

STORMWATER MANAGEMENT A

THIS LOT IS SUBJECT TO THE CITY OF COLUMBIA STORMWATER ORDINANCE, CHAPTER 12A, WATER QUALITY AND DETENTION REQUIREMENTS. THIS PLAN IS CONCEPTUAL IN NATURE AND A FULL STORMWATER MANAGEMENT PLAN WITH BE PROVIDED WITH FUTURE CONSTRUCTION DOCUMENTS. FUTURE DETENTION SHALL BE DESIGNED TO LIMIT THE POST—DEVELOPMENT RELEASE RATES TO THE PRE—DEVELOPMENT FLOW RATES FOR THE 100—YEAR EVENT FOR LOTS 1—A & 1—B GRACE COVENANT CHURCH SUBDIVISION PLAT 1—A AND LOT 2, GRACE COVENANT CHURCH SUBDIVISION. WATER QUALITY FOR THESE LOTS SHALL TREAT NEW IMPERVIOUS AREAS TO A LEVEL OF SERVICE OF 3.

STREAM BUFFER STATEMENT

THIS TRACT IS REGULATED BY THE CITY OF COLUMBIA STREAM BUFFER ORDINANCE AS DETERMINED BY THE USGS MAP FOR COLUMBIA QUADRANGLE, BOONE COUNTY, MISSOURI AND ARTICLE X OF CHAPTER 12A OF THE CITY OF COLUMBIA CODE OF ORDINANCES. NO STREAM BUFFER EXISTS ON THIS SITE.

FLOOD PLAIN STATEMENT

A PORTION OF THIS TRACT IS LOCATED WITHIN A FLOOD HAZARD AREA AS DEFINED BY CITY OF COLUMBIA ORDINANCE 29—2.3 (d)(4), PER THE BOONE COUNTY FLOOD INSURANCE RATE MAP (FIRM) PANEL #29019C0280E, DATED APRIL 19, 2017.

SPECIAL FLOOD HAZARD AREA DEFINED AS ZONE X, HAVING 0.2% ANNUAL CHANCE FLOOD HAZARD, OR AREA OF 1% ANNUAL CHANCE FLOOD WITH AVERAGE DEPTH LESS THAN ONE FOOT OR WITH DRAINAGE AREAS OF LESS THAN ONE SQUARE

APPROVED BY THE CITY OF COLUMBIA PLANNING AND ZONING COMMISSION THIS 2187 DAY OF

JANUARY 2024.

\$ARA/LOE, CHAIRMAN

ACCEPTED BY ORDINANCE OF THE CITY COUNCIL OF COLUMBIA

THIS 18 DAY OF MUYCH, 2020.

