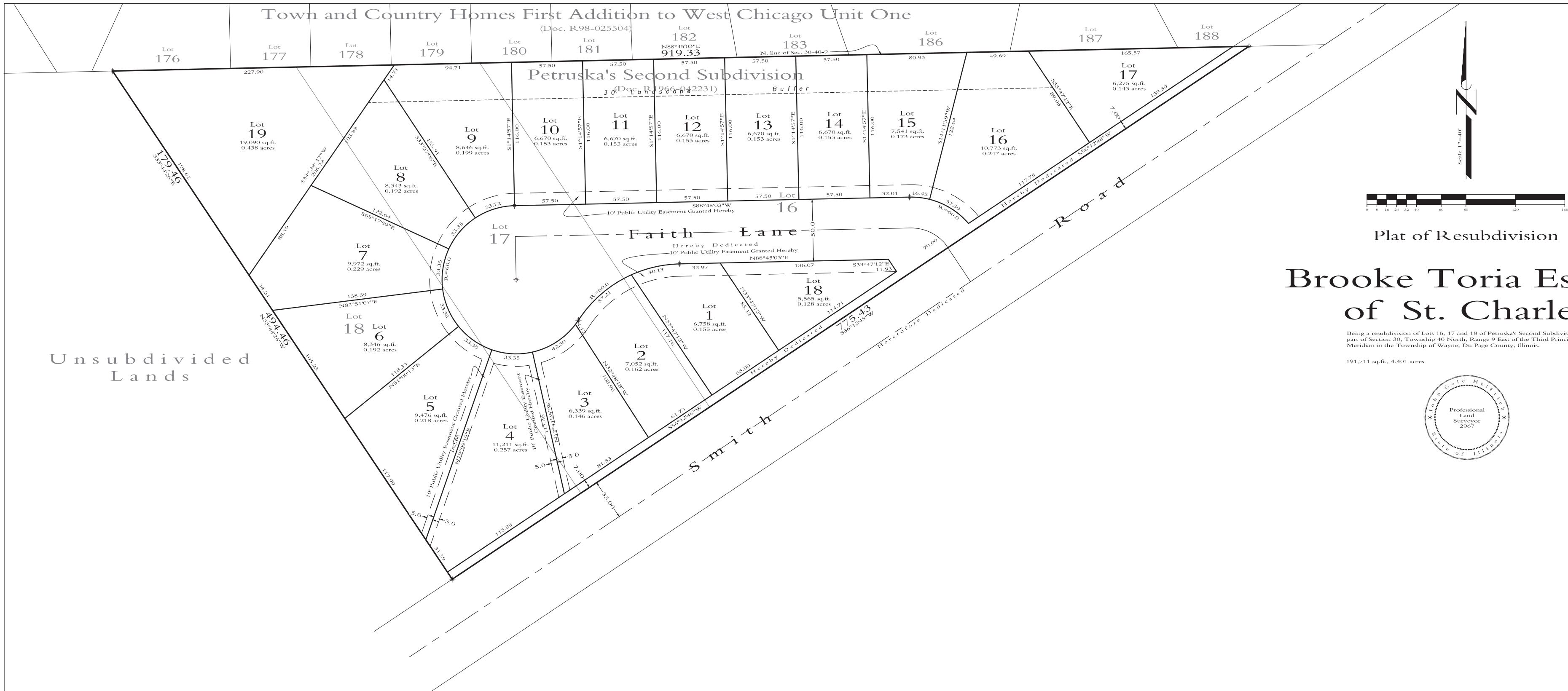


Plat of Resubdivision

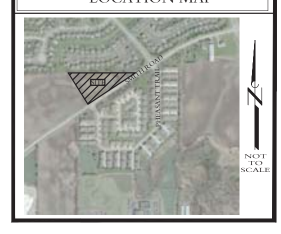
Brooke Toria Estates of St. Charles

Being a resubdivision of Lots 16, 17 and 18 of Petruska's Second Subdivision of part of Section 30, Township 40 North, Range 9 East of the Third Principal Meridian in the Township of Wayne, Du Page County, Illinois.

191,711 sq.ft., 4.401 acres

John Cole Helwick
Professional Land Surveyor 2967
State of Illinois

LOCATION MAP



notes:

Iron pipes at all lot corners except as noted.

The platted lands are subject to the terms and conditions contained in Documents____________________.

Sheet 1 of 2

Date: 4-28-18
File: 17-034R[P1]
Job: 17-034

Craig R. Knoche & Associates
Civil Engineers, P.C.
Illinois Registered Design Firm 3063
24 North Bennett Street • Geneva, Illinois 60134 • phone (630) 845-1270 • fax (630) 845-1275
• Civil Engineers • Surveyors • Land Planners

Prepared for:
V & M Investment and Remodeling Group LLC

Plat of Resubdivision

Plat of Resubdivision

Brooke Toria Estates
of St. Charles

Owner's Certificate

State of Illinois
County of DuPage } S.S.

This is to certify that V&M Investment and Remodeling Group, LLC is the owner of the lands shown and described on the annexed plat and by its duly authorized Manager has as such owner caused said lands to be surveyed, resubdivided and platted as shown thereon for the uses and purposes therein set forth and does hereby acknowledge and adopt the same under the style and title thereon shown. It is further certified that the lands platted hereby fall within the boundaries of St. Charles Community Unit School District 303.

Dated this____day of________, A.D.2018.

by:______________________________
Manager

for: V&M Investment and Remodeling Group, LLC

Notary's Certificate

State of Illinois
County of DuPage } S.S.

I,____________________ , a notary public in and for the County and State aforesaid do hereby certify that________________, as Manager of V&M Investment and Remodeling Group, LLC, who is personally known to me to be the same person whose name is subscribed to the foregoing certificate, appeared before me this day in person and acknowledged the execution of the annexed plat and accompanying instrument as being pursuant to authority given and as their free and voluntary act and as the free and voluntary act of V&M Investment and Remodeling Group, LLC.

Given under my hand and notarial seal this____day of__________, A.D.2018.

____
notary public

Certificate as to Spoecial Assessments

State of Illinois
County of Kane
County of DuPage } S.S.

I do hereby certify that there are no delinquent or unpaid current or forfeited special assessments or any deferred installments thereof that have not been apportioned against the tract of land included in the annexed plat.

Dated at ____________, Illinois, this _____ day of ________, A.D. 2018.

____
City Collector

Plan Commission Certificate

State of Illinois
County of Kane
County of DuPage } S.S.

Approved this _____ day of ________, A.D. 2018.

____
Chairman, Plan Commission

Plan Commission Certificate

State of Illinois
County of Kane
County of DuPage } S.S.

Approved this _____ day of ________, A.D. 2018.

____
Chairman, Plan Commission

Director of Community Development Certificate

State of Illinois
County of Kane
County of DuPage } S.S.

I,__________________, do hereby certifiy that the required improvements have been installed or the required guarantee bond has been posted for the completion of all required land improvements.

dated at St. Charles, Illinois this _____ day of ________, A.D. 2018.

____
Director of Community Development

City Council Certificate

State of Illinois
County of Kane
County of DuPage } S.S.

Approved this _____ day of ________, A.D. 2018.

City Council of the City of St. Charles, Illinois

by: ____________________ attest:____________________
Mayor City Clerk

PUBLIC UTILITY EASEMENT DECLARATION

A PERMANENT NON-EXCLUSIVE EASEMENT IS HEREBY GRANTED TO THE CITY OF ST. CHARLES AND TO ALL PUBLIC UTILITY COMPANIES OF ANY KIND OPERATING UNDER FRANCHISE GRANTING THEM EASEMENT RIGHTS FROM SAID CITY OF ST. CHARLES, INCLUDING BUT NOT LIMITED TO, AMERITECH AND NICOR AND TO THEIR SUCCESSORS AND ASSIGNS(HEREIN COLLECTIVELY REFERRED TO AS "GRANTEES"), IN, UPON, ACROSS, OVER, UNDER, AND THROUGH THE AREAS SHOWN BY DASHED LINES AND LABELED "PUBLIC UTILITY EASEMENT" ON THE PLAT OF SUBDIVISION HEREON DRAWN FOR THE PURPOSE OF INSTALLING, CONSTRUCTING, INSPECTING, OPERATING, REPLACING, RENEWING, ALTERING, ENLARGING, REMOVING, REPAIRING, CLEANING, AND MAINTAINING ABOVE GROUND AND UNDERGROUND ELECTRICAL SYSTEMS, CABLE TELEVISION, COMMUNICATION, GAS, TELEPHONE OR OTHER UTILITY LINES OR APPURTENANCES, SANITARY AND STORM SEWERS, DRAINAGE WAYS, STORM WATER DETENTION AND RETENTION, WATER MAINS AND ANY AND ALL MANHOLES, HYDRANTS, PIPES, CONNECTIONS, CATCH BASINS, BUFFALO BOXES AND WITHOUT LIMITATION, SUCH OTHER INSTALLATIONS AS MAY BE REQUIRED TO FURNISH PUBLIC UTILITY SERVICE TO ADJACENT AREAS TOGETHER WITH THE RIGHT OF ACCESS ACROSS THE REAL ESTATE PLATTED HEREIN FOR THE NECESSARY PERSONNEL AND EQUIPMENT TO MAKE ANY OR ALL OF THE ABOVE WORK. THE RIGHT IS ALSO HEREBY GRANTED TO SAID GRANTEES TO CUT DOWN, TRIM, OR REMOVE ANY TREES, SHRUBS, OR OTHER PLANTS THAT INTERFERE WITH THE OPERATION OF OR ACCESS TO SAID UTILITY INSTALLATIONS, WITHOUT LIMITATION, IN, ON, UPON OR ACROSS, UNDER, OR THROUGH SAID EASEMENTS. IN THE EVENT UTILITY MAINTENANCE IS PERFORMED WITHIN THE UTILITY EASEMENT, THE CITY OF ST. CHARLES WILL HAVE NO OBLIGATION WITH RESPECT TO SURFACE RESTORATION INCLUDING, BUT NOT LIMITED TO, THE RESTORATION, REPAIR, OR REPLACEMENT OF ANY LANDSCAPING PROVIDED, HOWEVER, THE GRANTEES SHALL BE OBLIGATED FOLLOWING ANY SUCH WORK, TO BACKFILL AND MOUND SO AS TO RETAIN SUITABLE DRAINAGE, REMOVE DEBRIS, AND LEAVE THE AREA IN GENERALLY CLEAN AND WORKMANLIKE CONDITION. NO PERMANENT BUILDINGS OR TREES SHALL BE PLACED ON SAID EASEMENTS, BUT THE EASEMENT AREAS MAY BE USED FOR GARDENS, SHRUBS, LANDSCAPING, PAVING, FENCES, SIDEWALKS, CURBING, AND OTHER PURPOSES THAT DO NOT INTERFERE WITH THE AFORESAID USES AND RIGHTS. WHERE AN EASEMENT IS USED FOR STORM OR SANITARY SEWERS, OTHER UTILITY INSTALLATIONS SHALL BE SUBJECT TO THE PRIOR APPROVAL OF SAID CITY OF ST. CHARLES SO AS NOT TO INTERFERE WITH THE GRAVITY FLOW IN SAID SEWER OR SEWERS. UTILITY INSTALLATIONS, OTHER THAN THOSE MANAGED BY THE CITY OF ST. CHARLES, SHALL BE SUBJECT TO THE APPROVAL OF THE CITY OF ST. CHARLES, AS TO DESIGN AND LOCATION, AND ALL OTHER INSTALLATIONS ARE SUBJECT TO THE ORDINANCES OF THE CITY OF ST. CHARLES.

Surveyor's Certificate

State of Illinois
County of DuPage } S.S.

This is to certify that I, John Cole Helfrich, an Illinois Professional Land Surveyor, have surveyed, resubdivided and platted the lands described as follows:

Lots 16, 17 and 18 of Petruska's Second Subdivision of part of Section 30, Township 40 North, Range 9 East of the Third Principal Meridian in the Township of Wayne, Du Page County, Illinois.

I further certify that the lands described above are not located in a designated Flood Hazard Area as defined by the Federal Emergency Management Agency.

All dimensions are given in feet and decimal parts thereof and are correct at 62° Fahrenheit.

Given under my Hand and Seal at Wheaton, Illinois this____day of____________, A.D.2018.

____
Illinois Professional Land Surveyor 2967
exp 11-30-18

This professional service complies with the current Illinois Standards for a Boundary Survey

County Clerk's Certificate

State of Illinois
County of DuPage } S.S.

I, Paul Hinds, County Clerk of Du Page County, Illinois, do hereby certify that there are no delinquent general taxes, no unpaid forfeited taxes and no redeemable tax sales against any of the land included in the annexed plat.

I further certify that I have received all statutory fees in connection with the annexed plat.

Given under my hand and seal at ________, Illinois, this _____ day of ________, A.D. 2018.

____
Du Page County Clerk

County Recorder's Certificate

State of Illinois
County of DuPage

I, Fred Bucholz, Recorder of Du Page County, Illinois, do hereby certify that this instrument was filed for record on the____day of______________, A.D. 2018 and was placed of record as Document______________________.

Given under my hand at Wheaton, Illinois, this _____ day of ________, A.D. 2018.

____
Du Page County Recorder

Sheet 2 of 2

Date: 4-28-18
File: 17-034RP2
Job: 17-034

Craig R. Knoche & Associates
Civil Engineers, P.C.
Illinois Registered Design Firm 3963
24 North Bennett Street • Geneva, Illinois 60134 • phone (630) 845-1270 • fax (630) 845-1275
• Civil Engineers • Surveyors • Land Planners

Prepared for:
V & M Investment and Remodeling Group LLC

Plat of Resubdivision

RESIDENTIAL DEVELOPMENT

SMITH ROAD
ST. CHARLES, ILLINOIS

PREPARED FOR

LOCATION MAP

DRAWINGS INDEX

		REV	DATE
C0.1	TITLE & INDEX SHEET	0	4/30/18
C0.2	EXISTING CONDITIONS & DEMOLITION PLAN	0	4/30/18
C1.1	SITE PLAN	0	4/30/18
C2.1	GRADING PLAN	0	4/30/18
C2.2	STORMWATER POLLUTION PREVENTION PLAN	0	4/30/18
C2.3	SWPPP DETAILS	0	4/30/18
C2.4	FAITH LANE PLAN & PROFILE	0	4/30/18
C3.1	UTILITY PLAN	0	4/30/18
C4.1	LANDSCAPE PLAN	0	4/30/18
C7.1	GENERAL NOTES & SPECIFICATIONS	0	4/30/18
C7.2	SITE DETAILS	0	4/30/18
C7.3	UTILITY DETAILS	0	4/30/18
	LATEST REVISION	0	4/30/18

CONTACTS

CITY OF ST. CHARLES
2 EAST MAIN STREET
ST. CHARLES, IL 60174

COMMUNITY & ECONOMIC DEVELOPMENT
RITA TUNGARE – DIRECTOR (630) 377-4443

PLANNING DIVISION
RUSSELL COLBY – COMMUNITY DEVELOPMENT DIVISION MANAGER (630) 377-4443

PUBLIC WORKS
PETER SUHR – DIRECTOR (630) 377-4405

KAREN YOUNG – ASSISTANT DIRECTOR OF PW-ENGINEERING (630) 377-4486

BENCHMARKS

BENCHMARK #1: RIM OF XVV THAT IS ON THE SOUTH SIDE OF SMITH ROAD JUST TO THE SOUTHWEST OF PHEASANT TRAIL, APPROX. 228' SOUTHWEST OF THE SITE'S SOUTHWEST PROPERTY CORNER.

ELEVATION: 762.52

BENCHMARK #2: RIM OF XSANMH ON THE SOUTH SIDE OF SMITH ROAD, JUST EAST OF PHEASANT TRAIL. APPROX. 93' SOUTHEAST OF THE SITE'S SOUTHWEST PROPERTY CORNER.

ELEVATION: 760.34

ALL ELEVATIONS ARE NAVD88 UNLESS OTHERWISE STATED. REFER TO C0.2 FOR BENCHMARK LOCATIONS. IT IS THE CONTRACTOR'S RESPONSIBILTY TO VERIFY ALL BENCHMARKS

DRAINAGE OVERLAY CERTIFICATE

STATE OF ILLINOIS } S.S.
COUNTY OF DUPAGE }

TO THE BEST OF OUR KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF SUCH SUBDIVISION OR ANY PART THEREOF, OR, THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, ADEQUATE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS OR DRAINS WHICH THE SUBDIVIDER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL NOT BE DIVERTED UPON THE PROPERTY OF ADJOINING LAND OWNERS IN SUCH CONCENTRATIONS AS MAY CAUSE DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

DATED THIS_____ DAY OF _____, 2018

_____ _____
ILLINOIS REGISTERED PROFESSIONAL ENGINEER OWNER OR ATTORNEY FOR OWNER

062-054950
STATE REGISTRATION NUMBER

WARNING CALL

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

CALL J.U.L.I.E. TOLL FREE 1-800-892-0123

(Operates 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.

Steven R. Kudwa
Professional Engineer
54950
State of Illinois

REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

TITLE & INDEX SHEET

RESIDENTIAL DEVELOPMENT
SMITH ROAD
ST. CHARLES, ILLINOIS

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 CITY OF ST. CHARLES.
LICENSE EXPIRATION: NOVEMBER 30, 2019

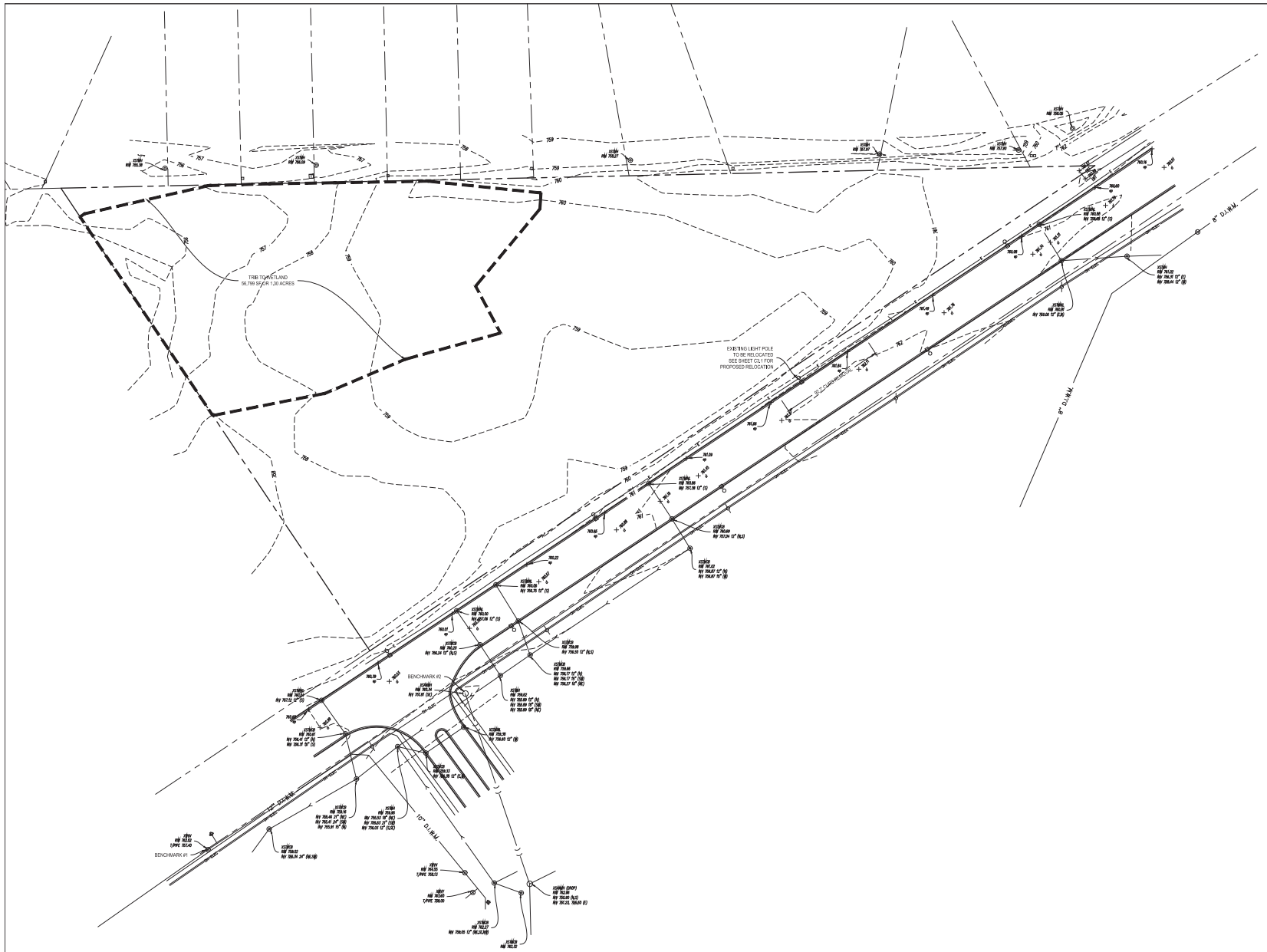
STEVEN R. KUDWA LICENSED ENGINEER # 062-054950

Craig R. Knoche & Associates, Civil Engineers, P.C.
• Civil Engineers • Surveyors • Land Planners
24 N. Bennett Street • Geneva, IL 60134 • phone (630) 845-1370 • fax (630) 845-1375

DATE: 4/30/18
FILE: 17-034 C01
JOB NO: 17-034

C0.1
SHEET NO.

