# FINAL ENGINEERING

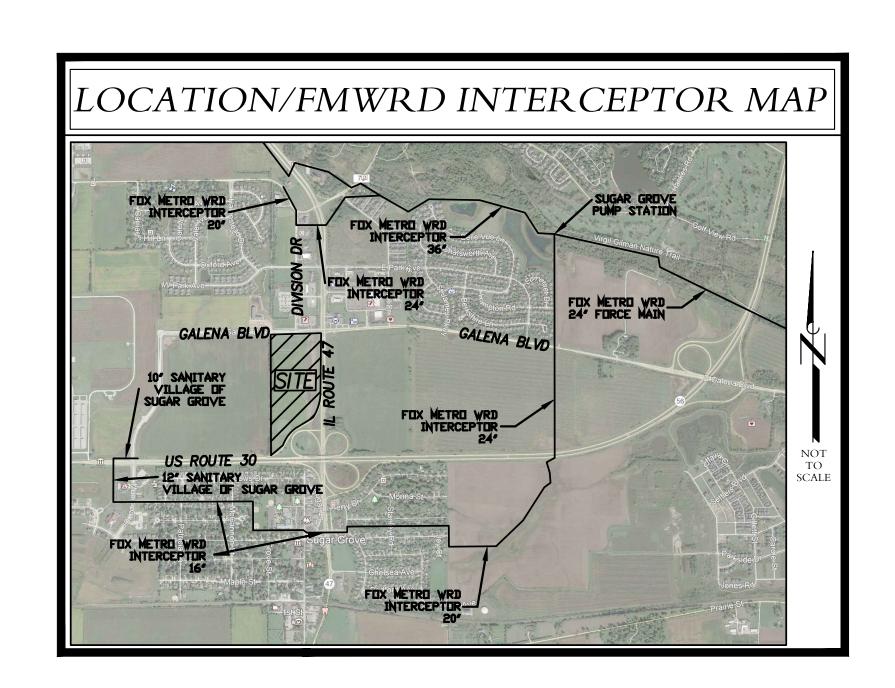
# PRAIRIE GROVE COMMONS UNIT TWO

# SWC IL ROUTE 47 & GALENA BLVD SUGAR GROVE, ILLINOIS

PREPARED FOR

SDP SUGAR GROVE LLC 2803 BUTTERFIELD ROAD, SUITE 300 OAK BROOK, ILLINOIS

DRAWINGS INDEX



# WARNING CALL

Call 48 hours before you dig (Excluding Sat., Sun. & Holidays)



24 hours a day 365 days a year)

BEFORE YOU DIG

CONTRACTORS SHALL CALL J.U.L.I.E. BEFORE START OF CONSTRUCTION. CALL LOCAL AMERITECH OFFICE FOR LOCATIONS OF FIBEROPTIC CABLES. J.U.L.I.E. DOES NOT MARK THESE LOCATIONS.

#### ON-SITE IMPROVEMENTS REVDATETITLE SHEET & INDEX 8/16/22 CO.1 4/28/22 1 OF 2 PLAT OF SUBDIVISION 4/28/22 PLAT OF SUBDIVISION 2 OF 2 3/1/22 GRANT OF EASEMENT 1 OF 1 5/2/22 CO.2 EXISTING CONDITIONS & DEMOLITION PLAN 5/2/22 EXISTING CONDITIONS & DEMOLITION PLAN CO.3 9/16/22 C1.1 P.U.D. PLAN C1.2 9/16/22 DEVELOPMENT PLAN PHASE 1 9/16/22 C2.1 GRADING PLAN 9/16/22 C2.2 GRADING PLAN 9/16/22 C2.3 STORMWATER POLLUTION PREVENTION PLAN 9/16/22 STORMWATER POLLUTION PREVENTION PLAN C2.4 2/28/22 C2.5 SWPPP DETAILS 11/8/21 1 OF 2 NATIVE LANDSCAPE PLAN NATIVE LANDSCAPE SPECIFICATIONS 11/8/21 2 OF 2 8/18/22 SANITARY EXTENSION OVERVIEW C3.1 9/16/22 C3.2 UTILITY PLAN 8/18/22 C3.3 SANITARY PLAN & PROFILE 8/18/22 SANITARY PLAN & PROFILE C3.4 8/18/22 *C3.5* SANITARY PLAN & PROFILE 8/18/22 C3.6 SANITARY PLAN & PROFILE 8/18/22 C3.7 SANITARY PLAN & PROFILE 8/18/22 C3.8 SANITARY PLAN & PROFILE 8/18/22 C3.9 SANITARY PLAN & PROFILE SANITARY PLAN & PROFILE 8/18/22 C3.10 5/1/22 LANDSCAPE PLAN L-0.05/1/22 LANDSCAPE PLAN L-1.05/1/22 L-2.0 LANDSCAPE PLAN 5/24/21 C7.1 GENERAL NOTES & SPECIFICATIONS 2/2017 VILLAGE OF SUGAR GROVE STANDARD NOTES 1 OF 3 2/2017 2 OF 3 VILLAGE OF SUGAR GROVE STANDARD NOTES 2/2017 VILLAGE OF SUGAR GROVE STANDARD NOTES 3 OF 3 2/2/22 FOX METRO GENERAL NOTES & SPECIFICATIONS *C7.2* 5/2/22 C7.3 SITE & UTILITY DETAILS 5/2/22 UTILITY DETAILS C7.4 UTILITY DETAILS 5/2/22 C7.5

# **CONTACTS**

VILLAGE OF SUGAR GROVE 10 S. MUNICIPAL DRIVE SUGAR GROVE, ILLINOIS 60554

**COMMUNITY DEVELOPMENT** WALTER MAGDZIARZ — DIRECTOR (630) 391-7220

PUBLIC WORKS DEPARTMENT TONY SPECIALE - DIRECTOR (630) 391-7230

# **BENCHMARKS**

BENCHMARK #1: FOUND CUT-CROSS IN THE TIP OF THE SOUTH CURB OF THE MEDIAN ON IL ROUTE 47, APPROX. AT THE MIDPOINT OF THE DEVELOPMENT'S EAST PROPERTY LINE WHERE THE IL 47 MEDIAN HAS A BREAK.

ELEVATION: 714.72

BENCHMARK #2: RIM OF EX. SANMH LOCATED ON THE NORTH SIDE OF GALENA BLVD., 27.1' NORTH & 8.7' EAST OF THE se CORNER OF THE UNDEVELOPED LOT ON THE WEST SIDE OF DIVISION DRIVE.

ELEVATION: 708.47

REFER TO SHEET CO.2 FOR BENCHMARK LOCATIONS. ALL BENCHMARKS ARE USGS NAVD 88 DATUM.

LATEST REVISION

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED UNDER MY SUPERVISION AND TO THE BEST OF MY KNOWLEDGE COMPLY WITH THE CODES AND ORDINANCES OF THE VILLAGE OF SUGAR GROVE. MY LICENSE EXPIRATION: NOVEMBER 30, 2023 STEVEN R. KUDWA, P.E.

11 9/16/22



LICENSED ENGINEER # 062-054950



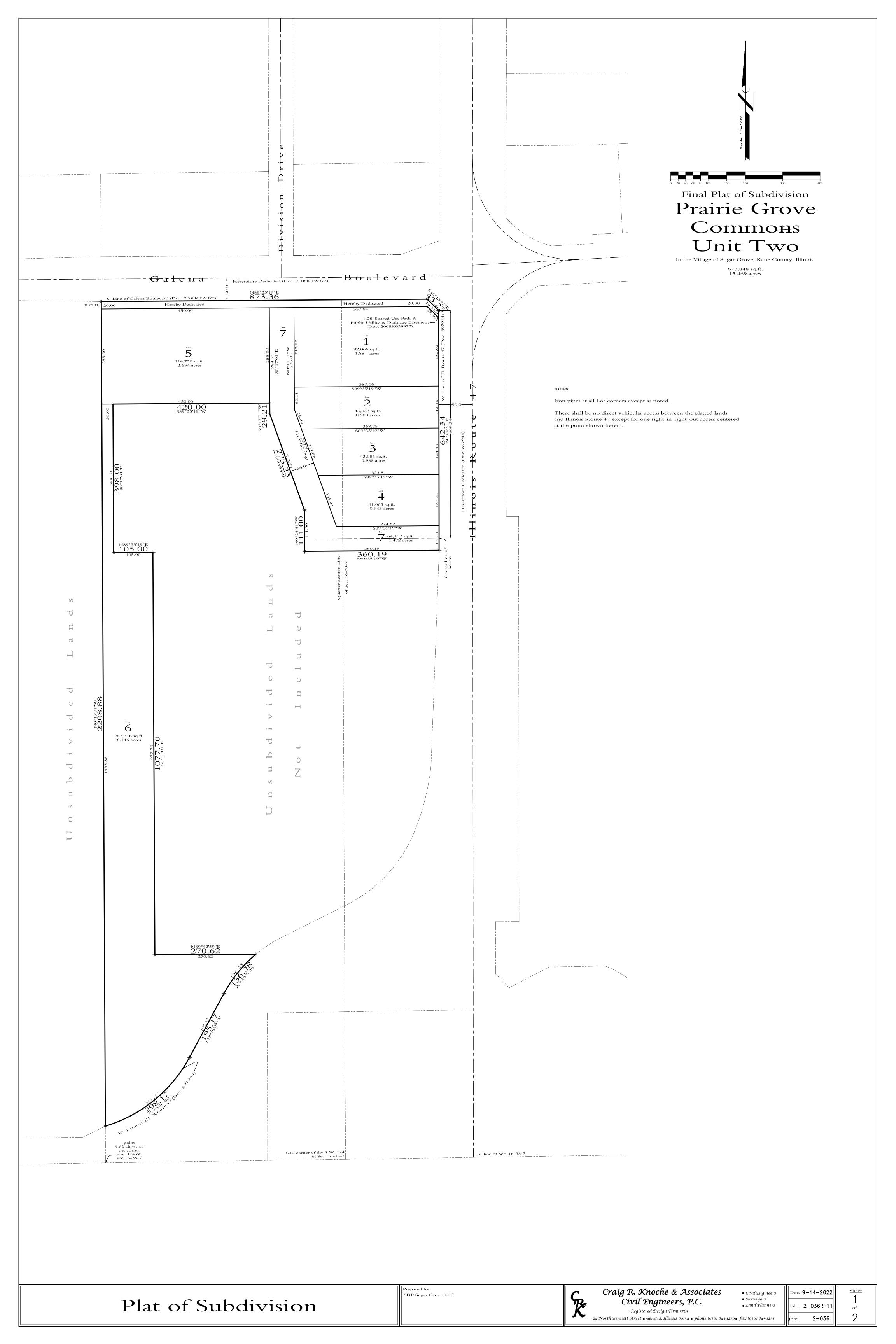
20-036 C01

REVISIONS 1 6/30/21 TREE REMOVAL/ NATIVE LANDSCAPE ADDED

NO. DATE DESCRIPTION NO. DATE DESCRIPTION

TITLE SHEET & INDEX

PRAIRIE GROVE COMMONS UNIT TWO SWC IL ROUTE 47 & GALENA BLVD SUGAR GROVE, ILLINOIS

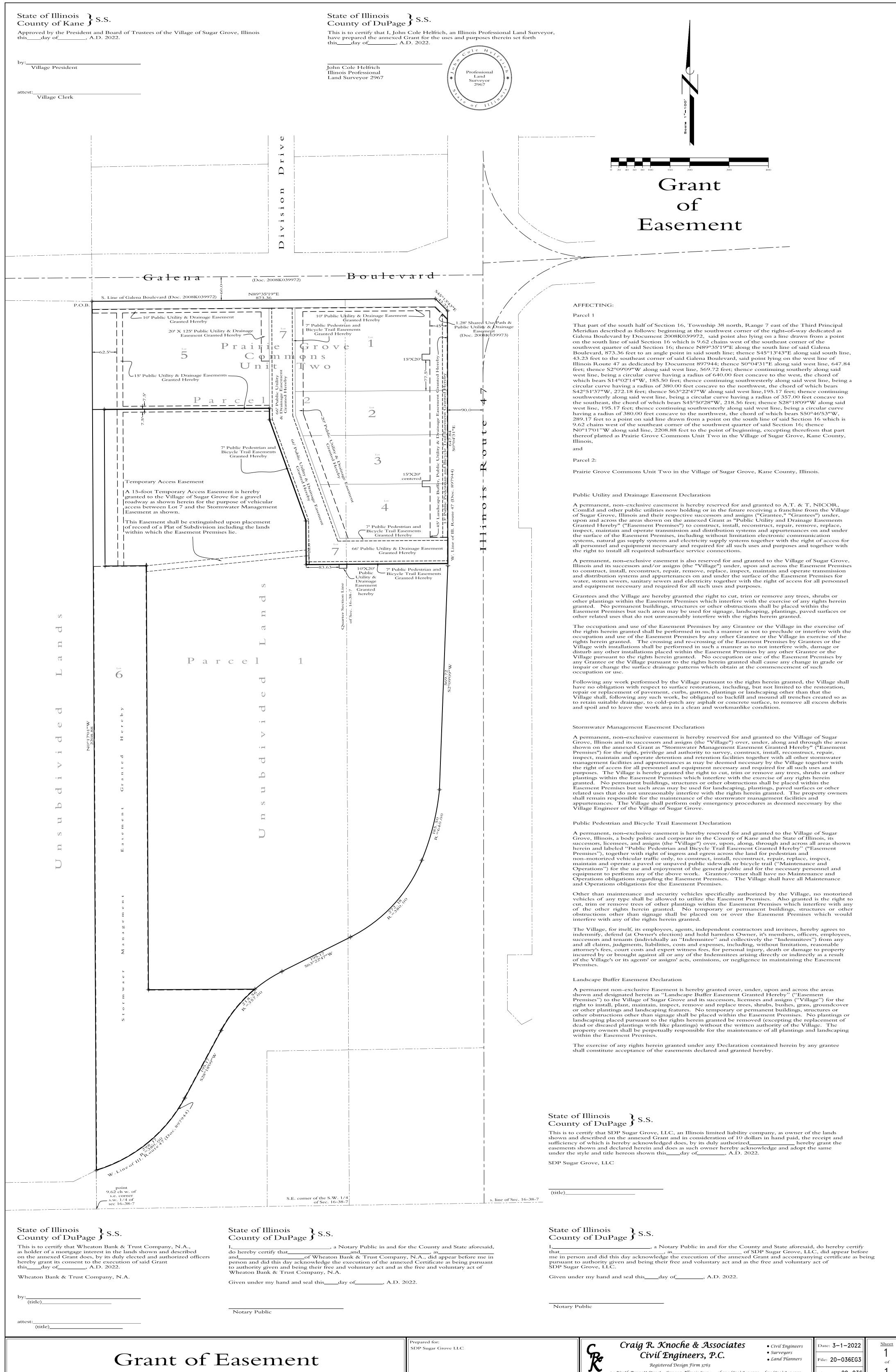


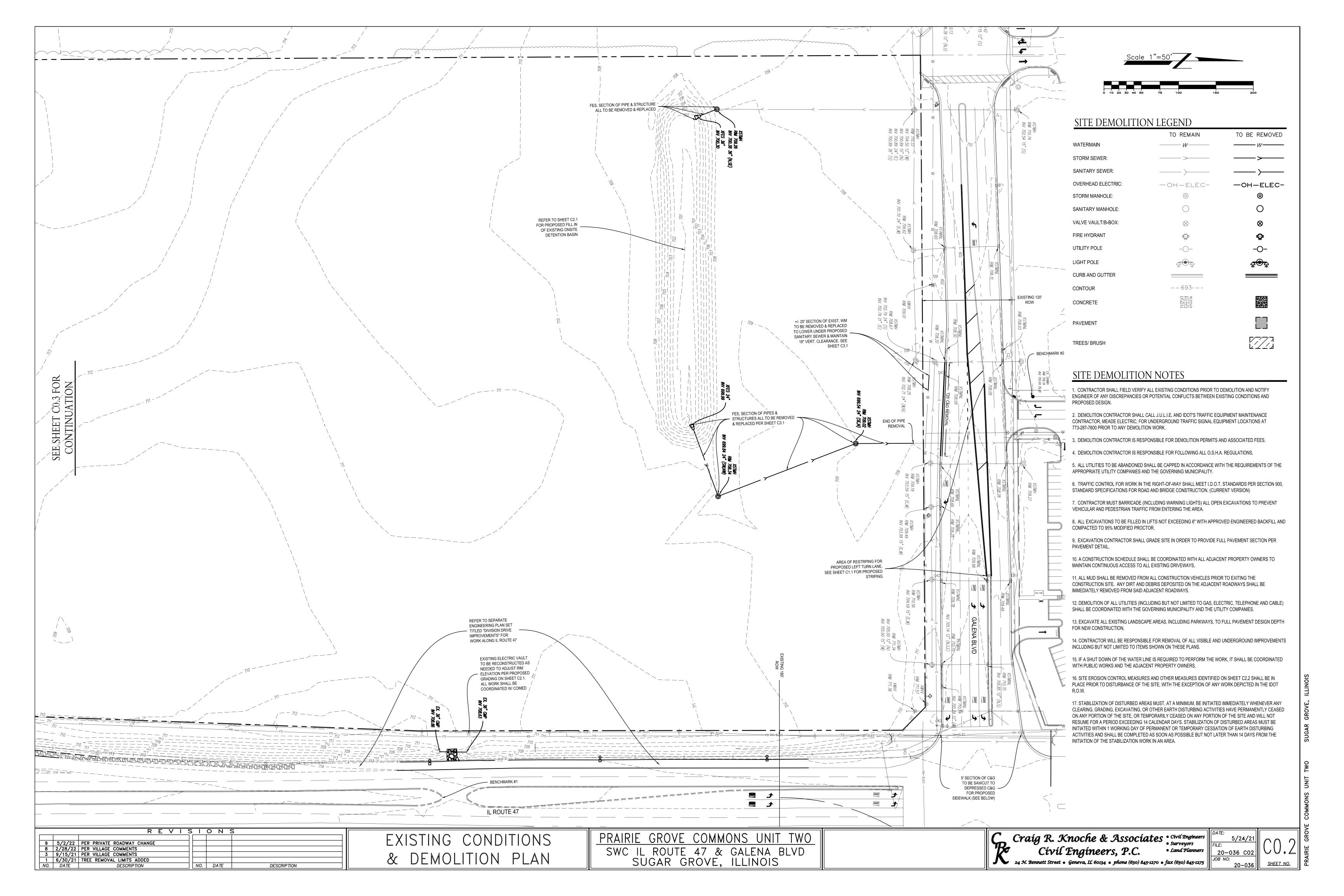
# Plat of Subdivision

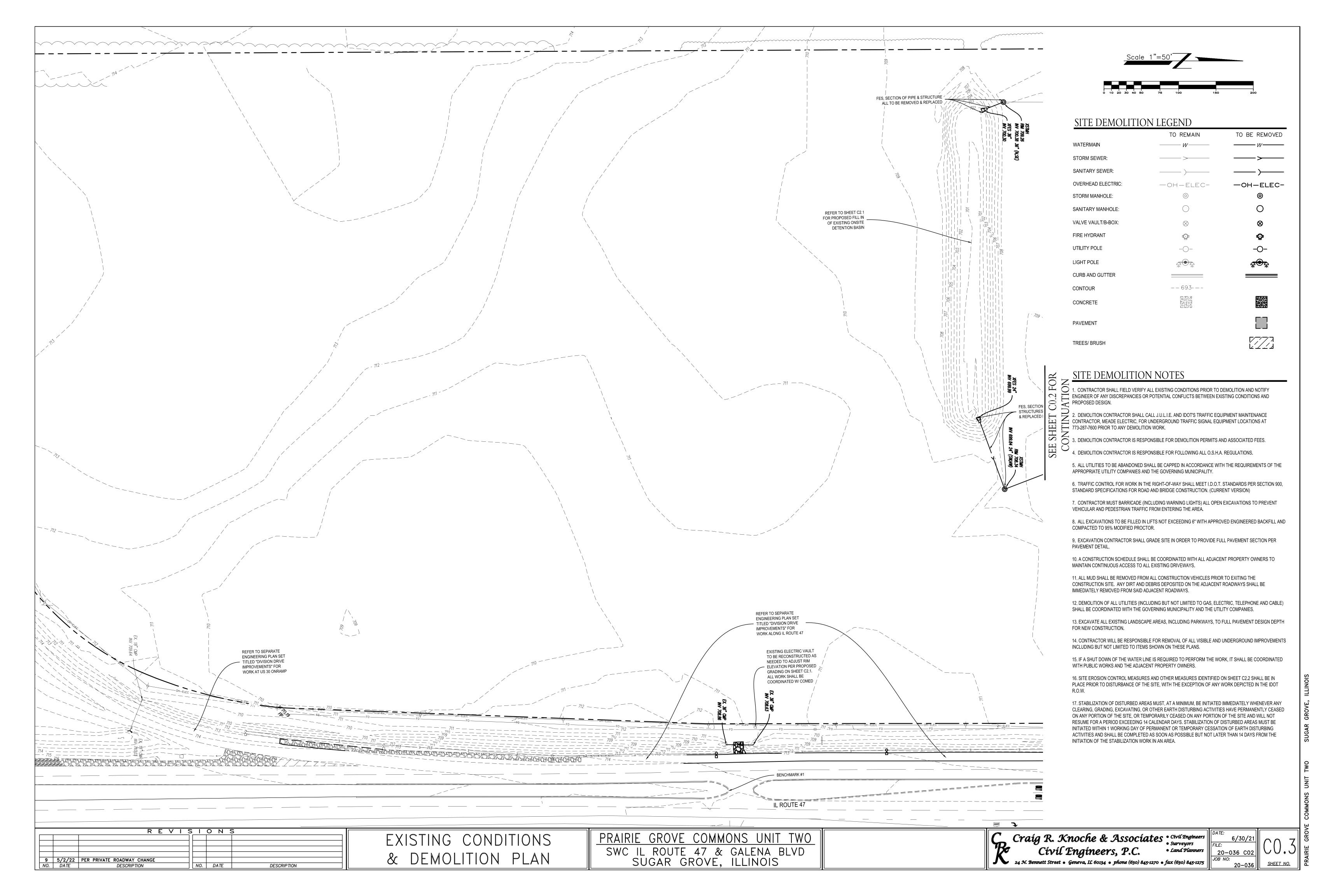
# Prairie Grove Commons Unit Two

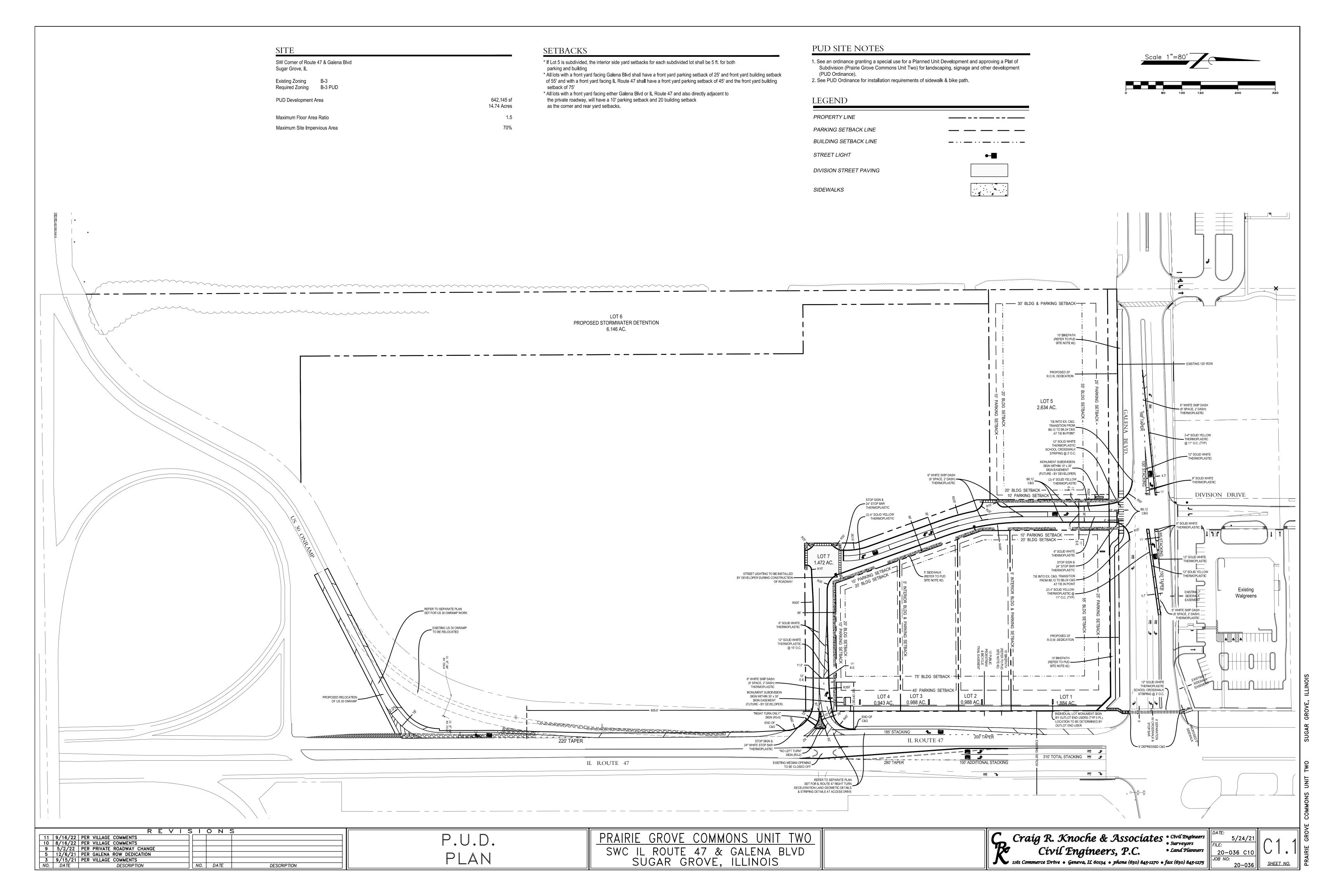
State of Illinois County of DuPage S.S. This is no cutify that SDP Super Grove, LLC an illinois Lumed Labelity Company is the owner of the lands shown and described on the annexed plat and by its daily authorized Manuppe has a such cowner canced this some to be surveyed, shability and subject as shown thereon for the use and purposes thereith see texts, does hereby declared to published as shown thereon from the same and purposes thereith see texts, does hereby declared to published and and adopted the same under the style and title thereous shown.  It is further certified that the bank planted herein fall within the boundaries of Kaneland Community Units School Disease 302.  Dated at Oak Brook, Illinois thisday of	State of Illinois Country of DuPage S.S.  This is to certify that I, John Cole Helfrich, an Illinois Professional Land Surveyor, have surveyed, resubdivided and planted those lands described as follows:  That part of the south balf of Section 16, Township 38 north, Range 7 east of the Third Principal Metidian described as follows:  begaming at the southwest corner of the right-of-way dedicated as Galena Boulevard by Document 20088(039972, and point also lying on a line drawn from a point on the south line of said Section 16, which is 9462 thans were of the southeat corner of the southwest quarter of said Section 16, and the southwest quarter of said Section 16, and south line; thence \$49°13'43"Pa along said south line, 43.23 feet to the southwast quarter of said Galena Boulevard, said point lying on the west line of Illinois Route 47 as dedicated by Document 897944; thence \$10°043'1Pa along said west line, 642-34 feet; thence \$89°35'19'W, 360,19 feet; thence \$10°043'1Pa along said west line, 642-34 feet; thence \$89°35'19'W, 360,19 feet; thence \$10°043'1Pa along said west line, 642-34 feet; thence \$89°35'19'W, 360,19 feet; thence \$10°043'1Pa along said west line, 642-34 feet; thence \$89°35'19'W, 360,19 feet; thence \$10°043'1Pa along said west line, 640°40'19'W, 360°40'19'W, 360°40'19'W
State of	This plat has been approved by the Illinois Department of Transportation with respect To roadway access pursuant to §2 of "An Act to revise the law in relation to plats," as amended. A plan that meets the requirements contained in the Department's "Policy on Permits for Access Driveways to State Highways" will be required by the Department.  Jose Rios, P.E. Region One Engineer
State of Illinois County of Kane S.S.  I, Village Treasurer of the Village of Sugar Grove, Illinois, do hereby certify that there are no delinquent or unpaid current or forfeited special assessments or any deferred installments thereof that have been apportioned against the tract of land included in this plat. I further certify that I have collected all fees required by Village ordinances, annexation agreements, recapture agreements or other agreements pertaining to the land included in this plat.  dated at Sugar Grove, Illinois this day of, A.D.2022.	State of Illinois County of Kane S.S.  Approved and accepted by the President and Board of Trustees of Village of Sugar Grove, Illinois by Ordinance No at a meeting held  In witness thereof I have set my Hand and the Seal of the Village of Sugar Grove this day of, A.D.2022.  Village Clerk
State of Illinois County of Kane S.S.  I	State of Illinois County of Kane S.S.  Approved and accepted by the President and Board of Trustees of the Village of Sugar Grove, Illinois thisday of, A.D.2022.  Village President
State of Illinois County of Kane S.S.  Reviewed by the Planning Commission of the Village of Sugar Grove, Illinois this	State of Illinois County of Kane  I, County Clerk in and for the County and State aforesaid find no redeemable tax sale, unpaid forfeiture taxes or unpaid current taxes against any of the lands described in the annexed surveyor's certificate.  dated at Geneva, Illinois thisday of, A.D.2022.  County Clerk  State of Illinois County of Kane  State of Illinois A.S.S.  This instrument, no, was filed for record in the Recorder's office of Kane County, Illinois thisday of, A.D.2022 atO'clockm., and was recorded in plat envelope no
	Recorder of Deeds

