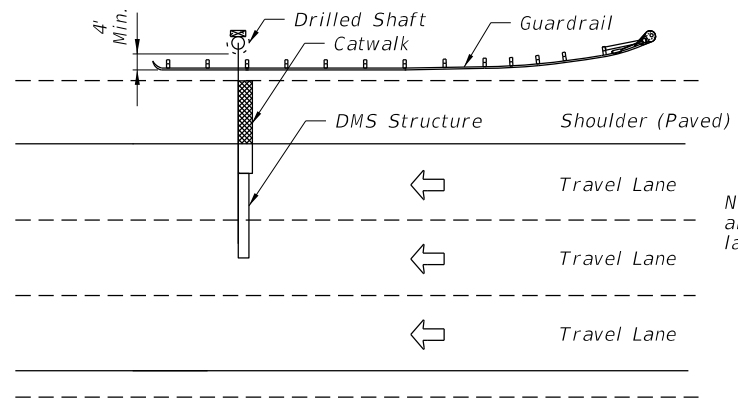


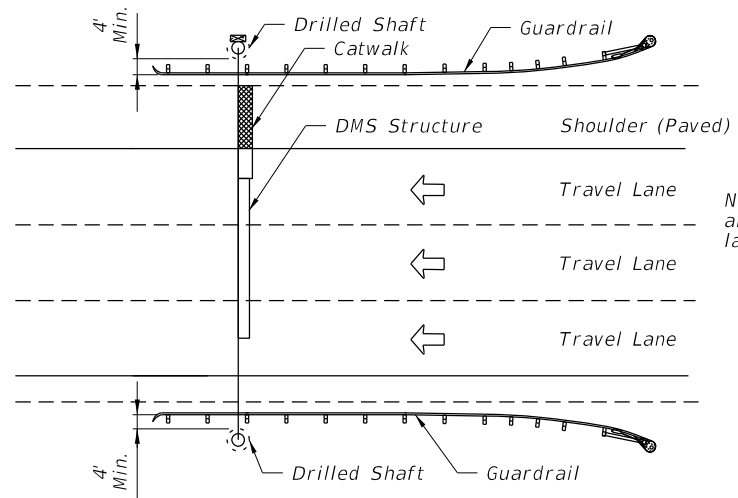
**GENERAL NOTES:**

1. If no guardrail or barrier wall exists, structure shall be outside the clear zone. Clear zone shall be measured to edge of the drilled shaft if drilled shaft is more than 4" above adjacent grade.
2. Extend Catwalk from DMS to outer edge of paved shoulder but not less than four feet in length.
3. Clear zone distance and setbacks from edge of travel lane shall be in accordance with Plans Preparation Manual Volume I, Chapters 2 and 4.



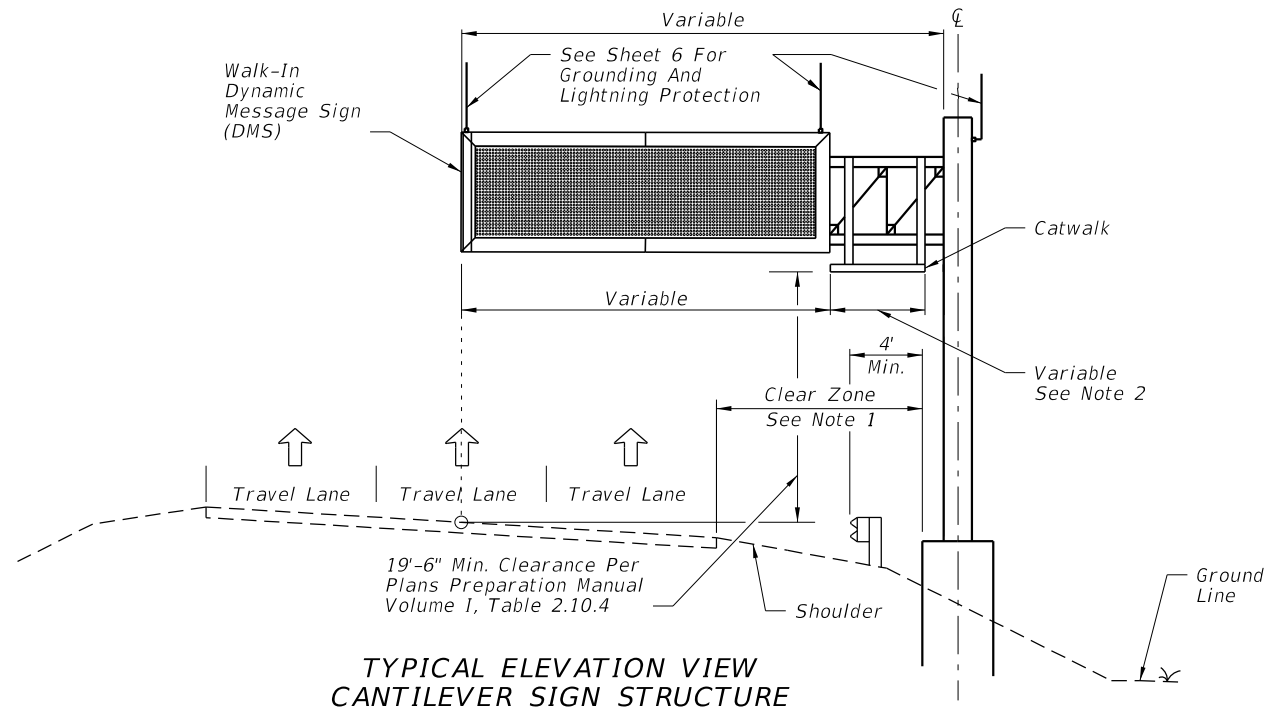
Note: Actual number and direction of travel lanes varies.

**TYPICAL PLAN VIEW  
DMS CANTILEVER SIGN STRUCTURE**

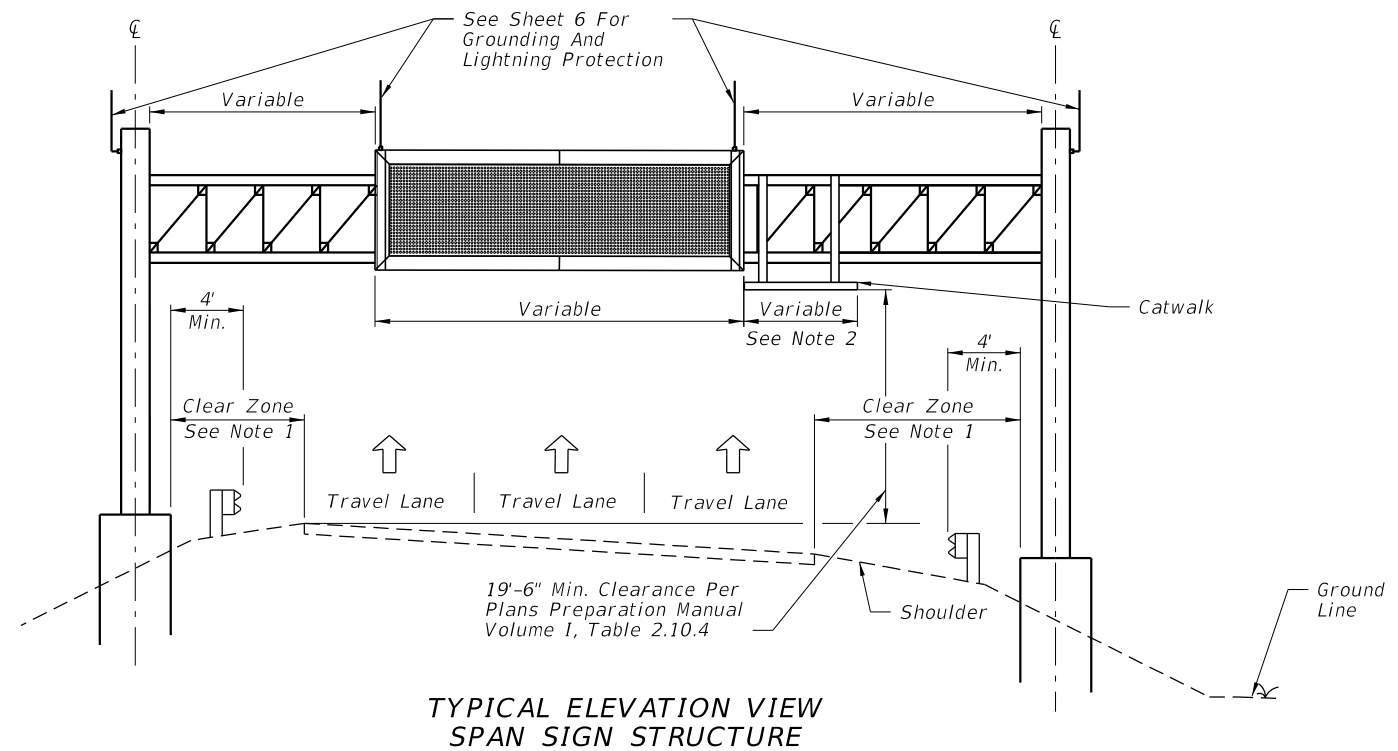


Note: Actual number and direction of travel lanes varies.

