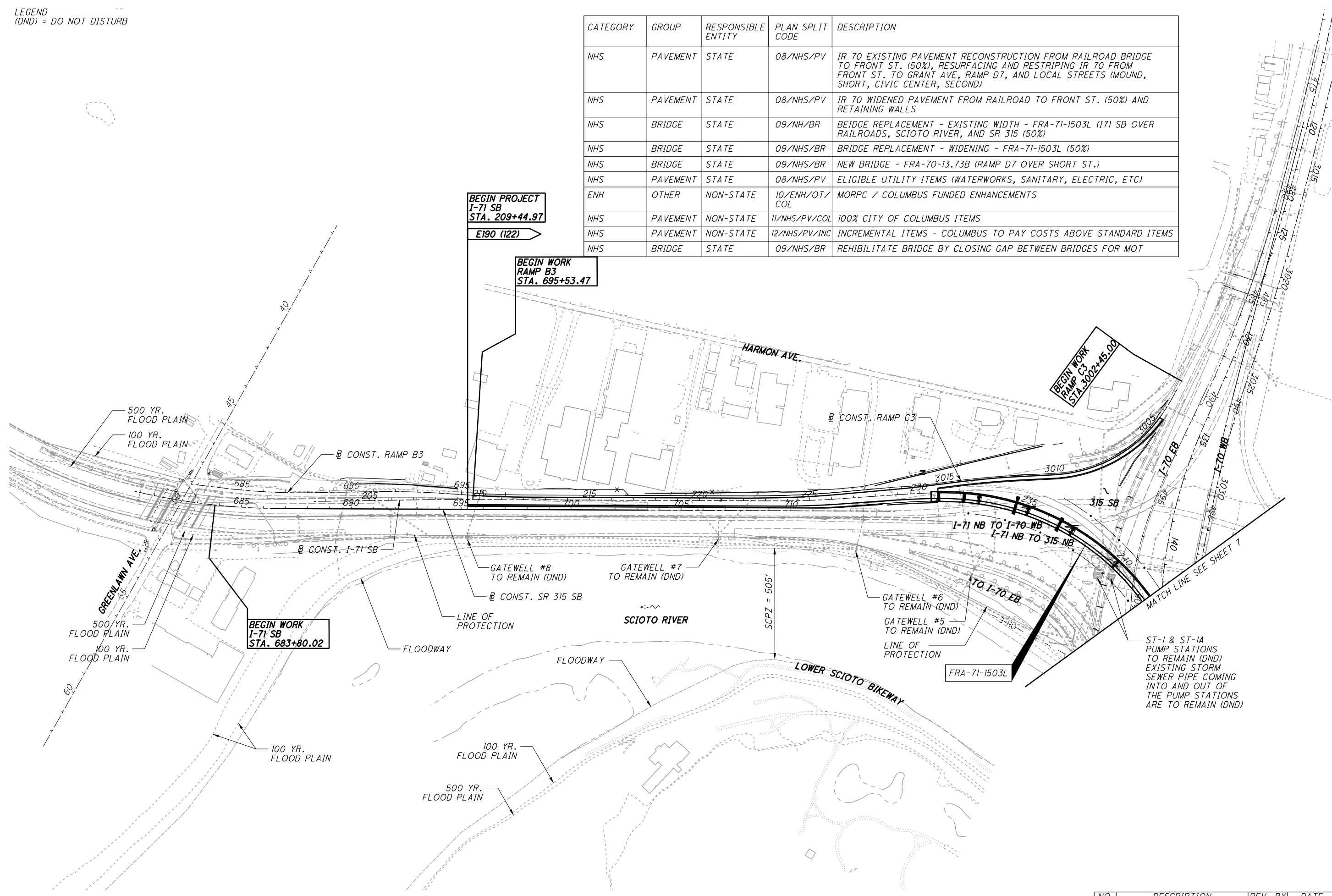


LEGEND
(DND) = DO NOT DISTURB

CATEGORY	GROUP	RESPONSIBLE ENTITY	PLAN SPLIT CODE	DESCRIPTION
NHS	PAVEMENT	STATE	08/NHS/PV	IR TO EXISTING PAVEMENT RECONSTRUCTION FROM RAILROAD BRIDGE TO FRONT ST. (50%), RESURFACING AND RESTRIPING IR 70 FROM FRONT ST. TO GRANT AVE, RAMP D7, AND LOCAL STREETS (MOUND, SHORT, CIVIC CENTER, SECOND)
NHS	PAVEMENT	STATE	08/NHS/PV	IR 70 WIDENED PAVEMENT FROM RAILROAD TO FRONT ST. (50%) AND RETAINING WALLS
NHS	BRIDGE	STATE	09/NH/BR	BEIDGE REPLACEMENT - EXISTING WIDTH - FRA-71-1503L (I71 SB OVER RAILROADS, SCIOTO RIVER, AND SR 315 (50%))
NHS	BRIDGE	STATE	09/NHS/BR	BRIDGE REPLACEMENT - WIDENING - FRA-71-1503L (50%)
NHS	BRIDGE	STATE	09/NHS/BR	NEW BRIDGE - FRA-70-13.73B (RAMP D7 OVER SHORT ST.)
NHS	PAVEMENT	STATE	08/NHS/PV	ELIGIBLE UTILITY ITEMS (WATERWORKS, SANITARY, ELECTRIC, ETC)
ENH	OTHER	NON-STATE	10/ENH/OT/COL	MORPC / COLUMBUS FUNDED ENHANCEMENTS
NHS	PAVEMENT	NON-STATE	11/NHS/PV/COL	100% CITY OF COLUMBUS ITEMS
NHS	PAVEMENT	NON-STATE	12/NHS/PV/INC	INCREMENTAL ITEMS - COLUMBUS TO PAY COSTS ABOVE STANDARD ITEMS
NHS	BRIDGE	STATE	09/NHS/BR	REHABILITATE BRIDGE BY CLOSING GAP BETWEEN BRIDGES FOR MOT



SCHEMATIC PLAN

FRA-71-14.36

NO.	DESCRIPTION	REV. BY	DATE
1	REVISE PLAN SPLITS	TAZ	09/30/21
4	REVISE PLAN SPLITS	TAZ	11-29-2021



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ITEM SPECIAL - SURVEY CONTROL VERIFICATION

THE CONTRACTOR SHALL PERFORM THIS WORK TO VERIFY THE PROVIDED SURVEY CONTROL. THE CONTRACTOR WILL PERFORM THE VERIFICATION USING ONE OF THE TWO METHODS BELOW DEPENDENT UPON THE CONTRACTOR'S CHOSEN MEANS OF SURVEY CONTROL TO BE USED ON THE PROJECT. THE WORK SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF AN OHIO LICENSED SURVEYOR.

- 1) IF USING GPS DEVICES TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
 - A. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
 - B. PERFORM A SITE CALIBRATION UTILIZING THE AVAILABLE HORIZONTAL AND VERTICAL CONTROL POINTS PROVIDED IN THE PLAN.
 - C. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.

- 2) IF USING CONVENTIONAL SURVEY INSTRUMENTATION TO ESTABLISH AND OR PROVIDE SUPPLEMENTAL HORIZONTAL AND VERTICAL SURVEY CONTROL
 - A. LOCATE VERTICAL CONTROL POINTS PROVIDED IN THE PLANS AND PERFORM A DIFFERENTIAL LEVEL CIRCUIT.
 - B. LOCATE AND OBSERVE ANGLE AND DISTANCE TO ALL AVAILABLE HORIZONTAL CONTROL POINTS PROVIDE IN THE PLAN
 - C. PROVIDE A REPORT, SIGNED BY AN OHIO LICENSED SURVEYOR, TO THE PROJECT ENGINEER COMPARING THE OBSERVED DATA TO THE PLAN DATA ALONG WITH A NARRATIVE DETAILING ANY DISCREPANCIES FOUND.

ALL MATERIALS, LABOR, EQUIPMENT, TOOLS. AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID ITEM 690E98400, SPECIAL-SURVEY CONTROL VERIFICATION

ITEM SPECIAL - EMERGENCY CLOSURE

THIS ITEM WILL COVER PAYMENT FOR ALL WORK ASSOCIATED WITH THE EMERGENCY ACTION PLAN FOR PART 2. THIS INCLUDES BUT IS NOT LIMITED TO: STOCKPILING OF EMERGENCY FILL MATERIALS FOR EXCAVATIONS AS SHOWN IN THE EMERGENCY ACTION PLAN; EMERGENCY BACKFILLING AS NEEDED AND THEN REMOVAL OF TEMPORARY BACKFILL MATERIALS FROM THE EXCAVATION AFTER THE FLOOD EVENT AND FROM THE SITE ONCE THE WORK IS COMPLETED.

