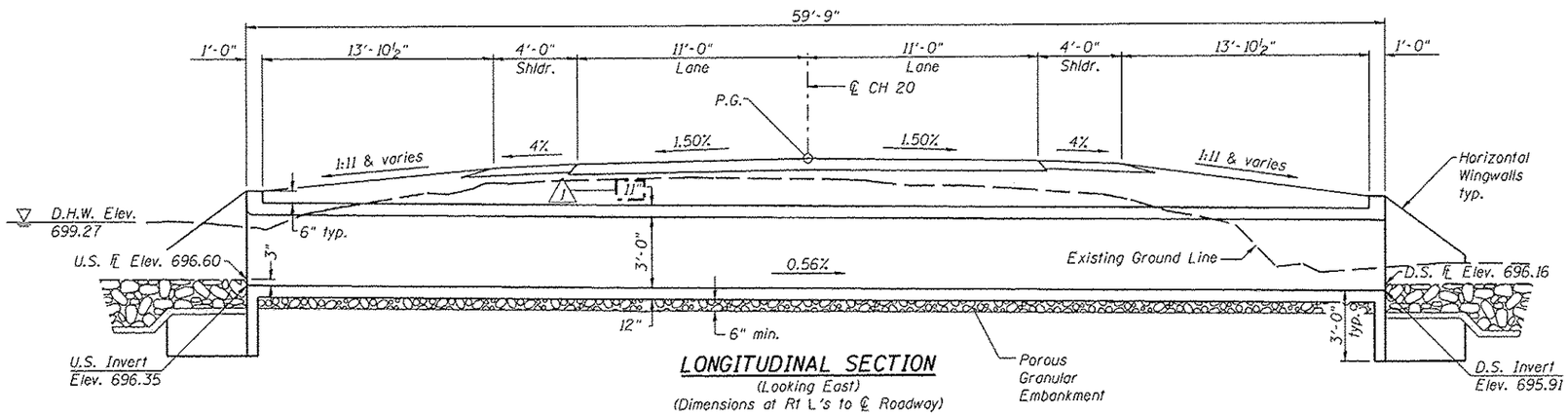
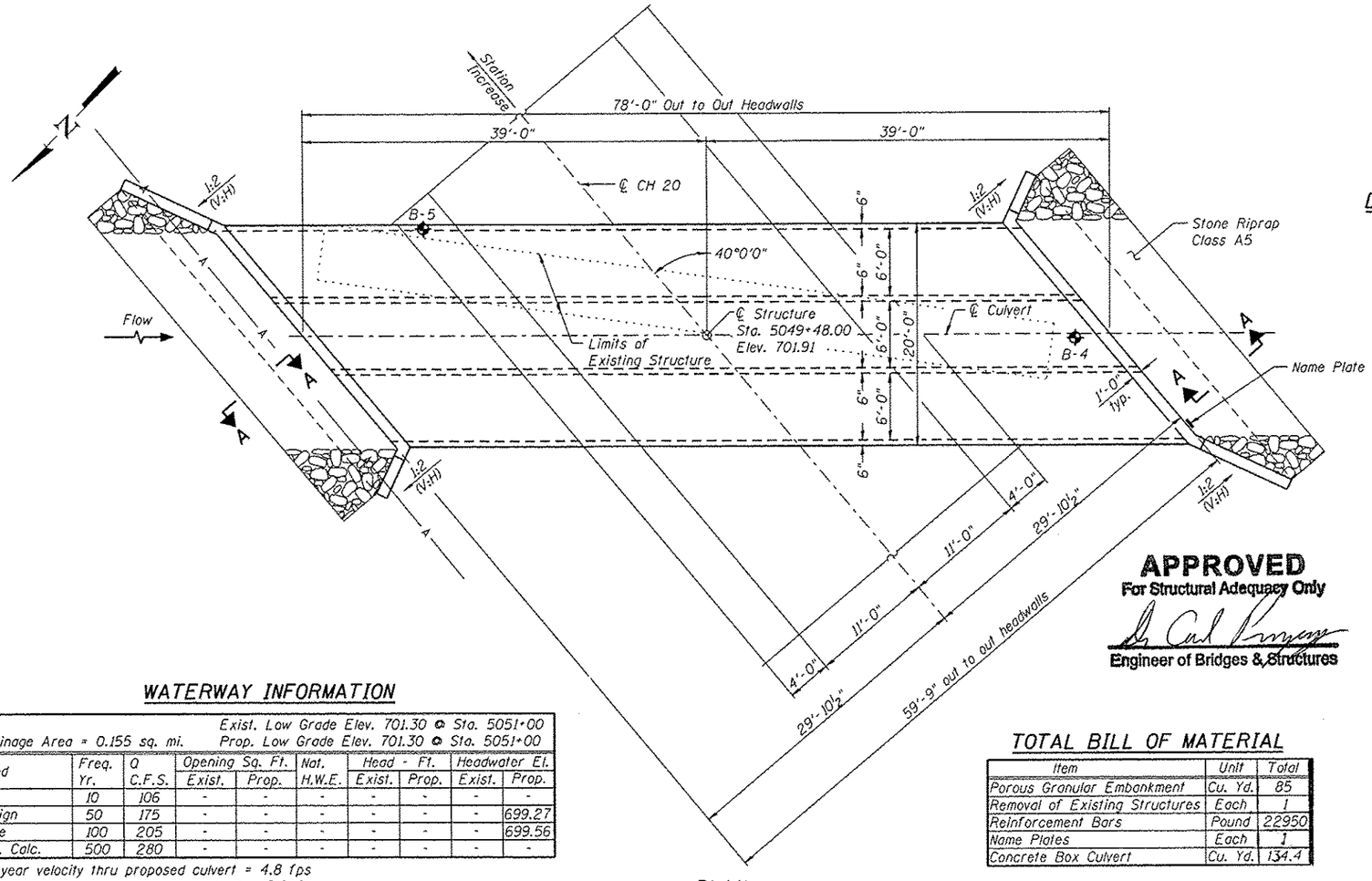
Benchmark: Chiseled Square on SW corner of PCC pad for G.T.E. phone box. Sta. 5046+22.52, 34.50' LT., Elev. 702.98.
Existing Structure: No structure number previously assigned. Built as a 5'x3' reinforced elliptical concrete culvert pipe, 68'-4"(±) out to out length.
Existing structure to be removed and replaced. Roadway traffic will be detoured during construction.
No Salvage.



