UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

ELECTRIC
AEP OHIO
2552 QUAKER ROAD
BUCYRUS, OH 44820
419.563.1509

CABLE
CHARTER COMMUNICATIONS
5520 WHIPPLE AVENUE NW
NORTH CANTON, OH 44720
330.494.9200

COMMUNICATION
LUMEN
175 ASHLAND ROAD, P.O. BOX 3555
MANSFIELD, OH 44907
419.755.7956

THE AFOREMENTIONED UTILITY COMPANIES AND AGENCIES HAVE VARIOUS FACILITIES IN THE AREA THAT WILL REMAIN IN PLACE DURING CONSTRUCTION.

EXTREME CAUTION SHOULD BE EXERCISED IN AREAS WITH UTILITIES. SECTIONS 105.07 AND 107.16 OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS REQUIRE, AMONG OTHER THINGS, THAT THE CONTRACTOR COOPERATE WITH ALL UTILITIES LOCATED WITHIN THE LIMITS OF THIS CONSTRUCTION PROJECT AND TAKE RESPONSIBILITY FOR THE PROTECTION OF THE UTILITY PROPERTY AND SERVICES.

SURVEYING PARAMETERS (G105)

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

VERTICAL POSITIONING
ORTHOMETRIC HEIGHT DATUM: NAVD88
GEOID: GEOID12B

HORIZONTAL POSITIONING
REFERENCE FRAME: NAD83 (2011)
ELLIPSOID: GRS80
MAP PROJECTION: LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM: PROJECT SPECIFIC GROUND COORDINATES SCALED FROM OHIO STATE PLANE – NORTH ZONE (3401) BY A COMBINED SCALE FACTOR ABOUT THE GRID ORIGIN N=0, E=0
COMBINED SCALE FACTOR: UNITLESS GRID TO GROUND PROJECT ADJUSTMENT FACTOR (PAF)
MULTIPLIER = 1.00009691.
GRID (METERS) TO PROJECT (U.S. SURVEY FEET)
MULTIPLIER = 3.280515419

ORIGIN OF COORDINATE SYSTEM: N=0, E=0 COORDINATE

PROJECT COORDINATE UNITS ARE IN U.S. SURVEY FEET, GRID COORDINATE UNITS ARE IN METERS. USE THE FOLLOWING CONVERSION FACTOR:
1 METER = 39.37 INCHES = 3.280833333 U.S. SURVEY FEET

EXISTING PLANS

EXISTING PLANS ENTITLED AS LISTED BELOW MAY BE INSPECTED IN THE ODOT DISTRICT THREE OFFICE IN ASHLAND.

PLAN	PID	DATE
CRA-96-(0.00-3.65)	11077	1992

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PROGRESSION OF WORK

GUARDRAIL SHALL BE REMOVED PRIOR TO ANY EMBANKMENT WORK AT THE GUARDRAIL RUN. GUARDRAIL WORK SHALL BE DONE AFTER WIDENING, PAVING, AND BERM WORK SO AS TO ESTABLISH PROPER GRADES FROM WHICH TO CONSTRUCT THE RAIL.

ROUTINE MAINTENANCE

BETWEEN THE TIME THAT BIDS ARE TAKEN AND THE START OF CONSTRUCTION, THE MAINTAINING AGENCY MAY ENTER UPON THE PROJECT AND PERFORM ROUTINE MAINTENANCE SUCH AS CRACK SEALING, PATCHING, AND BERM AND SHOULDER REPAIR. THE EFFECTS, IF ANY, OF THE PERFORMANCE OF ROUTINE MAINTENANCE SHALL BE CONSIDERED AS INHERENT IN WORK OF THE CHARACTER PROVIDED FOR IN THE PLAN AND THE RESULTING CONDITIONS SHALL NOT BE CONSIDERED AS DIFFERING MATERIALLY FROM THOSE EXISTING AT THE TIME BIDS WERE TAKEN.

PROFILE

PLACE THE PROPOSED PAVEMENT TO FOLLOW THE PROFILE SHOWN ON SHEETS 29-32, OF THESE PLANS. PLACE THE PROPOSED ASPHALT CONCRETE LIFTS AS SHOWN ON THE TYPICAL SECTIONS.

ITEM 209 – PREPARING SUBGRADE FOR SHOULDER PAVING

PREPARE THE SHOULDER FOR PAVING A CONSISTENT SAFETY EDGE IN BOTH THICKNESS AND WIDTH.

PRIOR TO PAVING THE SAFETY EDGE, GRADE AN AREA 10 INCHES WIDE, BEGINNING AT THE EDGE OF THE PAVED ROADWAY, TO PROVIDE A LEVEL SURFACE FREE OF VEGETATION FOR CONSTRUCTION OF THE SAFETY EDGE. IF NECESSARY, EXCAVATE THE GRADED AREA TO THE DEPTH NECESSARY TO CONSTRUCT THE SAFETY EDGE. COMPACT THE GRADED SHOULDER ACCORDING TO 617.05 OR AS DIRECTED BY THE ENGINEER. THE GRADED SHOULDER BEYOND THE 10-INCH WIDE AREA FOR THE SAFETY EDGE SHALL BE GRADED AT A 10:1 SLOPE, OR AS DIRECTED BY THE ENGINEER. THE INTENT IS TO PROVIDE AN UNOBSTRUCTED AND POSITIVE FLOW OF STORM WATER FROM THE PAVEMENT TO THE DITCH.

SAFETY EDGE

IN ADDITION TO THE REQUIREMENTS OF 401.12, ATTACH A DEVICE TO THE SCREED OF THE PAVER THAT CONFINES THE MATERIAL AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A COMPACTED WEDGE SHAPE PAVEMENT EDGE OF APPROXIMATELY 30 DEGREES (NOT STEEPER THAN 40 DEGREES). ENSURE THE DEVICE MAINTAINS CONTACT WITH THE EXISTING SURFACE, AND ALLOW FOR AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS AND OBSTRUCTIONS. DO NOT USE CONVENTIONAL SINGLE PLATE STRIKE OFF.

