STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

I GENERAL NOTES

1. All work shall be done in accordance to the Illinois Department of Transportation (IDOT) Standard Specification For Road and Bridge Construction, Adopted January 1, 2007, and latest Supplemental Specifications and recurring Special Provisions, unless noted otherwise. Construction Plans and Subsequent Details are all to be considered as part of the Contract. Incidental Items or Accessories necessary to complete this work may not be specifically noted but are considered a part of this Contract.

2. No Construction Plans shall be used for Construction unless specifically Marked For Construction. Prior to commencement of construction, the Contractor shall verify all dimensions and conditions affecting the work with the actual conditions. If there are discrepancies between the job site and what is shown on the construction plans, The contractor must immediately report to Engineer before doing any work, otherwise the Contractor shall assume full responsibility. In the event of disagreement between the plans and existing conditions and or details, the Contractor shall secure written instruction from the Engineer prior to proceeding with any part of the work affected by omissions or discrepancies. In failing to secure such instruction, the Contractor will be considered to have proceeded at his own risk and expense. In the event of any doubt or questions arising with respect to the true meaning of the Construction Plans or Specifications, the decision of the Engineer shall be final and conclusive.

3. Contractor shall verify all topographic information and grade elevations adjacent to bridge prior to proceeding, inform Engineer of any variation.

II CAST-IN-PLACE CONCRETE

1. All cast-in-place concrete work and reinforcing steel work shall be in accordance with Sections 503 and 508 respectively of the IDOT Standard Specifications For Road And Bridge Construction, adopted January 1, 2007, and Supplemental Specifications and Recurring Special Provisions and as noted below.

2. Cover from the face of concrete to face of reinforcement bars shall be 3" for surfaces cast against earth and 2" for all other surfaces unless otherwise shown.

3. All reinforcement bars shall be epoxy coated.

4. Reinforcement Bars shall conform to the requirements of ASTM A760 Grade 60. Field bending or cutting shall not be permitted. See Special Provision.

5. Reinforcement Bars designated (E) shall be Epoxy Coated.

6. Reinforcing bar bending dimensions are out to out.

7. Concrete in drilled shafts shall be class DS concrete and shall have a minimum compressive strength of 4,000 psi @ 28 days. All other C.I.P. concrete shall be class SI concrete and shall have a minimum compressive strength of 3,500 psi @ 28 days.

8. All exposed concrete edges shall be beveled $\frac{3}{4}$".

III PREFABRICATED PEDESTRIAN BRIDGE

The Prefabricated Pedestrian Bridge shall be designed, fabricated, delivered and erected according to the Special Provisions of "Pedestrian Truss Superstructure" and design plans.

1. Style: Pratt Truss or Approved Equal.

2. Span: 84' - 10" end to end of each bridge span.

3. Loading: Per AASHTO Guide Specification for Design of Pedestrian Bridges.
   Dead Load : Actual weight of the structure
   Live Load : 85 PSF or H6 (12,000 Lb) vertical load. Vertical impact is not required.
   Wind Load : 35 PSF on the full vertical projected area of the bridge, as if enclosed.

4. Finishes: All steel shall be unpainted weathering steel conforming to the Special Provision for "Surface Preparation and Painting Requirements for Weathering Steel."

5. The total depth of deck, from top of deck to the bottom of bottom chord shall be less than 12".

6. Quality: The bridge manufacturer shall maintain proper records assuring that all steel, bolts, and materials used are in accordance with material specified. The bridge shall be identified and marked with a permanent nameplate showing the manufacturers name, location, date of manufacture, and load carrying capacity. Structural material shall be traceable to each bridge. All welders shall be qualified in accordance with AWS D1.1-2002 structural welding code. All workmanship shall be in compliance with AASHTO and AISC standard practice. Full penetration weld details used in shop splices shall be submitted to the Engineer to determine testing required (If any).

7. Delivery: Bridges shall be delivered by truck to a location nearest the site accessible by roads.

8. Field welding of construction accessories will not be permitted to beams or girders.

IV CONSTRUCTION

1. Do not scale dimensions for construction. Scale, if shown, applies only to full size drawings.

2. No construction joints, except those shown on the plans, will be allowed unless directed by the Engineer.

3. Any information concerning type or location of underground and other utilities is not guaranteed to be accurate or all inclusive. The Contractor is responsible for making his own determinations as to the type and location of the utilities as may be necessary to avoid damage thereto. Contractor shall call J.U.L.I.E. and the Engineer prior to excavation.

4. Shop working or layout drawings pertaining to the construction of the work, as may be required, shall be submitted to the Engineer for approval prior to the start of construction. Shop drawing shall be signed and sealed by a Structural Engineer licensed in State of Illinois.

5. Upon completion, the contractor shall collect and remove all construction debris and excess material from the site. Damaged trees, shrubs, and other landscape features resulting from construction activities shall be replaced or repaired.

