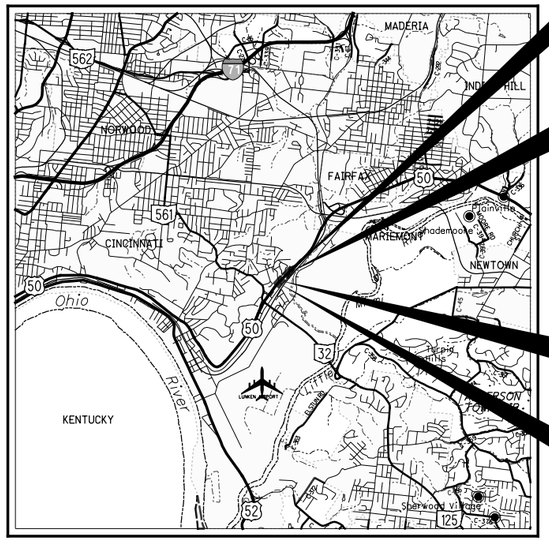


END PROJECT
STA. 52+51.51
SLM = 28.30

RESUME PROJECT
STA. 49+36.93
SLM = 28.24

SUSPEND PROJECT
STA. 43+49.59
SLM = 28.13

BEGIN PROJECT
STA. 40+85.36
SLM = 28.08

LOCATION MAP

LATITUDE: 39°07'30" LONGITUDE: 84°24'50"

SCALE IN MILES
0 1 2 3 4

N

PORTION TO BE IMPROVED
INTERSTATE HIGHWAY
FEDERAL ROUTES
STATE ROUTES
COUNTY & TOWNSHIP ROADS
OTHER ROADS

## DESIGN DESIGNATION

| | |
|---|---|
| CURRENT ADT (2019) | 16,000 |
| DESIGN YEAR ADT (2039) | 17,000 |
| DESIGN HOURLY VOLUME (2039) | 1,500 |
| DIRECTIONAL DISTRIBUTION | 0.52 |
| TRUCKS (24 HOUR B&C) | 7% |
| DESIGN SPEED | 50 MPH |
| LEGAL SPEED | 45 MPH (EB); 50 MPH (WB) |

DESIGN FUNCTIONAL CLASSIFICATION:
02 - OTHER FREEWAY (URBAN)

NHS PROJECT ---------- YES

## DESIGN EXCEPTIONS

| DESIGN FEATURE | APPROVAL DATE | SHEET |
|---|---|---|
| SHOULDER WIDTH | 4/4/18 | 7,9 |

# STATE OF OHIO
# DEPARTMENT OF TRANSPORTATION

# HAM-50-(28.08)(28.24)

## CITY OF CINCINNATI
## HAMILTON COUNTY

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## PROJECT DESCRIPTION

BRIDGE REHABILITATION ON HAM-50-2810 (OVER HEEKIN AVE.) AND HAM-50-2825 (OVER W.B. RAMP TO EASTERN AVE.), REPAIRS INCLUDE DECK REPLACEMENT ON EXISTING BEAMS, SEMI-INTEGRAL ABUTMENT CONVERSIONS, STRUCTURAL STEEL PAINTING AND SUBSTRUCTURE PATCHING. PROJECT INCLUDES LIGHTING, APPROACH SLABS, APPROACH ROADWAY PAVEMENT, DECORATIVE RAILING AND GUARDRAIL.

## EARTH DISTURBED AREAS

| | |
|---|---|
| PROJECT EARTH DISTURBED AREA: | 2.3 ACRES |
| ESTIMATED CONTRACTOR EARTH DISTURBED AREA: | 0.8 ACRES |
| NOTICE OF INTENT EARTH DISTURBED AREA: | N/A (MAINTENANCE PROJECT) |

## LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

## 2019 SPECIFICATIONS

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

**UNDERGROUND UTILITIES**
Contact Two Working Days Before You Dig
OHIO811.org Before You Dig
OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)


PLAN PREPARED BY:
PALMER ENGINEERING
8350 EAST KEMPER ROAD - SUITE B
CINCINNATI, OH 45249
WINCHESTER ■ NASHVILLE ■ LOUISVILLE ■ CINCINNATI ■ AKRON ■ TALLAHASSEE ■ ORLANDO


ENGINEERS SEAL:

STATE OF OHIO
BRONSON J FUNKE
E-61820
REGISTERED PROFESSIONAL ENGINEER

SIGNED: _____
DATE: 11-19-21

| STANDARD CONSTRUCTION DRAWINGS | | | | | | | | | | SUPPLEMENTAL SPECIFICATIONS | | SPECIAL PROVISIONS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| BP-1.1 | 7/28/00 | BP-5.1 | 7/16/21 | RM-4.6 | 7/19/13 | HL-50.21 | 1/15/21 | TC-52.10 | 10/18/13 | 800-2019 | 10/15/21 | |
| BP-3.1 | 01/17/20 | | | | | HL-60.11 | 7/21/17 | TC-52.20 | 1/15/21 | 813 | 10/19/18 | |
| | | F-1.1 | 7/19/13 | AS-1-15 | 7/17/15 | | | TC-61.30 | 7/19/19 | 821 | 4/20/12 | |
| CB-6 | 7/16/21 | F-3.3 | 7/19/13 | AS-2-15 | 1/18/19 | MT-95.30 | 7/19/19 | TC-65.10 | 1/17/14 | 829 | 1/20/17 | |
| | | | | BR-1-13 | 1/17/14 | MT-95.41 | 1/17/20 | TC-65.11 | 7/21/17 | 832 | 10/19/18 | |
| I-3B | 3B1, 7/16/21 | MGS-1.1 | 7/16/21 | GSD-1-19 | 1/15/21 | MT-95.45 | 1/17/20 | TC-72.20 | 7/20/18 | 902 | 7/19/19 | |
| I-3C | 3C1, 7/16/21 | MGS-2.1 | 1/19/18 | PCB-91 | 7/17/20 | MT-95.70 | 1/17/20 | | | 913 | 4/16/21 | |
| | | MGS-3.1 | 1/19/18 | SICD-1-96 | 7/18/14 | MT-98.28 | 1/17/20 | | | 921 | 4/20/12 | |
| MH-1 | 7/16/21 | MGS-3.2 | 1/18/13 | SICD-2-14 | 1/15/21 | MT-98.30 | 7/16/21 | | | 929 | 1/20/17 | |
| | | MGS-4.2 | 7/19/13 | VPF-1-90 | 7/20/18 | MT-101.60 | 1/17/20 | | | | | |
| DM-1.1 | 7/17/20 | MGS-4.3 | 1/18/13 | | | MT-101.70 | 1/17/20 | | | | | |
| DM-1.2 | 7/16/21 | MGS-5.2 | 7/15/16 | HL-10.11 | 1/15/21 | MT-101.90 | 7/17/20 | | | | | |
| DM-4.1 | 7/17/20 | | | HL-10.12 | 1/20/17 | MT-102.10 | 1/17/20 | | | | | |
| DM-4.3 | 1/15/16 | RM-4.1 | 1/17/20 | HL-10.13 | 4/17/20 | MT-103.10 | 1/19/18 | | | | | |
| DM-4.4 | 1/15/16 | RM-4.2 | 4/17/20 | HL-20.11 | 1/15/21 | MT-105.10 | 1/17/20 | | | | | |
| | | RM-4.5 | 7/21/17 | HL-30.11 | 1/15/21 | MT-110.10 | 7/19/13 | | | | | |

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

APPROVED Tammy K Campbell
DATE 11/29/2021 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E161 (439)
PID NO. 100800
CONSTRUCTION PROJECT NO. *
RAILROAD INVOLVEMENT NONE
HAM-50-(28.08)(28.24)
1 / 162

**ITEM 204 - PROOF ROLLING**

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING.