CONSTRUCTION OF SAFETY EDGE CAN BE OMITTED AT LOCATIONS WHERE EXISTING WIDTH OF GRADED SHOULDER OR BERM IS LESS THAN 12". PROJECTS WITH VARYING CONDITIONS SHOULD USE SAFETY EDGE WHERE POSSIBLE. PLAN PREPARATION HAS MADE EVERY REASONABLE ATTEMPT TO IDENTIFY POSSIBLE SAFETY EDGE LOCATIONS.

USE THE TRANSTECH SHOULDER WEDGE MAKER, THE CARLSON SAFETY EDGE END GATE, THE ADVANT-EDGER, THE TROXLER SAFETSLOPE OR A SIMILAR APPROVED-EQUAL DEVICE THAT PRODUCES THE SAME WEDGE CONSOLIDATION RESULTS. CONTACT INFORMATION FOR THESE WEDGE SHAPE COMPACTION DEVICES IS THE FOLLOWING:

TRANSTECH SYSTEMS, INC.
1594 STATE STREET
SCHENECTADY, NY 12304
1-800-724-6306
www.transtechsys.com

ADVANT-EDGE PAVING EQUIPMENT LLC
P.O. BOX 9163
NISKAYUNA, NY 12309-0163
518-280-6090
www.advantedgepaving.com

CARLSON SAFETY EDGE END GATE
18450 50TH AVENUE EAST
TACOMA, WA 98446
253-875-8000

TROXLER ELECTRONICS LABORATORIES INC.
3008 E. CORNWALLIS RD.
RESEARCH TRIANGLE PARK, NC 27709
1-877-TROXLER
www.troxlerlabs.com

IF ELECTING TO USE A SIMILAR DEVICE, PROVIDE PROOF THAT THE DEVICE HAS BEEN USED ON PREVIOUS PROJECTS WITH ACCEPTABLE RESULTS OR CONSTRUCT A TEST SECTION PRIOR TO THE BEGINNING OF WORK AND DEMONSTRATE WEDGE COMPACTION TO THE SATISFACTION OF THE ENGINEER. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN NECESSARY FOR TRANSITIONS AND TURNOUTS OR OTHERWISE AUTHORIZED BY THE ENGINEER.

IN ADDITION TO THE REQUIREMENTS OF 401.16, MAKE THE FIRST ROLLER PASS 8 TO 12 INCHES AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER.

ITEM 202 - PAVEMENT REMOVED, AS PER PLAN (2.50" THICK)

THE DESCRIBED THICKNESS OF 2.50" SHALL BE CONSIDERED AN ESTIMATE; ACTUAL REMOVAL THICKNESS SHALL BE DETERMINED BASED ON FDR SWELL, AS DETERMINED DURING PERFORMANCE OF ITEM 690 – SPECIAL: MIXTURE DESIGN FOR FULL DEPTH RECLAIMED BASE COURSE. PAYMENT FOR PAVEMENT REMOVAL SHALL BE MADE AT THE CONTRACT PRICE PER SQUARE YARD FOR ITEM 202 – PAVEMENT REMOVED, AS PER PLAN (2.50").

RETAIN SUFFICIENT QUANTITY OF GRINDINGS FROM THIS WORK TO PROVIDE FOR FDR CONSTRUCTION OVER ITEM 304 – AGGREGATE BASE, AS DETAILED ON THE TYPICAL SECTIONS. PLACEMENT AND INCORPORATION OF GRINDINGS SHALL BE PAID FOR INCIDENTAL TO ITEM 690 – FULL DEPTH RECLAIMED BASE COURSE, 6.00 INCHES DEEP. DO NOT INCORPORATE ITEM 304 MATERIAL INTO THE FDR MIX.

ESTIMATED QUANTITY OF GRINDINGS TO BE RETAINED FOR FDR: 3035 CU YD

EXISTING CULVERTS

THIS PROJECT IS LOCATED IN AN AREA WITH LITTLE ELEVATION BETWEEN THE EDGE OF PAVEMENT AND EX. DITCH FLOWLINE. DUE TO THE LIMITED DEPTH OF COVER, THE CONTRACTOR MUST TAKE CARE TO NOT DAMAGE THE EXISTING CULVERTS AT THE FOLLOWING LOCATIONS WHEN PERFORMING SHOULDER EXCAVATIONS:

CRA-96-0.26	CRA-96-1.10	CRA-96-1.23
CRA-96-2.11	CRA-96-3.14	CRA-96-3.50

COMPACTION OF ITEM 304 – AGGREGATE BASE WILL NOT BE PERFORMED AT THE ABOVE-MENTIONED LOCATIONS.

THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS AND OR REPLACEMENTS OF THE ABOVE-MENTIONED CULVERTS IF DAMAGES OCCUR.

ITEM 204 – UNSTABLE OR UNSUITABLE FOUNDATION SOILS

IF UNSTABLE OR OTHERWISE UNSUITABLE FOUNDATION SOILS ARE ENCOUNTERED IN THE AREAS OF THE PROPOSED ROADBED, THEY SHALL BE REMOVED AND REPLACED. THE LOCATIONS AND DIMENSIONS WILL BE AS DETERMINED BY THE ENGINEER.

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE IDENTIFIED BY PROOF ROLLING. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.
2. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO C&MS 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE IDENTIFIED UNSUITABLE AREAS.
3. COMPACT THE REPLACED SUBGRADE ACCORDING TO C&MS 204.03.
4. PROOF ROLL THE STABILIZED AREAS ACCORDING TO C&MS 204.06 TO VERIFY STABILITY.
5. FINE GRADE THE SUBGRADE TO MATCH THE EXISTING GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204, EXCAVATION OF SUBGRADE.

THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. THE DEPARTMENT WILL PAY FOR QUANTITIES ACTUALLY USED ON THE PROJECT.