LOCATIONS POTENTIALLY REQUIRING EMERGENCY CLOSURE ARE DESCRIBED IN THE EMERGENCY ACTION PLAN AND INCLUDE THE SANITARY FORCEMAIN, FRA-71-1503L PIERS 9L AND 9R, FRA-70-13.22L WESTERN ABUTMENT AND FRA-70-1323C WESTERN ABUTMENT.

RIPARIAN HABITAT

EXISTING RIPARIAN HABITAT ZONES ALONG THE SCIOTO RIVER SHALL BE MAINTAINED TO THE MAXIMUM EXTENT PRACTICABLE DURING PROJECT CONSTRUCTION.

STREAM CHANNEL EXCAVATION

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT ANY INCIDENTAL DISCHARGES ASSOCIATED WITH THE CONSTRUCTION WORK ALONG AND WITHIN THE SCIOTO RIVER CHANNEL. THIS PERTAINS TO ANY EXCAVATION OPERATION SUCH AS, FOUNDATION PIER OR ABUTMENT EXCAVATION, EXCAVATION FOR ROCK CHANNEL PROTECTION AND REMOVAL OF ANY TEMPORARY FILL ASSOCIATED WITH CONSTRUCTION OPERATIONS. A SPILL/RUNOFF CONTAINMENT SYSTEM SHALL BE UTILIZED TO PREVENT OR MINIMIZE THE LIKELIHOOD OF CONTAMINANTS ENTERING THE RIVER. COST OF THE CONTAINMENT SYSTEM SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 832 - EROSION CONTROL (EACH).

ENDANGERED BAT HABITAT REMOVAL

THIS PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THROUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS: A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

LOWER SCIOTO BIKEWAY (LSB) AND SCIOTO AUDUBON METRO PARK (SAMP)

THE CONTRACTOR WILL KEEP OPEN EITHER THE EXISTING LOWER SCIOTO BIKEWAY OR THE CONSTRUCTED DETOUR ROUTE IN ORDER TO MINIMIZE INTERACTION BETWEEN TRAIL USERS AND CONSTRUCTION ACTIVITIES, EXCEPT FOR THE TWO-WEEK PARK CLOSURE PERIODS. BOTH TRAILS MUST BE CLOSED WHEN THE PARK IS CLOSED TO ENSURE THE SAFETY OF TRAIL USERS.

TO ENABLE THE CONTRACTOR TO HAUL MATERIALS TO THE PROJECT SITE, THE SCIOTO AUDUBON METRO PARK SHALL BE ALLOWED TO BE CLOSED FOR A PERIOD OF TWO (2) WEEKS BETWEEN JANUARY 1, 2022 AND MARCH 15, 2022 AND AGAIN BETWEEN NOVEMBER 1, 2022 AND MARCH 15, 2023. THE CONTRACTOR MUST NOTIFY ODOT AT LEAST 14 DAYS IN ADVANCE OF THE REQUESTED CLOSURE.

THE CONTRACTOR SHALL MAINTAIN ACCESS TO THE GRANGE INSURANCE AUDUBON CENTER, PRIVATE BUSINESSES, AND UTILITY COMPANY PROPERTIES DURING THE 2-WEEK CLOSURE PERIODS OF THE SCIOTO AUDUBON METRO PARK. OUTSIDE THE 2- WEEK CLOSURE PERIODS, TRUCK DELIVERIES WILL BE ALLOWED FROM 9:00PM THRU 6:00AM APRIL 1ST THRU SEPTEMBER 30TH AND 6:00PM TO 7:00AM OCTOBER 1ST THRU MARCH 31ST. OUTSIDE OF THOSE DESIGNATED HOURS, ONLY TRUCKS WITH A TOTAL WEIGHT OF LESS THAN 13 TONS WILL BE ALLOWED TO BE WITHIN THE SCIOTO AUDUBON METRO PARK.

ANY CONCRETE POUR THAT IS LARGER THAN 200 CUBIC YARDS IS TO BE PERFORMED OUTSIDE OF SCIOTO AUDUBON METRO PARK HOURS (6:30 AM TO 8:00 PM). CONCRETE POURS SMALLER THAN 200 CUBIC YARDS MAY BE PERFORMED DURING SAMP HOURS THIS WILL BE THE ONLY EXCEPTION TO THE TONNAGE RESTRICTION ABOVE. THE CONTRACTOR WILL INSTALL SIGNAGE AT THE PARK ENTRANCE TO NOTIFY USERS OF HIGHER THAN USUAL TRUCK TRAFFIC FOR THESE EVENTS.

IF ADDITIONAL CLOSURES OF THE LOWER SCIOTO BIKEWAY OR LOWER SCIOTO BIKEWAY DETOUR ARE ANTICIPATED, THE CONTRACTOR SHALL NOTIFY THE CITY OF COLUMBUS, FRANKLIN COUNTY METRO PARKS, AND ODOT AT LEAST 7 DAYS BEFORE THE REQUESTED CLOSURE IS TO OCCUR.

DURING PERIODS OF NO CONSTRUCTION ACTIVITY, THE EXISTING LOWER SCIOTO BIKEWAY WILL BE OPEN FOR PUBLIC USE. VEHICULAR, PEDESTRIAN, AND BICYCLE ACCESS WILL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION ACTIVITIES EXCEPT FOR THE 2-WEEK CLOSURE PERIODS OF THE SCIOTO AUDUBON METRO PARK.

APPROPRIATE SIGNAGE SHALL BE INSTALLED TO ALERT USERS OF THE SCIOTO AUDUBON METRO PARK AND THE LOWER SCIOTO BIKEWAY OF CONSTRUCTION ACTIVITIES, ACCESS RESTRICTIONS OR CLOSURES, AND TO DIRECT USERS TO SECONDARY ACCESS POINTS. SEE TRAFFIC CONTROL PLANS ON PART 1

NO CONSTRUCTION ACTIVITY SHALL OCCUR DURING RED WHITE AND BOOM AND ONE DAY PRECEDING THE EVENT. THE CONSTRUCTION ACTIVITY LIMITATION DATES FOR RED WHITE AND BOOM FOR EACH YEAR WILL BE PROVIDED TO THE CONTRACTOR BY ODOT.

THE STAGING AND/OR STORAGE OF CONSTRUCTION EQUIPMENT SHALL NOT TAKE PLACE OUTSIDE OF THE FENCED CONSTRUCTION LIMITS WITHIN THE DEFINED BOUNDARIES OF THE SCIOTO AUDUBON METRO PARK.

THE CONTRACTOR SHALL BE REQUIRED TO CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH ODOT DISTRICT 6, COLUMBUS RECREATION AND PARKS, AND FRANKLIN COUNTY METRO PARKS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.

A REPRESENTATIVE FROM COLUMBUS RECREATION AND PARKS AND FRANKLIN COUNTY METRO PARKS SHALL BE INVITED TO ATTEND ALL CONSTRUCTION RELATED MEETING. A SCHEDULE OF CONSTRUCTION ACTIVITIES SHALL BE PROVIDED TO COLUMBUS RECREATION AND PARKS, AND SCIOTO AUDUBON METRO PARK REPRESENTATIVES. CONTACT INFORMATION:

COLUMBUS RECREATION AND PARKS:
BRAD WESTALL, (614) 645-2441 BRWESTALL@COLUMBUS.GOV

FRANKLIN COUNTY METRO PARKS:
D.J. WHITE, (614) 445-1076

THE LOWER SCIOTO BIKEWAY AND LOWER SCIOTO BIKEWAY DETOUR WILL NOT BE USED FOR ACCESS TO THE WORK AREA, EXCEPT AT THE DESIGNATED CROSSINGS WITHIN EACH PHASE.