ITEM 204 - PROOF ROLLING 4 HOUR.

**AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS**

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 29 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND THE ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO FILE A NEW FAA FORM 7460-1, ADVISING THE FAA THAT AERONAUTICAL STUDY NO. 2020-AGL-23082-OE IS BEING RESUBMITTED AND THAT AN ALTERATION TO THE ORIGINAL SUBMISSION IS REQUESTED.

NOTIFY THE ODOT OFFICE OF AVIATION WHEN RESUBMITTING FAA FORM 7460-1. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

FAA APPROVAL MAY TAKE UP TO 45 DAYS. ALL SUBMISSIONS SHALL BE DIRECTED TO THESE OFFICES:

EXPRESS PROCESSING CENTER
THE FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
AIR TRAFFIC AIRSPACE BRANCH ASW-520
2601 MEACHAN BLVD.
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OHIO 43235
614-387-2346

**CITY OF CINCINNATI DEPARTMENT OF TRANSPORTATION AND ENGINEERING (DOTE) PERMIT**

A CITY OF CINCINNATI DEPARTMENT OF TRANSPORTATION AND ENGINEERING (DOTE) PERMIT IS REQUIRED PRIOR TO THE ODOT CONTRACTOR COMMENCING WORK IN THE CITY OF CINCINNATI'S PUBLIC RIGHT-OF-WAY. PERMIT APPLICATIONS FOR STREET USE, STREET BARRICADE, STREET OPENING, ETC. MAY BE MADE AT ROOM 425, CITY HALL, 801 PLUM STREET CINCINNATI, OHIO 45202. FOR MORE INFORMATION, VISIT THE WEBSITE AT:
https://www.cincinnati-oh.gov/dote/permits-licenses/

DURING THE DURATION OF THE PROJECT, THE CURRENT TRUCK BAN WILL BE ENFORCED ON COLUMBIA PARKWAY. EXCEPTIONS TO THE BAN CAN BE MADE THROUGH A CITY PERMIT FOR THE NECESSARY SEGMENTS ON COLUMBIA PARKWAY.

CITY ISSUED PERMITS MAY REQUIRE MAJOR EVENT WORK RESTRICTIONS ON THE CONTRACTOR'S ACTIVITIES. THE CITY MAINTAINS A LIST OF KNOWN MAJOR EVENTS AT THE FOLLOWING WEBSITE:
http://cincinnati-oh.gov/police/special-events-regulations-auctions/event-permits/.

THE CITY OF CINCINNATI RESTRICTS NIGHTTIME CONSTRUCTION WORK BETWEEN THE HOURS OF 11:00 P.M. AND 7:00 A.M. CITY ISSUED PERMITS WILL REQUIRE THE CONTRACTOR TO SECURE THE CITY ENGINEER'S APPROVAL FOR NIGHTTIME WORK.

**ITEM 622 - BARRIER MISC.: NEW JERSEY SHAPE A**
**ITEM 622 - BARRIER MISC.: NEW JERSEY SHAPE C**
**ITEM 622 - BARRIER TRANSITION, AS PER PLAN**

CONSTRUCT THE ABOVE ITEMS PER THE DETAILS ON SHEETS 70 THRU 72. FOR DETAILS AND MODIFICATIONS NOT NOTED, CONSTRUCT PER CMS 622. ALL WORK INDICATED ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE PER THE RESPECTIVE ITEM.

**ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE B**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

THE FACE OF THE TYPE B IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, MGS TYPE B, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING REFLECTIVE SHEETING AND ALL RELATED HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

**CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES**

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

**CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL**

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A W-BEAM, BEAM SPLICE AS SHOWN IN AASHTO M 180-12, EXCEPT THE BEAM WASHERS ARE NOT TO BE USED. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

**ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN**

WHERE DESIGNATED, EXISTING ANCHOR ASSEMBLIES INCLUDING ALL POSTS AND HARDWARE SHALL BE REMOVED. THIS ITEM SHALL ALSO INCLUDE THE REMOVAL OF THE ENTIRE CONCRETE ANCHOR AND CONCRETE ENCASEMENT. ALL HOLES LEFT AFTER REMOVAL OF ASSEMBLIES AND POSTS SHALL BE FILLED WITH GRANULAR MATERIAL AS DIRECTED BY THE ENGINEER. PAYMENT SHALL INCLUDE ALL NECESSARY LABOR AND EQUIPMENT REQUIRED TO PERFORM THE WORK AS INDICATED ABOVE. PAYMENT SHALL BE AT THE UNIT BID PRICE.

ITEM UNIT DESCRIPTION -
202 EACH ANCHOR ASSEMBLY REMOVED, TYPE A, AS PER PLAN.

**REVIEW OF DRAINAGE FACILITIES**

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, 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 APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

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 STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT 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 611 CONDUIT ITEMS.

**ITEM SPECIAL - PIPE CLEANOUT**

THIS WORK SHALL CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING DRAINAGE CONDUITS SPECIFIED IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL SEWERS SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

CLEAN-OUT OF THE PIPE SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL - PIPE CLEAN-OUT. THIS PRICE SHALL INCLUDE THE COST FOR MATERIAL, EQUIPMENT, LABOR, AND ALL INCIDENTALS REQUIRED TO COMPLETE THE CLEAN-OUT.

**EXISTING UNDERDRAINS**

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS ENCOUNTERED DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDER-DRAINS THAT OUTLET TO A SLOPE.

UNDER-DRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDER-DRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDER-DRAINS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

| | |
|---|---|
| 601, TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT | 4 SQ. YD. |
| 611, 6" CONDUIT, TYPE F, FOR UNDERDRAIN OUTLETS | 50 FT. |
| 611, PRECAST REINFORCED CONCRETE OUTLET | 2 EACH |
| 605, 6" UNCLASSIFIED PIPE UNDERDRAINS | 50 FT. |

**TEMPORARY DRAINAGE ITEMS**

TEMPORARY DRAINAGE ITEMS LABELED ON THE MAINTENANCE OF TRAFFIC PLAN ARE ITEMIZED ON THE MOT PLANS. PAYMENT FOR THE TEMPORARY DRAINAGE ITEMS ARE ITEMIZED AND CARRIED TO THE GENERAL SUMMARY.

**INLET, NO. 3A, AS PER PLAN**
**INLET, NO. 3C, AS PER PLAN**

CONSTRUCT THE ABOVE ITEMS PER THE DETAILS ON SHEETS 64 AND 65. FOR DETAILS AND MODIFICATIONS NOT NOTED, CONSTRUCT PER SCD I-2.1 AND CMS 611. ALL WORK INDICATED ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE PER THE RESPECTIVE ITEM.