ITEM 204 - EMBANKMENT	855 CU. YDS.
ITEM 204 - EXCAVATION OF SUBGRADE	855 CU. YDS.
ITEM 204 – SUBGRADE COMPACTION	855 SQ. YDS.
ITEM 204 – PROOF ROLLING	1 HOURS

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (446), AS PER PLAN, PG64-22

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W8-1-36) SHALL BE ERECTED ON EACH SIDE OF TRANSVERSE JOINTS LEFT OPEN OVER NIGHT, INCLUDING A SPEED ADVISORY SIGN. THESE SIGNS SHALL BE REMOVED IMMEDIATELY AFTER JOINT HAS BEEN CLOSED. PLACEMENT OF SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

CARE SHALL BE TAKEN TO MATCH EXISTING PAVEMENT ELEVATIONS AT EXISTING PAVED BERMS, DRIVES, INTERSECTIONS, ETC.

REQUIREMENTS OF 442 APPLY EXCEPT AS FOLLOWS:
MIX DESIGN: FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS.
CHOOSE OPTIMUM BINDER CONTENT AT DESIGN AIR VOIDS OF 3.5%.
MINIMUM TOTAL PG BINDER CONTENT IS 6.3 PERCENT.
MINIMUM VIRGIN PG BINDER CONTENT IS 5.2 PERCENT.
USE A PG 64-22 BINDER.
WHEN AN AGGREGATE SOURCE IS SPECIALLY DESIGNATED WITH AN SR ON THE AGGREGATE GRAVITY LIST DO NOT USE THE AGGREGATE EXCEPT AS ALLOWED FOR MEDIUM TRAFFIC IN THE GUIDELINES FOR MAINTAINING ADEQUATE PAVEMENT FRICTION IN SURFACE PAVEMENT.
QUALITY CONTROL: DO NOT PERFORM Nmax IN QUALITY CONTROL TESTING. DO NOT TAKE EXTRA ASPHALT BINDER SAMPLES AS OUTLINED IN CMS 442.05.

SEE ALSO THE REQUIREMENTS OF THE AC GAUGE OFFSET AND IDEAL-CT MIX DESIGN ACCEPTANCE NOTES IN THESE PLANS.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (446), AS PER PLAN, PG64-22 (SAFETY EDGE)

THE SAFETY EDGE SHALL BE INSTALLED AT THE SAME TIME AS THE SURFACE COURSE IS TO BE PLACED. THE SAFETY EDGE WILL NOT REQUIRE ANY DENSITY TESTING.

GENERAL NOTES

DESIGN AGENCY
DISTRICT 3
ENGINEERING TEAM 3
DESIGNER
JSR
REVIEWER
CAD 05/12/22
PROJECT ID
105452
SUBSET 1 | TOTAL 7
SHEET P.8 | TOTAL 69

CRA-96-0.00

MODEL: General Notes 1 PAPERSIZE: 34x22 (in.) DATE: 8/18/2022 TIME: 1:58:12 PM USER: jricer
pw:\\ohiodot-pw.bentley.com:ohiodot-pw-02\Documents\01 Active Projects\District 03\Crawford\105452\400-Engineering\Roadway\Sheets\105452_GN001.dgn

IDEAL-CT MIX DESIGN ACCEPTANCE

FOLLOW ALL REQUIREMENTS OF THE SPECIFICATIONS WITH THE ADDITION OF THE FOLLOWING:

PERFORM THE IDEAL-CT FOR THE MIX DESIGN SUBMITTAL PER SUPPLEMENT 1033 ON THE JMF ASPHALT BINDER CONTENT DETERMINED FROM THE DESIGN AIR VOIDS AND ENSURE THE MINIMUM IN THE TABLE BELOW IS MET FOR THE MIX TYPE. THE IDEAL-CT ONLY NEEDS TO BE RAN FOR MIX DESIGN ACCEPTANCE.

PROVIDE RESULTS PER SUPPLEMENT 1033 WITH THE MIX DESIGN. SUPPLY SIX GYRATORY COMPACTED SPECIMENS TO THE HEIGHT MENTIONED IN SUPPLEMENT 1033 FOR THE MIX TYPE SPECIFIED. ALLOW MORE THAN TWO WEEKS FOR MIX DESIGN REVIEW AND PRELIMINARY APPROVAL DUE TO OMM VERIFYING THE MIX.

MIX TYPE	MINIMUM CT_{INDEX}
ITEM 442 (SUPERPAVE) 9.5 MM	80
ITEM 442 (SUPERPAVE) 19 MM (INTERMEDIATE)	60

ELECTRONIC TICKETING

PROVIDE ELECTRONIC MATERIAL TICKETS IN AN ELECTRONIC FORMAT DIRECTLY RECORDED FROM THE MATERIAL LOADING SOURCE FOR THE FOLLOWING MATERIALS:

- AGGREGATE
- ASPHALT CONCRETE
- PORTLAND CONCRETE

THIS NOTE IN NO WAY SUPERSEDES ANY OTHER COMMERCIAL REGULATIONS OR ANY OTHER LEGAL REQUIREMENTS REGULATING THE TRANSPORTATION OF COMMERCIAL MATERIALS.

