

CIVIL BOUNDARY LEGEND

---	SECTION LINE
---	PROPERTY BOUNDARY
---	PROPERTY LINE / LOT LINE
---	EASEMENT LINE
---	R/W RIGHT-OF-WAY
---	P/E PERMANENT EASEMENT
---	C/E CONSTRUCTION EASEMENT

CIVIL UTILITY LEGEND

EXISTING	PROPOSED	
SS	SSFM	SANITARY SEWER
		SANITARY SEWER FORCEMAIN
		SANITARY MANHOLE
		SANITARY CLEANOUT
		SANITARY DROP MANHOLE
		SANITARY WYE
		SANITARY PLUG
		SANITARY PIG
SD		STORM DRAIN PIPE
		AREA INLET
		BEEHIVE INLET
		CURB INLET
		STORM MANHOLE
		FES OUTFALL
		WATER LINE
		CURB STOP
		WATER MANHOLE
		AIR RELEASE MANHOLE
		METER MANHOLE
		GATE VALVE
		BLOW-OFF HYDRANT
		FIRE HYDRANT
		WELL
		AIR RELEASE HYDRANT
		BUTTERFLY VALVE
		PRESSURE REDUCING MANHOLE
		SLIDE MANHOLE
		PLUG VALVE
		WATER CROSS
		WATER TEE
		WATER FITTING
		WATER CAP
		WATER COUPLING
		WATER REDUCER
		SADDLE
		CABLE TV LINE
		CABLE TV PEDESTAL
		TELEPHONE LINE
		TELEPHONE PEDESTAL
		FIBER OPTIC LINE
		FIBER OPTIC PEDESTAL
		GAS LINE
		GAS LINE VENT
		ELECTRIC, UNDERGROUND
		ELECTRIC, OVERHEAD
		ELECTRIC UTILITY POLE
		ELECTRIC BOX
		ELECTRIC MANHOLE
		ELECTRIC GUY
		ELECTRIC LIGHT
		ELECTRIC SIGNAL ARM
		ELECTRIC SIGNAL
		ELECTRIC PUSH-TO-WALK
		UNKNOWN PEDESTAL
		UNKNOWN MANHOLE
		UNKNOWN VALVE

CIVIL TOPOGRAPHIC LEGEND

EXISTING	PROPOSED	
X	X	BUILDING
XX	XX	FENCE, BARBED WIRE
		FENCE, WOVEN WIRE
		FENCE, CHAINLINK
		FENCE, WOOD
		FENCE, VINYL
		TREE - GROUP
		TREE - CONIFEROUS
		TREE - DECIDUOUS
		SHRUB / BUSH
		SIGN
		MILE POST
		BORE HOLE
		RIGHT-OF-WAY MONUMENT
		CONTOUR - INDEX
		CONTOUR - INTERMEDIATE

