

FINAL ENGINEERING PLANS FOR: 7TH AVENUE CREEK DRAINAGE IMPROVEMENTS AT JOHN DEUTSCH CULVERT CITY OF ST. CHARLES, ILLINOIS KANE COUNTY, ILLINOIS

SITE BENCHMARKS:

SEE SHEET C-02 FOR BENCHMARK INFORMATION

NOTE:

- CITY OF ST. CHARLES IS TO BE NOTIFIED 3 DAYS PRIOR TO CONSTRUCTION START.
- CITY OF ST. CHARLES SHALL BE INCLUDED IN ALL PRE-CONSTRUCTION MEETINGS.
- ANY KNOWN DISCREPANCIES ON THIS PLAN SET MUST BE BROUGHT TO THE ATTENTION OF CITY OF ST. CHARLES PRIOR TO THE START OF CONSTRUCTION.

Dial 811 or 1-800-892-0123

JULIE DESIGN TICKET NUMBER:# A1861870



WITH THE FOLLOWING:
COUNTY KANE COUNTY
CITY-TOWNSHIP KANE COUNTY-ST. CHARLES TOWNSHIP
SEC. & 1/4 SEC. NO.# 34 & 35-40 N.-8 E.

Know what's below.
Call before you dig.

Two (2) working days before you dig
(Excluding Sat., Sun. & Holidays)

CLIENT:

CITY OF ST. CHARLES
KAREN YOUNG, P.E., CFM
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CITY OF ST. CHARLES
2 E. MAIN STREET
ST. CHARLES, IL 60174
PHONE: 630-377-4405

ENGINEER / SURVEYOR:

HR GREEN INC.,
420 N. FRONT ST.
McHENRY IL. 60050
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BERNIE BAUER, P.L.S. - PROJECT LAND SURVEYOR
PHONE: (630) 708-5033

AJAY JAIN, P.E., CFM, - VICE PRESIDENT,
WATER RESOURCES PRACTICE LEADER
PHONE: (815) 759-8331

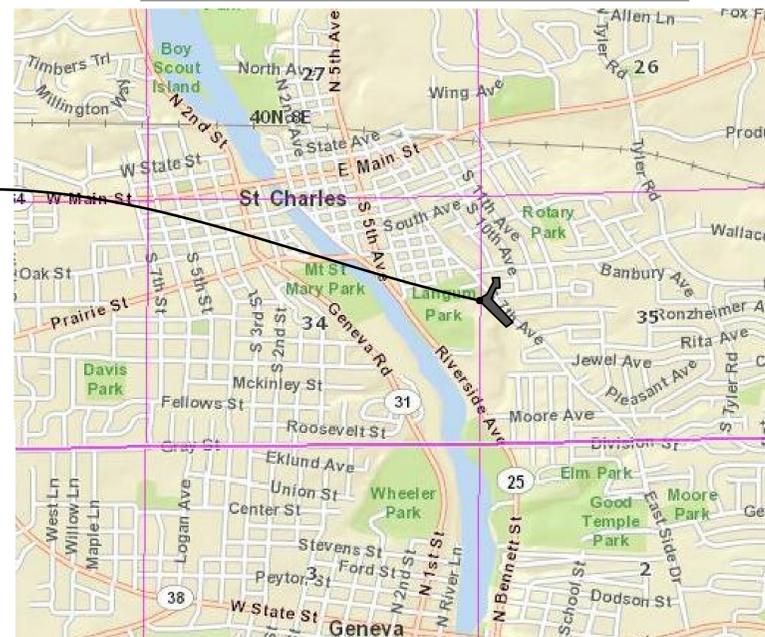
RALPH STARK, P.E., CFM,
ASSOCIATE/LEAD WATER RESOURCE ENGINEER
PHONE: (815) 759-8357

UTILITY CONTACT INFORMATION

J.U.L.I.E.	DESIGN TICKET #A1861870	ILLINOIS JULIE, 800-892-0123
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SANITARY/ WATER	PUBLIC WORKS DEPARTMENT PUBLIC WORKS FIELD OFFICE 200 DEVEREAUX WAY ST. CHARLES, IL 60174	630-377-4405
ELECTRICAL POWER	CITY OF ST. CHARLES (ALONG JOHN DEUTSCH DR.) THOMAS BRUHL	630-377-4405
NATURAL GAS	NICOR GAS YVONNE HARRIS NEW BUSINESS COORDINATOR 90 N. FINLEY ROAD GLEN ELLYN, IL 60137	630-317-1684
TELEPHONE	ATT/DISTRIBUTION JANET AHERN 1000 COMMERCE DRIVE, FLOOR 1 OAK BROOK, IL 60523 MM3781@ATT.COM	630-573-5450 630-573-5495
CABLE/ INTERNET	COMCAST MARTHA GIERAS 680 INDUSTRIAL DRIVE ELMHURST, IL 60126	224-229-5862
	WIDE OPEN WEST PAUL FLINKOW 1674 FRONTENAC RD NAPERVILLE, IL 60563	630-536-3100 630-536-3139
EPA	I.E.P.A. - PERMIT SECTION, DIVISION OF WATER POLLUTION P.O. BOX 19276 SPRINGFIELD, IL 62794-9276	217-782-0610
GEOTECHNICAL AND TESTING	MIDLAND STANDARD ENGINEERING MICHAEL PRIGGE, P.E. 558 PLATE DRIVE EAST DUNDEE, IL 60118	847-844-1895

**PROJECT
LOCATION**
7TH AVE. CREEK DRAINAGE
IMPROVEMENTS AT JOHN
DEUTSCH CULVERT

LOCATION MAP



420 N. FRONT STREET, SUITE 100 | McHENRY, IL 60050
Phone: 815.385.1778 | Toll Free: 800.728.7805 | Fax: 815.385.1781 | HRGreen.com

Sheet List Table

Sheet Number	Sheet Title
CIVIL - FINAL ENGINEERING	
C-01	COVER SHEET
C-02	GENERAL NOTES
C-03	GENERAL NOTES
C-04	EROSION CONTROL AND STORMWATER POLLUTION PREVENTION PLAN
C-05	EROSION CONTROL AND STORMWATER POLLUTION PREVENTION PLAN
C-06	GENERAL SITE PLAN
PROJECT LOCATION 1 - BASE BID	
C-07	JOHN DEUTSCH DR. - DETAILED EXISTING CONDITIONS
C-08	UPSTREAM OF JOHN DEUTSCH DR. - DETAILED EXISTING CONDITIONS
C-09	JOHN DEUTSCH DRIVE - TREE REMOVAL AND EROSION CONTROL PLAN
C-10	JOHN DEUTSCH DRIVE - TREE REMOVAL AND EROSION CONTROL PLAN
C-11	JOHN DEUTSCH DRIVE - DETAILED DEMOLITION PLAN
C-12	UPSTREAM OF JOHN DEUTSCH DRIVE - DETAILED DEMOLITION PLAN
C-13	JOHN DEUTSCH DRIVE - PROP. GRADING, UTILITY & RESTORATION PLAN
C-14	JOHN DEUTSCH DRIVE - CULVERT AND ROADWAY SECTIONS
C-15	JOHN DEUTSCH DRIVE - PAVEMENT RESTORATION PLAN
STRUCTURAL - PROJECT LOCATION 1 - BASE BID	
S-01	JOHN DEUTSCH - DOUBLE BOX CULVERT GENERAL PLAN AND ELEVATION
S-02	MULTI-CELL C.I.P. CONCRETE BOX CULVERT APRON END SECTION DETAIL
S-03	MULTI-CELL C.I.P. CONCRETE BOX CULVERT APRON END SECTION DETAIL
PROJECT LOCATION 1 - ALTERNATE BID	
ALT-1	JOHN DEUTSCH DRIVE - EXISTING CULVERT REHABILITATION
PROJECT LOCATION 2 - BASE BID	
CZ-01	7TH AVENUE - EXISTING CONDITIONS PLAN AND PROFILE
CZ-02	7TH AVE CULVERT - PROPOSED CULVERT REHABILITATION - DETAILS
PROJECT LOCATION 2 - ALTERNATE BID	
NET 2	7TH AVENUE - CULVERT LINING
DETAILS (FOR ALL PROJECT LOCATIONS - BASE BID AND ALTERNATE BID)	
EC-01	EROSION CONTROL DETAILS
EC-02	EROSION CONTROL DETAILS
EC-03	EROSION CONTROL DETAILS
EC-04	EROSION CONTROL DETAILS
EC-05	EROSION CONTROL DETAILS
CD-01	STANDARD CONSTRUCTION DETAILS
CD-02	STANDARD CONSTRUCTION DETAILS
CD-03	STANDARD CONSTRUCTION DETAILS
CD-04	STANDARD CONSTRUCTION DETAILS

CERTIFICATION

CIVIL

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Illinois.

Jason M. Whyte
JASON M. WHYTE, P.E.
License Number: 062060462
My license renewal date is 11/30/2019.
Pages or sheets covered by this seal:
C-01 - C-15, ALT-1, CZ-01, CZ-02, ALT-2, EC-01 - EC-05, CD-01 - CD-04

8/01/2018
DATE

STRUCTURAL

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Illinois.

