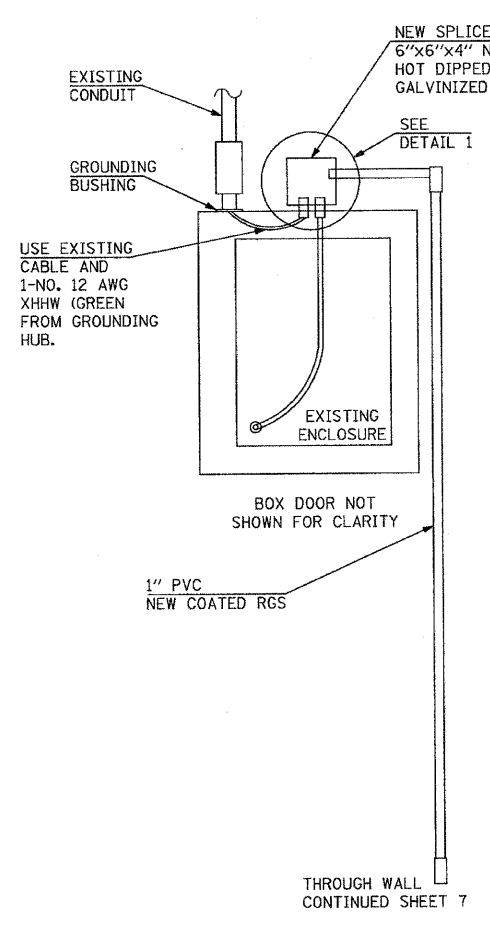
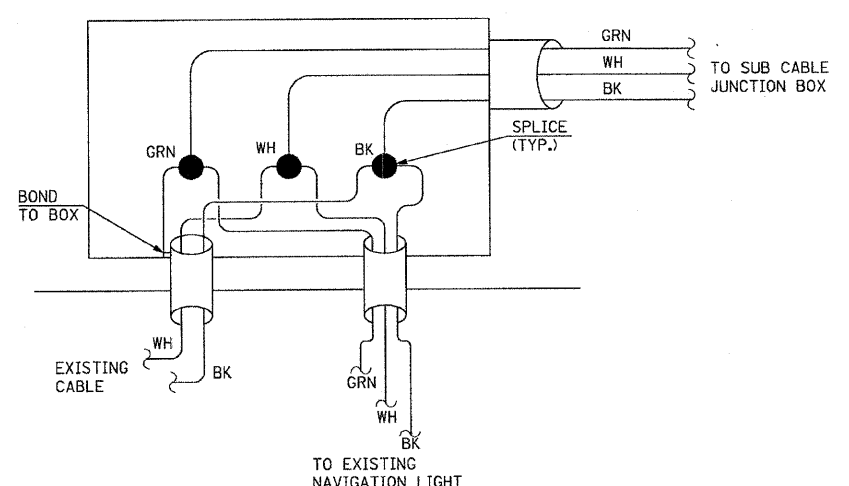


PLAN
(EXISTING INSTALLATION WITH NEW INTERFACING CABLE AND CONDUIT)

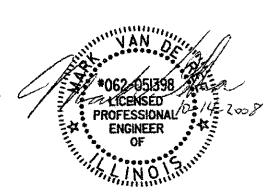


SECTION A-A
(THROUGH WALL NAVIGATION LIGHT)