CIVIL SURFACE LEGEND

EXISTING	PROPOSED	
		BITUMINOUS PAVEMENT
		CONCRETE
		GRAVEL

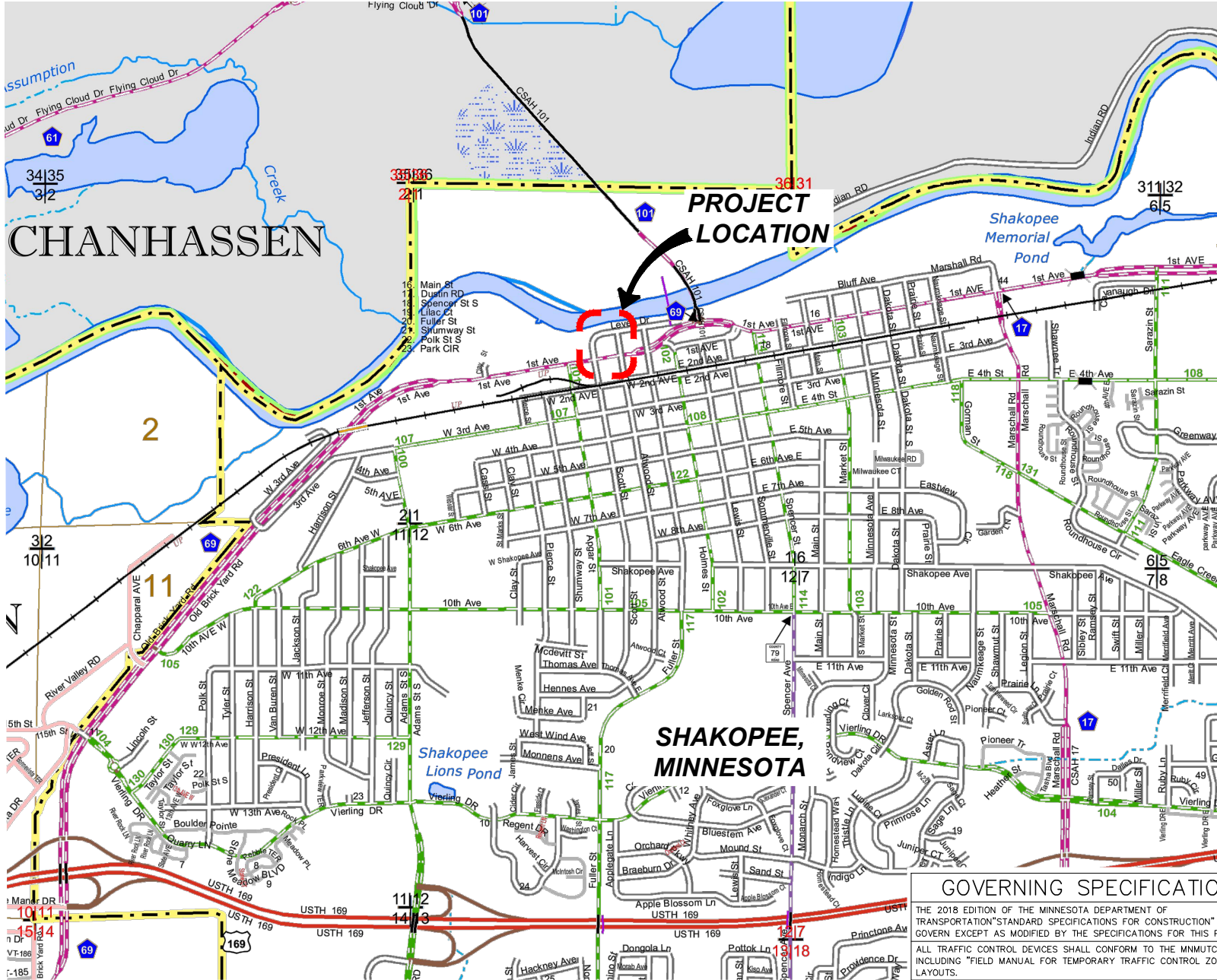
SHAKOPEE, MINNESOTA

CONSTRUCTION PLANS

FOR

BUILDING DEMOLITION, TRASH REMEDIATION, AND REMOVAL

GAUGHAN COMPANIES



PROJECT LOCATION
COUNTY: SCOTT COUNTY
DISTRICT METRO

SHEET NO & DESCRIPTION

C1	COVER
C2	SWPPP
C3	SWPPP
C4	EXISTING CONDITIONS AND DEMOLITION PLAN

THIS PLAN CONTAINS 4 SHEETS

DRAWINGS ARE INTENDED TO BE VIEWED IN COLOR. DRAWINGS NOT IN COLOR WILL NOT ACCURATELY DISPLAY NECESSARY INFORMATION



I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

PRINT NAME: CHRISTOPHER MCKENZIE LICENSE # 48260

DATE: _____ SIGNATURE: _____

RECOMMENDED FOR APPROVAL

CITY OF SHAKOPEE CITY ENGINEER Date: _____

AUGUST 2020 SHEET NO. 1 OF 4 SHEETS

GOVERNING SPECIFICATIONS

THE 2018 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION" SHALL GOVERN EXCEPT AS MODIFIED BY THE SPECIFICATIONS FOR THIS PROJECT.

ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MNMUTCD. INCLUDING "FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS."

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL C. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF C/ASCE 28-2, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA".

NOTE:
THE EXACT LOCATION OF UNDERGROUND UTILITIES SUCH AS GAS, TELEPHONE, FIBEROPTIC, ELECTRIC, CABLE TV, AND PIPE LINES ARE UNKNOWN. THE CONTRACTOR SHALL CONTACT Gopher State ONE CALL BEFORE COMMENCING EXCAVATION. Gopher State ONE TICKET NO. XXXXXX.

PLAN REVISIONS

DATE	SHEET NO.	APPROVER

SEDIMENT CONTROL MEASURES AND TIMING:

THE CONTRACTOR IS RESPONSIBLE FOR ALL SEDIMENT CONTROL MEASURES FOR THE PROJECT.

SEDIMENT CONTROL MEASURES SHOWN ON PLANS ARE THE ABSOLUTE MINIMUM REQUIREMENTS. THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL SEDIMENT CONTROL MEASURES AS NECESSARY TO PROPERLY MANAGE THE PROJECT AREA.

THE CONTRACTOR SHALL ENSURE SEDIMENT CONTROL MEASURES ARE ESTABLISHED ON ALL DOWN GRADIENT PERIMETERS BEFORE ANY UPGRADE LAND DISTURBING ACTIVITIES BEGIN. THESE MEASURES SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED.

THE CONTRACTOR SHALL ENSURE THERE ARE NO UNBROKEN SLOPE LENGTH GREATER THAN 75 FEET ON SLOPES 3:1 OR STEEPER.

THE CONTRACTOR SHALL ENSURE SEDIMENT CONTROL PRACTICES REMOVED OR ADJUSTED FOR SHORT-TERM ACTIVITIES BE RE-INSTALLED IMMEDIATELY AFTER THE SHORT-TERM ACTIVITY HAS BEEN COMPLETED. SEDIMENT CONTROL PRACTICES MUST BE REINSTALLED BEFORE THE NEXT PRECIPITATION EVENT EVEN IF THE SHORT-TERM ACTIVITY IS NOT COMPLETE.

THE CONTRACTOR SHALL ENSURE STORM DRAIN INLETS AND CULVERT INLETS ARE PROTECTED BY APPROPRIATE BMPS DURING CONSTRUCTION UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAS BEEN STABILIZED. INLET AND CULVERT PROTECTION SHALL CONFORM TO THE 2018 MNDOT SPECIFICATIONS 2573.

THE CONTRACTOR SHALL ENSURE STOCK PILES ARE PROVIDED WITH AN EFFECTIVE SEDIMENT PERIMETER CONTROL AND STOCK PILES SHALL NOT BE PLACED IN ANY TYPE OF SURFACE WATER OR NATURAL BUFFER.

THE CONTRACTOR SHALL INSTALL PERIMETER CONTROL AROUND ALL STAGING AREAS, BORROW PITS, AND AREAS CONSIDERED ENVIRONMENTALLY SENSITIVE.

THE CONTRACTOR SHALL ENSURE VEHICLE TRACKING BE MINIMIZED WITH EFFECTIVE BMPS. WHERE THE BMPS FAIL TO PREVENT SEDIMENT FROM TRACKING ONTO STREETS THE CONTRACTOR SHALL CONDUCT STREET SWEEPING TO REMOVE ALL TRACKED SEDIMENT.

THE CONTRACTOR SHALL IMPLEMENT CONSTRUCTION PRACTICES TO MINIMIZE SOIL COMPACTION.

