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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.

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

### ITEM 606 - IMPACT ATTENUATOR, TYPE 3, (UNIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE TYPE 3 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE (REFER TO THE POSTED SHOP DRAWINGS FOR THE MOST CURRENT APPROVED PRODUCT MODELS). WHEN BI-DIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. THE FACE OF THE IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

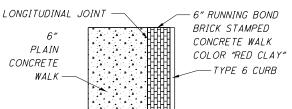
PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 3, (UNIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS/BACKSTOPS, TRANSITIONS, HARDWARE AND GRADING. NOT SEPARATELY SPECIFIED. AS REQUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

## ITEM 608 - WALKWAY, MISC .: DECORATIVE CONCRETE WALK

THIS ITEM IS FOR USE IN THE "TREE LAWN" OR "UTILITY STRIP" BETWEEN THE BACK OF CURB AND THE PROPOSED CONCRETE WALK FOR THE STREETS NOTED IN THE TYPICAL SECTIONS. UTILITY POLES AND OTHER SUCH ITEMS THAT ARE LESS THAN HALF THE WIDTH THE DECORATIVE TREATMENT SHALL BE CONTINUOUS AND THE SAW CUTS SHALL BE INCIDENTAL AND AS DIRECTED BY THE ENGINEER.

THE TYPICAL SECTION SHALL BE AS NOTED IN THE DETAIL. ALL WORK SHALL CONFORM TO ODOT CMS ITEM 608 UNLESS OTHERWISE NOTED HEREIN:

THIS ITEM 608 WALKWAY, MISC .: DECORATIVE CONCRETE WALK WILL BE MEASURED BY THE SQUARE FOOT OF FINISHED SURFACE COMPLETE IN PLACE. THE ACCEPTED QUANTITIES OF THIS ITEM WILL BE PAID FOR AT THE CONTRACT PRICES DESIGNATED. THE CONTRACT PRICE SHALL INCLUDE ALL
LABOR, MATERIAL, EQUIPMENT, AND INCIDENTAL ITEMS NEEDED
FOR ITEM 608, WALKWAY MISC.: DECORATIVE CONCRETE WALK,
COMPLETE IN PLACE. CONTRACTION AND EXPANSION JOINTS
SHALL BE PLACED IN LINE WITH EACH OF THOSE PROVIDED IN ADJACENT, WALK, EXCAVATION, BACKFILL, BASE COURSE MATERIAL, REINFORCING STEED EXPANSION JOINT MATERIAL, CONTRACTION JOINTS AND OTHER RELATED MISCELLANEOUS ITEMS WILL NOT BE PAID FOR SEPARATELY, BUT THE COST THEREOF SHALL BE INCLUDED IN THE COST OF THE ITEM OF WHICH THEY ARE A PART. PAYMENT FOR ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT PRICE FOR: ITEM 608 WALKWAY, MISC .: DECORATIVE CONCRETE WALK.



ITEM 606 - IMPACT ATTENUATOR, TYPE 3, (UNIDIRECTIONAL), AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A TYPE 3 IMPACT ATTENUATOR THAT IS NOT LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. THE CONTRACTOR SHALL SUBMIT MANUFACTURER SHOP DRAWINGS; ODOT APPROVAL MUST BE OBTAINED PRIOR TO ORDERING ANY MATERIAL. THIS UNIDIRECTIONAL ATTENUATOR SHALL BE RATED FOR 50 MPH AND FIT THE GORE AREA BETWEEN RAMPS 5 AND 5A. THE WIDTHS BETWEEN THE TWO BARRIERS IS 11.73'.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID PER EACH FOR ITEM 606, IMPACT ATTENUATOR, TYPE 3, (UNIDIRECTIONAL), AS PER PLAN AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUP/BACKSTOPS, TRANSITIONS, HARDWARE AND FOUNDATION PAVING, NOT SEPARATELY SPECIFIED, AS REOUIRED BY THE MANUFACTURER. INSTALLATION SHALL BE AT THE LOCATION SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

### ITEM 609- COMBINATION CURB & GUTTER, TYPE 2, AS PER PLAN

THIS ITEM OF WORK SHALL CONSIST OF CONSTRUCTING ITEM 609, COMBINATION CURB & GUTTER, TYPE 2, MEETING THE MOST CURRENT STANDARDS SET FORTH BY THE CITY OF AKRON DEPARTMENT OF PUBLIC SERVICE. SEE DETAILS ON SHEET 41 .