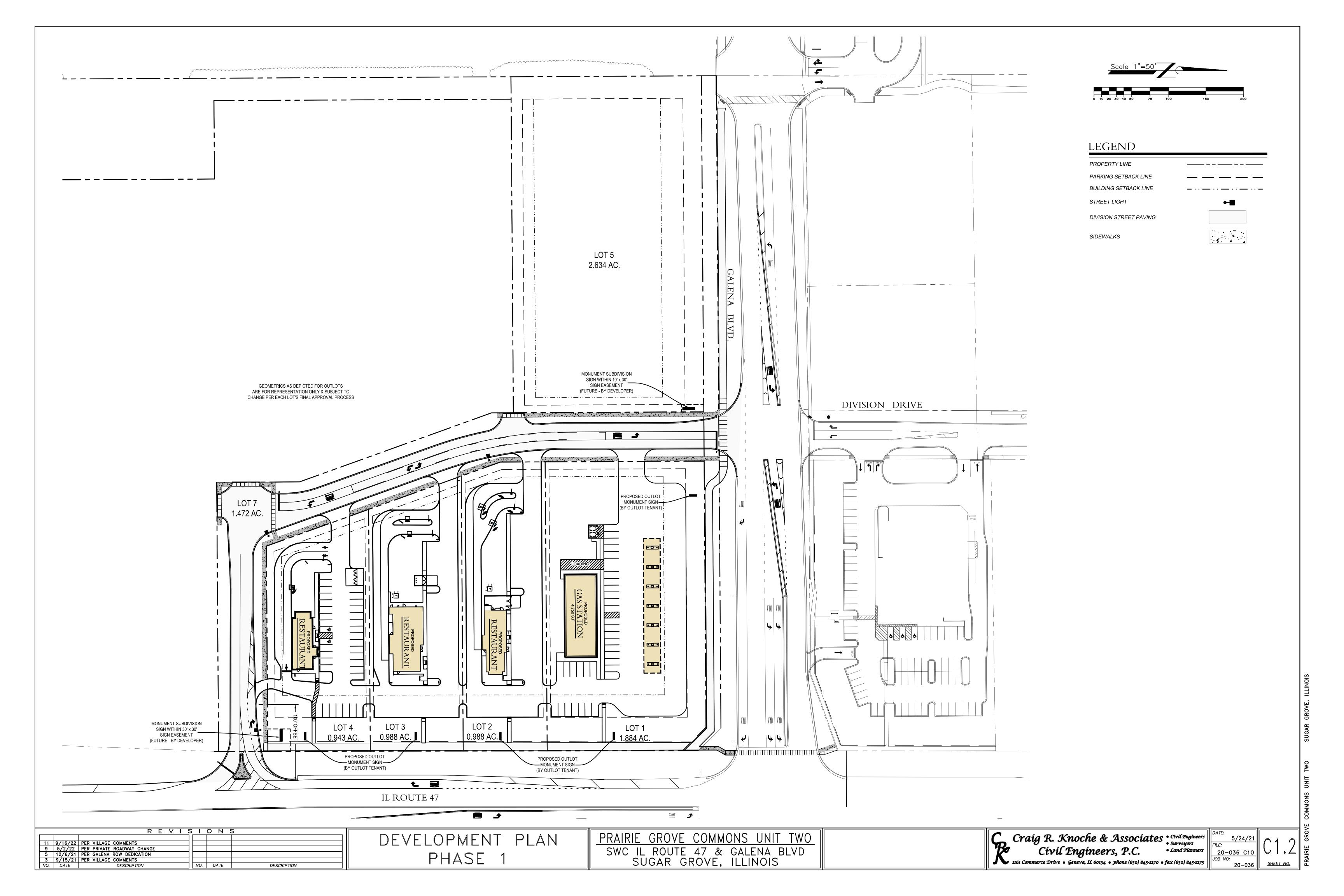
SDP Sugar Grove LLC

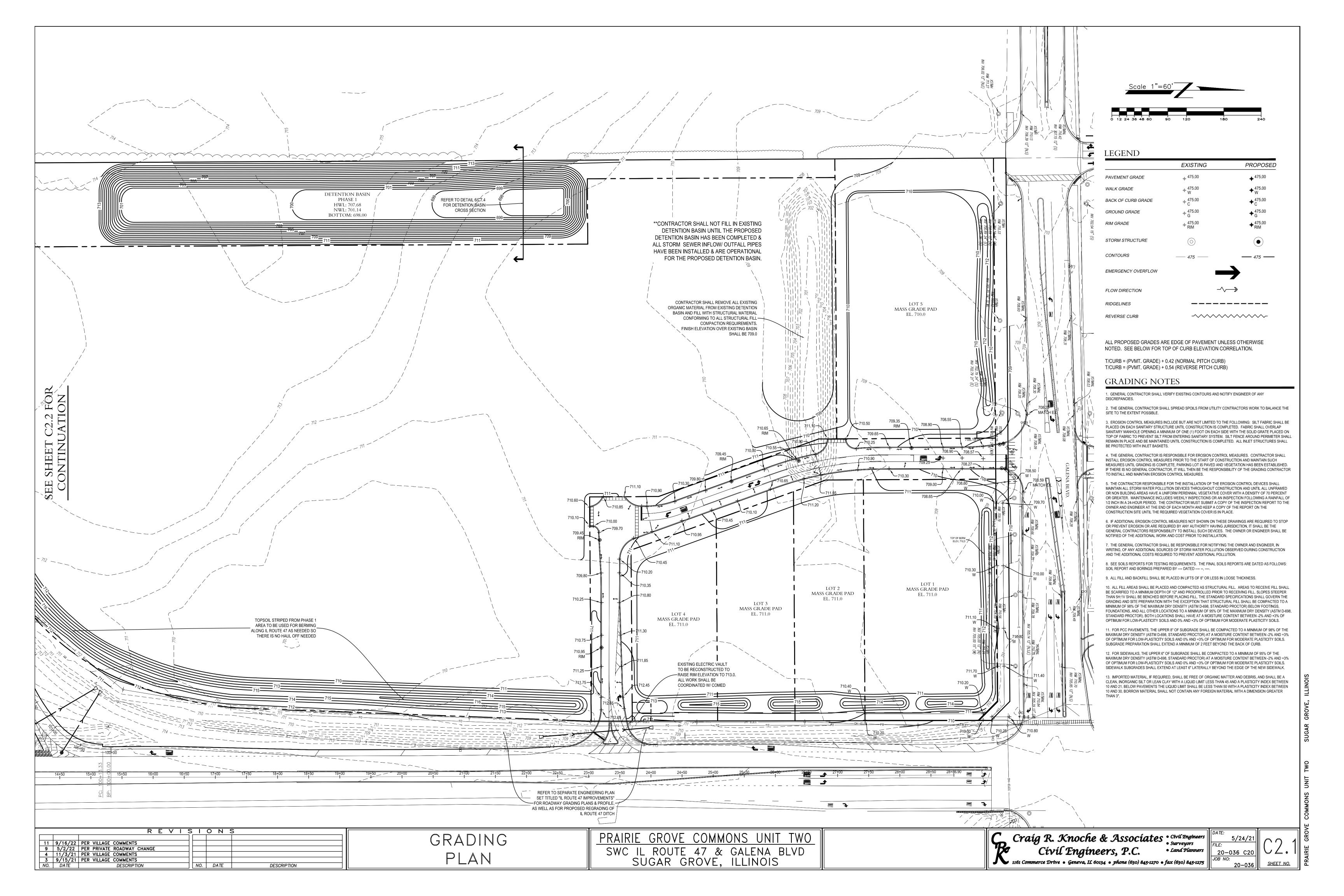


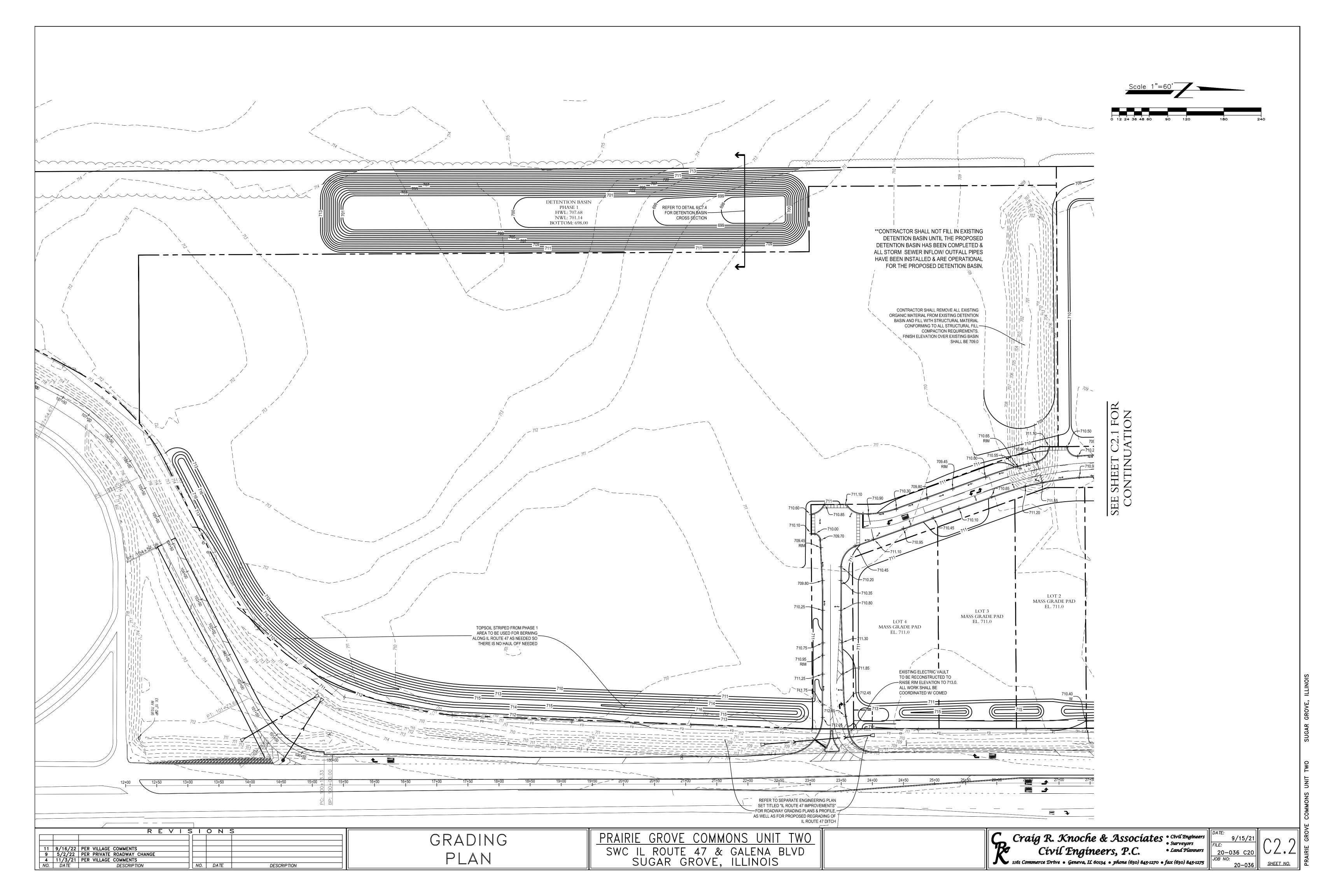


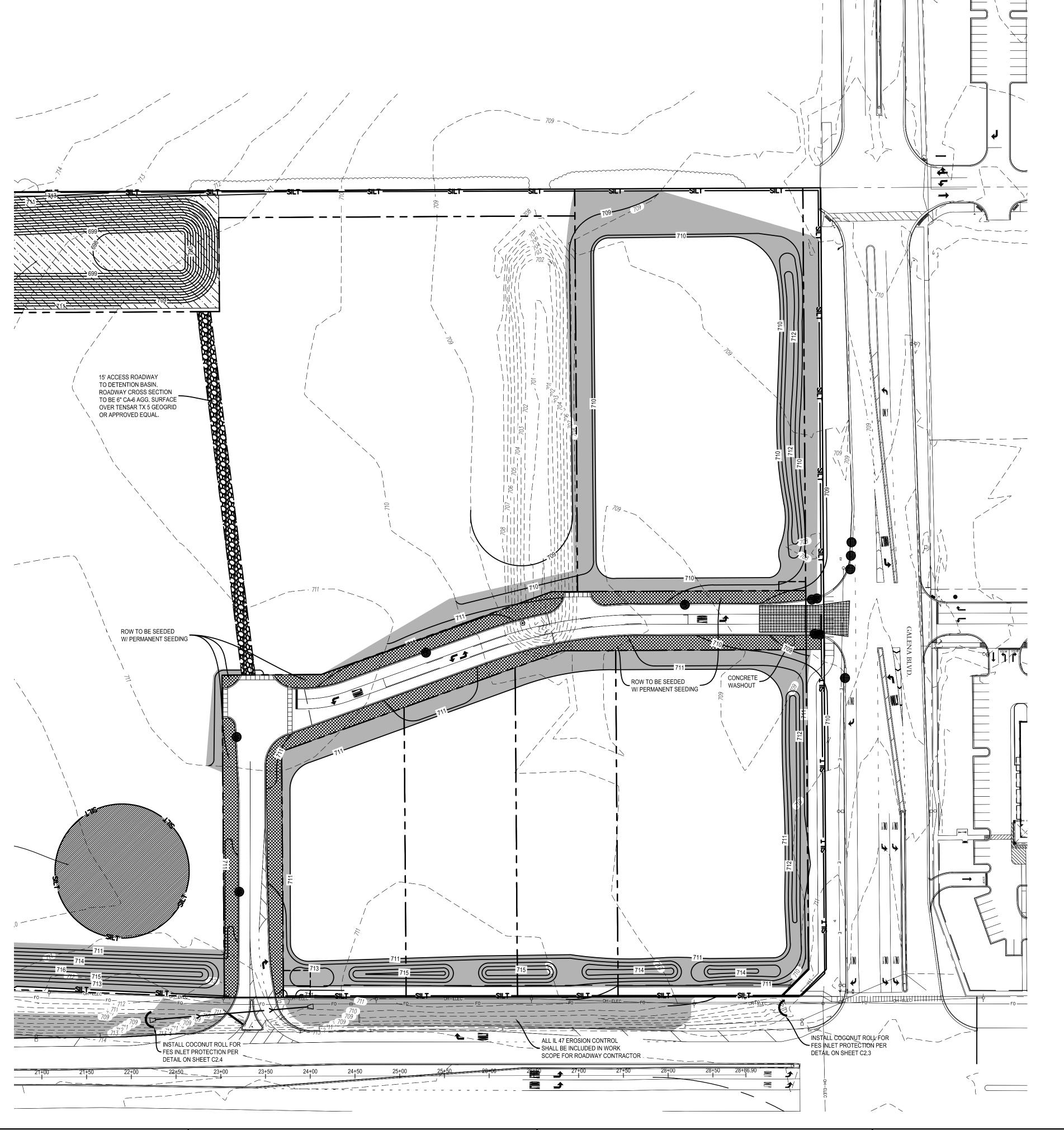












I CERTIFY UNDER PENALTY OF LAW THAT I UNDERSTAND THE TERMS AND CONDITIONS OF THE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT (ILR10) THAT AUTHORIZES THE STORMWATER DISCHARGE ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE CONSTRUCTION SITE IDENTIFIED AS PART OF THIS CERTIFICATION. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR VIOLATING THIS PERMIT, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING STORMWATER POLLUTION PREVENTION PLAN OWNER CERTIFICATION

IT IS THE RESPONSIBILITY OF THE LANDOWNER AND/OR GENERAL CONTRACTOR TO INFORM ANY SUBCONTRACTOR(S) WHO MAY PERFORM WORK ON THIS PROJECT OF THE REQUIREMENTS IN IMPLEMENTING AND MAINTAINING THESE EROSION CONTROL PLANS AND THE NATIONAL POLLUTANT

REVISIONS /16/22 PER VILLAGE COMMENTS
5/2/22 PER PRIVATE ROADWAY CHANGE
/28/22 PER VILLAGE COMMENTS
1/3/21 PER VILLAGE COMMENTS
1/15/21 PER VILLAGE COMMENTS

SEE

STORMWATER POLLUTION PREVENTION PLAN

PRAIRIE GROVE COMMONS UNIT TWO
SWC IL ROUTE 47 & GALENA BLVD
SUGAR GROVE, ILLINOIS

Craig R. Knoche & Associates • Ctvil Engineers Surveyors • Land Planners

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STORMWATER POLLUTION

PREVENTION PLAN

REVISIONS

11 9/16/22 PER VILLAGE COMMENTS
9 5/2/22 PER PRIVATE ROADWAY CHANGE
8 2/28/22 PER VILLAGE COMMENTS
4 11/3/21 PER VILLAGE COMMENTS

SUGAR GROVE, ILLINOIS

RAIRIE GROVE COMMONS UNIT

Craig R. Knoche & Associates • Ctvil Engineers
• Surveyors
• Civil Engineers, P.C.
• Land Planners

1161 Commerce Drive • Geneva, IL 60134 • phone (630) 845-1270 • fax (630) 845-1275

# EROSION CONTROL NOTES

- 1. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS IN THE ILLINOIS URBAN MANUAL REVISED FEBRUARY, CURRENT EDITION,
- 2. THE COUNTY/MUNICIPALITY MUST BE NOTIFIED AT LEAST ONE WEEK PRIOR TO THE PRE-CONSTRUCTION MEETING, THE COMMENCEMENT OF LAND DISTURBING ACTIVITIES AND FINAL INSPECTION.
- 3, A COPY OF THE APPROVED STORM WATER POLLUTION PREVENTION PLAN SHALL BE MAINTAINED ON THE
- 4. PRIOR TO COMMENCING LAND-DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING BUT NOT LIMITED TO ADDITIONAL PHASES OF DEVELOPMENT AND OFF-SITE BORROW OR WASTE AREAS), A SUPPLEMENTARY STORM WATER POLLUTION PREVENTION PLAN SHALL BE SUBMITTED BY THE OWNER FOR REVIEW BY THE COUNTY/MUNICIPALITY AND IEPA.
- 5. EROSION CONTROL MEASURES INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING: INLET BASKETS SHALL BE PLACED AND SHALL REMAIN IN PLACE AROUND EACH STORM STRUCTURE UNTIL CONSTRUCTION IS COMPLETED. A SILT FENCE AROUND PERIMETER SHALL REMAIN IN PLACE AND BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETED. ALL INLET STRUCTURES SHALL BE PROTECTED WITH ADS "FLEX STORM" OR APPROVED EQUAL INLET BASKETS.
- 6. THE CONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL MEASURES. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO THE START OF LAND DISTURBING ACTIVITY AND MAINTAIN SUCH MEASURES UNTIL VEGETATION STABILIZATION IS 70% COMPLETE AND PARKING LOT IS PAVED.
- 7. THE CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF EROSION CONTROL DEVICES SHALL MAINTAIN ALL STORM WATER POLLUTION DEVICES THROUGHOUT CONSTRUCTION AND UNTIL ALL UNFRAMED OR NON-BUILDING AREAS HAVE A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70% OR GREATER. MAINTENANCE INCLUDES WEEKLY INSPECTIONS OR AN INSPECTION FOLLOWING A RAINFALL OF 1/2" IN A 24-HOUR PERIOD. THE CONTRACTOR MUST SUBMIT A COPY OF THE INSPECTION REPORT TO THE OWNER AND ENGINEER AT THE END OF EACH MONTH AND KEEP A COPY OF THE REPORT ON THE CONSTRUCTION SITE UNTIL THE REQUIRED VEGETATION COVER IS IN PLACE.
- 8. IF ADDITIONAL EROSION CONTROL MEASURES NOT SHOWN ON THESE DRAWINGS ARE REQUIRED TO STOP OR PREVENT EROSION OR ARE REQUIRED BY ANY AUTHORITY HAVING JURISDICTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSTALL SUCH DEVICES. THE OWNER AND ENGINEER SHALL BE NOTIFIED OF THE ADDITIONAL WORK AND COST PRIOR TO INSTALLATION.
- 9. ANY AND ALL INCIDENTS OF NON-COMPLIANCE MUST BE SUBMITTED TO KANE COUNTY. THE OWNER AND
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER. ENGINEER AND THE COUNTY/MUNICAPILITY, IN WRITING, OF ANY ADDITIONAL SOURCES OF STORM WATER POLLUTION OBSERVED DURING CONSTRUCTION AND THE ADDITIONAL COSTS REQUIRED TO PREVENT ADDITIONAL POLLUTION.
- 11. REFER TO LANDSCAPE PLAN FOR LOCATIONS AND SPECIFICATIONS OF SODDING AND SEEDING.
- 12. STOCKPILES SHALL NOT EXCEED 2:1 SLOPES. STOCKPILES REMAINING IN PLACE LONGER THAN 14 DAYS SHALL BE REQUIRED TO HAVE I.D.O.T. #7 SEED MIX INSTALLED. ALL STOCKPILES SHALL BE EQUIPPED WITH SILT FENCE PRIOR TO PILING OF EARTHWORK SPOILS. A TEMPORARY SILTATION DITCH SHALL BE INSTALLED AROUND PERIMETER OF STOCKPILE WITH SILT FENCE LOCATED ON BOTH SIDES OF DITCH.
- 13. ALL ADJACENT STREETS AND ROADWAYS SHALL BE KEPT CLEAR OF DEBRIS. DAILY INSPECTIONS AND CLEANING ARE REQUIRED AS NECESSARY. CLEANING SHALL BE DONE WHEN DEEMED NECESSARY BY AUTHORITIES TO PREVENT HAZARDS TO HEALTH OR DRAINAGE UTILITIES INCLUDING CURB AND GUTTERS INLETS, DITCHES ETC
- 14. STABILIZATION OF DISTURBED AREAS MUST BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES AND SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NOT LATER THAN 14 DAYS FROM THE INITIATION OF THE STABILIZATION WORK IN AN AREA
- 15. DURING DEWATERING OPERATIONS. WATER WILL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS. DEWATERING DIRECTLY INTO FIELD TILES OR STORM WATER STRUCTURES IS PROHIBITED.
- 16. THE CONDITION OF THE CONSTRUCTION SITE FOR WINTER SHUTDOWN SHALL BE ADDRESSED EARLY IN THE FALL GROWING SEASON SO THAT SLOPES AND OTHER BARE EARTH AREAS MAY BE STABILIZED WITH TEMPORARY AND/OR PERMANENT VEGETATION COVER FOR PROPER EROSION AND SEDIMENT CONTROL. ALL OPEN AREAS THAT ARE TO REMAIN IDLE THROUGHOUT THE WINTER SHALL RECEIVE TEMPORARY EROSION CONTROL MEASURES INCLUDING TEMPORARY SEEDING, MULCHING AND/OR EROSION CONTROL BLANKET PRIOR TO THE END OF THE FALL GROWING SEASON. THE AREAS TO BE WORKED BEYOND THE END OF THE GROWING SEASON MUST INCORPORATE THE SOIL STABILIZATION MEASURES THAT DO NOT RELY ON VEGETATIVE COVER SUCH AS EROSION CONTROL BLANKET AND HEAVY MULCHING.
- 17. STOCKPILES OF SOIL AND OTHER BUILDING MATERIALS TO REMAIN IN PLACE MORE THAN THREE (3) DAYS SHALL BE FURNISHED WITH EROSION AND SEDIMENT CONTROL MEASURES (I.E., PERIMETER SILT FENCE). STOCKPILES TO REMAIN IN PLACE FOR 14 DAYS OR MORE SHALL RECEIVE TEMPORARY SEEDING.
- 18. COMPLETED SLOPES SHALL BE SEEDED AND MULCHED (OR BLANKETED, IF APPLICABLE) AS THE EXCAVATION PROCEEDS TO THE EXTENT CONSIDERED DESIRABLE AND PRACTICAL. PERMANENT SEEDING SHALL BE USED WHENEVER POSSIBLE LINDER NO CIRCUMSTANCES SHALL THE CONTRACTOR PROLONG FINAL GRADING AND SHAPING SO THAT THE ENTIRE PROJECT CAN BE PERMANENTLY SEEDED AT ONE TIME.
- 19. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE CONTROLLING JURISDICTION.
- 20. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO INFORM ANY SUBCONTRACTOR(S) WHO MAY PERFORM WORK ON THIS PROJECT OF THE REQUIREMENTS IN IMPLEMENTING AND MAINTAINING THESE EROSION CONTROL PLANS AND THE NATIONAL POLLUTANT DISCHARGE DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS SET FORTH BY THE ILLINOIS EPA.
- 21. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OR NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS
- 22. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OR CONSTRUCTION
- 23, BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
- 24. SWPP PLAN MUST CLEARLY DELINEATE ALL STATE WATERS AS WELL AS ANY ACTIVITY IMPACTING STATE WATERS OR REGULATED WETLANDS. ALL AREAS MUST BE MAINTAINED ON SITE AT ALL TIMES.
- 25. GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
- 26. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- 27. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEANUP FUEL OR CHEMICAL SPILLS AND LEAKS.
- 28. RUBBISH, TRASH, GARBAGE LITTER, OR OTHER SUCH MATERIAL SHALL BE DEPOSITED INTO SEALED CONTAINERS, MATERIAL SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OR WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- 29. STORM WATER POLLUTION PREVENTION MEASURES AS SHOWN ON THIS PLAN ARE TO BE INITIATED IMMEDIATELY AT THE START OF CONSTRUCTION.
- 30. THE LIMITATION ON SITE DISTURBANCE IS IN RECOGNITION OF THE NEED TO PREVENT EROSION IN PREFERENCE TO CONTROLLING SEDIMENT. SITE DISTURBANCES SHALL NOT EXCEED 20 ACRES AT ANY ONE TIME UNLESS IT IS TO BALANCE CUT AND FILL, FOR WHICH A MAXIMUM OF 40 ACRES MAY BE DISTURBED AT ANY ONE TIME. THE ADMINISTRATOR HAS CONSIDERABLE FLEXIBILITY TO VARY THE MAXIMUM AREA OF DISTURBANCE BASED ONSITE OR PROJECT SPECIFIC CONDITIONS, OR IN RECOGNITION OF A PARTICULARLY EFFECTIVE PLAN WITH AGGRESSIVE AND EFFECTIVE IMPLEMENTATION. THE AMOUNT OF AREA OPEN TO EROSION AT ANY ONE TIME POSES A RISK FOR DELIVERY OF SEDIMENT DOWNSTREAM AND THE RISK NEEDS TO BE MINIMIZED CONSISTENT WITH THE REQUIREMENTS OF GETTING THE PROJECT CONSTRUCTED.
- 31. STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING, OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION OF DISTURBED AREAS MUST BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES AND SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NOT LATER THAN 14 DAYS FROM THE INITIATION OF THE STABILIZATION WORK IN AN AREA.

# SOIL STABILIZATION NOTES

- 1. TOPSOIL AND VEGETATIVE COVER STRIP TOPSOIL AND REMOVE EXISTING VEGETATION. STOCKPILE ON-SITE (FOR REUSE) AT LOCATION DESIGNATED
- 2. PERMANENT SEEDING IMMEDIATELY FOLLOWING FINISH GRADING AND TOPSOIL PLACEMENT INSTALL SEEDING OR SOD IN AREAS AS DESIGNATED ON PLANS.
- 3. PAVED AREAS INSTALL THE AGGREGATE BASE AS SOON AS THE CONSTRUCTION SEQUENCE TO PROVIDE REQUIRED STABILIZATION.
- 4. SLOPE PROTECTION PROTECT SEEDING ON STEEP SLOPES WITH MULCH, EXCELSIOR BLANKET, OR EQUAL. EROSION BLANKET SHALL BE REQUIRED ON ALL SLOPES GREATER THAN 4(H):1(V).
- 5. ON-SITE & OFF-SITE SOIL STOCKPILE AND BORROW AREAS TO REMAIN MORE THAN 3 DAYS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES, STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE
- 6. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

7. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION AND SEDIMENT CONTROL MEASURES (SILT FENCES, ETC.) TO PREVENT EROSION, AND POLLUTANT DISCHARGE.

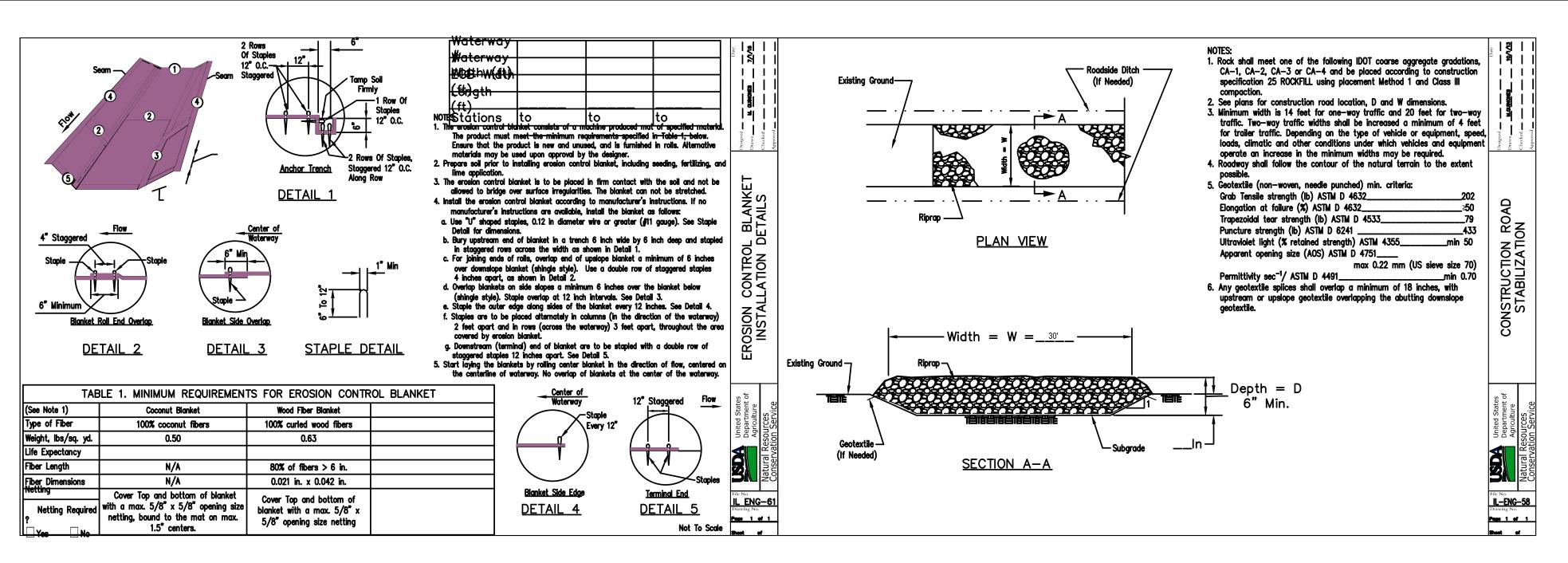
# SEDIMENT CONTROL NOTES

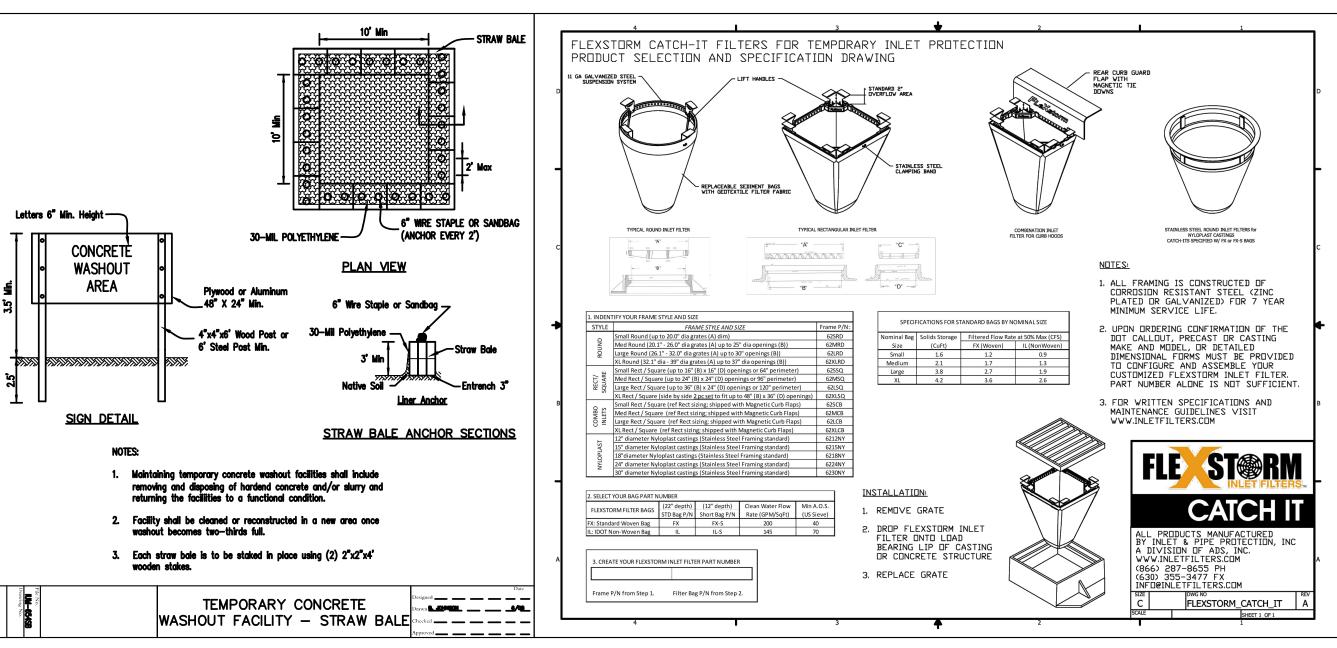
- 1. ADJACENT PROPERTY PROTECT ADJACENT PROPERTY FROM SEDIMENT DEPOSITION BY PRESERVING A VEGETATED BUFFER STRIP OR BY SEDIMENT BARRIERS OR FILTERS AT THE LOWER PERIMETER OF THE LOT
- 2. SEDIMENTATION CONTROL SHALL BE PROVIDED IN ALL AREAS AROUND THE STOCKPILE AREAS
- 3. STORM SEWER INLET PROTECTION "FLEX STORM" OR APPROVED EQUAL INLET BASKETS SHALL BE PLACED IN ALL INLETS AND SILT FENCE SHALL BE INSTALLED AROUND EACH INLET.
- 4. PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT (MUD) BY RUNOFF OR VEHICLE TRACKING ONTO STATE, COUNTY, OR TOWNSHIP HIGHWAYS OR LOCAL STREETS, IF NECESSARY, STATE COUNTY OR TOWNSHIP HIGHWAYS OR LOCAL STREETS SHALL BE CLEANED DAILY AT THE END OF EACH WORK DAY OR AS REQUIRED TO KEEP MUD AND OR OTHER DEBRIS OFF ANY HIGHWAY OR STREET
- a. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD. THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED. PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. ONLY USE CONSTRUCTION ENTRANCE/STAGING AREAS AS
- 5. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES TO BE CHECKED WEEKLY AND AFTER
- 6. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- 7. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED
- 8. REMOVAL OF CONTROL MEASURES- DISPOSE OF ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES WITH 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED.
- 9. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- 10. UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS IN THE <u>ILLINOIS URBAN MANUAL</u> LATEST EDITION.
- 11. A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- 12. PRIOR TO COMMENCING LAND-DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS, (INCLUDING BUT NOT LIMITED TO, ADDITIONAL PHASES OF DEVELOPMENT AND OFF-SITE BORROW OR WASTE AREAS) A SUPPLEMENTARY EROSION CONTROL PLAN SHALL BE SUBMITTED TO THE OWNER FOR REVIEW BY THE SOIL CONSERVATION DISTRICT.
- 13. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE GOVERNING SOIL AND WATER CONSERVATION DISTRICT
- 14. DURING DEWATERING OPERATIONS, WATER WILL BE PUMPED INTO SEDIMENT BASINS OR SILT
- 15. CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE DETENTION POND AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE
- 16. THE PRIMARY PURPOSE OF ALL SOIL EROSION AND SEDIMENT CONTROL BMP'S (BEST MANAGEMENT PRACTICES) IS TO PREVENT SEDIMENT FROM LEAVING THE SITE, ALL STORMWATER DISCHARGE LOCATIONS WITH A DIRECT CONNECTION TO THE SITE SHOULD BE MONITORED CLOSELY FOR EVIDENCE OF SEDIMENT. THE VILLAGE MAY REQUEST THAT ADDITIONAL BMP'S BE INSTALLED IN THE EVENT OF OFF-SITE SEDIMENT DISCHARGE OR HIGH POTENTIAL FOR
- 17. PRIOR TO FILING FOR NOTICE OF TERMINATION, THE SITE SHOULD BE PROPERLY STABILIZED. ALL VEGETATED AREAS SHOULD HAVE ESTABLISHED PERENNIAL VEGETATION WITH UNIFORM COVERAGE OF 70% OR GREATER

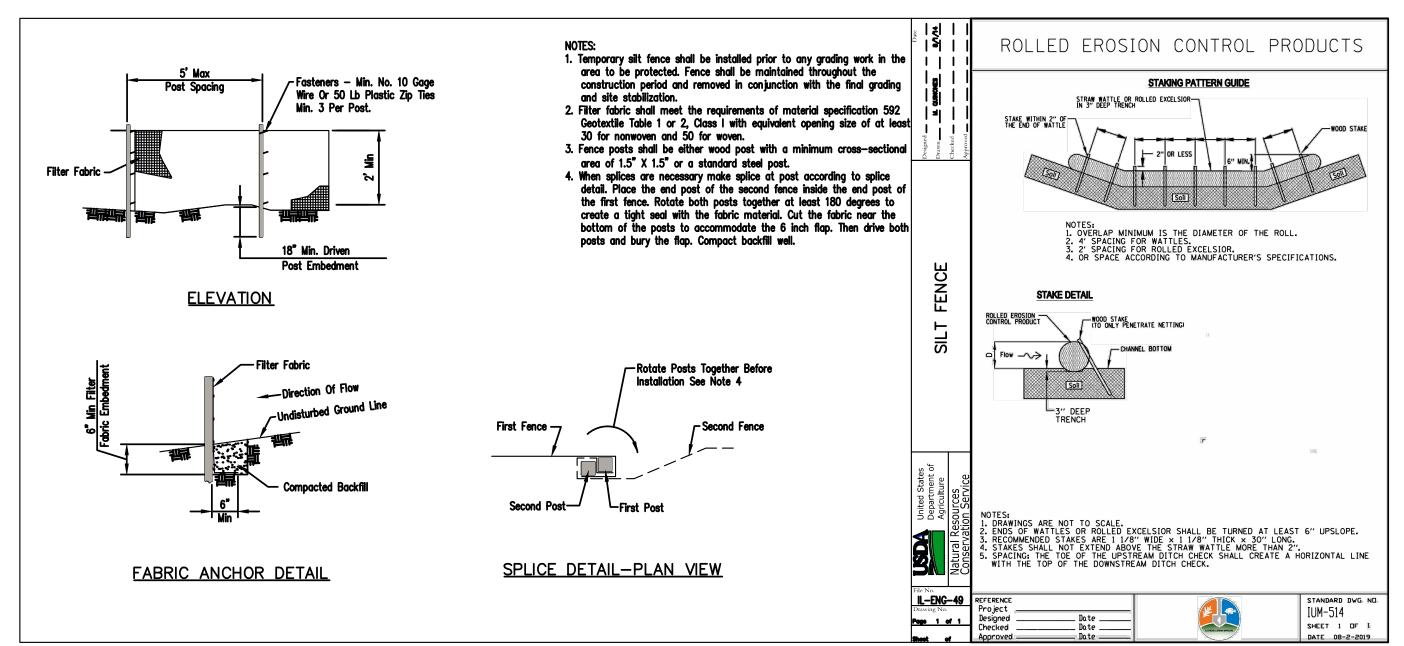
# **SCHEDULE**

- 1. (1 WEEK) MOBILIZATION, INSTALL EROSION CONTROL, STRIP ANY VEGETATION
- 2. (2 WEEKS) TOP SOIL STRIPING AND MASS GRADING
- 3. (2 WEEKS) INSTALL REMAINING UNDERGROUND STORM UTILITIES AND INLET PROTECTORS.
- 4. (2 WEEKS) INSTALL SANITARY, WATER, GAS, ELECTRIC AND TELEPHONE UTILITIES.
- 5. (1 WEEK) PREPARE AND FINE GRADE SITE.
- 6. (2 WEEKS) INSTALL CURBS AND STONE BASE FOR PAVING.
- 7. (2 WEEKS) CONCRETE AND ASPHALT PAVING
- 8. (2 WEEKS) INSTALL LANDSCAPING AND REMOVE TEMPORARY EROSION CONTROL MEASURES

STABILIZATION TYPE	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.	NOV.	DEC.
PERMANENT			+A									7 10
SEEDING		1	1	2.00	A'+				1000	A'+		1985 S
DORMANT SEEDING	В		-					17.00			+ B	
TEMPORARY SEEDING			+c			-	+ <sup>D</sup>		-			
SODDING			+ E**									(A)
MULCHING	E	10			100							
A KENTUCKY BLUE MIXED WITH PER 30 LBS/ACRE. A' NATIVE SEEDING	RENNIAL RYE G	BS/ACRE EGRASS		D E	SPRING O WHEAT OI 150 LBS/A	R CEREAL CRE.						JUNE AND JULY. O 3 WEEKS AFTER







REVISIONS 8 2/28/22 PER VILLAGE COMMENTS 3 9/15/21 PER VILLAGE COMMENTS NO. DATE DESCRIPTION

SWPPP DETAILS

PRAIRIE GROVE COMMONS UNIT TWO SWC IL ROUTE 47 & GALENA BLVD SUGAR GROVE, ILLINOIS

1161 Commerce Dríve ● Geneva, IL 60134 ● phone (630) 845-1270 ● fax (630) 845-1275

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DATE: 03/29/2021

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ENCAP, Inc. #20-1204N USACE # LRC-2016-00054 Munic. Project # 21-002

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#### **NATIVE PLANTING SPECIFICATIONS**

#### PRAIRIE GROVE COMMONS UNIT 2 - PHASE 1 STORMWATER DETENTION BASIN

Prepared by ENCAP, Inc. dated March 29, 2021

#### 1.0 PURPOSE

The purpose of this plan is to create a naturalized stormwater detention basin within the project area. The stormwater detention basin is designed to capture, slow down, and release overland stormwater runoff from surrounding commercial properties, streets, and impervious surfaces. The basin will be planted with native, deep-rooted vegetation that will aid these functions.