**PROFILE AND ALIGNMENT**

PLACE THE PROPOSED PAVEMENT IN GRAPHIC GRADE PROFILE AREAS TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

**PART-WIDTH CONSTRUCTION**

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

CALCULATED DAM CHECKED DPF

# GENERAL NOTES

HAM-50-(28.08)(28.24)

**ITEM SPECIAL - MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION**

ALL CONCRETE SHALL BE TESTED. ALL TESTING, INSPECTION AND QUALITY CONTROL FOR CONCRETE, NOT INCLUDED UNDER QC/QA PAY ITEMS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL PROVIDE A CONCRETE TESTING CONSULTANT WITH PREVIOUS EXPERIENCE AND FAMILIARITY IN ODOT PROCEDURES, CONCRETE TESTING REQUIREMENTS AND CONCRETE TESTING DOCUMENTATION. AT LEAST 30 DAYS PRIOR TO CONCRETE PLACEMENT, SUBMIT TO THE ENGINEER FOR APPROVAL, THE PROPOSED CONCRETE TESTING CONSULTANT ALONG WITH THE RESUMES OF THE PROPOSED TESTING PERSONNEL.

TESTING CONCRETE FOR STRUCTURES AND PORTLAND CEMENT CONCRETE PAVEMENT SHALL BE PERFORMED AS OUTLINED IN CMS SPECIFICATIONS 455 RESPECTIVELY.

THROUGH THE CONTRACTOR, THE CONSULTANT SHALL BE RESPONSIBLE FOR ENSURING THAT ALL CONCRETE PLACED IS IN ACCORDANCE WITH THE SPECIFICATIONS. SUCH WORK SHALL BE IN ACCORDANCE WITH THE APPLICABLE CONSTRUCTION AND MATERIAL SPECIFICATIONS AND THE ODOT CONSTRUCTION INSPECTION MANUAL OF PROCEDURES FOR CONCRETE. THE CONCRETE CONSULTANT SHALL PROVIDE THE NECESSARY TRAINED TECHNICIAN(S), ALL EQUIPMENT, AND SHALL FURNISH THE PROJECT ENGINEER WITH TWO (2) COPIES OF ALL TEST RESULTS WITHIN 24 HOURS AFTER COMPLETION OF CONCRETE PLACEMENT.

THE TECHNICIAN SHALL BE ACI LEVEL 1 CERTIFIED AND WILL BE REQUIRED TO DEMONSTRATE HIS/HER COMPETENCE AND EXPERIENCE LEVELS TO THE ENGINEER PRIOR TO BEGINNING WORK. THE ENGINEER WILL ORDER THE CONTRACTOR TO REPLACE ANY TECHNICIAN THAT IS NOT VERSED IN THE REQUIRED TESTING PROCEDURE.

THE TECHNICIAN SHALL VERBALLY NOTIFY THE ODOT PROJECT ENGINEER OF ANY FAILING TEST AND SHALL SUBMIT FOLLOW-UP WRITTEN NOTIFICATION TO THE PROJECT ENGINEER OF REMEDIAL ACTION(S) TAKEN. TESTS SHALL BE TAKEN AS SPECIFIED WITHIN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, CONCRETE MANUAL OR APPROPRIATE SUPPLEMENTAL SPECIFICATION AS LISTED IN THE PROPOSAL GOVERNING THE PROJECT. IT SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO MAKE IMMEDIATE CORRECTIONS OR ADJUSTMENTS TO THE CONCRETE MIX VIA DIRECT COMMUNICATION WITH THE CONCRETE SUPPLIER'S PLANT PERSONNEL TO MAINTAIN UNINTERRUPTED COMPLIANCE WITH THE SPECIFICATIONS UPON NOTIFICATION OF CONCRETE MIX NON-COMPLIANCE BY THE CONSULTANT TECHNICIAN. THE PROJECT ENGINEER MAY REQUIRE MORE FREQUENT TESTING AS CONDITIONS WARRANT.

UPON COMPLETION OF DAILY CONCRETE PLACEMENT(S), THE CONCRETE CONSULTANT SHALL PROVIDE THE PROJECT ENGINEER WITH DAILY TEST REPORTS, TE-45'S, INSPECTORS DAILY REPORT AND SUPPORTING DOCUMENTATION FOR EACH ITEM OF CONCRETE WORK PERFORMED SEPARATED BY MIX DESIGN. SUBSEQUENTLY, UPON COMPLETION OF AN ENTIRE CONCRETE SPECIFICATION ITEM, THE CONCRETE CONSULTANT SHALL ALSO PROVIDE THE PROJECT ENGINEER WITH TWO (2) COPIES OF AN ADDITIONAL INSPECTION REPORT BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHICH CONTAINS THE TESTING-RESULTS SUMMARY FOR EACH ITEM BY CONTRACT REFERENCE NUMBER AND THE CONSULTANT'S CONCLUSIONS RELATIVE TO SPECIFICATION COMPLIANCE FOR ALL CONCRETE-TESTING WORK.

THE ODOT PROJECT ENGINEER RESERVES THE RIGHT TO MAKE UNANNOUNCED QUALITY-CONTROL TESTS TO VERIFY PROCEDURES USED AND RESULTS BEING OBTAINED BY THE CONTRACTOR.

THE CONCRETE TECHNICIAN SHALL WORK UNDER THE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, WHO WILL MONITOR THE CONCRETE TEST RESULTS. THE FINAL INSPECTION REPORTS FOR EACH COMPLETED ITEM SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO, CERTIFYING THAT ALL CONCRETE TESTS PROVIDED BY THE CONTRACTOR MET APPLICABLE CONTRACT REQUIREMENTS. A FINAL REPORT ISSUED BY THE CONSULTING FIRM SHALL CONTAIN A CERTIFIED STATEMENT OF COMPLIANCE WITH ODOT SPECIFICATIONS AND ANY OTHER CONCLUSIONS REGARDING THE CONCRETE MATERIALS INCORPORATED INTO THE PROJECT. SUCH STATEMENT SHALL BE SIGNED BY A REGISTERED PROFESSIONAL ENGINEER, STATE OF OHIO. AND, THE CONCRETE CONSULTANT SHALL BE REQUIRED TO ATTEND MONTHLY PROGRESS MEETINGS AS REQUIRED BY THE PROJECT ENGINEER.

ADDITIONALLY, THE CONTRACTOR SHALL BE REQUIRED TO KEEP A POSTED LIST OF BEAM AND CYLINDER IDENTIFICATION NUMBERS FOR THE PURPOSE OF IDENTIFYING THE CORRESPONDING PLACEMENT LOCATION AND CONCRETE SPECIFICATION ITEM.

PAYMENT SHALL BE BID AS LUMP SUM FOR ITEM SPECIAL MISC.: CONSULTANT FOR CONCRETE QUALITY CONTROL INCLUDING TESTING AND INSPECTION. THE ITEM WILL BE PAID FOR AS FOLLOWS:

UPON APPROVAL OF CONSULTANT . . . . . 20%
PROGRESSIVE EQUIVALENT PAYMENTS . . . . . 50%
UPON SUBMISSION OF FINAL REPORT . . . . . 30%

THE TECHNICIAN SHALL HAVE THE FULL EFFECT AND AUTHORITY OF AN ODOT PROJECT INSPECTOR IN DETERMINING ACCEPTABILITY OF MATERIAL AND CONCRETE PLACEMENT PRACTICES.