BRIAN TREECE, MAYOR

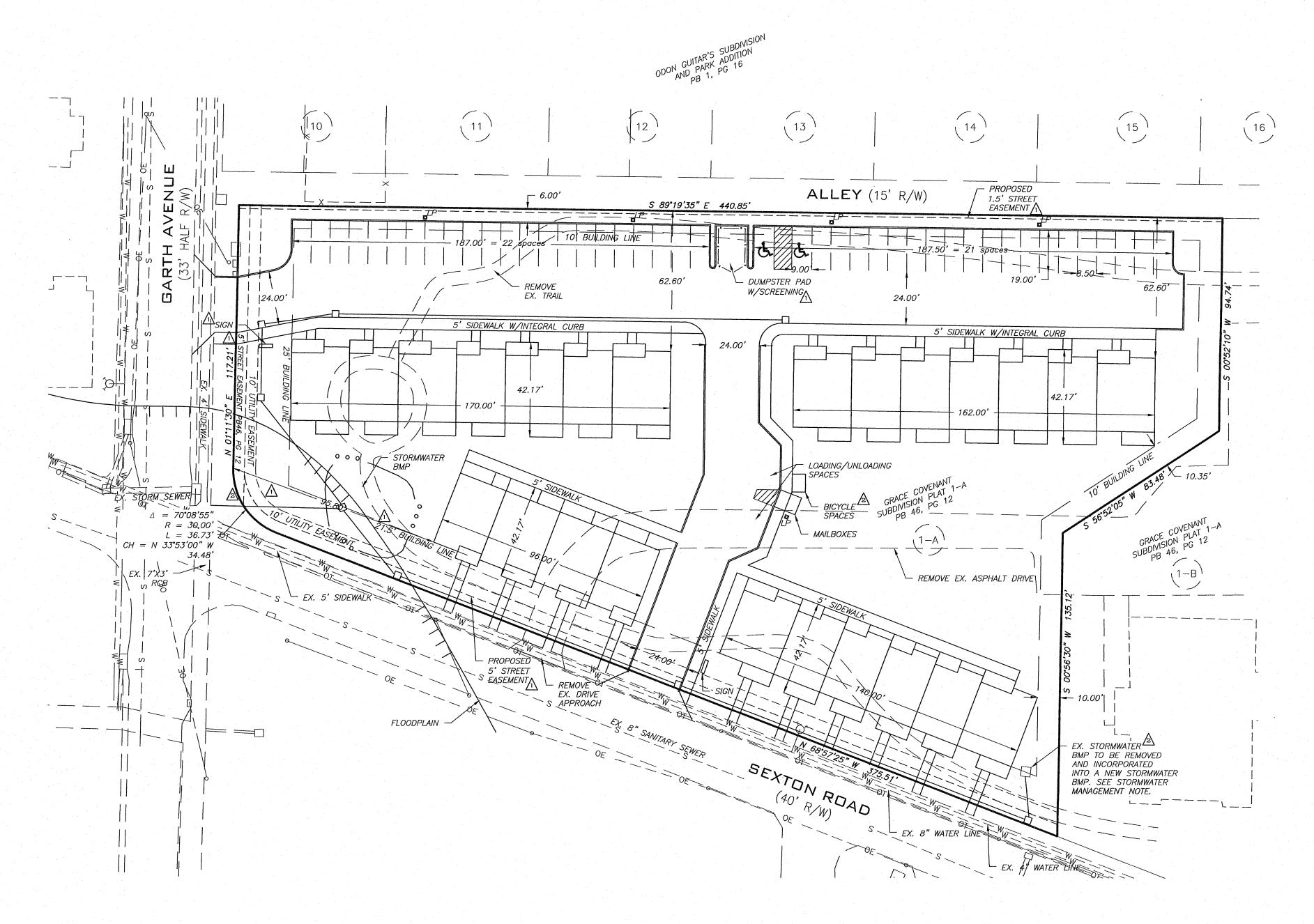
SHEELA AMIN, CITY CLERK

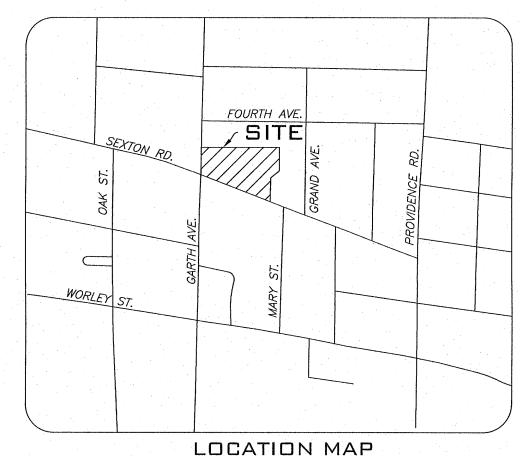
ORDINANCE # 024570

SCALE: 1" = 30'

0 15 30 60

BEARINGS ARE REFERENCED TO
GRACE COVENANT CHURCH SUBDIVISION,
PLAT 1—A AS RECORDED IN
PLAT BOOK 46, PAGE 12





NOT TO SCALE

SITE DATA

ACREAGE: 1.96 ACRES
SEC.—TWNSHP.—RNG.: NW ¼ 12—48—13
EXISTING ZONING: PD
PROPOSED ZONING: PD

THE HOUSING AUTHORITY OF THE CITY OF COLUMBIA, MISSOURI 201 SWITZLER STREET

COLUMBIA, MO 65203

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2 12/00/10

11/16/20

CITY COMMENTS

CITY COMMENTS

DRIGINAL

REVISIONS

LEGAL DESCRIPTION

A TRACT OF LAND LOCATED IN THE NORTHWEST QUARTER (NW 1/4) OF SECTION 12, TOWNSHIP 48 NORTH, RANGE 13 WEST, CITY OF COLUMBIA, BOONE COUNTY, MISSOURI, BEING ALL OF LOT 1—A OF GRACE COVENANT CHURCH SUBDIVISION, PLAT 1—A AS RECORDED IN PLAT BOOK 46, PAGE 12, RECORDS OF BOONE COUNTY, MISSOURI.