Expected potential benefits for this plan include: improved water quality locally and throughout the watershed, increased groundwater filtration and infiltration, improved soil stabilization, reduction in sedimentation loads on surrounding water resources, improved wildlife habitat, and improved aesthetics.

#### 2.0 CONTRACTOR QUALIFICATIONS

- 1. The Native Landscape Contractor chosen for the establishment and enhancement of the natural areas must be experienced in the restoration, installation, and management of said areas. They must have a minimum of five years experience conducting ecological restoration and management projects.
- 2. There shall be a supervisor available at all times that can identify non-native and native plants by genus and species. The goal of installing successful native plant communities is a long-term process. Therefore, it is imperative that a qualified Native Landscape Contractor perform the initial installation and maintenance.

#### 3.0 QUALITY AND CONDITION

- 1. Native seed shall be obtained from sources east of the Mississippi River within the same EPA Level III Ecoregion as the project site (Central Corn Belt Plains). Plant origins outside of the Ecoregion shall be approved by the Wetland Consultant and/or Owner.
- 2. Native seeds shall be blended by the vendor, and the mixture and ratio shall be guaranteed in writing to be as specified. The amount of seed indicated on the specifications shall mean the total amount of pure live seed (PLS) per acre for all species listed. It is the sole responsibility of the Native Landscape Contractor to provide approved seed that meets industry-standard PLS requirements.
- 3. Native Landscape Contractor shall provide the Wetland Consultant with the name and location of the seed supplier, origin of the various kinds of plants, and a statement of the purity of the seed.
- 4. Seed shall conform to applicable State and Federal regulations as in effect on the date of letting. Unless otherwise specified, seed shall not contain in excess of 1 percent weed seeds; 0 percent is desirable.
- 5. All storage requirements, stratification, and scarification considerations shall be the sole responsibility of the Native
- 6. Mycorrhizal inoculants shall be pelletized and mixed at 1 lb. per acre with the fine seeds before installation. The inoculants shall contain a diverse mixture of Glomales fungal species (Glomus spp.) in palletized form.
- 7. Under no circumstances shall Wheat (Triticum aestivum), Cereal Rye (Secale cereale), Perennial Rye (Lolium perenne), or Barley (Hordeum vulgare) be used as a temporary cover crop.

#### **4.0 HANDLING**

- 1. Native Landscape Contractor shall be solely responsible for the proper handling and storage of the seed according to the best seed handling and storage practices, including fungicide treatments and stratification considerations. Owner shall make no compensation for damage to the seed because of improper storage, cleaning, threshing, or screening operations.
- 2. All native seeds shall be packed and covered in such a manner as to ensure adequate protection against damage and maintain dormancy while in transit, storage, or during planting operations.
- 3. Seed shall be kept dry and unopened until needed for use. Seed shall not be stored or temporarily stored in locations or vehicles where the temperature will be in excess of 90 degrees F.

## 5.0 SITE PREPARATION - Stormwater Detention Basin

- 1. The General Contractor and Native Landscape Contractor shall be responsible for performing all work necessary to achieve and maintain an acceptable seedbed prior to seeding. All areas must be properly prepared before seeding begins. Underground utility location maps and plans should be reviewed prior to work. Equipment having low unit pressure ground contact shall be utilized within the planting areas.
- 2. Unless the Wetland Consultant agrees to another approach, the seedbed shall be prepared by working the topsoil to a depth of 3 inches. Site preparation equipment shall be of a design that can be utilized efficiently by the Native Landscape Contractor to meet the requirements for the work specified. The equipment proposed for use by the Native Landscape Contractor for disking and herbicide applications shall be subject to approval by the Wetland Consultant.
- 3. Prior to seeding, at least 6 inches of topsoil shall be present and free of all clods, stones, roots, sticks, rivulets, gullies, crusting, and cracking. The soil aggregate size will be no greater than 2 inches in the largest diameter.
- 4. If present, compacted soils shall be disked or raked prior to seeding. Remedial measures for the access area may, at the direction of the Wetland Consultant, involve ripping from 12 to 18 inches of the soil horizon prior to disking. If compaction is not a concern and the seedbed needs to be loosened prior to seeding to ensure good seed-soil contact, disking or raking shall be performed using equipment and the approach recommended by the Native Landscape Contractor, subject to approval by the Wetland Consultant.
- 5. If needed, cultivation shall occur within 24 hours prior to seeding. Seeding should occur immediately after the last cultivation preferably before a rain.

#### **6.0 PLANT MATERIALS**

#### Table 1: Tall Mesic Prairie with Flowers Mix

Scientific Name	Common Name	Lbs/A
Andropogon gerardii	Big Bluestem	1.500
Amorpha canescens	Leadplant	0.125
Aster laevis	Smooth Blue Aster	0.063
Aster novae-angliae	New England Aster	0.063
Baptisia leucantha	White Indigo	0.063
Bouteloua curtipendula	Side Oats	2.000
Carex bicknellii	Bicknell's Sedge	0.062
Cassia fasciculata	Partridge Pea	0.125
Dalea purpureum	Purple Prairie Clover	0.063
Echinacea purpurea	Purple Coneflower	0.281
Elymus canadensis	Canada Wild Rye	1.000
Eryngium yuccifolium	Rattlesnake Master	0.188
Heliopsis helianthoides	Early Sunflower	0.125
Lespedeza capitata	Roundhead Bushclover	0.125
Liatris aspera	Button Blazing Star	0.125
Liatris pycnostachya	Prairie Blazingstar	0.188
Monarda fistulosa	Bergamot	0.031
Panicum virgatum	Switch Grass	0.250
Parthenium integrifolium	Wild Quinine	0.063
Penstemon digitalis	Foxglove Beardtongue	0.063
Physostegia virginiana	False Dragonhead	0.063
Potentilla arguta	Prairie Cinquefoil	0.063
Ratibida pinnata	Yellow Coneflower	0.125
Rosa blanda	Early Wild Rose	0.063
Rudbeckia hirta	Black-eyed Susan	0.250
Rudbeckia subtomentosa	Sweet Coneflower	0.031
Schizachyrium scoparius	Little Bluestem	3.000
Silphium integrifolium	Rosinweed	0.188
Silphium laciniatum	Compass Plant	0.188
Solidago nemoralis	Old-field Goldenrod	0.125
Solidago rigida	Stiff Goldenrod	0.063
Sorghastrum nutans	Indian Grass	3.000
Verbena stricta	Hoary Vervain	0.125
Vernonia fasciculata	Common Ironweed	0.188
Veronicastrum virginicum	Culver's Physic	0.006
· · · <b>· · · · · ·</b>	Total	

#### Table 2: Wet Mesic Prairie with Flower Mix

Scientific Name	Common Name	Lbs/Ac
Andropogon gerardii	Big Bluestem	3.000
Asclepias Species	Milkweed	0.063
Aster laevis	Smooth Blue Aster	0.016
Aster novae-angliae	New England Aster	0.031
Calamagrostis canadensis	Blue Joint Grass	0.063
Carex annectens xanthocarpa	Yellow-fruited Sedge	0.063
Carex bebbii	Bebb's Sedge	0.063
Carex normalis	Normal Sedge	0.063
Carex vulpinoidea	Fox Sedge	0.125
Cassia fasciculata	Partridge Pea	0.250
Elymus virginicus	Virginia Wild Rye	2.000
Epilobium coloratum	Cinnamon Willow Herb	0.015
Eupatorium perfoliatum	Boneset	0.015
Hypericum pyramidatum	Great St. John's Wort	0.063
ris virginica shrevei	Blue Flag Iris	0.125
_iatris pycnostachya	Prairie Gayfeather	0.313
₋iatris spicata	Spiked Gayfeather	0.188
_obelia siphilitica	Great Blue Lobelia	0.031
Mimulus ringens	Monkey Flower	0.031
Monarda fistulosa	Bergamot	0.063
Panicum virgatum	Switch Grass	0.750
Parthenium integrifolium	Wild Quinine	0.125
Petalostemum (Dalea) purpureum	Purple Prairie Clover	0.250
Physostegia virginiana	False Dragonhead	0.063
Pycnanthemum virginicum	Common Mt. Mint	0.063
Ratibida pinnata	Yellow Coneflower	0.250
Rudbeckia hirta	Black-eyed Susan	0.250
Schizachyrium scoparium	Little Bluestem	2.000
Scirpus atrovirens	Dark Green Rush	0.500
Silphium laciniatum	Compass Plant	0.188
Silphium perfoliatum	Cup Plant	0.250
Solidago (Oligoneuron) riddellii	Riddell's Goldenrod	0.063
Solidago (Oligoneuron) rigida	Stiff Goldenrod	0.125
Sorghastrum nutans	Indian Grass	2.000
Spartina pectinata	Cord Grass	1.000
Vernonia fasciculata	Common Ironweed	0.031
Veronicastrum virginicum	Culver's Physic	0.063
	-	
Zizia aurea	Golden Alexander	0.031

# Table 3: Shallow Emergent Plug Mix

Scientific Name	<b>Common Name</b>		Plugs/Ac
Acorus americanus	Sweetflag		750
Carex comosa	Bristly Sedge		250
Carex lacustris	Lake Sedge		250
Carex vulpinoidea	Fox Sedge		500
Iris virginica	Blue Flag Iris		250
Juncus effusus	Soft Rush		250
Scirpus atrovirens	Dark Green Rush		500
Scirpus acutus	Hardstem Bulrush		500
Scirpus cyperinus	Wool Grass		250
Scirpus fluviatilis	River Bulrush		250
Scirpus pungens	Chairmaker's Rush		250
Scirpus validus creber	Softstem Bulrush		500
Sparganium eurycarpum	Burr Reed		500
. 5		Total	5000

# Table 4: Temporary Matrix Seed Mixture to be Planted with Tables 1 & 2 Above

Scientific Name	Common Name	lbs per acre
Avena sativa	Seed Oats	32.0
Elymus canadensis	Canada Wild Rye	2.00
Elymus virginicus	Virginia Wild Rye	2.00
Lolium multiflorum	Italian Rye Grass	4.00
Total	· -	40.0

### 7.0 SEED INSTALLATION

1. Except where site conditions preclude their use, seeding shall be performed using a Truax drill, Truax Trillion seeder, or comparable equipment designed specifically for installation of native seed. For areas where site conditions preclude the use of specialized equipment, seed may be installed through hand broadcasting and lightly raking in the seed. Hand broadcast seed shall be spread at twice the specified rate. Other methods of seed installation may be used with prior approval from the Wetland Consultant.

#### 2. Seasonal Considerations:

November 1 through February 28: Seed must be protected from displacement due to water and wind erosion. Seeding on bare, graded surfaces must be protected with double netted erosion control blankets on slopes. Less cover crop will be observed during the following spring due to frost damage.

March 1 through June 29: Seeding during this period is appropriate but germination of a portion of the seed may not occur until the following season due to lack of cold stratification to break seed dormancy. Cover crop generally germinates within 2-3 weeks of seeding operation. Seeding on bare, graded surfaces must be protected with erosion control blankets on slopes.

June 30 through September 15: Installation of native seed should be suspended unless irrigation can be provided or unseasonably cool conditions persist. Also, any annual forbs planted with the mix during this time period may germinate but not have sufficient time to flower before fall senescence. Seeding on bare, graded surfaces must be protected with erosion control blankets on slopes.

September 15 through October 31: Seeding on bare, graded surfaces must be protected with double netted erosion control blankets on slopes. Less cover crop will be observed during the following spring due to frost damage.

- 3. Prior to starting work, all seeding equipment shall be calibrated and adjusted to sow seeds at the proper seeding rate. In general, the optimum seeding depth is 0.25 inch below the soil surface. Areas where the seed has not been incorporated into the soil to the proper depths will not be accepted, and no compensation for materials or labor for the rejected work will be made by the Owner.
- 4. Equipment shall be operated in a manner to ensure complete, uniform coverage of the entire area to be seeded and to avoid damage to existing woody plants. Any area inadequately covered, as solely determined by the Wetland Consultant, shall be retreated at no additional cost to the Owner.
- 5. Seeding and soil tracking/firming shall not be done during periods of rain, severe drought, high winds, excessive moisture, frozen ground, or other conditions that preclude satisfactory results.
- 6. To achieve best results, seed boxes should be kept more than one-quarter full at all times and ground speed should be no more than 2 to 3 mph.
- 7. Seeding operations must occur when soil moisture is appropriate for seeding operation.
- 8. Native plant seed shall not receive fertilizer.
- 9. Wet seed that is moldy or otherwise damaged in transit or storage shall not be used.
- 10. After seeding operation is completed, install erosion control blanket per manufacturer's specifications as necessary.

#### 8.0 PLUGGING IMPLEMENTATION

- 1. Plugs shall be installed in the spring or other date guaranteed by the Native Landscape Contractor.
- 2. Plugs shall be planted in a hole dug with a trowel, spade, planting bar, or suitable instrument such that the hole is of a minimum diameter and depth to accommodate the plug, with its roots, without damage.
- 3. The soil excavated from the planting hole should be used to backfill around the plant and lightly packed to secure the
- 4. If planting is delayed more than six hours after delivery, store plugs in the shade, protect from the weather and mechanical damage, and keep them moist and cool. All plugs should be planted within 24 hours of delivery.
- 5. Plugs shall be obtained from a reputable nursery or grown from seed. Plugs shall not be collected from wild populations of plants.
- 6. Plugs shall be installed in areas approximately 8 feet by 12 feet in size. Waterfowl exclusion shall be constructed around plug areas in a manner to protect new plantings from depredation. Fencing shall be constructed of 1" wire mesh or comparable material two feet in width. Posts shall be metal t-post or 2"x 2" wood stakes. Posts shall be 4 to 6 feet in length dependant on soil structure within the emergent planting area. String shall be strung across the tops of the exclusion structures to prevent aerial entry by waterfowl.

# 9.0 EROSION CONTROL

- 1. The Native Landscape Contractor shall be fully responsible for implementing erosion control measures within prescribed
- 2. All areas are recommended to be covered with erosion control blanket; North American Green S-150 or equivalent will be used at a minimum. Fall-winter plantings and/or 3:1 slopes require North American Green S150 or equivalent. 3 feet above and below (i.e. half of the blanket width) the normal water line (NWL) of the stormwater detention basin will be stabilized with North American Green C125 or equivalent. Erosion control blanket shall be installed within 24 hours after an area is seeded. See manufacturer's specifications for erosion control blanket composition.

# 10.0 CLEAN-UP AND PROTECTION

- 1. During landscape work, store materials and equipment where directed. Keep pavements clean and work areas and adjoining areas in an orderly condition.
- 2. Protect landscape work and materials from damage due to landscape operations or operations by other trades and trespassers. Maintain protection during installation and maintenance periods. Treat, repair, or replace damaged landscape work as directed by the Wetland Consultant.

# 11.0 INSPECTIONS AND ACCEPTANCE

- 1. Owner reserves the right to inspect all seeds and plants either at place of growth or at site before planting for compliance with requirements for name, variety, size, quantity, quality or mix proportion.
- 2. Native Landscape Contractor is to keep records of the certificates of composition or invoices of seed mixtures and integrity of plant materials with respect to species, variety, and source after purchase.
- 3. Native Landscape Contractor is to notify Owner within five days after completing initial and/or supplemental plantings in each area.

#### MANAGEMENT AND MONITORING PLAN

#### PRAIRIE GROVE COMMONS UNIT 2 - STORMWATER DETENTION BASIN

#### Prepared by ENCAP, Inc. dated March 29, 2021

#### 1.0 MONITORING METHODOLOGY

The planted areas will be monitored annually for a three-year period to ensure successful establishment of the plantings. The primary objective of the monitoring program is to track the success of the planted species over the 3-year period of regularly scheduled monitoring sessions. The monitoring documents changes in plant community composition and reveals the need for management changes to improve floristic quality. Specific goals of the monitoring are to determine the vegetative species present, the percent cover by vegetation, and identify hydrology and erosion problems.

Monitoring within the planted areas shall be conducted annually utilizing a meander survey methodology. The monitoring

- 1) the dominant vegetative species within each planting zone,
- 2) the approximate percent vegetative coverage by native and non-native species within each designed planting zone, and 3) water level or drainage problems,
- Observations shall be made during the monitoring to identify specific management strategies necessary to reach design goals. Site conditions shall be photo documented during monitoring sessions.

#### 2.0 PERFORMANCE CRITERIA

by non-native or invasive species.

- 1. By the end of the third growing season, all proposed vegetative areas shall achieve eighty-five percent (85%) vegetative
- 2. All proposed native vegetated areas shall achieve a minimum FQI of ten (10) within the three (3) year monitoring period;
- 3. All proposed native vegetated areas shall not be dominated or contain cumulatively more than ten percent (10%) cover

# 3.0 REPORTING

An annual vegetation monitoring report will be submitted to the Owner, Village of Sugar Grove, and Kane County by February 15th following the monitoring season each year. This report will be used to determine if the natural areas are meeting performance standards. The report shall include information on site location; permit numbers; methodology used (including monitoring dates); data results; summary relative to performance criteria; a summary of the annual monitoring observations; a description of the management performed during the year; a list of recommendations for management during the upcoming year; and representative photographs of the natural areas. The naturalized Stormwater Detention Basin shall meet certification requirements, associated performance standards, and will be monitored and maintained for a period of three years or until performance standards have been met to ensure successful establishment.

#### 4.0 MANAGEMENT PLAN

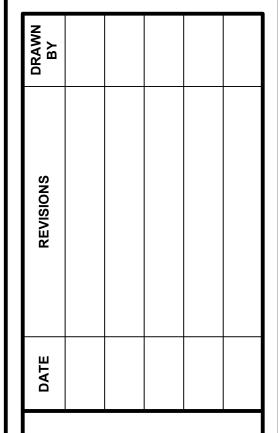
1. First Year. Mow the planted areas to a height of 6-8 inches 2-4 times during the early growing season and as needed to control non-native and invasive species. Mowing (including weed whipping) shall take place prior to or when non-native and invasive species are flowering so as to prevent seed set. Control undesirable plant species, when present in small quantities, by hand pulling prior to the development and maturity of the plant. Hand removal shall include the removal of all aboveground and belowground stems, roots and flower masses prior to development of seeds. Apply herbicide (as necessary) to non-native and invasive species within the naturalized areas with appropriate herbicide. Management site visits should be conducted at a minimum of 3-4 times annually.

Herbicide should be applied by a trained and licensed applicator. Non-selective herbicides can be used but with utmost caution. Non-selective herbicides are absorbed through the plant tissues and work their way into the root system, effectively killing the plant. The only acceptable non-selective herbicides are glyphosate based such as RoundUp, Rodeo, or Razor. The only acceptable selective herbicides (i.e. targeting broad leaf and woody plants) are 2,4-D (2,4-Dichlorophenoxyacetic acid) based or triclopyr based such as Garlon 4.

- 2. Second Year. Control of undesirable plant species during the second growing season shall consist primarily of herbicide application. Mowing (including weed whipping) shall be conducted two to four times during the early growing season and as needed to a height of 6 to 8 inches to prevent annual weeds from producing seed. Management site visits should be conducted at a minimum of 3-4 times annually.
- 3. Third Year. Undesirable plant species will be controlled (as necessary) by mowing (including weed whipping), hand pulling, and/or spot herbicide application. At the completion of the third growing season (dependent on fuel availability; dominance of graminoid species, i.e. grasses and sedges, is required for successful burning), fire may be introduced to the planted areas as the primary management tool. Trained professionals experienced in the fuel types present shall conduct burning. State and local permits shall be obtained prior to prescribed burning. Prior to a prescribed burn, surrounding property owners as well as local police and fire departments will be notified. A burn plan designating the preferred wind direction and speed, location of firebreaks, and necessary personnel and equipment shall be prepared and utilized in planning and burn implementation.

The initial burn shall be dependent on fuel availability that is directly related to the quantity and quality of grasses, sedges, and forbs present within the planting area. The burn season runs from November 1 through April 30 and burns shall be conducted whenever conditions are suitable. Generally, a new prairie/wetland area shall be burned annually for two years after the third growing season and then every other year thereafter, burning approximately 50-75% of the area. Undesirable plant species will be controlled (as necessary) by spot mowing (including weed whipping), hand pulling, and/or spot herbicide application. Continue to performance management site visit 3-4 times annually during the

4. Long Term. As the planted areas mature, required supplemental management will be significantly reduced. The plant communities will stabilize and be effectively managed through prescribed burning. Mowing to prevent seed set of undesirable species and spot herbicide application are recommended when and where applicable. Management site visits should be conducted at a minimum of 1-2 times annually. Prescribed burning should be conducted every 2-5 years depending on site conditions and fuel availability.