CALCULATED DAM
CHECKED DPF

# GENERAL NOTES

HAM-50-(28.08)(28.24)

## ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF 1 LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT THE COMPLETED PAVEMENT, SHOULDER AND MEDIAN REBUILDING, ITEM 615 ROADS FOR MAINTAINING TRAFFIC, AND TEMPORARY SURFACES USING ITEM 410. ADDITIONAL, SHORT TERM LANE CLOSURES BEYOND WHAT IS SHOWN ON THE DETAILED PHASING PLANS FOR PHASE 1, PHASE 2 AND PHASE 3. AND DESCRIBED IN THE BELOW PHASING FOR PHASE 1, PHASE 2, PHASE 3 AND PHASE 4 WILL BE SUBJECT TO THE LANE VALUE CONTRACT TABLE (LVCT) ON THIS SHEET.

NO ADDITIONAL, SHORT TERM LANE CLOSURES ON US50 AND CITY STREETS SHALL BE PERMITTED DURING THE FOLLOWING DESIGNATED EVENTS:

RIVERFEST (LABOR DAY FIREWORKS)
ST PATRICK'S DAY PARADE
RED'S OPENING DAY AND OPENING DAY PARADE

| | |
|---|---|
| BOCKFEST 5K | WRANGLER RUN |
| HEART MINI MARATHON | SUPER HERO 5K |
| MS WALK | QUEEN BEE HALF MARATHON |
| FLYING PIG MARATHON WEEKEND | THANKSGIVING DAY RUN |

DATES OF THE ABOVE EVENTS WILL BE SUPPLIED AT THE PRE-CONSTRUCTION MEETING.

NO ADDITIONAL, SHORT TERM LANE CLOSURES ON US50 AND CITY STREETS SHALL BE PERMITTED DURING THE FOLLOWING DESIGNATED HOLIDAYS:

| | |
|---|---|
| CHRISTMAS | FOURTH OF JULY |
| NEW YEARS | LABOR DAY |
| MEMORIAL DAY | THANKSGIVING |

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

| DAY OF HOLIDAY OR EVENT | TIME ALL LANES MUST BE OPEN TO TRAFFIC |
|---|---|
| SUNDAY | 12:00N FRIDAY THROUGH 6:00 AM MONDAY |
| MONDAY | 12:00N FRIDAY THROUGH 6:00 AM TUESDAY |
| TUESDAY | 12:00N MONDAY THROUGH 6:00 AM WEDNESDAY |
| WEDNESDAY | 12:00N TUESDAY THROUGH 6:00 AM THURSDAY |
| THURSDAY | 12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY |
| THURSDAY (THANKSGIVING ONLY) | 6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY |
| FRIDAY | 12:00N THURSDAY THROUGH 6:00 AM MONDAY |
| SATURDAY | 12:00N FRIDAY THROUGH 6:00 AM MONDAY |

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF $75 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

### PHASE 1A/1B

REMOVE THE CONCRETE MEDIAN BARRIER AND CONSTRUCT THE MEDIAN CROSSOVERS, REBUILD MEDIAN FOR CONSTRUCTION ACCESS AND REBUILD US 50 E.B. OUTSIDE SHOULDER FOR USE IN PHASES 1B, 2 AND 3.

### PHASE 1A

UTILIZE A RIGHT LANE CLOSURE FOR THE E.B. OUTSIDE SHOULDER REBUILDING. ONCE THE SHOULDER IS REBUILT, CLOSE THE LEFT LANE OF E.B. US 50 AND SHIFT TO THE OUTSIDE SHOULDER AND TO THE RIGHT SIDE OF THE EXISTING BRIDGES AND PLACE PORTABLE BARRIER AND TRAFFIC CONTROL AS PER PHASE 2 IN THE E.B. DIRECTION ONLY.

### PHASE 1B

CLOSE THE W.B. LEFT LANE FOR MEDIAN REMOVAL AND REBUILDING FOR THE CROSSOVERS. UTILIZE PORTABLE BARRIER IN THE W.B. DIRECTION ALONG THE OPEN RIGHT LANE TO PROTECT THE MEDIAN OPENING UNTIL SUCH TIME THAT PHASE 2 IS FULLY IMPLEMENTED.

### PHASE 2

SHIFT W.B. TRAFFIC TO A SINGLE LANE CROSSOVER TO THE E.B. SIDE. REMOVE THE LEFT BRIDGES AND A PORTION OF THE MEDIAN SIDE OF THE RIGHT BRIDGES. CONSTRUCT THE LEFT BRIDGES AND APPROACHES.
SEE PHASE DETAILS ON SHEETS 25 - 28.

### PHASE 3

SHIFT THE SINGLE LANE OF W.B. US 50 TO THE LEFT BRIDGES CONSTRUCTED IN PHASE 2. SHIFT E.B. TRAFFIC TO A SINGLE LANE CROSSOVER TO THE W.B. SIDE. COMPLETE REMOVAL OF THE RIGHT BRIDGES AND CONSTRUCT THE RIGHT BRIDGES AND APPROACHES.
SEE PHASE DETAILS ON SHEETS 29 - 32 .

### PHASE 4

MAINTAIN W.B. US 50 TRAFFIC CONTROL AND PORTABLE BARRIER IN THE PHASE 3 CROSSOVER POSITION. SHIFT E.B. TRAFFIC BACK TO THE ORIGINAL LANES, UNDER A LEFT-LANE CLOSURE CONDITION. RE-CONSTRUCT THE REMOVALS FOR THE MEDIAN CROSSOVERS; AND CONSTRUCTION ACCESS; MEDIAN CONCRETE BARRIER AND DRAINAGE INLETS AS REQUIRED.

### PHASE 5

RESURFACE THE ROADWAY APPROACHES AND COMPLETE INCIDENTAL WORK. LANE CLOSURES ON US 50 AND RAMPS SHALL BE PER THE PERTINENT S.C.D.'S AND DURING THE TIMES PERMITTED IN THE LANE VALUE CONTRACT TABLE ON THIS SHEET.

### HEEKIN AVENUE

MAINTAIN TRAFFIC AT ALL TIMES. MAINTAIN ONE-LANE OF TWO WAY TRAFFIC USING FLAGGERS AS NEEDED. MAINTAIN PEDESTRIAN ACCESS ON A MINIMUM OF ONE SIDE OF THE STREET AT ALL TIMES. UTILIZE S.C.D. MT-110.10 FOR DETOUR PEDESTRIAN TRAFFIC TO THE OTHER SIDE OF THE STREET.

