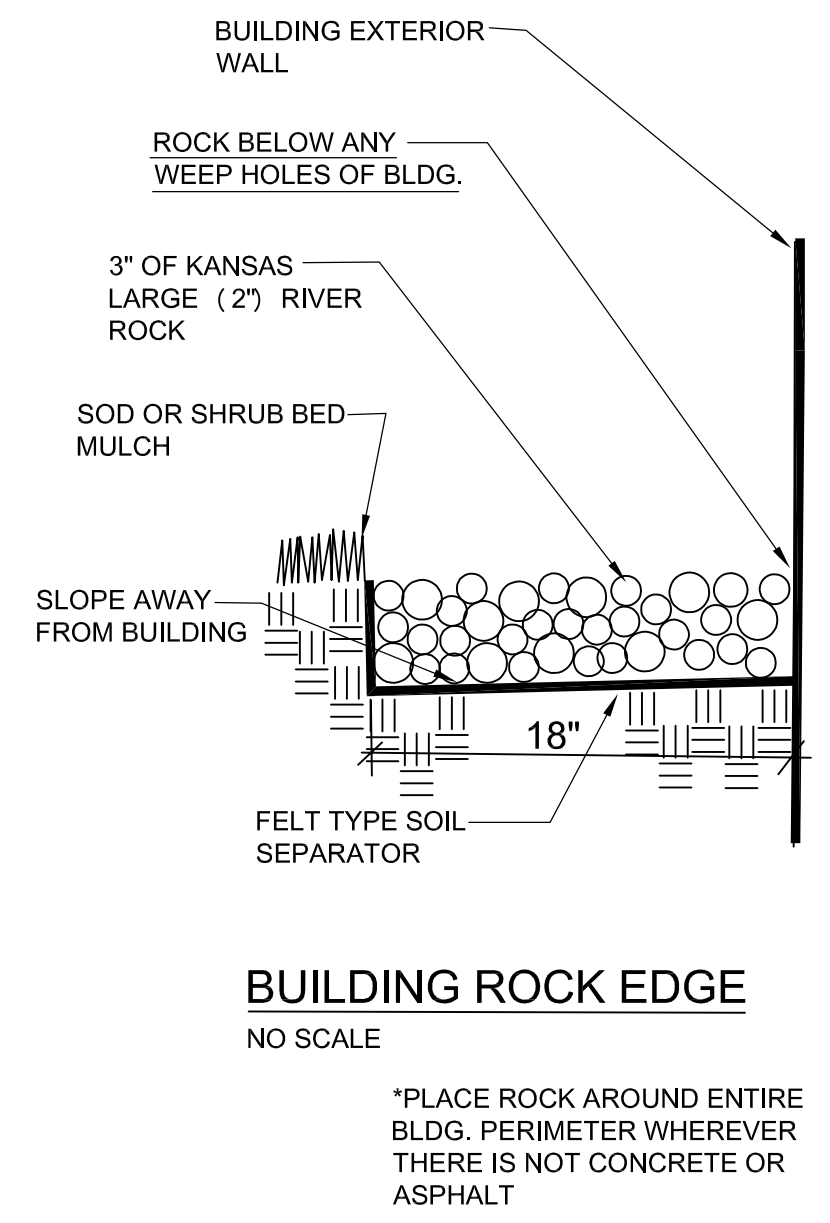
GENERAL LANDSCAPE NOTES:



QTY	BOTANICAL / COMMON NAME	CONT	CAL
2	Acer platanoides 'Superform' / Superform Maple	B & B	2.5" Cal
3	Gymnocladus dioica 'Stately Manor' / Stately Manor Kentucky Coffee Tree Seedless	B & B	2.5" cal.
6	Hypericum frondosum 'Sunburst' / Sunburst Hypericum 18"-24" hgt. & sp.	3 gal	
10	Ilex glabra 'SMNIGAB17' TM / Gem Box Inkberry Holly 12"-15" hgt. & sp.	3 gal	
9	Juniperus chinensis 'Sea Green' / Sea Green Juniper 24"-30" hgt. & sp.	5 gal	
17	Juniperus virginiana 'Grey Owl' / Grey Owl Juniper 24" sp.	3 gal	
1	Juniperus virginiana 'Taylor' / Taylor Eastern Redcedar B&B	6ft.	
5	Physocarpus opulifolius 'Center Glow' / Center Glow Ninebark 24"-30" hgt. & sp.	5 gal	
7	Rhus aromatica 'Gro-Low' / Gro-Low Fragrant Sumac 18"-24" sp.	3 gal	
3	Spiraea x bumalda 'Anthony Waterer' / Anthony Waterer Spiraea 18"-24" hgt.	3 gal	
14	Cerastogma plumbaginoides 'Blue Plumbago' / Blue Plumbago	1 gal	
12	Calamagrostis acutiflora 'Karl Foerster' / Feather Reed Grass 24" hgt.	3 gal	