RESIDENTIAL DEVELOPMENT ST. CHARLES, ILLINOIS



SITE DEMOLITION LEGEND

	TO REMAIN	TO BE REMOVED
WATERMAIN	W	W
STORM SEWER:	>	>
SANITARY SEWER:	)	)
OVERHEAD CABLE	OH CABLE	OH CABLE
FIBER OPTIC	FO	FO
OVERHEAD ELECTRIC	OH ELEC	OH ELEC
UNDERGROUND TELEPHONE	T	T
STORM MANHOLE:	◎	◎
STORM INLET:	▨	▨
SANITARY MANHOLE:	○	○
VALVE VAULT/B-BOX:	⊗	⊗
FIRE HYDRANT		
UTILITY POLE	—○—	—○—
CURB AND GUTTER		
CONTOUR	--693--	
TREES		
STREET LIGHT	o-□	o-□
TRANSFORMER	T	T

SITE DEMOLITION NOTES

1. All sewers which are to be abandoned shall be removed and replaced with approved trench backfill and compacted to 95% modified proctor if located in future building areas or 90% in any other location. Plugs shall be on both ends of pipe for a distance of 2' and be made of non-shrink concrete concrete or mortar.

2. Contractor shall field verify all existing conditions prior to demolition and notify engineer of any discrepancies or potential conflicts between existing conditions and proposed design.

3. All excess material shall be hauled offsite and disposed of properly. Demolition debris shall not be buried on site unless soil engineer has approved as allowable backfill.

4. Contractor must barricade construction area with 6 ft. min. chain link fence equipped with locked construction entrance gate. All open trenches must be backfilled the same day they are opened.

5. Demolition contractor shall call J.U.L.I.E. prior to any demolition work.

6. Demolition contractor is responsible for demolition permits and associated fees.

7. Demolition contractor is responsible for following all O.S.H.A. regulations.

8. All utilities to be abandoned shall be capped in accordance with the requirements of the appropriate utility companies and the governing municipality.

9. Traffic control for work in the right-of-way shall meet I.D.O.T. standards per Section 900, Standard Specifications for Road and Bridge Construction, (as adopted 2012)

10. Contractor must barricade (including warning lights) all open excavations to prevent vehicular and pedestrian traffic from entering the area.

11. All excavations to be filled in 9" lifts with approved engineered backfill and compacted to 95% modified proctor.

12. Excavation contractor shall grade site in order to provide full pavement section per pavement detail.

13. A construction schedule shall be coordinated with all adjacent property owners to maintain continuous access to all existing driveways.

14. All mud shall be removed from all construction vehicles prior to exiting the construction site. Any dirt and debris deposited on the adjacent roadways shall be immediately removed from said adjacent roadways.

15. All manholes to be abandoned shall have the cone removed and backfilled per the requirements of the appropriate utility company and the governing municipality.

16. Demolition drawing is for site demolition work only - building demolition by others.

17. Demolition of all utilities (including but not limited to gas, electric, telephone and cable) shall be coordinated with the governing municipality and the utility companies.

18. Excavate all existing landscape areas, including parkways, to full pavement design depth for new construction.

19. Contractor will be responsible for removal of all visible and underground improvements including but not limited to items shown on these plans.

REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

EXISTING CONDITIONS & DEMOLITION PLAN

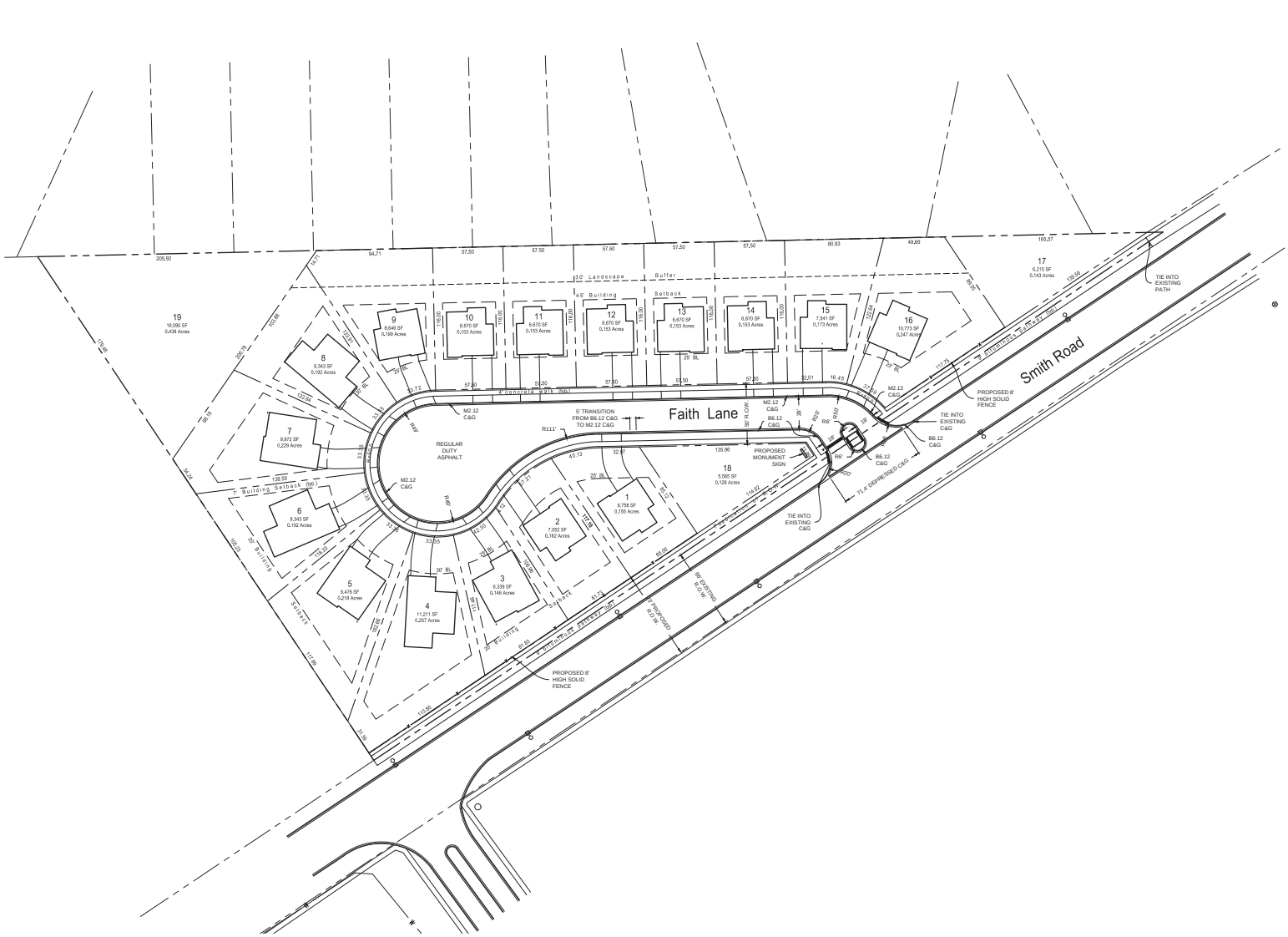
RESIDENTIAL DEVELOPMENT
SMITH ROAD
ST. CHARLES, ILLINOIS

Craig R. Knoche & Associates • Civil Engineers • Surveyors • Land Planners
Civil Engineers, P.C.
1181 Commerce Drive • Geneva, IL 60134 • phone (630) 845-1370 • fax (630) 845-1375

DATE: 4/30/18
FILE: 17-034 C02
JOB NO: 17-034

C0.2
SHEET NO.

RESIDENTIAL DEVELOPMENT ST. CHARLES, ILLINOIS



SITE ANALYSIS

SITE

NW Corner of Smith Road and Pheasant Trail
St. Charles, IL

Proposed Use Single Family Residences
Existing Zoning R-4 (Unincorporated DuPage County)
Required Zoning RS-4 (City of St. Charles)

Parcel Area	191,712 sf ±4.40 Acres
Total Area To Be Dedicated	5,390 sf ±0.12 Acres
Parcel Area	186,327 sf ±4.28 Acres

LEGEND

- PROPOSED CURB & GUTTER
- EXISTING CURB & GUTTER
- PROPERTY LINE
- SETBACK LINE
- LIGHT POLE

SITE NOTES

1. ALL DIMENSIONS ARE BACK OF CURB UNLESS OTHERWISE NOTED.
2. ALL CURB RADII ARE BACK OF CURB UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO VERIFY DIMENSIONS PRIOR TO STARTING WORK AND NOTIFY ENGINEER IF ANY DISCREPANCIES ARE FOUND.
4. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING ALL EXISTING PAVEMENT DAMAGED DURING CONSTRUCTION.
5. SEE DETAILS FOR BITUMINOUS AND CONCRETE PAVEMENT SECTIONS.
6. CONTRACTOR TO PROVIDE TEMPORARY TRAFFIC CONTROL MEASURES DURING CONSTRUCTION OF ENTRANCE OF R.O.W. IN ACCORDANCE W/ ILLINOIS D.O.T. REQUIREMENTS.
7. ADA HANDICAP RAMPS SHALL BE INSTALLED AT ALL LOCATIONS DELINEATED ON PLANS AS WELL AS AT ALL LOCATIONS WHERE SIDEWALK ABUTS DRIVES OR ROADWAYS.
8. CONTRACTOR SHALL COMPARE ARCHITECTURAL AND ENGINEERING PLANS FOR INTERFACE COMPATIBILITY.
10. ALL CURB AND GUTTER SHALL BE B6.12 UNLESS OTHERWISE NOTED ON PLANS
11. PAVEMENT STRIPING TO BE TRAFFIC YELLOW TWO COATS UNLESS OTHERWISE SPECIFIED ON PLANS.

REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

SITE PLAN

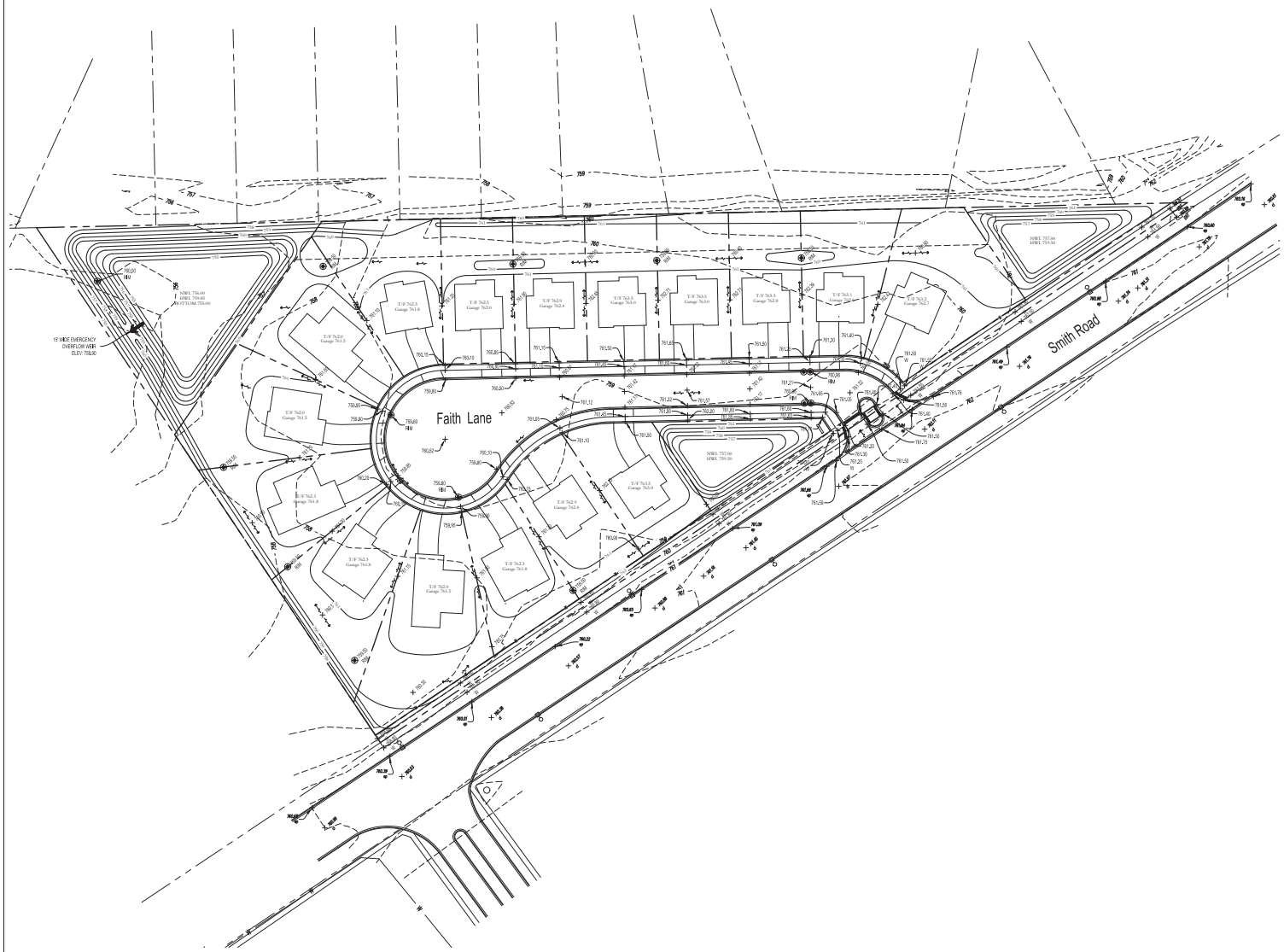
RESIDENTIAL DEVELOPMENT
SMITH ROAD
ST. CHARLES, ILLINOIS

Craig R. Knoche & Associates • Civil Engineers • Surveyors • Land Planners
Civil Engineers, P.C.
1181 Commerce Drive • Geneva, IL 60134 • phone (630) 845-1370 • fax (630) 845-1375

DATE: 4/30/18
FILE: 17-034 C10
JOB NO: 17-034

C1.1
SHEET NO.

RESIDENTIAL DEVELOPMENT ST. CHARLES, ILLINOIS



LEGEND

	EXISTING	PROPOSED
PAVEMENT GRADE	475.00	475.00
WALK GRADE	475.00 W	475.00 W
BACK OF CURB GRADE	475.00 C	475.00 C
GROUND GRADE	475.00 G	475.00 G
RIM GRADE	475.00 RIM	475.00 RIM
STORM STRUCTURE	⊙	◉
CONTOURS	— 475 —	— 475 —
EMERGENCY OVERFLOW		➔
FLOW DIRECTION		⤳
RIDGELINES	- - - - - - - - - -	
REVERSE CURB	∿∿∿∿∿∿∿∿∿∿	

GRADING NOTES

1. GENERAL CONTRACTOR SHALL VERIFY EXISTING CONTOURS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

2. THE GENERAL CONTRACTOR SHALL SPREAD SPOILS FROM UTILITY CONTRACTORS WORK TO BALANCE THE SITE TO THE EXTENT POSSIBLE.

3. EROSION CONTROL MEASURES INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING. SILT FABRIC SHALL BE PLACED ON EACH SANITARY STRUCTURE UNTIL CONSTRUCTION IS COMPLETED. FABRIC SHALL OVERLAP SANITARY MANHOLE OPENING A MINIMUM OF ONE (1) FOOT ON EACH SIDE WITH THE SOLID GRATE PLACED ON TOP OF FABRIC TO PREVENT SILT FROM ENTERING SANITARY SYSTEM. SILT FENCE AROUND PERIMETER SHALL REMAIN IN PLACE AND BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETED. ALL INLET STRUCTURES SHALL BE PROTECTED WITH INLET BASKETS.

4. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL MEASURES. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO THE START OF CONSTRUCTION AND MAINTAIN SUCH MEASURES UNTIL GRADING IS COMPLETE, PAVING LOT IS PAVED AND VEGETATION HAS BEEN ESTABLISHED. IF THERE IS NO GENERAL CONTRACTOR, IT WILL THEN BE THE RESPONSIBILITY OF THE GRADING CONTRACTOR TO INSTALL AND MAINTAIN EROSION CONTROL MEASURES.

5. THE CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF THE EROSION CONTROL DEVICES SHALL INSPECT ALL STORM WATER POLLUTION DEVICES THROUGHOUT CONSTRUCTION AND UNTIL ALL UNPAVED OR NON BUILDING AREAS HAVE A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70 PERCENT OR GREATER. MAINTENANCE INCLUDES WEEKLY INSPECTIONS OR INSPECTION FOLLOWING A RAINFALL OF 1/2 INCH 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.

6. 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 GENERAL CONTRACTORS RESPONSIBILITY TO INSTALL SUCH DEVICES, THE OWNER OR ENGINEER SHALL BE NOTIFIED OF THE ADDITIONAL WORK AND COST PRIOR TO INSTALLATION.

7. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND ENGINEER IN WRITING, OF ANY ADDITIONAL SOURCES OF STORM WATER POLLUTION OBSERVED DURING CONSTRUCTION AND THE ADDITIONAL COSTS REQUIRED TO PREVENT ADDITIONAL POLLUTION.

8. SEE SOILS REPORTS FOR TESTING REQUIREMENTS. THE FINAL SOILS REPORTS ARE DATED AS FOLLOWS: SOIL REPORT AND BORINGS PREPARED BY TERRACON DATED APRIL 11, 2017.

9. ALL FILL AND BACKFILL SHALL BE PLACED IN LIFTS OF 9" OR LESS IN LOOSE THICKNESS.

10. ALL FILL AREAS SHALL BE PLACED AND COMPACTED AS STRUCTURAL FILL. AREAS TO RECEIVE FILL SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 12" AND PROOFROLLED PRIOR TO RECEIVING FILL. SLOPES STEEPER THAN 5H:1V SHALL BE BENCHED BEFORE PLACING FILL. THE STANDARD SPECIFICATIONS SHALL GOVERN THE GRADING AND SITE PREPARATION WITH THE EXCEPTION THAT STRUCTURAL FILL SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY (ASTM D-698, STANDARD PROCTOR) BELOW FOOTINGS, FOUNDATIONS, AND ALL OTHER LOCATIONS TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY (ASTM D-698, STANDARD PROCTOR), BOTH LOCATIONS SHALL HAVE AT A MOISTURE CONTENT BETWEEN +2% AND +5% OF OPTIMUM FOR LOW PLASTICITY SOILS AND 0% AND +3% OF OPTIMUM FOR MODERATE PLASTICITY SOILS.

11. FOR PCC PAVEMENTS, THE UPPER 9" OF SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY (ASTM D-698, STANDARD PROCTOR) AT A MOISTURE CONTENT BETWEEN +2% AND +5% OF OPTIMUM FOR LOW PLASTICITY SOILS AND 0% AND +3% OF OPTIMUM FOR MODERATE PLASTICITY SOILS. SUBGRADE PREPARATION SHALL EXTEND A MINIMUM OF 2 FEET BEYOND THE BACK OF CURB.

12. FOR SIDEWALKS, THE UPPER 9" OF SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY (ASTM D-698, STANDARD PROCTOR) AT A MOISTURE CONTENT BETWEEN +2% AND +5% OF OPTIMUM FOR LOW PLASTICITY SOILS AND 0% AND +3% OF OPTIMUM FOR MODERATE PLASTICITY SOILS. SIDEWALK SUBGRADES SHALL EXTEND AT LEAST 9" LATERALLY BEYOND THE EDGE OF THE NEW SIDEWALK.