GENERAL NOTES

1. BUILDING SIZE AND DIMENSIONS ARE APPROXIMATE.

- 2. ALL PROPOSED UTILITIES ARE SHOWN FOR GENERAL LOCATION PURPOSES ONLY AND MAY BE REFINED ON FINAL CONSTRUCTION DOCUMENTS.
- 3. THIS DEVELOPMENT MAY BE BUILT IN MULTIPLE PHASES.
- 4. 1 MONUMENT SIGN EACH PROPOSED ALONG BOTH GARTH AVENUE AND SEXTON ROAD BEING A MAXIMUM OF 16 SQUARE FEET IN AREA AND 6' HEIGHT. ALL SIGNAGE TO BE COMPLIANT WITH SECTION 29-4.8 OF THE CITY OF COLUMBIA CODE OF ORDINANCES.
- 5. ALL LIGHTING SHALL BE IN ACCORDANCE WITH THE CITY OF COLUMBIA LIGHTING ORDINANCE. ALL LIGHTING SHALL BE SHIELDED AND DIRECTED INWARD AND DOWNWARD AWAY FROM RESIDENCES, NEIGHBORING PROPERTIES, PUBLIC STREETS, AND OTHER PUBLIC

DENSITY

 $TOTAL\ LOT\ AREA\ =\ 1.96\ AC.$

PROPOSED # OF UNITS = 16

PROPOSED DENSITY = 12.25 UNITS/AC.

IMPERVIOUS AREAS

TOTAL LOT AREA = 1.96 AC.

EX. IMPERVIOUS AREA CIRCA 1992 = 0.29 AC. (14.8%)

EX. IMPERVIOUS AREA CIRCA 2020 = 0.23 ACA. (11.7%)

PROPOSED IMPERVIOUS AREA = 1.13 AC. (57.7%)

PROPOSED PERVIOUS (LANDSCAPE) AREA = 0.83 AC. (42.3%)

PARKING DATA

REQUIRED:

10 4-BEDROOM UNITS @ 2.5 SPACES/UNIT = 25 SPACES 6 3-BEDROOM UNITS @ 2.5 SPACES/UNIT = 15 SPACES 8 2-BEDROOM UNITS @ 2 SPACES/UNIT = 16 SPACES

TOTAL REQUIRED = 56 SPACES

56 SPACES (3 OF WHICH ARE REQUIRED TO BE ADA ACCESSIBLE SPACES, WITH 1 BEING VAN ACCESSIBLE);

4 REQUIRED BICYCLE SPACES, (MAY BE COUNTED TOWARDS TOTAL REQUIRED SPACES)

PROVIDED:

41 REGULAR SPACES
2 ADA ACCESSIBLE SPACES (BOTH VAN ACCESSIBLE)
4 BICYCLE SPACES

TOTAL PROVIDED = 47 SPACES = 1.96 SPACES/UNIT(24)



A CIVIL GROUP
-CIVIL ENGINEERING-

-PLANNING-

-SURVEYING-

3401 BROADWAY

BUSINESS PARK COURT

PH: (573) 817-5750

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MISSOURI CERTIFICATE OF

AUTHORITY: 2001006116

THIS DOCUMENT HAS BEEN

SUITE 105 COLUMBIA, MO 65203

February 4, 2021				
PROJECT#	COHA20.02			
DRAWING #	COHA20-02			
DRAWN BY:	KPM	-		
SHEET	C101	· .		
SHEET 1	0F 2			

LANDSCAPING NOTES

1. <u>PROPOSED AREAS</u>: TOTAL AREA OF SITE= 1.96 AC. = 85,226 SQ.FT.

EX. SIDEWALK/DRIVEWAY PAVEMENT= 11,035 SQ.FT. (12.9%) EX. LANDSCAPING AREA= 75,206 SQ.FT. (87.1%)

PROP. NEW BUILDING AREA = 21,804 SQ.FT. PROP. NEW PARKING LOT PAVEMENT= 22,622 SQ.FT. PROP. NEW SIDEWALK PAVEMENT= 4,670 SQ.FT.