Steven L. Schwarz
STEVEN L. SCHWARZ, S.E.
License Number: 081-6011
My license renewal date is 11/30/2018.
Pages or sheets covered by this seal:
S-01 - S-03

8/01/2018
DATE

FOR BID
~~NOT~~ FOR CONSTRUCTION

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NO.	DATE	BY	REVISION DESCRIPTION

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McHENRY, ILLINOIS 60050
PHONE: 815.385.1778 | TOLL FREE: 800.728.7805
FAX: 815.385.1781 | HRGreen.com

PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT AND 7TH AVENUE CULVERT REHABILITATION
CLIENT: CITY OF ST. CHARLES
KANE COUNTY, IL

CIVIL - FINAL ENGINEERING
COVER SHEET

SHEET NO.
C-01

GENERAL NOTES:

- All items of this project shall be governed by specifications included in the documents listed below:
 - "Standard Specifications for Road and Bridge Construction" prepared by the Department of Transportation of the State of Illinois and adopted by said department (Latest Edition).
 - "Supplemental Specifications and Recurring Special Provisions" adopted by the Illinois Department of Transportation (Latest Edition).
 - "Bureau of Design & Environment Manual" (BDE) by Illinois Department of Transportation (Latest Edition)
 - "Manual on Uniform Traffic Control Devices" - Federal Highway Administration MUTCD (Latest Edition)
 - "Illinois Supplement to the National Manual on Uniform Traffic Control Devices" (Latest Edition).
 - "Standard Specifications for Water and Sewer Main Construction in Illinois" (Latest Edition).
 - "Illinois Urban Manual" prepared by the U.S. Department of Agriculture NRCS and maintained by the Association of Illinois Soil and Water Conservation Districts (Latest Edition).
 - "Standards and Specifications for Soil Erosion and Sediment Control" by IEPA, Illinois Urban Manual - A Technical Manual Designed For Urban Ecosystem Protection and Enhancement, (Latest Edition).
 - "Kane County Stormwater Management Ordinance"
 - "City of St. Charles Stormwater Management Ordinance"
 - City of St. Charles Design and Inspection Policy Manual.

In addition the following special provisions supplement the said specifications, and in case of conflict with any part or parts of said specifications, these special provisions shall take precedence and shall govern.

- SCOPE OF WORK: The proposed improvement consists of supplying all the necessary labor, material and equipment to satisfactorily construct and install all improvements according to the plans designated as 7TH AVENUE CREEK, DRAINAGE IMPROVEMENTS AT JOHN DEUTSCH CULVERT.

COORDINATION WITH UTILITIES

Prior to the start of construction, the contractor shall have all utilities located by J.U.L.I.E. (811) or (1-800-892-0123) at least 48 hours prior to the start of construction. The contractor shall cooperate with all utility owners as provided for in the Standard Specifications.

The contractor shall be responsible for the protection of all underground or surface utilities, even though they may not be shown on the plans. Any utility that is damaged during construction shall be repaired or replaced to the satisfaction of the Engineer or the Owner. This work shall be paid for at the Contractor's expense.

It is the Contractor's responsibility to locate all existing utilities prior to construction. The location of existing utilities as shown on these plans is based on record information and may not be accurate. Where conflict exists between existing utilities and the proposed underground piping requiring a revision to the plans, such construction shall not be undertaken until such changes are approved by the Engineer. The contractor shall report all such conflicts immediately to the Engineer.

All existing utilities within the project area shall be removed and relocated, if necessary, for construction by the utility company which has jurisdiction over it. The Contractor is responsible for scheduling with the appropriate utility company.

Where proposed water main crosses under existing gas main the Contractor shall provide extra care when installing proposed water main to prevent damage to existing gas main.

The coordination of all utility work for the construction project will be discussed at a pre construction meeting.

CONSTRUCTION OF UNDERGROUND UTILITIES

- Excavation: Where working conditions and right-of-way permit, pipe line trenches with sloping sides may be used. The slopes shall not extend below the top of the pipe, and trench excavations below this point shall be made with vertical sides with widths not exceeding those specified herein for the various sizes of pipe. Open-cut trenches shall be sheeted and braced as required by the governing State and Federal laws and municipal ordinances, and as may be necessary to protect life, property, or the work. Where firm foundation is not encountered at the grade established due to unsuitable soil, all such unsuitable material shall be removed and replaced with approved compacted granular material.
- Width of trench: The maximum width of trench at the top of the pipe shall be as follows: In addition see trench detail on sheet C-27.

Nominal Pipe Sizes (Inches)	Trench Widths (Inches)
12 or smaller	30
14-18	36
20-24	42
27-30	48
33 and larger	1 1/3 times pipe O.D.

- Removal of water: Contractors shall, at all times during construction, provide and maintain ample means and devices with which to remove and properly dispose of all water entering the excavations. No sanitary sewer shall be used for disposal of trench water. This shall be incidental to the utility work Unless Noted Otherwise.

- Bedding of pipe: All pipe shall be installed on a bed of approved, compacted granular material unless otherwise approved by the City Engineer. Bedding shall be provided for all underground pipelines, except where concrete encasement, concrete cradles, boring or jacking are indicated. Bedding shall be a minimum thickness of four inches and consist of gravel or crushed stone 1/4-inch to one inch in size. As a minimum, the bedding material shall conform to the requirements of the "Standard Specifications for Road and Bridge Construction," Illinois Department of Transportation. The gradations shall conform to gradation CA7, CA8, CA13 or CA13 therein. Note that when PVC or ADS pipe is used, the bedding material shall extend to 12 inches over the top of the pipe. Bedding shall be properly compacted. The bedding and backfilling of excavated materials shall be verified with City first and be installed as per typical trench backfill detail. This shall be incidental to utility work Unless Noted Otherwise.

Wherever two or more pipes or conduits are placed in the same trench or excavated area, backfill the trench with granular bedding material to support the uppermost pipe or conduit.

- Trench backfill: Whenever the excavation is within 2' of existing or proposed street, parking areas, driveways, or other paved areas, the trench shall be backfilled with an approved selected granular material (per the City of St. Charles standard detail contained in this plan set), compacted in place. The top 12" of the backfill shall be filled with road gravel or crushed stone and maintained as a temporary surface for the normal use of the area. Special backfill shall be per the City of St. Charles standard detail and shall be compacted in place to ninety-five percent (95%) of maximum density at optimum moisture as determined by the Standard Proctor Test. Refer to the City standard trench detail. Note: Excavated materials may be used if approved by the Engineer. To be measured and paid for per Section 208 of the Standard Specifications for Road and Bridge Construction (DDI).

- Restoration of drainage: As soon as possible after backfilling the trench, all ditching, grading and shaping necessary to restore the original drainage in the area of work shall be performed. Culverts removed during the course of the work shall be replaced as soon as practicable.

Adequate temporary drainage facilities meeting the approval of the Engineer shall be provided during construction. This work shall be incidental to the project Unless Noted Otherwise.

- Utilities: The Contractor shall notify all utilities owners prior to the installation of any pipe lines. Where conflict exists between underground utilities and the proposed underground piping requiring a revision to the plans, such construction shall not be undertaken until such changes are approved by the CITY OF ST. CHARLES and/or Engineer in writing.

(GENERAL NOTES CONTINUE ON SHEET C-03)

SUMMARY OF QUANTITIES

BASE BID - PROJECT LOCATION #1: JOHN DEUTSCH CULVERT REPLACEMENT		
ITEM	UNIT	QUANTITY
TREE REMOVAL (6 to 15 UNIT)	UNIT	281
TREE REMOVAL (OVER 15 UNIT)	UNIT	35
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL (extra undercut of culvert only)	CU.YD.	100
ROCK EXCAVATION	CU.YD.	8
POROUS GRANULAR EMBANKMENT (extra undercut of culvert only)	CU.YD.	100
SODDING, SALT TOLERANT	SQ.YD.	260
TOPSOIL EXCAVATION AND PLACEMENT	CU.YD.	116
TOPSOIL FURNISH AND PLACE, VARIABLE DEPTH	SQ.YD.	700
EROSION CONTROL BLANKET	SQ.YD.	706
INLET AND PIPE PROTECTION	EACH	3
TEMPORARY DITCH CHECKS - COIR LOG	LIN.FT.	240
STONE RIPRAP, CLASS A4	SQ.YD.	346
AGGREGATE BASE COURSE, TYPE B, 6"	SQ.YD.	168
AGGREGATE BASE COURSE, TYPE B, 4", SPECIAL	SQ.YD.	290
HOT-MIX ASPHALT SURFACE COURSE, MIX D, N50, 2"	TON	188
HOT-MIX ASPHALT BINDER COURSE, IL-19, N50, 3"	TON	79
HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ.YD.	1,175
PAVEMENT REMOVAL, FULL DEPTH	SQ.YD.	168
HOT-MIX ASPHALT SURFACE REMOVAL, 7", SPECIAL	SQ. YD.	290
PORTLAND CEMENT CONCRETE DRIVEWAY REMOVAL AND REPLACEMENT	SQ.YD.	63
SIDEWALK REMOVAL	SQ.FT.	200
PORTLAND CEMENT CONCRETE SIDEWALK, SPECIAL, 8"	SQ.FT.	200
NAME PLATES	EACH	1
PRECAST CONCRETE BOX CULVERT, 12' X 8'	LIN.FT.	128
BOX CULVERT END SECTIONS	EACH	2
STEEL FLARED END SECTIONS 12"	EACH	1
STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	85
TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	2
TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	2
SHORT TERM PAVEMENT MARKING, TAPE	SQ. FT.	630
SHORT TERM PAVEMENT MARKING REMOVAL	SQ. FT.	630
REMOVAL OF EXISTING STRUCTURES, SPECIAL	EACH	1
CURB REMOVAL AND REPLACEMENT	LIN.FT.	64
STORM SEWER REMOVAL, D.I., 12"	LIN.FT.	6
CUT AND CAP EXISTING 8" WATERMAIN	EACH	1
CONSTRUCTION LAYOUT	LSUM	1
LANDSCAPE WALL	SQ.FT.	63
SEEDING	SQ.YD.	706
LANDSCAPE MAINTENANCE - YEAR 1	LSUM	1
LANDSCAPE MAINTENANCE - YEAR 2	LSUM	1
LANDSCAPE MAINTENANCE - YEAR 3	LSUM	1
EROSION CONTROL FENCE	LIN.FT.	500
WATERMAIN REMOVE & REPLACE 8" DUCTILE IRON, CLASS 52 WITH POLYETHYLENE ENCASEMENT	LIN.FT.	80
STORM SEWER, PVC, 12"	LIN.FT.	25
TEMPORARY FLOW BYPASS	LSUM	1
CLEARING	ACRES	0
TRAFFIC CONTROL	LSUM	1
DEBRIS REMOVAL FROM CHANNEL	LSUM	1
CONTINGENCY	LSUM	1