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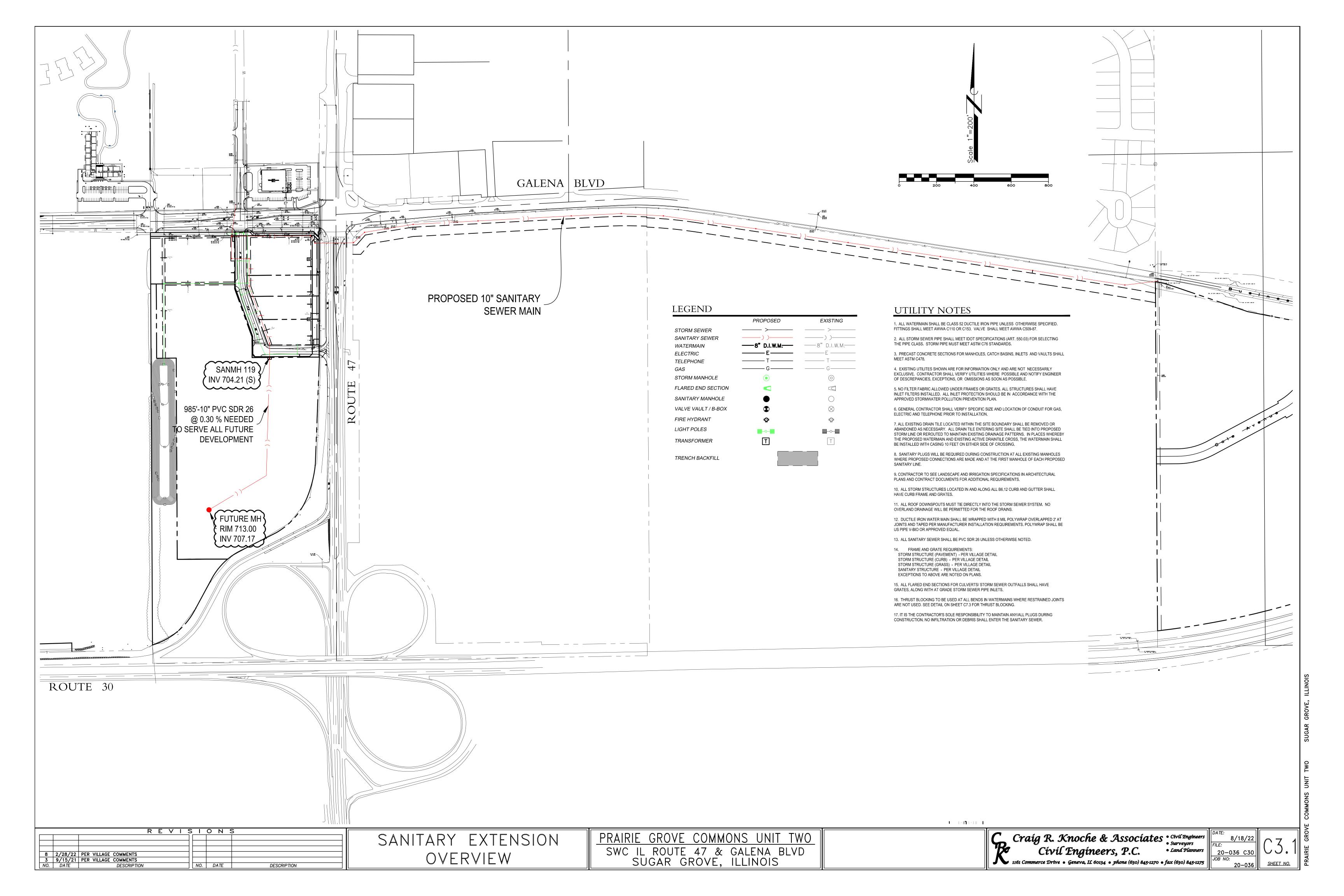
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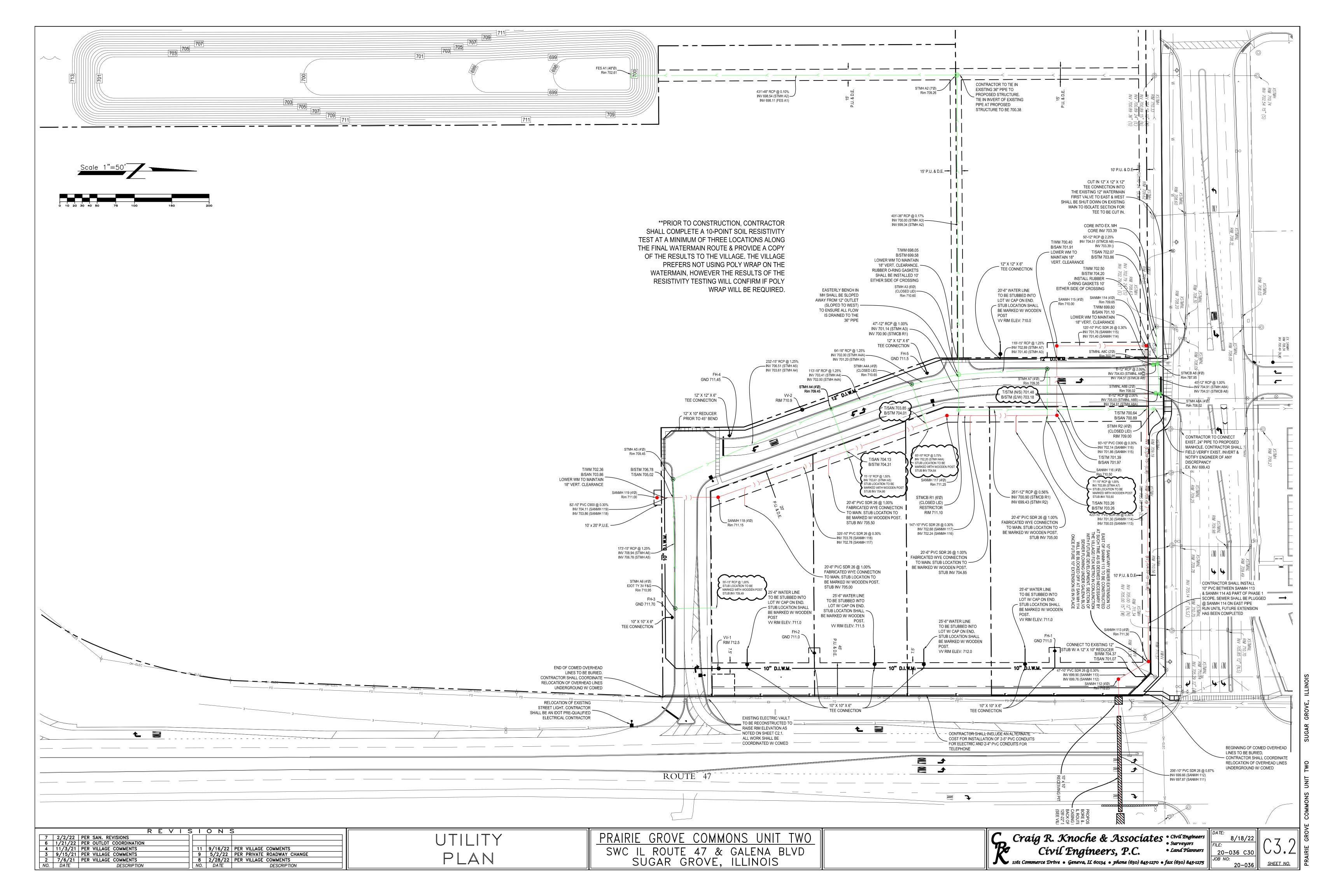
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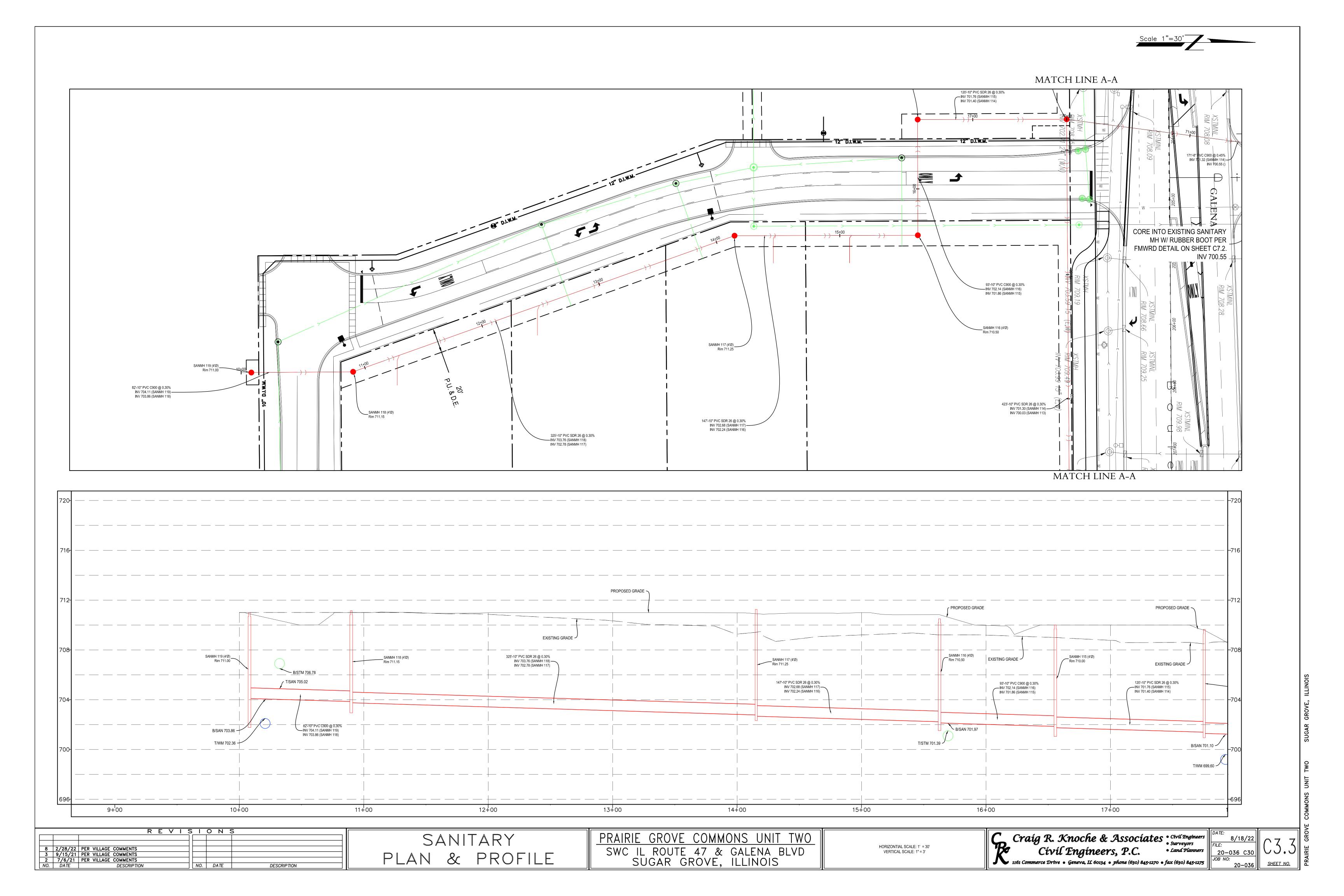
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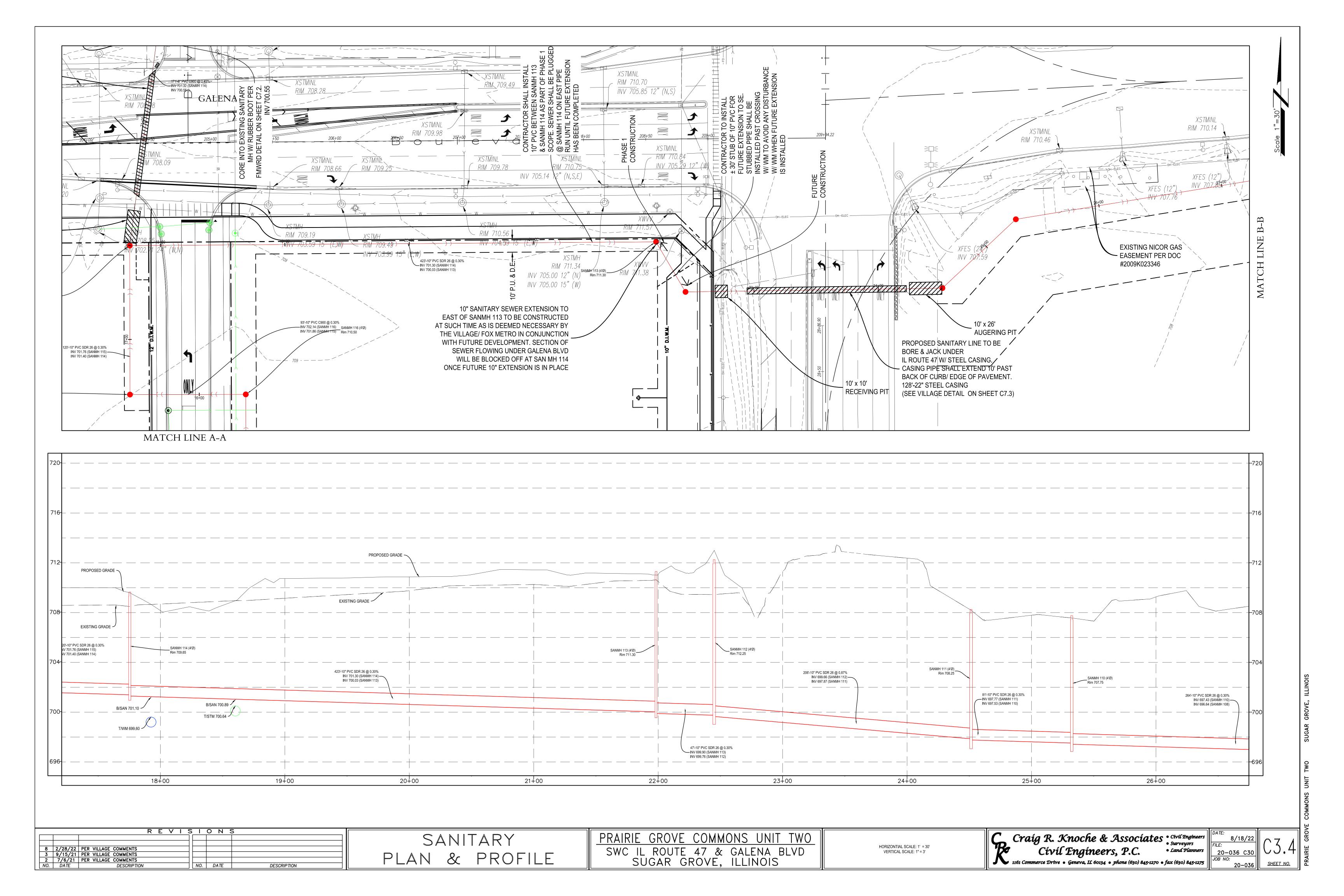
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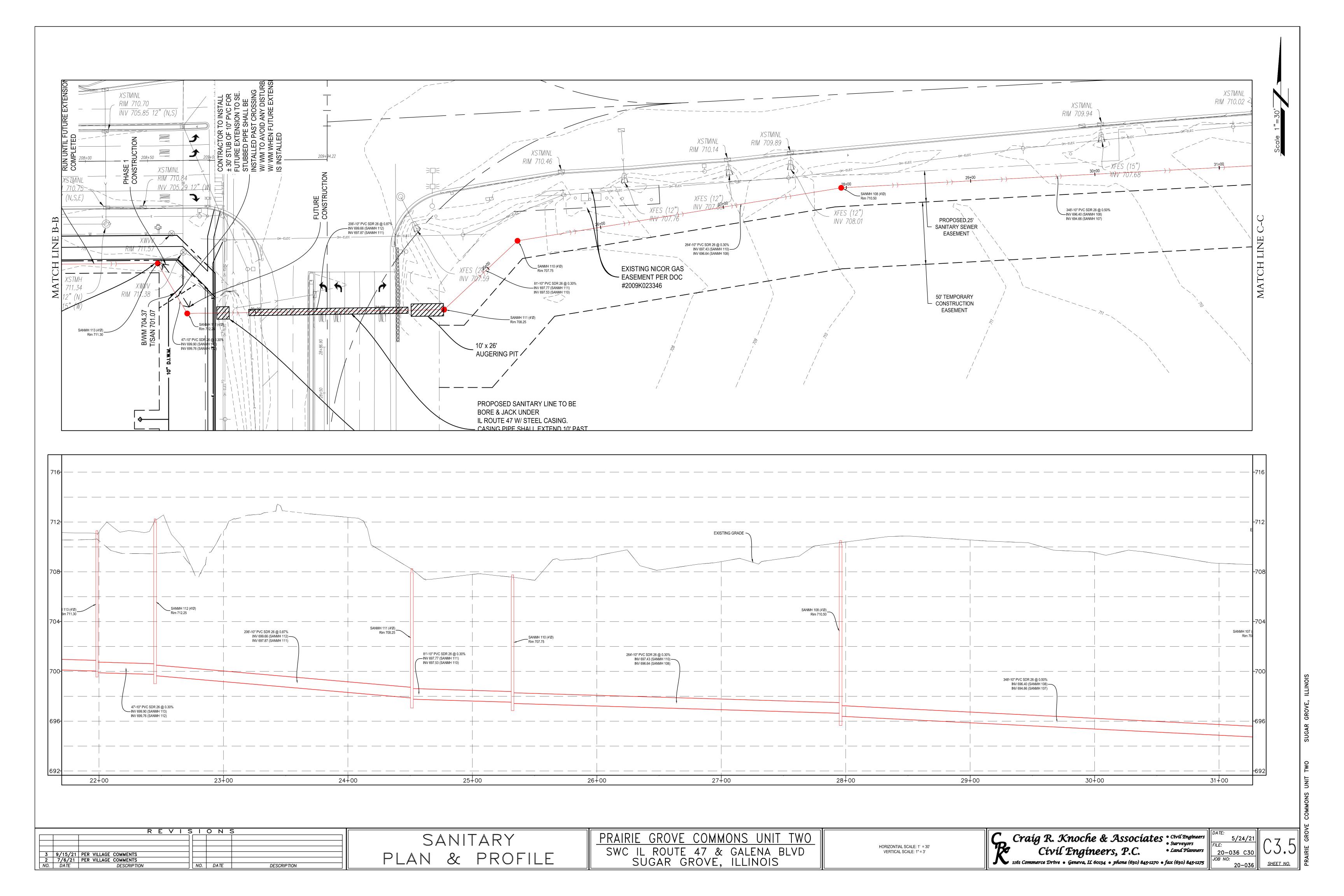
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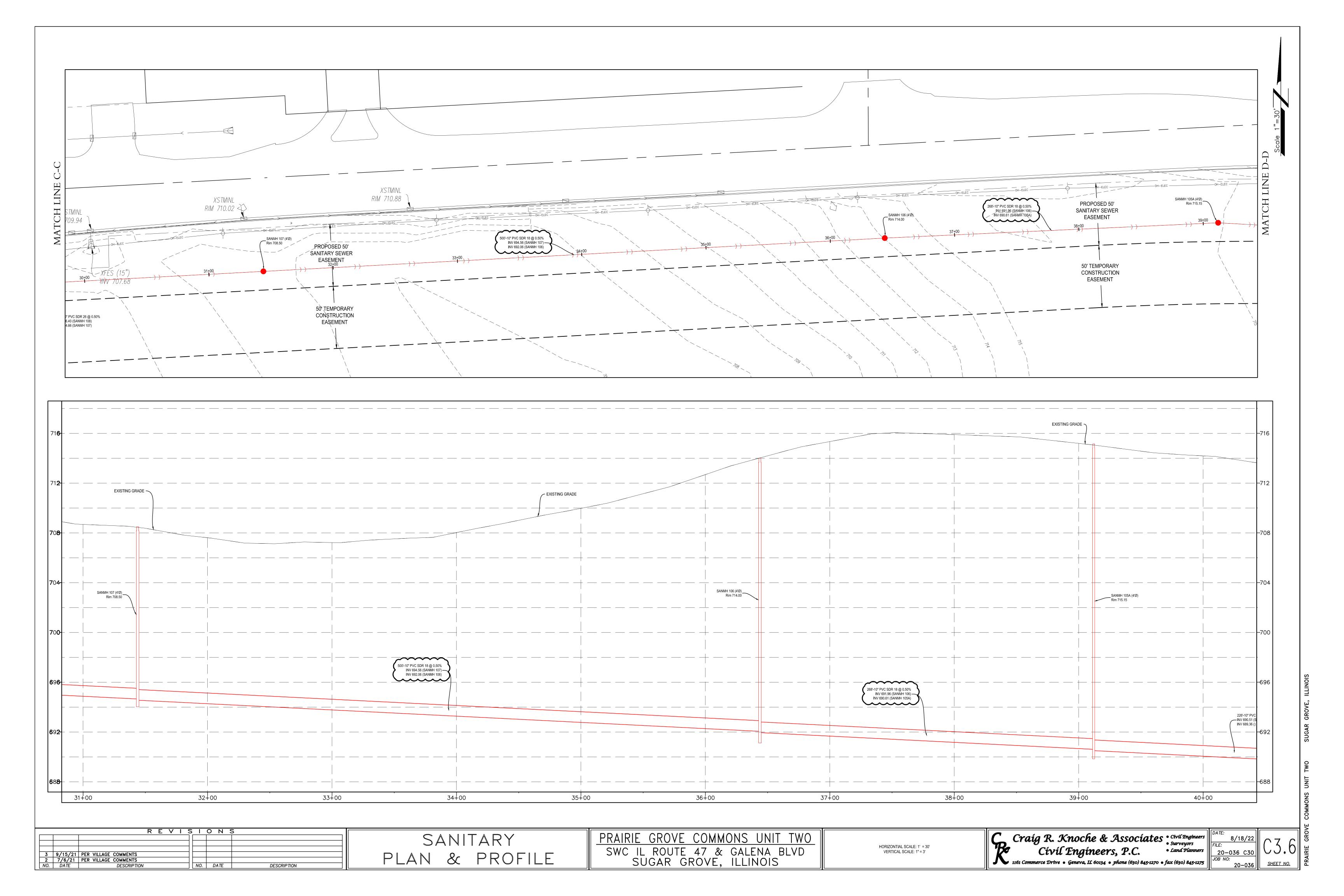


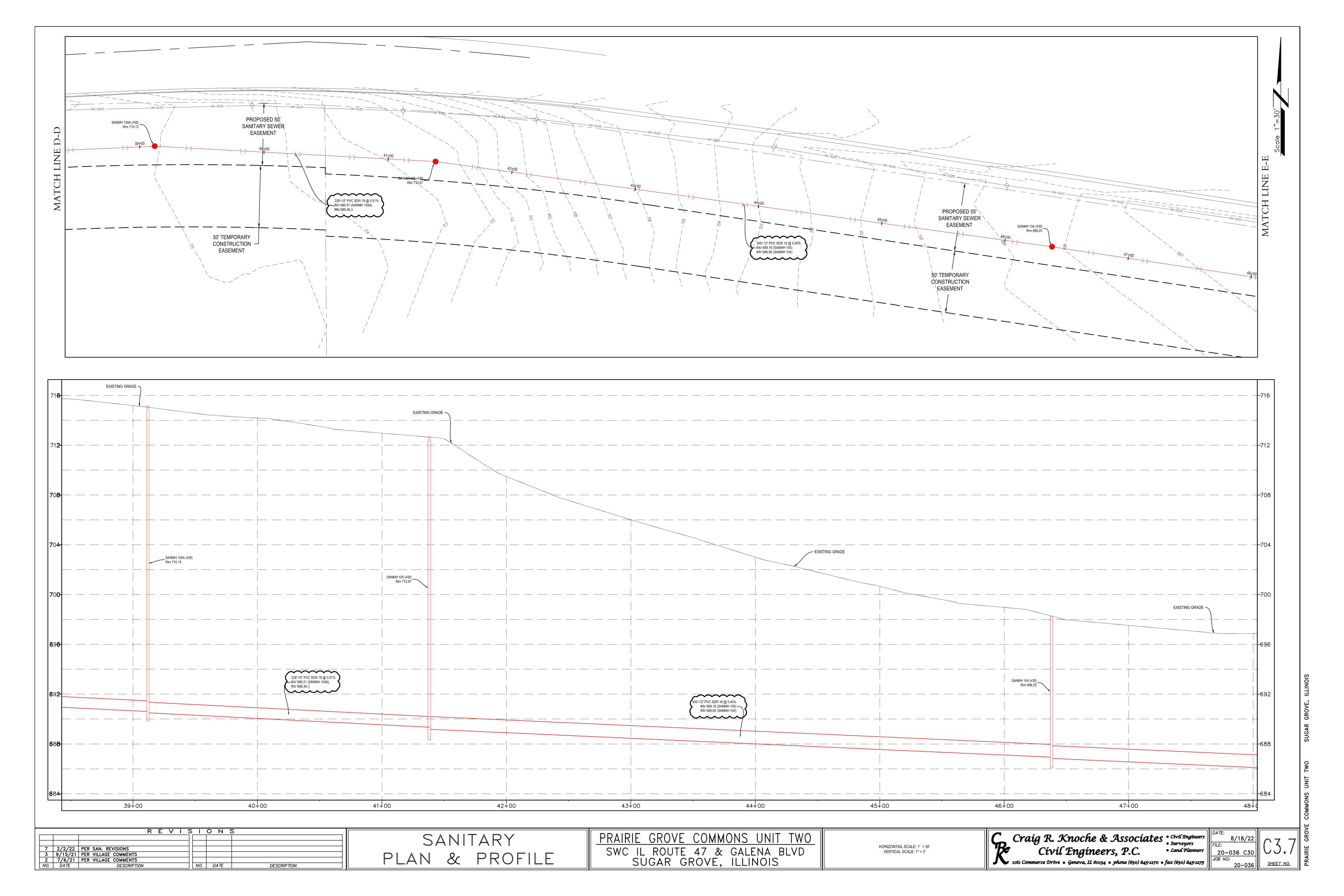


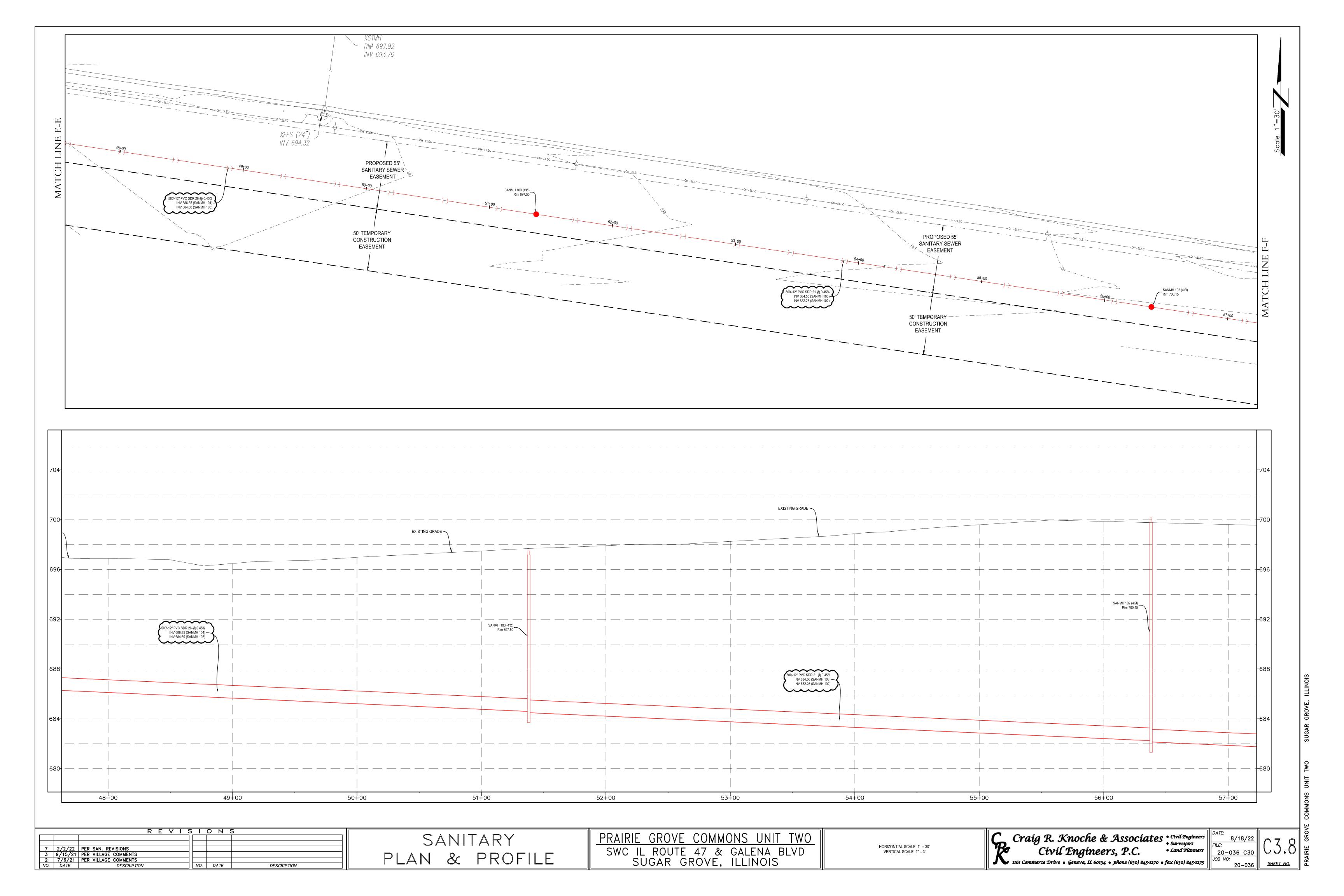


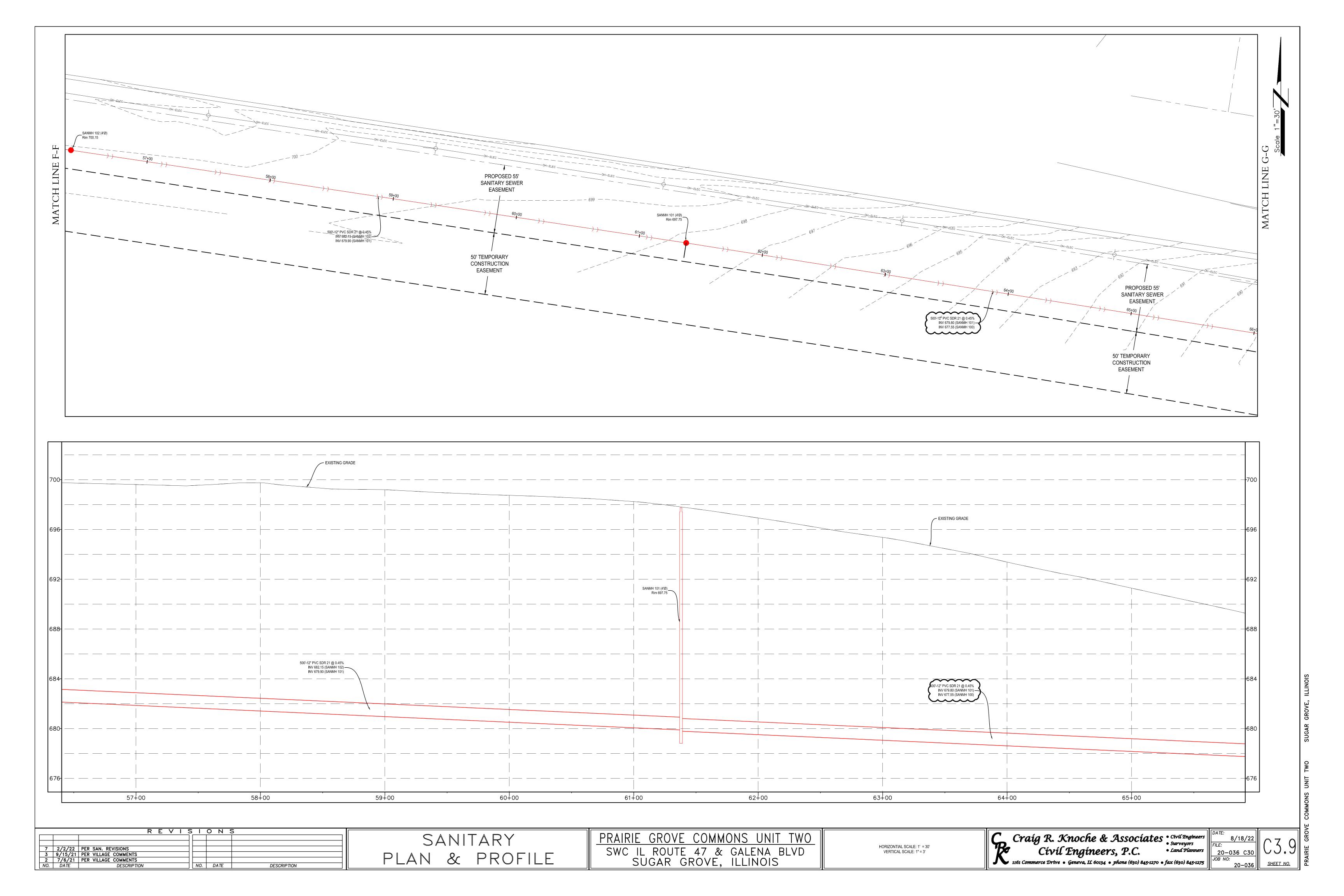


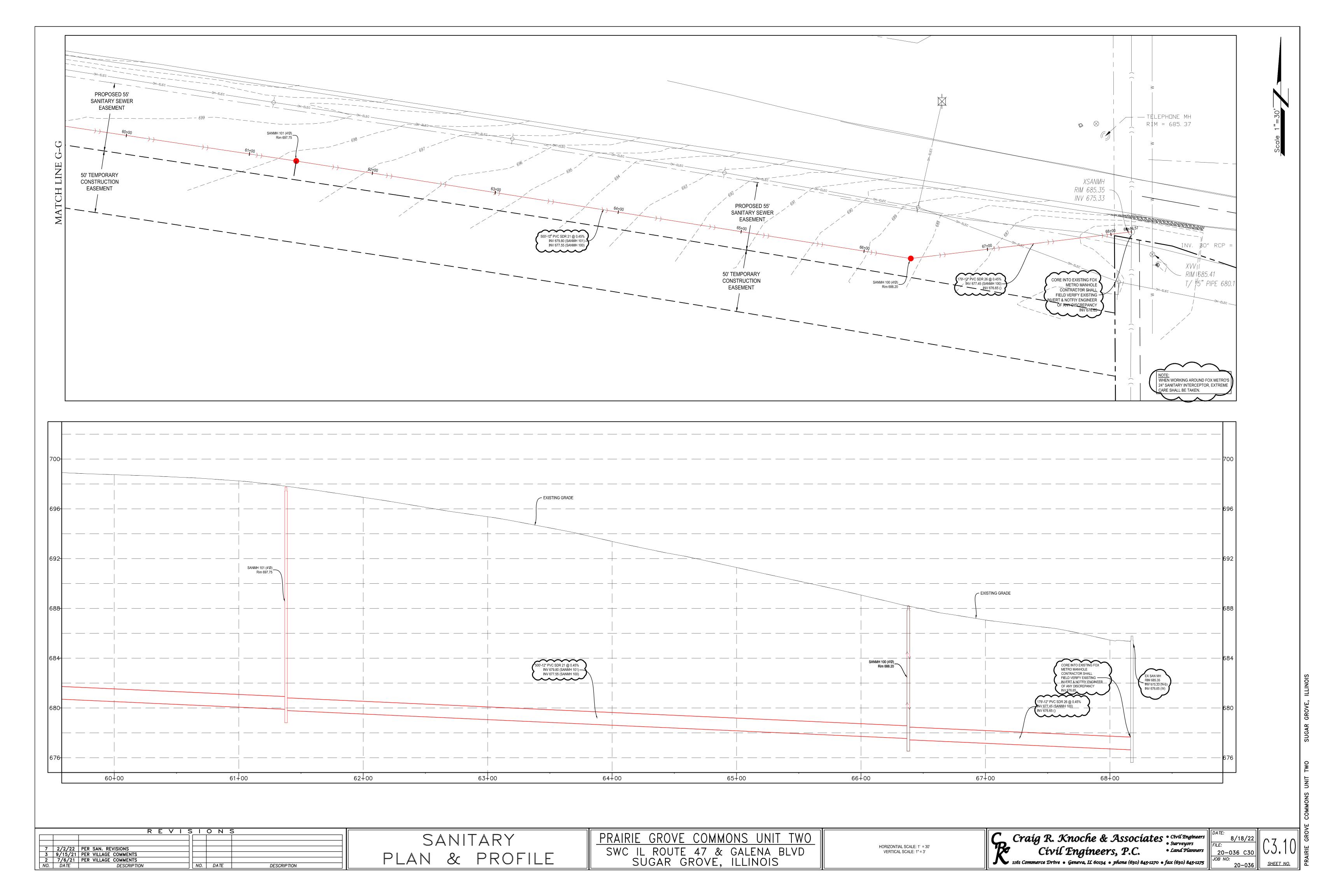


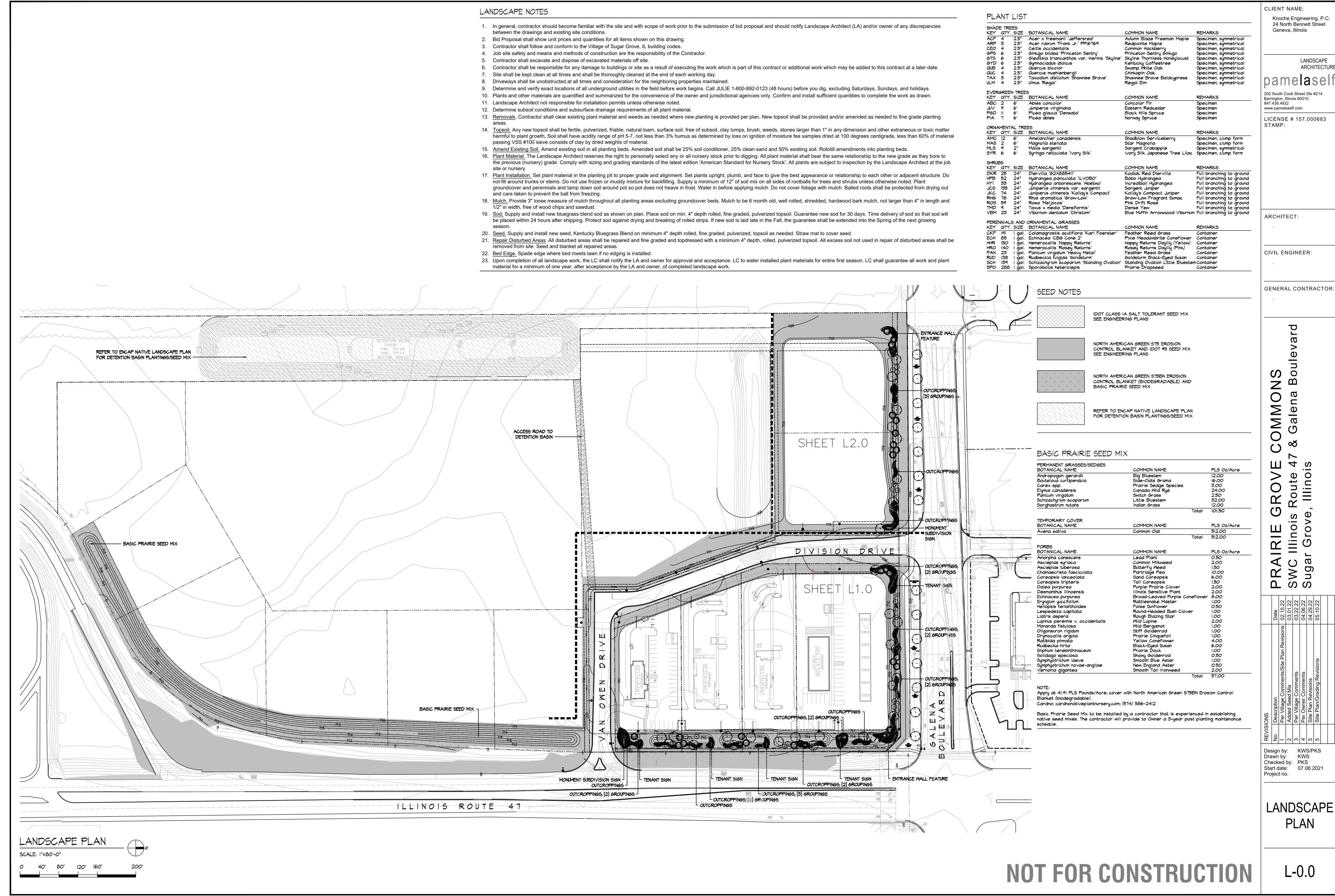


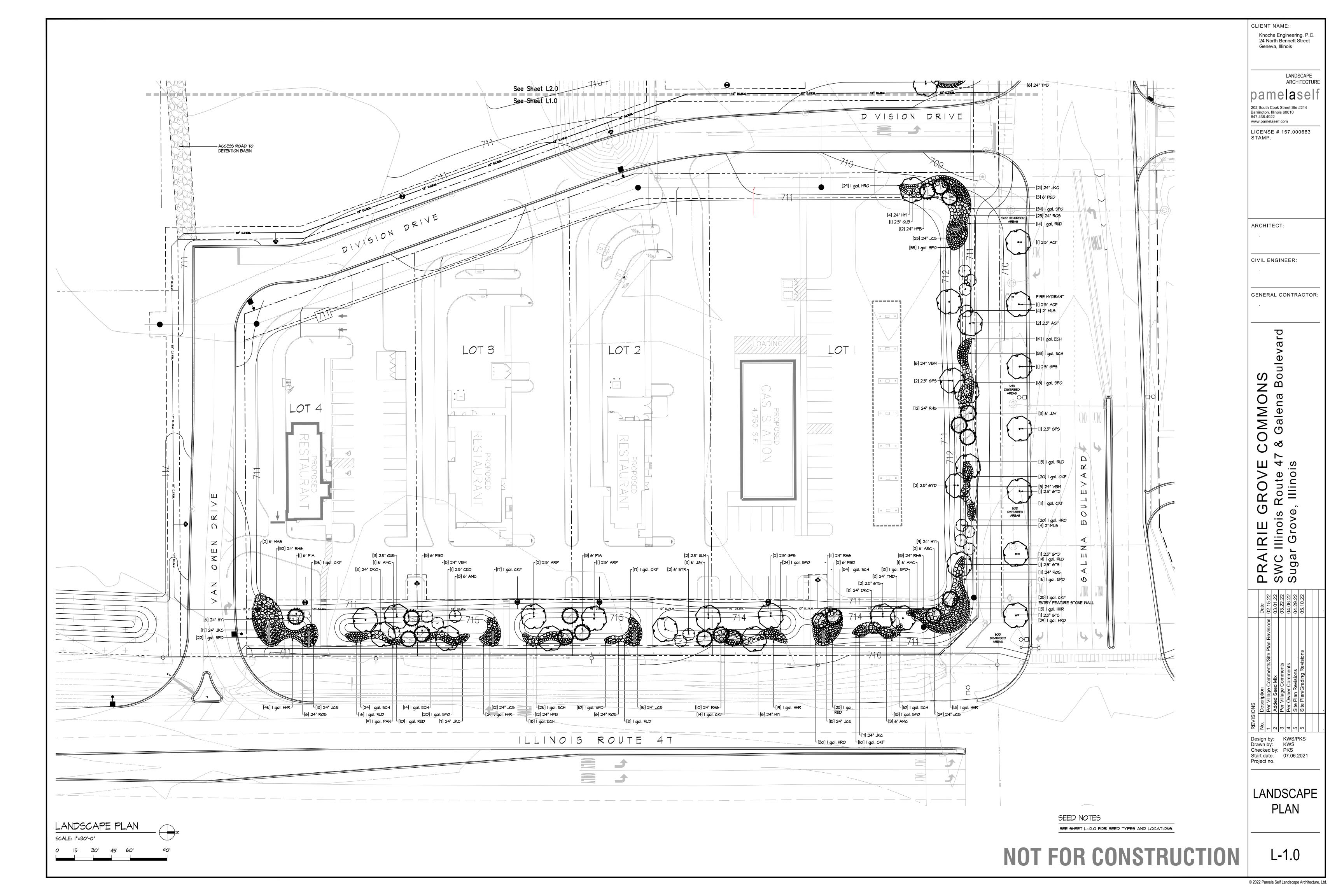


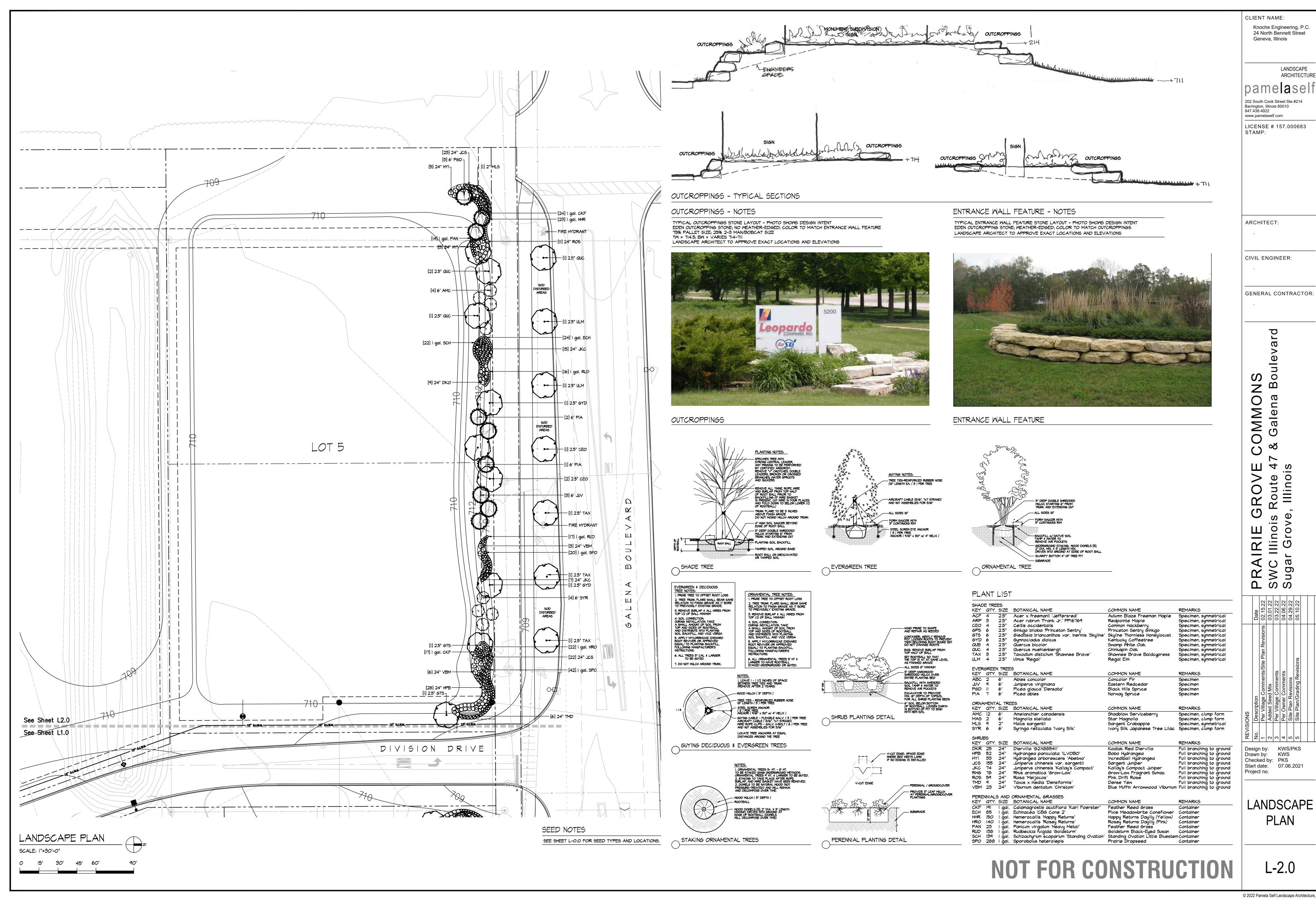












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#### GENERAL NOTES & SPECIFICATIONS

by project plans and specifications.

