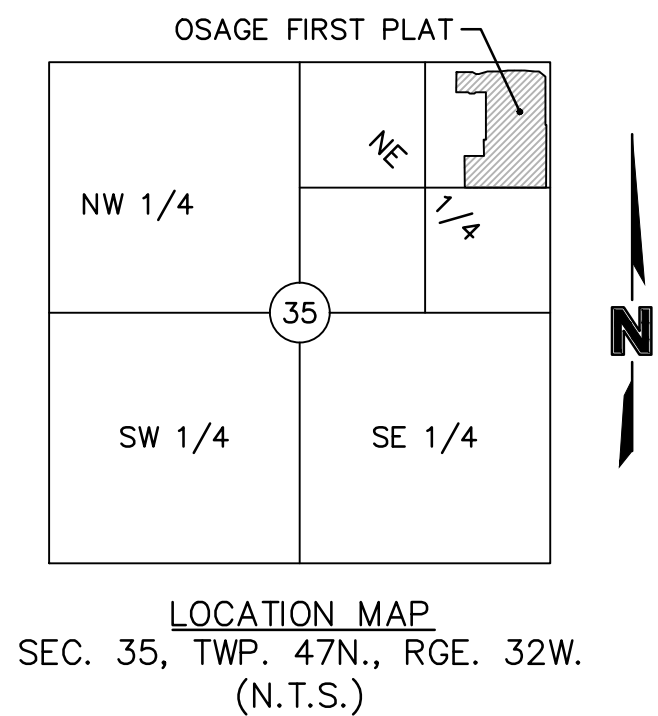


OSAGE
FIRST PLAT
GRADING & SITE DISTURBANCE PLANS

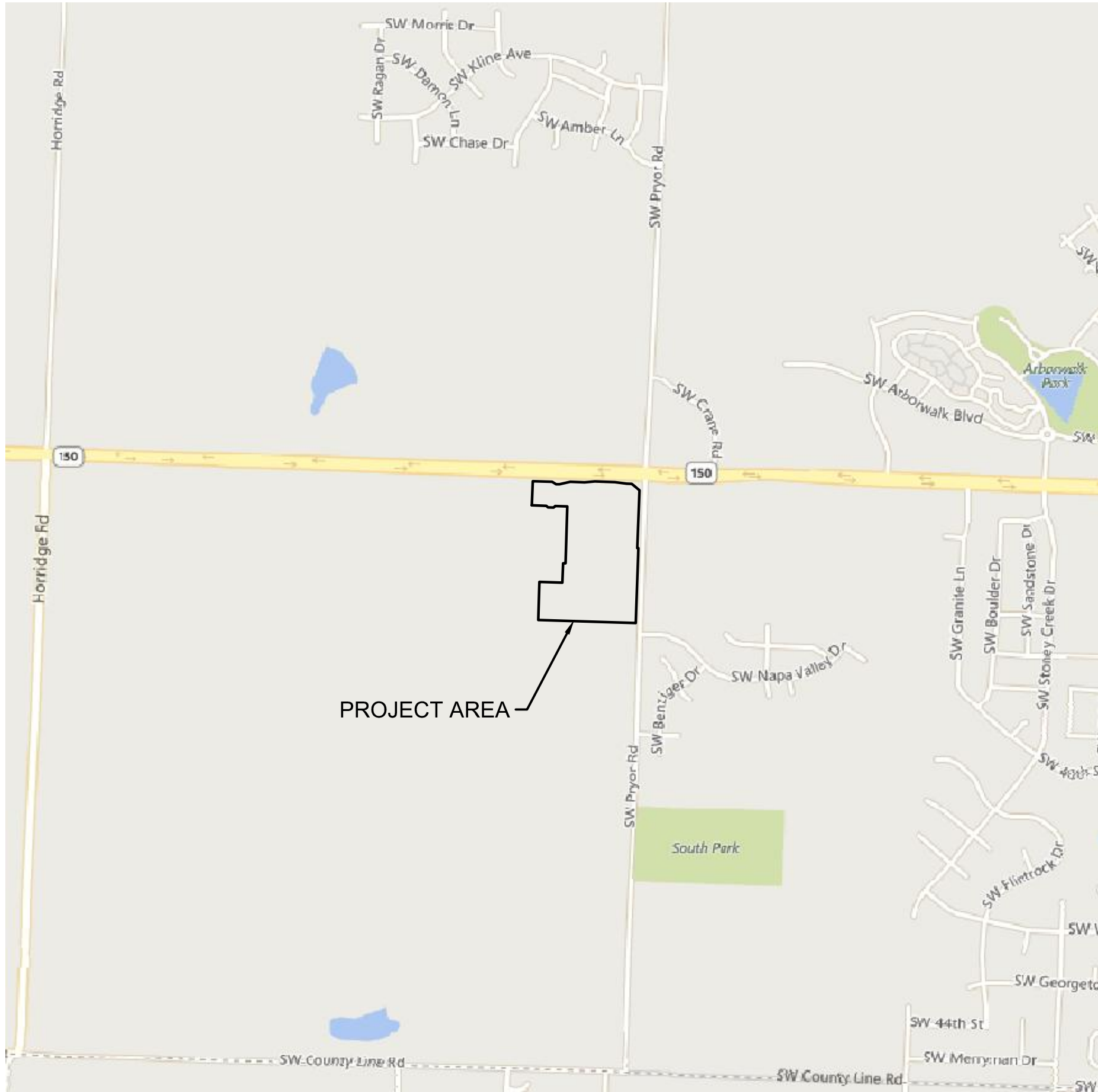
NE 1/4 SECTION 35, TOWNSHIP 47 N, RANGE 32 W.
IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

DISTURBED AREA: 21.29 ACRES



PROJECT TEAM & UTILITY CONTACT LIST	
OWNER / DEVELOPER CLAYTON PROPERTIES GROUP, INC. D.B.A. SUMMIT HOMES 120 SE 30TH STREET CONTACT: VINCENT WALKER LEE'S SUMMIT, MO 64082 PHONE: 816.246.6700 EMAIL: VINCENT@SUMMITHOMESKC.COM	UTILITY SERVICE NUMBERS NAME: LEE'S SUMMIT PUBLIC WORKS PHONE: 816-969-1800 NAME: LEE'S SUMMIT WATER & SERVICES DEPARTMENT PHONE: 816-969-1940 NAME: SPIRE (MGE) PHONE: 314-342-0500 NAME: AT&T PHONE: 800-286-8313 NAME: EVERGY PHONE: 816-471-5275 NAME: SPECTRUM (TWC) PHONE: 877-772-2253 NAME: GOOGLE FIBER PHONE: 877-454-6959
ENGINEER OLSSON 1301 BURLINGTON ST. SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: BROCK WORTHLEY PHONE: 816.361.1177 EMAIL: BWORTHLEY@OLSSON.COM	
SURVEYOR OLSSON 1301 BURLINGTON ST. SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JASON ROUBEUSH PHONE: 816.361.1177 EMAIL: JROUBEUSH@OLSSON.COM	

- ☐ NOT FOR CONSTRUCTION
- ☒ REVIEWED FOR CONSTRUCTION



GENERAL NOTES:

1. THE INTENT OF THIS LAND DISTURBANCE PLAN IS TO ASSIST THE DEVELOPER IN HIS RESPONSIBILITY TO PROVIDE ALL MATERIALS, TOOLS, EQUIPMENT AND LABOR NECESSARY TO CONTROL EROSION, SILTATION AND DISCHARGES OF SOIL MATERIAL (SEDIMENT) INTO DOWNSTREAM SYSTEMS OR RECEIVING CHANNELS. THIS SHALL BE REQUIRED DURING ALL PHASES OF CONSTRUCTION AND UNTIL SUITABLE GROUND COVER IS ESTABLISHED FOR ALL DISTURBED AREAS. IF ANY METHOD OF CONTROL FAILS, THE DEVELOPER SHALL NOTIFY THE OWNER IMMEDIATELY, SO THAT THE OWNER OR HIS AGENT CAN REVIEW THE DEVELOPER'S PROPOSED METHOD OF REPAIR.