DETAIL 1

- NOTES:**
1. USING A MULTIMETER, MEASURE RESISTANCE FROM ELECTRICAL SERVICE ENTRANCE GROUND TO THE EXISTING CONDUIT WHERE IT CONNECTS TO THE "THROUGH WALL" NAVIGATION LIGHT.
 - 2a. IF THE CONDUIT RESISTANCE MEASUREMENT FROM NOTE 1 IS 1 OHM OR LESS; THEN, INSTALL A GROUNDING HUB OR GROUNDING BUSHING ON THE END OF THE EXISTING CONDUIT INSIDE THE "THROUGH WALL" NAVIGATION LIGHT ENCLOSURE AND ROUTE A NEW GREEN NO. 10 AWG COPPER XHHW INSULATED GROUND CONDUCTOR FROM THE HUB OR BUSHING TO INSIDE THE NEW SPLICE BOX INSTALLED ABOVE THE "THROUGH WALL" NAVIGATION LIGHT ENCLOSURE. BOND THE GROUND CONDUCTOR TO THE NEW SPLICE BOX.
 - 2b. IF THE CONDUIT RESISTANCE TO GROUND FROM NOTE 1 CANNOT BE REDUCED TO 1 OHM OR LESS; THEN, PROCEED WITH THE INSTALLATION IN NOTE 2A AND RUN A NEW GREEN NO. 10 AWG COPPER XHHW INSULATED GROUND CONDUCTOR FROM THE CONDUIT GROUNDING HUB OR BUSHING BACK TO THE BENCH BOARD AND CONNECT TO A SOLID GROUND THERE. BOND THE NEW GROUND CONDUCTORS TO THE CONDUIT GROUNDING HUB OR BUSHING AND NEW SPLICE BOX. WORK UNDER THIS ITEM THAT IS ADDITIONAL TO THE NOTE 2A INSTALLATION WILL BE CONSIDERED "EXTRA WORK" AND WILL BE PAID SEPARATELY.
 3. PERFORM INSTALLATION OF DOLPHIN LIGHT WITH CONDUIT, SUB CABLE, BOXES AND DEVICES AS DETAILED ON SHEET 7, COMPLETE TO JUNCTION BOX ON PIER CAP.
 4. CORE DRILL WALL FOR 1" PVC COATED RGS (RIGID GALVANIZED STEEL) CONDUIT. GROUT CLOSED AFTER CONDUIT INSTALLATION. CARE MUST BE TAKEN NOT TO DAMAGE WALL PANELS. ANY DAMAGED WALL PANEL SHALL BE REPLACED IN-KIND AT CONTRACTOR'S EXPENSE.
 5. ROUTE 1", PVC COATED RIGID GALVANIZED STEEL CONDUIT ON TOP OF PIER CAP, THROUGH WALL SURROUNDING MACHINERY AREA AT DOCK LEVEL, TO 6" X 6" X 4" HOT DIPPED GALVANIZED SPLICE BOX MOUNTED ABOVE ACCESS BOX FOR THE EXISTING.
 6. CONNECT 2-1" PVC COATED RGS NIPPLES FROM 6" X 6" X 4" SPLICE BOX TO PIER LIGHT ENCLOSURE FLANGE.
 7. INSTALL NEW DOLPHIN LIGHT CONDUCTORS PER THE NOTES ON SHEET 7.
 8. INSTALL A 12-3 SOWA CABLE FROM THE SPLICE BOX TO THE EXISTING PIER LIGHT.
 9. SPLICE EXISTING NAVIGATION LIGHT CONDUCTORS TO NEW DOLPHIN LIGHT AND SOWA CABLE AS SHOWN IN DETAIL 1.
 10. THE CONTRACTOR SHALL FURNISH ALL ITEMS TO PROVIDE COMPLETE FUNCTIONAL DOLPHIN NAVIGATION LIGHT. THESE ITEMS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING ITEMS. ITEMS LISTED ARE FOR EAST AND WEST DOLPHIN INSTALLATIONS.
 - a. 2 EA. NAVIGATION LIGHT FIXTURES WITH 360 DEGREE RED LENS AND LED LAMP PER THE SPECIFICATIONS.
 - b. 2 EA. SUBMARINE CABLE APPROXIMATELY 100 FEET IN LENGTH PER THE SPECIFICATION.
 - c. 90 LINEAR FEET OF 3 INCH PVC SCHEDULE 80 CONDUITS.
 - d. 4 EA. THREE INCH LB CONDUIT FITTINGS.
 - e. 4 EA. KELLEM TYPE GRIPS
 - f. 2 EA. 12 INCH HEIGHT X 10 INCH WIDTH X 6 INCH DEPTH, 316 STAINLESS STEEL, NEMA 4X, JUNCTION BOX.
 - g. 80 LINEAR FEET OF ONE INCH PVC COATED RIGID GALVANIZED STEEL CONDUIT.
 - h. 2 EA. 6" HEIGHT X 6" WIDE X 4" DEPTH, NEMA 12, HOT DIPPED GALVANIZED STEEL SPLICE BOX, PAINTED GRAY.
 - i. 10 LINEAR FEET OF 3 CONDUCTOR NO. 12 AWG "SOWA" FLEXIBLE CABLE.
 - j. 300 LINEAR FEET OF NO. 10 AWG CONDUCTOR WITH TYPE XHHW INSULATION.
 - k. AS REQUIRED 1 INCH PVC COATED CONDUIT FITTINGS, LENGTH AS REQUIRED 316 STAINLESS STEEL STRUT AND ASSOCIATED CONDUIT SUPPORT HARDWARE. ALL LENGTHS ARE APPROXIMATE THE CONTRACTOR SHALL VERIFY ALL LENGTHS BEFORE CONSTRUCTION.
 - l. 1-15AMP, 120V a.c. FUSE AND LABEL.
 11. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE AND VERIFY EXISTING FIELD CONDITIONS PRIOR TO ORDERING MATERIALS AND STAGING CONSTRUCTION. ANY QUANTITY ADJUSTMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND MEET HIS/HER APPROVAL. VARIATIONS IN QUANTITIES SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION. HOWEVER THE CONTRACTOR WILL BE PAID AT THE CONTRACT UNIT PRICE FOR THE WORK COMPLETED.



EXPIRES: November 30, 2009

	USER NAME = petald	DESIGNED - MVD	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	NAVIGATION LIGHT DETAILS		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	FILE NAME = D180E11-shr-elc-7a.dgn	DRAWN - BLC	REVISED -				389	2424.2 B-1	COOK	23	7a
	PLOT SCALE = NONE	CHECKED - MVD	REVISED -		SCALE: NONE		SHEET NO. 7a OF 7a SHEETS	STA. 379+09.67 TO STA. 382+42.67	FED. ROAD DIST. NO. 1 ILLINOIS FED. AID PROJECT		CONTRACT NO. 60E11
	PLOT DATE = 10/14/2008	DATE - 10/15/08	REVISED -								