LOTS 6a & LOT 7 Of I-470 BUSINESS & TECHNOLOGY CENTER

STORMWATER POLLUTION PREVENTION PLAN SWPPP

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

PREPARED FOR:

Ward Development 1120 NW Eagle Ridge Dr. Grain Valley, MO 64029 Phone: 816-229-8115

PREPARED BY"

Quist Engineering Inc. 821 NE Columbus St. Lee's Summit, MO 64063 Phone: 816-550-5675 1/7/2020 Rev 1-13-2020 Rev 1-16-2020 Rev-1-18-2020 Rev-1-18-2020 Rev-1-24-2020

Lot 6a AND Lot 7 of I-470 Business Center STORMWATER POLLUTION PREVENTION PLAN

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Lot 6a & Lot 7 of I-470 Business & Technology Center

NOTE: THIS STORMWATER POLLUTION PREVENTION PLAN SHALL BE RETAINED ONSITE AT THE PROJECT LOCATION WITH A COPY OF ALL ASSOCIATED PERMITS. APPROVED EROSION AND SEDIMENT CONTROL PLANS AND ENGINEERING DRAWINGS ARE NOT IN AND OF THEMSELVES THE STORMWATER POLLUTION PREVENTION PLAN BUT ARE A PART OF THE PLAN BY REFERENCE.

SITE DESCRIPTION

Lot 6a & lot 7 of I-470 Business & Tech- nology Center	LATITUDE:	OWNER NAME: WARD DEVELOPMENT	
SITE LOCATION: 2730NE Independence Ave. Lee's Summit, MO 64064	38.961562 LONGITUDE: -94.361226	ADDRESS: 1120 NW EAGLE RIDGE Grain Valley, MO 64029 PHONE: 816-228-8115	

PROJECT DESCRIPTION: Grading for placement of fill

The project consists of the grading for future a new commercial buildings and parking lot. Soil disturbing activities will include: clearing and grubbing; installing erosion and sediment controls; grading excavation and preparation for final stabilization and seeding.

SOIL INFORMATION AND TYPES	Based on the Soil Survey of Jackson County, by the USDA Soil Conservation Service. The primary soil types at this location are : SIBLEY-URBAN LAND COMPLEX
RUNOFF COEFFICIENTS:	Runoff coefficients for each phase and section of the project are provided in the "Construction Plans and Profiles" Per "C" = 0.30 Post "C" = 0.30
SITE AREA	The site includes 2.4 acres of which 1.98 acres will be disturbed by construction activities.
SITE MAP	See Attached map
NAME OF RECEIVING WATERS	Un known reach into May Brook branch running into Lakewood Lake E
DESCRIPTION OF EXISITING	The existing vegetation consist of grass and with few trees with an average slope of 3%

ESTIMATED PROJECT DATES

START OF CONSTRUCTION: 1/15/2020

COMPLETION OF CONSTRUCTION: 5/15/2020

SEQUENCE OF MAJOR ACTIVITIES: The order of activities will be as follows:

PHASE 1

SHALL INCLUDE THE FOLLOWING:

- 1. INSTALL SWPPP SIGN AND LOCATION OF MDNR PERMIT AND SWPPP REPORTS
- 2. INSTALL SILT FENCE
- 3. INSTALL TEMPORARY CONSTRUCTION ENTRANCE
- 4. REHABILITATE EXISTING ROCK CHECK DAM TO MEET CITY'S SPECIFICATION.

PHASE 2

SHALL INCLUDE THE FOLLOWING:

- 1. MAINTAIN ALL ESC DEVICES
- 2. REMOVE TOP SOIL AND TREES.
- PHASE 3

SHALL INCLUDE THE FOLLOWING:

1. FULLY VEGETATED SITE
2. REMOVE SILT FENCE

- 5. REHABILITATE EXISTING CURB INLET BY ROCK CHECK DAM ALONG MCBAINE DR
- 6. INSTALL STRAW WATTLE ALONG AREA OF DEPRESSED CURB NEAR THE SOUTHWEST CORNER OF DISTURBED AREA
- 3. ROUGH GRADE CUT AND ENGINEERED FILL
- 4. SEED AND SOD ALL DISTURBED AREAS
- 3. REMOVE INLET PROTECTION
- 4. REMOVE STRAW WATTLE

CONTROLS

STRUCTURAL PRACTICES: The following erosion and sediment control structural practices will be incorporated on the site.