DEWATERING AND BASIN DRAINING ACTIVITIES:

THE CONTRACTOR IS RESPONSIBLE FOR ADHERING TO ALL DEWATERING AND SURFACE DRAINAGE REGULATIONS. DISCHARGE DIRECTLY INTO A SURFACE WATER IS NOT ALLOWED WITHOUT PRETREATING PRIOR TO DISCHARGE. CONTRACTOR SHALL COMPLY WITH ALL INVASIVE SPECIES REQUIREMENTS TO PREVENT THE SPREAD OF INVASIVE SPECIES.

CONTRACTOR SHALL SUBMIT A DEWATERING PLAN TO THE ENGINEER AND CITY 7 DAYS PRIOR TO INITIATING DEWATERING ACTIVITIES FOR REVIEW.

WATER FROM DEWATERING ACTIVITIES SHALL DISCHARGE TO A TEMPORARY AND/OR PERMANENT SEDIMENT BASIN.

IF WATER CANNOT BE DISCHARGED TO A SEDIMENTATION BASIN, IT SHALL BE TREATED WITH OTHER APPROPRIATE BMPS, TO EFFECTIVELY REMOVE SEDIMENT.

DISCHARGE THAT CONTAINS OIL OR GREASE MUST BE TREATED WITH AN OIL-WATER SEPARATOR OR SUITABLE FILTRATION DEVICE PRIOR TO DISCHARGE.

DISCHARGE POINTS SHALL BE PROTECTED FROM EROSION AND SCOUR.

DISCHARGE WATER SHALL BE DISPERSED OVER AN ACCEPTED ENERGY DISSIPATION MEASURE.

WATER FROM DEWATERING SHALL BE DISCHARGED IN A MANNER THAN DOES NOT CAUSE NUISANCE CONDITIONS, EROSION, OR INUNDATION OF WETLANDS.

INSPECTION AND MAINTENANCE:

ALL INSPECTIONS, MAINTENANCE, REPAIRS, REPLACEMENTS, AND REMOVAL OF BMPS IS TO BE CONSIDERED INCIDENTAL TO THE BMP BID ITEMS.

THE CONTRACTOR IS RESPONSIBLE FOR COMPLETING SITE INSPECTIONS, AND BMP MAINTENANCE TO ENSURE COMPLIANCE WITH THE PERMIT REQUIREMENTS.

THE CONTRACTOR SHALL INSPECT THE CONSTRUCTION SITE ONCE EVERY 7 DAYS DURING ACTIVE CONSTRUCTION AND WITHIN 24 HOURS AFTER A RAINFALL EVENT GREATER THAN 0.5 INCHES IN 24 HOURS.

THE CONTRACTOR SHALL DOCUMENT A WRITTEN SUMMARY OF ALL INSPECTIONS AND MAINTENANCE ACTIVITIES CONDUCTED WITHIN 24 HOURS OF OCCURRENCE. RECORDS OF EACH ACTIVITY SHALL INCLUDE THE FOLLOWING:

- DATE AND TIME OF INSPECTIONS;
- NAME OF PERSON(S) CONDUCTING INSPECTION;
- FINDINGS AND RECOMMENDATIONS FOR CORRECTIVE ACTIONS IF NECESSARY;
- CORRECTIVE ACTIONS TAKEN;
- DATE AND AMOUNT OF RAINFALL EVENTS;
- POINTS OF DISCHARGE OBSERVED DURING INSPECTION AND DESCRIPTION OF THE DISCHARGE
- AMENDMENTS MADE TO THE SWPPP.

THE CONTRACTOR SHALL SUBMIT A COPY OF THE WRITTEN INSPECTIONS TO THE ENGINEER AND OWNER ON A MONTHLY BASIS. IF MONTHLY INSPECTION REPORTS ARE NOT SUBMITTED, MONTHLY PAYMENTS MAY BE HELD.

THE CONTRACTOR SHALL KEEP THE SWPPP, ALL INSPECTION REPORTS, AND AMENDMENTS ONSITE. THE CONTRACTOR SHALL DESIGNATE A SPECIFIC ONSITE LOCATION TO KEEP THE RECORDS

THE CONTRACTOR IS RESPONSIBLE FOR THE OPERATION AND MAINTENANCE OF TEMPORARY AND PERMANENT WATER QUALITY BMP'S, AS WELL AS EROSION AND SEDIMENT CONTROL BMP'S.

