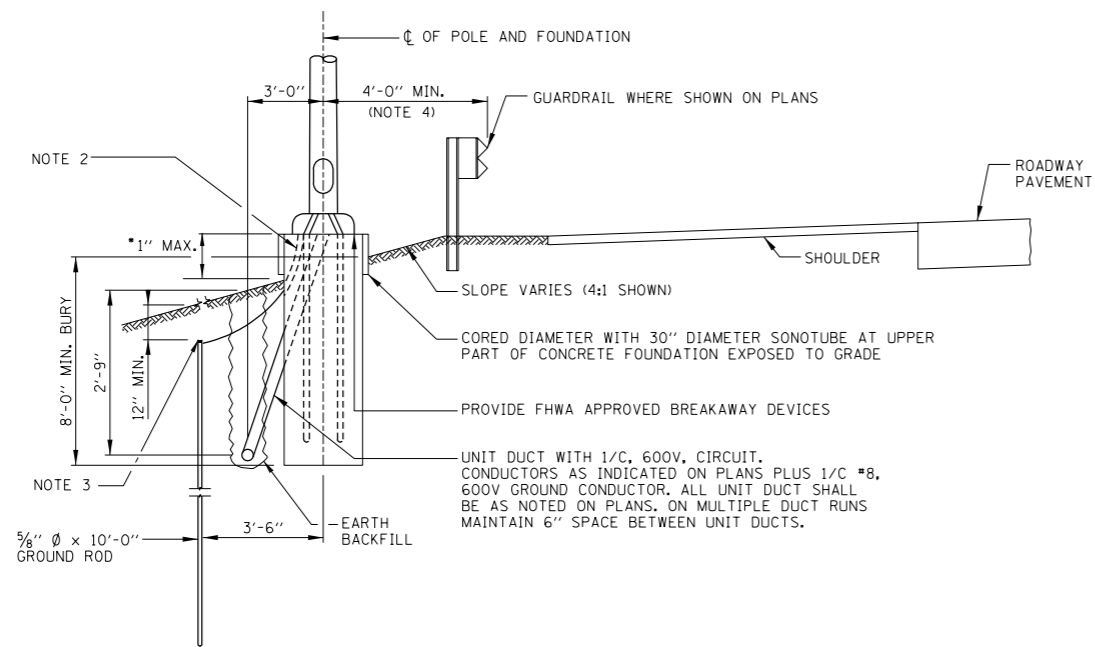


OTHERWISE SAME AS FOR GUARDED SLOPES

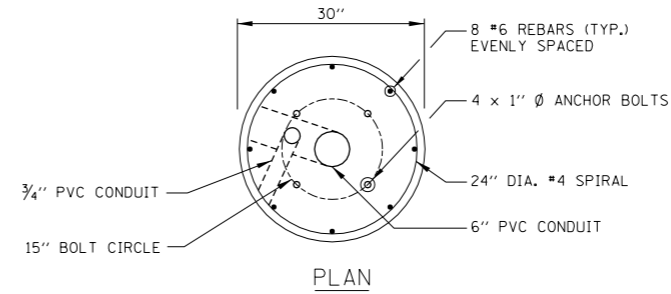
CONCRETE FOUNDATION INSTALLATION ALONG UNGUARDED SLOPES

NO SCALE
* MEASURED AT LOW SIDE OF SLOPE

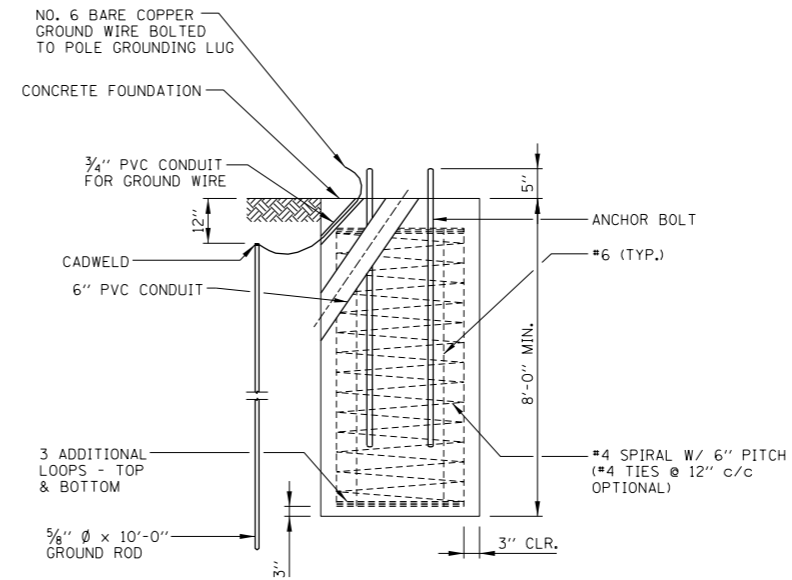


CONCRETE FOUNDATION ALONG GUARDED SLOPES

NO SCALE
* MEASURED AT LOW SIDE OF SLOPE



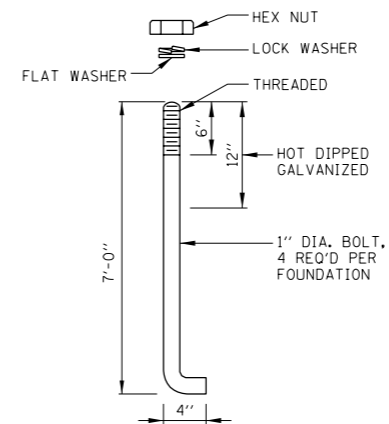
PLAN



ELEVATION

CONCRETE FOUNDATION DETAILS

NO SCALE

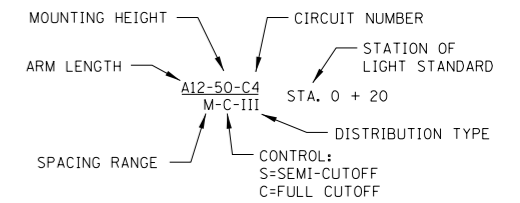


ANCHOR BOLT DETAIL

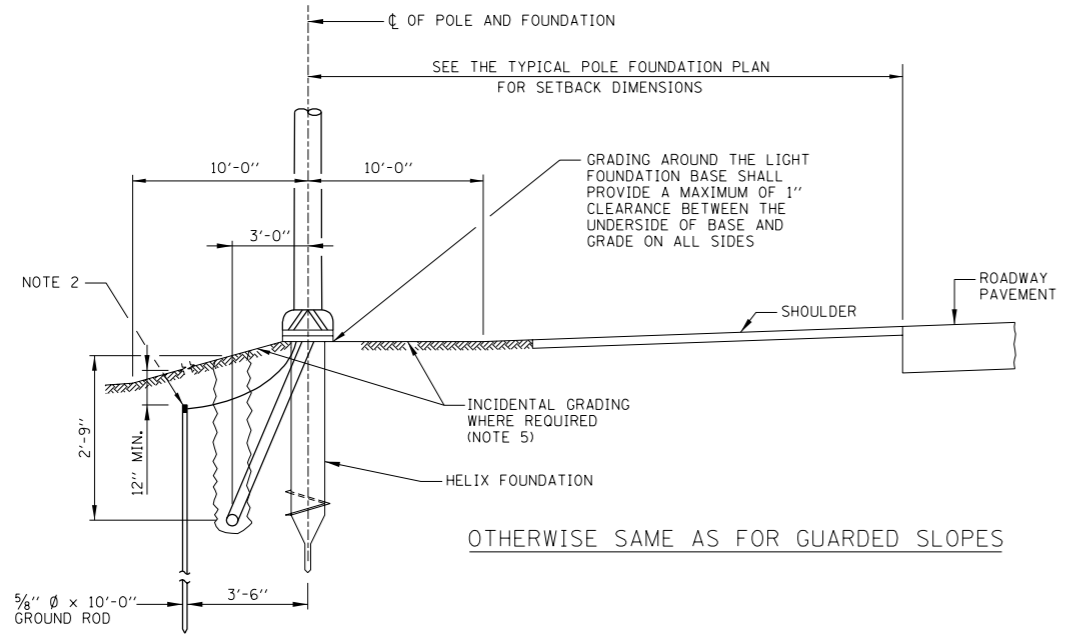
NO SCALE

NOTES:

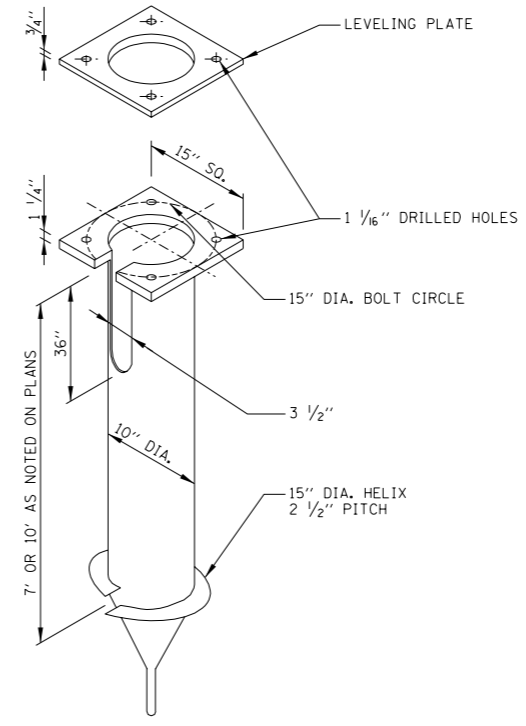
- ALL LIGHT STANDARDS, BOTH NEW AND EXISTING, ARE SHOWN ON PLANS WITH THE FOLLOWING SAMPLE DESCRIPTION:
 - MOUNTING HEIGHT
 - ARM LENGTH
 - SPACING RANGE
 - CIRCUIT NUMBER
 - STATION OF LIGHT STANDARD
 - DISTRIBUTION TYPE
 - CONTROL: S=SEMI-CUTOFF, C=FULL CUTOFF
- 3/4" PVC CONDUIT IN CONCRETE FOUNDATION FOR NO. 6 BARE COPPER GROUND WIRE.
- CADWELD NO. 6 BARE COPPER GROUND CABLE TO GROUND ROD.
- 3'-3" MINIMUM OFFSET MAY BE USED WHEN LIGHT STANDARD IS LOCATED BETWEEN GUARDRAIL AND SOUND BARRIER/RETAINING WALL.
- FOR IN LINE FUSE HOLDER, JOINT ASSEMBLY AND POLE BASE WIRING DIAGRAM, SEE STANDARD H2 (LIGHT STANDARD POLE WIRING).
- AT LOCATIONS NOT PROTECTED BY GUARDRAIL, THE SLOPE ADJACENT TO EACH FOUNDATION SHALL BE GRADED SO THAT THE MAXIMUM EXPOSURE ABOVE GRADE TO THE LIGHT POLE FOUNDATION IS 1 INCH ON ANY FACE. THIS GRADING SHALL EXTEND AT 20:1 TO A MINIMUM RADIUS OF 10 FEET FROM THE FOUNDATION AND SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE FOUNDATION. THE SIDE SLOPES BEYOND A MINIMUM OF 10'-0" RADIUS SHALL NOT EXCEED 3:1.



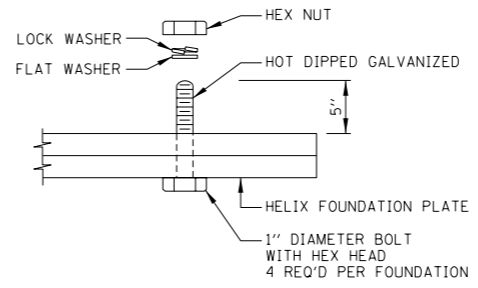
DATE	REVISIONS



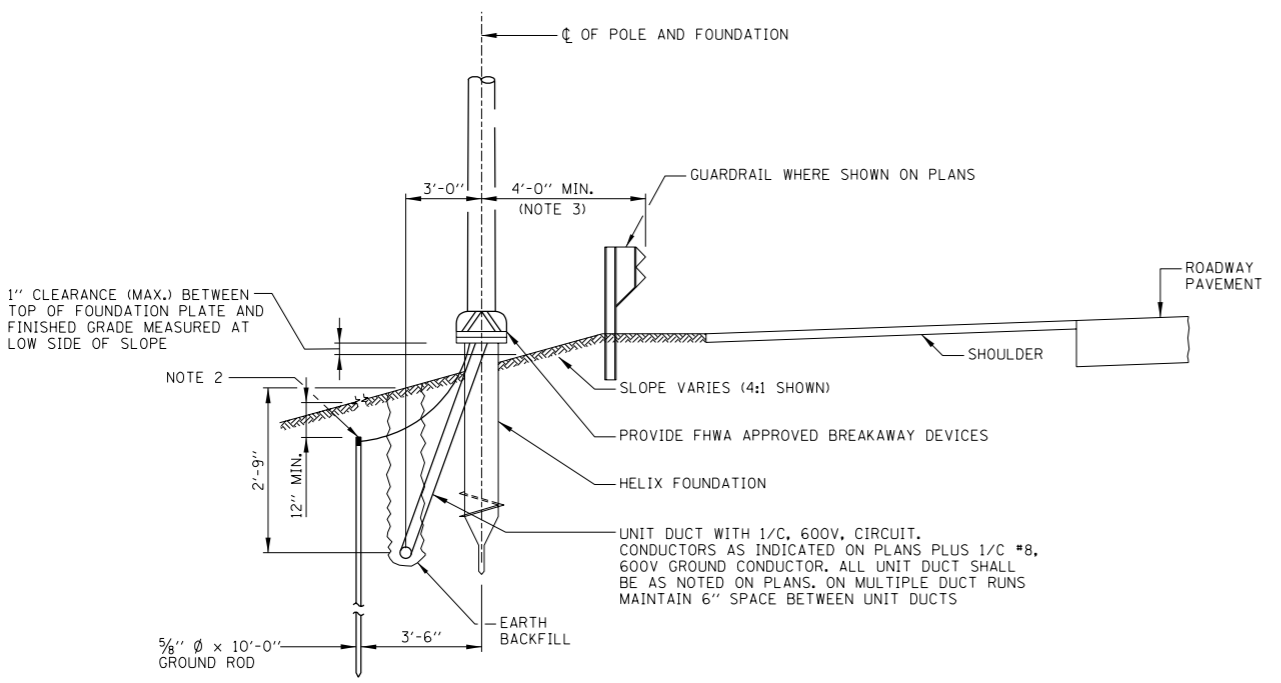
HELIX FOUNDATION INSTALLATION ALONG UNGUARDED SLOPES
NO SCALE



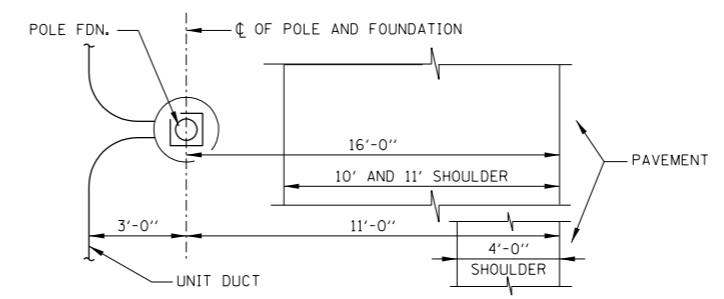
HELIX FOUNDATION
NO SCALE



HELIX FOUNDATION
BASE ATTACHMENT DETAIL
NO SCALE



TYPICAL INSTALLATION ALONG GUARDED SLOPES
NO SCALE



TYPICAL POLE FOUNDATION PLAN
NO SCALE

- NOTES:**
- ALL LIGHT STANDARDS, BOTH NEW AND EXISTING, ARE SHOWN ON PLANS WITH THE FOLLOWING SAMPLE DESCRIPTION:
 - CADWELD NO. 6 BARE COPPER GROUND CABLE TO GROUND ROD.
 - 3'-3" MINIMUM OFFSET MAY BE USED WHEN LIGHT STANDARD IS LOCATED BETWEEN GUARDRAIL AND SOUND BARRIER/RETAINING WALL.
 - FOR IN-LINE FUSE HOLDER, JOINT ASSEMBLY AND POLE BASE WIRING DIAGRAM, SEE STANDARD H2 (LIGHT STANDARD POLE WIRING).
 - AT LOCATIONS NOT PROTECTED BY GUARDRAIL, THE SLOPE ADJACENT TO EACH FOUNDATION SHALL BE GRADED SO THAT THE MAXIMUM EXPOSURE ABOVE GRADE TO THE LIGHT POLE FOUNDATION IS 1 INCH ON ANY FACE. THIS GRADING SHALL EXTEND AT 20:1 TO A MINIMUM RADIUS OF 10 FEET FROM THE FOUNDATION AND SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE FOUNDATION. THE SIDE SLOPES BEYOND A MINIMUM OF 10'-0" RADIUS SHALL NOT EXCEED 3:1.

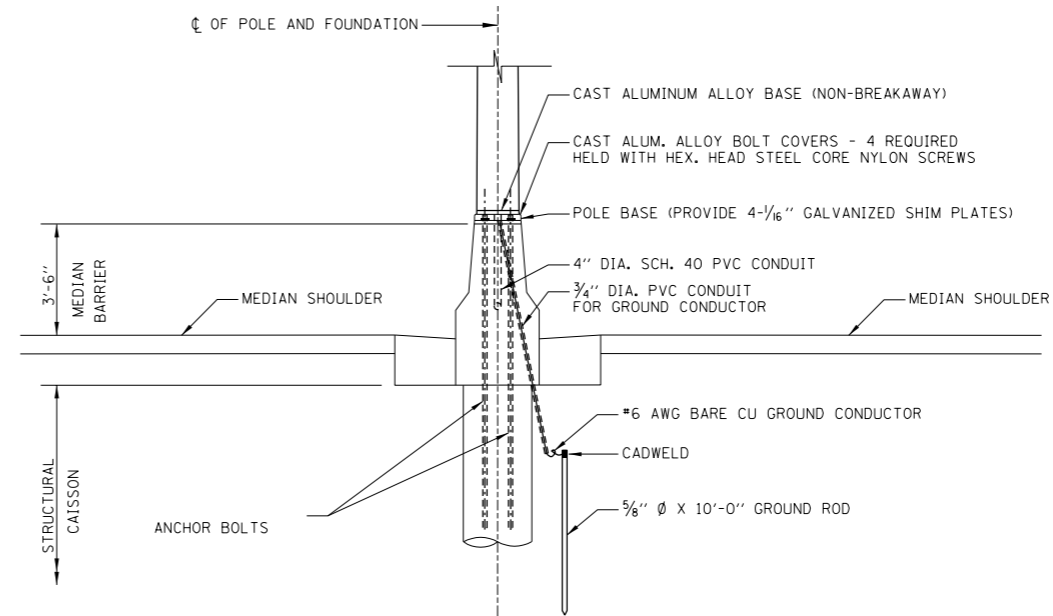
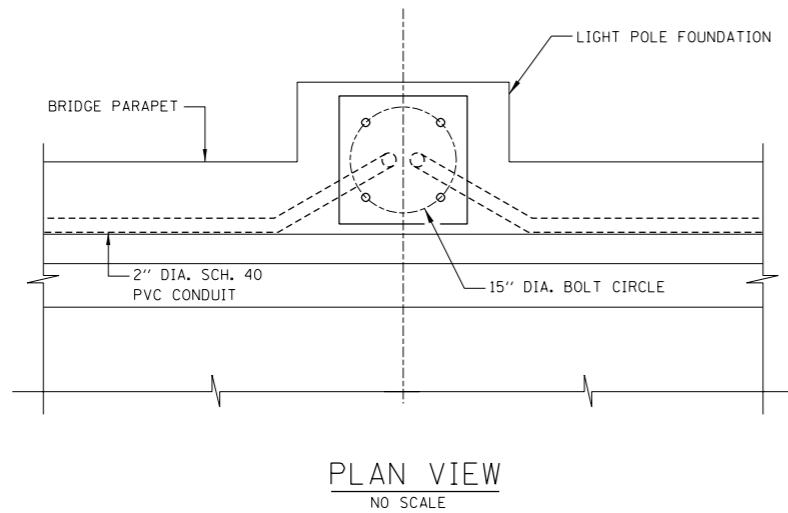


DATE	REVISIONS

LIGHT STANDARD
FOUNDATION

STANDARD H1-00

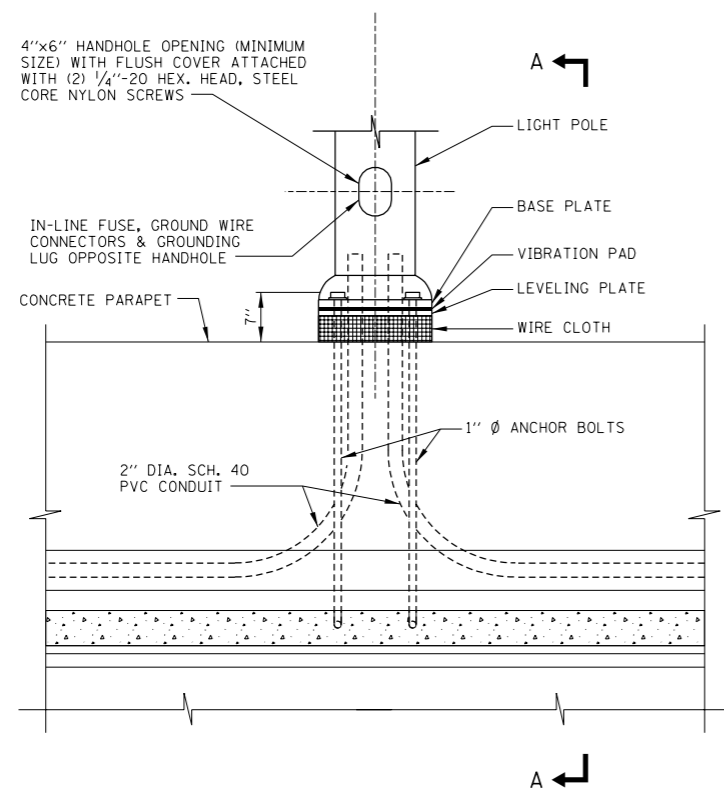
APPROVED *Jeff Daley*
CHIEF ENGINEER DATE 1-1-2007



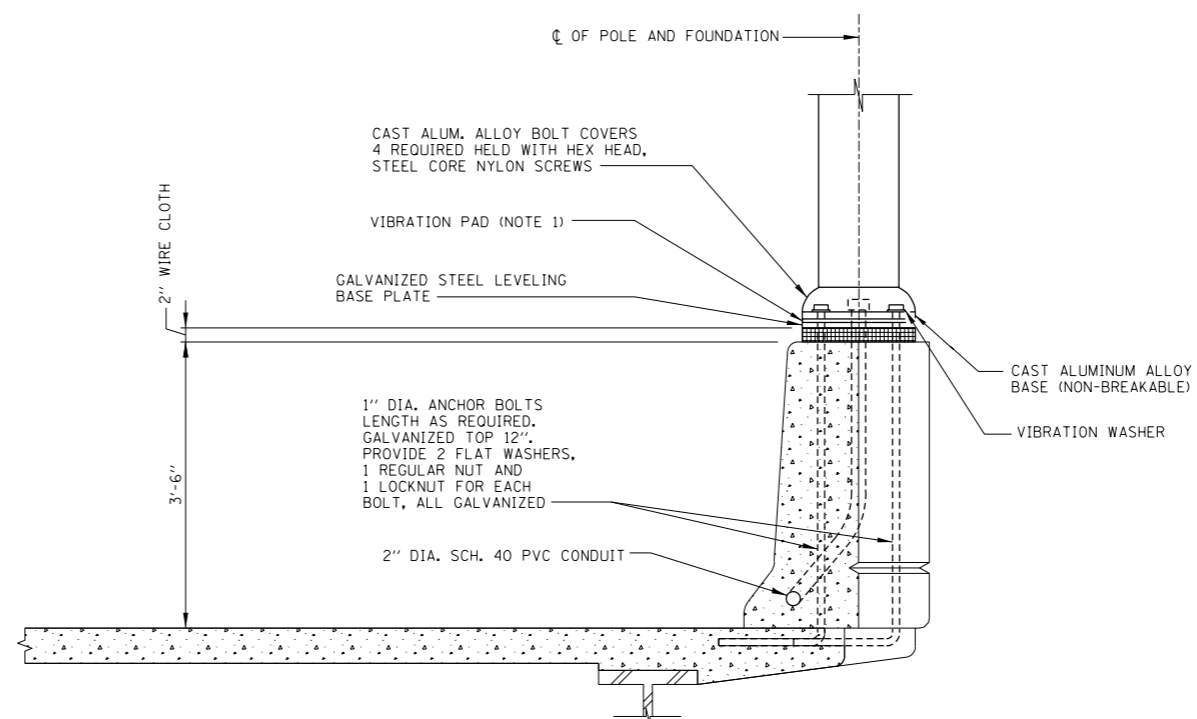
MEDIAN BARRIER MOUNTED LIGHT STANDARD DETAIL
NO SCALE

NOTES:

- EACH BRIDGE MOUNTED STANDARD SHALL BE PROVIDED WITH SHOCK ABSORBING VIBRATION PADS, NUTS, WASHERS, LEVELING PLATE AND WIRE MESH FOR ITS ERECTION ON THE FOUNDATION AS SHOWN ON THE PLANS.
- ALL LIGHT STANDARDS, BOTH NEW AND EXISTING, ARE SHOWN ON PLANS WITH THE FOLLOWING SAMPLE DESCRIPTION:
 - MOUNTING HEIGHT
 - ARM LENGTH
 - SPACING RANGE
 - CIRCUIT NUMBER
 - STATION OF LIGHT STANDARD
 - DISTRIBUTION TYPE
 - CONTROL: S=SEMI-CUTOFF C=FULL CUTOFF
- FOR DETAILS OF FUSE HOLDER, POLE BASE WIRING, AND JOINT ASSEMBLY, SEE STANDARD H2 (LIGHT STANDARD POLE WIRING).