BASE BID - PROJECT LOCATION #2: 7TH AVENUE CULVERT REPAIRS		
ITEM	UNIT	QUANTITY
TEMPORARY DITCH CHECKS - COIR LOG	LIN. FT.	40
STONE RIPRAP, CLASS A4	SQ. YD.	39
REPAIR OF EXISTING CMP INVERT VOIDS	SQ. FT.	20
TEMPORARY FLOW BYPASS	LSUM	1
GROUT INJECTION OF VOIDS BEHIND CULVERT WALLS	LSUM	1
DEBRIS REMOVAL FROM CULVERTS	LSUM	1

ALTERNATIVE BID FOR PROJECT LOCATION #1, JOHN DEUTSCH CULVERT REPAIRS		
ITEM	UNIT	QUANTITY
TEMPORARY DITCH CHECKS - COIR LOG	LIN. FT.	120
STONE RIPRAP, CLASS A4	SQ. YD.	34
REPAIR OF EXISTING CMP INVERT VOIDS	SQ. FT.	480
TEMPORARY FLOW BYPASS	LSUM	1
DEBRIS REMOVAL FROM CULVERTS	LSUM	1

ALTERNATIVE BID FOR PROJECT LOCATION #2, 7TH AVENUE CULVERTS, GEOPOLYMER LINING		
ITEM	UNIT	QUANTITY
GEOPOLYMER LINER	LIN. FT.	788

* = INDICATES PROJECT SPECIAL PROVISION WRITTEN FOR THIS PAY ITEM.

PROJECT LEGENDS:

	DESIGNATES PROPOSED HMA PAVEMENT
	DESIGNATES PROPOSED PCC PAVEMENT
	DESIGNATES RIDGE LINES
	DESIGNATES PROPOSED CONCRETE SIDEWALK
	DESIGNATES AREA OF DEPRESSED SIDEWALK
	DESIGNATES AREA TO UTILIZE TRUNCATED DOMES
	DESIGNATES EROSION CONTROL MEASURE (SEE SHEET C-05-EC-05 FOR EROSION CONTROL LEGEND)
	DESIGNATES SILT FILTER FENCE (LIMITS OF GRADING) (SEE SPECIFIED SHEET FOR DETAILS.)
	DESIGNATES AREA TO BE SEEDDED (SEE LANDSCAPE PLANS)
	DESIGNATES AREA TO BE SEEDDED AND TO UTILIZE EXCELSIOR BLANKET (SEE DETAILS) (SEE LANDSCAPE PLANS)
	DESIGNATES PROPOSED RIPRAP AREA (SEE DETAILS) (QUANTITY AS INDICATED)
	DESIGNATES TEMPORARY CONSTRUCTION ACCESS
	DESIGNATES CONCRETE CURB & GUTTER
	DESIGNATES REVERSE CURB & GUTTER
	DESIGNATES AREA OF DEPRESSED CURB AND GUTTER.
	DESIGNATES TREE AND BRUSH REMOVAL (SEE SHEET FOR SIZE AND QUANTITY)
	DESIGNATES TREE TRUNK & ROOT PROTECTION (POTENTIAL ROOT PRUNING REQUIRED) (SEE SHEET EC-03 FOR DETAIL)
	DESIGNATES MAINTAIN 18" VERTICAL SEPARATION PER TO I.E.P.A.'S REQUIREMENTS
	DESIGNATES SANITARY SEWER TAG
	DESIGNATES WATER MAIN TAG
	DESIGNATES STORM SEWER TAG
	DESIGNATES CROSSING TAG

Dial 811 or 1-800-892-0123 JULIE DESIGN TICKET NUMBER:# A1861870



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COUNTY KANE COUNTY
CITY-TOWNSHIP KANE COUNTY-ST. CHARLES TOWNSHIP
SEC. & 1/4 SEC. NO.# 34 & 35-40 N.-B. E.

Two (2) working days before you dig
(Excluding Sat., Sun. & Holidays)

SITE BENCHMARKS:

SOURCE BENCHMARK: CITY OF ST. CHARLES BENCHMARK #19 TO REACH THE STATION FROM THE INTERSECTION OF MAIN STREET (ILLINOIS ROUTE 64) AND NORTH 5TH AVENUE (ILLINOIS ROUTE 25) IN ST. CHARLES, GO EASTERLY ON ROUTE 64 FOR 0.9 MILES TO AN INTERSECTION. TURN RIGHT AND GO SOUTH ON TYLER ROAD FOR 0.8 MILES TO AN INTERSECTION. TURN RIGHT AND GO 0.1 MILES SOUTH TYLER ROAD TO AN INTERSECTION. TURN RIGHT AND GO WEST ON RONZHEIMER AVENUE FOR 0.1 MILES TO STATION ON THE RIGHT.

THE STATION IS THE TOP-CENTER OF A 2 1/2 INCH DIAMETER ALUMINUM DISK STAMPED -STC 19 2008-- CONTAINING A SMALL MAGNET AND MOUNTED ON TOP OF A 3/4 INCH ALUMINUM ROD INSIDE GREASE-FILLED PLASTIC EXTRUDED FIN SLEEVE. AN ALUMINUM ACCESS COVER MOUNTED ON A 6-INCH DIAMETER PVC PIPE WAS INSTALLED. THE MARK IS 56.2 FEET NORTHWEST OF THE CENTER OF A STORM MANHOLE, 33.6 FEET NORTH OF THE CENTER OF A WATER MANHOLE, 26.3 FEET WEST-SOUTHWEST OF THE CENTER OF A SANITARY MANHOLE, AND 2.6 FEET NORTH OF THE EDGE OF PAVEMENT ALONG THE NORTH SIDE OF RONZHEIMER AVENUE.
ELEV: 761.17 (NAVD 88)

B.M. 22a: "ARROW" FLANGE BOLT ON THE FIRE HYDRANT ON NORTHEAST QUADRANT OF RONZHEIMER AND 7TH ST.
ELEV: 713.00 (NAVD 88)
AREA APPEARED TO BE RECENTLY DISTURBED. NEW ELEVATION ESTABLISHED ON FIRE HYDRANT

B.M. 23: "TAG" FLANGE BOLT ON THE FIRE HYDRANT AT THE NORTHEAST QUAD OF THE INTERSECTION OF FERN AVE. AND 7TH AVE.
ELEV: 726.40 (NAVD 88)

B.M. 24: CROSS CUT ON SIDE WALK ON SOUTH SIDE OF MADISON AVE, APPROXIMATELY 135 FEET EAST OF THE CENTERLINE OF 7TH AVE.
ELEV: 724.26 (NAVD 88)

B.M. 32: "TAG" FLANGE BOLT ON THE FIRE HYDRANT ON THE NORTH SIDE OF SPRING AVE, BETWEEN # 930 & 924.
ELEV: 717.59 (NAVD 88)