13. IMPORTED MATERIAL, IF REQUIRED, SHALL BE FREE OF ORGANIC MATTER AND DEBRIS, AND SHALL BE A CLEAN, INORGANIC SILT OR LEAN CLAY WITH A LIQUID LIMIT LESS THAN 45 AND A PLASTICITY INDEX BETWEEN 15 AND 27, BELOW PAVEMENTS THE LIQUID LIMIT SHALL BE LESS THAN 35 WITH A PLASTICITY INDEX BETWEEN 10 AND 30. BORROW MATERIAL SHALL NOT CONTAIN ANY FOREIGN MATERIAL WITH A DIMENSION GREATER THAN 3".

REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

GRADING PLAN

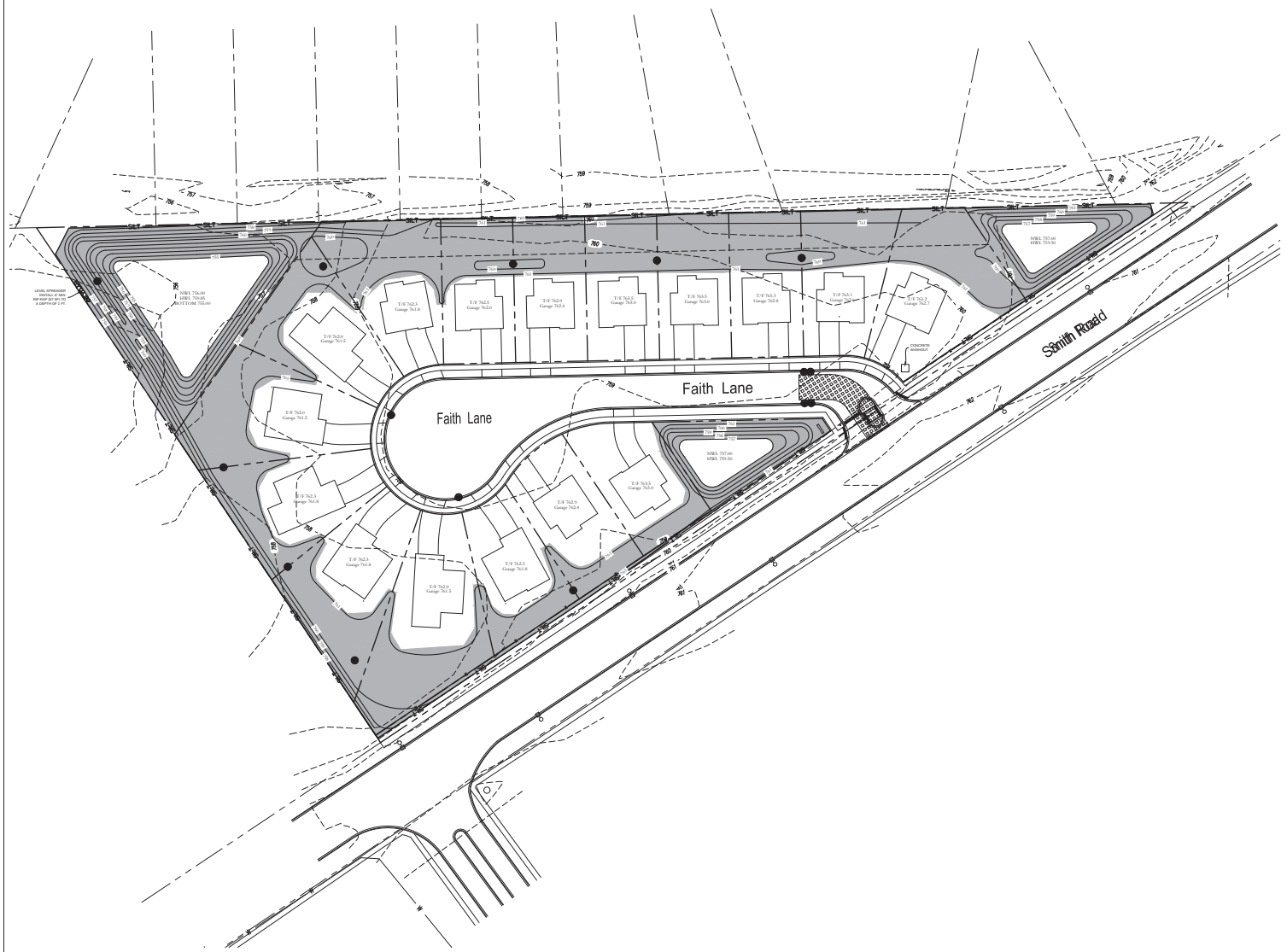
RESIDENTIAL DEVELOPMENT
SMITH ROAD
ST. CHARLES, ILLINOIS

Craig R. Knoche & Associates • Civil Engineers • Surveyors • Land Planners
Civil Engineers, P.C.
1181 Commerce Drive • Geneva, IL 60134 • phone (630) 845-1370 • fax (630) 845-1375

DATE: 4/30/18
FILE: 17-034 C2D
JOB NO: 17-034

C2.1
SHEET NO.

RESIDENTIAL DEVELOPMENT ST. CHARLES, ILLINOIS



Scale 1"=40'

0 20 30 40 60 80 120 160

LEGEND

	EXISTING	PROPOSED
PAVEMENT GRADE	475.00	475.00
WALK GRADE	475.00 W	475.00 W
BACK OF CURB GRADE	475.00 C	475.00 C
GROUND GRADE	475.00 G	475.00 G
RIM GRADE	475.00 RIM	475.00 RIM
STORM STRUCTURE	⊙	⊙
CONTOURS	475	475
EMERGENCY OVERFLOW		➔
FLOW DIRECTION		⇝
RIDGELINES		
REVERSE CURB		

GRADING NOTES

1. GENERAL CONTRACTOR SHALL VERIFY EXISTING CONTOURS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

2. THE GENERAL CONTRACTOR SHALL SPREAD SOILS FROM UTILITY CONTRACTORS WORK TO BALANCE THE SITE TO THE EXTENT POSSIBLE.

3. EROSION CONTROL MEASURES INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING. SILT FABRIC SHALL BE PLACED ON EACH SANITARY STRUCTURE UNTIL CONSTRUCTION IS COMPLETED. FABRIC SHALL OVERLAP SANITARY MANHOLE OPENING A MINIMUM OF ONE (1) FOOT ON EACH SIDE WITH THE SOLID GRATE PLACED ON TOP OF FABRIC TO PREVENT SILT FROM ENTERING SANITARY SYSTEM. SILT FENCE AROUND PERIMETER SHALL REMAIN IN PLACE AND BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETED. ALL INLET STRUCTURES SHALL BE PROTECTED WITH INLET BASKETS.

4. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL MEASURES. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO THE START OF CONSTRUCTION AND MAINTAIN SUCH MEASURES UNTIL GRADING IS COMPLETE, PAVING LOT IS PAVED AND VEGETATION HAS BEEN ESTABLISHED. IF THERE IS NO GENERAL CONTRACTOR, IT WILL THEN BE THE RESPONSIBILITY OF THE GRADING CONTRACTOR TO INSTALL AND MAINTAIN EROSION CONTROL MEASURES.

5. THE CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF THE EROSION CONTROL DEVICES SHALL MAINTAIN ALL STORM WATER POLLUTION DEVICES THROUGHOUT CONSTRUCTION AND UNTIL ALL UNPAVED OR NON BUILDING AREAS HAVE A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70 PERCENT OR GREATER. MAINTENANCE INCLUDES WEEKLY INSPECTIONS OR INSPECTION FOLLOWING A RAINFALL OF 1/2 INCH 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.

6. 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 GENERAL CONTRACTORS RESPONSIBILITY TO INSTALL SUCH DEVICES. THE OWNER OR ENGINEER SHALL BE NOTIFIED OF THE ADDITIONAL WORK AND COST PRIOR TO INSTALLATION.

7. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND ENGINEER IN WRITING, OF ANY ADDITIONAL SOURCES OF STORM WATER POLLUTION OBSERVED DURING CONSTRUCTION AND THE ADDITIONAL COSTS REQUIRED TO PREVENT ADDITIONAL POLLUTION.

8. SEE SOILS REPORTS FOR TESTING REQUIREMENTS. THE FINAL SOILS REPORTS ARE DATED AS FOLLOWS: SOIL REPORT AND BORINGS PREPARED BY TERRACON DATED APRIL 11, 2017.

9. ALL FILL AND BACKFILL SHALL BE PLACED IN LIFTS OF 9" OR LESS IN LOOSE THICKNESS.

10. ALL FILL AREAS SHALL BE PLACED AND COMPACTED AS STRUCTURAL FILL. AREAS TO RECEIVE FILL SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 12" AND PROOFROLLED PRIOR TO RECEIVING FILL. SLOPES STEEPER THAN 5H:1V SHALL BE BENCHED BEFORE PLACING FILL. THE STANDARD SPECIFICATIONS SHALL GOVERN THE GRADING AND SITE PREPARATION WITH THE EXCEPTION THAT STRUCTURAL FILL SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY (ASTM D-698, STANDARD PROCTOR) BELOW FOOTINGS, FOUNDATIONS, AND ALL OTHER LOCATIONS TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY (ASTM D-698, STANDARD PROCTOR), BOTH LOCATIONS SHALL HAVE AT A MOISTURE CONTENT BETWEEN +2% AND +5% OF OPTIMUM FOR LOW PLASTICITY SOILS AND 0% AND +3% OF OPTIMUM FOR MODERATE PLASTICITY SOILS.

11. FOR PCC PAVEMENTS, THE UPPER 9" OF SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY (ASTM D-698, STANDARD PROCTOR) AT A MOISTURE CONTENT BETWEEN +2% AND +5% OF OPTIMUM FOR LOW PLASTICITY SOILS AND 0% AND +3% OF OPTIMUM FOR MODERATE PLASTICITY SOILS. SUBGRADE PREPARATION SHALL EXTEND A MINIMUM OF 2 FEET BEYOND THE BACK OF CURB.

12. FOR SIDEWALKS, THE UPPER 9" OF SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY (ASTM D-698, STANDARD PROCTOR) AT A MOISTURE CONTENT BETWEEN +2% AND +5% OF OPTIMUM FOR LOW PLASTICITY SOILS AND 0% AND +3% OF OPTIMUM FOR MODERATE PLASTICITY SOILS. SIDEWALK SUBGRADES SHALL EXTEND AT LEAST 9" LATERALLY BEYOND THE EDGE OF THE NEW SIDEWALK.

13. IMPORTED MATERIAL, IF REQUIRED, SHALL BE FREE OF ORGANIC MATTER AND DEBRIS, AND SHALL BE A CLEAN, INORGANIC SILT OR LEAN CLAY WITH A LIQUID LIMIT LESS THAN 45 AND A PLASTICITY INDEX BETWEEN 10 AND 21, BELOW PAVEMENTS THE LIQUID LIMIT SHALL BE LESS THAN 30 WITH A PLASTICITY INDEX BETWEEN 10 AND 30. BORROW MATERIAL SHALL NOT CONTAIN ANY FOREIGN MATERIAL WITH A DIMENSION GREATER THAN 3".

REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

STORMWATER POLLUTION PREVENTION PLAN

RESIDENTIAL DEVELOPMENT
SMITH ROAD
ST. CHARLES, ILLINOIS

Craig R. Knoche & Associates • Civil Engineers • Surveyors • Land Planners
Civil Engineers, P.C.
1181 Commerce Drive • Geneva, IL 60134 • phone (630) 845-1370 • fax (630) 845-1375

DATE: 4/30/18
FILE: 17-034 C2D
JOB NO: 17-034

C2.2
SHEET NO.

RESIDENTIAL DEVELOPMENT ST. CHARLES, ILLINOIS

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 SITE AT ALL TIMES.

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 DUPAGE COUNTY, THE OWNER AND IEPA.

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. UNDER 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.

32. SOIL STOCKPILES SHALL NOT BE LOCATED IN A DRAINAGEWAY, FLOOD PLAIN AREA OR A DESIGNATED BUFFER, UNLESS OTHERWISE APPROVED, UNDER SPECIFIC CONDITIONS TO BE ESTABLISHED BY THE DIRECTOR OR ADMINISTRATOR.

33. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL STABILIZATION IS ACHIEVED. TRAPPED SEDIMENT AND OTHER DISTURBED SOILS RESULTING FROM TEMPORARY MEASURES SHALL BE PROPERLY DISPOSED OF PRIOR TO PERMANENT STABILIZATION.

34. IF THE CONTRACTOR ENCOUNTERS GROUNDWATER EITHER DURING CONSTRUCTION OR PRIOR TO START OF CONSTRUCTION, A DEWATERING SYSTEM PLAN SHALL BE PROVIDED FOR REVIEW.

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 SITE MAP AND PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.
6. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
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 PROVIDED.
5. SOIL EROSION AND SEDIMENTATION CONTROL MEASURES TO BE CHECKED WEEKLY AND AFTER EACH RAIN. CLEAN AND RESTORE AS REQUIRED.
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 ILLINOIS URBAN MANUAL 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 TRAPS. DEWATERING DIRECTLY INTO FIELD TILES OR STORMWATER STRUCTURES IS PROHIBITED.
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 DISCHARGE.
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. DETENTION BASIN SHALL BE CONSTRUCTION IN THE INITIAL CONSTRUCTION PHASING.

3. (2 WEEKS) INSTALL REMAINING UNDERGROUND STORM UTILITIES AND INLET PROTECTORS.

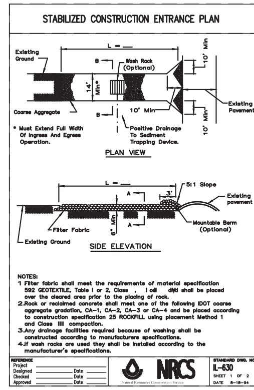
4. (2 WEEKS) INSTALL SANITARY, WATER, GAS, ELECTRIC AND TELEPHONE UTILITIES.

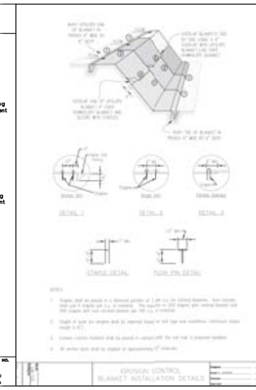
5. (1 WEEK) PREPARE AND FINE GRADE SITE.

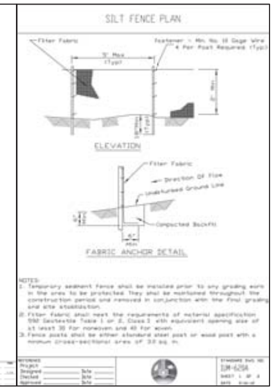
6. (2 WEEKS) INSTALL CURBS AND STONE BASE FOR PAVING.

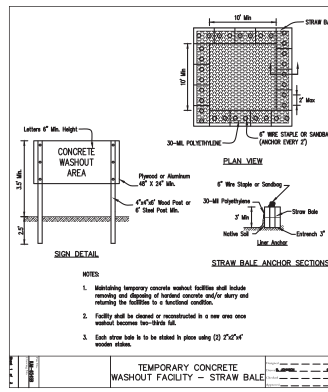
7. (2 WEEKS) CONCRETE AND ASPHALT PAVING

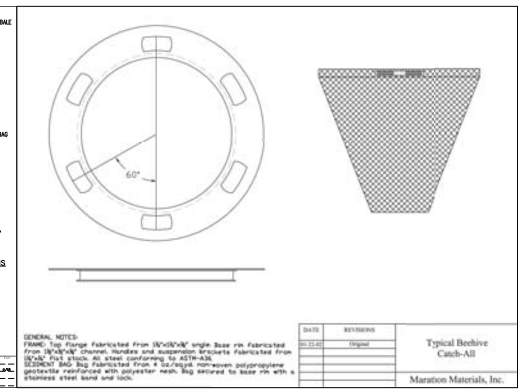
8. (2 WEEKS) INSTALL LANDSCAPING AND REMOVE TEMPORARY EROSION CONTROL MEASURES.

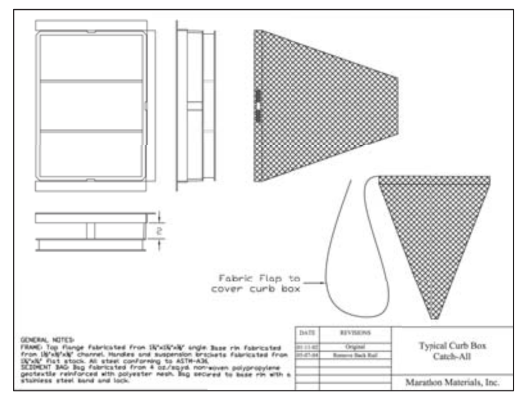


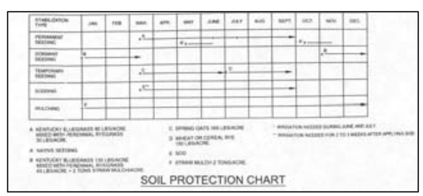












REVISIONS					
NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

SWPPP DETAILS

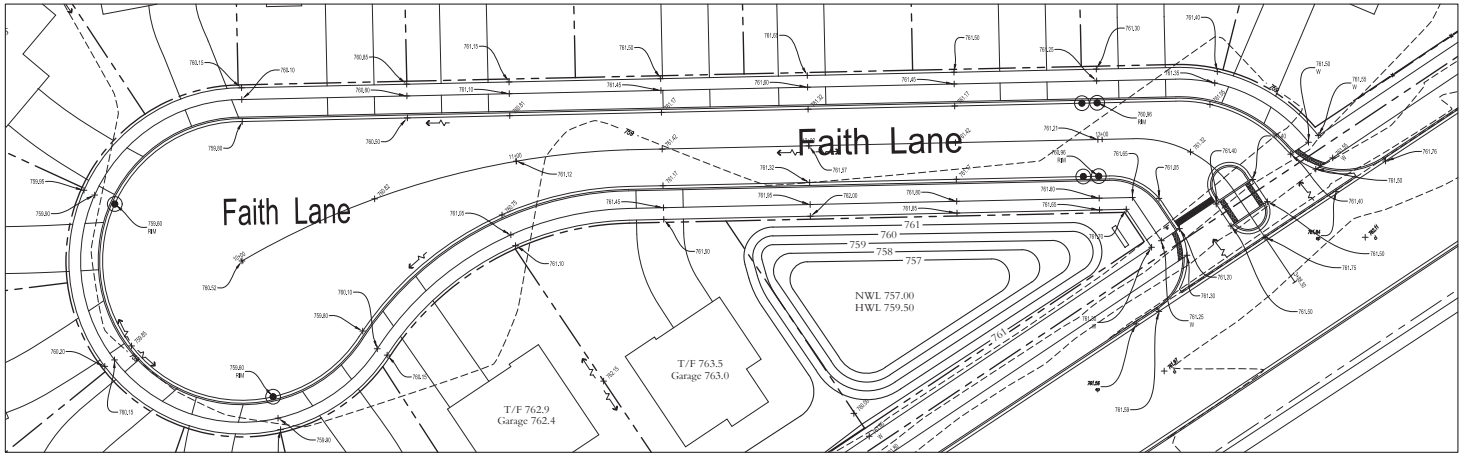
RESIDENTIAL DEVELOPMENT
SMITH ROAD
ST. CHARLES, ILLINOIS

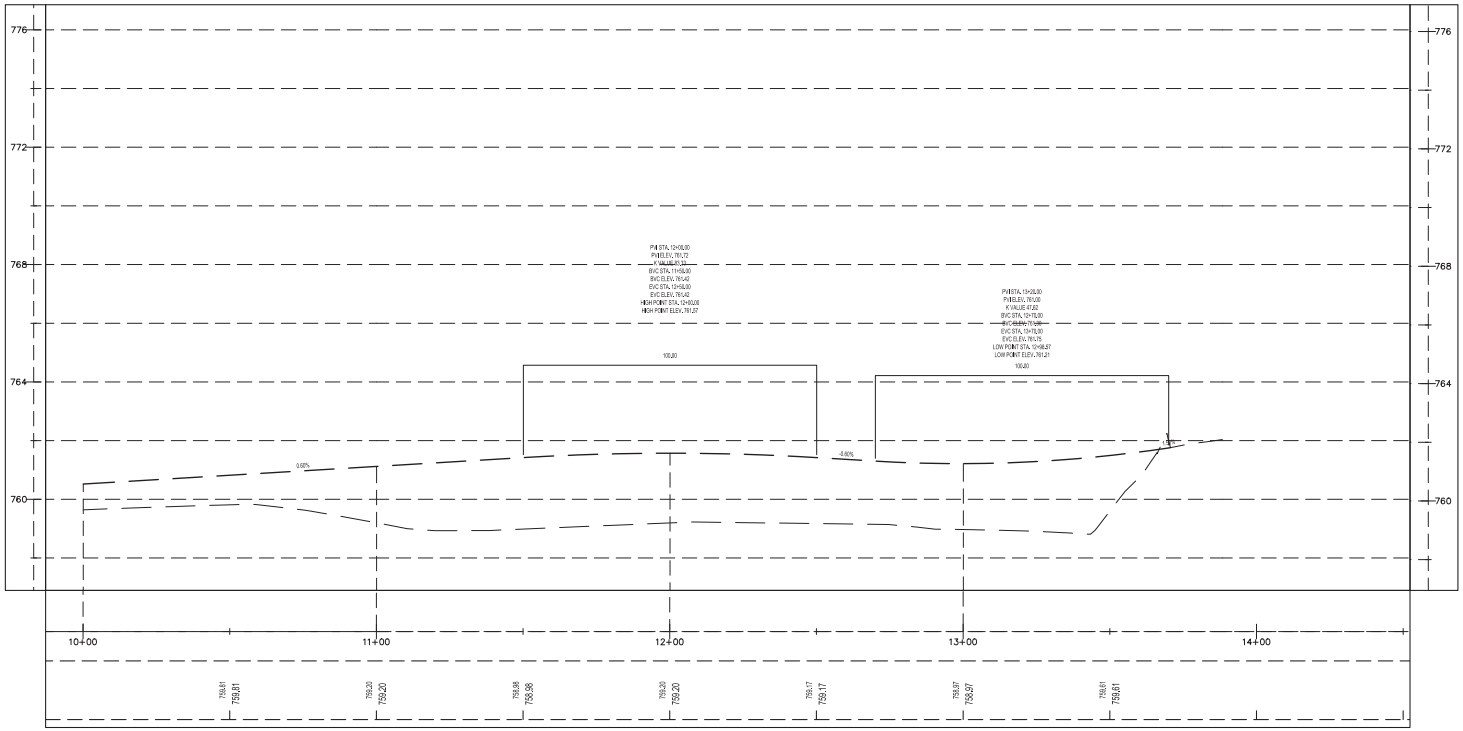
Craig R. Knoche & Associates Civil Engineers, P.C.
• Civil Engineers • Surveyors • Land Planners
1161 Commerce Drive • Geneva, IL 60134 • phone (630) 845-1270 • fax (630) 845-1275

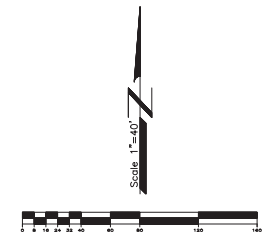
DATE: 4/30/18
FILE: 17-034 C20
JOB NO: 17-034

C2.3
SHEET NO.