- 1. All roadway and pavement construction shall comply with the requirements of the latest Illinois Department of Transportation "Standard Specification for Road and Bridge Construction" or latest edition, except as may be modified by the project plans and specifications.
- 2. All underground construction shall comply with the requirements of the latest "Standard Specifications for Water and Sewer Main Construction in Illinois", Illinois municipal league, latest edition, except as may be modified
- 3. All work shall be in accordance with the standard specifications of the Municipality, IDOT and Fox Metro as applicable. Each Contractor shall be provided with the applicable sections of this specification in the bid
- 4. All elevations shown are plus and are NAVD88 Datum.
- 5. The Municipal building and engineering departments shall be notified at least two (2) working days prior to start construction. The contractor is responsible for notifying all jurisdictional agencies and all utility companies with facilities that may be affected by the proposed construction, and ensuring that all underground lines are located, prior to commencing
- 6. All work to meet the Municipal Supplemental Codes unless the state codes are more restrictive.
- 7. The contractor(s) shall indemnify the owner, the engineer, and the municipality, their agents, etc and Illinois Department of Transportation. From all liability involved with the construction, installation and testing of the work on this project.
- 8. All work shall comply with the "Illinois Urban Manual." The contractor shall take whatever steps are necessary to control erosion on the site. Erosion control features shall be constructed concurrently with other work on the site. The contractor shall take sufficient precautions to prevent pollution of streams, lakes and reservoirs with fuels, oils, bitumins, calcium chloride or other harmful materials. He shall conduct and schedule his operations so as to avoid or minimize siltation of streams, lakes and reservoirs. Hauling will not be allowed when the work site is too wet to maintain acceptable conditions on adjacent streets. Adjacent streets and driveways shall be manually or mechanically swept periodically as may be responsible for removing sediment resulting from this project from storm sewers and drainage structures at no additional cost.
- 9. The contractor shall be responsible for the compliance with all of the requirements of the occupational safety and health act including those requirements for open cut trenches and sheeting and bracing as required. At no time will the engineer or any of his employees be held liable, either directly or as third party participants to any litigation concerned with construction project.
- 10. All existing field drainage tiles encountered or damaged during construction are to be restored to their original condition, properly rerouted, and/or connected to the storm sewer system. The contractor shall keep a record of all locations of field drainage tile encountered unless otherwise noted.
- 11. Commonwealth Edison, AT&T, NICor gas, and other utility company conduits are not necessarily shown on the drawings and must be located in the field prior to construction.
- 12. The contractor shall field verify the existing conditions and notify Craig R. Knoche & Associates, Civil Engineers P.C. of any discrepancies prior to submitting a bid.
- 13. Contractor will be responsible for repairing all existing pavement damaged during construction that is not specified.
- 14. All concrete used shall be I.D.O.T. class S1.
- 15. Subgrade preparation for all pavements shown on the drawings shall include topsoil stripping and removal of any underlying unstable/deleterious material.
- 16. Apply prime coat uniformly over surface of compacted aggregate base at a rate of 0.40 gal/SY. Apply enough material to penetrate and seal, but not flood surface. Allow prime coat to cure for 72 hours minimum.
- 17. It shall be the responsibility of each contractor to notify J.U.L.I.E prior to performing any excavations.
- 18. Cable routing and specification in accordance with village ordinance.19. The contractor shall provide the municipality and Craig R. Knoche & Associates Civil Engineers, P.C. with a complete set of record drawings

within 30 days of completion of the work. Drawings shall include

- 20. All property dimensions and areas are approximates and subject to change per final survey.
- 21. All dimensions are back of curb unless otherwise noted.

elevations, location of other utilities, services, field tiles, etc.

- 22. All curb radii are back of curb unless otherwise noted.
- 23. See architectural plans for exact building dimensions.24. Contractors to verify dimensions prior to starting work and notify
- engineer if any discrepancies are found.
- 25. Sidewalk around perimeter of the building shall be integral curb / walk.

  26. All pavement markings shall be painted traffic yellow 4" wide and 2
- 27. Contractor to provide temporary traffic control measures during construction of entrances of R.O.W. in accordance with Illinois D.O.T. Requirements.
- 28. Contractor shall verify with local municipality or controlling jurisdiction as to the necessity for and requirements relating to the inspection by an approved on—site engineer.
- 29. The Municipal, IDOT and Fox Metro details shall take precedence. Craig R. Knoche and Associates will not take responsibility for the accuracy of the Municipal details.
- 30. Knoche Engineering PC shall not have control or be in charge of and shall not be responsible for the means, methods, safety, safety precautions techniques, sequence procedures or time of performance of the client, the contractor, other contractors or subcontractors performing any of the work or providing any of the services on the project

#### EARTHWORK NOTES & SPECIFICATIONS

- 1. All trenched in green / landscape area shall be backfield with earth compacted to 90%. A minimum of 6"of topsoil shall provided in green / landscape areas. Trenches in all paved areas, curbed, and sidewalk areas shall be back filled with approved Engineering Backfill compacted as 95% modified Proctor.
- 2. All disturbed areas shall be restored and positive drainage must be
- 3. All landscaping must be restored to its original condition. Replacement of all black dirt, seed, trees, bushes, etc. shall be provided by the contractor and guaranteed for one year following final inspection by the local governmental agency having jurisdiction. Guarantee shall include repair of trench settlements as needed to bring trench to original grade.
- 4. Existing drainage patterns shall be restored following construction. Positive drainage shall be maintained throughout construction.
- 5. All existing utilities or improvements, including walk, curbs, pavements, driveways, and parkways damaged or removed during construction shall be restored to their original condition.
- 6. See soil report for testing requirements.
- 7. The contractor is advised that soil borings have been performed for this project. Boring logs and the soil report are available from the engineer. This report is dated \_\_\_\_\_\_ and was prepared by \_\_\_\_\_. The soil borings were performed by \_\_\_\_\_. The soils report and borings are a part of the of the bidding documents and is the soil reports and borings are not received with the bid set, it is the bidders responsibility to obtain and review the soil report and borings prior to submitting final bid.
- 8. After stripping and rough grading is completed, the exposed sub grade should be proof rolled. Proof rolling may be accomplished with a fully loaded, tandem—axle dump truck or other equipment providing an equivalent sub grade loading. Unstable areas observed at this time should be improved by scarification and recompaction or by undercutting and replacement with
- 9. State erosion control measures must be implemented and maintained throughout construction.
- 10. Contractor shall provide dust control during site work demolition or removal. Contractor shall control dust created from on—site construction and associated traffic using water or other approved means.
- 11. Protect trees, plant growth, and features designated to remain as final landscaping. Construction equipment shall not travel under drip lines of trees to be protected.
- 12. Protect benchmarks from damage or displacement.
- 13. Remove trees and shrubs, stump, and root system to a minimum depth of 42 inches.
- 14. Moisture Control—Where subgrade or layer of soil material must be moisture conditioned before compaction, uniformly apply water to surface of subgrade or layer of soil material. Apply water in minimum quantity as necessary to prevent free water from appearing on surface during or subsequent to compaction operations.
- 15. Remove and replace, or scarify and air dry, soil material that is too wet to permit compaction to specified density.
- 16. Stockpile or spread soil material that has been removed because it is too wet to permit compaction. Assist drying by discing, harrowing or pulverizing until moisture content is reduced to a satisfactory value.
- TRAFFIC CONTROL NOTES & SPECIFICATIONS
- 1. The contractor in accordance with I.D.O.T. standards shall provide all required traffic control and signs.
- The contractor shall maintain temporary access to all roadways and driveways during construction. The contractor shall notify homeowners at least 24 hours in advance of temporary open cuts required to install utilities across driveways.

# GENERAL UTILITY NOTES & SPECIFICATIONS

- 1. Water and sewer locations taken from drawings by others and must be located in the field by contractor prior to construction, including all elevations of rims and inverts.
- 2. All sewer and water mains trenches under, crossing under or within five (5) feet of existing or proposed curb & gutter, sidewalk, or pavement shall be back filled.
- 3. Valve Vaults and manholes frames and rings shall be set in workmanlike manner in easy—stick (or equal) bed.
- All stubs to buildings shall end 5 ft. from the building. All stubs shall be right angles to the foundation.
- 5. Contractor shall mark the end of all stubs with a 4" x 4" wood marker extended to 3' minimum above grade. Markers shall be painted as follows: Blue — Water, Green — Sanitary, Yellow — Storm.
- 6. Install conduit free from crimps and dents. Plug ends to prevent entry of dirt or moisture after installed
- 7. Clean out conduit before installation of conductors.
- 8. Conduit outside the building shall be buried minimum 36 inches below grade unless noted otherwise
- 9. Underground conduits shall have a minimum of 2 inch spacing between conduits and be back filled and compacted to the density specified elsewhere to eliminate all air pockets. Conduits from building to fuel pumps may be clustered in the same trench with minimal separation as required by owner.
- 10. All underground conduits shall be protected against future excavation damage by placing a plastic tape warning marking in each trench during backfill. Install tape full length of the trench.
- 11. Contractor shall verify with local munipality or controlling jurisdiction as to the necessity for and requirements relating to the inspection by an approved

REVISIONS

NO. DATE DESCRIPTION

NO. DATE DESCRIPTION

GENERAL NOTES & SPECIFICATIONS

PRAIRIE GROVE COMMONS UNIT TWO
SWC IL ROUTE 47 & GALENA BLVD
SUGAR GROVE, ILLINOIS

Craig R. Knoche & Associates • Ctvil Engineers
• Surveyors
• Civil Engineers, P.C.
• Land Planners

24 N. Bennett Street • Geneva, IL 60134 • phone (630) 845-1270 • fax (630) 845-1275

DATE: 5/24/21 FILE: 20-036 C70 JOB NO: 20-036

21 C 7.
6 SHEET NO.

#### GENERAL NOTES REVISED DECEMBER 2017

- 1. A PRECONSTRUCTION MEETING SHALL BE HELD PRIOR TO THE START OF ANY CONSTRUCTION, INCLUDING THE INSTALLATION OF TREE PROTECTION AND SOIL EROSION CONTROL MEASURES. THE CONTRACTOR SHALL NOTIFY THE VILLAGE ENGINEER A MINIMUM OF 10 DAYS IN ADVANCE OF STARTING ANY WORK. THE VILLAGE ENGINEER WILL COORDINATE THE PRECONSTRUCTION MEETING WITH THE VILLAGE STAFF, FIRE DISTRICT, POLICE DEPARTMENT, AND KANE COUNTY DEPARTMENT OF TRANSPORTATION. THE DEVELOPER/OWNER, THE GENERAL CONTRACTOR, AND ALL MAJOR SUBCONTRACTORS SHALL ATTEND THE MEETING.
- 2. IN ADDITION TO THE FORMAL PRECONSTRUCTION MEETING AT THE BEGINNING OF THE PROJECT, A PRECONSTRUCTION MEETING SHALL BE HELD ON SITE BEFORE EACH MAJOR WORK ITEM (I.E. UNDERGROUND WORK, CURBS AND GUTTER, PAVING, ETC.). THE GENERAL CONTRACTOR AND THE FOREMAN TO COMPLETE THE WORK SHALL ATTEND THE MEETING AT A MINIMUM. THE VILLAGE ENGINEER SHALL BE CONTACTED 48 HOURS IN ADVANCE OF THE MEETING SO THAT THE MEETING CAN BE COORDINATED WITH THE APPROPRIATE PUBLIC WORKS STAFF MEMBER.
- 3. THE IDOT "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" LATEST EDITION AND REVISIONS, THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", LATEST EDITION AND REVISIONS THERETO, THESE IMPROVEMENT PLANS AND DETAILS, SPECIAL PROVISIONS AND CODES AND ORDINANCES OF THE VILLAGE OF SUGAR GROVE, ILLINOIS SHALL GOVERN APPLICABLE PORTIONS OF THIS PROJECT.
- 4. LOCATIONS OF UTILITIES SHOWN ON PLANS ARE APPROXIMATE ONLY, AND ARE NOT NECESSARILY COMPLETE. CONTRACTOR SHALL MAKE THEIR OWN INVESTIGATIONS AS TO LOCATION OF ALL EXISTING UNDERGROUND STRUCTURES, CABLES, UTILITIES AND PIPE LINES.
- 5. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND VILLAGE SO THAT THE CONFLICT MAY BE RESOLVED.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL PRIVATE AND PUBLIC UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER, THE VILLAGE, AND/OR THE UTILITY COMPANY BY THE CONTRACTOR AT THEIR OWN EXPENSE.
- 7. THE CONTRACTOR SHALL NOTIFY J.U.L.I.E. (1-800-892-0123) AT LEAST TEN DAYS PRIOR TO CONSTRUCTION SO THAT EACH UTILITY COMPANY CAN STAKE OUT ANY UNDERGROUND IMPROVEMENTS THAT THEY MAY HAVE WHICH MIGHT INTERFERE WITH THE PROPOSED CONSTRUCTION.
- 8. THE CONTRACTOR SHALL BE REQUIRED TO MAKE ARRANGEMENTS FOR THE PROPER BRACING, SHORING AND OTHER REQUIRED PROTECTION OF ALL ROADWAYS, STRUCTURES, POLES, CABLES AND PIPE LINES, BEFORE CONSTRUCTION BEGINS. THEY SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE STREETS OR ROADWAYS AND ASSOCIATED STRUCTURES AND SHALL MAKE REPAIRS AS NECESSARY TO THE SATISFACTION OF THE ENGINEER AND VILLAGE AT THEIR OWN EXPENSE.
- 9. THE CONTRACTOR SHALL OBTAIN, ERECT, MAINTAIN AND REMOVE ALL SIGNS, BARRICADES, FLAGGERS AND OTHER TRAFFIC CONTROL DEVICES AS MAY BE NECESSARY FOR THE PURPOSE OF REGULATING, WARNING OR GUIDING TRAFFIC. PLACEMENT AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE APPLICABLE PARTS OF ARTICLE 107.14 OF THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE ILLINOIS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND HEALTHFUL WORKING CONDITIONS THROUGHOUT THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. ADEQUATE TEMPORARY SANITARY FACILITIES SHALL BE PROVIDED.
- 11. BEFORE ACCEPTANCE AND RELEASE OF THE SURETY BY THE VILLAGE AND FINAL PAYMENT, ALL WORK SHALL BE INSPECTED AND APPROVED BY THE VILLAGE ENGINEER AND VILLAGE.
- 12. SPECIAL ATTENTION IS DRAWN TO THE FACT THAT ARTICLE 105.06 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION REQUIRES THE CONTRACTOR TO HAVE A COMPETENT SUPERINTENDENT ON THE PROJECT SITE AT ALL TIMES, IRRESPECTIVE OF THE AMOUNT OF WORK SUBLET. THE SUPERINTENDENT SHALL BE CAPABLE OF READING AND UNDERSTANDING THE PLANS AND SPECIFICATIONS, SHALL HAVE FULL AUTHORITY TO EXECUTE ORDERS TO EXPEDITE THE PROJECT, SHALL BE RESPONSIBLE FOR SCHEDULING AND HAVE CONTROL OF ALL WORK AS THE AGENT OF THE CONTRACTOR. FAILURE TO COMPLY WITH THIS PROVISION WILL RESULT IN A SUSPENSION OF WORK AS PROVIDED IN ARTICLE 108.07 OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. THE CONTRACTOR WILL HAVE IN THEIR POSSESSION ON THE JOB SITE AT ALL TIMES A COPY OF THE PLANS AND SPECIFICATIONS DURING CONSTRUCTION.
- 13. THE CONTRACTOR SHALL RESTORE ANY AREA DISTURBED TO A CONDITION EQUAL TO OR BETTER THAN ITS ORIGINAL USE. THIS SHALL INCLUDE FINISH GRADING, ESTABLISHMENT OF A VEGETATIVE COVER (SEEDING OR SOD), GENERAL CLEANUP AND PAVEMENT REPLACEMENT. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE FACILITIES DURING CONSTRUCTION AND SHALL REPAIR ANY DRAINAGE FACILITIES DAMAGED DURING CONSTRUCTION.
- 14. THE DEVELOPER/CONTRACTOR SHALL KEEP PUBLIC STREETS FREE AND CLEAN OF DIRT AND DEBRIS; AND, WHEN NECESSARY CLEAN PAVEMENTS ON A DAILY BASIS OR AS DIRECTED BY THE VILLAGE.
- 15. NO EXCAVATION SHALL REMAIN OPEN OVER ANY WEEKEND.

- 16. WITH THE EXCEPTION OF CURB INLETS, UTILITY STRUCTURES SHALL NOT BE CONSTRUCTED IN PAVED AREAS, INCLUDING ROADWAYS, SIDEWALKS, CURB AND GUTTER, AND/OR TRAILS.
- 17. TRENCH BACKFILL SHALL BE PROVIDED AT ALL UTILITY TRENCHES AND REMOVAL OF UTILITY TRENCHES IN ALL PAVED AREAS AND 2 FEET BEYOND, INCLUDING ROADWAYS, CURBS AND GUTTER, SIDEWALK, TRAILS, AND DRIVEWAYS. INITIAL TRENCH BACKFILL AND BEDDING SHALL BE GRADED CA-7 STONE. THE FINAL TRENCH BACKFILL SHALL BE CA-7 CRUSHED AGGREGATE AND SHALL BE PLACED IN 6" LIFTS AND SHALL BE COMPACTED IN PLACE TO NINETY FIVE PERCENT (95%) OF MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE MODIFIED STANDARD PROCTOR TEST.
- 18. ALL ROUGH GRADING SHALL BE COMPLETED WITHIN 1 FOOT OF THE FINAL GRADE PRIOR TO CONSTRUCTION OF ANY UNDERGROUND UTILITY WITH THE EXCEPTION OF STORM SEWERS AND SANITARY SEWERS.
- 19. CURB PROTECTION IS REQUIRED AT ALL TIMES.
- 20. TREE PROTECTION AND EROSION CONTROL ITEMS SHALL BE INSTALLED ON SITE PRIOR TO THE START OF ANY CONSTRUCTION
- 21. MARKING OF VALVE BOXES, BUFFALO BOXES AND MANHOLES: ALL MAIN LINE VALVE BOXES, BUFFALO BOXES AND MANHOLES SHALL BE MARKED AT THE TIME OF CONSTRUCTION WITH A FOUR INCH BY FOUR INCH (4" X 4") HARDWOOD POST NEATLY INSTALLED VERTICALLY WITH A MINIMUM THREE FEET (3') BURY AND A MINIMUM FOUR FEET (4') EXPOSED. THE TOP ONE FOOT (1') OF THE POST SHALL BE PAINTED AS FOLLOWS: BLUE FOR WATER AND GREEN FOR SEWERS.
- 22. ALL FINAL ADJUSTMENTS OF CASTINGS WILL BE ACCOMPLISHED BY THE USE OF CONCRETE ADJUSTING RINGS SET IN BUTYL ROPE JOINT SEALANT; MORTAR JOINTS WILL NOT BE ALLOWED. HEIGHT OF ADJUSTING RINGS SHALL NOT EXCEED TEN INCHES (10"). SEE THE STORM SEWER DETAILS FOR CURB INLET HYDRAULIC CEMENT FILLET REQUIREMENT.
- 23. ALL PARKWAYS WITHIN THE DEDICATED STREET RIGHT OF WAY SHALL BE GRADED, TOPSOIL PLACED TO A MINIMUM THICKNESS OF SIX INCHES (6"), EROSION CONTROL BLANKET PLACED, AND SEEDED (CLASS 1A MINIMUM UNLESS OTHERWISE SPECIFIED), OR SODDED IN AN APPROVED MANNER.
- 24. ABSOLUTELY NO SUBSTITUTIONS OR VARIANCES WILL BE PERMITTED TO ANY OF THE VILLAGE OF SUGAR GROVE STANDARD NOTES OR ORDINANCES UNLESS APPROVED OTHERWISE BY THE VILLAGE IN WRITING PRIOR TO COMMENCING CONSTRUCTION ACTIVITY.
- 25. ACCESS TO LOCAL RESIDENCES AND BUSINESSES SHALL BE MAINTAINED DURING CONSTRUCTION.
- 26. NEITHER THE ENGINEER, NOR THE VILLAGE, SHALL ASSUME ANY OF THE RESPONSIBILITIES OF THE CONTRACTOR'S SUPERINTENDENT OR THE SUBCONTRACTORS. ADDITIONALLY, NEITHER THE ENGINEER, NOR THE VILLAGE, SHALL ADVISE ON, OR ISSUE DIRECTIONS CONCERNING ASPECTS OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES, OR SAFETY PRECAUTIONS AND/OR PROGRAMS IN CONNECTION WITH THE WORK.
- 27. THE CONTRACTOR SHALL REPLACE ALL LOT IRONS UNNECESSARILY DAMAGED OR REMOVED DURING CONSTRUCTION OF THIS PROJECT AND THE CONTRACTOR SHALL PAY SAID COST OF REPLACEMENT.
- 28. THE CONTRACTOR SHALL DISPOSE OF ALL EXCESS EXCAVATION, UNSUITABLE AND UNUSABLE MATERIALS OFFSITE AND AT AN APPROVED LOCATION IN A MANNER THAT PUBLIC OR PRIVATE PROPERTY WILL NOT BE DAMAGED OR ENDANGERED. THIS WORK SHALL BE IN ACCORDANCE WITH THE CURRENT IEPA DISPOSAL REQUIREMENTS.
- 29. EQUIPMENT AND MATERIALS SHALL NOT BE STORED WITHIN THE VILLAGE'S RIGHT-OF-WAY AT ANY TIME WITHOUT THE EXPRESS WRITTEN PERMISSION OF THE VILLAGE.
  - SOIL EROSION AND SEDIMENTATION CONTROL **REVISED DECEMBER 2017**
- 1. GENERAL
- a) ON SITE SEDIMENT CONTROL MEASURES. AS SPECIFIED BELOW. SHALL BE CONSTRUCTED AND FUNCTIONAL PRIOR TO INITIATING CLEARING. GRADING, STRIPPING, EXCAVATION OR FILL ACTIVITIES ON THE SITE.
- b) THE CONTRACTOR SHALL PROVIDE SOIL EROSION AND SEDIMENTATION CONTROL IN ACCORDANCE WITH VILLAGE ORDINANCES, VILLAGE STANDARD SPECIFICATIONS FOR IMPROVEMENTS, "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" (THE YELLOW BOOK), THE ILLINOIS URBAN MANUAL (LATEST EDITION), AND IN ACCORDANCE WITH THE PLANS.
- c) IF THE PROJECT DISTURBS MORE THAN 1 ACRE OF LAND, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING A LOG OF THE CONDITIONS OF THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES PER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) (REGIONAL OR PROJECT SPECIFIC) PERMIT REQUIREMENTS. THE CONTRACTOR IS OBLIGATED TO RÉVIEW AND RECORD THE STATUS OF THE SOIL EROSION AND SEDIMENTATION CONTROL MEASURES AT MINIMUM EVERY WEEK AND AFTER EVERY 1/2" RAINFALL EVENT. THIS LOG SHALL BE KEPT ON SITE, AND THE VILLAGE AND/OR VILLAGE ENGINEER RESERVES THE RIGHT TO REVIEW THIS LOG UPON REQUEST.
- d) THE VILLAGE ENGINEER OR THEIR REPRESENTATIVE WILL HAVE THE AUTHORITY TO STOP WORK IF PROPER SOIL STABILIZATION AND SEDIMENTATION CONTROLS ARE NOT BEING OBSERVED.

- e) SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED WEEKLY AND AFTER EACH RAIN. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CLEANED AND RESTORED AS REQUIRED.
- f) ANY DEFICIENCIES IN SOIL EROSION AND SEDIMENTATION CONTROL MEASURES WILL BE REPORTED TO THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY WITH THE CONSTRUCTION SITE STORM WATER DISCHARGE INCIDENCE OF NON-COMPLIANCE FORM.
- 2. SOIL STABILIZATION
- a) TOPSOIL STRIPPING STRIPPED TOPSOIL SHALL BE STOCKPILED ON\_SITE (FOR REUSE) AT THE LOCATION(S) DESIGNATED ON THE PLANS.
- b) STABILIZATION PRACTICES STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER CLEANING, GRADING, EXCAVATING, OR OTHER DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION OF DISTURBED AREAS MUST BE INITIATED WITHIN ONE (1) WORKING DAY OF 4. FIELD REVIEW PERMANENT OR TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES AND SHALL BE COMPLETED AS SOON AS POSSIBLE BUT NO LATER THAN 14 DAYS FROM THE INITIATION OF STABILIZATION WORK IN AN AREA. EXCEPTIONS TO THESE TIME FRAMES ARE AS FOLLOWS:
- i. WHERE THE INITIATION OF STABILIZATION MEASURES IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE.
- ii. ON AREAS WHERE CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED AND WILL RESUME AFTER 14 DAYS, A TEMPORARY STABILIZATION TECHNIQUES AND MATERIALS SHALL BE DESCRIBED IN THE SWPPP.
- c) PERMANENT SEEDING \_ IMMEDIATELY FOLLOWING FINISH GRADING AND TOPSOIL PLACEMENT, SEEDING OR SOD SHALL BE INSTALLED IN AREAS AS DESIGNATED ON PLANS.
- d) DUST CONTROL UNDER DRY CONDITIONS WHERE SOIL MIGRATION IS AN ISSUE, THE CONTRACTOR WILL BE REQUIRED TO WET THE EXPOSED UNPROTECTED SOIL SURFACE WITH WATERING TRUCKS TO EFFECTIVELY ELIMINATE SOIL MIGRATION. GRADING ACTIVITIES PRODUCING DUST MUST BE SUSPENDED UNTIL THE NUISANCE IS ABATED. IF, AT THE VILLAGE ENGINEER'S DISCRETION, PROPER DUST CONTROL IS NOT BEING OBSERVED, AN ORDER TO IMMEDIATELY STOP WORK WILL BE ISSUED UNTIL PROPER DUST CONTROL MEASURES ARE IMPLEMENTED.
- e) PAVED AREAS THE AGGREGATE BASE COURSE SHOULD BE INSTALLED AS SOON AS POSSIBLE TO STABILIZE THE EXPOSED SOIL SUBGRADE. IN CERTAIN CONDITIONS, LIME STABILIZATION OF ROADWAY SUB-GRADE MAY BE APPROVED BY THE VILLAGE ENGINEER. VILLAGE ENGINEER APPROVAL MUST BE OBTAINED IN WRITING PRIOR TO LIME STABILIZATION.
- f) SLOPE PROTECTION STEEP SLOPES MAY REQUIRE ADDITIONAL STABILIZATION, IN ADDITION TO SEEDING, SUCH AS MULCH, EXCELSIOR BLANKET, SOD, OR EQUAL.
- 3. SEDIMENT CONTROL
- a) FOR DISTURBED AREAS DRAINING MORE THAN ONE ACRE, A SEDIMENT TRAP OR EQUIVALENT CONTROL MEASURE SHALL BE CONSTRUCTED AT THE DOWNSLOPE POINT OF THE DISTURBED AREA.
- b) SEDIMENT BASIN AND SEDIMENT TRAP DESIGNS SHALL PROVIDE FOR BOTH DETENTION STORAGE AND SEDIMENT STORAGE. THE DETENTION STORAGE SHALL BE COMPOSED OF EQUAL VOLUMES OF WET DETENTION STORAGE AND DRY DETENTION STORAGE, AND EACH SHALL BE SIZED FOR THE 2-YEAR, TWENTY-FOUR (24) HOUR RUNOFF FROM THE SITE UNDER MAXIMUM RUNOFF CONDITION'S DURING CONSTRUCTION. THE RELEASE RATE OF THE BASIN SHALL BE THAT RATE REQUIRED TO ACHIEVE MINIMUM DETENTION TIMES OF AT LEAST TEN (10) HOURS. THE ELEVATION OF THE OUTLET STRUCTURE SHALL BE PLACED SUCH THAT IT ONLY DRAINS THE DRY DETENTION STORAGE.
- c) ADJACENT PROPERTY PROTECTION ADJACENT PROPERTIES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION BY PRESERVING A VEGETATED BUFFER STRIP (MINIMUM WIDTH OF 25 FEET) OR SEDIMENT BARRIERS (E.G. SILT FENCE) AT THE LOWER PERIMETER OF THE LOT. WHERE POSSIBLE, BOTH A VEGETATED BUFFER STRIP AND SEDIMENT BARRIER SHALL BE INSTALLED.
- d) STOCKPILE PROTECTION SEDIMENTATION BARRIERS SHALL BE PROVIDED IN ALL AREAS AROUND THE PERIMETER OF STOCKPILE AREAS.
- e) STORM SEWER INLET PROTECTION DURING CONSTRUCTION SEDIMENT SHALL BE FILTERED THROUGH A FILTER FABRIC BARRIER AROUND ALL FRONT, SIDE, OR BACKYARD INLETS BEFORE IT ENTERS NEWLY CONSTRUCTED STORM SEWER (STRAW BALES ARE NOT ALLOWED). THE VILLAGE RECOMMENDS ALL STORM SEWER INLET STRUCTURES (INCLUDING ROADWAY AND FRONT, SIDE, OR BACKYARD STRUCTURES) UTILIZE FLEXSTORM INLET FILTERS™ OR APPROVED EQUAL BY THE VILLAGE ENGINEER SEDIMENT CONTROL INLET FILTERS TO PROPERLY MANAGE SEDIMENT CONTROL AND TO MINIMIZE STORM SEWER TELEVISING AND CLEANING WHICH WOULD OTHERWISE BE REQUIRED PRIOR TO VILLAGE ACCEPTANCE OF THE STORM SEWER SYSTEM. ALL INLET FILTERS SHALL BE PROPERLY MAINTAINED UNTIL SUCH TIME AS ALL AREAS TRIBUTARY TO A PARTICULAR INLET HAVE BEEN ADEQUATELY VEGETATED.
- f) DITCH PROTECTION ROCK DAMS SHALL BE INSTALLED AS DITCH CHECKS AND STAKED IN PLACE AT 250 LINEAL FEET MAXIMUM SPACING IN ALL SWALES. IF DITCH SLOPES ARE SEVERE, CLOSER SPACING OF DITCH CHECKS MAY BE REQUIRED. STRAW BALES ARE NOT ALLOWED AS DITCH CHECKS.

- g) CONSTRUCTION ACCESS \_ CONSTRUCTION TRAFFIC SHALL ENTER AND LEAVE THE SITE AT A DESIGNATED ACCESS. PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY RUNOFF OR VEHICLE TRACKING ONTO STATE/COUNTY/TOWNSHIP HIGHWAYS OR LOCAL TRUCK WASHING FACILITIES MAY BE REQUIRED. IF NECESSARY, HIGHWAYS OR LOCAL STREETS SHALL BE CLEANED DAILY AT THE END OF EACH WORK DAY OR AS REQUIRED TO KEEP MUD AND/OR OTHER DEBRIS OFF OF ANY HIGHWAY OR STREET.
- h) ROADWAY CLEANING & STREET SWEEPING ROADWAYS SHALL BE KEPT CLEAN DURING THE COURSE OF CONSTRUCTION BY UTILIZING MANUAL CLEANING, STREET SWEEPERS, OR OTHER MACHINERY. UPON THE INSTALLATION OF THE FINAL SURFACE COURSE OF THE ROADWAY, ABSOLUTELY NO HEAVY MACHINERY (E.G. SKID STEER, ENDLOADER) SHALL BE UTILIZED FOR ROADWAY CLEANING.
- i) REMOVAL OF CONTROL MEASURES AFTER FINAL SITE STABILIZATION IS DEEMED ACHIEVED BY THE VILLAGE ENGINEER, ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS.