ELEVATION OF CONCRETE PARAPET AND LIGHT STANDARD
NO SCALE



BRIDGE PARAPET MOUNTED LIGHT STANDARD DETAIL SECTION A-A
NO SCALE

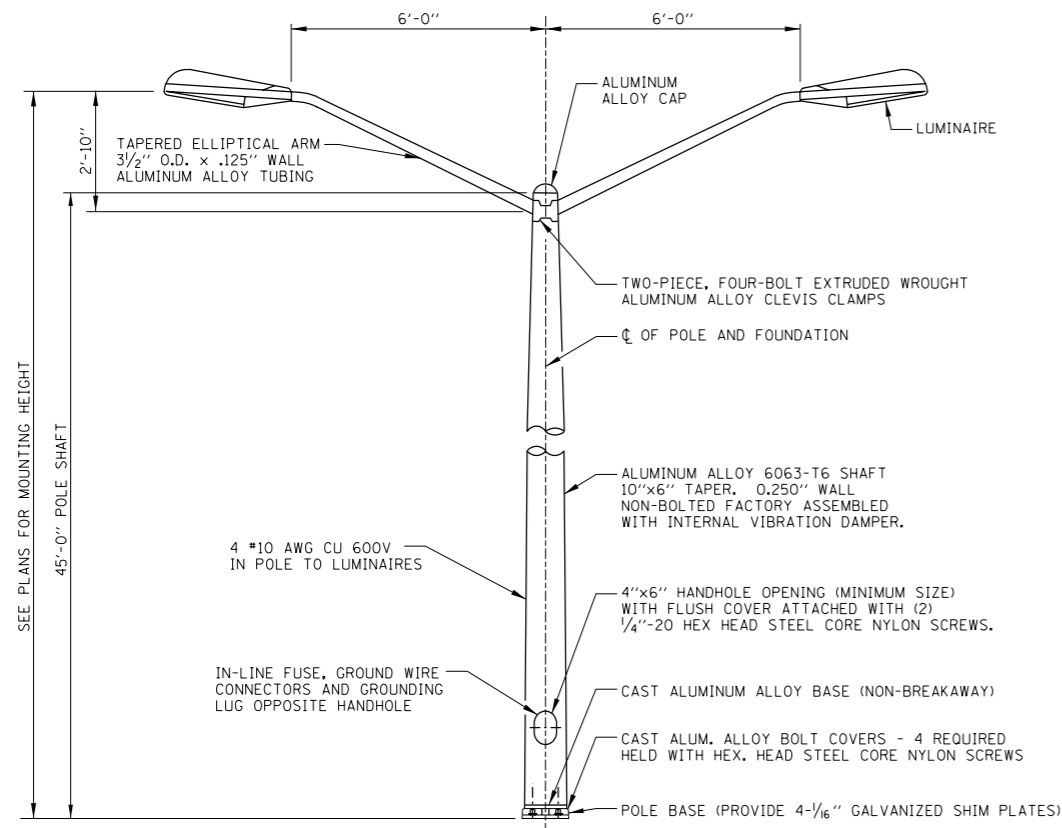
DATE	REVISIONS

LIGHT STANDARD FOUNDATION

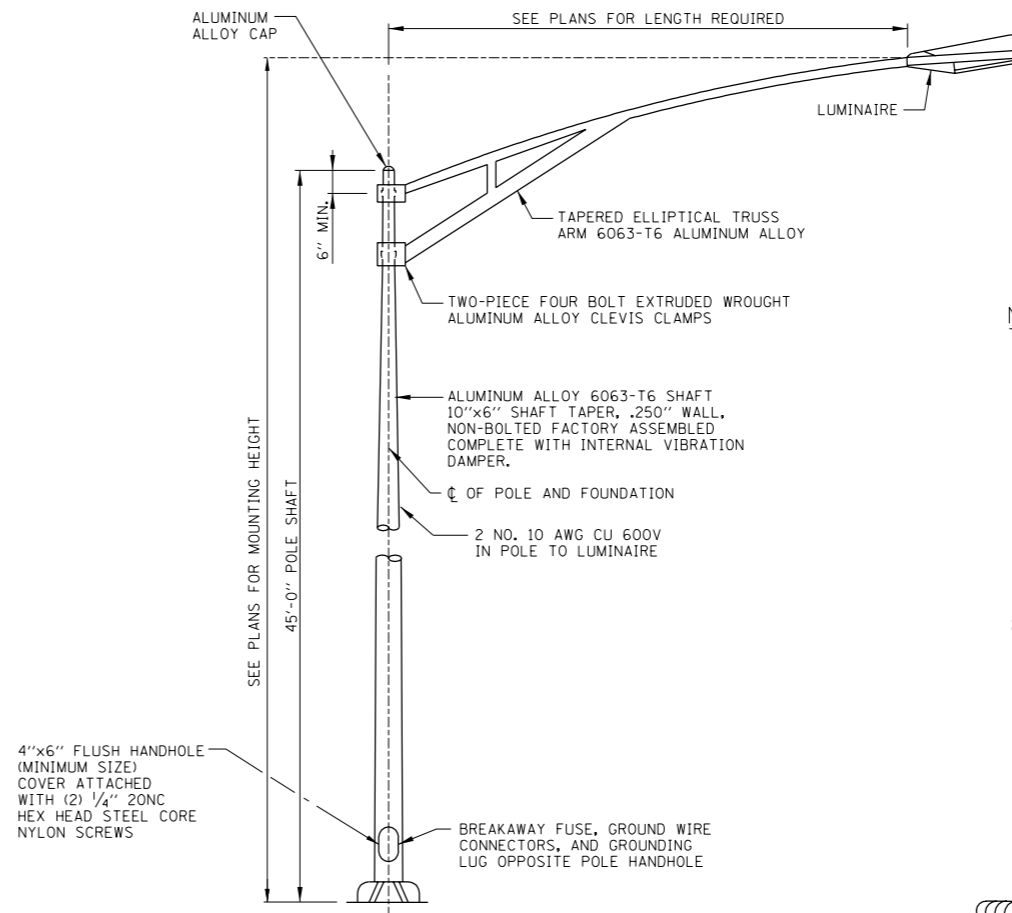
STANDARD H1-00

APPROVED: *Jeff Daley*
CHIEF ENGINEER

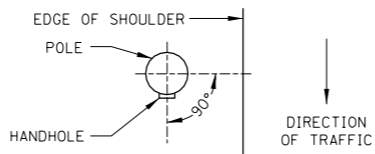
DATE 1-1-2007



TWIN MAST LIGHT STANDARD DETAIL
NO SCALE

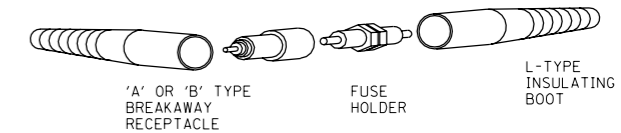


SINGLE MAST LIGHT STANDARD DETAIL
NO SCALE

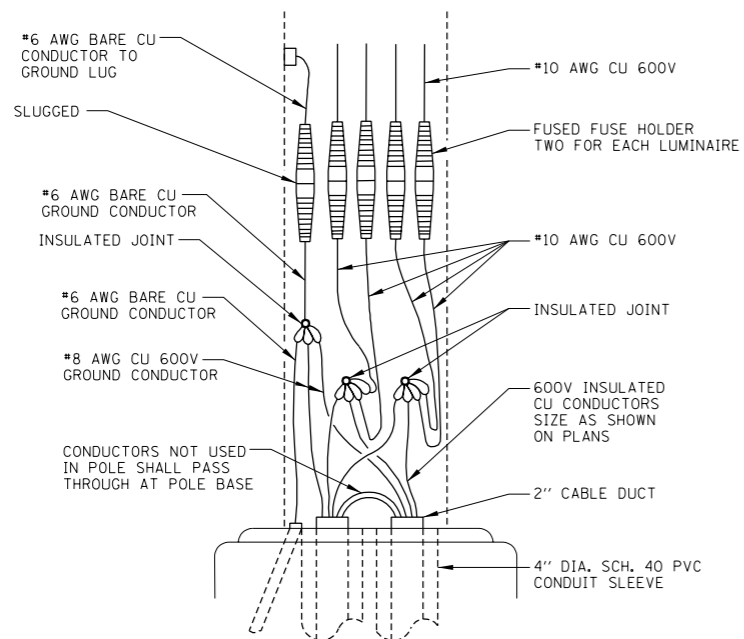


HANDHOLE ORIENTATION

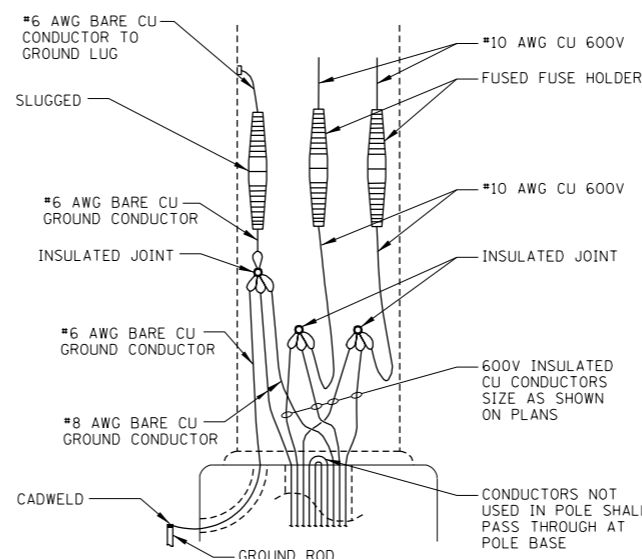
- NOTES:
- ALL LIGHT STANDARDS, BOTH NEW AND EXISTING, ARE SHOWN ON PLANS WITH THE FOLLOWING SAMPLE DESCRIPTION:
 - MOUNTING HEIGHT
 - ARM LENGTH
 - SPACING RANGE
 - CIRCUIT NUMBER
 - STATION OF LIGHT STANDARD
 - DISTRIBUTION TYPE
 - CONTROL: S=SEMI-CUTOFF, C=FULL CUTOFF
 - FOR STRUCTURAL DETAILS OF MEDIAN BARRIER AND CAISSON, SEE STANDARD H8 (MEDIAN BARRIER LIGHT POLE FOUNDATION DETAILS), STANDARD H9 (MEDIAN BARRIER LIGHT POLE FOUNDATION DETAILS - TYPE 4 RETROFIT, 32" BARRIER) OR STRUCTURAL PLANS.



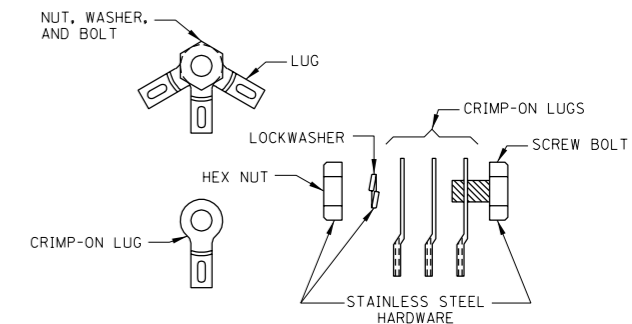
IN-THE-LINE FUSE HOLDER DETAIL WITH BREAKAWAY FEATURE
NO SCALE



TWIN MAST POLE BASE WIRING DIAGRAM
NO SCALE



SINGLE MAST POLE BASE WIRING DIAGRAM
NO SCALE



JOINT ASSEMBLY DETAILS
NO SCALE

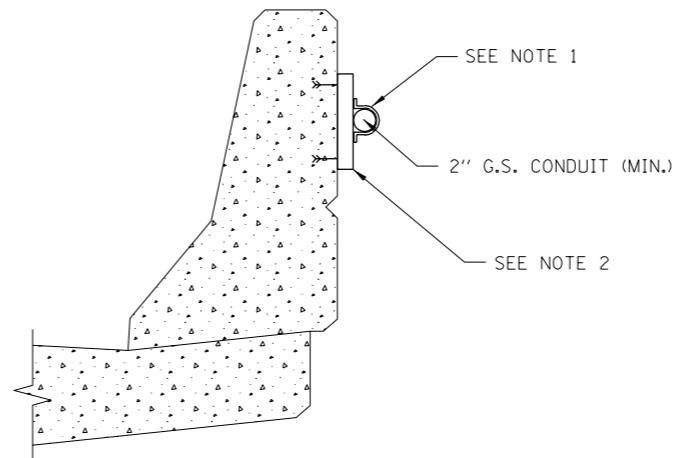
APPROVED: *Jeff Daley*
CHIEF ENGINEER
DATE: 1-1-2007

DATE	REVISIONS

Illinois Tollway
Open Roads for a Faster Future

LIGHT STANDARD
POLE WIRING

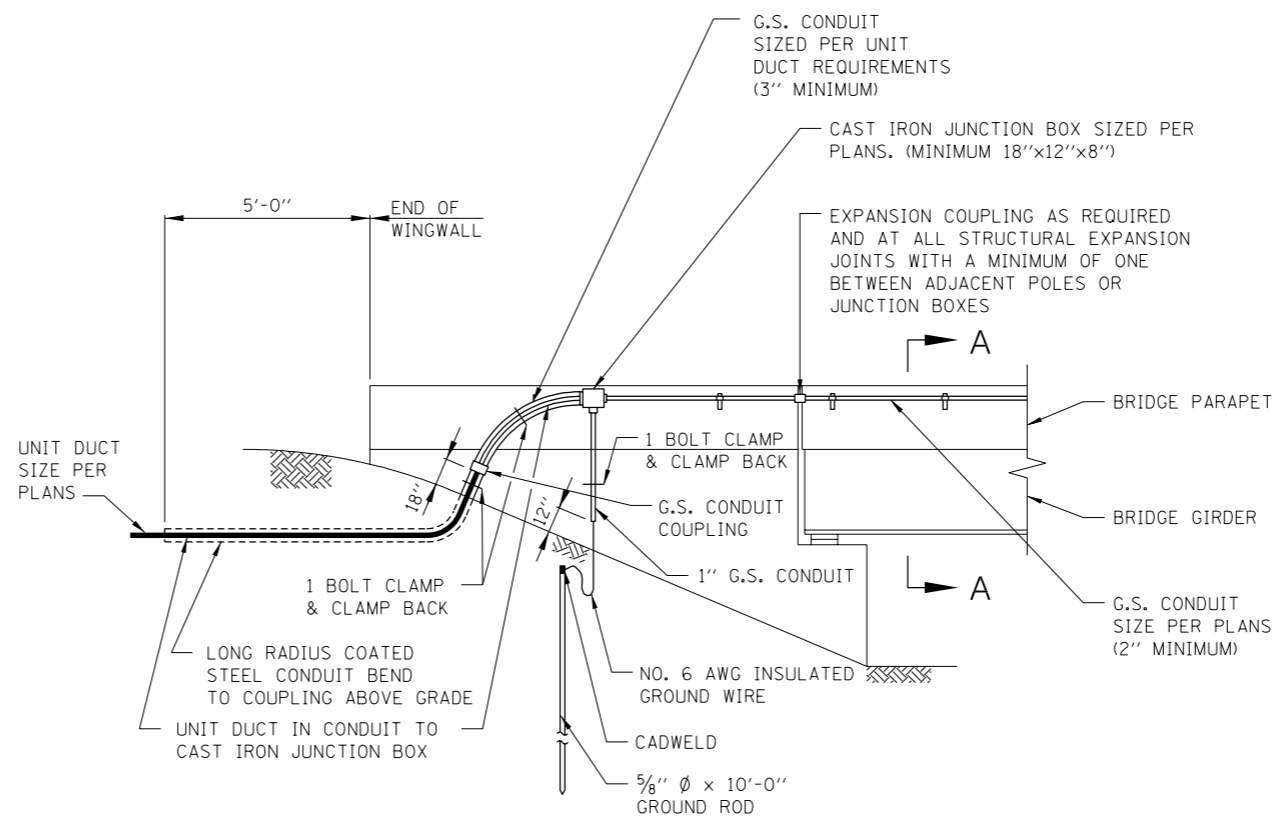
STANDARD H2-00



SECTION A-A
NO SCALE

NOTES:

1. UNISTRUT #P2558-20 PIPE SUPPORT (HOT DIPPED GALVANIZED AFTER FABRICATION), MINIMUM SIZE EQUAL TO PIPE DIAMETER. MOUNT TO CHANNEL WITH TWO $\frac{3}{8}$ " STAINLESS STEEL CLAMPING NUTS, HEX HEAD CAP SCREW & LOCK WASHER, MOUNTED ON 5 FOOT CENTERS.
2. ALLIED #P.S.200EH STEEL CHANNEL (HOT DIPPED GALVANIZED AFTER FABRICATION), 10" LONG MOUNTED EXTERNALLY ON BRIDGE PARAPET. INSTALL ON 5'-0" CENTERS. ATTACH TO BRIDGE PARAPET WITH $\frac{1}{2}$ " DIA. EXPANSION ANCHORS, MIN. 2" LONG. EXPANSION ANCHOR SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION AND SHALL BE MADE BY PARABOLT, KWICK-BOLT OR WEJ-IT.



TYPICAL WINGWALL CONDUIT TRANSITION
NO SCALE

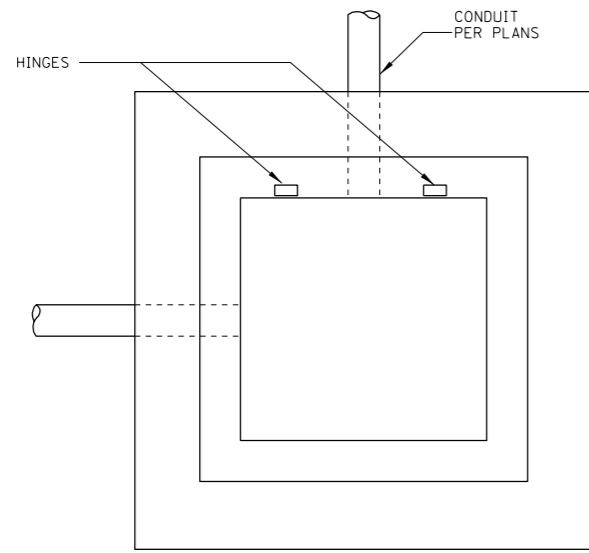
APPROVED *Jeff Stanley* CHIEF ENGINEER DATE 1-1-2007

DATE	REVISIONS

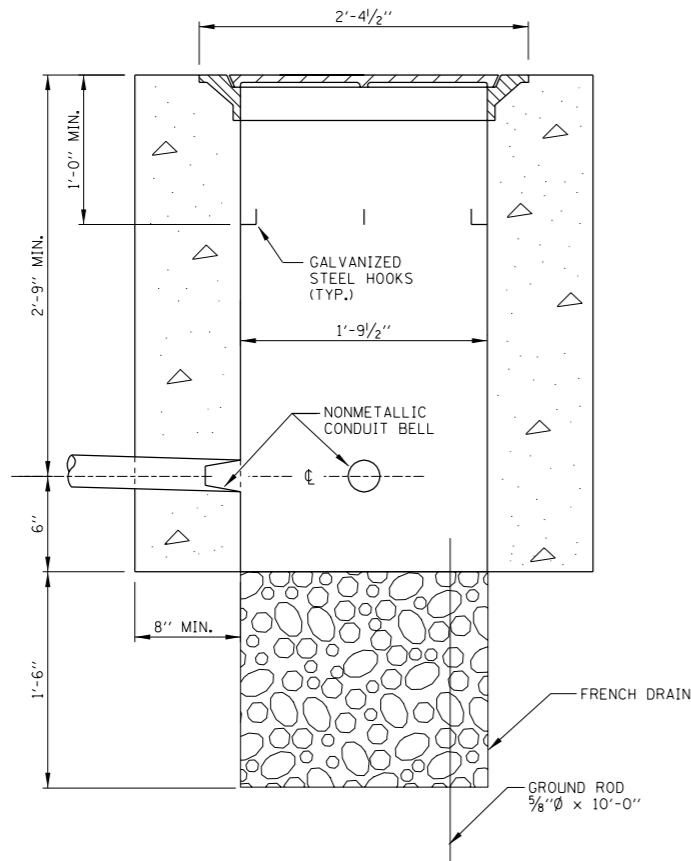


WINGWALL CONDUIT DETAILS

STANDARD H3-00

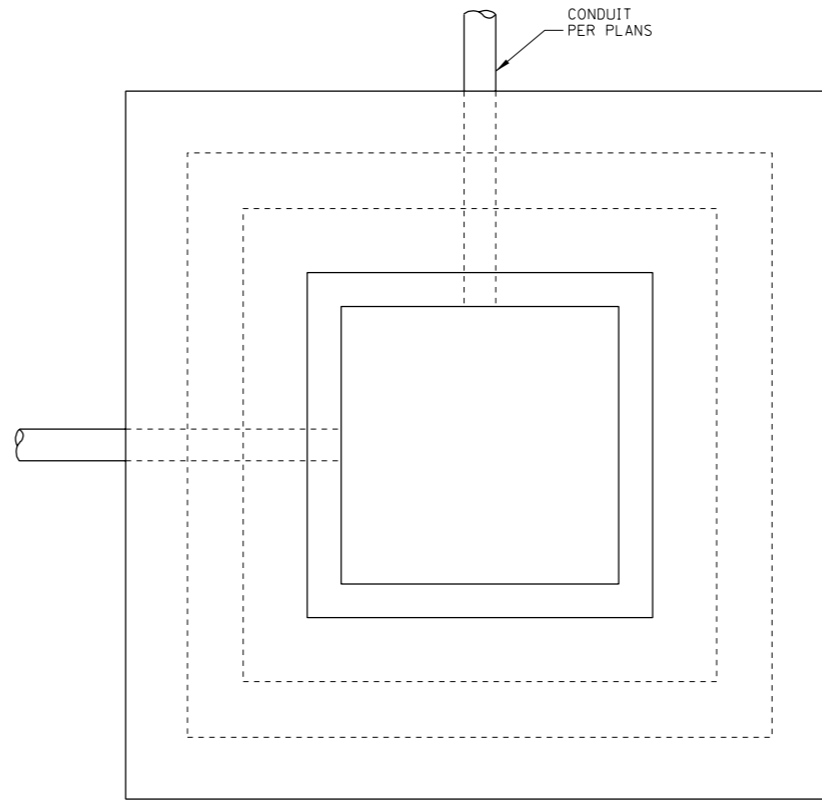


PLAN

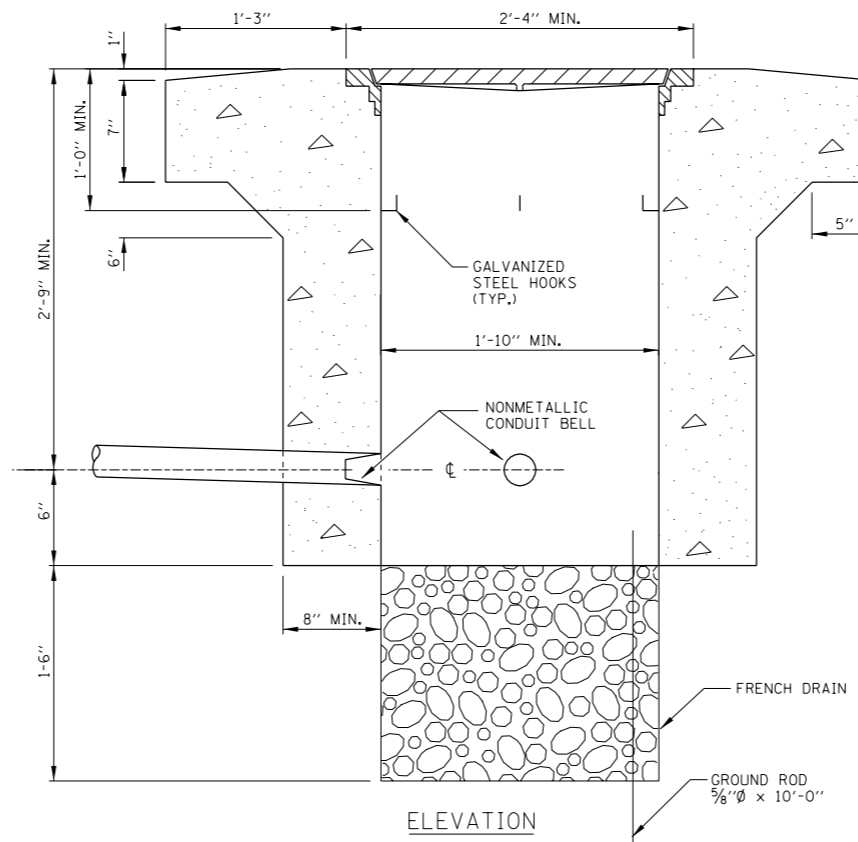


ELEVATION

PC CONCRETE HANDHOLE

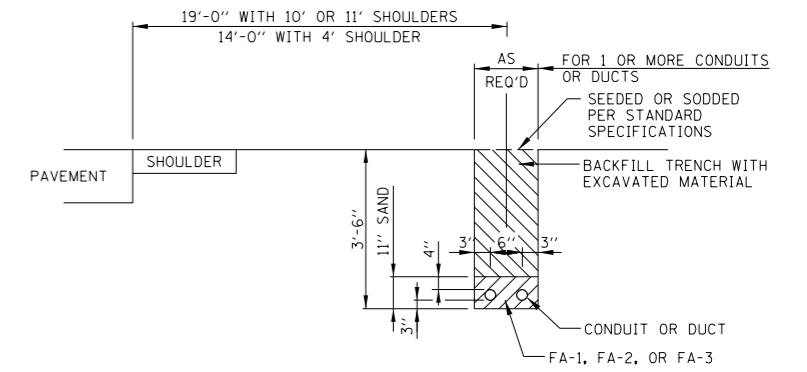


PLAN



ELEVATION

PC CONCRETE - HEAVY DUTY HANDHOLE

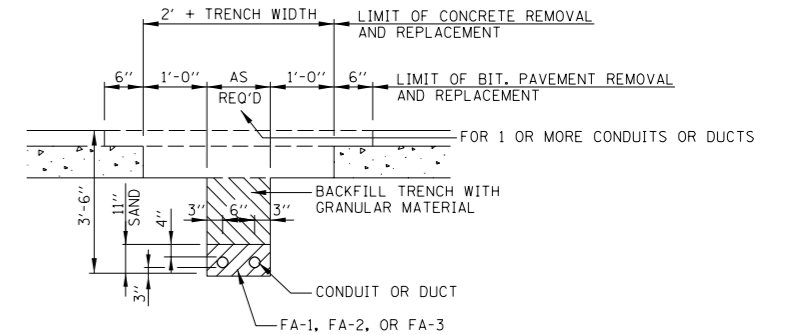


TRENCHING FOR CONDUIT IN NON-PAVED AREAS

NO SCALE

NOTE:

SAW-CUT BITUMINOUS AND CONCRETE PAVEMENTS 1" DEEP PRIOR TO REMOVAL



TRENCHING FOR CONDUIT IN PAVED AREAS

NO SCALE

SEE SHEET 2 (OF 2) IN THIS SERIES FOR GENERAL NOTES

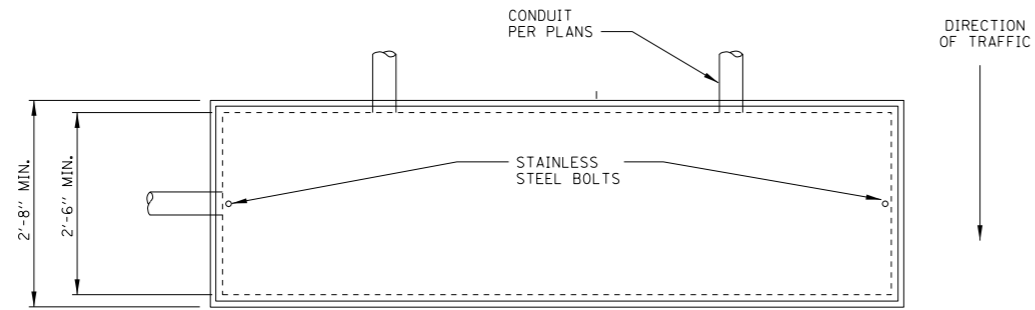


DATE	REVISIONS

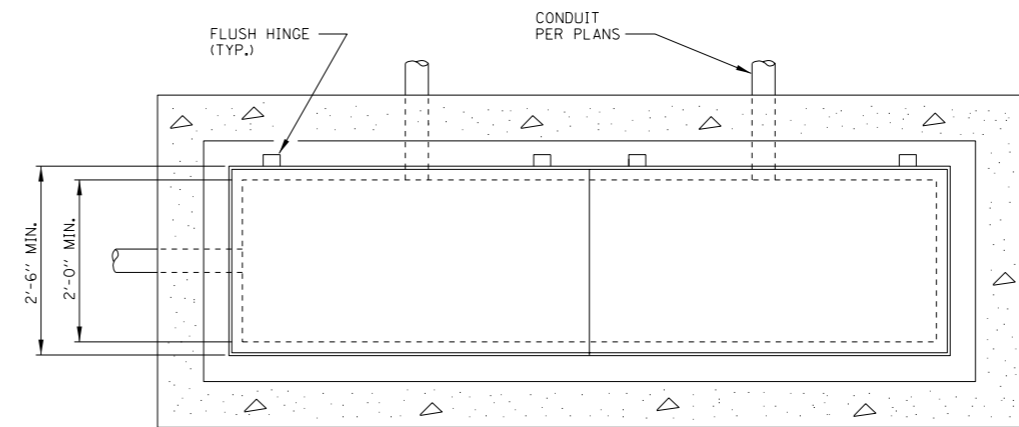
BURIED WIRING DETAILS

STANDARD H4-00

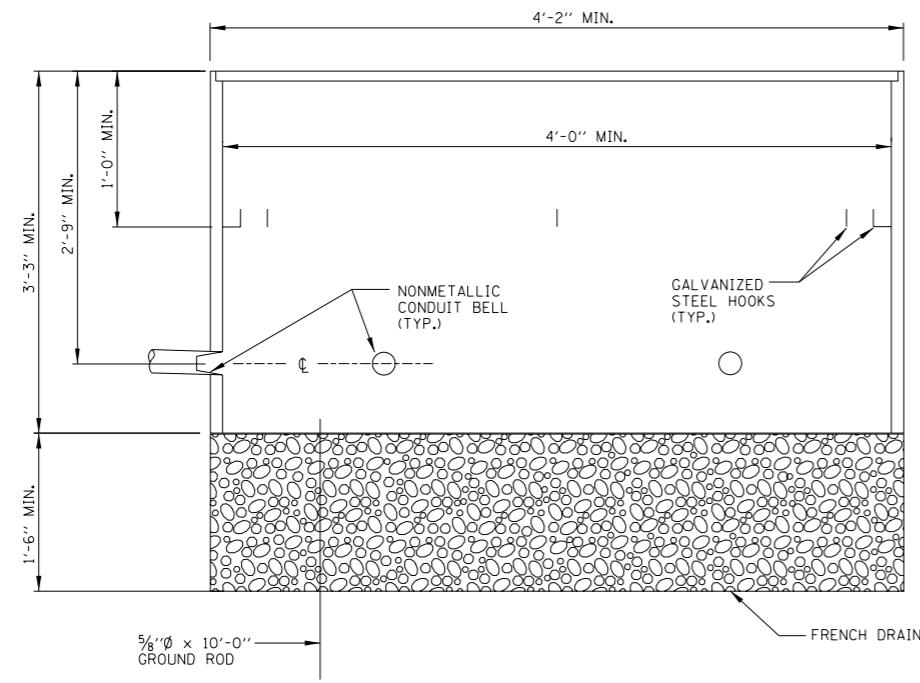
APPROVED *Jeff Daley* CHIEF ENGINEER DATE 1-1-2007



PLAN

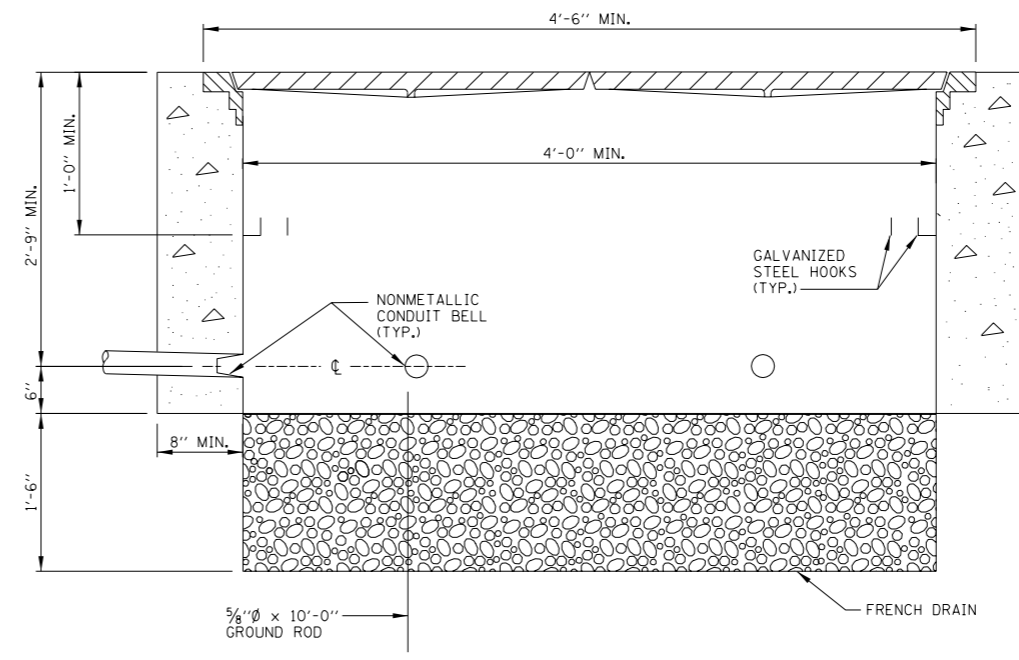


PLAN



ELEVATION

POLYMER CONCRETE DOUBLE HANDHOLE



ELEVATION

CONCRETE DOUBLE HANDHOLE

NOTES:

1. JUNCTION BOXES LOCATED IN UNPAVED AREAS AND NOT PROTECTED BY GUARDRAIL SHALL BE CONSTRUCTED WITH THE TOP FLUSH WITH THE ADJACENT SLOPE.
2. AGGREGATE FOR FRENCH DRAIN SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
3. HANDHOLES CONSTRUCTED IN PAVED AREAS SHALL BE HEAVY DUTY TYPE.

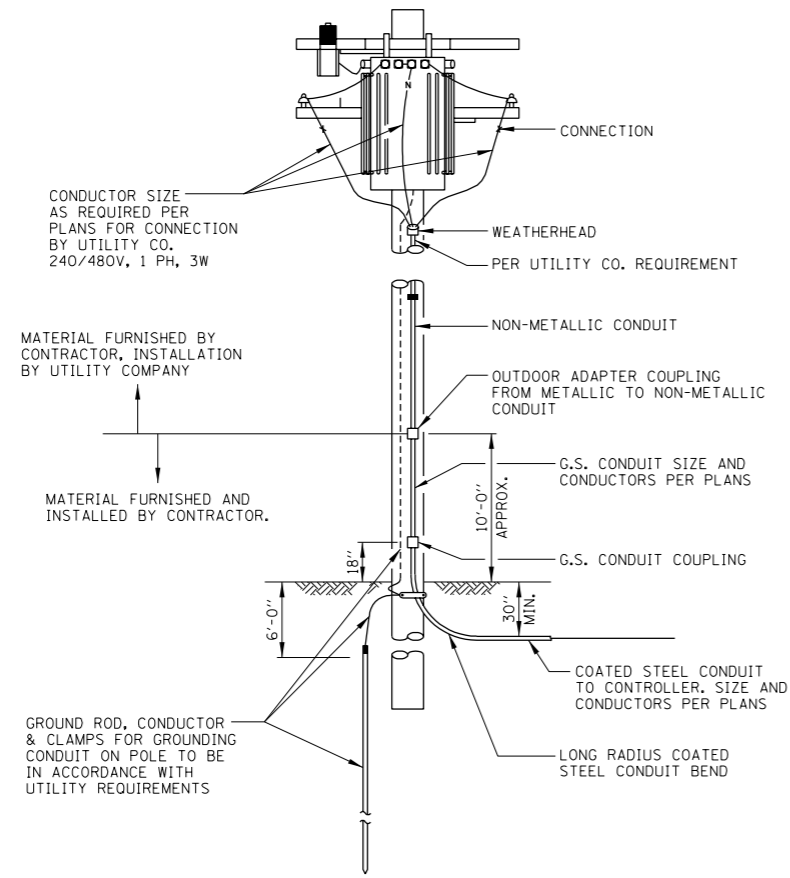


APPROVED *Jeff Walley*
 CHIEF ENGINEER
 DATE 1-1-2007

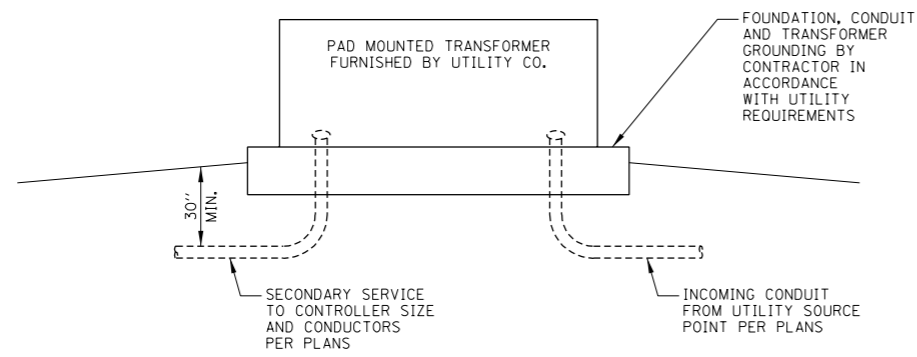
DATE	REVISIONS

BURIED WIRING DETAILS

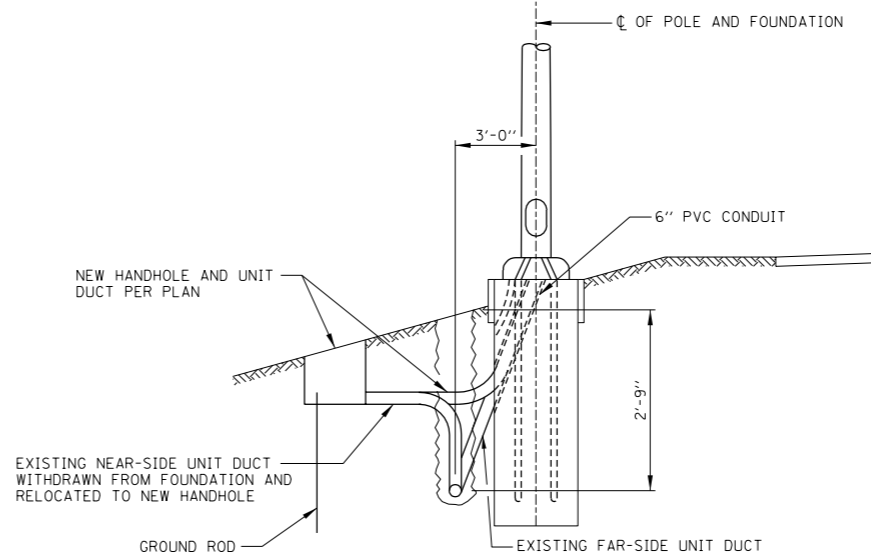
STANDARD H4-00



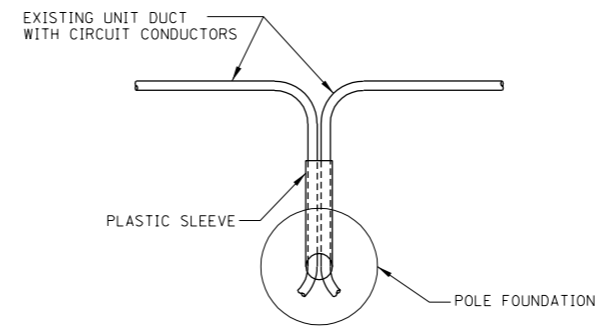
UTILITY SERVICE POLE
SUBJECT TO UTILITY COMPANY APPROVAL
NO SCALE



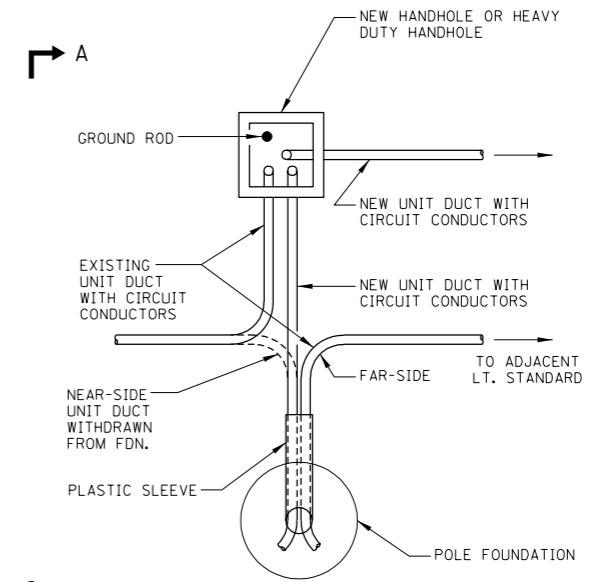
PAD MOUNTED TRANSFORMER
SUBJECT TO UTILITY COMPANY APPROVAL
NO SCALE



SECTION A-A



EXISTING WIRING



PROPOSED WIRING REVISION

POLE FOUNDATION WITH UNIT DUCT
NO SCALE

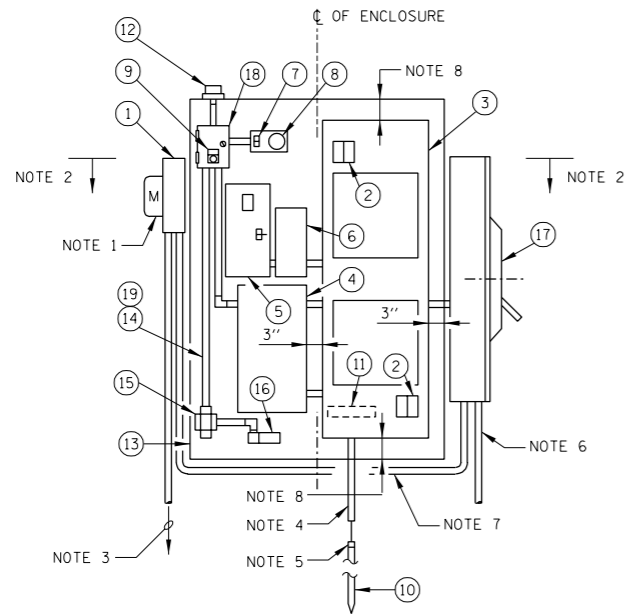
WIRING MODIFICATION AT EXISTING LIGHTING STANDARDS
NO SCALE

APPROVED: *Jeff Daley*
CHIEF ENGINEER
DATE: 1-1-2007

DATE	REVISIONS



EXISTING UNDERGROUND WIRING MODIFICATION DETAILS
STANDARD H5-00



INTERIOR EQUIPMENT LAYOUT

FOR WIRING DIAGRAM SEE SHEET 2 (OF 2) IN THIS SERIES
NO SCALE

CONTROL CONSOLES CONTACTOR AND BREAKER SCHEDULE								
CONSOLE	NO. OF BRANCH BREAKERS		MAIN BREAKER 2 POLE 600 VOLT		LOAD PER CIRCUIT (WATTS OR KW)	CONTACTOR 2 POLE, 600 VOLT SQUARE-D CLASS 8903	METER SOCKET REQUIRED BY UTILITY SERVICE COMPANY	
NO.	LOCATION		SECTION		SIZES		SIZE	YES/NO
	DWG.	STATION	A 15A	B 30A	FRAME	TRIP		
TOTAL LOAD								

FOR DATA TABULATION SEE PLANS

NOTES:

- 1. PROVIDE METER WHERE INDICATED IN SCHEDULE (FOR 100A AND 150A CONTROL CONSOLES ONLY).
- 2. 6'-0" MAXIMUM HEIGHT ABOVE GRADE.
- 3. TO UTILITY SERVICE AS INDICATED ON PLANS.
- 4. 3/4" PVC CONDUIT IN CONCRETE, SEE FOUNDATION DETAILS.
- 5. CADCWELD NO. 3/0 BARE COPPER GROUND CABLE TO GROUND ROD.
- 6. TO UTILITY SERVICE AS INDICATED ON PLANS WHEN A METER SOCKET IS NOT REQUIRED.
- 7. CONDUIT AND CABLE BETWEEN METER FITTING AND DISCONNECT SWITCH ROUTED BETWEEN CONTROL CONSOLE AND CONCRETE FOUNDATION, WHEN A METER SOCKET IS REQUIRED. CONDUIT AND CABLE SHALL BE THE SAME AS THE SERVICE.
- 8. A MINIMUM CLEARANCE OF 4 INCHES FROM TOP AND BOTTOM OF ENCLOSURE.

EQUIPMENT LEGEND

ITEM DESCRIPTION

- ① METER SOCKET, MILBANK MFG. CO. CATALOG NO. U8949-RL-KK-TG.
- ② SECONDARY SURGE ARRESTERS, 2 POLE, 650 VOLT.
- ③ MAIN PANELBOARD, 480/240 VOLT, 1 PHASE, 3 WIRE, 2 SECTION, 2 POLE MAIN CIRCUIT BREAKER 65,000 AMPERES SYMMETRICAL INTERRUPTING CAPACITY. CUTLER-HAMMER PANELBOARD TYPE POW-R-LINE 3a IN A NEMA 1 ENCLOSURE, WITH CIRCUIT BREAKERS PER SCHEDULE ON PLANS. DOOR HINGES ON RIGHT SIDE.
- ④ LIGHTING CONTACTOR, 480 VOLT, 2 POLE, 120 VOLT CONTROL, WITH RELAY FOR 2 WIRE CONTROL, ONE NORMALLY OPEN AND ONE NORMALLY CLOSED AUXILIARY CONTACTS, CONTROL LINE FUSE, IN A NEMA 1 ENCLOSURE, SQUARE-D CLASS 8903, TYPE PB. SEE PLANS FOR CONTACTOR SIZE AND BREAKER SCHEDULE.
- ⑤ SECONDARY BREAKER, 15 AMPERE TRIP, 277 VOLT, SINGLE POLE, 65,000 AMPERES SYMMETRICAL INTERRUPTING CAPACITY IN A NEMA 1 SURFACE MOUNTED ENCLOSURE.
- ⑥ STEP DOWN TRANSFORMER, 1500 VA, 480 VOLT PRIMARY, 120 VOLT SECONDARY, SINGLE PHASE, 60 HERTZ, DRY TYPE, NEMA 3R ENCLOSURE.
- ⑦ SINGLE POLE, 15 AMPERE SWITCH, IN A NEMA 1 ENCLOSURE (WITH ITEM 8), RATED AT 120-277 VAC.
- ⑧ PORCELAIN LAMP HOLDER 660W, 600V, MOUNTED ON A NEMA 1 ENCLOSURE (WITH ITEM 7), W/25W, 120V INCANDESCENT LAMP.


ITEM DESCRIPTION

- ⑨ HAND-OFF-AUTO SELECTOR SWITCH WITH LEGEND PLATE, ALLEN-BRADLEY CATALOG NO. 800T-J2A. MOUNTED IN THE COVER OF ITEM 18.
- ⑩ 3/8" x 10'-0" GROUND ROD IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, DRIVEN EXTERNAL TO THE FOUNDATION.
- ⑪ GROUND BUS MOUNTED IN PANELBOARD ENCLOSURE.
- ⑫ PHOTO ELECTRIC CONTROL SWITCH, PRECISION CATALOG NO. LM-2275 WITH PRECISION LOCKING TYPE RECEPTACLE CATALOG NO. M2ANB.
- ⑬ NEMA TYPE 3R ENCLOSURE WITH DRIP SHIELD AND STAINLESS STEEL HARDWARE. ENCLOSURE SHALL CONFORM TO J.I.C. STANDARDS WITH CELLULAR NEOPRENE GASKETED DOORS. ALL SEAMS CONTINUOUSLY WELDED, 10 GAUGE GALVANIZED STEEL BODY, REMOVABLE PANEL INSIDE THE BACK AND A FACTORY INSTALLED DRIP SHIELD. ALL SURFACES SHALL BE CLEANED PRIOR TO PAINTING. THE INTERIOR SHALL HAVE A BAKED WHITE ENAMEL FINISH AND THE EXTERIOR SURFACE SHALL HAVE TWO EPOXY FINISH COATS OF ANSI-61 GRAY. THE ENCLOSURE SHALL HAVE CONTINUOUS HINGED DOORS MEETING IN THE CENTER, OVERLAPPED AND GASKETED, WITH NO CENTERPOST. AN OIL TIGHT KEY LOCKING HANDLE WITH 3 POINT LATCH SHALL BE PROVIDED (FURNISH 6 KEYS). EACH END OF THE ENCLOSURE SHALL HAVE A SCREENED, GASKETED VENTILATING LOUVER AND THE TOP OF THE ENCLOSURE SHALL HAVE A VENTILATOR. LOUVERS AND VENTILATOR SHALL BE AS MANUFACTURED BY HOFFMAN ENGINEERING COMPANY. INTERNAL CONDUIT SHALL HAVE LOCKNUTS, INSULATING BUSHING AND CONDULET FITTINGS AS REQUIRED. INTERNAL WIRING SHALL BE EPR INSULATED NEC TYPE RHW-2. PROVIDE A WIRING DIAGRAM IN A PRINT POCKET ON THE INSIDE OF THE CABINET DOOR.