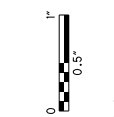
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GENERAL NOTES

FRA-71-14.36

NO.	DESCRIPTION	REV. BY	DATE
4	ADDED NOTE	LM	11-24-2021
4	Revise LSB Note	TAZ	11-24-2021

44
1228



ITEM 202E11501 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

DURING CONSTRUCTION, THERE IS THE POTENTIAL FOR THE CONTRACTOR TO ENCOUNTER (8) ABANDONED CONCRETE PIER FOUNDATIONS ALONG MOUND STREET FROM APPROXIMATELY STATION 10+68 TO STATION 13+45. IF THESE STRUCTURES SHOULD BE ENCOUNTERED DURING CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL REMOVE THE PORTION OF THE STRUCTURE IN CONFLICT WITH PROPOSED CONSTRUCTION ACTIVITY PER C&S 109.05. THE COST FOR EACH ITEM SHALL BE \$1.00. THE FIXED AMOUNT SHOWN ON THE PROPOSAL IS INCLUDED (AS ANY OTHER BID ITEMS) IN THE TOTAL BID AMOUNT. THIS FIXED AMOUNT IS THE DEPARTMENT'S ESTIMATE OF THE TOTAL COST OF PORTIONS OF STRUCTURE REMOVED THAT IS REQUIRED TO BE PERFORMED WITHIN THE WORK LIMITS AS DIRECTED BY THE ENGINEER. C&S TABLE 104.02-2 DOES NOT APPLY TO REDUCTIONS IN THIS CONTRACT ITEM. FORCE ACCOUNT RECORDS SHALL BE KEPT TO TRACK AND ULTIMATELY DETERMINE THE AMOUNT OF THE PAY ITEM USED.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE.

202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
25,000 EACH

ITEM 611 - CONDUIT BORED OR JACKED, AS PER PLAN:

WHERE IT IS SPECIFIED THAT A CONDUIT BE INSTALLED BY THE METHOD OF BORING OR JACKING, NO TRENCH EXCAVATION SHALL BE CLOSER THAN 25 FEET OR AS SPECIFIED IN THE PLANS TO THE NEAREST RAIL. PROVIDE A 36 INCH STEEL CASING PIPE CONFORMING TO ODOT'S SPECIFICATIONS 748.06 HAVING JOINTS WITH A CIRCUMFERENTIAL FULLY PENETRATING B-U4B WELD THAT IS PERFORMED BY AN ODOT APPROVED FIELD WELDER. HYDROSTATIC TESTING IS NOT REQUIRED FOR THE CASING PIPE. THE CASING PIPE SHALL MEET OR EXCEED THE DESIGN REQUIREMENTS AS SPECIFIED IN "CSX DESIGN & CONSTRUCTION SPECIFICATIONS, PIPELINE OCCUPANCIES" REVISION DATE OCTOBER 14, 2015.

THE 36 INCH STEEL CASING PIPE SHALL HAVE A WALL THICKNESS OF 0.532 INCHES. THE INSTALLED CASING PIPE SHALL CONTAIN A 18 INCH STORM SEWER CARRIER PIPE. THE CARRIER PIPE SHALL BE AN 18" AWWA C905 GASKETED INTEGRAL BELL PVC PIPE, PC 200, DR 21.

ALL LABOR AND MATERIALS FOR THE INSTALLATION OF THE 36" CASING PIPE SHALL AND THE COST OF CONSTRUCTING THE 18" CARRIER PIPE PIPE SHALL BE PAID FOR AS:

ITEM 611 - CONDUIT, BORED AND JACKED, AS PER PLAN

BACKFILL FOR FORCEMAINS

FOR THE VOID CREATED TO EXCAVATE AND CONSTRUCT THE PROPOSED FORCE MAINS, WEST OF THE RIVER IN THE AREA OF THE EXISTING STORMWATER PUMP STATION, THE EXCAVATION AND BACKFILL SHALL BE PER THE CITY OF COLUMBUS SPECIFICATION 901 AND THE MOST RECENT USACE STANDARD OPERATING PROCEDURE (SOP) FOR EXCAVATION BENCHING AND/OR BACKFILL COMPACTION FOR LEVEE AND FLOODWALL MODIFICATIONS (14 JUNE 2021 LATEST VERSION).

USACE PROCEDURES AND GUIDANCE SHALL SUPERCEDE AND SHALL BE FOLLOWED FOR ALL EXCAVATION BENCHING AND BACKFILL WITHIN THE LEVEE EMBANKMENT AND WITHIN 15 FEET OF THE TOE OF THE LEVEE OR FACE OF FLOODWALL. ALL LEVEE EMBANKMENT MATERIAL AND LEVEE FOUNDATION MATERIAL DISTURBED DURING EXCAVATION FOR THE INSTALLATION OF THE FORCE MAINS SHALL BE REPLACED ACCORDING TO THE USACE SOP.

ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTING THE FORCE MAINS

STANDARD OPERATING PROCEDURE FOR EXCAVATION BENCHING AND/OR BACKFILL COMPACTION FOR LEVEE AND FLOODWALL MODIFICATIONS - 14 JUNE 2021

1. PLACING BACKFILL WITHIN THE LEVEE EMBANKMENT WILL REQUIRE THE FOLLOWING:

- A) THE SURFACE OF THE LEVEE SHALL BE STRIPPED OF ORGANICS AND TOPSOIL TO A DEPTH OF APPROXIMATELY 6 INCHES PRIOR TO BENCHING THE LEVEE SIDESLOPE.
- B) THE EXISTING LEVEE EMBANKMENT SHALL BE OVER-EXCAVATED IN ALL DIRECTIONS BY BENCHING 1 FT VERTICAL AND 3 FT HORIZONTAL INTO STIFF UNDISTURBED SOIL. A LEVEL BOTTOM SURFACE DAY-LIGHTING TOWARD THE LEVEE TOE SHALL BE PROVIDED FROM WHICH THE UPWARD BENCHING ON THE SIDES SHALL INITIATE. BENCHING MAY HAVE TO BE PERFORMED BY HAND METHODS OR USING SMALL-SCALE EXCAVATION EQUIPMENT.
- C) THE LEVEE SOIL ON WHICH THE BACKFILL IS TO BE PLACED SHOULD NOT BE EXCAVATED UNTIL IMMEDIATELY BEFORE BACKFILLING, AND SHALL NOT BE ALLOWED TO BECOME OVERLY WET OR DRY WHILE EXPOSED. THE SURFACE AREA OF THE BENCHES SHALL BE SCARIFIED AS NECESSARY TO ENSURE A GOOD BOND BETWEEN THE EXISTING SOIL AND THE BACKFILL MATERIAL.
- D) BACKFILL MATERIAL MUST BE LOW PERMEABILITY SOILS - IMPERMEABLE SOILS (E.G. SC, CL OR CL-ML WITH AN ESTIMATED HYDRAULIC CONDUCTIVITY LESS THAN 1 X10⁻⁵ CM/SEC) IN ACCORDANCE WITH ASTM 2488 - USCS CLASSIFICATION SYSTEM.
- E) BACKFILL MATERIAL SHALL BE PLACED IN LOOSE LIFTS WITH THICKNESSES NOT TO EXCEED 6-INCHES AND COMPACTED TO A MINIMUM OF 95 PERCENT STANDARD PROCTOR DENSITY DETERMINED AT OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D-698. MOISTURE CONTROL LIMITS ARE TO BE WITHIN -1% TO +3% OF OPTIMUM.
- F) COMPACTION TEST RESULTS OF WORK ACCOMPLISHED IN ITEM "E" ABOVE SHALL BE SUBMITTED TO USACE FOR REVIEW THROUGHOUT THE CONSTRUCTION PROCESS.
- G) EARTHWORK SPECIFICATION REQUIREMENTS SHALL BE SUBMITTED FOR REVIEW.
- H) THE FINISHED RIVERSIDE OR LANDSIDE SLOPE OF THE LEVEE SHALL BE GRADED TO MATCH THE EXISTING LEVEE SLOPES UPSTREAM AND DOWNSTREAM. A SITE-SPECIFIC GRADING PLAN MUST BE APPROVED FOR PROJECTS WHERE THE FINAL GRADE DIFFERS FROM THE ORIGINAL GRADE.
- I) THE DISTURBED AREAS SHALL BE SEEDED AND COVERED WITH A BIO-DEGRADABLE GEOTEXTILE WHEN FINAL GRADING IS COMPLETE.

