STATE OF OHIO
CITY OF CANTON
STA-0153-01.70
MAHONING ROAD NE
ROADWAY IMPROVEMENTS

STAGE 2 SUBMITTAL

INDEX OF SHEETS
TITLE SHEET ............................................ 1
SCHEMATIC PLAN ........................................ 2
REFERENCE TIES ........................................ 3
TYPICAL SECTIONS ................................. 4-8
GENERAL NOTES ....................................... 9-12
MAINTENANCE OF TRAFFIC ...................... 13-22
GENERAL SUMMARY ............................ 23-25
SUBSIDIARIES .......................................... 26-44
PROJECT SITE PLAN ............................. 45-46
PLAN & PROFILE .................................... 47-54
REMOVAL PLAN ....................................... 55-62
DRIVEWAY PROFILES ........................... 63-69
INTERSECTION DETAILS ...................... 70-75
STREETSIDE PLAN ............................. 76-83
STREETSIDE DETAILS ....................... 84-87
TRAFFIC CONTROL .............................. 88-103
SIGNAL PLAN ........................................ 104-122
STREET LIGHTING PLAN ..................... 1E1-1E11

NOT USED: 110,118

APPROVED ..............................................
DATE ...................................................
DANIEL J. WOGLIN, P.E., S.E.
CANTON CITY ENGINEER

DESIGN EXCEPTIONS

DESIGN FEATURE  ......................................
PAVEMENT CROSS SLOPE

PORTION TO BE IMPROVED
STATE & FEDERAL ROUTES
OTHER ROADS

PROJECT DESCRIPTION
THE PROJECT WORK INVOLVES THE IMPROVEMENT OF
APPROXIMATELY 0.7 MILES OF MAHONING ROAD NE
S.R. 153 BETWEEN THE GRACE AVENUE NE AND SMOKY
AVENUE NE INTERSECTIONS. THE IMPROVEMENTS INCLUDE
NEW SIDEWAALK, PLANTERS, SIGNING, AND STREET
LIGHTING.

2010 SPECIFICATIONS
THE STANDARD SPECIFICATIONS OF THE STATE OF
OHIO, DEPARTMENT OF TRANSPORTATION AND THE CITY OF
CANTON, INCLUDING CHANGES AND SUPPLEMENTAL
SPECIFICATIONS LISTED IN THE PROPOSAL, SHALL GOVERN
THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT
THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE
THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT
PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC
WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

E.C. & G., Inc.
352 MAIN STREET, Suite 200, MANSFIELD, OH 44906
(419) 520-3793 (FAX: 419) 520-3794

OUTS REFERENCE NUMBERS
MAHONING ROAD - AS31102839
SUPERIOR AVE - AS31102847
WINFIELD AVE - AS31102251
ROYAL AVE - AS31102655
15TH STREET - AS31102859
GRASS AVE - AS31102864
16TH STREET - AS31102868

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE 800-362-2764
OHIO UTILITIES PROTECTION SERVICE

E.C. & G., Inc.
352 MAIN STREET, SUITE 200, MANSFIELD, OH 44906
(419) 520-3793 (FAX: 419) 520-3794

AUGUST, 2011

CITY OF CANTON
STA-0153-01.70
MAHONING ROAD NE
ROADWAY IMPROVEMENTS

INDEX OF SHEETS
TITLE SHEET ............................................ 1
SCHEMATIC PLAN ........................................ 2
REFERENCE TIES ........................................ 3
TYPICAL SECTIONS ................................. 4-8
GENERAL NOTES ....................................... 9-12
MAINTENANCE OF TRAFFIC ...................... 13-22
GENERAL SUMMARY ............................ 23-25
SUBSIDIARIES .......................................... 26-44
PROJECT SITE PLAN ............................. 45-46
PLAN & PROFILE .................................... 47-54
REMOVAL PLAN ....................................... 55-62
DRIVEWAY PROFILES ........................... 63-69
INTERSECTION DETAILS ...................... 70-75
STREETSIDE PLAN ............................. 76-83
STREETSIDE DETAILS ....................... 84-87
TRAFFIC CONTROL .............................. 88-103
SIGNAL PLAN ........................................ 104-122
STREET LIGHTING PLAN ..................... 1E1-1E11

NOT USED: 110,118

APPROVED ..............................................
DATE ...................................................
DANIEL J. WOGLIN, P.E., S.E.
CANTON CITY ENGINEER

DESIGN EXCEPTIONS

DESIGN FEATURE  ......................................
PAVEMENT CROSS SLOPE

PORTION TO BE IMPROVED
STATE & FEDERAL ROUTES
OTHER ROADS

PROJECT DESCRIPTION
THE PROJECT WORK INVOLVES THE IMPROVEMENT OF
APPROXIMATELY 0.7 MILES OF MAHONING ROAD NE
S.R. 153 BETWEEN THE GRACE AVENUE NE AND SMOKY
AVENUE NE INTERSECTIONS. THE IMPROVEMENTS INCLUDE
NEW SIDEWAALK, PLANTERS, SIGNING, AND STREET
LIGHTING.

2010 SPECIFICATIONS
THE STANDARD SPECIFICATIONS OF THE STATE OF
OHIO, DEPARTMENT OF TRANSPORTATION AND THE CITY OF
CANTON, INCLUDING CHANGES AND SUPPLEMENTAL
SPECIFICATIONS LISTED IN THE PROPOSAL, SHALL GOVERN
THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT
THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE
THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT
PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC
WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

E.C. & G., Inc.
352 MAIN STREET, Suite 200, MANSFIELD, OH 44906
(419) 520-3793 (FAX: 419) 520-3794

OUTS REFERENCE NUMBERS
MAHONING ROAD - AS31102839
SUPERIOR AVE - AS31102847
WINFIELD AVE - AS31102251
ROYAL AVE - AS31102655
15TH STREET - AS31102859
GRASS AVE - AS31102864
16TH STREET - AS31102868

2 WORKING DAYS
BEFORE YOU DIG
CALL TOLL FREE 800-362-2764
OHIO UTILITIES PROTECTION SERVICE

E.C. & G., Inc.
352 MAIN STREET, SUITE 200, MANSFIELD, OH 44906
(419) 520-3793 (FAX: 419) 520-3794

AUGUST, 2011
PROPOSED LEGEND

1. ITEM 204 - PAVEMENT PLANNING, AS PER PLAN
2. ITEM 624 - 3/4" FINE GRADED POLYMER ASPHALT CONCRETE, TYPE A
3. ITEM 448 - 1 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, PS84-22
4. ITEM 407 - TACK COAT, 701.13
5. ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE
6. ITEM 305 - 10" CONCRETE BASE
7. ITEM 304 - AGGREGATE BASE, AS PER PLAN
8. ITEM 304 - SUBGRADE COMPACTION
9. ITEM 608 - CURB, TYPE 6, AS PER PLAN
10. ITEM 600 - CITY STANDARD AS CONCRETE CURBS AND GUTTER, AS PER PLAN
11. ITEM 608 - 5" CONCRETE WALK, AS PER PLAN (DEPTH VARIES AT BRICK PANELS)
12. ITEM SPECIAL - BRICK WALKWAY PANELS
13. ITEM 620 - 6" SHALLOW PIPE UNDERDRAINS, 701.31, WITH FABRIC WRAP, AS PER pair
14. ITEM 626 - SEEDING AND Mulching, CLASS 1
15. ITEM 656 - 6" NON-REINFORCED CONCRETE PAVEMENT, AS PER PLAN
16. EXISTING COMPOSITE PAVEMENT (BRICK OR CONCRETE UNDER ASPHALT)

See street and dimensions details. See street standards and specifications.
PROPOSED LEGEND

1. ITEM 254 - PAVEMENT PLANNING, AS PER PLAN
2. ITEM 424 - 3/4" FINE GRANULATED POLYMER ASPHALT CONCRETE, TYPE A
3. ITEM 448 - 1 1/2" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I, PC44-20
4. ITEM 407 - TACK COAT, TC44
5. ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE
6. ITEM 305 - 1" CONCRETE BASE
7. ITEM 304 - AGGREGATE BASE, AS PER PLAN
8. ITEM 204 - SUBGRADE COMPACTED
9. ITEM 806 - CURB, TYPE A, AS PER PLAN
10. ITEM 000 - CITY STANDARD 43 CONCRETE CURB AND GUTTER, AS PER PLAN
11. ITEM 806 - 5" CONCRETE WALK, AS PER PLAN (DEPTH VARIES AT BRICK PANELS)
12. ITEM 806 - BRICK WALKWAY PANELS
13. ITEM 805 - 6" SHALLOW PIPE UNDERGRAVING, 707-J, WITH FABRIC WRAP, AS PER PLAN
14. ITEM 806 - SEEDING AND MULCHING, CLASS I
15. ITEM 659 - 6" HIGH-REINFORCED CONCRETE PAVEMENT, AS PER PLAN
16. EXISTING COMPOSITE PAVEMENT (BRICK OR CONCRETE UNDER ASPHALT)

SEE STREETSIDE PLANS FOR BRICK LOCATIONS, DIMENSIONS AND SPECIFICATIONS.
SEE CANTON CITY STANDARD DRAWING, TYPICAL STREETSIDE CORRIDOR, BRICK WALKWAY PAVERS.
PRECONSTRUCTION INCIDENTALS

PROJECT SPECIFICATIONS/REQUIREMENTS:

THE CONTRACTOR SHALL COMPLY WITH THE CITY OF CANTON SPECIFICATIONS, ESPECIALLY 0-641 AND 0-642 PROJECT DOCUMENTATION AND SUBMITTAL REQUIREMENTS.

ADMINISTRATIVE REQUIREMENTS:
THE CONTRACTOR SHALL BE RESPONSIBLE FOR FULLY COMPLYING WITH ALL THE ADMINISTRATIVE DUES HEREBIN CONTAINED.

THE CONTRACTOR SHALL INFORM THE CITY AN EMPLOYEE RESPONSIBLE FOR CORRESPONDENCE, NOTIFICATIONS, AND SUBMITTALS PERTAINING TO THE PROJECT.

PRECONSTRUCTION MEETINGS:
A PRECONSTRUCTION MEETING WILL BE HELD WITH THE CONTRACTOR REPRESENTATIVES OF ALL UTILITY COMPANIES, THE CITY OF CANTON ENGINEERING DEPARTMENT, AND THE CITY OF CANTON WATER DEPARTMENT IS REQUESTED FOR THE PROJECT PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY.

FOR CITY GENERAL PROJECTS, THE CITY ENGINEER WILL CONTACT THE CONTRACTOR TO ARRANGE A MEETING DATE. THE CITY ENGINEER WILL CONTACT THE ABOVE AGENCIES TO CONFIRM THE MEETING DATE.

PROJECT SAFETY:
THE CONTRACTOR SHALL MAINTAIN A SAFE WORKING ENVIRONMENT AT THE PROJECT SITE AT ALL TIMES. THE CONTRACTOR SHALL PROPERLY SUPPORT AND MAINTAIN ALL EXCAVATIONS PER APPLICABLE SAFETY REQUIREMENTS AND MEET WITH ALL OSHA REQUIREMENTS. ASSOCIATE SAFETY OFFICERS AND SUPERVISORS SHALL BE APPOINTED AT EACH CONSTRUCTION SITE. PERSONNEL SHALL BE INSTRUCTED IN THE USE OF PERSONAL PROTECTIVE EQUIPMENT AND STANDARDS OF CONDUCT TO AVOID INJURIES TO THEMSELVES AND OTHER WORKERS. THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER IN WRITING IF ANY PROGRESS OR PROGRESS FLOWERS ARE TO BE STOPPED EXCEPT DUE TO SAFETY CONSIDERATIONS.

UNDERGROUND UTILITIES:
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS WERE OBTAINED FROM EXISTING OBSERVATIONS, FROM EXISTING RECORDS, AND FROM THE OWNERS OF THE UTILITIES. EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS BELIEVED TO BE CORRECT AND COMPLETE BUT NOT EXHAUSTIVE. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT ALL THE VARIOUS UTILITIES COMPANIES (PUBLIC AND PRIVATE) TO VERIFY THE EXISTENCE, LIMITS AND/OR LOCATION OF ANY UTILITIES WHICH MAY BE ALONG THE TRAXIS OR WITHIN THE VERTICALITY OF THIS IMPROVEMENT.