AT THE PRE-CONSTRUCTION MEETING, SUBMIT AN ELECTRONIC TICKETING PLAN TO THE ENGINEER DESCRIBING THE PROPOSED ELECTRONIC TICKET DELIVERY METHOD. THE ELECTRONIC MATERIAL TICKET SHALL CONTAIN INFORMATION AS REQUIRED PER THE APPLICABLE MATERIAL SPECIFICATION FOR WEIGHT MEASUREMENT AND OTHER MATERIAL CHARACTERISTICS; PROVIDE AN EXAMPLE(S) OR A "MOCK-UP" OF THE PROPOSED ELECTRONIC TICKET TO SHOW THE DETAILS ON WHAT IS TO BE TRANSMITTED TO THE DEPARTMENT. NAMING OF THE ELECTRONIC MATERIAL TICKET FILES SHALL BE DISTINCT SUCH THAT THE TICKET'S REPRESENTED MATERIAL IS EASILY DETERMINED; INCLUDE THE PROPOSED NAMING CONVENTION. DELIVERY MAY BE THROUGH A PRODUCER WEBSITE UPLOAD ACCESSIBLE TO THE ENGINEER, ODOT PROJECT SPECIFIC SHAREPOINT DOCUMENTATION SITE UPLOAD, OR ANOTHER SECURE ELECTRONIC TRANSMITTAL MEANS. EMAILING OF A TICKET TO AN ODOT CONTACT IS ACCEPTABLE BUT IS NOT PREFERRED. THE ELECTRONIC TICKETING PLAN SHALL IDENTIFY A CONTINGENCY METHOD FOR MANUALLY CAPTURING AND DELIVERING TICKET INFORMATION IF ELECTRONIC TRANSMISSION IS TEMPORARILY UNAVAILABLE. AN ELECTRONIC TICKETING PLAN WHICH INCLUDES SOLELY THE USE OF DIGITAL PHOTOS OF PAPER TICKETS IS NOT ACCEPTABLE.

THE DEPARTMENT RECOGNIZES THAT VARIOUS DIGITAL TICKETING SYSTEMS MAY BE COMMERCIALLY AVAILABLE AND USED TO ACCOMMODATE INDIVIDUAL CONTRACTORS AND MATERIAL SUPPLIER CAPABILITIES. THE CONTRACTOR MAY PROVIDE A DIGITAL TICKETING SYSTEM GIVING SECURE ACCESS TO ORGANIZED DIGITAL DATA. IF UTILIZED, THE DIGITAL TICKETING SYSTEM MAY ALSO BE ACCESSIBLE BY REAL-TIME MONITORING WITH A MOBILE COMMUNICATION DEVICE SUCH AS A TABLET, SMARTPHONE, ETC. THROUGH MOBILE DEVICE APPLICATIONS ("MOBILE APP") IF ACCEPTABLE TO THE DEPARTMENT. IF A DIGITAL TICKETING SYSTEM REQUIRES A MOBILE APP, THE MOBILE APP SHALL BE AT NO COST TO THE DEPARTMENT. THE DIGITAL DATA MUST BE ABLE TO BE EXPORTED IN A FORMAT USABLE BY THE ENGINEER UPON REQUEST (I.E. MICROSOFT WORD, MICROSOFT EXCEL, PDF FORMATS).

DELIVER EACH ELECTRONIC MATERIAL TICKET TO THE ENGINEER PRIOR TO THE PLACEMENT OF MATERIAL, BUT NOT PRIOR TO THE LOADING OF MATERIAL AT THE SOURCE.

PROVIDE THE ENGINEER A DAILY MATERIAL SUMMARY REPORT BY THE END OF THE DAY'S HAULING ACTIVITIES, OR AT A TIME AS APPROVED BY THE ENGINEER. THE DAILY MATERIAL SUMMARY REPORT INCLUDES SUMMARY INFORMATION LISTED FOR EACH MATERIAL AS OUTLINED IN THE RESPECTIVE MATERIAL SPECIFICATION.

COSTS FOR THE ELECTRONIC TICKETING SHALL BE INCIDENTAL TO THE RESPECTIVE ITEMS TO WHICH THE DELIVERED QUANTITIES BELONG.

FULL DEPTH RECLAMATION WITH EMULSIFIED ASPHALT

GENERAL. THIS WORK CONSISTS OF FULL DEPTH RECLAMATION (FDR) WITH EMULSIFIED ASPHALT BY PULVERIZING ALL OF THE EXISTING ASPHALT LAYERS AND MAY INCLUDE PORTIONS OF THE AGGREGATE BASE AND SUBGRADE MATERIAL TO A SPECIFIED DEPTH, WIDTH, AND GRADATION; MIXING EMULSIFIED ASPHALT, WATER, AGGREGATE, AND ADDITIVES WITH THE PULVERIZED MATERIAL; AND SPREADING AND COMPACTING THE MIXTURE.

JUST-IN-TIME TRAINING. PROVIDE A JUST-IN-TIME TRAINING (JITT) COURSE REGARDING DESIGN, CONSTRUCTION, AND TESTING OF FDR WITH EMULSIFIED ASPHALT FOR CONTRACTOR AND DEPARTMENT PROJECT STAFF. SUBMIT THE JITT INSTRUCTOR, COURSE CONTENT, TRAINING SITE, DATE, AND TIME, TO THE ENGINEER FOR APPROVAL. CONDUCT THE TRAINING CLASS AT A PROJECT FIELD LOCATION CONVENIENT FOR ALL PROJECT CONSTRUCTION PERSONNEL RESPONSIBLE FOR FDR OPERATIONS AND INSPECTION TO ATTEND.

HOLD THE JITT COURSE DURING NORMAL WORKING HOURS NOT MORE THAN 14 DAYS BEFORE THE START OF THE FDR OPERATION.

PROVIDE A JITT INSTRUCTOR EXPERIENCED IN THE CONSTRUCTION METHODS, MATERIALS, AND TEST METHODS ASSOCIATED WITH EMULSIFIED ASPHALT STABILIZED FDR. SUBMIT A COPY OF THE COURSE SYLLABUS, HANDOUTS AND PRESENTATION MATERIALS TO THE ENGINEER AT LEAST 5 DAYS BUSINESS DAYS BEFORE THE JITT COURSE DATE.

