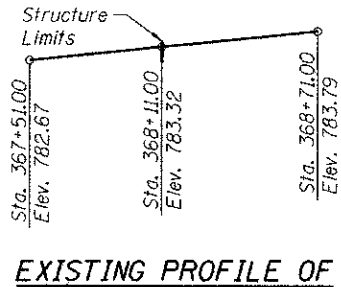


Benchmark: Large Mag nail in north face of the first utility pole on the south side of Rollins Road. First pole west of the proposed tunnel crossing. Sta. 367+34, Offset 44.00' Rt. Elev. 782.70 (NAVD 88)

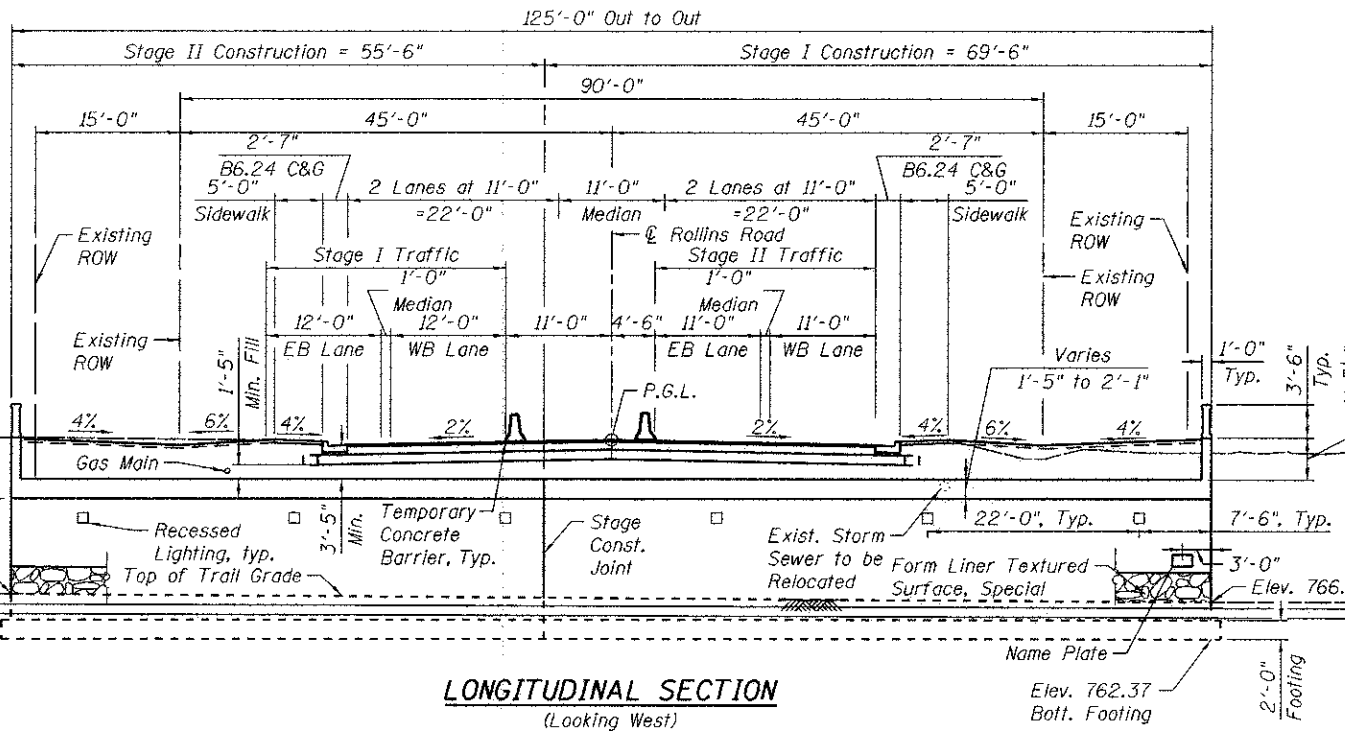
Maintenance of Traffic: Traffic will be staged during construction.

Existing Structure: None.