THE CONTRACTOR SHALL INSPECT EROSION PREVENTION AND SEDIMENTATION CONTROL BMPS TO ENSURE INTEGRITY AND EFFECTIVENESS. ALL NONFUNCTIONAL BMPS SHALL BE REPAIRED, REPLACED, OR SUPPLEMENTED WITH FUNCTIONAL BMPS WITHIN 24 HOURS OF FINDING. THE CONTRACTOR SHALL INVESTIGATE AND COMPLY WITH THE FOLLOWING INSPECTION AND MAINTENANCE REQUIREMENTS:

PERIMETER CONTROL DEVICES, INCLUDING SILT FENCE SHALL BE REPAIRED, OR REPLACED, WHEN THEY BECOME NONFUNCTIONAL OR THE SEDIMENT REACHES 1/2 OF THE DEVICE HEIGHT. THESE REPAIRS SHALL BE MADE WITHIN 24 HOURS OF DISCOVERY.

TEMPORARY AND PERMANENT SEDIMENT BASINS SHALL BE DRAINED AND THE SEDIMENT REMOVED WHEN THE DEPTH OF SEDIMENT COLLECTED IN THE BASIN REACHES ½ THE STORAGE VOLUME. DRAINAGE AND REMOVAL MUST BE COMPLETED WITHIN 72 HOURS OF DISCOVERY.

INSPECTION AND MAINTENANCE (CONTINUED):

SURFACE WATERS, INCLUDING DRAINAGE DITCHES AND CONVEYANCE SYSTEMS, MUST BE INSPECTED FOR EVIDENCE OF EROSION AND SEDIMENT DEPOSITION. THE CONTRACTOR SHALL REMOVE ALL DELTAS AND SEDIMENT DEPOSITED IN SURFACE WATERS, INCLUDING DRAINAGEWAYS, CATCH BASINS, AND OTHER DRAINAGE SYSTEMS. THE CONTRACTOR SHALL RE-STABILIZE THE AREAS WHERE SEDIMENT REMOVAL RESULTS IN EXPOSED SOIL. REMOVAL AND STABILIZATION MUST TAKE PLACE WITHIN 7 DAYS OF DISCOVERY, UNLESS PRECLUDED BY LEGAL, REGULATORY, OR PHYSICAL CONSTRAINTS. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL LOCAL, REGIONAL, STATE AND FEDERAL AUTHORITIES AND OBTAIN ANY APPLICABLE PERMITS, PRIOR TO CONDUCTING ANY WORK IN SURFACE WATERS.

CONSTRUCTION SITE VEHICLE EXIT LOCATIONS SHALL BE INSPECTED DAILY FOR EVIDENCE OF SEDIMENT TRACKING ONTO PAVED SURFACES. TRACKED SEDIMENT MUST BE REMOVED FROM ALL PAVED SURFACES WITHIN 24 HOURS OF DISCOVERY.

IF SEDIMENT ESCAPES THE CONSTRUCTION SITE, OFF-SITE ACCUMULATIONS OF SEDIMENT MUST BE REMOVED IN A MANOR AND AT A FREQUENCY SUFFICIENT TO MINIMIZE OFF-SITE IMPACTS.

POLLUTION PREVENTION MANAGEMENT MEASURES:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL POLLUTION PREVENTION MANAGEMENT MEASURES.

ALL POLLUTION PREVENTION MEASURES ARE CONSIDERED INCIDENTAL TO THE MOBILIZATION BID ITEM, UNLESS OTHERWISE NOTED.