- a) THE VILLAGE ENGINEER SHALL MAKE FIELD REVIEWS AS DESCRIBED BELOW, AND SHALL EITHER STATE THAT THE PORTION OF THE WORK IS COMPLETED SATISFACTORILY OR SHALL NOTIFY THE DEVELOPER WHEN THE WORK FAILS TO COMPLY WITH THE SITE DEVELOPMENT OR EROSION AND SEDIMENTATION CONTROL PLAN AS APPROVED. IN ORDER TO OBTAIN FIELD REVIEWS AND TO ENSURE COMPLIANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN, THE GRADING OR BUILDING PERMIT, AND THIS TITLE, THE DEVELOPER SHALL NOTIFY THE VILLAGE ENGINEER WITHIN TWO (2) WORKING DAYS OF THE COMPLETION OF THE CONSTRUCTION STAGES SPECIFIED BELOW:
- 1. UPON COMPLETION OF INSTALLATION OF SEDIMENT AND RUNOFF CONTROL MEASURES (INCLUDING PERIMETER CONTROLS AND DIVERSIONS), PRIOR TO PROCEEDING WITH ANY OTHER EARTH
- DISTURBANCE OR GRADING; 2. AFTER STRIPPING AND CLEARING;
- 3. AFTER ROUGH GRADING;
- 4. AFTER FINAL GRADING:
- 5. AFTER SEEDING AND LANDSCAPING DEADLINES; AND 6. AFTER FINAL STABILIZATION AND LANDSCAPING, PRIOR TO REMOVAL OF
- SEDIMENT CONTROLS.
- b) IF STRIPPING, CLEARING, GRADING AND/OR LANDSCAPING ARE TO BE DONE IN PHASES OR AREAS, THE DEVELOPER SHALL GIVE NOTICE AND REQUEST A FIELD REVIEW AT THE COMPLETION OF EACH OF THE ABOVE WORK STAGES IN EACH PHASE OR AREA.

#### SANITARY SEWER CONSTRUCTION REVISED DECEMBER 2017

- 1. ALL SANITARY MANHOLE FRAMES SHALL BE IDOT TYPE 1 (STANDARD 604001) AND ALL MANHOLE LIDS SHALL HAVE "VILLAGE OF SUGAR
- GROVE" AND "SANITARY" CAST INTO THEM. 2. ALL SANITARY SEWERS ARE SUBJECT TO THE REQUIREMENTS, SPECIFICATIONS, AND STANDARDS OF FOX METRO WATER RECLAMATION
- DISTRICT (FMWRD). 3. AT THE COST OF THE DEVELOPER/CONTRACTOR, ALL SANITARY SEWERS SHALL BE AIR AND MANDREL (DEFLECTION) TESTED PER FMWRD SPECIFICATIONS. LIKEWISE, ALL SANITARY MANHOLES SHALL BE AIR TESTED BY FMWRD SPECIFICATIONS. THE VILLAGE ENGINEER SHALL WITNESS ALL TESTING AND SHALL BE CONTACTED 48 HOURS IN ADVANCE OF ALL TESTING. THE VILLAGE ENGINEER WILL FORWARD ALL TEST RESULTS TO FMWRD UPON PASSING RESULTS OF THE ENTIRE SYSTEM. FMWRD IS RESPONSIBLE FOR THE TELEVISING OF THE SEWER
- 4. THE LOCATION OF THE ENDS OF ALL SANITARY SEWER SERVICE LOCATIONS SHALL BE TIED TO EACH PROPERTY CORNER WITH THE LOCATION BEING INCLUDED IN THE RECORD DRAWINGS.
- 5. ALL FINAL ADJUSTMENTS OF CASTINGS WILL BE ACCOMPLISHED BY THE USE OF CONCRETE ADJUSTING RINGS SET IN BUTYL ROPE JOINT SEALANT; MORTAR JOINTS WILL NOT BE ALLOWED. HEIGHT OF ADJUSTING RINGS SHALL NOT EXCEED EIGHT INCHES (8").

#### STORM SEWER CONSTRUCTION REVISED DECEMBER 2017

- a) ALL WORK AND MATERIAL SHALL BE IN ACCORDANCE WITH VILLAGE ORDINANCES, VILLAGE STANDARD SPECIFICATIONS FOR IMPROVEMENTS, AND THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS" (LATEST EDITION). IN CASE OF CONFLICT, THE MORE STRINGENT OF THE REQUIREMENTS SHALL APPLY.
- b) THE STORMWATER DRAINAGE SYSTEM SHALL BE SEPARATE AND INDEPENDENT OF THE SANITARY SEWER SYSTEM.
- c) ALL STORM SEWER STRUCTURES, OTHER THAN CURB INLETS AND CURB CATCH BASINS SHALL BE MARKED AT THE TIME OF CONSTRUCTION WITH A 4" X 4" HARDWOOD POST NEATLY INSTALLED VERTICALLY WITH A MINIMUM 4 FEET BURY AND A MINIMUM 4 FEET EXPOSED. THE TOP 1 FOOT OF THE POST SHALL BE NEATLY PAINTED GREEN.
- 2. STORM SEWER
- a) STORM SEWER SHALL BE CONSTRUCTED OF REINFORCED CONCRETE PIPE (RCP) CONFORMING TO THE ASTM DESIGNATION C-76, CLASS III OR BETTER. OTHER MATERIALS FOR STORM SEWERS MAY BE USED IN SPECIAL CASES UPON THE WRITTEN APPROVAL OF THE VILLAGE ENGINEER. ANY FLEXIBLE PIPE STORM SEWER SYSTEMS SO APPROVED BY THE VILLAGE ENGINEER SHALL BE SUBJECT TO MANDREL TESTING. FOR ALL SECTIONS, 30 DAYS FOLLOWING INSTALLATION.

- b) JOINTS FOR ALL RCP STORM SEWERS SHALL BE OF THE BITUMINOUS MASTIC OR RUBBER GASKET TYPE, EXCEPT WHEN OTHERWISE REQUIRED BY THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY OR THE VILLAGE ENGINEER. ALL STORM SEWERS THAT ENCROACH WITHIN FIFTEEN FEET (15') OF ANY BUILDING FOUNDATION SHALL BE 'O'-RING OR OTHER RUBBER GASKET JOINTS AS PER THE ASTM C-443 SPECIFICATION.
- c) EXISTING GROUNDWATER DRAIN TILES ENCOUNTERED ON SITE SHALL BE CONNECTED TO STORM SEWERS WITH THE USE OF A MANHOLE OR SHALL BE RESTORED TO OPERATING CONDITION AT THE DIRECTION OF THE VILLAGE ENGINEER. EXISTING GROUNDWATER DRAIN TILES THAT ENTER THE SITE FROM OTHER PROPERTIES SHALL BE CONNECTED TO THE NEW STORM SEWER SYSTEM WITH THE USE OF A MANHOLE.
- d) ALL CLOSED STORM STRUCTURE LIDS SHALL HAVE "VILLAGE OF SUGAR GROVE" AND "STORM" CAST INTO THEM.

#### 3. MANHOLES, FRAMES AND LIDS

- a) ALL MANHOLES, CATCH BASINS, AND INLETS SHALL BE REINFORCED PRECAST CONCRETE AND SHALL BE SEALED WITH BUTYL ROPE JOINT SEALANT UNLESS APPROVED OTHERWISE BY THE VILLAGE ENGINEER IN HIGH GROUNDWATER OR HIGH MOISTURE SOIL AREAS.
- b) STORM SEWER STRUCTURES SHALL BE SIZED SUCH THAT A MINIMUM OF 12 INCHES OF PRECAST CONCRETE STRUCTURE IS PROVIDED BETWEEN ALL PIPE OPENINGS. WHERE CLOSED LIDS ARE NEEDED, MANHOLE CASTINGS SHALL BE IDOT TYPE 1 NEENAH R-1713 FRAME WITH TYPE B COVER, EJIW 1050, OR APPROVED EQUAL. WHERE OPEN LIDS ARE NEEDED, USE NEENAH R-1713 WITH TYPE D COVER, EJIW 1050 WITH TYPE M1 RADIAL FLAT GRATE OR APPROVED EQUAL. ALL TYPE B COVERS SHALL HAVE "VILLAGE OF SUGAR GROVE" AND "STORM" CAST INTO THE TOP AND SHALL BE THE CONCEALED PICK HOLE TYPE.
- c) IN PAVED AREAS, CAST IN PLACE CONCRETE BLOCKING, A MINIMUM OF 10 INCHES THICK, EXTENDING 18 INCHES OUT FROM THE FRAME IS REQUIRED. THE SURFACE OF THE CONCRETE BLOCKING SHALL BE SET TO THE ELEVATION OF THE TOP OF THE BITUMINOUS BINDER COURSE. IN CONCRETE PAVEMENT APPLICATIONS, THE SURFACE OF THE BLOCKING SHALL MATCH THE FINISH PAVEMENT SURFACE.
- d) ALL CATCH BASINS AND INLETS SHALL BE BACKFILLED WITH CA-7 CRUSHED LIMESTONE OR CRUSHED GRAVEL TO ALLOW FOR SUB-GRADE SEEPAGE. IF SUB-GRADE CONDITIONS ARE EXCESSIVELY WET,
- EXCESSIVELY SENSITIVE TO MOISTURE OR SPECIAL CONDITIONS EXIST AS DEEMED BY THE VILLAGE OR THE VILLAGE ENGINEER, A CAPPED PERFORATED PIPE UNDERDRAIN STUBBED FROM THE STRUCTURE MAY BE REQUIRED.
- e) FOR M-3.12 CURB AND GUTTER UNDER PONDING OR CONTINUOUS GRADE CONDITIONS, INLET AND/OR CATCH BASIN FRAMES AND GRATES SHALL BE NEENAH R-3501-P, EJIW 7525, OR APPROVED EQUAL. FOR B-6.12 CURB AND GUTTER UNDER PONDING CONDITIONS, INLET AND/OR CATCH BASIN FRAMES AND GRATES SHALL BE NEENAH R-3281-A, EJIW 7210 WITH TYPE M2 GRATE AND T1 BACK OR APPROVED EQUAL. FOR B-6.12 CURB AND GUTTER UNDER CONTINUOUS GRADE CONDITIONS, INLET AND/OR CATCH BASIN FRAMES AND GRATES SHALL BE NEENAH R-3281-AL, EJIW 7210 WITH TYPE M4 VANE GRATE AND TI BACK OR APPROVED EQUAL. ALL CURB INLET FRAMES SHALL BE SEALED WITH A HYDRAULIC CEMENT FILLET BETWEEN THE FRAME AND TOP ADJUSTING RING OR CONE SECTION. WHEN ADDITIONAL GRATE CAPACITY IS NEEDED IN PONDING CONDITIONS TO HANDLE THE TRIBUTARY FLOW, ADDITIONAL INLET STRUCTURES SHALL BE UTILIZED. IN CASES WHERE STORM SEWER INLETS ARE USED IN DEPRESSED BARRIER CURB AREAS, USE NEENAH R-3339-1, EJIW 5130, OR APPROVED EQUAL. IN REAR YARDS AND ALL OTHER TURF APPLICATIONS (EXCEPT ROADSIDE DITCH DRAINAGE APPLICATIONS) CATCH BASINS SHALL BE NEENAH R-1713 WITH TYPE D COVER, EJIW 1050 WITH TYPE M1 RADIAL FLAT GRATE, OR APPROVED EQUAL. ROADSIDE DITCH DRAINAGE STRUCTURES SHALL BE EVALUATED ON A CASE BY CASE BASIS.
- f) NO MORE THAN 3 PRE-CAST CONCRETE ADJUSTING RINGS. NOT EXCEEDING 10 INCHES THICKNESS, MAY BE USED ON ANY STRUCTURE.

# 4. SUMP PUMPS & SERVICE LINES

- a) ALL INDIVIDUAL SUMP PUMP LINES SHALL BE CONNECTED TO A STORM STRUCTURE OR SUMP PUMP DISCHARGE COLLECTOR LINE STRUCTURE. SUMP PUMP COLLECTION LINES SHALL BE 6 INCHES DIAMETER MINIMUM. SUMP PUMP DISCHARGE COLLECTOR LINES SHALL HAVE A CLEANOUT/INLET STRUCTURE AT THE UPSTREAM END AND SHALL HAVE A CLEANOUT/INLET STRUCTURE EVERY 300 FEET MAXIMUM. SUMP PUMP CLEANOUT STRUCTURES SHALL BE 2 FOOT DIAMETER STRUCTURES AND WILL NOT BE ALLOWED TO PICK UP SURFACE DRAINAGE. ALL SUMP CONNECTIONS TO THE CLEANOUT/INLET STRUCTURE SHALL BE PRECAST OR CORE DRILLED AND SHALL BE SEALED INSIDE AND OUTSIDE THE STRUCTURE WITH HYDRAULIC CEMENT. THE MINIMUM DEPTH OF COVER FOR SUMP PUMP SERVICE LINES IS 24". THE FRAME AND LID SHALL BE NEENAH NO. R-1706-1 OR APPROVED EQUAL.
- b) THE CONNECTION TO THE STORM SEWER SHALL BE THROUGH A STRUCTURE. STUBS SHALL BE PROVIDED AS APPROPRIATE FOR ALL LOTS AND SHALL EXTEND AT A MINIMUM TO THE EASEMENT LINE TO AVOID EXCAVATION ISSUES WITH OTHER BURIED UTILITIES. ALL PIPE USED FOR SUMP PUMP DISCHARGE COLLECTOR LINES SHALL BE PVC (SDR-26) OF THE SIZE SPECIFIED BY THE ENGINEER. SUMP PUMP DISCHARGES TO A CLOSED PIPE SYSTEM SHALL BE PROVIDED WITH AN OUTSIDE AIR BREAK TO FACILITATE FLOW.
- c) ALL SUMP PUMP SERVICE STUBS SHALL BE MARKED AT THE TIME OF CONSTRUCTION WITH A 2" X 4" WOOD POST NEATLY INSTALLED VERTICALLY WITH THE BOTTOM SET AT THE INVERT ELEVATION OF THE CAPPED STUB, A MINIMUM 3 FEET BURY AND A MINIMUM 4 FEET EXPOSED. THE TOP 1 FOOT OF THE POST SHALL BE NEATLY PAINTED GREEN.

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**VILLAGE OF SUGAR GROVE** 10 MUNICIPAL DRIVE SUGAR GROVE, IL 60554

| Bar represents 1"d FULL size plotted scale. Percentage I to 1" to be applied to stated scales.

NO. | DATE

REVISIONS

**STANDARD NOTES** 

**VILLAGE OF SUGAR GROVE STANDARD NOTES** 

2017 DATE: FEBRUARY PROJECT NO: SG1700 NOTES 3 SHEET

#### WATER MAIN CONSTRUCTION REVISED DECEMBER 2017

- 1. ALL WATER MAIN CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS", LATEST EDITION AND REVISIONS THERETO, THESE IMPROVEMENT PLANS AND DETAILS, SPECIAL PROVISIONS AND IN ACCORDANCE WITH CODES AND ORDINANCES OF THE VILLAGE OF SUGAR GROVE, ILLINOIS. IN CASE OF CONFLICT WITH VILLAGE CODES, DRAWINGS, AND THESE STANDARD NOTES, THE VILLAGE ENGINEER SHALL BE CONTACTED TO CONFIRM WHICH IS CORRECT.
- 2. ALL WATER MAIN SHALL BE DUCTILE IRON PIPE CLASS 52 WITH EITHER MECHANICAL OR PUSH\_ON JOINTS AND SHALL CONFORM TO ANSI A21.51, AWWA C151 AND ANSI A21.11, AWWA C111. PIPE SHALL BE MANUFACTURED IN THE UNITED STATES.
- 3. THE 10-POINT SOIL EVALUATION PROCEDURE FOR DUCTILE IRON PIPE CONFORMING TO APPENDIX A OF THE ANSI/AWWA C105/A21.5 STANDARD SHALL BE USED TO DETERMINE THE CORROSIVITY OF THE SOILS ON A PER PROJECT BASIS AND WHETHER OR NOT POLYETHYLENE WRAP IS REQUIRED FOR CORROSION PROTECTION. IF CORROSION PROTECTION IS REQUIRED, THE WATER MAIN SHALL BE WRAPPED WITH POLYETHYLENE WRAP IN ACCORDANCE WITH ANSI/AWWA C105/A21.5.
- 4. BRASS WEDGES SHALL BE INSTALLED AT EACH PUSH JOINT FOR ELECTRICAL CONDUCTIVITY. WEDGES SHALL BE INSTALLED 180° APART. TWO (2) WEDGES SHALL BE INSTALLED PER JOINT FOR WATER MAIN UP TO 12" AND TWO (2) PAIRS OF TWO (2) WEDGES SHALL BE INSTALLED PER JOINT ON WATER MAIN LARGER THAN 12".
- 5. ALL FITTINGS SHALL BE COMPACT DUCTILE IRON AND SHALL CONFORM TO ANSI/AWWA C153/421.53\_84. FITTINGS SHALL BE U.L. LISTED CLASS 350, TYLER UNION, GRIFFIN OR APPROVED EQUAL. FITTINGS SHALL BE MANUFACTURED IN THE UNITED STATES.
- 6. ALL PIPE AND FITTINGS SHALL BE CEMENT LINED IN ACCORDANCE WITH ANSI/AWWA C104/421.4.
- 7. ALL FITTINGS SHALL BE MECHANICAL JOINT AND INSTALLED WITH RETAINER GLANDS UNLESS OTHERWISE SHOWN ON THE DRAWINGS.
- 8. LONG RADIUS CURVES, EITHER HORIZONTAL OR VERTICAL, MAY BE LAID WITH STANDARD PIPE BY DEFLECTIONS AT THE JOINTS. MAXIMUM DEFLECTIONS AT PIPE JOINTS AND LAYING RADIUS FOR THE VARIOUS PIPE LENGTHS SHALL BE IN ACCORDANCE WITH ANSI/AWWA C600. WHEN RUBBER GASKETED PIPE IS LAID ON A CURVE, THE PIPE SHALL BE JOINTED IN A STRAIGHT ALIGNMENT AND THEN DEFLECTED TO THE CURVED ALIGNMENT. TRENCHES SHALL BE MADE WIDER ON CURVES FOR THIS PURPOSE.
- 9. SLEEVES SHALL BE ROCKWELL D.I. COUPLING TYPE 441, TYLER UNION OR APPROVED EQUAL. SLEEVES SHALL BE PROVIDED AT LOCATIONS SHOWN ON THE PLANS OR AS REQUIRED. THE COST OF SLEEVES IS CONSIDERED AS INCIDENTAL TO THE COST OF THE PROJECT.
- 10. ALL GATE VALVES SHALL HAVE A NON\_RISING STEM, SHALL HAVE A STANDARD OPERATING NUT AND SHALL OPEN IN A COUNTER\_CLOCKWISE DIRECTION. GATE VALVES SHALL BE AMERICAN FLOW CONTROL SERIES 2500 DUCTILE IRON RESILIENT WEDGE GATE VALVES IN ACCORDANCE WITH AWWA C-515 STANDARD. ALL WATER MAIN GATE VALVES SHALL BE INSTALLED IN VALVE VAULTS.
- 11. ALL FIRE HYDRANT VALVE BOXES SHALL BE HEAVY WALL HIGH DENSITY POLYETHYLENE AMERICAN FLOW CONTROL TRENCH ADAPTERS. LIDS TO BE MARKED "WATER" (VALVE BOX EXTENSIONS IF REQUIRED ARE CONSIDERED INCIDENTAL). OPEN GRADED (CA-7) LIMESTONE SHALL BE UTILIZED TO BACKFILL AROUND THE OPERATING NUT ON ALL VALVE BOXES TO PREVENT MUD FROM PENETRATING THE VALVE BOXES.
- 12. ALL HYDRANTS SHALL BE IN ACCORDANCE WITH SECTION FOUR (4) OF AWWA C502-54 STANDARD AND SHALL BE AN AMERICAN FLOW CONTROL/WATEROUS PACER MODEL NO. WB-67-250 (BREAK AWAY STYLE TRAFFIC DESIGN) WITH ONE 4 1/2" STEAMER NOZZLE AND TWO 2 1/2" HOSE OUTLETS, OF WHICH THE THREADS CONFORM WITH THE STANDARDS OF THE VILLAGE OF SUGAR GROVE, ILLINOIS. ALL HYDRANTS SHALL HAVE AN AUXILIARY GATE VALVE. HYDRANT INSTALLATIONS SHALL HAVE 5.5' DEPTH OF COVER. FIRE HYDRANTS SHALL BE PLACED 3 FOOT FROM THE BACK OF CURB TO THE CENTER OF THE HYDRANT, OR WHERE THERE IS NO CURB AND GUTTER, THE FACE OF THE PUMPER NOZZLE SHALL BE LOCATED FIVE FEET (5') FROM THE PAVED ROAD EDGE. CENTER LINE OF PUMPER NOZŽLÉ SHALL BE EIGHTEEN INCHES (18") TO TWENTY INCHES (20") ABOVE FINISH GRADE LINE (SIDEWALK TÓ CURB).
- 13. ALL FIRE HYDRANTS ALONG A POTABLE WATER MAIN SHALL BE FACTORY PAINTED RED. ALL FIRE HYDRANTS ALONG A RAW WATER MAIN SHALL BE FACTORY PAINTED EMERALD GREEN WITH THE PAINT CODE M4157 BY WATEROUS.
- 14. ALL MECHANICAL JOINT FITTINGS, VALVES AND HYDRANTS SHALL BE RESTRAINED WITH RETAINER GLANDS. RETAINER GLANDS SHALL BE EBAA IRON SERIES 1100 MEGALUG OR APPROVED EQUAL. THE VILLAGE ENGINEER SHALL WITNESS ALL RESTRAINED JOINTS, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VILLAGE ENGINEER PRIOR TO BACKFILLING SUCH WATER SYSTEM IMPROVEMENTS. SHOULD THE SYSTEM BE BACKFILLED PRIOR TO INSPECTION, THE RESTRAINT SYSTEM WILL HAVE TO BE EXCAVATED BY THE CONTRACTOR FOR INSPECTION AT NO COST TO THE VILLAGE OF SUGAR GROVE.

- 15. ALL PRESSURE TAPS TO AN EXISTING VILLAGE MAIN SHALL BE MADE WITH AN AMERICAN FLOW CONTROL SERIES 2800 COMPACT DUCTILE IRON MECHANICAL JOINT TAPPING SLEEVE AND AN AMERICAN FLOW CONTROL SERIES 2500 DUCTILE IRON RESILIENT WEDGE TAPPING VALVE (MJ X FL) AND SHALL BE CONSTRUCTED IN A FIVE (5') FOOT MINIMUM DIAMETER VALVE VAULT. ALL TAPS SHALL BE PERFORMED BY THE CONTRACTOR AFTER PAYMENT OF APPLICABLE CONNECTION FEES AND SHALL BE WITNESSED BY THE VILLAGE. THE VILLAGE ENGINEER SHOULD BE NOTIFIED 48 HOURS IN ADVANCE OF ANY TAP.
- 16. ALL TEES, BENDS, VALVES, AND FIRE HYDRANTS SHALL BE ADEQUATELY SUPPORTED WITH A CONCRETE BASE, AND SUPPORTED LATERALLY WITH PRECAST CONCRETE THRUST BLOCKING (NOT POURED-IN-PLACE) AGAINST UNDISTURBED EARTH. THE VILLAGE ENGINEER SHALL WITNESS ALL THRUST BLOCKING, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONTACT THE VILLAGE ENGINEER PRIOR TO BACKFILLING THE WATER SYSTEM IMPROVEMENTS. SHOULD THE SYSTEM BE BACKFILLED PRIOR TO INSPECTION, THE BLOCKING WILL HAVE TO BE EXCAVATED BY THE CONTRACTOR FOR INSPECTION AT NO COST TO THE VILLAGE OF SUGAR GROVE.
- 17. ALL WATER MAINS SHALL HAVE A MINIMUM DEPTH OF COVER OF 5.5' FROM THE FINISH GRADE TO THE TOP OF PIPE OR AS NOTED ON
- 18. ALL VERTICAL WATER MAIN ADJUSTMENTS SHALL BE ACCOMPLISHED BY DEFLECTION, NOT BENDS IN THE WATER MAIN.
- 19. ALL WATER SERVICES SHALL BE ONE (1") INCH DIAMETER TYPE "K" COPPER PIPE WITH COMPRESSION CONNECTIONS. NO JOINTS WILL BE ALLOWED BETWEEN THE CORPORATION STOP AND THE CURB STOP. MATERIAL AND INSTALLATION WILL BE IN GENERAL ACCORDANCE WITH AWWA C800. THE UNDERGROUND WATER SERVICE PIPE AND THE BUILDING SEWER SHALL BE NOT LESS THAN TEN FEET (10') APART HORIZONTALLY AND SHALL BE SEPARATED BY UNDISTURBED OR COMPACTED EARTH.
- 20. A DUCTILE IRON SADDLE WITH 2 STAINLESS STEEL STRAPS AND ACCESSORIES IS REQUIRED FOR WATER SERVICES 1.5" OR LARGER. ALL CORPORATION STOPS, CURB STOPS, AND CURB BOXES SHALL BE AS FOLLOWS:
- 21. THE BUFFALO BOXES SHALL BE SET BETWEEN THE SIDEWALK AND THE HOUSE/BUILDING. IT SHALL BE PLACED EITHER WITHIN THE RIGHT OF WAY (BETWEEN THE SIDEWALK AND THE RIGHT OF WAY) OR IN AN EASEMENT ADJACENT TO THE RIGHT OF WAY WITHIN 2 FEET OF THE SIDEWALK. NO BUFFALO BOX SHALL BE ALLOWED IN A SIDEWALK, DRIVEWAY OR OTHER PAVED SURFACE.
- 22. THE CONTRACTOR SHALL OBTAIN, ERECT, MAINTAIN AND REMOVE ALL SIGNS, BARRICADES, FLAGMEN AND OTHER CONTROL DEVICES AS MAY BE NECESSARY FOR THE PURPOSE OF REGULATING, WARNING OR GUIDING TRAFFIC. PLACEMENT AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE APPLICABLE PARTS OF ARTICLE 107.14 OF THE STANDARD SPECIFICATIONS AND THE ILLINOIS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. CONTRACTOR SHALL FURNISH A TRAFFIC CONTROL PLAN FOR IDOT OR VILLAGE APPROVAL IF REQUIRED.
- 23. ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CODE REQUIREMENTS.
- 24. THE CONTRACTOR SHALL RESTORE ANY AREA DISTURBED TO A CONDITION EQUAL TO OR BETTER THAN ITS ORIGINAL USE. THIS SHALL INCLUDE FINISH GRADING, ESTABLISHMENT OF A VEGETATIVE COVER (SEEDING OR SOD), GENERAL CLEANUP AND PAVEMENT REPLACÉMENT.
- 25. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SAFE AND HEALTHFUL WORKING CONDITIONS THROUGHOUT THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS.
- 26.BEFORE ACCEPTANCE BY THE VILLAGE ALL WORK SHALL BE INSPECTED AND APPROVED BY THE VILLAGE OR ITS REPRESENTATIVES.
- 27. EASEMENTS FOR THE EXISTING UTILITIES, BOTH PUBLIC AND PRIVATE, AND UTILITIES WITHIN PUBLIC RIGHTS-OF-WAY ARE SHOWN ON THE PLANS ACCORDING TO AVAILABLE RECORDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT LOCATION IN THE FIELD OF THESE UTILITY LINES AND THEIR PROTECTION FROM DAMAGE DUE TO CONSTRUCTION OPERATIONS. IF EXISTING UTILITY LINES OF ANY NATURE ARE ENCOUNTERED WHICH CONFLICT IN LOCATION WITH NEW CONSTRUCTION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT MAY BE RESOLVED.
- 28. WATER MAINS AND WATER SERVICE LINES SHALL BE PROTECTED FROM SANITARY SEWERS, STORM SEWERS, COMBINED SEWERS, HOUSE SEWER SERVICE CONNECTIONS AND DRAINS IN ACCORDANCE WITH TITLE 35: ENVIRONMENTAL PROTECTION AGENCY SUBTITLE F: PUBLIC WATER SUPPLIES, CHAPTER II: ENVIRONMENTAL PROTECTION AGENCY, PARTS <u>651\_654 TECHNICAL POLICY STATEMENTS, SECTION 653.119.</u>

- 29. WHENEVER POSSIBLE, A WATER MAIN MUST BE LAID AT LEAST TEN FEET HORIZONTALLY FROM ANY EXISTING OR PROPOSED DRAIN OR SEWER LINE. SHOULD LOCAL CONDITIONS EXIST WHICH WOULD PREVENT A LATERAL SEPARATION OF TEN FEET, A WATER MAIN MAY BE LAID CLOSER THAN TEN FEET TO A STORM OR SANITARY SEWER PROVIDED THAT THE WATER MAIN INVERT IS AT LEAST EIGHTEEN INCHES ABOVE THE CROWN OF THE SEWER, AND IS EITHER IN A SEPARATE TRENCH OR IN THE SAME TRENCH ON AN UNDISTURBED EARTH SHELF LOCATED TO ONE SIDE OF THE SEWER. IF IT IS IMPOSSIBLE TO OBTAIN PROPER HORIZONTAL OR VERTICAL SEPARATION AS DESCRIBED ABOVE. THEN THE SEWER MUST ALSO BE CONSTRUCTED OF WATER MAIN TYPE MATERIAL (DUCTILE IRON PIPE WITH SLIP-ON OR MECHANICAL JOINTS, PRESTRESSED REINFORCED CONCRETE PIPE WITH ASTM C-443 JOINTS, ETC.) AND PRESSURE TESTED TO THE MAXIMUM EXPECTED SURCHARGE HEAD TO ASSURE WATER TIGHTNESS BEFORE BACKFILLING.
- 30. WHENEVER WATER MAINS MUST CROSS HOUSE SEWERS, STORM SEWERS OR SANITARY SEWERS, THE WATER MAIN SHALL BE LAID AT SUCH AN ELEVATION THAT THE INVERT OF THE WATER MAIN IS EIGHTEEN INCHES ABOVE THE CROWN OF THE DRAIN OR SEWER. THIS VERTICAL SEPARATION MUST BE MAINTAINED FOR THAT PORTION OF THE WATER MAIN LOCATED WITHIN TEN FEET HORIZONTALLY OF ANY SEWER OR DRAIN CROSSED. THIS MUST BE MEASURED AS THE NORMAL DISTANCE FROM THE WATER MAIN TO THE DRAIN OR SEWER. IF IT IS IMPOSSIBLE TO OBTAIN THE PROPER VERTICAL SEPARATION AS DESCRIBED ABOVE OR IF IT IS NECESSARY FOR THE WATER MAIN TO PASS UNDER A SEWER OR DRAIN, THEN THE SEWER MUST BE CONSTRUCTED OF WATER MAIN TYPE MATERIAL (AS NOTED IN ITEM 23). THIS CONSTRUCTION MUST EXTEND ON EACH SIDE OF THE CROSSING UNTIL THE NORMAL DISTANCE FROM THE WATER MAIN TO THE SEWER OR DRAIN LINE IS AT LEAST TEN FEET. IN MAKING SUCH CROSSINGS, CENTER A LENGTH OF WATER MAIN PIPE OVER/UNDER THE SEWER TO BE CROSSED SO THAT THE JOINTS WILL BE EQUIDISTANT FROM THE SEWER AND AS REMOTE THEREFROM AS POSSIBLE. WHERE A WATER MAIN MUST CROSS UNDER A SEWER, A VERTICAL SEPARATION OF EIGHTEEN INCHES BETWEEN THE INVERT OF THE SEWER AND THE CROWN OF THE WATER MAIN SHALL BE MAINTAINED, ALONG WITH MEANS TO SUPPORT THE LARGER SIZED SEWER LINES TO PREVENT THEIR SETTLING AND BREAKING THE WATER MAIN.
- 31. VALVE VAULT FRAMES SHALL BE IDOT TYPE 1 (STANDARD 604001) WITH CONCEALED PICKHOLES AND ALL LIDS SHALL HAVE "VILLAGE OF SUGAR GROVE" AND "WATER" CAST INTO THEM.
- 32. VALVE VAULTS SHALL BE ADJUSTED WITH PRECAST CONCRETE ADJUSTING RINGS TO A MAXIMUM OF EIGHT (8") INCHES.
- 33. HYDROSTATIC TESTS \_ THE CONTRACTOR SHALL PERFORM HYDROSTATIC TESTS IN ACCORDANCE WITH DIVISION IV, SECTION 41 OF THE STANDARD SPECIFICATIONS FOR WATER AND SEWER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION, AND APPLICABLE PROVISIONS OF AWWA C\_600 AND C\_603. THE WATER MAINS SHALL BE PRESSURE TESTED AT 150 PSI. ALLOWABLE LEAKAGE SHALL BE AS SET FORTH IN AWWA C\_600 LATEST EDITION. THE MAXIMUM ALLOWABLE LEAKAGE SHALL BE BASED OFF OF THE FIRST 1,000 FEET OF PIPE (I.E. IF 2,000 FEET OF PIPE IS BEING TESTED, THE ALLOWABLE LEAKAGE WILL BE BASED ON THE FIRST 1,000 FEET ONLY.) THE DURATION OF THE TEST SHALL BE FOR TWO HOURS MINIMUM, AND THE MAXIMUM PRESSURE DROP DURING THIS TWO HOUR PERIOD IS A CUMULATIVE 2 PSI. TO MEET THE TESTING REQUIREMENTS, THE WATER MAIN SHALL SATISFY THE PRESSURE DROP AND THE ALLOWABLE LEAKAGE REQUIREMENTS. THE GAUGE WILL BE ZEROED OUT BEFORE THE PRESSURE TEST BEGINS. IN ADDITION, THE PRESSURE GAUGE USED IN THE HYDROSTATIC TEST SHALL BE IN 2 PSI INCREMENTS OR LESS AND HAVE A MINIMUM OF A 3½" DIAMETER FACE. WHEN TESTING DUCTILE IRON SERVICES, THE PERMANENT VALVE ON THE BUILDING RISER SHALL BE INSTALLED PRIOR TO PRESSURE TESTING.
- 34. DISINFECTION OF THE WATER MAINS \_ UPON COMPLETION OF THE NEWLY LAID WATER MAINS, THE WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION. PROCEDURE DESIGNATION, AWWA C\_651, LATEST EDITION. THE CONTRACTOR IS RESPONSIBLE FOR COLLECTING SAMPLES AND HAVING BACTERIOLOGICAL TESTING PERFORMED AS REQUIRED BY THE IEPA. THE CONTRACTOR SHALL FURNISH TO THE VILLAGE THE REQUIRED DOCUMENTATION, TEST RESULTS, ETC., REQUIRED BY THE IEPA FOR PLACING THE WATER MAINS OR SERVICE LINES IN SERVICE AND/OR SECURING AN OPERATING PERMIT.
- 35. WATER VALVES AND FIRE HYDRANTS SHALL BE OPERATED BY VILLAGE OF SUGAR GROVE PERSONNEL ONLY.
- 36. THE DEVELOPER/CONTRACTOR SHALL CONTACT THE VILLAGE ENGINEER TO SCHEDULE OPERATION OF VALVES, FLUSH AND FILL, PRESSURE TEST, CHLORINATION, AND SAMPLING. THE VILLAGE ENGINEER WILL CONTACT THE VILLAGE ACCORDINGLY. THE DEVELOPER/CONTRACTOR SHALL PROVIDE 48 HOURS NOTICE PRIOR TO PERFORMING ANY OF THESE WORK ITEMS. THE FOLLOWING ACTIVITIES MUST BE SCHEDULED WITH THE VILLAGE ENGINEER ON INDEPENDENT DAYS:
  - ✓ FLUSH AND FILL (WATER MAIN/SERVICE SHALL THEN BE PRE-TESTED.)
  - ✓ PRESSURE TEST (THE GAUGE SHALL BE ZEROED OUT BEFORE
  - THE START OF THE TEST.)
  - ✓ CHLORINATION
    ✓ 1ST DAY OF SAMPLING ✓ 2ND DAY OF SAMPLING

- 37. THE VILLAGE SHALL WITNESS ALL SERVICE TAPS GREATER THAN 1" IN DIAMETER. ACCORDINGLY, THE DEVELOPER/CONTRACTOR SHALL CONTACT THE VILLAGE ENGINEER 48 HOURS IN ADVANCE OF THE TAP.
- 38. THE WATER MAIN WILL BE INSTALLED UNDER THE RULES AND REGULATIONS OUTLINE IN THE IEPA WATER MAIN CONSTRUCTION PERMIT. HOWEVER THE WATER SERVICE INSTALLATION IS NOT COVERED UNDER THE IEPA PERMIT. ANY WATER SERVICE INSTALLATION WILL BE PERFORMED ACCORDING TO THE RULES AND REGULATIONS OF THE ILLINOIS PLUMBING CODE AND ILLINOIS PLUMBING LICENSE LAW (225 ILCS 320). PER THE ILLINOIS PLUMBING CODE, AN ILLINOIS LICENSED PLUMBER MUST PERFORM THE WORK ASSOCIATED WITH THE WATER SERVICES. THE WORK THAT MUST BE PERFORMED BY A LICENSED PLUMBER INCLUDES BUT IS NOT LIMITED TO THE TAP AT THE WATER MAIN, SERVICE PIPE INSTALLATION, CURB STOP INSTALLATION, B-BOX INSTALLATION, CONNECTION TO THE EXISTING WATER SERVICE AND ANY OTHER FITTINGS REQUIRED. ENGINEERING ENTERPRISES, INC WILL BE RESPONSIBLE FOR THE FIELD REVIEW OF ANY MATERIALS USED FOR THE WATER SERVICE INSTALLATION AND CONNECTIONS. THE VILLAGE OF SUGAR GROVE'S ILLINOIS LICENSED PLUMBER AND PLUMBING INSPECTOR WILL PERFORM ALL INSPECTIONS FOR THE WATER SERVICES. THE VILLAGE OF SUGAR GROVE PUBLIC WORKS DEPARTMENT SHALL BE CONTACTED A MINIMUM OF 48 HOURS PRIOR TO ANY INSPECTION AT 630-391-7230. THE INSTALLER'S ILLINOIS LICENSED PLUMBER CARD WILL NEED TO BE PRESENTED DURING THE INSPECTION.
- 39. FOX METRO WATER RECLAMATION DISTRICT SHALL BE CONTACTED BY THE DEVELOPER/CONTRACTOR TO OBSERVE THE CONSTRUCTION OF ALL WATER SERVICE LINES TO A BUILDING/HOUSE. THEIR OBSERVATION IS REQUIRED FROM THE SERVICE VALVE TO THE BUILDING/HOUSE.
- 40. ALL WATER MAIN SHALL BE PRE-PRESSURE TESTED PRIOR TO THE ACTUAL PRESSURE TEST THE VILLAGE ENGINEER AND/OR THE VILLAGE WITNESSES.