2. PLACING BACKFILL MATERIALS OUTSIDE THE PROJECTED LEVEE SLOPES BUT WITHIN A MINIMUM OF 15 FEET OF THE TOE OF THE LEVEE OR FACE OF THE FLOODWALL REQUIRES THE FOLLOWING:

- A) BACKFILL MATERIAL MUST BE LOW PERMEABILITY SOILS - IMPERMEABLE SOILS (E.G. SC, CL OR CL-ML WITH AN ESTIMATED HYDRAULIC CONDUCTIVITY LESS THAN 1 X10⁻⁵ CM/SEC) IN ACCORDANCE WITH ASTM 2488 - USCS CLASSIFICATION SYSTEM. ALTERNATIVELY, CONTROLLED LOW STRENGTH MATERIAL (E.G. FLOWABLE FILL) MEETING THE ABOVE CONDUCTIVITY REQUIREMENTS AND THE GOVERNING STATE'S DOT STANDARD SPECIFICATION MAY ALSO BE USED AS BACKFILL MATERIAL.
- B) BACKFILL SHALL BE PLACED IN LOOSE LIFTS WITH THICKNESSES NOT TO EXCEED 8-INCHES AND COMPACTED TO A MINIMUM OF 95 PERCENT STANDARD PROCTOR DENSITY DETERMINED AT OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D-698, UNLESS OTHERWISE DIRECTED. MOISTURE CONTROL LIMITS ARE TO BE WITHIN -1% TO +3% OF OPTIMUM.
- C) THE DISTURBED AREAS SHALL BE SEEDED AND COVERED WITH A BIO-DEGRADABLE GEOTEXTILE WHEN FINAL GRADING IS COMPLETE.

ITEM 611 - CONDUIT UNDER RAILROAD

THE STATE SHALL PAY TO THE RAIL COMPANY ALL COSTS FOR WATCHMEN OR FLAGGERS DEEMED NECESSARY BY THE RAIL COMPANY, OR OCCASIONED BY THE OPERATIONS OF THE CONTRACTOR, OR ANY SUB-CONTRACTOR, IN CARRYING FORWARD THE INSTALLATION OF PIPE OR CONDUIT UNDER THE RAILROAD PER THE PLAN. THE COSTS FOR WATCHMEN OR FLAGGERS REQUIRED BY AN ALTERNATE METHOD OF INSTALLATION SHALL BE PAID TO THE RAIL COMPANY BY THE CONTRACTOR. THE COSTS FOR WATCHMEN OR FLAGGERS OCCASIONED BY THE NEGLIGENCE OF THE CONTRACTOR, OR ANY SUB-CONTRACTOR, IN CONNECTION WITH THE INSTALLATION OF THE PIPE OR CONDUIT SHALL BE PAID BY THE CONTRACTOR.

TRACK SUPPORTS REQUIRED BY THE RAIL COMPANY IN CONNECTION WITH THE INSTALLATION OF THE PIPE OR CONDUIT PER THE PLAN SHALL BE INCLUDED IN THE COMPANY FORCE ACCOUNT WORK AND PAID BY THE STATE. THE COST OF ANY TRACK SUPPORTS REQUIRED BY AN ALTERNATE METHOD OF INSTALLATION OF THE PIPE OR CONDUIT SHALL BE SHALL BE PAID TO THE RAIL COMPANY BY THE CONTRACTOR.

THE CONTRACTOR SHALL SECURE APPROVAL OF HIS OPERATIONS FROM THE STATE AND THE RAIL COMPANY. THE RAIL COMPANY WILL PERFORM AN ENGINEERING REVIEW OF METHODS OF OPERATIONS AND ENGINEERING SUPERVISION OF CONSTRUCTION WITHOUT COST TO THE CONTRACTOR.

PRIOR TO BIDDING, THE CONTRACTOR SHALL COORDINATE WITH THE RAIL COMPANY TO AGREE UPON THE REQUIREMENTS OF WATCHMEN AND FLAGGERS TO PROTECT RAILROAD TRAFFIC DURING THE CONTRACTOR'S OPERATIONS. THE CONTRACTOR SHALL EXECUTE A BOND IN FAVOR OF BOTH THE STATE AND THE COMPANY AS REQUIRED BY SECTION 5525.16 OF THE REVISED CODE OF OHIO.

THE CONTRACTOR SHALL CO-OPERATE WITH THE RAILROAD OFFICIALS CONCERNING WORK ADJACENT TO RAILROAD TRACKS, IN ORDER TO AVOID DELAY TO, OR INTERFERENCE WITH RAILROAD TRAFFIC, AND SHALL NOTIFY THE COMPANY 40 HOURS IN ADVANCE OF CONSTRUCTION OPERATIONS.

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.

NORFOLK SOUTHERN NOTES

FOR PROJECTS EXCEEDING 30 DAYS OF CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE THE FLAGMAN A SMALL WORK AREA WITH A DESK/COUNTER AND CHAIR WITHIN THE FIELD/SITE TRAILER, INCLUDING THE USE OF BATHROOM FACILITIES, WHERE THE FLAGMAN CAN CHECK IN/OUT WITH THE PROJECT, AS WELL AS TO THE FLAGMAN'S HOME TERMINAL. THE WORK AREA SHOULD PROVIDE ACCESS TO TWO (2) ELECTRICAL OUTLETS FOR RECHARGING RADIO(S), AND A LAPTOP COMPUTER; AND HAVE THE ABILITY TO PRINT OFF NEEDED DOCUMENTATION AND ORDERS AS NEEDED AT THE FIELD/SITE TRAILER. THIS SHOULD AID IN MAXIMIZING THE FLAGMAN'S TIME AND EFFICIENCY ON THE PROJECT.

ALL UTILITY INSTALLATIONS OR RELOCATIONS THAT ARE REQUIRED IN CONJUNCTION WITH THIS PROJECT CAN BE INSTALLED OR RELOCATED AS PART OF THE PROJECT PROVIDED THE CONSTRUCTION IS PERFORMED BY THE PROJECT CONTRACTOR OR PROJECT CONTRACTOR'S SUB-CONTRACTOR. HOWEVER, THE UTILITY MUST SUBMIT AN APPLICATION FOR THE INSTALLATION OR RELOCATION TO AECOM FOR APPROPRIATE HANDLING FOR LICENSE AGREEMENT AND APPLICABLE FEES. FOR UTILITY APPLICATIONS GO TO:

www.nscorp.com > Real Estate > NS Services > Wire, Pipeline and Fiber Optics Projects

NOTE: LICENSE AGREEMENT MUST BE EXECUTED PRIOR TO UTILITY BEING INSTALLED OR RELOCATED.

TOP OF RAIL ELEVATIONS SHALL BE CHECKED AND THE MINIMUM VERTICAL CLEARANCE VERIFIED BEFORE START OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE NORFOLK SOUTHERN ENGINEER PUBLIC IMPROVEMENTS.

NORFOLK SOUTHERN WILL BE PROVIDED AS-BUILT DRAWINGS OF THE BRIDGES SHOWING THE ACTUAL CLEARANCES AS CONSTRUCTED. DEPTH, SIZE, AND LOCATION OF ALL FOUNDATION COMPONENTS SHALL BE SHOWN ON THE DRAWINGS.

ITEM 253 - PAVEMENT REPAIR, AS PER PLAN

THE PAVEMENT REPAIR CALLED OUT ON THE PLAN SHEETS IS PER SQUARE YARD. THE CONTRACTOR SHALL USE THE FOLLOWING FOR THE PAVEMENT RESTORATION BUILDUP AT THE STATED LOCATIONS:

- 1) MOUND STREET BETWEEN FRONT STREET AND SHORT STREET, AND INCLUDING SHORT STREET, SHALL USE ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B.
- 2) MOUND STREET WEST OF SHORT STREET, IN THE MILLING AND RESURFACING AREA SHALL USE THE PAVEMENT BUILDUP AS SHOWN ON THE MOUND STREET TYPICAL SECTION ON SHEET 35.
- 3) I-71SB NEAR GREENLAWN AVE SHALL USE THE PAVEMENT BUILDUP AS SHOWN ON THE I-71SB TYPICAL SECTION ON SHEET 19.
- 4) SHARED USE PATH SHALL USE THE FOLLOWING BUILDUP FOR PAVEMENT RESTORATION:
 - * ITEM 823 - 1.5" OF ASPHALT CONCRETE SURFACE COURSE, TYPE 1 (448)
 - * ITEM 823 - 1.5" OF ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2 (448)
 - * ITEM 304 - 4" AGGERGATE BASE

NO.	DESCRIPTION	REV. BY	DATE
3	UPDATE ITEM 202 NOTE	LM	11-22-2021
4	Add Backfill & USACE Note	TAZ	11-24-2021
4	Add Pvmf. Repair Note	TAZ	11-24-2021

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GENERAL NOTES

FRA - 71 - 14.36



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SHEETING & BRACING

ANY SHEETING AND BRACING USED BY THE CONTRACTOR AND NOT OTHERWISE CALLED FOR IN THE PLANS SHALL BE FURNISHED, INSTALLED, AND MAINTAINED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. NO SEPARATE PAYMENT SHALL BE MADE FOR SHEETING AND BRACING. AT ALL TIMES THE CONTRACTOR SHALL BE REQUIRED TO EXCAVATE IN A MANNER THAT IS SAFE TO ALL WORKERS AND THE GENERAL TRAVELING PUBLIC. ALL OSHA REQUIREMENTS SHALL BE UPHELD AND SOUND SAFETY PRACTICES SHALL BE EXERCISED AT ALL TIMES. REMOVAL OF SHEETING AND BRACING ITEMS UPON COMPLETION OF WORK WILL BE REQUIRED AS DIRECTED BY ODOT REPRESENTATIVES.