THE CONTRACTOR IS RESPONSIBLE FOR INFORMING ALL VISITORS AND/OR PERSONNEL ON-SITE OF THE POLLUTION PREVENTION MANAGEMENT MEASURES. POLLUTION PREVENTION MANAGEMENT MEASURES INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL, IN COMPLIANCE WITH MPCA DISPOSAL REQUIREMENTS, OF ALL HAZARDOUS MATERIALS, SOLID WASTE, AND PRODUCTS ON-SITE.

THE CONTRACTOR SHALL ENSURE BUILDING PRODUCTS THAT HAVE THE POTENTIAL TO LEACH POLLUTANTS ARE KEPT UNDER COVER TO PREVENT THE DISCHARGE OF POLLUTANTS.

THE CONTRACTOR SHALL ENSURE PESTICIDES, HERBICIDES, INSECTICIDES, FERTILIZERS, TREATMENT CHEMICALS, AND LANDSCAPE MATERIALS ARE COVERED TO PREVENT THE DISCHARGE OF POLLUTANTS.

THE CONTRACTOR SHALL ENSURE HAZARDOUS MATERIALS AND TOXIC WASTE IS PROPERLY STORED IN SEALED CONTAINERS TO PREVENT SPILLS, LEAKS, OR OTHER DISCHARGE. STORAGE AND DISPOSAL OF HAZARDOUS WASTE OR HAZARDOUS MATERIALS MUST BE IN COMPLIANCE WITH MINN. R. CH. 7045 INCLUDING SECONDARY CONTAINMENT AS APPLICABLE.

THE CONTRACTOR SHALL ENSURE ASPHALT SUBSTANCES USED ON-SITE SHALL ARE APPLIED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.

THE CONTRACTOR SHALL ENSURE PAINT CONTAINERS AND CURING COMPOUNDS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT AND/OR CURING COMPOUNDS SHALL NOT BE DISCHARGED INTO THE STORM SEWER SYSTEM AND SHALL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURE'S INSTRUCTION.

THE CONTRACTOR SHALL ENSURE SOLID WASTE BE STORED, COLLECTED AND DISPOSED OF PROPERLY IN COMPLIANCE WITH MINN. R. CH. 7035.

THE CONTRACTOR SHALL ENSURE PORTABLE TOILETS ARE POSITIONED SO THAT THEY ARE SECURE AND WILL NOT BE TIPPED OR KNOCKED OVER. SANITARY WASTE MUST BE DISPOSED OF PROPERLY IN ACCORDANCE WITH MINN. R. CH. 7041.

THE CONTRACTOR SHALL MONITOR ALL VEHICLES ON-SITE FOR LEAKS AND RECEIVE REGULAR PREVENTION MAINTENANCE TO REDUCE THE CHANCE OF LEEKAGE.

EXTERNAL WASHING OF TRUCKS AND OTHER CONSTRUCTION VEHICLES AND ENGINE DEGREASING ARE PROHIBITED AT THE CONSTRUCTION SITE.

THE CONTRACTOR SHALL ENSURE WASHOUT WASTE MUST CONTACT THE GROUND AND BE PROPERLY DISPOSED OF IN COMPLIANCE WITH MPCA RULES.

THE CONTRACTOR SHALL INCLUDE SPILL KITS WITH ALL FUELING SOURCES AND MAINTENANCE ACTIVITIES. SECONDARY CONTAINMENT MEASURES SHALL BE INSTALLED AND MAINTAINED BY THE CONTRACTOR.

THE CONTRACTOR SHALL ENSURE SPILLS ARE CONTAINED AND CLEANED UP IMMEDIATELY UPON DISCOVERY. SPILLS LARGE ENOUGH TO REACH THE STORM WATER CONVEYANCE SYSTEM SHALL BE REPORTED TO THE MINNESOTA DUTY OFFICER AT 1.800.422.0798.

PERMIT TERMINATION CONDITIONS:

THE CONTRACTOR IS RESPONSIBLE FOR ENSURING THE ENTIRE SITE MEETS PERMIT TERMINATION CONDITIONS. PERMIT TERMINATION CONDITIONS INCLUDES BUT IS NOT LIMITED TO THE FOLLOWING:

ALL SOIL DISTURBING ACTIVITIES HAVE BEEN COMPLETED.

