LOCATION MAP
NOT TO SCALE

DESIGN DESIGNATION

CURRENT ADT (2001)	35,100
DESIGN YEAR ADT (2021)	42,900
DESIGN HOURLY VOLUME (2004)	4,300
DIRECTIONAL DISTRIBUTION	51%
TRUCKS (24 HOUR B&C)	7.0%
DESIGN SPEED	45 MPH
LEGAL SPEED	45 MPH (ANGOLA TO NEBRASKA) 35 MPH (NEBRASKA TO DORR)
DESIGN FUNCTIONAL CLASSIFICATION	URBAN PRINCIPAL ARTERIAL

DESIGN EXCEPTIONS

NONE REQUIRED

UNDERGROUND UTILITIES

TWO WORKING DAYS BEFORE YOU DIG

CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE

NON MEMBERS

MUST BE CALLED DIRECTLY

PLANS PREPARED BY:
CITY OF TOLEDO OHIO
DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF ENGINEERING SERVICES
600 JEFFERSON AVE, SUITE 300

SCANNED

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
LUC - 20 - 12.40
REYNOLDS ROAD - PHASE II
CITY OF TOLEDO
LUCAS COUNTY

INDEX OF SHEETS

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LEGEND

Existing

—St—	Storm Sewer Lines	WV	Water Valves
—W—	Water Lines	GV	Gas Valves
—San—	Sanitary Sewer Lines		Water Hydrant
—G—	Gas Lines		Utility Poles (Telephone, Power & Light w/Guy Wire)
—T—	Telephone Lines		
— —	Centerline		Utility Manholes
—R/W—	Right-Of-Way Lines	CB	Catch Basin
—P/L—	Property Lines		Monument
	Fence Lines		Tree

Proposed

R/W	PROPOSED RIGHT-OF-WAY		CURB REMOVED
	STORM SEWER CONDUIT		DRIVE REMOVAL
CB	CATCH BASIN RECONSTRUCTED TO GRADE		SIDEWALK REMOVED
			CONCRETE DRIVE & WALK
CB	CATCH BASIN ADJUST TO GRADE		
MH	MANHOLE RECONSTRUCTED TO GRADE		
MH	MANHOLE ADJUST TO GRADE		
	SURFACE DRAINAGE FLOW DIRECTION		

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS			
DWG	DATE	DWG	DATE	DWG	DATE	DWG	DATE	DWG	DATE		DATE		DATE
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PROJECT DESCRIPTION

THIS PROJECT IMPROVES 2.0 MILES OF STATE ROUTE THROUGH REMOVING THE EXISTING WEARING COURSE, PERFORMING NECESSARY PAVEMENT REPAIRS, REPLACING CURB AND GUTTER, SIDEWALK AND HANDICAP RAMPS, DRIVE APPROACHES, AND SIGNAL UPGRADES.

NOTES

2005 SPECIFICATIONS:

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

TRAFFIC NOT REROUTED:

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

APPROVALS

APPROVED: Robert R. Williams DATE: 1/10/07
DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES

APPROVED: Warren E. Henry DATE: 1/9/07
COMMISSIONER, ENGINEERING SERVICES

APPROVED: Luther Earl Wilkinson DATE: 1/9/07
SENIOR TRANSPORTATION ENGINEER, ENGINEERING SERVICES

APPROVED: Barbara J. Jones DATE: 1/9/07
SENIOR SIGNAL ENGINEER, TRANSPORTATION

APPROVED: Stephanie A. Bartlett DATE: 1/9/07
DESIGN ENGINEER, ENGINEERING SERVICES

STATE OF OHIO — BARBARA J. JONES — E-51364 — REGISTERED PROFESSIONAL ENGINEER — 1/9/07

STATE OF OHIO — LUTHER EARL WILKINSON — E-63089 — REGISTERED PROFESSIONAL ENGINEER — 1/9/07

2009 RECORD DRAWINGS - BK230-2

FEDERAL PROJECT NO. E050587

PID NO. 78395

CONSTRUCTION PROJECT NO. -

RAILROAD INVOLVEMENT -

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

GENERAL NOTES

Conduct Of Work:

THE CONTRACTOR SHALL SO CONDUCT HIS WORK TO INSURE THAT EACH OPERATION IS COMPLETED IN A REASONABLE PERIOD OF TIME.

Sequence Of Work:

THE CITY OF TOLEDO CONSTRUCTION ENGINEER SHALL APPROVE THE SEQUENCE OF STREET RESURFACING AND/OR THE ORDER OF CONSTRUCTION OF VARIOUS BID ITEMS ON THE PROJECT AS OUTLINED IN THE CONTRACTOR'S PROGRESS SCHEDULE (108.03).

THE CONTRACTOR SHALL NOTIFY, IN WRITING, ALL AFFECTED RESIDENTS (AS DETERMINED BY THE CITY OF TOLEDO) OF HIS INTENTION TO START EACH STREET. SAID NOTIFICATION SHALL BE MADE SEVENTY TWO (72) HOURS TO MOBILIZATION. A SAMPLE TEXT OF THE NOTIFICATION LETTER IS AVAILABLE UPON REQUEST FROM THE DIVISION OF ENGINEERING SERVICES. THE CONSTRUCTION ENGINEER SHALL BE NOTIFIED AS TO WHEN THAT NOTIFICATION IS MADE FURTHERMORE, A COPY OF SAID NOTIFICATION SHALL BE GIVEN TO THE PROJECT ENGINEER PRIOR TO THE START OF EACH STREET.

THE COMPLETION DATE OF THIS CONTRACT SHALL ALSO INCLUDE THE COMPLETION OF PUNCH LIST ITEMS.

Notification:

THE CONSTRUCTION ENGINEER SHALL BE NOTIFIED (1-419-936-2847) BY THE CONTRACTOR AT LEAST SEVEN (7) DAYS IN ADVANCE OF ANY CONSTRUCTION IN ORDER TO ARRANGE FOR INSPECTION OF THE PROJECT.

THE CITY WILL PROVIDE BASIC SURVEY AND CONSTRUCTION STAKING SERVICES REQUIRED FOR EXECUTION OF THIS CONTRACT.

THE CONTRACTOR SHALL NOTIFY THE CHIEF SURVEYOR (1-419-936-2685 OR 1-419-936-2275) AT LEAST THREE (3) DAYS IN ADVANCE OF ANY CONSTRUCTION IN ORDER TO ARRANGE FOR CONSTRUCTION STAKING. THE CHIEF OF SURVEYOR'S SHALL ALSO BE MADE AWARE OF DAILY SURVEY NEEDS BY NO LATER THAN 3:00 P.M. THE DAY PRECEDING. CONTRACTOR WILL ASSUME ALL LIABILITY FOR TAKING NECESSARY MEASURES AT THE DIRECTION OF THE ENGINEER FOR WORK COMPLETED WITHOUT STAKING.

THE CONTRACTOR SHALL NOTIFY THE CITY OF TOLEDO DIVISION OF ENVIRONMENTAL SERVICES (419-936-3015) AT LEAST (3) DAYS PRIOR TO STARTING CONSTRUCTION FOR PURPOSE OF MONITORING EROSION CONTROL AND BMP MEASURES.

THE CONTRACTOR SHALL NOTIFY ALL PUBLIC AND PRIVATE UTILITY COMPANIES, IN WRITING, AT LEAST SEVEN (7) DAYS IN ADVANCE OF BEGINNING ANY CONSTRUCTION OPERATIONS.

Removals:

IN ALL SIDEWALK, DRIVE, OR PAVEMENT REMOVALS, EDGES SHALL BE CUT TO THE NEAREST JOINT WITH NEAT LINES BY USE OF A POWER CARBORUNDUM SAW. SAW CUTS SHALL BE FULL DEPTH. REMOVALS SHALL BE MADE ONLY TO THE EXTENT APPROVED BY THE ENGINEER. COST OF SAW CUTS SHALL BE INCLUDED IN THE APPROPRIATE BID ITEM.

Concrete Pavement:

THE CONTRACTOR SHALL NOT REMOVE ANY MORE PAVEMENT OR DRIVEWAYS THAN CAN BE REPLACED IN SEVENTY-TWO (72) HOURS.

Temporary Soil Erosion And Sediment Control:

THE FOLLOWING CONTINGENCY QUANTITIES ARE TO BE AS DIRECTED BY THE ENGINEER FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

ITEM 659~SEEDING AND MULCHING INCLUDING COMMERCIAL FERTILIZER	500 SQ. YDS.
ITEM 653~2" TOPSOIL FURNISHED & PLACED	28.0 CU.YD.
ITEM 659~WATER	5.0 MGAL.

Estimated Quantities:

QUANTITIES SHOWN IN THE GENERAL SUMMARY ARE ESTIMATED AS THEY ARE COMPUTED FROM OFFICE RECORDS ONLY. FINAL PAY QUANTITIES WILL BE DETERMINED BY THE PROJECT ENGINEER IN THE FIELD. THE CITY OF TOLEDO RESERVES THE RIGHT TO ADJUST THE ESTIMATED QUANTITIES BY NONPERFORMING, INCREASING AND/OR REDUCING ANY OF THE VARIOUS ITEMS AS LONG THE WORK REMAINS WITHIN THE BOUNDARY OF THE TOTAL PROJECT AREA.

THE FOLLOWING CONTINGENCY ITEMS ARE INCLUDED IN THE GENERAL SUMMARY TO BE USED ONLY AS DIRECTED BY THE ENGINEER:

Estimated Quantities~Continued:

ITEM 202~SIDEWALK REMOVED	3,500 SQ. FT.
ITEM 203~EXCAVATION	400 CU. YD.
ITEM 202~CURB REMOVED, TYPE A	200 FT.
ITEM 203~EXCAVATION FOR SIDEWALK	50 CU. YD.
ITEM 203~EMBANKMENT FOR SIDEWALK	50 CU. YD.
ITEM 301~BITUMINOUS AGGREGATE BASE	275 CU. YD.
ITEM 304~AGGREGATE BASE	275 CU. YD.
ITEM 448~ASPHALT CONCRETE SURFACE COURSE FOR DRIVES, TYPE 1 PG. 64-22	50 SQ. YD.
ITEM 603~6" CONDUIT SDR 35	150 LIN. FT.
ITEM 604~MANHOLE ADJUST TO GRADE	10 EACH
ITEM 604~MANHOLE RECONSTRUCT TO GRADE	5 EACH
ITEM 604~CATCH BASIN ADJUST TO GRADE	4 EACH
ITEM 604~CATCH BASIN RECONSTRUCT TO GRADE	4 EACH
ITEM 604~MONUMENT BOX ADJUST TO GRADE	2 EACH
ITEM 604~PROVIDE & INSTALL MONUMENT BOX, TYPE B	1 EACH
ITEM 608~4" CONCRETE WALK	11,800 SQ. FT.
ITEM 608~PEDESTRIAN RAMP, AS PER PLAN	16 EACH
ITEM 609~CONCRETE CURB, TYPE B	200 FT.
ITEM 614~LAW ENFORCEMENT OFFICER WITH PATROL CAR	24 HR.
ITEM 625~CONDUIT, JACKED UNDER PAVEMENT, AS PER PLAN, 3"	16 FT.
ITEM 625~TRENCH IN PAVED AREA, TYPE B, AS PER PLAN, 3"	6 FT.
ITEM 625~PULLBOX MISC.: PULLBOX RECONSTRUCTED, TYPE A	1 EACH
ITEM SPECIAL~SPRINKLER HEADS	5 EACH
ITEM SPECIAL~CATCH BASIN CLEANING	10 EACH
ITEM SPECIAL~CONCRETE PAVEMENT, FS CLASS	4,959.5 SQ. YD.
ITEM SPECIAL~CURB WALLS, 3" TO 6"	150.0 LIN. FT.
ITEM SPECIAL~CURB WALLS, 6" TO 12"	150.0 LIN. FT.
ITEM SPECIAL~CONDUIT FOR SPRINKLER SYSTEMS	50 FT.

Storm Sewers And Drainage Structures:

THE "UNIT PRICE" BID FOR CONDUIT SHALL INCLUDE, BUT NOT BE LIMITED TO; CLEARING AND GRUBBING, THE REMOVAL AND/OR REPLACEMENT OF EXISTING PAVING, STORM SEWERS, PIPE SPECIALS, TAPS (I.E. ROOF DRAIN OR SUMP PUMP CONNECTIONS) AS WELL AS ALL OTHER ITEMS NECESSARY FOR PLACING THE CONDUIT AND THE RESTORATION OF DISTURBED AREAS IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

THE CONTRACTOR SHALL SO CONDUCT HIS OPERATIONS THAT THE FLOW OF ALL SEWERS WHICH ARE TO REMAIN IN SERVICE SHALL BE MAINTAINED AT ALL TIMES. ANY ADDITIONAL COST OR LABOR INVOLVED IN MAINTAINING THIS FLOW, BY PUMPING OR ANY OTHER APPROVED METHOD, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE 603 ITEM.

WHEN WORKING IN THE AREA ADJACENT TO EXISTING SEWERS. THE CONTRACTOR SHALL PROCEED WITH CAUTION IN ORDER THAT NO DAMAGE IS DONE TO THE EXISTING SEWERS. ANY DAMAGE TO EXISTING SEWERS RESULTING FROM THE CONTRACTOR'S OPERATIONS OR NEGLIGENCE, AS DETERMINED BY THE ENGINEER, SHALL BE IMMEDIATELY REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE CITY OF TOLEDO.

AT THOSE LOCATIONS WHERE THE PLANS REQUIRE THE CONNECTION OF A NEW SEWER TO AN EXISTING SEWER OR APPURTENANCE, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING SEWER OR APPURTENANCE, BOTH AS A LINE AND GRADE, BEFORE HE STARTS CONSTRUCTION OF THE PROPOSED SEWER. PAYMENT FOR THIS OPERATION SHALL BE INCLUDED IN THE UNIT BID PRICE FOR THE APPLICABLE 603 ITEM.

BEFORE FINAL ACCEPTANCE BY THE CITY, ALL STRUCTURES SHALL BE CLEANED SO THAT ALL CONSTRUCTION MATERIALS AND PRIOR DEBRIS ACCUMULATIONS ARE REMOVED FROM THE STRUCTURE. ALL EXCESS EXCAVATED MATERIALS AND/OR DEBRIS GENERATED FROM WORK ON STRUCTURES MUST BE REMOVED FROM THE PROJECT AREA WITHIN THE SAME DAY.

Curb Removal:

THE CONTRACTOR SHALL USE A NARROW BUCKET (12") WHEN REMOVING CURBS THAT ARE ADJACENT TO TREES IN ORDER TO MINIMIZE DAMAGE TO TREES/TREE ROOTS. ANY DAMAGE TO THE TREES/TREE ROOTS, AS DETERMINED BY THE DIVISION OF FORESTRY, WILL RESULT IN HAVING THE CONTRACTOR REMOVE AND REPLACE THE DAMAGED TREE AT NO COST TO THIS CONTRACT.

Resurfacing:

BUTT JOINTS ARE REQUIRED AT ALL INTERSECTING STREETS UNLESS OTHERWISE SHOWN ON THE PLANS.

PAVEMENT SHALL BE FEATHERED TO MEET EXISTING CASTINGS THAT ARE NOT TO BE ADJUSTED AS DIRECTED BY THE PROJECT ENGINEER.

ALL COSTS REQUIRED IN ORDER TO PERFORM THE ABOVE WORK (INCLUDING STREET CLEANING) SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE ASPHALTIC CONCRETE BID ITEM.

Materials:

CONTRACTOR SHALL NOTE THAT QUANTITIES FOR ITEM~203 EXCAVATION DOES NOT APPEAR ON THE INDIVIDUAL PLAN AND PROFILE SHEETS.

Review Of Drainage Facilities:

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE CITY, REPRESENTATIVES OF THE CITY AND THE CONTRACTOR SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS, RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE CITY.

ALL NEW CONDUITS, INLETS, CATCH BASINS AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE CITY.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO WHAT WAS DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 603 CONDUIT ITEMS.

Underground Utilities:

THE LOCATION OF THE UNDERGROUND UTILITIES INCLUDING SERVICE TAPS SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC. THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCHES OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE CITY OF TOLEDO DOES NOT GUARANTEE THEIR ACCURACY OR COMPLETENESS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING UTILITIES PRIOR TO COMMENCING WORK.

IN THE EVENT UNDERGROUND UTILITY FACILITIES ARE NOT LOCATED IN THE FIELD ACCORDING TO UTILITY LOCATION INFORMATION PROVIDED ON THESE PLANS. THE CITY OF TOLEDO WILL NOT BE HELD LIABLE FOR ADDITIONAL COSTS RELATING TO ALTERNATE METHODS OF CONSTRUCTION, OR COSTS RELATING TO CONTRACTOR PERSONNEL AND EQUIPMENT DOWNTIME.

IN ACCORDANCE WITH THE PROVISIONS OF THE OHIO REVISED CODE-SECTION 153.64 AS ENACTED IN AMENDED SUBSTITUTE HOUSE BILL NO. 538 ON MARCH 31, 1982. THE CONTRACTOR SHALL BE REQUIRED TO CONTACT THE OWNERS OF UNDERGROUND UTILITY FACILITIES SHOWN ON THE PLANS AND SPECIFICATIONS. SUCH NOTICE SHALL BE MADE AT LEAST TWO (2) WORKING DAYS EXCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS PRIOR TO COMMENCING CONSTRUCTION OPERATIONS. NAMES, ADDRESSES AND TELEPHONE NUMBERS OF THE REGISTERED UTILITY PROTECTION SERVICE AND OWNERS OF UNDERGROUND UTILITY FACILITIES IN THE CITY OF TOLEDO ARE LISTED BELOW.

OHIO UTILITIES PROTECTION SERVICE (REGISTERED UTILITY PROTECTION SERVICE)
4740 BELMONT AVENUE
YOUNGSTOWN, OHIO 44505-1014
1-800-362-2764

A.T.& T.
130 NORTH ERIE STREET, ROOM 206
TOLEDO, OHIO 43624
1-419-245-7301 (AERIAL) 1-419-245-5595 (UNDERGROUND)

TOLEDO EDISON COMPANY (ELECTRIC AND STEAM)
300 MADISON AVENUE
TOLEDO, OHIO 43652
1-419-249-5218

COLUMBIA GAS OF OHIO, INC.
333 S. ERIE STREET
TOLEDO, OHIO 43602
1-419-252-8110

R & U
DEDT/LOC 1105/642
2270 LAKESIDE BLVD.
RICHARDSON, TEXAS 75082
ATTN: INVESTIGATION 1-800-526-0119

BUCKEYE CABLEVISION
4818 ANGOLA ROAD
TOLEDO, OHIO 43615
1-419-866-9800

KMC TELECOM, INC.
6 CITY PARK AVENUE
TOLEDO, OHIO 43609
1-419-776-5615

Underground Utilities~Continued:

CITY OF TOLEDO - DIVISION OF TRANSPORTATION
110 NORTH WESTWOOD AVENUE
TOLEDO, OHIO 43607
1-419-245-1300 (INCLUDES FIRE AND POLICE COMMUNICATIONS CONDUITS)
1-419-245-1300 (TRAFFIC SIGNS AND SIGNALS, ROAD CLOSURES)

CITY OF TOLEDO - DIVISION OF WATER DISTRIBUTION
401 SOUTH ERIE STREET
TOLEDO, OHIO 43602
1-419-245-1825 (SERVICE TAPS)
1-419-242-5040 (WATER LINES & HYDRANTS)

CITY OF TOLEDO - DIVISION OF ENGINEERING SERVICES
600 JEFFERSON AVENUE, SUITE 300
TOLEDO, OHIO 43604
1-419-242-5040 (WATER ENGINEERING)
1-419-936-2276 (SANITARY ENGINEERING)
1-419-936-2546 (STORM AND PAVING)
1-419-245-1346 OR 1-419-936-2847 (CONSTRUCTION INSPECTION)

UTILITY MANHOLES AND/OR VALVE BOXES WILL BE ADJUSTED BY THEIR RESPECTIVE OWNERS. LET IT BE KNOWN TO ALL UTILITY COMPANIES THAT PROPOSED PAVING OPERATIONS MAY NECESSITATE VERTICAL ADJUSTMENTS OF EXISTING STRUCTURES AND/OR APPURTENANCES LOCATED WITHIN THE PROJECT LIMITS.

THE CONTRACTOR WILL BE RESPONSIBLE FOR CONTACTING ALL APPROPRIATE UTILITY COMPANIES TO MAKE ARRANGEMENTS FOR ANY REQUIRED ADJUSTMENTS, RECONSTRUCTIONS, REMOVALS, AND/OR REALLOCATIONS OF EXISTING FACILITIES. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE COORDINATION OF ALL CONSTRUCTION ACTIVITIES WITH THOSE MENTIONED ABOVE.

Sprinkler Systems:

THE PROVISIONS BELOW SHALL ONLY APPLY TO SPRINKLER SYSTEMS PARALLEL TO AND WITHIN 30 INCHES OF THE BACK OF CURB REMOVED. COST FOR REPLACEMENT AND REINSTALLATION OF SPRINKLER SYSTEM OUTSIDE THE AFOREMENTIONED LIMITS SHALL BE THE TOTAL RESPONSIBILITY OF THE CONTRACTOR.

THE CONTRACTOR WILL BE REQUIRED TO REINSTALL CONDUIT AND SPRINKLER HEADS REMOVED PRIOR TO BACKFILLING THE CURB OR CURB AND GUTTER. THE CONTRACTOR SHALL REPLACE DAMAGED SPRINKLER SYSTEMS USING THE SAME TYPE AND SIZE COMPONENTS AS WAS EXISTING, INCLUDING ALL CONNECTIONS.

Sprinkler Systems ~ Continued:

SPRINKLER HEADS SHALL BE DISCUSSED IN THE NOTIFICATION LETTER FOR CURB WORK WHERE PROPERTY OWNERS WILL BE DIRECTED TO MARK THE SPRINKLER HEADS IN THE R/W. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING, MAINTAINING AND PRESERVING ANY SPRINKLER HEADS THAT MAY BE IMPACTED BY CONSTRUCTION. COST FOR REINSTALLATION OF UNDAMAGED SPRINKLER HEADS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE 609 ITEM. ANY SPRINKLER HEADS SO REMOVED THAT ARE DAMAGED BY THE CONTRACTOR SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

SPRINKLER CONDUIT: A CONTINGENCY QUANTITY OF ITEM SPECIAL-CONDUIT FOR SPRINKLER SYSTEMS HAS BEEN ADDED TO THE CONTRACT TO PROVIDE FOR THE REPLACEMENT OF SPRINKLER SYSTEM CONDUIT UNAVOIDABLY DAMAGED DURING CONSTRUCTION. THIS ITEM SHALL ONLY BE USED AT THE DIRECTION OF THE ENGINEER. COST FOR REINSTALLATION OF UNDAMAGED SPRINKLER CONDUIT SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE APPROPRIATE 609 ITEM.

Asphalt Driveways:

ASPHALT DRIVE APRON REMOVAL AND REPLACEMENT, WHEN DIRECTED BY THE ENGINEER SHALL BE PAID FOR UNDER ITEM 203~EXCAVATION AND ITEM 448~ASPHALT CONCRETE SURFACE COURSE FOR DRIVES, TYPE 1 PG. 64-22.

GENERAL NOTES ~ CONTINUED

Item 202~Wearing Course Removed:

THIS ITEM HAS BEEN ESTABLISHED FOR REMOVAL OF EXISTING FLEXIBLE (ASPHALT) PAVEMENT FOR A DEPTH OF 0" TO 3". THESE REMOVAL AREAS MAY INCLUDE BUTT JOINTS AT INTERSECTING STREETS.

WHENEVER THE WEARING COURSE IS REMOVED FOR BUTT JOINTS, THE CONTRACTOR IS REQUIRED TO CONSTRUCT A TEMPORARY COLD PATCH OR SIMILAR APPROVED MATERIAL WEDGE. IT IS UNDERSTOOD AND

REQUIRED THAT PRIOR TO APPLICATION OF THE ASPHALT PAVEMENT OVERLAY, THE TEMPORARY COLD PATCH WEDGE WILL BE REMOVED. THE CROSS SLOPE OF THE TOP SURFACE OF THE TEMPORARY WEDGE SHALL NOT BE MORE THAN 1"/FT. SIMILAR WEDGES SHALL BE PLACED AT DRIVEWAY LIPS WHEN THIS LIP MEASURES 2" OR MORE AFTER GRINDING. ALL COSTS ASSOCIATED WITH THE CONSTRUCTION AND REMOVAL OF THE WEDGES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 202~WEARING COURSE REMOVED.

BUTT JOINTS AS DETAILED ON THESE PLANS ARE REQUIRED AT ALL IN-TERSECTING STREETS, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

Item 407~Tack/Rubberized Tack Coat:

THE BITUMINOUS MATERIAL FOR TACK COAT SHALL MEET THE APPLICABLE REQUIREMENTS OF 702 AND SHALL BE ONE OF THE FOLLOWING: RC-250, RS-1, SS-1, SS-1H OR MS-1. THE BITUMINOUS MATERIAL FOR RUBBER-IZED TACK COAT SHALL BE A RUBBERIZED ASPHALT EMULSION. THE RATE OF APPLICATION FOR BOTH TACK TYPES SHALL BE 0.05 GAL./S.Y. AND 7 LBS./S.Y. FOR COVER AGGREGATE. THE PROJECT ENGINEER RE-SERVES THE RIGHT TO ALTER THESE RATES IF NECESSARY.
THE CONTRACTOR SHALL MAKE AN EFFORT TO MINIMIZE THE TRACKING OF TACK AND/OR ASPHALT ONTO ADJACENT OR NEARBY STREETS. IF IT BE-COMES NECESSARY TO DRIVE ASPHALT TRUCKS ON A CONCRETE STREET. THE CONTRACTOR SHALL PROVIDE COVER AGGREGATE AS PER ITEM 407. COST FOR THIS WORK SHALL INCLUDE CLEANUP.

Item 604~Standard Monument, Type B:

WITH THE ASSISTANCE OF THE CITY SURVEYOR, THE CONTRACTOR SHALL INSTALL A NEW MONUMENT AND/OR A NEW MONUMENT BOX AS DIRECTED BY THE ENGINEER. PAYMENT FOR SAID WORK SHALL BE MADE UNDER THE APPROPRIATE BID ITEMS. NO ADDITIONAL COMPENSATION WILL BE GIVEN FOR ADJUSTMENT TO GRADE WHEN A NEW MONUMENT IS INSTALLED.

Item 604~Provide And Install Monument Box, As Per Plan:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AND INSTALLING THE MONUMENT FRAME AND COVER AS MANUFACTURED BY NEENAH R-1978 B OR EAST JORDAN NO. 8380 OR EQUAL, OVER A MONUMENT. THE CONTRACTOR SHALL TAKE SPECIAL PRECAUTION TO PREVENT ANY DIS-TURBANCE OR DAMAGE OF THE MONUMENT. REMOVAL OF THE EXISTING PAVEMENT SURFACE SURROUNDING THE MONUMENT MAY BE REQUIRED IN ORDER TO INSTALL THE NEW MONUMENT FRAME AND COVER. ALL WORK MUST BE COMPLETED WITHIN SEVENTY-TWO (72) HOURS OF BEGINNING WORK ON A GIVEN MONUMENT. COST FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 604~PROVIDE AND INSTALL MONUMENT BOX, AS PER PLAN.

PRIOR TO ADJUSTING OR SETTING ANY MONUMENTS, THE CONTRACTOR SHALL NOTIFY THE CHIEF SURVEYOR TO ARRANGE TO HAVE THE MONUMENTS REFERENCED BY THE CITY OF TOLEDO.

REFERENCES FOR MONUMENTS LOCATED IN THE PAVEMENT ARE ON FILE AT THE DIVISION OF ENGINEERING SERVICES, SURVEY SECTION. COPIES OF THE REFERENCE NOTES ARE AVAILABLE UPON REQUEST.

Item 604~Catch Basin, Manhole Adjusted/ Reconstructed To Grade, As Per Plan:

IN ADDITION TO THE PROVISIONS OUTLINED UNDER ITEM 604, WORK INVOLVED UNDER THIS ITEM SHALL INCLUDE; REMOVAL AND REPLACEMENT OF NECESSARY PAVEMENT, AND REMOVAL AND REPLACEMENT OF NECESSARY CONCRETE CURB OR CONCRETE CURB AND GUTTER.

A STRUCTURE IN THE PAVEMENT AREA MUST BE COMPLETED WITHIN SEVENTY -TWO (72) HOURS OF BEGINNING WORK ON THAT STRUCTURE.

BEFORE FINAL ACCEPTANCE BY THE CITY, ALL STRUCTURES SHALL BE CLEANED SO THAT ALL CONSTRUCTION MATERIALS AND PRIOR DEBRIS ACCUMULATIONS, IF APPLICABLE, ARE REMOVED FROM THE STRUCTURE. ALL EXCESS EXCAVATED MATERIALS AND/OR BEBRIS GENERATED FROM WORK ON STRUCTURES MUST BE REMOVED FROM THE PROJECT AREA WITHIN THE SAME DAY.

Item 604~Catch Basin, Manhole Adjusted/ Reconstructed To Grade, As Per Plan~Cont:

ALL REPAIR WORK SHALL INCLUDE PLASTERING INSIDE AND OUTSIDE WALL WITH A MINIMUM 1/4" THICKNESS OF PLASTER, WITHIN LIMITS OF WORK.

WHEN A CATCH BASIN AND/OR MANHOLE IS ADJUSTED TO GRADE, THE WORK SHALL INCLUDE THE REPLACEMENT, REPAIR AND/OR REMORTARING OF UP TO TWELVE (12) INCHES AS MEASURED FROM THE BOTTOM SURFACE OF THE OLD CASTING.

