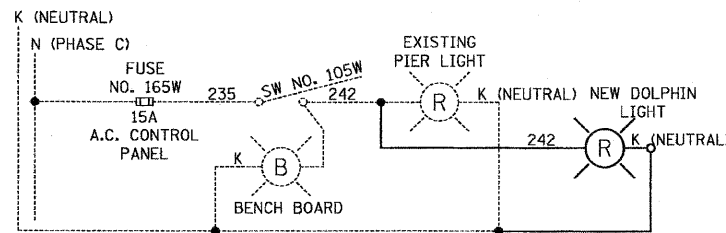


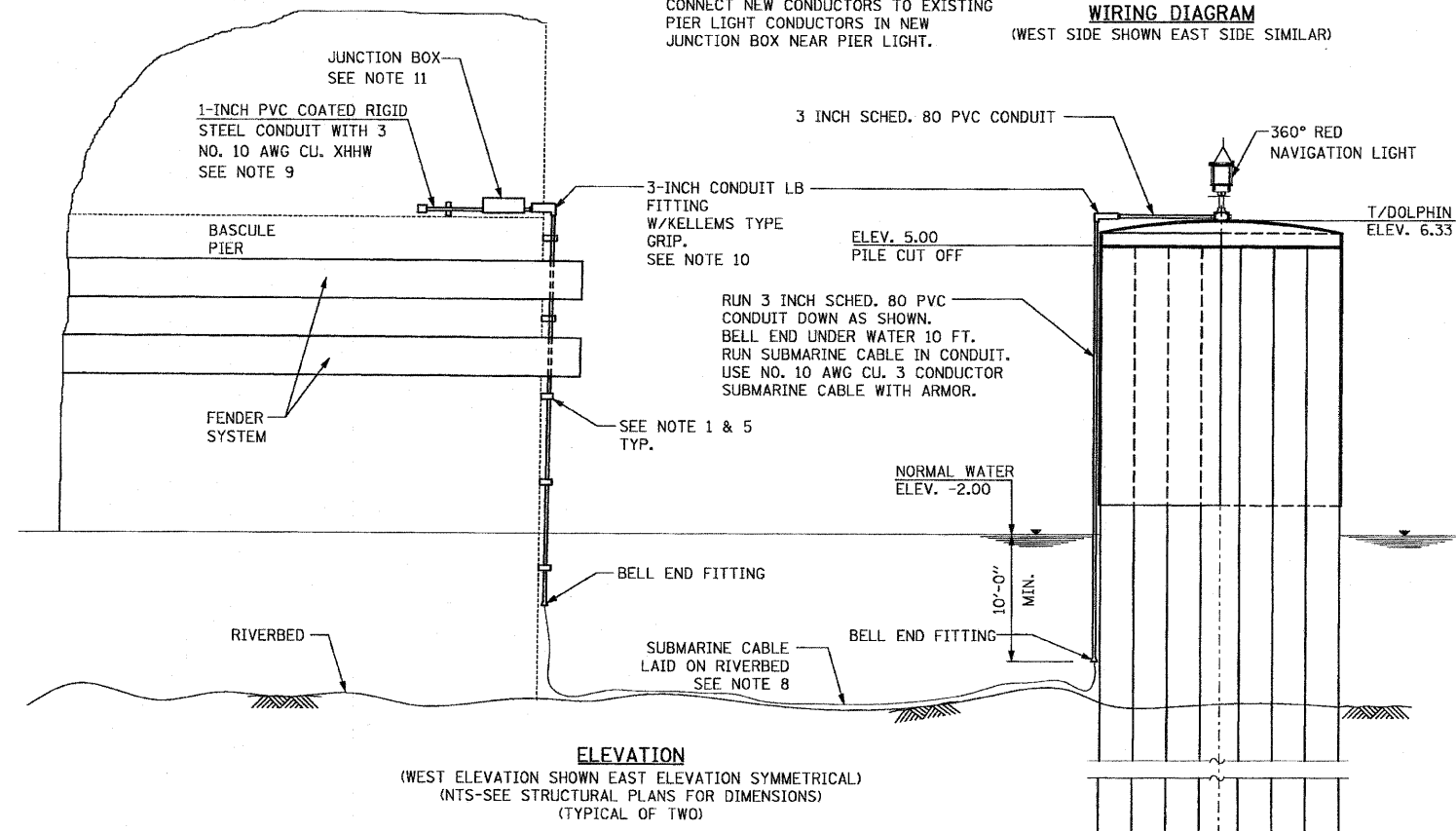
LEGEND

----- EXISTING
 _____ NEW

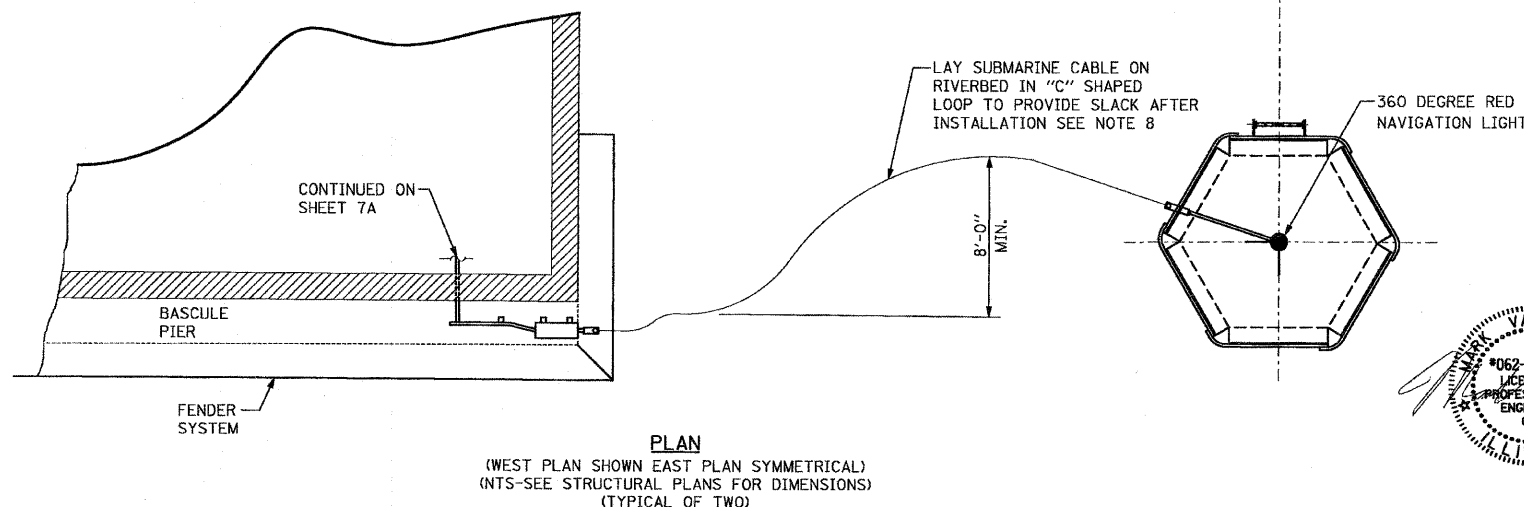


WIRING DIAGRAM
 (WEST SIDE SHOWN EAST SIDE SIMILAR)

NOTE:
 CONNECT NEW CONDUCTORS TO EXISTING PIER LIGHT CONDUCTORS IN NEW JUNCTION BOX NEAR PIER LIGHT.



