

**Benchmark:**  
TBM #3 Box cut in southeast corner of concrete pad of 2 electric transformers in the Northwest quadrant of the intersection of Essington Road & Hennepin Drive, Elevation 604.12

**Existing Structure:**  
Structure No. 099-6468 consists of (3) 87"x63" CMP Arches. Traffic on Essington Road is to be detoured during construction.

**Salvage:** None

SUNNYLAND DRAIN  
BUILT 20\_\_ BY  
CITY OF JOLIET  
SECTION 06-00130-00-CH  
F.A.U. RT. 0326 STA. 142+63  
STR. NO. 099-6469 LOADING HS20

**NAME PLATE**  
See Std. 515001

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAU 0326	06-00130-00-CH	WILL	116	89
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT: M-8003(654)		

Contract #63185

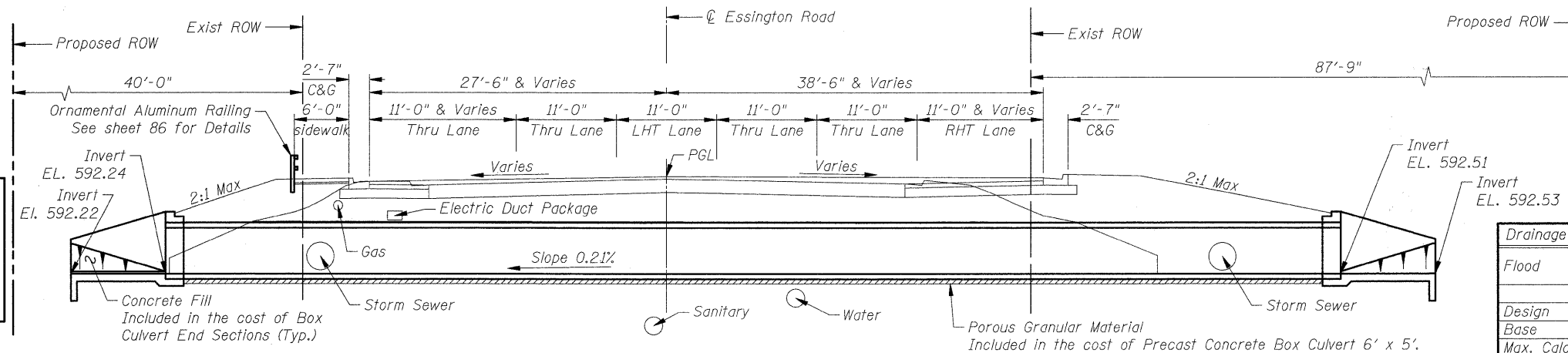
**INDEX OF CULVERT DRAWINGS**

- C1 General Plan & Elevation
- C2 Culvert Details I
- C3 Culvert Details II
- C4 Soil Boring Logs