MATERIALS. FURNISH MATERIALS CONFORMING TO:

EMULSIFIED ASPHALT	702.04
WATER	499.02
PORTLAND CEMENT	701.04
LIME (QUICKLIME)	712.04.B
FLY ASH	701.13
CORRECTIVE AGGREGATE	703.02, 703.04, 703.16.C.2, 703.16.C.3

FURNISH EMULSIFIED ASPHALT MEETING THE REQUIREMENTS OF THE TABLE BELOW:

FDR EMULSIFIED ASPHALT MATERIAL SPECIFICATION

TEST	PROCEDURE	MINIMUM	MAXIMUM
VISCOSITY, SAYBOLT FUROL, @77° F (25° C), SFS	AASHTO T 59	20	100
SIEVE TEST, NO. 20 (850 µM), RETAINED ON SIEVE, %	AASHTO T 59		0.10
STORAGE STABILITY TEST, 24 HR., %	AASHTO T 59		1
DISTILLATION TEST, RESIDUE BY DISTILLATION, %	AASHTO T 59[1]	64.0	
OIL DISTILLATE BY VOLUME, %	AASHTO T 59		1
PENETRATION, 77° F (25° C), 100 G, 5 S, DMM	AASHTO T 59	50	200

[1] MODIFIED AASHTO T 59 – DISTILLATION TEMPERATURE OF 350 ± 9° F (177 ± 5° C) WITH A 20-MINUTE HOLD.

DETERMINE FROM MIX DESIGN IF ADDITIVES ARE NECESSARY AND, IF SO, THE REQUIRED PERCENTAGE IN THE MIX.

DETERMINE FROM MIX DESIGN THE TYPE AND QUANTITY OF CORRECTIVE AGGREGATE THAT MAY BE REQUIRED. ENSURE THE CORRECTIVE AGGREGATE MEETS THE PERFORMANCE AND GRADATION REQUIREMENTS OF THE MIX DESIGN. CORRECTIVE AGGREGATE MAY BE FINE, COARSE, OR RECLAIMED ASPHALT PAVEMENT (RAP) FROM STOCKPILES. OBTAIN RAP FROM VERIFIABLE DEPARTMENT OR OHIO TURNPIKE COMMISSION PROJECTS. IF THE RAP IS NOT FROM ABOVE SOURCES, THE SOURCE IS UNKNOWN, OR MORE THAN ONE SOURCE OF RAP IS USED, PROCESS AND BLEND ALL THE RAP FOR THE PROJECT INTO A SINGLE UNIFORM STOCKPILE, TEST ACCORDING TO LEVEL 3 ASPHALT MIX DESIGN REQUIREMENTS, AND OBTAIN DISTRICT TESTING APPROVAL FOR USE. OBTAIN WRITTEN APPROVAL FROM OMM FOR USE OF UNUSUALLY LARGE, OLD RAP STOCKPILES OF UNKNOWN CONTENT, AGE, OR BOTH. ENSURE NO FOREIGN OR DELETERIOUS MATERIAL IS PRESENT IN RAP.

SUBMITTALS. PREPARE THE MIX DESIGN REPORT AS DESCRIBED IN THE PLANS AND SUBMIT TO THE ENGINEER FOR REVIEW AT LEAST 14 DAYS BEFORE WORK BEGINS. DO NOT BEGIN WORK WITHOUT APPROVAL OF THE MIX DESIGN REPORT BY THE ENGINEER. THE ENGINEER MAY REQUIRE ADDITIONAL SAMPLING IF THE REPORT IS NOT SATISFACTORY.

EQUIPMENT. PROVIDE EQUIPMENT THAT MEETS THE FOLLOWING REQUIREMENTS:

PROVIDE A SELF-PROPELLED RECLAIMER THAT IS CAPABLE OF FULLY PULVERIZING TO THE DEPTH REQUIRED, INCORPORATING THE EMULSIFIED ASPHALT AND WATER, AND MIXING THE MATERIALS TO PRODUCE A HOMOGENEOUS MATERIAL. ENSURE THE RECLAIMER HAS A MINIMUM RATING OF 600 HP (447 KW); IS CAPABLE OF RECLAIMING NOT LESS THAN 7.75 FT (2.36 M) WIDE AND 12 INCHES (300 MM) DEEP IN EACH PASS; THE ROTATIONAL SPEED OF THE CUTTING DRUM IS ADJUSTABLE INDEPENDENT OF THE MACHINE'S FORWARD SPEED; AND HAS AN ADDITIVE SYSTEM FOR EMULSIFIED ASPHALT WITH A FULL-WIDTH SPRAY BAR CONSISTING OF A POSITIVE DISPLACEMENT PUMP INTERLOCKED TO THE SELF-PROPELLED RECLAIMER'S GROUND SPEED SO THAT THE AMOUNT OF EMULSIFIED ASPHALT AGENT BEING ADDED IS AUTOMATICALLY ADJUSTED WITH CHANGES TO THE RECLAIMER'S GROUND SPEED. ENSURE THE ADDITIVE SYSTEM IS CAPABLE OF INCORPORATING UP TO 7 GALLONS PER SQUARE YARD ($31.7\ L/M^2$) OF EMULSIFIED ASPHALT. ENSURE THE INDIVIDUAL VALVES ON THE SPRAY BAR ARE CAPABLE OF BEING TURNED OFF AS NECESSARY TO MINIMIZE EMULSIFIED ASPHALT OVERLAP ON SUBSEQUENT PASSES. VERIFY THAT THE RECLAIMER IS PROPERLY CALIBRATED TO DELIVER THE SPECIFIED EMULSIFIED ASPHALT CONTENT.

IF APPLYING DRY POWDER ADDITIVES, PROVIDE SPREADERS OR DISTRIBUTORS THAT ARE NON-PRESSURIZED MECHANICAL VANE-FEED, CYCLONE, OR SCREW TYPE CAPABLE OF PROVIDING A CONSISTENT, ACCURATE, AND UNIFORM DISTRIBUTION OF MATERIAL WHILE MINIMIZING DUST DURING CONSTRUCTION.