TOTAL PROP. IMPERVIOUS AREA = 49,096 SQ.FT. (57.6%) TOTAL PROP. LANDSCAPING AREA= 36,130 SQ.FT. (42.4%)

OR 2 CONIFEROUS TREES AT 8-FEET IN HEIGHT.

2. <u>TREE PRESERVATION:</u> NO CLIMAX FOREST OR SIGNIFICANT TREES EXISTS ON SITE. THERE ARE 10 EXISTING SIGNIFICANT TREES (20"+ DBH) ON THE SITE OF WHICH 25% OR 3, SHALL BE PRESERVED DURING DEVELOPMENT. IF A PRESERVED SIGNIFICANT TREE MUST BE REMOVED, IT SHALL BE

REPLACED BY 3 MEDIUM TO LARGE DECIDUOUS TREES OF 2" CALIPER

3. <u>STREET FRONTAGE LANDSCAPING:</u>

A. IN ACCORDANCE WITH SECTION 29-4.4(D)(1) ALL PARKING PAVED AREAS MORE THAN 40 FEET IN LENGTH WITHIN 25 FEET OF STREET RIGHT-OF-WAY SHALL BE IMPROVED WITH A LANDSCAPING BUFFER STRIP SIX-FOOT WIDE IN ACCORDANCE WITH PROVISIONS OF SECTION 4.4(E)(2). SEE NOTE 5 BELOW FOR COMPLIANCE WITH THIS REQUIREMENT.

B. IN ACCORDANCE WITH SECTION 29-4.4(D)(2) STREET TREE LANDSCAPING SHALL BE INSTALLED AS FOLLOWS:

PROVIDENCE ROAD FRONTAGE = 42.5 L.F. 1 TREE/ 40 FT = 42.5/40 = 1.06 OR 2 TOTAL TREES 30% LARGE TREES = 1 TREE 30% MEDIUM TREES = 1 TREE REMAINING TREE VARIETIES = 0 TREE

PROPERTY EDGE BUFFERING: THE SITE IS ZONED M—OF AND ADJACENT PROPERTIES ARE ZONED R-MF THEREFORE A LEVEL 2 BUFFER IS REQUIRED ON SUBJECT SITE.

A. LANDSCAPE BUFFER SHALL BE DESIGNED SO THAT AT LEAST 80% OPACITY IS ACHIEVED, VIEWED HORIZONTALLY, IN THE SPACE BETWEEN ONE FOOT AND FIVE FEET ABOVE GRADE AT THE TIME OF

B. THE LANDSCAPE BUFFER SHALL INCLUDE THE FOLLOWING PLANT MIX:

B.a. 4 CATEGORIES CONTAINED IN SECTION 29-4.4(C)(6). 4 CATEGORIES ARE GRASS, SHRUBS, CONIFERS, AND MEDIUM SHADE TREE.

B.a.A. 1 TREE, 10' HEIGHT, 2" CALIPER AT TIME OF INSTALLATION REQUIRED FOR EVERY 200 SQ. FT. OF BUFFER AREA. TOTAL BUFFER AREA = $206' \times 4' = 824/200 = 4.12$ = 5 TREES (CONIFERS)

B.a.B. SHRUBS AND FLOWERING PLANTS THAT COVER A MINIMUM OF 50% OF THE REMAINING AREA WITH A MINIMUM OF 25% OF THAT PLANT MATERIAL BEING IN FLOWERING SHRUBS.

50% AREA = 824*0.5 = 412 S.F. AREA IN SHRUBS AT 1 SHRUB/25 S.F. = 412/25 = 17 SHRUBS 25% AREA = 412*0.25 = 103 S.F. FLOWERING SHRUBS AT 1 SHRUB/25 S.F. = 103/25 = 5 SHRUBS

THERE ARE EXISTING SCREENING FENCES ON THE NORTH AND WEST SIDES OF THE SITE. SCREEN ON SOUTH SIDE TO BE 6' WOOD FENCE (OR APPROVED EQUAL, VERIFY WITH ARCHITECT AND OWNER, SEPARATE APPROVAL BY ARBORIST REQUIRED FOR DIFFERENT DESIGN).