### RAMP H TO EASTERN AVENUE

MAINTAIN TRAFFIC ON RAMPS AT ALL TIMES, MAINTAIN SAFE PEDESTRIAN ACCESS AT ALL TIMES. UTILIZE S.C.D. MT-98.28 FOR WORK ON HAM-50-2825 L/R AND ON RAMP H THAT REQUIRES CLOSURE OVER AND/OR OF PORTIONS OF THE RAMP.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DETERMINED BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC.

| | | | |
|---|---|---|---|
| ITEM 410, | TRAFFIC COMPACTED SURFACE, TYPE A OR B | 150 | CU. YD. |
| ITEM 616, | WATER | 2 | M. GAL. |

### TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

### OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH IN CONFORMANCE WITH MT-101.90 BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

### DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

| | | | |
|---|---|---|---|
| ITEM | 616, | WATER | 15 M. GAL. |

### LANE VALUE CONTRACT TABLE

| DESCRIPTION OF CRITICAL LANE/RAMP TO BE MAINTAINED | RESTRICTED TIME PERIOD | TIME UNIT | DISINCENTIVE $ PER TIME UNIT PER LANE |
|---|---|---|---|
| 1 LANE CLOSED WB (SEE NOTE 2) | 6AM - 9AM M-F | 1 MIN | $20 |
| 1 LANE CLOSED EB (SEE NOTE 2) | 4PM - 6PM M-F | 1 MIN | $25 |
| TOTAL DURATION OF PHASES 1A/1B THRU 4 | 225 DAYS | 1 DAY | $3,500 |

NOTES

1) NO CLOSURES 2 HOURS BEFORE TO 2 HOURS AFTER EVENTS AT GREAT AMER. BALLPARK, US BANK ARENA, PAUL BROWN STADIUM AND WEST END STADIUM. THIS RESTRICTION APPLIES TO TE BLINL FESTIVAL, DAV 5K HUDY 14K AND ANY OTHER LOCAL VENUE GENERATING AN EVENT ATTENDANCE OF 10,000+.

2) THE RESTRICTED TIME PERIIODS ARE APPLICABLE TO SHORT TERM LANE CLOSURES DURING PRE-PHASE 1, PHASE 5, AND ALL TRAFFIC SWITCHES.

CALCULATED DAM CHECKED DPF

# MAINTENANCE OF TRAFFIC GENERAL NOTES

HAM-50-(28.08)(28.24)

# MAINTENANCE OF TRAFFIC SUBSUMMARY

HAM-50-(28.08)(28.24)

CALCULATED DAM | CHECKED DPF

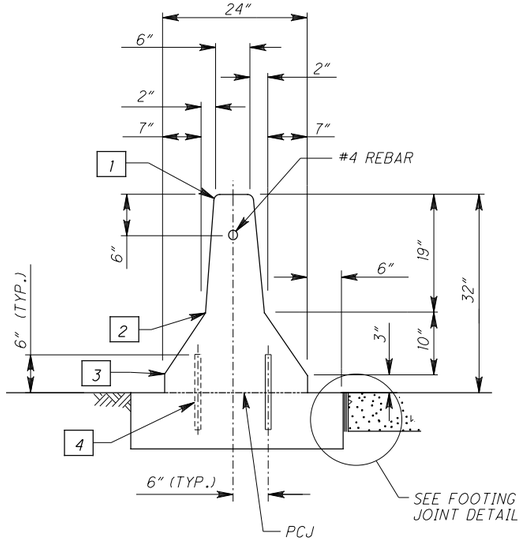
| REF. NO. | PHASE NO. | SHEET NO. | STATION FROM | STATION TO | SIDE/ LOCATION | LENGTH | 614 WORK ZONE EDGE LINE, CLASS 1, 6" (WHITE) MILE | 614 WORK ZONE EDGE LINE, CLASS 1, 6" (YELLOW) MILE | 614 WORK ZONE EDGE LINE, CLASS 1,6" 740.06, TYPE 1 (WHITE) MILE | 614 WORK ZONE EDGE LINE, CLASS 1,6" 740.06, TYPE 1 (YELLOW) MILE | 614 WORK ZONE DOTTED LINE, CLASS 1, 6" (WHITE) FEET | 614 WORK ZONE DOTTED LINE, CLASS 1, 6" (YELLOW) FEET | 614 WORK ZONE CHANNELIZING LINE, CLASS 1, 12" (WHITE) FEET | 614 WORK ZONE RAISED PAVEMENT MARKER (WHITE) EACH | 614 WORK ZONE RAISED PAVEMENT MARKER (YELLOW) EACH | 614 OBJECT MARKER, ONE WAY EACH | 614 BARRIER REFLECTOR, TYPE 1, ONE WAY EACH | 614 BARRIER REFLECTOR, TYPE 2, ONE WAY EACH | 614 INCREASED BARRIER DELINIATION FEET | 614 WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL) EACH | 622 PORTABLE BARRIER, UNANCHORED FT | 622 PORTABLE BARRIER, 50" AS PER PLAN (GLARE SHIELD) FT | 622 PORTABLE BARRIER, ANCHORED FT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1A | | 20+75.00 | 61+25.00 | EB - OUTSIDE SHOULDER | 4050 | 0.70 | | 0.07 | | 600 | | | | | | | | | | | | | |
| | 1B | | 34+10.00 | 38+70.00 | WB - MEDIAN | 460 | | | | | | | | | | 10 | 10 | | | 1 | 460 | | |
| | 1B | | 43+10.00 | 49+80.00 | WB - MEDIAN | 670 | | | | | | | | | | 14 | 14 | | | 1 | 670 | | |
| | 1B | | 55+40.00 | 58+70.00 | WB - MEDIAN | 330 | | | | | | | | | | 8 | 8 | | | 1 | 330 | | |
| | 1B | | 33+00.00 | 68+75.00 | WB - MEDIAN | 3575 | 0.68 | | | | | 600 | | | | | | | | | | | |
| PB4 | 2 | 25-26 | 32+10.00 | 34+00.00 | EB LANES | 190 | | | | | | | | | | 5 | 5 | | | 1 | 190 | | |
| PG1 | 2 | 26-27 | 34+00.00 | 58+50.00 | EB LANES | 2450 | | | | | | | | | | 50 | 50 | | | | | 2450 | |
| PB5 | 2 | 26 | 34+25.00 | | ℄ | | | | | | | | | | | | | | | 1 | | | |
| PB6 | 2 | 26 | 35+70.00 | 38+70.00 | EB SHOULDER | 300 | | | | | | | | | | 7 | 7 | | | 1 | 300 | | |
| PB7 | 2 | 26 | 40+50.00 | 41+36.00 | EB MEDIAN | 86 | | | | | | | | | | 3 | 3 | | | | 86 | | |
| PBM1 | 2 | 26 | 41+36.00 | 42+96.00 | EB MEDIAN | 160 | | | | | | | | | | 4 | 4 | | | | | | 160 |
| PB8 | 2 | 26 | 42+96.00 | 45+04.00 | EB/WB MEDIAN | 208 | | | | | | | | | | 5 | 5 | | 154 | 1 | 208 | | |
| PB9 | 2 | 26 | 46+34.00 | 48+74.00 | WB MEDIAN | 240 | | | | | | | | | | 6 | 6 | | | | 240 | | |
| PB10 | 2 | 26 | 48+64.00 | 49+85.00 | EB MEDIAN | 121 | | | | | | | | | | 3 | 3 | | | | 121 | | |
| PBM2 | 2 | 26 | 49+85.00 | 51+89.00 | EB MEDIAN | 204 | | | | | | | | | | 5 | 5 | | | | | | 208 |
| PB11 | 2 | 26-27 | 51+89.00 | 56+40.00 | EB/WB MEDIAN | 451 | | | | | | | | | | 10 | 10 | | 90 | 1 | 451 | | |
| BR1 | 2 | 26 | 40+62.00 | 43+67.50 | EB SHOULDER | 306 | | | | | | | | | | 7 | 5 | 2 | | | | | |
| BR2 | 2 | 26 | 48+62.00 | 53+29.00 | EB SHOULDER | 467 | | | | | | | | | | 10 | 8 | 2 | | | | | |
| EY1 | 2 | 25-27 | 20+50.00 | 61+75.00 | EB MOT LANE | 4125 | | 0.71 | | 0.07 | | | | | | | | | | | | | |
| EY2 | 2 | 26-27 | 34+00.00 | 78+30.00 | WB MOT LANE | 4430 | | 0.84 | | | | | | | 104 | | | | | | | | |
| DY1 | 2 | 25 | 20+50.00 | 26+50.00 | EB MOT LANE | 600 | | | | | | 600 | | | | | | | | | | | |
| DY2 | 2 | 27 | 72+30.00 | 78+30.00 | WB MOT LANE | 600 | | | | | | 600 | | | | | | | | | | | |
| EW1 | 2 | 25-27 | 30+75.00 | 61+75.00 | EB | 3100 | 0.58 | | 0.01 | | | | | | | | | | | | | | |
| EW2 | 2 | 26-27 | 34+00.00 | 60+30.00 | WB | 2630 | 0.50 | | | | | | | 104 | | | | | | | | | |
| PG2 | 3 | 30-31 | 33+50.00 | 59+50.00 | WB LANES | 2600 | | | | | | | | | | 53 | 53 | | 35 | | | 2600 | |
| PB12 | 3 | 30 | 37+95.00 | 38+50.00 | EB MEDIAN | 55 | | | | | | | | | | 2 | 2 | | | 1 | 55 | | |
| PB13 | 3 | 30 | 43+48.00 | 44+23.00 | ℄ | 75 | | | | | | | | | | 3 | 3 | | | | 75 | | |
| PB14 | 3 | 30 | 44+13.00 | 46+53.00 | EB LANE | 240 | | | | | | | | | | 6 | 6 | | | | 240 | | |
| PB15 | 3 | 30 | 47+84.00 | 49+38.00 | EB LANE/℄ | 154 | | | | | | | | | | 4 | 4 | | 154 | 1 | 154 | | |
| PB16 | 3 | 31 | 59+50.00 | 60+80.00 | WB LANE | 130 | | | | | | | | | | 4 | 4 | | 110 | | 130 | | |
| BR3 | 3 | 30 | 38+50.00 | 43+48.00 | EB SHOULDER | 498 | | | | | | | | | | 7 | 7 | | | | | | |
| BR4 | 3 | 30 | 49+38.00 | 55+50.00 | EB SHOULDER | 612 | | | | | | | | | | 10 | 10 | | | | | | |
| EY3 | 3 | 29-31 | 30+75.00 | 59+09.00 | EB MOT LANE | 2834 | | 0.46 | | 0.08 | | | | | 100 | | | | | | | | |
| EY4 | 3 | 30-31 | 33+00.00 | 60+75.00 | WB MOT LANE | 2775 | | 0.53 | | | | | | | | | | | | | | | |
| EW3 | 3 | 29-31 | 30+75.00 | 59+09.00 | EB MOT LANE | 2834 | 0.46 | | 0.08 | | | | | 100 | | | | | | | | | |
| EW4 | 3 | 30 | 40+50.00 | 54+00.00 | WB MOT LANE | 1350 | 0.19 | | 0.07 | | | | | | | | | | | | | | |
| CH1 | 3 | 31 | 57+90.00 | 59+95.00 | WB MOT LANE | 205 | | | | | | | 205 | | | | | | | | | | |
| | 4 | | 24+00.00 | 58+50.00 | EB - MEDIAN | 3450 | | 0.58 | | 0.07 | | 600 | | | | 32 | 32 | | | 3 | 1460 | | |
| | 4 | | 34+10.00 | 58+70.00 | EB-SAME LIMITS AS PH 1B PB | | | | | | | | | | | | | | | | | | |
| **TOTALS CARRIED TO GENERAL SUMMARY** | | | | | | | **6.23** | | **0.45** | | **2400** | | **205** | **408** | | **268** | **264** | **4** | **543** | **13** | **5170** | **5050** | **368** |