### ITEM 609- COMBINATION CURB & GUTTER, TYPE 3, AS PER PLAN A & B

THIS ITEM OF WORK SHALL CONSIST OF CONSTRUCTING ITEM 609, COMBINATION CURB & GUTTER, TYPE 3 MEETING THE MOST CURRENT STANDARDS SET FORTH BY THE CITY OF AKRON DEPARTMENT OF PUBLIC SERVICE. SEE DETAILS ON SHEET 41 .

## ITEM 607 - FENCE MISC .: TEMPORARY CONSTRUCTION FENCE

THIS ITEM SHALL CONSIST OF THE PLACEMENT AND REMOVAL OF ORANGE PLASTIC CONSIST OF THE PLACEMENT AND REMOVAL OF ORANGE PLASTIC CONSTRUCTION FENCE TO BE PLACED AT THE CONSTRUCTION LIMITS OF THE ST. MARY'S ROMAN CATHOLIC CHURCH, 750 S. MAIN ST. ALL LABOR, EOUIPMENT AND MATERIALS NECESSARY TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 607 - FENCE MISC .: TEMPORARY CONSTRUCTION FENCE (FT). ITEM 607 - FENCE, MISC.: TEMPORARY CONSTRUCTION FENCE
1000 FT

# 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.

## ITEM 619 FIELD OFFICE, TYPE C, AS PER PLAN

THIS WORK CONSISTS OF PROVIDING, MAINTAINING, AND SUBSEQUENTLY REMOVING A FIELD OFFICE FOR THE EXCLUSIVE USE OF THE DEPARTMENT FOR THE DURATION OF THE CONTRACT AT A LOCATION APPROVED BY THE ENGINEER.

FURNISH A COMPLETELY FUNCTIONAL FIELD OFFICE OF THE TYPE SPECIFIED IN THE CONTRACT PRIOR TO BEGINNING WORK.

THE FIELD OFFICE WILL BE A SUITE TYPE OFFICE (NO TRAILER OR MODULAR OFFICE) WITH A MINIMUM OF 3,000 SOUARE FEET AND AT GROUND LEVEL WITH A MINIMUM CEILING HEIGHT OF EIGHT (8) FEET. PROVIDE TWO (2) OUTSIDE DOORS, LOCKABLE VANDAL PROOF CYLINDER TYPE DEAD BOLTS AND LOCKABLE WINDOWS. THE FLOOR SPACE WILL BE DIVIDED INTO A RESTROOM, ONE GENERAL OFFICE AREA (MINIMUM 400 SQUARE FEET), NOT LESS THAN THREE INDIVIDUAL OFFICES (MINIMUM 300 SQUARE FEET EACH). AND ONE CONFERENCE ROOM (MINIMUM 500 SQUARE FEET), AS DEEMED NECESSARY BY THE ENGINEER.

FURNISH EACH FIELD OFFICE WITH A MEANS FOR MAINTAINING ROOM TEMPERATURE BETWEEN 68°F AND 80°F.

FURNISH ELECTRIC SERVICE FOR EACH FIELD OFFICE.

FURNISH NEAT, SANITARY, ENCLOSED TOILET ACCOMMODATIONS CONNECTED TO AN EXISTING SANITARY SEWER LINE FOR THE USE OF THE OCCUPANTS OF THE FIELD OFFICE, MEETING APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. FURNISH ASSOCIATED LAVATORY AND SANITARY SUPPLIES. POTABLE HOT AND COLD RUNNING WATER WILL BE PROVIDED IN THE RESTROOM FOR SANITARY PURPOSES.

## ITEM 619 FIELD OFFICE, TYPE C, AS PER PLAN (CONT.)

FURNISH TRASH COLLECTION SERVICE / DUMPSTER.

FURNISH PROFESSIONAL, BONDED AND INSURED JANITORIAL SERVICE WITH A WEEKLY CLEANING OF THE ENTIRE OFFICE TO INCLUDE THE RESTROOM FACILITIES FOR THE DURATION OF THE

FURNISH BOTTLED DRINKING WATER SERVICE WITH A HOT AND COLD DISPENSER AND ASSOCIATED SUPPLIES.

PROVIDE A LOCKABLE WOOD OR METAL STORAGE BOX OF SUFFICIENT SIZE TO STORE A NUCLEAR DENSITY GAUGE AND AN ELECTRICAL CONNECTION FOR THE GAUGE.