- 1. Temporary diversion silt fence
- 2. Temporary Construction Entrance
- 3. Rock Check Dam
- 4. Inlet Protection
- 5. Silt fencing. (as needed)
- 6. Straw Wattle

NONSTRUCTURAL PRACTICES: The following erosion and sediment control nonstructural practices will be incorporated on the site.

1. Seeding.

3. Maintenance of all ground cover

2. Sod ding

DESCRIPTION OF STRUCTURAL AND NONSTRUCTURAL PRACTICES

Describe each practice that will be used on the project. Explaining materials used, dimensions etc.

- 1. A silt fence, silt fence shall be used to retain and divert water to allow the sedimentation to settle out.
- 2. Rock check dam, Rock check dam will be used prior to the existing area inlet to slow the runoff down long enough to allow the sedimentation to settle out
- 3. Straw Wattle Shall be used to filter sediment out of runoff flowing into storm structure.

EXPLANATION OF PRACTICES

Specify where, why and how each practice is used and how it contributes to erosion and sediment control.

- Sedimentation fence: This silt fence will slow the runoff down and pond the runoff up.
 This ponding will allow the sediment in the runoff to settle out before leaving the site.
 Built up sediment shall be removed when it reaches one third the height of sediment fence, inlet controls or rock ditch checks.
- 2. Rock Check Dam. The rock check dam will slow the runoff down prior to entering the area inlet allow the separate of the sediment from the storm water.
 - Built up sediment shall be removed when it reaches one third the height of sediment fence, inlet controls or rock ditch checks.
- 3. Straw Wattle. Shall be used to filter sediment out of runoff flowing into storm structure. Built up sediment shall be removed when it reaches one third the height of wattle.

STABILIZATION PRACTICES

- 1 Land shall be developed in increments of a workable size with erosion and sediment controls provided, maintained and temporarily stabilized by "Best Management Practices", seeding and mulching or paving before and during the construction period. Permanent seeding and mulching to take place upon completion of the increment or phase. All seeding, temporary of permanent shall be in accordance with the Kansas City Metropolitan Chapter of the American Public Works Association [APWA], Division II Section 2400 "Seeding and Sod ding". These specifications are appended to and made apart of this Storm water Pollution Prevention Plan.
- No areas shall be left denuded for any period longer than fourteen [14] days.
- No unprotected, disturbed area shall drain to roadway pavements such that sub base, base or wearing surfaces are contaminated by silt and sediments trapped at low areas or inlets.
- 4 All utility trenches located outside of paved areas are to be seeded and mulched within fourteen [14] days after completion of backfilling operations.
- 5 Temporary controls such as earth berms, diversion dikes, and sediment traps are to be seeded and mulched within fourteen [14] days after grading is complete.
- 6 All sediment control measures shall be installed and maintained in conformance with specifications outlined in the Kansa City Metropolitan Chapter of the American Public Works Association [APWA], Division V Section 5100, "Erosion and Sediment Control", and recognized "Best Management Procedures".
- Areas where construction activity temporarily ceases for more than fourteen [14] days will be stabilized with a temporary seed.

MAINTENANCE/INSPECTION PROCEDURES EROSION AND SEDIMENT CONTROL INSPECTION AND MAINTENACE PRACTICES

Inspections of the construction site shall be made by personnel familiar with the construction activity. Erosion and Sediment Control measures identified in the SWPPP shall be observed to ensure that they are operating correctly.

Inspections shall be conducted at least once every seven [7] calendar days and within **24 hours** of the end of any storm event creating runoff. These inspections shall cover disturbed areas that have not been finally stabilized, areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site.

Installation dates for controls shall be noted on plans kept at the site.

Where areas have been finally or temporarily stabilized or runoff is unlikely due to winter conditions [e.g., site is covered with snow, ice or frozen ground exists] such inspections shall be conducted at least once a month.

Built up sediment shall be removed when it reaches **one third** the height of sediment fence, inlet controls or rock ditch checks. **(contractor will remove accumulated sediment)**

All project boundaries, perimeters, drainages, structural and nonstructural practices [i.e. check dams ,berms, inlet controls, sediment fencing, etc.] and outfalls shall be checked during each inspection and logged.

Standard inspection sheets and logs as contained in the SWPPP shall be used for weekly inspections and shall be retained on site as part of this Storm Water Pollution Plan. These logs should note problem areas, changes and dates when solutions were implemented. These should also be noted on erosion control plans as well.