**BENCHMARKS WERE ESTABLISHED ON JULY/AUGUST OF 2015 AS PART OF PROJECT 86150238 IN FB: NL-3, PG: 47-49 & 62

SYMBOL LEGEND

EXISTING	PROPOSED

STANDARD ABBREVIATIONS

- B-B - BACK TO BACK OF CURB
- B.C. - BACK OF CURB
- B.O.C. - BACK OF CURB
- B.S.L. - BUILDING SETBACK LINE
- P.S.L. - PARKING SETBACK LINE
- C.B. - STORM CATCH BASIN
- C.E. - COMMONWEALTH EDISON CO.
- D.E. - DRAINAGE EASEMENT
- E-E - EDGE TO EDGE OF PAVEMENT
- E.O.P. - EDGE OF PAVEMENT
- E.O.S. - EDGE OF SHOULDER
- E.P. - EDGE OF PAVEMENT
- E.S. - EDGE OF SHOULDER
- F.E.S. - FLARED END SECTION
- I.B.T. - ILLINOIS BELL TELEPHONE CO.
- L.E. - LANDSCAPE EASEMENT
- M.H. - MANHOLE (TYPE SPECIFIED ON PLANS)
- R.C.M.E. - ROAD CONSTRUCTION & MAINTENANCE EASEMENT
- R.O.W. - RIGHT OF WAY
- S.R.L. - SEPTIC RESTRICTION LINE
- T.B.F. - TRENCH BACKFILL
- T.C. - TOP OF CURB
- T.C.E. - TEMPORARY CONSTRUCTION EASEMENT
- T.O.B. - TOP OF BERM
- T.O.C. - TOP OF CURB
- U.E. - UTILITY EASEMENT
- P.S.L. - PARKING SETBACK LINE
- P.U.E. - PUBLIC UTILITY EASEMENT
- P.G.L. - PROFILE GRADE LINE

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PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT AND 7TH AVENUE CULVERT REHABILITATION
CLIENT: CITY OF ST. CHARLES
KANE COUNTY, IL

CIVIL - FINAL ENGINEERING
GENERAL NOTES

SHEET NO.
C-02

SPECIFICATIONS AND GENERAL NOTES:

UNITED STATES ARMY CORPS OF ENGINEERS NOTES:

- WORK IN THE WATERWAY SHOULD BE TIMED TO TAKE PLACE DURING LOW ORNO-FLOW CONDITIONS. LOW FLOW CONDITIONS ARE FLOW AT OR BELOW THE NORMAL WATER ELEVATION. WATER SHALL BE ISOLATED FROM THE IN-STREAM WORK AREA USING A COFFERDAM.
- CONSTRUCTED OF NON-ERODIBLE MATERIALS (STEEL SHEETS, AQUA BARRIERS, RIP RAP AND GEOTEXTILE FABRIC, ETC.). EARTHEN COFFERDAMS ARE NOT PERMISSIBLE.
- WORK MAY NOT BE PERFORMED IN THE WATER, EXCEPT FOR THE PLACEMENT OF THE MATERIALS NECESSARY FOR THE CONSTRUCTION OF THE COFFERDAM. THE COFFERDAM MUST BE CONSTRUCTED FROM THE UPLAND AREA AND NO EQUIPMENT MAY ENTER THE WATER AT ANY TIME. IF THE INSTALLATION OF THE COFFERDAM CANNOT BE COMPLETED FROM SHORE AND ACCESS IS NEEDED TO REACH THE AREA TO BE OFFERED, OTHER MEASURES, SUCH AS THE CONSTRUCTION OF A CAUSEWAY, WILL BE NECESSARY TO ENSURE THAT EQUIPMENT DOES NOT ENTER THE WATER. ONCE THE COFFERDAM IS IN PLACE AND THE ISOLATED AREA IS DEWATERED, EQUIPMENT MAY ENTER THE COFFERED AREA TO PERFORM THE REQUIRED WORK.
- IF BYPASS PUMPING IS NECESSARY, THE INTAKE HOSE SHALL BE PLACED ON A STABLE SURFACE OR FLOATED TO PREVENT SEDIMENT FROM ENTERING THE HOSE. THE BYPASS DISCHARGE SHALL BE PLACED ON A NON-ERODIBLE, ENERGY DISSIPATING SURFACE PRIOR TO REJOINING THE STREAM FLOW AND SHALL NOT CAUSE EROSION. FILTERING OF BYPASS WATER IS NOT NECESSARY UNLESS THE BYPASS WATER HAS BECOME SEDIMENT-LADEN AS A RESULT OF THE CURRENT CONSTRUCTION ACTIVITIES.
- DURING DEWATERING OF THE COFFERED AREA, ALL WATER MUST BE FILTERED TO REMOVE SEDIMENT. POSSIBLE OPTIONS FOR SEDIMENT REMOVAL INCLUDE BAFFLE SYSTEMS, ANIONIC POLYMERS, DEWATERING BAGS, OR OTHER APPROPRIATE METHODS. WATER SHALL HAVE SEDIMENT REMOVED PRIOR TO BEING RE-INTRODUCED TO THE DOWNSTREAM WATERWAY. A STABILIZED CONVEYANCE FROM THE DEWATERING DEVICE TO THE WATERWAY MUST BE IDENTIFIED. DISCHARGE WATER IS CONSIDERED CLEAN IF IT DOES NOT RESULT IN A VISUALLY IDENTIFIABLE DEGRADATION OF WATER CLARITY.
- THE PORTION OF THE SIDE SLOPE THAT IS ABOVE THE OBSERVED WATER ELEVATION SHALL BE ESTABLISHED AS SPECIFIED IN THE PLANS PRIOR TO ACCEPTING FLOWS. THE SUBSTRATE AND TOE OF SLOPE THAT HAS BEEN DISTURBED DUE TO CONSTRUCTION ACTIVITIES SHALL BE RESTORED TO PRE-CONSTRUCTION CONDITIONS AND FULLY STABILIZED PRIOR TO ACCEPTING FLOWS.

COUNTY STORMWATER PERMIT REQUIREMENTS

SOIL DISTURBANCE SHALL BE CONDUCTED IN SUCH A MANNER AS TO MINIMIZE EROSION. AREAS OF THE DEVELOPMENT SITE THAT ARE NOT TO BE GRADED SHALL BE PROTECTED FROM CONSTRUCTION TRAFFIC OR OTHER DISTURBANCE UNTIL FINAL SEEDING IS PERFORMED.

SOIL STABILIZATION MEASURES SHALL CONSIDER THE TIME OF YEAR, DEVELOPMENT SITE CONDITIONS AND THE USE OF TEMPORARY OR PERMANENT MEASURES.

STABILIZATION BY SEEDING SHALL INCLUDE TOPSOIL PLACEMENT AND FERTILIZATION, AS NECESSARY.

NATIVE SEED MIXTURES SHALL INCLUDE RAPID-GROWING ANNUAL GRASSES OR SMALL GRAINS TO PROVIDE INITIAL, TEMPORARY SOIL STABILIZATION.

OFFSITE PROPERTY SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. VELOCITY DISSIPATION DEVICES SHALL BE PLACED AT CONCENTRATED DISCHARGE LOCATIONS ALONG THE LENGTH OF ANY OUTFALL CHANNEL, AS NECESSARY TO PREVENT EROSION.

SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE DISTURBANCE OF TRIBUTARY AREAS.

STABILIZATION OF DISTURBED AREAS SHALL BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE DEVELOPMENT SITE, OR TEMPORARY CEASED ON ANY PORTION OF THE DEVELOPMENT SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. STABILIZATION OF DISTURBED AREAS SHALL BE INITIATED WITHIN 1 WORKING DAY OF PERMANENT OR TEMPORARY CESSATION OF EARTH DISTURBING ACTIVITIES AND SHALL BE COMPLETED AS SOON AS POSSIBLE, BUT NO LATER THAN 14 CALENDAR DAYS FROM THE INITIATION OF STABILIZATION WORK IN THE AREA. EXCEPTIONS TO THESE TIME FRAMES ARE SPECIFIED AS INSTANCES WHEN THE INITIATION OF STABILIZATION MEASURES IS PRECLUDED BY SNOW COVER, STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE AND IN AREAS WHERE CONSTRUCTION ACTIVITY HAS TEMPORARILY CEASED AND WILL RESUME AFTER 14 DAYS, A TEMPORARY STABILIZATION METHOD MAY BE USED.

DISTURBANCE OF STEEP SLOPES SHALL BE MINIMIZED. AREAS OR EMBANKMENTS HAVING SLOPES STEEPER THAN 3:1 SHALL BE STABILIZED WITH STAKING IN PLACE SOD, EROSION CONTROL BLANKET IN COMBINATION WITH SEEDING, OR EQUIVALENT CONTROL MEASURE.

PERIMETER CONTROL MEASURES SHALL BE PROVIDED DOWN SLOPE AND PERPENDICULAR TO THE FLOW OF RUNOFF FROM DISTURBED AREAS, WHERE THE TRIBUTARY AREA IS GREATER THAN 5,000 SQUARE FEET, AND WHERE RUNOFF WILL FLOW IN A SHEET FLOW MANNER. PERIMETER EROSION CONTROL SHALL ALSO BE PROVIDED AT THE BASE OF SOIL STOCKPILES.

THE DRAINAGE SYSTEM SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION DOWN SLOPE FROM DISTURBED AREAS. INLET PROTECTION THAT REDUCES SEDIMENT LOADING, WHILE ALLOWING RUNOFF TO ENTER THE INLET SHALL BE REQUIRED FOR ALL STORM SEWERS, CHECK DAMS, OR AN EQUIVALENT CONTROL MEASURE, SHALL BE REQUIRED FOR ALL CHANNELS. FILTER FABRIC INLET PROTECTION AND STRAW BALE DITCH CHECKS ARE NOT ACCEPTABLE CONTROL MEASURES.