RESIDENTIAL DEVELOPMENT ST. CHARLES, ILLINOIS







LEGEND

	EXISTING	PROPOSED
PAVEMENT GRADE	475.00	475.00
WALK GRADE	475.00 W	475.00 W
BACK OF CURB GRADE	475.00 C	475.00 C
GROUND GRADE	475.00 G	475.00 G
RIM GRADE	475.00 RIM	475.00 RIM
STORM STRUCTURE	⊙	⊙
CONTOURS	475	475
EMERGENCY OVERFLOW		➔
FLOW DIRECTION		⇝
RIDGELINES		
REVERSE CURB		

GRADING NOTES

1. GENERAL CONTRACTOR SHALL VERIFY EXISTING CONTOURS AND NOTIFY ENGINEER OF ANY DISCREPANCIES.

2. THE GENERAL CONTRACTOR SHALL SPREAD SPOILS FROM UTILITY CONTRACTORS WORK TO BALANCE THE SITE TO THE EXTENT POSSIBLE.

3. EROSION CONTROL MEASURES INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING: SILT FABRIC SHALL BE PLACED ON EACH SANITARY STRUCTURE UNTIL CONSTRUCTION IS COMPLETED. FABRIC SHALL OVERLAP SANITARY MANHOLE OPENING A MINIMUM OF ONE (1) FOOT ON EACH SIDE WITH THE SOLID GRATE PLACED ON TOP OF FABRIC TO PREVENT SILT FROM ENTERING SANITARY SYSTEM. SILT FENCE AROUND PERIMETER SHALL REMAIN IN PLACE AND BE MAINTAINED UNTIL CONSTRUCTION IS COMPLETED. ALL INLET STRUCTURES SHALL BE PROTECTED WITH INLET BASKETS.

4. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL MEASURES. CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO THE START OF CONSTRUCTION AND MAINTAIN SUCH MEASURES UNTIL GRADING IS COMPLETE, PARKING LOT IS PAVED AND VEGETATION HAS BEEN ESTABLISHED, IF THERE IS NO GENERAL CONTRACTOR, IT WILL THEN BE THE RESPONSIBILITY OF THE GRADING CONTRACTOR TO INSTALL AND MAINTAIN EROSION CONTROL MEASURES.

5. THE CONTRACTOR RESPONSIBLE FOR THE INSTALLATION OF THE EROSION CONTROL DEVICES SHALL MAINTAIN ALL STORM WATER POLLUTION DEVICES THROUGHOUT CONSTRUCTION AND UNTIL ALL UNPAVED OR NON BUILDING AREAS HAVE A UNIFORM PERENNIAL VEGETATIVE COVER WITH A DENSITY OF 70 PERCENT OR GREATER. MAINTENANCE INCLUDES WEEKLY INSPECTIONS OR INSPECTION FOLLOWING A RAINFALL OF 1/2 INCH 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.

6. 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 GENERAL CONTRACTORS RESPONSIBILITY TO INSTALL SUCH DEVICES. THE OWNER OR ENGINEER SHALL BE NOTIFIED OF THE ADDITIONAL WORK AND COST PRIOR TO INSTALLATION.

7. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE OWNER AND ENGINEER IN WRITING, OF ANY ADDITIONAL SOURCES OF STORM WATER POLLUTION OBSERVED DURING CONSTRUCTION AND THE ADDITIONAL COSTS REQUIRED TO PREVENT ADDITIONAL POLLUTION.

8. SEE SOILS REPORTS FOR TESTING REQUIREMENTS. THE FINAL SOILS REPORTS ARE DATED AS FOLLOWS: SOIL REPORT AND BORINGS PREPARED BY TERRACON DATED APRIL 11, 2017.

9. ALL FILL AND BACKFILL SHALL BE PLACED IN LIFTS OF 9" OR LESS IN LOOSE THICKNESS.

10. ALL FILL AREAS SHALL BE PLACED AND COMPACTED AS STRUCTURAL FILL. AREAS TO RECEIVE FILL SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 12" AND PROOFROLLED PRIOR TO RECEIVING FILL. SLOPES STEEPER THAN 4H:1V SHALL BE BENCHED BEFORE PLACING FILL. THE STANDARD SPECIFICATIONS SHALL GOVERN THE GRADING AND SITE PREPARATION WITH THE EXCEPTION THAT STRUCTURAL FILL SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY (ASTM D-698, STANDARD PROCTOR) BELOW FOOTINGS, FOUNDATIONS, AND ALL OTHER LOCATIONS TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY (ASTM D-698, STANDARD PROCTOR), BOTH LOCATIONS SHALL HAVE AT A MOISTURE CONTENT BETWEEN +2% AND -1% OF OPTIMUM FOR LOW PLASTICITY SOILS AND 0% AND +3% OF OPTIMUM FOR MODERATE PLASTICITY SOILS.

11. FOR PCC PAVEMENTS, THE UPPER 9" OF SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY (ASTM D-698, STANDARD PROCTOR) AT A MOISTURE CONTENT BETWEEN +2% AND +3% OF OPTIMUM FOR LOW-PLASTICITY SOILS AND 0% AND +3% OF OPTIMUM FOR MODERATE PLASTICITY SOILS. SUBGRADE PREPARATION SHALL EXTEND A MINIMUM OF 2 FEET BEYOND THE BACK OF CURB.

12. FOR SIDEWALKS, THE UPPER 9" OF SUBGRADE SHALL BE COMPACTED TO A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY (ASTM D-698, STANDARD PROCTOR) AT A MOISTURE CONTENT BETWEEN +2% AND +3% OF OPTIMUM FOR LOW-PLASTICITY SOILS AND 0% AND +3% OF OPTIMUM FOR MODERATE PLASTICITY SOILS. SIDEWALK SUBGRADES SHALL EXTEND AT LEAST 9" LATERALLY BEYOND THE EDGE OF THE NEW SIDEWALK.

13. IMPORTED MATERIAL, IF REQUIRED, SHALL BE FREE OF ORGANIC MATTER AND DEBRIS, AND SHALL BE A CLEAN, INORGANIC SILT OR LEAN CLAY WITH A LIQUID LIMIT LESS THAN 45 AND A PLASTICITY INDEX BETWEEN 10 AND 21. BELOW PAVEMENTS THE LIQUID LIMIT SHALL BE LESS THAN 30 WITH A PLASTICITY INDEX BETWEEN 10 AND 30. BORROW MATERIAL SHALL NOT CONTAIN ANY FOREIGN MATERIAL WITH A DIMENSION GREATER THAN 3".

REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

FAITH LANE
PLAN & PROFILE

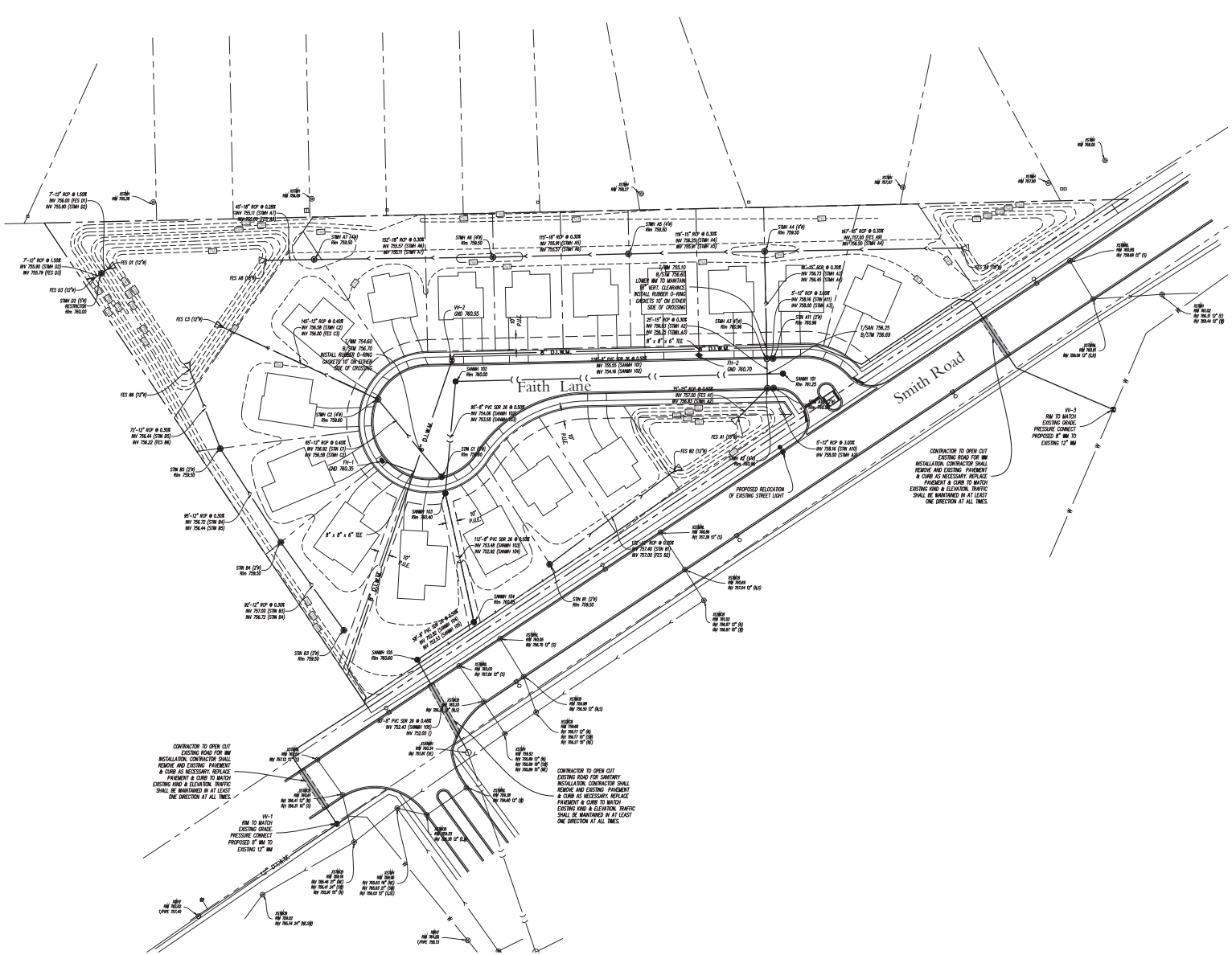
RESIDENTIAL DEVELOPMENT
SMITH ROAD
ST. CHARLES, ILLINOIS

Craig R. Knoche & Associates • Civil Engineers • Surveyors • Land Planners
Civil Engineers, P.C.
1181 Commerce Drive • Geneva, IL 60134 • phone (630) 845-1370 • fax (630) 845-1375

DATE: 4/30/18
FILE: 17-034 C2D
JOB NO: 17-034

C2.4
SHEET NO.

RESIDENTIAL DEVELOPMENT ST. CHARLES, ILLINOIS



LEGEND

	PROPOSED	EXISTING
STORM SEWER	———	———
SANITARY SEWER	———	———
WATERMAIN	8" D.I.W.M.	8" D.I.W.M.
ELECTRIC	E	E
TELEPHONE	T	T
GAS	G	G
STORM MANHOLE	◉	◎
FLARED END SECTION	◀	◁
SANITARY MANHOLE	●	○
VALVE VAULT / B-BOX	⊗	⊗
FIRE HYDRANT		
LIGHT POLES	■-○-■	■-○-■
TRANSFORMER	T	T

UTILITY NOTES

1. ALL WATERMAIN SHALL BE CLASS 52 DUCTILE IRON PIPE UNLESS OTHERWISE SPECIFIED. FITTINGS SHALL MEET AWWA C110 OR C153. VALVE SHALL MEET AWWA C509-87.

2. ALL STORM SEWER PIPE SHALL MEET IDOT SPECIFICATIONS (ART. 550.03) FOR SELECTING THE PIPE CLASS. STORM PIPE MUST MEET ASTM C76 STANDARDS.

3. PRECAST CONCRETE SECTIONS FOR MANHOLES, CATCH BASINS, INLETS AND VAULTS SHALL MEET ASTM C478.

4. EXISTING UTILITIES SHOWN ARE FOR INFORMATION ONLY AND ARE NOT NECESSARILY EXCLUSIVE. CONTRACTOR SHALL VERIFY UTILITIES WHERE POSSIBLE AND NOTIFY ENGINEER OF DISCREPANCIES, EXCEPTIONS, OR OMISSIONS AS SOON AS POSSIBLE.

5. NO FILTER FABRIC ALLOWED UNDER FRAMES OR GRATES. ALL STRUCTURES SHALL HAVE INLET FILTERS INSTALLED. ALL INLET PROTECTION SHOULD BE IN ACCORDANCE WITH THE APPROVED STORMWATER POLLUTION PREVENTION PLAN.

6. GENERAL CONTRACTOR SHALL VERIFY SPECIFIC SIZE AND LOCATION OF CONDUIT FOR GAS, ELECTRIC AND TELEPHONE PRIOR TO INSTALLATION.

7. ALL EXISTING DRAIN TILE LOCATED WITHIN THE SITE BOUNDARY SHALL BE REMOVED OR ABANDONED AS NECESSARY. ALL DRAIN TILE ENTERING SITE SHALL BE TIED INTO PROPOSED STORM LINE OR REROUTED TO MAINTAIN EXISTING DRAINAGE PATTERNS. IN PLACES WHEREBY THE PROPOSED WATERMAIN AND EXISTING ACTIVE DRAINTILE CROSS, THE WATERMAIN SHALL BE INSTALLED WITH CASING 10 FEET ON EITHER SIDE OF CROSSING.

8. SANITARY PLUGS WILL BE REQUIRED DURING CONSTRUCTION AT ALL EXISTING MANHOLES WHERE PROPOSED CONNECTIONS ARE MADE AND AT THE FIRST MANHOLE OF EACH PROPOSED SANITARY LINE.

9. CONTRACTOR TO SEE LANDSCAPE AND IRRIGATION SPECIFICATIONS IN ARCHITECTURAL PLANS AND CONTRACT DOCUMENTS FOR ADDITIONAL REQUIREMENTS.

10. ALL STORM STRUCTURES LOCATED IN AND ALONG ALL B6.12 CURB AND GUTTER SHALL HAVE CURB FRAME AND GRATES.

11. ALL ROOF DOWNSPOUTS MUST TIE DIRECTLY INTO THE STORM SEWER SYSTEM. NO OVERLAND DRAINAGE WILL BE PERMITTED FOR THE ROOF DRAINS.

12. CONTRACTOR RESPONSIBLE FOR THE RELOCATION OF THE STREET LIGHT IN THE IDOT R.O.W. SHALL BE AN IDOT PREFERRED ELECTRICAL CONTRACTOR AND COORDINATE THE RELOCATION WITH KEITH KNAPP IN THE BUREAU OF ELECTRICAL AT (847) 524-2145.

13. FRAME AND GRATE REQUIREMENTS:
STORM STRUCTURE (PAVEMENT) – NEENAH R-1557 FRAME, R-2557 TYPE G GRATE
STORM STRUCTURE (CURB) – NEENAH R-1557 FRAME, R-2557 TYPE G GRATE
STORM STRUCTURE (GRASS) – NEENAH R-4341-A
SANITARY STRUCTURE – NEENAH R-1733 WITH SOLID LID
EXCEPTIONS TO ABOVE ARE NOTED ON PLANS.

REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

UTILITY PLAN

RESIDENTIAL DEVELOPMENT
SMITH ROAD
ST. CHARLES, ILLINOIS

Craig R. Knoche & Associates • Civil Engineers • Surveyors • Land Planners
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1181 Commerce Drive • Geneva, IL 60134 • phone (630) 845-1370 • fax (630) 845-1375

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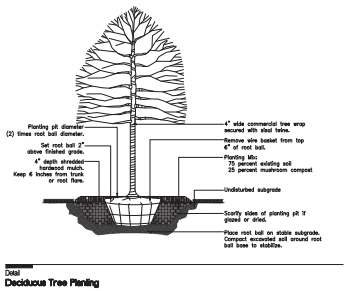
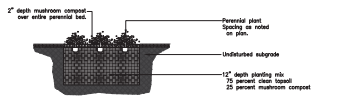
C3.1
SHEET NO.

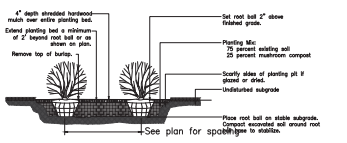
RESIDENTIAL DEVELOPMENT ST. CHARLES, ILLINOIS



Detail
Deciduous Tree Planting



Detail
Perennial Planting



Detail
Shrub Planting

Lo Pro Wet Mesic Prairie Grass Mix

Botanical Name	Common Name	Lbs./Acre
Calamagrostis canadensis	Blue Joint Grass	0.031
Carex annectens xanthocarpa	Yellow Sedge	0.063
Carex bebbii	Bebb's Sedge	0.600
Carex bicknellii	Bicknell's Sedge	0.125
Carex molesta	Field Ovoi Sedge	0.250
Carex normalis	Normal Sedge	0.063
Carex scoparia	Broom Sedge	0.500
Carex vulpinoidea	Fox Sedge	0.250
Elymus canadensis	Canadian Wild Rye	1.000
Elymus virginicus	Virginia Wild Rye	2.000
Glyceria striata	Manna Grass	1.000
Juncus spp.	Rush Species	0.031
Leersia oryzoides	Rice Cut Grass	0.250
Panicum virgatum	Switch Grass	0.250
Poa palustris	Marsh Blue Grass	1.000
Schizachyrium scoparium	Little Bluestem	2.000
Scirpus atrovirens	Dark Green Rush	0.500
Sporobolus heterolepis	Prairie Dropseed	0.250
Total		10.163 Lbs./Acre
Permanent Matrix		10.163 Lbs./Acre

Cover with NAG S75BN Erosion Control Blanket (biodegradable).