ITEM DESCRIPTION

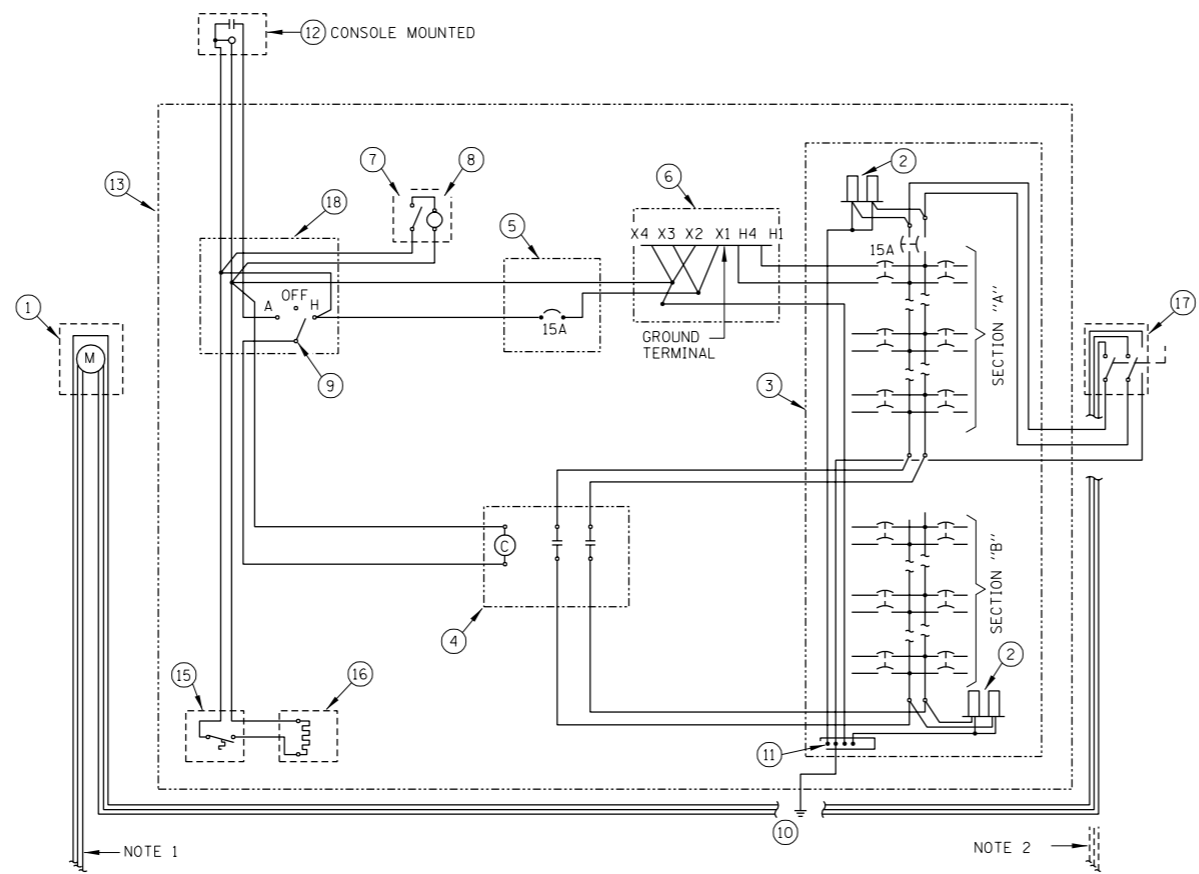
- ⑭ INTERNAL CONTROL WIRING SHALL BE #12 AWG, STRANDED, EPR INSULATED NEC TYPE RHW-2 RATED 600 VOLT, WITH SUITABLE COLOR CODING TO BE APPROVED BY THE ENGINEER BEFORE CONSTRUCTION.
- ⑮ THERMOSTAT (120V), CHROMALOX CATALOG NO. WR-80 (PCN 263177) AND 4" SQ. BOX WITH COVER.
- ⑯ STRIP HEATER SHALL BE 304 STAINLESS STEEL (150W, 120V), SIMILAR DESIGN TO CHROMALOX CATALOG NO. PT-615 (PCN 131967) WITH 1/8" x 1/6" DIA. MOUNTING HOLES IN TABS, NO. PT-AC-1 (PCN 255724) PROTECTIVE COVER, AND (PCN 255716) SECONDARY INSULATION BUSHING KIT.
- ⑰ SERVICE SAFETY SWITCH, 600 VOLT, NON-FUSED, NEMA 4X STAINLESS STEEL ENCLOSURE (SIZE AND AMPERES AS REQUIRED PER PLANS).
- ⑱ NEMA TYPE 1, 8"x6"x4" JUNCTION BOX & COVER WITHOUT KNOCKOUTS. ITEM 9 IS MOUNTED IN THE COVER.
- ⑲ INTERNAL CONDUIT AND FITTINGS SHALL BE 3/4" MINIMUM.



APPROVED:  **Jeff Daley**
CHIEF ENGINEER
DATE 1-1-2007

DATE	REVISIONS

OUTDOOR CONTROL
CONSOLE DETAILS
STANDARD H6-00



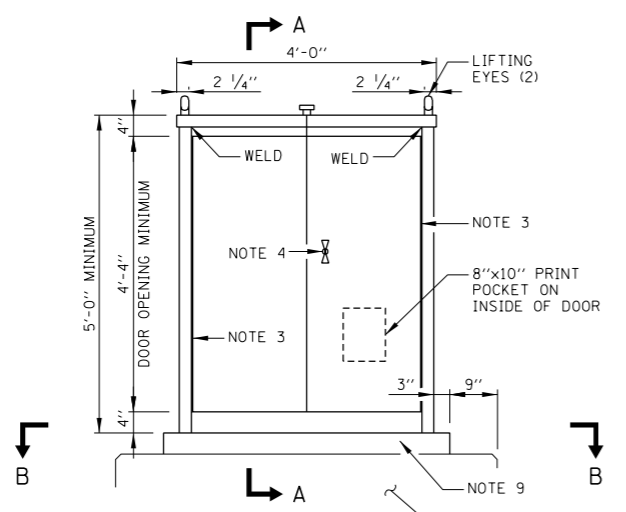
CONTROL CONSOLE WIRING DIAGRAM
NOTE 3

WIRING DIAGRAM NOTES:

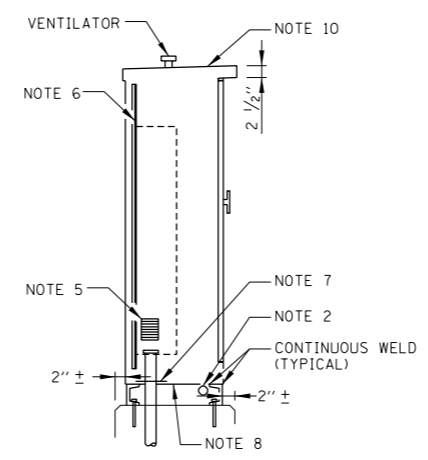
1. TO UTILITY SERVICE. 480/240V, 1 PHASE, 3 WIRE, GROUNDED, WHEN A METER SOCKET IS REQUIRED.
2. TO UTILITY SERVICE. 480/240V, 1 PHASE, 3 WIRE, GROUNDED, WHEN A METER SOCKET IS NOT REQUIRED.
3. ITEM NUMBERS REFER TO EQUIPMENT LIST ON SHEET 1 (OF 2) IN THIS SERIES.

CONTROL CONSOLE NOTES:

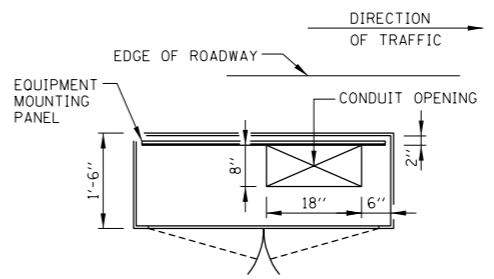
1. FOR INTERIOR EQUIPMENT LAYOUT DETAILS, SEE SHEET 1 (OF 2) IN THIS SERIES.
2. CONDUIT AND CABLE BETWEEN METER FITTING AND DISCONNECT SWITCH ROUTED BETWEEN CONTROL CONSOLE AND CONCRETE FOUNDATION, WHEN A METER SOCKET IS REQUIRED. CONDUIT AND CABLE SHALL BE THE SAME AS THE SERVICE.
3. CONTINUOUS STAINLESS STEEL PIANO HINGES.
4. 3 POINT LATCH VAULT TYPE HANDLE WITH MASTER KEYED CHICAGO CYLINDER LOCK CATALOG NO. 60
5. SCREENED LOUVERS ON SIDES OF CABINET.
6. 10 GAUGE EQUIPMENT MOUNTING PANEL.
7. REMOVABLE #10 GAUGE 10" x 20" PLATE, DRILL PLATE AS REQUIRED FOR CONDUIT ENTRY.
8. UNDERCOAT UNDERSIDE OF CABINET.
9. 4" x 2 1/2" STEEL CHANNEL (2 REQUIRED-FRONT AND BACK). EXTEND CHANNEL 3" BEYOND ENCLOSURE (CONTINUOUSLY WELD CHANNEL TO ENCLOSURE).
10. TOP SLOPED 1/2" TO REAR FOR DRAINAGE.



FRONT VIEW
NO SCALE



SECTION A-A



SECTION B-B

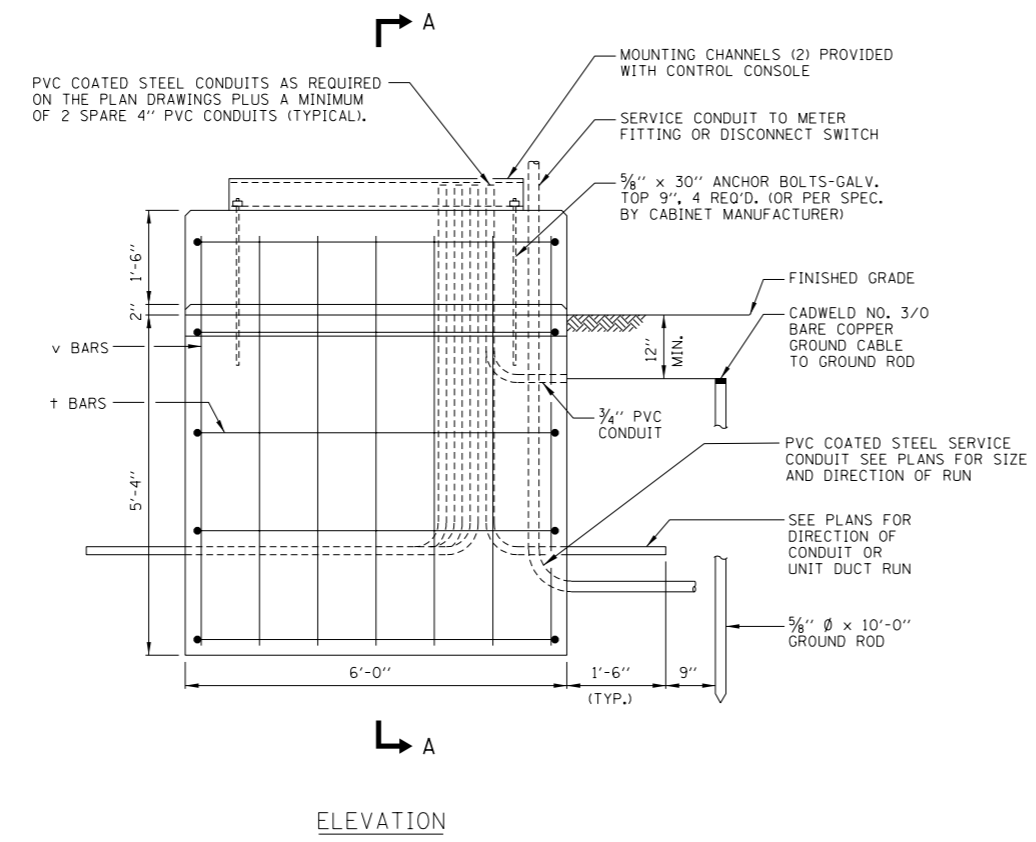
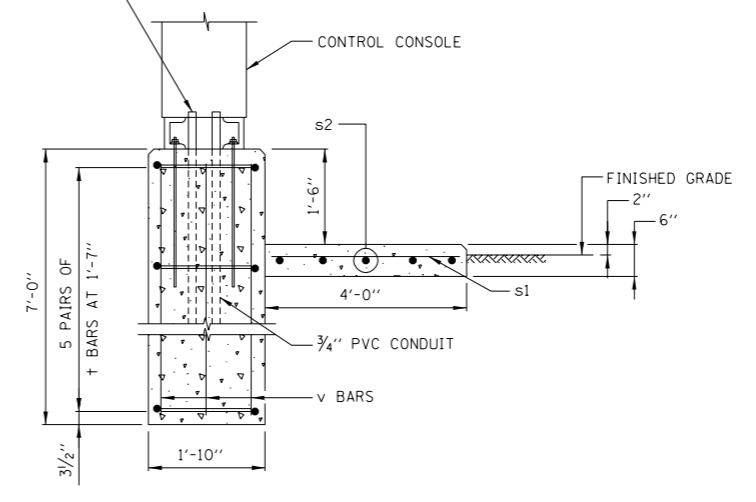
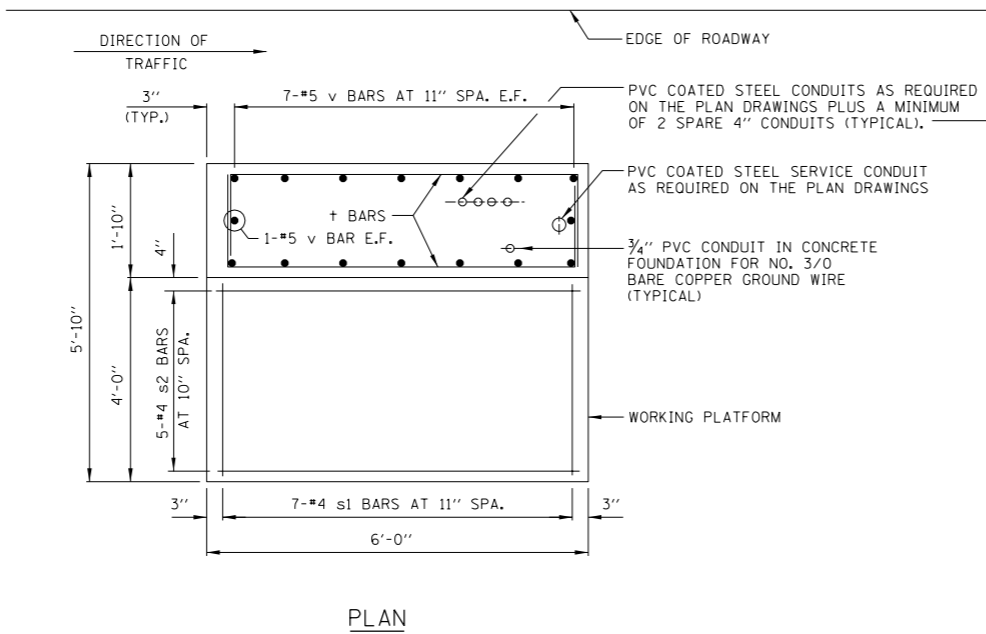


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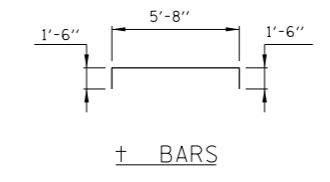
OUTDOOR CONTROL CONSOLE DETAILS

STANDARD H6-00



REINFORCING BAR SCHEDULE					
BAR	NO.	SIZE	LENGTH	WT. LBS.	SHAPE
v	16	#5	6'-7"	110	—
+	10	#4	8'-8"	58	⌈
s1	7	#4	3'-8"	17	—
s2	5	#4	5'-8"	19	—

BILL OF MATERIAL		
DESCRIPTION	UNIT	QUANTITY
REINF. STEEL, EPOXY COATED	LBS.	204
CLASS "SI" CONCRETE	CU. YDS.	3.3



SEE SHEET 2 (OF 2) IN THIS SERIES FOR GENERAL NOTES

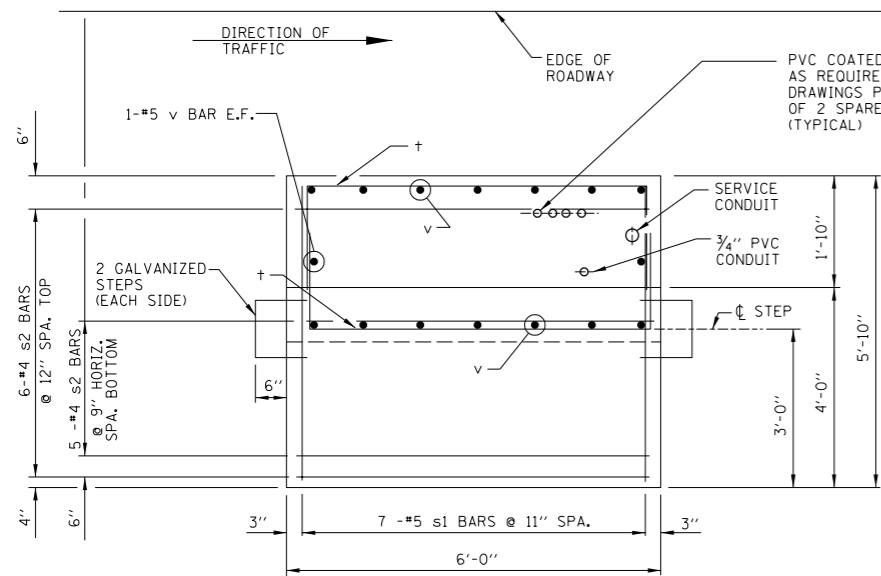
TYPE A CONTROL CONSOLE FOUNDATION
NO SCALE



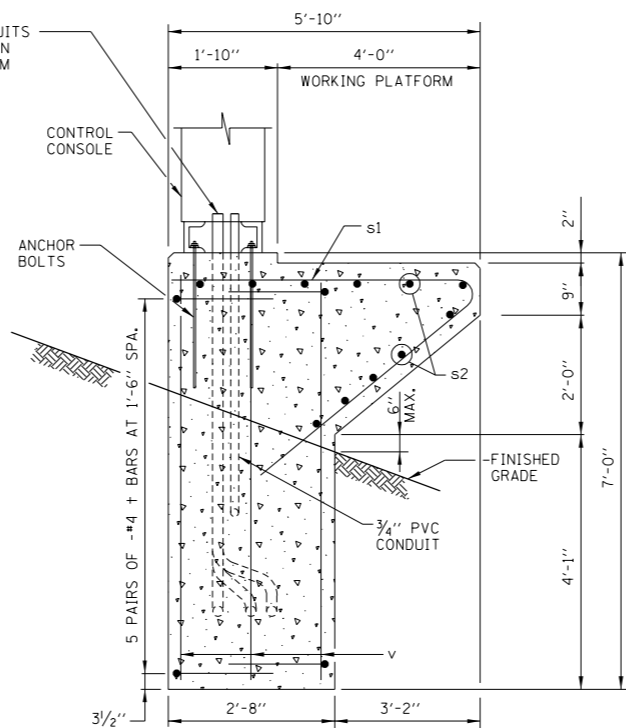
APPROVED *Jeff Haley* CHIEF ENGINEER DATE 1-1-2007

DATE	REVISIONS

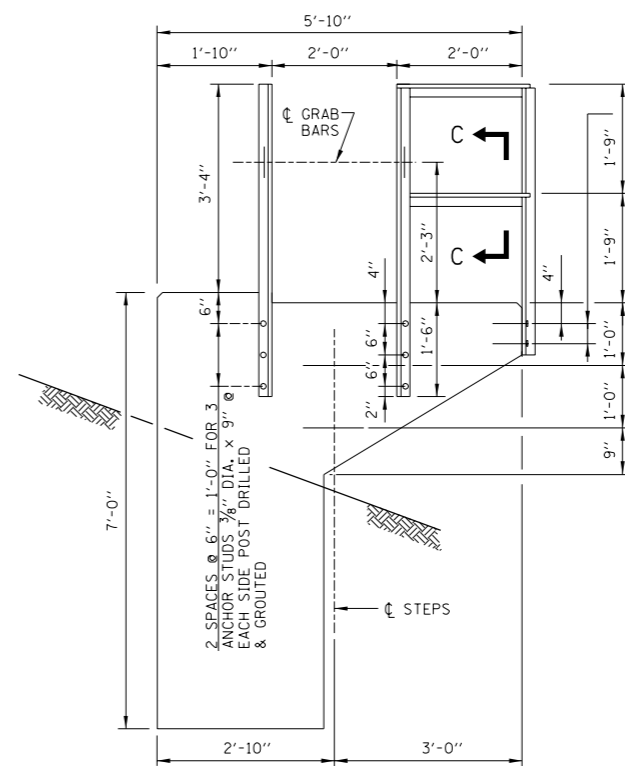
OUTDOOR CONTROL CONSOLE FOUNDATION DETAILS
STANDARD H7-00



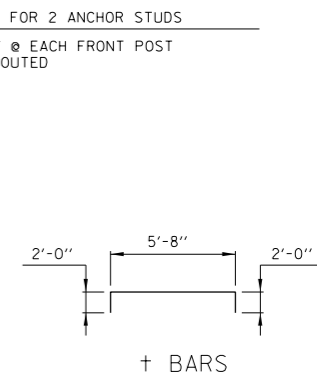
PLAN



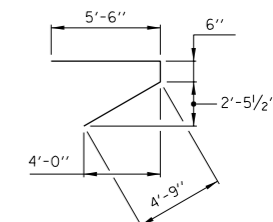
SECTION A-A



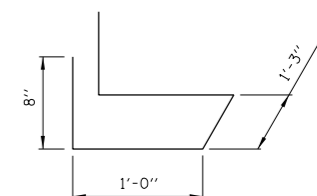
VIEW B-B



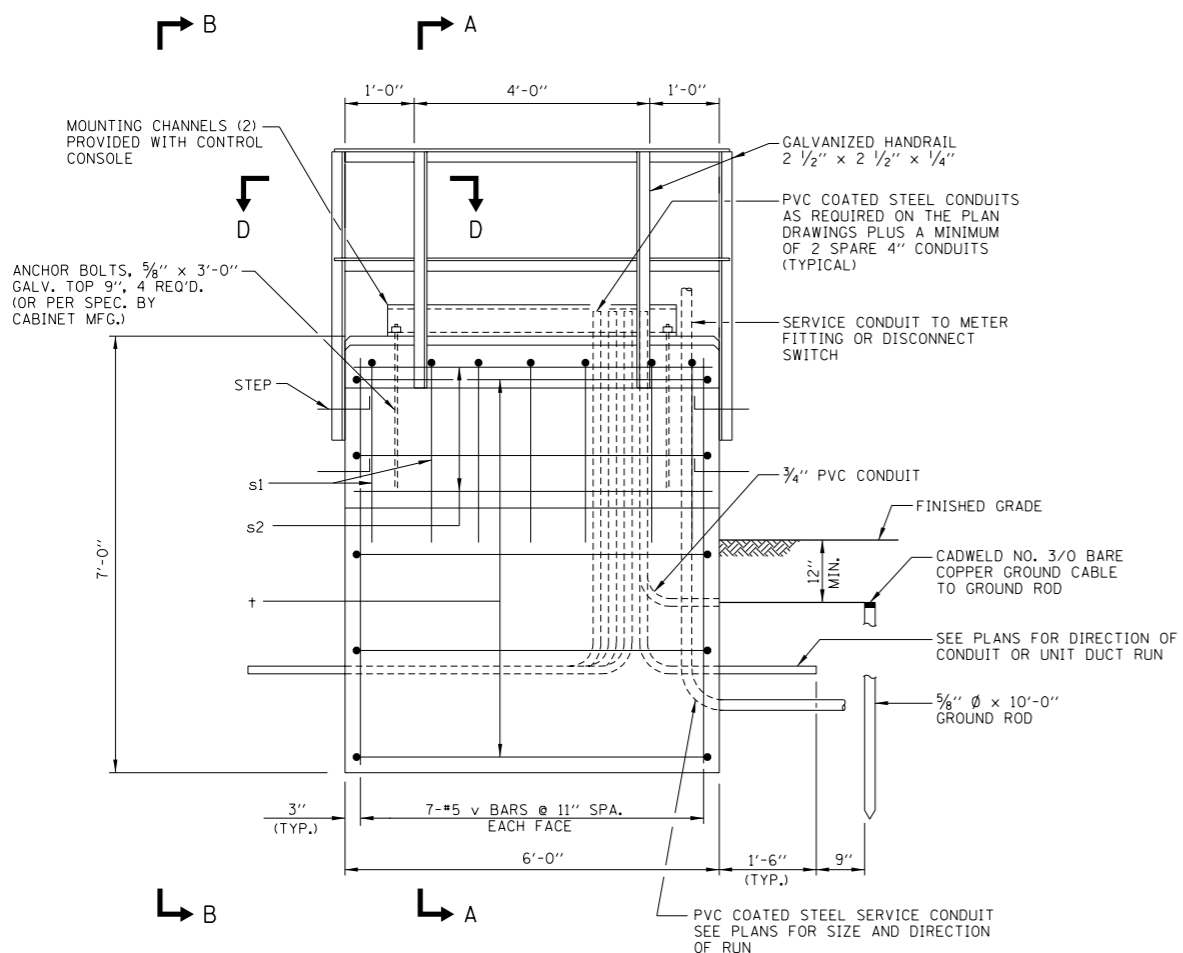
+ BARS



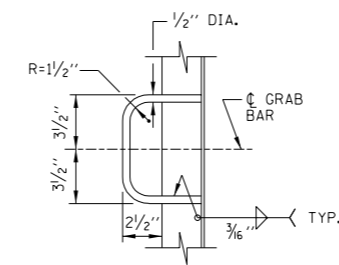
s1 BARS



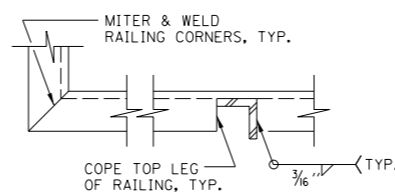
3/4" DIA. STEEL STEP



ELEVATION



VIEW C-C



VIEW D-D

REINFORCING BAR SCHEDULE					
BAR	NO.	SIZE	LENGTH	WT. LBS.	SHAPE
v	16	#5	6'-5"	107	—
+	10	#4	9'-8"	65	—
s1	7	#5	10'-9"	79	—
s2	11	#4	5'-8"	42	—

BILL OF MATERIAL		
DESCRIPTION	UNIT	QUANTITY
REINF. STEEL, EPOXY COATED	LBS.	293
CLASS "SI" CONCRETE	CU. YDS.	5.35
STRUCTURAL STEEL	LBS.	158
ANCHOR STUDS	EACH	16
STEPS & GRAB BARS	LBS.	31

NOTES:

- EXPOSED CONCRETE EDGES SHALL HAVE 3/4" x 45° CHAMFERS EXCEPT WHERE SHOWN OTHERWISE. CHAMFERS ON VERTICAL EDGES SHALL BE CONTINUED A MINIMUM OF ONE FOOT BELOW FINISHED GROUND LEVEL.
- REINFORCEMENT BARS, INCLUDING EPOXY-COATED REINFORCEMENT BARS, SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M-31 (ASTM A615), GRADE 60 DEFORMED BARS.
- REINFORCEMENT BARS SHOWN SHALL BE EPOXY COATED.
- REINFORCEMENT BENDING DETAILS SHALL BE IN ACCORDANCE WITH THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315, LATEST EDITION.
- REINFORCEMENT BAR BENDING DIMENSIONS ARE OUT TO OUT.
- 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.
- FOR CLARITY, CONTROL CONSOLE AND RAILINGS ARE NOT SHOWN IN PLAN VIEW.
- GRAB BARS AND STEPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 709, GRADE 36 OR 50 OR ASTM A 307. STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A 709, GRADE 36 OR 50.