UTILITY IDENTIFICATION:
AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING OPERATIONS ON THIS PROJECT, THE CONTRACTOR SHALL NOTIFY THE CITY ENGINEER, THE REGISTERED UTILITY PROTECTION AGENCY, SERVICE, AND THE OWNERS OF ANY OTHER UTILITIES (PUBLIC AND/OR PRIVATE) THAT MAY HAVE UTILITY LINES OR FACILITIES WITHIN THE VERTICALITY OF THIS PROJECT BUT WHO ARE NOT HERETOBINE NOTIFIED OF SUCH UTILITY LINES OR FACILITIES. THE CONTRACTOR SHALL NOTIFY THE REGISTERED UTILITY AGENCY/VENDOR, SERVICE, AND THE OWNERS OF ANY UTILITY LINES OR FACILITIES WHICH ARE BELIEVED TO BE ON THE PROPERTY, SATURDAY, SUNDAY AND OTHER LEGAL HOLIDAYS, OR AT OTHER TIMES AS REQUESTED BY THE CONTRACTOR/OWNER/UTILITY FACILITIES IN THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA INSIDE SUCH A MANUAL AS TO INDICATE THEIR LOCATION TOGETHER WITH THE APPROPRIATE DEPTH AT WHICH THEY WERE INSTALLED. THE LOCATIONS AND/OR LOCATION OF SUCH UTILITIES SHALL BE ON THE SHEET OF THE PLANNED CONSTRUCTION.

OHIO UTILITIES PROTECTION SERVICES, 1-800-582-2157 (CONTACT NON-MEMBERS DIRECTLY).
THE PRIMARY UTILITIES WITHIN THE CITY OF CANTON AREA:

MATERIAL, GAS DISTRIBUTION

<table>
<thead>
<tr>
<th>TELEPHONE</th>
<th>ADDRESS</th>
<th>PHONE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMMON GAS DISTRIBUTION</td>
<td>1-888-365-7511</td>
<td>414-575-7762</td>
</tr>
<tr>
<td>COMMON GAS DISTRIBUTOR</td>
<td>18000 OHIO AVE., CANTON, OH 44710</td>
<td>330-436-7511</td>
</tr>
<tr>
<td>COMMON GAS DISTRIBUTION</td>
<td>11600 HURSTBURY RD., CANTON, OH 44710</td>
<td>330-436-7511</td>
</tr>
<tr>
<td>COMMON GAS DISTRIBUTION</td>
<td>330-436-7511</td>
<td>330-436-7511</td>
</tr>
</tbody>
</table>

COMMUNICATIONS CABLE

<table>
<thead>
<tr>
<th>ELECTRIC</th>
<th>ADDRESS</th>
<th>PHONE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>OHIO UTILITIES PROTECTION SERVICES</td>
<td>1-800-582-2157</td>
<td>330-436-7511</td>
</tr>
<tr>
<td>OHIO UTILITIES PROTECTION SERVICES</td>
<td>1-800-582-2157</td>
<td>330-436-7511</td>
</tr>
<tr>
<td>OHIO UTILITIES PROTECTION SERVICES</td>
<td>1-800-582-2157</td>
<td>330-436-7511</td>
</tr>
<tr>
<td>OHIO UTILITIES PROTECTION SERVICES</td>
<td>1-800-582-2157</td>
<td>330-436-7511</td>
</tr>
</tbody>
</table>

SANDYHILL SD, SANDYHILL SD

<table>
<thead>
<tr>
<th>WATER</th>
<th>ADDRESS</th>
<th>PHONE NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>CITY ENGINEER'S OFFICE</td>
<td>2342-330TH ST. N.E.</td>
<td>330-436-7511</td>
</tr>
<tr>
<td>CITY ENGINEER'S OFFICE</td>
<td>11600 HURSTBURY RD. N.E.</td>
<td>330-436-7511</td>
</tr>
<tr>
<td>CITY ENGINEER'S OFFICE</td>
<td>2342-330TH ST. N.E.</td>
<td>330-436-7511</td>
</tr>
<tr>
<td>CITY ENGINEER'S OFFICE</td>
<td>11600 HURSTBURY RD. N.E.</td>
<td>330-436-7511</td>
</tr>
</tbody>
</table>

LEGEND

EXISTING CHEMICAL HEATER LINE
EXISTING CHEMICAL HEATER TELEPHONE
EXISTING CHEMICAL ELECTRIC
EXISTING CHEMICAL HEATER CABLE TELEVISION
EXISTING CHEMICAL HEATER ELECTRIC/CABLE
EXISTING CHEMICAL ELECTRIC/TELEPHONE
EXISTING CHEMICAL ELECTRIC/TELEPHONE/CABLE
EXISTING GAS LINE
EXISTING WATER LINE
EXISTING WATER VALVE
EXISTING WATER MASK
EXISTING SANITARY/COMBINED DRAIN
EXISTING UTILITY VALVE
EXISTING ELECTRIC METER
EXISTING TELEPHONE METER
EXISTING METER
EXISTINGtility POLY
EXISTING LIGHT POLY
EXISTING TRAFFIC SIGNAL POLY
EXISTING ELECTRIC POLY/TELEPHONE
EXISTING ELECTRIC/LIGHT POLY
EXISTING TELEPHONE/LIGHT TELEPHONE
EXISTING PERMIT
EXISTING METER BOX
EXISTING STATION
EXISTING PAY PHONE
EXISTING YARD LIGHT
EXISTING PARKING METER
EXISTING TELEPHONE PASTERN
EXISTING WOODED WELL
EXISTING BUS SHELTER

UNDERGROUND CONSULT AARDING
GM + 6 X 14 KT
OD = 6 X 14 KT
CTD = 6 X 14 KT
CTD = 6 X 14 KT
ROADWAY / PAVEMENT / WALK / CURB

Pavements are to be constructed in accordance with DOT standards and specifications, unless otherwise specified. Where different standards apply, the higher standards shall apply. Deviations from this are as follows:

(1) No. 21 or larger ductile iron pipe shall be permitted.

New No. 8 - 10 CONCRETE CURB AS PER PLAN

The requirements of No. 8 or 8 concrete curbs and ramps shall apply. Deviations from this are as follows:

(1) Concrete mix coarse aggregate shall be limestone only.
(2) Expansion joints 1/2" to 1" shall be placed at the locations designated as the walks at intervals not to exceed 30 feet in length.
(3) Cold weather practices shall be submitted by the contractor to the City Engineer for approval. The contractor shall place and finish the concrete in accordance with latest edition of AASHTO.

New No. 8 - 10 CONCRETE AND CURB CUTS AS PER PLAN

Requirements of No. 8 curb shall apply. Deviations from this are as follows:

(1) Concrete mix coarse aggregate shall be limestone only.
(2) Construction joints for stand-up curb and curb connection to sidewalks shall be at the locations shown on the plans. Joints shall be made at intervals not to exceed 20 feet in length.
(3) Cold weather practices shall be submitted by the contractor to the City Engineer for approval. The contractor shall place and finish the concrete in accordance with latest edition of AASHTO.
(4) Curb shall be coded or sleeved 3" to 1/2" for 5" drain outlets at the locations shown on the plans. Curb cutting of curb is prohibited.

Drop curb at sidewalks.

The contractor shall provide drop curb for all proposed entrances at the time the concrete curb is placed. Drop curbs shall conform to DOT standards construction drawing B-41. When the existence of sidewalks are not known at the time of curb construction, the drops may be saw cut by the city engineer's approval.

Wheelchair ramps.

Wheelchair ramps shall be constructed in accordance with DOT standards construction drawing B-73. "Curb cutout," "drop-in" and "side entry" are prohibited. Use of wheelchair cleat, red (Rutile) $0.50.

Restricted work schedule.

No concrete finishing or permanent asphalt shall be placed from November 15th to April 15th unless special approval is granted by the city engineer.

Asphalt/concrete.

It shall be the responsibility of the contractor to notify the city engineer at least 24 hours in advance of any proposed work which requires construction testing and/or preconstruction inspection. Failure to provide this notification shall result in the exclusion of asphalt or concrete. Work will not proceed until testing and/or inspection has been completed and approved by the city engineer.

SANITARY SEWERS / STORM SEWERS

All sanitary/storm sewer conduits and appurtenances shall be constructed according to city specifications and shall be constructed in accordance with specifications effective at the time of construction.

BENDING

Bending shall be executed in accordance with the following:

(1) All manholes shall have a 6 ½ percent air in the hardened concrete.
(2) Precast base shall be extended using of No. 1200 concrete mix.
(3) Grate rings shall be set in mortar.
(4) Grate rings shall be set in mortar.

Tank and pipe sections shall be extended using of No. 1200 concrete mix.

MATERIALS

Precast manholes: Precast concrete manholes shall be in accordance with DOT and DOT Standard Construction Drawing NO-1.

(1) All manholes shall have a 6 ½ percent air in the hardened concrete.
(2) Precast base shall be extended using of No. 1200 concrete mix.
(3) Grate rings shall be set in mortar.
(4) Grate rings shall be set in mortar.

Brick manholes:

(1) All manholes shall have a 6 ½ percent air in the hardened concrete.
(2) Precast base shall be extended using of No. 1200 concrete mix.
(3) Grate rings shall be set in mortar.
(4) Grate rings shall be set in mortar.

Concrete masonry block:

(1) All manholes shall have a 6 ½ percent air in the hardened concrete.
(2) Precast base shall be extended using of No. 1200 concrete mix.
(3) Grate rings shall be set in mortar.
(4) Grate rings shall be set in mortar.

Underground utilities shall be constructed in accordance with DOT and/or underground specifications, deviations from this are as follows:

(1) No air-cooled blast furnace slag shall be permitted.
(2) All underground utilities shall be constructed in accordance with DOT and/or underground specifications, deviations from this are as follows:
ITEM 6.1A — LAW ENFORCEMENT OFFICER WITH PATROL CAR

In addition to the requirements of ORS 814 and the chart of uniform traffic control devices (chart), a uniformed law enforcement officer and officer driving a patrol car shall be provided for controlling the following traffic:

FOR LANE CLOSURES:
- During initial set-up of portion, tear down portion, temporary lane closure at intersection or within the work zone.
- During the entire advance preparation and closure sequence where complete blockage of traffic is required.

FOR PHASE CHANGES:
- During mobilizing, demobilizing, or maintaining a signalized intersection during removal or installation.

Law enforcement officers (LEO) should not be used where the oncoming traffic is too heavy that it is detrimental to the flow of traffic. LEOs shall be dispatched to work when it is determined by the public safety agency, and the traffic control officer that it is safe and appropriate to use them. LEOs not approved by the traffic control officer shall not be used.

ITEM 6.1B — WORK ZONE PAYMENT MARKINGS

All work zone payment markings applied to the completed intermediate surfacing course shall be 641.00 per square yard. The following payment shall be made for various items shown on the plans or specifications:

ITEM 2.2 — ASPHALT CONCRETE WALK 3000.00

Payment for all materials, equipment and materials shall be included in the lump sum contract price for item 6.1A, maintaining traffic, unless otherwise specified in the plan.

ITEM 6.1C — TEMPORARY RAMPS OF VERTICAL SURFACES AT DRAWERS

In order to provide for local access, longitudinal vertical faces at driveways or crossings shall be temporarily ramped as illustrated below. Permanent vertical faces shall be temporarily ramped a minimum of 15 degrees in accordance with the project standards. No Nos. 1 "TRUMP" signs are required in advance of the ramped area. The grade break shall not exceed a maximum of 9 percent at either end of the wedge. All temporary ramps shall be installed at the direction of the engineer, using item 6.14 — ASPHALT CONCRETE FOR ROAD SURFACES.

ITEM 6.1D — TEMPORARY AWAITS ON WORK ZONE LOCATION

In order to provide for local access, longitudinal vertical faces at driveways or crossings shall be temporarily ramped as illustrated below. Permanent vertical faces shall be temporarily ramped a minimum of 15 degrees in accordance with the project standards. No Nos. 1 "TRUMP" signs are required in advance of the ramped area. The grade break shall not exceed a maximum of 9 percent at either end of the wedge. All temporary ramps shall be installed at the direction of the engineer, using item 6.14 — ASPHALT CONCRETE FOR ROAD SURFACES.