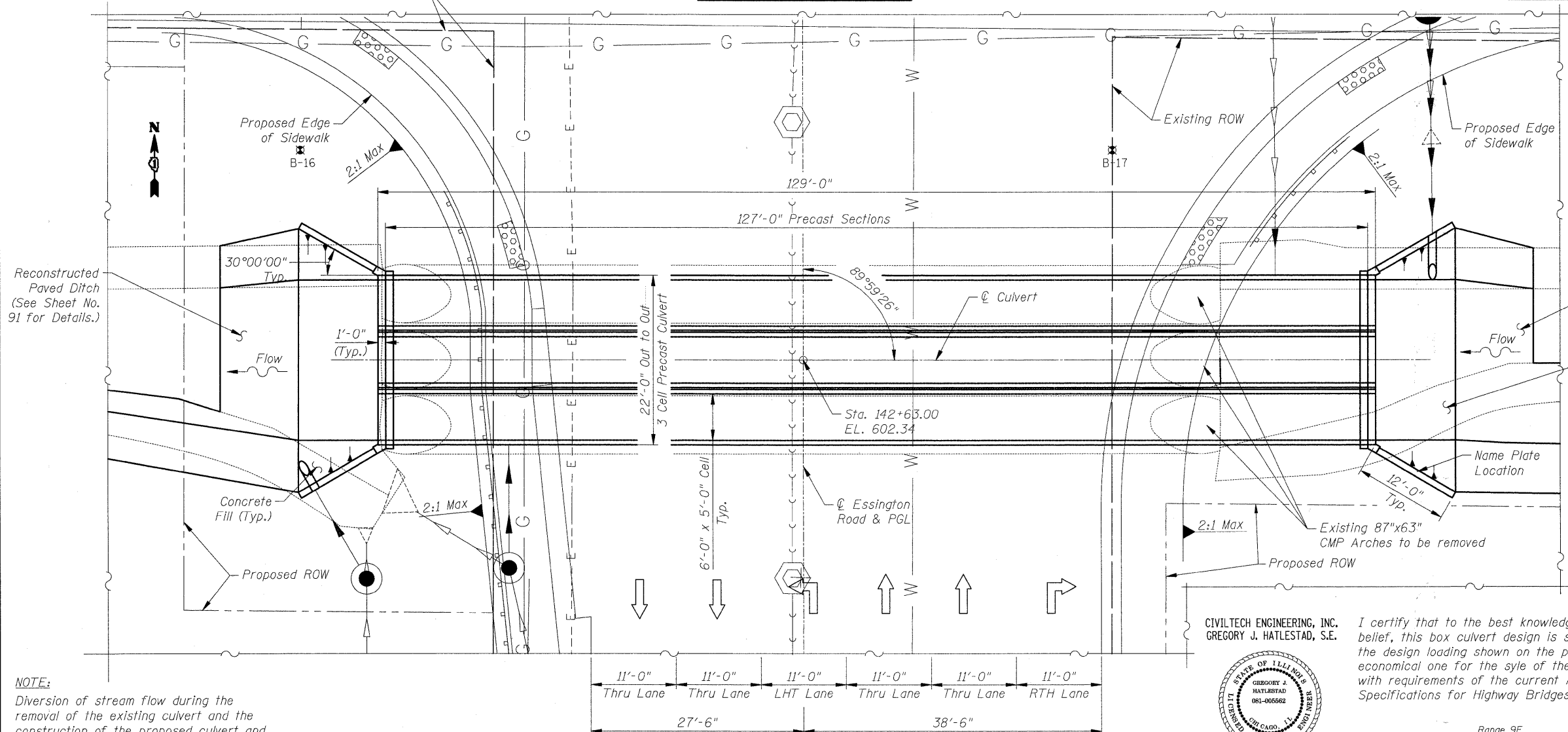
**WATERWAY INFORMATION**

Drainage Area = 2.07 sq miles Low Grade Elev. 602.21 @ Sta. 142+00

Flood	Freq. Yr.	C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	200	40.32	30.80	594.42	0.52	0.49	594.94	594.91
Base	50	365	77.31	69.70	596.38	0.60	0.41	596.98	596.79
Max. Calc.	100	460	93.00	90.00	598.34	0.95	0.63	599.29	598.97
	500	770	93.00	90.00	600.01	2.52	2.01	602.53	602.02



**LONGITUDINAL SECTION**



**PLAN**

**GENERAL NOTES**

- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Precast concrete box culvert sections shall conform to the requirements of Article 540.06 of the Standard Specifications and the applicable requirements of AASHTO M259.
- Lifting holes shall be filled with concrete plugs and mastic after box sections are in place.

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	TOTAL
Pipe Culvert Removal	Foot	327
Box Culvert End Sections	Each	2
Precast Concrete Box Culvert 6' x 5'	Foot	381
Name Plates	Each	1

**DESIGN SPECIFICATIONS**

2002 AASHTO

**DESIGN STRESSES**

**FIELD UNITS**

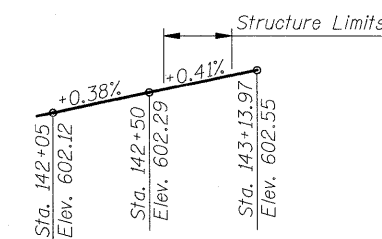
f'c = 3,500 psi  
fy = 60,000 psi (Reinforcement)

**PRECAST UNITS**

f'c = 5,000 psi  
fy = 65,000 psi (Welded Wire Fabric)

**LOADING HS20-44**

Allow 50#/sq. ft. for future wearing surface

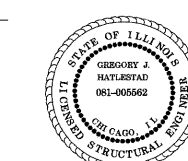


**PROPOSED PROFILE GRADE**  
**ESSINGTON ROAD**

(Along PGL)

C1 of C4

CIVILTECH ENGINEERING, INC.  
GREGORY J. HATLESTAD, S.E.

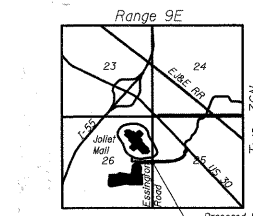


GREGORY J. HATLESTAD, S.E.  
# 081-005562

EXP 6/30/10

DATE 5/27/09

I certify that to the best knowledge, information and belief, this box culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of the structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.



**LOCATION SKETCH**

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
GENERAL PLAN & ELEVATION  
ESSINGTON ROAD OVER SUNNYLAND DRAIN  
STATION 142+63.00  
SECTION 06-00130-00-CH WILL COUNTY  
STRUCTURE 099-6469

Scale: None  
Date: May 29, 2009

By: M. Lange  
Checked: G. Hatlestad