IN THE EVENT THAT AN EXISTING CATCH BASIN OR INLET IS ADJUSTED TO GRADE FOR AN EXTENDED PERIOD OF TIME PRIOR TO THE PAVING OF THE ASPHALT SURFACE COURSE, THE CONTRACTOR SHALL TAKE THE APPROPRIATE MEASURES TO MAINTAIN THE SURFACE RUNOFF SO THAT PONDING WILL NOT OCCUR.

ALL EXISTING WATER MANHOLES AND WATER BOX CASTINGS AND LIDS THAT ARE BEING REPLACED SHALL BE RETURNED TO THE CITY OF TOLEDO, DIVISION OF WATER, 401 SOUTH ERIE STREET.

COSTS FOR ALL ABOVE WORK SHALL BE INCLUDED UNDER THE APPROPRIATE 604 BID ITEM.

Item 608~Sidewalk And Item 452~ Plain Concrete Pavement:

CITY OF TOLEDO SIDEWALK CONSTRUCTION STANDARDS, IN ADDITION TO STANDARD ODOT ITEM 608 SPECIFICATIONS SHALL ALSO INCLUDE THE FOLLOWING REQUIREMENTS: COST OF MATERIAL AND LABOR TO ACHIEVE THE FOLLOWING REQUIREMENTS SHALL BE INCLUDED AS PART OF THE UNIT PRICE BID FOR THE APPROPRIATE ODOT ITEM.

ANY ELEVATION CHANGE IN EXISTING OR PROPOSED SIDEWALKS GREATER THAN 6" SHALL BE PAID UNDER ITEM 203~EXCAVATION FOR SIDEWALK OR ITEM 203~EMBANKMENT FOR SIDEWALK.

THE CONTRACTOR SHALL PROVIDE SUFFICIENT BARRICADES, SIGNS AND OTHER MEASURES NECESSARY TO KEEP PEDESTRIANS, VENDORS AND VEHICLES FROM MARRING AND DEFACING NEW CONCRETE CURBS, DRIVEWAYS, PED-ESTRIAN RAMPS AND SIDEWALKS. IN THE EVENT CONCRETE MARRING AND ACTS OF VANDALISM DO OCCUR PRIOR TO CONCRETE HARDENING, RESULTING CONCRETE BLEMISHES MUST BE COMPLETELY REMOVED TO THE SATISFACTION OF THE ENGINEER. SAID REMOVAL AND RESTORATION OF NEW CONCRETE SHALL BE AT NO ADDITIONAL COST TO THE CITY.

Item 608~Sidewalk And Item 452~ Plain Concrete Pavement: Continued:

REMOVAL AND REPLACEMENT OF PARKING LOT ASPHALT PAVEMENT REQUIRED IN CONJUNCTION WITH THE INSTALLATION OF ADJACENT SIDEWALK WORK WILL BE ACCOMPLISHED BY A SAW JOINT, NO MORE THAN 24 INCHES FROM THE EDGE OF NEW SIDEWALK. PAVEMENT REPLACEMENT SHALL BE IN-KIND. COST OF PAVEMENT WILL BE BASED ON UNIT BID PRICES ESTABLISHED IN THE UNIT PRICE PROPOSAL.

Item 614~Maintaining Traffic/Portable Changeable Message Board:

UNDER THIS ITEM THE CONTRACTOR SHALL PROVIDE ONE PORTABLE CHANGEABLE MESSAGE BOARD ON REYNOLDS ROAD IN EACH DIRECTION AS DIRECTED BY THE PROJECT ENGINEER. MESSAGE BOARD SHALL BE ERECTED TWO WEEKS PRIOR TO CONSTRUCTION START DATE THROUGH COMPLETION OF ROADWAY WORK (I.E. VEHICLES CAN TRAVEL IN BOTH DIRECTIONS). COSTS ASSOCIATED WITH WORK DESCRIBED SHALL BE INCLUDED IN ITEM 614~ PORTABLE CHANGEABLE MESSAGE BOARD, APP.

PLEASE REFER TO THE GENERAL PROVISIONS IN THE CONTRACT PROPOSAL DOCUMENT FOR INFORMATION REGARDING MAINTENANCE OF TRAFFIC.

ALL TRAFFIC CONTROLS SHALL BE FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH REVISION 21 OR LATEST REVISION, CONSTRUCTION SEC-TION, OF THE "OHIO MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS". COST SHALL BE INCLUDED IN THE UNIT PRICE FOR THE APPROPRIATE BID ITEM WHICH CAUSES TRAFFIC DISRUPTION.

Item 614~Law Enforcement Officer With Patrol Car:

IN ADDITION TO THE REQUIREMENTS OF 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD). A UNIFORMED LAW ENFORCEMENT OFFICER (AND OFFICIAL PATROL CAR WITH WORKING TOP MOUNTED EMERGENCY FLASHING LIGHTS) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

1. FOR LANE CLOSURES, DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

2. DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

3. DURING A TRAFFIC SIGNAL INSTALLATION.

LAW ENFORCEMENT OFFICERS (L.E.O.'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR REPLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES WITH:

LUCAS COUNTY SHERIFF
1622 SPEILBUSCH AVENUE
TOLEDO, OHIO 43624
PHONE: (419) 245-4900

STATE HIGHWAY PATROL
TOLEDO PATROL POST
10391 AIRPORT HIGHWAY
TOLEDO, OHIO 43558
PHONE: (419) 865-5544

THE CITY OF TOLEDO
POLICE DEPARTMENT
525 NORTH ERIE
TOLEDO, OHIO 43624
PHONE: (419) 245-3246

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, HE MAY DO SO AT HIS OWN EXPENSE. PAYMENT FOR THE EXCESS ABOVE THE CONTRACT REQUIREMENTS WILL BE INCLUDED UNDER ITEM 614 MAINTAINING TRAFFIC.

LAW ENFORCEMENT OFFICERS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GEN-ERAL SUMMARY:

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR 24 HR

Item 659~Seeding And Mulching:

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL WITHIN THE RIGHT-OF-WAY. QUANTITY CALCULATIONS FOR ITEM 659, SEEDING AND MULCHING ARE BASED ON THESE LIMITS.

Item Special~Catch Basin Cleaning:

THE CONTRACTOR SHALL UPON DIRECTION BY THE ENGINEER PROVIDE ALL LABOR, MATERIAL AND MECHANICAL SEWER EQUIPMENT WITH HIGH PRESSURE WATER JETTING AND VACUUM CAPABILITIES TO REMOVE ALL DEBRIS FROM A CATCH BASIN 2 TO 10 FEET DEEP. THE UNIT PRICE PER CATCH BASIN SHALL INCLUDE ALL NECESSARY TRAFFIC CONTROL, CLEANING AND PROPER DISPOSAL OF THE MATERIAL REMOVED. THE CITY WILL ATTEMPT TO CON-SOLIDATE THE NECESSARY CATCH BASIN CLEANINGS AT THE START OF THE PROJECT.

Item Special~Concrete Pavement, FS Class

A CONTINGENCY QUANTITY FOR THESE ITEMS HAS BEEN INCLUDED IN THE GENERAL SUMMARY. THESE ITEMS ARE INTENDED FOR USE ONLY AT THE DIRECTION OF THE ENGINEER. UNIT PRICE BID SHALL BE THE ADDITIONAL PAYMENT REQUIRED ABOVE THE UNIT PRICE BID FOR THE RESPECTIVE CONCRETE PAVEMENT ITEMS IN SQ. YDS.

Unrecorded Sanitary Concerns

ANY UNRECORDED ACTIVE CONNECTION TO A SANITARY SEWER ENCOUNTERED DURING CONSTRUCTION SHALL BE RECONNECTED TO THE EXISTING SANITARY SEWER TO THE SATISFACTION OF THE ENGINEER.

Existing Survey Points

SURVEY MONUMENTS, BENCH MARKS AND EXISTING POINTS DAMAGED OR DISTURBED BY CONSTRUCTION SHALL BE REPLACED BY A REGISTERED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE. SHOULD CONTRACTOR FAIL TO PROPERLY REPLACE THESE POINTS, THE DIVISION OF ENGINEERING SERVICES WILL REPLACE THEM AT THE CONTRACTOR'S EXPENSE AFTER THREE WEEKS NOTICE.

Project Notes:

1. CONTINUE 5' WALK, ON WEST SIDE, FROM SOUTH END OF PROJECT TO BRADBURY, INCLUDING THE UNDERPASS.

2. A 12' OPEN TRENCH SHALL BE USED FOR INSTALLATION OF THE 54" PIPE AT THE INTERSECTION OF HILL AND REYNOLDS. CONTRACTOR SHALL MAINTAIN ALL RIGHT TURN MOVEMENTS AND CROSSING OF REYNOLDS USING HILL AVENUE.

3. ADDITIONAL SIDEWALK MAY BE REQUIRED FOR PUSH BUTTON ACCESS AT SIGNALIZED LOCATIONS. CONTACT THE DIVISION OF TRANSPORTATION FOR LOCATIONS.

4. THERE ARE 16 PEDESTRIAN RAMPS INCLUDED IN THE CONTINGENCY QUANTITIES INTENDED FOR THE INTERSECTION OF REYNOLDS AND ANGOLA SOUTH AND REYNOLDS AND SOUTHWYCK. THIS WORK TO BE DONE ONLY AS DIRECTED BY THE ENGINEER.

4. THE INTERSECTION OF REYNOLDS AND DORR IS TO BE INCLUDED IN THIS PROJECT. BELOW ARE THE QUANTITIES ASSOCIATED WITH THIS INTERSECTION.

ITEM 202 -	CURB AND GUTTER REMOVED	228 FT
ITEM 202 -	WEARING COURSE REMOVED	2129.6 SQ YD
ITEM 202 -	SIDEWALK REMOVED	134 SQ FT
ITEM 407 -	TACK COAT	213 GAL
ITEM 442 -	1-1/2" ASPHALT CONCRETE, INTERMEDIATE COURSE 12.5mm, TYPE A (446), PG 70-22m	89 CU YD
ITEM 442 -	1-1/2" ASPHALT CONCRETE, SURFACE COURSE 9.5mm, TYPE A (446), PG 70-22m	89 CU YD
ITEM 608 -	PEDESTRIAN RAMP	3 EACH
ITEM 608 -	4" CONCRETE WALK	134 SQ FT
ITEM 609 -	CONCRETE CURB, TYPE B	228 FT

Calculated: .
Checked: .

GENERAL NOTES (SHEET 2 OF 2) - REYNOLDS ROAD

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

General Summary

Prop. Item No.	State Item No.	100% CITY Quantity Schedule	100% CITY Contingency	Urban Paving	SAFETY FUNDS Quantity Schedule	SAFETY FUNDS Contingency	Grand Total	Unit	Description
1	202	16887.7					16887.7	LIN. FT.	CURB AND GUTTER REMOVED
2	202	2608				200	2808	LIN. FT.	CURB REMOVED, TYPE A
3	202	4930.7					4930.7	SQ. YD.	PAVEMENT REMOVED
4	202	33543.9	3500				37043.9	SQ. FT.	SIDEWALK REMOVED
5	202			67736.4			67736.4	SQ. YD.	WEARING COURSE REMOVED (0"–3")
6	202	38.5					38.5	SQ. YD.	CONCRETE MEDIAN / TRAFFIC ISLAND REMOVED
7	202	33					33	UN. FT.	PIPE REMOVED, 12"
8	203	1600	400				2000	CU. YD.	EXCAVATION
9	203		50				50	CU. YD.	EXCAVATION FOR SIDEWALK
10	203		50				50	CU. YD.	EMBANKMENT FOR SIDEWALK
11	301	109	275				384	CU. YD.	BITUMINOUS AGGREGATE BASE, 9"
12	304		275				275	CU. YD.	AGGREGATE BASE
13	407			6572.7			6572.7	GAL.	TACK COAT
14	442			2743.7			2743.7	CU. YD.	1-1/2" ASPHALT CONCRETE, INTERMEDIATE COURSE, 12.5mm, TYPE A (446), PG 70-22m
15	442			2743.7			2743.7	CU. YD.	1-1/2" ASPHALT CONCRETE, SURFACE COURSE, TYPE A (446), PG 70-22m
16	448		50				50	CU. YD.	ASPHALT CONCRETE, SURFACE COURSE FOR DRIVES, TYPE 1, PG 64-22
17	452	4959.5					4959.5	SQ. YD.	8" PLAIN CONCRETE PAVEMENT, CLASS MS
18	603		150				150	FT.	6" CONDUIT, PVC SDR 35
19	603	33	25				58	LIN. FT.	12" CONDUIT, TYPE B
20	603	317					317	LIN. FT.	54" CONDUIT, TYPE B
21	604	2					2	EACH	ODOT TYPE 4 MANHOLE
22	604	84	10				94	EACH	MANHOLE ADJUST TO GRADE
23	604	30	5				35	EACH	MANHOLE RECONSTRUCT TO GRADE
24	604	53	4				57	EACH	CATCH BASIN ADJUST TO GRADE
25	604	20	4				24	EACH	CATCH BASIN RECONSTRUCT TO GRADE
26	604	76					76	EACH	PROVIDE AND INSTALL CATCH BASIN CASTING
27	604	114					114	EACH	PROVIDE AND INSTALL HEAVY DUTY MANHOLE CASTING
28	604	3	2				5	EACH	MONUMENT BOX ADJUST TO GRADE
29	604	2	1				3	EACH	PROVIDE AND INSTALL MONUMENT BOX, TYPE B
30	604		3				3	EACH	PROVIDE AND INSTALL CATCH BASIN TYPE D
31	608	54				16	70	EACH	PEDESTRIAN RAMP, AS PER PLAN
32	608	46497.7	10000			1800	58297.7	SQ. FT.	4" CONCRETE WALK
33	608	43.1					43.1	SQ. YD.	CONCRETE MEDIAN / TRAFFIC ISLAND
34	609	16487.9				200	16687.9	LIN. FT.	CONCRETE CURB, TYPE B
35	609	3107.8					3107.8	LIN. FT.	CONCRETE CURB, TYPE B1
36	614	2					2	EACH	PORTABLE CHANGEABLE MESSAGE BOARD, APP
37	614		24				24	HR	LAW ENFORCEMENT OFFICER WITH PATROL CAR
38	625				16		16	FT	CONDUIT, 3", 725.05, AS PER PLAN
39	625					16	16	FT	CONDUIT, JACKED UNDER PAVEMENT, AS PER PLAN 3"
40	625				10		10	FT	TRENCH, AS PER PLAN
41	625				6		6	FT	TRENCH, IN PAVED AREA, TYPE A, AS PER PLAN
42	625					6	6	FT	TRENCH, IN PAVED AREA, TYPE B, AS PER PLAN
43	625				1		1	EACH	PULLBOX MISC.: PULLBOX TYPE A
44	625					1	1	EACH	PULLBOX MISC.: PULLBOX RECONSTRUCTED, TYPE A
45	625				2		2	EACH	GROUND ROD, AS PER PLAN
46	632				1		1	EACH	COMB. SIGNAL SUPPORT MISC.: SIGNAL SUPPORT 0.1793"x12"x33' W/ MAST ARM 0.1793"x9"x32'
47	632				1		1	EACH	COMB. SIGNAL SUPPORT MISC.: SIGNAL SUPPORT 0.2391"x18"x33' W/ MAST ARM 0.3125"x13"x30' & 0.1793"x9.44"x27'-9"
48	632				2		2	EACH	CABLE SUPPORT ASSEMBLY
49	632				16		16	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD
50	632				4		4	EACH	PROVIDE VEHICULAR SIGNAL HEAD, LED, POLE MOUNTED, 1-SECTION, 12" LENS, W/ BACKPLATE, AS PER PLAN
51	632				4		4	EACH	PROVIDE VEHICULAR SIGNAL HEAD, LED, RIGID MOUNT, 1-SECTION, 12" LENS, W/ BACKPLATE, AS PER PLAN
52	632				1		1	EACH	PROVIDE & INSTALL VEHICULAR SIGNAL HEAD, LED, POLE MOUNTED, 1-SECTION, 12" LENS, W/ BACKPLATE, AS PER PLAN
53	632				45		45	EACH	PROVIDE VEHICULAR SIGNAL HEAD, LED, RIGID MOUNT, 3-SECTION, 12" LENS, W/ BACKPLATE, AS PER PLAN
54	632				1		1	EACH	PROVIDE VEHICULAR SIGNAL HEAD, LED, POLE MOUNTED, 3-SECTION, 12" LENS, W/ BACKPLATE, AS PER PLAN
55	632				3		3	EACH	PROVIDE & INSTALL VEHICULAR SIGNAL HEAD, LED, PEDESTAL MOUNT, 3-SECTION, 12" LENS, W/ BACKPLATE, AS PER PLAN

General Summary

Prop. Item No.	State Item No.	100% CITY Quantity Schedule	100% CITY Contingency	Urban Paving	SAFETY FUNDS Quantity Schedule	SAFETY FUNDS Contingency	Grand Total	Unit	Description
56	632				58		58	EACH	PROVIDE & INSTALL VEHICULAR SIGNAL HEAD, LED, RIGID MOUNT, 3-SECTION, 12" LENS, W/ BACKPLATE, AS PER PLAN
57	632				5		5	EACH	PROVIDE & INSTALL VEHICULAR SIGNAL HEAD, LED, POLE MOUNT, 3-SECTION, 12" LENS, W/ BACKPLATE, AS PER PLAN
58	632				2		2	EACH	PROVIDE VEHICULAR SIGNAL HEAD, LED, RIGID MOUNT, 4-SECTION, 12" LENS, W/ BACKPLATE, AS PER PLAN
59	632				4		4	EACH	PROVIDE & INSTALL VEHICULAR SIGNAL HEAD, LED, RIGID MOUNT, 4-SECTION, 12" LENS, W/ BACKPLATE, AS PER PLAN
60	632				7		7	EACH	PROVIDE VEHICULAR SIGNAL HEAD, LED, RIGID MOUNT, 5-SECTION, 12" LENS, W/ BACKPLATE, AS PER PLAN
61	632				7		7	EACH	PROVIDE VEHICULAR SIGNAL HEAD, LED, PEDESTAL MOUNTED, 5-SECTION, 12" LENS, W/ BACKPLATE, AS PER PLAN
62	632				4		4	EACH	PROVIDE & INSTALL VEHICULAR SIGNAL HEAD, LED, RIGID MOUNT, 5-SECTION, 12" LENS, W/ BACKPLATE, AS PER PLAN
63	632				7		7	EACH	PROVIDE PEDESTRIAN SIGNAL HEAD W/ LED LAMP UNITS, POLE MOUNTED, TYPE D-2, 1-WAY, AS PER PLAN
64	632				2		2	EACH	PROVIDE PEDESTRIAN SIGNAL HEAD W/ LED LAMP UNITS, PEDESTAL MOUNTED, TYPE D-2, 1-WAY, AS PER PLAN
65	632				28		28	EACH	PROVIDE & INSTALL PEDESTRIAN SIGNAL HEAD W/ LED LAMP UNITS, POLE MOUNTED, TYPE D-2, 1-WAY, AS PER PLAN
66	632				2		2	EACH	PROVIDE & INSTALL PEDESTRIAN SIGNAL HEAD W/ LED LAMP UNITS, PEDESTAL MOUNTED, TYPE D-2, 1-WAY, AS PER PLAN
67	632				14		14	EACH	PROVIDE PEDESTRIAN SIGNAL HEAD W/ LED LAMP UNITS, POLE MOUNTED, TYPE D-2, 2-WAY, AS PER PLAN
68	632				14		14	EACH	PROVIDE & INSTALL PEDESTRIAN SIGNAL HEAD W/ LED LAMP UNITS, POLE MOUNTED, TYPE D-2, 2-WAY, AS PER PLAN
69	632				2		2	EACH	PROVIDE 20-MPH SIGNAL HEAD W/ LED LAMP UNITS, POLE MOUNTED, TYPE D-2, AS PER PLAN
70	632				36		36	EACH	PROVIDE PEDESTRIAN PUSH-BUTTON
71	632				21		21	EACH	PROVIDE & INSTALL PEDESTRIAN PUSH-BUTTON
72	632				5		5	EACH	SIGNALIZATION MISC.: PROVIDE VIDEO DETECTION SYSTEM
73	632				8		8	EACH	SIGNALIZATION MISC.: PROVIDE & INSTALL VIDEO DETECTION SYSTEM
74	632				280		280	FT.	SIGNAL CABLE, 2 CONDUCTOR, NO. 12 AWG, AS PER PLAN
75	632				410		410	FT.	SIGNAL CABLE, 5 CONDUCTOR, NO. 12 AWG, AS PER PLAN
76	632				231		231	FT.	SIGNAL CABLE, 7 CONDUCTOR, NO. 12 AWG, AS PER PLAN
77	632				200		200	FT.	SIGNAL CABLE, 9 CONDUCTOR, NO. 12 AWG, AS PER PLAN
78	632				1		1	EACH	SIGNAL SUPPORT FOUNDATION, TYPE D, AS PER PLAN
79	632				1		1	EACH	SIGNAL SUPPORT FOUNDATION, ODOT TYPE TC-12.30, DESIGN 10
80	632				2		2	EACH	REMOVAL OF MISC. TRAFFIC SIGNAL ITEM, SIGNAL SUPPORT & FOUNDATION
81	644			3.3			3.3	MILE	LANE LINE
82	644			0.5			0.5	MILE	CENTER LINE, DOUBLE SOLID
83	644			2.2			2.2	MILE	CENTER LINE, SOLID AND DASHED
84	644			0.24			0.24	MILE	EDGE LINE, YELLOW
85	644			1869.0			1869.0	FT.	CHANNELIZING LINE
86	644			961.0			961.0	FT.	STOP LINE
87	644			3809.0			3809.0	FT.	CROSSWALK LINE
88	644			102.0			102.0	FT.	TRANSVERSE LINE, YELLOW
89	644			477.0			477.0	FT.	DOTTED LINE, 4" WHITE
90	644			67			67	EACH	LANE ARROW
91	644			5			5	EACH	WORD ON PAVEMENT, 96"
92	653	126.5	28				154.5	CU. YD.	2" TOPSOIL, FURNISHED AND PLACED
93	659	2300	500				2800	SQ. YD.	SEEDING AND MULCHING, INCLUDING COMMERCIAL FERTILIZER
94	659		5				5	MGAL.	WATER
95	SPEC.	12					12	EACH	AREA INLET PROTECTION
96	SPEC.	78					78	EACH	CURB INLET PROTECTION
97	SPEC.		10				10	EACH	CATCH BASIN CLEANING
98	SPEC.		4959.5				4959.5	SQ. YD.	CONCRETE PAVEMENT, FS CLASS
99	SPEC.	375	150				525	FT.	INTIGRAL CURB & WALK, 3" TO 6"
100	SPEC.	375	150				525	FT.	CURB WALLS, 6" TO 12"
101	SPEC.		50				50	EACH	CONDUIT FOR SPRINKLER SYSTEMS
102	SPEC.		5				5	FT.	SPRINKLER HEADS
103	614			1.0			1.0	LUMP	MAINTAINING TRAFFIC
104	619			8.0			8.0	MONTH	FIELD OFFICE
105	624			1.0			1.0	LUMP	MOBILIZATION

2009 RECORD DRAWINGS - BK230-2

0 10 20 40
Horizontal Scale In Feet

Calculated: .
Checked: .

GENERAL SUMMARY

REYNOLDS ROAD PHASE 2
DORR TO ANGOLA
RESURFACING

Horizontal Scale In Feet
0 20 40 80

Calculated: .
Checked: .

SCHEMATIC PLAN (SHEET 1 OF 3)

REYNOLDS ROAD PHASE 2
DORR TO ANGOLA
RESURFACING

6
58

2009 RECORD DRAWINGS - BK230-2

MAINTENANCE OF TRAFFIC GENERAL NOTES

GENERAL CONDITIONS

ALL PAVEMENT PLANING, ASPHALT RESURFACING, PAVEMENT MARKINGS, AND WATER LINE WORK TO BE PERFORMED BY THE CONTRACTOR FOR THIS PROJECT SHALL BE COMPLETED BETWEEN THE HOURS OF 8:00 PM AND 6:00 AM. THE ONLY EXCEPTIONS FOR DAYTIME WATER LINE WORK WILL BE FOR TASKS TO BE PERFORMED BY THE CITY OF TOLEDO DIVISION OF WATER DISTRIBUTION (RE-TAPS AND CONNECTIONS TO SIDE STREET WATER MAINS). ALL OTHER CONTRACT WORK SHALL BE PERFORMED BETWEEN THE HOURS OF 6:00 AM AND 8:00 PM.

THE CONTRACTOR SHALL MAINTAIN THREE LANES OF TRAFFIC AT ALL TIMES, WITH A MINIMUM OF AT LEAST A 10' LANE WIDTH. BETWEEN THE HOURS OF 8:00 PM AND 6:00 AM, TRAFFIC MAY BE RESTRICTED TO ONE LANE IN EACH DIRECTION ONLY IF APPROVED BY THE ENGINEER. A FINE OF $1000 PER HOUR PER LANE SHALL BE ENFORCED FOR ANY UNAPPROVED LANE RESTRICTIONS THAT EXIST BEYOND THE DESIGNATED TIMES.

THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES ON REYNOLDS ROAD AND ALL CROSS STREETS WITHIN THE PROJECT LIMITS IN ACCORDANCE WITH THE REQUIREMENTS OF 1) SPECIFICATION 614, 2) THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), AND THE APPLICABLE STANDARD DRAWINGS FOR MAINTENANCE OF TRAFFIC IN EFFECT AT THE TIME OF CONTRACT LETTING; 3) THE MAINTENANCE OF TRAFFIC SPECIFICATIONS IN THE CITY OF TOLEDO PART A-BID BOOK AND 4) AS OUTLINE IN THE THESE PLANS. THE PROPOSED CONSTRUCTION PHASING SHOULD BE FOLLOWED.

THE CONTRACTOR SHALL NOTIFY IN WRITING THE CITY OF TOLEDO, DIVISION OF TRANSPORTATION (PHONE 419-245-1300 FAX 419-245-1310) 7 DAYS IN ADVANCE OF ANY STREET OR LANE CLOSURES.

THROUGHOUT THE DURATION OF ALL CONSTRUCTION PHASES, THE CONTRACTOR SHALL MAINTAIN AND PROVIDE ACCESS TO SIDEWALKS, CROSSWALKS, AND PRIVATE DRIVEWAYS. THE APPROPRIATE DELINEATION (SIGNS, BARRICADES, ETC.) SHALL BE PROVIDED IN ACCORDANCE WITH THE OMUTCD. ACCESS RESTRICTIONS TO PRIVATE DRIVEWAYS SHALL BE MINIMIZED. HOWEVER, WHERE REQUIRED, ONLY TEMPORARY CLOSURES WILL BE ACCEPTABLE AND THEY SHALL BE COORDINATED WITH THE PROJECT ENGINEER AND PROPERTY OWNER, OR HIS DULLY AUTHORIZED REPRESENTATIVE. THE CITY OF TOLEDO, DIVISION OF TRANSPORTATION, AND ALL AFFECTED/ADJACENT PROPERTY OWNERS SHALL BE GIVEN FORTY-EIGHT (48) HOURS ADVANCE WRITTEN NOTICE PRIOR TO ANY COMMENCEMENT OF FULL OR TEMPORARY CLOSURES TO ANY PUBLIC STREET OR PRIVATE DRIVEWAY WITHIN THE PROJECT LIMITS.

PRIOR TO THE COMMENCEMENT OF EACH CONSTRUCTION PHASE, AND ANY RELATED LANE REDUCTION OR CLOSURE:

ALL PAVEMENT MARKINGS, INCLUDING STRIPING AND LANE ARROWS (EXISTING OR TEMPORARY) AND SIGNAGE(INCLUDING OVERHEAD), INAPPROPRIATE FOR TEMPORARY TRAFFIC CONTROL OF THE ASSOCIATED CONSTRUCTION PHASE SHALL BE MODIFIED, REMOVED AND/OR REPLACED AS NECESSARY TO PROVIDE EFFICIENT AND SAFE TEMPORARY TRAFFIC CONTROL IN ACCORDANCE WITH THE LATEST REVISION OF THE OMUTCD. ALL TEMPORARY TRAFFIC CONTROL PAVEMENT MARKINGS AND SIGNAGE AND REMOVAL SHALL BE INCLUDED IN ITEM 614 MAINTENANCE OF TRAFFIC-LUMP SUM, REGARDLESS OF ACTUAL NUMBER OF APPLICATIONS. ALL SIGNS REMOVED SHALL BE STORED BY THE CONTRACTOR FOR PICKUP BY THE CITY OF TOLEDO, DIVISION OF TRANSPORTATION. THE CONTRACTOR SHALL PROVIDE THE CITY WITH A MINIMUM FORTY-EIGHT (48) HOUR NOTICE PRIOR TO ANY SUCH PICKUP.

A FINE OF $100 PER HOUR, FOR THE DURATION, WILL BE LEVIED AGAINST THE CONTRACTOR FOR THE FOLLOWING VIOLATION.

1. ANY DROP-OFFS AT JOINTS GREATER THAN 1 1/2".

614 MAINTENANCE OF TRAFFIC

THE CONTRACTOR SHALL SUBMIT TWO (2) WEEKS PRIOR TO STARTING CONSTRUCTION TO THE ENGINEER AND DIVISION OF TRANSPORTATION AND RECEIVE AN APPROVAL OF A TRAFFIC CONTROL PLAN BEFORE STARTING CONSTRUCTION FOR EACH OF THE LISTED PHASES.