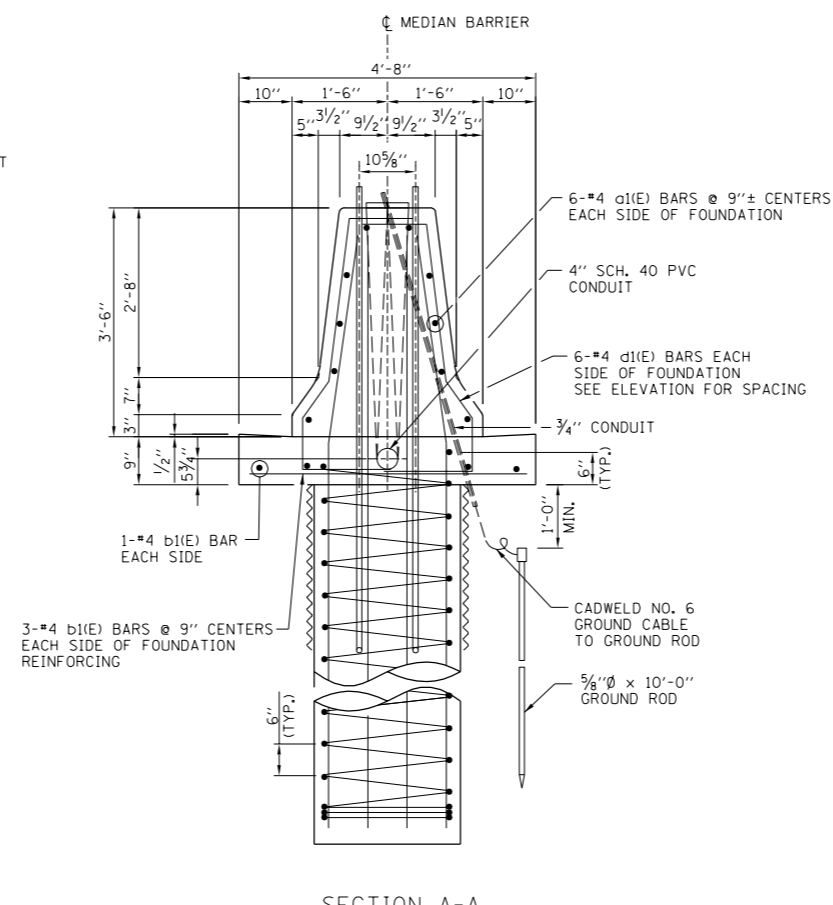
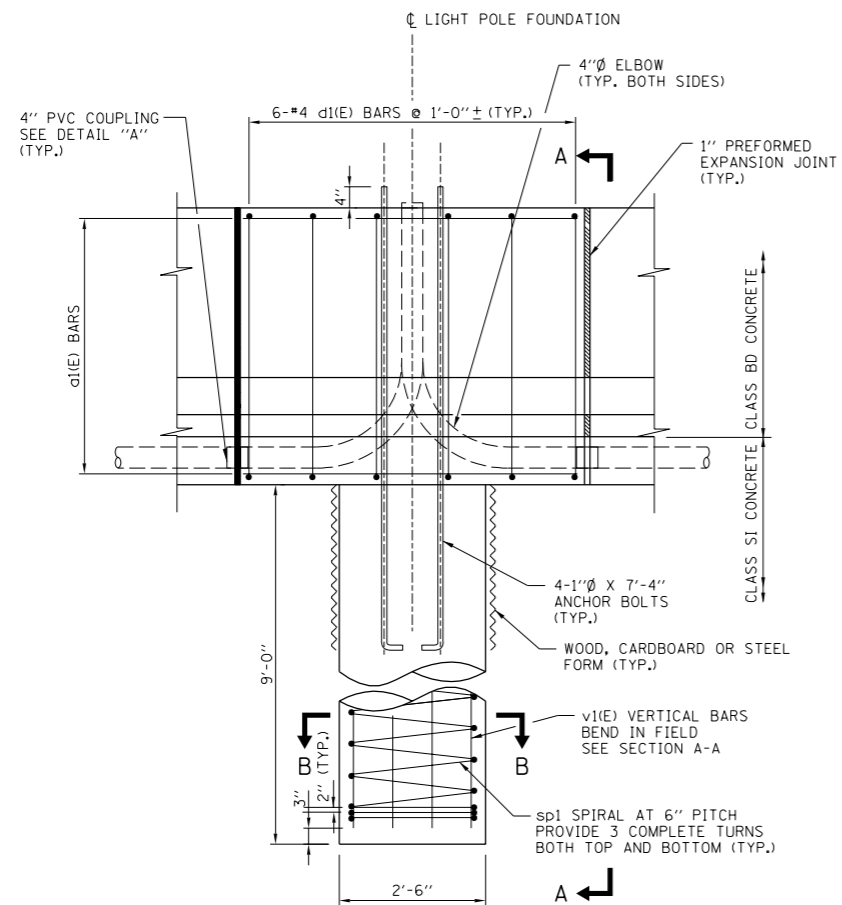
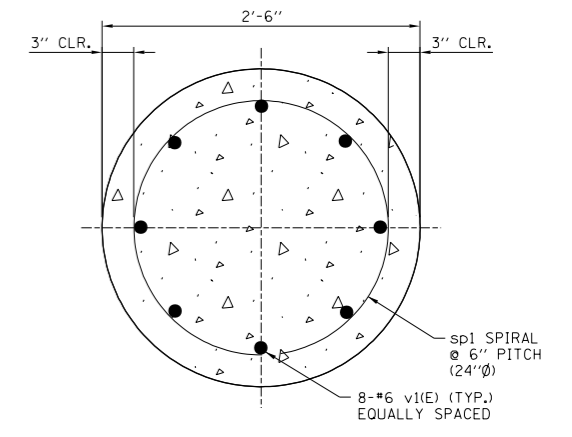
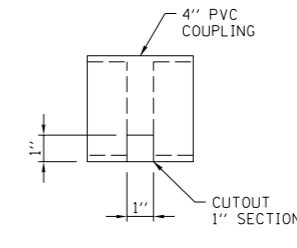
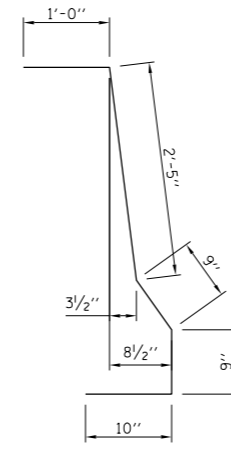
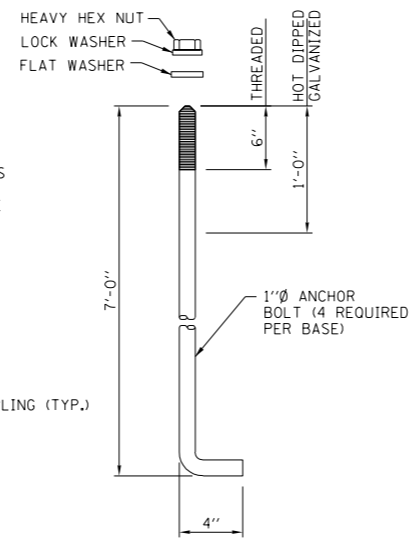
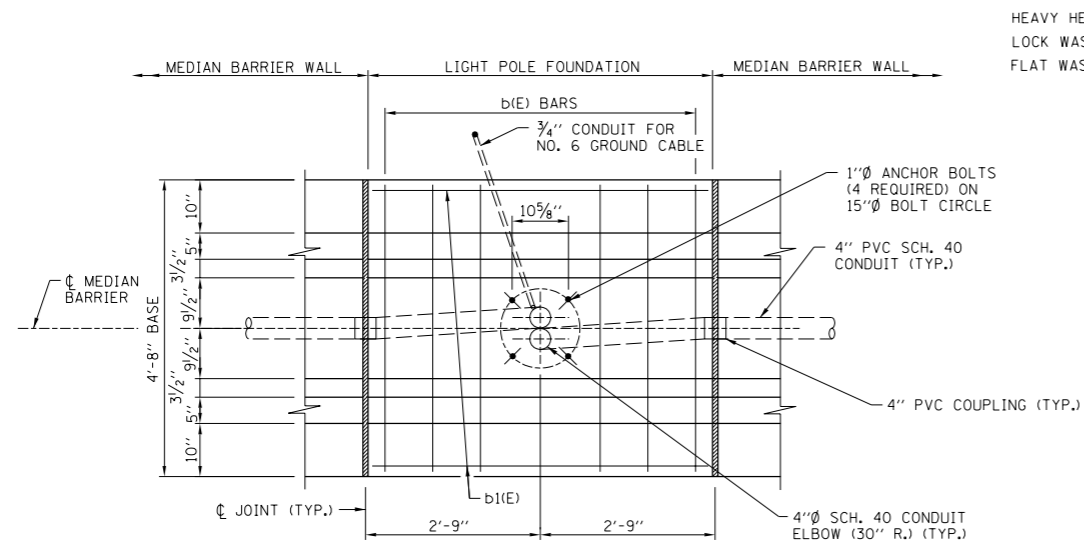
DATE	REVISIONS

OUTDOOR CONTROL CONSOLE FOUNDATION DETAILS
STANDARD H7-00

TYPE B CONTROL CONSOLE FOUNDATION

NO SCALE

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CHIEF ENGINEER
DATE: 1-1-2007



REINFORCING BAR SCHEDULE					
BAR	NO.	SIZE	LENGTH	WT. LBS.	SHAPE
d1(E)	12	#4	5'-0"	40	—
b1(E)	6	#4	4'-2"	17	—
b1(E)	2	#4	5'-2"	7	—
d1(E)	12	#4	5'-9"	46	⌋
sp1	*	#4	*	*	⌋
v1(E)	8	#6	11'-9"	142	—

* SEE SECT. A-A



TYPE 1 CENTERED CAISSON, 42" BARRIER

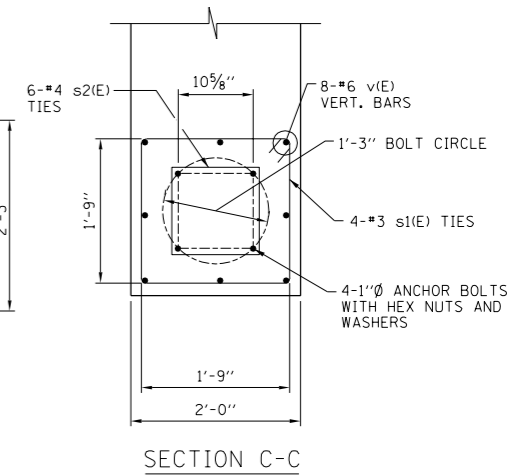
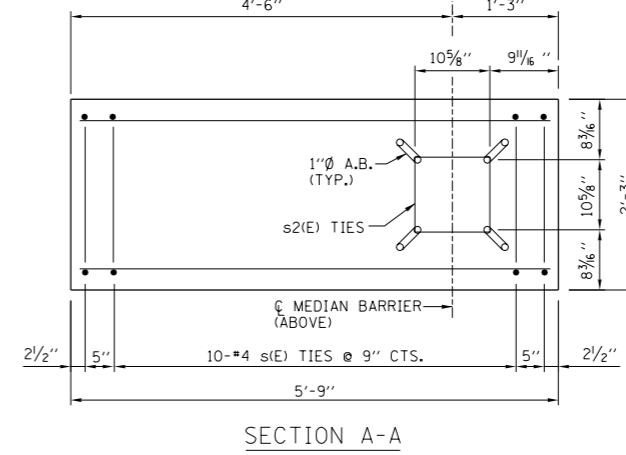
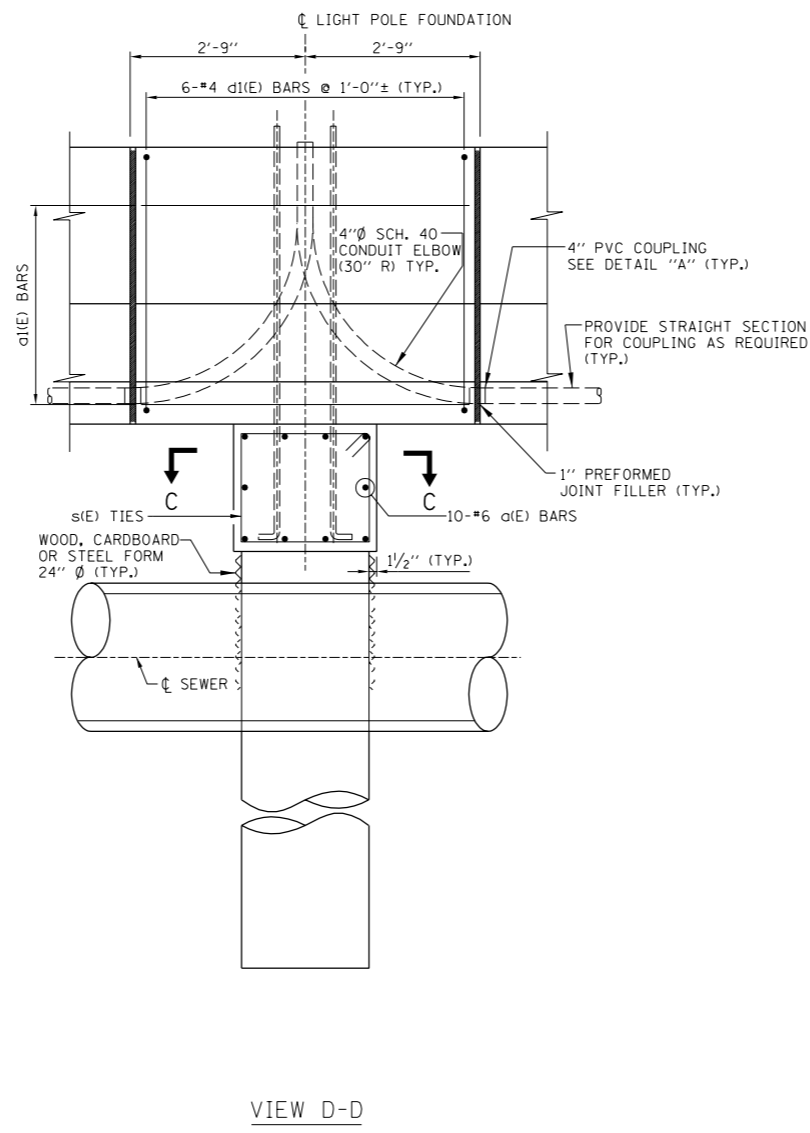
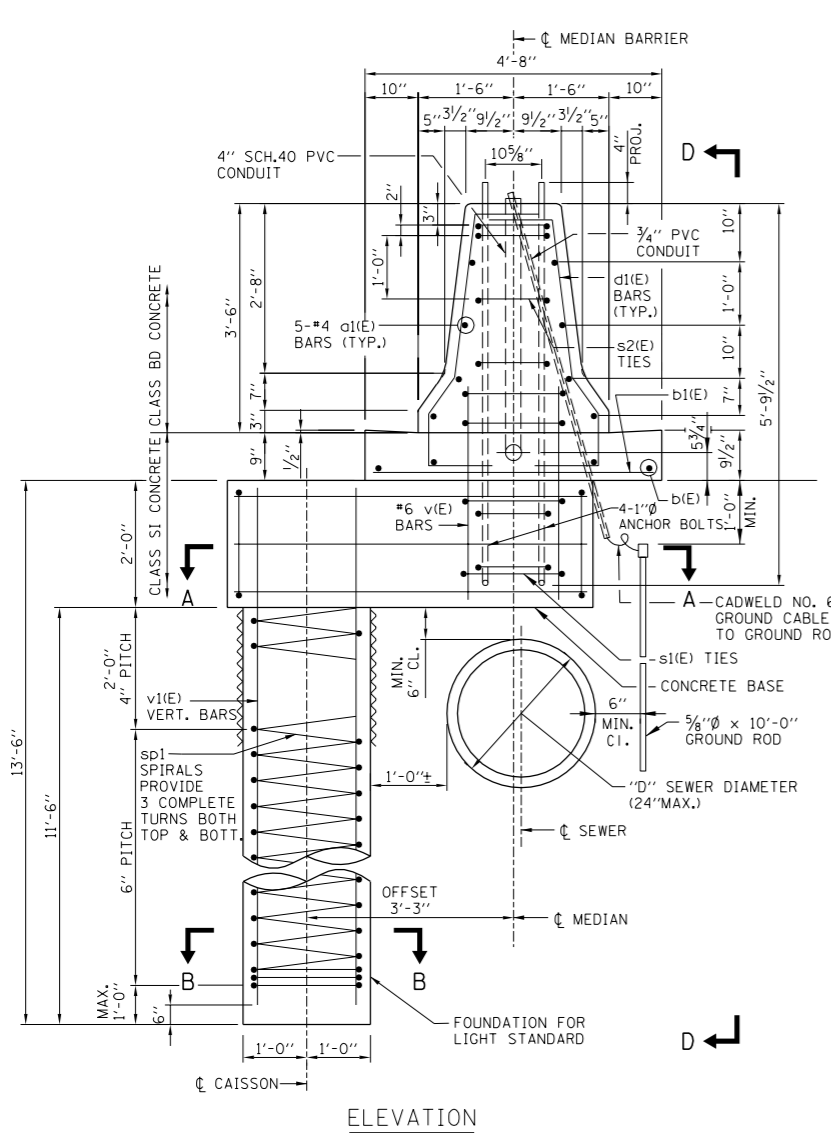
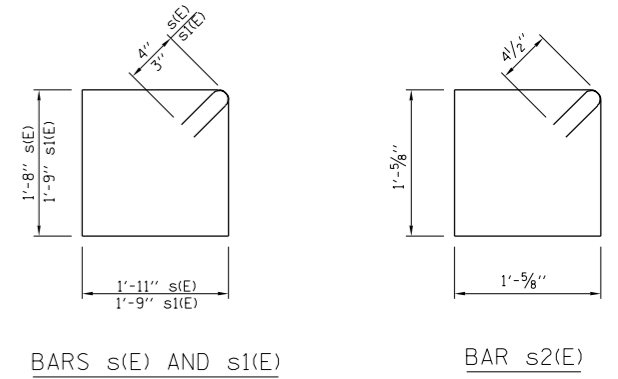
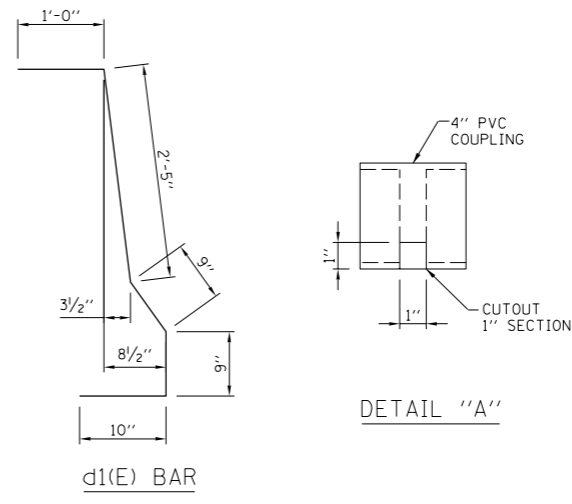
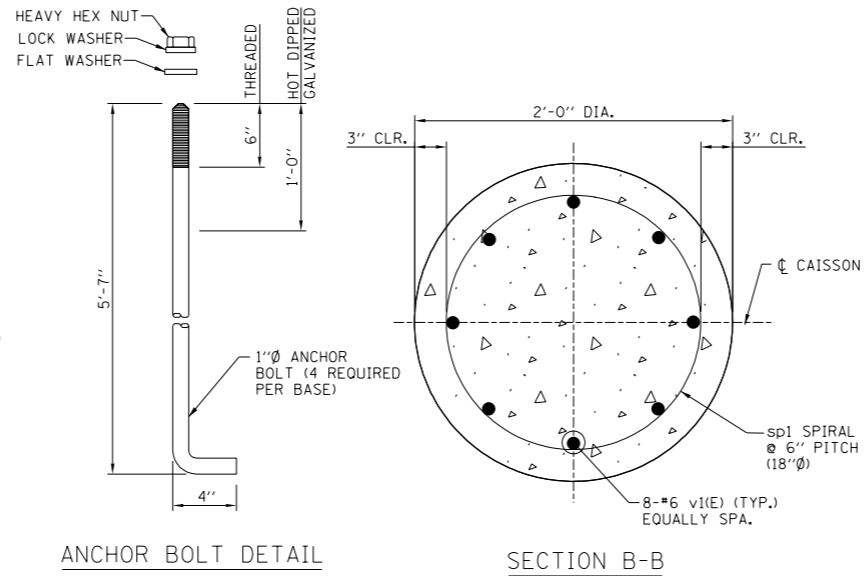
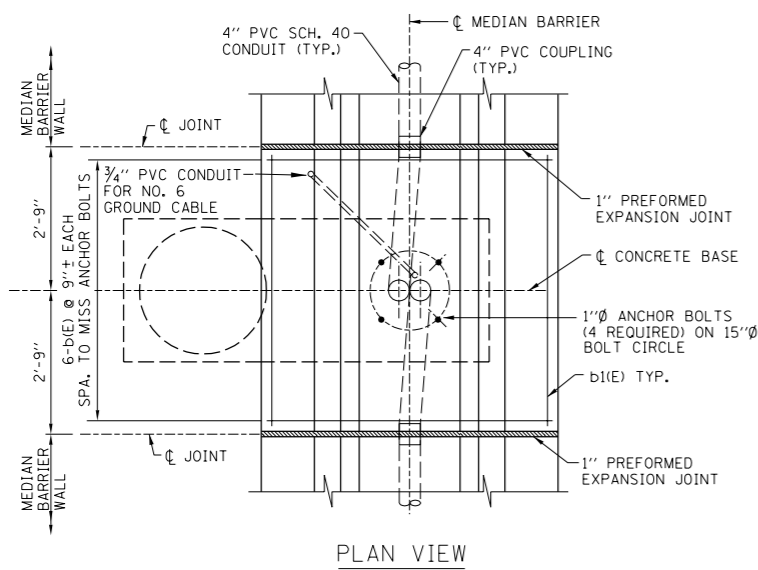
DATE	REVISIONS

MEDIAN BARRIER LIGHT POLE FOUNDATION DETAILS

STANDARD H8-00

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DATE 1-1-2007



REINFORCING BAR SCHEDULE					
BAR	NO.	SIZE	LENGTH	WT. LBS.	SHAPE
d1(E)	10	#6	5'-6"	83	—
d1(E)	10	#4	5'-0"	34	—
b1(E)	6	#4	4'-2"	17	—
b1(E)	2	#4	5'-2"	7	—
d1(E)	12	#4	5'-9"	46	⌋
s1(E)	12	#4	7'-10"	63	□
s1(E)	4	#3	7'-6"	12	□
s2(E)	6	#4	5'-0"	20	□
sp1	*	#4	*	*	⌋
v1(E)	8	#6	3'-2"	38	—
v1(E)	8	#8	12'-6"	267	—