THIS PLAN INDICATES THE CRITICAL AREA(S) OF CONCERN AND THESE AREA(S) WILL BE CONTROLLED AS A MINIMUM. THE CONTROL MAY CONSIST OF TEMPORARY CONTROL MEASURES AS SHOWN ON THE PLANS OR ORDERED BY THE OWNER DURING THE COURSE OF THE CONTRACT TO CONTROL EROSION OR WATER POLLUTION. SUCH MEASURES MAY INCLUDE, BUT NOT BE LIMITED TO, SLOPE DRAPES, EROSION BARRIERS, LOG BARS, GRAVEL, MULCHES, GRASSES, SLOPE DRAINS, DIVERSION SWALES OR OTHER EROSION CONTROL DEVICES OR METHODS. THE OWNER HAS THE AUTHORITY TO LIMIT THE SURFACE AREA OF ERODIBLE EARTH MATERIAL EXPOSED BY THE CONSTRUCTION OPERATIONS AND TO DIRECT THE DEVELOPER TO PROVIDE IMMEDIATE EROSION AND TEMPORARY POLLUTION CONTROL MEASURES TO PREVENT CONTAMINATION OF ADJACENT STREAMS OR OTHER WATER COURSES, LAKES, PONDS, OR OTHER AREAS OF WATER IMPOUNDMENT OR CONVEYANCES.

THE TEMPORARY POLLUTION CONTROL PROVISIONS CONTAINED HEREIN SHALL BE COORDINATED WITH ANY PERMANENT EROSION CONTROL FEATURES SPECIFIED ELSEWHERE IN THE CONTRACT TO THE EXTENT PRACTICAL TO ASSURE ECONOMICAL, EFFECTIVE AND CONTINUOUS EROSION CONTROL THROUGHOUT THE CONSTRUCTION AND POST CONSTRUCTION PERIOD.

2. THIS SEDIMENTATION CONTROL PLAN MAKES USE OF THE FOLLOWING APPLICATIONS:

- ___ PRESERVATION OF EXISTING VEGETATION
 _X SEDIMENT BARRIERS
 _X SEDIMENT TRAPS
 _X INLET PROTECTION
 ___ OUTLET PROTECTION
 ___ SOIL RETAINING SYSTEMS
 ___ SLOPE DRAINS
 ___ SUBSURFACE DRAINS

PHYSICAL DESCRIPTION OF EACH SPECIFIC SEDIMENT CONTROL DEVICE TO BE UTILIZED IS CALLED OUT ON THE PLANS WITH INSTALLATION PROCEDURES, CONSTRUCTION SPECIFICATIONS AND MAINTENANCE ARRANGEMENT AS CALLED FOR ON THE DETAIL SHEET. IN ADDITION TO THE MEASURES SPECIFIED, THE FOLLOWING GENERAL PRACTICES SHALL BE ADHERED TO WHEN APPLICABLE.

A) CLEARING AND GRUBBING WITHIN 50' OF A DEFINED DRAINAGE COURSE SHOULD BE AVOIDED WHEN POSSIBLE. WHERE CHANGES TO A DEFINED DRAINAGE COURSE OCCUR, WORK SHOULD BE DELAYED UNTIL ALL MATERIALS AND EQUIPMENT NECESSARY TO PROTECT AND COMPLETE THE DRAINAGE CHANGE ARE ON SITE. CHANGES SHALL BE COMPLETED AS QUICKLY AS POSSIBLE ONCE THE WORK HAS BEEN INITIATED. THE AREA IMPACTED BY THE CONSTRUCTION ACTIVITIES SHALL BE REVEGETATED OR PROTECTED FROM EROSION AS SOON AS POSSIBLE. AREAS WITHIN 50' OF A DEFINED DRAINAGE WAYS SHOULD BE RECONTOURED AS NEEDED OR OTHERWISE PROTECTED WITHIN FIVE (5) WORKING DAYS AFTER GRADING HAS CEASED.

B) WHERE SOIL DISTURBING ACTIVITIES CEASE IN AN AREA FOR MORE THAN 14 DAYS, THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE EROSION CONTROL MEASURES. IF THE SLOPE OF THE AREA IS GREATER THAN 3:1 OR IF THE SLOPE IS GREATER THAN 3% AND GREATER THAN 150 FEET IN LENGTH, THEN THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE EROSION CONTROL MEASURES IF ACTIVITIES CEASE FOR MORE THAN SEVEN (7) DAYS.

C) EXISTING VEGETATION SHALL BE PRESERVED TO THE EXTENT AND WHERE PRACTICAL. IN NO CASE SHALL DISTURBED AREAS REMAIN WITHOUT VEGETATIVE GROUND COVER FOR A PERIOD IN EXCESS OF 60 DAYS.

D) ADDITIONAL SITE MANAGEMENT PRACTICES WHICH SHALL BE ADHERED TO DURING THE CONSTRUCTION PROCESS SHALL INCLUDE:

SOLID AND HAZARDOUS WASTE MANAGEMENT INCLUDING PROVIDING TRASH CONTAINERS AND REGULAR SITE CLEAN UP FOR PROPER DISPOSAL OF SOLID WASTE SUCH AS BUILDING MATERIAL, PRODUCT/MATERIAL SHIPPING WASTE, FOOD CONTAINERS AND CUPS, AND PROVIDING CONTAINERS FOR THE PROPER DISPOSAL OF WASTE PAINTS SOLVENTS, AND CLEANING COMPOUNDS.

PROVISIONS OF PORTABLE TOILETS FOR PROPER DISPOSAL OF SANITARY SEWAGE.

STORAGE OF CONSTRUCTION MATERIALS AWAY FROM DRAINAGE COURSES AND LOW AREAS.

INSTALLATION OF CONTAINMENT BERMS AND USE OF DRIP PANS AT PETROLEUM PRODUCT AND LIQUID STORAGE TANKS AND CONTAINERS.

3. ALL DISTURBED AREAS SHALL BE SEEDED, FERTILIZED AND MULCHED, OR SODDED, IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS ADOPTED BY THE CITY OF LEE'S SUMMIT AND GOOD ENGINEERING PRACTICES. THIS SHALL BE COMPLETED WITHIN FOURTEEN (14) DAYS AFTER COMPLETING THE WORK, IN ANY AREA. IF THIS IS OUTSIDE OF THE SEEDING PERIOD, SILT BARRIERS OR OTHER SIMILARLY EFFECTIVE MEASURES SHALL BE PROVIDED UNTIL SUCH TIME THAT THE AREAS CAN BE SEEDED.

4. THE CONSTRUCTION COVERED BY THESE PLANS SHALL CONFORM TO ALL CURRENT STANDARDS AND SPECIFICATIONS ADOPTED BY THE CITY OF LEE'S SUMMIT. THE DEVELOPER WILL BE RESPONSIBLE FOR DETERMINING ALL ADDITIONAL STANDARDS, SPECIFICATIONS OR REQUIREMENTS WHICH ARE REQUIRED BY GOVERNING AGENCIES (INCLUDING LOCAL, STATE AND FEDERAL AUTHORITIES) HAVING JURISDICTION OVER THE WORK PROPOSED BY THESE CONSTRUCTION DRAWINGS.

5. ALL EROSION CONTROL MEASURES, TEMPORARY OR PERMANENT, REQUIRE MAINTENANCE TO PRESERVE THEIR EFFECTIVENESS. ALL EROSION CONTROL DEVICES SHALL BE INSPECTED IMMEDIATELY AFTER EACH HEAVY RAINSTORM AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHOULD BE MADE IMMEDIATELY. ALL COSTS ASSOCIATED WITH THE REPAIR WORK INCLUDING RELATED INCIDENTALS WILL BE THE DEVELOPER'S RESPONSIBILITY AND SHALL BE INCLUDED IN THE DEVELOPER'S BID FOR THE PROPOSED WORK.

6. ALL EROSION CONTROL MEASURES TO BE PER APWA KANSAS CITY METRO CHAPTER STANDARD DETAILS.

7. THE DEVELOPER MUST REMOVE AT HIS COST ANY BAD SUBSURFACE SOIL WHICH WOULD NOT BE ABLE TO SUPPORT ANY PROPOSED PUBLIC IMPROVEMENT. BACKFILL SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL SECTIONS 2100 AND 2201 ENTITLED "GRADING AND SITE PREPARATION" AND "SUBGRADE PREPARATION".

