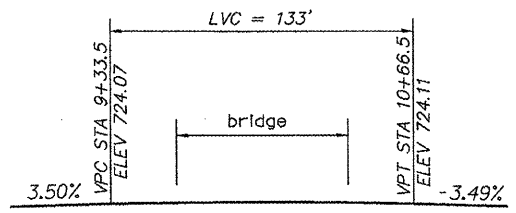


85547

**BENCHMARKS:**  
 B.M.- No. 300, Northeast bolt on Fire Hydrant located at Northwest corner of Riverside Blvd. and Garden Plain Ave. Elev. = 722.78'  
 B.M.- No. 301, Southeast bolt on Fire Hydrant located at Southwest corner of Clifford Ave. and Garden Plain Ave. Elev. = 724.09'

GARDEN PLAIN AVENUE OVER LOVES PARK CREEK  
 BUILT 2012  
 CITY OF LOVES PARK  
 WINNEBAGO COUNTY  
 SEC. 08-00069-00-BR  
 STATION 10+00  
 STR. NO. 101-6421 LOADING HL-93



**HIGHWAY CLASSIFICATION**  
 Garden Plain Avenue  
 ADT: 310 (2012)  
 Functional Class: Local Street (Urban)  
 Posted Speed: not posted  
 Design Speed: 30 mph

**EXISTING STRUCTURE:** S.N. 101-6407; Built in 1970, two span bridge that measures 62'-7" back to back of abutments with 30 ft. long precast, prestressed concrete deck beams supported by pile caps with 16 in. by 16 in. precast concrete piles. Overall width of the bridge measures 34 ft. with 3 ft. walks on both sides. The bridge deck has a bituminous overlay with steel railings. Roadway will be closed during demolition and construction.

**LETTERING FOR NAME PLATE**

Locate Name Plate at Southeast Corner of Bridge (See Std. 515001)

**DESIGN SPECIFICATIONS**

2007 AASHTO LRFD Bridge Design Specifications 4th Edition with 2008 and 2009 Interims.

**LOADING HL-93**

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

**DESIGN STRESSES**

**FIELD UNITS**  
 f'c = 3500 psi (Class P Concrete Substructure)  
 fy = 60,000 psi (reinforcement)

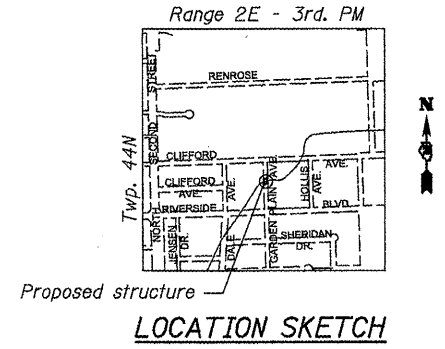
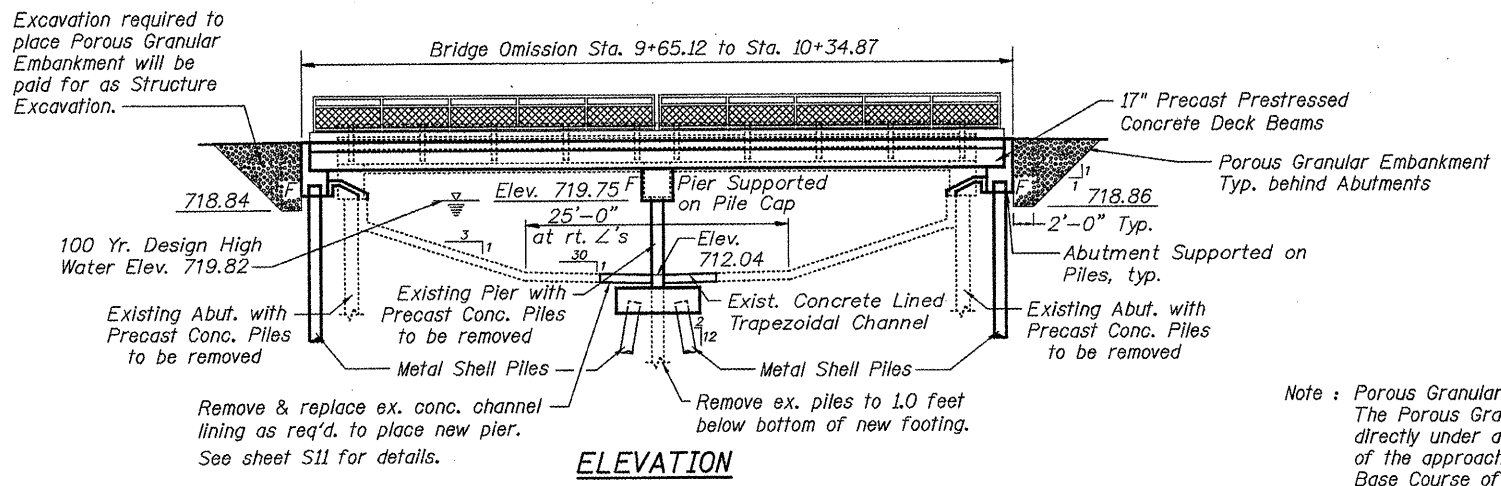
**PRECAST PRESTRESSED UNITS**

f'c = 6,000 psi  
 f'ci = 5,000 psi  
 fpu = 270,000 psi (1/2" Low Relaxation strands)  
 fpbt = 201,960 psi (1/2" Low Relaxation strands)