A MINIMUM OF ONE TEN (10) FOOT TRAFFIC LANE IN EACH DIRECTION, ON ALL STREETS, SHALL BE PROVIDED AND LEFT TURN LANES SHALL BE PROVIDED AT ALL SIGNALIZED INTERSECTIONS AT ALL TIMES. THE CONTRACTOR SHALL SUPPLY AND INSTALL ALL MATERIAL REQUIRED IN THE OMUTCD FOR MAINTENANCE OF TRAFFIC IN THE CONSTRUCTION AREA.

IT IS NOT INTENDED THAT THE ABOVE NARROWED LANE WIDTHS BE USED EXCLUSIVELY ON THIS PROJECT, BUT THAT MAXIMUM USAGE BE MADE OF EXISTING PAVEMENT. THE LIMITS AND DURATION OF USE OF NARROWED LANES SHALL BE HELD TO AN ABSOLUTE MINIMUM AND IN ALL CASES SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

THE CONTRACTOR SHALL SUBMIT A PROPOSED WORK SCHEDULE FOR APPROVAL OF THE ENGINEER WHO SHALL COORDINATE THE SAME WITH THE DIVISION OF TRANSPORTATION.

PEDESTRIAN TRAFFIC SHALL BE MAINTAINED AT ALL LOCATIONS. THE CONTRACTOR SHALL KEEP ALL SIDEWALK AREAS REASONABLY FREE OF DIRT, MUD, AND OTHER DEBRIS TO THE SATISFACTION OF THE ENGINEER.

ARROW BOARDS FOR ALL LANE CLOSURES SHALL BE UTILIZED.

THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE OVERHEAD SIGN STRUCTURES AND ALL OTHER PROPOSED UTILITIES (ESPECIALLY THE UNDERGROUND SIGNAL CONDUIT) SO THAT CONFLICTS WHICH WILL CAUSE THE RELOCATION OF THE OVERHEAD SIGN STRUCTURES ARE PREVENTED.

CONTRACTOR SHALL INSTALL TWO (2) WEEKS PRIOR TO THE ACTUAL CONSTRUCTION ON REYNOLDS ROAD, A PORTABLE MESSAGE BOARD ON EACH END OF REYNOLDS ROAD CONSTRUCTION LIMITS INDICATING WHEN THIS TRAFFIC WILL BE RESTRICTED.

PHASE I CONSTRUCTION - PIPE INSTALLATION

INSTALLATION OF THE 54" PIPE SHALL TAKE PLACE BEFORE THE MILLING PROCESS. CONTRACTOR SHALL MAINTAIN ALL RIGHT TURN MOVEMENTS AND ALLOW TRAFFIC TO CROSS REYNOLDS PARALLEL TO THE TRENCH KEEPING ONE LANE OPEN FOR EASTBOUND AND WESTBOUND TRAFFIC.

PHASE II CONSTRUCTION - WEARING COURSE REMOVED AND RESURFACING TO INTERMEDIATE COURSE - ENTIRE LENGTH OF PROJECT, PIPE INSTALLATION

THE CONTRACTOR SHALL PERFORM THE WEARING COURSE REMOVED AND INTERMEDIATE COURSE PAVING BETWEEN THE HOURS OF 8:00 PM AND 6:00 AM. THE CONTRACTOR SHALL USE TWO MILLING MACHINES IN CONTINUOUS OPERATION WHILE KEEPING AT LEAST ONE LANE OPEN IN EACH DIRECTION. THE CONTRACTOR SHALL PLACE THE SPECIFIED TACK COAT AND LAY THE SPECIFIED INTERMEDIATE COURSE IMMEDIATELY AFTER MILLING AND BROOMING OPERATIONS. ALL LANES SHOULD BE OPEN TO TRAFFIC BETWEEN 6:00 AM AND 8:00 PM DURING PHASE I OF CONSTRUCTION.

THE CONTRACTOR MAY PARTIALLY CLOSE INTERSECTIONS ADJACENT TO THE WORK AREA DURING MILLING AND PAVING OPERATIONS. THE CONTRACTOR MUST NOTIFY THE DIVISION OF TRANSPORTATION IN ADVANCE OF ANY CLOSURES.

FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT MAY BE REQUIRED AT CERTAIN LOCATIONS, AS DIRECTED BY THE ENGINEER. ALL FULL DEPTH REPAIRS SHALL BE PERFORMED PRIOR TO THE PLACEMENT OF THE FINAL COURSE OF ASPHALT.

PHASE III CONSTRUCTION - CONCRETE WORK

CONDUCT CURB & GUTTER REMOVAL AND REPLACEMENT, SIDEWALK REMOVAL/REPLACEMENT, DRIVE REMOVAL AND REPLACEMENT, UTILITY ADJUSTMENTS, AND ALL OTHER RELATED CONSTRUCTION ACTIVITIES.

CURB & GUTTER AND DRIVE WORK IS ONLY PERMITTED ON ONE SIDE OF THE ROAD AT A TIME SO AS TO KEEP THREE LANES OPEN AT ALL TIMES.

TEMPORARY TRAFFIC CONTROL SHALL ACCOMMODATE ALL TURNING MOVEMENTS AT THE INTERSECTIONS OF REYNOLDS & HILL AND REYNOLDS & DORR, INCLUDING BUT NOT LIMITED TO, LEFT AND RIGHT TURNS BY SEMI TRUCKS AND BUSES.

PHASE IV CONSTRUCTION - APPLICATION OF FINAL COURSE OF ASPHALT

PERFORM PLACEMENT OF FINAL COURSE OF ASPHALT AND ALL OTHER RELATED CONSTRUCTION ACTIVITIES INCLUDING, BUT NOT LIMITED TO, PAVEMENT MARKINGS AND MANHOLE ADJUSTMENTS.

Calculated: .
Checked: .

MAINTENANCE OF TRAFFIC

REYNOLDS ROAD PHASE 2
DORR TO ANGOLA
RESURFACING

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale In Feet
0 20 40 80

Calculated: .
Checked: .

SCHEMATIC PLAN (SHEET 2 OF 3)

REYNOLDS ROAD PHASE 2
DORR TO ANGOLA
RESURFACING

Horizontal Scale In Feet
0 20 40 80

Calculated: .
Checked: .

SCHEMATIC PLAN (SHEET 3 OF 3)

REYNOLDS ROAD PHASE 2
DORR TO ANGOLA
RESURFACING

2009 RECORD DRAWINGS - BK230-2

TYPICAL SECTION

(NO SCALE)
REYNOLDS ROAD
STA. 657+81.49 TO STA. 755+81.41

TYPICAL SECTION

(NO SCALE)
REYNOLDS ROAD
STA. 755+81.41 TO STA. 760+30.00

LEGEND

1. Item 202 – Concrete Curb And Gutter Removed
2. Item 202 – Wearing Course Removed (0"–3")
3. Item 407 – Tack Coat (Applied At 0.05 Gal/Sq. Yd.)
4. Item 442 – 1 1/2" Asphalt Concrete Surface Course, 9.5mm., Type A (446), PG 70–22m
5. Item 442 – 1 1/2" Asphalt Concrete Surface Intermediate Course, 12.5mm., Type A (446), PG 70–22m
6. Item 608 – 4" Concrete Walk
7. Item 609 – Concrete Curb or Curb and Gutter, Type B or B–1
8. Match Existing Material For Parking Lots:
   Item 448 – Asphalt Concrete Surface Course Type 1, For Drives, PG 64–22

   For Other Areas:
   Item 653 – 2" Topsoil, Furnished & Placed
   Item 659 – Seeding & Mulching, Including Commercial Fertilizer

EXISTING PAVEMENT SECTION:

- A Existing Asphalt Varies (4"–12")
- B 9" Reinforced Concrete
- C 6" Aggregate Base

Horizontal Scale In Feet
0 10 20 40

Calculated: .
Checked: .

TYPICAL SECTION

REYNOLDS ROAD PHASE 2
DORR TO ANGOLA
RESURFACING

DRIVE TABLE

REYNOLDS ROAD									
REFERENCE NUMBER	SHEET NUMBER	LOCATION		DIMENSIONS				202	452
		STATION	SIDE	TYPE	B	W	D	PAVEMENT REMOVED	8" PLAIN CONCRETE PAVEMENT
					FT	FT	FT	SQ YD	SQ YD
D1	–	658+66.48	RT	1–3	49.9	49.9	7	28.1	38.8
D2	–	659+56.63	RT	1	32.0	32.0	6.5	17.9	23.1
D3	–	659+65.83	LT	2	27.4	41.6	8.8	68.0	33.7
D4	–	660+16.19	LT	1–3	44.8	44.8	5	8.9	24.9
D5	–	660+98.48	RT	1	47.1	47.1	6.3	23.1	33.0
D6	–	661+48.74	LT	3	39.2	39.2	5.0	0.0	21.8
D7	–	663+06.63	RT	1	43.8	46.7	2.2	81.4	11.1
D8	–	663+54.85	LT	3	25.1	26.5	8.5	24.4	37.4
D9	–	664+19.15	LT	3	25.6	26.1	12.1	48.3	34.8
D10	–	665+38.45	RT	1	34.0	36.6	2.2	34.1	8.3
D11	–	665+39.34	LT	3	62.4	62.4	5.0	18.3	34.7
D12	–	667+07.29	LT	3	44.7	44.7	6.3	22.3	31.3
D13	–	667+70.78	RT	1	39.6	42.9	2.8	92.1	12.8
D14	–	668+73.89	RT	1	37.6	41.0	3.2	114.4	14.0
D15	–	668+99.40	LT	3	46.7	46.7	5.0	43.4	25.9
D16	–	669+66.52	RT	1	48.6	52.7	3.2	34.7	18.0
D17	–	670+50.39	LT		0	0	0	15.0	0
D18	–	670+67.78	RT	1	38.3	41.5	3.2	27.2	14.2
D19	–	672+23.18	LT	3	25.6	28.5	22.4	61.3	64.0
D20	–	672+87.12	LT	3	26.7	29.5	1.5	19.5	4.7
D21	–	675+01.50	RT	1	30.4	34.2	2.9	20.5	10.4
D22	–	675+66.21	RT	1	29.3	33.0	2.5	55.0	8.7
D23	–	676+28.46	RT	1	31.3	34.1	2.7	59.2	9.8
D24	–	677+12.80	RT	1	30.4	35.1	2.6	58.1	9.5
D25	–	678+31.43	LT	3	41.9	43.1	1.4	30.2	6.6
D26	–	678+69.90	RT	1	34.1	38.8	2.8	23.2	11.3
D27	–	679+27.17	LT	1	25.5	25.5	5.1	58.6	14.5
D28	–	679+49.08	RT	1	38.1	41.7	2.6	46.6	11.5
D29	–	679+92.12	LT	1	25.1	27.9	2.0	25.6	5.9
D30	–	680+95.90	RT	1	24.3	27.4	2.8	16.0	8.0
D31	–	681+42.92	LT	1	34.8	37.8	1.2	26.9	4.8
D32	–	681+65.43	RT	1	53.7	57.3	2.8	104.1	17.3
D33	–	682+11.50	LT	1	35.9	38.3	1.2	28.1	4.9
D34	–	684+79.01	RT	1	30.6	67.2	17.5	111.9	95.1
D35	–	686+22.73	RT	1	29.8	66.5	17.3	111.6	92.6
D36	–	687+04.90	RT	1–2	26.8	51.4	17.3	29.0	75.2
D37	–	688+06.88	RT	1	26.2	42.2	5.8	77.5	22.0
D38	–	689+08.58	RT	1	30.0	43.3	5.9	75.5	24.0
D39	–	689+72.50	RT	1	26.2	41.8	5.8	68.1	21.9
D40	–	690+44.81	RT	1	25.3	40.3	5.7	59.8	20.8
D41	–	697+82.16	RT	1	31.5	31.5	5.0	0.0	17.5
D42	–	698+91.27	RT	1	33.4	33.4	5.0	0.0	18.6
D43	–	699+80.50	RT	1	33.0	33.0	5.0	3.3	18.3
D44	–	701+01.35	LT	2	0.0	0.0	0.0	0.0	0.0
D45	–	704+86.80	RT	1	22.1	42.2	13.2	0.0	47.2
D46	–	705+94.84	RT	1	16.3	37.9	11.5	0.0	34.6
D47	–	706+64.02	LT	1	26.7	51.9	14.4	77.1	62.9
D48	–	706+64.46	RT	1	26.3	42.7	9.7	67.6	37.2
D49	–	707+68.42	LT	1	23.8	50.9	12.0	75.6	49.8
D50	–	708+39.15	LT	1	47.3	69.5	10.3	94.0	64.8
D51	–	709+59.26	LT	1–2	54.1	54.1	5.0	57.9	30.1
D52	–	712+87.34	RT	1	29.3	46.8	10.2	72.5	43.1
D53	–	713+19.95	LT	1	31.5	50.8	11.0	42.5	50.3
D54	–	714+74.05	RT	1	18.1	36.3	12.8	36.5	38.7
D55	–	714+97.05	LT	1	37.1	62.4	13.2	88.9	73.0
D56	–	715+06.98	RT	1	16.2	34.7	13.6	40.2	38.5
D57	–	715+87.34	RT	1	20.0	33.7	15.0	0.0	44.8
D58	–	716+89.25	LT	1	31.2	59.2	14.7	0.0	73.8
D59	–	720+74.14	LT		0.0	0.0	0.0	0.0	0.0
D60	–	720+84.29	RT	1	24.9	53.0	16.0	99.4	69.2
D61	–	722+78.08	LT	1	43.6	58.7	14.2	116.5	80.7
D62	–	724+03.56	LT	2	33.5	44.5	14.1	0.0	61.1
D63	–	725+05.23	LT	2	39.2	39.2	5.0	0.0	21.8
D64	–	726+32.67	LT	1–3	48.2	48.2	5.0	0.0	26.8
D65	–	726+81.95	LT	3	41.5	41.5	5.0	0.0	23.1

DRIVE TABLE

REYNOLDS ROAD									
REFERENCE NUMBER	SHEET NUMBER	LOCATION		DIMENSIONS				202	452
		STATION	SIDE	TYPE	B	W	D	PAVEMENT REMOVED	8" PLAIN CONCRETE PAVEMENT
					FT	FT	FT	SQ YD	SQ YD
D66	–	731+51.93	LT	1	32.7	55.8	7.8	61.6	38.4
D67	–	732+90.81	LT	1	37.7	59.0	7.1	62.3	38.1
D68	–	734+99.17	LT	1	30.6	47.8	10.5	51.3	45.7
D69	–	735+79.16	LT	1	26.7	40.9	11.0	51.0	41.3
D70	–	739+99.80	RT	1	51.4	74.9	20.5	197.1	143.8
D71	–	740+11.11	LT	1	57.6	81.2	6.9	0.0	53.2
D72	–	742+38.96	RT	1–2	57.2	75.9	9.9	94.6	73.2
D72A	–		LT		36.3	59.4	11.3	60.1	60.1
D73	–	742+69.68	LT	1	44.9	68.2	11.0	94.1	69.1
D74	–	745+23.48	LT	1	43.8	74.2	19.9	121.2	130.5
D75	–	746+35.04	RT	3	51.2	51.2	5.0	0.0	28.4
D76	–	748+34.16	RT	2	42.2	118.6	29.0	241.2	259.1
D77	–	748+88.93	LT	2	32.8	65.6	19.3	105.5	105.5
D78	–	750+81.88	RT	1	29.2	52.6	19.3	112.7	87.7
D79	–	751+79.96	LT	1	25.8	51.1	18.3	0.0	78.2
D80	–	753+43.67	LT	1	45.4	77.0	20.3	0.0	138.0
419	h. Reynolds		RT		35.4	64.5	15.3	33.4	84.9
Totals (Carried To General Summary)								4026	3462.4

TYPICAL DRIVE REPLACEMENT – TYPE 1

TYPICAL DRIVE REPLACEMENT – TYPE 2

TYPICAL DRIVE REPLACEMENT – TYPE 3

CATCH BASIN FEATHER DETAIL

(NO SCALE)

3"–6" INTEGRAL CURB & WALK

6"–12" CONCRETE RETAINING WALL SECTION

NOTE: 8" CONCRETE DRAINAGE CHANNEL SHALL BE PAID FOR UNDER ITEM 452~8" CONCRETE PAVEMENT, CLASS MS

8" CONCRETE DRAINAGE CHANNEL

TYPICAL BUTT JOINT DETAIL

(NO SCALE)

NOTES:

1.) CONTRACTOR SHALL INSURE A 90° CORNER AT THE END OF THE BUTT JOINT, TO BE INCLUDED IN THE COST OF ITEM 202 ~ WEARING COURSE REMOVED.

2.) A TEMPORARY WEDGE OF COLD PATCH APPROVED MATERIAL SHALL BE CONSTRUCTED AT THE END OF EACH BUTT JOINT. THE COST IS TO BE INCLUDED IN ITEM 202 ~ WEARING COURSE REMOVED.

3.) ASPHALT SURFACE TO BE REMOVED OVER EXISTING CONCRETE TO BE INCLUDED THE COST OF ITEM 202 ~ WEARING COURSE REMOVED.

CALCULATED

CHECKED

DRIVE TABLE AND MISCELLANEOUS DETAILS

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

SWPPP ~ GENERAL NOTES

Project Description:

RECONSTRUCTION OF 2 MILES OF ROADWAY INCLUDING PAVEMENT REMOVAL AND REPLACEMENT, NEW CURBS AND DRIVEWAY APRONS, REPLACEMENT OF SIDEWALK AND INSTALLATION OF PEDESTRIAN CURB RAMPS. IMPROVEMENTS ARE LOCATED ON REYNOLDS ROAD FROM DORR STREET TO ANGOLA ROAD.

TOTAL DISTURBED AREA FOR THE PROJECT IS APPROXIMATELY 1 ACRE. STORM WATER FOR PROJECT AREA DISCHARGES INTO A MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4). SEDIMENT AND EROSION CONTROL MEASURES CONSIST OF THE PROVISION FOR COVER OVER DISTURBED SOILS USING TEMPORARY OR PERMANENT SEEDING AND MULCHING, AND PROTECTION OF STORM WATER INLETS USING A COMBINATION OF FILTER FABRIC FENCE, AREA INLET PROTECTION DEVICES, AND CURB INLET PROTECTION DEVICES.

Pre And Post-Construction Runoff Coefficients:

THE PRE-CONSTRUCTION RUNOFF COEFFICIENT FOR THE PROJECT AREA IS 0.75. THE POST-CONSTRUCTION RUNOFF COEFFICIENT IS 0.75.

Soils Information:

SOIL NAME	SYMBOL	BEDROCK (in.)	DEPTH (in.)	PERMEABILITY (in./hr)	EROSION K	FACTORS T	WIND ERODIBILITY GROUP
BIXLER	BxA,ByA	>60	0-10	6.0-20	0.17	4	2
			10-28	6.0-20	0.17		
			28-32	6.0-20	0.17		
			32-72	6.0-20	0.17		
COLWOOD	Co	>60	0-12	0.6-2.0	0.28	5	5
			12-45	0.6-2.0	0.43		
			45-60	0.6-2.0	0.43		
DIGBY	DgA	>60	0-12	2.0-6.0	0.24	4	3
			12-40	0.6-2.0	0.32		
			40-60	6.0-20	0.10		
DIXBORO	DsA,DtA	>60	0-9	2.0-6.0	0.20	5	3
			9-27	0.6-2.0	0.20		
			27-60	0.6-2.0	0.20		
LAMSON	La	>60	0-33	2.0-6.0	–	–	–
			33-46	2.0-6.0	–		
			46-60	–	–		
OTTOKEE	OtB	>60	0-9	6.0-20	0.17	5	2
			9-74	6.0-20	0.17		
SISSON	SmB,SnB	>60	0-9	0.6-2.0	0.32	5	5
			9-40	0.6-2.0	0.43		
			40-60	0.6-2.0	0.43		
SLOAN	So	>60	0-12	0.6-2.0	0.37	5	6
			12-36	0.6-2.0	0.37		
			36-67	0.6-2.0	0.37		
UDORTHENTS	Uo	–	–	–	–	–	–

Construction Sequence:

1.) PRE-CONSTRUCTION MEETING:

ALL PROPOSED SWPPP MEASURES SHALL BE REVIEWED BASED UPON THE CONTRACTOR'S PROPOSED CONSTRUCTION SEQUENCE AND SCHEDULE.

2.) PRE-CONSTRUCTION SWPPP MEASURES:

TEMPORARY SEDIMENTATION AND EROSION CONTROL ITEMS SHALL BE INSTALLED ON EXISTING INLETS BEFORE EARTHWORK STARTS:

* WITHIN CONSTRUCTION LIMITS: INSTALL INLET PROTECTION DEVICES (CI-# OR RI-#) AT INLETS WHERE FRAME AND COVER REMAIN IN PLACE, WHILE CONSTRUCTION IS ONGOING AND/OR ADJACENT GROUND IS DISTURBED AND NOT STABILIZED. INSTALL AREA INLET PROTECTION DEVICES (AI-#) AT MANHOLES WHERE ADJACENT GROUND IS DISTURBED AND NOT STABILIZED.

* OUTSIDE CONSTRUCTION LIMITS: INSTALL INLET PROTECTION DEVICES (CI-# OR RI-#) AT INLETS AND AREA INLET PROTECTION DEVICES (AI-#) AT MANHOLES THAT MAY RECEIVE STORM DRAINAGE FROM THE CONSTRUCTION AREA, AS DETERMINED BY THE ENGINEER. BARRIERS ARE TO REMAIN IN PLACE WHILE CONSTRUCTION IS ONGOING.

3.) CONSTRUCTION SWPPP MEASURES:

* THE PROJECT SITE SHALL BE CLEARED AND GRUBBED ONLY WHERE NECESSARY.

* IF NEW OR EXISTING INLETS MAY RECEIVE STORM DRAINAGE DUE TO FRAME AND COVER REMOVAL, INSTALL AREA INLET PROTECTION (AI-#) UNTIL THE FRAME AND COVER ARE INSTALLED.

* INSTALL MULCH, TEMPORARY OR PERMANENT SEEDING AND MULCHING, OR SODDING IN ALL AREAS THAT WILL BE INACTIVE FOR 21 DAYS OR MORE, WITHIN 7 DAYS OF DISTURBING AREA. FILTER FABRIC FENCE OR PRE-MANUFACTURED BARRIERS SUCH AS FILTREXX, FILTERSOXX OR EQUAL, MAY ALSO BE REQUIRED AND APPROVED BY THE ENGINEER.

* STREET CLEANING SHALL BE PERFORMED AS REQUIRED OR DIRECTED.

4.) POST-CONSTRUCTION SWPPP MEASURES:

* INSTALL INLET PROTECTION DEVICES (CI-# OR RI-#) ON INLETS THAT MAY RECEIVE STORM DRAINAGE UNTIL DISTURBED GROUND IS STABLE (A VEGETATION GROWTH DENSITY OF ≥70% OR EQUIVALENT).

5.) UPON COMPLETION OF PERMANENT STORM WATER CONTROL STRUCTURES AND WHEN SITE IS SUFFICIENTLY STABLE (A VEGETATIVE GROWTH DENSITY OF ≥70% OR EQUIVALENT), THE TEMPORARY SEDIMENTATION AND EROSION CONTROL ITEMS SHALL BE REMOVED.

6.) REPAIR SEEDING AND MULCHING AS DIRECTED BY THE ENGINEER.

Storm Water Pollution Prevention Notes:

ALL WORK SPECIFIED AS AN ODOT ITEM SHALL BE GOVERNED BY THE CURRENT STATE OF OHIO DEPARTMENT OF TRANSPORTATION HANDBOOK. ALL OTHER ITEMS SHOULD CONFORM TO SPECIFICATIONS CONTAINED IN THE ODNR MANUAL~"RAINWATER AND LAND DEVELOPMENT."

THIS CONTRACT DRAWING SHALL BE MADE AVAILABLE ON SITE AT ALL TIMES AND PRESENTED UPON REQUEST. IF UNFORESEEN EROSION IS ENCOUNTERED, ADDITIONAL EROSION AND SEDIMENTATION CONTROL MEASURES MAY BE REQUESTED BY THE CITY OR SOIL CONSERVATION SERVICE REPRESENTATIVE AT ANYTIME. SUCH REQUESTS SHALL BE IMPLEMENTED IMMEDIATELY AT CONTRACTOR'S EXPENSE.

1.) ALL STORM WATER POLLUTION PRACTICES SHALL BE INSTALLED BEFORE ANY OTHER EARTH MOVING OCCURS.

2.) IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ALL SEDIMENT AND EROSION CONTROL ITEMS AT ALL TIMES.

3.) TEMPORARY SEDIMENTATION AND EROSION CONTROL MEASURES MUST BE INSPECTED AND LOGGED BY THE CONTRACTOR FOR THE OHIO EPA, LOGGING SHALL BE WEEKLY AND WITHIN 24 HOURS OF EACH RAIN STORM EVENT WHICH PRODUCES 0.5 INCHES OR MORE OF RAIN OVER THE PRECEDING 24 HOUR PERIOD. INSPECTION LOGS SHALL INCLUDE THE FOLLOWING INFORMATION; INSPECTOR NAME, DATE OF INSPECTION, WEATHER CONDITIONS, CONDITIONS OF SWPPP MEASURES, CORRECTIVE ACTIONS NEEDED, AND DATE OF CORRECT ACTIONS. THE CITY INSPECTOR AND THE ENGINEER SHALL EACH RECEIVE A COPY OF ALL INSPECTION RECORDS.

4.) UTILITY COMPANIES MUST COMPLY WITH ALL STORM WATER POLLUTION PREVENTION MEASURES AS DEFINED ON THE STORM WATER POLLUTION PREVENTION PLANS, DETAILS AND NOTES.

5.) ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OF FINAL GRADING. AREAS WITHIN 50 FEET OF A STREAM SHALL BE STABILIZED WITHIN TWO (2) DAYS OF INACTIVITY. ALL DISTURBED AREAS THAT WILL BE INACTIVE FOR 21 DAYS OR MORE SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OF THE DATE THE AREAS BECOME INACTIVE.

6.) EROSION AND SEDIMENTATION CONTROL ITEMS SHALL BE INSTALLED AS SHOWN ON THE INDIVIDUAL PLAN SHEETS AND AS FOLLOWS:

A) AT ALL STAGING AREAS AND AROUND ALL MATERIAL STOCK PILES.

B) ADDITIONAL LOCATIONS AS DIRECTED BY THE ENGINEER, OR OTHER AGENCY HAVING JURISDICTION.

7.) CONSTRUCTION ENTRANCES, HAUL ROUTES AND ROADS UNDERGOING CONSTRUCTION SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. AS A MINIMUM, THE FOLLOWING METHODS OF CONTROL SHALL BE USED:

A) STREETS AND HAUL ROADS SHALL BE SWEPT BY AN AUTOMATIC, SELF-CONTAINED MECHANICAL SWEEPER MEETING THE REQUIREMENTS OF ELGIN-WHITE, WING-MODEL 475, WAYNE MODEL 475, WAYNE MODEL 880 OR EQUAL HAVING A DUST CONTROL WATER SYSTEM.

B) ALL EXCESSIVE DIRT ON THE PAVEMENT SHALL BE REMOVED BY MEANS OF HAND SHOVELING OR APPROPRIATE MECHANICAL EQUIPMENT, AND SHALL BE SWEPT AS DESCRIBED ABOVE.

C) SIDEWALKS AND DRIVEWAYS SHALL BE CLEANED BY MEANS OF SHOVELS AND HAND BROOMS OR APPROPRIATE MECHANICAL EQUIPMENT.

D) IF THE CONTRACTOR FAILS TO PERFORM THE ABOVE WORK IN A SATISFACTORY MANNER, ALL WORK, EXCEPT CLEANUP OPERATIONS, SHALL BE STOPPED IMMEDIATELY UNTIL THE CONTRACTOR HAS COMPLIED WITH THE ABOVE REQUIREMENT TO THE SATISFACTION OF THE ENGINEER.

E) LIQUIDATED DAMAGES FOR DELAY, OF $400 PER OCCURRENCE, WILL BE LEVIED AGAINST THE CONTRACTOR FOR FAILURE TO PERFORM STREET SWEEPING WITHIN 8 HOURS OF BEING DIRECTED TO DO SO BY THE INSPECTOR OR ENGINEER.

8.) IN ACCORDANCE WITH ODOT ITEM~877.05, IN THE EVENT THAT THE CONTRACTOR OR ITS AGENTS REFUSE OR FAIL TO ADHERE TO THE REQUIREMENTS OF THE NPDES STORM WATER PERMIT AND AS A RESULT AN ASSESSMENT OR FINE IS MADE OR LEVIED AGAINST THE CITY OF TOLEDO, THE CONTRACTOR SHALL REIMBURSE THE CITY WITHIN TEN (10) CALENDAR DAYS OF THE ASSESSMENT OR FINE OR THE CITY MAY WITHHOLD THE AMOUNT OF THE FINE FROM THE CONTRACTOR'S NEXT PAY ESTIMATE AND DELIVER THAT SUM TO THE PERMITTING AGENCIES ISSUING THE ASSESSMENT OR FINE.

Item 207~Temporary Seeding And Mulching:

PLANT ODOT ITEM 207 TEMPORARY SEEDING AND MULCHING IN ALL AREAS THAT WILL BE INACTIVE FOR 21 DAYS OR MORE AND WHICH DO NOT REQUIRE IMMEDIATE SOIL STABILIZATION. ALL DISTURBED AND ERODED EARTH SHALL BE REGRADED AND SEEDED WITHIN 7 DAYS WITH SEEDING, AS DEFINED ABOVE AND AS SHOWN ON THE TABLE BELOW, TO ESTABLISH STABILITY AND PROVIDE SEDIMENT CONTROL.

