

**PROTECTION OF TREES**

TREE PROTECTION MEASURES SHALL BE INSTALLED AS SPECIFIED PRIOR TO THE START OF CONSTRUCTION.

SPECIAL CARE SHALL BE TAKEN TO AVOID DAMAGE TO TREES AND THEIR ROOT SYSTEMS WHICH ARE NOT CALLED FOR REMOVAL. IN GENERAL, WHERE THE LINE OF TRENCH FALLS WITHIN THE LIMITS OF THE LIMB SPREAD, THE LEAVING OF HEADERS ACROSS THE TRENCH TO PROTECT ROOTS WILL BE REQUIRED. THE OPERATION OF ALL EQUIPMENT, PARTICULARLY WHEN EMPLOYING BOOMS, SHALL BE CONDUCTED IN A MANNER WHICH WILL NOT INJURE TREES, TRUNKS, BRANCHES OR THEIR ROOTS UNLESS SUCH TREES ARE DESIGNATED FOR REMOVAL. THE STORAGE OF MATERIALS, AND THE DEPOSITION OF EXCAVATION SHALL BE PROHIBITED WITHIN THE TREE CANOPY OF ANY TREE TO BE SAVED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A QUALIFIED TREE SERVICE TO TRIM TREE BRANCHES AND DAMAGED ROOTS (1/4" DIAMETER OR LARGER) AND TO PAINT ALL CUTS OR WOUNDS TO THE TREE WITH APPROVED TREE WOUND DRESSING. THE TREE SERVICE SHALL BE ON THE JOB SITE AT ALL TIMES WHEN EXCAVATION AND BACKFILLING OPERATIONS ARE TAKING PLACE WITHIN THE LIMITS OF THE LIMB SPREAD OF ALL TREES TO BE SAVED. SHOULD THE CONTRACTOR'S OPERATIONS DAMAGE ANY TREE TO SUCH AN EXTENT THAT IT, IN THE OPINION OF THE TREE SERVICE, WILL NOT LIVE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH REMOVING THE TREE AND ALL PAYMENTS TO THE PROPERTY OWNER FOR THE VALUE OF THE REMOVED TREE, AS DETERMINED BY AN ARBORIST MUTUALLY AGREED UPON BY THE CITY OF MENTOR AND THE CONTRACTOR.

**PLACEMENT OF TREE PROTECTIVE BARRIERS**

PRIOR TO CONSTRUCTION, TREE PROTECTIVE BARRIERS SHALL BE PLACED AROUND ALL TREES TO BE PRESERVED AND ANY OTHER VEGETATION LOCATED NEAR CONSTRUCTION ACTIVITY WHICH IS TO BE SAVED. THESE BARRIERS WILL BE LOCATED JUST OUTSIDE OF THE TREE'S CANOPY.

PROTECTIVE BARRIERS SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE AND FINAL ACCEPTANCE HAS BEEN ISSUED BY THE CITY OF MENTOR.

AREAS WITHIN THE PROTECTIVE BARRIERS SHALL BE FREE OF ALL BUILDING MATERIALS, DIRT, CHEMICALS (INCLUDING GAS, OIL AND CONTAMINATED WATER), CONSTRUCTION DEBRIS, VEHICLES, AND DEVELOPMENT ACTIVITIES.

NO DISTURBANCE SHALL OCCUR WITHIN THE PROTECTIVE AREA OF A TREE DESIGNATED TO BE PRESERVED.

**SPECIFICATIONS OF TREE PROTECTIVE BARRIERS**

TREE PROTECTIVE BARRIERS WILL BE FLORESCENT POLYETHYLENE LAMINAR SAFETY FENCING, MINIMUM FOUR (4) FEET IN HEIGHT OR A SECURELY INSTALLED POST AND RAIL WOODEN FENCE, MINIMUM FOUR (4) FEET IN HEIGHT WITH A MINIMUM TWO (2) INCH X FOUR (4) INCH RAIL. THE FENCE SHALL BE MADE HIGHLY VISIBLE WITH A FLORESCENT ORANGE OR YELLOW PAINT. SUCH BARRIERS SHALL REMAIN INTACT THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS, AND IF DISTURBED MUST BE RESTORED PRIOR TO THE END OF THE WORKING DAY.