6. All bearing surfaces must be true and level.

7. Contractor must coordinate with Bridge Manufacturer to ensure proper placement of cast-in-place anchors. If the contractor elects to use post-installed anchors in lieu of cast-in-place anchors, he must coordinate the plate dimensions, bolt spacing and bolt quantity with the Bridge Manufacturer prior to construction.

8. Bridge Seat Sealer shall be applied to the seat area of all piers.

V FOUNDATION NOTES

1. The minimum allowable end tip resistance of the drilled shafts shall be 7.5 ksf based on the soils report prepared by ECS Illinois, LLc. See soil report for additional information.

2. Soil borings prepared by Testing Service Corporation, File No. L-30,535 dated September 5, 1991, for the Deerfield Road bridge over the Des Plaines River (SN 049-0174) have been included in these plans.

3. The Contractor is responsible for design, installation and removal of all excavation support systems.

4. The excavation and work area shall be properly drained at all times during construction. all wet, loose, frozen or other unsuitable material shall be removed prior to placement of concrete or compacted backfill.

5. To reduce the potential for sloughing of granular soils resulting in loss of confinement, the use of full length temporary steel casing will likely be necessary.

6. The cost of temporary steel casing is included with "Drilled Shaft in Soil".

7. Based on the soil conditions encountered during our subsurface exploration, groundwater seepage and sloughing of granular sandy/silty soils will take place during drilled pier excavations. To reduce the potential for sloughing of granular soils resulting in loss of confinement, the use of full length temporary steel casing will likely be necessary. The temporary casing must be carefully twisted or vibrated ahead of the drilling to help maintain a stable excavation and reduce the risk of disturbance to or, heave or blow-in of saturated granular soils. Difficult drilling and casing advancement may be encountered. If difficult advancement of temporary casing ahead of drilling is experienced, the contractor may elect to excavate the pier in small increments (1 or 2 feet) then push the steel casing. The temporary steel casing should be extended a minimum 2 feet above the ground surface. Advancement of full length temporary protective steel casing by telescoping method should be anticipated during pier excavation.

   We anticipate groundwater seepage will take place during pier excavation. While drilling into the saturated granular soils, appropriate construction procedures should be implemented to reduce the potential for construction problems. In addition to full length temporary casing, the foundation contractor should be prepared to introduce drilling fluid/water into the drilled pier and complete the pier excavation under slurry. Drilling fluid/water is used with temporary casing to resist the seepage pressure on the excavation bottom and reduce the potential for sloughing of the excavation sides. An appropriate head must be maintained to reduce the potential for heave or blow-in.

   Due to the granular nature of the soils encountered in the borings and the presence of groundwater seepage, placement of pier concrete by tremie method is anticipated. Proper placement of pier concrete by tremie method should be implemented. We recommend a minimum diameter of 10 inches by used for the tremie. The tremie pipe should be kept below the surface of the concrete at all times and lifted slightly, no more than 1 foot, to permit the flow of concrete and reduce the potential for water contamination. We recommend the water or slurry be removed or pumped out from the top of the shaft while the pier concrete is being placed to minimize contamination to the concrete. The contractor should exercise care to make sure all surface contaminated concrete is completely removed during concreting. We recommend the concrete be placed immediately after pier excavation is completed. The temporary steel casing can be extracted as the concreting operation progresses. A positive head of concrete should be maintained prior to pulling out the temporary steel casing to prevent water and soil outside the steel casing from contaminating the concrete.

   The foundation contractor should have available on site full length temporary steel casing, a suitable pump, tremie pipes as well as an adequate source/supply of drilling fluid/water to reduce the potential for construction problems and prevent construction delay. The pump should be suitable to remove water seepage and slurry from the pier*s bearing depth. The contractor should have adequate water on site to flood the shaft if necessary should heave of the excavation bottom occur.

   One of the most critical aspects of installation of drilled piers is removal of the casing. Specifically, concrete will have a tendency to *arch* within the casing lining, creating the possibility of voids or discontinuities within the shaft of the caisson. During concreting operations, we recommend that special attention be paid to the pour and pull operations, to help ascertain that discontinuities are not created within the shaft of the caisson. The drilled pier concrete should be placed in intimate contact with undisturbed natural soil. To reduce the potential for arching, we recommend the drilled pier concrete mix be designed for a slump of 7 to 9 inches for tremie placement.

   All work described as part of item 7 above is included in the various pay items associated with the bridge piers.

DESIGNED -	
CHECKED -	
DRAWN -	
CHECKED -	

\- 200

EXAMINED

ENGINEER OF BRIDGE DESIGN

PASSED

ENGINEER OF BRIDGES AND STRUCTURES

GENERAL NOTES
DEERFIELD ROAD BIKE PATH
OVER DES PLAINES
SEC. 04-00038-03-BR
LAKE COUNTY
STATION 4+77.30
STRUCTURE NO.

SHEET NO.	F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
S-2 SHEETS	1257	04-00038-03-BR	LAKE	44 40	21
			CONTRACT NO. 63408		
	FED. ROAD DIST. NO. 1	ILLINOIS	FED. AID PROJECT		

N:\LCDOT\86377A\Struct\86377A-S2.SHT