TELEPHONE SERVICE AND TELEPHONES, INCLUDING ALL NECESSARY WIRING, WILL BE SUPPLIED AT EACH DESK, THE CONFERENCE ROOM, AND THE GENERAL OFFICE AREA INTERCONNECTED BETWEEN TELEPHONES. ALL TELEPHONES WILL BE EQUIPPED WITH SPEAKER PHONE AND TWO (2) LINE CAPABILITIES WITH TWO (2) LINE SERVICE AT EACH LOCATION. A TOTAL OF THREE (3) OUTSIDE LINES WILL BE PROVIDED, ONE OF WHICH WILL BE DEDICATED FOR THE USE OF THE FACSIMILE MACHINE. THE TWO (2) LINES FOR THE TELEPHONE WILL HAVE THE ABILITY TO AUTOMATICALLY TRANSFER TO THE NEXT LINE IF ANOTHER LINE IS IN USE.

PROVIDE A BROADBAND INTERNET CONNECTION CAPABLE OF MINIMUM DOWNLOAD SPEEDS GREATER THAN 10 MBPS, UPLOAD SPEEDS GREATER THAN 2 MBPS, AND NETWORK LATENCY LESS THAN 50 MILLISECONDS. WHEN MULTIPLE BROADBAND SERVICES ARE AVAILABLE, THE FOLLOWING IS THE PREFERRED ORDER: CABLE, DSL, CÉLLULAR, AND WIRELESS RADIO. SATELLITE COMMUNICATION IS NOT COMPATIBLE WITH ODOT VPN CONNECTION AND WILL NOT BE ACCEPTED. SUPPLY ALL WIRING, ROUTERS, MODEMS (CAPABLE TO BE CONFIGURED IN BRIDGE MODE), SOFTWARE, AND INCIDENTALS NECESSARY TO CONNECT FIVE (5) PERSONAL COMPUTERS AT SEPARATE LOCATIONS, DESIGNATED BY THE PROJECT ENGINEER, THROUGHOUT THE OFFICE TO THE SYSTEM.

PROVIDE THE FOLLOWING OFFICE FURNITURE AND EQUIPMENT:

- 1. SIX (6) TELEPHONES WITH SPEAKER PHONE AND TWO (2) LINE CONNECTION
- 2. ONE (1) DIGITAL ANSWERING MACHINE WITH TIME / DATE STAMP
- 3. ONE (1) MULTI-FUNCTION COLOR COPIER THAT IS SET UP FOR SCANNING, PRINTING, FAXING, AND COPYING WITH THE FOLLOWING SPECIFICATIONS:

A. COLOR PRINT/COPY/SCAN

- B. COPY/PRINT SPEED: 30 PPM (LETTER), 15 PPM (LEGAL), 15 PPM (LEDGER), OR HIGHER.
- C. DUPLEX PRINTING SUPPORT
  D. AUTOMATIC DOCUMENT FEEDER WITH 50 SHEET
  DUPLEXING DOCUMENT FEEDER
- E. COPIER MEMORY: 1 GB
- F. INSTALLED HDD: 40 GB G. DATA ENCRYPTION AND HDD ERASE SUPPORT INCLUDED
- WITH MACHINE H. INTERNAL STAPLER SUPPORT
- I. PAPER CAPACITY: 250 SHEET X 2 TRAYS, 50 SHEET BYPASS TRAY
- J. NETWORK INTERFACE: 10/100 BASE-TX, 1000 BASE-TX K. ANALOG FAX SUPPORT INCLUDED WITH MACHINE
- L. COLOR SCANNING WITH THE FOLLOWING REQUIREMENTS: RESOLUTION: 600 X 600 DPI
  SCAN AREA UP TO 11 1/2 X 17 1/2
  SCANNING PROTOCOL SUPPORT TCP/IP, SMTP, SMB, FTP, POP3, NCP
- iv. FILE SCAN TYPES SUPPORTED: SINGLE PAGE TIFF
- JPEG, PDF, MULTI-PAGE TIFF, PDF, AND OCR PDF SCANNING SUPPORT FOR SCAN-TO-EMAIL, HDD, SMB (FOLDER), URL, AND TWAIN
- M. NETWORK PROTOCOL SUPPORT FOR TCP/IP N. CLIENT AND SERVER PRINT DRIVER SUPPORT FOR PCL
- PRINT DRIVERS O. SERVER OPERATING SYSTEM SUPPORT FOR WINDOWS SERVER 2008 AND WINDOWS SERVER 2008 R2 (32 BIT/64
- P. CLIENT PRINT DRIVER SUPPORT FOR WINDOWS
- XP/WINDOWS 7 (BOTH PCL 32 BIT/64 BIT)
  O.MINIMUM PRINT/COPY RESOLUTION OF 600 X 600 DPI R. SECURE PRINTING WITH PASSWORD OR PIN FROM CLIENT TO COPIER
- S. PROVIDE THE COPIER WITH ALL NECESSARY TONER PAPER SUPPLIES, AND A SERVICE CONTRACT WITH A RESPONSE TIME OF 24 HOURS OR LESS FOR MAINTENANCE AND SUPPLIES OF THE COPY MACHINE.