**TYPICAL PLAN VIEW  
SPAN SIGN STRUCTURE**



**TYPICAL ELEVATION VIEW  
CANTILEVER SIGN STRUCTURE**



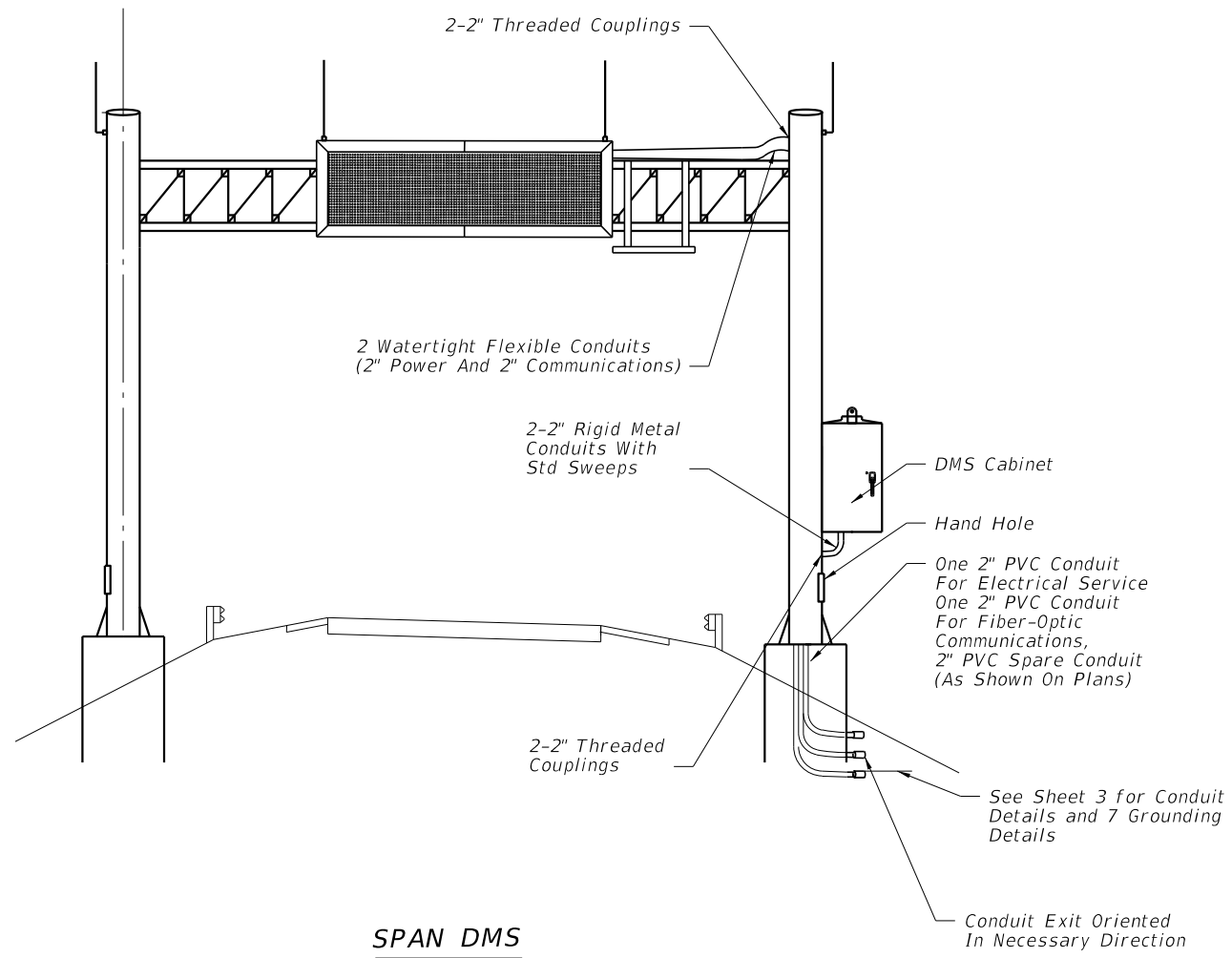
**TYPICAL ELEVATION VIEW  
SPAN SIGN STRUCTURE**

**GENERAL LAYOUT**

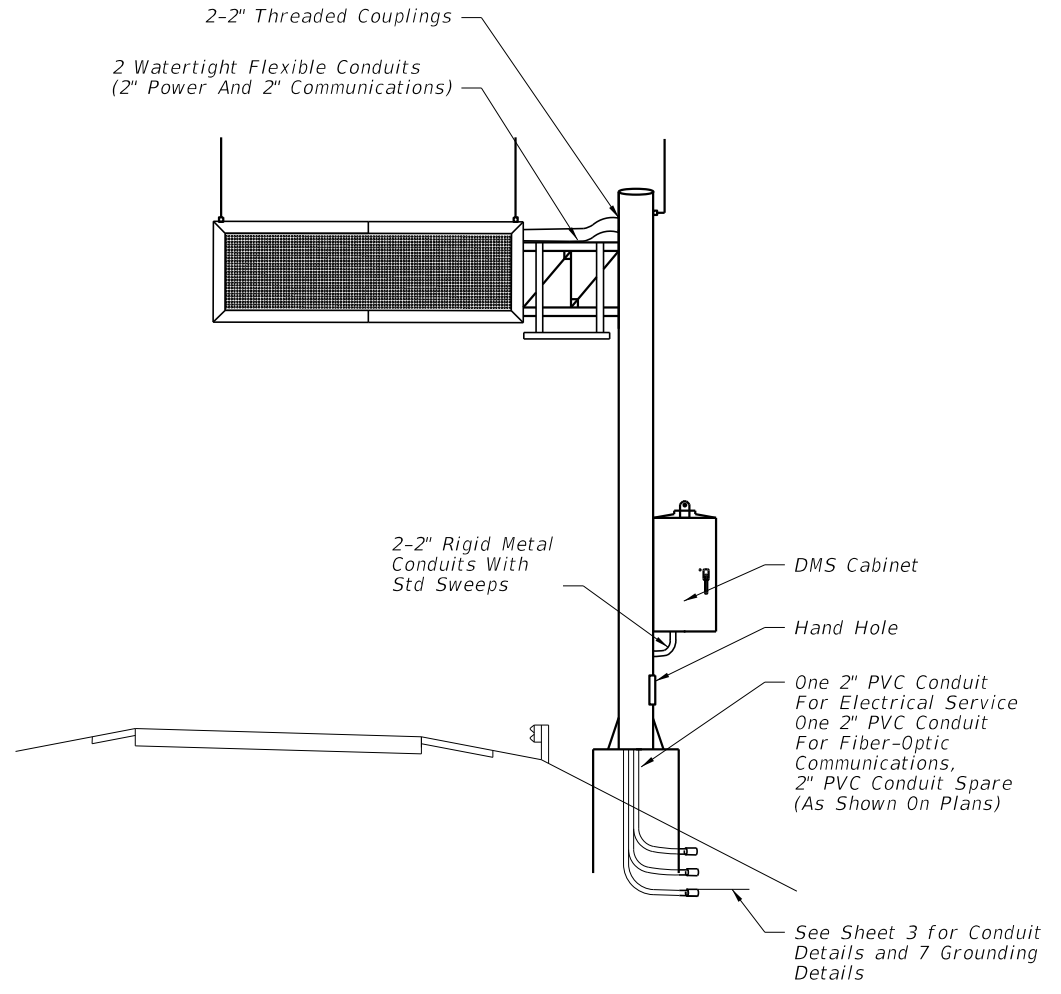
12/30/2011 11:50:09 AM r19960/h C:\projects\standards\vis\18000-s\18300-01.dgn

LAST REVISION	01/01/12	DESCRIPTION:	 <b>FDOT DESIGN STANDARDS FY 2012/2013</b>	<b>DYNAMIC MESSAGE SIGN WALK-IN</b>	INDEX NO.	SHEET NO.
					<b>18300</b>	<b>1</b>