8. THE CONTRACTOR SHALL CONTACT THE CITY'S DEVELOPMENT SERVICES ENGINEERING INSPECTORS 48 HOURS PRIOR TO ANY LAND DISTURBANCE WORK AT (816) 969-1200

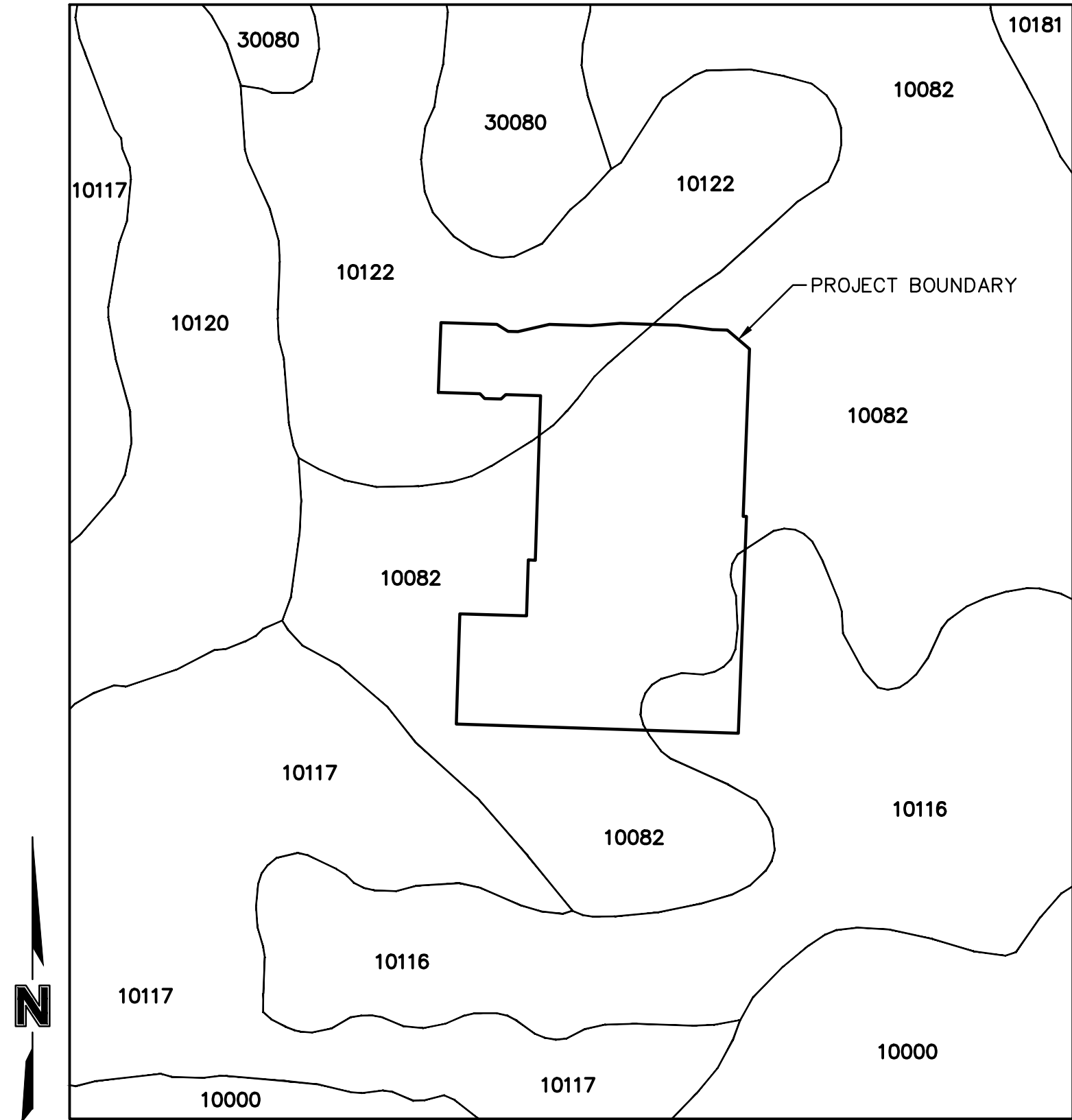
9. TREE CLEARING TO HAPPEN BETWEEN NOVEMBER 1 AND MARCH 31. TREES CLEARED BETWEEN APRIL 1 AND OCTOBER 31 MUST BE TREES GREATER THAN 1,000 FEET FROM FORESTED OR WOODED AREAS OR TREES LESS THAN 3 INCHES IN DIAMETER, AT BREAST HEIGHT, AND NOT MIXED WITH LARGER TREES. IF LARGER TREES NEED TO BE CLEARED, A SURVEY OF THE TREES MUST BE CONDUCTED TO MAKE SURE THERE ARE NO BAT ROOSTS IN THE TREES.

TREE CLEARING TO BE CONDUCTED BY CUTTING DOWN AND MULCHING OR BY PUSHING OVER AND MULCHING. TREES SHALL NOT BE BURNED DOWN.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
PRIVATE GRADING				
1	EXCAVATION	C.Y.	27,711	⚠
2	EMBANKMENT	C.Y.	33,974	
PUBLIC GRADING				
3	EXCAVATION	C.Y.	5,625	⚠
4	EMBANKMENT	C.Y.	9,615	
SITE DISTURBANCE				
5	CONSTRUCTION ENTRANCE	EA.	1	
6	CONCRETE WASHOUT	EA.	1	
7	CURB INLET PROTECTION	EA.	25	⚠
8	AREA INLET PROTECTION	EA.	10	
9	SILT FENCE	L.F.	2543	
10	DIVERSION BERM	L.F.	3347	
11	ROCK DITCH CHECK	EA.	3	
12	SEDIMENT TRAP	EA.	3	
13	SEDIMENT BASIN	EA.	1	
14	DISTURBED AREA	AC.	21.29	⚠
15	TREE CLEARING	AC.	4.53	
16	PERMANENT SEEDING	AC.	18.01	

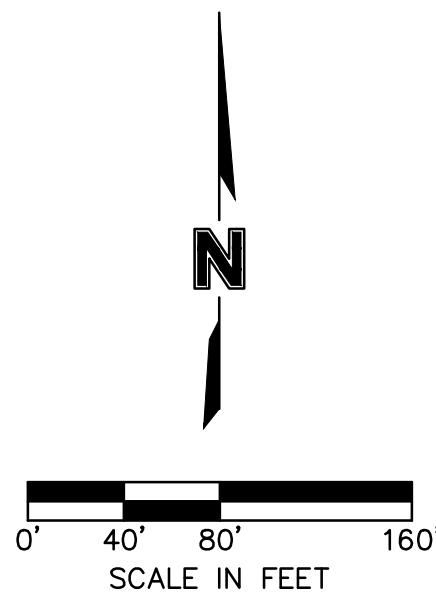
SUMMARY OF QUANTITIES AS INDICATED ABOVE AND ANY QUANTITIES AS SHOWN WITHIN THE PLANS HAVE BEEN PROVIDED FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR USE IN PREPARATION OF CONTRACT DOCUMENTS. QUANTITIES INTENDED FOR, BUT NOT LIMITED TO, THE PREPARATION OF PROPOSALS AND BID DOCUMENTS SHALL BE INDEPENDENTLY EVALUATED BY THE ESTIMATING PARTY BASED UPON THE CONTENTS OF THESE PLANS.

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DATE: Apr 17, 2020 3:07pm XREFS: C_PTBK_A192339 C_PBASE_A192339 C_PBDY_A192339 C_PBASE_A192339 C_PEROS_A192339



SOILS MAP
N.T.S.

SOIL CLASSIFICATION BY NRCS WEB SOIL SURVEY			
MAP SYMBOL	SOIL TYPE	HYDROLOGIC SOIL GROUP	SLOPES
10000	ARISBURG SILT LOAM	C	1-5%
10082	ARISBURG-URBAN LAND COMPLEX	C	1-5%
10116	SAMPSEL SILTY CLAY LOAM	C/D	2-5%
10117	SAMPSEL SILTY CLAY LOAM	C/D	5-9%
10120	SHARPSBURG SILT LOAM	C	2-5%
10122	SHARPSBURG SILT LOAM	C	5-9%
10181	UDARENTS-URBAN LAND SAMPSEL COMPLEX	C	5-9%
30080	GREENTON SILTY CLAY LOAM	C/D	5-9%



DISTURBED AREA & PRESERVED VEGETATION

GENERAL LAYOUT
GRADING & SITE DISTURBANCE PLANS

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

REVISIONS DESCRIPTION

DATE

REV. NO.