No Mow Seed Mix

Botanical Name	Common Name	Pounds per Acre
Festuca commutata	Longfellow II Chewings Fescue	50
Festuca obtusa	Nodding Fescue	50
Festuca ovina	Sheeps Fescue	50
Festuca rubra	Creeping Red Fescue	50

Cover with NAG S75BN Erosion Control Blanket (biodegradable).

Plant List

Shade Trees

Key	Qty.	Size	Botanical Name	Common Name	Remarks
ACM	9	2.5"	Acer miyabei 'Morton'	State Street Miyabe Maple	BB
CEO	10	2.5"	Celtis occidentalis	Common Hackberry	BB
GPS	3	2.5"	Ginkgo biloba 'Princeton Sentry'	Princeton Sentry Ginkgo	BB
GTS	9	2.5"	Gleditsia triacanthos var. inermis 'Skyline'	Skyline Thornless Honeylocust	BB
QUB	5	2.5"	Quercus bicolor	Swamp White Oak	BB
ULM	9	2.5"	Ulmus 'New Horizon'	New Horizon Elm	BB

Shrubs

Key	Qty.	Size	Botanical Name	Common Name	Remarks
JCS	6	24"	Juniperus chinensis var. sargentii	Sargent Juniper	BB

Perennials

Key	Qty.	Size	Botanical Name	Common Name	Remarks
ALL	14	#1	Allium 'Summer Beauty'	Summer Beauty Allium	Container
HLG	9	#1	Hemerocallis 'Little Grapette'	Little Grapette Daylily	Container

Emergents

Key	Qty.	Size	Botanical Name	Common Name	Remarks
ACO	426	2"	Acorus calamus	Sweet Flag	Plug
SAG	428	2"	Sagittaria latifolia	Duck Potato	Plug
SCA	280	2"	Scirpus acutus	Hard Stem Bulrush	Plug
SCV	354	2"	Scirpus validus	Great Bulrush	Plug
SPA	264	2"	Sparganium eurycarpum	Bur Reed	Plug

Smith Road Residential Development

Smith Road
St. Charles, Illinois

DAVID R. McCALLUM ASSOCIATES, INC.
LANDSCAPE ARCHITECTS
350 N. Milwaukee Avenue | Libertyville, Illinois 60048
T 847.362.0339 | F 847.362.0374

McCALLUM ASSOCIATES

Landscape Plan

Mark	Description	Date
2	For Review	04.23.18
1	For Review	04.19.18

Issuance

Number
47828

Scale
1" = 30'

North

File
47828PHA

Sheet
L1.0

GENERAL NOTES & 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 by project plans and specifications.

3. All work shall be in accordance with the standard specifications of the governing jurisdiction. Each Contractor shall be provided with the applicable sections of this specification in the bid package.

4. All elevations shown are plus and are NAVD88 Datum.

5. The governing jurisdiction 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 construction.

6. All work to meet the governing jurisdiction's Supplemental Codes unless the state codes are more restrictive.

7. The contractor(s) shall indemnify the owner, the engineer, and the governing jurisdiction, 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, bituminus, 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 within the plans.

14. All concrete used shall be I.D.O.T. class SI.

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 0.25 LB/SF +/- 0.01. 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 the governing jurisdiction's 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 elevations, location of other utilities, services, field tiles, etc.

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.

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 onsite pavement markings shall be painted traffic yellow 4" wide and 2 coats. Stop bars and lane lines shall be painted white.

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 the governing jurisdiction as to the necessity for and requirements relating to the inspection by an approved on-site engineer.

29. The governing jurisdiction 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 maintained.

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. There are two reports. The first is dated September 13, 2016 and was prepared by TSC. The second set of borings and associated report is an addendum to the first report, is dated March 31, 2017 and was also prepared by TSC. 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 suitable compacted fill.

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.

2. 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.

4. 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 the governing jurisdiction as to the necessity for and requirements relating to the inspection by an approved on-site engineer.

GENERAL NOTES FOR SANITARY SEWER CONSTRUCTION

DESIGN STANDARDS

A. Sanitary sewer system

Sanitary sewer system shall be designed to meet Illinois Environmental Protection Agency (IEPA), The Standard Specifications for Sewer and Water Main Construction in Illinois, latest edition, Metropolitan Water Reclamation District of Greater Chicago and other applicable requirements. The design shall incorporate the more stringent requirements of the following items or agency requirements:

1. Each single-family lot or each building in other than single-family development shall be served with a separate sanitary sewer service.

2. All structures shall include provisions for an overhead sewer system, unless otherwise approved by the Utilities Superintendent or Director of Public Works.

3. Manholes are to be provided at each change in direction of flow, change in pipe size, change in slope, change in material and at each intersection. Maximum manhole spacing is three hundred feet (300). Where feasible, the sanitary sewer system shall be designed so as to provide for manholes to be installed within the R.O.W. Sanitary sewers installed within the rights-of-way shall not be placed more than eight feet from edge of pavement.

4. Provide calculations to substantiate the available capacity of the receiving sewer.

5. Note on the plans which sewer lines are to be public and private.

6. Pipe shall be laid in approved bedding. Minimum size sewer main shall be eight inches (8"). Sanitary sewers with an invert elevation fifteen feet or greater in depth shall be ductile iron pipe. Sanitary services shall be a minimum of 4" with a minimum slope of 2.00%

7. When connecting to an existing sewer main by means other than an existing "Y", "T", or an existing manhole, one or the following methods shall be used:

a) Remove an entire section of pipe and replace with a "Y" or "T" branch section. Pipe section shall be removed by breaking only the top of one bell. After the "Y" or "T" branch is inserted, concrete shall be placed over the broken area to a minimum thickness of four inches (4") and to a dimension of eight inches (8") in all directions.

b) Using pipe cutter, neatly and accurately cut out desired length of pipe for insertion of proper fitting. Use "band-seal" couplings or similar couplings, and sewer rings and clamps to fasten the inserted fitting and hold it firmly in place. Mission couplings shall have the length of boot approximately equal to the pipe diameter. Follow manufacturer's recommendations for the installation.

c) Pipe penetrations into existing sanitary manholes shall be properly sized and cored and sealed with flexible watertight connections. No cut-in connection made by breaking or cutting a hole in the main and inserting the spigot end of an ordinary sewer pipe shall be permitted. No connections to manholes are permitted unless approved by the Superintendent.

8. New sanitary manholes are to be pre-cast reinforced concrete eccentric type with a minimum 48" I.D. barrel section, and monolithic bottom section; Pipe penetrations are to be sealed via the use of a cast-in-place flexible synthetic rubber pipe sleeve, which is to be fastened to the pipe with stainless steel bands. Barrel sections shall be sealed using a butyl rubber material strip and/or rubber gasket and a nine-inch (9") "MacWrap" external seal band or approved equal. Frames shall be sealed to the manhole by using either synthetic rubber seals with stainless steel bands or a heat shrinkable wrap around sleeve. Approved systems are external type chimney seals, manufactured by "Cretex" or "Canusa Wrapid Seal manhole encapsulation system. Existing frames requiring adjustment will also be required to be sealed. A maximum of eight inches (8") of adjusting rings may be used. All joints between pre-cast elements, adjusting rings and manhole frames shall be set in place using butyl rubber joint sealant. Steps shall be made of steel reinforced plastic, using an approved plastic meeting ASTM D4101, Type II, Grade 49108, over a #3 grade 60, ASTM A615, reinforcing bar. Steps shall be at 16" (inch) centers.

9. Sanitary sewer manholes constructed in a flood plain must have a rim twelve inches (24") above base flood elevation and have a water-tight-lock type frame and cover, Neenah R-1916 C or approved equal. Cover must have "SANITARY" cast into the top of the cover.

10. Except as provided in #8 above, all frames and covers are to be East Jordan Iron Works Number 1050-Z1, with concealed pick holes and sealed cover. Variations in casting dimensions shall be approved by Utilities Superintendent. Manhole covers must have "SANITARY" cast into the top of the cover. Manhole covers shall be EAST JORDAN IRON WORKS, product No. 102332, catalog No. 1020A, reference No. 102089. The cover casting shall include the Municipality's logo. All casting shall be coated immediately after cleaning and machining. Coating shall be a non-toxic water base asphalt paint, complying to the AWWA C104 specification.

11. All utility and service trenches under or within two feet of paved surfaces or driving areas shall be backfilled with CA-6 material properly compacted. Mechanically compacted backfill shall be placed in six-inch horizontal layers of thickness. Each layer shall be evenly spread, moistened (or dried, if necessary), and then tamped or rolled until 90 percent relative compaction is achieved.

WATER MAIN NOTES & SPECIFICATIONS

1. All water service horizontal and vertical separation from sanitary and storm sewers shall be the same as water main separations.

2. Water services shall have a minimum of 5.5 feet of cover from finished grade.

3. Any existing utility structures requiring modifications are to be adjusted (up to 12" total adjustment) by the contractor as part of the contract. Any adjustment of 2" or less shall use preformed rubber adjusting rings, which are 2" or less in thickness.

4. All water mains shall be cement lined ductile iron pipe, class 52 conforming to AWWA C-151 with push-on or mechanical joints and shall have a minimum of 5.5 feet of cover. Water mains shall be encased in polyethylene film in accordance with AWWA C-105-82. Fittings shall be cement lined, tar coated cast iron with mechanical joints rated 250 PSI per AWWA C110/Ansi 21.20 (Clow, American, U.S. Pipe, or equal). Trace Wire shall be installed (see COMM Supplemental Specifications).

5. All materials shall be verified with the local authority. Water services shall be type "K" copper water tube or the size shown on the plans, corporations stop, curb stop, and service box, all as required by the municipality, and all necessary labor, tools, equipment, excavations and back fill, for a complete installation as shown on the plans.

6. All fire hydrants shall be Waterous Pacer Model WB-67. Auxiliary valve to be resilient seat wedge gate valve, with valve inlet embossed "water". All fire hydrants shall be painted in accordance with the Municipal standards.

7. Water mains shall be protected in accordance with the requirements of the Illinois EPA. Where a sewer (sanitary or storm) crosses below a water main, a minimum vertical separation of 18" shall be provided between the top of the sewer pipe and the bottom of the water main pipe. When the 18" vertical separation is not provided and the water main is above the sewer (sanitary or storm), the sewer shall be constructed to water main standards for a minimum of 10 feet on each side of the water main unless otherwise noted on the drawings. When the water main crosses below the sewer (storm only), the sewer shall be constructed to water main standards for a minimum of 20 feet on each side of the water main unless otherwise noted on the drawings. If the water main crosses beneath the sewer (storm only), 18" vertical separation shall be provided in all cases. In addition, sewer pipe shall be supported in order to prevent pipe from sagging closer to the water main. Minimum water main cover is 5-1/2 feet. Minimum horizontal separation of 10' between sewers and water main shall be adhered to. Prior IEPA approval is required in order to construct water main under storm or sanitary sewers.

8. All horizontal and vertical separation between water main services and storm sanitary sewer shall be the same as listed in water main note 7.

9. Service lines (1.5" and smaller) shall be copper water tube, type k, and soft temper for underground service conforming to ASTM B-88 and B-251 and also conforming to all Village requirements.

10. The water main will be pressure tested according to Local Requirement

11. Sterilize pipe per local jurisdictional agency requirements. Minimum water main chlorination test shall result in a chlorine water mixture of at least 50 parts per million available at each outlet where sampling can be obtained from. Test periods for the water main shall be at least 24 hours and at the end of that time the chlorine residual shall be at least 10 ppm at the sampling points. If chlorine residual is less than 10 ppm, additional application shall be made and the retention period repeated until the required 10 ppm residual is obtained. After obtaining successful test results, flush heavily chlorinated water from the main until the replacement water is the same chemical and bacteriological quality as the water source.

12. There will be no 90 degree bends permitted on watermain installations.

13. All fittings shall be installed Field Lok (Tyler MJ Accessories).

14. Manholes used for valve vaults will be a minimum of five (5) feet in diameter measured internally.

15. Contractor must install a 1" flared corp. for filling and chlorinating.

REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

GENERAL NOTES & SPECIFICATIONS

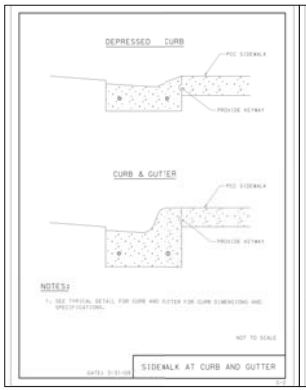
RESIDENTIAL DEVELOPMENT
SMITH ROAD
ST. CHARLES, ILLINOIS

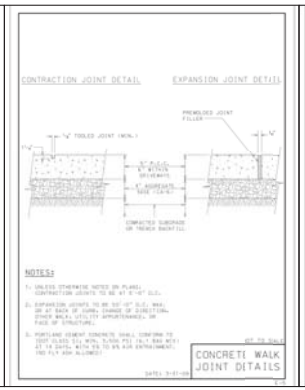
Craig R. Knoche & Associates • Civil Engineers • Surveyors • Land Planners
Civil Engineers, P.C.
24 N. Bennett Street • Geneva, IL 60134 • phone (630) 845-1370 • fax (630) 845-1375

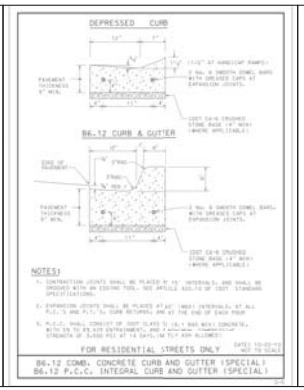
DATE: 4/30/18
FILE: 17-034 C70
JOB NO: 17-034

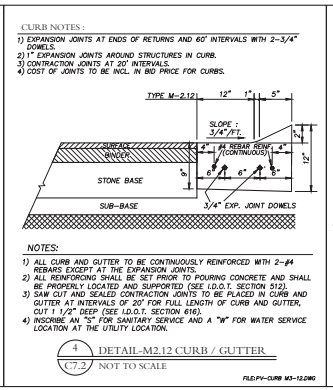
C7.1
SHEET NO.

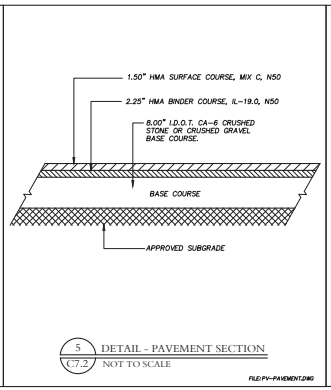
RESIDENTIAL DEVELOPMENT ST. CHARLES, ILLINOIS

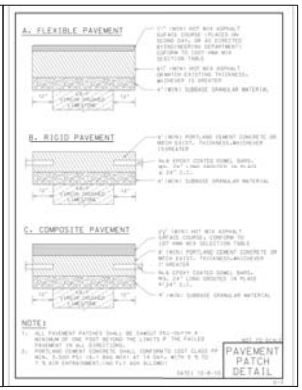


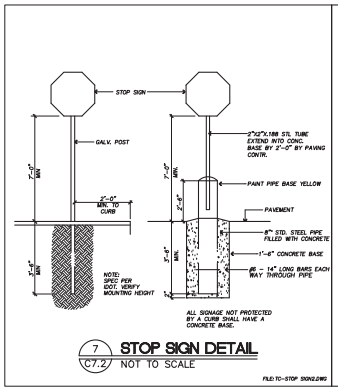


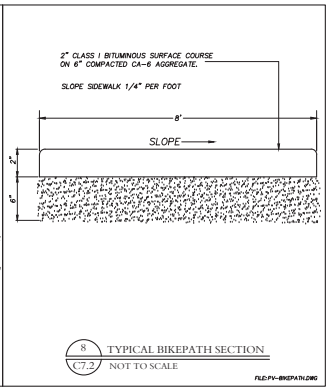












REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

SITE DETAILS

RESIDENTIAL DEVELOPMENT
SMITH ROAD
ST. CHARLES, ILLINOIS

Craig R. Knoche & Associates
Civil Engineers, P.C.
• Civil Engineers • Surveyors • Land Planners
24 N. Bennett Street • Geneva, IL 60134 • phone (630) 845-1370 • fax (630) 845-1375

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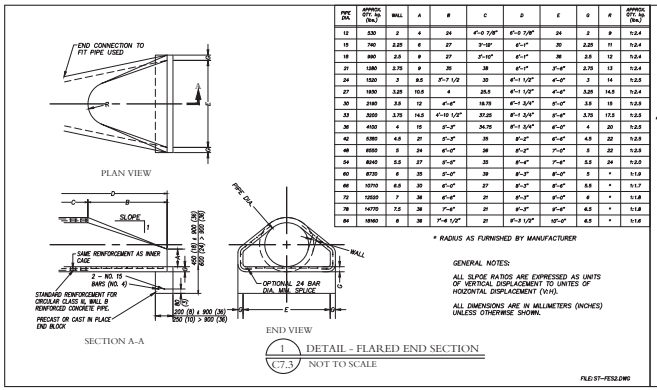
C7.2
SHEET NO.

RESIDENTIAL DEVELOPMENT ST. CHARLES, ILLINOIS



PIPE DIA.	APPROX. QTY. 1/2 (lbs.)	WALL	A	B	C	D	E	G	R	APPROX. QTY. 1/2 (lbs.)
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15	740	2.25	6	27	3'-10"	6'-1"	30	2.25	11	1:2.4
18	880	2.5	9	27	3'-10"	6'-1"	36	2.5	12	1:2.4
21	1280	2.75	9	30	38	6'-1"	3'-6"	2.75	13	1:2.4
24	1520	3	8.5	3'-7 1/2	33	6'-1 1/2"	4'-0"	3	14	1:2.5
27	1930	3.25	10.5	4	29.5	6'-1 1/2"	4'-6"	3.25	14.5	1:2.4
30	2160	3.5	12	4'-6"	16.75	6'-1 3/4"	5'-0"	3.5	15	1:2.5
33	3200	3.75	14.5	4'-10 1/2"	37.25	6'-1 3/4"	5'-6"	3.75	17.5	1:2.5
36	4100	4	15	5'-3"	34.75	6'-1 3/4"	6'-0"	4	20	1:2.5
42	5280	4.5	21	5'-3"	35	6'-2"	6'-6"	4.5	22	1:2.5
48	6550	5	24	6'-1"	38	6'-3"	7'-0"	5	22	1:2.5
54	8240	5.5	27	6'-6"	33	6'-4"	7'-6"	5.5	24	1:2.5
60	9720	6	33	6'-10"	39	6'-5"	8'-0"	5	*	1:1.8
66	10710	6.5	30	6'-10"	37	6'-5"	8'-6"	5.5	*	1:1.7
72	12530	7	36	6'-6"	31	6'-5"	8'-10"	6	*	1:1.8
78	14770	7.5	38	7'-6"	31	6'-5"	9'-6"	6.5	*	1:1.8
84	18160	8	38	7'-6 1/2"	31	6'-5 1/2"	10'-0"	6.5	*	1:1.8

* RADIUS AS FURNISHED BY MANUFACTURER

GENERAL NOTES:

ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITES OF HOZONTAL DISPLACEMENT (v:h).

ALL DIMENSIONS ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SHOWN.

