

DESIGN CRITERIA

Building Codes and Specifications:

- A. Chicago Building Code (CBC), 2012 Edition
 - 1. Type of Construction: Type II - Non-Combustible per Section 6 (13-60-030)
- B. American Institute of Steel Construction (AISC), LRFD, 13th Edition
- C. American Concrete Institute (ACI), Building Code Requirements for Structural Concrete, ACI 318-08

Design Loads Criteria:

- A. Dead Loads
 - 1. UV Resistant Polycarbonate Glazing Panels 2.5 PSF
 - 2. 12" Polycarbonate Traffic Signal 24 LB
- B. Snow Loads
 - 1. Roof Snow Load (Pf) 25 PSF
- C. Wind Loads
 - 1. MWFRS Wind Pressure 20 PSF

Materials:

All structural steel materials shall be as follows unless noted otherwise:

- A. Steel:
 - 1. Structural Steel Wide Flange ASTM A992
 - 2. Structural Plates ASTM A572, Grade 50
 - 3. Hollow Structural Sections ASTM A500, Grade B
 - 4. High Strength Bolts ASTM A325-N or SC
 - 5. Anchor Rods ASTM F1554, Grade 55
 - 6. Welding Electrode AWS A5.1 or A5.5 E70XX

GENERAL NOTES

1. Field verify all existing dimensions and elevations for conformance with the drawings. All discrepancies shall be immediately brought to the attention of the Engineer.
2. Shop drawings prepared by suppliers, subcontractors, etc. shall be reviewed and coordinated by the Contractor prior to submitting to the Engineer.
3. Shop drawings prepared by the subcontractors, suppliers, etc. shall be reviewed by the Engineer for conformance with design concept only.
4. Unless otherwise noted, all details, sections and notes on the drawings are intended to be typical for similar situations elsewhere.
5. The Contractor is to refer to the architectural drawings for dimensions and details not provided.
6. Comply with all applicable city, county, state and federal laws, including the Occupational Safety and Health Act (OSHA) and regulations adopted pursuant thereto.
7. The contract structural drawings and specifications represent the finished structure. Unless otherwise indicated, they do not indicate the means or method of construction. Provide all measures necessary for construction including, but not limited to, bracing, shoring for construction equipment, shoring for the building, forms, scaffolding, planking, safety nets, support and bracing for cranes and gin poles, etc.
8. Supervise and direct the work so as to maintain sole responsibility for all construction means, methods, techniques, sequences and procedures. As a part of this responsibility, retain the services of a licensed Structural Engineer to design and supervise any scaffolding for working personnel, and all shoring of forms and elements of construction.

STRUCTURAL STEEL

1. Structural steel details, fabrication, and erection shall conform to the latest edition of the AISC Manual of Steel Construction unless otherwise shown or specified.
2. Estimated weight of Structural Steel = 67,910 pounds (ASTM A992)
Estimated weight of Structural Steel = 32,950 pounds (ASTM A572, Grade 50)
Estimated weight of Structural Steel = 43,930 pounds (ASTM A500, Grade B)
3. Field connections shall be bolted or welded. High strength bolts shall be installed in accordance with AISC Specifications. Bolts shall be ASTM A325, 3/4" diameter unless noted otherwise. Use Type N for framed connections and Type SC (Slip Critical) at wind moment connections. All welding to be done by certified welders. All welds to be E70XX electrodes.
4. Shop connections may be welded unless otherwise indicated. Welds shall be designed to be fully equivalent in strength to bolted connections.
5. Unless otherwise noted, all welds shall be continuous 1/4" fillet welds.
6. Provide welded moment connections where shown and as detailed on the drawings using full penetration welds, unless noted otherwise.
7. All full penetration welds shall be provided with backup bars unless noted otherwise.
8. Fabricator shall select AISC simple shear connections for steel beams capable of carrying either the reaction force when indicated or 50% of the total uniform load for the given size, span, and grade of the beam, as tabulated in the AISC tables for allowable loads.
9. Other connections shall be standard double angle shear connections, unless noted otherwise.
 - A. The minimum number of bolts per vertical row shall be as follows, unless noted otherwise.

Beam Size	Min. No. of Bolts
W8, W10	2
W12, W14, W16	3
W18	4
W21	5
W24	6
W27	7
W30	8
W33	9
W36	10

10. Cuts, holes (openings), etc., required in structural steel members for the work of other trades shall be shown on the shop drawings. Burning of holes and cuts in structural steel members in the field shall not be allowed, except by written permission from the Engineer.
11. Erect and maintain temporary bracing to ensure the alignment and stability of the structure during erection until permanent connections have been completed.
12. Fabricate and install beams with natural camber up.
13. All exposed structural steel shall be hot-dip galvanized per ASTM A123.
14. All structural bolts, nuts, and washers shall be hot-dip galvanized per ASTM A153.
15. Repair of damaged and uncoated areas of galvanized steel shall conform to ASTM A780. Submit to the Illinois Department of Transportation for approval of all proposed repair work.

MASONRY

1. Grout under column base plates shall attain a minimum 28-day compressive strength of 6000 psi and shall conform to ASTM C1107 standards. Grout shall also contain inhibitors.

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TOTAL BILL OF MATERIAL

Item	Unit	Total Quantity
Structural Steel (CTA)	L. Sum	1
Translucent Canopy Roof (CTA)	Sq Ft	1,662
Flashing, Gutters And Sheet Metal (CTA)	L. Sum	1
Plumbing - Downspouts (CTA)	L. Sum	1
Electrical Work For Canopy Lighting And Heat Trace (CTA)	L. Sum	1
LED Light Source Fixture For Canopy Lighting (CTA)	Each	36

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USER NAME = BAWtor+	DESIGNED - ENH	REVISED -
	CHECKED - HKB	REVISED -
PLOT SCALE = 0:1.0000 '1" / in.	DRAWN - CD	REVISED -
PLOT DATE = 9/15/2013	CHECKED - HKB	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PEDESTRIAN CANOPY GENERAL NOTES
STRUCTURE NO. 016-1716**

SHEET NO. 1 OF 11 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3730	2013-008R	COOK	559	442
CONTRACT NO.			60W26	
ILLINOIS FED. AID PROJECT				