12/30/2011 11:50:10 AM r19960rh C:\projects\standards\18000-s\18300-02.dgn



**SPAN DMS**



**CANTILEVER DMS**

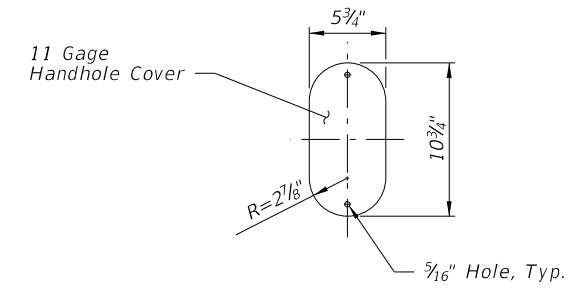
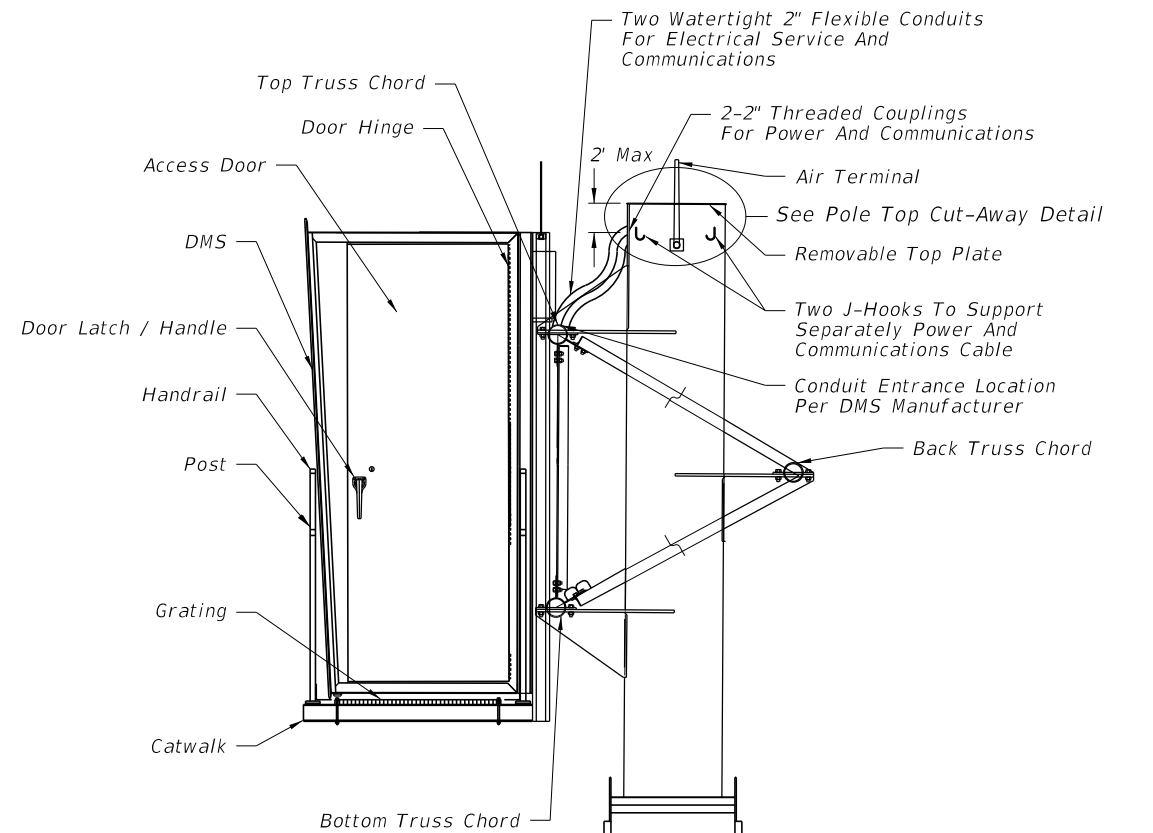
**GENERAL NOTES:**

1. Conductors for grounding shall be connected to steel framework that have been cleaned to base metal, by use of bonding plates having contact area of not less than 8 square inches or by welding or brazing. Drilling and tapping the steel structure to accept a threaded connector is also an acceptable method.
2. If steel framework is to be drilled and tapped to accept threaded connector, the threaded connector shall have at least 5 threads fully engaged and secured with a jam nut to the steel framework.
3. Bends in the conduit shall not be less than the minimum bending radius for the cable contained in the conduit.
4. Catwalk and handrail design and installation shall comply with AISC, AASHTO, and OSHA requirements as applicable.
5. All data, fiber-optic and power cable for the DMS shall be completely encased within the sign structure or in conduit.
6. Permanently stamp/mark foundation to conduit locations.
7. Transition conduit in foundation to underground conduit with appropriate reducer outside the limits of the foundation.

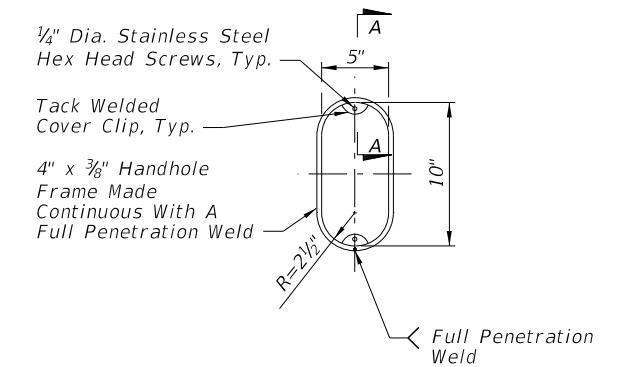
LAST REVISION	01/01/10	DESCRIPTION:	<b>FDOT DESIGN STANDARDS FY 2012/2013</b>	<b>DYNAMIC MESSAGE SIGN WALK-IN</b>	INDEX NO.	SHEET NO.
					18300	2

**GENERAL NOTES:**

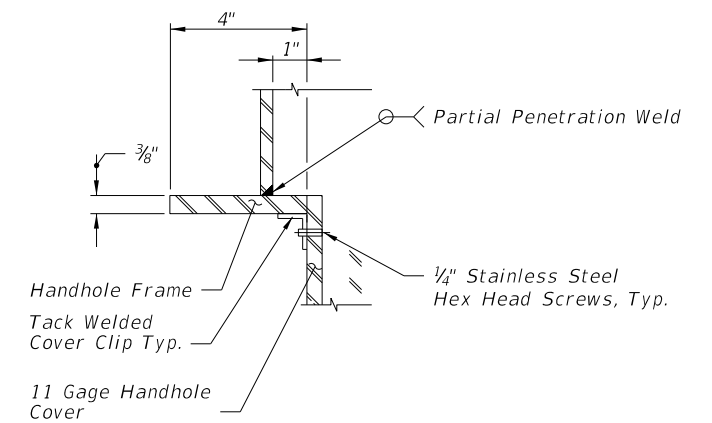
1. DMS Cabinet may be pole or ground mounted depending on project requirements.
2. See sheet 7 for additional conduits for grounding. The number and placement of conduits are approximate.
3. Field adjust pole-mounted DMS cabinet height to achieve best access for maintenance personnel given site conditions as directed by the Engineer. Avoid conflicts with stiffeners, hand-hole and maintenance of anchor bolts.