TEMPORARY SEEDING SPECIFICATIONS:

SEEDING DATES:	SEEDING TYPE:	APPLICATION RATE POUNDS PER 1,000 SQ. FT.
MAR. 1 – AUG. 15	1. PREPARE SEEDBED 2. TEMPORARY SEEDING: OATS TALL FESCUE ANNUAL RYEGRASS OR PERRENIAL RYEGRASS TALL FESCUE ANNUAL RYEGRASS 3. MULCH	 3 1 1 1 1 1
AUG. 16 – NOV. 1	1. PREPARE SEEDBED 2. TEMPORARY SEEDING: RYE TALL FESCUE ANNUAL RYEGRASS OR WHEAT TALL FESCUE ANNUAL RYEGRASS OR PERRENIAL RYEGRASS TALL FESCUE ANNUAL RYEGRASS 3. MULCH	 3 1 1 3 1 1 3 1 1
NOV. 2 – NOV. 20	MULCH ONLY, OR SOD, OR DORMANT SEED PREPARATIONS: 1. PREPARE SEEDBED 2. DORMANT SEEDING-NO SEED SHALL BE PLACED UNTIL AFTER NOV. 20. AFTER NOV. 20, PLACE SEED AT ABOVE APPLICATION RATES PLUS 50% 3. MULCH	
NOV. 21 – FEB. 28	MULCH ONLY, OR SOD OR DORMANT SEEDING: 1. PREPARE SEEDBED 2. SEED AT ABOVE APPLICATION RATES PLUS 50% 3. MULCH	
SEED BED PREPARATION:	SEEDBED SHALL BE PULVERIZED AND LOOSE TO ENSURE SUCCESS OF ESTABLISHING SEEDBED.	
MULCH:	WOOD CELLULOSE FIBER (46 LBS/1000 SF), OR MULCH MATTING PER MANUFACTURER RECOMMENDATIONS, OR STRAW MULCH (90 LBS/1000 SF) WITH TACKIFIER.	
TACKIFIER:	ASPHALT EMULSION (0.1 GAL/SY), OR SYNTHETIC BINDER (AGRI-TAC, DCA-70, PETROSET, TERRA TACK, OR EQUAL) AT RATE PER MANUFACTURER RECOMMENDATIONS.	

Construction Entrances:

CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF-WAY.

WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED TRAP.

Item 659~Seeding And Mulching

PLANT ODOT ITEM 659 SEEDING AND MULCHING IN ALL AREAS THAT CAN BE BROUGHT TO FINAL GRADE. APPLICATIONS OF PERMANENT SEEDING SHALL NOT BE DELAYED WHILE CONSTRUCTION OF LIMITED PORTIONS OF THE SITE IS BEING COMPLETED.

PERMANENT SEEDING SPECIFICATIONS:

SEEDING DATES:	SEEDING TYPE:	APPLICATION RATE POUNDS PER 1,000 SQ. FT.
MAR. 1 – MAY. 31 AUG. 1 – SEPT. 30	1. PREPARE SEEDBED 2. PERMANENT SEEDING:	
	PARKS AND BOULEVARDS: MASTERPIECE TALL FESCUE (TURF TYPE) PICASSO TALL FESCUE (TURF TYPE) REMBRANDT TALL FESCUE (TURF TYPE) KENTUCKY BLUEGRASS TOTAL:	 3 3 3 1 10
	RESIDENTIAL AND OTHER AREAS: TURF TYPE RYEGRASS, CALYPSO II RYE, HEADSTART RYE, RACER RYE CREEPING RED FESCUE KENTUCKY BLUEGRASS TOTAL: 3. MULCH	 5 3 2 10
OCT. 1 – NOV. 20	1. PREPARE SEEDBED 2. DORMANT SEEDING-NO SEED SHALL BE PLACED UNTIL AFTER NOV. 20. AFTER NOV. 20, PLACE SEED AT ABOVE APPLICATION RATES PLUS 50%. 3. MULCH	
NOV. 21 – FEB. 28	1. PREPARE SEEDBED 2. DORMANT SEEDING-SEED AT ABOVE APPLICATION RATES PLUS 50% 3. MULCH	
SEED BED PREPARATION:	WORK LIME AND FERTILIZERS INTO SOIL TO DEPTH OF 3"	
	LIME FERTILIZER (10-20-10)	92 20
MULCH:	WOOD CELLULOSE FIBER (46 LBS/1000 SF), OR MULCH MATTING PER MANUFACTURER RECOMMENDATIONS, OR STRAW MULCH (90 LBS/1000 SF) WITH TACKIFIER.	
TACKIFIER:	ASPHALT EMULSION (0.1 GAL/SY), OR SYNTHETIC BINDER (AGRI-TAC, DCA-70, PETROSET, TERRA TACK, OR EQUAL) AT RATE PER MANUFACTURER RECOMMENDATIONS.	
IRRIGATION:	WATER AS NEEDED TO ENSURE ADEQUATE MOISTURE FOR SEED GERMINATION AND PLANT GROWTH.	

Calculated: . Checked: .

STORM WATER POLLUTION PROTECTION PLAN (SHEET 1 OF 3)

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

Area Inlet Protection (AI-#):
Construction Specifications

AREA INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS, OR BEFORE THE STORM DRAIN BECOMES OPERATIONAL. SUPPORT POSTS FOR A SILT FENCE MUST BE STEEL FENCE POSTS, OR 2X4-INCH WOOD, LENGTH 3 FOOT MINIMUM, SPACING 3 FOOT MAXIMUM, WITH A TOP FRAME SUPPORT. THE EARTH AROUND THE INLET SHALL BE EXCAVATED TO A DEPTH OF AT LEAST 18-INCHES. THE POSTS SHALL BE DRIVEN 18-INCHES INTO THE GROUND AT FOUR CORNERS OF THE INLET AND THE TOP PORTION OF THE FRAME ASSEMBLED USING THE OVERLAP JOINT METHOD SHOWN IN THE SILT FENCE DETAIL. THE TOP OF THE FRAME SHALL BE AT LEAST 6-INCHES BELOW ADJACENT ROADS, IF PONDED WATER WOULD POSE A SAFETY HAZARD TO TRAFFIC. WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY TO THE FRAME. GEOTEXTILE SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY. IT SHALL EXTEND FROM THE TOP OF THE FRAME TO 18-INCHES BELOW THE INLET NOTCH ELEVATION. THE GEOTEXTILE SHALL OVERLAP ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST. BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6-INCH LAYERS UNTIL THE EARTH IS EVEN WITH NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES. A COMPACTED EARTH DIKE, OR CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET, IF THE INLET IS NOT IN A DEPRESSION AND IF RUNOFF BYPASSING THE INLET WILL NOT FLOW TO A SETTLING POND. THE TOP OF EARTH DIKES SHALL BE AT LEAST 6-INCHES HIGHER THAN THE TOP OF THE FRAME.

INSPECTION AND MAINTENANCE:

INSPECT THE AREA INLET PROTECTION AFTER EACH RAIN AND PROMPTLY MAKE REPAIRS AS NEEDED. SEDIMENT SHALL BE REMOVED AFTER EACH SIGNIFICANT STORM (1/2" IN 24 HOURS) TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN. THE SEDIMENT SHALL BE IMMEDIATELY REMOVED FROM THE TRAVELED WAY OF ROADS. THE REMOVED SEDIMENT SHALL BE PLACED WHERE IT CANNOT ENTER A STORM DRAIN, STREAM OR BE TRANSPORTED OFF-SITE.

SECTION A-A
(NO SCALE)

PLAN VIEW
(NO SCALE)

AREA INLET PROTECTION DEVICE
(NO SCALE)

NOTES:

1. THIS TYPE OF INLET PROTECTION TO BE USED UPON CURB INLET BOX INSTALLATION PRIOR TO FRAME AND COVER INSTALLATION.
2. AREA INLET PROTECTION IS TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREA (LESS THAN 5%).
3. USE OF 2X4-INCH WOOD, OR EQUIVALENT METAL STAKES (3 FOOT MIN. LENGTH).
4. INSTALL 2X4-INCH WOOD TOP FRAME TO INSURE STABILITY.
5. THE TOP OF THE FRAME (PONDING HEIGHT) MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BY-PASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

PLAN VIEW
(NO SCALE)

SECTION A-A
(NO SCALE)

CURB INLET PROTECTION DEVICE (CI-#)
(NO SCALE)

Inlet Protection (CI-# Or RI-#):

CONSTRUCTION SPECIFICATIONS:

INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LANDI. DISTURBANCE BEGINS, OR BEFORE THE STORM DRAIN BECOMES OPERATIONAL. PLACE THE PROTECTION DEVICES ON GENTLY SLOPING STREETS WHERE WATER CAN POND. THE DEVICES MUST ALLOW FOR OVERFLOW FROM A SEVERE STORM EVENT. SLOPE RUNOFF SHALL BE ALLOWED TO FLOW OVER2. DEVICE AND NOT BE BYPASSED OVER THE CURB.

INSPECTION AND MAINTENANCE:

INSPECT THE DEVICES AFTER EACH RAIN AND PROMPTLY REPLACE AS NEEDED. SEDIMENT SHALL BE REMOVED AFTER EACH SIGNIFICANT STORM (1/2" IN 24 HOURS) TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN. SEDIMENT SHALL BE IMMEDIATELY REMOVED FROM THE TRAVELLED WAY OF ROADS. THE REMOVED SEDIMENT SHALL BE PLACED WHERE IT CANNOT ENTER A STORM DRAIN, STREAM, OR BE TRANSPORTED OFF SITE.

NOTES:

PLACE INLET PROTECTION DEVICES ON GENTLY SLOPING STREET SEGMENTS WHERE WATER CAN POND AND ALLOW SEDIMENT TO SEPARATE FROM RUN-OFF.

CURB INLET PROTECTION DEVICES SHALL BE PRE-MANUFACTURED DEVICES.

CURB INLET WITH GRATE (CI-#): DANDY BAG-BEAVER DAM, E.L.S. PRODUCTS-ULTRA CURBGUARD OR APPROVED EQUAL.

CURB INLET WITHOUT GRATE (CI-#): DANDY BAG-TRUE DAM, FILTREXX-FILTERSOXX, NATIONAL INLET PRO-TECTION-INLET GUARD OR APPROVED EQUAL.

ROADSIDE GRATE INLET (RI-#): ULTRATECH-ULTRA GRATE GUARD, STREAM SAVER, KRI-STAR-FLOWGUARD PLUS OR APPROVED EQUAL.

Item 207~Filter Fabric Fence:

CONSTRUCTION SPECIFICATIONS:

FILTER FABRIC FENCE SHALL BE CONSTRUCTED BEFORE DISTURBANCE BEGINS. THE HEIGHT OF A FILTER FABRIC FENCE SHALL NOT EXCEED 36 INCHES, OR BE LESS THAN 16 INCHES. STORAGE HEIGHT SHALL NEVER EXCEED 18 INCHES, OR HALF OF THE TOTAL HEIGHT ABOVE THE ORIGINAL GROUND. THE FENCE LINE SHALL FOLLOW LEVEL CONTOURS AS CLOSELY AS POSSIBLE, THE FILTER FABRIC SHALL BE CUT FROM A CONTINUOUS ROLL TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SECURELY WRAPPED AROUND A POST. POSTS SHALL BE SPACED A MINIMUM OF 10 FEET APART AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 16 INCHES), ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE. WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET. WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR ±5 FEET UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE RESTORED WITHIN 7 DAYS FROM INSTALLATION. TURN THE ENDS OF THE FENCE UPHILL APPROXIMATELY 2 FEET. A TRENCH SHALL BE EX-CAVATED APPROXIMATELY 4 INCHES WIDE AND 6 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER. WHEN STANDARD-STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED, OR WIRED TO THE FENCE, AND 8 INCHES OF THE FABRIC SHALL EXTEND INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES. WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE EL-IMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED, OR WIRED DIRECTLY TO THE POSTS. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE TOE OF THE FILTER FABRIC.

Item 207~Filter Fabric Fence ~ Continued:

FILTER FABRIC FENCES PLACED AT THE TOE OF A SLOPE SHALL BE SET AT LEAST 10 FEET FROM THE THE TOE IN ORDER TO INCREASE PONDING VOLUME. FILTER FABRIC FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREAS HAS BEEN PERMANENTLY STABILIZED AND SEDIMENT STORED BEHIND THE FILTER FABRIC FENCE HAS BEEN REMOVED.

INSPECTION AND MAINTENANCE:

FILTER FABRIC FENCES AND FILTER BARRIERS SHALL BE INSPECTED WEEKLY AND AFTER EACH SIGNIFICANT STORM (1/2" IN 24 HOURS). ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. SEDIMENT SHALL BE REMOVED WHEN IT REACHES 1/3± HEIGHT OF THE FENCE (9 INCHES MAXIMUM). FILTER FABRIC FENCES SHALL BE REPLACED WHEN THE FENCE IS NO LONGER DETAINING WATER FOR SEDIMENTATION.

JOINT SECTION OF FILTER FABRIC FENCE

NOTES:

1. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY.

2. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

3. FILTER FABRIC FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.

STANDARD DETAIL
TRENCH WITH NATIVE BACKFILL

ALTERNATE DETAIL
TRENCH WITH GRAVEL

ITEM 207~FILTER FABRIC FENCE
(NO SCALE)

2009 RECORD DRAWINGS - BK230-2

Calculated: . Checked: .

STORM WATER POLLUTION PROTECTION PLAN (SHEET 2 OF 3)

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

SWPPP ~ GENERAL NOTES

Construction Site Inspection Checklist

INSPECTIONS SHALL BE CONDUCTED BY CONTRACTOR ONCE EVERY 7 DAYS AND WRITTEN WITHIN 24 HOURS OF A 0.5" OR GREATER RAINFALL. ALL SEDIMENT CONTROLS MUST BE INSTALLED PRIOR TO GRADING AND WITHIN 7 DAYS OF FIRST GRUBBING. RECORDS OF INSPECTIONS SHALL BE KEPT BY CONTRACTOR ON THE FOLLOWING FORM:

NAME OF DEVELOPMENT: _____

LOCATION (CITY OR TWP.) _____

COUNTY: _____

NPDES PERMIT #: _____

DATE OF INSPECTION: _____

NAME OF INSPECTOR: _____

WEATHER CONDITIONS: _____

HAS IT RAINED 0.5" OR MORE IN THE PAST 24 HOURS ?

☐YES ☐NO

Temporary Stabilization
Key Things To Look For...

1) ARE THERE ANY AREAS OF THE SITE THAT ARE DISTURBED, BUT WILL LIKELY LIE DORMANT FOR 45 DAYS LONGER? ☐YES ☐NO

2) HAVE ALL DORMANT, DISTURBED AREAS BEEN TEMPORARILY STABILIZED IN THEIR ENTIRETIES ? ☐YES ☐NO

3) HAVE DISTURBED AREAS OUTSIDE THE SILT FENCE BEEN SEEDED OR MULCHED ? ☐YES ☐NO

4) HAVE SOIL STOCKPILES THAT WILL SIT FOR 45 DAYS OR LONGER BEEN STABILIZED ? ☐YES ☐NO

5) HAS SEED AND MULCH BEEN APPLIED AT THE PROPER RATE ? IN GENERAL, SEED IS APPLIED AT 3 TO 5 lbs. PER 1000 ft^2, AND STRAW MULCH IS APPLIED AT 2–3 BALES PER 1000 ft^2. ☐YES ☐NO

6) HAS SEED OR MULCH WASHED OR BLOWN AWAY ? IF SO REPAIR. ☐YES ☐NO

NOTE AREAS WHERE REPAIRS OR MAINTENANCE IS NEEDED OR WHERE THIS PRACTICE NEEDS TO BE APPLIED:

_____

_____

_____

Construction Entrances
Key Things To Look For...

1) HAS THE DRIVE BEEN CONSTRUCTED BY PLACING GEOTEXTILE FABRIC UNDER THE STONE ? ☐YES ☐NO

2) IS THE STONE 2–INCHES IN DIAMETER ? ☐YES ☐NO

3) HAS THE STONE BEEN PLACED TO A DEPTH OF 6 INCHES, A WIDTH OF 10 FEET, AND A LENGTH OF AT LEAST 50 FEET (30 FEET FOR ENTRANCES ONTO INDIVIDUAL SUBLOTS) ? ☐YES ☐NO

4) IF THE DRIVE IS PLACED ON A SLOPE, HAS A DIVERSION BERM BEEN CONSTRUCTED ACROSS THE DRIVE TO DIVERT RUNOFF AWAY FROM THE STREET OR WATER RESOURCE ? ☐YES ☐NO

5) IF DRIVE IS PLACED ACROSS A DITCH, WAS A CULVERT PIPE USED TO ALLOW RUNOFF TO FLOW ACROSS THE DRIVE ? ☐YES ☐NO

NOTE AREAS WHERE REPAIRS OR MAINTENANCE IS NEEDED OR WHERE THIS PRACTICE NEEDS TO BE APPLIED:

_____

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_____

Sediment Ponds
Key Things To Look For...

1) ARE CONCENTRATED FLOWS OF RUNOFF DIRECTED TO A SEDIMENT POND ? ☐YES ☐NO

2) IS SHEET–FLOW RUNOFF FROM DRAINAGE AREAS WHICH EXCEED THE CAPACITY OF SILT FENCE (GENERALLY 0.25 ACRE OR LARGER) DIRECTED TO A SEDIMENT POND ? ☐YES ☐NO

3) IS RUNOFF BEING COLLECTED AND DIRECTED TO THE SEDIMENT POND VIA THE STORM SEWER SYSTEM OR VIA A NETWORK OF DIVERSION BERMS OR CHANNELS ? ☐YES ☐NO

4) IS THE SEDIMENT POND SIZED APPROPRIATELY (67 CUBIC YARDS PER ACRE OF TOTAL DRAINAGE AREA) ? ☐YES ☐NO

5) HAVE THE EMBANKMENTS OF THE SEDIMENT POND AND THE AREAS THAT LIE DOWNSTREAM OF THE POND BEEN STABILIZED ? ☐YES ☐NO

6) FOR SEDIMENT BASINS WHICH DEWATER 100% BETWEEN STORMS, IS THE RISER PIPE WRAPPED WITH CHICKEN WIRE AND DOUBLE–WRAPPED WITH GEOTEXTILE FABRIC ? DOES THE RISER HAVE 1–INCH DIAMETER HOLES SPACED 4 INCHES APART, BOTH HORIZONTALLY AND VERTICALLY ? FOR SEDIMENT BASINS WHICH DEWATER 60% BETWEEN STORMS, IS THE DIAMETER OF THE DEWATERING HOLE PER PLAN (SEE PAGE 105 RAINWATER MANUAL) ? ☐YES ☐NO

7) FOR SEDIMENT TRAPS, IS THERE GEOTEXTILE UNDER THE STONE SPILLWAY SADDLE–SHAPED ? FOR SEDIMENT TRAPS WHICH DEWATER 100% BETWEEN STORMS, IS THE DEWATERING PIPE END–CAPPED, NO LARGER THAN 6 INCHES IN DIAMETER, PERFORATED, AND DOUBLE–WRAPPED IN GEOTEXTILE ? ☐YES ☐NO

8) IS THE LENGTH–TO–WIDTH RATIO BETWEEN INLET(S) AND OUTLET AT LEAST 2:1 ? ☐YES ☐NO

NOTE: IF NOT, A BAFFLE SHOULD BE ADDED TO LENGTHEN THE DISTANCE.

9) IS THE DEPTH FROM THE BOTTOM OF THE BASIN TO THE TOP OF THE PRIMARY SPILLWAY NO MORE THAN 3 TO 5 FEET ? ☐YES ☐NO

10) FOR A MODIFIED STORM WATER POND BEING USED AS A SEDIMENT POND, IS THE CONNECTION BETWEEN THE RISER PIPE AND THE PERMANENT OUTLET WATER–TIGHT ? WAS THE BASIN INSTALLED PRIOR TO GRADING THE SITE ? ☐YES ☐NO

11) IS IT TIME TO CLEAN–OUT THE SEDIMENT POND TO RESTORE ITS ORIGINAL CAPACITY ? GENERALLY, SEDIMENT SHOULD BE REMOVED ONCE THE POND IS HALF FULL. STABILIZE THE DREDGED SEDIMENTS WITH SEED AND MULCH. ☐YES ☐NO

NOTE AREAS WHERE REPAIRS OR MAINTENANCE IS NEEDED OR WHERE THIS PRACTICE NEEDS TO BE APPLIED:

_____

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_____

Silt Fence
Key Things To Look For...

1) IS THE FENCE TRENCHED AT LEAST 4" TO 6" INTO THE GROUND ? ☐YES ☐NO

2) IS THE TRENCH BACKFILLED TO PREVENT RUNOFF FROM CUTTING UNDERNEATH THE FENCE ? ☐YES ☐NO

3) IS THE FENCE PULLED TIGHT SO IT WON'T SAG WHEN WATER BUILDS UP BEHIND IT ? ☐YES ☐NO

4) ARE THE ENDS BROUGHT UPSLOPE OF THE REST OF THE FENCE SO AS TO PREVENT RUNOFF FROM GOING AROUND THE ENDS ? ☐YES ☐NO

5) IS THE FENCE PLACED ON A LEVEL CONTOUR ? IF NOT, THE FENCE WILL ONLY ACT AS A DIVERSION. ☐YES ☐NO

5) IS THE FENCE PLACED ON A LEVEL CONTOUR ? IF NOT, THE FENCE WILL ONLY ACT AS A DIVERSION. ☐YES ☐NO

6) HAVE ALL GAPS AND TEARS IN THE FENCE BEEN ELIMINATED ? ☐YES ☐NO

7) IS THE FENCE CONTROLLING AN APPROPRIATE DRAINAGE AREA ? REFER TO PAGE 119 OF RAINWATER MANUAL. ☐YES ☐NO

RULE OF THUMB: NO MORE THAN 0.25 ACRE SHOULD LIE BEHIND 100 FEET OF FENCE AT 2% TO 10% SLOPE, i.e., THE DISTANCE BETWEEN THE FENCE AND THE TOP OF THE SLOPE BEHIND IT SHOULD BE NO MORE THAN 125 FEET. THE ALLOWABLE DISTANCE INCREASES ON FLATTER SLOPES AND DECREASES FOR STEEPER SLOPES.

NOTE AREAS WHERE REPAIRS OR MAINTENANCE IS NEEDED OR WHERE THIS PRACTICE NEEDS TO BE APPLIED:

_____

_____

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Inlet Protection
Key Things To Look For...

1) DOES WATER POND AROUND THE INLET WHEN IT RAINS ? ☐YES ☐NO

2) HAS THE FABRIC BEEN REPLACED WHEN IT DEVELOPS TEARS OR SAGS ? ☐YES ☐NO

3) FOR CURB INLET PROTECTION, DOES THE FABRIC COVER THE ENTIRE GRATE, INCLUDING THE CURB WINDOW ? FOR YARD INLET PROTECTION, DOES THE STRUCTURE ENCIRCLE THE ENTIRE GRATE ? ☐YES ☐NO

4) IS THE FABRIC PROPERLY ENTRENCHED OR ANCHORED SO THAT WATER PASSES THROUGH IT AND NOT UNDER IT ? ☐YES ☐NO

5) FOR YARD INLET PROTECTION, IS THE FABRIC PROPERLY SUPPORTED TO WITHSTAND THE WEIGHT OF WATER AND PREVENT SAGGING ? THE FABRIC SHOULD BE SUPPORTED BY A WOOD FRAME WITH CROSS BRACES, OR STRAW BALES. ☐YES ☐NO

6) IS SEDIMENT THAT HAS ACCUMULATED AROUND THE INLET REMOVED ON A REGULAR BASIS ? ☐YES ☐NO

NOTE AREAS WHERE REPAIRS OR MAINTENANCE IS NEEDED OR WHERE THIS PRACTICE NEEDS TO BE APPLIED:

_____

_____

_____

Permanent Stabilization
Key Things To Look For...

1) ARE ANY AREAS AT FINAL GRADE ? ☐YES ☐NO

2) HAS THE SOIL BEEN PROPERLY PREPARED TO ACCEPT A PERMANENT SEEDING ? ☐YES ☐NO

3) HAS SEED AND MULCH BEEN APPLIED AT THE APPROPRIATE RATE (SEE PAGE 169 OF THE RAINWATER MANUAL) ? ☐YES ☐NO

4) IF RAINFALL HAS BEEN INADEQUATE, ARE SEEDED AREAS BEING WATERED ? ☐YES ☐NO

5) FOR DRAINAGE DITCHES WHERE FLOW VELOCITY EXCEEDS 3.5 ft/sec FROM A 10–YEAR, 24–HOUR STORM HAS MATTING BEEN APPLIED TO THE DITCH BOTTOM ? IF THE FLOW VELOCITY EXCEEDS 5.0 ft/sec, HAS THE DITCH BOTTOM BEEN STABILIZED WITH ROCK RIP–RAP ? ☐YES ☐NO

NOTE: ROCK CHECK DAMS MAY BE NEEDED TO SLOW THE FLOW OF RUNOFF.

6) HAS ROCK RIP–RAP BEEN PLACED UNDER ALL STORM WATER OUTFALL PIPES TO PREVENT SCOURING IN THE RECEIVING STREAM OR EROSION OF THE RECEIVING CHANNEL ? ☐YES ☐NO

7) FOR SITES WITH STEEP SLOPES OR FILL AREAS, IS RUNOFF FROM THE TOP OF THE SITE CONVEYED TO THE BOTTOM OF THE SLOPE OR FILL AREA IN A CONTROLLED MANNER SO AS NOT TO CAUSE EROSION ? ☐YES ☐NO

NOTE AREAS WHERE REPAIRS OR MAINTENANCE IS NEEDED OR WHERE THIS PRACTICE NEEDS TO BE APPLIED:

_____

_____

_____

Non–Sediment Pollution Control
Key Things To Look For...

1) HAS AN AREA BEEN DESIGNATED FOR WASHING OUT CONCRETE TRUCKS ? WASHINGS MUST BE CONTAINED ON SITE WITHIN A BERMED AREA UNTIL THEY HARDEN. THE WASHINGS SHOULD NEVER BE DIRECTED TOWARD A WATERCOURSE, DITCH OR STORM DRAIN. ☐YES ☐NO

2) IS WASTE AND PACKAGING DISPOSED OF IN A DUMPSTER ? DO NOT BURN THEM AT THE SITE. ☐YES ☐NO

3) ARE FUEL TANKS AND DRUMS OF TOXIC AND HAZARDOUS MATERIALS STORED WITHIN A DIKED AREA OR TRAILER AND AWAY FROM ANY WATERCOURSE, DITCH OR STORM DRAIN ? ☐YES ☐NO

4) ARE STREETS SWEPT AS OFTEN AS NECESSARY TO KEEP THEM CLEAN AND FREE OF SEDIMENT ? ☐YES ☐NO

NOTE: SEDIMENT SHOULD BE SWEPT BACK ONTO THE LOT NOT DOWN THE STORM SEWERS.

5) ARE STOCKPILES OF SOIL OR OTHER MATERIALS STORED AWAY FROM ANY WATERCOURSE, DITCH OR STORM DRAIN ? ☐YES ☐NO

6) HAVE STREAM CROSSINGS BEEN CONSTRUCTED ENTIRELY OF NONERODIBLE MATERIAL ? ☐YES ☐NO

7) IF AN AREA OF THE SITE IS BEING DEWATERED, IS IT BEING PUMPED FROM A SUMP PIT OR IS THE DISCHARGE DIRECTED TO A SEDIMENT POND ? ☐YES ☐NO

NOTE: IF YOU MUST LOWER GROUND WATER, THE WATER MAY BE DISCHARGED TO THE RECEIVING STREAM AS LONG AS THE WATER REMAINS CLEAN. BE SURE NOT TO CO–MINGLE THE CLEAN GROUND WATER WITH SEDIMENT–LADEN RUNOFF OR TO DISCHARGE IT OFF SITE BY PASSING IT OVER DISTURBED GROUND.

NOTE AREAS WHERE REPAIRS OR MAINTENANCE IS NEEDED OR WHERE THIS PRACTICE NEEDS TO BE APPLIED:

_____

_____

_____

Calculated: .
Checked: .

STORM WATER POLLUTION PROTECTION PLAN (SHEET 3 OF 3)

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale In Feet 0 10 20 40

Calculated: .

Checked: .

PLAN - REYNOLDS ROAD STA. 657+8149 TO 666+00

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

Horizontal Scale In Feet: 0 10 20 40

Calculated: .

Checked: .

PLAN - REYNOLDS ROAD
STA. 666+50 TO 675+50

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

15
58

2009 RECORD DRAWINGS - BK230-2

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale In Feet 0 10 20 40

Calculated:

Checked:

PLAN - REYNOLDS ROAD STA. 675+50 TO 685+00

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

Horizontal Scale In Feet: 0 10 20 40

Calculated: .

Checked: .

PLAN - REYNOLDS ROAD
STA. 685+00 TO 695+00

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale In Feet: 0 10 20 40

Calculated: .

Checked: .

PLAN - REYNOLDS ROAD
STA. 695+00 TO 705+00

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale In Feet
0 10 20 40

Calculated:
Checked:

PLAN - REYNOLDS ROAD
STA. 705+00 TO 709+00

REYNOLDS ROAD
PHASE 2 ROADWAY IMPROVEMENTS

19
58

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale In Feet: 0 10 20 40

Calculated: .

Checked: .

PLAN - REYNOLDS ROAD
STA. 709+00 TO 712+00

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

20
58

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale In Feet: 0 10 20 40

Calculated: .

Checked: .