ODOT'S CONCRETE BARRIER INLETS

PER ODOT'S STANDARD CONSTRUCTION DRAWINGS FOR CONCRETE BARRIER INLET DETAILS, THE STATION AND OFFSET IS CALLED OUT TO THE CENTER OF THE GRATE. THE GRATE ELEVATION CALLED OUT IN THE STORM SEWER PROFILES AND CROSS SECTIONS ARE TO THE CENTER EDGE OF THE GRATE WHERE IT ABUTS TO THE FACE OF BARRIER.

ITEM 608- CURB RAMP. MISC.: COLUMBUS CURB RAMP TYPE A, C, D, G, H, J AND P-7 AS PER PLAN

ALL CURB RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF COLUMBUS SPECIFICATION ITEM 608 AND DETAILS ON SHEETS 587 - 597.

GRATINGS, VALVE BOXES, AND UTILITY BOXES SHALL NOT BE LOCATED IN THE RAMP, LANDING, DETECTABLE WARNINGS, OR TRANSITION AREAS.

A MINIMUM OF 1 GALLON OF CURING MEMBRANE SHALL BE USED FOR EACH 200 SQUARE FEET OF SURFACE TREATED.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT, AND NECESSARY MATERIALS.

BENCHING OF FOUNDATION SLOPES

ALTHOUGH CROSS-SECTIONS INDICATE SPECIFIC DIMENSIONS FOR PROPOSED BENCHING OF THE EMBANKMENT FOUNDATIONS IN CERTAIN AREAS, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. BENCH ALL OTHER SLOPED EMBANKMENT AREAS AS SET FORTH IN 203.05. NO ADDITIONAL PAYMENT WILL BE MADE FOR BENCHING REQUIRED UNDER THE PROVISIONS OF 203.05

ITEM 609 - CURB. MISC.: STRAIGHT 16", 17" AND 18" GRANITE CURB. AS PER PLAN

REFERENCE SHEETS 564 - 565 AND 573 FOR ADDITIONAL INFORMATION ON MATERIALS AND CONSTRUCTION OF STRAIGHT 18" GRANITE CURB. ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY FOR CONSTRUCTION SHALL BE INCLUDED IN THE UNIT COSTS OF THE FOLLOWING ITEMS:

ITEM 609 - CURB, MISC.: STRAIGHT 18" GRANITE CURB AS PER PLAN FOR MT. AIRY GRANITE COLOR

ITEM 608 - DETECTABLE WARNINGS. AS PER PLAN

THE DETECTABLE WARNINGS SHALL BE TYPE E PRE-MANUFACTURED PRODUCT FOR INSTALLATION INTO WET CONCRETE.

ITEM 690 SPECIAL - 4" PIPE UNDERDRAIN

ALL PROPOSED UNDERDRAINS AS SHOWN IN THIS CONSTRUCTION DOCUMENT THAT ARE WITHIN THE CITY STREET'S RIGHT OF WAY SHALL BE FURNISHED AND INSTALLED PER ITEM 605 FROM THE 2018 CITY OF COLUMBUS CONSTRUCTION & MATERIAL SPECIFICATIONS INCLUDING ALL REVISIONS AND CHANGES.

ITEM 608 - WALKWAYS. MISC.: BRICK PAVER CROSSWALK/WALK. AS PER PLAN

SEE DETAILS, SHEETS 559 & 560.

BRICK PAVERS CONSTRUCTION FOR CROSSWALKS SHALL FOLLOW THE CITY OF COLUMBUS SUPPLEMENTAL SPECIFICATION 1524. SEE GENERAL NOTE SHEETS 53 AND 54. THE COLOR LISTED BELOW ON THIS SHEET SHALL APPLY TO BOTH.

ALL BRICK PAVEMENT PLACEMENT WILL REQUIRE ALL NEW BRICK PAVERS, FURNISHED AND INSTALLED BY THE CONTRACTOR. NO SALVAGEABLE BRICKS ARE TO BE REUSED, ALL SALVAGEABLE BRICKS ARE TO BE CLEANED AND PALLETIZED, NO MORE THAN 3' HIGH, SHRINK WRAPPED AND DELIVERED TO THE CITY OF COLUMBUS OPERATIONS YARD, LOCATED AT 1850 E. 25TH AVENUE.

THE FOLLOWING SUPPLIER CAN PROVIDE THE NEW BRICKS:

PINE HALL BRICK
2701 SHOREFAIR DRIVE
WINSTON-SALEM, NC 27105
800-334-8689
WWW.PINEHALLBRICK.COM

THE BELDEN BRICK COMPANY
P.O. BOX 20910
CANTON, OH 44701-0910
(330) 451-2031
WWW.BELDENBRICK.COM

(OR APPROVED EQUAL)

BRICK SPECIFICATIONS
MATERIAL: SOLID FIRECLAY BRICK
SIZE: 8" X 4" X 2 3/4" (HEAVY DUTY)
8" X 4" X 2 1/4" (LIGHT DUTY)
COLOR: PATHWAY FULL RANGE

PAVER WALK CONCRETE BASE

ALL WORK FOR THE CONCRETE BASE SHALL CONFORM TO ITEM 608, EXCEPT THAT THE ITEM 608 REQUIREMENTS FOR EDGING OUTSIDE EDGES AND CONTROL JOINTS AT 5-FOOT INTERVALS SHALL BE WAIVED.

THE CONCRETE BASE SHALL BE CORE DRILLED WITH A 2" DIAMETER BIT THROUGH THE ENTIRE DEPTH OF THE BASE. THE WEEP HOLES SHALL BE LOCATED FLUSH WITH THE PROPOSED CURB AND IN ALL LOW LYING AREAS ALONG THE SLAB WHICH COULD POTENTIALLY TRAP WATER. THE WEEP HOLES SHALL BE SPACED EVERY 6 FOOT ON CENTER. FINAL LAYOUT OF WEEP HOLES SHALL BE SET BY THE CONTRACTOR AND MARKED ON THE BASE PRIOR TO DRILLING FOR APPROVAL BY THE ENGINEER-IN-CHARGE. ONCE THE CORING IS COMPLETE THE HOLE SHALL BE FILLED WITH #9 WASHED AGGREGATE,

NON-ANGULAR, AND CLEANED. FILTER FABRIC SHALL BE PLACED ALONG THE CURB LINE AT A WIDTH OF 12" AND TURNED UP ALONG THE CURB PRIOR TO THE PLACEMENT OF THE SETTING BED. COSTS FOR WEEP HOLE INSTALLATION, INCLUDING DRILLING, AGGREGATE FILL, AND FILTER FABRIC SHALL BE INCLUDED WITHIN THE BID COSTS OF ITEM 608 - WALKWAY MISC.: BRICK PAVER WALK, AS PER PLAN AND ITEM 608 - MISC.: BRICK PAVER CROSSWALK, AS PER PLAN.

EDGING

WHERE THE BRICK PAVER WALK ABUTS THE LAWN, THE CONTRACTOR IS REQUIRED TO USE EDGING AS SHOWN ON MISC. DETAIL SHEET 585, STD. DWG. 2301, BRICK SIDEWALK DETAIL TO HOLD THE BRICKS IN PLACE. THE COST FOR THE EDGING SHALL BE INCLUDED IN THE COST FOR ITEM 608 - WALKWAY MISC.: BRICK PAVER WALK, AS PER PLAN.

NEOPRENE MODIFIED ASPHALT ADHESIVE

FURNISH NEOPRENE MODIFIED ASPHALT ADHESIVE THAT CONTAINS 2 PERCENT NEOPRENE, GRADE WMI, OXIDIZED ASPHALT WITH A 150 DEGREE SOFTENING POINT (77 PENETRATION), AND 10 PERCENT LONG FIBERIZED INERT MATERIAL AS SUPPLIED BY:

KARNAK
330 CENTRAL AVENUE
CLARK, NJ 07066
(800) 526-4236
http://www.karnakcorp.com

HANOVER ARCHITECTURAL PRODUCTS
5000 HANOVER ROAD
HANOVER, PA 17331
(717) 637-0500
http://www.hanoverpavers.com

(OR APPROVED EQUAL)

ALL COSTS FOR EQUIPMENT, LABOR, AND MATERIALS SHALL BE INCLUDED IN THE SQUARE FOOT UNIT PRICE OF ITEM 608 - WALKWAY, MISC.: BRICK PAVER WALK, AS PER PLAN AND ITEM 608 - WALKWAY, MISC.: BRICK PAVER CROSSWALK, AS PER PLAN.