* SEE SECT. B-B

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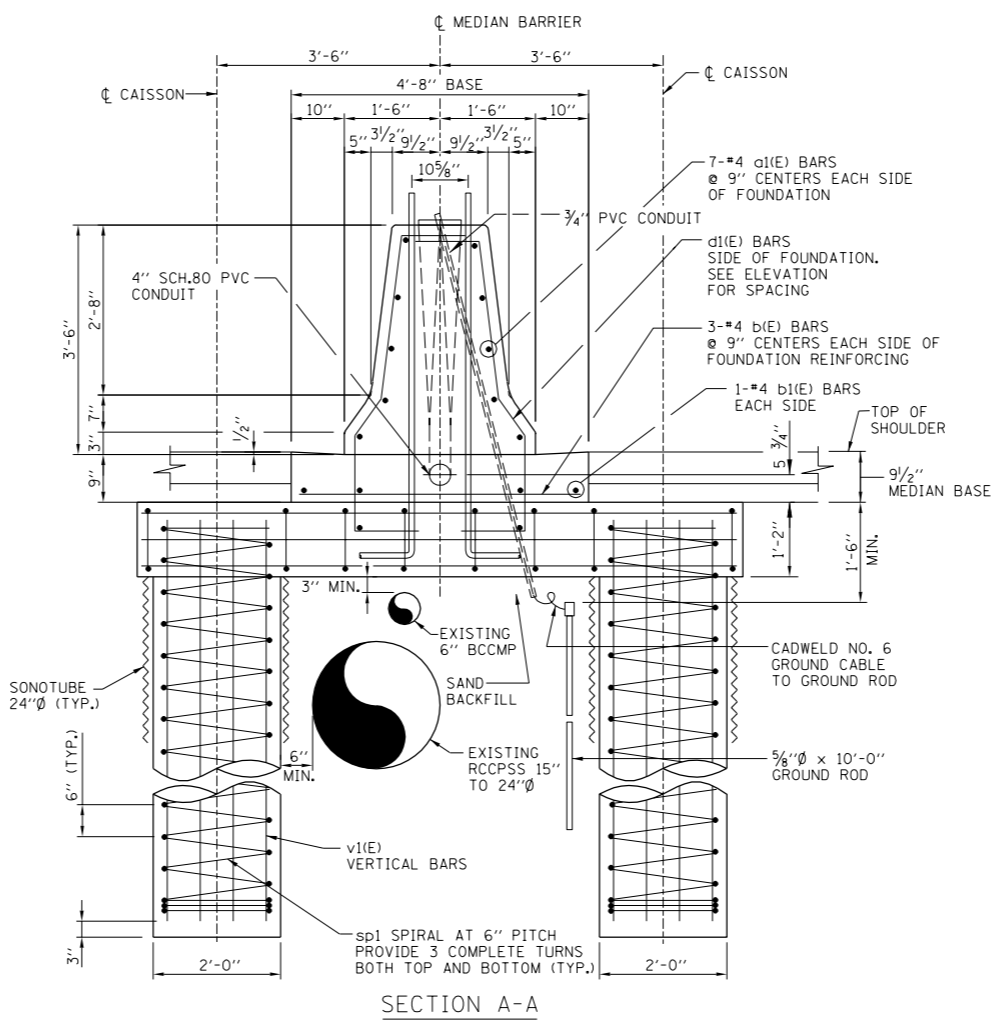
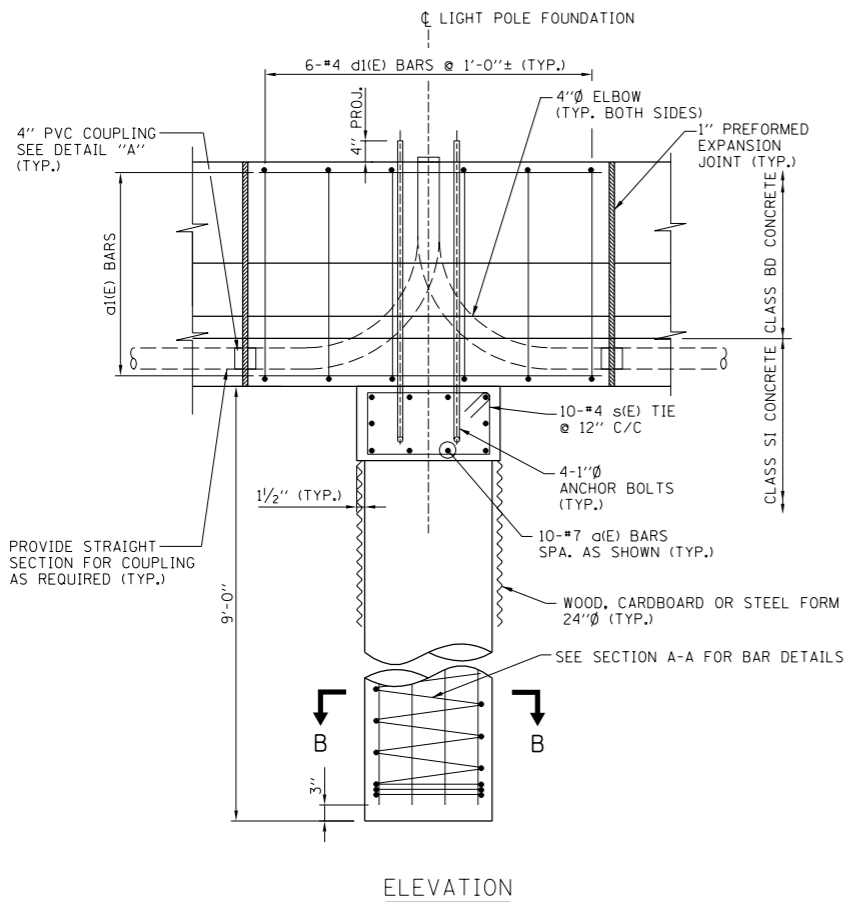
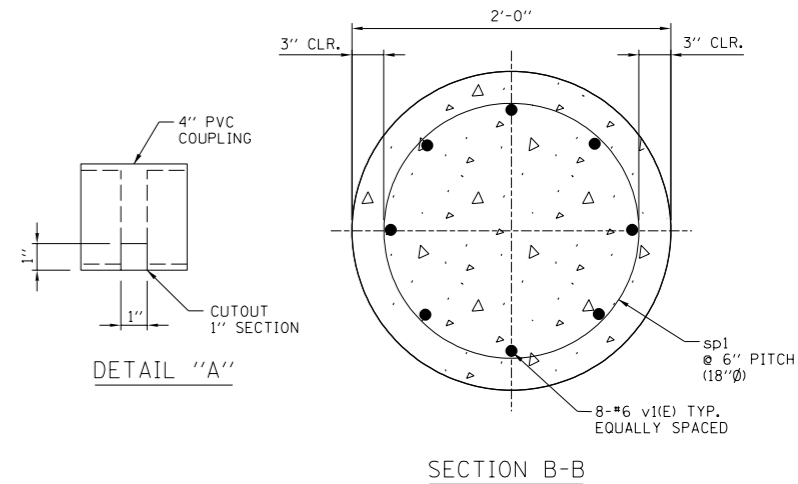
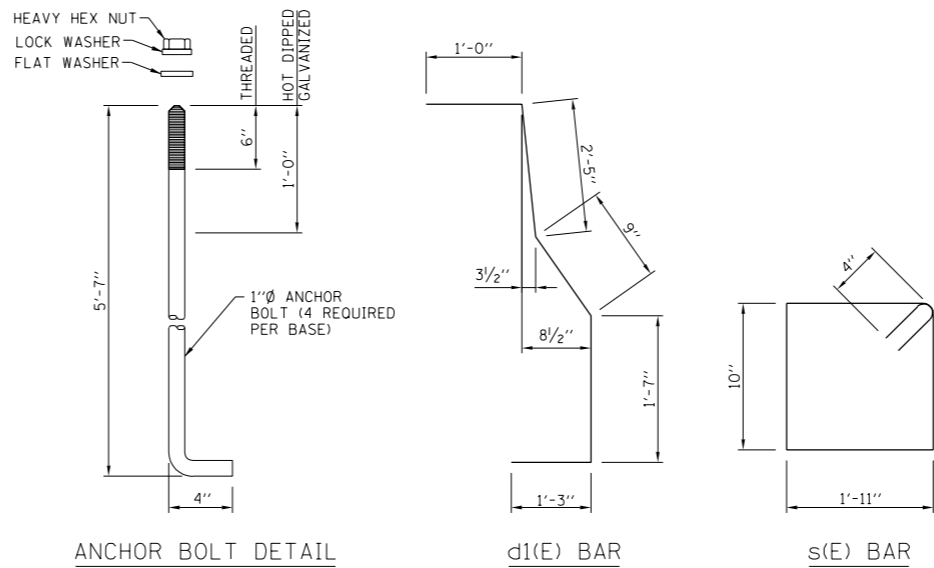
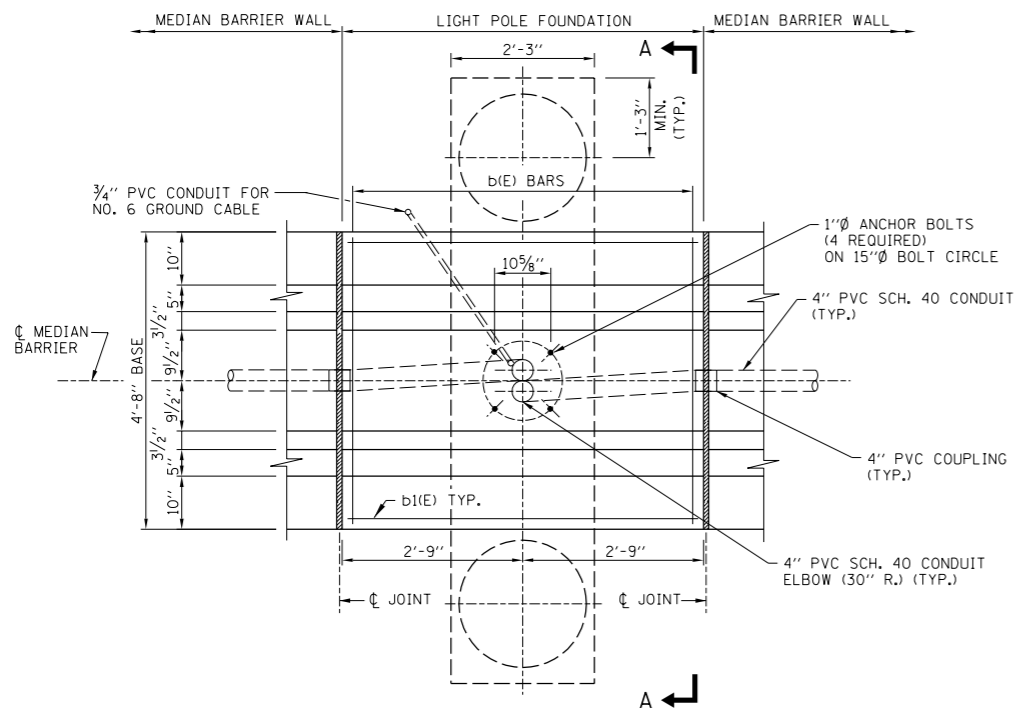
TYPE 2 OFFSET CAISSON, 42" BARRIER

DATE	REVISIONS

Illinois Tollway
Open Roads for a Faster Future

MEDIAN BARRIER LIGHT POLE FOUNDATION DETAILS

STANDARD H8-00



NOTES:

1. THE FURNISHING AND INSTALLATION OF THE 6" P.V.C. DRAIN PIPE INCLUDING ALL THE FITTINGS REQUIRED AND REMOVAL AND REPLACEMENT OF THE EXISTING SHOULDER NECESSARY TO INSTALL THE 6" P.V.C. PIPE SHALL BE INCIDENTAL TO LIGHT POLE FOUNDATION (MEDIAN BARRIER) STRADDLED.
2. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING CONDITIONS AND LOCATIONS AND SIZES OF DRAIN AND STORM SEWER PIPES HAVE BEEN TAKEN FROM EXISTING PLANS AND SUBJECT TO NOMINAL CONSTRUCTION VARIANCES. IT WILL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY SUCH DIMENSIONS, DETAILS AND LOCATIONS OF THE PIPES IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS.

REINFORCING BAR SCHEDULE					
BAR	NO.	SIZE	LENGTH	WT. LBS.	SHAPE
a(E)	10	#7	9'-0"	184	—
ai(E)	14	#4	5'-0"	47	—
b(E)	6	#4	4'-2"	17	—
bi(E)	2	#4	5'-2"	7	—
d(E)	12	#4	6'-7"	53	⌋
s(E)	10	#4	6'-2"	42	⌋
sp1	*	#4	*	*	⌋
vi(E)	16	#6	9'-9"	235	⌋

* SEE SECT. A-A

TYPE 3 STRADDLED CAISSON, 42" BARRIER

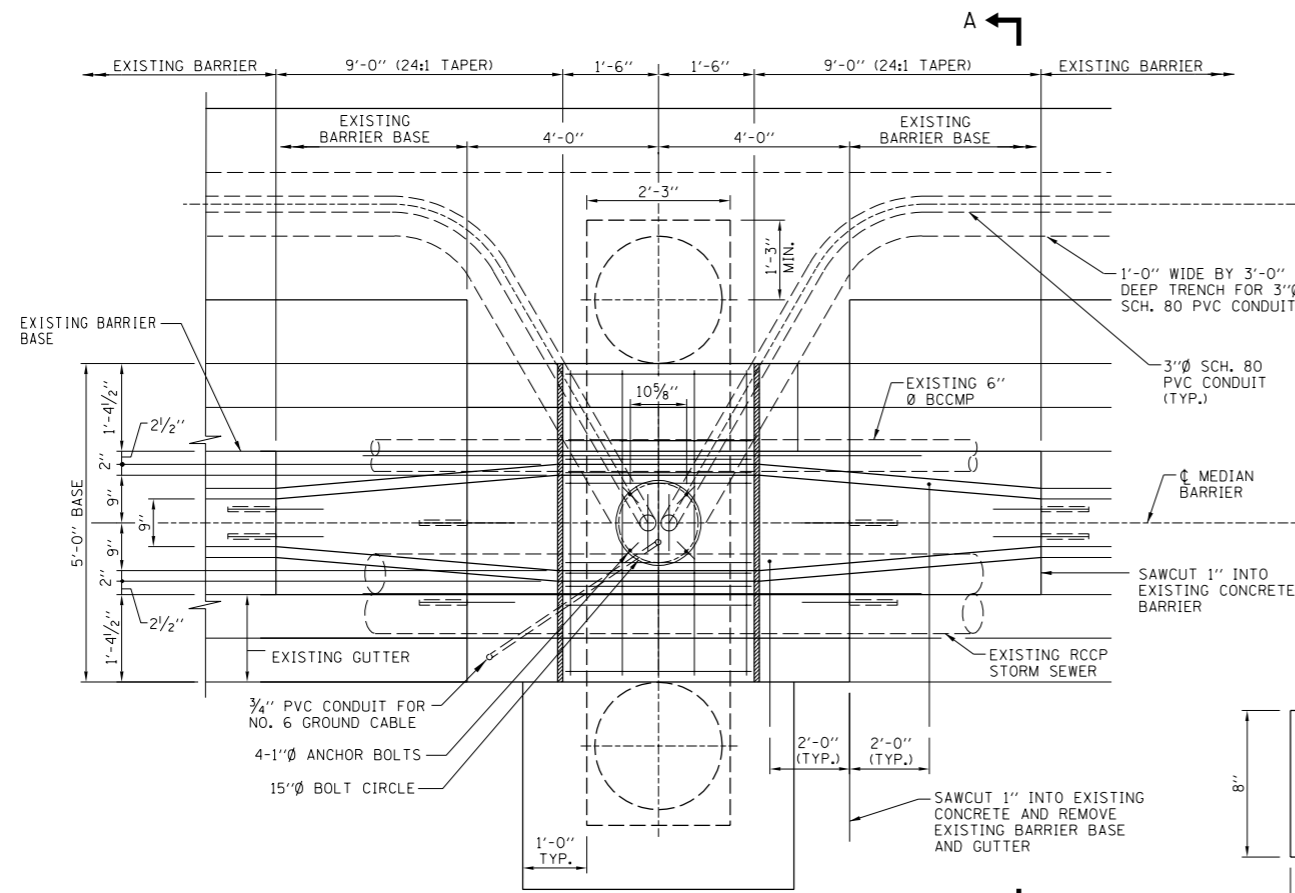
APPROVED *Jeff Daley* CHIEF ENGINEER DATE 1-1-2007



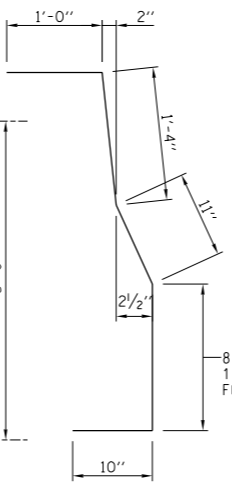
DATE	REVISIONS

MEDIAN BARRIER LIGHT POLE FOUNDATION DETAILS

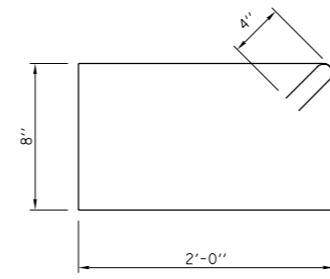
STANDARD H8-00



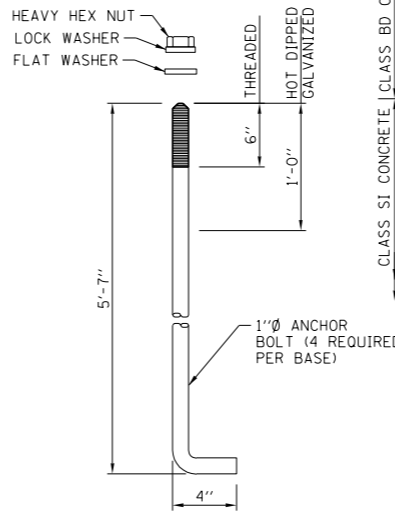
PLAN VIEW



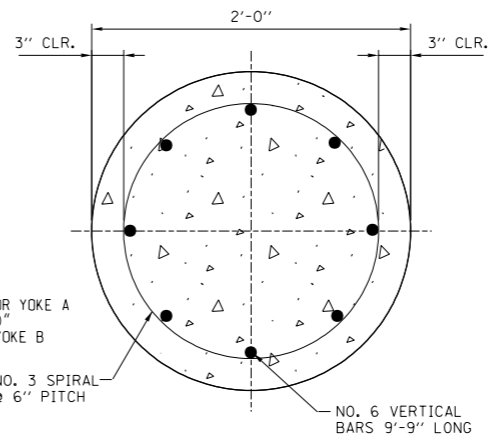
YOKE DETAIL



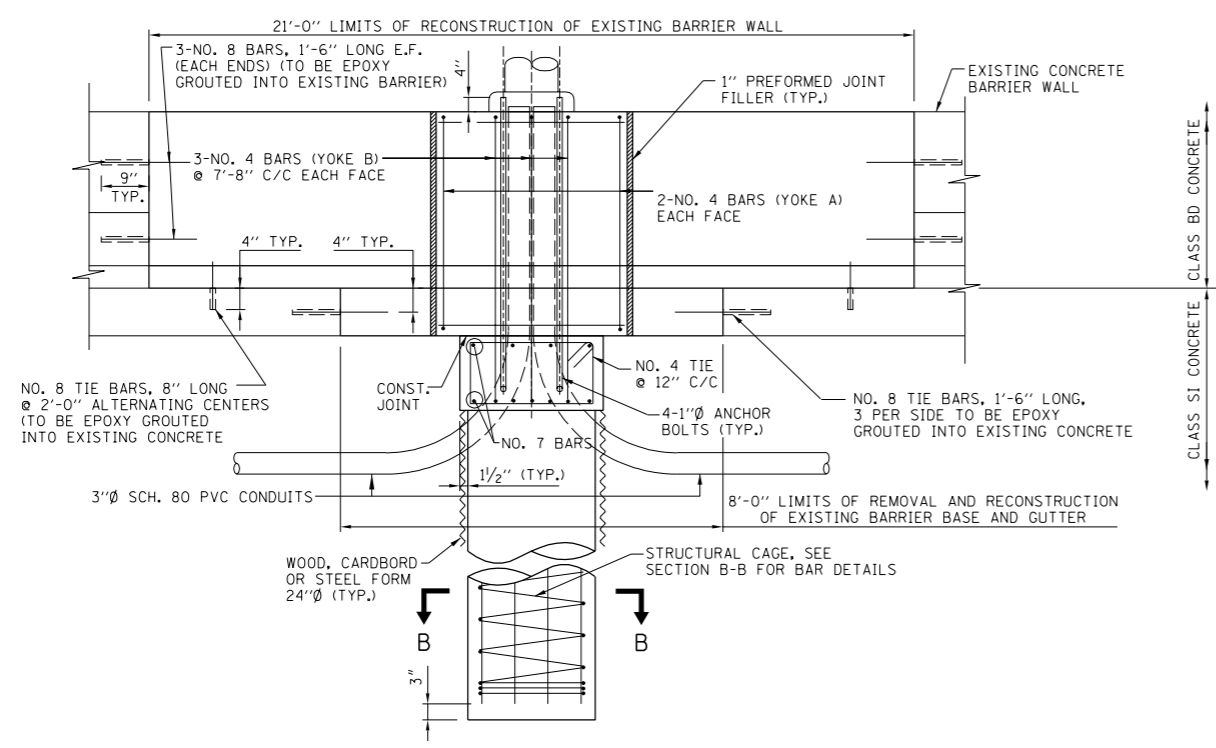
"S" TIES



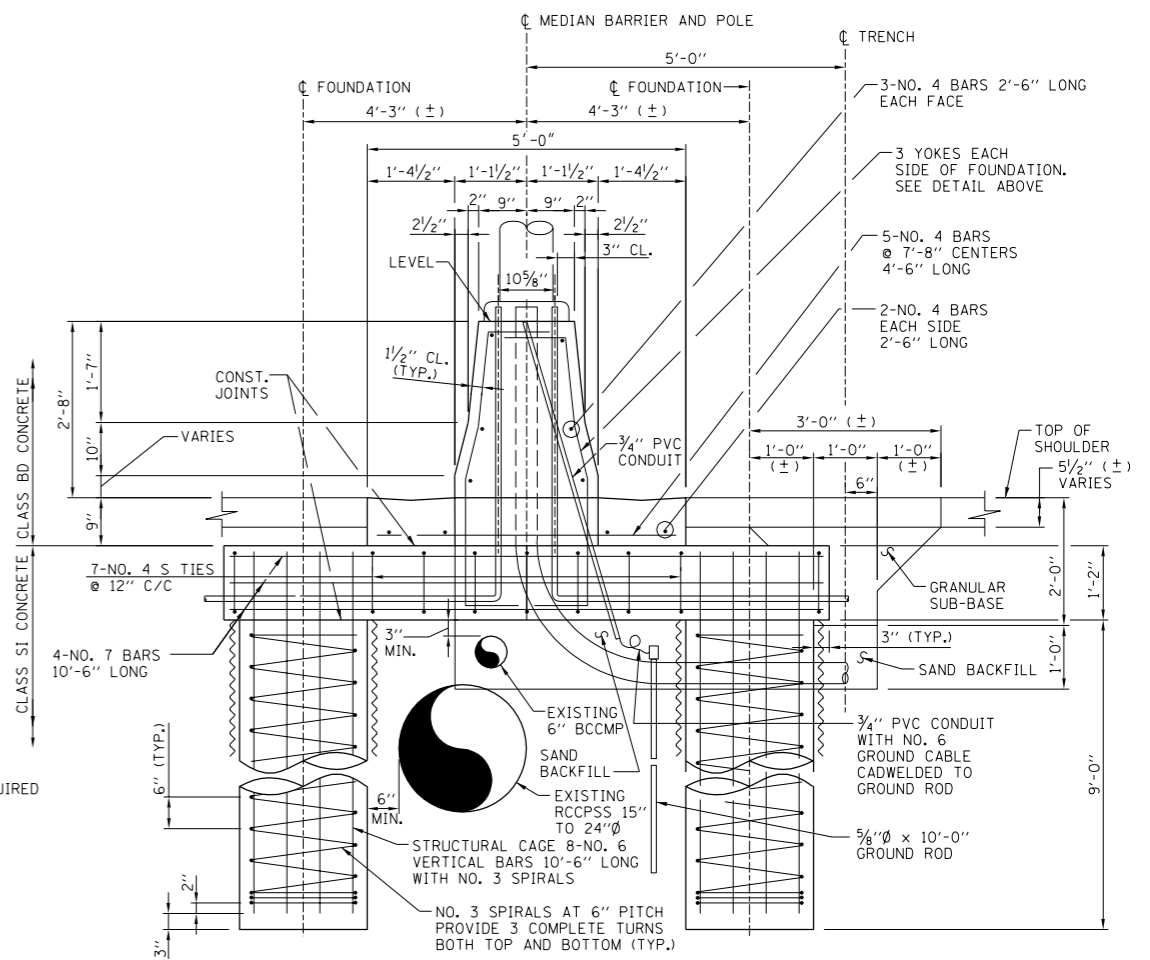
ANCHOR BOLT DETAIL



SECTION B-B



ELEVATION



SECTION A-A

NOTES:

1. THE FURNISHING AND INSTALLATION OF THE 6" P.V.C. DRAIN PIPE INCLUDING ALL THE FITTINGS REQUIRED AND REMOVAL AND REPLACEMENT OF THE EXISTING SHOULDER NECESSARY TO INSTALL THE 6" P.V.C. PIPE SHALL BE INCIDENTAL TO LIGHT POLE FOUNDATION (MEDIAN BARRIER) STRADDLED.
2. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING CONDITIONS AND LOCATIONS AND SIZES OF DRAIN AND STORM SEWER PIPES HAVE BEEN TAKEN FROM EXISTING PLANS AND SUBJECT TO NOMINAL CONSTRUCTION VARIANCES. IT WILL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY SUCH DIMENSIONS, DETAILS AND LOCATIONS OF THE PIPES IN THE FIELD AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS.
3. ALL BARS EXCEPT SPIRAL SHALL BE EPOXY COATED.