ITEM 6.1E — TEMPORARY RAMPS OF VERTICAL SURFACES AT CROSSINGS

In order to provide for local access, longitudinal vertical faces at crossings or driveways shall be temporarily ramped as illustrated below. Permanent vertical faces shall be temporarily ramped a minimum of 15 degrees in accordance with the project standards. No Nos. 1 "TRUMP" signs are required in advance of the ramped area. The grade break shall not exceed a maximum of 9 percent at either end of the wedge. All temporary ramps shall be installed at the direction of the engineer, using item 6.14 — ASPHALT CONCRETE FOR ROAD SURFACES.
MAINTENANCE OF PEDESTRIAN TRAFFIC

The contractor shall take adequate precautions (i.e. temporary walkways, detours, etc.) for the safety of pedestrians within the work zone.

General Note: Pedestrian temporary walkways (or equal) are required to be maintained for the duration of the project. The contractor shall provide the necessary temporary walkways to ensure the safety and accessibility of pedestrians during the construction. These walkways shall be maintained in a safe and usable condition, and any obstructions or hazards shall be promptly removed. The contractor shall also ensure that the temporary walkways do not interfere with the movement of vehicles and maintain pedestrian flow.

Length of Phase: As shown on Sheet 13.

Note: The temporary walkways shall be clearly marked and signposted to ensure the safety of pedestrians and to guide their movement. The contractor shall also ensure that the temporary walkways are equipped with appropriate safety features such as barriers, lights, and pedestrian crossing signals to enhance pedestrian safety.

E.G. & C. Inc.

Scale: 1/2"=1'-0"
<table>
<thead>
<tr>
<th>ITEM</th>
<th>SHEET NUMBER</th>
<th>ITEM EXT.</th>
<th>GRADE TOTAL</th>
<th>UNIT</th>
<th>DESCRIPTION</th>
<th>SEB SHEET NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>28</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>32</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>33</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>34</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>38</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ITEM</td>
<td>13</td>
<td>14</td>
<td>23</td>
<td>44</td>
<td>104</td>
<td>105</td>
</tr>
<tr>
<td>------</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>ITEM EX.</td>
<td>71</td>
<td>1099</td>
<td>699</td>
<td>105</td>
<td>902</td>
<td>1055</td>
</tr>
<tr>
<td>ITEM</td>
<td>125</td>
<td>126</td>
<td>127</td>
<td>128</td>
<td>129</td>
<td>130</td>
</tr>
<tr>
<td>GRAND TOTAL</td>
<td>7100</td>
<td>7200</td>
<td>FT</td>
<td>400</td>
<td>450</td>
<td>GAL</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SHEET NO.</td>
<td>EXIST. NO.</td>
<td>LOCATION</td>
<td>STATION</td>
<td>SITE</td>
<td>CODE</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>-----------</td>
<td>----------</td>
<td>--------</td>
<td>-----</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td>06</td>
<td>1</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-10</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>2</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-11</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>3</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-12</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>4</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-13</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>5</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-14</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>6</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-15</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>7</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-16</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>8</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-17</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>9</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-18</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>10</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-19</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>11</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-20</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>12</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-21</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>13</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-22</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>14</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-23</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>15</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-24</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>16</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-25</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>17</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-26</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>18</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-27</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>19</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-28</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>20</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-29</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>21</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-30</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>22</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-31</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>23</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-32</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>24</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-33</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>25</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-34</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>26</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-35</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>27</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-36</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>28</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-37</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>29</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-38</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>30</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-39</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>31</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-40</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>32</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-41</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>33</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-42</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>34</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-43</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>35</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-44</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>36</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-45</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>37</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-46</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>38</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-47</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>39</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-48</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>40</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-49</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>41</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-50</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>42</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-51</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>43</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-52</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
<tr>
<td>06</td>
<td>44</td>
<td>MAIWAYING RD</td>
<td>NE 0.5 A</td>
<td>57-53</td>
<td>LT</td>
<td>SPECIAL</td>
</tr>
</tbody>
</table>

**TOTAL FROM "OFFICIAL" COLUMN**

**TOTAL CARRIED TO GENERAL SUMMARY**
<table>
<thead>
<tr>
<th>SHEET NO.</th>
<th>REFERENCE NO.</th>
<th>STATION</th>
<th>300</th>
<th>302</th>
<th>303</th>
<th>304</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>FROM</td>
<td>PT</td>
<td>PT</td>
<td>PT</td>
<td>PT</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STA.</td>
<td>OFFSET</td>
<td>SIDE</td>
<td>STA.</td>
<td>OFFSET</td>
</tr>
<tr>
<td>51</td>
<td>R1.1</td>
<td>27+07.0</td>
<td>43.4</td>
<td>LT</td>
<td>00+00</td>
<td>19.4</td>
</tr>
<tr>
<td>52</td>
<td>R1.2</td>
<td>20+77.7B</td>
<td>47.5</td>
<td>RT</td>
<td>05+00</td>
<td>14.7</td>
</tr>
<tr>
<td>53</td>
<td>R1.3</td>
<td>04+00</td>
<td>14.4</td>
<td>LT</td>
<td>01+00</td>
<td>10.7</td>
</tr>
<tr>
<td>54</td>
<td>R1.4</td>
<td>06+00</td>
<td>14.1</td>
<td>RT</td>
<td>05+00</td>
<td>10.9</td>
</tr>
<tr>
<td>55</td>
<td>R1.5</td>
<td>06+05</td>
<td>14.4</td>
<td>LT</td>
<td>06+00</td>
<td>10.7</td>
</tr>
<tr>
<td>56</td>
<td>R1.6</td>
<td>01+05</td>
<td>25.1</td>
<td>LT</td>
<td>01+00</td>
<td>17.7</td>
</tr>
<tr>
<td>57</td>
<td>R1.7</td>
<td>01+05</td>
<td>25.1</td>
<td>RT</td>
<td>01+00</td>
<td>17.7</td>
</tr>
<tr>
<td>58</td>
<td>R2.1</td>
<td>03+00</td>
<td>16.0</td>
<td>LT</td>
<td>03+00</td>
<td>11.6</td>
</tr>
<tr>
<td>59</td>
<td>R2.2</td>
<td>04+00</td>
<td>16.8</td>
<td>RT</td>
<td>04+00</td>
<td>11.7</td>
</tr>
<tr>
<td>60</td>
<td>R3.1</td>
<td>03+35</td>
<td>16.0</td>
<td>LT</td>
<td>03+30</td>
<td>16.5</td>
</tr>
<tr>
<td>61</td>
<td>R3.2</td>
<td>04+00</td>
<td>16.8</td>
<td>RT</td>
<td>04+00</td>
<td>11.7</td>
</tr>
<tr>
<td>62</td>
<td>R4.1</td>
<td>06+00</td>
<td>21.5</td>
<td>RT</td>
<td>06+00</td>
<td>21.5</td>
</tr>
<tr>
<td>63</td>
<td>R4.2</td>
<td>07+00</td>
<td>21.5</td>
<td>RT</td>
<td>07+00</td>
<td>21.5</td>
</tr>
<tr>
<td>64</td>
<td>R5.1</td>
<td>10+00</td>
<td>15.7</td>
<td>LT</td>
<td>10+00</td>
<td>15.7</td>
</tr>
<tr>
<td>65</td>
<td>R5.2</td>
<td>10+50</td>
<td>15.7</td>
<td>RT</td>
<td>10+50</td>
<td>15.7</td>
</tr>
<tr>
<td>66</td>
<td>R5.3</td>
<td>15+00</td>
<td>15.7</td>
<td>LT</td>
<td>15+00</td>
<td>15.7</td>
</tr>
<tr>
<td>67</td>
<td>R5.4</td>
<td>15+50</td>
<td>15.7</td>
<td>RT</td>
<td>15+50</td>
<td>15.7</td>
</tr>
<tr>
<td>68</td>
<td>R5.5</td>
<td>20+00</td>
<td>15.7</td>
<td>LT</td>
<td>20+00</td>
<td>15.7</td>
</tr>
<tr>
<td>69</td>
<td>R5.6</td>
<td>20+50</td>
<td>15.7</td>
<td>RT</td>
<td>20+50</td>
<td>15.7</td>
</tr>
<tr>
<td>70</td>
<td>R5.7</td>
<td>30+00</td>
<td>15.7</td>
<td>LT</td>
<td>30+00</td>
<td>15.7</td>
</tr>
<tr>
<td>71</td>
<td>R5.8</td>
<td>30+50</td>
<td>15.7</td>
<td>RT</td>
<td>30+50</td>
<td>15.7</td>
</tr>
<tr>
<td>72</td>
<td>R6.1</td>
<td>35+50</td>
<td>15.7</td>
<td>LT</td>
<td>35+50</td>
<td>15.7</td>
</tr>
<tr>
<td>73</td>
<td>R6.2</td>
<td>40+00</td>
<td>15.7</td>
<td>RT</td>
<td>40+00</td>
<td>15.7</td>
</tr>
<tr>
<td>74</td>
<td>R6.3</td>
<td>45+00</td>
<td>15.7</td>
<td>LT</td>
<td>45+00</td>
<td>15.7</td>
</tr>
<tr>
<td>75</td>
<td>R6.4</td>
<td>45+00</td>
<td>15.7</td>
<td>RT</td>
<td>45+00</td>
<td>15.7</td>
</tr>
<tr>
<td>76</td>
<td>R6.5</td>
<td>50+00</td>
<td>15.7</td>
<td>LT</td>
<td>50+00</td>
<td>15.7</td>
</tr>
<tr>
<td>77</td>
<td>R6.6</td>
<td>50+00</td>
<td>15.7</td>
<td>RT</td>
<td>50+00</td>
<td>15.7</td>
</tr>
<tr>
<td>78</td>
<td>R6.7</td>
<td>55+00</td>
<td>15.7</td>
<td>LT</td>
<td>55+00</td>
<td>15.7</td>
</tr>
<tr>
<td>79</td>
<td>R6.8</td>
<td>55+00</td>
<td>15.7</td>
<td>RT</td>
<td>55+00</td>
<td>15.7</td>
</tr>
</tbody>
</table>

**TOTALS CARRIED TO GENERAL SUMMARY**

|       |       |       | 4281 | 3138 | 65   | 65   |

**ROADWAY REMOVAL SUB-SUMMARY**

**ECONOMIC DEVELOPMENT PROJECT**

**MANAGING ROAD REUSE PROSPECT**
| STATION | 305 | 600 | 900 | 1200 | 1500 | 1800 | 2100 | 2400 | 2700 | 3000 | 3300 | 3600 | 3900 | 4200 | 4500 | 4800 | 5100 | 5400 | 5700 | 6000 | 6300 | 6600 | 6900 | 7200 | 7500 | 7800 | 8100 | 8400 | 8700 | 9000 |
|---------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| FROM    | TO  | L    | H    | A    | AN   | FT   |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 07-046.15 | 07-046.75 | 0.75 | 408.68 | 1.00 | 408 | 52 | 565.66 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 06-467.75 | 06-468.11 | 0.11 | 414.56 | 1.00 | 415 | 65 | 514.65 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 02-449.35 | 02-450.95 | 0.95 | 435.75 | 1.00 | 436 | 85 | 453.75 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 02-428.10 | 02-429.70 | 0.70 | 469.20 | 1.00 | 469 | 81 | 485.10 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 02-305.40 | 02-306.30 | 0.30 | 499.70 | 1.00 | 499 | 63 | 529.30 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 02-176.90 | 02-178.30 | 0.30 | 572.29 | 1.00 | 572 | 80 | 572.29 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 01-568.61 | 01-570.61 | 0.61 | 578.61 | 1.00 | 578 | 76 | 578.61 |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |

TOTAL FROM COLUMN: 1521
TOTAL FROM LEFT COLUMN: 1521

TOTAL EXPANDED TO GENERAL SUMMARY: 771.25
<table>
<thead>
<tr>
<th>SHEET NO.</th>
<th>REFERENCE NO.</th>
<th>STATION</th>
<th>FROM</th>
<th>TO</th>
<th>FT</th>
<th>FT</th>
<th>EACH</th>
</tr>
</thead>
<tbody>
<tr>
<td>04</td>
<td>CR-1</td>
<td>00-01-47</td>
<td>58.37</td>
<td>67</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-2</td>
<td>01-03-85</td>
<td>18.97</td>
<td>68</td>
<td></td>
<td></td>
<td>PERPENDICULAR</td>
</tr>
<tr>
<td>04</td>
<td>CR-3</td>
<td>04-06-50</td>
<td>3.77</td>
<td>69</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-4</td>
<td>05-01-47</td>
<td>37.89</td>
<td>70</td>
<td></td>
<td></td>
<td>PERPENDICULAR</td>
</tr>
<tr>
<td>04</td>
<td>CR-5</td>
<td>05-03-39</td>
<td>18.97</td>
<td>71</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-6</td>
<td>05-05-12</td>
<td>37.89</td>
<td>72</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-7</td>
<td>01-01-38</td>
<td>2.00</td>
<td>73</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-8</td>
<td>02-04-39</td>
<td>24.17</td>
<td>74</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-9</td>
<td>02-06-15</td>
<td>43.10</td>
<td>75</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-10</td>
<td>02-08-10</td>
<td>39.00</td>
<td>76</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-11</td>
<td>02-08-03</td>
<td>24.17</td>
<td>77</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-12</td>
<td>03-01-26</td>
<td>18.17</td>
<td>78</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-13</td>
<td>03-01-30</td>
<td>18.17</td>
<td>79</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-14</td>
<td>03-01-30</td>
<td>18.17</td>
<td>80</td>
<td></td>
<td></td>
<td>PERPENDICULAR</td>
</tr>
<tr>
<td>04</td>
<td>CR-15</td>
<td>03-01-30</td>
<td>18.17</td>
<td>81</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-16</td>
<td>03-01-30</td>
<td>18.17</td>
<td>82</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-17</td>
<td>03-01-30</td>
<td>18.17</td>
<td>83</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-18</td>
<td>03-01-30</td>
<td>18.17</td>
<td>84</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-19</td>
<td>03-01-30</td>
<td>18.17</td>
<td>85</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-20</td>
<td>03-01-30</td>
<td>18.17</td>
<td>86</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-21</td>
<td>03-01-30</td>
<td>18.17</td>
<td>87</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-22</td>
<td>03-01-30</td>
<td>18.17</td>
<td>88</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-23</td>
<td>03-01-30</td>
<td>18.17</td>
<td>89</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-24</td>
<td>03-01-30</td>
<td>18.17</td>
<td>90</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-25</td>
<td>03-01-30</td>
<td>18.17</td>
<td>91</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-26</td>
<td>03-01-30</td>
<td>18.17</td>
<td>92</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-27</td>
<td>03-01-30</td>
<td>18.17</td>
<td>93</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-28</td>
<td>03-01-30</td>
<td>18.17</td>
<td>94</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-29</td>
<td>03-01-30</td>
<td>18.17</td>
<td>95</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-30</td>
<td>03-01-30</td>
<td>18.17</td>
<td>96</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-31</td>
<td>03-01-30</td>
<td>18.17</td>
<td>97</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-32</td>
<td>03-01-30</td>
<td>18.17</td>
<td>98</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-33</td>
<td>03-01-30</td>
<td>18.17</td>
<td>99</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-34</td>
<td>03-01-30</td>
<td>18.17</td>
<td>100</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-35</td>
<td>03-01-30</td>
<td>18.17</td>
<td>101</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-36</td>
<td>03-01-30</td>
<td>18.17</td>
<td>102</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-37</td>
<td>03-01-30</td>
<td>18.17</td>
<td>103</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-38</td>
<td>03-01-30</td>
<td>18.17</td>
<td>104</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-39</td>
<td>03-01-30</td>
<td>18.17</td>
<td>105</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
<tr>
<td>04</td>
<td>CR-40</td>
<td>03-01-30</td>
<td>18.17</td>
<td>106</td>
<td></td>
<td></td>
<td>TYPE 1</td>
</tr>
</tbody>
</table>

TOTAL CUMULATED TO GENERAL SUMMARY: 50
<table>
<thead>
<tr>
<th>STATION</th>
<th>392</th>
<th>397</th>
<th>402</th>
<th>407</th>
<th>412</th>
<th>417</th>
<th>422</th>
</tr>
</thead>
<tbody>
<tr>
<td>INDUSTRIAL AVENUE</td>
<td>08/09/24</td>
<td>07/07/25</td>
<td>09/09/26</td>
<td>08/09/26</td>
<td>07/07/25</td>
<td>09/09/24</td>
<td>08/09/24</td>
</tr>
<tr>
<td>WAREHOUSE AVG.</td>
<td>49/47.4</td>
<td>49/47.5</td>
<td>49/47.5</td>
<td>49/47.5</td>
<td>49/47.5</td>
<td>49/47.5</td>
<td>49/47.5</td>
</tr>
<tr>
<td>CLOVER AVENUE</td>
<td>09/09/26</td>
<td>08/09/26</td>
<td>07/07/25</td>
<td>09/09/26</td>
<td>08/09/26</td>
<td>07/07/25</td>
<td>09/09/26</td>
</tr>
<tr>
<td>BARBER RUN AVENUE</td>
<td>08/08/24</td>
<td>07/07/25</td>
<td>08/08/25</td>
<td>07/07/25</td>
<td>08/08/24</td>
<td>07/07/25</td>
<td>08/08/24</td>
</tr>
<tr>
<td>WAREHOUSE AVG.</td>
<td>08/08/24</td>
<td>07/07/25</td>
<td>08/08/25</td>
<td>07/07/25</td>
<td>08/08/24</td>
<td>07/07/25</td>
<td>08/08/24</td>
</tr>
<tr>
<td>WAREHOUSE AVG.</td>
<td>08/08/24</td>
<td>07/07/25</td>
<td>08/08/25</td>
<td>07/07/25</td>
<td>08/08/24</td>
<td>07/07/25</td>
<td>08/08/24</td>
</tr>
<tr>
<td>TOTAL CARRIED TO GENERAL SUMMARY</td>
<td>9405.51</td>
<td>9571.63</td>
<td>9612.53</td>
<td>9571.63</td>
<td>9405.51</td>
<td>9571.63</td>
<td>9405.51</td>
</tr>
</tbody>
</table>

**Footnotes:**

1. **Total Calculation:** 9405.51
2. **Part 2:** 9571.63
3. **Part 3:** 9612.53
4. **Part 4:** 9571.63
5. **Part 5:** 9405.51
6. **Part 6:** 9571.63
7. **Part 7:** 9405.51
8. **Part 8:** 9571.63
<table>
<thead>
<tr>
<th>STATION</th>
<th>X</th>
<th>Y</th>
<th>A1</th>
<th>A2</th>
<th>A3</th>
<th>A4</th>
<th>A5</th>
</tr>
</thead>
<tbody>
<tr>
<td>STATION</td>
<td>X</td>
<td>Y</td>
<td>A1</td>
<td>A2</td>
<td>A3</td>
<td>A4</td>
<td>A5</td>
</tr>
<tr>
<td>FROM</td>
<td>TO</td>
<td>L M AX X SP EACH BP SP CY M' BP SP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77-02-25</td>
<td>LT</td>
<td>77-02-46</td>
<td>LT</td>
<td>25</td>
<td>35</td>
<td>115</td>
<td>70-78</td>
</tr>
<tr>
<td>77-02-46</td>
<td>LT</td>
<td>77-02-69</td>
<td>LT</td>
<td>46</td>
<td>20</td>
<td>135</td>
<td>122-75</td>
</tr>
<tr>
<td>77-02-37</td>
<td>LT</td>
<td>77-02-47</td>
<td>LT</td>
<td>37</td>
<td>10</td>
<td>125</td>
<td>121-65</td>
</tr>
<tr>
<td>77-02-17</td>
<td>LT</td>
<td>77-02-47</td>
<td>LT</td>
<td>17</td>
<td>34</td>
<td>115</td>
<td>121-65</td>
</tr>
<tr>
<td>77-02-35</td>
<td>LT</td>
<td>77-02-47</td>
<td>LT</td>
<td>35</td>
<td>22</td>
<td>125</td>
<td>122-75</td>
</tr>
<tr>
<td>77-02-31</td>
<td>LT</td>
<td>77-02-47</td>
<td>LT</td>
<td>31</td>
<td>41</td>
<td>115</td>
<td>121-65</td>
</tr>
<tr>
<td>77-02-25</td>
<td>LT</td>
<td>77-02-47</td>
<td>LT</td>
<td>25</td>
<td>35</td>
<td>115</td>
<td>70-78</td>
</tr>
<tr>
<td>77-02-46</td>
<td>LT</td>
<td>77-02-69</td>
<td>LT</td>
<td>46</td>
<td>20</td>
<td>135</td>
<td>122-75</td>
</tr>
<tr>
<td>FROM</td>
<td>TO</td>
<td>L M AX X SP EACH BP SP CY M' BP SP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>77-02-25</td>
<td>LT</td>
<td>77-02-46</td>
<td>LT</td>
<td>25</td>
<td>35</td>
<td>115</td>
<td>70-78</td>
</tr>
<tr>
<td>77-02-46</td>
<td>LT</td>
<td>77-02-69</td>
<td>LT</td>
<td>46</td>
<td>20</td>
<td>135</td>
<td>122-75</td>
</tr>
<tr>
<td>77-02-37</td>
<td>LT</td>
<td>77-02-47</td>
<td>LT</td>
<td>37</td>
<td>10</td>
<td>125</td>
<td>121-65</td>
</tr>
<tr>
<td>77-02-17</td>
<td>LT</td>
<td>77-02-47</td>
<td>LT</td>
<td>17</td>
<td>34</td>
<td>115</td>
<td>121-65</td>
</tr>
<tr>
<td>77-02-35</td>
<td>LT</td>
<td>77-02-47</td>
<td>LT</td>
<td>35</td>
<td>22</td>
<td>125</td>
<td>122-75</td>
</tr>
<tr>
<td>77-02-31</td>
<td>LT</td>
<td>77-02-47</td>
<td>LT</td>
<td>31</td>
<td>41</td>
<td>115</td>
<td>121-65</td>
</tr>
<tr>
<td>77-02-25</td>
<td>LT</td>
<td>77-02-47</td>
<td>LT</td>
<td>25</td>
<td>35</td>
<td>115</td>
<td>70-78</td>
</tr>
<tr>
<td>77-02-46</td>
<td>LT</td>
<td>77-02-69</td>
<td>LT</td>
<td>46</td>
<td>20</td>
<td>135</td>
<td>122-75</td>
</tr>
</tbody>
</table>

**CALCULATIONS**

**TOTAL, THIS COLUMN**

| TOTAL, THIS COLUMN | 125 | 1225 | 2265 | 2691 |

**TOTAL COPIED TO GENERAL SUMMARY**

| 392 | 3383 | 3428 | 4352 |

**TOTAL PRIVATE-LIGHT COLUMN**

| TOTAL PRIVATE LIGHT COLUMN | 125 | 1225 | 2265 | 2691 |

**TOTAL COPIED TO GENERAL SUMMARY**

<p>| 392 | 3383 | 3428 | 4352 |</p>
<table>
<thead>
<tr>
<th>REF. NO.</th>
<th>LOCATION</th>
<th>STATION</th>
<th>SE</th>
<th>TYPE</th>
<th>CENTERLINE</th>
<th>COMINGLING LANE</th>
<th>STOP LANE</th>
<th>CROSSING LANE</th>
<th>LANE DIVIDER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FROM</td>
<td>TO</td>
<td>PT</td>
<td>PT</td>
<td>PT</td>
</tr>
<tr>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>112</td>
<td>112</td>
<td>68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>112</td>
<td>112</td>
<td>68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>112</td>
<td>112</td>
<td>68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>112</td>
<td>112</td>
<td>68</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL**

<table>
<thead>
<tr>
<th></th>
<th>112</th>
<th>112</th>
<th>68</th>
<th>68</th>
<th>1</th>
</tr>
</thead>
</table>

**TOTAL SHEET**

| 204 | 144 | 62 | 1 |

**TOTAL PLAN SHEET**

| 500 | 400 | 150 | 20 |

**TOTAL CARRIED TO GENERAL SUMMARY**

| 7420 | 652 | 281 | 144 |
PLANT LIST

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>QUANTITY</th>
<th>SCIENTIFIC NAME</th>
<th>COMMON NAME</th>
<th>SIZE</th>
<th>PICT.</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>30</td>
<td>Acer Rubrum 'Brandywine'</td>
<td>BRANDYWINE RED MAPLE</td>
<td>3'/3&quot;</td>
<td>9490</td>
<td>Street Tree Form</td>
</tr>
<tr>
<td>HA</td>
<td>30</td>
<td>Haile's Sierra</td>
<td>HAILIE'S OAK</td>
<td>3'/3&quot;</td>
<td>9480</td>
<td>Street Tree Form</td>
</tr>
<tr>
<td>HR</td>
<td>3</td>
<td>Haile's Sundance</td>
<td>HAILIE'S CRANBERY</td>
<td>3'/3&quot;</td>
<td>9480</td>
<td>Street Tree Form</td>
</tr>
<tr>
<td>MC</td>
<td>2</td>
<td>Pinus 'Montana'</td>
<td>CEDAR</td>
<td>3'/3&quot;</td>
<td>9480</td>
<td>Street Tree Form</td>
</tr>
<tr>
<td>OP</td>
<td>13</td>
<td>Quercus phellos 'Green Pillar'</td>
<td>GREEN PILLAR</td>
<td>3'/3&quot;</td>
<td>9480</td>
<td>Street Tree Form</td>
</tr>
</tbody>
</table>