FULL DEPTH RECLAMATION WITH EMULSIFIED ASPHALT (CONTINUED)

PROVIDE A MOTOR GRADER WITH CROSS SLOPE INDICATOR FOR PRE-SHAPING, AERATING, SPREADING, AND FINAL SHAPING OF THE MATERIAL.

PROVIDE WATER TRUCK(S) FOR SUPPLYING WATER TO THE RECLAIMER OR ROADWAY FOR ADDITION OF MOISTURE AND FOR FINISH ROLLING THE FDR OPERATION. ENSURE THE WATER TRUCK(S) CAN PROVIDE A CONTROLLED AND CONSISTENT SPRAY WITHOUT ERODING OR OTHERWISE DAMAGING THE COMPACTED FDR STABILIZED BASE SURFACE.

PROVIDE VIBRATORY PAD FOOT ROLLER(S) WITH A FRONT MOUNTED BLADE FOR BACK-DRAGGING HAVING A MINIMUM STATIC WEIGHT OF 10 TONS (9 METRIC TONS) AND A MINIMUM EFFECTIVE WEIGHT OF 25 TONS (23 METRIC TONS). PROVIDE A VIBRATORY SINGLE OR TANDEM SMOOTH DRUM ROLLER(S) HAVING A MINIMUM STATIC WEIGHT OF 10 TONS (9 METRIC TONS) OR A PNEUMATIC TIRE ROLLER, WEIGHING AT LEAST 25 TONS, WITH MINIMUM TIRE PRESSURES OF 90 POUNDS PER SQUARE INCH (620 KPA) FOR INTERMEDIATE AND FINISH ROLLING. PERFORM ALL FINISH ROLLING IN STATIC MODE.

CONSTRUCTION.

A. ROADWAY PREPARATION. REMOVE VEGETATION FROM CRACKS, JOINTS, AND OTHER AREAS SUCH AS ALONG EDGES OF THE EXISTING PAVEMENT TO PREVENT CONTAMINATION OF THE PULVERIZED BITUMINOUS MATERIAL DURING THE RECLAIMING OPERATION. ENSURE THE SUBGRADE IS FIRM AND ABLE TO SUPPORT, WITHOUT YIELDING OR SUBSEQUENT SETTLEMENT, THE CONSTRUCTION EQUIPMENT AND COMPACTION OF THE FDR STABILIZED BASE. CORRECT SOFT OR YIELDING SUBGRADE BEFORE CONSTRUCTION PROCEEDS. PROTECT FROM DAMAGE ANY MANHOLES, VALVE COVERS, AND OTHER BURIED STRUCTURES/UTILITIES BEFORE PROCEEDING. PLACE GRINDINGS RETAINED DURING PERFORMANCE OF ITEM 202 - PAVEMENT REMOVED, AS PER PLAN (2.5" THICK) AS SHOWN ON THE TYPICAL SECTIONS. CONSTRUCT FDR IN A SERIES OF PARALLEL LANES SUCH THAT LONGITUDINAL AND TRANSVERSE JOINTS ARE MINIMIZED.

B. WEATHER. PERFORM WORK ONLY BETWEEN MAY 1 AND SEPTEMBER 30. ENSURE THE AIR TEMPERATURE IS A MINIMUM OF 50 °F (10 °C) AND RISING BEFORE INJECTING EMULSIFIED ASPHALT. PULVERIZATION MAY BE PERFORMED AT LOWER TEMPERATURES. DO NOT PERFORM WORK WHEN THE LOCAL WEATHER FORECAST PREDICTS TEMPERATURES AT OR BELOW 32 °F (0 °C) WITHIN 7 DAYS AFTER PLACEMENT OF THE MATERIAL. THE ENGINEER MAY RESTRICT WORK WHEN THE HEAT INDEX IS GREATER THAN 100 °F (38 °C).

C. TEST STRIP. CONSTRUCT A MINIMUM 500 FT LONG TEST STRIP, IN THE PRESENCE OF THE ENGINEER, ON THE FIRST DAY OF PRODUCTION, TO VERIFY THE CONSTRUCTION PROCESS AND DETERMINE THE SEQUENCE AND MANNER OF ROLLING NECESSARY TO OBTAIN THE SPECIFIED DENSITY REQUIREMENTS. THIS ALLOWS THE CONTRACTOR TO DEMONSTRATE THE APPROPRIATENESS OF THE EQUIPMENT, MATERIALS, AND PROCESSES PROPOSED. THIS INCLUDES VERIFYING THE OPTIMAL RATES FOR THE EMULSIFIED ASPHALT, WATER, AND ANY ADDITIVES RECOMMENDED IN THE MIX DESIGN. PLACE FDR AT THE DEPTH OF THE LIFT REQUIRED BY THE PROJECT.

OBTAIN THE MAXIMUM WET DENSITY FOLLOWING THE REQUIREMENTS OF QUALITY CONTROL SECTION G IN THIS NOTE. ENSURE THE MAXIMUM WET DENSITY IS WITHIN ORIGINAL MIX DESIGN TOLERANCES. MONITOR AND TEST COMPACTION FOLLOWING THE REQUIREMENTS OF QUALITY CONTROL SECTION H IN THIS NOTE.

A NEW TEST STRIP IS REQUIRED IF CHANGES ARE MADE OUTSIDE OF THE TOLERANCES OF THE ORIGINAL MIX DESIGN, EQUIPMENT, OR CONSTRUCTION METHODS. PRODUCTION MAY CONTINUE ONLY AFTER APPROVAL OF THE TEST STRIPS AT THE DISCRETION OF THE ENGINEER. THE TEST STRIPS WILL BE CONSIDERED PART OF THE COMPLETED WORK AND WILL REMAIN IN PLACE.