PLAN - REYNOLDS ROAD
STA. 712+00 TO 721+00

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale In Feet
0 10 20 40

Calculated:
Checked:

PLAN - REYNOLDS ROAD STA. 721+00 TO 731+00

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale In Feet: 0 10 20 40

Calculated: .

Checked: .

PLAN - REYNOLDS ROAD STA. 731+00 TO 741+00

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale In Feet 0 10 20 40

Calculated: .

Checked: .

PLAN - REYNOLDS ROAD
STA. 741+00 TO 751+00

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

Calculated:

Checked:

PLAN - REYNOLDS ROAD
STA. 751+00 TO 760+30

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

25
58

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale in Feet: 0 10 20 40

Calculated: JLM
Checked: GAS

STRIPING PLAN
DORR STREET TO ANGOLA ROAD

REYNOLDS ROAD
PHASE 2 ROADWAY IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale in Feet: 0 10 20 40

Calculated: JLM
Checked: GAS

STRIPING PLAN
DORR STREET TO ANGOLA ROAD

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale in Feet: 0 10 20 40

Calculated: JLM
Checked: GAS

STRIPING PLAN
DORR STREET TO ANGOLA ROAD

REYNOLDS ROAD
PHASE 2 ROADWAY IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale in Feet: 0 10 20 40

Calculated: JLM
Checked: GAS

STRIPING PLAN
DORR STREET TO ANGOLA ROAD

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

2009 RECORD DRAWINGS - BK230-2

Calculated: JLM
Checked: GAS

Horizontal Scale in Feet
0 10 20 40

STRIPING PLAN
DORR STREET TO ANGOLA ROAD

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

30
58

Horizontal Scale in Feet: 0 10 20 40

Calculated: JLM
Checked: GAS

STRIPING PLAN
DORR STREET TO ANGOLA ROAD

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

Calculated: JLM
Checked: GAS

0 10 20 40
Horizontal
Scale In Feet

N

STRIPING PLAN
DORR STREET TO ANGOLA ROAD

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale in Feet: 0 10 20 40

Calculated: JLM
Checked: GAS

STRIPING PLAN
DORR STREET TO ANGOLA ROAD

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

Horizontal Scale In Feet
0 10 20 40

Calculated: JLM
Checked: GAS

STRIPING PLAN
DORR STREET TO ANGOLA ROAD

REYNOLDS ROAD
PHASE 2 ROADWAY IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

Calculated: JLM
Checked: GAS

0 10 20 40
Horizontal Scale In Feet

N

STRIPING PLAN
DORR STREET TO ANGOLA ROAD

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

NOTE:
TRAFFIC PAVEMENT MARKING TO COMPLY WITH THE STATE OF OHIO SPECIFICATIONS FOR ITEM 642, 643, 644, OR 645, AS SPECIFIED IN THE PLANS, AND WITH THE REQUIREMENTS OF PART 3, OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. UNLESS SHOWN OTHERWISE.

TYPICAL PAVEMENT MARKING
AT RAILROAD CROSSINGS
(WHITE)

NOTES:
1. ON MULTI-LANE ROADS, THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES AND INDIVIDUAL R & R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.

NOTE:
1. TAPER A-B AND TAPER A-C NORMALLY SHALL NOT BE LESS THAN 30:1. THE CRITICAL TAPER SHALL CONTROL THE LENGTH OF "X"

THROUGH ARROW

TURN ARROW

COMBINED ARROWS

TWO-WAY LEFT TURN ARROWS

NOTES:
1. THIS MARKING SHALL ONLY BE USED IN CONJUNCTION WITH STANDARD SCHOOL ZONE MARKING.
2. IN URBAN AREAS, A MINIMUM LETTER HEIGHT OF FOUR FEET (4') MAY BE USED IN MINOR LOCATIONS.
3. CENTER OR LANE LINES DO NOT PASS THROUGH "SCHOOL" MARKING.

WORD "SCHOOL" PAVEMENT MARKING (WHITE)

CONVERGING LINES:
$L = WS$ $S \geq 45mp$
$L = \frac{WS^2}{60}$ $S < 45mp$

DIMENSIONS (INCHES)												
A	B	C	D	E	F	G	H	J	K	L	M	N
16	72	57	15	148	18	8	4.50	9	6.75	28.50	33.75	42

WORD "ONLY" PAVEMENT MARKING (WHITE)

NO SCALE

STANDARD PAVEMENT MARKINGS

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

2009 RECORD DRAWINGS - BK230-2

SAFETY PROJECT NOTES

GENERAL – SCOPE OF WORK

IT IS THE INTENT OF THESE PLANS AND SPECIFICATIONS THAT THE CONTRACTOR WILL FURNISH AND INSTALL CONDUIT, TRAFFIC SIGNAL POLES AND MAST ARMS, TRAFFIC SIGNAL HEADS, DETECTION SYSTEMS, CABLE AND WIRING, FOUNDATIONS, PUSHBUTTONS, PULLBOXES, GROUND RODS AND ALL MATERIALS, LABOR, EQUIPMENT, TOOLS AND INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION IN PLACE, COMPLETE AND ACCEPTED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS. THE SUPPLY AND/OR INSTALLATION OF TRAFFIC SIGNAL CONTROLLERS IS NOT A REQUIREMENT OF THE CONTRACTOR ON THIS PROJECT.

GENERAL – EXISTING TRAFFIC CONTROL SIGNS

EXISTING TRAFFIC CONTROL SIGNS WHICH INTERFERE WITH THE CONTRACTOR'S WORK WILL BE REMOVED AND REPLACED WITH REGULATORY SIGNING BY THE DIVISION OF TRANSPORTATION. THE CONTRACTOR SHALL PROVIDE THE DIVISION OF TRANSPORTATION (419-245-1300) A MINIMUM 2 WEEK NOTICE PRIOR TO THE NEED FOR INSTALLATION OF THIS REGULATORY SIGNING. THIS DOES NOT, IN ANY WAY, RELIEVE THE CONTRACTOR'S RESPONSIBILITY UNDER ITEM 614.

COMPLIANCE WITH OTHER SPECIFICATIONS AND STANDARDS

ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF:

- THE OMUTCD
- THE NATIONAL MUTCD
- NATIONAL ELECTRICAL CODE (NEC)
- NATIONAL ELECTRICAL SAFETY CODE (NESC)
- ASTM STANDARDS
- ANSI STANDARDS
- IMSA STANDARDS
- APPLICABLE CITY CODES AND ORDINANCES.

ALL ELECTRICAL EQUIPMENT SHALL CONFORM TO THE FOLLOWING, WHEREVER APPLICABLE:

- NEMA STANDARDS PUBLICATIONS TS 1-1989 (R-1994), TS 2-1992, TS 3.1-1996, TS 3.2-1996, AND TS 3.3-1996
- UL STANDARDS
- ELECTRONIC INDUSTRIES ASSOCIATION (EIA) STANDARDS.

WHEREVER REFERENCE IS MADE TO ANY SUCH SPECIFICATION, MANUAL, CODE, OR STANDARD, THE REFERENCE SHALL BE CONSTRUED TO MEAN THE VERSION, AS REVISED, THAT IS IN EFFECT ON THE DATE OF ISSUANCE OF THIS PROJECT.

GENERAL - OPERATION OF EXISTING TRAFFIC SIGNALS

THE CONTRACTOR SHALL ENSURE CONTINUED OPERATION OF THE EXISTING TRAFFIC SIGNALS AT ALL TIMES. ANY DISRUPTION TO THE OPERATION OF ANY TRAFFIC SIGNAL OR EXISTING TRAFFIC SIGNAL HARDWARE, EXCEPT CONTROLLER AND/OR INTERCONNECT, BY THE CONTRACTOR OR HIS AGENT (SUB-CONTRACTOR) SHALL BE RESTORED BY THE CONTRACTOR OR HIS AGENT (SUB-CONTRACTOR) AT NO COST TO THE STATE OF OHIO OR THE CITY OF TOLEDO.

ANY DISRUPTION OR DAMAGE TO THE TRAFFIC SIGNAL CONTROLLER OR INTERCONNECT CABLE SHALL BE REPAIRED BY CITY FORCES. ALL COSTS ASSOCIATED WITH SERVICES PROVIDED BY CITY FORCES WILL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR.

THE CONTRACTOR SHALL NOTIFY THE CITY OF TOLEDO DIVISION OF TRANSPORTATION IMMEDIATELY OF ANY DISRUPTION TO THE OPERATION OF ANY EXISTING TRAFFIC SIGNAL.

WHERE THE CONTRACTOR HAS FAILED OR CANNOT RESPOND TO DISRUPTION TO AN EXISTING TRAFFIC SIGNAL IMMEDIATELY, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE OF OHIO OR THE CITY OF TOLEDO FOR POLICE SERVICES AND MAINTENANCE SERVICES BY CITY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR.

STANDARD SPECIFICATIONS

EXCEPT AS OTHERWISE SPECIFICALLY REQUIRED BY THE PLANS AND SPECIAL PROVISIONS, ALL WORK ON THIS PROJECT SHALL FULLY COMPLY WITH THE MOST RECENT VERSION OF THE CITY OF TOLEDO, DIVISION OF TRANSPORTATION, STANDARD DRAWINGS (HEREIN REFERRED TO AS "STANDARD DRAWINGS") AND THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS, 2005 EDITION (HEREIN REFERRED TO AS "SPECIFICATIONS").

THE CONTRACTOR SHALL AT ALL TIMES PERFORM HIS WORK IN A NEAT AND PROPER MANNER, IN ACCORDANCE WITH THE HIGHEST DEGREE OF WORKMANSHIP AS ACCEPTED IN THE INDUSTRY. THE ENGINEER MAY REFUSE WORK, WHICH, IN HIS OPINION, DOES NOT MEET THESE REQUIREMENTS AND IS CONSIDERED OF UNSATISFACTORY QUALITY. IN SUCH CASES, THE CONTRACTOR SHALL THEN REMOVE THE DEFICIENT WORK AND REPLACE IT WITH WORK OF SPECIFIED QUALITY AT NO ADDITIONAL EXPENSE TO THE CITY.

COORDINATION OF ACTIVITIES

ALL WORK SHALL BE COORDINATED WITH THE CITY OF TOLEDO. THE CONTRACTOR SHALL BE REQUIRED TO COORDINATE ACTIVITIES TO ENSURE SMOOTH TRANSITION OF OPERATION FROM THE EXISTING SIGNAL HEADS TO THE NEW SIGNAL HEADS. **A REPRESENTATIVE OF THE CITY OF TOLEDO DIVISION OF TRANSPORTATION SHALL BE PRESENT AT ALL LOCATIONS WHERE VEHICULAR AND/OR PEDESTRIAN SIGNAL HEADS ARE BEING REPLACED DURING NORMAL SIGNAL OPERATION. IN THE EVENT THAT THE CONTRACTOR DESIRES TO REPLACE SIGNAL HEADS UNDER FLASH OR "ALL-OUT" CONDITION, THIS WORK WILL BE ARRANGED, IN ADVANCE, WITH THE DIVISION OF TRANSPORTATION, AND WILL ONLY BE PERMITTED DURING LIGHT TRAFFIC CONDITIONS, INCLUDING, BUT NOT LIMITED TO, NIGHTS AND WEEKENDS.**

THE DIVISION OF TRANSPORTATION (419-245-1300) SHALL BE NOTIFIED AT LEAST 24 HOURS PRIOR TO ANY AND ALL SCHEDULED WORK ON THIS PROJECT.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE THE UNDERGROUND CONSTRUCTION ACTIVITIES ON A CONTINUING BASIS WITH EACH OF THE UTILITY AGENCIES THAT HAVE FACILITIES IN THE IMMEDIATE VICINITY OF THE PROJECT AREA.

WORK ITEMS

THE CONTRACTOR WILL BE REQUIRED TO PERFORM THE FOLLOWING GENERAL WORK ITEMS AS PART OF THIS PROJECT:

- FURNISH AND INSTALL CONDUIT, PULLBOXES AND POLE FOUNDATIONS AT SPECIFIED LOCATIONS.
- FURNISH AND INSTALL TRAFFIC SIGNAL POLES AND MAST ARMS AT SPECIFIED LOCATIONS.
- FURNISH AND INSTALL SIGNAL CABLE, VEHICULAR AND PEDESTRIAN TRAFFIC SIGNAL HEADS AND PUSHBUTTONS, INCLUDING FIELD-DRILLING, WHERE NECESSARY.
- REMOVE EXISTING VEHICULAR AND PEDESTRIAN SIGNAL HEADS; SALVAGE AND DELIVER TO THE CITY OF TOLEDO, DIVISION OF TRANSPORTATION, 110 N. WESTWOOD, TOLEDO, OHIO.
- FURNISH, AND INSTALL VIDEO DETECTION SYSTEMS, INCLUDING FIELD HARDWARE AND CABLE. CABINET HARDWARE WILL BE INSTALLED BY CITY FORCES.
- TERMINATE CABLE AT VEHICULAR AND PEDESTRIAN SIGNAL HEADS AND PUSHBUTTONS.
- REMOVE TRAFFIC SIGNAL POLES AND MAST ARMS AT SPECIFIED LOCATIONS; SALVAGE AND DELIVER TO THE CITY OF TOLEDO, DIVISION OF TRANSPORTATION POLE YARD, 200 S. ELMDALE, TOLEDO, OHIO.
- REMOVE POLE FOUNDATIONS, AS REQUIRED.

REFER TO SHEETS 40-53 FOR SPECIFIC WORK TASKS REQUIRED AT EACH INTERSECTION.

CITY OF TOLEDO WORK ITEMS

THE CITY OF TOLEDO WILL BE RESPONSIBLE FOR THE FOLLOWING ITEMS OF WORK IN CONJUNCTION WITH THIS PROJECT:

- FURNISHING AND INSTALLING POWER SERVICES, AS REQUIRED.
- ARRANGING FOR POWER THROUGH THE TOLEDO EDISON COMPANY, AS REQUIRED.
- FURNISHING AND INSTALLING TRAFFIC SIGNAL POLES AND MAST ARMS AT SPECIFIED LOCATIONS.
- FURNISHING AND INSTALLING CABLE AT SPECIFIED LOCATIONS.
- INSTALLING VEHICULAR AND PEDESTRIAN SIGNAL HEADS AND PUSHBUTTONS AT SPECIFIED LOCATIONS.
- INSTALLING CABINET HARDWARE FOR VIDEO DETECTION SYSTEMS.
- SPLICING SIGNAL CABLE IN POLE BASES AND TERMINATING IN CONTROLLERS, AS REQUIRED.

625 CONDUIT, 725.05, AS PER PLAN

CONDUIT SHALL CONFORM TO 625.12, WITH THE FOLLOWING EXCEPTIONS OR ADDITIONS:

TYPE
UNLESS OTHERWISE SHOWN ON THE PLANS, CONDUIT AND FITTINGS SHALL CONFORM TO NEMA TC-2 FOR ELECTRICAL PLASTIC CONDUIT (EPC-40-PVC) AND FITTINGS, TYPE 11, AND TO NEMA TC-3 FOR P.V.C. FITTINGS FOR USE WITH RIGID P.V.C. CONDUIT.

CONDUIT ELBOWS SHALL CONTAIN A TRUE CIRCULAR ARC HAVING AN INSIDE RADIUS NOT LESS THAN FOUR (4) TIMES THE NOMINAL INSIDE DIAMETER OF THE CONDUIT. EACH CONDUIT COUPLING SHALL BE MANUFACTURED WITH A SHOULDER CENTERED ALONG THE INSIDE WALL OF THE COUPLING AND RAISED TO PROVIDE A BUTT SURFACE FOR CONDUIT LENGTHS OR ELBOWS.

INSTALLATION

CONDUIT SHALL BE JOINED AS DESCRIBED IN NEMA TC-2, APPENDIX A.

UNLESS OTHERWISE PROVIDED, HORIZONTAL RUNS OF UNDERGROUND CONDUIT SHALL BE PLACED AT LEAST TWENTY-FOUR (24) INCHES BELOW THE FINISHED GRADE. CONDUIT RUNS SHALL BE INSTALLED SO AS TO DRAIN INTO PULLBOXES OR INTO A STANDARD DRAIN TEE PLACED IN THE CONDUIT RUN AT THE LOW POINT AS DESIGNATED BY THE ENGINEER.

A DRAINAGE POCKET OF AT LEAST TWELVE (12) INCHES SQUARE AND TWELVE (12) INCES DEEP FILLED WITH APPROVED GRANULAR MATERIAL SHALL BE PROVIDED BELOW EACH DRAIN TEE. FIELD BENDS OF CONDUIT SHALL NOT BE PERMITTED. BENDS SHALL BE MADE WITH MANUFACTURED ELLS. BENDS SHALL BE USED SPARINGLY AND SHALL NOT EXCEED 180 DEGREES IN ANY SINGLE RUN.

WHERE THE PLANS INDICATE THAT AN EXISTING CONDUIT RUN IS TO BE REDIRECTED, EXTENDED AND/OR USED IN PART, THE CONTRACTOR SHALL DO ALL WORK NECESSARY TO INCORPORATE THE EXISTING CONDUIT INTO THE NEW CONDUIT SYSTEM ACCORDING TO THE STANDARDS USED HEREIN FOR NEW CONDUIT WORK.

AS NEARLY AS PRACTICAL, CONDUIT RUNS SHALL ENTER MANHOLES, PULLBOXES AND FOUNDATIONS FROM THE DIRECTION OF THE RUN AND BELOW GROUND LEVEL.

WHERE A CONDUIT RUN TERMINATES IN AN EXISTING PULLBOX OR UTILITY MANHOLE, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND UTILITY COMPANY TO OBTAIN DIRECTION, SPECIFICATIONS AND INSPECTION FOR ENTERING THE PULLBOX OR MANHOLE AND SHALL CONFORM TO THEIR REQUIREMENTS. THE CONTRACTOR SHALL CORE DRILL ALL OPENINGS IN EXISTING CONCRETE PULLBOXES AND UTILITY MANHOLES. UPON COMPLETION OF THE INSTALLATION OF THE CONDUIT INTO THE PULLBOX OR MANHOLE, THE CONTRACTOR SHALL SEAL THE AREA AROUND THE CONDUIT WITH MORTAR TO THE APPROVAL OF THE ENGINEER OR UTILITY COMPANY. THIS WORK SHALL BE INCLUDED IN THE COST OF THE CONDUIT.

CONDUIT RUNS TERMINATING IN PULLBOXES SHALL EXTEND NOT LESS THAN TWO (2) INCHES NOR MORE THAN FOUR (4) INCHES INSIDE THE INSIDE WALL OF THE PULLBOX AND NOT LESS THAN SIX (6) INCHES NOR MORE THAN EIGHT (8) INCHES ABOVE THE BOTTOM.

625 TRENCH, AS PER PLAN

ADD:

WHERE NOTED ON THE PLANS, TRENCH SHALL INCLUDE THE REMOVAL AND DISPOSAL OF EXISTING CONDUIT AND PULLBOXES. PULLBOX RINGS AND LIDS SHALL BE STORED ON SITE FOR USE BY THE CITY.

625 CONDUIT, JACKED UNDER PAVEMENT, AS PER PLAN

CONDUIT BEING BORED, JACKED AND/OR DRILLED UNDER PAVEMENT SHALL BE P.V.C. SCHEDULE 40 AND SHALL INCLUDE PULL ROPE AND TONE WIRE IN ACCORDANCE WITH THE REQUIREMENTS OF 625 CONDUIT, 725.05, AS PER PLAN.

625 GROUND ROD, AS PER PLAN

ADD:

IN ADDITION TO THE REQUIREMENTS OF 625.16, (ADEQUATE FOR THE POWER FEED REFERENCE TO BE LOCATED IN THE NEAREST PULLBOX TO THE INCOMING LINE), A MAXIMUM OF THREE (3) OHM EARTH RESISTANCE SHALL BE OBTAINED FOR A SUPPRESSION / SAFETY / CHASSIS GROUND IN THE CONTROLLER BASE.

A THIRTY (30) FOOT ROD OR ANY NUMBER OF SHORTER RODS SHALL BE DRIVEN IN THE GROUND DURING CONSTRUCTION OF THE CONTROLLER BASE IN ORDER TO OBTAIN A MAXIMUM OF THREE (3) OHM EARTH RESISTANCE.

625 PULLBOX MISC: PULLBOX, TYPE A
625 PULLBOX MISC.: PULLBOX, TYPE S

PULLBOXES SHALL CONFORM TO 625.11 WITH THE FOLLOWING EXCEPTIONS OR ADDITIONS:

PULLBOXES SHALL BE PROVIDED AS SHOWN ON **SHEET 54** AND/OR AS NOTED HEREIN.

TYPE S PULLBOXES SHALL CONFORM TO 725.06, 725.07 OR 725.08 AND SHALL HAVE NOMINAL OPENING DIMENSIONS OF 24 INCHES X 35 INCHES. THE WORD "TRAFFIC" SHALL BE INTEGRALLY CAST AS PART OF THE COVER OR SECURELY FASTENED WITH CORROSION RESISTANT HARDWARE. THE SUPPLIED PULLBOXES SHALL BE ABLE TO SUPPORT A 15,000 LB. MINIMUM VERTICAL LOADING WITHOUT PERMANENT DAMAGE OR DEFLECTION TO THE UNIT. THIS ITEM SHALL INCLUDE BUT IS NOT LIMITED TO THE DISPOSAL OF SURPLUS MATERIAL AND THE RESTORATION OF DISTURBED FACILITIES AND SURFACES.

625 PULLBOX MISC.: PULLBOX RECONSTRUCTED
625 PULLBOX MISC.: PULLBOX RECONSTRUCTED AS TYPE S

PULLBOXES SHALL BE RECONSTRUCTED AS SHOWN ON **SHEET 55** AND/OR AS NOTED HEREIN.

EXISTING PULLBOX RINGS AND LIDS SHALL NOT BE USED FOR NEW PULLBOX INSTALLATIONS, BUT SHALL BE SALVAGED ON SITE FOR USE BY THE CITY OF TOLEDO. EXCAVATION AROUND THE EXISTING PULLBOX SHALL BE BY MANUAL METHODS, AND SHALL BE PERFORMED WITH CARE IN ORDER TO AVOID DISRUPTION TO THE TRAFFIC SIGNAL. IF DURING A PULLBOX REMOVAL AND REPLACEMENT AN EXCAVATION REMAINS, IT SHALL BE PROTECTED AT ALL TIMES.

WHERE EXISTING PULLBOXES ARE SMALLER THAN NECESSARY TO PROVIDE ADEQUATE SPACE FOR EXISTING CABLE, NEW CABLE, AND SPLICE ENCLOSURES, THEY SHALL BE REPLACED WITH PULLBOXES NOTED ON THE PLANS AS "TYPE S". SUCH PULLBOXES SHALL MEET ALL REQUIREMENTS OF 625.11 AND "ITEM 625 PULLBOX MISC.: PULLBOX, TYPE S."

ALL COSTS RELATING TO THIS SPECIFICATION, INCLUDING REMOVAL OF EXISTING PULLBOX, SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR THE APPLICABLE ITEM.

625 METHOD OF MEASUREMENT

METHOD OF PAYMENT SHALL CONFORM TO 625.20 WITH THE FOLLOWING EXCEPTIONS OR ADDITIONS:

- EXTENSION OF EXISTING CONDUIT SHALL BE MEASURED AS THE HORIZONTAL STRAIGHT LINE DISTANCE OF EXTENSION REQUIRED TO MEET EXISTING CONDUIT.
- CONDUIT SHALL INCLUDE PULL LINES AND TONE WIRE.
- CONDUIT JACKED UNDER PAVEMENT SHALL BE MEASURED AS THE HORIZONTAL STRAIGHT LINE DISTANCE FROM BACK OF CURB TO BACK OF CURB OR EDGE OF DRIVE PLUS 3' BEHIND EACH CURB OR EDGE OF DRIVE.
- GROUND RODS WILL BE MEASURED AS ONE PER LOCATION, INDEPENDENT OF THE NUMBER REQUIRED TO MEET THE AS PER PLAN REQUIREMENTS.
- PULLBOXES SHALL BE MEASURED BY TYPE.

CONTINGENCY QUANTITIES

THE FOLLOWING QUANTITIES ARE PROVIDED FOR USE, AS DIRECTED BY THE ENGINEER.

ITEM	DESCRIPTION	QUANTITY	UNIT
202	CURB REMOVED	200	FEET
608	4" CONCRETE WALK	1800	SQ. FT.
608	PEDESTRIAN RAMP APP	16	EACH
609	CURB, TYPE B	200	FEET
625	CONDUIT, JACKED UNDER PAVEMENT, 3", APP	16	FEET
625	TRENCH IN PAVED AREA, TYPE B, APP	6	FEET
625	PULLBOX MISC.: PULLBOX RECONSTRUCTED, TYPE A	1	EACH

THE ITEMS USED AS DIRECTED BY THE ENGINEER SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT. THESE ITEMS HAVE BEEN CARRIED TO THE GENERAL SUMMARY. ESTIMATED CONTINGENCY QUANTITIES OF MATERIALS SHALL NOT BE ORDERED FOR DELIVERY TO THE PROJECT UNLESS AUTHORIZED BY THE ENGINEER.

CALCULATED | CHECKED

SAFETY PROJECT NOTES

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

230-2

SAFETY PROJECT NOTES

632 PROVIDE *(AND INSTALL)* VEHICULAR SIGNAL HEAD, LED, *MOUNTING TYPE, X-SECTION*, 12", AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 632 AND 732, THE FOLLOWING REQUIREMENTS SHALL APPLY:

LAMPS:
LED, LIGHT EMITTING DIODE, SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATION 872 AND SHALL BE PROVIDED FOR ALL SIGNAL LENS TYPES. ALL LAMP UNITS SHALL BE 12-INCH SIZE, AND SHALL BE MANUFACTURED BY GELCORE, DIALIGHT OR APPROVED EQUAL, AS DETERMINED BY THE CITY OF TOLEDO.

SIGNAL SECTIONS:
1) SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF POLYCARBONATE PLASTIC, AND MEET INSTITUTE OF TRANSPORTATION ENGINEERS (ITE) SPECIFICATIONS.
2) PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY NOT BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.

MOUNTING HARDWARE:
ALL SIGNAL HEADS SHALL BE PROVIDED WITH HARDWARE FOR MOUNTING. WHEN RIGID MOUNTING **(SHEET 58)** IS SPECIFIED FOR USE WITH POLYCARBONATE VEHICULAR HEADS, MOUNTING HARDWARE SHALL INCLUDE APPROPRIATE BRACING AND/OR REINFORCEMENT TO ENSURE THE STRUCTURAL INTEGRITY OF THE HEAD. PELCO ASTRO-BRAC ASSEMBLIES ARE CONSIDERED TO BE AN ACCEPTABLE TREATMENT FOR RIGID MOUNTING. EACH SUCH ASSEMBLY MUST INCLUDE A MARK 1 TERMINAL COMPARTMENT HARDWARE FOR MAST ARM POLE ASSEMBLIES SHALL BE PROVIDED SUCH THAT THE OPTICAL UNITS ARE CAPABLE OF BEING ALIGNED VERTICALLY.

BACKPLATES:
WHERE SPECIFIED TO BE INCLUDED, BACKPLATES SHALL BE LOUVERED AND CONSTRUCTED OF WROUGHT SHEET ALUMINUM, .050 INCH MINIMUM THICKNESS. BACKPLATE BASE METAL SHALL BE ANODIZED TO MAXIMIZE PAINT ADHESION ACCORDING TO MIL-A-8625, TYPE II OR TYPE I. BACKPLATES SHALL BE PAINTED ON BOTH SIDES WITH AT LEAST TWO COATS OF FLAT BLACK ALKYD ENAMEL PAINT CLOSELY MATCHING FED-STD-595B-37038. BACKPLATES SHALL EXTEND FIVE INCHES BEYOND THE OUTSIDE OF THE SIGNAL ASSEMBLY ON ALL SIDES. THE OVERALL OUTSIDE SHAPE OF THE INSTALLED BACKPLATE SHALL BE RECTANGULAR. THE BACKPLATE SHALL ALLOW NO GAPS BETWEEN THE BACKPLATE AND THE SIGNAL HEAD OR BETWEEN SIGNAL SECTIONS. A ONE-INCH WIDE (MINIMUM) CONTINUOUS OUTSIDE BORDER OF YELLOW REFLECTIVE SHEETING, TYPE H OR J, SHALL BE APPLIED TO THE FRONT FACE OF THE BACKPLATE. ALL ASSEMBLY AND MOUNTING HARDWARE SHALL BE STAINLESS STEEL AND SHALL BE INCLUDED IN THE ITEM. IF USED, MACHINE NUTS SHALL BE THREAD-DEFORMING OR NYLON LOCKNUTS. RIVETS SHALL NOT BE USED FOR MOUNTING THE BACKPLATE TO THE SIGNAL HEAD. A MINIMUM OF FOUR MOUNTING POINTS SHALL BE USED ON EACH SIGNAL SECTION FOR ATTACHING A BACKPLATE.

VISORS:
THE VISOR FOR VEHICULAR SIGNALS SHALL BE THE TUNNEL-TYPE, NOT LESS THAN NINE (9) INCHES NOR MORE THAN TWELVE (12) INCHES IN LENGTH, AND SHALL BE DESIGNED TO REDUCE SUN PHANTOM TO A MINIMUM. THE VISOR SHALL FULLY ENCLOSE NOT LESS THAN EIGHTY PERCENT (80%) OF THE LENS CIRCUMFERENCE.

LEGEND:
COLORED ARROW LENSES SHALL BE PROVIDED WHEN AND AS SPECIFIED IN THE PLANS. ARROW LENSES SHALL CONFORM TO THE CURRENT STANDARDS OF THE INSTITUTE OF TRANSPORTATION ENGINEERS, VEHICLE TRAFFIC CONTROL SIGNAL HEADS (PUB. NO. ST-0088).