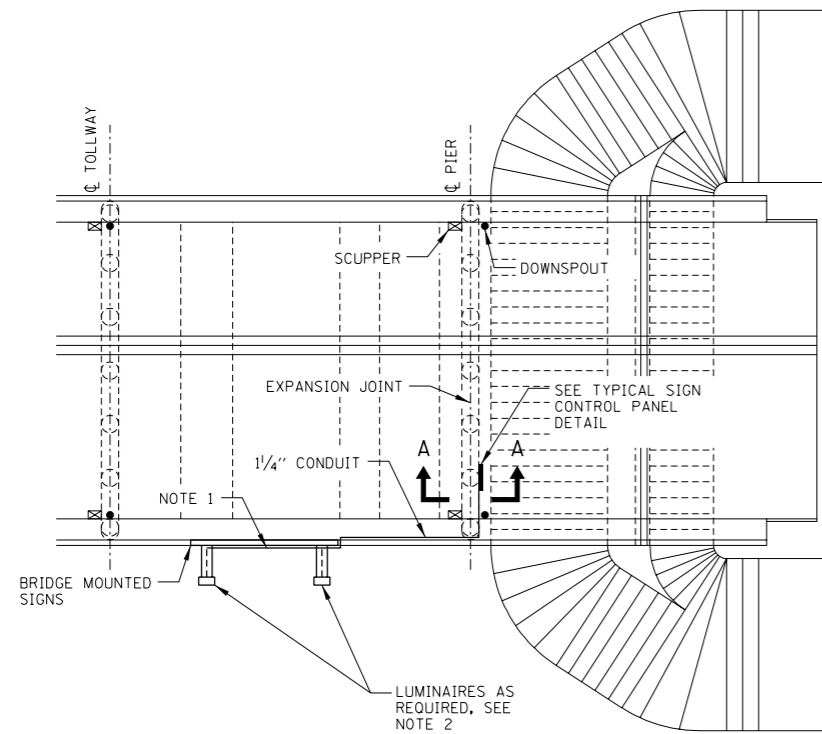
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DATE	REVISIONS

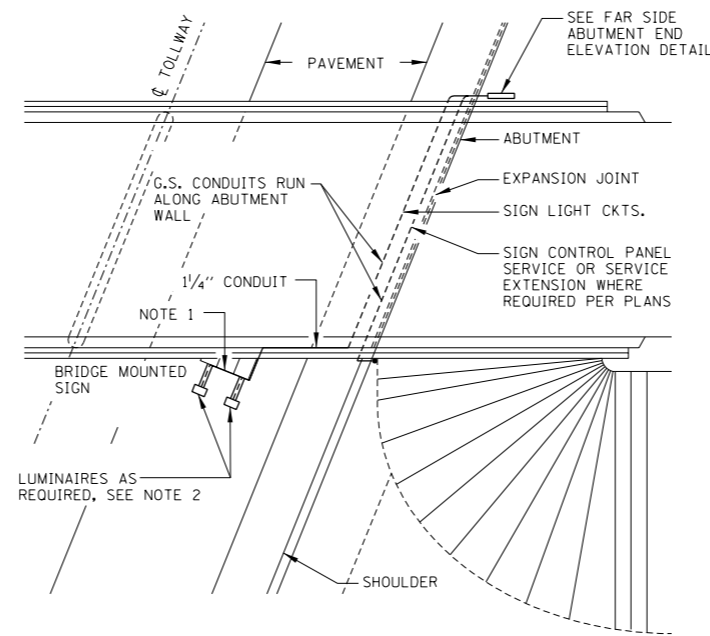
Illinois Tollway
Open Roads for a Faster Future

MEDIAN BARRIER LIGHT POLE FOUNDATION DETAILS-TYPE 4 RETROFIT, 32" BARRIER

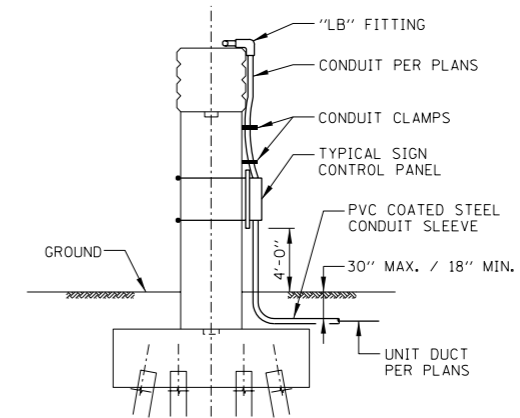
STANDARD H9-00



PLAN



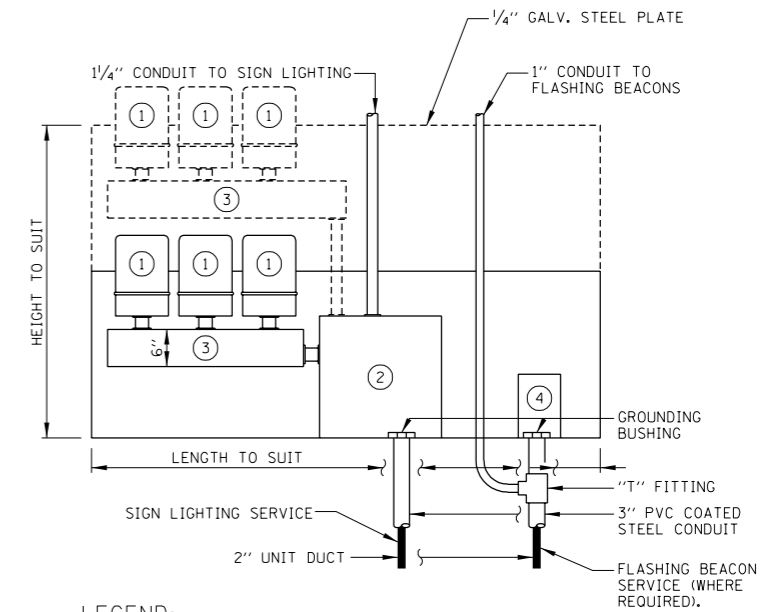
PLAN



SECTION A-A
NO SCALE

NOTES:

1. FOR SIGN STRUCTURE INSTALLATION DETAILS, SEE SHEET 2 (OF 2) IN THIS SERIES.
2. FOR SIGN LUMINAIRE INSTALLATION AND WIRING, SEE STANDARD H14 (SIGN LUMINAIRE MOUNTING DETAIL AND WIRING DIAGRAMS).

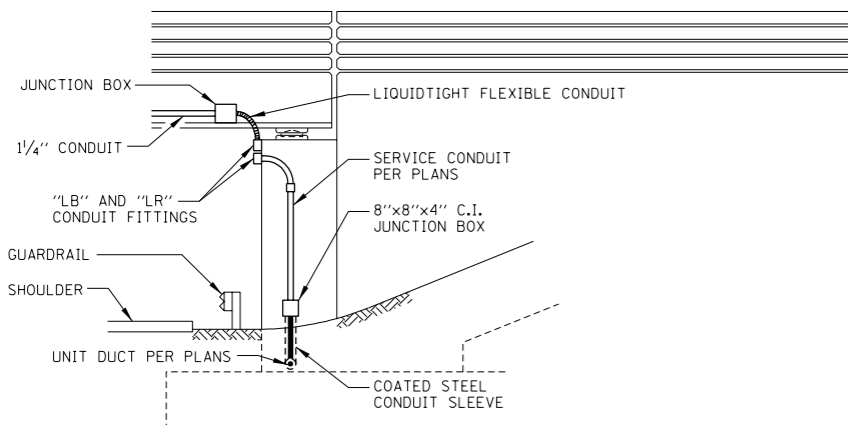


LEGEND:

- ① WEATHERPROOF CANNISTER BALLAST (BALLAST SHALL BE MARKED TO IDENTIFY WHICH LUMINAIRE IT IS WIRED).
- ② SIGN LIGHTING SERVICE - CIRCUIT BREAKER (30 AMP/2 POLE) IN NEMA TYPE 4 C.I. ENCLOSURE, OZ TYPE "YW" WITH MOUNTING FEET OR APPROVED EQUAL.
- ③ 6"x6" HOT DIPPED GALVANIZED WEATHERPROOF WIREWAY (LENGTH TO SUIT).
- ④ FLASHING BEACON CONTROLLER.

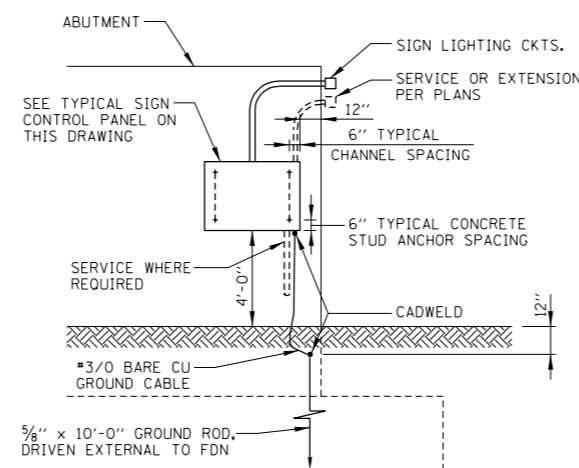
TYPICAL SIGN CONTROL PANEL

FOR TYPICAL WIRING DIAGRAM SEE STANDARD H14 (SIGN LUMINAIRE MOUNTING DETAIL AND WIRING DIAGRAMS)
NO SCALE



NEAR SIDE ABUTMENT END ELEVATION

NO SCALE



FAR SIDE ABUTMENT END ELEVATION

NO SCALE

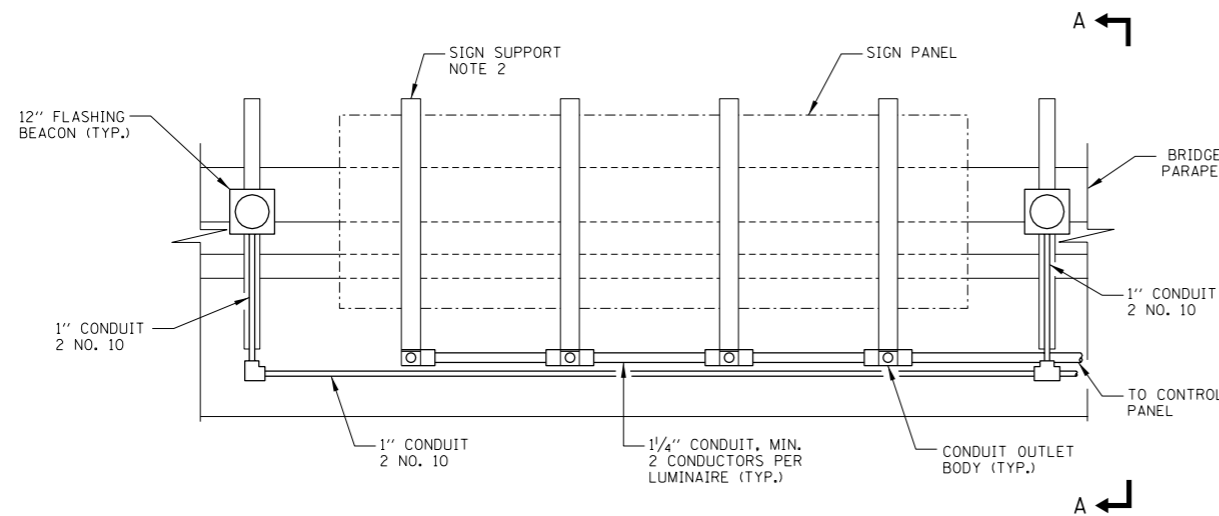


DATE	REVISIONS

BRIDGE MOUNT SIGN LIGHTING TYPICAL WIRING

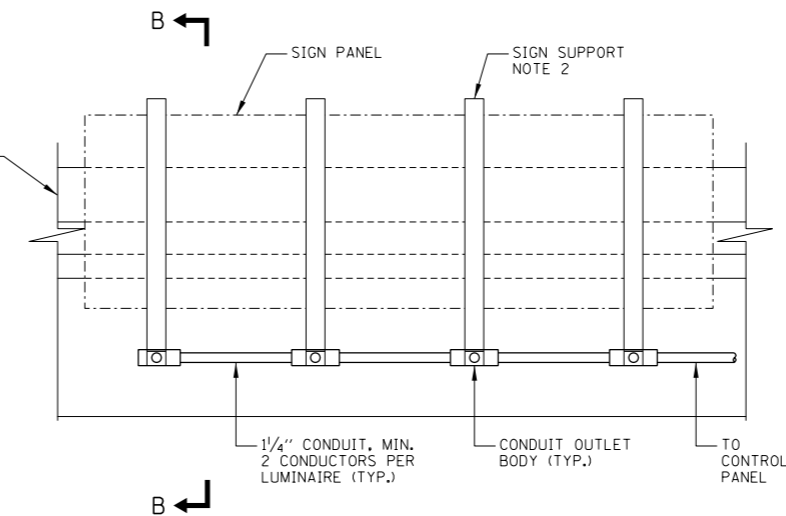
STANDARD H10-00

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TYPICAL FRONT ELEVATION WITH FLASHING BEACON

LUMINAIRES NOT SHOWN
NO SCALE

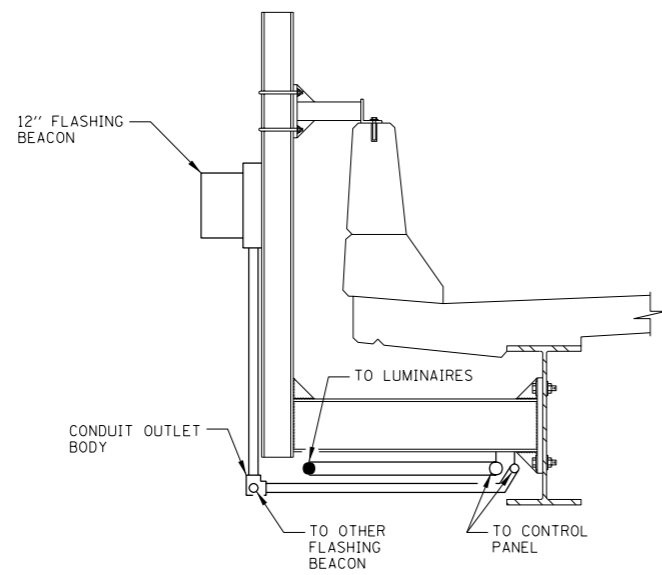


TYPICAL FRONT ELEVATION WITHOUT FLASHING BEACON

LUMINAIRES NOT SHOWN
NO SCALE

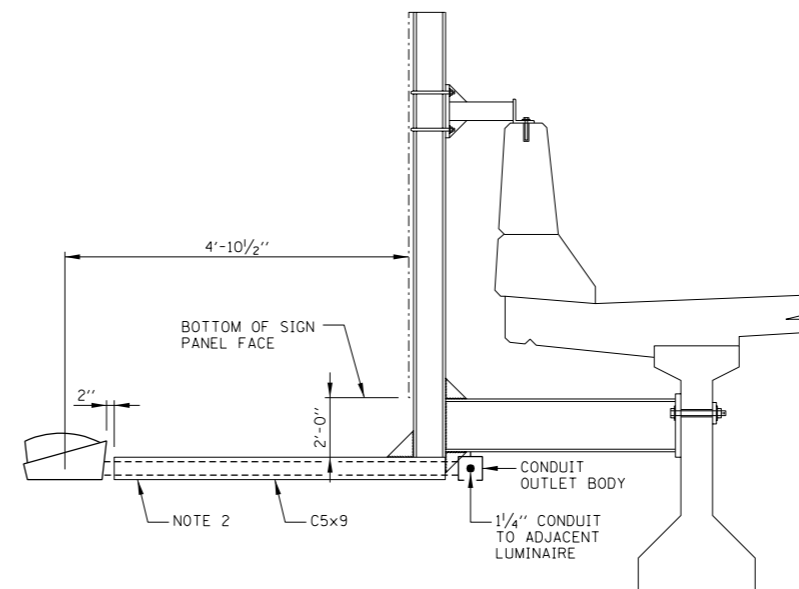
NOTES:

1. PROVIDE 12" FLASHING BEACON ONLY WHERE INDICATED ON PLANS.
2. SEE STRUCTURAL DRAWINGS FOR DETAILS OF SIGN SUPPORTS AND FIXTURE SUPPORT CHANNELS.
3. SEE STANDARD H14 (SIGN LUMINAIRE MOUNTING DETAIL AND WIRING DIAGRAMS) FOR INSTALLATION OF CONDUIT IN FIXTURE SUPPORT CHANNEL.
4. FLASHING BEACON TO BE ATTACHED TO SUPPORT WITH STAINLESS STEEL SCREWS AND NEOPRENE SPACERS. DRILLED SCREW HOLES TO BE SEALED WATERTIGHT.



SECTION A-A

STEEL BRIDGE SHOWN
NO SCALE



SECTION B-B

CONCRETE BRIDGE SHOWN
NO SCALE

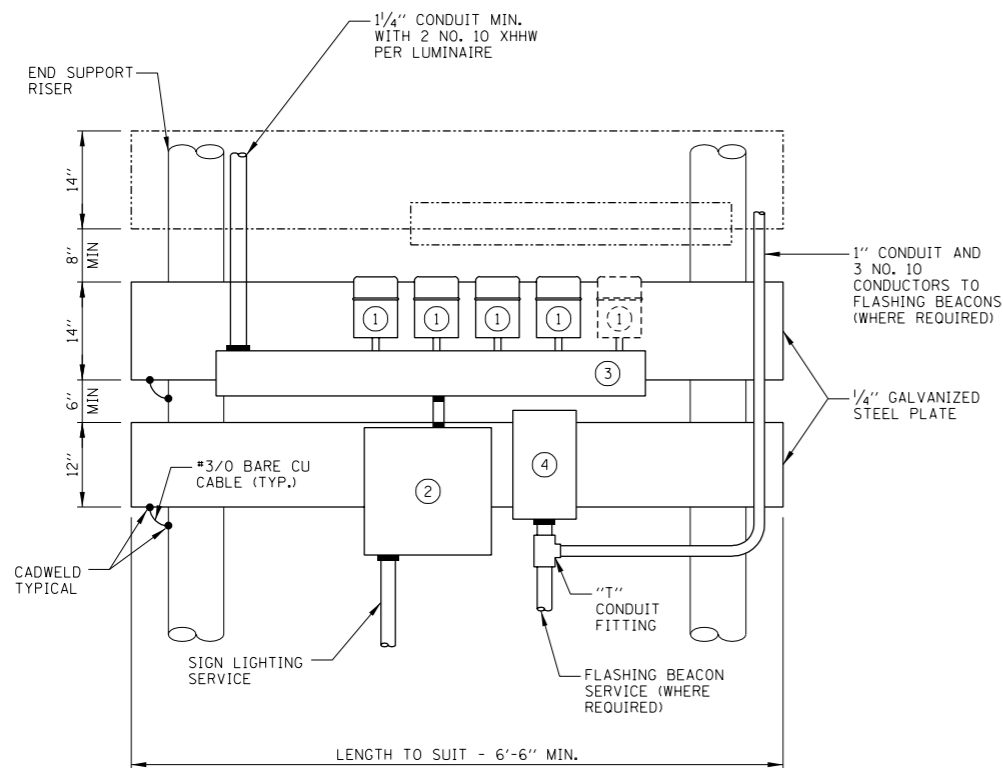


DATE	REVISIONS

BRIDGE MOUNT SIGN
LIGHTING TYPICAL WIRING

STANDARD H10-00

APPROVED: *Jeff Daley*
CHIEF ENGINEER
DATE: 1-1-2007



TYPICAL SIGN LIGHTING CONTROL PANEL

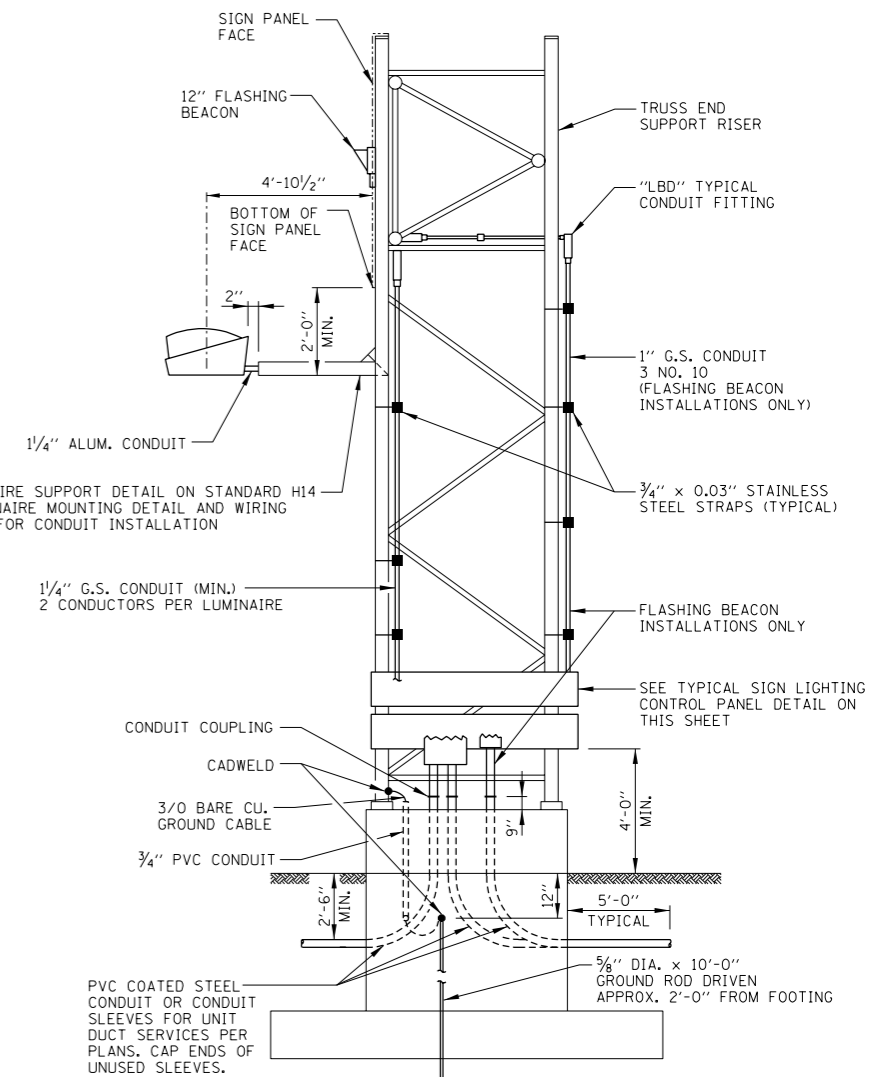
FOR WIRING DIAGRAMS SEE STANDARD H14
(SIGN LUMINAIRE MOUNTING DETAIL AND WIRING DIAGRAMS)
NO SCALE

LEGEND:

- ① WEATHERPROOF CANNISTER BALLAST (BALLAST SHALL BE MARKED TO IDENTIFY WHICH LUMINAIRE IT IS WIRED).
- ② SIGN LIGHTING SERVICE - CIRCUIT BREAKER (30 AMP/2 POLE) IN NEMA TYPE 4 C.I. ENCLOSURE, OZ TYPE "YW" WITH MOUNTING FEET OR APPROVED EQUAL.
- ③ 6"x6" HOT DIPPED GALVANIZED WEATHERPROOF WIREWAY (LENGTH TO SUIT).
- ④ FLASHING BEACON CONTROLLER.

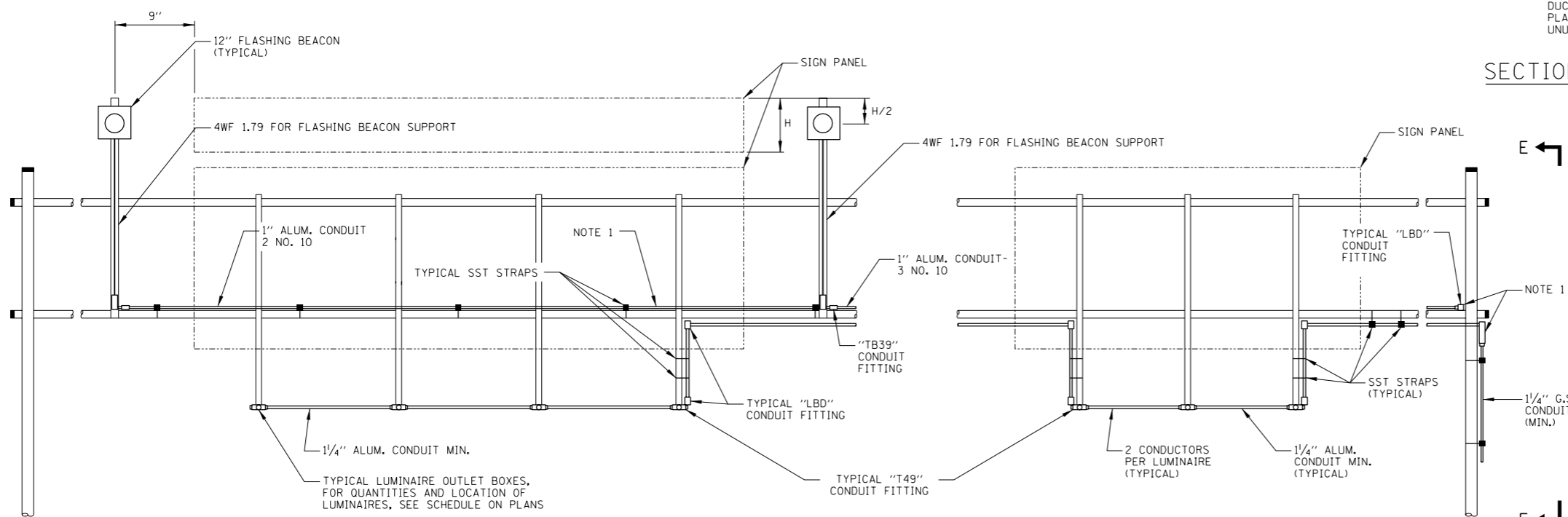
NOTES:

- 1. CONDUIT AND FITTINGS ATTACHED TO THE HORIZONTAL ALUMINUM SIGN TRUSS SHALL BE ALUMINUM. GALVANIZED STEEL CONDUIT AND CAST IRON ALLOY FITTINGS SHALL BE UTILIZED WHERE ATTACHED TO STEEL TRUSS END SUPPORT RISERS. THREADED JOINTS BETWEEN DISSIMILAR METALS SHALL BE COATED WITH AN APPROVED THREAD LUBRICANT.
- 2. PROVIDE 12" FLASHING BEACON ONLY WHERE INDICATED ON PLANS. FLASHING BEACON TO BE ATTACHED TO SUPPORT WITH STAINLESS STEEL SCREWS AND NEOPRENE SPACERS. DRILLED SCREW HOLES TO BE SEALED WATERTIGHT.
- 3. ALL EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE NATIONAL ELECTRICAL SAFETY CODE.
- 4. ALL STEEL TO BE HOT DIPPED GALVANIZED AFTER WELDING PER THE STANDARD SPECIFICATIONS.
- 5. FOR DIMENSION "H" SEE CONTRACT PLANS.