PERENNIALS & BULBS

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>QUANTITY</th>
<th>SCIENTIFIC NAME</th>
<th>COMMON NAME</th>
<th>PICT.</th>
<th>COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>H6</td>
<td>60</td>
<td>Stella Erythro</td>
<td>STELLA ERYTHRO SAVILEY</td>
<td>Qucmp</td>
<td>1&quot; Curb</td>
</tr>
</tbody>
</table>

*All street trees shall be branched-up manner of 3'-4'.
CONCRETE WALKWAY PAVEMENT

TREE GRATE AND FRAME NEENAH R-8811 PAINTED BLACK

TREE WRAP

2' PEA GRAVEL

BACKFILL PLANTING MIX

CONCRETE COLLAR SUPPORTING FRAME/GRATE (SEE CONCRETE WALKWAY DETAIL FOR JOINT SPACING AND FINISH)

BRICK WALKWAY PAVEMENT

#3 REBARS INSTALLED THROUGH FRAME LUGS

4" COMPACTED THICKNESS AGGREGATE ODOT #304

PLANTING SOIL MIX/TREE PIT AS PER SPECIFICATION SECTION 02955, TREES AND SHRUBS.
4x8 BRICK PAVER, 2 3/4" THICK - ROADWAY PAVER BY BELDEN BRICK - ASTM C1272 TRAFFIC TYPE F APPL PX WEATHER SX - 10,000 PSI - COLOR JUMBO REGIMENTAL

BRICK ALTERNATE - WHITACRE GREER 4 X 8-1/2 X 3-1/2 WEATHER CLASS SX, TRAFFIC F, APPLICATION PX - COLOR 33 DARK ANTIQUE - 10,000 PSI ASTM C1272

BRICK TO HAVE BEVELED EDGE AND LUGS.

USE PERPENDICULAR HERRINGBONE PATTERN IN INTERSECTION.

SWEEP JOINTS WITH DRY MIXTURE OF POLYMERIC SAND Techni-Seal OR APPROVED EQUAL USE PLATE TAMPER WITH RUBBER MAT OR OTHER PROTECTION FOR BRICK.

REMOVE EXCESS AND MOISTEN TO SET JOINT SEALANT SAND.

1" MAX COMPACTED CONCRETE SAND ODOT 703.02 (ASTM C 33) SETTING BED W/ MORTAR.

USE INTERIOR FORMING PINS FOR WEEP HOLES ON DOWNSLOPE SIDES AND INTERIOR CORNERS. MAX 4 FT. CENTERS. COVER W/ FILTER FABRIC.

CONCRETE CROSSWALK AND PAVER BASE IS TO BE CLASS "C" ODOT 499.03 - HIGH EARLY. NO EXPANSION JOINTS ARE TO BE PLACED AGAINST BRICK PAVER SECTIONS.

MAX 1/4" SPACE BETWEEN BRICK AND CONCRETE.

PROVIDE 1/4" RADIUS ON ALL SLAB EDGES.

TYPICAL CONTROL JOINT, 1/4 DEPTH OF SLAB SPACING OF JOINTS TO BE 4' O.C. - ALIGN CONCRETE CROSSWALK AND CONCRETE WALK JOINTS.

POLYURETHANE ELASTOMERIC SEALANT, TYP.

10" ITEM 452 PLAIN PORTLAND CEMENT CONCRETE PAVEMENT

COMPACTED AGGREGATE BASE ODOT ITEM #304, 4" TYP.
MAINTENANCE OF TRAFFIC

This section shall consist of maintenance of traffic on existing streets and highways in accordance with the Ohio Manual of Uniform Traffic Control Devices for Streets and Highways, latest edition, and this section and the Ohio Revised Code and the specifications and the following:

A. A VEHICLE TO DROP ITS Curbside PLOW IN EACH DIRECTION SHALL BE MAINTAINED ON THE EXISTING PAVEMENT.

B. THE CONTRACTOR SHALL, UPON THE CITY OF CANTON ENCOURAGE THE USE OF PAINTED CORDS AND GLOWS FOR INDICATION OF THE CONDITION OF THE EXISTING SIGNAL INSTALLATION,

C. THE CONTRACTOR SHALL NOT USE ACCEPTABLE TRAFFIC CONTROL DEVICES FOR LAKE RESTRICTIONS ON ROAD RESTRICTIONS THAT A IN OPERATION ONE-HALF HOUR AFTER SUNSET OR ONE-HALF-HOUR BEFORE SUNRISE. ALL NIGHT TIME LAKE RESTRICTIONS SHALL REQUIRE DUE BARS, BARRETTES OR A MARGIN SPACING OF FIFTY FEET.

D. LAKE RESTRICTIONS ON ROAD RESTRICTIONS SHALL NOT BE REQUIRED AFTER NORMAL WORKING HOURS. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTUALLY REMOVING AND/OR REPLACING PLACEMENT MATERIALS.

E. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND SUBSEQUENTLY REMOVE ALL FLAGS, BARRETTES, SIGNS, SIGN SUPPORTS, AND FURNISH AND MAINTAIN ALL FLASHERS,美麗器和苗頭等相關統計和報告的生成。

F. THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND SUBSEQUENTLY REMOVE ALL FLASHERS, BARRETTES, SIGNS, SIGN SUPPORTS, AND FURNISH AND MAINTAIN ALL FLASHERS,美麗器和苗頭等相關統計和報告的生成。

G. THE CONTRACTOR SHALL ALSO FOLLOW THE INTERSECT PROXY 1ST SEQUENCING WHICH WILL BE PROVIDED AT THE INITIAL SITE WITNESS 2:30:00 REGARDING FOUNDATIONS, THE COST FOR THE ABOVE MAINTENANCE OF TRAFFIC REQUIREMENTS SHALL BE INCENTIVE TO THE CONTRACTOR ON A UNIT SUMMARIZED PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

UTILITY CONTACT INFORMATION

THE FOLLOWING UTILITIES ARE LOCATED WITHIN THE PROJECT AREA:

AMERICAN ELECTRIC POWER

4790 SOUTH STREET
CANTON, OH 44707
PHONE: 330-417-7400
ATTN: MR. DON MILLER

DOWNTOWN EAST OHIO DISTRIBUTION

4790 SOUTH STREET
CANTON, OH 44707
PHONE: 330-417-7400
ATTN: MR. DON MILLER

TIME-WARPER CARL

5200 ROOSEVELT AVENUE NW
CANTON, OH 44707
PHONE: 330-417-7400
ATTN: MR. DON MILLER

CITY OF CANTON PARK

1330 13TH STREET NE
CANTON, OH 44707
PHONE: 330-417-7400
ATTN: MR. DON MILLER

CITY OF CANTON TRAFFIC

323 MAIN STREET NE
CANTON, OH 44707
PHONE: 330-417-7400
ATTN: MR. DON MILLER

CITY OF CANTON TRAFFIC

323 MAIN STREET NE
CANTON, OH 44707
PHONE: 330-417-7400
ATTN: MR. DON MILLER

CITY OF CANTON TRAFFIC

323 MAIN STREET NE
CANTON, OH 44707
PHONE: 330-417-7400
ATTN: MR. DON MILLER
ITEM 832 - VEHICLE SIGNAL HEAD LED, BY TYPE, # LIGHTS, 1 MAY, POLYCARBONATE, AS PER PLAN

In addition to the requirements of CMS 832 and 73A, the following requirements shall also apply:

A. VEHICLE SIGNAL HEADS SHALL BE FREE SWINGING.

B. ALL UPPER SIGNAL SUPPORT HARDWARE AND HINGING UP TO AND INCLUDING THE #2 HINGE FITTING SHALL BE FORGEE METAL FOR SIGNAL DISPLAYS OF TWO OR MORE SECTIONS.

C. THE ENCLOSURE FITTING SHALL BE OF THE TRI-SECTION DESIGN WITH SEPARATE RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.

D. VEHICLE SIGNAL HEADS SHALL BE PROVIDED WITH A PIVOT AND LOCK BALANCE ADJUSTMENT. ALL BALANCE ADJUSTER SHAL I HAVE A MINIMUM THREE QUARTER INCH 1/8 MILLIMETER EYE BOLT AND THREE QUARTER INCH 1/8 MILLIMETER WIRE SLOT. THE EYE BOLTS ARE CAST FROM BRASS STEEL AND PROVIDED WITH A 3/4 FINISH. THREE QUARTER INCH 1/8 MILLIMETER BODY HALVES ARE CAST FROM AN IRON-ZINC 60-40 DUCTILE IRON AND PROVIDED WITH A BRIGHT ZINC FINISH.

E. ALL LAMP UNITS SHALL BE THE 1/8 INCH 1000 MILLIMETER SIZE AND BE EQUIPPED WITH 1/8" CUTAWAY VISION UNLESS OTHERWISE NOTED IN PLANS.

F. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF POLYCARBONATE PLASTIC AND MEET SPECIFICATIONS.

G. PIPE, SPIKES AND FITTINGS CONSTRUCTED OF ALUMINUM, POLYCARBONATE OR EXPELLED METAL SHALL BE OBTAINED BY USE OF POLYCARBONATE MATERIAL, RATHER THAN PAINTING. ALL EXTERIOR COLOR SHALL BE FEDERAL HIGHWAY YELLOW AT INTERSECTIONS THAT CONTAIN NOSTALGIA SIGNAL SUPPORTS AND PEDESTALS. THE FOLLOWING IS A SUMMARY OF THE PERFORMANCE SPECIFICATIONS.

THE CONTRACTOR SHALL PROVIDE THE CITY, IN WRITING, THE MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LAMP UNITS TO BE USED IN THE TRAFFIC SIGNAL HEADS prior to installation, for acceptance and warranty purposes. The information shall be sent to the following location.

TRAFFIC ENGINEERING DEPARTMENT
2400 15TH STREET NE
CANTON, OH 44105
ATTN: NICHOLAS LOZAK, P.E.

The city will measure "vehicular signal head" with LED lamp units, by type, as per plan by the number of complete units furnished and installed, and will include all support, and mounting hardware, disconnect hangers, enclosure caps, and lamps as specified.

All proposed connections shall be field drilled, bonded, or strapped on the Nostalgia signal poles shall not be permitted.

ITEM 833 - PEDESTRIAN PUSHBUTTON, AS PER PLAN

PEDESTRIAN PUSHBUTTONS SHALL BE AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANT AND FREE ZEE PIECE. IN ORDER TO CONFIRM COORDINATED TIMES, THE REQUIREMENTS OF 833.05 AND 833.06 ARE MODIFIED AS FOLLOWS:

A. THE MAXIMUM FORCE REQUIRED TO OPERATE THE PUSHBUTTON SHALL BE TYPICALLY 50 POUNDS.

B. THE PUSHBUTTON SHALL BE RAISED OR FLUSH AND SHALL BE A MINIMUM OF 2 1/2 INCHES AT THE SMALLEST DIAMETER.

ITEM 834 - REMOVAL OF TRAFFIC SIGNAL INSTALLATION, APP

The removal shall consist of vehicular signal heads, pedestrian signal heads, controllers with cabinet, traffic poles and pedestals, foundations, full boxes, messenger wire, signal cable, conduit, miscellaneous attachments, pole and mast arm mounted signs, and all other portions of a traffic signal installation per section 833.26 unless otherwise stated on the intersection plan sheet. UNLESS OTHERWISE DESIGNATED, ALL TRAFFIC POLES AND ARMS REMOVED SHALL BE DELIVERED TO THE CITY OF CANTON TRAFFIC SIGNAL AND PAVING DEPARTMENT AT 2506 CLEVELAND AVENUE S.E., CANTON, OHIO. IN ADDITION, UNLESS OTHERWISE DESIGNATED, ALL OTHER ITEMS REMOVED EXCEPT MESSANGER WIRE AND SIGNAL CABLES SHALL BE DELIVERED TO THE CITY OF CANTON TRAFFIC SIGNAL DEPARTMENT AT 2300 36TH STREET S.E., CANTON, OHIO. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISPOSAL OF MESSANGER WIRE, SIGNAL CABLES, AND ANY OTHER TRAFFIC SIGNAL ITEMS DESIGNATED BY THE ENGINEER.