| SHEET NUM. | | | | | | | | | | | | | PART. | ITEM | ITEM EXT | GRAND TOTAL | UNIT | DESCRIPTION | SEE SHEET NO. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 16 | 17 | 18 | | 19 | 20 | | | | | | | 01/NHS/BR | | | | | | |
| | | | | | | | | | | | | | | | | | | ***MAINTENANCE OF TRAFFIC*** | |
| | 150 | | | | | | | | | | | | 150 | 410 | 12000 | 150 | CY | TRAFFIC COMPACTED SURFACE, TYPE A OR B | |
| | | | | | | 8 | | | | | | | 8 | 611 | 04400 | 8 | FT | 12" CONDUIT, TYPE B | |
| | | | | | | 1 | | | | | | | 1 | 611 | 98470 | 1 | EACH | CATCH BASIN, NO. 2-2B | |
| | | | 500 | | | | | | | | | | 500 | 614 | 11110 | 500 | HOUR | LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE | |
| | | | | | 543 | | | | | | | | 543 | 614 | 11630 | 543 | FT | INCREASED BARRIER DELINEATION | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | 13 | | | | | | | | 13 | 614 | 12380 | 13 | EACH | WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) | |
| | | 10 | | | | | | | | | | | 10 | 614 | 12500 | 10 | EACH | REPLACEMENT SIGN | |
| | | 50 | | | | | | | | | | | 50 | 614 | 12600 | 50 | EACH | REPLACEMENT DRUM | |
| | | | | | 408 | | | | | | | | 408 | 614 | 12800 | 408 | EACH | WORK ZONE RAISED PAVEMENT MARKER | |
| | | | | | 264 | | | | | | | | 264 | 614 | 13310 | 264 | EACH | BARRIER REFLECTOR, TYPE 1, ONE WAY | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | 4 | | | | | | | | 4 | 614 | 13312 | 4 | EACH | BARRIER REFLECTOR, TYPE 2, ONE WAY | |
| | | | | | 268 | | | | | | | | 268 | 614 | 13350 | 268 | EACH | OBJECT MARKER, ONE WAY | |
| | | 12 | | | | | | | | | | | 12 | 614 | 18601 | 12 | SNMT | PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN | 17 |
| | | | | | | 1.48 | | | | | | | 1.48 | 614 | 20560 | 1.48 | MILE | WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT | |
| | | | | | 6.23 | | | | | | | | 6.23 | 614 | 22010 | 6.23 | MILE | WORK ZONE EDGE LINE, CLASS I, 6" | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | 0.45 | | | | | | | | 0.45 | 614 | 22210 | 0.45 | MILE | WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I | |
| | | | | | | 2.61 | | | | | | | 2.61 | 614 | 22360 | 2.61 | MILE | WORK ZONE EDGE LINE, CLASS III, 6", 642 PAINT | |
| | | | | | 205 | | | | | | | | 205 | 614 | 23010 | 205 | FT | WORK ZONE CHANNELIZING LINE, CLASS I, 12" | |
| | | | | | | 231 | | | | | | | 231 | 614 | 23690 | 231 | FT | WORK ZONE CHANNELIZING LINE, CLASS III, 12", 642 PAINT | |
| | | | | | 2,400 | | | | | | | | 2,400 | 614 | 24000 | 2,400 | FT | WORK ZONE DOTTED LINE, CLASS I | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | 626 | | | | | | | 626 | 614 | 24612 | 626 | FT | WORK ZONE DOTTED LINE, CLASS III, 6", 642 PAINT | |
| | 17 | | | | | | | | | | | | 17 | 616 | 10000 | 17 | MGAL | WATER | |
| | | | | | 5,050 | | | | | | | | 5,050 | 622 | 41011 | 5,050 | FT | PORTABLE BARRIER, 50", AS PER PLAN | 17 |
| | | | | | 5,170 | | | | | | | | 5,170 | 622 | 41100 | 5,170 | FT | PORTABLE BARRIER, UNANCHORED | |
| | | | | | 368 | | | | | | | | 368 | 622 | 41110 | 368 | FT | PORTABLE BARRIER, ANCHORED | |
| | | | | | | | | | | | | | | | | | | | |
| | | | 5 | | | | | | | | | | 5 | 829 | 00100 | 5 | SNMT | WORK ZONE EGRESS WARNING SYSTEM | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | ***INCIDENTALS*** | |
| | | | | | | | | | | | | | LS | 614 | 11000 | LS | | MAINTAINING TRAFFIC | 16 |
| | | | | | | | | | | | | | LS | 623 | 10000 | LS | | CONSTRUCTION LAYOUT STAKES AND SURVEYING | |
| | | | | | | | | | | | | | LS | 624 | 10000 | LS | | MOBILIZATION | |