REVISIONS



olsson

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Missouri Certificate of Authority # 001592
1301 Burlington Street
North Kansas City, MO 64116
TEL 816.361.1177
www.olsson.com

drawn by: SS
checked by: SS
designed by: BMW
QA/QC by: JES
project no.: A19-2339
drawing no.: C_GEN01_A192339
date: 3/17/2020

SHEET
C403

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GENERAL NOTES:

1. CONTRACTOR SHALL ADHERE TO THE "DESIGN AND CONSTRUCTION MANUAL" SECTION 2100 AS ADOPTED BY THE CITY OF LEE'S SUMMIT (LATEST EDITION), FOR EXCAVATION AND EMBANKMENT WORK WITHIN THE PROPOSED RIGHT-OF-WAY.
2. AREAS OF CONSTRUCTION SHALL BE STRIPPED OF ALL VEGETATION, ORGANIC MATTER AND TOPSOIL TO A DEPTH AS RECOMMENDED BY GEOTECHNICAL ENGINEER AND OR TESTING AGENCY. SOILS REMOVED DURING SITE STRIPPING SHOULD BE EVALUATED TO DETERMINE IF PORTIONS OF THE TOPSOIL STRATUM MAY BE UTILIZED AS STRUCTURAL FILL WITHIN PAVEMENT AREAS. ANY MATERIAL NOT DEEMED AS SUITABLE FILL MATERIAL BY THE GEOTECHNICAL ENGINEER AND OR TESTING AGENCY SHALL BE REMOVED FROM THE JOB SITE BY THE CONTRACTOR AT HIS EXPENSE.
3. ALL EMBANKMENT OUTSIDE OF RIGHT-OF-WAY SHOULD BE PLACED IN CONTROLLED LIFTS HAVING A MAXIMUM LOOSE LIFT THICKNESS OF 8". EMBANKMENT SHOULD BE COMPACTED TO A MINIMUM OF 95% OF THE MATERIALS MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698 (STANDARD PROCTOR COMPACTION). MOISTURE CONTENT OF THE FILL AT THE TIME OF COMPACTION SHALL BE WITHIN A RANGE OF -0 TO +4 PERCENT OF OPTIMUM MOISTURE CONTENT.

LOT FILL INFORMATION			
LOT NUMBER	MAX DEPTH OF FILL (OVER 2' PLACED)	EXISTING SLOPES > 6:1	PROPOSED SLOPES > 3:1
1	2.2		
2	3.3		
3	3.0	X	
4	3.3	X	
5	3.9		
6	3.2		
7	4.4		
8	3.8		
9	3.2		
10	3.4		
11	3.6	X	
12			
13			
14		X	
15		X	
16	2.5	X	
17	2.5		
18	4.0		
19	4.0		
20	3.6		
21	4.0		
22	5.3		
23	6.5		
24	7.3		
25	7.0		
26	4.3		
27	4.8		
28	5.0		
29	4.9		
30	4.0		
31	3.7		
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			

X Indicates condition applies to lot

LEGEND	
- - - 100 - -	EXISTING INDEX CONTOURS
- - - 100 - -	EXISTING INTERMEDIATE CONTOURS
- - - 100 - -	PROPOSED INDEX CONTOURS
- - - 100 - -	PROPOSED INTERMEDIATE CONTOURS

EARTHWORK QUANTITIES		
LOCATION	CUT (C.Y.)	FILL (C.Y.)
STREET	5,625	9,615
SITE	27,711	33,974
TOTAL	33,336	43,589

EARTHWORK QUANTITIES NOTES:

1. EARTHWORK QUANTITIES BASED ON FINISHED GRADE SURFACE AND DO NOT INCLUDE ADJUSTMENTS FOR TOPSOIL AND SHRINKAGE.
2. EARTHWORK QUANTITIES DO NOT TAKE INTO CONSIDERATION EXCAVATION, REMOVAL AND DISPOSAL OF MATERIAL DEEMED UNSUITABLE BY A GEOTECHNICAL ENGINEER. THE EARTHWORK CONTRACTOR IS RESPONSIBLE FOR EXCAVATION, REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL AND FOR REPLACING IT WITH SUITABLE MATERIAL.



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STATE OF MISSOURI
BROCK M. WORTHLEY
JANUARY
PE-2019-000037
1/24/2020
PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION
1	4/17/2020	GRADING REVISED

GRADING PLAN	OSAGE FIRST PLAT	2020
GRADING & SITE DISTURBANCE PLANS		

drawn by: _____ GS
checked by: _____ SS
designed by: _____ BMW
QA/QC by: _____ JES
project no.: A19-2339
drawing no.: C_GRD01_A192339
date: 3/17/2020

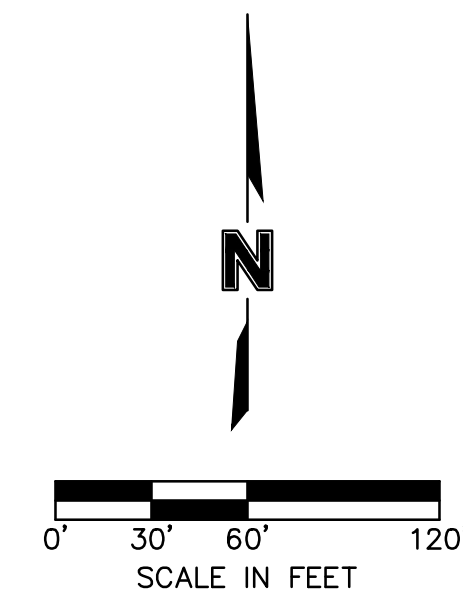
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REVISIONS

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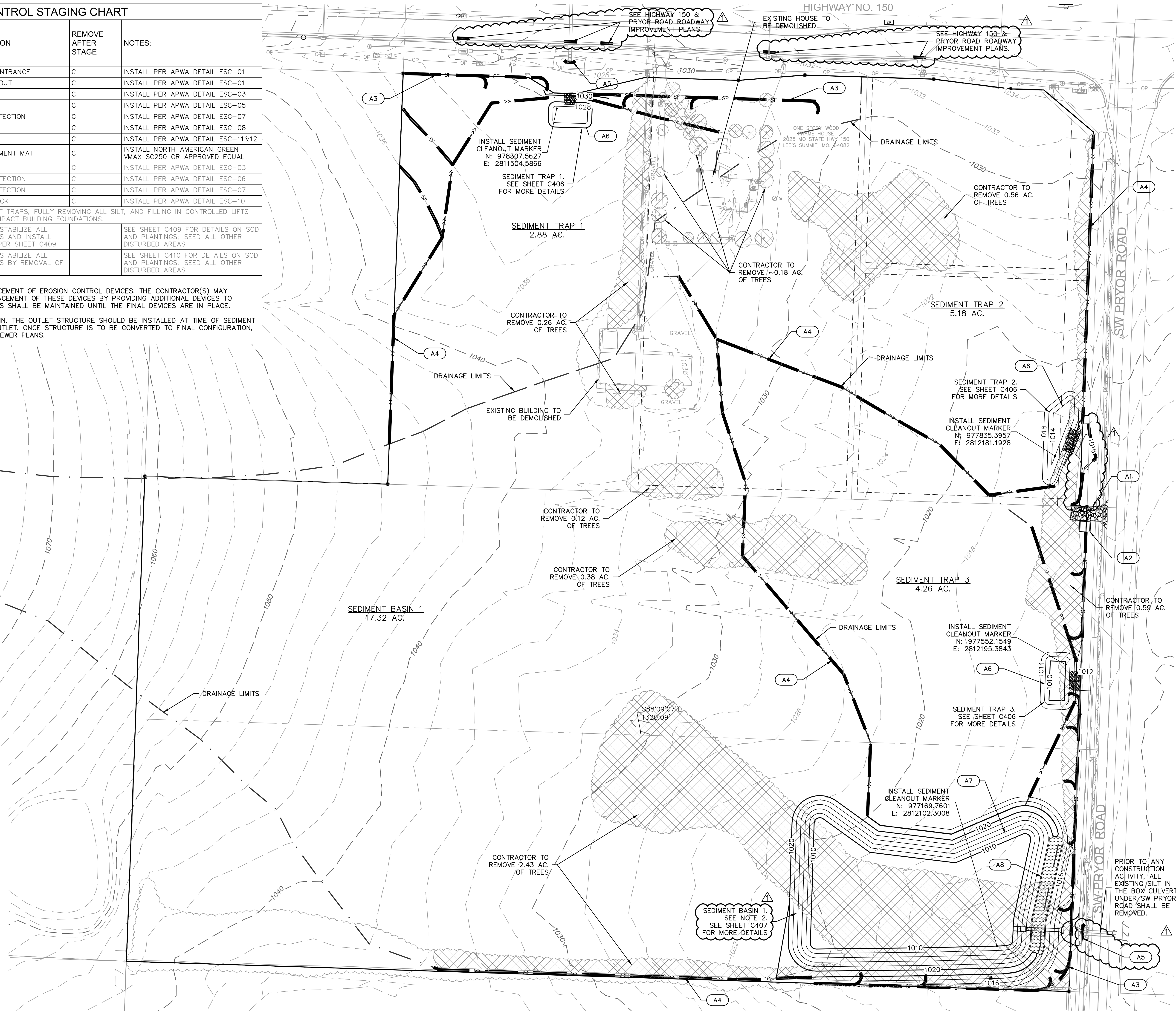
EROSION CONTROL STAGING CHART				
PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A - PRE-MASS GRADING	A1	CONSTRUCTION ENTRANCE	C	INSTALL PER APWA DETAIL ESC-01
	A2	CONCRETE WASHOUT	C	INSTALL PER APWA DETAIL ESC-01
	A3	SILT FENCE	C	INSTALL PER APWA DETAIL ESC-03
	A4	DIVERSION BERM	C	INSTALL PER APWA DETAIL ESC-05
	A5	AREA INLET PROTECTION	C	INSTALL PER APWA DETAIL ESC-07
	A6	SEDIMENT TRAP	C	INSTALL PER APWA DETAIL ESC-08
	A7	SEDIMENT BASIN	C	INSTALL PER APWA DETAIL ESC-11&12
	A8	TURF REINFORCEMENT MAT	C	INSTALL NORTH AMERICAN GREEN VMAX SC250 OR APPROVED EQUAL
B - INTERIM	B1	SILT FENCE	C	INSTALL PER APWA DETAIL ESC-03
	B2	CURB INLET PROTECTION	C	INSTALL PER APWA DETAIL ESC-06
	B3	AREA INLET PROTECTION	C	INSTALL PER APWA DETAIL ESC-07
	B4	ROCK DITCH CHECK	C	INSTALL PER APWA DETAIL ESC-10
UPON REMOVAL CONTRACTOR TO OVER-EXCAVATE SEDIMENT TRAPS, FULLY REMOVING ALL SILT, AND FILLING IN CONTROLLED LIFTS TO PREVENT VOIDS OR EXCESSIVE SETTLING THAT COULD IMPACT BUILDING FOUNDATIONS.				
C - DISTURBED AREA STABILIZATION	C1	SEED, SOD AND STABILIZE ALL DISTURBED AREAS AND INSTALL ALL PLANTINGS PER SHEET C409		SEE SHEET C409 FOR DETAILS ON SOD AND PLANTINGS; SEED ALL OTHER DISTURBED AREAS
D - FINAL STABILIZATION	D1	SEED, SOD AND STABILIZE ALL DISTURBED AREAS BY REMOVAL OF SEDIMENT TRAPS		SEE SHEET C410 FOR DETAILS ON SOD AND PLANTINGS; SEED ALL OTHER DISTURBED AREAS