## ITEM 619 FIELD OFFICE, TYPE C, AS PER PLAN (CONT.)

- 4. ONE (I) SLIM DESIGN GPS ENABLED DIGITAL CAMERA, 12.1
  MEGAPIXELS, IMAGE RESOLUTION UP TO 4000 X 2248, 20X
  OPTICAL ZOOM, 4X DIGITAL ZOOM, 3" LCD SCREEN,
  PANORAMA MODE, IMAGE STITCHING, MOVIE MODE, USB 2.0
  INTERFACE AND SHALL INCLUDE THE FOLLOWING ACCESSORIES;
  16 GB SECURE DIGITAL MEMORY CARD, LITHIUM ION
  RECHARGEABLE BATTERY, BATTERY CHARGER, AC ADAPTER,
  WRIST STRAP, USB INTERFACE CABLE, AUDIO/VIDEO CABLE,
  SOFT FORM FITTING CARRYING CASE, DIGITAL PHOTO
  SOFTWARE FOR PC COMPUTER. WINDOWS 8 COMPATIBLE. ONE
  (I) DIGITAL HD FLASH MEMORY VIDEO CAMERA, 16 GB INTERNAL
  MEMORY, 3" MINIMUM LCD SCREEN SIZE, 60X OPTICAL ZOOM,
  2000X DIGITAL ZOOM, 470K VIDEO RESOLUTION, SUPER
  STEADY SHOT IMAGE STABILIZATION, SUPER NIGHT SHOT
  INFRARED SYSTEM FOR FULL COLOR IMAGING IN LOW LIGHT
  CONDITIONS, BUILT-IN MICROPHONE, RECHARGEABLE LITHIUM
  ION BATTERY, BATTERY CHARGER, AC ADAPTER, CARRYING
  CASE, UNIVERSAL TRIPOD, USB INTERFACE CABLE, DIGITAL
  VIDEO CAMERA SOFTWARE FOR PC COMPUTER.
  5. EIGHT (8) PRINTING DESK CALCULATORS WITH TAPE.
  6. EIGHT (8) DESK AND CHAIR SETS.
  7. TEN (10) STACKABLE CHAIRS.
  8 EIGHT (9) DESK AND CHAIR SETS.

- 7. TEN (10) STACKABLE CHAIRS. 8. EIGHT (8) WORK TABLES, 30" X 72" 9. ONE (1) DRAFTING/PLAN TABLE WITH A MINIMUM 36" X 60" WORKING SURFACE WITH AN APPROPRIATE ADJUSTABLE HEIGHT DRAFTING CHAIR
- 10. THREE (3), 4-DRAWER, LOCKABLE, LEGAL SIZE METAL FILING
- 11. FOUR (4), 2-DRAWER, LOCKABLE, LEGAL SIZE METAL FILING CABINETS.
- 12. THREE (3) PORTABLE, TYPE 2-A:10-BC, FIVE POUND SIZE FIRE
- EXTINGUISHERS.

  13. THREE (3) PLAN RACKS, EACH CAPABLE OF HANDLING THE BREAKDOWN OF 22 X 34 INCH SIZED PLANS INTO TEN SECTIONS. TWENTY (20) ALL-WEATHER PARKING SPACES.
- 15.EIGHT (8) 24-OUART WASTE BASKETS WITH APPROPRIATE SIZED TRASH BAGS. 16.ONE (1) NEW PROJECTOR TO BE USED BY THE PROJECT WITH
- - i.ONE (1) NEW PROJECTOR TO BE USED BY THE PROJECT WITH
    THE FOLLOWING SPECIFICATIONS:

    A. MATIVE RESOLUTION 1920 x 1080

    B. ENGINE TYPE LCD
    C. ASPECT RATIO 16:9
    D. RATED CONTRAST RATIO 70,000:1
    E. RATED BRIGHTNESS 2500 ANSI LUMENS
    F. ZOOM OPTICAL
    G. COMPUTER INTERFACES ANALOG VGA, HDMI, MHL
    H. VIDEO INTERFACES COMPONENT, COMPOSITE, HDMI,
    MHI
  - MHL
    1. SUPPORTED VIDEO FORMATS 480p, 720p, 1080i, 576i, 576p, 480i, 1080p
    J. USB PORTS
    K. WIRELESS REMOTE CONTROL
    L. BUILT IN SPEAKERS
- L. BUILI IN SPEAKERS
  M. ALL ACCESSORIES NECESSARY TO OPERATE
  17. ONE (I) NEW TELEVISION WITH THE FOLLOWING
  SPECIFICATIONS:
  A. DIAGONAL SCREEN SIZE 55"
  B. NATIVE RESOLUTION 1920 x 1080
  C. HDMI PORTS 3