Storm Water Management: Storm water drainage will be provided by curb and gutter, storm sewer and catch basins for the developed areas. Details of storm water management for each phase and section of the project are provided in the "Construction Plans"

OTHER CONTROLS

OFFSITE VEHICLE TRACKING

Stabilized construction entrances will be provided to help reduce vehicle tracking of sediments. The paved street adjacent to the site will be swept as needed to remove any excess mud, dirt or rock tracked from the site. Dump trucks hauling material from the construction site will be covered with a tarpaulin.

NON-STORMWATER DISCHARGES

It is expected that the following non-storm water discharges will occur from the site during the construction period:

- Water from water line flushing.
 Pavement wash waters. [where no spills, leaks of toxic or hazardous materials have occurred]
- 3. Uncontaminated groundwater. [from dewatering excavation]

All non-storm water discharged will be directed to the sediment basin prior to discharge, where possible.

WASTE DISPOSAL

WASTE MATERIALS

All waste materials will be collected and stored in a proper receptacle in accordance with all local and state management regulations. All trash and construction debris from the site will be deposited in dumpsters. The trash will be hauled to a appropriate waste disposal site. No construction waste materials will be buried onsite. All project personnel will be instructed regarding the correct procedure for waste disposal.

HAZARDOUS WASTE

All hazardous waste materials will be disposed of in a manner specified by the manufacturer and as required by local or State regulation. Site personnel will be instructed in these practices.

SANITARY WASTE

All sanitary waste will be collected from the portable units as required by local and State regulation.

INVENTORY FOR POLLUTION PREVENTION PLAN

The materials or substances listed below are expected to be present onsite during construction:

• Concrete	Petroleum based products
• Wood	• Solvents
Masonry blockRoofing shingles	DetergentsPaints
• Tar	• Fertilizers
• Tires	• Herbicides
 Insulation 	• Steel

SPILL PREVENTION MATERIAL MANAGEMENT PRACTICES

The following are the materials management practices that will be used to reduce the risk of spills or other accidental exposure of materials and substances to storm water runoff.

GOOD HOUSEKEEPING

The following good housekeeping practices will be followed onsite during the construction project.

- All materials stored onsite will be stored in a neat, orderly manner in the appropriate containers. Materials
 which have potential for contaminating runoff during storm events will be stored in their appropriate watertight containers, stored under a canopy, tarpaulin, shrink wrapped or otherwise precluded from direct exposure to precipitation.
- Empty containers that may contain chemical residues shall be disposed of in accordance with State and local regulations.
- Products, where possible, will be kept in their original containers with the original manufacturers label.
- Chemical or petroleum products will not be mixed with one another unless recommended by the manufacturer
- Whenever possible, all of a product will be used before disposing of the container.
- Manufacturers recommendations for proper use and disposal will be followed.
- The site superintendent will inspect daily to ensure proper use and disposal of materials onsite.

HAZARDOUS PRODUCTS:

These practices are used to reduce the risks associated with hazardous materials.

- Products will be kept in original containers unless they are not resalable.
- Original specimen labels and materials safety data sheets must be kept on file on the project.
- If surplus product must be disposed of, manufacturer's and/or local and State recommended methods for proper disposal will be followed.

PRODUCT SPECIFIC PRACTICES

The following product specific practices will be followed onsite.

PETROLEUM PRODUCTS

- All onsite vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage.
- It is recommended that, if practicable, all refueling, repair and changing of equipment and vehicle fluids shall be conducted in a designated area. This area shall be designed to reduce the potential for contamination of resources on the project and shall not be within 50 feet of wetlands, streams, water bodies, tree preservation areas or other environmentally sensitive areas.
- Petroleum products will be stored in tightly sealed containers, which are clearly labeled.
- An area will be designated for the collection and storage of all chemical and petroleum based products and containers for those products. The containers shall be protected from rain events.
- Any asphalt substances used onsite will be applied according to the manufacture's recommendations.
- The project superintendent will regularly inspect the site to insure proper disposal methods for used antifreeze, oils, filters, and other hazardous materials are followed.

FERTILIZERS

Fertilizers used will be applied according to manufacturer's product standards. The contents of partially sealed bags will be transferred to sealable plastic containers to avoid spills.

PAINTS

All containers will be tightly sealed and stored when no in use. Excess paint will be properly disposed of according to manufacturer's instructions or local and State regulations.

CONCRETE TRUCKS

POFESS OF THE PROPERTY OF THE

Concrete trucks will not be allowed to wash out or discharge excess concrete or drum wash water on site.