1 DETAIL - FLARED END SECTION
C7.3 NOT TO SCALE

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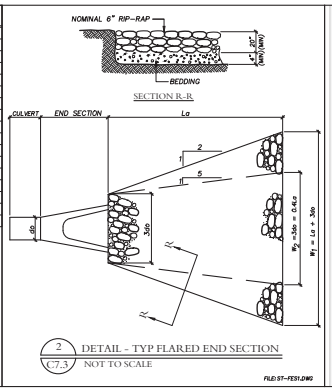

2 DETAIL - TYP FLARED END SECTION
C7.3 NOT TO SCALE

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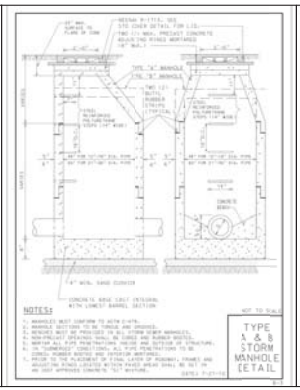

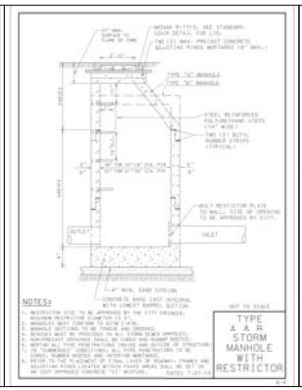

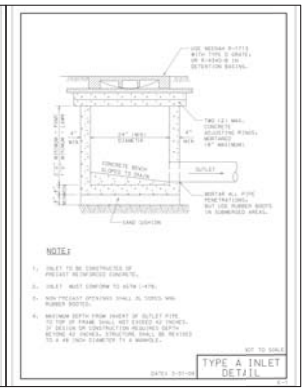

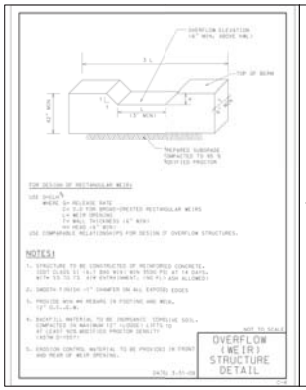

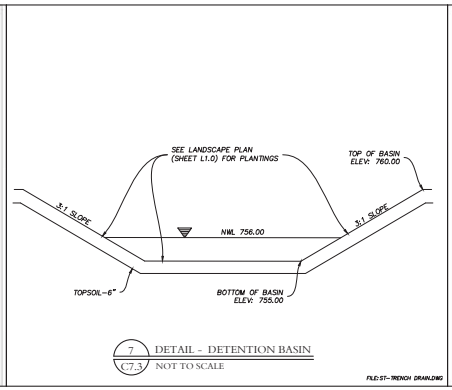

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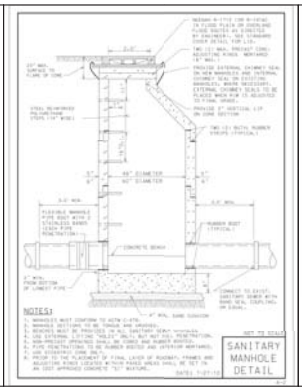

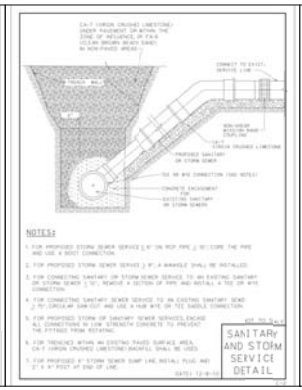

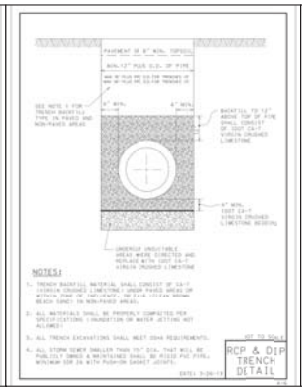

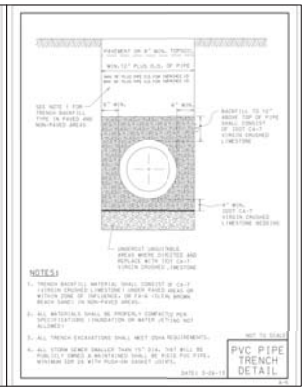

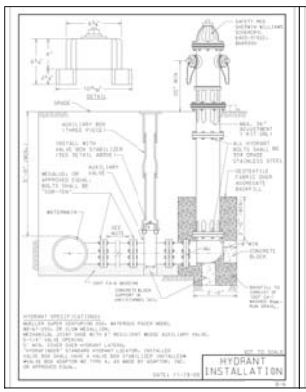

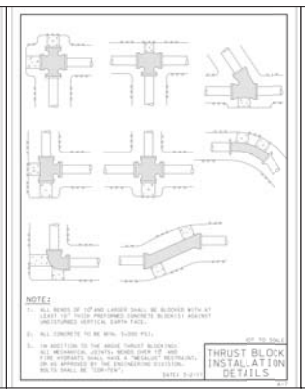

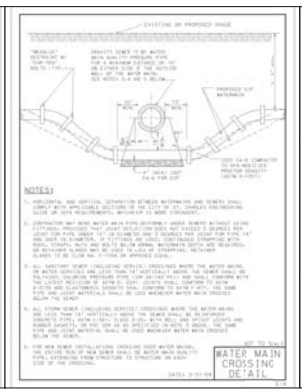

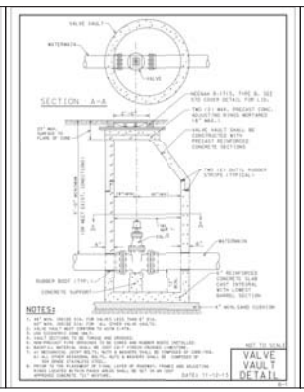

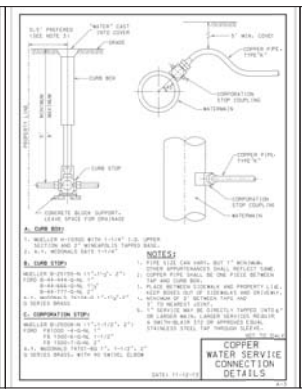

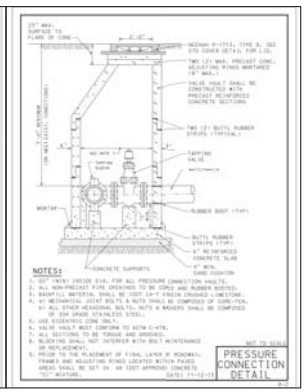

REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

UTILITY DETAILS

RESIDENTIAL DEVELOPMENT
SMITH ROAD
ST. CHARLES, ILLINOIS

Craig R. Knoche & Associates
Civil Engineers, P.C.
• Civil Engineers • Surveyors • Land Planners
24 N. Bennett Street • Geneva, IL 60134 • phone (630) 845-1370 • fax (630) 845-1375

DATE: 4/30/18
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JOB NO: 17-034

C7.3
SHEET NO.

RESIDENTIAL DEVELOPMENT ST. CHARLES, ILLINOIS

GHA GEWALT HAMILTON ASSOCIATES, INC.
CONSULTING ENGINEERS
625 Forest Edge Drive, Vernon Hills, IL 60061
TEL 847.478.9700 ■ FAX 847.478.9701
www.gha-engineers.com

Traffic Planning Study

To: Mr. Steven Kudwa, P.E.
Knoche Engineering, P.C.

From: Daniel P. Brinkman, P.E., PTOE
Senior Transportation Engineer

Date: March 27, 2018

Subject: Proposed Residential Development
Smith Road at Faith Lane
St. Charles, Illinois

Part I. Introduction and Project Context

Gewalt Hamilton Associates, Inc. (GHA) has conducted a traffic planning study for the proposed residential development located along the north side of Smith Road, between the two intersections of Pheasant Trail in St. Charles, Illinois. The site is currently vacant.

As proposed, the development consists of constructing sixteen (16) single family homes. Access to the site will be provided via the construction of a new City street; Faith Lane.

The following provides a summary of existing conditions, site traffic characteristics, and the analyses of the development's impact on the surrounding roadway network and site access. *Exhibits* and *Appendices* referenced are located at the end of this document.

Part II. Background Information

Site Location Map and Roadway Inventory

Exhibit 1 provides a location map of the site vicinity. *Exhibit 2* provides a photo inventory of current site conditions. Pertinent comments to the adjacent roadways include:

Smith Road

- Smith Road is a local (City of St. Charles) roadway that extends north from IL Rte 64 (North Avenue).
- At its unsignalized intersections with Pheasant Trail, Smith Road provides separate left turn lanes within a full width flush median that extends along the site frontage.
- The posted speed limit is 40 miles per hour (mph) along the site frontage.
- In 2016, the Illinois Department of Transportation (IDOT) completed a count which indicated that Smith Road between North Avenue and Powis Road carried approximately 8,150 vehicles per day.

Pheasant Trail / Camden Drive

- Pheasant Trail intersects Smith Road both east and west of the subject site. The western intersection is a "T" south of Smith Road. The eastern intersection is a 4-legged intersection with the northern leg changing name to Camden Drive.
- Pheasant Trail is under Stop sign control at both Smith Road intersections.

Pedestrian Facilities

- An approximately 5-ft wide concrete sidewalk exists along the south side of Smith Road from North Avenue, nearly to Powis Road.
- From Powis Road west to the site, there is an approximately 10-ft wide asphalt multi-use trail along the north side of Smith Road.
- West of the subject site there is a sidewalk on the north side of Smith Road.

Existing Traffic

Exhibit 3 summarizes the existing weekday morning and evening peak hour traffic volumes. A 24-hour traffic count was conducted by IDOT on Wednesday, April 13, 2016 between North Avenue and Powis Road. The observed weekday morning and evening peak hours occurred from 7:00 to 8:00 AM and 5:00 to 6:00 PM, respectively.

Exhibit 3 also provides the 2016 Annual Average Daily Traffic (AADT) volume along Smith Road from the IDOT website www.gettingaroundillinois.com.

Summaries of the 2016 IDOT traffic counts can be found in *Appendix A*. *Note the "raw" traffic data provided is adjusted based on day of week and month of year factors which results in an AADT which is lower than the total 24-hour count.*

Part III. Traffic Evaluation

Proposed Plan

Exhibit 4 illustrates the September 5, 2017 Site Plan of the development prepared by Knoche Engineering, P.C. As previously mentioned, the development consists of the construction of a new roadway (Faith Lane) and sixteen (16) single family homes. Faith Lane will provide a short boulevard style entrance consistent with the adjacent Pheasant Trail intersections. Lastly, the site plan illustrates the extension of the aforementioned asphalt multi-use trail along the frontage of the development. An existing overhead light and pole will have to be relocated to accommodate the new intersection.

Trip Generation and Directional Distribution

Exhibit 5 – Part A tabulates the traffic generation calculations for the proposed development. Trip generation rates published by the Institute of Transportation Engineers (ITE) in the 10th Edition of the Manual *Trip Generation* were used to determine the anticipated traffic from the proposed development. ITE Land Use Code (LUC) 210, Single-Family Detached Housing rates were used in the analyses. As can be seen, the development is expected to generate between 16 and 17 trips (combined inbound and outbound) during the Peak Hours and just less than 200 trips on a daily basis.

Exhibit 5 – Part B provides the anticipated trip distribution. This was based on existing site travel patterns and site access locations. Based on the patters observed, traffic volumes are anticipated to be slightly weighted towards the east and connections to Powis Road and IL Rte 59 via extensions of Smith Road.

Site and Total Traffic Assignments

Exhibit 6 illustrates the site traffic assignments for the development during the weekday peak hours, which are based on the traffic characteristics summarized in *Exhibit 5* (traffic generation and trip distribution) and assigned to the area roadways. Site and Existing traffic (see *Exhibits 6* and *3,* respectively) were combined to develop Total Traffic, which is illustrated on *Exhibit 7*. To be conservative we included a modest 2% growth in through traffic along Smith Road in the Total Traffic assignment.

Capacity Analysis

Capacity analyses are a standard measurement in the industry that identifies how an intersection operates. *Exhibit 8* – Part A lists the analysis parameters, as published in the Transportation Research Board's (TRB) Highway Capacity Manual (HCM), sixth edition, 2016. They are measured in terms of level of service (LOS). The concept of LOS is defined as a qualitative measure describing operational conditions within a traffic stream and their perception by motorists and/or passengers. A level-of-service definition provides an index to quality of traffic flow in terms of such factors as speed, travel time, freedom to maneuver, traffic interruptions, comfort, convenience, and safety.

Six levels of service are defined for each type of facility. They are given letter designations from A to F, with LOS A representing the best operating conditions and LOS F the worst. LOS C is often considered acceptable for design purposes and LOS D is usually considered as providing the lower threshold of acceptable operations. Since the level of service of a traffic facility is a function of the traffic flows placed upon it, such a facility may operate at a wide range of levels of service, depending on the time of day, day of week or period of year.

Capacity analyses were performed using the Highway Capacity Software (HCS) for the following scenarios:

- *Total Traffic* – Existing traffic (year 2016 +2%) plus the addition of site generated traffic.

Exhibit 8 - Part B summarizes the intersection capacity analysis results and calculated 95th-percentile queues. As can be seen, the proposed access drive (Faith Lane) is expected to operate at or above the Design LOS C under the total traffic assignments.

Capacity analysis summary printouts are provided in *Appendix C*

Access Location and Operations

As proposed, Faith Lane will be constructed approximately 460-ft east of the intersection of Smith Road and Pheasant Trail (west) and approximately 560-ft west of the intersection of Smith Road and Pheasant Trail (east) and Camden Drive. Given the limited projected turning movements at Faith Lane, we do not anticipate the additional traffic generated by the development resulting in any operational problems along the Smith Road corridor.

- The proposed separation from both Pheasant Trail intersections is sufficient.

- The Faith Lane access location provides more than sufficient sight distance along Smith Road.

- A separate eastbound left turn lane should be constructed within the existing median on Smith Road to serve Faith Lane. We would recommend a 115-ft storage length and a 135-ft (11:1) taper based on the 40 mph posted speed limit.

- Faith Lane should be under Stop sign control at its intersection with Smith Road.

- We would anticipate that the City will require parkway trees along the site frontage consistent with the pattern along the balance of Smith Road.

Part IV. Conclusions

A traffic planning study was performed for the proposed residential development to be located on the north side of Smith Road between the Pheasant Trail intersections. Based on our analyses, is our opinion that the additional traffic generated by the development can be easily accommodated by the area roadways. A separate eastbound left turn lane should be created within the existing median along Smith Road. However, no additional improvements are necessary to accommodate the anticipated development traffic volumes.

Part V. Technical Addendum

The following *Exhibits* and *Appendices* were previously referenced. They provide technical support for our observations, findings and recommendations discussed in the text.

Exhibits

1. Location Map
2. Photo Inventory
3. Existing Traffic
4. Site Plan
5. Project Traffic Characteristics
6. Site Traffic
7. Total Traffic
8. Intersection Capacity and Queue Analysis

Appendices

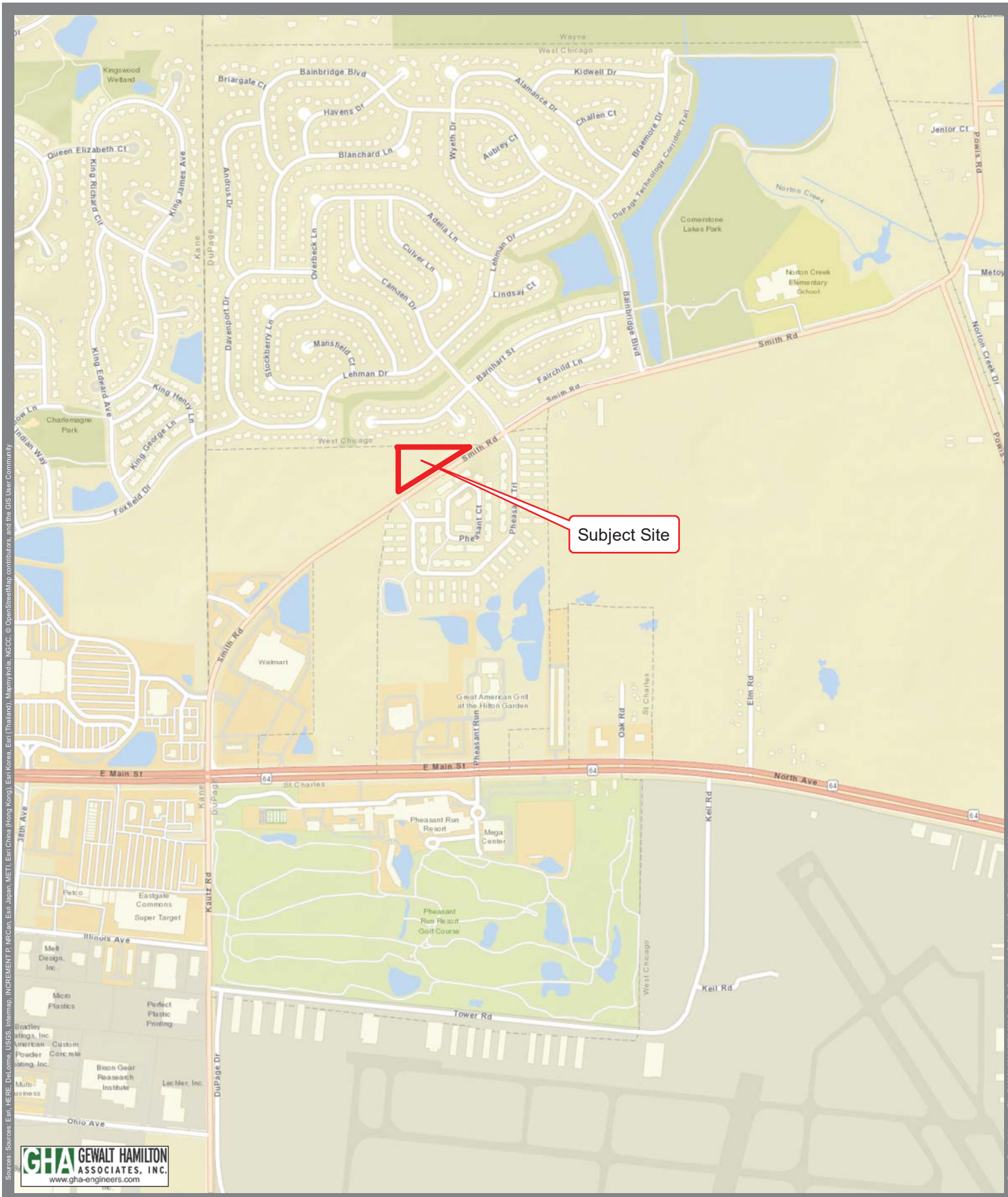
A. IDOT 2016 Traffic Count Summary
B. ITE LUC 210 information
C. Capacity Analysis Worksheets

Technical Addendum

GEWALT HAMILTON ASSOCIATES, INC.

Exhibits

GEWALT HAMILTON ASSOCIATES, INC.