#### STREET PAVING AND CONSTRUCTION REVISED DECEMBER 2017

- 1. ALL STREET PAVEMENTS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DESIGN CRITERIA FOR THE VARIOUS CLASSES AS ESTABLISHED IN THE "BUREAU OF DESIGN AND ENVIRONMENT MANUAL" AND "HIGHWAY STANDARDS" OF THE STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION, LATEST EDITION. CONSTRUCTION MATERIALS AND METHODS SHALL MEET THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION. THE THICKNESS OF THE PAVEMENTS FOR MAJOR COLLECTORS AND ARTERIALS SHALL BE DETERMINED IN ACCORDANCE WITH THE CURRENT ILLINOIS DEPARTMENT OF TRANSPORTATION BUREAU OF LOCAL ROADS AND STREET MANUAL CHAPTER FOURTY-FOUR -PAVEMENT DESIGN, OR AS REQUIRED BY THE JURISDICTIONAL AUTHORITY.
- 2. PRIOR TO THE CONSTRUCTION OF ANY ROADWAY PAVEMENT, ALL OF THE MAJOR UNDERGROUND WORK SHALL BE COMPLETELY INSTALLED IN
- 3. THE VILLAGE ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO THE POURING OF THE CURB AND GUTTER IN ORDER TO REVIEW THE AGGREGATE BASE AND STRING LINE/FORMWORK OF THE CURB AND GUTTER. THE CURB AND GUTTER SHALL BE MACHINE PLACED UNLESS OTHERWISE APPROVED BY THE VILLAGE ENGINEER AND SHALL BE COMPLETED IN A MONOLITHIC INSTALLATION UNLESS PREVIOUSLY APPROVED BY THE VILLAGE ENGINEER.
- 4. ALL EXPOSED CONCRETE SURFACES SHALL BE CURED AND PROTECTED WHEN REQUIRED DUE TO WEATHER CONDITIONS PER THE ILLINOIS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. LATEST EDITION. INCLUDING ANY REVISIONS. NO HONEYCOMBING OF THE CONCRETE WILL BE ACCEPTED.
- 5. PROOF ROLLS ARE REQUIRED ON THE SUB-GRADE, AGGREGATE BASE, HOT MIX ASPHALT BASE. AND THE BINDER COURSE. AND SHALL BE WITNESSED BY THE VILLAGE ENGINEER. THE VILLAGE ENGINEER SHALL BE PROVIDED A MINIMUM OF 48 HOURS ADVANCED NOTICE PRIOR TO THE PROOF ROLL. EACH PROOF ROLL SHALL BE AT THE COST OF THE CONTRACTOR AND SHALL BE TO THE SATISFACTION OF THE VILLAGE ENGINEER AS FOLLOWS:
- a.A LOADED TRUCK PROVIDED BY THE CONTRACTOR SHALL BE DRIVEN OVER THE AREA TO BE TESTED AT A SPEED PATTERN AND NUMBER OF CYCLES TO BE DETERMINED BY THE VILLAGE ENGINEER. THE TEST TRUCK SHALL BE THE COMMON TRACTOR TRAILER TYPE WITH NO MORE THAN FIVE (5) AXLES WITH A TOTAL OF EIGHTEEN (18) WHEELS LOADED TO A NET WEIGHT OF NO LESS THAN TWENTY-TWO (22) TONS. THE LOAD TICKET SHALL BE PROVIDED TO THE VILLAGE ENGINEER FOR RECORD.
- b. ANY UNSTABLE OR DAMAGED SUBGRADE. AGGREGATE SUB-BASE. OR BINDER COURSE SHALL BE REMOVED AND REPLACED TO THE SATISFACTION OF THE VILLAGE ENGINEER AT NO COST TO THE VILLAGE.
- c. THE VILLAGE ENGINEER IS RESPONSIBLE FOR INDICATING WHETHER THE PROOF ROLL PASSES OR FAILS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING HOW TO FIX ANY UNSATISFACTORY AREAS.
- 6. THE VILLAGE ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO THE START OF ANY PAVING.
- 7. FINAL PLACEMENT OF HOT MIX ASPHALT SURFACE COURSE SHALL BE DELAYED FOR A MINIMUM OF ONE FULL WINTER UNLESS OTHERWISE APPROVED BY THE VILLAGE AND VILLAGE ENGINEER. BEFORE THE PLACEMENT OF THE SURFACE COURSE, ALL UNDERGROUND UTILITY PUNCH LIST ITEMS FOR FINAL INSPECTION SHALL BE COMPLETED AND APPROVED. ALSO, THE BINDER COURSE PATCHES MUST BE COMPLETED AND THE CURB AND GUTTER REPAIRED AS REQUIRED BY THE VILLAGE ENGINEER.

- 8. ON ALL STREETS WHERE NEW PAVEMENTS MEET EXISTING HOT MIX ASPHALT, A BUTT JOINT SHALL BE PROVIDED IN ACCORDANCE WITH IDOT DETAIL BD400, LATEST REVISION (BUTT JOINT AND HMA TAPER DETAILS). THE SUBGRADE SHALL BE GRADED PARALLEL TO THE FINAL SURFACE GRADE AND AS SUCH SHALL DRAIN TO THE CURB LANE AND TO THE INLETS AND CATCH BASINS. POSITIVE DRAINAGE MUST BE ACCOMPLISHED ON THE COMPACTED SUB-GRADE OR THE PLACEMENT OF BASE MATERIAL WILL NOT BE ALLOWED. CERTIFICATION BY THE VILLAGE ENGINEER VERIFYING PROPER SUBGRADE DRAINAGE WILL BE REQUIRED PRIOR TO ANY ADDITIONAL ROADWORK.
- 9. THE HOT MIX ASPHALT BASE COURSE, LEVELING BINDER, BINDER COURSE, AND SURFACE COURSE MIXTURES SHALL BE LAID ON A SURFACE, WHICH IS DRY AND ONLY WHEN WEATHER CONDITIONS MEET ALL STANDARDS STATED IN THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. THE HOT MIX ASPHALT BASE COURSE, LEVELING BINDER AND BINDER COURSES SHALL BE PLACED ONLY WHEN THE TEMPERATURE IN THE SHADE IS AT LEAST FORTY DEGREES FAHRENHEIT (40°F), WHEN THE TEMPERATURE IN THE SHADE FOR THE PREVIOUS TWENTY-FOUR (24) HOURS IS AT LEAST THIRTY-TWO DEGREES FAHRENHEIT (32°F) AND WHEN THE FORECAST IS FOR RISING TEMPERATURES. THE SURFACE COURSE SHALL BE PLACED ONLY WHEN THE TEMPERATURE IN THE SHADE IS AT LEAST FORTY-FIVE DEGREES FAHRENHEIT (45°F), WHEN THE TEMPERATURE IN THE SHADE FOR THE PREVIOUS TWENTY-FOUR (24) HOURS IS AT LEAST FORTY DEGREES FAHRENHEIT (40°F), AND WHEN THE FORECAST IS FOR RISING TEMPERATURES.
- 10. AFTER THE BINDER COURSE HAS BEEN PROOF ROLLED AND REPAIRED WHERE REQUIRED AND PRIOR TO PLACING THE HOT MIX ASPHALT SURFACE COURSE, THE BINDER COURSE SHALL BE SURFACE TESTED BY THE CONTRACTOR'S PROJECT ENGINEER, AT NO COST TO THE VILLAGE IN ACCORDANCE WITH ARTICLE 406.11 OF THE "STATE OF ILLINOIS STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT ISSUE. ANY VARIATIONS IN THE BINDER COURSE, INCLUDING PATCHES AND HEADER JOINTS, EXCEEDING ONE-FOURTH INCH (1/4") SHALL BE CORRECTED BY THE REMOVAL AND REPLACEMENT OF ANY SUBSTANDARD AREAS OR THE CONSTRUCTION OF CORRECTIVE LEVELING BINDER AT THE DIRECTION OF THE VILLAGE ENGINEER. THE VILLAGE ENGINEER SHALL BE NOTIFIED NO LESS THAN FORTY-EIGHT (48) HOURS BEFORE THE SURFACE TESTING AND SHALL RECEIVE WRITTEN TEST RESULTS AND SPECIFIC CONSTRUCTION ENGINEERING RECOMMENDATIONS BEFORE THE SURFACE COURSE CAN BE CONSTRUCTED. PRIOR TO FINAL ACCEPTANCE, THE SURFACE COURSE SHALL BE SURFACE TESTED AS OUTLINED ABOVE AND CORRECTED AS DIRECTED BY THE VILLAGE ENGINEER.
- 11. THE AGGREGATE BASE COURSE SHALL BE PRIMED WITH BITUMINOUS MATERIALS (SS-1) AT A RESIDUAL ASPHALT RATE OF TWENTY-FIVE HUNDREDTHS (0.25) POUNDS PER SQUARE FOOT.
- 12. AFTER ANY BINDER COURSE SURFACE VARIATIONS HAVE BEEN CORRECTED TO THE SATISFACTION OF THE VILLAGE ENGINEER AND IMMEDIATELY PRIOR TO PLACING HOT MIX ASPHALT SURFACE COURSE, THE PAVEMENT SHALL BE THOROUGHLY CLEANED, FLUSHED AND PRIMED WITH BITUMINOUS MATERIALS (SS-1) AT A RESIDUAL ASPHALT RATE NOT TO EXCEED FIVE HUNDREDTHS (0.05) POUNDS PER SQUARE FOOT. WHEN BITUMINOUS MATERIALS (SS-1) ARE APPLIED UNDER TRAFFIC CONDITIONS, SANDING AT THE APPROXIMATE RATE OF TWO TO FOUR (2 TO 4) POUNDS PER SQUARE YARD WILL BE REQUIRED.
- 13. ALL HOT MIX ASPHALT SHALL BE DELIVERED AND HANDLED SO THAT THE HOT MIX ASPHALT IMMEDIATELY BEHIND THE PAVER SCREEN IS AT OR ABOVE TWO HUNDRED SEVENTY DEGREES FAHRENHEIT (270°F). ALL ASPHALT DELIVERED TO THE PROJECT SHALL BE COVERED WHEN THE TEMPERATURE IS AT OR BELOW SEVENTY DEGREES FAHRENHEIT (70°F).
- 14. THE MIX DESIGN SHALL BE SUBMITTED THE VILLAGE ENGINEER 48 HOURS IN ADVANCE OF PAVING.
- 15. ALL TESTING FOR BOTH CONCRETE PLACEMENT AND HOT MIX ASPHALT PAVING SHALL BE PER IDOT SPECIFICATIONS. THE ASPHALT LAYING PATTERN MUST BE APPROVED BY THE VILLAGE ENGINEER OR THEIR REPRESENTATIVE IN ORDER TO MINIMIZE TRANSVERSE JOINTS. A CERTIFIED NUCLEAR DENSITY TECHNICIAN MUST BE ON SITE TO SET THE ASPHALT PAVEMENT ROLLING PATTERN AND CONFIRM COMPACTION DENSITIES. THE TECHNICIAN SHALL REVISE THE ROLLING PATTERN AS DEEMED NECESSARY. THE TECHNICIAN SHALL STOP THE PAVING OPERATION IF THE REQUIRED DENSITIES ARE NOT BEING MET. DENSITY TEST RESULTS WILL BE SUBMITTED TO THE VILLAGE ENGINEER WITHIN ONE WEEK OF COMPLETION OF THE PAVING OPERATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR QUALITY CONTROL TESTING. THE VILLAGE SHALL BE RESPONSIBLE FOR QUALITY ASSURANCE TESTING. THEREFORE, AT THE TIME OF ASPHALT PAVING, A REPRESENTATIVE FROM THE CONTRACTOR'S TESTING AGENCY AND A REPRESENTATIVE FROM THE VILLAGE'S TESTING AGENCY SHALL BE PRESENT AT THE ASPHALT PLANT PRIOR TO PAVING AND ON SITE AT THE START OF PAVING. THE VILLAGE ENGINEER RESERVES THE RIGHT TO STOP PAVING AND/OR CONCRETE OPERATIONS IF THE CONTRACTOR DOES NOT HAVE A QUALIFIED TESTER ON SITE AT THE START OF THE PAVING AND/OR CONCRETE OPERATIONS.
- 16. ALL PAVING SHALL BE DONE WITH PAVING MACHINES UTILIZING ELECTRONIC GRADE CONTROL AND A STRING LINE SHOE ON WHEELS OF A MINIMUM LENGTH OF FIFTEEN FEET (15').
- 17. ALL ROLLERS SHALL BE PER IDOT SPECIFICATIONS.
- 18. ALL HOT MIX ASPHALT PLANTS SHALL BE APPROVED BY THE STATE. IN ADDITION, ALL PAVING CONTRACTORS PERFORMING WORK WITHIN THE RIGHT OF WAY SHALL FURNISH AN IDOT CERTIFICATE OF ELIGIBILITY TO THE VILLAGE PRIOR TO THE START OF PAVING.
- 19. LOAD TICKETS SHALL BE FURNISHED TO THE VILLAGE ENGINEER AT THE TIME OF PAVING.

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**VILLAGE OF SUGAR GROVE** 10 MUNICIPAL DRIVE SUGAR GROVE, IL 60554

Bar represents 1"c FULL size plotted scale. Percentage I to 1" to be applied to stated scales.

NO. | DATE REVISIONS

STANDARD NOTES

**VILLAGE OF SUGAR GROVE STANDARD NOTES** 

2017 DATE: FEBRUARY PROJECT NO: SG1700 NOTES 3

- 20. THE NOSE OF ALL ISLANDS IN THE ROADWAY SHALL BE TAPERED PER 12. THE MIX DESIGN SHALL BE SUBMITTED THE VILLAGE ENGINEER 48 IDOT STANDARDS AS TO NOT HINDER SNOW PLOW OPERATIONS.
- 21. THE VILLAGE ENGINEER MAY APPROVE LIME STABILIZATION, WHEN SOILS 13. ALL TESTING SHALL BE PER IDOT SPECIFICATIONS. A CERTIFIED LIME SHALL BE MIXED TO A MINIMUM DEPTH OF 16 INCHES AND MEET THE ILLINOIS DEPARTMENT OF TRANSPORTATION'S GUIDELINES FOR LIME STABILIZED SOIL MIXTURE AS OUTLINED IN THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION. DRAINAGE FABRIC WILL NOT BE REQUIRED IF LIME STABILIZATION, IN ACCORDANCE WITH IDOT STANDARD SPECIFICATIONS, IS UTILIZED FOR SOIL SUB-BASE MODIFICATION (ADD SOIL MODIFICATION (SECTION 302) WITH ALLOWED MODIFIERS - FLY ASH?).

#### PARKING LOT CONSTRUCTION REVISED DECEMBER 2017

CONSTRUCTION MATERIALS AND METHODS FOR PARKING LOT CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", LATEST EDITION.

2. PRIOR TO THE CONSTRUCTION OF ANY PARKING LOT PAVEMENT, ALL OF THE MAJOR UNDERGROUND WORK SHALL BE COMPLETELY INSTALLED.

3. THE VILLAGE ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO THE POURING OF THE CURB AND GUTTER IN ORDER TO REVIEW THE AGGREGATE BASE AND STRING LINE/FORMWORK OF THE CURB AND GUTTER. THE CURB AND GUTTER WITHIN THE PARKING LOT SHALL BE COMPLETED IN A MONOLITHIC INSTALLATION UNLESS PREVIOUSLY APPROVED BY THE VILLAGE ENGINEER.

4. CURING AND WEATHER PROTECTION OF ALL EXPOSED CONCRETE SURFACES SHALL BE IN ACCORDANCE WITH THE IDOT STANDARD SPECIFICATIONS, LATEST EDITION, INCLUDING ANY REVISIONS. NO HONEYCOMBING OF THE CONCRETE WILL BE ACCEPTED.

5. PROOF ROLLS ARE REQUIRED ON THE SUB-GRADE, AGGREGATE BASE, AND THE BINDER COURSE, AND SHALL BE WITNESSED BY THE VILLAGE ENGINEER. THE VILLAGE ENGINEER SHALL BE PROVIDED A MINIMUM OF 48 HOURS ADVANCED NOTICE PRIOR TO THE PROOF ROLL. EACH PROOF ROLL SHALL BE AT THE COST OF THE CONTRACTOR AND SHALL BE TO THE SATISFACTION OF THE VILLAGE ENGINEER AS FOLLOWS:

- a.A LOADED TRUCK PROVIDED BY THE CONTRACTOR SHALL BE DRIVEN OVER THE AREA TO BE TESTED AT A SPEED PATTERN AND NUMBER OF CYCLES TO BE DETERMINED BY THE VILLAGE ENGINEER. THE TEST TRUCK SHALL BE THE COMMON TRACTOR TRAILER TYPE WITH NO MORE THAN FIVE (5) AXLES WITH A TOTAL OF EIGHTEEN (18) WHEELS LOADED TO A NÉT WEIGHT OF NO LESS THAN TWENTY-TWO (22) TONS. THE LOAD TICKET SHALL BE PROVIDED TO THE VILLAGE ENGINEER FOR RECORD.
- b. ANY UNSTABLE OR DAMAGED SUBGRADE, AGGREGATE SUB-BASE, OR BINDER COURSE SHALL BE REMOVED AND REPLACED TO THE SATISFACTION OF THE VILLAGE ENGINEER AT NO COST TO THE
- VILLAGE. c. THE VILLAGE ENGINEER IS RESPONSIBLE FOR INDICATING WHETHER THE PROOF ROLL PASSES OR FAILS. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING HOW TO FIX ANY UNSATISFACTORY

6. THE VILLAGE ENGINEER SHALL BE NOTIFIED 48 HOURS PRIOR TO THE START OF ANY PAVING.

7. FINAL PLACEMENT OF HOT MIX ASPHALT SURFACE COURSE SHALL BE DELAYED FOR A MINIMUM OF ONE FULL WINTER UNLESS OTHERWISE APPROVED BY THE VILLAGE AND VILLAGE ENGINEER. BEFORE THE PLACEMENT OF THE SURFACE COURSE, ALL UNDERGROUND UTILITY PUNCH LIST ITEMS FOR FINAL INSPECTION SHALL BE COMPLETED AND APPROVED. ALSO, THE BINDER COURSE PATCHES MUST BE COMPLETED AND THE CURB AND GUTTER REPAIRED AS REQUIRED BY THE VILLAGE ENGINEER.

8. THE HOT MIX ASPHALT BINDER COURSE AND SURFACE COURSE MIXTURES SHALL BE LAID ON A SURFACE, WHICH IS DRY AND ONLY WHEN WEATHER CONDITIONS MEET ALL STANDARDS STATED IN THE IDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. THE HOT MIX ASPHALT BINDER COURSE SHALL BE PLACED ONLY WHEN THE TEMPERATURE IN THE SHADE IS AT LEAST FORTY DEGREES FAHRENHEIT (40°F), WHEN THE TEMPERATURE IN THE SHADE FOR THE PREVIOUS TWENTY-FOUR (24) HOURS IS AT LEAST THIRTY TWO DEGREES FAHRENHEIT (32°F) AND WHEN THE FORECAST IS FOR RISING TEMPERATURES. THE SURFACE COURSE SHALL BE PLACED ONLY WHEN THE TEMPERATURE IN THE SHADE IS AT LEAST FORTY-FIVE DEGREES FAHRENHEIT (45°F), WHEN THE TEMPERATURE IN THE SHADE FOR THE PREVIOUS TWENTY-FOUR (24) HOURS IS AT LEAST FORTY DEGREES FAHRENHEIT (40°F), AND WHEN THE FORECAST IS FOR RISING TEMPERATURES.

9. THE AGGREGATE BASE COURSE SHALL BE PRIMED WITH BITUMINOUS MATERIALS (SS-1) AT A RESIDUAL ASPHALT RATE OF TWENTY FIVE HUNDREDTHS (0.25) POUNDS PER SQUARE FOOT.

10. IMMEDIATELY PRIOR TO PLACING HOT MIX ASPHALT SURFACE COURSE, THE PAVEMENT SHALL BE THOROUGHLY CLEANED, FLUSHED AND PRIMED WITH BITUMINOUS MATERIALS (SS-1) AT A RESIDUAL ASPHALT RATE NOT TO EXCEED FIVE HUNDREDTHS (0.05) POUNDS PER SQUARE FOOT. WHEN BITUMINOUS MATERIALS (SS-1) ARE APPLIED UNDER TRAFFIC CONDITIONS, SANDING AT THE APPROXIMATE RATE OF TWO TO FOUR (2 TO 4) POUNDS PER SQUARE YARD WILL BE REQUIRED.

11. ALL HOT MIX ASPHALT SHALL BE DELIVERED AND HANDLED SO THAT THE HOT MIX ASPHALT IMMEDIATELY BEHIND THE PAVER SCREEN IS AT OR ABOVE TWO HUNDRED SEVENTY DEGREES FAHRENHEIT (270°F). ALL ASPHALT DELIVERED TO THE PROJECT SHALL BE COVERED WHEN THE TEMPERATURE IS AT OR BELOW SEVENTY DEGREES FAHRENHEIT (70°F).

HOURS IN ADVANCE OF PAVING.

ARE COMPATIBLE AS DETERMINED BY A GEOTECHNICAL ENGINEER. THE NUCLEAR DENSITY TECHNICIAN MUST BE ON SITE TO SET THE ASPHALT PAVEMENT ROLLING PATTERN AND CONFIRM COMPACTION DENSITIES. THE TECHNICIAN SHALL REVISE THE ROLLING PATTERN AS DEEMED NECESSARY. THE TECHNICIAN SHALL STOP THE PAVING OPERATION IF THE REQUIRED DENSITIES ARE NOT BEING MET. DENSITY TEST RESULTS SHALL BE SUBMITTED TO THE VILLAGE ENGINEER WITHIN ONE WEEK OF COMPLETION OF THE PAVING OPERATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR QUALITY CONTROL TESTING. THE VILLAGE RESERVES THE RIGHT TO PERFORM QUALITY ASSURANCE TESTING. THE VILLAGE ENGINEER RESERVES THE RIGHT TO STOP PAVING OPERATIONS IF THE CONTRACTOR DOES NOT HAVE A QUALIFIED TESTER ON SITE AT THE START OF THE PAVING OPERATIONS.

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REVISIONS

**VILLAGE OF SUGAR GROVE** STANDARD NOTES

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STANDARD NOTES

Rev: 2/11/2021

# FOR SANITARY SEWER CONSTRUCTION IN THE FOX METRO WATER

- All sanitary sewer construction shall be performed in accordance with the "Fox Metro Water Reclamation District Sewer Use Ordinance No. 885", the "Standard Specifications for Water and Sewer Main Construction in Illinois", and "77 Illinois Administrative Code, part 890, Illinois Plumbing Code", latest edition.
- Final-approved set of plans and specifications must be kept on the job site. Failure to do this may result in a fine and/or be considered cause to stop the job.
- Contractors for all sanitary public sewer extension projects shall notify the District's Engineering Department twenty-four (24) hours prior to the start of work. Notification shall be done via telephone at (630) 301-6882, or by email at submittals@foxmetro.org.
- . For service connection inspections, call 630-301-6811 by 3:00 p.m. the day prior to the requested inspection time.
- 5. To prevent any possible infiltration, inflow or debris from entering the downstream sanitary system, a factory-made plug shall be placed in the manhole by the All PVC plastic pipe and fittings shall have a cell classification of 12454 as defined in ASTM Dcontractor, as indicated on the final-approved plans. The placement of the plug(s) 1784 and shall have minimum pipe stiffness as shown below in Table 1. The required shall not interrupt the service of any user. This plug is to be removed only upon approval by the District or the city/village, and only after any construction drainage and/or debris has been properly removed. Under no circumstances is overland surface drainage allowed to drain into the sanitary system.
- All sanitary sewers shall be tested in accordance with Section 31-1.12 of the "Standard Specifications for Water and Sewer Main Construction in Illinois", including all manholes shall be vacuum tested (manhole testing will be in accordance with ASTM-1244-93 or in accordance with District requirements). In case of testing specification conflict, where deeper manholes are constructed, the more stringent requirement will apply.
- When connecting to an existing public sewer where a tee or wye is not provided, an "Inserta Tee" fitting must be installed. The minimum distance between fittings is four (4) feet center to center.
- Installation of a tee/wye on an existing main is prohibited. The angle of any new D-3139 incorporating the manufacturer's standard pipe bells and gaskets. Gaskets shall connection shall not exceed 1/1 or 45 degrees.
- 9. Only "Infi-Shield", "Adaptor-Seal", and "Wrapid Seal" or approved equal chimney | The District reserves the right to approve/reject all pipe and fittings on a case-by-case basis. seals shall be installed on all manholes.
- 10. Only PVC transition fittings shall be used in all new construction when joining PVC pipes which are damaged, disturbed during construction or have different outside diameters. Refer to Fox Metro "Manhole/Sewer Pipe Specifications" for information relating to repairs of mains damaged during construction.
- 1. All existing sanitary interceptor (15" in diameter or greater) manhole frames located within any proposed development will be required to be adjusted to grade. Under no circumstances may the vertical height of the adjusting rings exceed eight (8) inches (two total). Extreme care should be taken when working near all sanitary manholes.
- 12. Approved cast iron or concrete cleanout enclosures are required over the top of all cleanout covers in areas deemed necessary by the District.
- 13. Ductile iron and cast iron pipe are not allowed for the use of gravity sewers in the
- 4. Landscaping within any District easement is prohibited without review and subsequent plan approval.
- 15. District easements shall be graded so that the ground surface does not exceed a six (6) percent gradient in all directions.
- 16. All building drains/sewers shall be overhead or "hung" through the basement wall of any new building.
- 7. All sanitary risers shall be required to be constructed to a depth of no greater than six (6) to seven (7) feet at the right of way. If a conflict arises between a sanitary sewer and a water line, IEPA water & sewer separation requirements take the CA-7 Class 1A aggregate shall be required in twelve (12) inch lifts. precedent.
- 18.Whether any grease removal system is newly constructed or "retrofitted" to an existing building, a minimum of 1% slope and 3.5' of cover for pipes are required.
- 19. Minimum design slopes shall be 1.00% for six (6) inch building sewers, .40% for eight (8) inch sewers, and .28% for ten (10) inch sewers with all other design slopes | Pipe size shall be a minimum of eight (8) inches for public sewers and six (6) inches for conforming to the requirements of the "Standard Specifications for Water and Sewer | building sewers.
- with a \*6" or \*\*9" wide (min.) wrap meeting the requirements of ASTM C-877, \*\*type | blocking of any kind shall be used to adjust the pipe to grade except when embedment II or \*type III.
- sanitary sewer shall be repaired by the contractor at the discretion of the District. | material shall be placed and consolidated along the full width of the trench. The contractor Approval of repairs will need to be confirmed in writing by the appropriate shall be required to install the pipe in such a manner that the diametric deflection of the pipe municipality, or re-televised by the District. At the District's discretion, connection permits may be withheld if confirmation of completed repairs cannot be obtained.
- 22. Any contractor, who consistently fails to perform in accordance with the District's standards and specifications as provided on the plans, may be prohibited from performing work in the District. The District reserves the right to revoke or disallow any contractor's bond.
- 23. The District shall televise all sewers eight (8) inches in diameter or greater. In order | Cast iron enclosures shall be required for all sanitary sewer service cleanouts located in any to access each manhole, the developer is responsible for providing a smooth, level | paved surface. Locations of said cleanouts and covers shall be limited to a spacing of no area of sufficient width along the sanitary sewer system.
- 24. During televising, if any newly constructed public sewer requires "heavy cleaning", | Either 4" X 6" rubber or non-shear couplings shall be used to connect the building drain to the additional charges may be incurred by the developer.
- 25 Full-sized cleanouts are required on all building sewers

# Fox Metro 35 South Lake Street • Montgomery, Illinois 60538 Engineering Inquiries (630) 301-6882

Inspections (630) 301-6811\*FAX (630) 897-6094

Rev: 2/11/2021

FOX METRO WATER RECLAMATION DISTRICT MANHOLE / SEWER PIPE MATERIALS AND INSTALLATION SPECIFICATIONS

1. PIPE & FITTINGS

lipe and fittings used in sanitary sewer construction shall be polyvinyl chloride (PVC) pipe VC pipe and fittings dated over one-year-old shall not be permitted for use. No solventwelded joints shall be allowed outside of the foundation wall of any building.

he types of PVC pipe and fittings that shall be used in the District include:

- Poly Vinyl Chloride (PVC) Sewer Pipe and Fittings (ASTM SDR series), conforming to ASTM Numbers D-1784 (cell classification), D-3034, D-3212 (joint spec), and F-477
- Poly Vinyl Chloride (PVC) Pressure Rated Pipe and Fittings (ASTM SDR series), conforming to ASTM Numbers D-1784 (cell classification), D-2241, D-3139 (joint spec), and F-477 (gaskets).
- Poly Vinyl Chloride (PVC) Pressure Rated Pipe and Fittings (AWWA DR-series) conforming to AWWA C-900 and ASTM Numbers D-1784 (cell classification), D-3139 (joint spec), F-477 & F-913 (gaskets).

Standard Dimension Ratio (SDR) or Dimension Ratio (DR) for PVC pipe and fittings shall be selected based upon the depth of cover, as also shown in the table below:

Depth of Cover	Pipe Diameter	Minimum Thickness	National Standard	Minimum Pipe Stiffness
3.5' - <15'	6" - 12"	SDR 26	ASTM D-3034	115
3.5' - <20'	6" - 12"	SDR 21	ASTM D-2241	224
3.5' - <30'	6" - 12"	DR-18	AWWA C-900	364
3.5' - <30'	14"	DR-18	AWWA C-905	364

Fittings in sizes through twelve (12) inches shall have elastomeric joints and minimum socket depths as specified in each respective section. Fittings above twelve (12) inches shall be nolded or fabricated with elastomeric joints in accordance with ASTM standards D-1784 and conform to ASTM F-477 and ASTM F-913.

.. BEDDING, HAUNCHING, AND INITIAL BACKFILL

Bedding material shall be CA-7 Class 1A, as outlined in ASTM D-2321 and shall be certified by the District. the manufacturer and approved by the District prior to installation, to have the following characteristics:

- Description: Shall be crushed stone or crushed gravel, as produced by mechanical
- Gradation: Shall meet the IDOT gradation of CA-7, Class 1A.
- Plasticity Index: Shall meet a plasticity index of 0 to 4 percent as determined by the method given in AASHTO T 90.
- Specific Gravity: Shall have a specific gravity (dry) of greater than 2.45.

# LABORATORY TEST

The District reserves the right to require a contractor to submit certified copies of all reports of tests conducted by an independent laboratory before installation of PVC plastic pipe. Tests shall be conducted in accordance with Standard Method of Test for "External Loading Properties of Plastic Pipe by Parallel-Plate Loading" per ASTM D2412.