  - D. VIDEO INTERFACES COMPOSITE, HDMI, USB E. ALL ACCESSORIES NECESSARY TO OPERATE F. ALL HARDWARE NECESSARY TO HANG THE TELEVISION ON

EXPENSES FOR THE OPERATION OF THE FIELD OFFICE TO INCLUDE BUT NOT BE LIMITED TO ELECTRICAL SERVICE, HEATING/COOLING, RUNNING WATER SERVICE, SEWER SERVICE, TELEPHONE SERVICE, JANITORIAL SERVICE, BOTTLED WATER SERVICE, HIGH SPEED ONLINE SERVICE, ETC. WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL ALSO PROVIDE ALL NECESSARY SUPPLIES AND MAINTENANCE FOR ALL EQUIPMENT THAT THE CONTRACTOR IS REQUIRED TO FURNISH

FURNISH A CONCRETE CYLINDER CURING BOX CAPABLE OF HOLDING AT LEAST EIGHT 6X12 INCH (150 X 300MM) CYLINDERS AT 73 DEG F (23 DEG C) +/- 3 DEGREES NO MATTER WHAT THE AMBIENT TEMPERATURE IS WHEN CONSTRUCTING EITHER PORTLAND CEMENT CONCRETE PAVEMENT OVER 10,000 SOUARE YARDS (8000 SOUARE METERS) OR OVER 50 CUBIC YARDS (38 CUBIC METERS) OF BRIDGE STRUCTURE REPAIR OR REPLACEMENT CONCRETE. THE BOX WILL HAVE A SEALED LID.

THE CONTRACTOR WILL RETAIN RESPONSIBILITY FOR RISK OF LOSS OR DAMAGE TO SAID FIELD OFFICE, FURNISHINGS, AND EOUIPMENT WHILE THE OFFICE IS IN USE FOR THIS CONTRACT.

THE FIELD OFFICE WILL BE APPROVED IN ADVANCE BY THE ENGINEER AND FULLY OPERATIONAL WITHIN 30 DAYS AFTER THE SIGNING AND EXECUTION OF THE CONTRACT OR PRIOR TO THE START OF ANY CONSTRUCTION WORK, WHICHEVER COMES FIRST.

THE DEPARTMENT WILL MEASURE FIELD OFFICE, TYPE C, AS PER PLAN BY THE NUMBER OF MONTHS THE OFFICE IS MAINTAINED. A PARTIAL MONTH AT THE END OF THE PROJECT WILL BE PAID

