GENERAL NOTES
TRAFFIC SIGNALIZATION

GENERAL

All traffic signal equipment, controllers and installation shall be in accordance with the State of Ohio Department of Transportation (ODOT) "Construction and Materials Specifications", latest edition and revisions, and as supplemented by the following additional specifications.

STANDARD DRAWINGS

Unless otherwise shown on the plans, all work shall be in conformance with the applicable Standard Construction Drawings as listed on the Title Sheet.

POWER SERVICE FOR TRAFFIC SIGNAL

Electric power for traffic signal shall be obtained from the Ohio Company at the approximate location shown on the Plan. The voltage supplied shall be 120 volts, single phase, 60 Hz (AEP). The Contractor will be responsible for obtaining all permits and coordinating power service requirements with the power supplying company.

SUBMITTALS

Contractor shall submit traffic signal equipment documents to the Logan City Engineer in accordance with Item 625.04, Working Drawings, except that only three (3) sets are required for this project.

REMOVAL OF TRAFFIC SIGNAL INSTALLATION

When no longer needed and after the new traffic signal system is in operation, the Contractor shall remove the existing signal installation in accordance with the requirements of 632.25. All removed equipment shall be stored within the work limits of the project, accessible to vehicles for loading and ready for pick-up by Logan City Maintenance Forces. It shall also be the Contractor's responsibility to protect the existing traffic signal installation during the entire construction period. In the event that a temporary support or power service is needed, the necessary material, labor and equipment shall be provided by the Contractor. Cost of Electric Power and and signal maintenance components will be provided by the City of Logan. The cost for maintaining and removal of the existing traffic signal installation shall be paid for under Item No. 45 Signalization.

ITEM 633 – TRAFFIC SIGNAL CONTROLLER

CONTROLLER

The controller shall be actuated, eight-phase solid state digital microprocessor as per approved plan. The controller unit shall contain built-in equipment for both internal time based coordination and external hardware coordination. In addition, the controller unit shall provide for four overlap circuits.

The overlap programming shall be by use of an interchangeable plug-in printed circuit board assembly as described in PART 14 of TS-1, 1983. In addition to NEMA requirements, the conflict monitor shall have extended monitoring in accordance with 733.04 PART 3B.

All controller memories shall be involatile and shall not require batteries or other sources of energy to retain data while power is removed for the controller.

CABINET

The controller cabinet shall be keyed to the STATE MASTER. The cabinet shall be a ground mounted TYPE "P" cabinet of aluminum finish. Cabinet size shall comply to the requirements of NEMA TS-1 Section 14. Cabinet shall be oriented with respect to the intersection in a manner that will provide maintenance personnel with a view of the intersection while working on the controller. Printed circuit board type back panels of the control or cabinet will not be acceptable. Soldered connections will be permitted for wiring on the back side of the back panel. The cabinet shall be prewired to allow for expansion to Eight Phases.

ITEM 632 – TRAFFIC SIGNAL EQUIPMENT

LOOP DETECTOR UNIT

In addition to the requirements of 632 and 732.07 or 732.0, loop detector units shall have the following requirements or features:

1. The output device shall be a relay, and all contacts shall be included in the wiring harness.
2. The unit shall be self tuning.
3. The unit's electrical connection plugs or wiring harness shall allow ready replacement with single channel amplifiers as described in the final paragraph of 732.04.
4. Delay inhibit shall be connected on all detector harnesses for their respective phase greens.
5. Loop detector units shall be the delay and extension type, as per plan.

WIRING

A minimum of five conductor signal circuit shall be provided for each phase.

SIGNAL HEADS

Conventional cast aluminum, 732.01 glass lens.

STRAIN POLE

Strain poles shall be as per Standard Drawing TC-81.10, Design No. 8 and 10 of two-ply steel tapered tubes in accordance with the requirements of 732.12. Individual anchor bolt-on cover bases shall be furnished and installed.

UNDERDRAINS FOR PULL BOXES

Reference is made to Standard Drawing HL-30.11 for details of draining pull boxes. Underdrains for pull boxes shall be used as directed by the Engineer and shall be provided where the length required for other satisfactory outlet exceeds approximately 20 feet .

COORDINATOR UNIT

In the General Summary the following quantities have been provided to drain pull boxes when so directed by the Engineer:

Item 603 4" Conduit, Type D 100 L.F.

ITEM 633-A – GUARANTEE

The Contractor shall guarantee that the traffic control system installed as part of this contract shall operate satisfactorily for a period of 90 days following completion of the 10-day performance test. In the event of unsatisfactory operation, the Contractor shall correct faulty installations, make repairs, and replace defective parts with new parts of equal or better quality. Equipment, material and labor costs incurred in correcting an unsatisfactory operation shall be borne by the Contractor.

The guarantee shall cover the following items of the traffic control system: controllers and associated equipment, detector units, interconnection items, and master control equipment.

Customary manufacturers' guarantees for the foregoing items shall be hand carried or delivered by mail to the Logan City Engineer following acceptance of the equipment.

LOOP DETECTOR INSTALLATION

The locations of the proposed loop detectors shall be marked on the pavement with a removable substance. The Engineer must approve the locations prior to commencing pavement cutting.

COVERING OF VEHICULAR SIGNAL HEADS

The vehicular signal heads shall be covered at all times when the signal is not in operation or operating on flash. There shall be no power to the signal heads when covered.

NEW SIGNAL FLASH OPERATION

The signal shall flash for seven (7) days prior to being placed on regular operation. The signal shall not be placed on flash until the project Engineer has checked the installation and has given the Contractor approval to flash the signals. The signals will not be placed on flash until the permanent pavement markings and lane control signs have been installed.

CALCULATED HS CHECKED

GENERAL NOTES
TRAFFIC SIGNALIZATION

REALIGNMENT OF
S.R. 664 AT HUNTER RD.
CITY OF LOGAN, OHIO

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Job No. 0991SGN Date 12/08/95 Drawn By SB RMS