PIPE INSTALLATION AND FIELD TESTING

# . INSTALLATION

If the invert of any overhead sewer exceeds two (2) feet above the footing, plate compaction of

rench widths should be stable or supported, provide a width sufficient, but no greater than necessary to ensure working room to properly and safely place haunching and other embedment materials. The minimum trench width shall be 32" plus the outside diameter of the coupling. pipe and the maximum trench width shall be 48" plus the outside diameter of the pipe.

Pipes shall be laid in a manner which provides uniform support over the entire length. No concrete is used. Bedding shall be a minimum of six (6) inches in depth. The bedding materia shall be placed and worked in around pipe by hand to provide uniform support, then around 1. All sags, leaks, pipe defects, or other related issues with any newly televised and over the crown of the pipe by a minimum of twelve (12) inches. The granular embedment shall not exceed five (5) percent.

> PVC transition fittings shall be used in all new construction when joining PVC pipes of different outside dimensions.

Service connections to new mains shall be with a tee/wye fitting with a six (6) inch branch and shall connect to the main at a (max.) forty-five (45) degree angle. Where no tee/wye exists, an Where a newly constructed public sewer needs to be repaired due to damage having occurred Inserta Tee brand fitting shall be required.

greater than one hundred (100) feet.

inches inside of the six inch building sewer Whether any grease removal system (GRS) is newly constructed or retrofitted to an existing

construction shall be strictly adhered to. All building drains/sewers shall be overhead or "hung" through the wall of any basement.

building, all District guidelines pertaining to minimum slope and cover depth for sanitary

Full-sized cleanouts shall be installed five (5) feet from the foundation wall.

Before final acceptance, all public sewers shall be tested in accordance with Section 31-1.12 of the "Standard Specifications for Water and Sewer Main Construction in Illinois" (\*see item #2 under "Manhole Installation and Field Testing" below for vacuum testing).

All pipelines constructed of polyvinyl chloride (PVC) shall be subject to air exfiltration, deflection, vacuum and televising tests.

The deflection test shall be performed no sooner than thirty (30) days after the backfilling operation and shall consist of measuring the pipe for vertical ring deflection. Maximum ring deflection of the pipeline under load shall be limited to five (5) percent of the internal pipe diameter. All pipes exceeding this deflection shall be considered to have reached the limit of its serviceability and shall be re-laid or replaced by the contractor at their sole expense.

The cost of all deflection testing shall be borne by the contractor and shall be accomplished by pulling a mandrel, sphere, or pin-type "go / no go" device, with a diameter equal to ninety-five (95) percent of the un-deflected inside diameter of the flexible pipe through the pipeline. Pipe shall be constructed so that the internal diameter does not decrease by more than five (5) percent.

All sanitary sewer (public or private) having a diameter of eight (8) inches or greater shall be televised by the District. Said televising work is scheduled once all sanitary testing (air & vacuum) has been received by the District. Any defects in said sewer shall be excavated, then repaired, at the contractor's or developer's sole expense. Caution should be taken before constructing roads, curbs, sidewalks or any other infrastructure, whether it is above or below the ground surface. It is the responsibility of the utility contractor and the developer to contact the District prior to installing any of these utilities or infrastructure. Repairs to defective sanitary sewers shall be performed regardless of the status of other construction or extraneous expenses.

#### MANHOLE INSTALLATION AND FIELD TESTING

### 1. INSTALLATION

All manhole castings, adjusting rings and manhole sections shall be set in butyl rope. The inside joints of manhole sections, adjusting rings, and frame shall not be mortared. However, the area between the pipe and flow channel shall be filled with cement mortar to provide a flush smooth surface.

Each manhole cone and barrel section joint shall also be externally sealed with a \*6" or \*\*9" wide (min.) sealing band of rubber and mastic (see "REPAIRS" below). The band shall have an outer layer of rubber or polyethylene with an under layer of rubberized mastic (with a protective film), meeting the requirements of ASTM C-877, \*\*type II or \*type III.

Pipe connections to all manholes through openings (cast or core-drilled) shall be provided with a flexible rubber watertight connector conforming to ASTM C-923, "Standard Specifications for Resilient Connectors between Reinforced Concrete Manhole Structures and Pipes".

maximum of eight (8) inches of adjusting rings (2 total rings) is allowed. The frame, chimney and top "lip" of the cone section shall be required to be sealed with a chimney seal.

Only "Adaptor-Seal", "Infi-Shield", Canusa (Wrapid Seal), or an approved equal will be allowed. Do not use unapproved seals.

When a new manhole is approved to be constructed on an existing public sewer, only Cascade brand (CR style), or approved equal, stainless steel repair clamps shall be installed. Only repair clamps conforming to ANSI/NSF-61 shall be allowed. This work shall be inspected by

Each new manhole shall be vacuum tested after manhole is at finished grade. The manhole frame, adjusting rings and chimney seals shall be in place when testing. All lift holes shall be plugged with a non-shrinking grout. No grout shall be placed in the horizontal joints before, after or during testing in order to achieve a passing test result. All pipes entering the manhole shall be plugged, taking care to securely brace the plugs from being drawn into the manhole. A vacuum of ten (10) inches of mercury shall be drawn and the vacuum pump shut off. With the valves closed, the time shall be measured for the vacuum to drop to nine (9) inches of mercury (Hg) for the following time periods for each size manhole:

\*Forty-eight (48) inches Diameter - sixty (60) seconds

\*Sixty (60) inches Diameter – seventy-five (75) seconds

\*Seventy-two (72) inches Diameter - ninety (90) seconds

Manhole testing will be in accordance with ASTM-1244-93 or in accordance with District requirements. In case of conflict, the more stringent requirement will apply (e.g. where deeper manholes are constructed).

The contractor shall provide all material and equipment necessary for testing. Should the manhole fail the vacuum test, the structure shall be disassembled to a point that said leak can be repaired with butyl rope. After the repair is complete, the manhole shall be re-tested until a satisfactory result is obtained.

# REPAIRS & REHABILITATION OF EXISTING PIPES AND MANHOLES

Pipe connections of dissimilar materials where no hub exists shall be made with a non-shear

Existing non-PVC building sewers or "stubs" may not be used in connection with new buildings where a District connection permit is requested. In such cases, said building sewer or "stub" will either need to be removed to within one foot (1') of the public sewer and then replaced with appropriate PVC material. Any existing sanitary sewer main or service, which is required to be lined, shall be repaired with a cured-in-place pipe (CIPP) meeting the requirements of ASTM F1216, D5813, D790 and D2990. Said CIPP shall be installed using the inversion method only. Hot water or steam shall be used to cure all liners.

Building sewers shall be permanently abandoned using one of following two methods.

- 1.) Removed to within one (1) foot of the public sewer and plugged using a mechanical plug and mortar. This is the preferred method. If this is not feasible, see item two
- 2.) The building sewer connection shall be sealed within the public sewer with a four (4) foot minimum length cured in place pipe (C.I.P.P.) liner with hydrophilic gaskets.

during construction, Cascade brand (CR style), or approved equal, stainless steel repair clamps shall be required. Only repair clamps conforming to ANSI/NSF-61 shall be allowed. When the damage occurs within thirty (30) feet of a manhole, the contractor shall remove and replace the damaged main from the nearest joint to the manhole.

. MANHOLES

building sewer. If using a rubber fitting, the four-inch pipe shall be inserted six (6) to twelve (12) Each manhole, which has been disturbed in any way, including being raised or lowered, should be cleaned and dried before re-sealing. Each cone and barrel section joint shall require a double-layer of butyl rope and also be externally sealed with a \*6" or \*\*9" wide (min.) sealing band of rubber and mastic. The band shall have an outer layer of rubber or polyethylene with an under layer of rubberized mastic (with a protective film), meeting the requirements of ASTM C-877, \*\*type II or \*type III.

A maximum of eight (8) inches of adjusting rings (2 total rings) is allowed in any repair. The frame and chimney of the cone section shall be required to be sealed with a chimney seal. Only "Adaptor-Seal", "Infi-Shield", Canusa (Wrapid Seal), or approved equal will be allowed.

# CONTRACTOR NOTICE

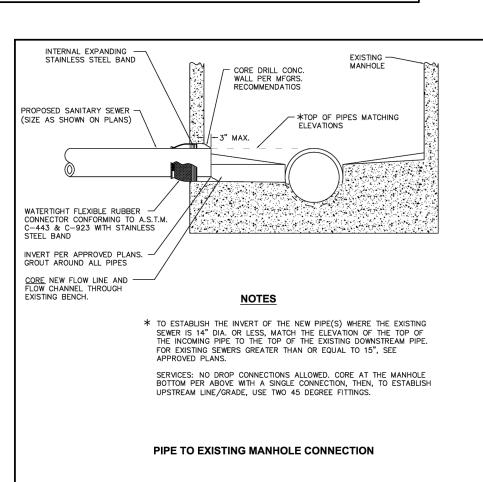
Fox Metro Water Reclamation District IMPORTANT - PLEASE READ!!

The following list represents costly problems or violations that commonly occur during or after construction. Our goal is to make everyone aware of these problems and hopefully reduce unnecessary delays, expenses, and fines.

- In order to perform new construction or repair work on any private sanitary or water service, the following must be completed before work may commence:
- A \$25,000 license & permit bond made out to "Fox Metro Water Reclamation District" must be received and approved for new construction or repair work. Please instruct your insurance company to call out the work to be performed as "sanitary sewer construction".
- A District permit for new construction or a repair permit needs to be issued.
- An inspection is required by the District. To save a \$50 same day inspection fee, please provide twenty-four (24) hour notice.
- . All <u>public sanitary sewer construction</u> must have an IEPA permit <u>and</u> plan approval letter on file at the District prior to commencing. Please provide our office with 48hour notification to verify this before starting construction.
- t. To prevent unnecessary flow or discharge into the existing sanitary system, all new sanitary construction must be securely plugged and maintained by the contractor. The plug(s) may only be removed after permission has been obtained from the municipality or from the District's engineering department. All construction drainage must be properly removed from the new sanitary sewer system.
- All newly proposed private building sewer construction must have a connection permit from the District. In addition, this work shall be inspected by the District. Please call (630) 301-6811 by 3:00 pm the day prior to the requested inspection time. No building sewers shall be installed until all proposed public sewers have been tested and approved by the District and a final recorded subdivision plat is submitted.
- All domestic water service installations (except for the Village of Oswego and the United City of Yorkville) are to be inspected by the District. Any final connection(s) to any building, made by any plumber or excavator, shall also be inspected by the <u>District.</u> Do not backfill this connection before this inspection is completed.
- All sanitary manholes are to be sealed (exterior of chimney & barrels) and vacuum tested. Any disruption of these manholes will break the seal(s), requiring a costly resealing and retesting process. Please stay clear of all manholes.

For questions regarding permitting and construction, call the District's engineering department at (630) 301-6882. For questions regarding inspections or to report violations, open manholes, or other issues please call (630) 301-6811.

Fox Metro



MIN. DEPTH 42" FOR SERVICE LINES, 72" FOR SEWER MAINS

SIDES OF TRENCH TO BE VERTICAL TO TOP OF PIPE

CA-7 CLASS 1A AGGREGATE -

Fox Metro

Fox Metro

TRENCH DETAIL FOR SANITARY SERVICES & MAINS

PLASTIC MANHOLE STEPS 1'-4" D.C. M.A. INDUSTRIES CAT. NO. M.A. PS IPF OR APPROVED EQUAL. 2'x4' MARKER PAINTED GREEN) - ₩ATERTIGHT FACTORY
 MADE PLUG AT STUB. THE WORDS 'SANITARY'
SHALL BE CAST IN LID. WYE OR TEE CONNECTION WITH 45° MAX BEND ALLOWED. 42' MINIMUM COVER DEPTH IS REQUIRED FOR ALL NEW CHISTRUCTION OR GREASE TRAP RETROFIT INSTALLATIONS. 8' MAX. (2 RINGS TOTAL) PRECAST CONCRETE — ADJUSTING RINGS SET IN BUTYL ROPE. ADAPTOR-SEAL, INFI-SHIELD, CANUSA (WRAPID SEAL) OR APPROVED EQUAL CHIMNEY SEALS ARE REQUIRED FOR ALL FRAMES AND ADJUSTING RINGS FOR INSTALLATION OF CHIMNEY SEALS, A 3' MONOLITHIC LIP IS REQUIRED ON ALL STRUCTURES. - UNDISTURBED GROUND CLEANDUT REQUIRED -MAIN. 1/1 DR 45° MAX. AT CONNECTION TO MAIN ALLOWED \* ALL BUILDING CONNECTIONS ARE REQUIRED TO BE OVERHEAD STUBS AT THE RIGHT OF WAY SHALL BE CONSTRUCTED TO NO DEEPER THAN 6-7. WHERE CONFLICTS EXIST BETWEEN THE WATERMAIN (OR WATER SERVICES) AND SANITARY SERVICES, INSTALL SANITARY TO MAXIMUM DEPTH TO AVOID CONFLICT, IN THE EVENT OF CONFLICTS, REFER TO 77 ILL. ADMIN. CODE PART 809, ILLINIOS PUMBING CODE; LATEST EDITION. FLEXIBLE RUBBER WATERTIGHT CONNECTOR PER A.S.T.M. C-923. 12' MIN. COVER REQUIRED OVER THE PIPE.
6' MIN. REQUIRED UNDER ALL MANHOLE AND SELECT GRANULAR BACKFILL, REQUIRED UNDER PAVED AREAS, TO BE APPROVED BY APPROPRIATE CITY OR VILLAGE. WHERE EXISTING SEWERS ARE 14" AND LESS. THE INVERT(S) OF NEW PIPE(S) SHALL BE DETERMINED BY MATCHING THE PROPOSED ELEVATION(S) TO THE TOP OF THE DOWNSTREAM PIPE. FOR SEWERS **GREATER THAN 45 ° CONNECTION AT MAIN NOT ALLOWED** 5" OR GREATER, SEE APPROVED PLANS FOR INVERT INFORMATION. LL FLOW CHANNELS SHALL BE PRECAST INTO THE BENCH. SANITARY SERVICE CONNECTION TYPE " A " MANHOLE

6" MIN. BEDDING

# **INSERTA TEE® INSTALLATION INSTRUCTIONS** Use Standard Hole Saw for PVC (solidwall, profile and closed profile) and corrugated polyethylene mainlines.

Use Poly Hole Saw for solidwall polyethylene mainlines Use Diamond Core Bits for concrete, clay, ductile iron and fiberglass mainlines. 1. Hand-held drill with hole saws recommended for 4", 6" & 8" INSERTA TEEs. Tie down Coring Machine recommended for 10", 12" and 15" INSERTA TEEs and ALL diamond bits

**INSERTA TEE SIZE HOLE DIAMETER** 4 1/2" (112.5 mm) 6" (150 mm) 6 1/2" (162.5 mm) 8" (200 mm) 8 3/4" (218.8 mm) 10" (250 mm) 10 7/8" (271.9 mm) 12 7/8" (321.8 mm) 12" (300 mm) 15 13/16" (401.6 mm) 16" & 18" 19 3/16" (487.17mm) 3. 8 lb. (3.6 kg) hammer and 2" (50mm) x 4" (100mm) board. 4" (100mm) x 4" 4. Bottle of INSERTA TEE solution - 16oz or 8oz supplied with order. (16oz of water to

INSTALLATION PROCEDURE

1 tablespoon of liquid soap

- 1. See Bit Diameters listed above. Make sure bit is perpendicular to mainline. Core proper size hole. Feel inside hole and clear any remaining material 2. Insert the rubber sleeve into the cored hole with the GOLD VERTICAL LINE ON THE RUBBER SLEEVE facing t the side of the mainline. The upper segment should be on top of the wall or rib and the lower segmen
- should be on the inside of the pipe. Feel inside to be sure lower segment is flat against the inside wall 3. Apply the INSERTA TEE solution supplied to the inside of the rubber sleeve and to the outside of the PVC hub adapter's spigot. WARNING! Using pipe lube may result in hub adapter popping out! 4. Place the PVC hub adapter into the rubber sleeve. Make sure that the RED VERTICAL LINE ON THE PVC HUB ADAPTER IS IN LINE WITH THE GOLD VERTICAL LINE ON THE RUBBER SLEEVE. Push hub adapter in as far as

possible by hand. Make sure hub adapter is perpendicular to mainline. Forcing hub adapter through at any

angle may cause damage to rubber sleeve or hub adapter 5. Place the 2 x 4 board onto the top of the PVC, hub adapter. 6 The RED HORIZONTAL LINE AT THE TOP OF THE HUB ADAPTER is the depth mark. This tells the installer just how far to drive the adapter into the rubber sleeve. Using the board and hammer, drive the PVC hub adapter into the rubber sleeve where the HORIZONTAL RED LINE ON THE PVC HUB ADAPTER MEETS THE TOP OF THE 7. Place the stainless band around the top of the rubber sleeve and tighten down.

8. Install side service pipe in normal manner. \* Do not install below spring line. \* <u>CIPP & FFP installations</u> -remove clay/concrete from area where connection is to occur. Next go to "Installation Procedure." INSERTA none 503.357.2110 fax 503.359.5417

. BELL END ACCEPTS PIPE WITH SDR 26, ASTM D3034 OR EQUIVALENT O.D. SPECIFICATION IN 8", 10", 12", 15", 18", 21", 24", 27", AND 30" SIZES (FOR 4" AND 6" SIZES, REFER TO FATBOY SPECIFICATIONS) B. CURVATURE VARIES WITH MAINLINE DIAMETERS. SPIGOT END PVC SDR 26, ASTM D3034 DIAMETERS: 8", 10", 12", 15", 18", 21", 24", 27" AND 30" **PART NAME** HUB ADAPTOR RUBBER GASKET SECURING CLAMP RUBBER SLEEVE (AVAILABLE IN NITRILE AND EPDM BY SPECIAL ORDER) ASTM F477 **UPPER SEGMENT\*** LOWER SEGMENT\*\*\* \* OPTIONAL: #316 STAINLESS STEEL BAND, SCREW AND HOUSING \* DISTANCE BETWEEN 4A AND 4B WILL VARY BY PRODUCT TYPI \*\*\* WILL NOT APPEAR ON RUBBER SLEEVES FOR CONCRETE OR CLAY PIPE

> **INSERTA TEE SIZE HOLE DIAMETER** 8" (200 mm) 8 ¾" (222mm) 10" (250 mm) 10 ½" (276mm) 12" (300 mm) 12 %" (327mm) 15" (375 mm) 15 <sup>13</sup>/<sub>16</sub>" (402mm) 18" (450 mm) 19 \( \frac{3}{6}\)" (503mm) 21" (525 mm) 22 1/6" (573mm 24" (600 mm) 25 \( \frac{5}{16} \)" (643mm) 27" (675 mm) 28 ½" (724mm) 30" (750 mm)

IOTE: RECOMMENDED METHOD OF CUTTING HOLE IS WITH HOLE SAW FOR PVC AND OTHER PLASTICS, AND DIAMOND BIT FOR CONCRETES, CLAY, FRP AND D.I. (SEE INSTALLATION INSTRUCTIONS. IOLE SAWS ARE AVAILABLE FOR PURCHASE OR RENT.)

> CORNELIUS, OR 97113 PH:(503) 357-2110 FAX:(503) 359-5417 SALES@INSERTATEE.COM

SDR 26 HWS GASKETED BELL GRAVITY APPLICATION SPECIFICATIONS

MATERIALS

ASTM F477

BAND SS #301

SCREW SS #305

HOUSING SS #30°

PVC SDR 26 ASTM D3034

REQUIRED WHEN A 10' MINIMUM SEPARATION IS

NOT POSSIBLE FOR WATER AND SEWER SERVICES

MINIMUM 6

WHERE 10' HORIZONTAL SEPARATIO

AND MINIMUM DEPTH CANNOT BE ACHIEVED, RE-ROUTE WATER SERVICE IN ORDER TO ACHIEVE SEPARATION.

Fox Metro

Fox Metro

SDR 26 HWS GASKETED BELL GRAVITY APPLICATIONS

18" OR GREATER

6" SANITARY SEWER SERVICE

NOTE

ILLINOIS PLUMBING CODE" LATEST EDITION.

SANITARY SEWER SERVICE & POTABLE

WATER SERVICE SEPARATION

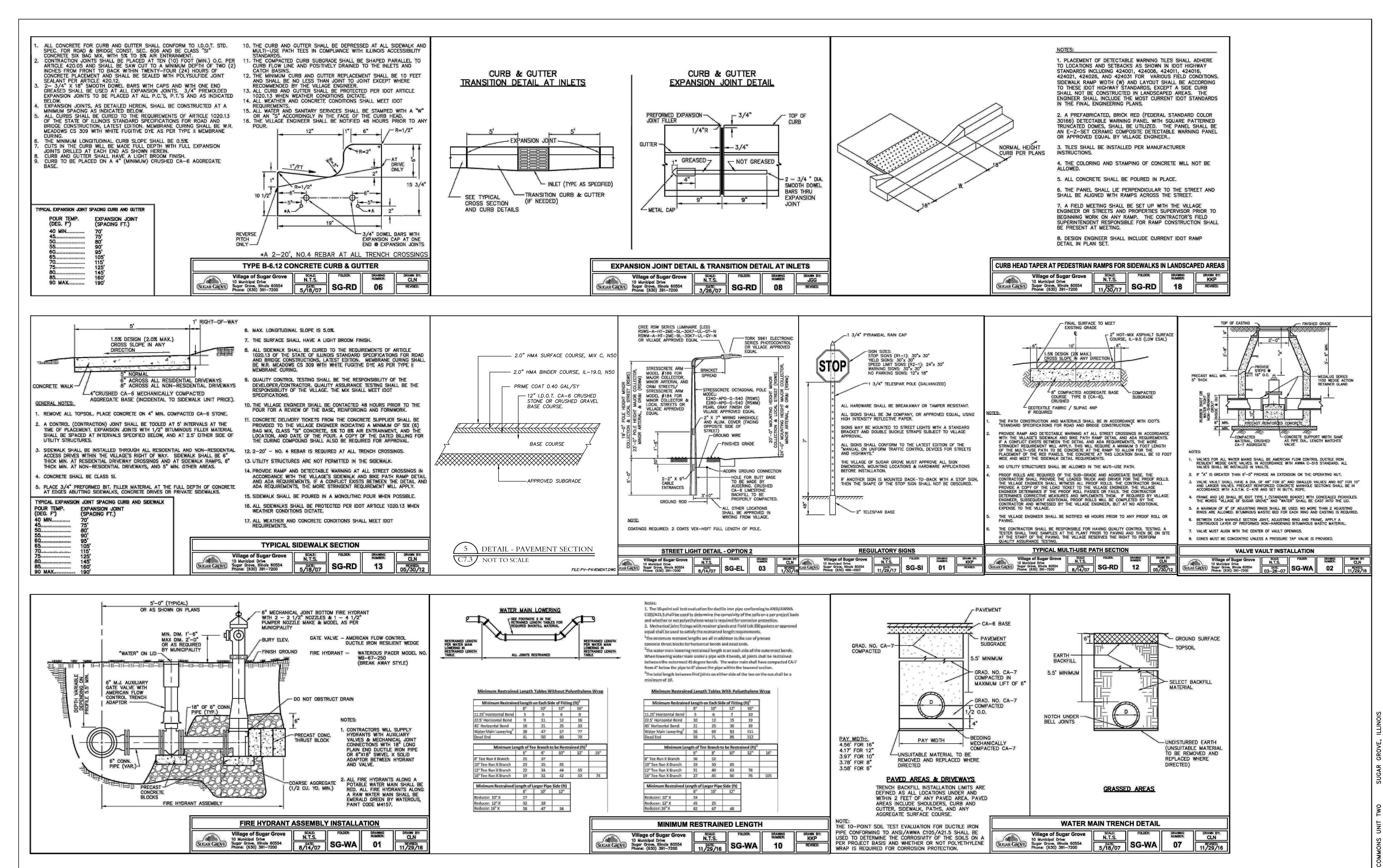
INSTALL PER "77 ILL. ADMIN. CODE PART 890

MINIMUM DEPTH 60"

5/24/21 20-036 C70

REVISIONS 2/2/22 | MWRD NOTES UPDATED 3/21 PER VILLAGE COMMENTS NO. DATE DESCRIPTION

FOX METRO GENERAL NOTES & SPECIFICATIONS PRAIRIE GROVE COMMONS UNIT TWO SWC IL ROUTE 47 & GALENA BLVD SUGAR GROVE, ILLINOIS



SITE & UTILITY

DETAILS

REVISIONS

NO. DATE

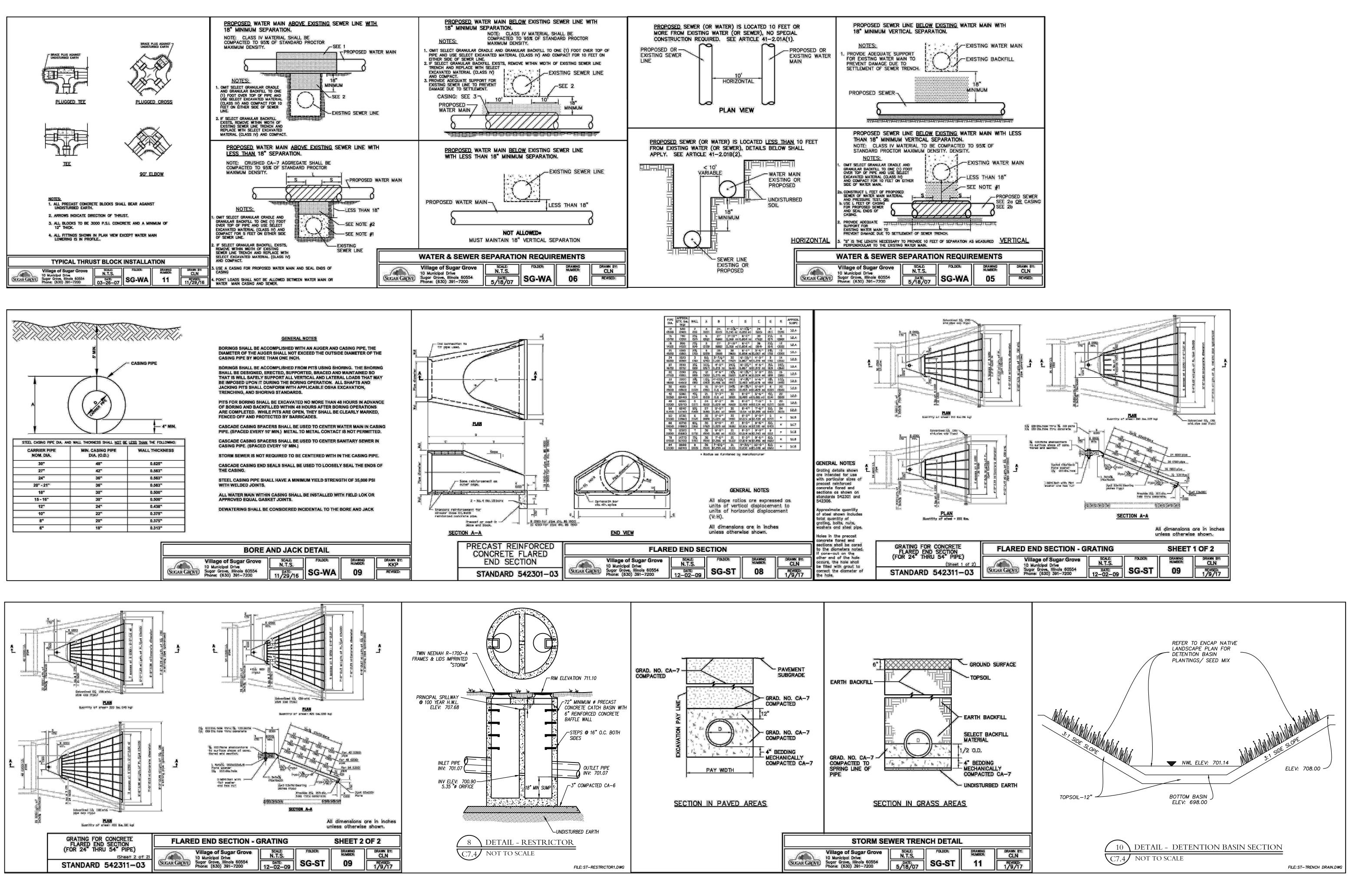
DESCRIPTION

9 5/2/22 PER PRIVATE ROADWAY CHANGE 3 9/15/21 PER VILLAGE COMMENTS

PRAIRIE GROVE COMMONS UNIT TWO SWC IL ROUTE 47 & GALENA BLVD SUGAR GROVE, ILLINOIS

Craig R. Knoche & Associates • Ctvil Engineers • Surveyors 24 N. Bennett Street • Geneva, IL 60134 • phone (630) 845-1270 • fax (630) 845-1275

5/24/21 20-036 C70



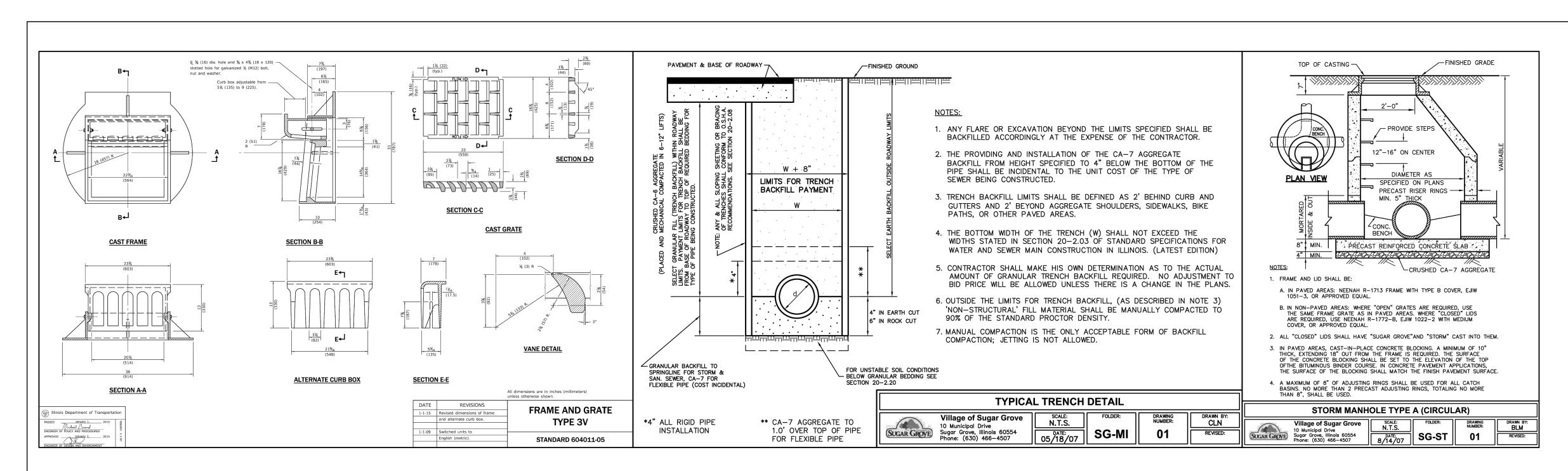
REVISIONS 9 5/2/22 PER PRIVATE ROADWAY CHANGE
4 11/3/21 PER VILLAGE COMMENTS
3 9/15/21 PER VILLAGE COMMENTS NO. DATE DESCRIPTION

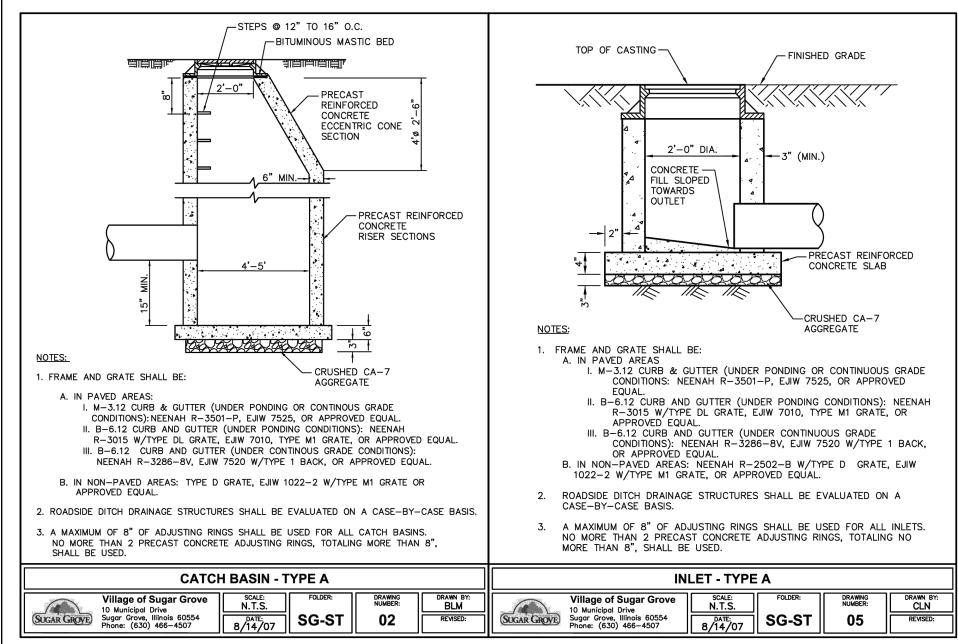
DETAILS

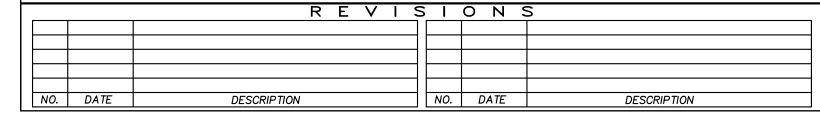
PRAIRIE GROVE COMMONS UNIT TWO SWC IL ROUTE 47 & GALENA BLVD SUGAR GROVE, ILLINOIS

Craig R. Knoche & Associates • Ctvil Engineers • Surveyors Civil Engineers, P.C. 24 N. Bennett Street • Geneva, IL 60134 • phone (630) 845-1270 • fax (630) 845-1275

5/24/21 20-036 C70







UTILITY DETAILS PRAIRIE GROVE COMMONS UNIT TWO
SWC IL ROUTE 47 & GALENA BLVD
SUGAR GROVE, ILLINOIS

Craig R. Knoche & Associates • Ctvil Engineers
• Surveyors
• Civil Engineers, P.C.
• Land Planners

24 N. Bennett Street • Geneva, IL 60134 • phone (630) 845-1270 • fax (630) 845-1275

DATE: 5/2/22
FILE: 20-036 C70
JOB NO: 000-0376

5/2/22 036 C70 C7.5