BITUMINOUS SETTING BED

FURNISH ASPHALT CEMENT CONFORMING TO ASTM D3381, VISCOSITY GRADE AC-10 OR AC-20. FURNISH FINE AGGREGATE OF NATURAL SAND AND/OR STONE SAND, COMPOSED OF HARD, TOUGH, DURABLE, UNCOATED PARTICLES, FREE FROM CLAY, SILT, ORGANIC MATERIAL OR OTHER DELETERIOUS SUBSTANCES, INSURE THE SAND IS UNIFORMLY GRADED WITH ALL MATERIAL PASSING THE NO. 4 SIEVE AND MEETING THE REQUIREMENTS OF ASTM C136.

COMBINE THE DRIED FINE AGGREGATE WITH HOT ASPHALT CEMENT AND MIX HEAT TO APPROXIMATELY 300 DEGREES FAHRENHEIT AT AN ASPHALT PLANT.

PROVIDE AN APPROXIMATE PROPORTION OF MATERIALS OF 7 PERCENT ASPHALT CEMENT AND 93 PERCENT FINE AGGREGATE.

PROVIDE EACH TO APPORTION BY WEIGHT TO 140 POUNDS OF ASPHALT CEMENT AND 1,860 POUNDS OF FINE AGGREGATE.

ALL COSTS FOR EQUIPMENT, LABOR, AND MATERIALS SHALL BE INCLUDED IN THE SQUARE FOOT UNIT PRICE OF ITEM 608 - WALKWAY MISC.: BRICK PAVER WALK, AS PER PLAN AND ITEM SPECIAL MISC.: BRICK PAVER CROSSWALK, AS PER PLAN. NO SEPARATE PAYMENT SHALL BE MADE.

BRICK PAVER JOINTING SAND AND SEALER

BRICK PAVERS SHALL BE TOPPED WITH JOINTING SAND WITH PAVER JOINTS BEING COMPLETELY FILLED WITH SPECIFIED SAND TO THE BOTTOM OF BRICK PAVER CHAMFERS (OR 1/8 - INCH BELOW TOP OF PAVER) AS SPECIFIED; GRADATION FOR JOINTING SAND SHALL BE POLYMERIC MANUFACTURED SAND MEETING THE GRADATION REQUIREMENTS OF ASTM C144.

METHOD OF MEASUREMENT

PAVERS SHALL BE MEASURED BY THE SQUARE FOOTAGE OF THE FINISHED PAVERS THAT ARE CONSIDERED COMPLETED IN PLACE.

BASIS OF PAYMENT

THE ACCEPTED QUANTITIES OF PAVERS WILL BE PAID FOR AT THE CONTRACT PRICES DESIGNATED FOR EACH PAVER TYPE SHOWN ON THE PLANS. EXCAVATION, BACKFILL, SUBGRADE PREPARATION AND COMPACTION, EXPANSION JOINT MATERIAL, ASPHALT ADHESIVE, BITUMINOUS SETTING BED, 4-INCH AND 8-INCH CONCRETE BASE, AND OTHER RELATED MISCELLANEOUS ITEMS WILL NOT BE PAID FOR SEPARATELY. ALL COSTS SHALL BE INCLUDED IN THE SQUARE FOOT UNIT PRICE OF ITEM 608 - MISC.: BRICK PAVER WALK, AS PER PLAN AND ITEM 608 - MISC.: BRICK PAVER CROSSWALK, AS PER PLAN.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING. AS PER PLAN

FOR THE PROPOSED STORM SEWER BETWEEN STRUCTURE (C302) AND STRUCTURE (SB57), THE COFFERDAMS AND EXCAVATION BRACING SHALL BE A SEPARATE PAY ITEM FROM ITEM 611 CONDUIT MISC.: CONDUIT INSTALLED BY THE TRENCHLESS METHOD, 24". IT IS ANTICIPATED THAT THE APPROXIMATE JACKING PIT DIMENSION FOR THE PROPOSED 24" PIPE AT STRUCTURE (SB57) WILL BE 35'X12' AND AT A APPROXIMATE DEPTH OF 8'. IT IS ANTICIPATED THAT THE APPROXIMATE RECEIVING PIT DIMENSION FOR THE PROPOSED 24" PIPE AT STRUCTURE (C302) WILL BE 20' IN DIAMETER AND AT A APPROXIMATE DEPTH OF 3'.

FOR THE PROPOSED STORM SEWER BETWEEN STRUCTURE (SB07) AND STRUCTURE (SB08), THE COFFERDAMS AND EXCAVATION BRACING SHALL BE A SEPARATE PAY ITEM FROM ITEM 611 CONDUIT BORED OR JACKED, AS PER PLAN. IT IS ANTICIPATED THAT THE APPROXIMATE JACKING PIT DIMENSION FOR THE PROPOSED PIPE AT STRUCTURE (SB07) WILL BE 25' IN DIAMETER AND AT A APPROXIMATE DEPTH OF 6.5'. IT IS ANTICIPATED THAT THE APPROXIMATE RECEIVING PIT DIMENSION FOR THE PROPOSED PIPE AT STRUCTURE (SB08) WILL BE 25' IN DIAMETER AND AT A APPROXIMATE DEPTH OF 9.5'.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE LUMP SUM PRICE BID FOR ITEM 503, COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN.

ITEM 611 - CONDUIT MISC: CONDUIT INSTALLED BY THE TRENCHLESS METHOD, 24"

INSTALL THE CONDUIT WITH A TRENCHLESS METHOD THAT PROVIDES HORIZONTAL AND VERTICAL ALIGNMENT ACCORDING TO THE PLAN THAT CONFORMS TO CMS 611. CONDUIT CAN BE INSTALLED BY TRENCHLESS METHODS SUCH AS: JACK AND BORE, TUNNELING, MICROTUNNELING, OR APPROVED EQUAL.

ALL CONDUIT MATERIALS SHALL FIT THE METHOD SELECTED AND MEET ODOT MATERIAL SPECIFICATIONS. ENSURE ALL MATERIAL PROVIDES A 75 YEAR DESIGN SERVICE LIFE. TUNNEL LINER PLATE WILL REQUIRE CONCRETE FIELD PAVING PER CMS 611.

IF FURNISHING A STEEL CASING PIPE TO CONVEY THE STORM WATER, ENSURE IT CONFORMS TO 748.06 WITH A FULL CIRCUMFERENTIAL PENETRATING B-U4B WELD AT THE JOINTS. ALL WELDING IS PERFORMED BY AN ODOT APPROVED FIELD WELDER. HYDROSTATIC TESTING IS NOT REQUIRED FOR THE CASING PIPE.

IF FURNISHING A TUNNEL LINER PLATE, ENSURE THE BASE METAL COMPOSITION, DEPTH AND SPAN OF THE CORRUGATIONS, AND SIZE AND SPACING OF BOLTS AND BOLT HOLES ARE IN ACCORDANCE WITH DETAILS OF THE MANUFACTURER. INSTALLATION OF THE STRUCTURE IS IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. ENSURE GALVANIZING IS PROVIDED IN ACCORDANCE WITH 707.03 AFTER CORRUGATING, FORMING, AND PUNCHING OF THE PLATES AND BOLT HOLES.

ALTERNATE MATERIALS MAY BE USED CONTINGENT UPON DEPARTMENT APPROVAL.

NO TRENCH EXCAVATION SHALL BE CLOSER THAN 10 FEET TO THE EXISTING BACK OF CURB. PROVIDE ALL NECESSARY DESIGN CALCULATIONS FOR PIPE MATERIALS AND JACKING FORCES AS PART OF THE INSTALLATION PLAN.