NOTE:
1. THE SITE DISTURBANCE PLANS INDICATES THE FINAL PLACEMENT OF EROSION CONTROL DEVICES. THE CONTRACTOR(S) MAY PROCEED WITH THE CONSTRUCTION PRIOR TO THE FINAL PLACEMENT OF THESE DEVICES BY PROVIDING ADDITIONAL DEVICES TO CONTROL EROSION ON THEIR ITEMS OF WORK. THESE DEVICES SHALL BE MAINTAINED UNTIL THE FINAL DEVICES ARE IN PLACE.
2. SEDIMENT BASIN TO BECOME PERMANENT DETENTION BASIN. THE OUTLET STRUCTURE SHOULD BE INSTALLED AT TIME OF SEDIMENT BASIN INSTALLATION TO BE UTILIZED AS SEDIMENT BASIN OUTLET. ONCE STRUCTURE IS TO BE CONVERTED TO FINAL CONFIGURATION, INSTALL PER DETENTION BASIN PLAN IN STREET & STORM SEWER PLANS.



LEGEND	
PHASE A	
SF	SILT FENCE
DI	STORM DRAIN INLET PROTECTION
<<	TEMPORARY DIVERSION BERM
STONE	TEMPORARY STONE CONSTRUCTION ENTRANCE
TURF	TURF REINFORCEMENT MAT
TREE	TREE CLEARING
DA	DRAINAGE AREA TO BASIN/TRAP

WHERE SILT FENCE IS SPECIFIED, IT MAY BE REPLACED BY MULCH BERM OR WATTLES FILLED WITH MULCH AT THE CONTRACTOR'S DISCRETION.



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STATE OF MISSOURI
BROCK M. WORTHLEY
Professional Engineer
PE-2019000237
1/24/2020

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION
1	4/17/2020	SILT FENCE, INLET PROTECTION AND NOTES ADDED SEDIMENT BASIN DETAILS NOTE CORRECTED

SITE DISTURBANCE PHASE A
GRADING & SITE DISTURBANCE PLANS

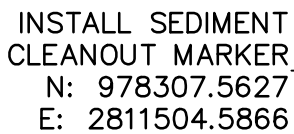
OSAGE
FIRST PLAT

2020

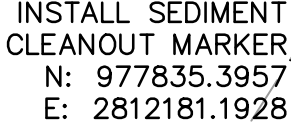
drawn by: GS
checked by: SS
designed by: BMW
QA/QC by: JES
project no.: A19-2339
drawing no.: C_ERC01_A192339
date: 3/17/2020

SHEET
C405

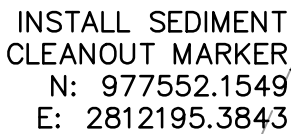
339



DESIGN ITEM	VALUE	UNIT
TRIBUTARY AREA	2.88	AC
MIN. STORAGE VOL	5206	CU FT
OVIDED STORAGE VOL.	6049	CU FT
DIMENT CLEANOUT EL	1028.15	FT
TOP OF TRAP	1031.00	FT
BOTTOM OF TRAP	1027.00	FT
HEIGHT OF DAM	2.00	FT
SPILLWAY LENGTH	17.27	FT
SPILLWAY WIDTH	17.50	FT