THE FOLLOWING LEGEND SHALL BE USED IN THE PLANS AND LENS TYPES SHALL BE FURNISHED IN ACCORDANCE THEREWITH:

DESIGNATION	DESCRIPTION
R	CIRCULAR RED LENS
Y	CIRCULAR YELLOW (AMBER) LENS
G	CIRCULAR GREEN LENS
<Y– OR –Y>	YELLOW (AMBER) ARROW LENS
<G– OR – G>	GREEN ARROW LENS

THE CONTRACTOR SHALL PROVIDE THE CITY OF TOLEDO, DIVISION OF TRANSPORTATION, IN WRITING, THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS TO BE USED IN THE TRAFFIC SIGNAL HEADS PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

THE COST OF THESE ITEMS SHALL INCLUDE COMPLETE UNITS WITH ALL SUPPORT AND MOUNTING HARDWARE, DISCONNECT HANGERS, CLOSURE CAPS, AND LAMPS AS SPECIFIED, AS WELL AS REMOVAL AND SALVAGE OF EXISTING ITEMS, WHERE SPECIFIED.

632 PROVIDE *(AND INSTALL)* PEDESTRIAN SIGNAL HEAD WITH LED LAMP UNITS, TYPE D-2, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 632.08 AND 732.05, THE FOLLOWING REQUIREMENTS SHALL APPLY:

LAMPS:
1) LED, LIGHT EMITTING DIODE, SIGNAL LAMP UNITS SHALL BE MANUFACTURED BY GELCORE, DIALIGHT OR APPROVED EQUAL, AS DETERMINED BY THE CITY OF TOLEDO.
2) LED LAMP UNITS SHALL BE 16-INCH SIZE AND SHALL DISPLAY THE SYMBOLS FOR THE UPRAISED HAND OR THE WALKING PERSON.
3) SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
4) PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY NOT BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.

THE CONTRACTOR SHALL PROVIDE THE CITY OF TOLEDO, DIVISION OF TRANSPORTATION, IN WRITING, THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS TO BE USED IN THE TRAFFIC SIGNAL HEADS PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

THE COST OF THESE ITEMS SHALL INCLUDE COMPLETE UNITS WITH ALL SUPPORT AND MOUNTING HARDWARE, DISCONNECT HANGERS, CLOSURE CAPS, AND LAMPS AS SPECIFIED, AS WELL AS REMOVAL AND SALVAGE OF EXISTING ITEMS, WHERE SPECIFIED.

632 PROVIDE *(AND INSTALL)* 20-MPH SIGNAL HEAD WITH LED LAMP UNITS, TYPE D-2, AS PER PLAN

THE REQUIREMENTS FOR THIS ITEM ARE IDENTICAL TO THOSE FOR PEDESTRIAN SIGNAL HEADS, WITH THE EXCEPTION THAT LAMP UNITS SHALL DISPLAY THE TEXT "20".

632 PROVIDE *(AND INSTALL)* PEDESTRIAN PUSHBUTTON, AS PER PLAN

THIS ITEM SHALL CONSIST OF PROVIDING, AND INSTALLING WHERE SPECIFIED, PEDESTRIAN PUSHBUTTONS CONSISTENT WITH THE CONSTRUCTION & MATERIAL SPECIFICATIONS. ANY FIELD-DRILLING NECESSARY TO ACCOMPLISH THE INSTALLATION SHALL BE CONSIDERED INCIDENTAL TO THE ITEM AND SHALL BE INCLUDED IN THE COST OF THE ITEM.

632 SIGNAL SUPPORT FOUNDATION, BY TYPE, AS PER PLAN

FOUNDATIONS FOR POLES AND PEDESTALS SHALL CONFORM TO 632.14 WITH THE FOLLOWING EXCEPTIONS:

FOUNDATIONS SHALL BE AS SHOWN ON ODOT STANDARD DRAWING TC-21.20 OR AS SHOWN ON **SHEET 56**, AS APPLICABLE.

AT LEAST TWO (2) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION OF FOUNDATIONS, THE CONTRACTOR SHALL CONTACT THE DIVISION OF TRANSPORTATION (419-245-1300). THE DIVISION OF TRANSPORTATION WILL MEET WITH THE CONTRACTOR ON SITE TO REVIEW AND CONFIRM FOUNDATION LOCATIONS AND MAKE ADJUSTMENTS, IF REQUIRED.

THE DIVISION OF TRANSPORTATION SHALL BE NOTIFIED (419-245-1300) AS TO THE SCHEDULED DATE AND TIME OF ANY POURS AND A REPRESENTATIVE WILL REVIEW THE ANCHOR BOLT PLACEMENT IN ADVANCE OF THE POUR TO CONFIRM ACCEPTABLE BOLT PLACEMENT AND STABILITY. THE DIVISION OF TRANSPORTATION IS WILLING TO LOAN ITS ANCHOR BOLT FORMS TO THE CONTRACTOR IN ORDER TO ENSURE ACCEPTABLE PLACEMENT AND STABILITY.

632 SIGNALIZATION MISC.: PROVIDE *(AND INSTALL)* VIDEO DETECTION SYSTEM

THIS ITEM SHALL CONSIST OF FURNISHING A VIDEO DETECTION SYSTEM FOR INTERSECTIONS IDENTIFIED IN THE PLANS. WHERE SPECIFIED FOR INSTALLATION, THE CONTRACTOR SHALL INSTALL ALL CAMERAS AND CABLES ASSOCIATED WITH THE SYSTEM. CITY FORCES WILL INSTALL COMPONENTS REQUIRED WITHIN THE CABINET. **VIDEO DETECTION SYSTEM SHALL BE EITHER ITERIS, AUTOSCOPE OR APPROVED EQUAL.**

THE VIDEO DETECTION SYSTEM FURNISHED SHALL BE CAPABLE OF PROVIDING VEHICLE DETECTION TO A SIGNALIZED INTERSECTION UNDER NORMAL AND HARSH WEATHER CONDITIONS. THE SYSTEM WILL BE USED IN LIEU OF THE CONVENTIONAL VEHICLE DETECTOR LOOP INSTALLATION. THE VIDEO DETECTION SYSTEM SHALL INCLUDE ALL CABINET HARDWARE (INCLUDING INTERFACE PANEL), FOUR (4) CAMERAS, WIRING, HARDWARE, SOFTWARE AND ASSOCIATED MATERIALS REQUIRED TO OPERATE THE SYSTEM.

THE SYSTEM SHALL ALLOW FOR COMPLETE CONTROL OF THE CAMERAS, DETECTION PROGRAMMING, ZOOM CAPABILITIES, AND VIEWING A LIVE VIDEO IMAGE.

DETECTOR(S) SHALL BE PROVIDED THAT MAINTAIN NON-VOLATILE OPERATIONS LOGS, NORMALLY CONTAINING: REVISION NUMBERS FOR THE CURRENT DETECTOR HARDWARE AND SOFTWARE COMPONENTS IN OPERATION; TITLE AND COMMENTS FOR THE DETECTOR CONFIGURATION; DATE AND TIME THE LAST DETECTOR CONFIGURATION WAS DOWNLOADED TO THE SENSOR; DATE AND TIME THE OPERATION LOG WAS LAST CLEARED; DATE AND TIME COMMUNICATIONS WERE OPENED OR CLOSED WITH THE SENSOR; DATE AND TIME OF THE LAST POWER-UP; AND TIME-STAMPED, SELF-DIAGNOSTIC HARDWARE AND SOFTWARE ERRORS THAT AID IN SYSTEM MAINTENANCE AND TROUBLESHOOTING.

THE COMMUNICATIONS INTERFACE PANEL SHALL BE PROVIDED WITH ALL NECESSARY TERMINATIONS AND CONNECTORS REQUIRED TO SUPPORT FOUR (4) VIDEO DETECTION CAMERA, INCLUDINNG INPUTS AND OUTPUTS; AND POINT-TO-POINT NETWORK COMMUNICATIONS. THE COMMUNICATIONS INTERFACE PANEL SHALL BE PROVIDED WITH A TERMINAL BLOCK FOR TERMINATING POWER (THREE WIRES).

A FIELD NETWORK COMMUNICATIONS PORT SHALL BE PROVIDED TO CONFIGURE AND PROVIDE GENERAL COMMUNICATIONS AND DATA RETRIEVAL TO COMMUNICATE WITH BOTH A LOCAL AND REMOTE WINDOWS COMPUTER RUNNING THE COMMUNICATIONS SERVER. THIS PORT SHALL BE USED TO UPDATE THE EMBEDDED SOFTWARE WITH A NEW SOFTWARE RELEASE AND TO INTERACT WITH APPLICATIONS SOFTWARE FOR ALL THE VARIOUS DETECTION REQUESTS SUPPORTED BY THE DETECTION CAMERA. EACH DETECTION CAMERA SHALL BE IP ADDRESSABLE USING THE UDP/IP MESSAGE PACKET AND ROUTING STANDARD.

THE VIDEO DETECTION SYSTEM SHALL INCLUDE SYSTEM SOFTWARE FOR MULTIPLE PC'S TO FULLY OPERATE THE SYSTEM. SOFT WARE SHALL BE COMPATIBLE WITH MICROSOFT WINDOWS NT 4.0 AND WINDOWS 2000.

THE VIDEO DETECTION SYSTEM SHALL PROVIDE NORMAL VIDEO COMPRESSION TECHNIQUEST TO PRODUCE THE LIVE VIDEO IMAGE.

THE VIDEO DETECTION SYSTEM SHALL BE COMPATIBLE WITH ALL NEMA TS-1 AND TS-2 CONTROLLERS IN TYPE "M"," MSX" & "P" CABINETS.

THE VENDOR SHALL MAKE AVAILABLE AN EXPERIENCED REPRESENTATIVE, IF REQUESTED BY THE CITY, TO ASSIST IN PROPER PLACEMENT OF HARDWARE AND DETECTION ZONES.

THE VIDEO DETECTION SYSTEM CABINET HARDWARE SHALL BE WARRANTED BY ITS SUPPLIER FOR A MINIMUM OF TWO (2) YEARS. ONGOING SOFTWARE SUPPORT BY THE SUPPLIER SHALL INCLUDE UPDATES TO THE APPLICATION SOFTWARE. THESE UPDATES SHALL BE PROVIDED FREE OF CHARGE DURING THE WARRANTY PERIOD. THE SUPPLIER SHALL MAINTAIN A PROGRAM FOR TECHNICAL SUPPORT AND SOFTWARE UPDATES FOLLOWING THE EXPIRATION OF THE WARRANTY PERIOD. THIS PROGRAM SHALL BE MADE AVAILABLE TO THE CONTRACTING AGENCY IN THE FORM OF A SEPARATE AGREEMENT FOR CONTINUING SUPPORT.

FOR CABLE ESTIMATION PURPOSES, THE ASSUMPTION THAT CAMERA PLACEMENT WILL OCCUR AT OR NEAR THE TIP OF EACH MAST ARM AT THE INTERSECTION SHOULD BE MADE. THE CONTRACTOR WILL BE REQUIRED TO PROVIDE AN ADEQUATE LENGTH OF APPROPRIATE CABLE AND/OR WIRES COMPATIBLE WITH THE SYSTEM TO ACCOMMODATE THIS PLACEMENT AND INCLUDE COILS WITHIN STRUCTURES AS DEFINED WITHIN 632 METHOD OF MEASUREMENT.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, HARDWARE, SOFTWARE AND OTHER INCIDENTALS NECESSARY TO ALLOW INSTALLATION OF A FULLY FUNCTIONAL DETECTION SYSTEM.

632 SIGNAL SUPPORT MISC.: SIGNAL SUPPORT WITH MAST ARM
632 COMBINATION SIGNAL SUPPORT MISC.: COMBINATION SIGNAL SUPPORT WITH MAST ARM

SIGNAL POLES AND MAST ARMS SHALL CONFORM TO 632.15 AND 732.11 WITH THE FOLLOWING EXCEPTIONS OR ADDITIONS:

SIGNAL POLES WITH MAST ARMS SHALL BE FURNISHED AND INSTALLED AS SHOWN ON **SHEET 57.**

ALL UPRIGHT POLE SHAFTS AND ALL TRAFFIC SIGNAL MAST ARMS THROUGH THIRTY-THREE (33) FEET IN LENGTH SHALL BE MADE IN ONE CONTINUOUS PIECE, BE ROUND IN CROSS SECTION AND UNIFORMLY TAPERED FROM BUTT TO TOP APPROXIMATELY ONE (1) INCH IN DIAMETER FOR EACH SEVEN (7) LINEAL FEET IN LENGTH (0.14 INCHES PER FOOT). ARMS AND POLE SHAFTS OVER THIRTY-EIGHT (38) FEET IN LENGTH MAY BE MADE IN A MAXIMUM OF TWO PIECES TO FACILITATE TRUCK SHIPMENT, BUT SOME POSITIVE MEANS OF ASSURING AN ADEQUATE AND PERMANENT FIELD CONNECTION BETWEEN THE TWO PIECES MUST BE PROVIDED.

MAST ARMS SHALL BE FABRICATED WITH A RISE OF APPROXIMATELY THREE (3) DEGREES.

ALL COMPONENT PARTS OF THE SIGNAL SUPPORTS SHALL BE STEEL. POLE FLANGES SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. SPECIFICATION A36. HIGH STRENGTH STEEL BOLTS SHALL HAVE A MINIMUM YIELD STRENGTH OF 55,000 PSI AND MINIMUM ULTIMATE STRENGTH OF 90,000 PSI. THE POLES SHALL HAVE A MINIMUM YIELD STRENGTH OF 55,000 PSI AFTER ALL FABRICATION OPERATIONS HAVE BEEN COMPLETED. THE BASE PLATE SHALL BE STEEL IN CONFORMANCE WITH A.S.T.M. A36.

ANCHOR BOLTS FOR STEEL POLES SHALL BE FABRICATED FROM HIGH STRENGTH STEEL HAVING A MINIMUM YIELD STRENGTH OF 85,000 PSI AND A MINIMUM ULTIMATE STRENGTH OF 90,000 PSI. EACH ANCHOR BOLT SHALL HAVE THE THREADED END GALVANIZED FOR A LENGTH SUFFICIENT TO EXTEND DOWNWARD INTO THE CONCRETE FOUNDATION. EACH BOLT SHALL BE PROVIDED WITH TWO REGULAR HEX NUTS. BOTH NUTS SHALL BE HOT DIP GALVANIZED AND MEET THE PHYSICAL AND CHEMICAL REQUIREMENTS OF A.S.T.M. SPECIFICATION A325.

ALTERNATE DESIGNS, WHICH ONLY ALTER THE ABOVE STRENGTH REQUIREMENTS, WILL BE CONSIDERED PROVIDED THAT THE STRENGTH TO SUPPORT SIGNALS AND SIGNS IS AT LEAST EQUAL TO THAT OF THE SPECIFIED POLE UNDER ALL CONDITIONS OF WIND, DEAD, LIVE AND IMPACT LOADING. STRESS CALCULATIONS ACCORDING TO AASHTO "SPECIFICATION FOR THE DESIGN AND CONSTRUCITON OF STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS" SHALL BE SUBMITTED TO VERIFY THIS FACT. SAID CALCULATIONS SHALL ALSO CONSIDER WELDS, JOINTS AND OTHER STRESSED FITTINGS.

EACH SIGNAL POLE WITH MAST ARM SHALL BE ERECTED AT THE LOCATION SHOWN ON THE PLANS. THE ORIENTATION ANGLE FOR MAST ARM "A" IS THE ANGLE SHOWN ON **SHEET 39.** ALL OTHER ORIENTATION ANGLES ARE MEASURED CLOCKWISE FROM MAST ARM "A".

SIGNAL POLE (S) SHALL BE ERECTED BY USING EQUIPMENT ADEQUATELY DESIGNED FOR SUCH LOADS. SIGNAL POLE(S) SHALL BE RAISED INTO PLACE SO AS TO INSURE THAT THE GAVANIZED COATING IS NOT DAMAGED. SIGNAL POLE (S) SHALL BE SEATED ON THE LEVELING NUTS AND RAKED SLIGHTLY AWAY FROM THE DIRECTION THAT THE SIGNAL HEAD LOADINGS ARE TO BE APPLIED. THE ANCHOR BASE PLATE SHALL THEN BE SECURED BY ADJUSTING THE LEVELING NUTS ON THE ANCHOR BOLTS.

HIGH STRENGTH NUTS AND BOLTS USED IN THE ASSEMBLY OF MAST ARMS TO THE POLE SHAFT SHALL BE TIGHTENED IN ACCORDANCE WITH 513.20, SECTIONS A THROUGH E, WITH THE FOLLOWING EXCEPTIONS:

1. HARDENED WASHERS AND DRIFT PINS ARE NOT REQUIRED
2. PROVISIONS OF 513.20, SECTION E, PARAGRAPHS (2) THROUGH (4) WILL NOT APPLY.

WHERE A TWO-PIECE POLE SHAFT OR MAST ARM IS REQUIRED, GREASE OR SIMILAR LUBRICANTS SHALL NOT BE USED IN THEIR ASSEMBLY.

ANY BREAKS IN THE GALVANIZED COATING SHALL BE REPAIRED IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.

CONDUIT ELLS IN POLE FOUNDATIONS SHALL BE PROVIDED AS SHOWN ON **SHEET S21.** EACH CONDUIT ELL WHICH WILL NOT HAVE WIRE OR CABLE PULLED INTO IT DURING CONSTRUCTION SHALL BE CAPPED AT BOTH ENDS WITH MANUFACTURED CONDUIT PLUGS OR CAPS OF APPROPRIATE SIZE.

CALCULATED
CHECKED

SAFETY PROJECT NOTES

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

230-2

SAFETY PROJECT NOTES

632 CABLE SUPPORT ASSEMBLY

CABLE SUPPORT ASSEMBLIES SHALL CONFORM TO 632.21 WITH THE FOLLOWING EXCEPTIONS:

ONE CABLE SUPPORT ASSEMBLY SHALL BE PROVIDED FOR EVERY THREE (3) CABLES ENTERING THE INTERIOR OF POLES THROUGH A WEATHERHEAD OR MAST ARM.

632 SIGNAL CABLE, AS PER PLAN

PLANS INDICATE SIGNAL CABLE AS BEING AS X/C-12 WHERE X IS A NUMBER AND WHERE X/C SHALL BE THE NUMBER OF CONDUCTORS IN THE CABLE AND 12 SHALL MEAN THAT THE CONDUCTORS SHALL BE NO. 12 A.W.G., SIGNAL CABLE SHALL BE 7-STRAND CONDUCTORS MEETING IMSA 19-1-1991, THIRD EDITION.

IN WIRING THE TRAFFIC SIGNAL HEADS, THE COMPLETE CABLE SHALL BE CARRIED THROUGH THE WIRE INLET INTO THE HEAD.

AT THE CONTROLLER LOCATION, EACH CABLE SHOWN IN THE WIRING DIAGRAM SHALL BE LABELED WITH A DURABLE LABEL EXCEPT SPARES. EXAMPLE OF TAGS:

PHASE A NORTHBOUND
PHASE A SOUTHBOUND
PHASE A LEFT TURN
X-WALK A PED INDICATIONS
X-WALK A & B INDICATIONS
X-WALK C & D INDICATIONS (IF APPLICABLE)

THE TAG SHALL BE NOT LESS THAN 0.031" THICK COPPER, BRASS OR PLASTIC AND SHALL BE EMBOSSED OR ENGRAVED WITH LETTERS OR NUMBERS OF NOT LESS THAN ¼" HIGH. IT SHALL BE SECURELY ATTACHED WITH AN AWG NO. 14 COPPER WIRE.

THE COST FOR THIS WORK SHALL BE INCLUDED IN THE INSTALLATION OF THE VARIOUS CABLES.

THE FOLLOWING STANDARD CABLE CODE CONNECTIONS FOR TRAFFIC SIGNALS SHALL BE FOLLOWED, WHERE APPLICABLE:

5-CONDUCTOR

WIRE COLOR	ALTERNATE 1	ALTERNATE 2	ALTERNATE 3
BLACK	SPARE	W	SPARE
WHITE	COMMON	COMMON	COMMON
RED	RED LAMP	DW	SPARE
GREEN	GREEN LAMP	SPARE	W
ORANGE	YELLOW LAMP	SPARE	DW

7-CONDUCTOR

WIRE COLOR	ALTERNATE 1	ALTERNATE 2
BLACK	W	YELLOW ARROW
WHITE	COMMON	COMMON
RED	DW	RED LAMP
GREEN	W	GREEN LAMP
ORANGE	DW	YELLOW LAMP
BLUE	SPARE	GREEN ARROW
WHITE/BLACK	SPARE	SPARE

632 METHOD OF MEASUREMENT

METHOD OF MEASUREMENT FOR CABLE SHALL CONFORM TO 632.29 WITH THE FOLLOWING ADDITIONS OR EXCEPTIONS:

WHEN CABLE PASSES THROUGH A PULLBOX, POLE, PEDESTAL FOUNDATION OR CONTROLLER FOUNDATION, AN ADDITIONAL ALLOWANCE OF FIVE (5) FEET FOR SLACK.

WHEN CABLE TERMINATES AT A PEDESTAL, MAST ARM OR SPAN WIRE-SUPPORTED VEHICULAR SIGNAL HEAD, ADDITIONAL ALLOWANCE OF FIVE (5) FEET FOR SLACK.

WHEN CABLE PASSES THROUGH OR TERMINATES IN A MANHOLE, AN ADDITIONAL ALLOWANCE OF TEN (10) FEET FOR SLACK.

SIGNAL HEAD SUB-SUMMARY – PROVIDE FOR INSTALLATION BY OTHERS

LOCATION	Vehicular, Polycarbonate, LED, w/Backplate											Pedestrian, LED, D-2			20 mph, LED, Pole-Mounted, D-2
	Rigid-Mount						Pole-Mount	Pedestal-Mount				Pole Mount		Pedestal-Mount, 1-Way	
	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	Y	R Y G	R Y G	R Y G	R Y G	1-Way	2-Way		
Dorr & Reynolds	3	4	5					1		1		3		5	
Nebraska & Reynolds	7				1								4		
Airport & Reynolds		3	3	1		4					4	2	3		
MVCDS Flashers							4								2
Glendale, Reynolds & Southwyck North	2	4	4			2			2		2	2	3		
Heatherdowns & Reynolds	4	3	3	1									4		
TOTAL	16	14	15	2	1	6	4	1	2	1	6	7	14	5	2
CARRIED TO SAFETY PROJECT SUMMARY	45			2	7		4	1	3		6	7	14	5	2

SIGNAL HEAD SUB-SUMMARY – PROVIDE AND INSTALL

LOCATION	Vehicular, Polycarbonate, LED, w/Backplate								Pedestrian, LED, D-2			
	Rigid-Mount						Pole-Mount		Pole Mount			
	Y	R Y G	R Y G	R Y G	R Y G	R Y G	Y	R Y G	1-Way	2-Way	Pedestal-Mount, 1-Way	Covering Pedestrian Signal Head
Elmer & Reynolds		8							4	1	2	
Bancroft & Reynolds		6				2			4	2		
Glann School & Reynolds	4						1					
Hill & Reynolds		4	2	2	2			3		4		
Reynolds & South		8							2	3		
Angola & Reynolds		7				1		1	2	1		4
Angola, Banbury & Reynolds		8							4	1		6
Brownstaone, MVCDS & Reynolds		8						1	8	1		
Reynolds & Southwyck South		5			2	1			4	1		6
TOTAL	4	54	2	2	4	4	1	5	28	14	2	16
CARRIED TO SAFETY PROJECT SUMMARY	4	58			4	4	1	5	28	14	2	16

POLE ORIENTATION DATA

POLE NO.	LOCATION	ORIENTATION ANGLES		
		FOUNDATION RELATIVE TO CENTERLINE	ELL ⑥	EDISON ELL (2") ⑦
512-2-1	NE Corner-Dorr & Reynolds	44° to Dorr	270°	90°
587-4-2	NE Corner-Reynolds & Nebraska	90° to Reynolds	135°	180°

ORIENTATION PLAN

CALCULATED BJJ
CHECKED GAS

SAFETY PROJECT NOTES AND TABLES

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

230-2

COLOR SEQUENCE CHART

INDICATIONS FACING	FLASH	INTERVALS 1	2	3	4	5	6	7	8	9	10
REYNOLDS	Y	G	G	Y	R	R	R	R	R	R	R
ELMER	R	R	R	R	R	G	G	G	Y	R	R
CROSSWALKS Ⓐ	DARK	W	FL DW	FL DW	FL DW	DW	DW	DW	DW	DW	DW
CROSSWALKS Ⓑ	DARK	DW	DW	DW	DW	W	FL DW	FL① DW	FL① DW	FL① DW	② DW
PHASING		ΦA				ΦB (Actuated)					
NEMA PHASING		Φ2				Φ4					

① DW–D1S2 & D2
② FLDW – D3

ELMER & REYNOLDS

CONTRACTOR WORK TASKS:
- PROVIDE AND INSTALL VEHICULAR AND PEDESTRIAN HEADS; REMOVE AND SALVAGE EXISTING HEADS; DELIVER TO DIVISION OF TRANSPORTATION
- PROVIDE AND INSTALL VIDEO DETECTION SYSTEM, INCLUDING CABLE

DIVISION OF TRANSPORTATION WORK TASKS:
- INSTALL CABINET HARDWARE FOR VIDEO DETECTION SYSTEM
- TERMINATE CABLE IN CONTROLLER CABINET

POLE & MAST ARM DATA

POLE NO.	POLE GA. & SIZE	ARM GA. & SIZE	FOUNDATION	BOLTS & BOLT CIRCLE	
396-4-1	7E11.0" x 7.85" x 22'-6"	7E8.0" x 3.80" x 30'-0"	"C"	1-1/2" x 60"	15"
396-4-2	7E11.0" x 6.38" x 22'-6"	7E8.0" x 4.08" x 28'-0"	"C"	1-1/2" x 60"	15"
396-4-3	7E10.0" x 6.85" x 22'-6"	7E7.0" x 3.64" x 24'-0"	"B"	1-1/2" x 60"	13-1/2"
396-4-4	7E12.0" x 7.38" x 33'-0"	7E9.0" x 5.64" x 24'-0"	"D"	1-1/2" x 60"	16"

AS BUILT

CITY OF TOLEDO
DEPT. OF PUBLIC SAFETY
DIV. OF TRAFFIC ENGINEERING

#396

ELMER & REYNOLDS

DATE	DESIGN	DWN.
12-04-06	BJJ	BJK
01-12-06	BJJ	BJK
12-31-96	HA	HA
8-3-94	BJJ	PAH
REVISIONS		

SCALE:	1" = 20'	DESIGN:	DML
DWG.NO.:	S-3-94	DRAWN:	PAH
DATE:	3-23-94	CHECKED:	

C:\DWGS\SIGNAL\Elmer & Reynolds, 396

COLOR SEQUENCE CHART

INDICATIONS FACING	FLASH	INTERVALS 1	2	3	4	5	6	7	8	9	10
NB REYNOLDS	R	G ←G–	G ←Y–	G	G	Y	R	R	R	R	R
SB REYNOLDS	R	R	R	G	G	Y	R	R	R	R	R
WB BANCROFT	R	G	G	R	R	R	G ←G–	G ←Y–	G	G	Y
EB BANCROFT	R	R	R	R	R	R	R	R	G	G	Y
CROSSWALK Ⓐ	DARK	W	W	W	FLDW	FLDW	DW	DW	DW	DW	DW
CROSSWALK Ⓑ	DARK	DW	DW	W	FLDW	FLDW	DW	DW	DW	DW	DW
CROSSWALK Ⓒ	DARK	DW	DW	DW	DW	DW	W	W	W	FLDW	FLDW
CROSSWALK Ⓓ	DARK	DW	DW	DW	DW	DW	DW	DW	W	FLDW	FLDW
PHASING		ϕA Lead		–ϕA			ϕB Lead		ϕB–		
NEMA PHASING		ϕ1		ϕ2			ϕ3		ϕ4		
		ϕ6					ϕ8				

WIRING DIAGRAM

BANCROFT & REYNOLDS

CONTRACTOR WORK TASKS:

- PROVIDE AND INSTALL VEHICULAR AND PEDESTRIAN HEADS; REMOVE AND SALVAGE EXISTING HEADS; DELIVER TO DIVISION OF TRANSPORTATION
- FIELD DRILL ACCESS; PROVIDE AND INSTALL PUSHBUTTONS
- PROVIDE AND INSTALL 2/C CABLE WITHIN EACH EXISTING POLE (POLE BASE TO PUSHBUTTON) (EST. 56' TOTAL) ; TERMINATE AT PUSHBUTTONS
- PROVIDE AND INSTALL VIDEO DETECTION, INCLUDING CABLE

DIVISION OF TRANSPORTATION WORK TASKS:

- SPLICE CABLE IN POLE BASES
- INSTALL CABINET HARDWARE FOR VIDEO DETECTION SYSTEM
- TERMINATE CABLE IN CONTROLLER CABINET

POLE & MAST ARM DATA

POLE NO.	POLE GA. & SIZE	ARM GA. & SIZE	FOUNDATION	BOLT & BOLT CIRCLE
507–4–1	7E12.0" x 7.38" x 33'–0"	7E8.0" x 3.52" x 32'–0"	D	1–1/2" x 60"; 16"
507–4–2	7E12.0" x 7.38" x 33'–0"	7E8.0" x 3.52" x 32'–0"	D	1–1/2" x 60"; 16"
507–4–3	7E12.0" x 7.38" x 33'–0"	7E8.0" x 3.52" x 32'–0"	D	1–1/2" x 60"; 16"
507–4–4	7E12.0" x 7.38" x 33'–0"	7E8.0" x 3.52" x 32'–0"	D	1–1/2" x 60"; 16"