IF DEWATERING SERVICES ARE USED, ADJOINING PROPERTIES AND DISCHARGE LOCATIONS SHALL BE PROTECTED FROM EROSION. DISCHARGES SHALL BE Routed THROUGH AN EFFECTIVE SEDIMENT CONTROL MEASURE (E.G., SEDIMENT TRAP, SEDIMENT BASIN, OR OTHER APPROPRIATE MEASURES). THE ENGINEER AND THE KANE COUNTY SOIL AND WATER CONSERVATION DISTRICT SHALL BE NOTIFIED PRIOR TO THE COMMENCEMENT OF DEWATERING ACTIVITIES.

ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS SHALL BE PERMANENTLY STABILIZED.

STOCKPILED SOIL AND MATERIALS SHALL BE REMOVED FROM FLOOD HAZARD AREAS AT THE END OF EACH WORK DAY. SOIL AND MATERIALS STOCKPILED IN IWM OR BUFFER AREAS SHALL BE PLACED ON TIMBER MATS, OR AN EQUIVALENT CONTROL MEASURE.

EFFECTIVE CONTROL MEASURES SHALL BE UTILIZED TO MINIMIZE THE DISCHARGE OF POLLUTANTS FROM THE DEVELOPMENT SITE. AT A MINIMUM, CONTROL MEASURES SHALL BE IMPLEMENTED IN ORDER TO:

- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATER.
- MINIMIZE THE EXPOSURE OF BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, VEHICLE FLUIDS, SANITARY WASTE, AND OTHER MATERIALS PRESENT ON THE DEVELOPMENT SITE TO PRECIPITATION AND TO STORMWATER.

ADEQUATE RECEPTACLES SHALL BE PROVIDED FOR THE DEPOSITION OF ALL CONSTRUCTION MATERIAL DEBRIS GENERATED DURING THE DEVELOPMENT PROCESS. THE CONTRACTOR SHALL NOT CAUSE OR PERMIT THE DUMPING, DEPOSITING, DROPPING, THROWING, DISCARDING OR LEAVING OF CONSTRUCTION MATERIAL DEBRIS UPON OR INTO ANY DEVELOPMENT SITE, CHANNEL OR IWM. THE DEVELOPMENT SITE SHALL BE MAINTAINED FREE OF CONSTRUCTION MATERIAL DEBRIS.

A STABILIZED MAT OF AGGREGATE UNDERLAIN WITH FILTER CLOTH (OR OTHER APPROPRIATE MEASURES) SHALL BE LOCATED AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING A CONSTRUCTION-SITE OF A MAJOR DEVELOPMENT TO OR FROM A PUBLIC RIGHT-OF-WAY, STREET ALLEY, OR PARKING AREA. ANY SEDIMENT OR SOIL REACHING AN IMPROVED PUBLIC RIGHT OF WAY, STREET, ALLEY OR PARKING AREA SHALL BE SCRAPPED OR STREET CLEANED AS ACCUMULATIONS WARRANT AND TRANSPORTED TO A CONTROLLED SEDIMENT DISPOSAL AREA.

ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED IN AN EFFECTIVE WORKING CONDITION.

DRAIN TILE SYSTEMS DISTURBED DURING DEVELOPMENT MUST BE RECONNECTED BY THE RESPONSIBLE FOR THEIR DISTURBANCE UNLESS THE APPROVED ENGINEERING PLANS INDICATE HOW THE DRAIN TILE SYSTEM IS TO BE CONNECTED TO THE PROPOSED STORMWATER MANAGEMENT SYSTEM.

ALL ABANDONED DRAIN TILES SHALL BE REMOVED IN THEIR ENTIRETY.

DRAIN TILES WITHIN THE DISTURBED AREA OF THE DEVELOPMENT SHALL BE REPLACED, BYPASSED AROUND THE DEVELOPMENT OR INTERCEPTED AND CONNECTED TO THE DRAINAGE SYSTEM FOR THE DEVELOPMENT. THE SIZE OF THE REPLACED OR BYPASSED DRAIN TILE SHALL BE EQUIVALENT TO THE EXISTING DRAIN TILE.

KANE-DuPAGE SOIL AND WATER CONSERVATION DISTRICT SPECIAL PROVISIONS

- The purpose of this soil erosion control plan is to protect the wetlands and streams on the site from siltation during land development activities.
- 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.
- The Kane-DuPage Soil and Water Conservation District (KDSWCD) must be notified one week prior to the pre-construction conference, one week prior to the commencement on land disturbing activities, and one week prior to the final inspection.
- A copy of the approved erosion and sediment control plan shall be maintained on the site at all times.
- Prior to commencing land disturbing activities in areas other than indicated on these plans (including but not limited to, off-site borrow or waste areas) the contractor shall submit a supplementary erosion control plan to the owner for review by the KDSWCD.
- The contractor is responsible for installation of any additional erosion control measures necessary to prevent erosion and sedimentation as determined by the KDSWCD.
- During dewatering operations, water will be pumped into sediment basins or silt traps.
- For additional details on specific erosion control practices see the attached "Soil Conservation Service Conservation Practice Standards".
- The drainage area of all areas draining to silt fences shall be less than 0.5 acre per 100 ft of silt fence and have no drainage slope length in excess of 200ft.
- All sediment ponds and temporary sediment traps shall be sized to store 134 cy per acre of tributary area not previously treated by another upstream sedimentation pond/trap.
- All disturbed areas will be seeded within 7 days of the completion of grading, in most cases prior to the construction of building construction.
- No proposed slopes in the disturbed areas exceed a slope of 3:1 horizontal to vertical.
- The untreated tributary area to a manhole inlet shall not exceed 1 acre. Should an excavated drain be constructed around the manhole, the excavated drain shall be a minimum of 134 cy per acre of drainage area.
- Riprap protection for proposed stormwater pipe outlets are sized to accommodate up to 10 fps outlet velocities.
- All grass waterways shall be constructed at a 1% slope or less and consist of a trapezoidal channel design. They are designed to carry the estimated 2yr, 24hr rainfall event peak flow and will be either sodded or protected by erosion control blanket and seeded. All seeding shall be according to the seed types and dates noted on the plan and specification sheets of this plan. The design channel velocities are less than 4 fps. The dimension for each channel is noted on the grading plan.
- Work in the waterway should be timed to take place during low or no-flow conditions. Low flow conditions are flow at or below the normal water elevation.
- The plan will be designed to allow for the conveyance of the 2-year peak flow past the work area without overtopping the cofferdam. The Corps has the discretion to reduce this requirement if documented by the applicant to be infeasible or unnecessary.
- Water shall be isolated from the in-stream work area using a cofferdam constructed of non-erodible materials (steel sheets, aqua barriers, rip rap and geotextile liner, etc.). Earthen cofferdams are not permissible.
- The cofferdam must be constructed from the upland area and no equipment may enter flowing water at any time. If the installation of the cofferdam cannot be completed from shore and access is needed to reach the area to be coffered, other measures, such as the construction of a causeway; will be necessary to ensure that equipment does not enter the water. Once the cofferdam is in place and the isolated area is dewatered, equipment may enter the coffered area to perform the required work.
- If bypass pumping is necessary, the intake hose shall be placed on a stable surface or floated to prevent sediment from entering the hose. The bypass discharge shall be placed on a non-erodible, energy dissipating surface prior to rejoining the stream flow and shall not cause erosion. Filtering of bypass water is not necessary unless the bypass water has become sediment-laden as a result of the current construction activities.
- During dewatering of the coffered work area, all sediment-laden water must be filtered to remove sediment. Possible options for sediment removal include baffle systems, anionic polymers systems, dewatering bags, or other appropriate methods. Water shall have sediment removed prior to being re-introduced to the downstream waterway. A stabilized conveyance from the dewatering device to the waterway must be identified in the plan. Discharge water is considered clean if it does not result in a visually identifiable degradation of water clarity.
- The area from the toe to the top of the side slope shall be temporarily stabilized during construction to reduce the potential for erosion. All areas disturbed due to construction activities shall be restored to proposed conditions and fully stabilized prior to accepting flows.
- THE CONTRACTOR SHALL SUBMIT AN IN-STREAM WORK PLAN TO KDSWCD INCLUDING METHODS AND MATERIALS BEFORE THE COMMENCEMENT OF CONSTRUCTION.

NOTES:

This plan has been prepared to comply with the provisions of the NPDES Permit Number issued by the Illinois Environmental Protection Agency for Stormwater Discharges from Construction Site Activities.

- Site Description.
 - The total area of the construction site is estimated to be 2.0± acres.
 - The total area if the site that is estimated to be disturbed by excavation, grading, or other activities, is 2.0± acres.
- Controls.

This section of the plan addresses the various controls that will be implemented for each of the major construction activities described in 1.b above. For each measure discussed, the contractors will be responsible for its implementation as indicated. Each such contractor has signed the required certification on forms which are attached to, and are a part of, this plan.

 - Erosion and Sediment Controls.
 - STABILIZATION PRACTICES. Provided below is a description of interim and permanent stabilization practices, including site-specific scheduling of the implementation of the practices. Site plans will ensure that existing vegetation is preserved where attainable and disturbed portions of the site will be stabilized. Except as provided in 2.a. (i) (A) and 2.b. stabilization of the disturbed areas must be initiated within one 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 form the initiation of the stabilization work in an area..
 - Where the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases is precluded by snow cover, stabilization measures shall be initiated as soon as practicable thereafter.