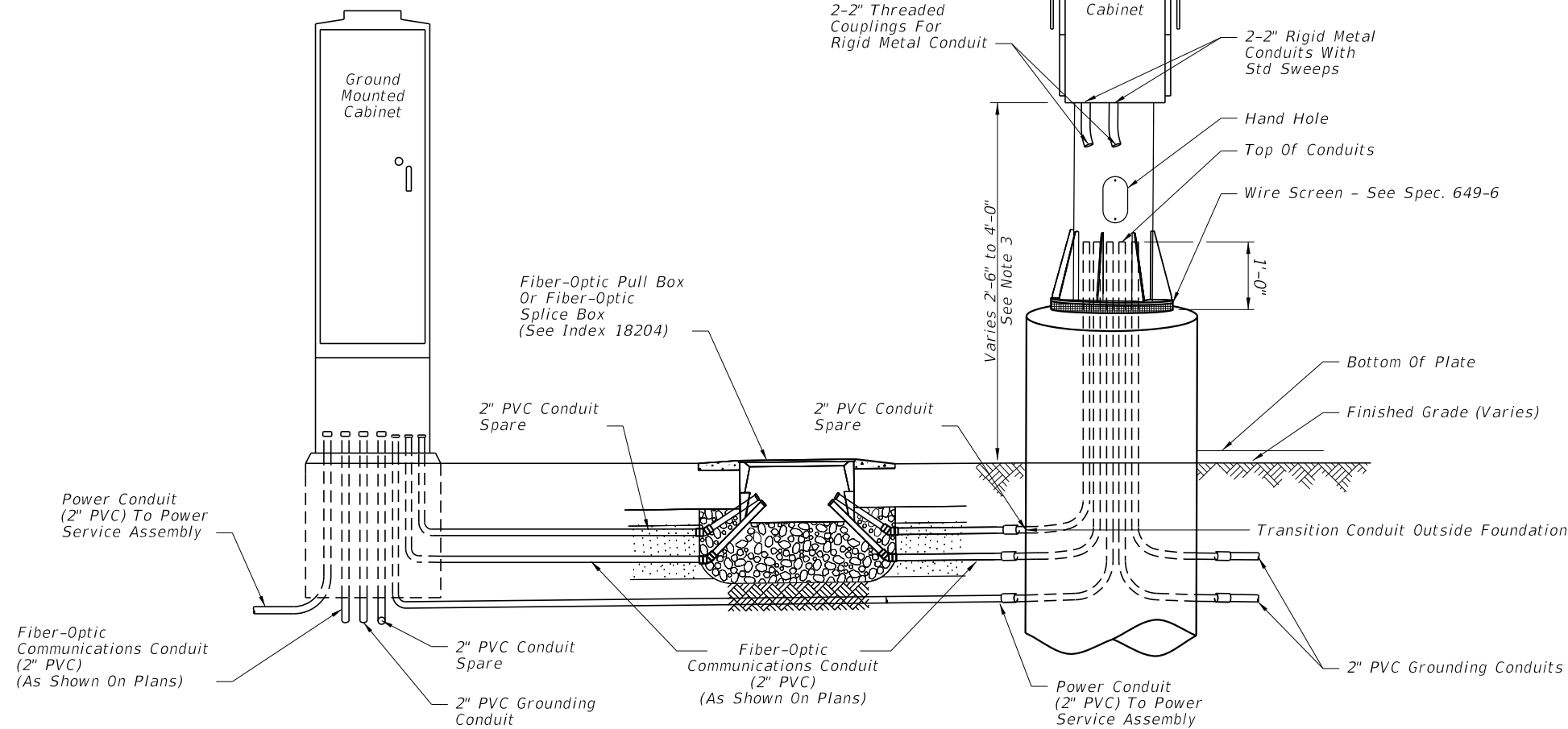
**HANDHOLE COVER**



**HANDHOLE FRAME**

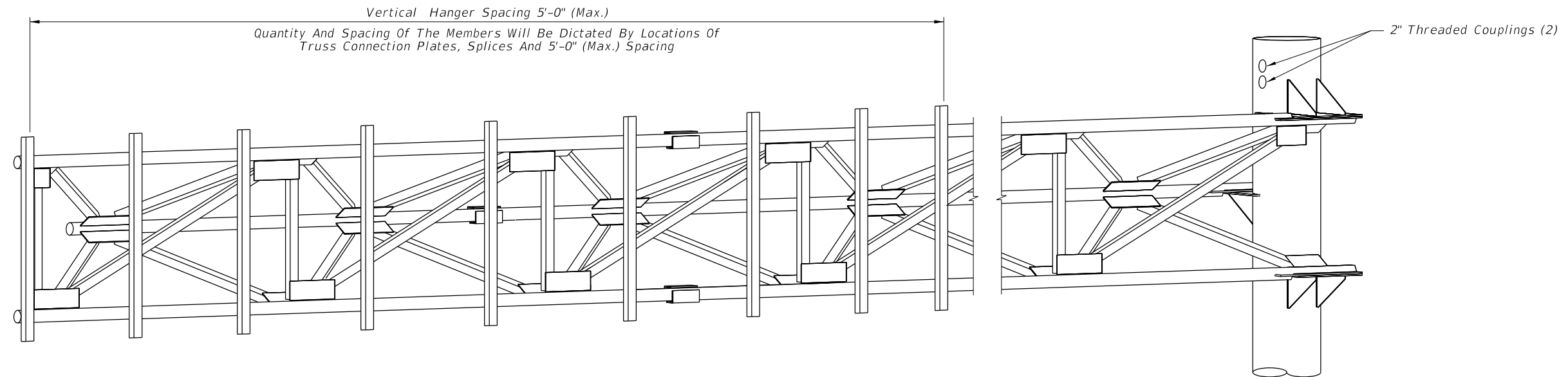


**SECTION A-A  
(Thru Handhole)**



C:\projects\standards\18000-s\18300-03.dgn  
 r1960/h  
 11:50:10 AM  
 12/30/2011

LAST REVISION	01/01/12	DESCRIPTION:	 <b>FDOT DESIGN STANDARDS FY 2012/2013</b>	<b>DYNAMIC MESSAGE SIGN WALK-IN</b>	INDEX NO.	18300	SHEET NO.	3
---------------	----------	--------------	---	-------------------------------------	-----------	-------	-----------	---



**HANGER LOCATION DETAIL**

(Cantilever Sign Structure Shown, Span Sign Structure Similar)

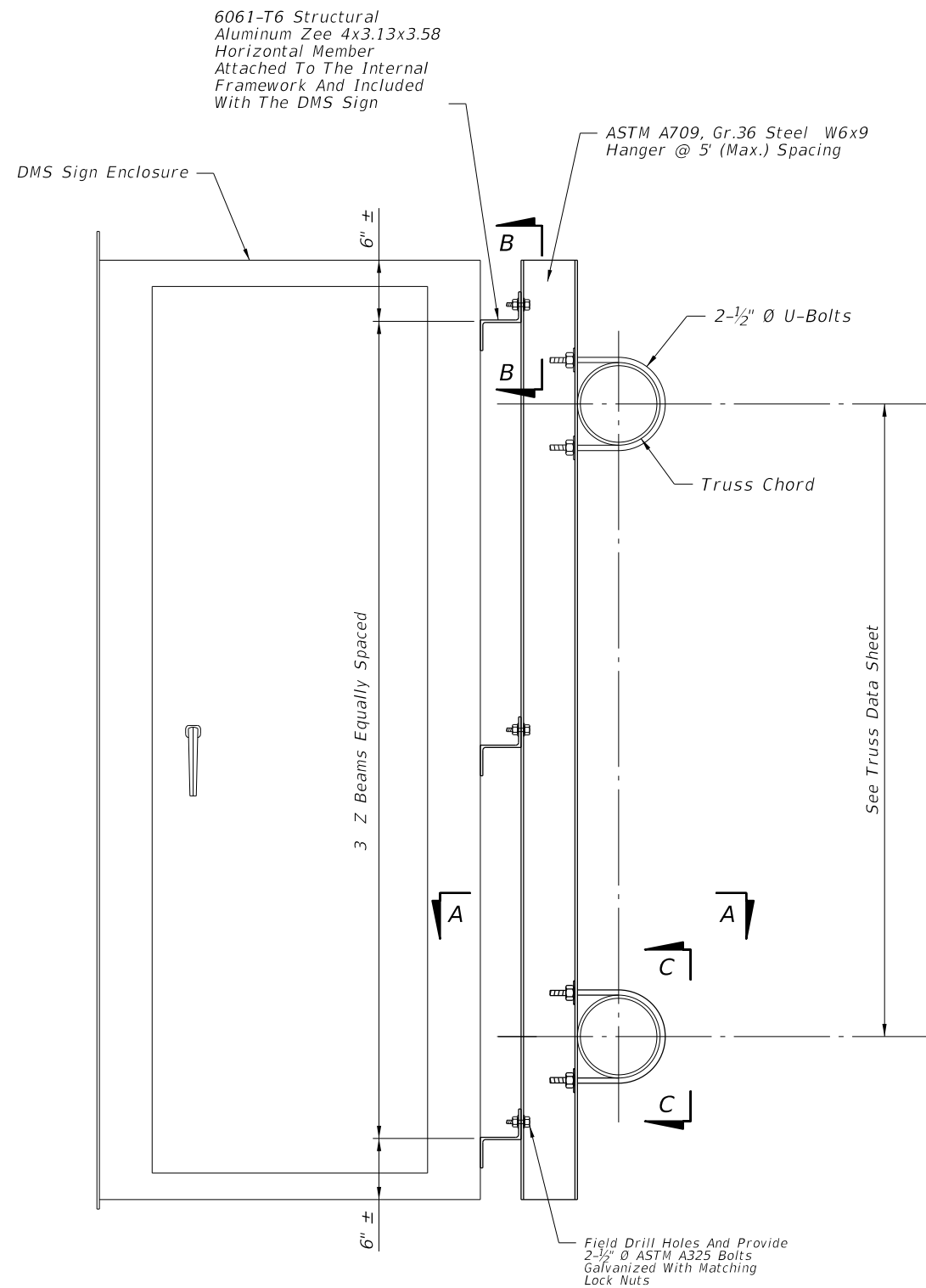
**GENERAL NOTES**

1. Design Specifications: FDOT Structures Manual (current edition) and AASHTO standard specifications for structural supports for highway signs, luminaries and traffic signals.
2. Design Wind Speed: 150 miles per hour. maximum DMS box weight for design: 4500lb.
3. Shop drawings including the DMS connection are required and fabrication shall not begin until these shop drawings are approved.
4. Before erection, after both the delivery of the DMS sign enclosure and the steel truss, the contractor shall carefully measure the exact locations for field drilling the  $\frac{1}{2}$ " bolt holes in the vertical hangers and horizontal mounting member attached to the sign enclosure.
5. Insure that the field located holes center justify vertically the sign enclosure with the centerline of the truss.
6. Locate the sign laterally on the structure as shown in the plans.
7. Insure that the field located holes allow the vertical hangers to be placed as shown on the plans with no conflicts with gusset or splice plates.
8. All steel items shall be galvanized as follows:  
 All nuts, bolts and washers     ASTM F2329  
 All other steel items            ASTM A123
9. All bolt hole diameters shall be equal to the bolt diameter plus  $\frac{1}{16}$ ", prior to galvanizing.
10. All bolts shall have single self-locking nuts or, proprietary locking nut system, installed in accordance with the manufacturer's recommendations.
11. Cost of the installation of the DMS sign enclosure on truss including the vertical hangers associated members and hardware shall be incidental in the cost of the sign structure.
12. Threaded couplings shall be located on sign side of column above the sign truss.