CITY OF TOLEDO
DEPT. OF PUBLIC SAFETY
DIV. OF TRAFFIC ENGINEERING

#507

BANCROFT & REYNOLDS

REVISIONS	
12-04-06	BJK
5-24-05	SLE
11-16-92	PAH
3-5-80	PAH

DATE 10-10-72	DESIGN
	DRAWN RRM
	CHECKED

230-2

GLANN SCHOOL & REYNOLDS

CONTRACTOR WORK TASKS:

- PROVIDE AND INSTALL 1-SECTION Y HEADS; REMOVE AND SALVAGE EXISTING HEADS; DELIVER TO DIVISION OF TRANSPORTATION

DIVISION OF TRANSPORTATION WORK TASKS:

- REMOVE AND SALVAGE EXISTING PEDESTRIAN SIGNAL HEADS
- DISCONNECT UN-USED CABLE IN CONTROLLER

WIRING DIAGRAM

CITY OF TOLEDO
DEPT. OF PUBLIC SAFETY
DIV. OF TRAFFIC ENGINEERING

#514

GLANN SCHOOL & REYNOLDS

3-18-74 MFW	SCALE: 1"=20'	DESIGN:	
REVISIONS	DWG. NO. S-38-72	DRAWN:	RRM
	DATE: 9-26-72	CHECKED:	CER

230-2

COLOR SEQUENCE CHART

INDICATIONS FACING	FLASH	INTERVALS 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
NB REYNOLDS LT	R	←G–	←Y–	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
NB REYNOLDS	R	G	G	G	G	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
SB REYNOLDS	R	R	R	G	G	G	G	G	G	G	Y	R	R	R	R	R	R	R	R	R	R	R	R
SB REYNOLDS LT	R	R	R	R	R	R	R	R	R	←G–	←Y–	R	R	R	R	R	R	R	R	R	R	R	R
EB DORR LT	R	R	R	R	R	R	R	R	R	R	R	R	←G–	←Y–	R	R	R	R	R	R	R	R	R
EB DORR	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	G	G	Y	R	R	R	R
WB DORR	R	R	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G	G	G	G	Y	R
WB DORR LT	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	←G–	←Y–	R
CROSSWALK Ⓐ	DARK	W	W	W	W	FL DW	FL DW	FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
CROSSWALK Ⓑ	DARK	DW	DW	DW	W	W	FL DW	FL DW	FL DW	FL DW	FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
CROSSWALKS Ⓒ	DARK	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	W	W	W	DW	DW	DW	DW	DW	DW	DW
CROSSWALKS Ⓒ	DARK	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	W	FL DW	FL DW	FL DW	FL DW	FL DW	FL DW
PHASING		ϕA LEAD			ϕA					ϕA LAG			ϕB LEAD			ϕB					ϕB LAG		
NEMA PHASING		ϕ1			ϕ2								ϕ3			ϕ4							
		ϕ6								ϕ5			ϕ8								ϕ7		

DORR & REYNOLDS

CONTRACTOR WORK TASKS:

- CONSTRUCT POLE FOUNDATION 512-2-1
- PROVIDE AND INSTALL POLE AND MAST ARM 512-2-1
- INSTALL 3" CONDUIT
- CONSTRUCT PULLBOX
- PROVIDE VEHICULAR AND PEDESTRIAN HEADS FOR INSTALLATION BY DIVISION OF TRANSPORTATION
- PROVIDE PUSHBUTTONS FOR INSTALLATION BY DIVISION OF TRANSPORTATION
- PROVIDE VIDEO DETECTION SYSTEM, INCLUDING CABLE, FOR INSTALLATION BY DIVISION OF TRANSPORTATION
- REMOVE AND SALVAGE EXISTING POLE AND MAST ARM 512-1-1; DELIVER TO DIVISION OF TRANSPORTATION POLE YARD
- REMOVE EXISTING FOUNDATION (POLE 512-1-1)

DIVISION OF TRANSPORTATION WORK TASKS:

- PRIOR TO START OF CONSTRUCTION, CONSTRUCT NEW CONTROLLER BASE AND INSTALL RELATED CONDUIT
- INSTALL VEHICULAR AND PEDESTRIAN HEADS
- INSTALL PUSHBUTTONS
- INSTALL VIDEO DETECTION SYSTEM, INCLUDING CABLE
- PROVIDE AND INSTALL ALL CABLE
- PERFORM ALL TERMINATIONS AND SPLICING

POLE & MAST ARM DATA

POLE NO.	POLE GA. & SIZE	ARM GA. & SIZE	FOUNDATION	BOLT & BOLT CIRCLE	
512-2-1	3E14.0"x9.38"x33'-0"	3E11.0"x8.83"x15'-6" & 7E9.36"x4.92"x31'-9"	K	1-3/4"x90"	20"
512-2-2	3E18.0"x13.38"x33'-0"	0E13.0"x8.80"x30'-0" &7E9.44"x9.44"x27'-9"	ODOT TC-12.30 DESIGN 10	1-3/4"x84"	18"

CALCULATED

CHECKED

DORR & REYNOLDS #512

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

230-2

COLOR SEQUENCE CHART

INDICATIONS FACING	FLASH	INTERVALS 1	2	3	4	5	6	7	8	9
NB REYNOLDS	Y	G ←G–	G ←Y–	G	G	G	Y	R	R	R
SB REYNOLDS	Y	R	R	G	G	G	Y	R	R	R
NEBRASKA & PRIVATE DRIVE	R	R	R	R	R	R	R	G	G	Y
CROSSWALK Ⓐ	DARK	W	W	W	W	FLDW	FLDW	DW	DW	DW
CROSSWALK Ⓑ	DARK	DW	DW	W	FLDW	FLDW	FLDW	DW	DW	DW
CROSSWALKS Ⓒ	DARK	DW	DW	DW	DW	DW	DW	W	FLDW	FLDW
PHASING		ϕA Lead		ϕA				ϕB		
NEMA PHASING		ϕ1		ϕ2				ϕ4		
		ϕ6								

NEBRASKA & REYNOLDS

CONTRACTOR WORK TASKS:

- CONSTRUCT POLE FOUNDATION 587-4-2
- PROVIDE AND INSTALL POLE AND MAST ARM 587-4-2
- INSTALL 3" CONDUIT
- PROVIDE VEHICULAR AND PEDESTRIAN HEADS FOR INSTALLATION BY DIVISION OF TRANSPORTATION
- PROVIDE PUSHBUTTONS FOR INSTALLATION BY DIVISION OF TRANSPORTATION
- PROVIDE VIDEO DETECTION SYSTEM, INCLUDING CABLE, FOR INSTALLATION BY DIVISION OF TRANSPORTATION
- REMOVE AND SALVAGE EXISTING POLE AND MAST ARM 587-4-2; DELIVER TO DIVISION OF TRANSPORTATION
- REMOVE EXISTING FOUNDATION (POLE 587-4-2)

DIVISION OF TRANSPORTATION WORK TASKS:

- INSTALL VEHICULAR AND PEDESTRIAN HEADS
- INSTALL PUSHBUTTONS
- INSTALL VIDEO DETECTION SYSTEM, INCLUDING CABLE
- PROVIDE AND INSTALL ALL CABLE
- PERFORM ALL TERMINATIONS AND SPLICING

POLE & MAST ARM DATA

POLE NO.	POLE GA. & SIZE	ARM GA. & SIZE	FOUNDATION	BOLT & BOLT CIRCLE
587-4-1	7E10.0" x 6.85" x 22'-6"	7E7.0" x 3.36" x 26'-0"	B	1-1/2" x 60"; 13-1/2"
587-4-2 (EX)	7E11.0" x 6.38" x 33'-0"	7E8.0" x 3.52" x 32'-0"	C	1-1/2" x 60"; 15"
587-4-2 (PROP)	7E12.0" x 7.38" x 33'-0"	7E9.0" x 4.52" x 32'-0"	D	1-1/2" x 60"; 16"
587-4-3	7E10.0" x 6.85" x 22'-6"	7E7.0" x 3.64" x 24'-0"	B	1-1/2" x 60"; 13-1/2"
587-4-4	7E12.0" x 7.38" x 33'-0"	7E8.0" x 3.52" x 32'-0"	D	1-1/2" x 60"; 16"

CITY OF TOLEDO
DEPT. OF PUBLIC SAFETY
DIV. OF TRAFFIC ENGINEERING

#587

NEBRASKA & REYNOLDS

REVISIONS	
1-5-07	BJK
6-15-05	SLE
3-15-74	RRM

SCALE: 1" = 20'
DWG. NO. S-66-72
DATE: 9-19-72
DESIGN:
DRAWN: DAC
CHECKED:

230-2

HILL & REYNOLDS

CONTRACTOR WORK TASKS:

- PROVIDE AND INSTALL VEHICULAR AND PEDESTRIAN HEADS; REMOVE AND SALVAGE EXISTING HEADS; DELIVER TO DIVISION OF TRANSPORTATION
- FIELD DRILL ACCESS; PROVIDE AND INSTALL PUSHBUTTONS
- PROVIDE AND INSTALL 2/C CABLE WITHIN EACH EXISTING POLE (POLE BASE TO PUSHBUTTON) TO SERVE PUSHBUTTONS (EST. 56' TOTAL)
- PROVIDE AND INSTALL VIDEO DETECTION, INCLUDING CABLE

DIVISION OF TRANSPORTATION WORK TASKS:

- PROVIDE AND INSTALL "LEFT TURN SIGNAL" SIGNS
- SPLICE CABLE IN POLE BASES
- INSTALL CABINET HARDWARE FOR VIDEO DETECTION SYSTEM
- TERMINATE CABLE IN CONTROLLER CABINET

COLOR SEQUENCE CHART

INDICATIONS FACING	FLASH	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
SB REYNOLDS LT	R	←G–	←Y–	R	R	R	R	R	R	R	R	R	R	R	R	R	R
SB REYNOLDS	R	G	G	G	G	G	Y	R	R	R	R	R	R	R	R	R	R
NB REYNOLDS	R	R	R	G	G	G	G	G ←G–	Y	R	R	R	R	R	R	R	R
WB HILL LT	R	R	R	R	R	R	R	R	R	←G–	←G–	←Y–	R	R	R	R	R
WB HILL	R	R	R	R	R	R	R	R	R	G	G	G	G	G	Y	R	R
EB HILL	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	G ←G–	Y
CROSSWALK Ⓐ	DARK	W	W	W	FLDW	FLDW	FLDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
CROSSWALK Ⓑ	DARK	DW	DW	W	FLDW	FLDW	FLDW	FLDW	FLDW	DW	DW	DW	DW	DW	DW	DW	DW
CROSSWALK Ⓒ	DARK	DW	DW	DW	DW	DW	DW	DW	DW	W	FLDW	FLDW	FLDW	FLDW	FLDW	DW	DW
CROSSWALK Ⓓ	DARK	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	① FLDW	FLDW	FLDW	FLDW
PHASING		ØA Lead		ØA				ØA Lag		ØB Lead			ØB			ØB Lag	
NEMA PHASING		Ø1		Ø2						Ø3			Ø4				
		Ø6						Ø5		Ø8						Ø7	

① REMAINS W – DIAL 3

WIRING DIAGRAM

POLE & MAST ARM DATA

POLE NO.	POLE GA. & SIZE	ARM GA. & SIZE	FOUNDATION	BOLT & BOLT CIRCLE
499-4-1	3E13.0" x 8.38" x 33'-0"	3E10.0" x 7.87" x 15'-3" 7E8.4" x 4.48" x 28'-0"	J	1-3/4" x 90"; 18"
499-4-2	3E12.0" x 7.38" x 33'-0"	3E9.0" x 3.68" x 38'-0"	I	1-3/4" x 90"; 16"
499-4-3	3E13.0" x 8.38" x 33'-0"	3E10.0" x 4.68" x 38'-0"	J	1-3/4" x 90"; 18"
499-4-4	3E12.0" x 7.38" x 33'-0"	3E9.0" x 3.96" x 36'-0"	I	1-3/4" x 90"; 16"

REVISIONS	
1-08-07	BJK
1-17-06	BJK
11-27-84	DAC

CITY OF TOLEDO
DEPT. OF PUBLIC SAFETY
DIV. OF TRAFFIC ENGINEERING

499
HILL & REYNOLDS

SCALE: 1" = 20'	DESIGN:
DWG. NO.: S-13-83	DRAWN: PAH
DATE: 11-10-83	CHECKED:

REYNOLDS & SOUTH

CONTRACTOR WORK TASKS:

- PROVIDE AND INSTALL VEHICULAR AND PEDESTRIAN HEADS; REMOVE AND SALVAGE EXISTING HEADS; DELIVER TO DIVISION OF TRANSPORTATION
- FIELD DRILL ACCESS; PROVIDE AND INSTALL PUSHBUTTONS
- PROVIDE AND INSTALL 2/C CABLE WITHIN EACH EXISTING POLE (POLE BASE TO PUSHBUTTON) TO SERVE PUSHBUTTONS (EST. 56' TOTAL)
- PROVIDE AND INSTALL VIDEO DETECTION, INCLUDING CABLE

DIVISION OF TRANSPORTATION WORK TASKS:

- INSTALL CABINET HARDWARE FOR VIDEO DETECTION SYSTEM
- SPLICE CABLE IN POLE BASES
- TERMINATE CABLE IN CONTROLLER CABINET

N

COLOR SEQUENCE CHART

INDICATIONS FACING	FLASH	INTERVALS 1	2	3	4	5	6
REYNOLDS	Y	G	G	Y	R	R	R
SOUTH & PRIVATE DRIVE	R	R	R	R	G	G	Y
CROSSWALKS Ⓐ	DARK	W	FLDW	FLDW	DW	DW	DW
CROSSWALKS Ⓑ	DARK	DW	DW	DW	W	FLDW	FLDW
PHASING		ΦA			ΦB		
NEMA PHASING		Φ2			Φ4		

WIRING DIAGRAM

AS BUILT

POLE & MAST ARM DATA

POLE NO.	POLE GA. & SIZE	ARM GA. & SIZE	FOUNDATION	BOLT & BOLT CIRCLE
379-4-1	Owned by Others	7E7.0" x 3.64" x 24'-0"	No Data	No Data
379-4-2	7E13.0" x 8.38" x 33'-0"	7E9.0" x 3.96" x 36'-0"	E	1-1/2" x 60"; 18"
379-4-3	7E10.0" x 5.38" x 33'-0"	7E7.0" x 3.64" x 24'-0"	B	1-1/2" x 60"; 13-1/2"
379-4-4	7E13.0" x 8.38" x 33'-0"	7E9.0" x 4.24" x 34'-0"	E	1-1/2" x 60"; 18"

CITY OF TOLEDO
DEPT. OF PUBLIC SAFETY
DIV. OF TRAFFIC ENGINEERING

#379

REYNOLDS & SOUTH

REVISIONS	
1-08-07	BJK
6-17-05	SLE
11-17-87	GAK/DML

SCALE: 1" = 20'	DESIGN: DAC
DWG. NO.: S-21-79	DRAWN: DAC
DATE: 8-16-79	CHECKED: RJN

ANGOLA & REYNOLDS

CONTRACTOR WORK TASKS:

- PROVIDE AND INSTALL VEHICULAR HEADS; REMOVE AND SALVAGE EXISTING HEADS: DELIVER TO DIVISION OF TRANSPORTATION
- PROVIDE AND INSTALL 2/C CABLE WITHIN EXISTING POLE 407-4-1 TO SERVE PUSHBUTTONS (EST. 14' TOTAL)
- PROVIDE AND INSTALL 5/C CABLE FROM CONTROLLER TO BASE OF POLE 407-4-1 (EST. 181' TOTAL)
- PROVIDE AND INSTALL 7/C CABLE WITHIN POLES 407-4-1, 407-4-2 AND 407-4-4 TO SERVE PEDESTRIAN HEADS (EST. 63' TOTAL)
- FIELD DRILL AS NECESSARY; PROVIDE AND INSTALL PEDESTRIAN HEADS AND PUSHBUTTONS
- PROVIDE AND INSTALL VIDEO DETECTION, INCLUDING CABLE

DIVISION OF TRANSPORTATION WORK TASKS:

- PRIOR TO START OF CONSTRUCTION, PROVIDE AND INSTALL STANDARD POLE TO REPLACE EXISTING COMBINATION POLE 407-4-2
- SPLICE CABLE IN POLE BASES
- INSTALL CABINET HARDWARE FOR VIDEO DETECTION SYSTEM
- TERMINATE CABLE IN CONTROLLER CABINET

COLOR SEQUENCE CHART

INDICATIONS FACING	FLASH	INTERVALS 1	2	3	4	5	6	7	8	9
NB REYNOLDS	Y	G ←G-	G ←Y-	G	G	Y	R	R	R	R
SB REYNOLDS	Y	R	R	R	G	Y	R	R	R	R
ANGOLA	R	R	R	R	R	R	R	G	Y	R
PHASING		ΦA Lead			ΦA			ΦB		
NEMA PHASING		Φ1			Φ2			Φ4		
		Φ6								

WIRING DIAGRAM

POLE & MAST ARM DATA

POLE NO.	POLE GA. & SIZE	ARM GA. & SIZE	FOUNDATION	BOLT & BOLT CIRCLE
407-4-1	7E12.0" x 8.85" x 22'-6"	7E9.0" x 3.96" x 36'-0"	D	1-1/2" x 60"; 16"
407-4-2	7E11.0" x 6.38" x 33'-0"	7E8.0" x 3.52" x 32'-0"	C	1-1/2" x 60"; 15"
407-4-3	7E12.0" x 8.85" x 22'-6"	7E9.0" x 3.96" x 36'-0"	D	1-1/2" x 60"; 16"
407-4-4	7E12.0" x 7.38" x 33'-0"	7E9.0" x 3.96" x 36'-0"	D	1-1/2" x 60"; 16"

AS BUILT

CITY OF TOLEDO
DEPT. OF PUBLIC SAFETY
DIV. OF TRAFFIC ENGINEERING

407

ANGOLA & REYNOLDS

DATE	DES.	DWN.
5-23-05		SLE
3-23-92	BJJ	PAH
2-18-92		PAH
4-10-90		PAH

REVISIONS

SCALE: 1" = 20'	DESIGN: DML
DWG. NO.: S-10-82	DRAWN: PAH
DATE: 4-15-82	CHECKED:

230-2

COLOR SEQUENCE CHART

INDICATIONS FACING	FLASH	INTERVALS 1	2	3	4	5	6
REYNOLDS	Y	G	Y	R	R	R	R
ANGOLA-BANBURY	R	R	R	R	G	Y	R
PHASING		ΦA			ΦB		
NEMA PHASING		Φ2			Φ4		

WIRING DIAGRAM

ANGOLA, BANBURY & REYNOLDS

CONTRACTOR WORK TASKS:

- PROVIDE AND INSTALL VEHICULAR HEADS; REMOVE AND SALVAGE EXISTING HEADS; DELIVER TO DIVISION OF TRANSPORTATION
- FIELD DRILL AS NECESSARY; PROVIDE AND INSTALL PEDESTRIAN HEADS
- FIELD DRILL ACCESS; PROVIDE AND INSTALL PUSHBUTTONS (POLES 408-4-3 & 408-4-4 ONLY)
- PROVIDE AND INSTALL 5/C CABLE FROM CONTROLLER TO BASE OF EACH POLE 408-4-3 AND 408-4-4 (EST. 196' TOTAL)
- PROVIDE AND INSTALL 7/C CABLE WITHIN ALL EXISTING POLES (POLE BASE TO PEDESTRIAN HEADS) TO SERVE PEDESTRIAN HEADS (EST. 84' TOTAL)
- PROVIDE AND INSTALL 2/C CABLE WITHIN EXISTING POLES 408-4-3 & 408-4-3 (POLE BASE TO PUSHBUTTON) TO SERVE PUSHBUTTONS (EST. 28' TOTAL)
- PROVIDE AND INSTALL VIDEO DETECTION, INCLUDING CABLE

DIVISION OF TRANSPORTATION WORK TASKS:

- SPLICE CABLE IN POLE BASES
- INSTALL CABINET HARDWARE FOR VIDEO DETECTION SYSTEM
- TERMINATE CABLE IN CONTROLLER CABINET

POLE & MAST ARM DATA

POLE NO.	POLE GA. & SIZE	ARM GA. & SIZE	FOUNDATION	BOLTS & BOLT CIRCLE
408-4-1	7E12.0"x8.85"x 22'-6"	7E9.0"x 3.96"x 36'-0"	D	1-1/2"x 60" 16"
408-4-2	7E12.0"x7.38"x 33'-0"	7E9.0"x 3.96"x36'-0"	D	1-1/2"x 60" 16"
408-4-3	7E12.0"x8.85"x 22'-6"	7E9.0"x 3.96"x 36'-0"	D	1-1/2"x 60" 16"
408-4-4	7E12.0"x 7.38"x 33'-0"	7E9.0"x 3.96"x 36'-0"	D	1-1/2"x 60" 16"

AS BUILT

CITY OF TOLEDO
DEPT. OF PUBLIC SAFETY
DIV. OF TRAFFIC ENGINEERING

408

ANGOLA, BANBURY & REYNOLDS

REVISIONS	
5-20-05	SLE
3-25-92	PAH
4-5-90	GAK

SCALE: 1" = 20'
DWG. NO.: S-3-82
DATE: 3-25-82
DESIGN: DML
DRAWN: DAC
CHECKED: CER

230-2

COLOR SEQUENCE CHART

INDICATIONS FACING	FLASH	1	2	3	4	5 ①	6	7 ②	8	9	10	11	12	13	14 ①	15	16	17
SB REYNOLDS LT	R	‹G–	‹G–	‹Y–	R	R	R	R	R	R	R	R	R	R	R	R	R	R
SB REYNOLDS	R	G	G	G	G	G	Y	R	R	R	R	R	R	R	R	R	R –G›	R –Y›
NB REYNOLDS	R	R	R	R	G	G	G	G	G	Y	R –G›	R –G›	R –Y›	R	R	R	R	R
NB REYNOLDS LT	R	R	R	R	R	R	R	‹G–	‹G–	‹Y–	R	R	R	R	R	R	R	R
WB AIRPORT LT	R	R	R	R	R	R	R	R	R	R	‹G–	‹G–	‹Y–	R	R	R	R	R
WB AIRPORT	R	R –G›	R –G›	R –Y›	R	R	R	R	R	R	G	G	G	G	G	Y	R	R
EB AIRPORT	R	R	R	R	R	R	R	R –G›	R –G›	R –Y›	R	R	R	R	R	R	G ‹G–	Y
CROSSWALK Ⓐ	DARK	W	FLDW	FLDW	FLDW	FLDW	FLDW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
CROSSWALK Ⓑ	DARK	DW	DW	DW	W	FLDW ③	FLDW ③	FLDW ③	FLDW	FLDW	DW	DW	DW	DW	DW	DW	DW	DW
CROSSWALK Ⓒ	DARK	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FLDW	FLDW	FLDW	FLDW	FLDW	DW	DW
CROSSWALK Ⓓ	DARK	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FLDW	FLDW	FLDW	FLDW
PHASING		ΦA Lead			ΦA			ΦA Lag			ΦB Lead			ΦB			ΦB Lag	
NEMA PHASING		Φ1			Φ2						Φ3			Φ4				
		Φ6						Φ5			Φ8						Φ7	
																	O/L A	

① OMIT INTERVAL – DIAL 1, OFFSET 1; DIAL 1 OFFSET 2; DIAL 3
② OMIT INTERVAL – DIAL 1, OFFSET 1; DIAL 1 OFFSET 2; DIAL 2
③ REMAINS WALK – DIAL 3

WIRING DIAGRAM

AIRPORT & REYNOLDS

CONTRACTOR WORK TASKS:

- PROVIDE VEHICULAR AND PEDESTRIAN HEADS FOR INSTALLATION BY DIVISION OF TRANSPORTATION
- PROVIDE PUSHBUTTONS FOR INSTALLATION BY DIVISION OF TRANSPORTATION
- PROVIDE VIDEO DETECTION SYSTEM, INCLUDING CABLE, FOR INSTALLATION BY DIVISION OF TRANSPORTATION

DIVISION OF TRANSPORTATION WORK TASKS:

- INSTALL VEHICULAR AND PEDESTRIAN HEADS
- INSTALL PUSHBUTTONS
- INSTALL VIDEO DETECTION SYSTEM, INCLUDING CABLE
- PROVIDE AND INSTALL ALL CABLE
- PERFORM ALL TERMINATIONS AND SPLICING

POLE & MAST ARM DATA

POLE NO.	POLE GA. & SIZE	ARM GA. & SIZE	FOUNDATION	BOLT & BOLT CIRCLE
504-4-1	3E13.0" x 8.38" x 33'-0"	3E10.0" x 7.87" x 15'-3"	J	1-3/4" x 90"; 18"
		7E8.44" x 4.24" x 30'-0"		
504-4-2	3E13.0" x 8.38" x 33'-0"	3E10.0" x 7.87" x 15'-3"	J	1-3/4" x 90"; 18"
		7E8.44" x 4.24" x 30'-0"		
504-4-3	3E13.0" x 8.38" x 33'-0"	3E10.0" x 7.87" x 15'-3"	J	1-3/4" x 90"; 18"
		7E8.44" x 4.80" x 26'-0"		
504-4-4	3E13.0" x 8.38" x 33'-0"	3E10.0" x 7.87" x 15'-3"	J	1-3/4" x 90"; 18"
		7E8.44" x 4.24" x 30'-0"		

DATE	DESIGN	DWN.
1-09-07		BJK
5-17-05		SLE

CITY OF TOLEDO
DEPT. OF PUBLIC SERVICE
DIVISION OF TRANSPORATION

#504

AIRPORT & REYNOLDS

SCALE:	1"=20'	DESIGN:	HA
DWG.NO.:	S-4-94	DRAWN:	GAK

MVCDS & REYNOLDS SCHOOL FLASHERS
CONTRACTOR SHALL PERFORM THE FOLLOWING:
- PROVIDE "20" AND 1-SECTION AMBER HEADS FOR INSTALLATION BY DIVISION OF TRANSPORTATION

BROWNSTONE, MVCDS & REYNOLDS
CONTRACTOR WORK TASKS:
- PROVIDE AND INSTALL VEHICULAR AND PEDESTRIAN HEADS; REMOVE AND SALVAGE EXISTING HEADS; DELIVER TO DIVISION OF TRANSPORTATION
- PROVIDE AND INSTALL 5/C CABLE FROM CONTROLLER TO PEDESTAL ON SW CORNER OF INTERSECTION (EST. 33' TOTAL)
- FIELD DRILL ACCESS; PROVIDE AND INSTALL PUSHBUTTONS AT THE FOLLOWING LOCATIONS: POLE 247-3-2; PEDESTAL AT SW CORNER OF INTERSECTION; PEDESTAL IN MEDIAN
- PROVIDE AND INSTALL 2/C CABLE WITHIN EXISTING POLE 247-3-2; PEDESTAL AT SW CORNER; AND PEDESTAL IN MEDIAN TO SERVE PUSHBUTTONS (EST. 42' TOTAL)
- PROVIDE AND INSTALL VIDEO DETECTION, INCLUDING CABLE

DIVISION OF TRANSPORTATION WORK TASKS:
- SPLICE CABLE IN POLE BASES
- INSTALL CABINET HARDWARE FOR VIDEO DETECTION SYSTEM
- TERMINATE CABLE IN CONTROLLER CABINET

COLOR SEQUENCE CHART

INDICATIONS FACING	FLASH	INTERVALS 1	2	3	4	5	6	7	8
REYNOLDS	Y	G	G	Y	R	R	R	R	R
BROWNSTONE & MVCDS	R	R	R	R	R	G	G	Y	R
CROSSWALKS Ⓐ	DARK	W	FLDW	FLDW	FLDW	DW	DW	DW	DW
CROSSWALKS Ⓑ	DARK	DW	DW	DW	DW	W	FLDW	FLDW	FLDW
PHASING		ϕA				ϕB			
NEMA PHASING		ϕ2				ϕ4			

WIRING DIAGRAM

NOTE:
1. THE FOLLOWING TRAFFIC SIGNAL MAST ARM POLES HAVE BEEN DESIGNED SUCH THAT THEIR RESPECTIVE POLE SHAFTS WILL, IN LIEU OF THAT SHOWN ON THE PLAN, ALSO ACCOMMODATE AND SUPPORT MAST ARM REPLACEMENTS WITH THE TRAFFIC SIGNAL LOADINGS INDICATED BELOW:

POLE NO.	ALTERNATE MAST ARM SIGNAL LOADINGS
247-3-1	1/5 AT 44', 1/5 AT 32'; OR 1/3 AT 52', 1/3 AT 40', 1/5 AT 28'
247-3-2	1/5 AT 34', 1/5 AT 22'
247-3-3	
ARM A	2/3 AT 58', 1/3 AT 48', 1/5 AT 37'
ARM B	1/5 AT 12'

POLE & MAST ARM DATA

POLE NO.	POLE GA. & SIZE	ARM GA. & SIZE	FOUNDATION	BOLT & BOLT CIRCLE
247-3-1	3+3E13.0" x 8.38" x 33'-0"	3E10.0" x 7.87" x 15'-3"	N	2-1/4" x 96"; 22"
		7E8.44" x 4.24" x 30'-0"		
247-3-2	7E13.0" x 8.38" x 33'-0"	7E10.0" x 5.24" x 34'-0"	E	1-1/2" x 60"; 18"
247-3-3	0E18.0" x 13.38" x 33'-0"	0E14.0" x 10.43" x 25'-6"	Special	2-1/4" x 96"; 25-1/2"
		7E11.05" x 6.29" x 34'-0"		

APPROVED: George F. Wintrebline - Board of Trustees 11/7/77
Jerry C. Meichen - Headmaster DATE: 11/7/77
MAUMEE VALLEY COUNTRY DAY SCHOOL

AS BUILT

CITY OF TOLEDO
DEPT. OF PUBLIC SAFETY
DIV. OF TRAFFIC ENGINEERING

247
BROWNSTONE, M.V.C.D. SCHOOL & REYNOLDS

REVISIONS	
SLE	9-22-05
CAK	9-24-80

SCALE: 1"=20	DESIGN: TLT
DWG. NO.: S-28-77	DRAWN: PAH
DATE: 9-27-77	CHECKED: CER

230-2

GLENDALE, REYNOLDS & SOUTHWYCK N.