SPILL CONTOL PRACTICES

In addition to the good housekeeping and material management practices discussed in previous sections of this plan, the following practices will be followed for spill prevention and cleanup

- Manufacturer's recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and the cleanup supplies.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials may include not be limited to brooms, dust pans, mops, rags, gloves goggles, absorbent material [oil dry, sand, sawdust] and plastic and metal trash containers.
- In the event of a spill of a hazardous substance, the spill will be immediately contained and the spill area kept well ventilated. Personnel will wear appropriated personnel protective clothing and equipment to prevent injury from contact with a hazardous substance during cleanup operations.
- Spills of toxic or hazardous material will be reported to the appropriate State, Federal, and local governmental agency, as required by regulatory standards.

STORMWATER POLLUTION PREVENTION PLAN COORDINATOR AND RESPONSIBILITIES

Duties of the SWPPP coordinator shall include implementation and maintenance of the SWPPP, conducting reguctions . lar inspections and the documentation of changes to the SWPPP.

SWPPP COORDINATOR FOR PROJECT

Robert Walquist Name:

Company: Quist Engineering Inc.

Phone: 816-550-5675

CERTIFICATION OF CONTINUES TO STATE THE Storm Water Pollution Prevention Plan reflects MDNR and water management and erosion and sediment control as established State of the American Public Works As "Erosion and Sediment Control"	d local authority requirements for storm shed in the County Code 241 and The Kan-
OWNER CERTIFICATION OF POLLUT	ION PREVENTION PLAN
I certify under penalty of law that this document and all attachment sion in accordance with a system designed to assure that qualified prinformation submitted. Based on my inquiry of the person or person directly responsible for gathering the information, the information shelief, true, accurate, and complete. I am aware that there are signition, including the possibility of fine and imprisonment for knowing	personnel properly gathered and evaluated the ons who manage the system, or those persons submitted is, to the best of my knowledge and ficant penalties for submitting false informa-
	Name [signed]
	Title
	Company
	Date
CONTRACTOR CERTIF	
I certify under penalty of law that I understand the terms and condition Discharge Elimination System {NPDES] permit that authorize construction activity from the construction site identified as part of	s the storm water discharges associated with
	Name [signed]

Title

Date

Company name

APPENDIX A

INSPECTION SHEET AND LOGS

SWI	SWPPP Survey Checklist									
Project No.:				I	Inspection Date:					
Project Name:				Owner (Permittee):						
	ect Location:					gineer:	<u> </u>			
	erintendent:					Permit N	Λο.			
	PPP Survey was conducted on the projection	act identifie	d abox					ad during	thic curvey	
	_	ent Inspecti				•		ica during ifall (inche	·	
Stor	m Water Pollution Prevention Plan:	Part of G	rading	Plans			Separate Docu	ment		
SW	PPP in Project Office:	Yes	No		ator Ins	pection F	Form and Log		No	
	of Permit & Conditions in Office:	Yes	No		Area (in	•			_	
1.		Name of r	eceivi	ng Wat	ers or S	treams:				
Grac	ling Contractor:					ntractor	Contra	acted Direc	et to Owner	
No.	I. Best Management Practices In	nspection	A		ble Co		Act	ion Taken	l	
1.	Stabilized Construction Entrance			Yes	<u> </u>	N/A				
2.	Public Street Clean at Construction En	ıtry		Yes	■No	N/A				
3.	Truck Wash Down Area			Yes	□No	N/A				
4.	Fabric Silt Fence			Yes	□No	N/A				
5.	Inlet Protection			Yes	□No	N/A				
6.	Sediment Basin			Yes	□No	N/A				
7.	Retention Basin			Yes	□No	N/A				
8.	Temporary Seeding or Mulching			Yes	□No	N/A				
9.	Erosion Control Mats			Yes	□No	N/A				
10.	Drainage Swales			Yes	□No	N/A				
11.				Yes	□No	N/A				
12.				Yes	□No	N/A				
13.				Yes	No	N/A				
14.				Yes	□No	N/A				
15.				Yes	□No	N/A				
16.				Yes	□No	N/A				
17.				Yes	□No	N/A				
18.				Yes	No	N/A				
19.				Yes	□No	N/A				
20.										
No.	II. General Condition Questions	/Checklist	A	Accepta	ble Co	ndition	C	omments		
1.	Are BMP's Completed per the SWPPI	2?		Yes	No	N/A				
2.	Are BMP's routinely maintained?			Yes	□No	N/A				
3.	Are good site housekeeping practices of			Yes	No	N/A				
4.	Is sediment form erosion being retaine			Yes	□No	N/A				
5.	Solid waste prohibited from being buri	ied on site?		Yes	□No	N/A				
6.	Hazardous waste and paint removed fr			Yes	□No	N/A				
7.	Has any disturbed site area been inacti	$ve > 14 \overline{day}$	s?	Yes	□No	N/A				
Repor	t Prepared by:			☐ Ca	rbon Co	opy to: _				
See C	ontinuation Page: Yes No, END	OF REPO	RT							