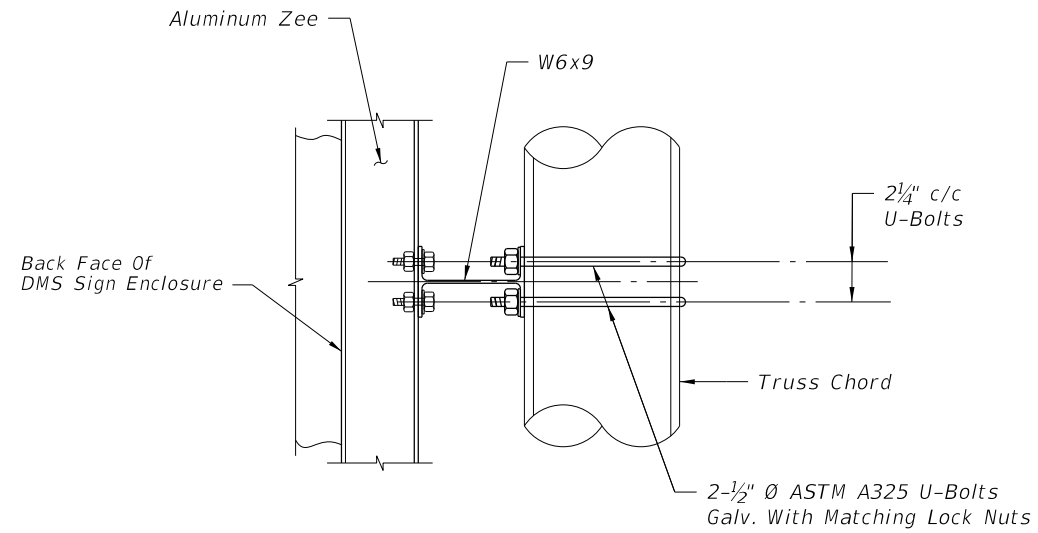
12/30/2011 11:50:11 AM r0960/h C:\projects\standards\18000-s\18300-04.dgn

LAST REVISION	07/01/10	DESCRIPTION:	 <b>FDOT DESIGN STANDARDS</b> FY 2012/2013	<b>DYNAMIC MESSAGE SIGN WALK-IN</b>	INDEX NO.	SHEET NO.
					18300	4

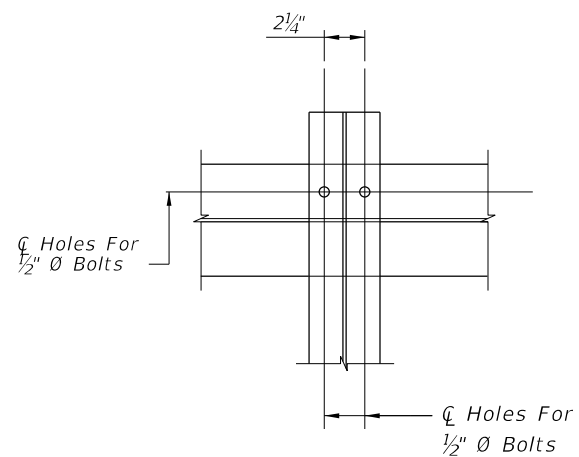
12/30/2011 11:50:11 AM r0960rh C:\projects\standards\18300-5.dgn