CONTRACTOR WORK TASKS:

- PROVIDE VEHICULAR AND PEDESTRIAN HEADS FOR INSTALLATION BY DIVISION OF TRANSPORTATION
- PROVIDE PUSHBUTTONS FOR INSTALLATION BY DIVISION OF TRANSPORTATION
- PROVIDE VIDEO DETECTION SYSTEM, INCLUDING CABLE, FOR INSTALLATION BY DIVISION OF TRANSPORTATION

DIVISION OF TRANSPORTATION WORK TASKS:

- INSTALL VEHICULAR AND PEDESTRIAN HEADS
- INSTALL PUSHBUTTONS
- INSTALL VIDEO DETECTION SYSTEM, INCLUDING CABLE
- PROVIDE AND INSTALL ALL CABLE
- PERFORM ALL TERMINATIONS AND SPLICING

COLOR SEQUENCE CHART – DIAL 1

INDICATIONS FACING	FLASH	INTERVALS 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
S.B. LT. REYNOLDS	R	←G-	←G-	←Y-	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
S.B. REYNOLDS	R	R	R	R	↑G	↑G	↑G	↑G	↑G	↑G	Y	R	R	R	R	R	R	R	R	R	R	↓G	↓Y
N.B. REYNOLDS	R	R	R	R	↑G	↑G	↑G	↑G	↑G	↑G	Y	R	R	R	R	↓G	↓Y	R	R	R	R	R	R
N.B. LT. REYNOLDS	R	←G-	←G-	←Y-	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
W.B. LT. GLENDALE	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	←G-	←Y-	R	R	R	R	R	R
W.B. GLENDALE	R	R	R	R	R	R	R	R	R	R	R	R	↑G	↑G	↑G	↑G	↑G	↑G	↑G	Y	R	R	R
E.B. GLENDALE	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	↑G	↑G	↑G	↑G	↑G	↑G	Y	R
E.B. LT. GLENDALE	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	←G-	←Y-	R
CROSSWALK Ⓐ	DARK	DW	DW	DW	W	W	FL DW	FL DW	FL DW	FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
CROSSWALK Ⓑ	DARK	W	W	W	W	FL DW	FL DW	FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
CROSSWALK Ⓒ	DARK	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	W	W	W	FL DW	FL DW	FL DW	FL DW	DW	DW	DW
CROSSWALK Ⓓ	DARK	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	W	FL DW	FL DW	FL DW	FL DW	FL DW	FL DW
PHASING		ϕA		AR	ϕB				AR	ϕC		AR	ϕD		AR	ϕE				AR	ϕF		AR

COLOR SEQUENCE CHART – DIAL 2

INDICATIONS FACING	FLASH	INTERVALS 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
S.B. LT. REYNOLDS	R	R	R	R	R	R	R	R	R	←G-	←Y-	R	R	R	R	R	R	R	R	R	R	R	R
S.B. REYNOLDS	R	R	R	R	↑G	↑G	↑G	↑G	↑G	↑G	Y	R	R	R	R	R	R	R	R	R	↓G	↓Y	R
N.B. REYNOLDS	R	↑G	↑G	↑G	↑G	↑G	↑G	Y	R	R	R	R	↓G	↓Y	R	R	R	R	R	R	R	R	R
N.B. LT. REYNOLDS	R	←G-	←Y-	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
W.B. LT. GLENDALE	R	R	R	R	R	R	R	R	R	R	R	R	←G-	←Y-	R	R	R	R	R	R	R	R	R
W.B. GLENDALE	R	R	R	R	R	R	R	R	R	R	R	R	↑G	↑G	↑G	↑G	↑G	↑G	↑G	Y	R	R	R
E.B. GLENDALE	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	↑G	↑G	↑G	↑G	↑G	↑G	Y	R
E.B. LT. GLENDALE	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	←G-	←Y-	R
CROSSWALK Ⓐ	DARK	W	W	W	W	FL DW	FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
CROSSWALK Ⓑ	DARK	DW	DW	DW	W	W	W	W	W	FL DW	FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
CROSSWALK Ⓒ	DARK	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	W	W	W	FL DW	FL DW	FL DW	FL DW	DW	DW	DW
CROSSWALK Ⓓ	DARK	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	W	FL DW	FL DW	FL DW	FL DW	FL DW	FL DW
PHASING		ϕA		AR	ϕB				AR	ϕC		AR	ϕD		AR	ϕE				AR	ϕF		AR

COLOR SEQUENCE CHART – DIAL 3

INDICATIONS FACING	FLASH	INTERVALS 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
S.B. LT. REYNOLDS	R	←G-	←Y-	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
S.B. REYNOLDS	R	↑G	↑G	↑G	↑G	↑G	Y	R	R	R	R	R	R	R	R	R	R	R	R	R	↓G	↓Y	R
N.B. REYNOLDS	R	R	R	R	↑G	↑G	↑G	↑G	↑G	↑G	Y	R	↓G	↓Y	R	R	R	R	R	R	R	R	R
N.B. LT. REYNOLDS	R	R	R	R	R	R	R	R	←G-	←G-	←Y-	R	R	R	R	R	R	R	R	R	R	R	R
W.B. LT. GLENDALE	R	R	R	R	R	R	R	R	R	R	R	R	←G-	←Y-	R	R	R	R	R	R	R	R	R
W.B. GLENDALE	R	R	R	R	R	R	R	R	R	R	R	R	↑G	↑G	↑G	↑G	↑G	↑G	↑G	Y	R	R	R
E.B. GLENDALE	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	↑G	↑G	↑G	↑G	↑G	↑G	Y	R
E.B. LT. GLENDALE	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	←G-	←Y-	R
CROSSWALK Ⓐ	DARK	W	W	W	W	FL DW	FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
CROSSWALK Ⓑ	DARK	DW	DW	DW	W	W	W	W	W	FL DW	FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
CROSSWALK Ⓒ	DARK	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	W	W	W	FL DW	FL DW	FL DW	FL DW	DW	DW	DW
CROSSWALK Ⓓ	DARK	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	W	FL DW	FL DW	FL DW	FL DW	FL DW	FL DW
PHASING		ϕA		AR	ϕB				AR	ϕC		AR	ϕD		AR	ϕE				AR	ϕF		AR

REVISIONS			
DATE	DES.	DWN.	BJK
1-08-07	BJJ	BJK	DWG
6-30-97	TJA	DWG	DAC
7-31-79	-	DAC	-

DWG. NO.: S-36-75 | DESIGN: CER
DATE: 9-8-75 | DRAWN: DAC
CADD DWG.: 586 | CHKD.: TLT

HORIZONTAL SCALE IN FEET 0 10 20 30 40

#586 - GLENDALE, REYNOLDS & SOUTHWYCK NORTH

~\TWCS\SIGNAL\Glendale Reynolds & Southwyck North 586

230-2

GLENDALE & SOUTHWYCK S.

CONTRACTOR WORK TASKS:

- CONSTRUCT PEDESTRIAN RAMPS FOR CROSSING REYNOLDS ROAD (SOUTH CROSSWALK), SOUTHWYCK BOULEVARD & PRIVATE DRIVE
- PROVIDE AND INSTALL VEHICULAR HEADS; REMOVE AND SALVAGE EXISTING HEADS; DELIVER TO DIVISION OF TRANSPORTATION
- FIELD DRILL AS NECESSARY; PROVIDE AND INSTALL PEDESTRIAN HEADS
- FIELD DRILL ACCESS; PROVIDE AND INSTALL PUSHBUTTONS (POLES 408-4-3 & 408-4-4 ONLY)
- PROVIDE AND INSTALL 9/C CABLE FROM CONTROLLER TO BASE OF EACH POLE 585-4-3 & 585-4-4 (EST. 200' TOTAL)
- PROVIDE AND INSTALL 7/C CABLE WITHIN ALL EXISTING POLES (POLE BASE TO PEDESTRIAN HEADS) TO SERVE PEDESTRIAN HEADS (EST. 84' TOTAL)
- PROVIDE AND INSTALL 2/C CABLE WITHIN EXISTING POLES 585-4-3 & 585-4-3 (POLE BASE TO PUSHBUTTON) TO SERVE PUSHBUTTONS (EST. 28' TOTAL)
- PROVIDE AND INSTALL VIDEO DETECTION, INCLUDING CABLE

DIVISION OF TRANSPORTATION WORK TASKS:

- PRIOR TO START OF CONSTRUCTION, PROVIDE AND INSTALL STANDARD POLE TO REPLACE EXISTING COMBINATION POLE 585-4-4
- SPLICE CABLE IN POLE BASES
- INSTALL CABINET HARDWARE FOR VIDEO DETECTION SYSTEM
- TERMINATE CABLE IN CONTROLLER CABINET

COLOR SEQUENCE CHART

INDICATIONS FACING	FLASH	INTERVALS 1	2	3	4	5	6	7	8
NB REYNOLDS	Y	G ←G-	G ←Y-	G	Y	R	R	R	R
SB REYNOLDS	Y	R	R	G	Y	R	R	R	R
PRIVATE DRIVE	R	R	R	R	R	G	Y	R	R
SOUTHWYCK SOUTH	R	R	R	R	R	R	R	G	Y
PHASING		ΦA LEAD		ΦA		ΦB		ΦC	
NEMA PHASING		Φ1		Φ2		Φ3		Φ4	
		Φ6							

POLE & MAST ARM DATA

POLE NO.	POLE GA. & SIZE	ARM GA. & SIZE	FOUNDATION	BOLT & BOLT CIRCLE
585-4-1	7E9.0" x 5.85" x 22'-6"	7E6.0" x 3.2" x 20'-0"	A	1-1/4" x 48"; 12-1/2"
585-4-2	7E13.0" x 9.85" x 22'-6"	7E9.5" x 4.18" x 38'-0"	E	1-1/2" x 60"; 18"
585-4-3	7E12.0" x 8.85" x 22'-6"	7E9.0" x 3.96" x 36'-0"	D	1-1/2" x 60"; 16"
585-4-4	7E12.0" x 7.38" x 33'-0"	7E9.0" x 3.68" x 38'-0"	D	1-1/2" x 60"; 16"

NOTE: PRETIMED CONTROLLER INSTALLED - 4/83
LOOPS DISCONNECTED

WIRING DIAGRAM

CITY OF TOLEDO
DEPARTMENT OF PUBLIC ENGINEERING

1-08-07	BJK
1-19-06	BJK
5-5-92	PAH
3-20-74	RRM

#585

REYNOLDS, & SOUTHWYCK SOUTH

S-64-72

230-2

COLOR SEQUENCE CHART

INDICATIONS FACING	FLASH	INTERVALS 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
S.B. REYNOLDS	R	G↑	G↑	G↑	Y	R	R	R	R	R	R	R	R	R	R	G↑	G↑
N.B. REYNOLDS	R	G↑	G↑	G↑	G↑	G↑	Y	R	R	R	R	R	R	R	R	R	R
W.B. HEATHERDOWNS L.T.	R	R	R	R	R	R	R	←G-	←G-	←Y-	R	R	R	R	R	R	R
W.B. HEATHERDOWNS	R	R	R	R	R	R	R	G↑	G↑	G↑	G↑	G↑	Y	R	R	R	R
E.B. HEATHERDOWNS	R	R	R	R	R	R	R	R	R	R	G	G	G	G ←G-	Y	R	R
S.B. REYNOLDS L.T.	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	←G-	←Y-
N.B. REYNOLDS L.T.	R	R	R	R	R	←G-	←Y-	R	R	R	R	R	R	R	R	R	R
CROSSWALK Ⓐ	DARK	W	FL DW	FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	W
CROSSWALK Ⓑ	DARK	W	W	FL DW	FL DW	FL DW	FL DW	DW	DW	DW	DW	DW	DW	DW	DW	DW	DW
CROSSWALK Ⓒ	DARK	DW	DW	DW	DW	DW	DW	W	FL DW	FL DW	FL DW	FL DW	FL DW	DW	DW	DW	DW
CROSSWALK Ⓓ	DARK	DW	DW	DW	DW	DW	DW	DW	DW	DW	W	FL DW	FL DW	FL DW	FL DW	DW	DW
PHASING		ϕA				ϕA LAG		ϕB LEAD			ϕB			ϕB LAG		ϕA LEAD	

WIRING DIAGRAM

HEATHERDOWNS & REYNOLDS

CONTRACTOR WORK TASKS:

- PROVIDE VEHICULAR AND PEDESTRIAN HEADS FOR INSTALLATION BY DIVISION OF TRANSPORTATION
- PROVIDE PUSHBUTTONS FOR INSTALLATION BY DIVISION OF TRANSPORTATION
- PROVIDE VIDEO DETECTION SYSTEM, INCLUDING CABLE, FOR INSTALLATION BY DIVISION OF TRANSPORTATION

DIVISION OF TRANSPORTATION WORK TASKS:

- INSTALL VEHICULAR AND PEDESTRIAN HEADS
- INSTALL PUSHBUTTONS
- INSTALL VIDEO DETECTION SYSTEM, INCLUDING CABLE
- PROVIDE AND INSTALL ALL CABLE
- PERFORM ALL TERMINATIONS AND SPLICING

POLE & MAST ARM DATA

POLE NO.	POLE GA. & SIZE	ARM GA. & SIZE	FOUNDATION	BOLTS & BOLT CIRCLE
453-4-1	3E13.0" x 8.38" x 33'-0"	3E9.0" x 6.9" x 15'-0"	J	1 3/4" x 90", 18"
		7E7.4" x 3.2" x 30'-0"		
453-4-2	0E16.5" x 11.88" x 33'-0"	27E12.0" x 8.46" x 25'-3"	R	2 1/4" x 96", 23 1/2"
		7E9.0" x 4.26" x 34'-0"		
453-4-3	3E13.0" x 8.38" x 33'-0"	7E9.0" x 3.68" x 38'-0"	J	1 3/4" x 90", 18"
453-4-4	0E16.5" x 11.88" x 33'-0"	27E12.0" x 8.46" x 25'-0"	R	2 1/4" x 96", 23 1/2"
		7E9.0" x 4.26" x 34'-0"		

CITY OF TOLEDO
DEPT. OF PUBLIC SAFETY
DIV. OF TRAFFIC ENGINEERING

453

HEATHERDOWNS & REYNOLDS

REVISIONS	
1-08-07	BJK
12-04-06	BJK

SCALE: 1" = 20'	DESIGN: HA/IAS
DWG. NO.: S-20-90	DRAWN: GAK
DATE: 12-7-90	CHECKED: HA

PLAN

PLAN

NOTES:

1. PULLBOX FRAME AND LID SHALL BE NEENAH OR APPROVED EQUAL
   TYPE A PULLBOX: R-1792-FL, SOLID LID
   TYPE B PULLBOX: R-1792-DL, SOLID LID
   TYPE C PULLBOX: R-1788-D, SOLID LID
2. FORMS SHALL BE TUBULAR WITH 3/8 INCH WALL THICKNESS, SPIRALLY WOUND, LAMINATED FIBER AND CONCENTRICALLY PLACED. DIMENSIONS SHOWN ARE I.D. FORMS WILL REMAIN IN PLACE UPON COMPLETION OF CONSTRUCTION.
3. CONCRETE SHALL BE CLASS C MEETING STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS, ITEM 499. CONCRETE FOR PULLBOXES SHALL BE POURED IN PLACE.
4. POUROUS BACKFILL SHALL BE NO. 6 COARSE AGGREGATE MEETING STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS, ITEM 703.
5. WHEN PULLBOX IS INSTALLED IN PAVED AREAS, AN ADEQUATE AREA SHALL BE REMOVED BY SAW CUTTING OR BY REMOVAL BACK TO AN EXPANSION JOINT. PAVEMENT MATCHING THE SURROUNDING AREA SHALL BE PLACED FROM THE PULLBOX RIM DOWN TO THE BOTTOM OF EXISTING PAVEMENT.
6. A GROUND ROD SHALL BE INSTALLED IN THE PULLBOX CLOSEST TO THE CONTROLLER. THE PRICE OF THIS GROUND ROD SHALL BE INCLUDED IN THE PRICE OF THE PULLBOX.
7. TYPE "A" TRENCH IN SIDEWALK AREAS SHALL INCLUDE THE REMOVAL AND REPLACEMENT OF SIDEWALK UP TO 2' IN WIDTH. IN NO CASE SHALL ANY SECTION OF SIDEWALK, EITHER NEW OR REMAINING, BE LESS THAN 2' IN WIDTH AS A RESULT OF THIS WORK.

SLOT TRENCH DETAIL

NOTE: TYPE "A" TRENCH IS USED WHEN DEPTH OF PAVED AREA IS <6", SUCH AS IN SIDEWALK AREAS.

TYPE "B" TRENCH IS USED WHEN DEPTH OF PAVED AREA IS >6", SUCH AS DRIVEWAY AREAS.

ELEVATION

CONCRETE PULLBOX

PULLBOX FRAME DETAIL

TYPE A & B PULLBOX LID DETAIL

TYPE C PULLBOX LID DETAIL

ELEVATION

CONCRETE PULLBOX

INSTALLED OVER EXISTING DUCT

DIMENSION TABLE

PULLBOX TYPE	DIMENSIONS IN INCHES									TYPICALLY USED IN
	A	B	C	D	E	F	G	H	J	
A	25 1/4	1 1/2	23 1/2	25 1/2	29 1/2	4	36	24	36	WALK OR EARTH
B	18 1/4	1 1/2	16 1/2	18 1/2	22 1/2	4	24	16	24	WALK OR EARTH
C	23 5/8	3	21 1/8	24 5/8	34 3/4	7	42	24	36	PAVEMENT

REVISIONS

DESCRIPTION	DATE	DES.	DWN.
Wall Thickness Dim. Added	09-06-00	DP	CMR
	5-8-03	HA	PAH

PULLBOX WITH NEW OR EXISTING CONDUIT

SD-2-77

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

PLAN
CORRUGATED & FIBER PULLBOX

PLAN
CONCRETE PULLBOX

NOTES:

1. PULLBOX FRAME AND LID SHALL BE NEENAH OR APPROVED EQUAL TYPE A PULLBOX: R-1792-FL, SOLID LID
2. FORMS SHALL BE TUBULAR WITH 3/8 INCH WALL THICKNESS, SPIRALLY WOUND, LAMINATED FIBER AND CONCENTRICALLY PLACED. DIMENSIONS SHOWN ARE I.D. FORMS WILL REMAIN IN PLACE UPON COMPLETION OF CONSTRUCTION.
3. CONCRETE SHALL BE CLASS C MEETING STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS, ITEM 499. CONCRETE FOR PULLBOXES SHALL BE POURED IN PLACE.
4. POUROUS BACKFILL SHALL BE NO. 6 COARSE AGGREGATE MEETING STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, CONSTRUCTION AND MATERIAL SPECIFICATIONS, ITEM 703.
5. A GROUND ROD SHALL BE INSTALLED IN THE PULLBOX CLOSEST TO THE CONTROLLER. THE PRICE OF THIS GROUND ROD SHALL BE INCLUDED IN THE PRICE OF THE PULLBOX.

ELEVATION

PULLBOX FRAME DETAIL

TYPE A
PULLBOX LID DETAIL

DIMENSION TABLE

PULLBOX TYPE	DIMENSIONS IN INCHES						
	A	B	C	D	E	F	G
A	25 1/4	1 1/2	23 1/2	25 1/2	29 1/2	4	36

REVISIONS			
DATE	DES.	DWN.	
6-1-98	HA	CMR	
5-8-93	HA	PAH	

DESIGN: DML, HA
DRAWN: DAC, PAH
CHECKED: BJJ

SD-1-95 REBUILT FIBER, CORRUGATED OR CONCRETE PULLBOX WITH RING & COVER

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

230-2

PLAN

ELEVATION
ANCHOR BASE POLE FOUNDATION

PEDESTAL

PLAN

ELEVATION
ANCHOR BASE PEDESTAL FOUNDATION

NOTES:

1. CONDUIT SIZE, NUMBER AND ORIENTATION SHALL BE PROVIDED IN THE FOUNDATION AS SHOWN ON THE PLANS.
2. AN ADDITIONAL 2" P.V.C. CONDUIT (SCHEDULE 40) SHALL BE PROVIDED IN EACH COMBINATION POLE FOUNDATION FOR LIGHTIONG. IF POWER TO THE LUMAINARES IS NOT TO BE PROVIDED AS PART OF THIS PROJECT, THIS CONDUIT SHALL BE CAPPED AT BOTH ENDS.
3. MODIFICATION TO THE FOUNDATION WILL BE REQUIRED WHEN SOIL WITH LOAD BEARING CAPACITY OF LESS THAN 2000 POUNDS PER SQUARE FOOT IS ENCOUNTERED. MODIFICATION TO THE FOUNDATION IS SUBJECT TO THE APPROVAL OF THE ENGINEER.
4. FOUNDATION SHALL BE CAST-IN -PLACE WITH CLASS "C" CONCRETE. THE FOUNDATION SQUARE BASE (CAP) SHALL BE FORMED TO 6"BELOW GROUND LINE AND BE BUILT AS AN INTEGRAL PART OF FOUNDATION.
5. ALL ANCHOR BOLTS SHALL BE PROVIDED WITH STANDARD GALVANIZED STEEL HEX NUTS, LEVELING NUTS, PLAIN AND LOCKWASHERS. ANCHOR BOLTS SHALL BE SECURED DURING THE PLACEMENT OF CONCRETE TO ENSURE ACCURATE BOLT CIRCLE AND BOIT PROJECTION "P".
6. WHEN THE FOUNDATION IS PLACED ADJACENT TO A PAVED SURFACE, 1/2" PREFORMED EXPANSION JOINT MATERIAL SHALL BE PLACED BETWEEN THE FOUNDATION AND THE ADJACENT PAVED SURFACE. IN ADDITION;

FOR POLES: THE TOP OF THE FOUNDATION SHALL BE FLUSH WITH THE ADJACENT SURFACE AND SLOPED TO DRAIN.
FOR PEDESTALS: THE AREA OF CONTACT WITH THE PEDESTAL BASE SHALL BE LEVEL. IF ADJACENT PAVED SLOPE, THE REMAINDER OF THE FOUNDATION TOP SHALL BE BEVELED TO MEET THE ADJACENT SURFACE.

FOUNDATION TYPE	POLE SIZE	"D" MIN.	BOLT CIRCLE	ANCHOR BOLT SIZE	Vert. Reinf.Bars Dia.	Vert. Reinf.Bars No.	PROJECTION "P"	CONC. CU.YD
A	7GA. 9.0"	9'	12-1/2"	1-1/4"x 48"	3/4"	8	5-1/8"	2.41
B	7GA. 10.0"	10'	13-1/2"	1-1/2"x 60"	3/4"	8	5-7/8"	2.67
C	7GA. 11.0"	10'	15"	1-1/2"x 60"	3/4"	8	6-1/8"	2.67
D	7GA. 12.0"	10'	16"	1-1/2"x 60"	3/4"	8	6-1/2"	2.67
E	7GA. 13.0"	10'	18"	1-1/2"x 60"	1"	16	6-3/4"	2.67
F	3GA. 9.0"	12'	12-1/2"	1-1/2"x 60"	3/4"	8	5-1/8"	3.20
G	3GA. 10.0"	12'	13-1/2"	1-1/2"x 60"	3/4"	8	5-7/8"	3.20
H	3GA. 11.0"	12'	15"	1-3/4"x 90"	3/4"	8	6-1/8"	3.20
I	3GA. 12.0"	12'	16"	1-3/4"x 90"	3/4"	8	6-3/4"	3.20
J	3GA. 13.0"	12'	18"	1-3/4"x 90"	3/4"	16	7"	3.20
K	3GA. 14.0"	12'	20"	1-3/4"x 90"	3/4"	16	7-1/2"	3.20
L	0GA. 13.0"	13'	18"	2"x 90"	3/4"	16	7-1/4"	3.46
M	7+7GA.13.0"	13'	20"	2"x 90"	3/4"	16	7-3/4"	3.46
N	3+3GA.13.0"	13'	22"	2-1/4"x 98"	3/4"	16	8"	3.46
O	3+3GA.15.0"	15'	22"	2-1/2"x 114"	3/4"	16	8-3/4"	3.46
P	0GA. 14.0"	13'	20"	2"x 90"	3/4"	16	7-3/4"	3.46
Q	0GA. 15.0"	13'	22"	2"x 90"	3/4"	16	8-1/4"	3.46
R	0GA. 16.5"	13'	23-1/2"	2-1/4"x 98"	3/4"	16	8"	3.46
S	7+7GA.16.5"	13'	23-1/2"	2-1/4"x 98"	3/4"	16	8"	3.46

REVISIONS			
DATE	DES.	DWN.	

DESIGN: CER
DRAWN: GAK
CHECKED: HA

POLE FOUNDATION AND PEDESTAL FOUNDATION DETAILS

SD-5-76

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

230-2

MAST ARM ATTACHMENT DETAILS

NON-RIGID ASSEMBLY

RIGID ASSEMBLY

MAST ARM MOUNTED SIGNAL HANGER ASSEMBLY

STEEL PLATE BASE USED ON ALL POLES 15 INCHES OR GREATER IN DIAMETER AND ON ALL 2 PLY POLES

ANCHOR BOLT PLAN

MAST BASE DETAILS

LUMINAIRE "SIMPLEX" FITTING

TWO BOLT "SIMPLEX" FITTING PROVIDED FOR LUMINAIRE MOUNTING ON ALL LUMINAIRE POLES LOCATED AT 32'-0".

NOTES

1. ALL REFERENCE ANGLES ARE MEASURED CLOCKWISE IN PLAN VIEW FROM MAST ARM A. ON TWIN MAST ARM POLES, THE LONGEST MAST ARM OR, IF THE MAST ARMS ARE EQUAL IN LENGTH, AN ARBITRARILY SELECTED MAST ARM HAS BEEN DESIGNATED MAST ARM A.
2. SEE PLANS AND, OR QUANTITY SUMMARY SHEETS FOR LOCATIONS AND SIZES OF SIGNAL HEADS. SIGNAL HEAD CLEARANCES SHALL BE 15'-0" MINIMUM TO 19'-0" MAXIMUM.
3. SIGNAL HEAD ATTACHMENTS TO MAST ARMS SHALL BE PROVIDED AS SHOWN ON THE FOLLOWING DETAILS.
   A. NON-RIGID. MAST ARM MOUNTED SIGNAL HANGER ASSEMBLY (DRAWING NO. SD-2-72).
   B. RIGID MAST ARM MOUNTED SIGNAL HANGER ASSEMBLY (DRAWING NO. SD-1-76).
4. SEE SPECIFICATIONS AND, OR, GENERALIZATION AND PAINTING REQUIREMENTS
5. STANDARD GAUGES

11 GAUGE	0.1196 INCHES
7 GAUGE	0.1793 INCHES
3 GAUGE	0.2391 INCHES
0 GAUGE	0.2990 INCHES

6. POLES SHALL HAVE A MINIMUM THICKNESS OF 7 GAUGE (0.1793 INCHES.)

REVISIONS			
DATE	DES.	DWN.	

DESIGN: HA
DRAWN:
CHECKED: BJJ

SD-2-76

MAST ARM POLE ASSEMBLIES AND DETAILS

REYNOLDS ROAD
PHASE 2 ROADWAY
IMPROVEMENTS

230-2

PLATE DETAIL

SIGNAL MOUNTING PLATE SCHEDULE				
UNION METAL DESIGN NUMBER	ARM DIAMETER	"A"	"B"	"C"
50300-Y1427	3.1 – 3.6	8-3/4"	5-3/8"	1-11/16"
50300-Y1428	3.6 – 4.4			
50300-Y1429	4.4 – 5.2			
50300-Y1430	5.2 – 5.8	10-3/4"	7-5/8"	1-9/16"
50300-Y1431	5.8 – 6.8			
50300-Y1432	6.8 – 7.9			
50300-Y1433	7.9 – 9.0	14"	10-7/8"	1-9/16"
50300-Y1434	9.0 – 10.1			
50300-Y1435	10.1 – 11.3			

NOTES:

1. SIGNAL HANGER ASSEMBLY IS TO BE PROVIDED BY POLE MANUFACTURER.
2. SEE GENERAL NOTES FOR MATERIAL FINISHES.
3. RIGID MAST ARM MOUNTED SIGNAL HANGER TO BE USED WHERE ONE OR ALL SECTIONS OF SIGNAL HEAD IS OPTICALLY PROGRAMMED.
4. REFER TO TRAFFIC CONTROL NOTES FOR ADDITIONAL REQUIREMENTS.

RIGID MOUNTING ASSEMBLY

DESIGN: TLT, JJP
DRAWN: DAG
CHECKED: DAC

REVISIONS

DATE	DES.	DWN.
XX-XX-XX	XXX	XXX

RIGID MAST ARM MOUNTED SIGNAL HANGER ASSEMBLY

SD-1-76

REYNOLDS ROAD PHASE 2 ROADWAY IMPROVEMENTS

58/58

230-2