**CONTINGENCY ITEMS**

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE FOR USE "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

**ITEM 203 - LINEAR GRADING, AS PER PLAN**

THIS ITEM IS INTENDED FOR USE TO GRADE THE GRASS AREAS BEHIND THE PROPOSED PAVEMENT WIDENING TO PROVIDE POSITIVE DRAINAGE TO EXISTING AND PROPOSED DRAINAGE STRUCTURES, AS DIRECTED BY THE ENGINEER, AND SHALL INCLUDE ALL EXCAVATION AND EMBANKMENT NECESSARY TO PERFORM SUCH GRADING.

THE APPROXIMATE LIMITS OF LINEAR GRADING, AS PER PLAN ARE AS FOLLOWS:

- S.R. 84 STA. 41+50± TO STA. 77+00±, LT.
- S.R. 84 STA. 113+50± TO STA. 123+20±, LT.
- S.R. 84 STA. 41+50± TO STA. 126+80±, RT.
- S.R. 306 STA. 14+50± TO STA. 19+00±, LT.
- S.R. 306 STA. 14+20± TO STA. 19+50±, RT.

A TOTAL QUANTITY OF 140 STATIONS HAS BEEN INCLUDED IN THE BID PROPOSAL FOR THIS ITEM

NOTE: THE EXCAVATION QUANTITY IN THE BID PROPOSAL IS FOR THE PAVEMENT WIDENING AREA ONLY. THE EMBANKMENT QUANTITY IN THE BID PROPOSAL IS FOR THE FILL REQUIRED FOR THE S.R. 306 WIDENING NEAR THE I-90 ENTRANCE RAMP ONLY.

**MANHOLES AND CATCH BASINS ADJUSTED TO GRADE, AS PER PLAN**

THIS ITEM IS INTENDED FOR USE WHERE, AS DETERMINED BY THE ENGINEER, MANHOLE OR CATCH BASIN CASTINGS NEED TO BE ADJUSTED TO GRADE. ADJUSTMENTS ARE NOT TO EXCEED SIX INCHES (6") VERTICALLY IN EITHER DIRECTION. THE CONTRACTOR SHALL INCLUDE THE COST OF EXCAVATION, GRANULAR BACKFILL AND PAVEMENT REMOVAL AND REPLACEMENT IN KIND WHERE NEEDED AROUND THE MANHOLES AND CATCH BASINS IN THE UNIT BID PRICE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED AS CONTINGENCY ITEMS FOR USE AS DIRECTED BY THE ENGINEER, AND ARE IN ADDITION TO THOSE ITEMS SPECIFICALLY CALLED OUT ON THE PLANS:

- ITEM 604 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN 8 EACH
- ITEM 604 - CATCH BASIN ADJUSTED TO GRADE, AS PER PLAN 2 EACH

**PARTIAL DEPTH PAVEMENT REPAIR**

A PARTIAL DEPTH PAVEMENT REPAIR ITEM HAS BEEN INCLUDED IN THE BID PROPOSAL FOR AREAS OF EXISTING ASPHALT PAVEMENT THAT, AS DETERMINED BY THE ENGINEER, EXHIBITS DETERIORATION AT THE SURFACE AND NEEDS TO BE REPLACED PRIOR TO BEGINNING ASPHALT OVERLAY OPERATIONS. THE AREAS TO BE REPAIRED SHALL BE MARKED IN THE FIELD BY THE ENGINEER. THE DEPTH OF PAVEMENT REPAIR SHALL BE AS DIRECTED BY THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED AS A CONTINGENCY ITEM FOR USE AS DIRECTED BY THE ENGINEER:

- ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR 500 S.Y.

**EROSION CONTROL**

SILT FENCE EROSION CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED ADJACENT TO ALL NEW AND EXISTING DITCH INLET BASINS AND ALONG THE BOTTOM OF THE SLOPE OF THE PROPOSED EMBANKMENT ON S.R. 306, NORTH OF THE I-90 RAMP. RESTORATION SHALL CLOSELY FOLLOW THE PAVEMENT CONSTRUCTION.