NO.	DESCRIPTION	REV. BY	DATE
4	Remove Detectable Warnings from Note	TAZ	11-30-2021

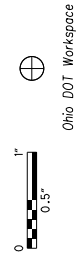
CALCULATED
CHECKED

GENERAL NOTES

FRA-71-14.36

47
1228

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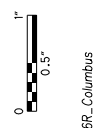
SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
48	67	170	276	278	279	284*	285	286	OFFICE		08/NHS/P V	08/NHS/P V.	11/NHS/P V/COL						
ROADWAY																			
											LUMP			201	11001	LS	CLEARING AND GRUBBING, AS PER PLAN	50	
		2	8 11,962	4,725	1 9,288	7,593 11,624	511 9,997				6 16,672 9,628	5 16,672 9,627	735 2,366	202	20010	11	EACH	HEADWALL REMOVED	
														202	23000	34,079	SY	PAVEMENT REMOVED	
														202	30000	21,621	SF	WALK REMOVED	
						15 74					8 37	7 37		202	30001	15	SF	WALK REMOVED, AS PER PLAN	
											31 974	31 973		202	30001	74	SF	WALK REMOVED, AS PER PLAN "A"	
						62								202	30600	62	SY	CONCRETE MEDIAN REMOVED	
			19 2,313	476 1,957	1,452 3,301						974 5,102	973 5,102	422	202	30700	1,947	FT	CONCRETE BARRIER REMOVED	
														202	32000	10,626	FT	CURB REMOVED	
		113	373	170	1,355	833	378				6 1,611	6 1,611		202	32300	12	FT	STONE CURB REMOVED FOR REUSE	
			6								3 4,712	3 4,711		202	35100	3,222	FT	PIPE REMOVED, 24" AND UNDER	
			4,935	1,802	2,686									202	35200	6	FT	PIPE REMOVED, OVER 24"	
														202	38000	9,423	FT	GUARDRAIL REMOVED	
			1								1			202	47800	1	EACH	IMPACT ATTENUATOR REMOVED	
				2	4	7	7				10	10		202	58000	20	EACH	MANHOLE REMOVED	
		2	9	1	3	8	2				2	2		202	58001	4	EACH	MANHOLE REMOVED, AS PER PLAN	
			4	3	15	4					13	12		202	58100	25	EACH	CATCH BASIN REMOVED	
											13	13		202	58200	26	EACH	INLET REMOVED	
											4	3		202	58700	7	EACH	MANHOLE ABANDONED	
											1			202	58701	1	EACH	MANHOLE ABANDONED, AS PER PLAN	
						1,077					539	538		SPECIAL	20270000	1,077	FT	FILL AND PLUG EXISTING CONDUIT, DIAMETER VARIES	
			422								211	211		SPECIAL	20270110	422	FT	PIPE CLEANOUT, 24" AND UNDER	
			2,670	1,314	168		422				2,287	2,287		202	75000	4,574	FT	FENCE REMOVED	
											205	205		202	75001	410	FT	FENCE REMOVED, AS PER PLAN	
						42		410			21	21		202	75001	42	FT	FENCE REMOVED, AS PER PLAN "A"	
						202					101	101		202	75001	202	FT	FENCE REMOVED, AS PER PLAN "B"	
							2				1	1		202	75250	2	EACH	GATE REMOVED	
							2				1	1		202	75251	2	EACH	GATE REMOVED, AS PER PLAN	
						1					1			202	75251	1	EACH	GATE REMOVED, AS PER PLAN "A"	
				2							1	1		202	75255	2	EACH	GATE REMOVED FOR REUSE, AS PER PLAN	
						2					1	1		202	98100	2	EACH	REMOVAL MISC.: STEPS REMOVED, AS PER PLAN	
						1	2				2	1		202	98100	3	EACH	REMOVAL MISC.: TRASH RECEPTACLES REMOVED, AS PER PLAN	
							1				1			202	98100	1	EACH	REMOVAL MISC.: WOOD POLE WITH CONCRETE BASE, REMOVED	
											1			202	98100	1	EACH	REMOVAL MISC.: BENCH REMOVED, AS PER PLAN	
											2	1		202	98100	2	EACH	REMOVAL MISC.: METAL POSTS REMOVED, AS PER PLAN	
											4	2		202	98100	4	EACH	REMOVAL MISC.: PRIVATE LIGHT REMOVED, AS PER PLAN	
											2	1		202	98100	2	EACH	REMOVAL MISC.: PRIVATE SIGN REMOVED	
						4	6				5	5		202	98100	10	EACH	REMOVAL MISC.: TREE GRATES REMOVED, AS PER PLAN	
								51					51	202	98200	51	FT	REMOVAL MISC.: RAILROAD TIE RETAINING WALL REMOVED	
2											1	1		202	98200	2	FT	REMOVAL MISC.: INSPECTION WELL	
100											50	50		202	98200	100	FT	REMOVAL MISC.: CONDUIT	
							42				21	21		202	98200	42	FT	REMOVAL MISC.: TENNIS NET REMOVED, AS PER PLAN	
			138								69	69		202	98700	138	FT	ABANDON MISC.: 24" CONDUIT, BULKHEADED AND FILLED IN-PLACE	
			4,767								9,731	9,730		203	10000	19,461	CY	EXCAVATION	
			7,858								84,973	46,415		203	20000	92,831	CY	EMBANKMENT	
											25	25		203	20001	50	CY	EMBANKMENT, AS PER PLAN	
50											23,497	11,726	46	204	10000	23,497	SY	SUBGRADE COMPACTION	
											123		123	204	13000	123	CY	EXCAVATION OF SUBGRADE	
											1,319	654	10	204	13001	1,319	CY	EXCAVATION OF SUBGRADE, AS PER PLAN	
								4			2	2		204	30010	4	CY	GRANULAR MATERIAL, TYPE B	
											5	2		204	45000	5	HOUR	PROOF ROLLING	
											4	2		204	45001	4	HOUR	PROOF ROLLING, AS PER PLAN	
											8,652	3,887	879	204	50001	8,652	SY	GEOTEXTILE FABRIC, AS PER PLAN	
											276	138		206	10500	276	TON	CEMENT	
											7,796	3,898	3,898	206	11000	7,796	SY	CURING COAT	
											7,796	3,898	3,898	206	15010	7,796	SY	CEMENT STABILIZED SUBGRADE, 12 INCHES DEEP	
**** INCLUDES QUANTITIES FROM SHEET 285A																			

NO.	DESCRIPTION	REV. BY	DATE
1	Move item from sheet 266	TAZ	10-14-21
3	Remove Duplicate Pay Qty.	TAZ	11-19-2021
4	Update Funding Splits	TAZ	11-24-2021

CALCULATED HRB CHECKED TAZ
GENERAL SUMMARY
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1228
ms consultants, inc.

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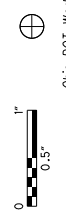
34" x 22"