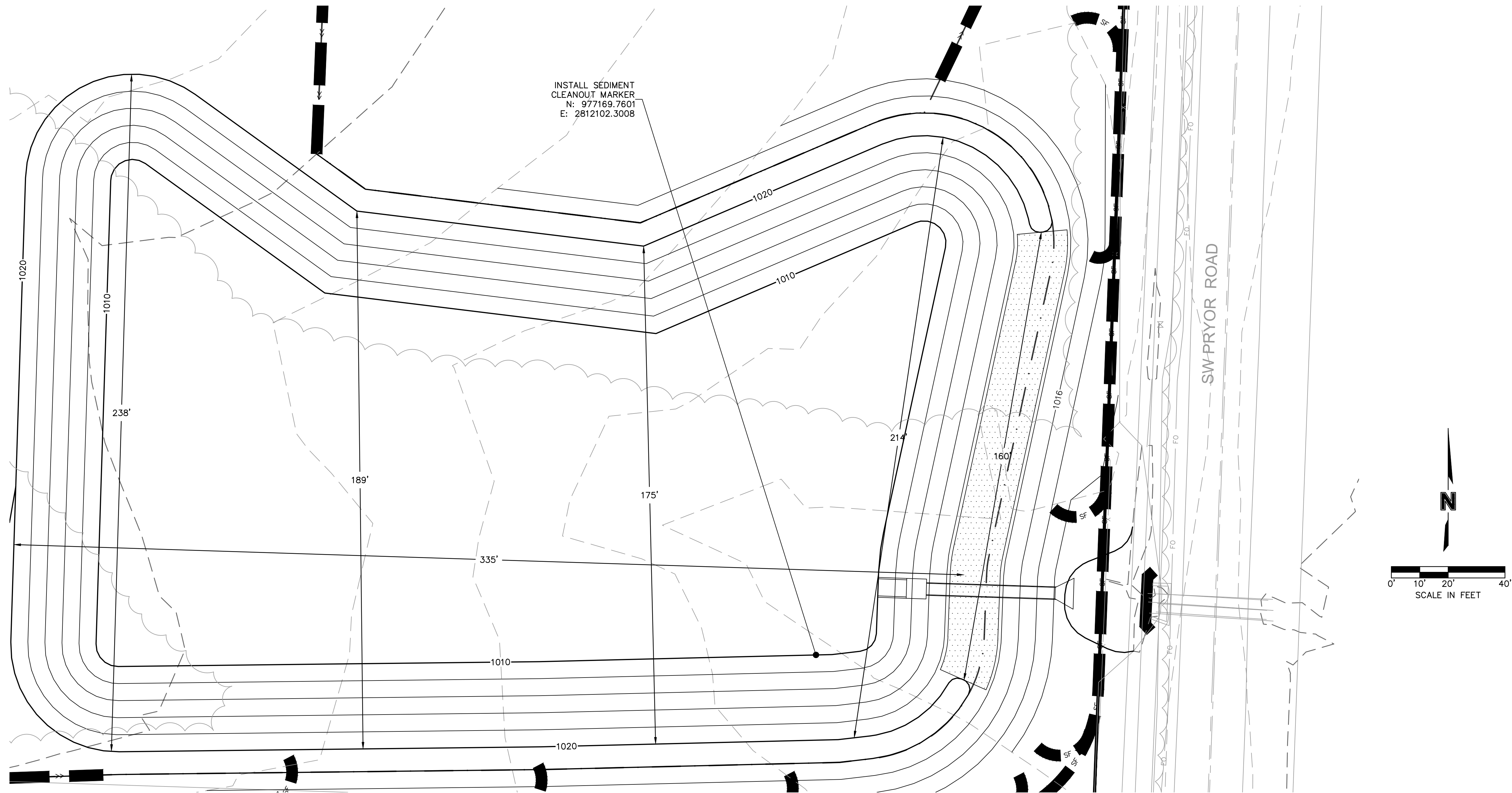
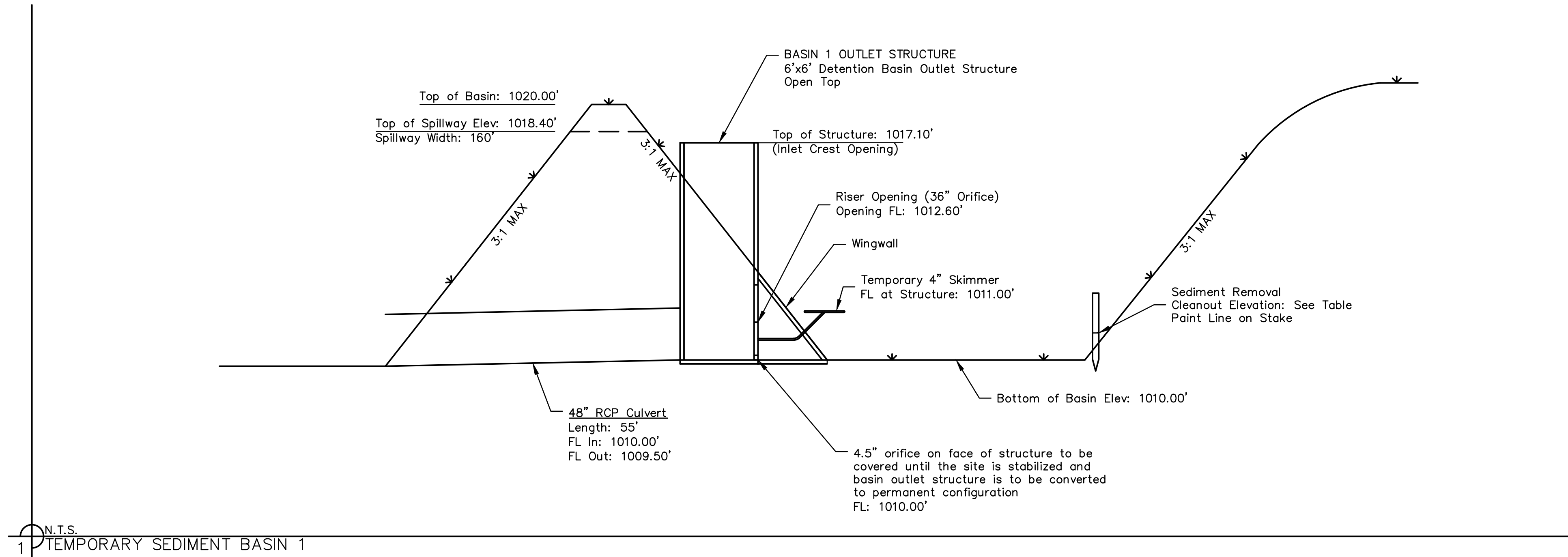


DESIGN ITEM	VALUE	UNIT
TRIBUTARY AREA	5.18	AC
MIN. STORAGE VOL	9376	CU FT
PROVIDED STORAGE VOL.	9931	CU FT
SEDIMENT CLEANOUT EL.	1015.24	FT
TOP OF TRAP	1018.00	FT
BOTTOM OF TRAP	1014.00	FT
HEIGHT OF DAM	2.00	FT
SPILLWAY LENGTH	31.10	FT
SPILLWAY WIDTH	31.50	FT



DESIGN ITEM	VALUE	UNIT
TRIBUTARY AREA	4.26	AC
MIN. STORAGE VOL.	7700	CU FT
PROVIDED STORAGE VOL.	8639	CU FT
SEDIMENT CLEANOUT EL.	1011.10	FT
TOP OF TRAP	1014.00	FT
BOTTOM OF TRAP	1010.00	FT
HEIGHT OF DAM	2.00	FT
SPILLWAY LENGTH	25.54	FT
SPILLWAY WIDTH	26.00	FT

DWG: F:\2019\2001-2500\019-2339-A\40-Design\AutoCAD\Final Plans\Sheets\GNCV\SITE DISTURBANCE\C_ERC01_A192339.dwg
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USER: bworthley



SEDIMENT BASIN 1 - PHASE A DESIGN SUMMARY			
Design Item	Quantity	Units	
Site Data			
Tributary Drainage Area To Pond	17.32	Acres	
50% (2 Year) Design Flow	47.78	cfs	
10% (10 Year) Design Flow	84.95	cfs	
4% (25 Year) Design Flow	82.88	cfs	
1% (100 Year) Design Flow	113.98	cfs	
Pond Data			
Minimum Sediment Storage Volume	2321	cu yd	
Provided Sediment Storage Volume	11062	cu yd	
Bottom Elevation	1010.00	ft	
Sediment Cleanout Elevation	1010.78	ft	
Top of Risser Elevation	1012.60	ft	
Emergency Spillway Elevation	1018.40	ft	
Top of Dam Elevation	1020.00	ft	
Basin Shape Data			
A = Area at Normal Pool	45677	sq ft	
L = Length of Flow Path	330	ft	
WE = Effective Width = A/L	138	ft	
Principal Spillway Data			
Risser Pipe DIA	6'x6"	Inlet Box	
Barrel Pipe DIA	48	in	
Skimmer Size	4	in	
Emergency Spillway Data			
Design Depth in Spillway	0.00	ft	
Design Velocity in Spillway	0	ft/sec	
Lining Material	TRM		
Spillway Width	160	ft	
Water Surface Elevations			
2-year	1012.53	ft	
10-year	1012.97	ft	
25-year	1013.33	ft	
100-year	1014.00	ft	

SEDIMENT BASIN 1 - PHASE B DESIGN SUMMARY			
Design Item	Quantity	Units	
Site Data			
Tributary Drainage Area To Pond	25.78	Acres	
50% (2 Year) Design Flow	71.11	cfs	
10% (10 Year) Design Flow	96.88	cfs	
4% (25 Year) Design Flow	123.34	cfs	
1% (100 Year) Design Flow	169.63	cfs	
Pond Data			
Minimum Sediment Storage Volume	3455	cu yd	
Proxided Sediment Storage Volume	11062	cu yd	
Bottom Elevation	1010.00	ft	
Sediment Cleanout Elevation	1011.04	ft	
Top of Riser Elevation	1012.60	ft	
Emergency Spillway Elevation	1018.40	ft	
Top of Dam Elevation	1020.00	ft	
Basin Shape Data			
A = Area at Normal Pool	45577	sq ft	
L = Length of Flow Path	330	ft	
WE = Effective Width = A/L	138	ft	
Principal Spillway Data			
Riser Pipe DIA	6"x6"	Inlet Box	
Barrel Pipe DIA	48	in	
Skimmer Size	4	in	
Emergency Spillway Data			
Design Depth in Spillway	0.00	ft	
Design Velocity in Spillway	0	f/sec	
Lining Material	TRM		
Spillway Width	160	ft	
Water Surface Elevations			
2-year	1012.83	ft	
10-year	1013.84	ft	
25-year	1014.43	ft	
100-year	1015.59	ft	

SITE DISTURBANCE PHASE A - BASIN TABLES

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

REVISIONS DESCRIPTION

DAT

NO.