5. RIGHT-OF-WAY BUFFERING:

IN ACCORDANCE WITH SECTIONS 29-4.4(D)(1) AND 29-4.4(E)(2) A SIX-FOOT WIDE LANDSCAPE BUFFER STRIP HAS BEEN PROVIDED ON THIS SITE. EACH BUFFER STRIP SHALL PROVIDE AT LEAST 80% OPACITY, VIEWED HORIZONTALLY, IN THE SPACE BETWEEN ONE FOOT AND FIVE FEET ABOVE GRADE AT THE SCREEN LINE, AT THE TIME OF INSTALLATION, AND SHALL CONTAIN A MINIMUM FOUR CATEGORIES OF PLANTING MATERIAL AS CONTAINED IN SECTION 29-4.4(C)(6). BUFFER STRIP SPECIFICATIONS DETAILS FOLLOW:

RIGHTI-OF-WAY BUFFER ZONE (42.5 L.F.):

42.5' LENGTH * 6' WIDTH = 255 S.F. BUFFER AREA CATEGORY 1: 255 S.F./200 S.F. = 1.3 TREES. 2 TREES PROVIDED

CATEGORY 2: DECIDUOUS FLOWERING SHRUB VARIETY 1 = 5 SHRUBS

CATEGORY 3: DECIDUOUS/EVERGREEN SHRUB VARIETY 2 = 4

CATEGORY 4: TURF GRASS- MIN. 50% AREA COVERAGE = 128 S.F. (80% OPACITY ACHIEVED WITH 1 SHRUB/ 5 LINEAR FEET. 42.5 L.F./5 = 8.5 = 9 SHRUBS TOTAL REQUIRED, SEE CATEGORY