ALL EXPOSED SOILS HAVE BEEN UNIFORMLY STABILIZED WITH A UNIFORM PERENNIAL VEGETATION COVER OF AT LEAST 70% OF ITS EXPECTED FINAL GROWTH.

ALL DRAINAGE DITCHES, BASINS, AND ALL STORM WATER CONVEYANCE SYSTEMS HAVE BEEN CLEARED OF SEDIMENT AND STABILIZED WITH PERMANENT COVER.

ALL TEMPORARY BMPS HAVE BEEN REMOVED AND PROPERLY DISPOSED OF.

FINAL STABILIZATION SHALL BE PERFORMED IN ACCORDANCE WITH MNDOT 2018 SPECIFICATION 2575.

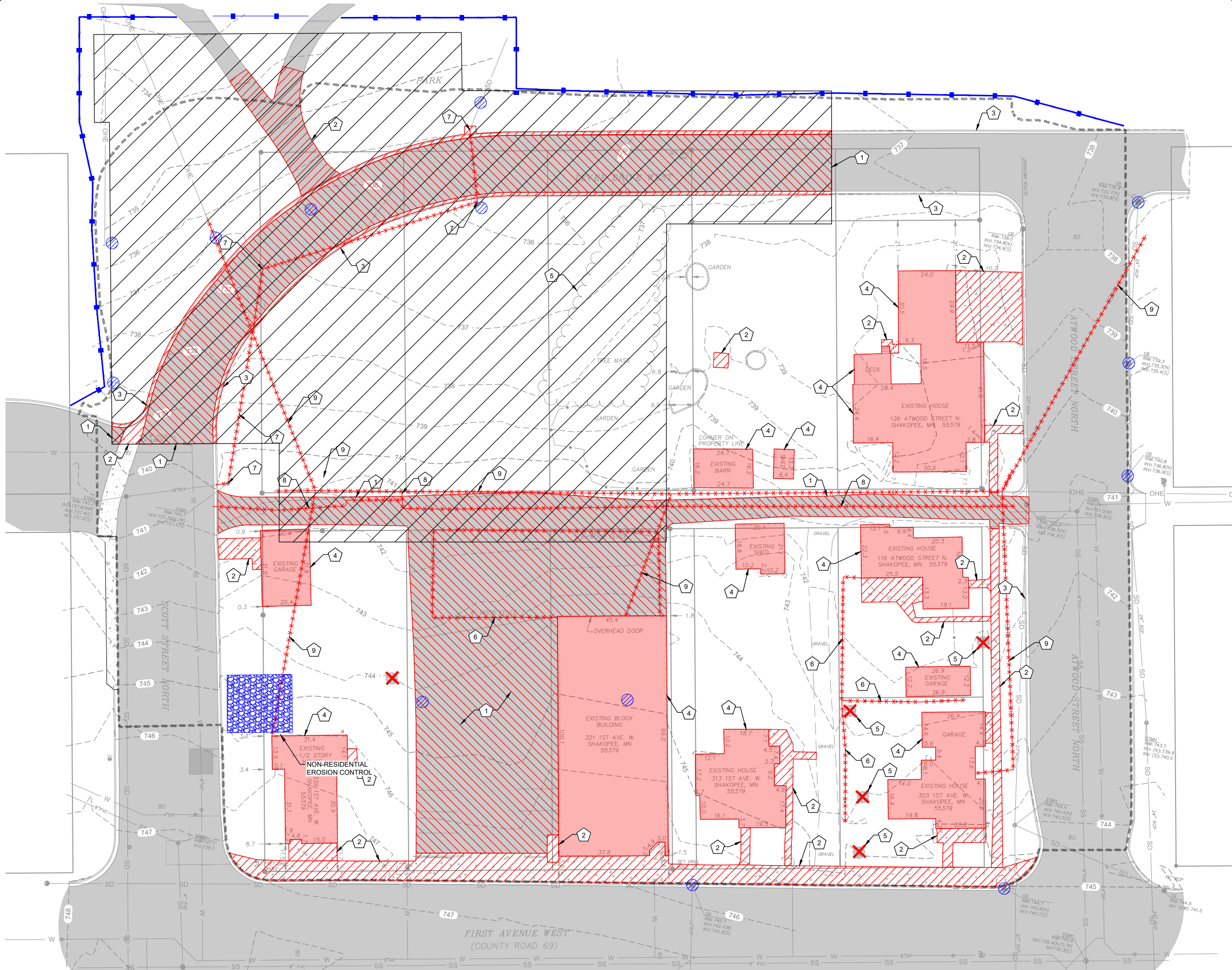
SYN	DATE	DESCRIPTION	APPR



SHAKOPEE MIX USE DEVELOPMENT
GAUGHAN CO.
SHAKOPEE, MINNESOTA

SWPPP

DRAWING TYPE
CONST
PREPARED BY
EJ
CHECKED / APPROVED
JN / CDM
DATE
AUGUST 2020
PROJECT NUMBER
14416-2018-001
SHEET
3 of 4
DRAWING
C3



0 20
Scale in Feet

ORIGINAL PLAN SIZE: 22"x34"
HALF SIZE PLAN SIZE: 11"x17"

REMOVAL NOTES

- REMOVE ASPHALT PAVEMENT
- REMOVE CONCRETE PAVEMENT
- SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT
- REMOVE EXISTING CONCRETE PAVEMENT TO NEAREST JOINT (REPLACE CONCRETE PAVEMENT BEYOND LIMITS OF DISTURBANCE)
- REMOVE EXISTING CURB & GUTTER TO NEAREST JOINT (REPLACE CURB & GUTTER BEYOND LIMITS OF DISTURBANCE)
- REMOVE EXISTING BUILDING AND FOUNDATION