ITEM 835 - SIGN SUPPORT, MISC.: NOSTALGIA SIGN SUPPORT, BY TYPE

NOSTALGIA SIGN SUPPORTS MUST MATCH ARMS AND ARMS SHALL BE PACIFIC FAMILY NOS309 SERIES ISEES DETAILS ON SHEETS 43-45 AND MANUFACTURED BY UNITED METAL CORPORATION

332 MADRILE AVENUE N.E.
P.O. BOX 8860
CANTON, OH 44701
PHONE: 330-457-6563

THE CONTRACTOR SHALL FURNISH AND INSTALL NOSTALGIA SIGN SUPPORTS AS PER PLANS. ALL HARDWARE INCLUDING LINCHNUTS AND RELATED EQUIPMENT SHALL BE INCLUDED WITH THIS ITEM.

The manufacturer shall provide written certification to the city that the accepted pole, arm, linchnuts, and decorative shrubes, if or will become a stock item. READILY AVAILABLE WITH REPLACEMENT PARTS FOR At least ten (10) years. All material supplies shall be warranted by the manufacturer for one year after delivery against faulty materials and workmanship. The pole top shall be deformed in the top of the pole shaft for access to the top of the pole shaft for access to cross wiring secured by a Junior wire support, an optional outlet frame shall be internally molded into the pole shaft to accommodate a 20A - 250V GFI duplex receptacle which is also included. The receptacle cover shall be weatherproof white in use and painted to match pole. The arm shall be drilled in the field for required signal locations. Two inch (2") rubber grommets shall be furnished with each arm. Nostalgia signal hanger clamps shall be supplied by the supplier of the manufacturer. As manufactured, as required, a permanent legible marking indication shall be included on each signal support and arm. The following indications shall be included as a minimum:

A. POLE MARKING: MONTH/DAY OF FABRICATION POLE CAUSE.

B. BOLT DIAMETER, POLE LENGTH, BOLT CIRCLE, ANCHOR BOLT DIAMETER, FLANGE BOLT DIAMETER, AND INTERSECTION LOCATION INCLUDING CORNER QUADRANT.

A. ARM MARKING: MONTH/DAY OF FABRICATION ARM CAUSE.

C. TIER DIAMETER, BOLT DIAMETER, AND INTERSECTION LOCATION INCLUDING CORNER QUADRANT.

The ornamental base shall be unincorporal base no. 73. the foundation surface shall be level. In order to accept the base assembly, all proposed extensions, connections, pedestrian signal heads, school speed limit signs, etc. to Nostalgia signal poles shall be field drilled, bonded, or strapped. On the Nostalgia signal poles shall not be permitted.

A. PEDESTRIAN SIGNAL SUPPORT, AS PER PLAN

NOSTALGIA PEDESTRIAN SUPPORTS SHALL BE PACIFIC FAMILY NOS309 SERIES ISEES DETAILS ON SHEETS 43-45 AND MANUFACTURED BY UNITED METAL CORPORATION

332 MADRILE AVENUE N.E.
P.O. BOX 8860
CANTON, OH 44701
PHONE: 330-457-6563

THE CONTRACTOR SHALL FURNISH AND INSTALL NOSTALGIA PEDESTRIAN SUPPORTS AS PER PLANS. PEDESTRIAN SUPPORTS SHALL INCLUDE HANDLE, CHAIN AND GROMMETS. ALL PEDESTRIAN SUPPORTS SHALL BE DESIGNED AND CONSTRUCTED TO MEET THE REQUIREMENTS OF PEDESTRIAN SUPPORT INSTALLATION AND SHALL BE BOLTED TO THE TOP OF THE SHFT AND SIZED TO ACCEPT PEDESTRIAN SIGNALS AS REQUIRED. THE ORNAMENTAL BASE SHALL BE FROM NOSTALGIA CORPORATION BASE NO. 14 AND SHALL BE LEVEL. IN ORDER TO ACCEPT, THE BASE ASSEMBLY AND SHALL BE AT LEAST AS FAR AS THE BOTTOM DIAMETER OF THE ORNAMENTAL BASE CASTING. ALL PROPOSED EXTENSIONS, CONNECTIONS (PEDESTRIAN PUSHERS, ETC.) TO NOSTALGIA PEDESTRIAL SHALL BE FIELD DRILLED, BONDED OR STRAPPED ON THE NOSTALGIA PEDESTRIAL SHALL NOT BE PERMITTED.

NOSTALGIA SIGNAL SUPPORT AND PEDESTRIAL AND DECORATIVE LIGHT POLE PAINTING

NOSTALGIA SIGNAL SUPPORT, ARMS, AND LINCHNUT BRACKETS SHALL BE PAINTED SURFACE PREPARATION, PREP APPLICATION, AND FINISH COATING ON ALL EXPOSED SUBSTRATES. THE FOLLOWING SHALL APPLY:

A. SURFACE PREPARATION

PREP CLEAR STAIN TO SSCP-1 SOLVENT CLEANING SPECIFICATION, PREP PREP CLEAR STAIN TO SSCP-1 BRUSH-OFF BLAST CLEANING SPECIFICATION.

B. COLOR

THE COLOR OF THE POLES SHALL BE BRED GREEN COLOR OR FORMULA 000703 IS ON FILE AT THE HOMETOWN TANK SERVICES CO., INC., CANTON, OHIO.

C. MATERIALS

PRIMER-APPLY ONE COAT OF POLYHANCE UNIVERSAL EPOXY PRIMER-LIGHT DRY AT A DAY DRY FLEXIBILITY OF 2-MM. 60 MINUTES, INTERMEDIATE-APPLY ONE COAT OF POLYHANCE EPOXY-FLUSH COLOR AT A DRY FLEXIBILITY OF 4-HR. 90 MINUTES, AND FINISH-APPLY ONE COAT OF ALUMICOPPER APPLIABLE UHTRAH-CO AT A DRY FLEXIBILITY OF 8-HR. 3-5 MINS.

D. APPLICATION

APPLICATIONS OF COATINGS SHALL BE BY SPRAY METHOD ONLY BY INDUSTRY STANDARDS OF GOOD WORKMANSHIP AND MANUFACTURED.

E. INSPECTION

INSPECTION OF APPLIED COATINGS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS: SUBMITTED PROPOSAL (APPLICATION STANDARD NO.2) HEAT-RELEASE COATING TECHNICALITY WITH WSLICIC GAGES (TSC-P-2).

F. WARRANTY

COATINGS MANUFACTURER SHALL PROVIDE A TEN YEAR 10 YEAR MATERIALS PERFORMANCE WARRANTY.
ITEM 632 - SIGNAL SUPPORT FOUNDATIONS, AS PER PLAN

THIS PROJECT REQUIRES CONSTRUCTION OF SIGNAL SUPPORT FOUNDATIONS IN LOCATIONS WHICH CONTAIN EXISTING UNDERGROUND UTILITIES. ORDERS FOR SIGNAL POLES AND ARM ARMS SHALL BE PLACED SIMULTANEOUSLY AFTER THEIR RESPECTIVE FOUNDATIONS HAVE BEEN CONSTRUCTED.

FOUNDATIONS THAT HAVE BEEN CONSTRUCTED SHALL BE PROTECTED AS PER SECTION 0231.03 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.


NO TIE EXTENSIONS SHALL BE GRANTED FOR DELAYS WHICH ARE CAUSED BY THE CONTRACTOR'S FAILURE TO PLAN FOUNDATION WORK AS SOON AS POSSIBLE IN THE CONTRACTOR'S PROGRESS SCHEDULE.

PAYMENT FOR ITEM 632 - SIGNAL SUPPORT FOUNDATION, AS PER PLAN SHALL BE MADE AT THE UNIT CONTRACT PRICE PER EACH, PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, AND OTHER INCIDENTALS NECESSARY TO ESTATE AND BUILD THE FOUNDATION SYSTEM, COMPLETE IN PLACE AND ACCEPTED.


FOUNDATIONS FOR MASTALUD SIGNAL SUPPORTS AND POLESTRAS SHALL BE CONSTRUCTED AS PER DETAILS SHOWN IN THESE PLANS.

ITEM 632 - CONTROLLER ITEM, MSC-1: PRE-EMPTION

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING PRE-EMPTION DEVICES AROUND THE LOCATIONS AND LOCAL CONTROLLERS AS SHOWN ON THE PLANS. THE PRE-EMPTION ELIGIBILITY SHALL CONFORM TO ODOT SPECIFICATION E.3.2 AND SHALL UTILIZE COMMUNICATIONS TO IDENTIFY THE PRESENCE OF AN EMERGENCY PREMPTIVE DEVICE. IT SHALL CAUSE THE TRAFFIC SIGNAL CONTROLLER TO SELECT A PRE-PROGRAMMED PRE-EMPTION PLAN THAT WILL DISPLAY AND HOLD THE DESIRED SIGNAL PHASE FOR THE DIRECTION OF THE EMERGENCY VEHICLE.


THE EQUIPMENT SHALL BE SHIELDED OR RACK MOUNTED AND EASILY REMOVABLE AND REPLACABLE WITHIN THE CABINET. THE EQUIPMENT SHALL BE SUPPLIED COMPLETELY WIRING IN THE CONTROLLER CABINET AND TESTED. THE SYSTEM SHALL BE CAPABLE OF PRE-EMPTING INTERSECTION FOR EACH APPROACH TO THE INTERSECTION. IT SHALL BE POSSIBLE TO DETECT THE EMERGENCY VEHICLE UP TO 100 FEET FROM THE INTERSECTION.

EACH INTERSECTION SHOWN IN THE PLANS AND THE ADDITIONAL SPACES SHALL BE SUPPLIED WITH THE FOLLOWING COMPONENTS:

A. PRE-EMPT DEEMER
B. PRE-EMPT PHASE SELECTOR ASSEMBLY
C. PRE-EMPT INTERFACE PANEL

AN ADDITIONAL ONE (1) PRE-EMPT DEEMER SUBJECT TO ALL THE REQUIREMENTS AND COMPONENTS LISTED IN THIS SECTION SHALL BE SUPPLIED AS SPARES AND SHALL BE INCIDENTAL TO Bid ITEM 633 - CONTROLLER ITEM, MSC-2: PRE-EMPTION.

THE CONTRACTOR SHALL INVENTORY THE CITY'S EMERGENCY VEHICLES TO DETERMINE COMPATIBILITY OF THE SENSORS WITH THE PROMPTED SYSTEM, EACH VEHICLE THAT IS DETERMINED TO BE NOT COMPATIBLE SHALL BE SUPPLIED WITH NEW SENSORS FOR THE FOLLOWING EMERGENCY VEHICLES AT COST INCIDENTIAL TO THE SYSTEM. THE CITY SHALL BE RESPONSIBLE FOR INSTALLING VEHICLE EQUIPMENT:

A. TYPE 80 VEHICLES
B. TYPE 48 VEHICLES
C. TYPE 60 VEHICLES

THE CITY SHALL BE SUPPLIED WITH SOFTWARE REQUIRED TO CALIBRATE LOG AND OPERATE THE SYSTEM. THE SOFTWARE SHALL BE CAPABLE OF OPERATING ON AN IBM OR IBM COMPATIBLE PERSONAL COMPUTER. TWO (2) OPERATING AND INSTRUCTION MANUALS SHALL BE SUPPLIED WITH THE SOFTWARE.

THE CONTRACTOR SHALL TYPHOON TEST THE INSTALLED SYSTEM AS A;height:100%;width:100%;box-sizing:border-box;line-break:initial;white-space:pre;overflow:hidden;display:flex;flex-direction:column;flex-grow:1;overflow-wrap:break-word;} A HIGHWAY SIGNAL SYSTEM SHALL VERIFY THAT ALL CONNECTIONS ARE PROPERLY MADE TO THE CONTROLLER CABINET. THE CONTRACTOR SHALL CHECK THAT THE RANGES SETTING IS PROPER FOR EACH INTERSECTION. THE CONTRACTOR SHALL DETERMINE THAT ALL PHASE SELECTIONS ARE SELECTING THE PROPER PHASE AND TIMING ACCURATELY. THE CONTRACTOR SHALL VERIFY THAT ALL VEHICLE EMITTERS ARE BEING PROPERLY DETECTED.