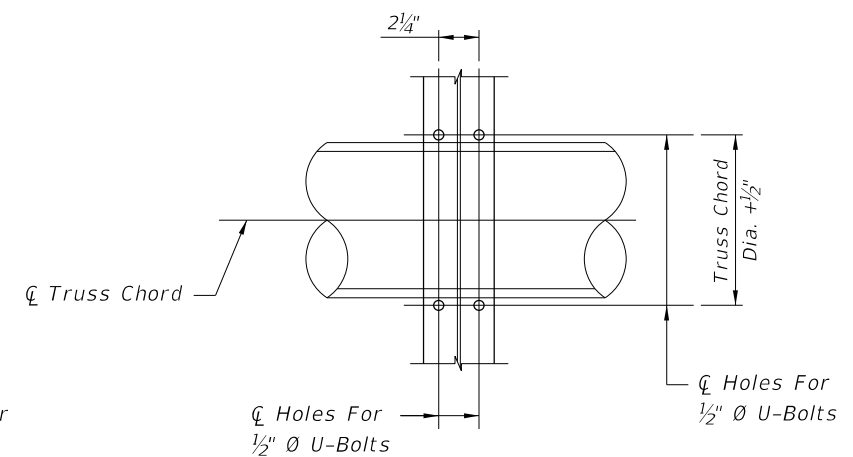
END VIEW



SECTION A-A

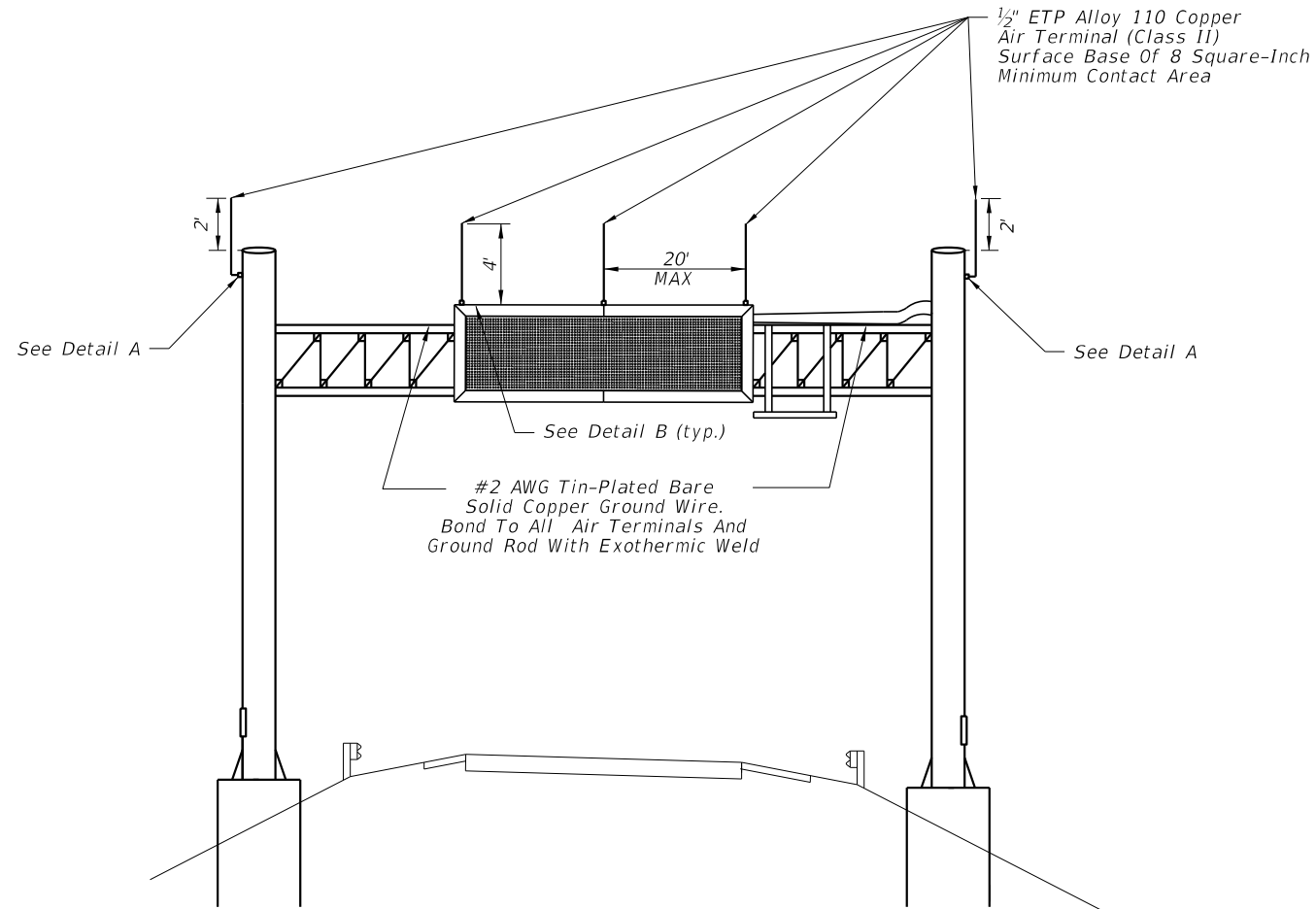


SECTION B-B

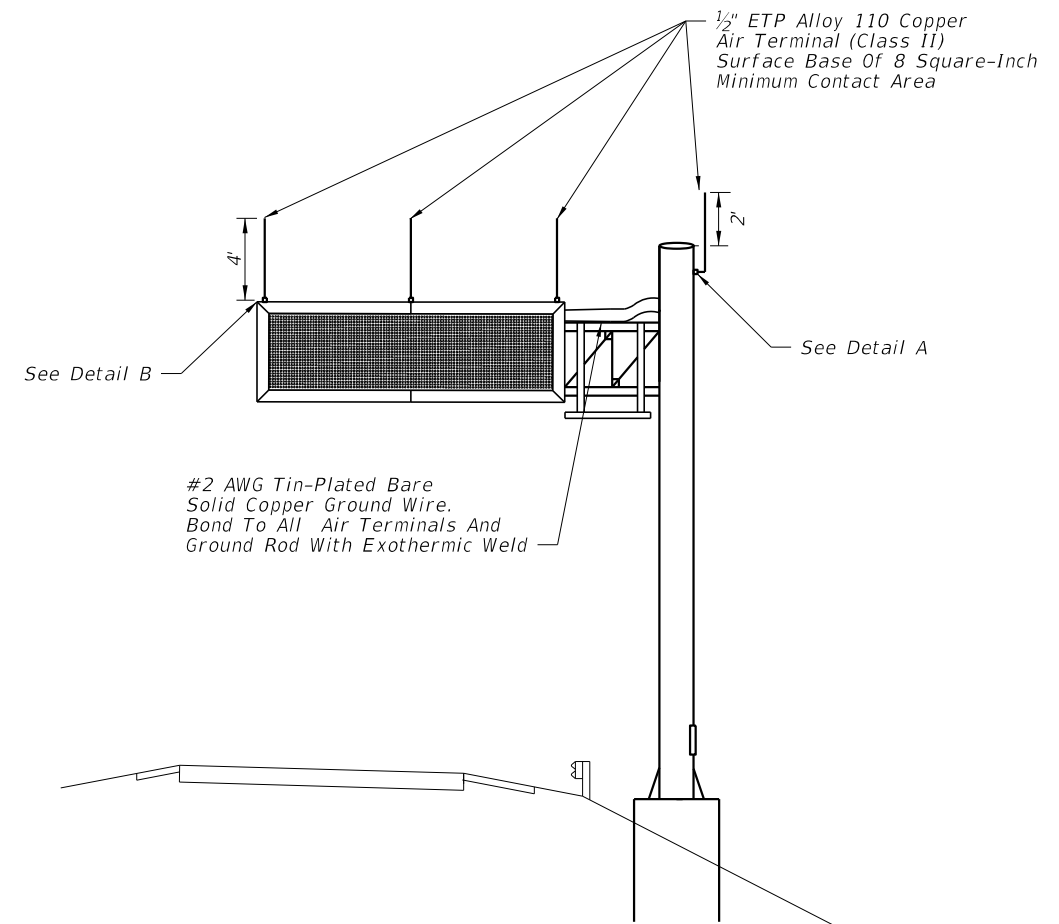


SECTION C-C

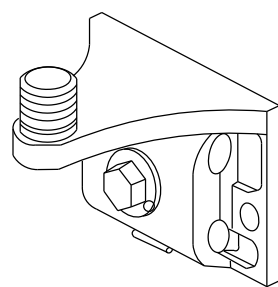
LAST REVISION	REVISION	DESCRIPTION:	 <b>FDOT DESIGN STANDARDS</b> FY 2012/2013	<b>DYNAMIC MESSAGE SIGN WALK-IN</b>	INDEX NO.	SHEET NO.
07/01/10					18300	5



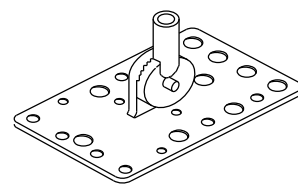
SPAN DMS



CANTILEVER DMS



DETAIL A



DETAIL B

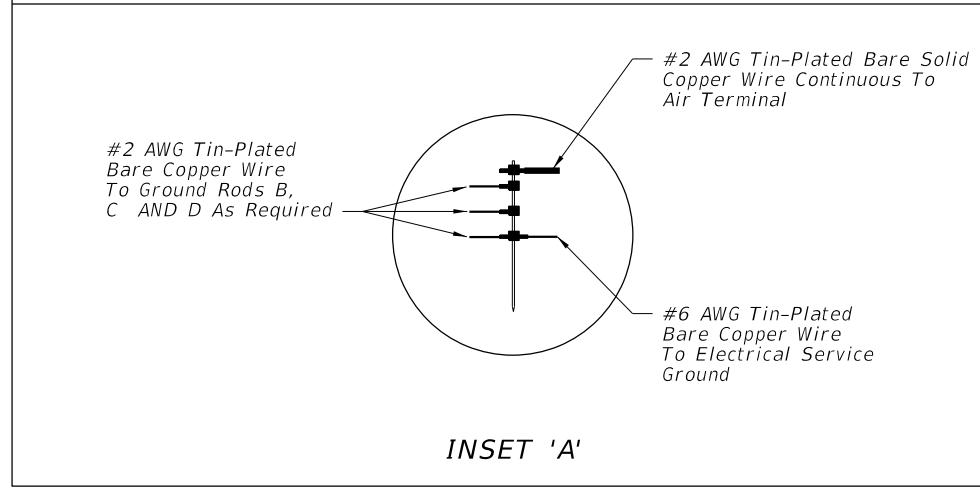
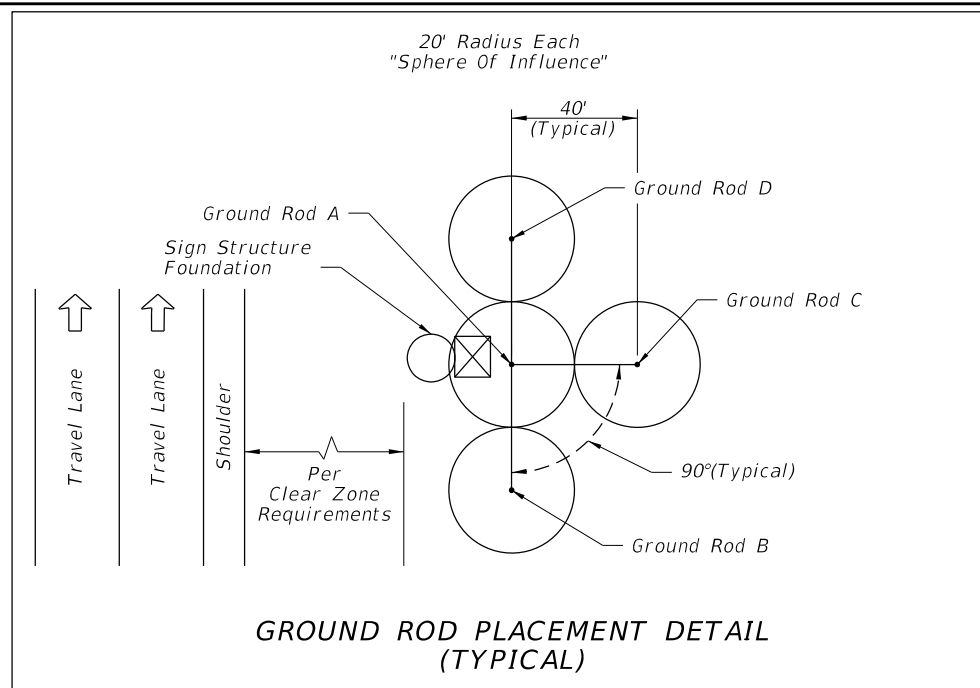
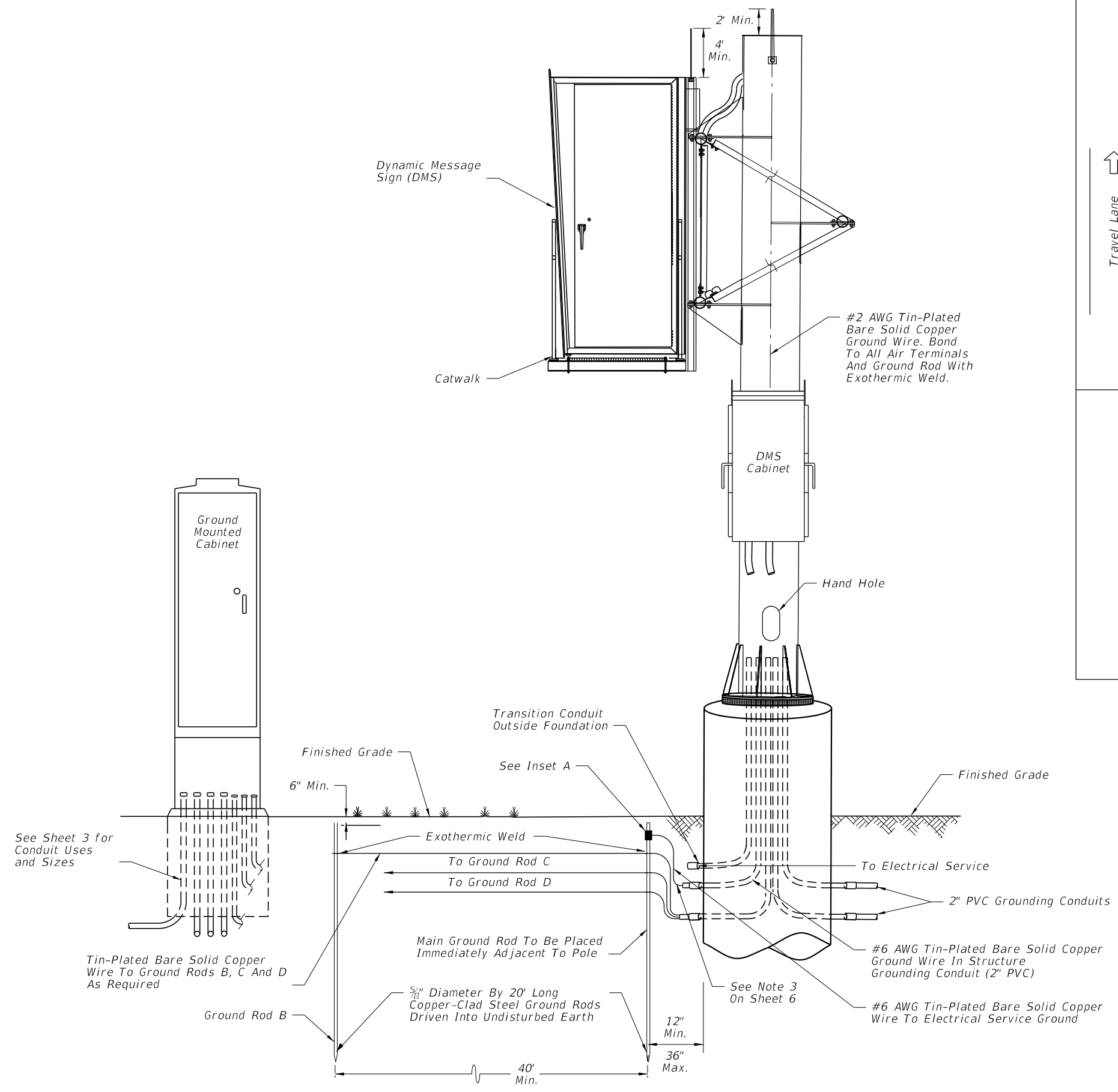
**GENERAL NOTES:**