Dedicated Design Irrigation System:

- If an irrigation system is not provided with the Landscape Plans, the Contractor is to design a 100 percent coverage irrigation system, including comprehensive engineering analysis by a qualified Professional Engineer, using performance requirements and design criteria indicated per Owner's direction.
- Irrigation Contractor to design and install irrigation system and shall include all required components including, but not limited to, rain shut off sensor, controller, taps, backflow preventers, all approvals, and all fees required by city. Components to be manufactured by Rainbird or Hunter unless alternate manufacturer is expressly approved by the Owner or Owner's Representative.
- Irrigation Contractor shall submit a copy of plan to Owner's Representative or Project Landscape Architect for review prior to installation of system.
- Irrigation Contractor shall conduct a training session with the owner (or representatives) demonstrating the operation of the system and the controller. As part of this training, Contractor shall provide one spring start-up and one fall shut-down of the system.
- Landscape Contractor to provide cost estimates for irrigation system for all plant material indicated on plans.
- Irrigation system shall be tested and approved by Owner's Representative or Landscape Architect prior to backfilling trenches. Irrigation system shall be fully operational prior to the installation of any plant materials.
- All planting beds shall be watered by the irrigation system.
- General Contractor to supply all power required to operate irrigation system.
- Irrigation Contractor shall notify Owner's Representative or Project Landscape Architect of any changes to irrigation conduit locations or sizes.
- It is the Landscape Contractor's responsibility to determine water application rates and timer cycling. The Irrigation Contractor will instruct the Owner on the operation and programming of the controller.
- All zones and main lines will be pressure-tested at the time of installation and again prior to building turnover. Results shall be submitted in writing to Project Landscape Architect and Owner or Owner's Representative.
- Irrigation shall not spray on building, sidewalks, and drives.
- Irrigation controller location shall be coordinated with other wall-mounted service panels per Owner's approval.
- Landscape Contractor shall hand-water all trees, and turf grass areas until substantial completion.
- Treeragor bags (or approved equal) shall be used for all proposed trees on site.



- Transplant Additives:**
- Apply a commercial transplant additive (approved by the Landscape Architect) to all trees, shrubs and groundcover at rates recommended by the manufacturer during the planting. This item shall be subsidiary to other planting items.
 - Transplant additive shall be Horticultural Alliance "DIEHARD Transplant" (or approved equal) mycorrhizal fungal transplant inoculant or equivalent equal containing the appropriate species of mycorrhizal fungi and bacteria, fungi stimulant, water retaining agents, mineral & organic nutrients and inert ingredients.
 - Demonstrate installation of all transplant additives for this project to the Landscape Architect. Provide actual additive product as evidence of sufficient quantity of product. (Empty product bags to be stockpiled for inspection by the Landscape Architect prior to disposal).
 - Number of transplant additive packets per tree, shrub or groundcover shall be applied according to the manufacturer's recommended rates and instructions. For all plants the packet mix shall be evenly distributed into the upper approximately 8" of backfill soil next to the rootball. Do not place mix in the bottom of the planting pit.
 - Furnishing and application of transplant additive shall be subsidiary to the planting operations.

Utility Note:
Utilities shown on plan are diagrammatic and some may be missing. Before starting any construction call appropriate locating service. In Missouri call 1-800-DIG-RITE (344-7483) to have utilities located.



Landscape Plan
Heartland Dental
Raymore, Missouri

Opperland LandDesign, LLC
Land Planning & Landscape Architecture
18990 West 117th Street
Olathe, Kansas 66061
pete@opperland.com
913.894.9407