**ITEM SPECIAL - MISCELLANEOUS METAL**

DURING THE CONSTRUCTION OF THIS PROJECT, EXISTING CASTINGS MAY, AS DETERMINED BY THE ENGINEER, PROVE TO BE UNSUITABLE. TO PROVIDE FOR THIS CONTINGENCY, AN ESTIMATED QUANTITY OF MISCELLANEOUS METAL HAS BEEN INCLUDED FOR USE AS DIRECTED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH, AS APPROVED BY THE ENGINEER, FOR THE PARTICULAR STRUCTURES IN QUESTION.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED FOR USE AS DIRECTED BY THE ENGINEER:

- ITEM SPECIAL - MISCELLANEOUS METAL 5000 LBS.

**ITEM 254 - PAVEMENT PLANING, BITUMINOUS**

THE EXISTING PAVEMENT SHALL BE PLANED 1-1/4 INCHES IN DEPTH TO THE LIMITS AS SHOWN ON THE PLAN SHEETS AND MAY BE ADJUSTED IN THE FIELD AS DIRECTED BY THE ENGINEER.

PAVEMENT PLANING WORK ZONE LENGTHS SHALL BE KEPT TO AN ABSOLUTE MINIMUM. TRAFFIC SHALL NOT BE EXPOSED TO LONGITUDINAL VERTICAL FACES DURING NON-WORKING HOURS.

TRANSVERSE VERTICAL FACES SHALL BE TEMPORARILY RAMPED A MINIMUM OF TEN (10) FEET IN LENGTH. THE TRAFFIC SHALL BE WARNED WITH AN OW-62 "BUMP" SIGN IN ADVANCE OF THE PLANING AREA, EXCEPT AT STOP CONDITIONS.

THE DIFFERENTIAL BETWEEN EXISTING CASTING ELEVATIONS AND THE SURROUNDING PAVEMENT SHALL NOT BE GREATER THAN ONE AND ONE-HALF (1-1/2) INCH WHEN EXPOSED TO TRAFFIC.

ANY NECESSARY CLEANING ALONG THE EDGE OF PAVEMENT OR EXISTING CURBS, INCLUDING DEBRIS REMOVAL, SHALL BE INCLUDED IN THE COST OF PAVEMENT PLANING.

THE TIME BETWEEN PAVEMENT PLANING OPERATIONS AND PAVEMENT RESURFACING OPERATIONS SHALL BE KEPT TO A MINIMUM AND SHALL IN NO CASE EXCEED TWO (2) WEEKS TO PROTECT THE EXISTING SUBPAVEMENT FROM UNDUE EXPOSURE.

**ITEM 254 - PATCHING PLANED SURFACES**

ANY LOOSE OR DISBONDED PAVEMENT REMAINING AFTER PLANING SHALL BE REMOVED DOWN TO SOLID SUBSTRATE AS DIRECTED BY THE ENGINEER AND BE REPAIRED PER ODOT 254.05. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE PLANS FOR USE AS A CONTINGENCY ITEM FOR USE AS DIRECTED BY THE ENGINEER:

- ITEM 254 - PATCHING PLANED SURFACES 3000 SQ. YDS.

**CONCRETE WALK REPLACEMENT**

DURING THE CONSTRUCTION OF THIS PROJECT, THE ENGINEER MAY DIRECT THE CONTRACTOR TO REMOVE AND REPLACE EXISTING CONCRETE WALK IN ADDITION TO THOSE AREAS OF WALK SPECIFICALLY CALLED OUT FOR REPLACEMENT IN THE PLANS. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AS CONTINGENCY ITEMS FOR USE, AS DIRECTED BY THE ENGINEER, TO REMOVE AND REPLACE AREAS OF EXISTING CONCRETE WALK:

- ITEM 608 - 4" CONCRETE WALK 3000 S.F.
- ITEM 202 - WALK REMOVED 3000 S.F.

**TRAFFIC SIGNAL LOOP DETECTORS**

AT ALL INTERSECTIONS ALONG THE PROJECT THAT ARE NOT DETAILED IN THE TRAFFIC CONTROL SIGNALIZATION PLANS, THE CONTRACTOR SHALL REPLACE THE EXISTING LOOP DETECTORS THAT ARE DAMAGED BY THE PAVEMENT PLANING AND/OR WIDENING OPERATIONS. THE CONTRACTOR SHALL INSTALL NEW LOOP DETECTORS AT APPROXIMATELY THE SAME SIZE AS EXISTING AT LOCATIONS AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHALL NOTIFY THE CITY PRIOR TO DISTURBING OR DAMAGING ANY EXISTING LOOP DETECTORS.