1. All grounding materials shall meet the requirements of Section A620 of the current Minimum Specifications For Traffic Control Signal Devices (MSTCSD), except as noted.
2. Exothermically weld all connections to ground rods.
3. The contractor may, upon approval of the Engineer, install a 30-foot sectional ground rod for instances when conditions will not allow for the installation of the 3 auxiliary ground rods.
4. Install marker tape directly above all grounding electrodes and conductors.
5. Copper flat surfaces shall be bolted, welded, or brazed securely to framework to maintain electrical continuity.
6. All air terminals must meet UL-96A.
7. Grounding system shall be placed within right of way.
8. See Sheet 7 for ground rod placement detail.
9. Lightning protection shall conform to NFPA 780. Spacing between air terminals shall not exceed 20 feet.

C:\projects\standards\18000-s\18300-06.dgn  
r0960/h  
11:50:12 AM  
12/30/2011

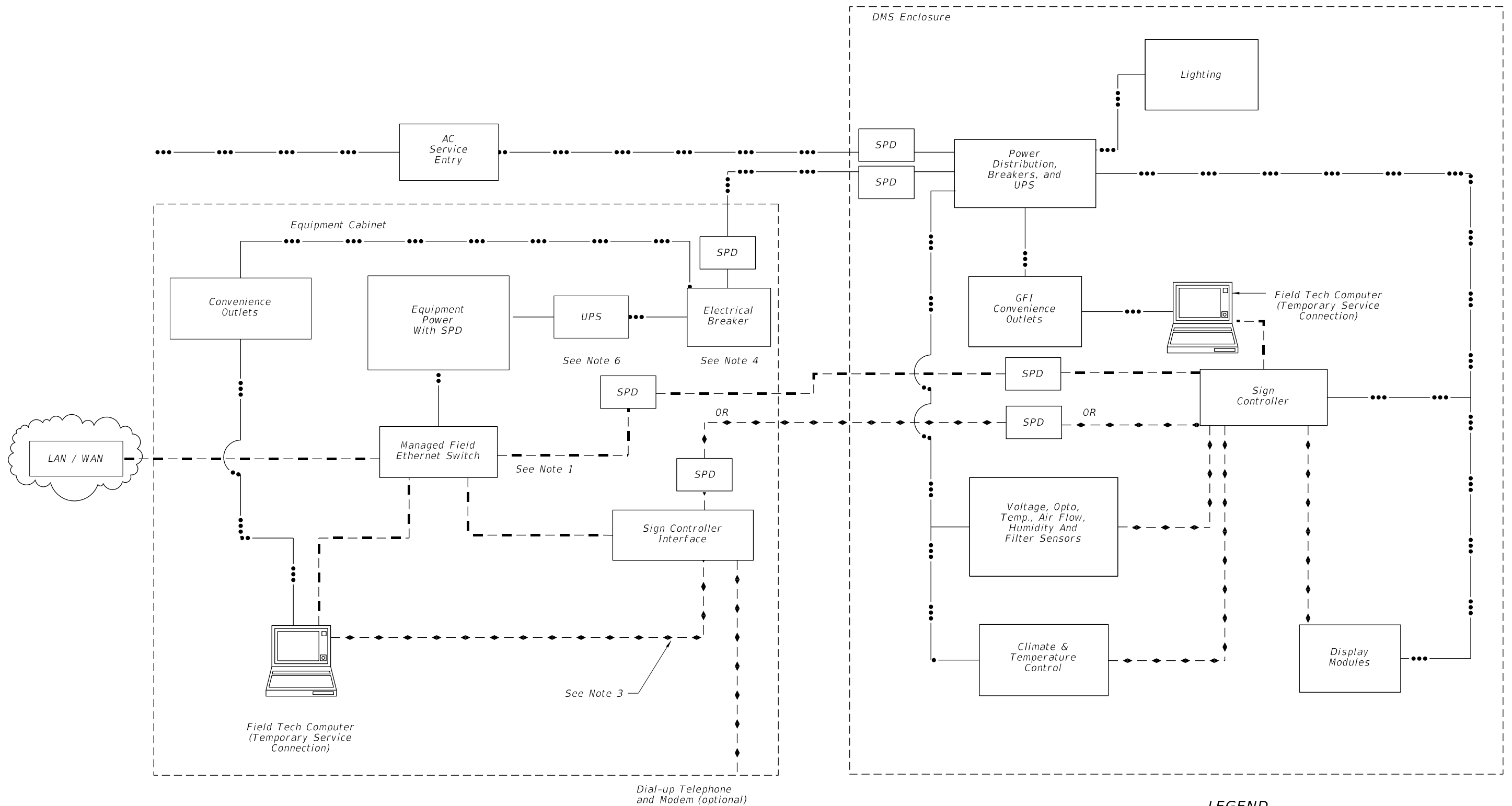
LAST REVISION	07/01/10	DESCRIPTION:		<b>FDOT DESIGN STANDARDS</b> FY 2012/2013	<b>DYNAMIC MESSAGE SIGN WALK-IN</b>	INDEX NO. <b>18300</b>	SHEET NO. <b>6</b>
---------------	----------	--------------	---	--	-------------------------------------	---------------------------	-----------------------

12/30/2011 11:50:13 AM r19960/h C:\projects\standards\18000-s\18300-07.dgn



LAST REVISION	01/01/12	DESCRIPTION:	 <b>FDOT DESIGN STANDARDS</b> FY 2012/2013	<b>DYNAMIC MESSAGE SIGN WALK-IN</b>	INDEX NO. <b>18300</b>	SHEET NO. <b>7</b>
---------------	----------	--------------	--	-------------------------------------	---------------------------	-----------------------

C:\projects\standards\18000-s\18300-s\18300-08.dgn  
 r19960/h  
 11:50:13 AM  
 12/30/2011



**GENERAL NOTES:**

1. Provide single ethernet connection from the managed field ethernet switch to either the sign controller interface in cabinet or sign controller in sign enclosure.
2. Locate cabinet as shown in plans.
3. Serial data link is for communications directly to the DMS controller.
4. Cabinet must include at least one breaker to control all cabinet power.
5. AC service entrance may be located in cabinet or sign housing.
6. UPS equipment location may vary. Diagram indicates functional requirements that uninterrupted power must be available in cabinet and sign housing.