<u>PERCENTAGE TREES IN BUFFER:</u> TOTAL TREES IN BUFFER = 2 NEW TREES

2 TREES x 0.3 MED/LARGE TREES = MIN. 1 MEDIUM TREE 2 TREES X 0.3 ONE SPECIES = MAX. 1 TREE PER SPECIES (2 SPECIES SHOWN)

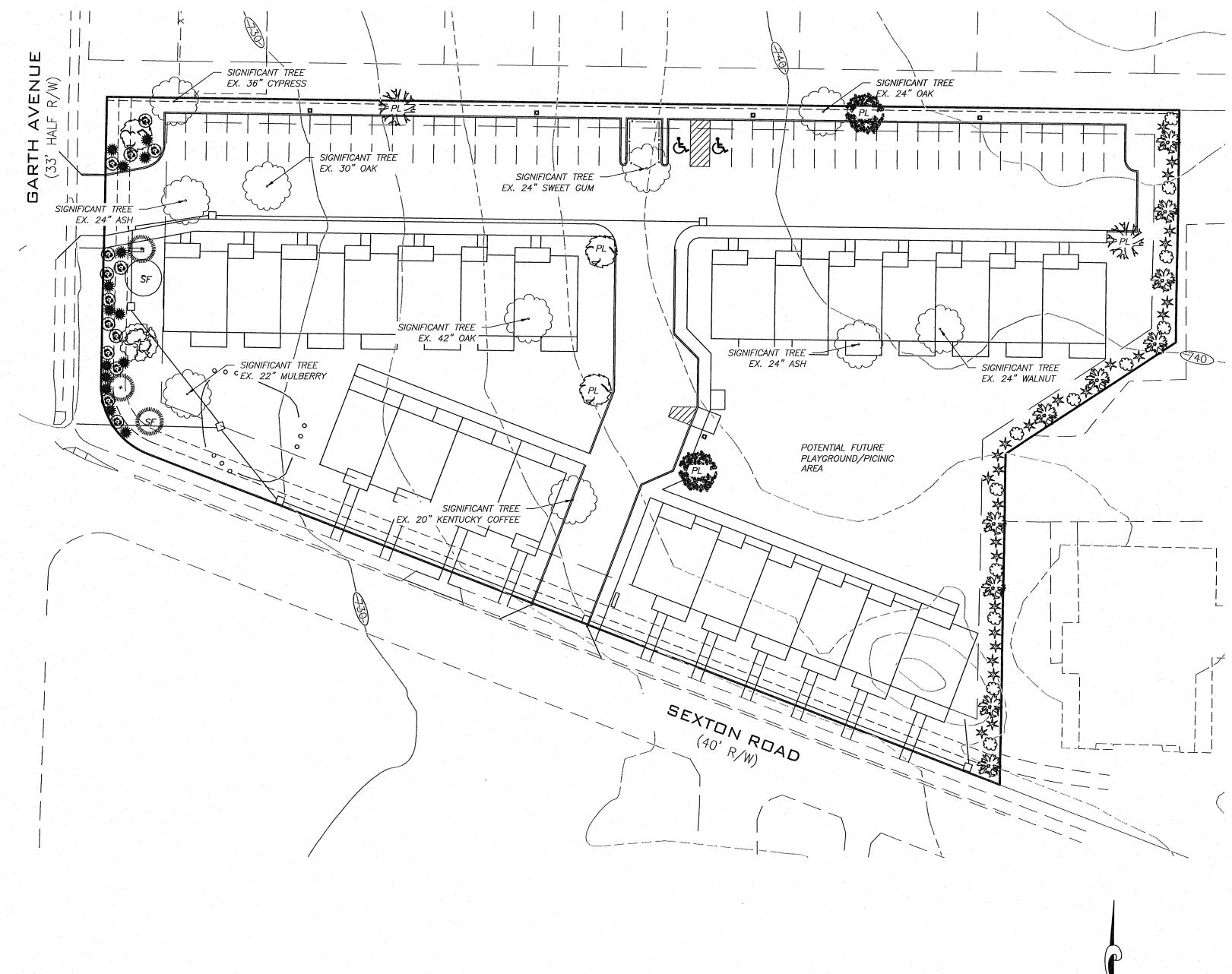
6. <u>PARKING AREA LANDSCAPING:</u>

2 & 3)

A. IN ACCORDANCE WITH SECTION 4.4(F)(4), 1 TREE REQUIRED PER EVERY 4,000 SQ. FT. OF PARKING PAVED AREA. PARKING PAVED $AREA = 5,054 \ SQ. \ FT. \ / \ 4,000 = 1.3 = 2 \ TREES \ REQUIRED.$ B. IN ACCORDANCE WITH SECTION 4.4(F)(5), OF THE 2 TREES REQUIRED ABOVE, A MINIMUM OF 30% SHALL BE MEDIUM SHADE TREES, AND A MINIMUM OF 40% SHALL BE LARGE SHADE TREES.

30% MEDIUM TREES = 1 MEDIUM TREE 40% LARGE TREES = 1 LARGE SHADE TREE REMAINING TREE VARIETIES = 0

7. LANDSCAPING CONTRACTOR MAY SUBMIT TO CITY ARBORIST ALTERNATE PLANTING LAYOUTS, TREE, SHRUB AND FLOWER MATERIALS OR SPECIES FOR APPROVAL PRIOR TO INSTALLATION, PROVIDED ANY REVISIONS COMPLY WITH THE CURRENT LANDSCAPING REQUIREMENTS.