THE COST TO REPLACE LOOP DETECTORS SHALL INCLUDE THE COST OF SPLICE KITS NECESSARY TO COMPLETE THE LOOP DETECTOR.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE PLANS TO REPLACE LOOP DETECTORS LOCATED WITHIN THE RESURFACING LIMITS AND NOT SPECIFICALLY CALLED OUT ON THE SIGNALIZATION PLANS:

- ITEM 632 - DETECTOR LOOP 6 EACH

ALL LOOP DETECTORS SHALL BE INSTALLED AFTER PAVEMENT PLANING, PRIOR TO THE INSTALLATION OF THE SURFACE COURSE.

**TEMPORARY PAVEMENT MARKINGS**

THE ROADWAY SHALL NOT BE OPENED TO TRAFFIC UNTIL EITHER THE PERMANENT OR TEMPORARY PAVEMENT MARKINGS ARE IN PLACE. THE FOLLOWING TEMPORARY PAVEMENT MARKINGS HAVE BEEN PROVIDED FOR USE AS DIRECTED BY THE ENGINEER FOR PLACEMENT AFTER PAVEMENT PLANING OPERATIONS, IF NEEDED:

- ITEM 614 - TEMPORARY CENTERLINE (DOUBLE, SOLID), CLASS 1, 642 PAINT 4.0 MILES
- ITEM 614 - TEMPORARY LANE LINE, CLASS 1, 642 PAINT 2.0 MILES
- ITEM 614 - TEMPORARY STOP LINE, CLASS 1, 642 PAINT 500 L.F.
- ITEM 614 - TEMPORARY CHANNELIZING LINE, CLASS 1, 642 PAINT 2000 L.F.
- ITEM 614 - TEMPORARY DOTTED LINE, CLASS 1, 642 PAINT 500 L.F.

**REMOVAL AND/OR RELOCATION OF EXISTING TRAFFIC SIGNS**

ALL EXISTING GROUND MOUNTED AND/OR POLE MOUNTED TRAFFIC SIGNS THAT CONFLICT WITH, OR ARE IN THE PATH OF THE PROPOSED PAVEMENT WIDENING SHALL EITHER BE RELOCATED OR REMOVED, AS DIRECTED BY THE ENGINEER, OR DESIGNATED OR DETAILED ON THE PLANS.

WHEN RELOCATING EXISTING SIGNS, THE CONTRACTOR SHALL INCLUDE NEW GROUND MOUNTED SUPPORTS (NO. 3 POSTS) IF HE IS UNABLE TO SALVAGE THE EXISTING POSTS. THE LOCATION OF THE RELOCATED SIGNS SHALL BE AT THE APPROPRIATE OFFSET FROM THE EDGE OF THE NEW PAVEMENT AND IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES UNLESS DIRECTED OTHERWISE BY THE ENGINEER, OR DESIGNATED IN THE PLANS.

WHEN REMOVING EXISTING SIGNS, THE CONTRACTOR SHALL DISPOSE OF EXISTING GROUND MOUNTED SUPPORTS AND SALVAGE THE EXISTING SIGNS FOR REUSE. THE CONTRACTOR SHALL DELIVER SALVAGED SIGNS TO THE CITY AT A LOCATION DETERMINED BY THE ENGINEER.

THE ABOVE WORK SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT AND PAYMENT FOR ALL LABOR, MATERIALS AND EQUIPMENT TO PROPERLY REMOVE AND RELOCATE THE EXISTING GROUND MOUNTED AND POLE MOUNTED TRAFFIC SIGNS SHALL BE INCLUDED IN THE UNIT PRICES BID FOR OTHER ITEMS.

**ITEM SPEC. - REPLACEMENT OF OVERHEAD SPAN WIRE MOUNTED SIGNS**

THERE ARE FIVE (5) LOCATIONS ALONG THE PROJECT ROUTE WHERE THE CONTRACTOR IS TO REMOVE AND REPLACE OVERHEAD SPAN WIRE MOUNTED SIGNS. (SEE SHEETS 54 TO 60) IF THE EXISTING SPAN WIRES ARE CURRENTLY ATTACHED TO AN EXISTING STRAIN POLE THAT IS IN CONFLICT WITH, OR IN THE PATH OF THE PROPOSED PAVEMENT WIDENING, THE EXISTING STRAIN POLE SHALL BE RELOCATED OR REPLACED (AT THE CONTRACTOR'S EXPENSE), AS DIRECTED BY THE ENGINEER, TO AN OFFSET CLEAR OF THE PROPOSED PAVEMENT WIDENING.