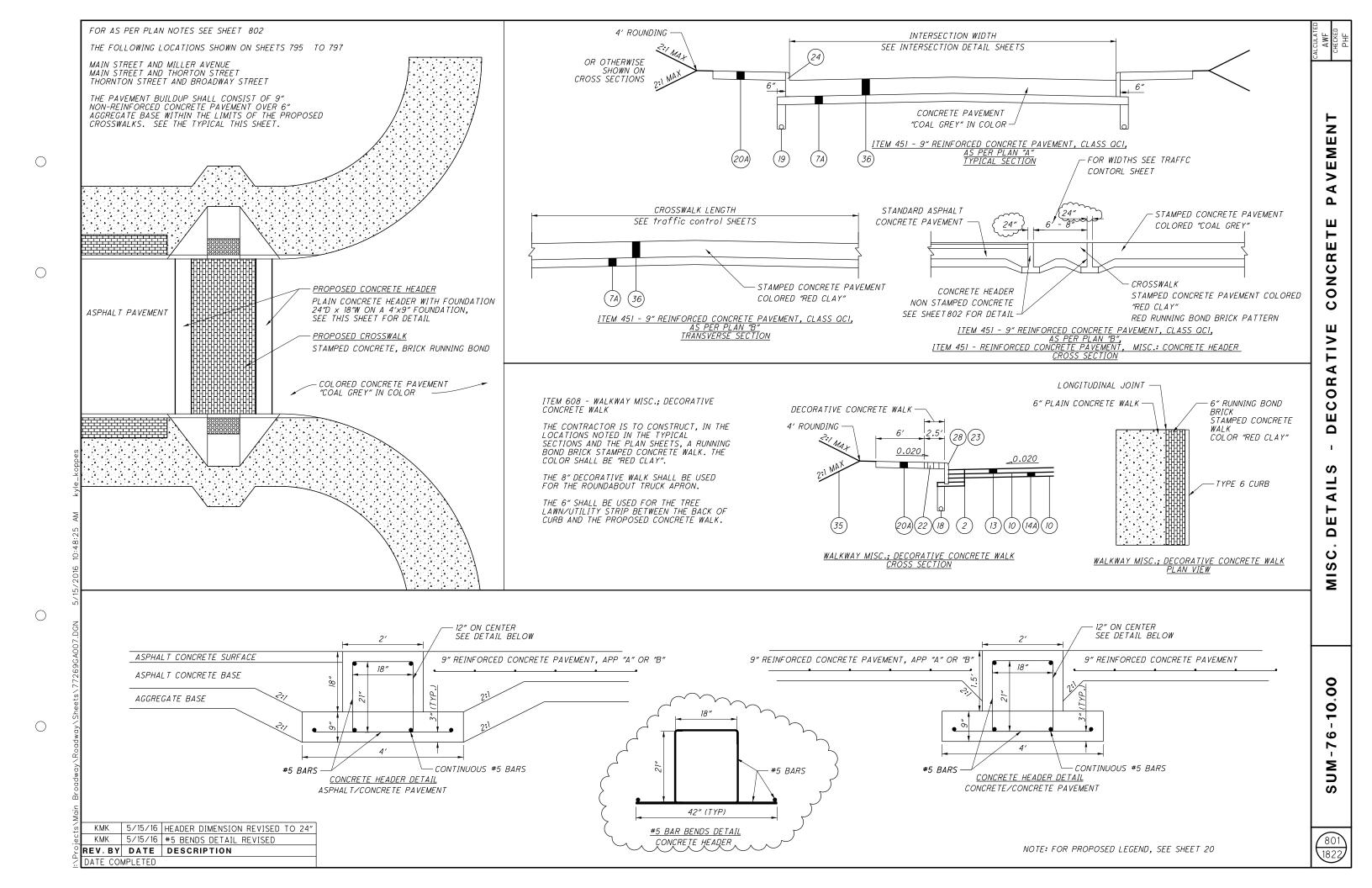
THE DEPARTMENT WILL PAY FOR ACCEPTED OUANTITIES AT THE CONTRACT PRICE AS FOLLOWS:

FIELD OFFICE, TYPE C. AS PER PLAN

5/15/16 REINFORCING STEEL REMOVED REV. BY DATE DESCRIPTION DATE COMPLETED

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THE MATERIALS AND PROCEDURES SHALL CONFORM TO CURRENT SPECIFICATIONS ISSUED BY THE BOMANITE CORPORATION. SYMONS AND INCRETE ARE ALTERNATE APPROVED SYSTEMS.

#### CONTACT INFORMATION:

BOMANITE CORPORATION 232 S. SCHOONER AVENUE MADERA, CA 93637 (559) 673-2411 - PHONE (559) 673-8246 - FAX BOMANITE@BOMANITE.COM WWW.BOMANITE.COM

DAYTON SUPERIOR CORPORATION 7777 WASHINGTON VILLAGE DR., SUITE 130 DAYTON, OH 45459 (877) 632-9866 - PHONE (937) 428-6360 - FAX INFO@DAYTONSUPERIOR.COM WWW.DAYTONSUPERIOR.COM

INCRETE SYSTEMS *1611 GUNN HIGHWAY* ODESSA, FL 33556 (800) 752-4626 - PHONE (813) 920-0826 - FAX SALES@INCRETE.COM WWW.INCRETE.COM

LOCAL CONTACTS: BOMANITE DESIGNS, INC. 6001 PINECONE DRIVE MENTOR, OH 44060 (440) 350-3900 - PHONE (440) 350-0035 - FAX WWW.BOMANITEDESIGNS.COM C/O TIMOTHY J. BASLER

SYMONS 600 SEASONS RD STOW, OH 44060 (330) 689-9999 - PHONE (330) 689-7123 - FAX WWW.SYMONS.COM INFO@SYMONS.COM

INCRETE SYSTEMS 1611 GUNN HIGHWAY ODESSA, FL 33556 (800) 752-4626 - PHONE (813) 920-0826 - FAX SALES@INCRETE.COM WWW.INCRETE.COM

THE WORKMANSHIP SHALL COMPLY WITH QUALITY STANDARDS SET FORTH BY THE BOMANITE CORPORATION.