SWI	SWPPP Survey Checklist Continuation Sheet							
The it	tems described below are part of the St6orm Water Pollution Prevention Plan (SWPPP) Survey for Project							
	per, Project titled, as follows:							
No.	III. Additional Comments (if applicable, note the item number of the topic above to which your comments apply).							

SWPPP OPERATOR INSPECTION LOG Project No.: Page of **Project Name: Owner (Permittee): Project Location: Civil Engineer: Superintendent: NPDES Permit No.: Storm Water Pollution Plan:** Part of Grading Plans **Separate Document** Site Area (in Acres): Name of Receiving Waters or Streams: **Grading Contractor:** Subcontractor Contracted Direct to Owner **BMP Condition BMP** Item **Inspection Date Inspection Conducted By Inspection Type** Date Weekly (W) or Good (G), Fair (F) Maintenance No. Maintenance Storm Event (S) or Poor (P) Required? Performed Y/N lW lG G W $\mathbb{I}F$ P N 2. lW G ٦F P Y 3. N W S G ĪΕ P Y 4. N W S ٦F Ъ lγ 5. G N W S G ٦F P Y 6. S W G ĴΕ Р Y N 7. S G P lW N 8. W S G P 9. N G 10. W N 11. W lG P 12. W lG 13. W G٦F P N 14. W S G ÌΕ P N 15. W S ٦F Р Y G S ٦F P 16. W G Y Р W lG 17. S W G ٦F P Y N 18. S 19. W G N S P 20. W G N W G P 21. P 22. W lG W lG ÌΕ P 23. P 24. W S lG ٦F Y lN 25. lW S G ٦F P Y N S W G ٦F P lΥ 26. lW S G ٦F Ρ 27. Y N W S lG 28. P lN 29. lW S G P N 30. W lG P P W G 31. 32. W G ÌΕ P N G W ٦Р

W

٦F

G

N

33.

34.

SWPPP OPERATOR INSPECTION LOG

Item No.	Inspection Date	Inspection Conducted By	Inspection Type BMP Condition Good (G), Fair (F) or Poor (P)		BMP Maintens Require Y/N	ance	Date Maintenance Performed			
35.			l DW	\Box S	ПG	F	P	$\square Y$	\neg_{N}	
			W W		G	r F	P	Y		
36.				S]		P	<u> </u>	N	
37.			W	$\square S$	G	F_[N	
38.			W	$\square S$	G	F [P	<u></u> Y [N	
39.			W		G	F [P	<u> </u>	N	
40.			W		G	F [P	<u> </u>	N	
41.			W		G	F [P	<u> </u>	<u></u> N	
42.			$\square W$		G	F [P	□Y [N	
43.			\square W		G	F [P		N	
44.			$\square W$	$\square S$	□G	F [P	\square Y	□N	
45.			\square W		G	□F [P	□Y [N	
46.			W	S	G	F	P	□ Y [N	
47.			W	S	G	F	P	Y	N	
48.			W	□S	G	F	P	□Y [N	
49.			<u> </u>		ПG	\overline{F}	P	\square_{Y}	$\overline{\mathbb{N}}$	
50.			□W		ПG	\overline{F}	P	TY [$\overline{\mathbb{N}}$	
51.			□W		G	F	P	TY [N	
52.			□W		G	F	P	\square Y	N	
53.			□W		G	=F	=P	\square Y	N	
54.			□W		G	F	P	\square Y	N	
55.			W		G	F	P	\square Υ	N	
56.					G	F	P	\bigcap_{Y}	N	
57.			W W		G	F	P	Y	N	
58.			W W			r F	$=\frac{P}{P}$	Y		
							P P]		
59.			W		G	F [<u> </u>	N	
60.			W	S	G	F [P	<u> </u>	N	
61.			W	$\square S$	G	<u>F</u>	P	<u> </u>	N	
62.			W		G	F [P	<u> </u>	<u></u> N	
63.			W		G	F [P		N	
64.			W		G	F	P		N	
65.			W		G	F [P		N	

Reference	Comments					
Item						

APPENDIX B

PERMIT COPIES