GHA GEWALT HAMILTON ASSOCIATES, INC.
www.gha-engineers.com

N

1 inch = 1,000 Feet

Exhibit 1 - Location Map

Smith Road Residential
St Charles, IL

MapCode: Date: 3/23/2018 Project:

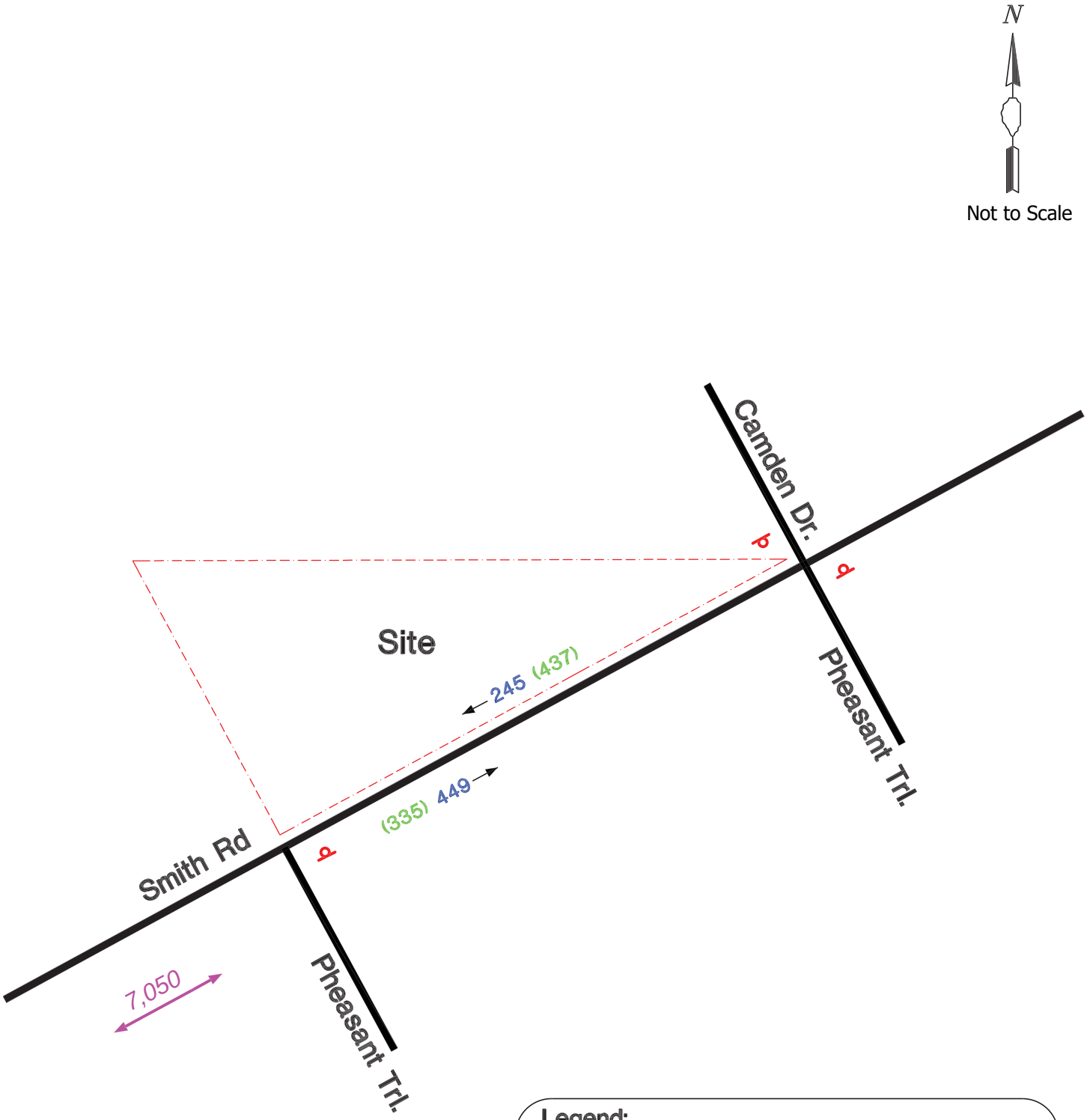
Drawn By: dbrinkman File: P:\0350-53995370.000 Smith Rd Residential St Charles\Study\Exhibits\Location Map.mxd

Looking west along Smith Road from Access

Looking east along Smith Road from Access

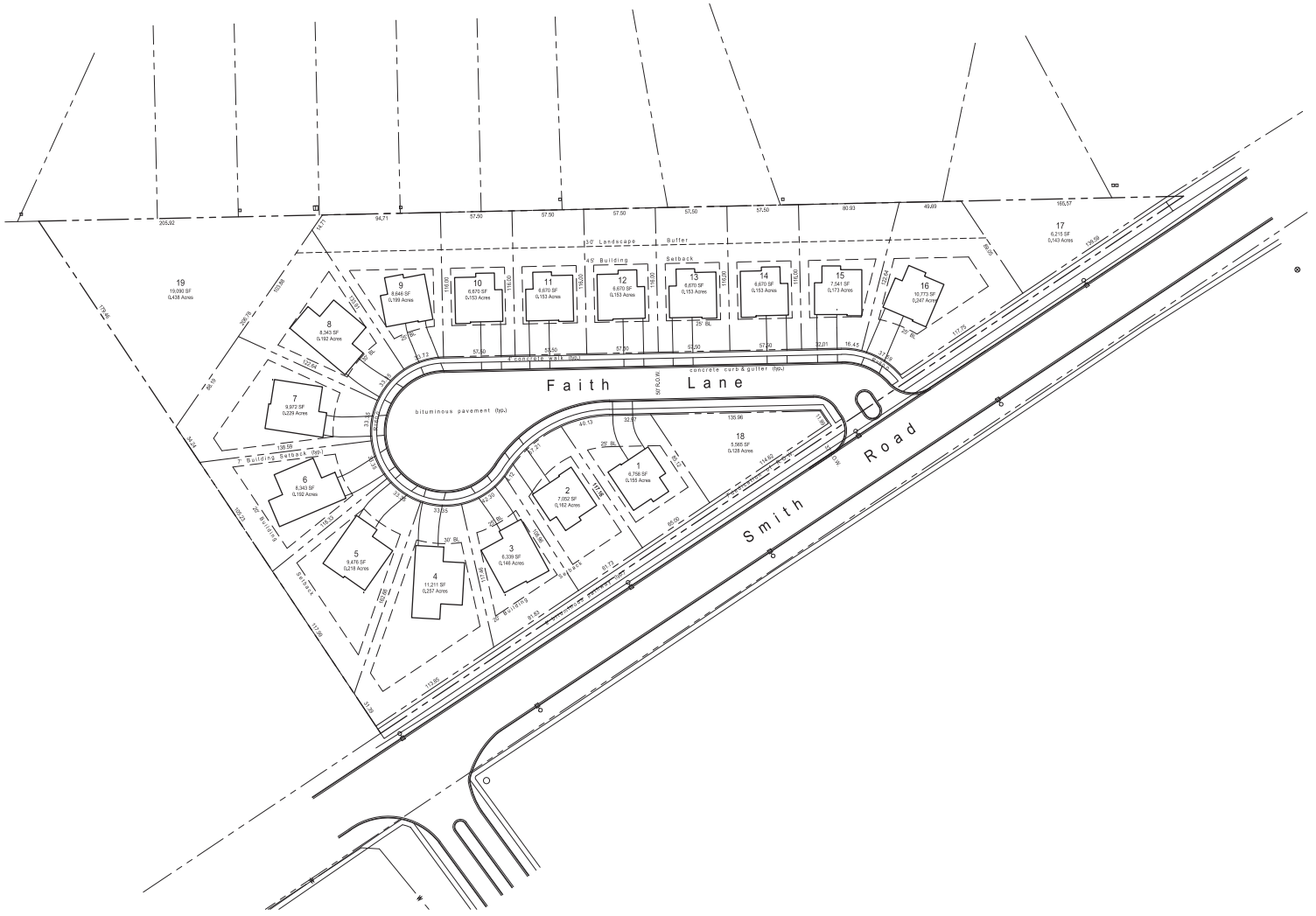
Looking east along Smit Road from Pheasant Trail

Looking south across Smith Road at Site



GEWALT HAMILTON ASSOCIATES, INC.

Exhibit 3
Existing Traffic
Sources: IDOT 2016



SITE ANALYSIS

SITE

NW Corner of Smith Road and Pheasant Trail
St. Charles, IL

Proposed Use	Single Family Residences
Existing Zoning	R-4 (Unincorporated DuPage County)
Required Zoning	RS-4 (City of St. Charles)
Parcel Area	191,712 sf ±4.40 Acres

LEGEND

- PROPOSED CURB & GUTTER
- EXISTING CURB & GUTTER
- PROPERTY LINE
- SETBACK LINE
- LIGHT POLE

SITE NOTES

1. ALL DIMENSIONS ARE BACK OF CURB UNLESS OTHERWISE NOTED.
2. ALL CURB RADII ARE BACK OF CURB UNLESS OTHERWISE NOTED.
3. CONTRACTOR TO VERIFY DIMENSIONS PRIOR TO STARTING WORK AND NOTIFY ENGINEER IF ANY DISCREPANCIES ARE FOUND.
4. SIDEWALK AROUND PERIMETER OF BUILDING SHALL BE INTEGRAL CURB AND SIDEWALK EXCEPT AT HANDICAP STALL LOCATIONS WHERE IT IS TO BE WALK/PAVEMENT UNLESS OTHERWISE SPECIFIED ON PLANS.
5. CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRING ALL EXISTING PAVEMENT DAMAGED DURING CONSTRUCTION.
6. SEE DETAILS FOR BITUMINOUS AND CONCRETE PAVEMENT SECTIONS.
7. CONTRACTOR TO PROVIDE TEMPORARY TRAFFIC CONTROL MEASURES DURING CONSTRUCTION OF ENTRANCE OF R.O.W. IN ACCORDANCE W/ ILLINOIS D.O.T. REQUIREMENTS.
8. ADA HANDICAP RAMPS SHALL BE INSTALLED AT ALL LOCATIONS DELINEATED ON PLANS AS WELL AS AT ALL LOCATIONS WHERE SIDEWALK ABUTS DRIVES OR ROADWAYS.
9. CONTRACTOR SHALL COMPARE ARCHITECTURAL AND ENGINEERING PLANS FOR INTERFACE COMPATIBILITY.
10. ALL CURB AND GUTTER SHALL BE B6.12 UNLESS OTHERWISE NOTED ON PLANS
11. PAVEMENT STRIPING TO BE TRAFFIC YELLOW TWO COATS UNLESS OTHERWISE SPECIFIED ON PLANS.
12. THERMOPLASTIC PAVEMENT MARKINGS ARE REQUIRED WITHIN THE COUNTY RIGHT-OF-WAY AND PROPOSED DRIVEWAY ENTRANCE TO SWIFT ROAD.

Exhibit 4 -Site Plan

REVISIONS

NO.	DATE	DESCRIPTION	NO.	DATE	DESCRIPTION

SITE PLAN

RESIDENTIAL DEVELOPMENT
SMITH ROAD
ST. CHARLES, ILLINOIS

Craig R. Knoche & Associates • Civil Engineers • Surveyors • Land Planners
Civil Engineers, P.C.
1181 Commerce Drive • Geneva, IL 60134 • phone (630) 845-1270 • fax (630) 845-1275

DATE: 9/5/17
FILE: 17-034 C10
JOB NO: 17-034

C1.1
SHEET NO.

RESIDENTIAL DEVELOPMENT ST. CHARLES, ILLINOIS

Exhibit 5

Project Traffic Characteristics

Smith Road Residential Development: St Charles, Illinois

Part A. Trip Generations

Development Component	ITE Land Use Code	Morning Peak Hour In	Morning Peak Hour Out	Morning Peak Hour Sum	Evening Peak Hour In	Evening Peak Hour Out	Evening Peak Hour Sum	Daily Sum
Single Family Subdivision • 16 homes	#210	**4**	**12**	**16**	**11**	**6**	**17**	**193**

Part B. Trip Distribution

Route	Direction (To /From)	Percent Use
Smith Road	West of Pheasant Trl	35%
	East of Camden / Pheasant Trl	65%
	Total =	**100%**

Source: Institute of Transportation Engineers (ITE), Trip Generation Manual; 10th Edition

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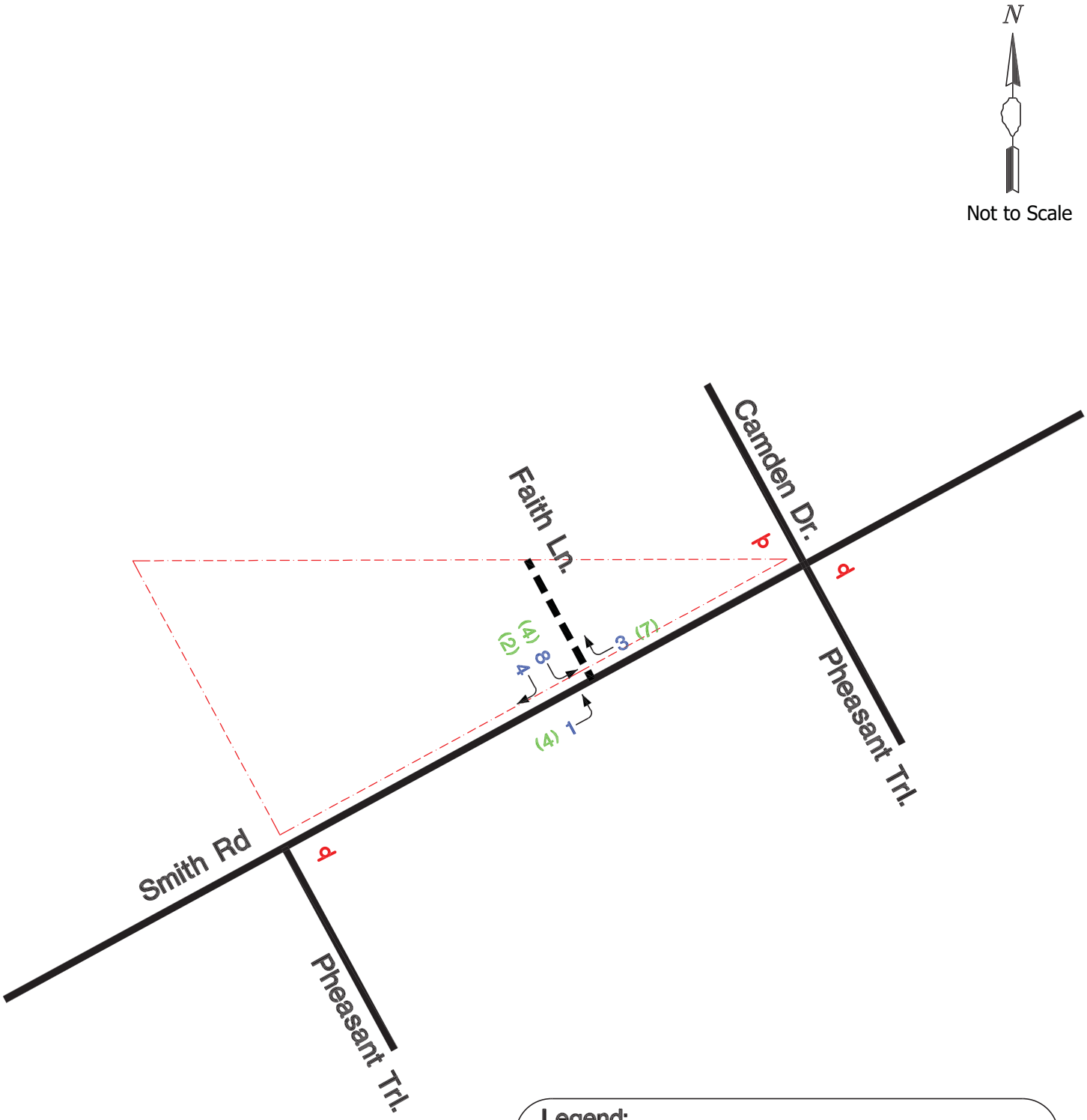
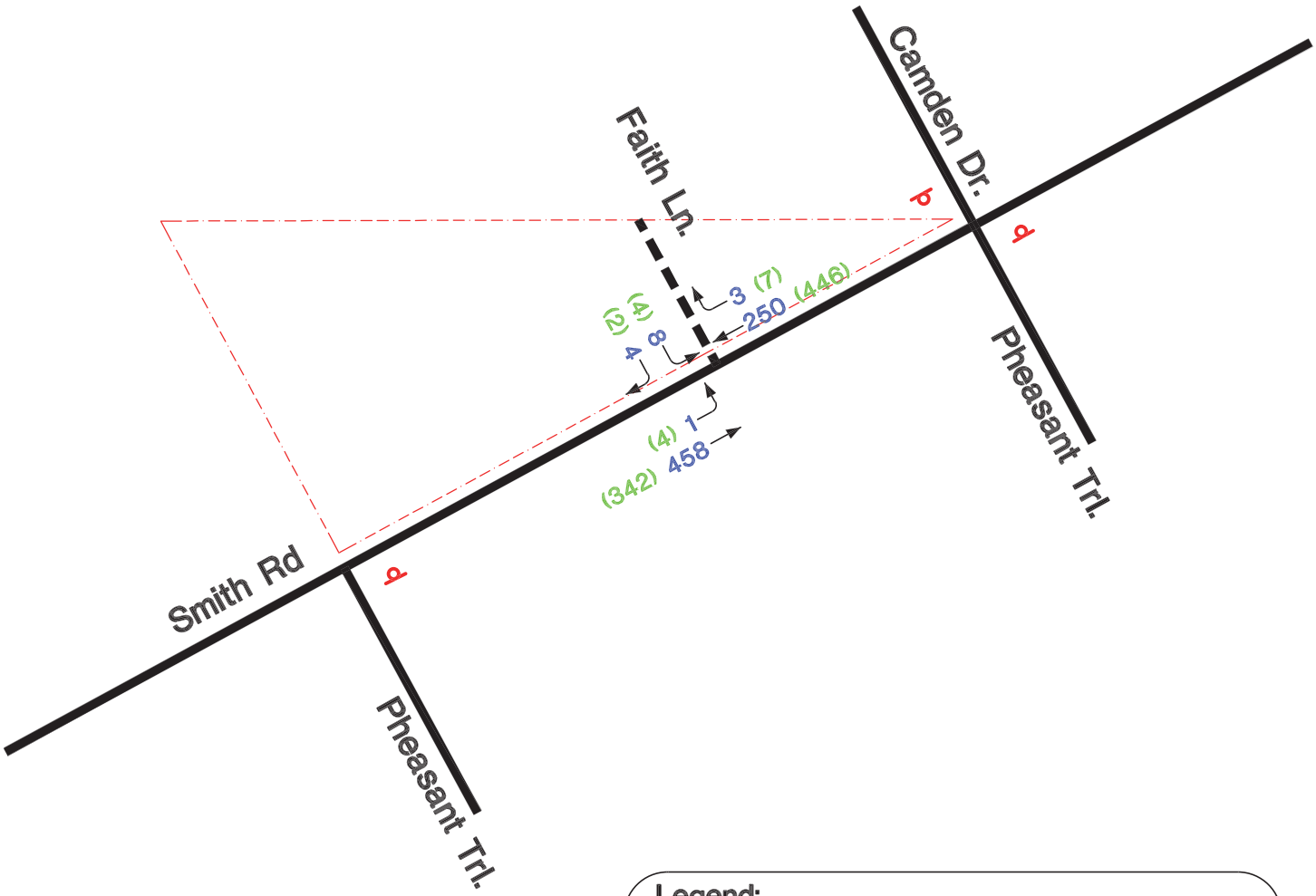


Exhibit 6
Site Traffic

GEWALT HAMILTON ASSOCIATES, INC.



Total Traffic includes 2% Growth along Smith Road

Legend:

XX – AM Peak Hour 7:00–8:00
(XX) – PM Peak Hour 5:00–6:00

– Existing Stop Sign

GEWALT HAMILTON ASSOCIATES, INC.

Exhibit 7
Total Traffic

Exhibit 8
Intersection Capacity and Queue Analyses

Residential Development; Smith Road, St. Charles, Illinois

Part A. Parameters - Type of Traffic Control *(Source: Highway Capacity Manual 6th Edition)*

I. Traffic Signals

LOS	Delay (sec / veh)	Description	Delay (sec / veh)
A	<10	All signal phases clear waiting vehicles without delay	< 10
B	>10 and < 20	Minimal delay experienced on select signal phases	>10 and < 15
C	>20 and < 35	Some delay experienced on several phases; often used as design criteria	>15 and < 25
D	>35 and < 55	Usually considered as the acceptable delay standard	>25 and < 35
E	>55 and < 80	Very long delays experienced during the peak hours	>35 and < 50
F	>80	Unacceptable delays experienced throughout the peak hours	>50

Part B. Results

	Roadway Conditions	LOS Per Movement By Approach (> = Shared Lane; - = Non Critical or not Allowed Movement)												Intersection / Approach	
		Eastbound			Westbound			Northbound			Southbound			Delay	
		LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	(sec / veh)	LOS
1. Faith Lane at Smith Road	TWSC - SB Stops													Intersection Delay	
A. Weekday Morning Peak Hour															
Total Traffic (See *Exhibit 7*)	• As Planned	A	-	-	-	-	-	-	-	-	>	B	<	10.7	B
	• 95th Queue Length (Veh)	<1										<1			
B. Weekday Evening Peak Hour															
Total Traffic (See Exhibit 7)	• As Planned	A	-	-	-	-	-	-	-	-	>	B	<	14.8	B
	• 95th Queue Length (Veh)	<1										<1			

GEWALT HAMILTON ASSOCIATES, INC.

Appendices

GHA GEWALT HAMILTON ASSOCIATES, INC.

Appendix A

IDOT 2016 Traffic Count Summary

GHA GEWALT HAMILTON ASSOCIATES, INC.

