STRUCTURAL SYMBOLS LIST

SYMBOL	DESCRIPTION
	WATERTIGHT BULKHEAD OR DECK
	NON-TIGHT BULKHEAD
	STIFFENER ON FAR SIDE
VL	VERTICAL LADDER
"A" "B" "t" "t"	FLANGE PLATE AxBxt NOTE: FLANGE MAY BE FABRICATED BY BENDING THE PLATE OR BY WELDING THE FLANGE TO THE WEB.

LIST OF ABBREVIATIONS

ABL	ABOVE BASELINE
ABS	AMERICAN BUREAU OF SHIPPING
AFT	AFTER
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
BHD	BULKHEAD
BRKT	BRACKET
BTM	BOTTOM
CJP	COMPLETE JOINT PENETRATION
℄	CENTERLINE
CO	CUTOUT
C-C	CENTER TO CENTER
CONT	CONTINUE
DISCH	DISCHARGE
DET	DETAIL
DIA	DIAMETER
DK	DECK
DN	DOWN
DO	DITTO (REPEAT PREVIOUS SCANTLING)
DWG	DRAWING
DWL	DESIGN WATER LINE
EQ	EQUAL
FB	FLAT BAR
FDN	FOUNDATION
FLG PL	FLANGE PLATE
FR	FRAME
FWD	FORWARD
GR	GRADE
INT	INTERVAL
IWO	IN WAY OF
KIPS	THOUSAND POUNDS
KSI	THOUSAND POUNDS PER SQUARE INCH
L	STEEL ANGLE
LEN	LENGTH
LKG	LOOKING
LONG	LONGITUDINAL
MH	MANHOLE
MIN	MINIMUM
NO	NUMBER
NPS SCH	NATIONAL PIPE STANDARDS SCHEDULE
NPS	NATIONAL PIPE STANDARDS
NPT	TAPER PIPE THREAD
NT	NON-TIGHT
NWT	NON-WATERTIGHT
OD	OUTSIDE DIAMETER
OPP	OPPOSITE
P	PORT
P/S	PORT/STARBOARD SYMMETRIC ABOUT CENTERLINE
PCF	POUNDS PER CUBIC FOOT
PL	PLATE
PLCS	PLACES
PLTG	PLATING
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
QAWT	QUICK ACTING WATERTIGHT
QAWTMH	QUICK ACTING WATERTIGHT MANHOLE
R	RADIUS
RB	ROUND BAR
RECT	RECTANGULAR
REF	REFERENCE
SCHED	SCHEDULE
SIM	SIMILAR

LIST OF ABBREVIATIONS (CONT)

ST	SQUARE OR RECTANGULAR TUBING
STBD	STARBOARD
STIF	STIFFENER
SWE	SUPPLIED WITH EQUIPMENT
THK	THICK
THKNS	THICKNESS
THRU	THROUGH
TYP	TYPICAL
TRVS	TRANSVERSE
UNO	UNLESS NOTED OTHERWISE
VL	VERTICAL LADDER
WT	WATERTIGHT

STRUCTURAL STEEL SPECIFICATIONS

1. MATERIALS

WIDE FLANGE/ WT SHAPES	ASTM A992
SHAPES, PLATES, CHANNELS, AND BARS	ASTM A36 OR ASTM A572 GR 50 AS NOTED
ANGLES	ASTM A36
STRUCTURAL TUBING	ASTM A500 GR B
PIPE	ASTM A53 GR B
BOLTS / SCREWS	ASTM F593, TYPE 316 STAINLESS STEEL, UNO
NUTS	ASTM F594, TYPE 316 STAINLESS STEEL, UNO
WASHERS	ASTM F844, WIDE SERIES, MAX THICKNESS, TYPE 316 STAINLESS STEEL, UNO
WELD ELECTRODES	E70XX, 70KSI, LOW HYDROGEN, UNO

2. WELDING
   - A. SEE SPECIFICATION FOR GENERAL WELDING AND WELD INSPECTION REQUIREMENTS
   - B. WHERE WELDS ARE NOT SHOWN, THE CONNECTION SHALL BE MADE WITH A COMPLETE JOINT PENETRATION WELD OR SHALL DEVELOP THE FULL CAPACITY OF THE MEMBERS BEING CONNECTED.
3. FINISHING

   EDGES OF ALL OPENINGS AND CUTOUTS SHALL BE SMOOTH AND FREE OF ANY BURRS, GOUGES, NICKS, OR SHARP EDGES.