D. PULVERIZATION AND INITIAL SHAPING. PULVERIZE THE EXISTING PAVEMENT WITH THE SELF-PROPELLED RECLAIMER AND SHAPE WITH THE MOTOR GRADER TO CORRECT FOR PROFILE, CROWN, AND CONTOUR, ACCORDING TO THE PLANS, BEFORE THE ADDITION OF THE EMULSIFIED ASPHALT. ADD ANY REQUIRED WATER, CORRECTIVE AGGREGATE, OR BOTH DURING THIS OPERATION. CONTINUE MIXING UNTIL THE ENTIRE MIXTURE IS PULVERIZED AND GRADATION REQUIREMENTS ARE MET. MAKE THE FINAL CHECK FOR GRADATION REQUIREMENTS AT THE CONCLUSION OF MIXING OPERATIONS. SHAPE THE PULVERIZED MATERIAL TO WITHIN 1/2 INCH (15 MM) OF THE PROPOSED GRADE AND COMPACT TO PREVENT SATURATION OF PULVERIZED MATERIAL AND TO PROVIDE DEPTH CONTROL DURING PROCESSING. OVERLAP LONGITUDINAL JOINTS A MINIMUM OF 6 INCHES (150 MM) AND TRANSVERSE JOINTS A MINIMUM OF 2 FEET (0.6 M).

E. CORRECTIVE AGGREGATE (IF REQUIRED). IF REQUIRED BY THE MIX DESIGN, SPREAD CORRECTIVE AGGREGATES, AT THE APPROVED RATE, USING A SPREADER BOX, MECHANICAL SPREADER, CONVENTIONAL PAVER, OR BY TAIL GATING FROM END DUMPS AND SPREADING TO A UNIFORM THICKNESS WITH A MOTOR GRADER. BLEND THE CORRECTIVE AGGREGATE WITH THE PULVERIZED MATERIAL BY MEANS OF ADDITIONAL FULL DEPTH MIXING TO FORM A HOMOGENEOUS MIXTURE BEFORE APPLICATION OF THE EMULSIFIED ASPHALT.

F. APPLICATION OF ADDITIVES (IF REQUIRED). AFTER PULVERIZING, SPREAD ANY ADDITIVES REQUIRED BY THE MIX DESIGN UNIFORMLY ON THE SURFACE. BEFORE PLACING ADDITIVES, CALIBRATE THE EQUIPMENT USED TO MECHANICALLY SPREAD AND MIX THE ADDITIVES ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS. AFTER CALIBRATION, VERIFY THE SPREAD RATE ACCORDING TO THE QUALITY CONTROL SECTION OF THIS NOTE.

GENERAL NOTES

DESIGN AGENCY
DISTRICT 3
ENGINEERING TEAM 3

DESIGNER	JSR
REVIEWER	CAD 05/12/22
PROJECT ID	105452
SUBSET / TOTAL	4 / 7
SHEET / TOTAL	P.11 / 69

CRA-96-0.00

MODEL: General Notes 4 PAPERSIZE: 34x22 (in.) DATE: 8/18/2022 TIME: 12:19:01 PM USER: jrter
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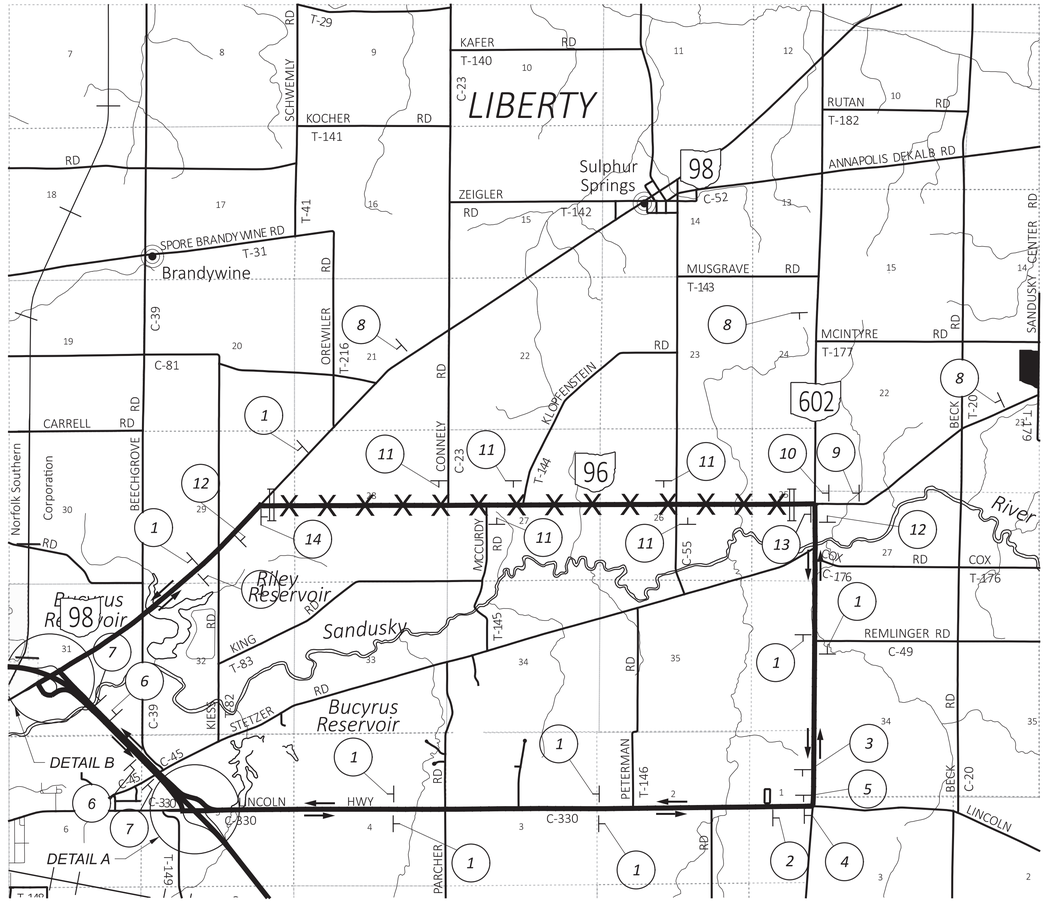
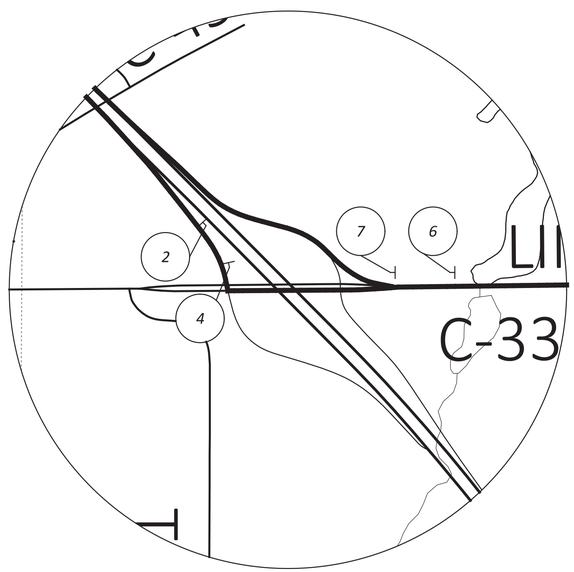
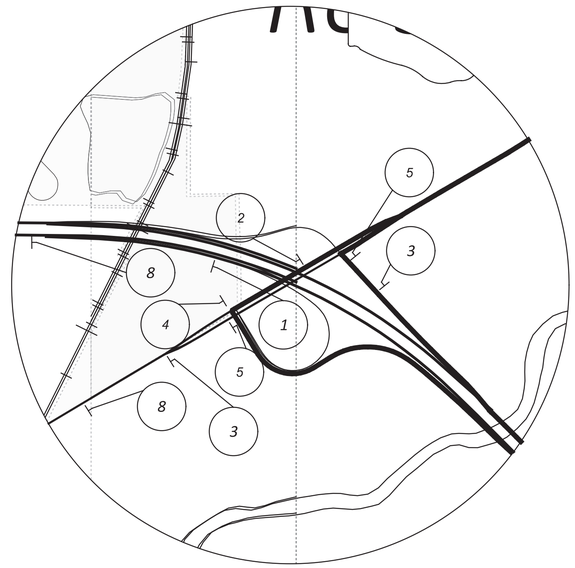
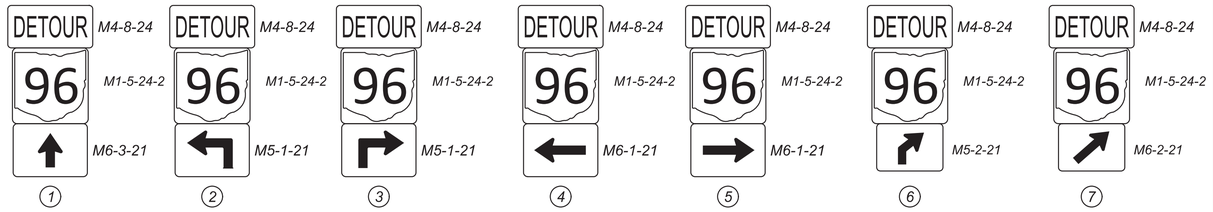