THE WORK SHALL BE COMPLETED BY A LICENSED INSTALLER WHO HAS BEEN TRAINED AND EQUIPPED BY THE MANUFACTURER. UNLESS OTHERWISE NOTED.

SYMONS AND INCRETE ARE ALTERNATE APPROVED SYSTEMS

#### SCOPE OF WORK

THIS ITEM SHALL INCLUDE, BUT NOT LIMITED TO, FURNISHING AND INSTALLING, APPLYING, OR PERFORMING:

- EXPANSION MATERIAL, MAY BE BY OTHER QUALIFIED CONTRACTOR.
- FIBER REINFORCED CONCRETE WITH INTEGRAL COLOR DYES TO В. PRODUCE A SPECIFIED COLOR.
  COLOR HARDENERS OF SPECIFIED COLORS
- COLOR RELEASE AGENTS OF SPECIFIED COLORS.
- IMPRINTING OF SPECIFIED PATTERNS.
- PRESSURE WASHING.
- SAWCUTTING. G.
- SFALER.
- REMOVAL OF ALL DEBRIS AND EXCESS MATERIAL FROM THE SITE, MAY BE BY OTHER QUALIFIED CONTRACTOR.

### QUALITY ASSURANCE

THE CONTRACTOR SHALL SUBMIT WITH THEIR BID PACKAGE EVIDENCE THAT A QUALIFIED FOREMAN OR SUPERVISOR WILL BE ON-SITE TO OVERSEE THE DECORATIVE CONCRETE PAVEMENT OPERATION WITH THE FOLLOWING MINIMUM QUALIFICATIONS WHICH SHALL BE MET OR EXCEEDED IN ORDER FOR THEIR BID TO BE ACCEPTABLE:

- FIVE (5) YEARS EXPERIENCE WITH IMPRINTED AND TEXTURED CONCRETE.
- SUCCESSFULLY COMPLETED FIVE (5) IMPRINTED CONCRETE
- INSTALLATIONS AND REFERENCES TO THOSE INSTALLATIONS. MUST BE A LICENSED CONTRACTOR WHO HAS BEEN TRAINED AND EQUIPPED BY THE SELECTED SYSTEMS CORPORATION.

THE FIVE COMPLETED INSTALLATIONS SHALL BE OF HIGH-QUALITY, SIMILAR IN SCOPE TO THAT SPECIFIED HEREIN, AND WITHIN 100 MILES RADIUS OF THIS PROPOSED PROJECT SITE.

#### QUALITY ASSURANCE (CONT'D)

THE CONTRACTOR SHALL PROVIDE JOB SITE SAMPLE PADS OF MINIMUM 100 SO. FT. FOR EACH COLOR AND IMPRINTING SCENARIO TO BE APPROVED BY THE ENGINEER PRIOR TO THE START OF THE DECORATIVE CONCRETE PAVEMENT CONSTRUCTION. ALL COLORS AND IMPRINTS SHALL BE SUBJECT TO CHANGE BY THE ENGINEER. THE APPROVED SAMPLE PADS SHALL BE THE STANDARD FOR THE BALANCE OF THE WORK AND PROTECTED AGAINST DAMAGE UNTIL COMPLETION OF THE DECORATIVE CONCRETE PAVEMENT AND FINAL APPROVAL BY THE ENGINEER.

#### CONSTRUCTION METHOD

FORMWORK SHALL BE OF METAL, UNLESS OTHERWISE PERMITTED BY THE ENGINEER, AND SHALL EXTEND THE FULL-DEPTH OF THE CONCRETE AND BE OF SUFFICIENT STRENGTH TO RESIST THE PRESSURE OF THE CONCRETE WITHOUT DEFLECTION. FORMWORK SHALL BE KEPT CLEAN AND SHALL BE OILED JUST BEFORE PLACING THE CONCRETE.

EXPANSION MATERIAL SHALL BE PLACED ADJACENT TO ALL CONCRETE CURBS AND CONCRETE HEADERS.

THE FINAL FINISHED SURFACE OF THE DECORATIVE CONCRETE PAVEMENT SHALL NOT BE MORE THAN 1/16 INCH ABOVE OR BELOW THE ADJACENT

### **MATERIALS**

THE MATERIALS SHALL BE AS DESIGNATED ON THE PLAN SHEET SET AND AS FURTHER DESIGNATED BELOW.