**SEISMIC DATA**

Seismic Performance Zone (SPZ) = 1  
 Design Spectral Acceleration at 1.0 sec. S<sub>D1</sub> = 0.075g  
 Design Spectral Acceleration at 0.2 sec. S<sub>DS</sub> = 0.160g  
 Soil Site Class = D

Salvage- None

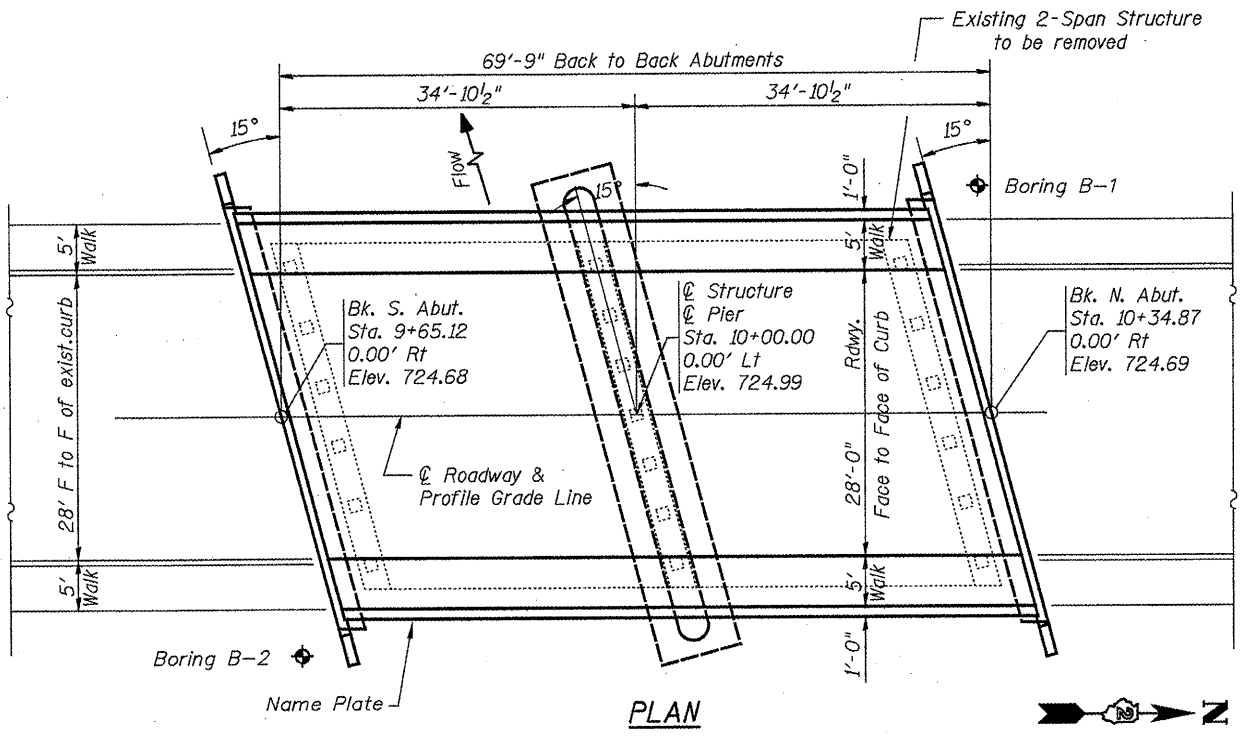


Note: Porous Granular Embankment is to be placed behind the abutment. The Porous Granular Embankment material shall be placed as shown directly under and for the full-width of the Aggregate Base Course of the approach roadway. Beyond the site limits of the Aggregate Base Course of the approach roadway, the Porous Granular Embankment material shall diminish in height from the full depth shown, utilizing a lateral slope of 1:1, to the bottom of the abutment cutoff wall at Elevation 718.84(S) & 718.86(N).

**DESIGN SCOUR ELEVATION TABLE**

	S. Abut.	Pier 1	N. Abut.
Design Scour Elevation (ft)	N/A	N/A	N/A

Concrete lined channel  
 Scour elevation not applicable



**WATERWAY INFORMATION**

Drainage Area = 6.32 SQ.MI. Low Grade Elev. = 721.5 @ Sta. 8+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Prop.	Nat. H.W.E.
Design	50	2030	254.0	254.0	719.46
Base	100	2200	268.0	268.0	719.82
Max calc.	500	N/A			

"I certify that to the best of my knowledge, information and belief, this bridge 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 Standard Specifications for Highway Bridges'."

Jeffrey T. Torney 12/15/11  
 ILLINOIS STRUCTURAL NO. 081-004880 (Expires 11/30/12)

**GENERAL PLAN AND ELEVATION**  
 GARDEN PLAIN AVENUE OVER LOVES PARK CREEK  
 SECTION 08-00069-00-BR  
 WINNEBAGO COUNTY  
 STATION 10+00.00  
 STRUCTURE NO. 101-6421

SHEET NO. S1	F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
14 SHEETS		08-00069-00-BR	WINNEBAGO	21	7
CONTRACT NO. 85547					
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT					

**McClure**  
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