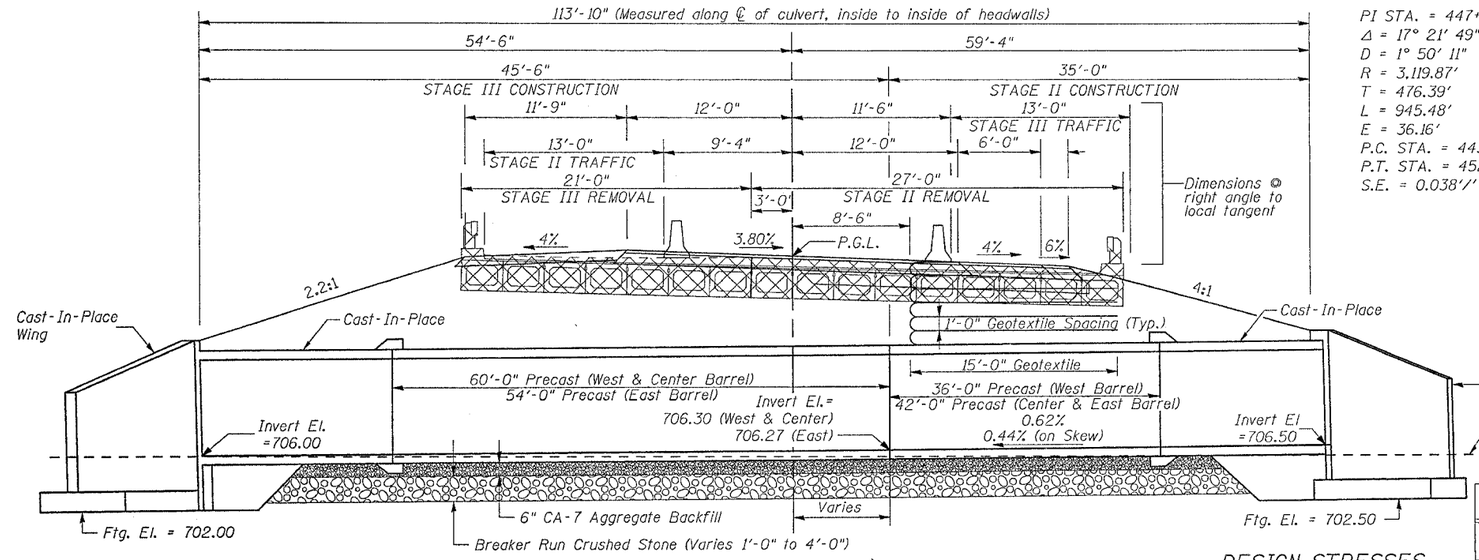
CONTRACT NO.				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
17	•	CARROLL	548	177
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (1,2)RS & (3-1)RS-1

Benchmark:

Existing Structure: Built in 1957 as a single span bridge with precast concrete deck beams. (Structure Number 008-0002) Length of span is 42'-10". Components of exisiting structure that do not affect new construction may remain in place. Remove existing to ±2'-0" below finished grade. No Salvage.

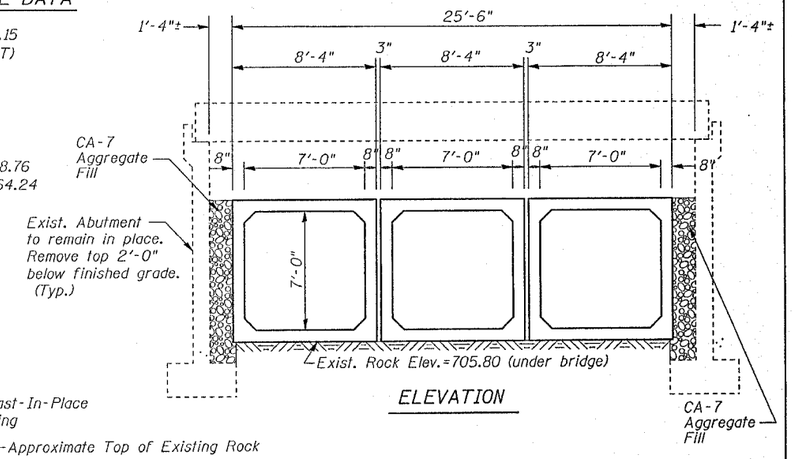
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



LONGITUDINAL SECTION

HORIZONTAL CURVE DATA

PI STA. = 447+95.15
Δ = 17° 21' 49" (RT)
D = 1° 50' 11"
R = 3,119.87'
T = 476.39'
L = 945.48'
E = 36.16'
P.C. STA. = 443+18.76
P.T. STA. = 452+64.24
S.E. = 0.038'/'



ELEVATION

DESIGN STRESSES

fy = 60,000 psi
fy = 65,000 psi (Welded Wire Fabric)
f'c = 3,500 psi
f'c = 5,000 psi (Precast)

PROFILE GRADE

Match existing plus 2½" overlay

DESIGN SPECIFICATIONS

2002 A.A.S.H.T.O. Specifications

WATERWAY INFORMATION TABLE

Ex. Drainage Area = 3.03 sq. mi.
Prop. Drainage Area = 2.75 sq. mi.
Existing Low Grade Elevation: 719.50 ft. @ Sta. 451+76
Proposed Low Grade Elevation: @ Sta.