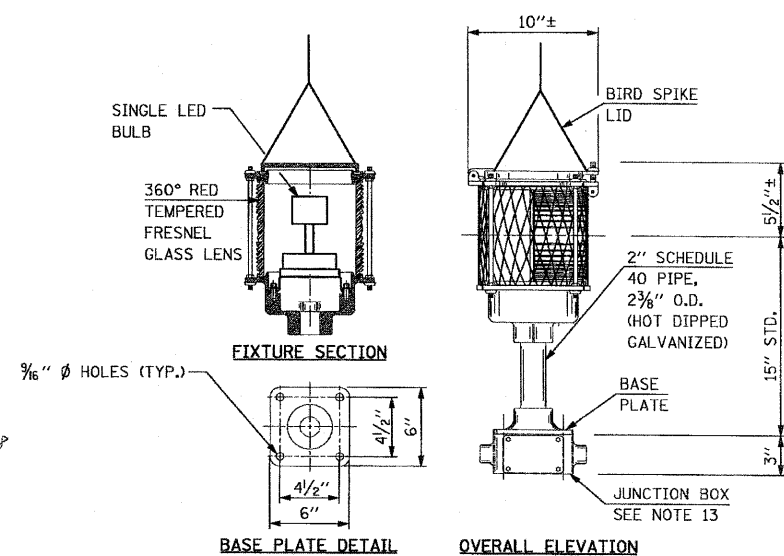
ELEVATION
 (WEST ELEVATION SHOWN EAST ELEVATION SYMMETRICAL)
 (NTS-SEE STRUCTURAL PLANS FOR DIMENSIONS)
 (TYPICAL OF TWO)



PLAN
 (WEST PLAN SHOWN EAST PLAN SYMMETRICAL)
 (NTS-SEE STRUCTURAL PLANS FOR DIMENSIONS)
 (TYPICAL OF TWO)

NOTES:

1. ALL FASTENERS AND MOUNTING HARDWARE SHALL BE GRADE 316 STAINLESS STEEL (ASTM A593). REFER TO STRUCTURAL SHEET 4 FOR ANCHOR AND FASTENER SIZES. MINIMUM ANCHOR PULLOUT STRENGTH SHALL BE 1400LBS.
2. INSTALL SUBMARINE CABLE, CONDUIT, PIER LIGHT IN ACCORDANCE WITH THE CURRENT EDITION OF NFPA-70 (NATIONAL ELECTRICAL CODE - NEC) ALL DEVICES, EQUIPMENT, BOXES, TERMINALS AND SPLICES SHALL BE UL LISTED. ALL EQUIPMENT AND DEVICES SHALL BE GROUNDED WITH A NO. 10 AWG COPPER GROUND CONDUCTOR. GROUND CONDUCTOR SHALL BOND THE DOLPHIN PIER LIGHTS TO THE EXISTING PIER LIGHT CIRCUIT DISTRIBUTION PANELS.
3. REFER TO SPECIAL PROVISIONS FOR MATERIAL AND DEVICE SPECIFICATIONS.
4. 3 INCH SCHEDULE 80 PVC CONDUIT SHALL BE USED FOR THE SUBMARINE CABLE AS SHOWN ON THE PLANS. PROVIDE CONDUIT REDUCERS TO FIT PIER LIGHTS AS NEEDED.
5. ALL CONDUIT SHALL BE MOUNTED ON ONE INCH STRUT EVERY FIVE FEET, VERTICALLY AND HORIZONTALLY. STRUT SHALL BE 14 GAGE MINIMUM GRADE 316 STAINLESS STEEL (ASTM A240). STRUT SHALL BE RIGIDLY ANCHORED TO PILES, PILE CAP, BASCULE PIERS, AND FOUNDATIONS. CONDUIT SHALL BE STRAPPED TO STRUT USING ASTM A316 UL LISTED STRAPS.
6. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS DETAILING ALL ASPECTS OF THIS INSTALLATION FOR APPROVAL BY THE ENGINEER PRIOR TO PURCHASING AND INSTALLING. SHOP DRAWINGS SHALL INCLUDE DIMENSIONS, MAKE AND MODEL.
7. WIRE NUTS SHALL NOT BE ALLOWED. ALL TERMINATIONS SHALL BE BY TERMINAL AND LUG. SPLICING SHALL BE BY WATERPROOF CRIMPED COMPRESSION BUTT SPLICES WITH HEAT SHRINK OVER TOP OVERLAPPING EDGES BY 2 INCHES MINIMUM EACH SIDE OF COMPRESSION BARREL. ALL TERMINATION AND SPLICE PRODUCTS SHALL BE UL LISTED AND 600V RATED.
8. SUBMARINE CABLE SHALL BE AS SPECIFIED IN THE SPECIAL PROVISIONS. MINIMUM REQUIREMENTS SHALL BE 3-NO. 10 AWG COPPER CONDUCTORS WITH STEEL ARMOR CLAD INSULATION.
9. FIELD ROUTE PVC COATED RIGID STEEL CONDUITS WITH CONDUCTORS TO EXISTING PIER LIGHT OR NEW PIER LIGHT CIRCUIT JUNCTION BOX. CONNECT CONDUCTORS TO EXISTING PIER LIGHT 120 VOLTS A.C. CIRCUIT. PROPOSED CONNECTION SHALL BE SHOWN ON CONTRACTORS SHOP DRAWINGS SUBMITTED FOR APPROVAL.
10. PROVIDE 3 INCH CONDUIT LB FITTING WITH INTEGRAL KELLEMS TYPE CABLE GRIP FOR SUBMARINE CABLE SUPPORT. KELLEM STYLE GRIP SHALL BE GRADE 316 STAINLESS STEEL, SIZED TO PROVIDE SUPPORT FOR 5 TIMES CABLE WEIGHT IN FREE AIR.
11. JUNCTION BOXES (JB) SHALL BE GRADE 316 STAINLESS STEEL (ASTM A240) MINIMUM 14 GAUGE, NEMA 4X WITH EXTERNAL MOUNTING EARS. ANCHORS SHALL BE PER NOTE 1. JB SHALL BE MINIMUM 12H X 10W X 6D INCHES, WITH GROUNDED COVER.
12. ALL WORK SHALL BE PERFORMED BY LICENSED JOURNEMEN ELECTRICIANS, SUPERVISED BY A LICENSED MASTER ELECTRICIAN.
13. SUPPORT RATED BOX PROVIDED BY PIER LIGHT MANUFACTURER.
14. TO MAKE THE NAVIGATION LIGHT CIRCUIT COMPLIANT WITH CURRENT NATIONAL ELECTRIC CODE (NEC), REPLACE THE EXISTING 30A FUSE NO. 165 WITH A 15A FUSE OF THE SAME TYPE. EXISTING 30A LABEL ON PANEL BOARD SHALL BE REMOVED AND REPLACED WITH A 15A LABEL. COST IS INCLUDED IN THE COST OF NAVIGATION LIGHTING SYSTEM.



DOLPHIN LAMP ASSEMBLY
 (2 REQUIRED)

EXPIRES: November 30, 2009



USER NAME = pstald	DESIGNED - MVD	REVISED -
FILE NAME = D160E11-sh1-olo.dgn	DRAWN - BLC	REVISED -
PLOT SCALE = NONE	CHECKED - MVD	REVISED -
PLOT DATE = 10/14/2008	DATE - 10/15/08	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

NAVIGATION LIGHTS
EAST & WEST DOLPHINS

SCALE: NONE SHEET NO. 7 OF 7a SHEETS STA. 379+09.67 TO STA. 382+42.67

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
389	2424.2 B-1	COOK	23	7
				CONTRACT NO. 60E11
FED. ROAD DIST. NO. 1 (ILLINOIS) FED. AID PROJECT				