REVISIONS



Olsson - Civil Engineering
Missouri Certificate of Authority #: 001592
1301 Burlington Street
North Kansas City, MO 64116

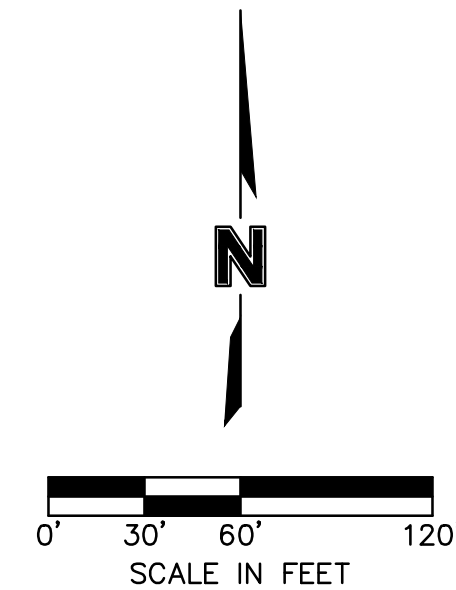
TEL 816.361.1177 www.olsson.com

olson

DWG: F:\2019\2001-2500\019-2339-A140-Design\AutoCAD\Final Plans\Sheets\ENR\A140-SITE DISTURBANCE\C_ERC02_A192339.dwg USER: bwerthley
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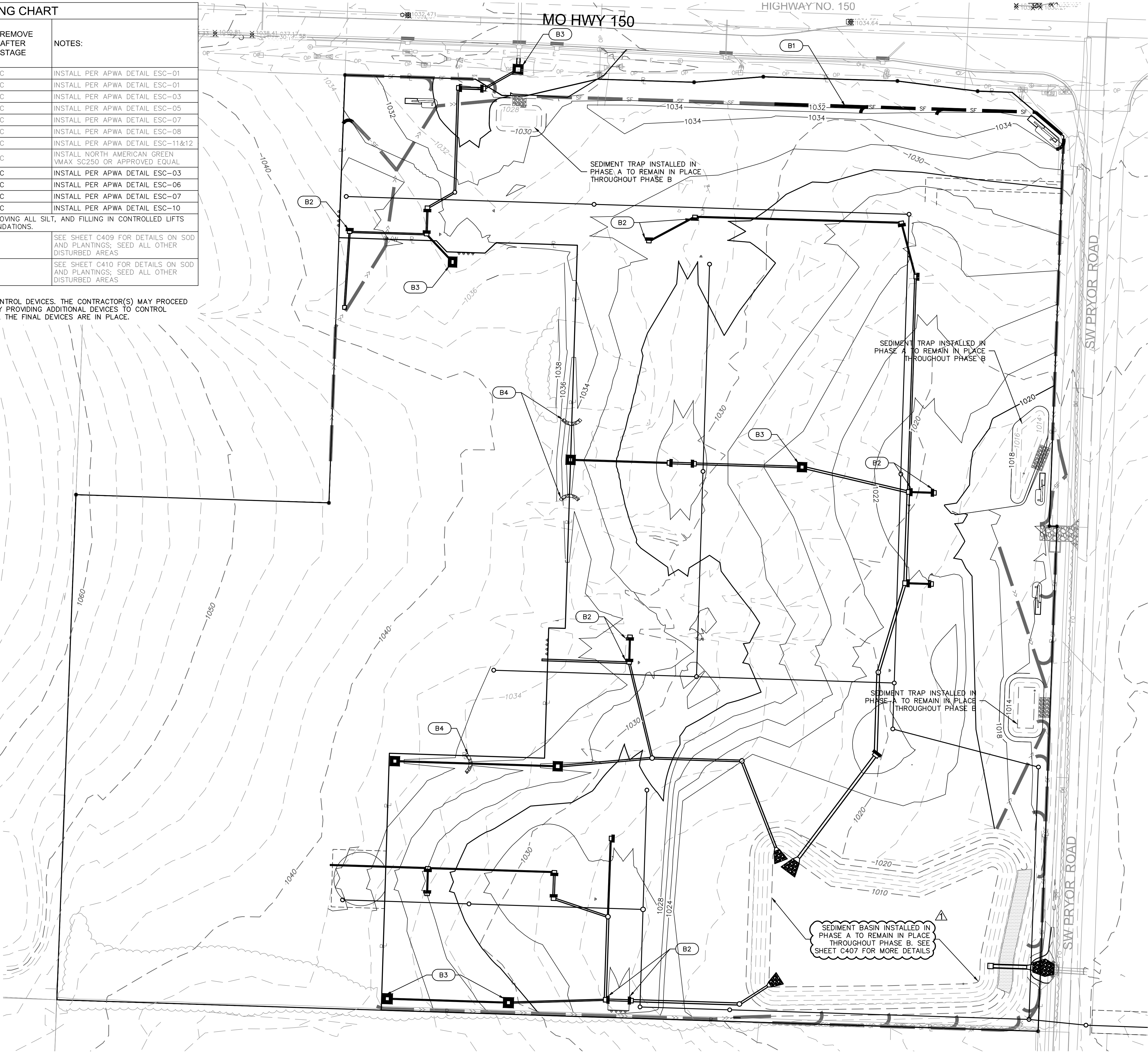
EROSION CONTROL STAGING CHART				
PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A - PRE-MASS GRADING	A1	CONSTRUCTION ENTRANCE	C	INSTALL PER APWA DETAIL ESC-01
	A2	CONCRETE WASHOUT	C	INSTALL PER APWA DETAIL ESC-01
	A3	SILT FENCE	C	INSTALL PER APWA DETAIL ESC-03
	A4	DIVERSION BERM	C	INSTALL PER APWA DETAIL ESC-05
	A5	AREA INLET PROTECTION	C	INSTALL PER APWA DETAIL ESC-07
	A6	SEDIMENT TRAP	C	INSTALL PER APWA DETAIL ESC-08
	A7	SEDIMENT BASIN	C	INSTALL PER APWA DETAIL ESC-11&12
	A8	TURF REINFORCEMENT MAT	C	INSTALL NORTH AMERICAN GREEN VMAX SC250 OR APPROVED EQUAL
B - INTERIM	B1	SILT FENCE	C	INSTALL PER APWA DETAIL ESC-03
	B2	CURB INLET PROTECTION	C	INSTALL PER APWA DETAIL ESC-06
	B3	AREA INLET PROTECTION	C	INSTALL PER APWA DETAIL ESC-07
	B4	ROCK DITCH CHECK	C	INSTALL PER APWA DETAIL ESC-10
UPON REMOVAL CONTRACTOR TO OVER-EXCAVATE SEDIMENT TRAPS, FULLY REMOVING ALL SILT, AND FILLING IN CONTROLLED LIFTS TO PREVENT VOIDS OR EXCESSIVE SETTLING THAT COULD IMPACT BUILDING FOUNDATIONS.				
C - DISTURBED AREA STABILIZATION	C1	SEED, SOD AND STABILIZE ALL DISTURBED AREAS AND INSTALL ALL PLANTINGS PER SHEET C409		SEE SHEET C409 FOR DETAILS ON SOD AND PLANTINGS; SEED ALL OTHER DISTURBED AREAS
D - FINAL STABILIZATION	D1	SEED, SOD AND STABILIZE ALL DISTURBED AREAS BY REMOVAL OF SEDIMENT TRAPS		SEE SHEET C410 FOR DETAILS ON SOD AND PLANTINGS; SEED ALL OTHER DISTURBED AREAS

NOTE:
THE SITE DISTURBANCE PLANS INDICATES THE FINAL PLACEMENT OF EROSION CONTROL DEVICES. THE CONTRACTOR(S) MAY PROCEED WITH THE CONSTRUCTION PRIOR TO THE FINAL PLACEMENT OF THESE DEVICES BY PROVIDING ADDITIONAL DEVICES TO CONTROL EROSION ON THEIR ITEMS OF WORK. THESE DEVICES SHALL BE MAINTAINED UNTIL THE FINAL DEVICES ARE IN PLACE.