The following interim and permanent stabilization practices, as a minimum will be implemented to stabilize the disturbed area of the site:

1 Temporary Seeding	5 Barrier filter	9 Vegetative channel
2 Permanent seeding	6 Inlet protection	10 Stabilized construction entrance
3 Erosion Blanket	7 Outlet protection	11 Dust & Traffic Control
4 Stone Riprap	8 Vegetative filter	12 Coir Logs

(ii)STRUCTURAL PRACTICES. Provided below is a description of structural practices that will be implemented, to the degree attainable, to divert flows from exposed soils, store flows or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. The installation of these devices may be subject to Section 404 of the Clean Water Act.

- Temporary Flow Diversion and Cofferdams
 - Vegetated drainage swales
 - Permanent seeding
 - Stone Riprap
 - Outlet protection
 - Filter fabric
 - Inlet protection
- Erosion Control. It shall be the Contractor's responsibility to provide adequate erosion control on the job site. The following erosion control sequence shall be adhered to:
 - Install silt fence along site perimeter.
 - Clear site and perform grubbing.
 - Mass grade using low points in profile as sediment ponds.
 - If low points are to be drained by pumping, a sump pit shall be installed per the typical detail.
 - Temporary seed all fill slopes around perimeter of project.
 - Install silt fence per grading/erosion plan.
 - Install storm sewer and inlet protection.
 - Perform stream bank mass grading.
 - Install riffles and rock vane weirs.
 - Stabilize with erosion control blankets per the erosion control plan.
 - Plant native plugs and seed.

Any siltation of conduits, structures, or ditches shall be cleaned and maintained by the Contractor, on a weekly basis, until the seeding has taken hold. 70% growth of permanent grass or temporary cover crop. All washouts, gullies, etc. will be regraded and reseeded by the Contractor, at the Contractor's expense.

The Contractor's responsibility for erosion control shall extend throughout the construction process. The Contractor shall be responsible for cleanup of paved surfaces within and adjacent to the project.

All erosion control practices shall be in compliance with the latest revision of the "Standard Specifications for Road and Bridge Construction," by the Illinois Department of Transportation and with "Standards and Specifications for Soil Erosion and Sedimentation Control" as published by the Illinois Environmental Protection Agency.

Contractor shall establish erosion control measures for any stockpile if it is to remain in place for more than three days. In addition, barrier filter fence shall enclose topsoil stockpile location. Labor and Material for stockpile areas are at the contractors expense and shall not be means for payment.

- Stormwater Management.
 - Provided below is a description of measures that will be installed during the construction process to control pollutants in stormwater discharges that will occur after construction operations have been completed. The installation of these devices may be subject to Section 404 of the Clean Water Act.

The practices selected for implantation were determined on the basis of the technical guidance contained in IEPA's Standard Specifications for Soil Erosion and Sedimentation Control, and other ordinances listed in the Specifications.

The stormwater pollutant control measures shall include:

- | | | |
|----------------------|------------------------------|---------------------|
| 1. Silt filter fence | 4. Rip-rap outlet protection | 6. RipRap buffers |
| 2. Drainage swales | 5. Pool / Riffles | 7. Native Plantings |
| 3. Riparian Buffer | | |
- (ii)Velocity dissipation devices will be placed at discharge locations and along the length of any outfall channel as necessary to provide a non-erosive velocity flow from the structure to a water course so that the natural physical and biological characteristics and functions are maintained and protected (e.g., maintenance of hydrologic conditions, such as the hydroperiod and hydrodynamics present prior to the initiation of construction activities).
- Stormwater Management Control includes
- | | |
|------------------------------------|---------------------|
| 1. Stone Riprap | 5. Pool / Riffles |
| 2. Filter Fabric | 6. Native Plantings |
| 3. Outlet protection using RipRap. | 7. Riparian Buffer |
| 4. Inlet protection. | |
- Other Controls.
 - Waste Disposal. The solid waste materials including trash, construction debris, excess construction materials, machinery, tools and other items will be collected and disposed off-site by the contractor. The contractor is responsible to acquire any permit required for such disposal. Burning on the site will not be permitted. No solid materials, including building materials, shall be discharged into Waters of the State, except as authorized by a Section 404 permit.
 - The provisions of this plan shall ensure and demonstrate compliance with applicable State and/or local waste disposal, sanitary sewer or septic system regulations.
 - Approved State or Local Plans.

The management practices, controls and other provisions contained in this plan are at least as protective as the requirements contained in the Illinois Environmental Protection Agency's Standards and Specifications for Soil and Erosion and Sediment Control dated October 1987, Illinois Procedures and Standards for Urban Soil Erosion and Sedimentation Plan, and the Municipal Subdivision Ordinance. Requirements specified in sediment and erosion control site plans or site permits or stormwater management or site plans or site permits approved by local officials that are applicable to protecting surface water resources are, upon submittal of an NOI to be authorized to discharge under this permit, incorporated by reference and are enforceable under this permit even if they are not specifically included in the plan.

- Maintenance.

The following is a description of procedures that will be used to maintain, in good and effective operating conditions, vegetation, erosion and sediment control measures and other protective measures identified in this plan and Standard Specifications. Contractor shall provide a bond for the maintenance period and use qualified staff or sub-contractor to perform maintenance (See Special Provision).

Monitoring and Management Plan
A 3-year maintenance and monitoring plan is required after installation of native landscaping. (See Project Special Provisions)

Stabilized construction entrance: The entrance shall be maintained to prevent tracking of sediment onto public streets. This will be done by top dressing with additional stones, remove and replace top layer of stones or washing the entrance. The sediment washed on the public right-of-way will be removed immediately. Contractor shall submit to owner and engineer proposed construction entrance location plan for approval.

Vegetative erosion control measures: The vegetative growth of temporary and permanent seeding, vegetative channels, vegetative filter, etc. shall be maintained periodically and supply adequate watering and fertilizer. The vegetative cover shall be reseeded as necessary.

Silt filter fence: The damaged silt filter fence shall be restored to meet the standards or removed and replaced as needed.

Rip-rap outlet protection: It shall be inspected after high flows for any scour beneath the Rip-rap or for stones that have been dislodged. It shall be repaired immediately.

Inlet Protection: Shall be inspected and emptied of silt if filled as required.

Stabilization of the disturbed areas must be initiated within one 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 form the initiation of the stabilization work in an area.

- Appropriate temporary or permanent stabilization measures shall include seeding, mulching, sodding, and/or non-vegetative measures.
- Areas having slopes greater than 12 percent shall be stabilized with sod, mat, or blanket in combination with seeding or equivalent.

Soil storage piles containing more than 10 cu. yds. of material shall not be located with a downslope drainage length less than 25 feet to a roadway or drainage channel. Filter barriers, including straw bales, filter fence, or equivalent, shall be installed immediately on the down slope of the piles.

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NO.	DATE	BY	REVISION DESCRIPTION


 ILLINOIS DESIGN FIRM # 184.001322
 420 N. FRONT STREET, SUITE 100
 McHENRY, ILLINOIS 60050
 PHONE: 815.385.1778 | TOLL FREE: 800.728.7805
 FAX: 815.385.1781 | HRGreen.com

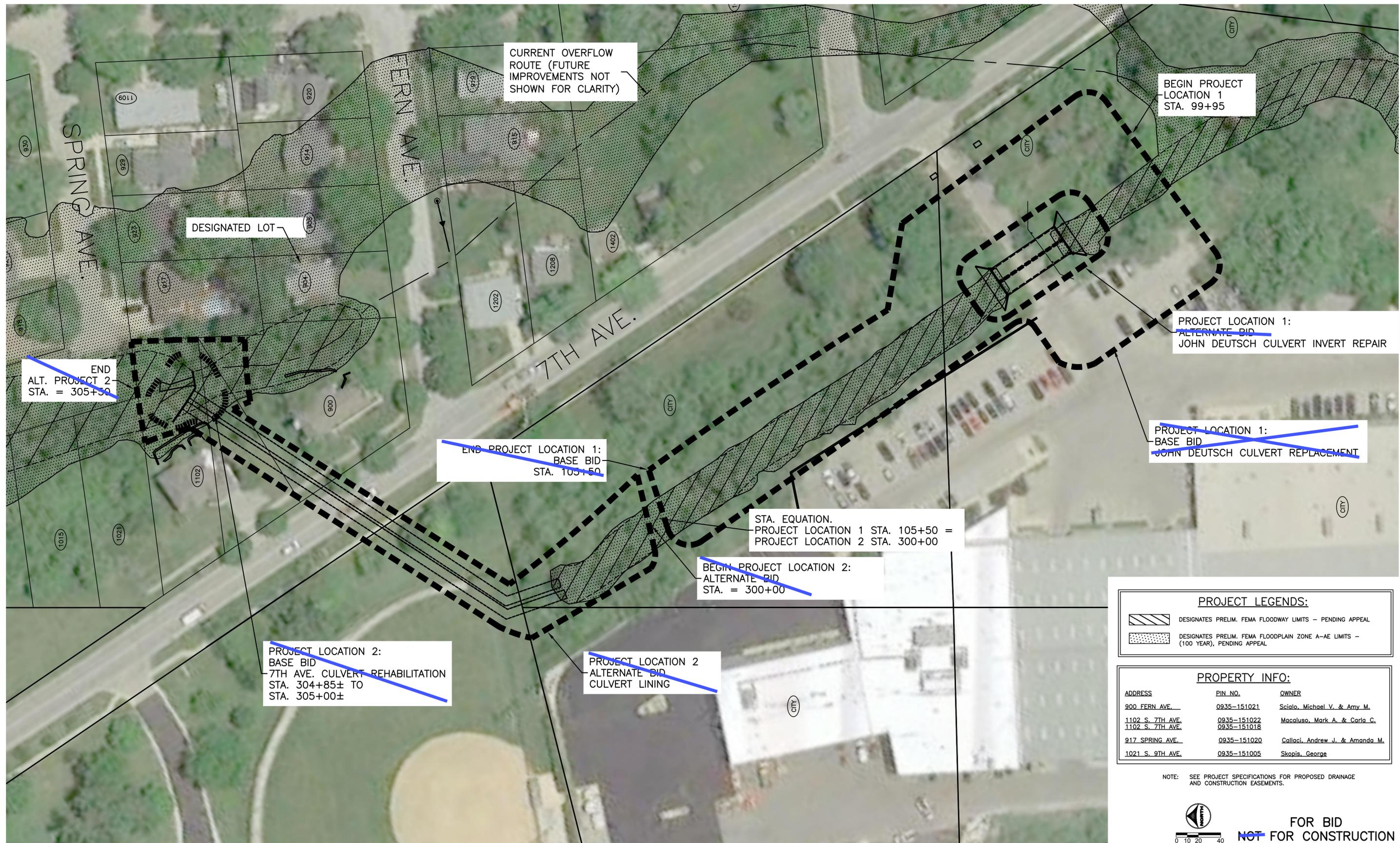
PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT AND 7TH AVENUE CULVERT REHABILITATION
CLIENT: CITY OF ST. CHARLES
KANE COUNTY, IL