		LANI	DSCAPING T	ΓABLE ΔΔ		
SYMBOL	QUANTITY	COMMON NAME	SCIENTIFIC NAME	CONTAINER/SIZE	SPACING	CATAGORY
FREET FRONTAGE						
	1	KENTUCKY COFFEETREE ESPRESSO	GYMNOCLADUS DIOICA	2" CAL — B&B	15' CENTERS	LARGE DECIDUOUS SHADE TREE – MATURE HEIGHT >45'
(SF)	1	FRONTIER ELM	ULMUS FRONTIER	2" CAL — B&B	15' CENTERS	LARGE DECIDUOUS SHADE TREE — MATURE HEIGHT >45'
	**************************************	EUROPEAN HORNBEAM	CARPINUS BETULUS	2" CAL — B&B	15' CENTERS	MEDIUM DECIDUOUS SHADE TREE — MATURE HEIGHT 30'—45'
30th 35 SF Co 3000	_	SUGAR TYME CRABAPPLE	MALUS SUTYZAM	4' HEIGHT	15' CENTERS	ORNAMENTAL TREE - MATURE HEIGHT < 20'
GHT-OF-WAY BUF	FERING					
	<u>-</u>	KENTUCKY COFFEETREE ESPRESSO	GYMNOCLADUS DIOICA	2" CAL — B&B	15' CENTERS	LARGE DECIDUOUS SHADE TREE — MATURE HEIGHT >45'
	1	DURA—HEAT RIVER BIRCH	BETULA NIGRA	2" CAL — B&B	15' CENTERS	MEDIUM DECIDUOUS SHADE TREE — MATURE HEIGHT 30'—45'
	2	OKLAHOMA REDBUD	CERCIS CANADENSIS	2" CAL — B&B	15' CENTERS	ORNAMENTAL TREE - MATURE HEIGHT < 20'
37.4. 37.4.	- · · · · · · · · · · · · · · · · · · ·	SUGAR TYME CRABAPPLE	MALUS SUTYZAM	4' HEIGHT	15' CENTERS	ORNAMENTAL TREE - MATURE HEIGHT < 20'
	14	SPICE BUSH	LINDERA BENZOIN	5 GAL	5' CENTERS	DECIDUOUS FLOWERING SHRUE VARIETY 1
*	14	TOR BIRCHLEAF SPIREA	SPIRAEA BETULIFOLIA	5 GAL	5' CENTERS	DECIDUOUS/EVERO REEN SHRUB VARIETY 2
ARKING LOT						
	2	RED MAPLE "SUN VALLEY"	ACER RUBRUM	2" CAL — B&B	15' CENTERS	LARGE DECIDUOUS SHADE TREE — MATURE HEIGHT >45'
PLA	2	EMER II — ALLEE ELM	ULMUS PARVIFOLIA — EMER II	2" CAL — B&B	15' CENTERS	LARGE DECIDUOUS SHADE TREE — MATURE HEIGHT >45'
PL	2	DURA—HEAT RIVER BIRCH	BETULA NIGRA	2" CAL — B&B	15' CENTERS	MEDIUM DECIDUOUS SHADE TREE – MATURE HEIGHT 30'–45'
PL H	_	OKLAHOMA REDBUD	CERCIS CANADENSIS	4' HEIGHT	15' CENTERS	ORNAMENTAL TREE - MATURE HEIGHT < 20'
ROPERTY EDG	E BUFFE	RING				
		EMERALD GREEN ARBORVITAE (THUJA OCCIDENTALIS)	2" CAL – B&B 10' HEIGHT	15' CENTERS	CONIFER OR UPRIGHT EVERGREEN TREE — MATURE HEIGHT >10'	
5073 5003	10	AMERICAN HOLLY (LLEX OPACA 'CROONENBURG')	2" CAL — B&B 10' HEIGHT	15' CENTERS	CONIFER OR UPRIGHT EVERGREEN TREE — MATURE	

NINEBARK

(PHYSOCARPUS

OPULIFOLIUS)

SPICE BUSH

(LINDERA BENZOIN)

10 20

BEARINGS ARE REFERENCED TO

ROCK BRIDGE CHRISTIAN CHURCH PLAT

2 AS RECORDED IN PLAT BOOK 46, PAGE 18 24"

5 GAL

ESE

CITY COMMENTS 2 02/01/21 CITY COMMENTS 101/06/21 6/1/20 DRIGINAL

REVISIONS

-CIVIL ENGINEERING--PLANNING--SURVEYING-3401 BROADWAY BUSINESS PARK COURT

A CIVIL GROUP

COLUMBIA, MO 65203 PH: (573) 817-5750 FAX: (573) 817-1677

SUITE 105

MISSOURI CERTIFICATE OF AUTHORITY: 2001006116

THIS DOCUMENT HAS BEEN ELECTRONICALLY SIGNED, SEALED AND DATED. **⊕** 9 **⊕** NUMBER E-25052 (E)> (3 < (E) JAY GEBHARDT MO PE-25052

DECIDUOUS

FLOWERING

SHRUB VARIETY

DECIDUOUS/EVER

GREEN SHRUB

VARIETY 2

5' CENTERS

5' CENTERS

February 4, 2021 PROJECT# WRCK20.01 DRAWING # WRCK20.01 PD PLAN

DRAWN BY:

SHEET C201

SHEET 2 OF 2