IF THE EXISTING SPAN WIRES ARE CURRENTLY ATTACHED TO UTILITY POLES THAT ARE IN CONFLICT WITH, OR DO NOT MEET CLEAR ZONE REQUIREMENTS FROM THE PROPOSED EDGE OF PAVEMENT, THE CONTRACTOR SHALL ATTACH NEW SPAN WIRES TO THE RELOCATED UTILITY POLES, ONCE THE UTILITY COMPANY RELOCATES THE POLE. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING HIS WORK WITH THAT OF THE UTILITY COMPANY THAT OWNS THE UTILITY POLE.

THE CONTRACTOR SHALL FURNISH AND INSTALL TWO (2) NEW 7/16" DIAMETER MESSENGER WIRES AT ALL FIVE (5) LOCATIONS, WHETHER THE POLES ARE TO BE RELOCATED, OR NOT. ALL HANGER ASSEMBLIES REQUIRED TO ATTACH THE SIGNS TO THE NEW SPAN WIRES SHALL BE INCLUDED.

PAYMENT FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPEC. - REPLACEMENT OF OVERHEAD SPAN WIRE MOUNTED SIGNS. THE COST OF THE NEW SIGNS ARE TO BE PAID FOR SEPARATELY, AND ARE NOT INCLUDED IN THIS ITEM.

**VIDEOTAPING**

THE CITY OF MENTOR WILL PROVIDE ABOVE GROUND VIDEOTAPING OF ALL WORK AREAS PRIOR TO THE BEGINNING OF THE WORK. THE CONTRACTOR SHALL NOT START WORK UNTIL SUCH TIME AS THE ENGINEER HAS ADVISED THAT THE VIDEOTAPING IS COMPLETE.

**MATERIAL SPECIFICATIONS**

MATERIAL SPECIFICATIONS CALLED FOR ON THE PLANS REPRESENT THE MINIMUM REQUIRED FOR EACH APPLICATION. THE OWNER MAY REQUEST OR THE CONTRACTOR MAY DESIRE TO SUBSTITUTE ALTERNATE MATERIALS. ANY SUCH SUBSTITUTIONS MUST BE EQUIVALENT IN QUALITY TO THE MATERIAL CALLED FOR AND MUST BE APPROVED IN WRITING BY THE APPROVING AGENCIES AND THE CONSULTING ENGINEER.

THE CONTRACTOR SHALL INCLUDE THE COST OF GRANULAR BACKFILL MATERIAL UNDER ALL EXISTING AND PROPOSED PAVEMENTS IN THE PRICE BID PER LINEAR FOOT OF PIPE.

SLAG SHALL NOT BE USED FOR BEDDING OR BACKFILL.

STORM SEWER PIPING LESS THAN 12" IN DIAMETER MAY BE EITHER V.C.P., C-700, E.S. PIPE OR ASTM 3034 -SDR 35 P.V.C. PIPE.

STORM SEWER PIPING 12" TO 15" IN DIAMETER SHALL BE R.C.P., C-76, CLASS IV PIPE.

STORM SEWER PIPING 18" IN DIAMETER OR GREATER SHALL BE R.C.P., C-76, CLASS III PIPE.

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REV. NO.	DESCRIPTION	DATE	BY	CHK'D.

**STATE ROUTE 84  
INTERIM WIDENING & RESURFACING  
IMPROVEMENTS**

CITY OF MENTOR, LAKE COUNTY, OHIO

DATE:	JULY, 2000
DRAWN BY:	J.J.C.
CHECKED BY:	C.C.H.
APPROVED BY:	C.C.H.
F.B. No.:	PG. --

**GENERAL NOTES**

SCALE	
HQR.	1" = 20'
VERT.	--
CONTRACT No.	
<b>00123</b>	
SHEET NO.	OF
<b>3</b>	<b>74</b>