IF THE PROMPTED EMERGENCY SYSTEM IS NOT COMPATIBLE WITH THE EXISTING SYSTEM, THE CONTRACTOR SHALL PROVIDE TRAINING FOR UP TO FIFTY (50) PERSONS IN THE OPERATION OF THE SYSTEM. IT SHALL BE PROVIDED WITHIN 48 HOURS OF THE INSTALLATION OF THE SYSTEM. IT SHALL CONSIST OF HANDS-ON INSTRUCTION FOR A MINIMUM OF SIXTY (60) HOURS. THE CONTRACTOR SHALL PROVIDE TRAINING FOR UP TO FOURTEEN (14) PERSONS IN THE INSTALLATION AND MAINTENANCE OF THE SYSTEM. IT SHALL CONSTITUTE OF A MINIMUM OF EIGHT (8) HOURS OF INSTRUCTION. TRAINING SHALL BE SUPPLIED WITHIN SEVEN (7) DAYS OF THE INSTALLATION OF THE SYSTEM. ALL TRAINING SHALL BE HELD IN A CITY-OWNED LOCATION. TRAINING SHALL BE CONDUCTED BY SOMEONE WHO HAS PERFORMED THIS WITHIN THE LAST YEAR AND DOES IT ON A REGULAR BASIS. THE COST OF TRAINING, INCLUDING COURSE MATERIAL, TRAVEL, SUBSISTENCE AND RELATED COSTS, SHALL BE ENTIRELY BORNE BY THE CONTRACTOR AND SHALL BE INCIDENTAL TO THE PRE-EMPTION EQUIPMENT.

PAYMENT FOR ITEM 633 - CONTROLLER ITEM, MSC-2: PRE-EMPTION SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH PRE-EMPTION IN PLACE AND OPERATIONAL AS SHOWN ON THE PLANS, EXCEPT FOR THOSE ITEMS BID SEPARATELY.

ITEM 632 - SIGNALIZATION, MSC-3: PRE-EMPTION DETECTOR CABLE PRE-EMPTION DETECTOR CABLE SHALL BE SHIELDED, 300 Volt, TYPE FE, 2 CONDUCTOR CABLE IN ACCORDANCE WITH ODOT 502.02. PRE-EMPTION DETECTOR CABLE SHALL BE APPROVED FOR BOTH OVERHEAD AND UNDERGROUND USE. THE JACKET SHALL WITHSTAND EXPOSURE TO SUNLIGHT AND ATMOSPHERIC TEMPERATURES AND STRESSES EXPECTED IN NORMAL INSTALLATIONS.

ITEM 632 - SIGNALIZATION, MSC-3: PRE-EMPTION DETECTOR THE PRE-EMPTION SYSTEM EQUIPMENT BID ON THIS PROJECT SHALL EMPLOY SOUND DETECTION COMMUNICATIONS. OTHER TYPES OF PRE-EMPTION SYSTEMS SHALL NOT BE PERMITTED. PRE-EMPTION DEVICES SHALL BE BLACK IN COLOR AND CONFORM OF A LIGHT WEIGHT, WEATHERPROOF AND DIRECTIONAL ASSEMBLY. EACH DETECTOR SHALL BE 360 DEGREE ADJUSTABLE. PRE-EMPTION DETECTORS SHALL HAVE INTERNAL CIRCUITRY TO SEND THE INDICATIVE SIGNAL TO THE PRE-EMPTION PHASE SELECTOR ASSEMBLY VIA THE PRE-EMPTION DETECTOR CABLE. PRE-EMPTION DETECTORS SHALL BE SUPPLIED IN MAST ARM MOUNTING HARDWARE WHICH INCLUDES STAINLESS STEEL BRACKETS, BOLTS, WASHERS AND BRACKETS AS APPROVED BY ODOT.
ITEM 632 - SIGNALIZATION, MISC. - PTZ CAMERA

THE CONTRACTOR SHALL FURNISH AND INSTALL A CLOSED CIRCUIT TELEVISION SYSTEM CONSISTING OF FIELD EQUIPMENT AND OTHER AUXILIARY AND INCIDENTAL EQUIPMENT REQUIRED TO ASSEMBLE A FULLY FUNCTIONING INTEGRATED TRAFFIC SURVEILLANCE SYSTEM. THE CCTV SYSTEM SHALL BE FURNISHED BY HONEYWELL, AXIS OR ALTRACCO ELECTRONICS. ALL PROVIDED COMPONENTS SHALL PROVIDE A MEAN TIME BETWEEN FAILURE (MTBF) OF 50,000 HOURS MINIMUM. COMPLIANCE WITH APPLICABLE ISO QUALITY ASSURANCE STANDARDS IS REQUIRED.

FOR EACH CAMERA, THERE SHALL BE SUPPLIED, INSTALLED, CONNECTED TO THE CAMERA AND MADE OPERATIONAL, A VIDEO/DATA TRANSMITTER. THE TRANSMITTER SHALL BE COMPATIBLE WITH ETHERNET COMMUNICATIONS PROTOCOLS, THE TRANSMITTER SHALL BE MOUNTED WITHIN A NEMA 4 ENCLOSURE AT THE BASE OF THE POLE ON WHICH THE CAMERA IS MOUNTED.

FOR EACH CAMERA THERE SHALL BE SUPPLIED, INSTALLED, CONNECTED TO THE CAMERA AND MADE OPERATIONAL, AN OUTDOOR RATED POWER. THE POWER SUPPLY SHALL MEET THE SAME ENVIRONMENTAL SUPPLY PERFORMANCE STANDARDS AS THOSE OF THE CAMERA AND VIDEO/DATA TRANSMITTER. THE POWER SUPPLY SHALL BE MOUNTED WITHIN THE SIGNAL CONTROLLER CABINET.

THE CCTV FIELD EQUIPMENT REQUIRED FOR THE CAMERA SITE SHALL INCLUDE INSTALLATION OF THE ITEMS DESCRIBED BELOW. PROCESS AND CONTROL EQUIPMENT FOR THE VIDEO/FIELD WITH THE SURVEILLANCE CAMERAS IS INCLUDED AS PART OF ITEM 622 SIGNALIZATION, MISC. - PTZ CAMERA.

CAMERA

THE CAMERA SHALL MEET OR EXCEED THE FOLLOWING MINIMUM REQUIREMENTS:

1. COLOR MONOCHROME ADVANCED DIGITAL SIGNAL PROCESSING (CSDP)
2. 1/3 INCH CHIPS, 10.1 MM TO 73.2 MM WITH DIGITAL INPUT
3. UTILIZE 1/4 INCH CCD, USING THE MOST CURRENT TECHNOLOGY
4. PROVIDE A MINIMUM RESOLUTION OF 470 TV LINES
5. PROVIDE SHARP, DETAINED IMAGES DOWN TO 0.1 LUX COLOR, 0.08 LUX COLOR WITH 1/4 SECOND SHUTTER, AND 0.1 LUX MONOCHROME
6. WHEN SWITCHED TO MONOCHROME MODE, THE CAMERA MUST AUTOMATICALLY ENABLE THE IR CUT FILTER
7. CONTINUOUS AUTOMATIC OR MANUAL OVERRIDE OF THE AUTO FOCUS SETTINGS MUST BE ALLOWED, AUTO IRIS WITH MANUAL OVERRIDE MUST ALSO BE ALLOWED

DOME

THE DOME HOUSING/DOME SHALL MEET OR EXCEED THE FOLLOWING MINIMUM REQUIREMENTS:

1. BE COMPATIBLE WITH A HIGH-SPEED MALYSIA ASSEMBLY USING PRECISION MOTORS AND HIGH STRENGTH BELT DRIVE, RESULTING IN ACCURATE OPERATION. GENTLE AND SMOOTH
2. INCORPORATE A SEALED SLIP RING TO PROVIDE A CONTINUOUS, THREE-HORSE HOEVEY DEGREE OF MOVEMENT OF THE DOME HOUSING/DOME TO THE ZOOM POSITION FOR GREATER ADJUSTMENT

MANUAL PAN SPEEDS RANGE FROM 0.6 RPS TO 4000 RPS PER SECOND.

MANUAL TILT SPEEDS MUST RANGE FROM 0.6 RPS TO 2000 RPS PER SECOND.

AUTO-PVCD TRACKING THAT ALLOWS THE DOME TO AUTOMATICALLY TURN 360-DEGREES WHEN REACHING ITS LIMITS TO ALLOW THE OPERATOR TO AUTOMATICALLY TRACK AN INDIVIDUAL MOVING DIRECTLY BELOW THE CAMERA.

DUST TIGHT, WEATHERPROOF, AND ABLE TO WITHSTAND VECUAL LOSS IMPACT IN ACCORDANCE WITH THE INTERNATIONAL ELECTRICITY COMMISSION STANDARD 6859.

RECEPTIBLE OF DOME SHALL BE AVAILABLE IN EITHER CLEAR OR SMOKE, AND SHALL BE ATTACHED WITH A KEYLOCK TO RESIST TAMPERING.

THERMOSTAT-CONTROLLED HYDRAULIC HEATER AND BLOWER MUST BE AVAILABLE TO MAINTAIN A SUITABLE OPERATING TEMPERATURE.

BUILT-IN POWER ISOLATION AND LIGHTNING SURGE PROTECTION

EQUIPPED WITH A SUN SHADE

PRESSURIZED HOUSING WIL SPRE RESISTANT TO SALT AIR, DUST, HUMIDITY, OR SMOKE.

MOUNTING BRACKET

THE MOUNTING HARDWARE SHALL PERMIT THE CAMERA TO BE SECURELY ATTACHED TO THE TOP OR SIZE OF A WOOD OR STEEL POLE. ALL BRACKETS, STRIPS, AND MISCELLANEOUS HARDWARE TO ATTACH THE HOUSING AND POWER SUPPLY SHALL BE INCLUDED AS PART OF THIS ITEM. ALL PARTS SHALL BE MADE OF CORROSION RESISTANT MATERIALS SUCH AS STAINLESS STEEL, ALUMINUM, OR BRASS. THE MOUNTING HEIGHT SHALL BE A MINIMUM OF 20 FEET ABOVE THE ROADWAY.

CABINET

A POLE MOUNTED NEW 4X RATED CABINET SHALL ENCLOSE THE VIDEO TRANSMISSION EQUIPMENT AND A POWER SUPPLY ASSEMBLY. THE CABINET SHALL MEET THE ENVIRONMENTAL REQUIREMENTS OF THE VIDEO TRANSMISSION EQUIPMENT. ALL EQUIPMENT SPECIFIED NEAR SHALL OPERATE ON A POWER SOURCE BETWEEN 85 TO 135 VAC, 47, 50, SINGLE PHASE.

LIGHTING PROTECTION

THE CONTRACTOR SHALL FURNISH AND INSTALL A PROPERLY FUNCTIONING LIGHTINGリAD AND TRANSIENT SURGE SUPPRESSOR TO PROTECT THE FIELD EQUIPMENT FROM LIGHTNING STRIKES AND SUPPLY VOLTA GE SURGES. THIS ITEM IS TO INCLUDE A LIGHTNING ROD.

TESTING AND CERTIFICATION

A. THE CONTRACTOR SHALL DEMONSTRATE THE FUNCTIONALITY OF THE PTZ CAMERA UPON COMPLETION OF INSTALLATION, DOCUMENTING THE RESULT OF ALL TESTS AND PROVIDING THESE RESULTS TO THE OWNER. THE PTZ CAMERA SHALL BE TESTED IN ACCORDANCE WITH THE FOLLOWING:

1. THE CONTRACTOR SHALL CONDUCT A COMPLETE INSTRUCTION AND TEST OF ALL INSTALLED PTZ CAMERA EQUIPMENT. THIS INCLUDES TESTING AND VERIFYING OPERATION WITH CONNECTED EQUIPMENT.
2. THE CONTRACTOR SHALL PROVIDE STAFF TO TEST ALL DEVICES AND ALL OPERATIONAL FEATURES OF THE SYSTEM FOR HONESTY BY THE OWNER'S REPRESENTATIVE AND THE AUTHORITY HAVING JURISDICTION. ALL TESTING MUST BE INSTRUMENTED BY THE OWNER'S REPRESENTATIVE, ACCORDING TO ACCEPTANCE.
3. THE TESTING AND CERTIFICATION SHALL TAKE PLACE AS OF:

a. THE PTZ CAMERA SHALL BE TESTED IN CONJUNCTION WITH THE MANUFACTURER'S REPRESENTATIVE.

b. ALL REQUIREMENTS NOTED IN THE ABOVE TEST SHALL BE CORRECTLY.

c. TEST RESULTS SHALL BE SUBMITTED TO THE CONSULTANT OR OWNER'S REPRESENTATIVE.

d. THE TEST AND CORRECTION OF ANY DEFICIENCIES SHALL BE RECOMMENDED BY THE OWNER'S REPRESENTATIVE, AND NOTED.

ea. THE OWNER'S REPRESENTATIVE SHALL ACCEPT THE SYSTEM.

f. THE SYSTEM TEST SHALL BE WITNESSED BY THE AUTHORITY HAVING JURISDICTION. ANY DEFICIENCIES NOTED DURING THE TESTING MUST BE CORRECTED.