CIVIL – FINAL ENGINEERING
EROSION CONTROL AND STORMWATER POLLUTION PREVENTION PLAN

SHEET NO.
C-04

Xrefs: xgt-1-dn01: 86140185.06-cc-Tabulations

Xref: xgl-1-dh01-x; 86140185_06-Prof; 86140185_02-xv-Aerial; 86140185_02-xc-Dgn; 86140185_06-xS-Dgn; 86140185_06-xV-Survey; 86140185_06-xV-Cis_Base; 86140185_06-Survey



PROJECT LEGENDS:	
	DESIGNATES PRELIM. FEMA FLOODWAY LIMITS - PENDING APPEAL
	DESIGNATES PRELIM. FEMA FLOODPLAIN ZONE A-AE LIMITS - (100 YEAR), PENDING APPEAL

PROPERTY INFO:		
ADDRESS	PIN NO.	OWNER
900 FERN AVE.	0935-151021	Scialo, Michael V. & Amy M.
1102 S. 7TH AVE.	0935-151022	Macaluso, Mark A. & Carlo C.
1102 S. 7TH AVE.	0935-151018	
917 SPRING AVE.	0935-151020	Callaci, Andrew J. & Amanda M.
1021 S. 9TH AVE.	0935-151005	Skopis, George

NOTE: SEE PROJECT SPECIFICATIONS FOR PROPOSED DRAINAGE AND CONSTRUCTION EASEMENTS.



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NO.	DATE	BY	REVISION DESCRIPTION

HRGreen ILLINOIS DESIGN FIRM # 184.001322
 420 N. FRONT STREET, SUITE 100
 McHENRY, ILLINOIS 60050
 PHONE: 815.385.1778 | TOLL FREE: 800.728.7805
 FAX: 815.385.1781 | HRGreen.com

PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT AND 7TH AVENUE CULVERT REHABILITATION
 CLIENT: CITY OF ST. CHARLES
 KANE COUNTY, IL

CIVIL - FINAL ENGINEERING
 GENERAL SITE PLAN

SHEET NO.
C-06

Dial 811 or 1-800-892-0123
811
 Know what's below.
 Call before you dig.

JULIE DESIGN TICKET NUMBER # A1861870

WITH THE FOLLOWING:
 COUNTY KANE COUNTY
 CITY-TOWNSHIP KANE COUNTY-ST. CHARLES TOWNSHIP
 SEC. & 1/4 SEC. NO. # 34 & 35-40 N.-8 E.

(2) Working Days before you dig
 (Excluding Sat., Sun. & Holidays)

SANITARY SEWER TAGS

PROJECT LOCATION 1

- EXISTING SAN SEWER 27" (RCP) TO REMAIN
- EXIST. SANITARY MANHOLE, 5' DIA.
RIM = 719.94
INV = 697.14 NW (Existing 27" RCP)
INV = 697.14 SE (Existing 27" RCP)
- EXISTING SAN SEWER 27" (RCP) TO REMAIN

WATER TAGS

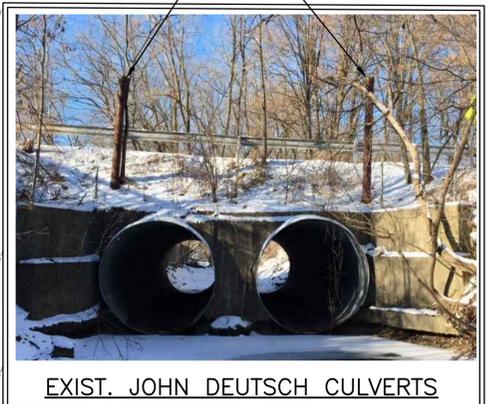
PROJECT LOCATION 1

- EXIST. 8" VALVE AND VALVE VAULT - TO REMAIN
COORDINATE SHUT DOWN OF WATER MAIN, EAST
ADD 2.5" WHIP FOR FLUSHING AND CHLORINATION
- EXIST. 8" WATER MAIN D.I.P. - TO REMAIN
PARTIAL REMOVAL - SEE DEMO PLAN
- EXIST. 8" VALVE AND VALVE VAULT - TO REMAIN
COORDINATE SHUT DOWN OF WATER MAIN, WEST
ADD 1" WHIP FOR FLUSHING AND CHLORINATION
- EXIST. 8" VALVE AND VALVE VAULT - TO REMAIN
COORDINATE SHUT DOWN OF WATER MAIN, EAST

STORM SEWER TAGS

PROJECT LOCATION 1

- EXIST. SS DI 12" TO REMAIN
BROKEN END OF PIPE SHALL BE CUT
BACK TO SOUND PIPE FOR CONNECTION
TO NEW PIPE (SEE DETAIL ON SHEET C-14)
- EXISTING CATCH BASIN TO REMAIN
RIM=720.12
- EXISTING CATCH BASIN TO REMAIN
RIM=719.50
- EXIST. SS RCP 12" TO REMAIN.
- EXIST. SS FES 12" TO REMAIN.
INV. = 704.11
- EXIST. SS FES TO REMAIN.
PRECAST CONCRETE, 12"
INV. = 704.10



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~~NOT~~ FOR CONSTRUCTION

Xrefs: 86140185.06-c-c-Survey; 86140185.06-x-v-Survey; xgt-1-dh01-x; 86140185.06-c-c-Design; 86140185.06-x-s-Design; 86140185.06-c-c-Tabulations

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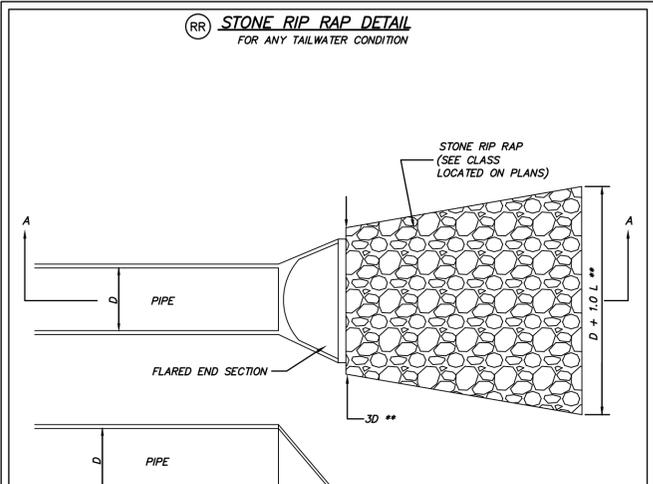
HRGreen
 ILLINOIS DESIGN FIRM # 184.001322
 420 N. FRONT STREET, SUITE 100
 McHENRY, ILLINOIS 60050
 PHONE: 815.385.1778 | TOLL FREE: 800.728.7805
 FAX: 815.385.1781 | HRGreen.com

PROJECT: JOHN DEUTSCH DRIVE CULVERT REPLACEMENT AND 7TH AVENUE CULVERT REHABILITATION
 CLIENT: CITY OF ST. CHARLES
 KANE COUNTY, IL

PROJECT LOCATION 1 - BASE BID
JOHN DEUTSCH DR. - DETAILED EXISTING CONDITIONS

SHEET NO.
C-07

RR STONE RIP RAP DETAIL
FOR ANY TAILWATER CONDITION



Approx. stone size based on IDOT Std.