SECTION E-E - FULL ELEVATION (OUTSIDE FOUNDATION)

NO SCALE



FRONT ELEVATION WITH FLASHING BEACON

LUMINAIRES NOT SHOWN
NO SCALE

FRONT ELEVATION WITHOUT FLASHING BEACON

LUMINAIRES NOT SHOWN
NO SCALE

TYPICAL SIGN PANEL ELEVATIONS

NO SCALE

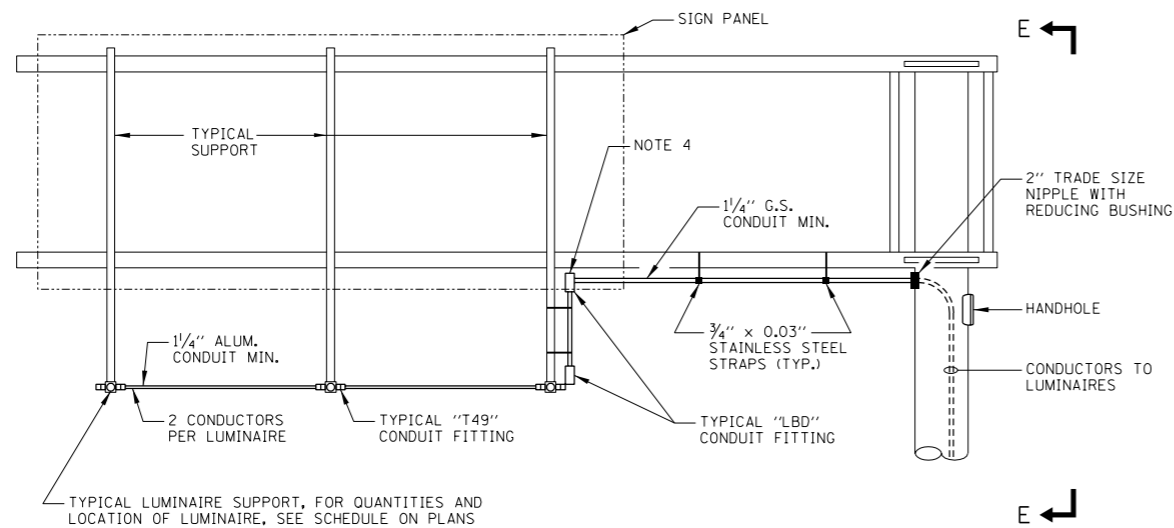
APPROVED: *Jeff Daley*
CHIEF ENGINEER
DATE 1-1-2007

DATE	REVISIONS



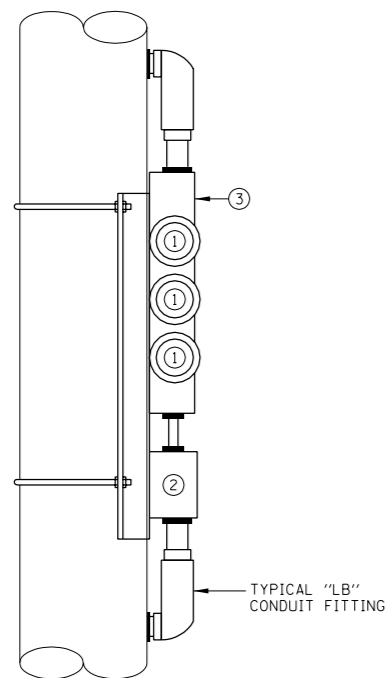
OVERHEAD TRUSS SIGN
LIGHTING WITHOUT CATWALK
TYPICAL WIRING DETAILS

STANDARD H11-00

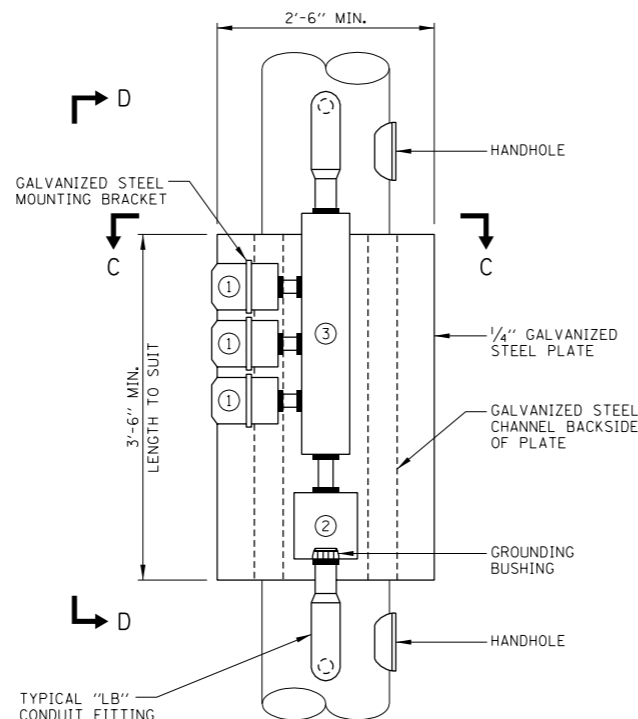


FRONT ELEVATION

(LUMINAIRES NOT SHOWN)
NO SCALE

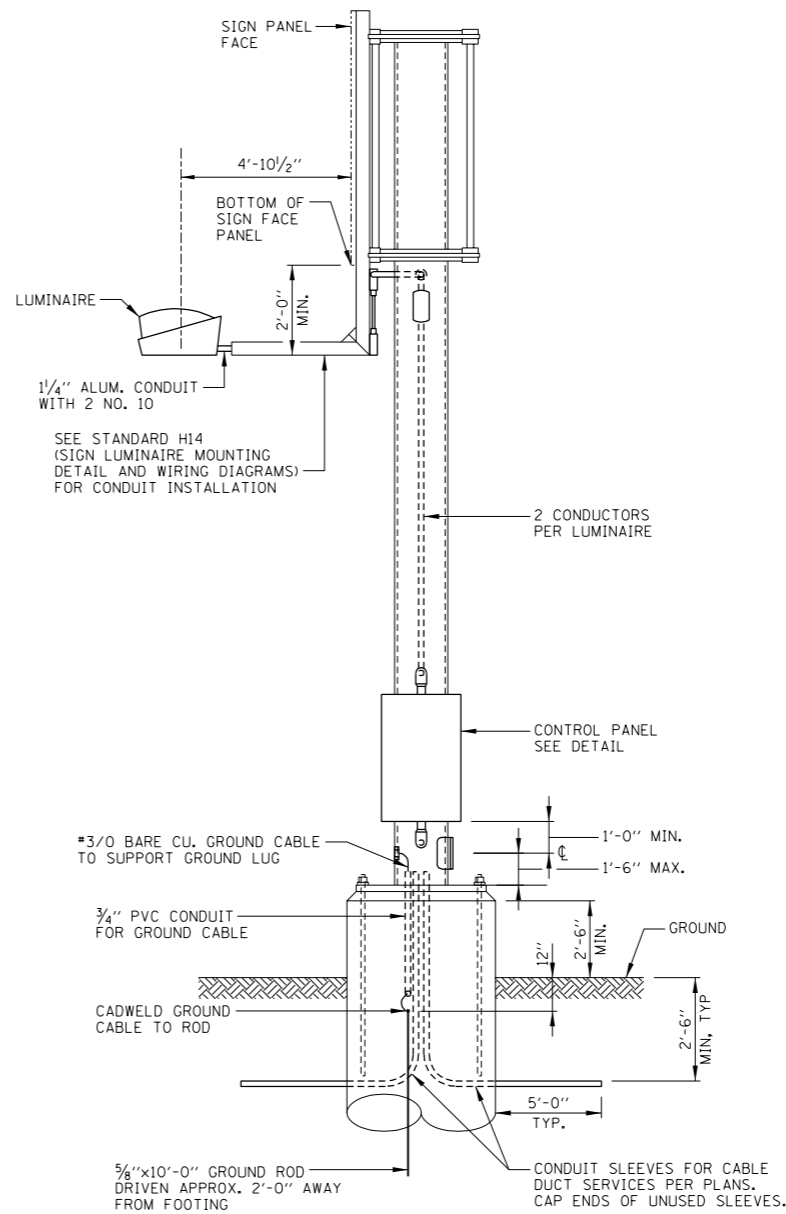


SECTION D-D
NO SCALE



TYPICAL CONTROL PANEL

FOR WIRING DIAGRAM SEE STANDARD H14
(SIGN LUMINAIRE MOUNTING DETAIL AND WIRING DIAGRAMS)
NO SCALE



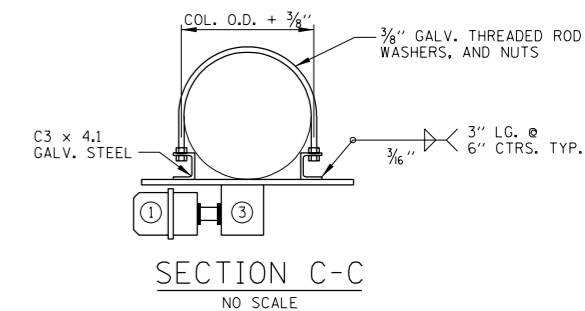
SECTION E-E - SIDE ELEVATION
NO SCALE

NOTES:

1. A GROUND WIRE (NO. 12 AWG.) WILL BE RUN FROM THE GROUNDING BUSHING (OVERHEAD SUPPORT) TO THE GROUNDING BUSHING IN THE JUNCTION BOX.
2. ALL EQUIPMENT SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND THE NATIONAL ELECTRICAL SAFETY CODE.
3. ALL STEEL TO BE HOT DIPPED GALVANIZED AFTER WELDING PER THE STANDARD SPECIFICATIONS.
4. CONDUIT AND FITTINGS ATTACHED TO THE ALUMINUM LUMINAIRE SUPPORTS SHALL BE ALUMINUM. GALVANIZED STEEL CONDUIT AND CAST IRON ALLOY FITTINGS SHALL BE UTILIZED WHERE ATTACHED TO THE STEEL SIGN SUPPORT TRUSS. THREADED JOINTS BETWEEN DISSIMILAR METALS SHALL BE COATED WITH AN APPROVED THREAD LUBRICANT.

LEGEND:

- ① WEATHERPROOF CANNISTER BALLAST (BALLAST SHALL BE MARKED TO IDENTIFY WHICH LUMINAIRE IT IS WIRED).
- ② SIGN LIGHTING SERVICE - CIRCUIT BREAKER (30 AMP/2 POLE) IN NEMA TYPE 4 C.I. ENCLOSURE, OZ TYPE \"YW\" WITH MOUNTING FEET OR APPROVED EQUAL.
- ③ 6\"/>



SECTION C-C
NO SCALE

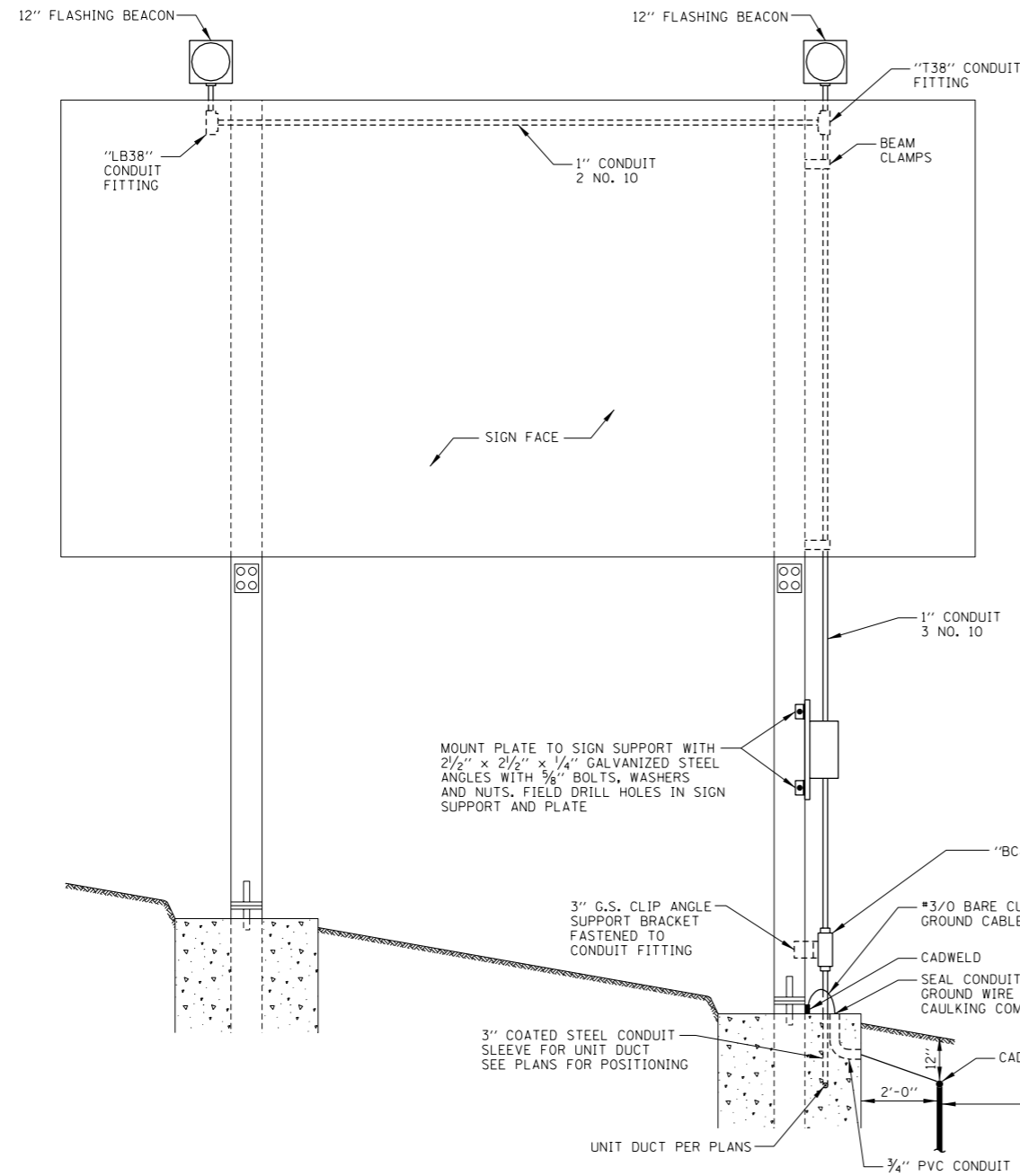
APPROVED *Jeff Daley* CHIEF ENGINEER DATE 1-1-2007

DATE	REVISIONS

Illinois Tollway
Open Roads for a Faster Future

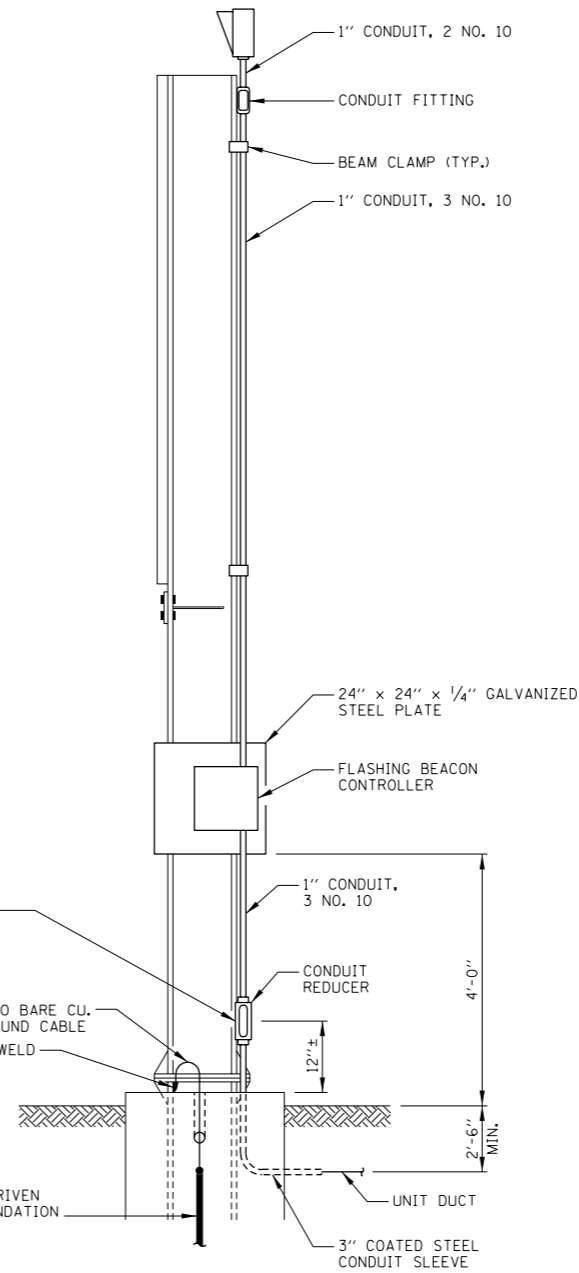
CANTILEVER SIGN LIGHTING
WITHOUT CATWALK
TYPICAL WIRING DETAILS

STANDARD H12-00

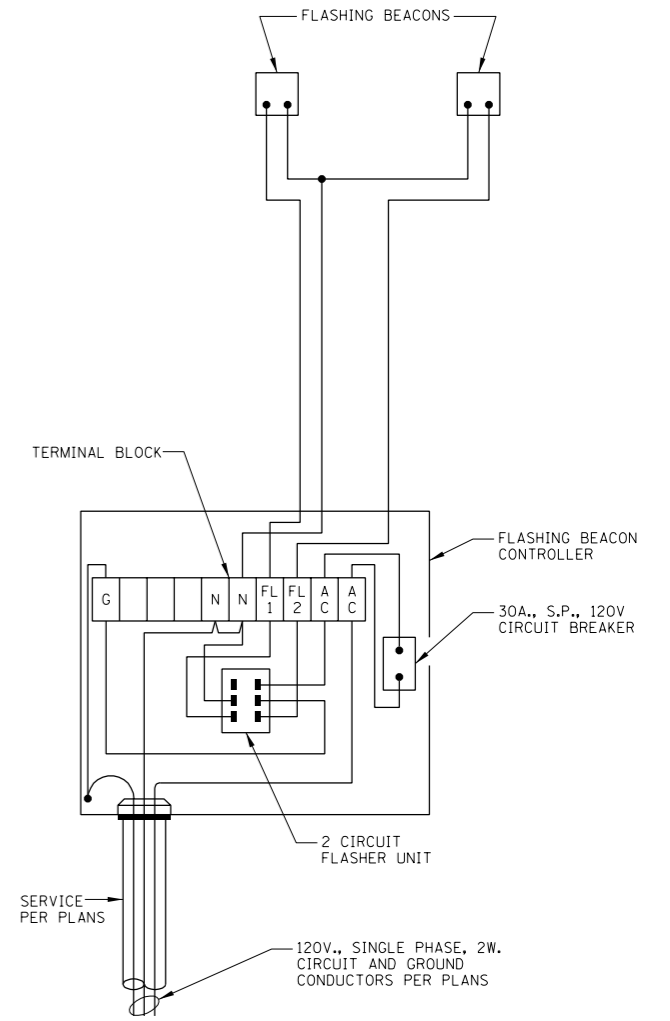


MOUNT PLATE TO SIGN SUPPORT WITH 2 1/2" x 2 1/2" x 1/4" GALVANIZED STEEL ANGLES WITH 3/8" BOLTS, WASHERS AND NUTS. FIELD DRILL HOLES IN SIGN SUPPORT AND PLATE

FRONT ELEVATION
NO SCALE



SIDE ELEVATION
NO SCALE



FLASHING BEACON WIRING DIAGRAM
NO SCALE

NOTES:

- HOLES WHICH ARE FIELD DRILLED IN STRUCTURAL STEEL MEMBERS SHALL BE PAINTED WITH ONE (1) COAT OF ZINC PAINT IMMEDIATELY FOLLOWING DRILLING. THE PAINT SHALL CONFORM TO FEDERAL SPECIFICATION TT-P641B TYPE 2 FOR GALVANIZING PRIMER.

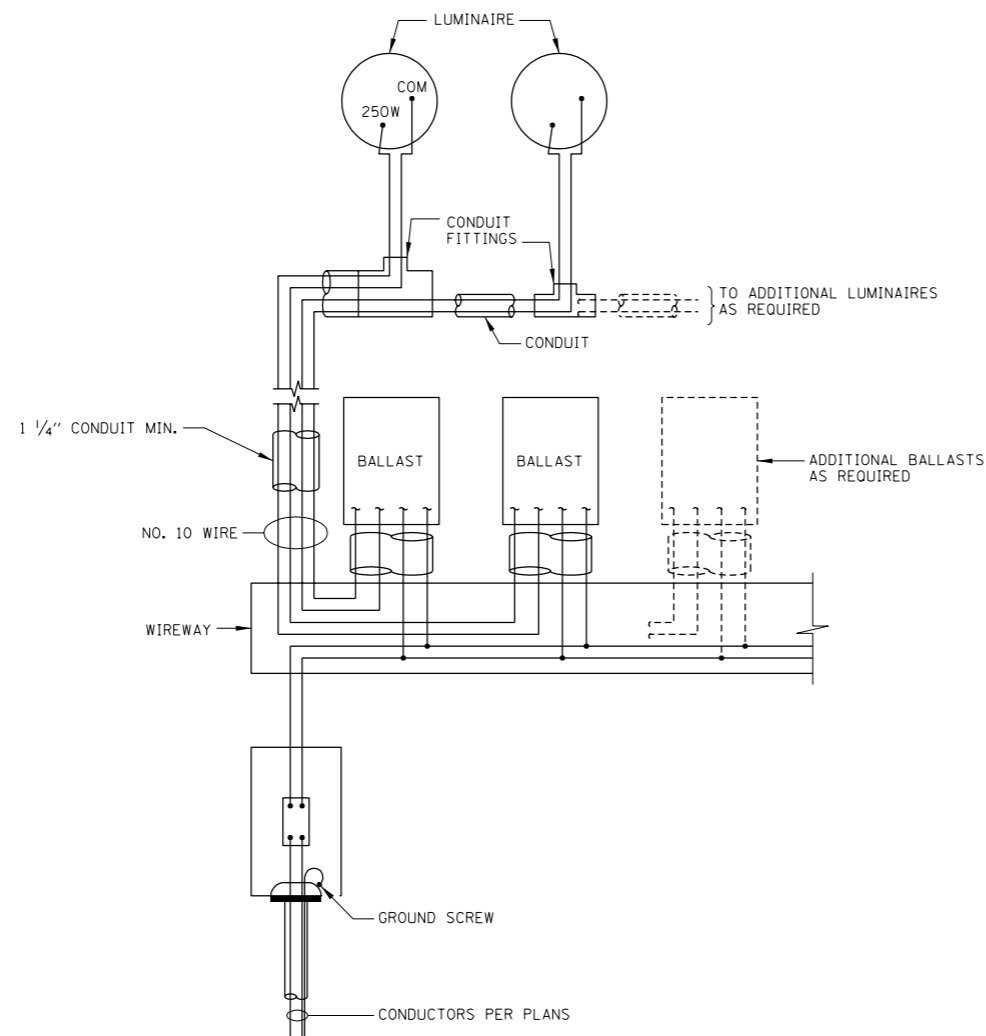
APPROVED *Jeff Daley* CHIEF ENGINEER DATE 1-1-2007

DATE	REVISIONS

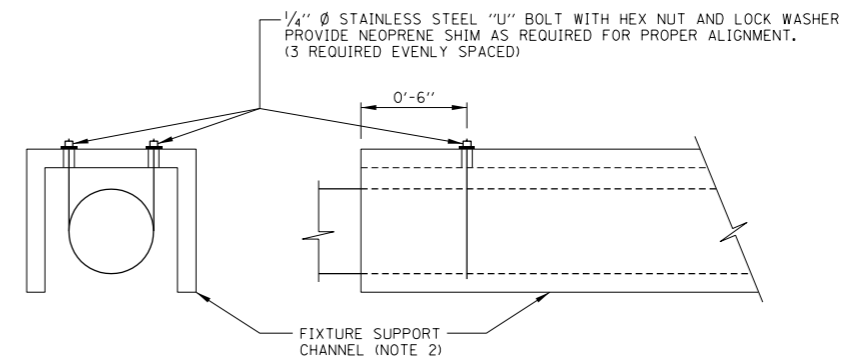
Illinois Tollway
Open Roads for a Faster Future

GROUND MOUNTED SIGN BEACON WIRING DETAILS AND DIAGRAM

STANDARD H13-00



SIGN WIRING DIAGRAM
NO SCALE



LUMINAIRE SUPPORT DETAIL
NO SCALE

NOTES:

- HOLES WHICH ARE FIELD DRILLED IN STRUCTURAL STEEL MEMBERS SHALL BE PAINTED WITH ONE (1) COAT OF ZINC PAINT IMMEDIATELY FOLLOWING DRILLING. THE PAINT SHALL CONFORM TO FEDERAL SPECIFICATION TT-P641b TYPE 2 FOR GALVANIZING PRIMER.
- SEE STRUCTURAL DRAWINGS FOR DETAILS OF FIXTURE SUPPORT CHANNELS. SUPPORT CHANNELS ARE ALUMINUM (n4"x2") FOR TRUSS TYPE AND CANTILEVER TYPE SIGN STRUCTURES AND STEEL (C5x9) FOR BRIDGE MOUNTED SIGNS.

APPROVED *Jeff Haley* CHIEF ENGINEER DATE 1-1-2007



DATE	REVISIONS

SIGN LUMINAIRE MOUNTING DETAIL AND WIRING DIAGRAMS

STANDARD H14-00