- CLEAR AND GRUB TREE
- REMOVE EXISTING FENCE
- REMOVE EXISTING RCP STORM SEWER PIPE, INLETS AND MANHOLES
- ABANDON EXISTING GAS SERVICE AND REMOVE METERS (COORDINATE WITH GAS UTILITY COMPANY)
- REMOVE OVERHEAD POWER LINE, POLES AND METERS (COORDINATE WITH ELECTRICAL UTILITY COMPANY)

NOTES

ALL AREAS TO BE RESTORED TO PRE-EXISTING CONDITION. ALL NON-PAVEMENT AREAS TO RECEIVE MNDOT SEED MIX 25-131 WITH BONDED FIBER MATRIX (SEEDING RATE 220 LBS PER AC).

SOIL CORRECTION AREA: EXCAVATION IN FORMER DUMP SITE.

SOIL CORRECTION AREA (SEE GEOTECHNICAL REPORT)

EROSION CONTROL LEGEND

- NON-RESIDENTIAL EROSION CONTROL AT SITE ENTRANCE PER DETAIL 3005NR
- SILT FENCE PER DETAIL 3004
- INLET PROTECTION PER DETAIL 3015
- GRADING LIMITS

EROSION CONTROL NOTES

ADJACENT STREETS AND ALLEYS MUST BE SWEEPED TO KEEP THEM FREE OF SEDIMENT. CONTRACTOR MUST MONITOR CONDITIONS AND SWEEP AS NEEDED OR WITHIN 24 HOURS OF NOTICE BY THE CITY.

SHAKOPEE MIX USE DEVELOPMENT
GAUGHAN CO.
SHAKOPEE, MINNESOTA

EXISTING CONDITIONS AND DEMOLITION PLAN

DRAWING TYPE
CONST

PREPARED BY
EJ

CHECKED / APPROVED
JN / CDM

DATE
AUGUST 2020

PROJECT NUMBER
14416-2018-001

SHEET
4 of 4

DRAWING
C4