Class	Min. (in.)	Max. (in.)
A1	4	10
A2	6	14
A3	8	18
A4	12	24
A5	15	28

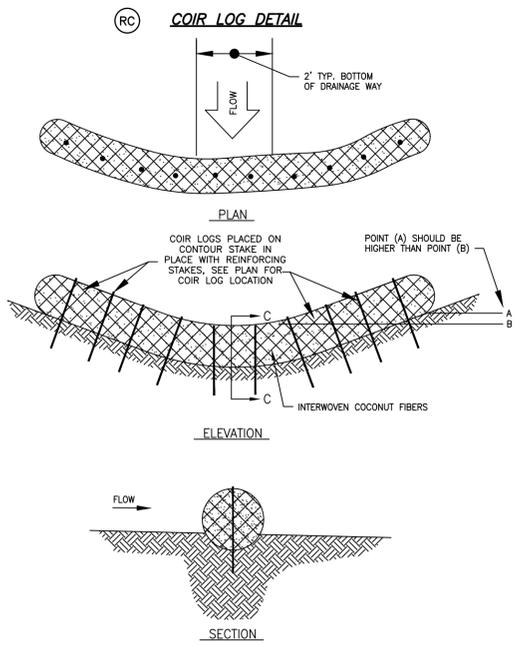
THE FILTER FABRIC SHALL MEET THE REQUIREMENTS IN MATERIAL SPECIFICATIONS 592 GEOTEXTILE TABLE 1 OR 2, CLASS I, II OR III.

** NOTE: WHEN OUTLETING TO A DEFINED CHANNEL, WIDTH AND AREA OF APRON SHALL CONFORM TO TOP OF CHANNEL BANK

LOW VELOCITY (<5fps)					HIGH VELOCITY (5-10fps)				
D	T	L	B	Quantity SY.	D	T	L	B	Quantity SY.
Pipe Size in. (Min. Thickness)	Rock Class	Length of Apron (Thickness)	Bedding Class	**	Pipe Size in. (Min. Thickness)	Rock Class	Length of Apron (Thickness)	Bedding Class	**
10"	A2 (6")	10'	-	8	10"	A2 (6")	10'	-	8
12"	A3 (15")	12'	-	11	12"	A3 (15")	12'	-	16
15"	A3 (15")	13'	-	13	15"	A3 (15")	15'	-	17
18"	A3 (15")	14'	-	16	18"	A4 (16")	16'	A1 (6")	20
21"	A3 (15")	15'	-	18	21"	A4 (16")	18'	A1 (6")	25
24"	A3 (15")	16'	-	21	24"	A4 (16")	20'	A1 (6")	31
27"	A3 (15")	17'	-	25	27"	A4 (16")	21'	A1 (6")	36
30"	A3 (15")	18'	-	29	30"	A4 (16")	22'	A1 (6")	39
33"	A4 (16")	19'	A1 (6")	32	33"	A5 (22")	23'	A1 (6")	44
36"	A4 (16")	20'	A1 (6")	36	36"	A5 (22")	24'	A1 (6")	48
42"	A4 (16")	22'	A1 (6")	44	42"	A6 (26")	26'	A2 (10")	58
48"	A4 (16")	24'	A1 (6")	53	48"	A6 (26")	28'	A2 (10")	68

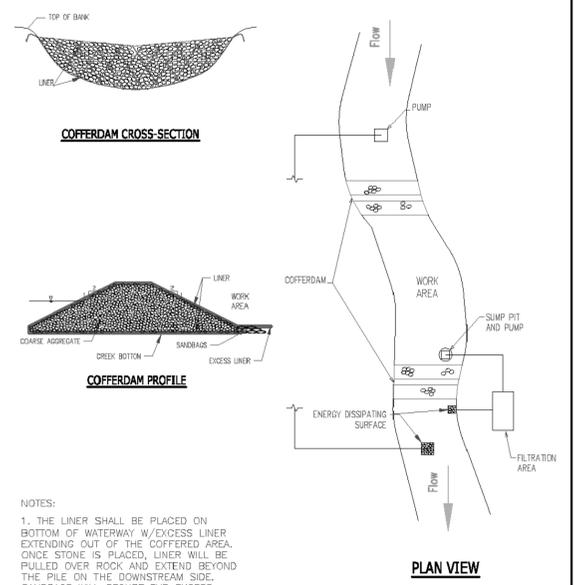
Note See current Illinois Department of Transportation Standard Specification to verify rock size and bedding thickness. RIPRAP

RC COIR LOG DETAIL



- INSTALLATION TO BE COMPLETED IN ACCORDANCE WITH MANUFACTURE SPECIFICATIONS
- SECURE LOG WITH WOODEN OR LIVE STAKES WOVEN THROUGH COIR LOG MESH AND DRIVEN INTO EARTH. STAKE LOG PER MANUFACTURE SPECIFICATIONS. TIE ADJACENT LOGS TOGETHER WITH BIODEGRADABLE TWINE. COMPACT SOIL AROUND LOGS. SECURE THE UPSTREAM AND DOWNSTREAM ENDS BY POSITIONING COIR LOGS SO THEY TRANSITION SMOOTHLY INTO A STABILIZED BANK
- LENGTH OF STAKE SHOULD BE BASED ON SOIL TYPE
- NOT RECOMMENDED FOR HIGH VELOCITY AREAS
- AVAILABLE DIA. 6", 8", 12", 16", & 20"
- AVAILABLE LENGTH. 10' & 20'

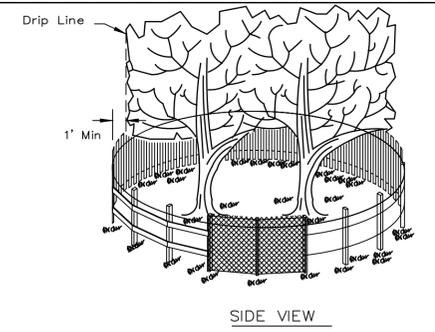
RR ROCK COFFERDAM



- NOTES:
- THE LINER SHALL BE PLACED ON BOTTOM OF WATERWAY W/EXCESS LINER EXTENDING OUT OF THE COFFERED AREA. ONCE STONE IS PLACED, LINER WILL BE PULLED OVER ROCK AND EXTEND BEYOND THE PILE ON THE DOWNSTREAM SIDE. SANDBAGS WILL SECURE THE EXCESS LINER AS SHOWN. REFER TO THE STANDARD FOR LINER SPECIFICATIONS.

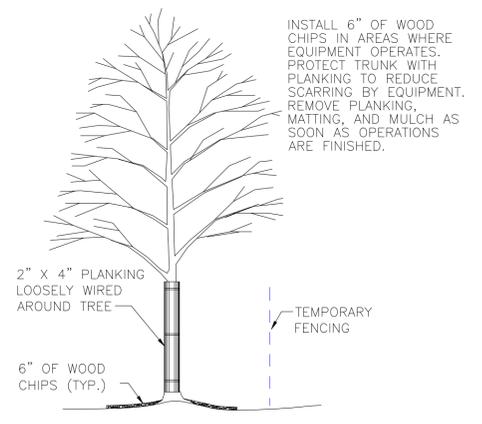
REFERENCE Project	_____	DATE _____	STANDARD DWG. NO. IUM-503RF
Designed	_____	DATE _____	SHEET 5 OF 7
Checked	_____	DATE _____	DATE 7-09-2018
Approved	_____	DATE _____	

TREE PROTECTION - FENCING

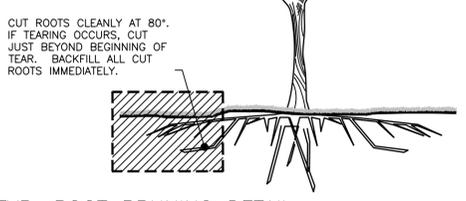


- NOTES:
- The fence shall be located a minimum of 1 foot outside the drip line of the tree to be saved and in no case closer than 5 feet to the trunk of any tree.
 - Fence posts shall be either standard steel posts or wood posts with a minimum cross sectional area of 3.0 sq. in.
 - The fence may be either 40" high snow fence, 40" plastic web fencing or any other material as approved by the engineer/inspector.

REFERENCE Project	_____	DATE _____	STANDARD DWG. NO. IL-690
Designed	_____	DATE _____	SHEET 1 OF 1
Checked	_____	DATE _____	DATE 4-7-94
Approved	_____	DATE _____	



TYP. TREE TRUNK PROTECTION DETAIL
SCALE: NTS



TYP. ROOT PRUNING DETAIL
SCALE: NTS

DRAWN BY: MRJ/MPL JOB DATE: 10/25/2016
 APPROVED: AJ JOB NUMBER: 86140185.02
 CAD DATE: 7/31/2018 11:10:46 AM
 CAD FILE: J:\2014\86140185.06\CAD\Dwgs\C\86140185.06-Details.dwg

NO.	DATE	BY	REVISION DESCRIPTION

IL-690
 420 N. FRONT STREET, SUITE 100
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7TH AVENUE CREEK IMPROVEMENTS
 CITY OF ST. CHARLES
 KANE COUNTY, IL

DETAILS (FOR ALL PROJECT LOCATIONS-BASE BID AND ALTERNATE BIDS)
EROSION CONTROL DETAILS

SHEET NO.
EC-03

NOT FOR CONSTRUCTION