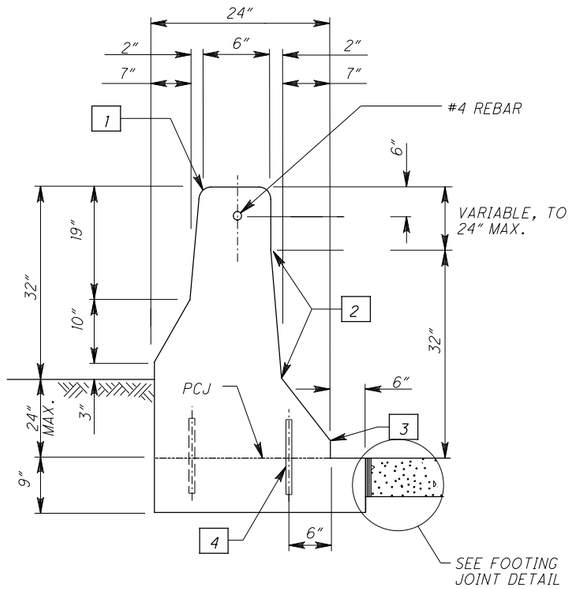
CALCULATED DAM CHECKED DCJ

# GENERAL SUMMARY

HAM-50-(28.08)(28.24)

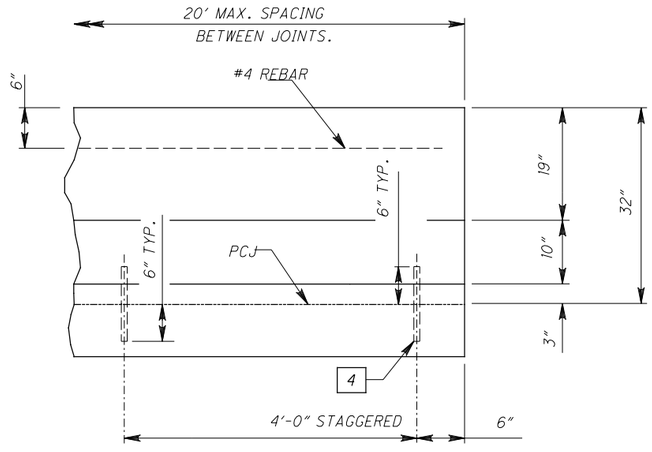



TYPE A



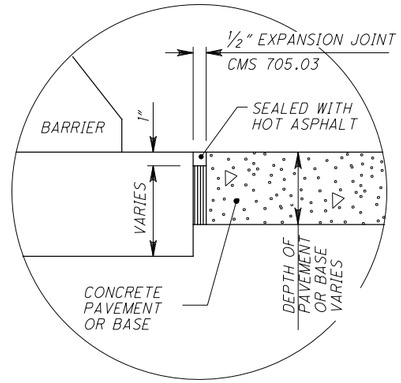

TYPE C

## NORMAL SECTIONS




32" BARRIER

## BARRIER ELEVATION




FOOTING JOINT DETAIL
SEE FOOTING NOTE

## NOTES

**JOINTS:** UNSEALED CONTRACTION JOINTS SPACED AT 20' MAXIMUM SHALL BE CONSTRUCTED THROUGHOUT THE RUN OF CONCRETE BARRIER EXCEPT THAT EXPANSION JOINTS SHALL BE USED AT THE CENTER LINE OF AND AROUND EACH BRIDGE PIER COLUMN AND ON EITHER SIDE OF OVERHEAD SIGN SUPPORTS, INLETS AND LIGHT POLE FOUNDATIONS. IF THE INLET TOP IS SLIP FORMED, THE EXPANSION JOINTS ADJACENT TO IT MAY BE OMITTED.

CONTRACTION JOINTS MAY BE CONSTRUCTED WITH METAL INSERTS INSIDE THE FORMS, PREFORMED FULL WIDTH JOINT FILLER, A GROOVING TOOL, OR BY SAWING. INSERTS, TOOLED JOINTS, AND SAWED JOINTS SHALL HAVE A 3" [75] MINIMUM DEPTH. ALL JOINTS SHALL BE CONSTRUCTED FOR THE FULL HEIGHT OF THE BARRIER INCLUDING THE FOOTING. SAWING SHALL BE DONE AS SOON AS CURING WILL ALLOW, TO PREVENT SPALLING.

**FOOTING JOINTS:** THE VERTICAL WALLS BETWEEN THE BARRIER FOOTING AND A CONCRETE PAVEMENT OR CONCRETE BASE SHALL BE PROVIDED WITH A SEALED JOINT AS SHOWN ON THIS SHEET. SEALING MATERIAL SHALL CONFORM TO CMS 702.01.

PCJ = PERMISSIBLE CONSTRUCTION JOINT

**MEASUREMENT:** ITEM 622 - BARRIER MISC.: NEW JERSEY SHAPE A OR C. IS PAID FOR IN FEET AS TYPE A OR TYPE C WITH APPROPRIATE DEDUCTIONS FOR OTHER ITEMS SUCH AS:

| | |
|---|---|
| ITEM 611 - INLET, NO. 3A, AS PER PLAN | 20 FT. |
| ITEM 611 - INLET, NO. 3C, AS PER PLAN | 20 FT. |
| ITEM 622 - BARRIER TRANSITION, AS PER PLAN, EACH. | SEE SHEETS 71 & 72 FOR BARRIER TRANSITION LEGNTHS |

**TRANSITIONS:** LINEAR TRANSITIONS BETWEEN THE DIFFERENT TYPES OF BARRIER DETAILED ON THIS DRAWING SHALL OCCUR BETWEEN CONTRACTION JOINTS SPACED NO CLOSER THAN 10'.