**LEGEND**

- ◆ - - - ◆ - - - ◆ Data
- Ethernet
- Power
- SPD Surge Protection Device

**SIGN AND CABINET WIRING DIAGRAM**

LAST REVISION	REVISION	DESCRIPTION:
07/01/10		

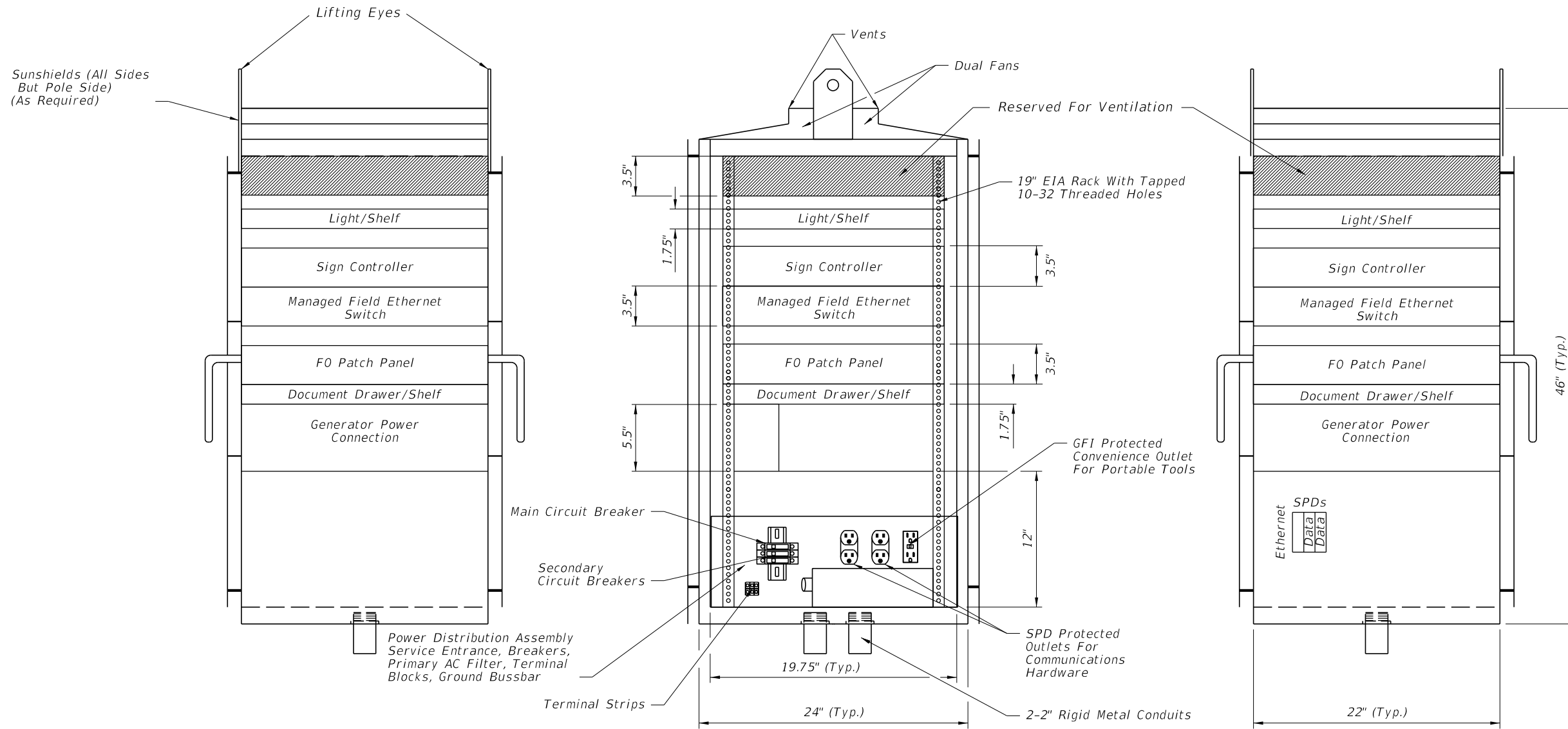


FDOT DESIGN STANDARDS  
 FY 2012/2013

DYNAMIC MESSAGE SIGN WALK-IN

INDEX NO.	SHEET NO.
18300	8





LEFT SIDE VIEW

FRONT VIEW  
POLE MOUNTED DMS CABINET

RIGHT SIDE VIEW

GENERAL NOTES:

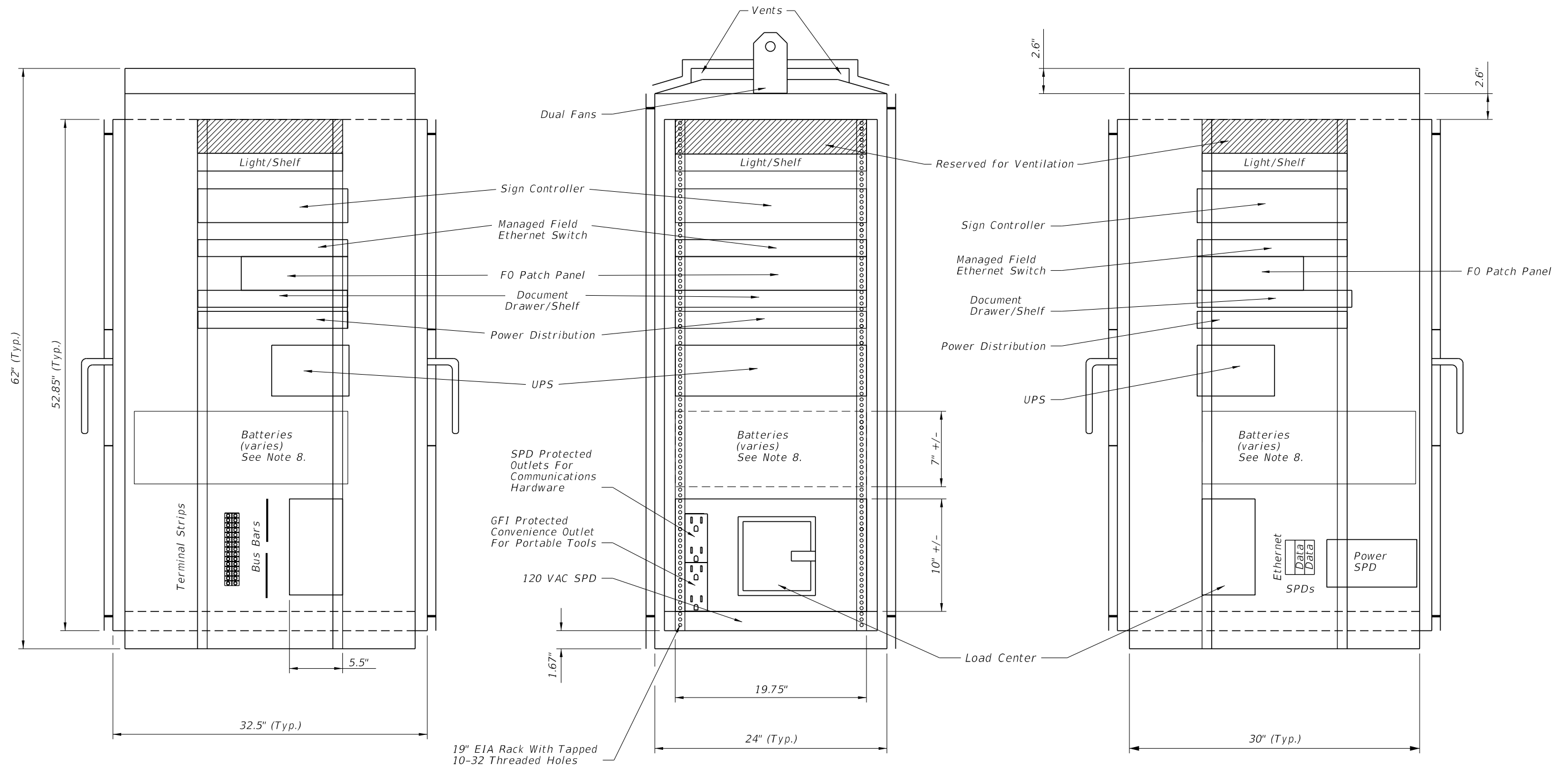
1. Cabinet layout is for pole or ground mounted installations.
2. All dimensions and equipment locations are approximate.
3. Conduit entrances are at bottom of cabinet.
4. Minimum number of duplex outlets is three, (2) SPD protected and (1) GFI protected.
5. Either an access controller or local access panel shall be provided to provide full access to DMS sign for control, programming and troubleshooting.
6. Load center shall be sized for connected equipment and convenience outlets with at least one main disconnect and three circuit breakers.
7. Batteries and UPS may be located in sign housing or cabinet.
8. Power Distribution Assembly component layout, orientation and location may vary.

CABINET LAYOUT 1

12/30/2011 11:50:14 AM r0960/h C:\projects\standards\18300-s\18300-09.dgn

LAST REVISION	REVISION	DESCRIPTION:	 <b>FDOT DESIGN STANDARDS</b> FY 2012/2013	<b>DYNAMIC MESSAGE SIGN WALK-IN</b>	INDEX NO. <b>18300</b>	SHEET NO. <b>9</b>
07/01/10						

12/30/2011 11:50:14 AM r0960rh C:\projects\standards\18000-s\18300-10.dgn




LEFT SIDE VIEW

FRONT VIEW  
GROUND MOUNTED DMS CABINET

RIGHT SIDE VIEW

CABINET LAYOUT 2

LAST REVISION	07/01/10	DESCRIPTION:	 <b>FDOT DESIGN STANDARDS</b> FY 2012/2013	<b>DYNAMIC MESSAGE SIGN WALK-IN</b>	INDEX NO. <b>18300</b>	SHEET NO. <b>10</b>
---------------	----------	--------------	--	-------------------------------------	---------------------------	------------------------