BARGE DESIGN LOADS

1. THE BARGE IS DESIGNED IN ACCORDANCE WITH ABS "RULES FOR BUILDING AND CLASSING STEEL BARGES 2009".
2. HULL FITTINGS LOADS:

8" BOLLARD	9 KIPS
24" CLEAT	90 KIPS

3. ACCESS LADDERS AND PLATFORMS:

   VERTICAL LADDERS 300 POUND CONCENTRATED ON CENTER OF EACH RUNG
4. GUARDRAILS AND HANDRAILS: 200 POUND CONCENTRATED LOAD APPLIED HORIZONTALLY AT THE TOP OF STANCHIONS AND APPLIED HORIZONTALLY AT MIDLENGTH OF TOP RAIL.
5. THE FOLLOWING UNIT WEIGHTS WERE USED IN THE DESIGN OF THE BARGE:

STEEL	489.6 PCF
FRESH WATER	62.4 PCF

GENERAL NOTES

1. THE REQUIREMENTS INDICATED ON THIS SHEET ARE INTENDED AS A BASIC SUMMARY OF THE MATERIAL AND CONSTRUCTION REQUIREMENTS FOR THE PROJECT. ADDITIONAL, MORE STRINGENT REQUIREMENTS ARE GIVEN IN THE PROJECT SPECIFICATIONS.
2. ALL STRUCTURAL RELATED SHOP DRAWINGS SHALL BE REVIEWED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION.
3. LIMBER AND VENT HOLES SHALL BE PROVIDED IN NON-TIGHT STRUCTURE TO PREVENT ACCUMULATION AND RETENTION OF LIQUIDS AND TO INSURE THEIR FREE FLOW TO DRAINS AND SUCTION PIPES. SUFFICIENT DRAIN HOLES SHALL BE PROVIDED IN BOTTOM STRUCTURE TO ENSURE DRAINAGE OF EACH BAY.
4. SMALL INACCESSIBLE VOIDS AND SPACES AS SHOWN ON THE DRAWINGS SHALL BE FILLED WITH LIGHTWEIGHT CONCRETE AFTER COATING TO PREVENT THE ACCUMULATION OF LIQUIDS.
5. ALL SNIPES AT ENDS OF STIFFENERS SHALL BE 45 DEGREES.
6. VERTICAL LADDERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE DETAIL ON SHEET 23.

REFERENCES

1. AMERICAN BUREAU OF SHIPPING (ABS), "RULES FOR BUILDING AND CLASSING STEEL BARGES 2009.
2. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN, THIRTEENTH EDITION, 2005.
3. AMERICAN WELDING SOCIETY (AWS) D1.1, 2006, STRUCTURAL WELDING CODE-STEEL

PROFESSIONAL ENGINEER
ORIGINAL REV - APPROVED BY ERIC D. SNYDER DATED 10/04/2011

ERIC D. SNYDER
STATE OF WASHINGTON
17216
REGISTERED PROFESSIONAL ENGINEER
2011-07-22

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DRAWING NO. CEIDT001BA-100-201

FILE NAME =	USER NAME =	DESIGNED - E. SNYDER	REVISED - REV A 07/21/2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	IDOT BRUSSELS FERRY STRUCTURAL GENERAL NOTES - BARGE	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - R. MANANSALA	REVISED -			304	21-3	JERSEY	26	4
	PLOT SCALE =	CHECKED - P. MARTIN	REVISED -						CONTRACT NO.	76D29
	PLOT DATE =	DATE - 10/04/2010	REVISED -		SCALE: NTS SHEET NO. OF SHEETS STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		