**REFLECTORIZATION:** BARRIER REFLECTORIZATION SHALL BE INSTALLED IN ACCORDANCE WITH CMS 626.

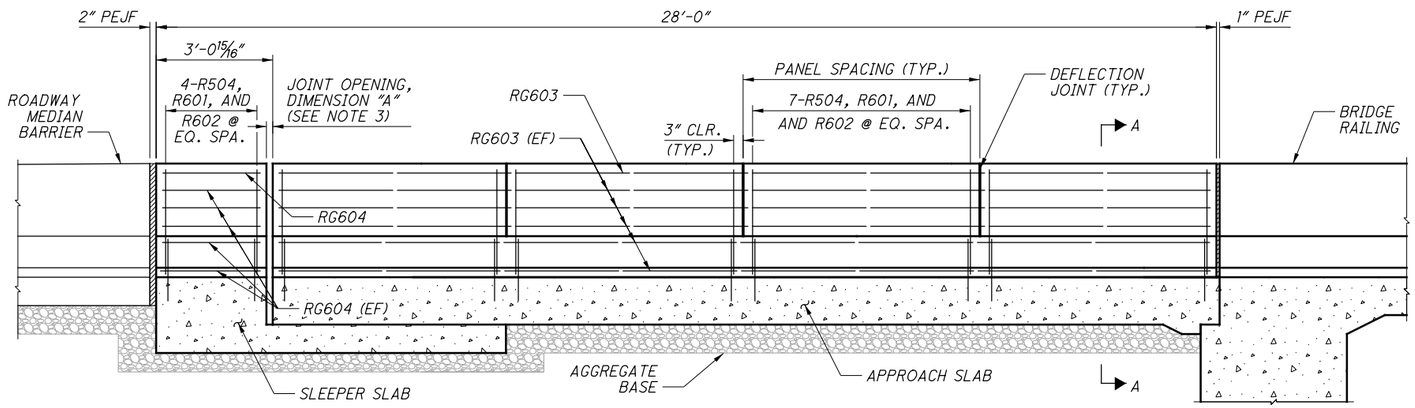
## LEGEND

1. 1" RADIUS OR *" CHAMFER.
2. PERMISSIBLE 10" RADIUS.
3. PERMISSIBLE 1" RADIUS.
4. #8 EPOXY COATED DEFORMED STEEL BARS, 1'-0" LONG, SPACED 4'-0" BETWEEN SUCCESSIVE BARS ON A STAGGERED PATTERN. OMIT DOWELS WHEN THE TOP IS CONSTRUCTED INTEGRALLY WITH THE BASE.

CALCULATED DAM
CHECKED DPF

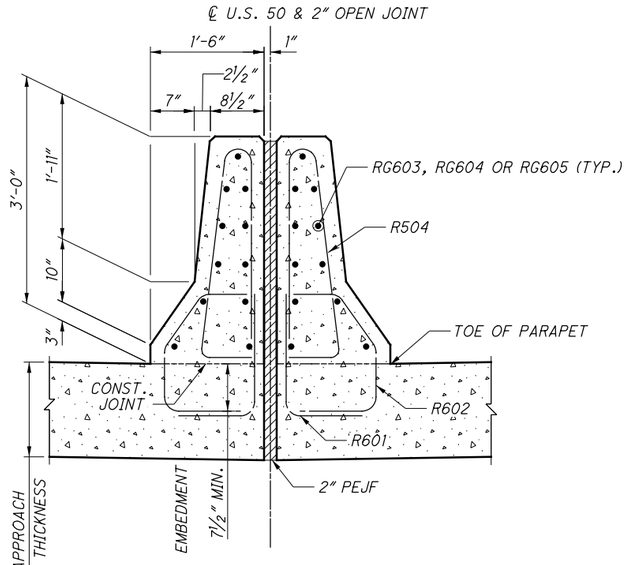
# NEW JERSEY SHAPE BARRIER DETAILS

HAM-50-(28.08)(28.24)




## APPROACH SLAB RAILING ELEVATION

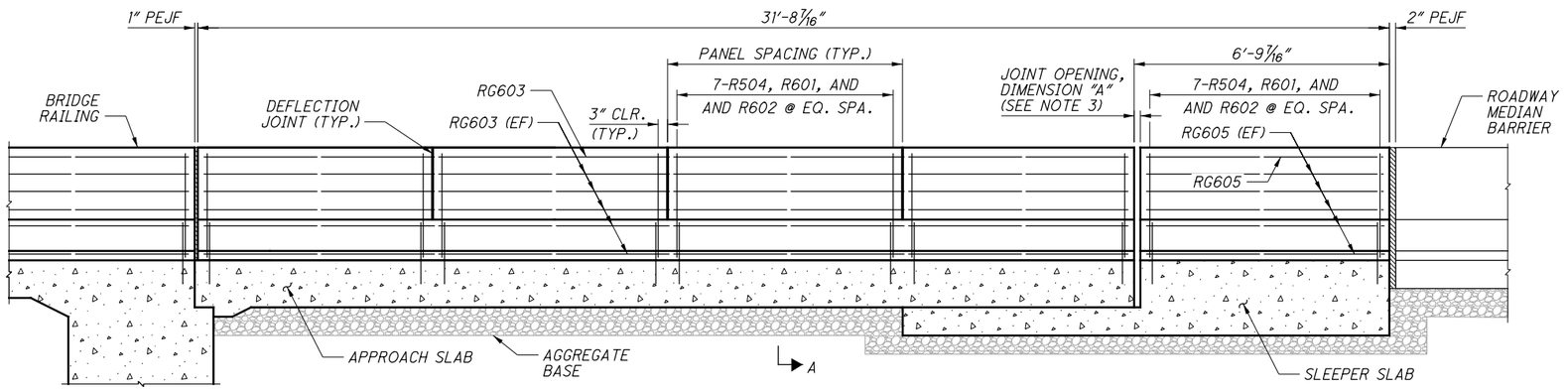
(EASTBOUND REAR, WESTBOUND FORWARD)




## SECTION A-A

(APPROACH SLAB RAILING)

DETAILS AND REINFORCING APPLY TO BOTH WESTBOUND AND EASTBOUND PARAPETS




## APPROACH SLAB RAILING ELEVATION

(EASTBOUND FORWARD, WESTBOUND REAR)

## NOTES

1. SEE SHEET 31/40 FOR RAILING PLAN.

2. PAYMENT FOR THE APPROACH SLAB MOUNTED MEDIAN PARAPETS SHALL BE MADE UNDER ITEM 511, CLASS QC3 CONCRETE, MISC.: BRIDGE DECK (MEDIAN PARAPETS) WITH QC/QA.

3. FOR JOINT OPENING, DIMENSION "A" SEE SHEET 7 OF STD. DWG. AS-2-15.

DESIGN AGENCY
Palmer ENGINEERING
8350 E. KEMPER RD. - SUITE 8
ENGINEERING CINCINNATI, OH 45249
CINCINNATI | AKRON | WILLIAMSBURG

| DESIGNED | DRAWN | REVIEWED | DATE |
|---|---|---|---|
| TES | TES | BJF | 12/18/2020 |
| CHECKED | REVISED | STRUCTURE FILE NUMBER | |
| JPR | | 3103781 | |

# 36" NEW JERSEY SHAPE CONCRETE APPROACH RAILING DETAILS

BRIDGE NO. HAM-50-2825
OVER RAMP H

HAM-50-(28.08)(28.24)
PID No. 100800

33/40

155/162

0:\ODOT\HAM\100800_HAM-50-28.10_28.35\Design\Structures\HAM050_2835C\Sheets\050_2835C_SA002.dgn Sheet 3/4/2022 2:14:09 PM scott.w