	Frequency Year	Discharge Existing	Discharge Proposed	Waterway Opening Sq. Ft. Existing	Waterway Opening Sq. Ft. Proposed	Natural H.W.E.	Head (ft) Exist.	Head (ft) Prop.	Headwater Elev. (ft) Existing	Headwater Elev. (ft) Proposed
Ten-Year	10	532	489	134.4	109	711.7	0	0	711.7	711.7
Design	50	855	740	165.2	132	712.8	0.5	0	713.3	712.8
Base	100	1000	843	176.4	141	713.2	0.6	0	713.8	713.2
EX OVT										
PR OVT										
Max Calc	500	1361	1087	207.2	164	714.3	0.7	0.1	715.0	714.4

10-Year Velocity through Existing Structure= 3.28 fps
10-Year Velocity through Proposed Structure= 4.55 fps

NOTES

Precast Box shall conform to the requirements of A.A.S.H.T.O. M259 (A.S.T.M. C789) The maximum design fill height for this structure is 7'-8".

Removal of the slab on the existing bridge creates an unstable condition for the existing abutment walls. Top of wall shall be braced against ground or opposite wall until culvert is placed and backfilled. Force at top of wall is 2.3 k/ft. Contractor to submit bracing plan or other method to stabilize walls for approval prior to removal of bridge deck . See special provision for Temporary Support System.

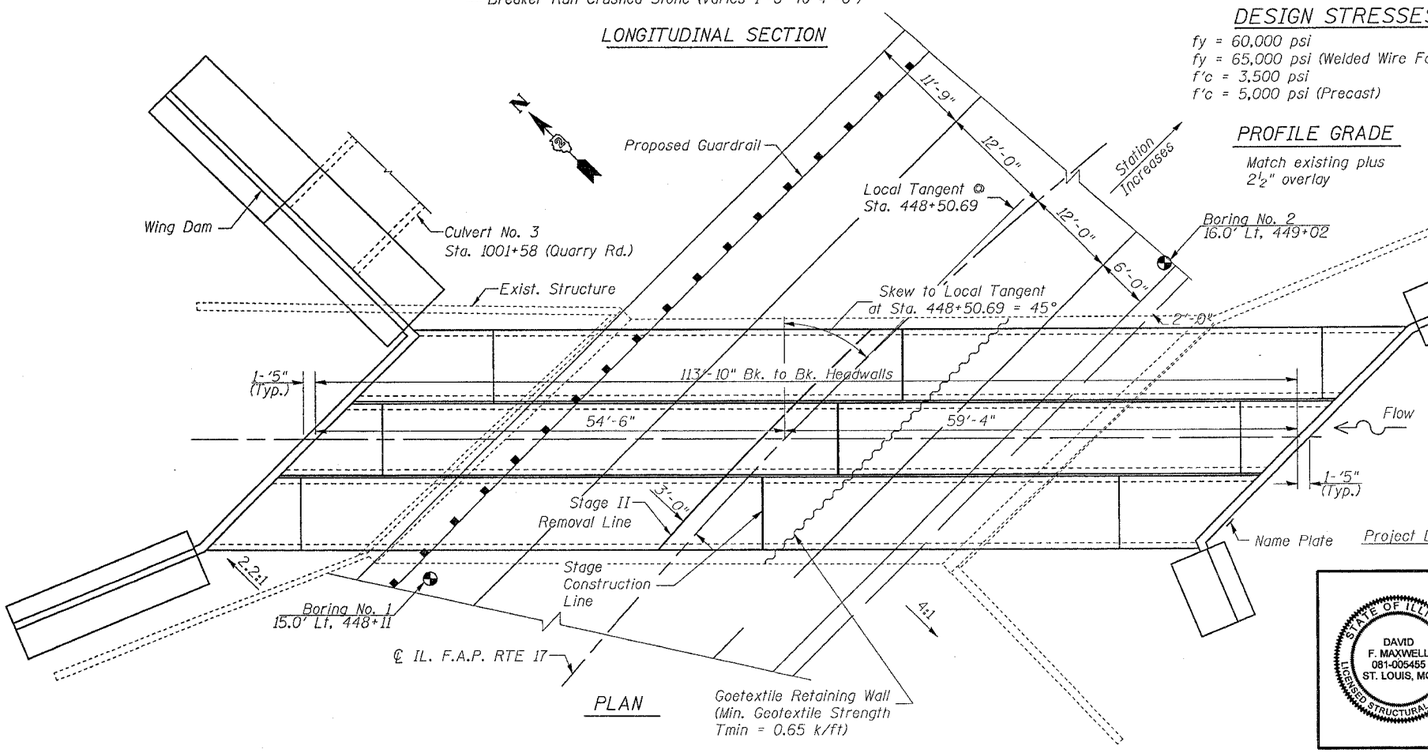
Breaker Run Crushed Stone to be placed as a subbase. Min. depth over component rock is 1'-0". Additional thickness required if component rock is not found.

Rock Excavation is estimated to be required under 55'-0" of culvert at a depth of 1'-0" between existing walls.

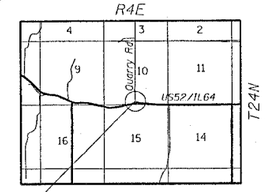
Work this sheet with Roadway Staging sheets. Stage I is for Culvert No. 3 construction. For additional notes see the General Notes sheet.

LOADING HS 20-44

Allow 50#/Sq. Ft. for future wearing surface



PLAN



LOCATION SKETCH

STATE OF ILLINOIS
DAVID F. MAXWELL 081-005455 ST. LOUIS, MO.
LICENSED STRUCTURAL ENGINEER

David F. Maxwell, S.E. Reg. No. 081-005455
Date: 3/15/07
My registration expires November 30, 2008.

GENERAL PLAN
US RTE 52 / IL RTE 64
CULVERT NO. 2
F.A.P. RTE 17 SECTION (1,2)RS & (3-1)RS-1
CARROLL COUNTY
STA. 448+50.69
STRUCTURE NO. 008-2019

PLOT DATE = 3/13/2007
FILE NAME = D:\CADD\18332P81\2074080LLV2.dgn
PLOT SCALE = $SCALE$
USER NAME = $USER$