

**GENERAL NOTES**

1. All grounding system connections shall be exothermically welded. This includes all cables, ground electrode and arrays. Do not exothermically bond grounding electrode to grounding electrode. Method of Measurement and Basis of Payment as per Section 620 of the Standard Specifications.
2. The contractor shall be responsible for contacting all utility companies prior to any underground work. The utility company will locate and identify their facilities.
3. Contractor shall determine the service required date for the power company transformer installation at the pre-construction conference.
4. The power company reserves the right to install the riser, switch gear and weatherhead on power company poles at the expense of the contractor. Contact the power company for cost or for authorization for an alternate procedure.
5. Any damaged portions of galvanized steel poles and bracket arms shall be painted in accordance with Section 562 of the Standard Specifications.
6. Before final acceptance, contractor shall provide 2 sets of full size as built plans to the maintaining agency.
7. Conduit routing shall be pole to pole, maintaining pole setback distance from edge of pavement. Any cable routing in locations where guardrail is proposed shall be 2' in front of the standard guardrail position.
8. Pole positions and conduit routing may be adjusted, as approved by the Engineer, to prevent conflicts with utility and drainage structures not indicated, and prevent guardrail post conflict with underground lighting circuits.
9. Where guardrail is constructed, the poles shall be placed a minimum of 4' behind the face of the guardrail.
10. Install pole foundations in accordance with Section 715 of the Standard Specifications.
11. All splices shall be made in pull boxes or the pole base. No splices shall be made inside the conduit. The wires at pullboxes shall have sufficient length to completely remove connectors to the outside of pull boxes remove connectors to the outside of pull boxes to make connectors accessible for changing fuses and trouble shooting the system.
12. Neutral wires to have white insulation. Do not use white or green insulated wires for ungrounded conductors.
13. All exposed or surfaced mounted conduit shall be rigid or intermediate metal. These exposed runs of conduit shall be provided with either expansion joints or flexible metal conduit sections adequate to take care of vibrations and thermal expansions. All metal conduit shall be grounded. Steel conduit shall be hot-dipped galvanized.
14. All conduit that will remain empty as spares shall be mandrel tested, cleaned inside and both ends capped. Leave the corrosion resistant pull/drag wire and place pull boxes to mark the location of the ends of the conduits.
15. Pull boxes shall be located at ends of conduit crossing roadways, and as necessary for the completion of the project.
16. These plans represent minimum acceptable criteria. The inspection per these drawings represent the minimum base of acceptance.
17. All material, unless otherwise specified, shall be Underwriters Laboratory approved.
18. A pull box shall be installed at each pole location. Pull boxes should be located 2' max from pole unless otherwise directed by the project engineer. Metal pull box covers shall be grounded. See General Requirements Section 635-5 of the Standard Specifications for Road and Bridge Construction.
19. At all pull boxes and pole bases, ends of conduit shall be sealed in accordance with Section 630 of the Standard Specifications for Road and Bridge Construction.
20. All mounting heights are ± 2'-6" unless otherwise noted in plans.
21. A handhole is required in all poles. Handhole should be located opposite approaching traffic with cover fastened with Stainless Steel Screws. The handhole opening shall be at least 20 square inches.
22. The luminaire and arm on joint use poles shall be grounded.

**BREAKAWAY FEATURE**

All conventional mounting height poles shall be mounted on a frangible metal base. The base shall be one piece and be designed to breakaway without the aid of any slipping or sliding surfaces. The design of the breakaway feature shall be in accordance with the breakaway performance requirements of the AASHTO 'Standard Specifications For Structural Supports For Highway Signs, Luminaires and Traffic Signals'. The contractor (supplier) shall submit copies of test reports as evidence the breakaway feature meets the above specifications and calculations to verify the design will meet the AASHTO wind loading specified in the contract plans. No poles are to be installed prior to approval of submittal data.

Any substantial remains of a breakaway support, when it is broken away, should not project more than 4" as discussed in Section 7 of the above AASHTO Specifications, and, Chapter 4, Section 4.2 of the AASHTO 'Roadside Design Guide'.

Poles behind bridge rail or barrier wall mounted, shall be non-frangible.

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