A. A LETTER OF CERTIFICATION SHALL BE PROVIDED TO INDICATE THAT THE TESTS HAVE BEEN PERFORMED, AND ALL DEVICES ARE OPERATIONAL.
THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540

THE CONTROLLER UNIT, PROVIDED IN THIS PROJECT SHALL BE A NEW TYPE MANUFACTURED BY ECONOLITE CONTROL PRODUCTS 3360 E. LA PALMA AVE. ANAHEIM, CALIFORNIA, 92807 TELEPHONE: 714-257-6540
**Grounding and Bonding**

The requirements of the construction and material specifications (if any) and the 12 series of standard construction drawings are modified as follows:

1. **All Metallic Parts Containing Electrical Conductors** shall be permanently joined to form an effective ground fault current path back to the grounded conductor in the power service disconnect switch.
   - Provide an equipment grounding conductor in metallic conductors (2.0.0.4) in addition to the conductors specified and bond the conduct to this grounding conductor.
   - When an equipment grounding conductor is required in plastic conduit (1.0.0.3), the installation shall include a separate equipment grounding conductor in addition to the conductors specified.
   - Metallic conduit carrying the loop wires from in the pavement to the pull box splice location will only be bonded at the pull box end, and will not contain an equipment grounding conductor.
   - If multiple conduit run begins and end at the same points, only one equipment grounding conductor is required.
   - If an equipment grounding conductor is needed in conduit between signalized intersections for underground interconnected cable, the grounding system for each signalized intersection will be separated by midway between the intersections.
   - The signal wires at signalized intersections will be used as the conductive path from corner to corner if conduit is not provided under the roadway. Where conduit connects the corners of an intersection, an equipment grounding conductor shall be used in the conduit.

2. **Conduit**
   - The 120.0.4 conduit shall have grounding bushings installed at all termination points. The bushing material shall be compatible with galvanized steel conduit and the grounding lug materials shall be compatible for use with copper wire. Threaded or compression type bushings may be used.
   - The 120.0.5 conduit shall have the inside and outside diameters of the conduit deburred at all termination points.
   - Both ends of metallic conduit shall be bonded to the equipment grounding conductor.
   - Metallic conduit may be bonded to metallic boxes through the use of conduit fittings approved for this type of connection, with the box bonded to the equipment grounding conductor.

3. **Wire for Grounding and Bonding**
   - Use insulated copper wire for the equipment grounding conductor. Bonding jumpers in boxes and enclosures may be bare or insulated copper wire. Wire size shall be as follows:
     - Use a #4 wire between the power service and supports, poles, pedestals, controller or flasher cabinets.
     - Use a minimum #6 wire between loop detector pull boxes and the first conduit that requires a larger size as specified in 3.J above.
     - The insulation shall be green or green with yellow stripes. For #4 or #6 larger, insulation may also be black with green tape labels installed at all access points.

4. **Ground Rod**
   - A 4 x 4 grounding rod will be used in foundations and concrete walls for the grounding conductor (ground wire) raceway to the ground rod. Shielded metallic conduit may be used. Both ends of the conduct shall be bonded to the grounding conductor.
   - The typical grounding conductor grounding wire shall be #6 bare or insulated copper.

5. **The Green Conductor in Signal Cables** is conductor #4 shall not be used to supply power to a signal indication. It will be connected to the signal body as an equipment grounding in aluminum heads and shall be bonded in plastic heads. Unshielded conductors shall be grounded in the cabinet. Typical use of conductors is as follows:
   - **Color**: Black, White, Yellow, Orange, Blue
   - **Material**: Stainless Steel, Copper, PVC, and Fiber Optic
   - **Function**: Signal, Power, Equipment Ground, Equipment Grounding, Power Only, Bonding

6. **Power Service and Disconnect Switch**
   - At the power service location, the grounding conductor ground wire from the disconnect switch neutral bar to the ground rod shall be a continuous, unshielded conductor. If spliced, it shall be an extruded Tefzone butt splice.

**Vehicle Detection**

Stop line detection
- The detection zone will be located 5’ in front of the stop line. The length and spacing will be as shown below.

<table>
<thead>
<tr>
<th>Location</th>
<th>Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>50’</td>
<td></td>
</tr>
<tr>
<td>25’</td>
<td></td>
</tr>
<tr>
<td>0’</td>
<td></td>
</tr>
</tbody>
</table>

**Vehicle Detection**

**Guarantee**

The contractor shall warrant that the traffic control system installed as part of this contract shall operate satisfactorily for a period of 180 days following completion of the 10-day performance test. The contractor and/or supplier shall be responsible for new equipment warranty for a one-year period.

In the event of an unsatisfactory operation, the contractor shall correct faulty installations, make repairs and replace defective parts with new parts 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, custom manufactured’s guarantee shall be turned over to the maintaining agency following acceptance of all equipment.
### Field Waring Hook-Up Chart (Mahanoy Rd. & Harmont Ave.)

<table>
<thead>
<tr>
<th>Signal Head</th>
<th>Head Indicator</th>
<th>Terminal Head</th>
<th>Flash</th>
</tr>
</thead>
<tbody>
<tr>
<td>61 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>62 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>63 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>64 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>65 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>66 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>67 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>68 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>69 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>70 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>71 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>72 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>73 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>74 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>75 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>76 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>77 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>78 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>79 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>80 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>81 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>82 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>83 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>84 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>85 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>86 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>87 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>88 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>89 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>90 (W7)</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

### Typical Signal Elevation View

**Note:** The above detail shows a typical arrangement that does not necessarily match every application as shown in the plans. Dimensions (L1) is the distance from the pole to the signal, sign or camera. In some cases, the distances from the pole to each additional signal, sign or camera may exceed the dimensional layout. The order of the letters indicates the order of the mounted items on each individual mast arm.

**Pole Orientation Plan View**

1. All angles measured clockwise from the mast arm/antenna axis.
2. The pole orientation plan view shows the orientation angles for each mast arm.

**Note:** Mast arm mounting height shall be determined by contractor dependent upon manufacturer.
NOSTALGIC FOUNDATION DETAIL

NOTES:
1. ALL FOUNDATIONS SHALL BE CEMENTED PIER TO AVOID DISTURBING SURROUNDING SOIL. A TEMPERED STEEL CASING MAY BE REQUIRED IF FOUNDATION IS IN OR DEEPER THAN 12 IN. DEEP. ATTACH FOUNDATION TO THE FOUNDATION. THEN THESE FOUNDATIONS SHALL BE CONCRETE TO THE FOUNDATION.
2. ACCESSORY BOLT PATTERNS SHALL BE PROVIDED BY POLE MANUFACTURER (U.L.C.)
3. ROUGHING STEEL SHALL BE ASSEMBLED IN CASES USING A. SCREW OR BOLT.
4. FOUNDATION TOP SHALL BE ROUND AND LEVEL TO DECORATIVE FOUNDATION.

**ONLY APPLY IN UPLAND AREAS**
A. TREE TO BE PLANTED AEA AT LEAST 1' ABOVE PROJECTED FINISHED GROUND GRADE.
B. FUSIBLE RUBBER SHEETING TO BE USED TO AVOID WATER FROM WORKING VAPOUR. PIPE UNDERGROUND. ZONE PIPE TO PROTECT PIPE FROM FINISHED GRADE. ELEVATED ZONE PIPE TO PROTECT PIPE FROM FINISHED GRADE. ELEVATED ZONE PIPE TO PROTECT PIPE FROM FINISHED GRADE. ELEVATED ZONE PIPE TO PROTECT PIPE FROM FINISHED GRADE.
C. TUBE TO BE PLANTED AEA AT LEAST 1' ABOVE PROJECTED FINISHED GROUND GRADE.
D. TUBE TO BE PLANTED AEA AT LEAST 1' ABOVE PROJECTED FINISHED GROUND GRADE.

1. CUT AND REMOVE EXPOSED TREE TO FINISHED GRADE AFTER CONCRETE IS CURBED.

<table>
<thead>
<tr>
<th>FOUNDATION</th>
<th>DIM.-1</th>
<th>DIM.-2</th>
<th>DIM.-4</th>
<th>DIM.-4</th>
<th>IN</th>
<th>DIM.-3</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMENSIONS</td>
<td>6&quot; x 6&quot;</td>
<td>6&quot; x 6&quot;</td>
<td>6&quot; x 6&quot;</td>
<td>6&quot; x 6&quot;</td>
<td>6&quot;</td>
<td>6&quot; x 6&quot;</td>
</tr>
</tbody>
</table>

POLE WIRING DIAGRAM

NOTE:
1. THE COST FOR WIRE TO ALL NOSTALGIC LUMINARIES AND RECEPTACLES SHALL BE INCLUSIVE TO THE NOSTALGIC SYSTEM. ALL WIRING IN POLICE AND CIRCUITS TO LIGHTS AND RECEPTACLES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. ALL WIRING MUST BE IN EACH NOSTALGIC POLE BASE SHALL BE NO. 8 WIRE AND CONNECTED TO 4-WIRE FUSE HOUSING. THE COST FOR THIS WIRE SHALL BE INCLUSIVE TO THE NOSTALGIC SYSTEM.
3. IN-LAND FUSE HOUSING SHALL BE RATED 40 AMPERES (SCREW-ON TYPE). INSTALL FUSES IN PHASE LINES AND FUSE LUG TO 1/4" SPLIT TUBE (PISTOL GRIP) FOR GROUND GROUND WIRE. INSTALL FUSES IN PHASE LINES AND FUSE LUG TO 1/4" SPLIT TUBE (PISTOL GRIP) FOR GROUND GROUND WIRE. COMPLETE GROUND CABLE MUST BE ELECTRICALLY CONNECTED TO THE GROUND POINT. GROUND CABLE MUST BE ELECTRICALLY CONNECTED TO THE GROUND POINT. GROUND CABLE MUST BE ELECTRICALLY CONNECTED TO THE GROUND POINT. GROUND CABLE MUST BE ELECTRICALLY CONNECTED TO THE GROUND POINT.

4. THE POLE RECEPTACLES SHALL BE ALTERNATELY NEEDED TO PHASE A AND PHASE B AS SHOWN IN THE POLE WIRING DIAGRAM.
5. FOR LIGHTS, USE 3-WAY FUSES. FOR RECEPTACLES, USE 15-WAY FUSES. AMP RATING FOR LIGHTS SHALL BE BASED UPON 70 DEGREES F. AMP RATING FOR LIGHTS SHALL BE BASED UPON 70 DEGREES F. AMP RATING FOR LIGHTS SHALL BE BASED UPON 70 DEGREES F. AMP RATING FOR LIGHTS SHALL BE BASED UPON 70 DEGREES F.

6. UNLESS OTHERWISE NOTED IN THESE PLANS, ALL WIRING SHALL BE NOSALGIC NO. 8 WIRE. CONCEPTS TO WIRE MUST BE ELECTRICALLY CONNECTED TO THE GROUND POINT. GROUND CABLE MUST BE ELECTRICALLY CONNECTED TO THE GROUND POINT. GROUND CABLE MUST BE ELECTRICALLY CONNECTED TO THE GROUND POINT. GROUND CABLE MUST BE ELECTRICALLY CONNECTED TO THE GROUND POINT.

7. UNDERGROUND BRANCH CIRCUIT MACHINES SHALL BE "RAIN".

8. UNDERGROUND BRANCH CIRCUIT MACHINES SHALL BE "RAIN".