LONGITUDINAL SECTION

(Looking East)
(Dimensions at Rt L's to ℄ Roadway)



PLAN

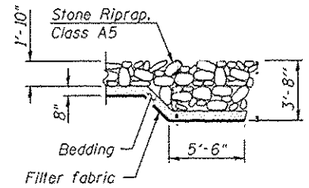
GENERAL NOTES

Layout of slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.

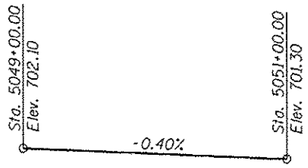
Backfill within the limits of the paved surface to the top of culvert elevation shall be performed using Porous Granular Embankment.

See Roadway plans for riprap quantities, and limits of Porous Granular Embankment.

Precast alternate is not allowed.



SECTION A-A



PROFILE GRADE

(Along ℄ CH 20)

INDEX OF SHEETS

1. General Plan and Elevation
2. Culvert Details
3. Soil Boring Logs

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	U.S. Invert	D.S. Invert
	693.35	692.91

STATION 5049+48.00
BUILT 20 BY
STATE OF ILLINOIS
LOADING HL-93
STRUCTURE NO. 055-2509

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications.
6th Edition

LOADING HL-93

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

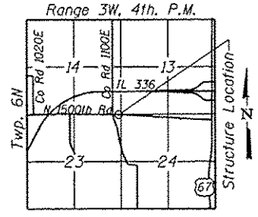
DESIGN STRESSES

FIELD UNITS

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

NAME PLATE

See Std. 515001



LOCATION SKETCH

WATERWAY INFORMATION

Drainage Area = 0.155 sq. mi.
Exist. Low Grade Elev. 701.30 @ Sta. 5051+00
Prop. Low Grade Elev. 701.30 @ Sta. 5051+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Not. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	106	-	-	-	-	-	-	-
Design	50	175	-	-	-	-	-	-	699.27
Base	100	205	-	-	-	-	-	-	699.56
Max. Calc.	500	280	-	-	-	-	-	-	-

50 year velocity thru proposed culvert = 4.8 fps
100 year velocity thru proposed culvert = 5.2 fps

TOTAL BILL OF MATERIAL

Item	Unit	Total
Porous Granular Embankment	Cu. Yd.	85
Removal of Existing Structures	Each	1
Reinforcement Bars	Pound	22950
Name Plates	Each	1
Concrete Box Culvert	Cu. Yd.	134.4

APPROVED
For Structural Adequacy Only
Engineer of Bridges & Structures

LICENSED STRUCTURAL ENGINEER
MICHAEL T. HALEY
81-5991
CHATHAM
STATE OF ILLINOIS

Michael J. Haley 1-11-13
Michael T. Haley — Date
Licensed Structural Engineer
State of Illinois No. 81-5991
Expires 11/30/2014

GENERAL PLAN & ELEVATION
COUNTY HIGHWAY RTE. 20
OVER DRAINAGE DITCH
F.A.P. 407-SECTION (55-3)A
MCDONOUGH COUNTY
STA. 5049+48.00
STRUCTURE NO. 055-2509

LIN ENGINEERING, LTD.
Consulting Engineers
Springfield, Illinois

USER NAME =	DESIGNED - ZTB	REVISED -	
FILE NAME =	CHECKED - TBP	REVISED -	
PLOT SCALE =	DRAWN - AJF	REVISED -	
PLOT DATE =	CHECKED - TBP	REVISED -	

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SHEET NO. 1 OF 3 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
407	(55-3)A	MCDONOUGH	1 289
		CONTRACT NO. 68A42	
	ILLINOIS	FED. AID PROJECT - D-94-036-11	