LEGEND		
PHASE A	PHASE B	
		SILT FENCE
		STORM DRAIN INLET PROTECTION
		TEMPORARY DIVERSION BERM
		ROCK DITCH CHECK
		TEMPORARY STONE CONSTRUCTION ENTRANCE
		TURF REINFORCEMENT MAT
		TREE CLEARING
		DRAINAGE AREA TO BASIN/TRAP

WHERE SILT FENCE IS SPECIFIED, IT MAY BE REPLACED BY MULCH BERM OR WATTLES FILLED WITH MULCH AT THE CONTRACTOR'S DISCRETION.



olsson

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Missouri Certificate of Authority # 001592
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STATE OF MISSOURI
BROCK M. WORTHMAN
Professional Engineer
PE-2019000237
1/24/2020

SITE DISTURBANCE PHASE B
GRADING & SITE DISTURBANCE PLANS

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

drawn by: GS
checked by: SS
designed by: BMW
QA/QC by: JES
project no.: A19-2339
drawing no.: C_ERC02_A192339
date: 3/17/2020

SHEET
C408

REV. NO. 1

DATE 4/17/2020

REVISIONS DESCRIPTION
SEDIMENT BASIN DETAILS NOTE CORRECTED

REVISIONS

EROSION CONTROL STAGING CHART				
PROJECT STAGE	EROSION CONTROL BMP REFERENCE NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A – PRE-MASS GRADING	A1	CONSTRUCTION ENTRANCE	C	INSTALL PER APWA DETAIL ESC-01
	A2	CONCRETE WASHOUT	C	INSTALL PER APWA DETAIL ESC-01
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	A4	DIVERSION BERM	C	INSTALL PER APWA DETAIL ESC-05
	A5	AREA INLET PROTECTION	C	INSTALL PER APWA DETAIL ESC-07
	A6	SEDIMENT TRAP	C	INSTALL PER APWA DETAIL ESC-08
	A7	SEDIMENT BASIN	C	INSTALL PER APWA DETAIL ESC-11&12
	A8	TURF REINFORCEMENT MAT	C	INSTALL NORTH AMERICAN GREEN VMAX SC250 OR APPROVED EQUAL
B – INTERIM	B1	SILT FENCE	C	INSTALL PER APWA DETAIL ESC-03
	B2	CURB INLET PROTECTION	C	INSTALL PER APWA DETAIL ESC-06
	B3	AREA INLET PROTECTION	C	INSTALL PER APWA DETAIL ESC-07
	B4	ROCK DITCH CHECKS	C	INSTALL PER APWA DETAIL ESC-10
UPON REMOVAL CONTRACTOR TO OVER-EXCAVATE SEDIMENT TRAPS, FULLY REMOVING ALL SILT, AND FILLING IN CONTROLLED LIFTS TO PREVENT VOIDS OR EXCESSIVE SETTLING THAT COULD IMPACT BUILDING FOUNDATIONS.				
C – DISTURBED AREA STABILIZATION	C1	SEED, SOD AND STABILIZE ALL DISTURBED AREAS AND INSTALL ALL PLANTINGS PER SHEET C409		SEE SHEET C409 FOR DETAILS ON SOD AND PLANTINGS; SEED ALL OTHER DISTURBED AREAS
D – FINAL STABILIZATION	D1	SEED, SOD AND STABILIZE ALL DISTURBED AREAS BY REMOVAL OF SEDIMENT TRAPS		SEE SHEET C410 FOR DETAILS ON SOD AND PLANTINGS; SEED ALL OTHER DISTURBED AREAS

GENERAL NOTES:
SEED & MULCH NOTES:
SEEDING SHALL BE DONE BEFORE THE PROPOSED SEEDBED BECOMES ERODED,
CRUSTED OVER, OR DRIED OUT AND SHALL NOT BE DONE WHEN THE GROUND IS
FROZEN, OR COVERED WITH SNOW. THE SEED SHALL COMPLY WITH THE
REQUIREMENTS OF THE MISSOURI SEED LAW AND THE FEDERAL SEED ACT. ALSO,
IT SHALL CONTAIN NO SEED OF ANY PLANT ON THE FEDERAL NOXIOUS WEED
LIST. OTHER WEED SEED SHALL NOT EXCEED ONE PERCENT BY WEIGHT OF MIX.

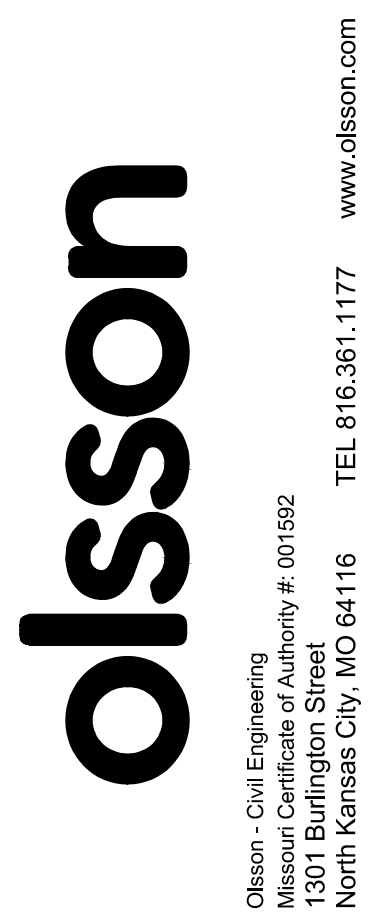
DURING THE DATES DECEMBER 15TH THROUGH MAY 31 ALL LIME, FERTILIZER, SEED, AND MULCH SHALL BE APPLIED TO FINISHED SLOPES OF DISTURBED AREAS. DURING THE MONTHS OF JUNE, JULY, OCTOBER, AND NOVEMBER 1ST THROUGH DECEMBER 15TH, LIME, FERTILIZER, SEED, AND MULCH SHALL BE APPLIED AT THE FOLLOWING RATES:

LIME - 100 % OF SPECIFIED QUANTITY
FERTILIZER - 75 % OF THE SPECIFIED QUANTITY
SEED - 50 % OF THE SPECIFIED QUANTITY
MULCH - 100 % OF THE SPECIFIED QUANTITY

MULCH SHALL BE VEGETATIVE TYPE, CEREAL STRAW FROM STALKS OF OATS, RYE OR BARLEY, OR APPROVED EQUAL. THE STRAW SHALL BE FREE OF PROHIBITED WEED SEED AND RELATIVELY FREE OF ALL OTHER NOXIOUS AND UNDESIRABLE SEED. MULCH SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE, (70 TO 90 LBS. PER 1000 SQ. FT.). MULCH SHALL BE EMBEDDED BY A MULCH ANCHORING TOOL OR DISK TYPE ROLLER HAVING FLAT SERRATED DISKS SPACED NOT MORE THAN 10 INCHES APART AND CLEANING SCRAPERS SHALL BE PROVIDED.

A north arrow pointing upwards with the letter 'N' in the center. Below it is a scale bar marked from 0' to 120' in increments of 30'. The text 'SCALE IN FEET' is centered below the scale bar.

WHERE SILT FENCE IS SPECIFIED, IT MAY BE REPLACED BY MULCH BERM OR WATTLES FILLED WITH MULCH AT THE CONTRACTOR'S DISCRETION.

[illegible]

SITE DISTURBANCE PHASE C GRADING & SITE DISTURBANCE PLANS	OSAGE FIRST PLAT
LEE'S SUMMIT, MISSOURI	
2020	

drawn by: _____	GS
checked by: _____	SS
designed by: _____	BMW
QA/QC by: _____	JES
project no.: _____	A19-2339
drawing no.: _____	C ERC03 A19-2339
date: _____	3/17/2020

SHEET

C409

DWG: F:\2019\2001-2500\019-2339-A\40-Design\AutoCAD\Final_Plans\Sheets\GNCV\SITE_DISTURBANCE\C_ERC03_A192339.dwg
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USER: bworthley C_PBASE_A192339

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	A7	SEDIMENT BASIN	C	INSTALL PER APWA DETAIL ESC-11&12
	A8	TURF REINFORCEMENT MAT	C	INSTALL NORTH AMERICAN GREEN VMAX SC250 OR APPROVED EQUAL
B – INTERIM	B1	SILT FENCE	C	INSTALL PER APWA DETAIL ESC-03
	B2	CURB INLET PROTECTION	C	INSTALL PER APWA DETAIL ESC-06
	B3	AREA INLET PROTECTION	C	INSTALL PER APWA DETAIL ESC-07
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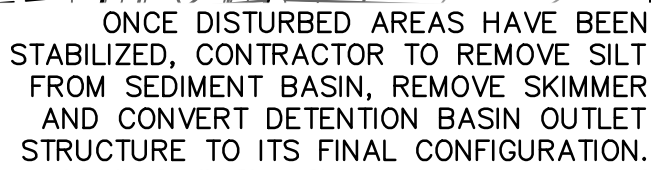
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WHERE SILT FENCE IS SPECIFIED, IT MAY BE REPLACED BY MULCH BERM OR WATTLES FILLED WITH MULCH AT THE CONTRACTOR'S DISCRETION.



SITE DISTURBANCE PHASE D GRADING & SITE DISTURBANCE PLANS	OSAGE FIRST PLAT		2020
	LEE'S SUMMIT, MISSOURI		
	drawn by: _____ GS checked by: _____ SS designed by: _____ BMW/ QA/QC by: _____ JES project no.: A18-2339 drawing no.: C ERC04 A182339 date: 3/17/2020		
SHEET C410			

drawn by: _____ GS
checked by: _____ SS
designed by: _____ BMW
QA/QC by: _____ JES
project no.: _____ A19-2339
drawing no.: C ERC04 A192339
date: 3/17/2020