Location Info	
Location ID	022 3496_EB
Type	LINK
Functional Class	7
Located On	SMITH
Between	North Ave (IL- 64) AND Powis Rd
Direction	EB
Community	ST CHARLES
MPO_ID	
HPMS ID	
Agency	Illinois DOT

Count Data Info	
Start Date	4/13/2016
End Date	4/14/2016
Start Time	9:00 AM
End Time	9:00 AM
Direction	EB
Notes	
Source	RD
File Name	
Weather	
Study	
Owner	idotco

Interval: 60 mins

Time	Hourly Count
00:00 - 01:00	20
01:00 - 02:00	3
02:00 - 03:00	7
03:00 - 04:00	8
04:00 - 05:00	57
05:00 - 06:00	105
06:00 - 07:00	285
07:00 - 08:00	449
08:00 - 09:00	382
09:00 - 10:00	163
10:00 - 11:00	137
11:00 - 12:00	183
12:00 - 13:00	187
13:00 - 14:00	188
14:00 - 15:00	294
15:00 - 16:00	282
16:00 - 17:00	311
17:00 - 18:00	334
18:00 - 19:00	229
19:00 - 20:00	145
20:00 - 21:00	139
21:00 - 22:00	75
22:00 - 23:00	39
23:00 - 24:00	26
TOTAL	4048

Location Info	
Location ID	022 3496_WB
Type	LINK
Functional Class	7
Located On	SMITH
Between	North Ave (IL- 64) AND Powis Rd
Direction	WB
Community	ST CHARLES
MPO_ID	
HPMS ID	
Agency	Illinois DOT

Count Data Info	
Start Date	4/13/2016
End Date	4/14/2016
Start Time	9:00 AM
End Time	9:00 AM
Direction	WB
Notes	
Source	RD
File Name	
Weather	
Study	
Owner	idotco

Interval: 60 mins	
Time	**Hourly Count**
00:00 - 01:00	18
01:00 - 02:00	11
02:00 - 03:00	4
03:00 - 04:00	6
04:00 - 05:00	20
05:00 - 06:00	70
06:00 - 07:00	138
07:00 - 08:00	245
08:00 - 09:00	314
09:00 - 10:00	149
10:00 - 11:00	137
11:00 - 12:00	214
12:00 - 13:00	211
13:00 - 14:00	220
14:00 - 15:00	197
15:00 - 16:00	395
16:00 - 17:00	419
17:00 - 18:00	437
18:00 - 19:00	305
19:00 - 20:00	204
20:00 - 21:00	157
21:00 - 22:00	110
22:00 - 23:00	70
23:00 - 24:00	40
TOTAL	4091

Appendix B
ITE LUC 210 Information

GEWALT HAMILTON ASSOCIATES, INC.

Land Use: 210
Single-Family Detached Housing

Description

Single-family detached housing includes all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision.

Additional Data

The number of vehicles and residents had a high correlation with average weekday vehicle trip ends. The use of these variables was limited, however, because the number of vehicles and residents was often difficult to obtain or predict. The number of dwelling units was generally used as the independent variable of choice because it was usually readily available, easy to project, and had a high correlation with average weekday vehicle trip ends.

This land use included data from a wide variety of units with different sizes, price ranges, locations, and ages. Consequently, there was a wide variation in trips generated within this category. Other factors, such as geographic location and type of adjacent and nearby development, may also have had an effect on the site trip generation.

Single-family detached units had the highest trip generation rate per dwelling unit of all residential uses because they were the largest units in size and had more residents and more vehicles per unit than other residential land uses; they were generally located farther away from shopping centers, employment areas, and other trip attractors than other residential land uses; and they generally had fewer alternative modes of transportation available because they were typically not as concentrated as other residential land uses.

Time-of-day distribution data for this land use are presented in Appendix A. For the six general urban/suburban sites with data, the overall highest vehicle volumes during the AM and PM on a weekday were counted between 7:15 and 8:15 a.m. and 4:00 and 5:00 p.m., respectively. For the two sites with Saturday data, the overall highest vehicle volume was counted between 3:00 and 4:00 p.m. For the one site with Sunday data, the overall highest vehicle volume was counted between 10:15 and 11:15 a.m.

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in California, Connecticut, Delaware, Illinois, Indiana, Maryland, Minnesota, Montana, New Jersey, North Carolina, Ohio, Oregon, Pennsylvania, South Carolina, South Dakota, Tennessee, Vermont, and Virginia.

Source Numbers

100, 105, 114, 126, 157, 167, 177, 197, 207, 211, 217, 267, 275, 293, 300, 319, 320, 356, 357, 367, 384, 387, 407, 435, 522, 550, 552, 579, 598, 601, 603, 614, 637, 711, 716, 720, 728, 735, 868, 903, 925, 936

Single-Family Detached Housing
(210)

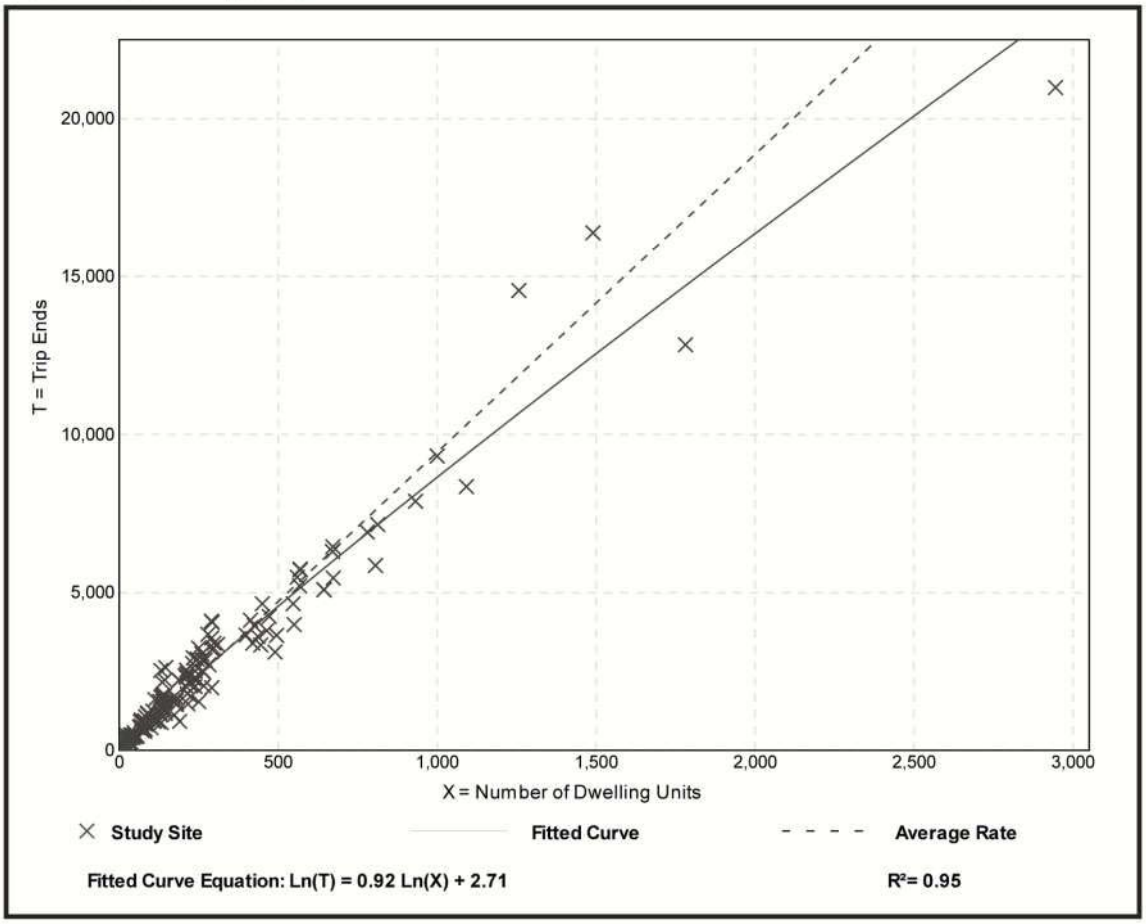
Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday**

Setting/Location: **General Urban/Suburban**
Number of Studies: 159
Avg. Num. of Dwelling Units: 264
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
9.44	4.81 - 19.39	2.10

Data Plot and Equation



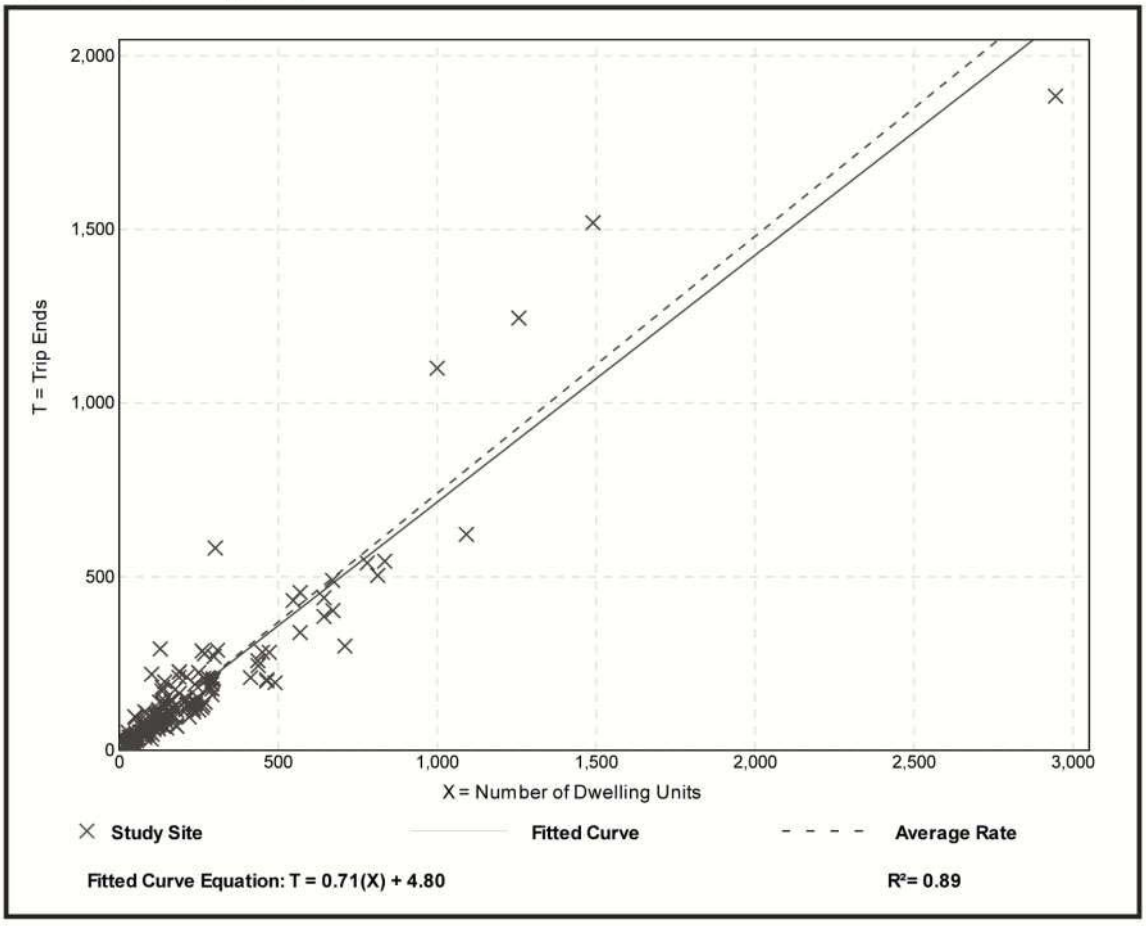
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 173
Avg. Num. of Dwelling Units: 219
Directional Distribution: 25% entering, 75% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.74	0.33 - 2.27	0.27

Data Plot and Equation



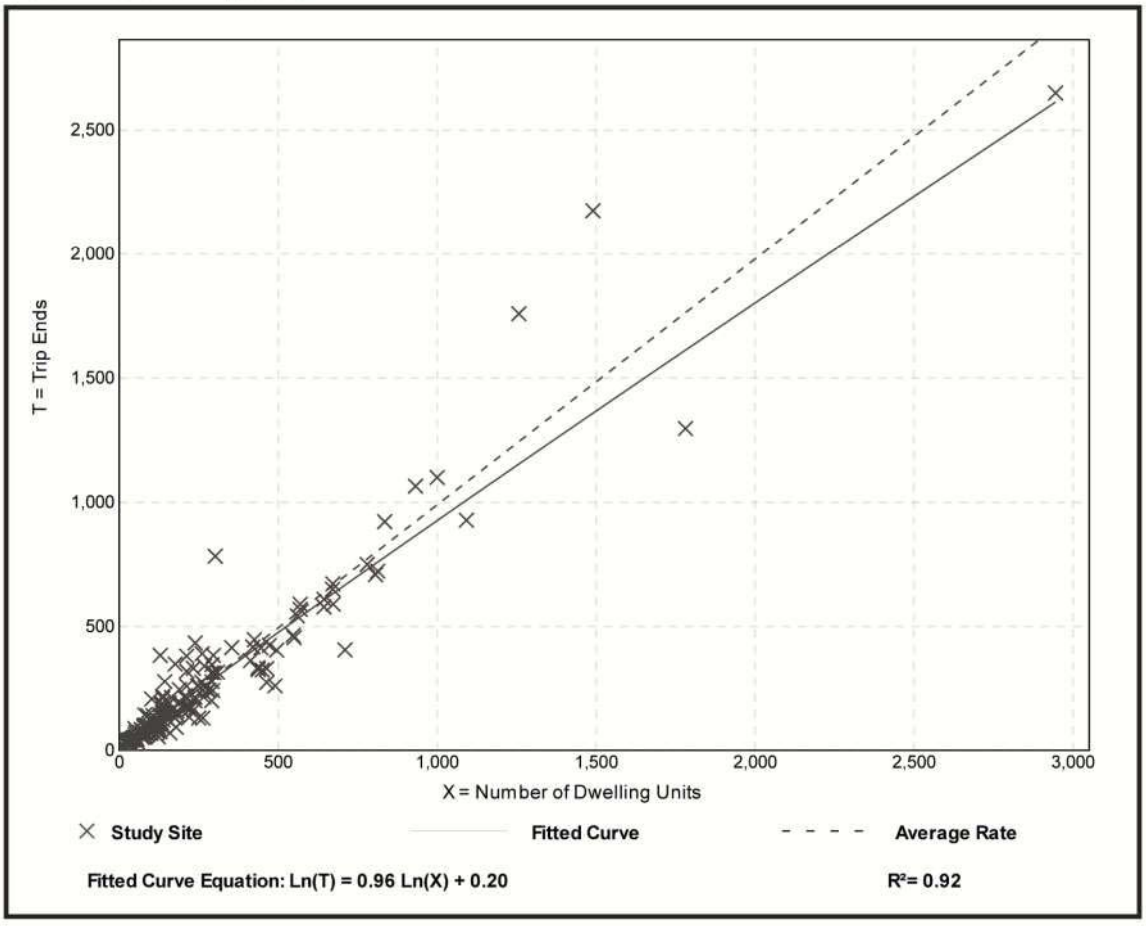
Single-Family Detached Housing
(210)

Vehicle Trip Ends vs: **Dwelling Units**
On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: **General Urban/Suburban**
Number of Studies: 190
Avg. Num. of Dwelling Units: 242
Directional Distribution: 63% entering, 37% exiting

Vehicle Trip Generation per Dwelling Unit

Average Rate	Range of Rates	Standard Deviation
0.99	0.44 - 2.98	0.31

Data Plot and Equation



Appendix C
Capacity Analysis Worksheets

GHA GEWALT HAMILTON ASSOCIATES, INC.

HCS7 Two-Way Stop-Control Report

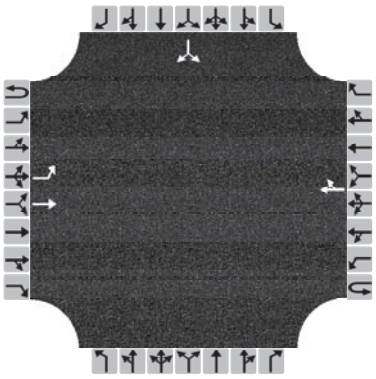
General Information

Analyst	DPB
Agency/Co.	GHA
Date Performed	3/23/2018
Analysis Year	2018
Time Analyzed	AM
Intersection Orientation	East-West
Project Description	SMITH RD RESIDENTIAL

Site Information

Intersection	FAITH LN AT SMITH RD
Jurisdiction	LOCAL
East/West Street	SMITH ROAD
North/South Street	FAITH LN
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		L	T					TR							LR	
Volume, V (veh/h)		1	458				245	3						8		4
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)		4.1												7.1		6.2
Critical Headway (sec)		4.13												6.43		6.23
Base Follow-Up Headway (sec)		2.2												3.5		3.3
Follow-Up Headway (sec)		2.23												3.53		3.33

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		1													13	
Capacity, c (veh/h)		1287													438	
v/c Ratio		0.00													0.03	
95% Queue Length, Q_{95} (veh)		0.0													0.1	
Control Delay (s/veh)		7.8													13.5	
Level of Service, LOS		A													B	
Approach Delay (s/veh)		0.0												13.5		
Approach LOS														B		

HCS7 Two-Way Stop-Control Report

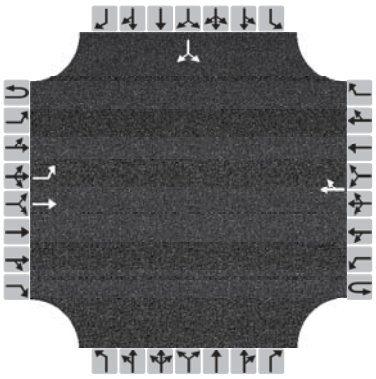
General Information

Analyst	DPB
Agency/Co.	GHA
Date Performed	3/23/2018
Analysis Year	2018
Time Analyzed	PM
Intersection Orientation	East-West
Project Description	SMITH RD RESIDENTIAL

Site Information

Intersection	FAITH LN AT SMITH RD
Jurisdiction	LOCAL
East/West Street	SMITH ROAD
North/South Street	FAITH LN
Peak Hour Factor	0.92
Analysis Time Period (hrs)	0.25

Lanes



Major Street: East-West

Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Priority	1U	1	2	3	4U	4	5	6		7	8	9		10	11	12
Number of Lanes	0	1	1	0	0	0	1	0		0	0	0		0	1	0
Configuration		L	T					TR							LR	
Volume, V (veh/h)		4	345				446	7						4		2
Percent Heavy Vehicles (%)		3												3		3
Proportion Time Blocked																
Percent Grade (%)														0		
Right Turn Channelized		No				No				No				No		
Median Type/Storage		Undivided														

Critical and Follow-up Headways

Base Critical Headway (sec)																
Critical Headway (sec)																
Base Follow-Up Headway (sec)																
Follow-Up Headway (sec)																

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		4													6	
Capacity, c (veh/h)		1064													374	
v/c Ratio		0.00													0.02	
95% Queue Length, Q_{95} (veh)		0.0													0.0	
Control Delay (s/veh)		8.4													14.8	
Level of Service, LOS		A													B	
Approach Delay (s/veh)		0.1												14.8		
Approach LOS														B		

RATHJE | WOODWARD LLC
ATTORNEYS AT LAW, ESTABLISHED 1938.
300 EAST ROOSEVELT ROAD, SUITE 300
WHEATON, ILLINOIS 60187

630-668-8500
FAX: 630-668-9218
kcarrara@rathjewoodward.com
Direct: 630-510-4924

July 13, 2018

Via First Class U.S. Mail & Email
Mr. Todd Wallace
Chair
City of St. Charles Plan Commission
c/o Russel Colby
2 East Main Street
St. Charles, IL 60174

Re: Smith Road Estates

Dear Mr. Wallace:

Please be advised that our firm represents Albert Petkus the property owner directly to the west of the Smith Road Estates (the "Project"). It is our understanding that the Petitioner has submitted final engineering for the Project. As you may recall from our client's previous presentations to the Plan Commission and the numerous concerns raised by the resident of West Chicago this area has a number of water drainage issues and wetlands present.

With the available information in hand our client is not generally opposed to the development; however, he wishes to make sure that adequate review and consideration of the drainage issues are fully vetted to avoid any additional water ponding, erosion or other problems from occurring on his property from the upstream development.

While we unfortunately have not had the opportunity to have our engineers review the proposed final engineering for the Project, it does appear from initial review of the site plan the Project does not anticipate piping its stormwater discharge to the available West Chicago drain structures to the north which was anticipated in the current Boundary Line agreement. An organized and coordinated stormwater plan between our client's property and the Project could possibly lead to better results for the City, the neighbors in West Chicago and both property owners. Such an analysis is worth considering as both of the properties develop and come on line.

As always, we trust that the Plan Commission, the City's staff and outside consultants will fully consider the potential impact of the upstream development on the downstream property and deliberate over what engineering solutions are best suited to protect everyone knowing the water problems that exist in the area.

Mr. Todd Wallace
July 13, 2018

Thank you for considering the above concerns during the public hearing process. If you should have any questions, please do not hesitate to contact me.

Sincerely yours,

RATHJE WOODWARD LLC

Kevin M. Carrara

KMC/lp