- A.EXPANSION MATERIAL. EXPANSION MATERIAL SHALL BE CLOSED-CELL EXPANDED POLYETHYLENE FOAM PER 516 ADDENDUM.
- B.CONCRETE. CONCRETE SHALL BE PER 451 WITH THE FOLLOWING **FXCFPTIONS:**
- 1. 451.09 JOINTS: AS DETAILED IN THE PROPOSED POUR PLAN SUBMITTED TO MEET THE REQUIREMENTS OF SECTION 4 -CONSTRUCTION METHODS
- 2.451.10 CONSOLIDATING AND FINISHING: THE CONCRETE SHALL BE PLACED AND SCREEDED TO THE FINISHED GRADE, AND FLOATED TO A UNIFORM SURFACE USING STANDARD FINISHING TECHNIQUES.

THE CONTRACTOR MAY SUBMIT AN ALTERNATE DECORATIVE CONCRETE MIX DESIGN TO THE ENGINEER BEFORE PLACING CONCRETE. THE ALTERNATE CONCRETE MIX DESIGN SHALL BE APPROVED IN WRITING BY THE ENGINEER PRIOR TO THE PLACING OF ANY DECORATIVE CONCRETE. INCLUDE THE FOLLOWING INFORMATION FOR EACH CONCRETE MIX DESIGN:
1. TYPE AND GRADATION OF FINE AND COURSE AGGREGATES.

- 2. PROPORTIONS OF ALL INGREDIENTS, INCLUDING ADMIXTURES ADDED
- EITHER AT TIME OF BATCHING OR ON THE JOB SITE. 3. CEMENT RATIO
- 4. WATER-CEMENT RATIO .UNIT WEIGHT OF CONCRETE.
- 6. NOMINAL SLUMP RANGE AND MAXIMUM SLUMP.
- 7. STRENGTH AT 4, 7, AND 28 DAYS.
- C.INTEGRAL COLOR DYE. INTEGRAL COLOR DYE SHALL BE RED CLAY (BOMANITE CORPORATION COLOR CHART) FOR THE STAMPED BRICK.
- D.COLOR HARDENER. COLOR HARDENER SHALL BE HEAVY DUTY GRADE

COLOR HARDENER SHALL BE APPLIED EVENLY TO THE SURFACE OF THE FRESH CONCRETE BY THE DRY-SHAKE METHOD USING A MINIMUM OF 60 POUNDS PER 100 SQ. FT. IT SHALL BE APPLIED IN TWO (2) OR MORE SHAKES, FLOATED AFTER EACH SHAKE, AND TROWELED ONLY AFTER THE

- E.COLOR RELEASE AGENT. COLOR RELEASE AGENT SHALL BE LIQUID.
- COLOR RELEASE AGENT SHALL BE APPLIED EVENLY TO THE TROWELED SURFACE PRIOR TO IMPRINTING.
- F. IMPRINTING TOOL. IMPRINTING TOOL SHALL BE RUNNING BOND BRICK, AS PER PLAN.

IMPRINTING TOOLS SHALL BE APPLIED WHILE THE CONCRETE IS IN THE PLASTIC STAGE OF SET.

- G. SEALER. SEALER COLOR SHALL BE CLEAR PER PLAN.
- SEALER SHALL BE APPLIED IMMEDIATELY AFTER COMPLETING THE IMPRINTING PROCESS.

COLOR CHART SHALL BE PROVIDED AS SHOP DRAWINGS FOR FURTHER COLOR SELECTIONS PRIOR TO CONSTRUCTION. SEVERAL MOCK UPS OF COLOR SELECTIONS MAY BE REQUESTED (10 SO. FT.) AT NO ADDITIONAL COST.

#### METHOD OF MEASUREMENT

THIS PROVISION SHALL INCLUDE MEASUREMENT OF THE ACTUAL SOUARE YARDS OF DECORATIVE CONCRETE PAVEMENT CONSTRUCTED AND APPROVED. FINAL QUANTITIES WILL BE DETERMINED FROM THE ENGINEER'S FINAL MEASUREMENT.

#### BASIS OF PAYMENT

ALL COSTS TO PERFORM THE ABOVE STATED WORK INCLUDING ALL MATERIALS, EQUIPMENT, TOOLS, LABOR, AND ALL INCIDENTAL AND ASSOCIATED COSTS SHALL BE PAID FOR UNDER THE ITEM 451 - 9" REINFORCED CONCRETE PAVEMENT, CLASS OCI, AS PER PLAN (A) AND ITEM 451 - 9" REINFORCED CONCRETE PAVEMENT, CLASS OCI, AS PER PLAN (B")

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KMK | 5/15/16 | APP REFERENCE REVISED FROM "B" TO "A" AND "C" TO "B" REV. BY DATE DESCRIPTION

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