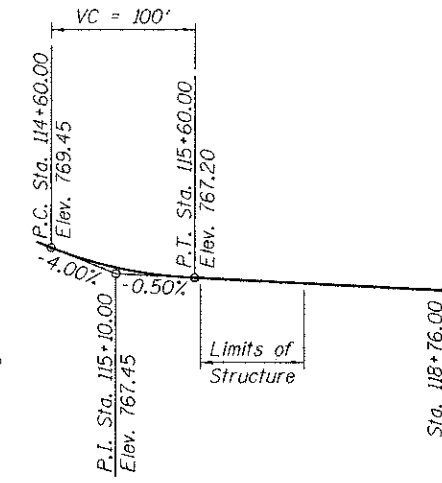
Note: Precast alternate is not allowed.



Proposed 12" ϕ Storm Sewer
Inv. Elev. 765.10



LONGITUDINAL SECTION
(Looking West)



PROPOSED PROFILE GRADE
TRAIL UNDERPASS
(Along Centerline of Millennium Trail)

CURVE DATA

MILLENNIUM TRAIL

$\Delta = 28^\circ 28' 02''$ (LT)	$\Delta = 69^\circ 19' 00''$ (LT)
$D = 27^\circ 17' 01''$	$D = 38^\circ 11' 50''$
$T = 53.27'$	$T = 103.70'$
$L = 104.34'$	$L = 181.47'$
$E = 6.65'$	$E = 32.36'$
$R = 210.00'$	$R = 150.00'$
P.C. = Sta. 114+57.92	P.C. = Sta. 116+95.00
P.T. = Sta. 115+62.26	P.T. = Sta. 118+76.47
P.I. = Sta. 115+11.19	P.I. = Sta. 117+98.70

ROLLINS ROAD
BUILT 201 BY
LAKE COUNTY FOREST
PRESERVE DISTRICT
SEC 12-F3000-01-BT
F.A.U. 181 STA. 368+11.00
STR. NO. 049-NO08 LOADING HL93

NAME PLATE

See Std. 515001

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.087g
Design Spectral Acceleration at 0.2 sec. (S_{D5}) = 0.161g
Soil Site Class = D

DESIGN SPECIFICATIONS

2012 AASHTO LRFD Bridge Design Specifications,
6th Edition with 2012 Interims

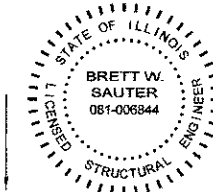
DESIGN STRESSES

FIELD UNITS

$f'_c = 3,500$ psi
 $f_y = 60,000$ psi (Reinforcement)

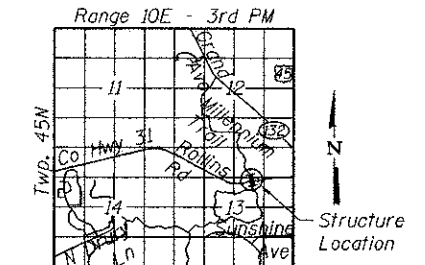
LOADING HL-93

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



DATE: 4/5/2013
SEAL EXPIRES: 11/30/2014

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



LOCATION SKETCH

GENERAL PLAN & LONGITUDINAL SECTION

ROLLINS ROAD OVER MILLENNIUM TRAIL

F.A.U. RTE. 181

SEC. 12-F3000-01-BT

LAKE COUNTY

STATION 368+11.00

STRUCTURE NUMBER 049-NO08

N:\PROJECTS\2013\Rollins\Design\Structural\CAD\0220087.dwg, 02/20/13, 08:11:00, LP:Edg



USER NAME = rdonley	DESIGNED - SMY	REVISED -
CHECKED - BWS	REVISIONS -	
PLOT SCALE = 1/8"=1'-0"	DRAWN - RD	REVISED -
PLOT DATE = 4/8/2013	CHECKED - BWS	REVISED -

MILLENNIUM TRAIL
LAKE COUNTY FOREST PRESERVES

F.A.U. RTE. 181	SECTION 12-F3000-01-BT	COUNTY LAKE	TOTAL SHEETS 118	SHEET NO. 50
CONTRACT NO. 63807				

SHEET NO. S-1 OF S-12 SHEETS

ILLINOIS FED. AID PROJECT