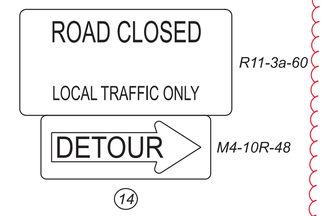


DETAIL A
US 30/CR 330 INTERCHANGE
NOT TO SCALE

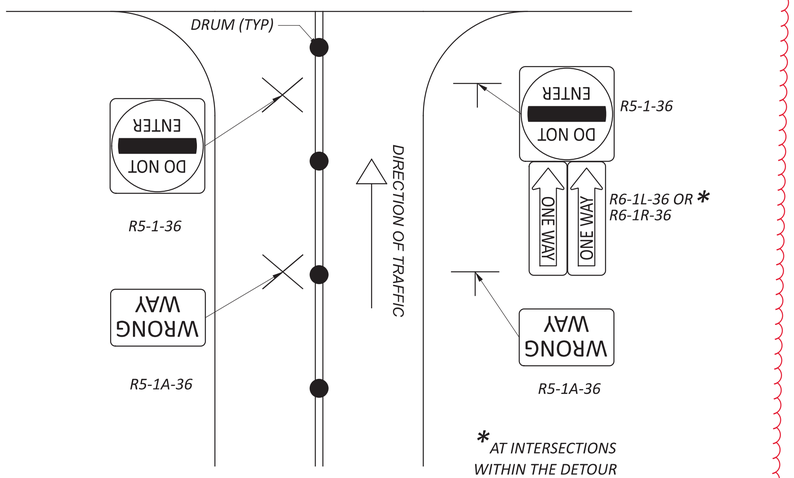


DETAIL B
US 30/SR 98 INTERCHANGE
NOT TO SCALE





INTERSECTION/END OF PROJECT DETAIL (TYPICAL ALL PHASES)



NOTES:
DRUMS SHALL BE PLACED AT 80' SPACING ALONG CENTERLINE. USE WHITE EDGE LINES FOR WORK ZONE EDGE LINES (10' LANE WIDTH).

LEGEND

- GATES, BARRICADES, AND ADVANCE WARNING SIGNS, AS PER MT-101.60
- STATE DETOUR
- DIRECTION OF DETOURED TRAFFIC
- XXX - CLOSED SEGMENT

NOTES

- THE ONE WAY DIRECTION SHALL BE WESTBOUND THROUGHOUT THE DURATION OF THE PROJECT

HORIZONTAL SCALE IN FEET
0 0.25 0.5 1

DETOUR PLAN PHASE 1 & 2

CRA-96-0.00

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DESIGN AGENCY
DISTRICT 3
ENGINEERING TEAM 3
DESIGNER JSR
REVIEWER CAD 05/12/22
PROJECT ID 105452
SHEET P.17 TOTAL 69