SHEET NUM.								PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
44	277	280	281	286	287	944	OFFICE	08/NHS/P V	08/NHS/P V.	11/NHS/P V/COL	12/NHS/P V/INC						
							4										
							LUMP	2	2			206	20000	4	hour	TEST ROLLING	
								LUMP	LUMP			206	30000	LS		MIXTURE DESIGN FOR CHEMICALLY STABILIZED SOILS	
		100						50	50			606	13000	100	FT	GUARDRAIL, TYPE 5	
	2,532	450	475					1,729	1,728			606	15050	3,457	FT	GUARDRAIL, TYPE MGS	
	2		2					2	2			606	26150	4	EACH	ANCHOR ASSEMBLY, MGS TYPE E, (MASH 2016)	
	1							1				606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
	3	2	3					4	4			606	35002	8	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
	4	2	1					4	3			606	35102	7	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
			1					1				606	60022	1	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL), 44MPH, 24" HAZ. WIDTH	
				1				1				606	60022	1	EACH	IMPACT ATTENUATOR, TYPE 2 (UNIDIRECTIONAL), 44MPH, 28" HAZ. WIDTH	
				1				1				606	60040	1	EACH	IMPACT ATTENUATOR, TYPE 3 UNIDIRECTIONAL, 62MPH, 29" HAZ. WIDTH	
	1,646	563	489					1,349	1,349			607	20000	2,698	FT	FENCE, TYPE CL	
		345		135				240	240			607	23000	480	FT	FENCE, TYPE CLT	
		20						10	10			607	23001	20	FT	FENCE, TYPE CLT, AS PER PLAN	
								8	7			607	39901	15	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN	
		41						21	20			607	39994	41	FT	TEMPORARY VANDAL FENCE, TYPE B	
		326						163	163			SPECIAL	60740000	326	FT	VANDAL PROTECTION FENCE	
		1						1				607	50901	1	EACH	GATE, TYPE CL, AS PER PLAN	
				469				235	234			607	98000	469	FT	FENCE, MISC.:AEP FENCE, AS PER PLAN	
				254				127	127			607	98000	254	FT	FENCE, MISC.:IRON FENCE CURB MOUNTED, AS PER PLAN	
				1				1				607	98100	1	EACH	FENCE, MISC.:5.5' GATE, AS PER PLAN	
				1				1				607	98100	1	EACH	FENCE, MISC.:AEP FENCE DRIVE-IN GATE, AS PER PLAN	
					17,209			7,567	7,567	2,075		608	10000	17,209	SF	4" CONCRETE WALK	
					235			25	25	185		608	15000	235	SF	8" CONCRETE WALK	
					128			60	60	8		608	53021	128	SF	DETECTABLE WARNING, AS PER PLAN	
					3,373					1,252	2,121	608	98000	3,373	SF	WALKWAY, MISC.: BRICK PAVER WALK, AS PER PLAN	
						5,600					5,600	608	98000	5,600	SF	WALKWAY, MISC.:BRICK PAVER CROSS WALK, AS PER PLAN	
										74		608	98000	74	SF	WALKWAY, MISC.:BRICK PAVER WALK, AS PER PLAN "A"	
											1,661	608	98000	1,661	SF	WALKWAY, MISC.:GRANITE COBBLES, AS PER PLAN	
					1			1				608	98200	1	EACH	WALKWAY, MISC.:COLUMBUS CURB RAMP, TYPE C, AS PER PLAN	
					5			2	2	1		608	98200	5	EACH	WALKWAY, MISC.:COLUMBUS CURB RAMP, TYPE D, AS PER PLAN	
					5			3	2			608	98200	5	EACH	WALKWAY, MISC.:COLUMBUS CURB RAMP, TYPE G, AS PER PLAN	
								2	1			608	98200	3	EACH	WALKWAY, MISC.:COLUMBUS CURB RAMP, TYPE H, AS PER PLAN	
					4			2	2			608	98200	4	EACH	WALKWAY, MISC.:COLUMBUS CURB RAMP, TYPE J, AS PER PLAN	
					1			1				608	98200	1	EACH	WALKWAY, MISC.:COLUMBUS CURB RAMP, TYPE P-7, AS PER PLAN	
					7			4	3			608	98200	7	EACH	WALKWAY, MISC.:COLUMBUS CURB RAMP, TYPE A, AS PER PLAN	
					20			10	10			622	10060	20	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE B	
	899		30					465	464			622	10120	929	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE C	
	970	452	2,258	269				1,975	1,974			622	10160	3,949	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D	
		2						1	1			622	10200	2	EACH	BARRIER TRANSITION	
			2					1	1			622	10201	2	EACH	BARRIER TRANSITION, AS PER PLAN	
			1					1				622	24841	1	EACH	CONCRETE BARRIER END SECTION, TYPE B, AS PER PLAN	
		4	3					4	3			622	25000	7	EACH	CONCRETE BARRIER END SECTION, TYPE D	
	10		1					6	5			622	25008	11	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C	
	6							3	3			622	25010	6	EACH	CONCRETE BARRIER END SECTION, TYPE D, REINFORCED	
	6	8	23	4				21	20			622	25050	41	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D	
		1						1				622	25051	1	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN "A"	
			6					3	3			622	25051	6	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN "B"	
			41					21	20			622	41111	41	FT	PORTABLE BARRIER, ANCHORED, AS PER PLAN	
				86				43	43			622	90000	86	FT	BARRIER, MISC.:CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C, AS PER PLAN "B"	
				73				37	36			622	90000	73	FT	BARRIER, MISC.:CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE C, AS PER PLAN "A"	
					2			1	1			622	90200	2	EACH	BARRIER, MISC.: CONCRETE BARRIER, TAPERED END SECTION, AS PER PLAN	
								1	1			625	32000	2	EACH	GROUND ROD	
LUMP						LUMP		LUMP	LUMP			SPECIAL	69098400	LS		EMERGENCY ACTION PLAN COORDINATION	
LUMP								LUMP	LUMP			SPECIAL	69098400	LS		SURVEY CONTROL VERIFICATION	
LUMP								LUMP	LUMP			SPECIAL	69098400	LS		EMERGENCY CLOSURE	
LUMP								LUMP	LUMP			878	25000	LS		INSPECTION AND COMPACTION TESTING OF UNBOUND MATERIALS	

NO.	DESCRIPTION	REV.	BY	DATE
1	New City additions			10-14-21
4	Update Funding Splits			11-24-2021
4	New City addition			11-24-2021

CALCULATED HRB CHECKED TAZ
GENERAL SUMMARY
FRA - 71 - 14.36
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 View: FENCE_VEW1
 By: tzongmeister



34" x 22"

SHEET NUM.											PART.					ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
51	67	170	281A	282	283	288	290	291	298	814	08/NHS/P V	08/NHS/P V.	08/NHS/P V..	10/ENH/O T/COL	11/NHS/P V/COL						
						28					14	14				601	20000	28	SY	EROSION CONTROL	
					498						249	249				601	21000	498	SY	CRUSHED AGGREGATE SLOPE PROTECTION	
7			286		18	176	6	4			240	239				601	21050	479	SY	CONCRETE SLOPE PROTECTION	
											9	9				601	21060	18	SY	TIED CONCRETE BLOCK MAT WITH TYPE 1 UNDERLAYMENT	
		4	2	3							5	4				601	32200	9	CY	TIED CONCRETE BLOCK MAT WITH TYPE 2 UNDERLAYMENT	
1											1					659	00100	1	EACH	ROCK CHANNEL PROTECTION, TYPE C WITH FILTER	
2,910											1,455	1,455				659	00300	2,910	CY	SOIL ANALYSIS TEST	
1,814											865	864			85	659	00500	1,814	SY	TOPSOIL	
16,576	6,362								2,230		11,469	11,469	2,230			659	00510	25,168	SY	SEEDING AND MULCHING, CLASS 1	
																				SEEDING AND MULCHING, CLASS 2	
7,830											3,915	3,915				659	00530	7,830	SY	SEEDING AND MULCHING, CLASS 3B	
										422				422		659	10001	422	SY	SEEDING AND MULCHING, AS PER PLAN	832
1,311											656	655				659	14000	1,311	SY	REPAIR SEEDING AND MULCHING	
1,311											656	655				659	15000	1,311	SY	INTER-SEEDING	
5											3	2				659	20000	5	TON	COMMERCIAL FERTILIZER	
6											3	3				659	31000	6	ACRE	LIME	
142											71	71				659	35000	142	MGAL	WATER	
0.06											0.03	0.03				659	40000	0.06	MSF	MOWING	
					125						63	62				660	25000	125	SY	SODDING STAKED	
			1,189		869						1,029	1,029				670	00720	2,058	SY	DITCH EROSION PROTECTION MAT, TYPE B	
					127						64	63				670	00760	127	SY	DITCH EROSION PROTECTION MAT, TYPE F	
											LUMP	LUMP				832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
											LUMP	LUMP				832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
											LUMP	LUMP				832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
											575,000	575,000				832	30000	1,150,000	EACH	EROSION CONTROL	
					29						15	14				836	10000	29	SY	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1	

GENERAL SUMMARY

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NO.	DESCRIPTION	REV. BY	DATE
4	Update Funding Splits	TAZ	11-24-2021

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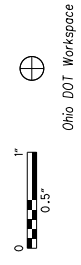
SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
48	51	281A	282	283	287	288+	290	291	292	653	08/NHS/P V	08/NHS/P V	11/NHS/P VICOL						
		1	1			1					2	1		602	20000	3	CY	CONCRETE MASONRY	
							4,968	2,209			3,589	3,588		605	05110	7,177	FT	4" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
							5,990	443			3,217	3,216		605	06020	6,433	FT	4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
	200										100	100		605	13300	200	FT	6" UNCLASSIFIED PIPE UNDERDRAINS	
	200									11			11	605	98300	11	EACH	UNDERDRAINS, MISC.: 6" CLEANOUT	653
											100	100		611	00406	200	FT	4" CONDUIT, TYPE F	
							512	497	3		505	504	3	611	00410	1,012	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	
										187			187	611	01500	187	FT	6" CONDUIT, TYPE F	
			269								135	134		611	03300	269	FT	10" CONDUIT, TYPE C	
			118								59	59		611	03700	118	FT	10" CONDUIT, TYPE F	
						113					57	56		611	04400	113	FT	12" CONDUIT, TYPE B	
		6									3	3		611	04600	6	FT	12" CONDUIT, TYPE C, 706.02	
		365	284	300							475	474		611	05900	949	FT	15" CONDUIT, TYPE B	
		18									9	9		611	05900	18	FT	15" CONDUIT, TYPE B, 706.02	
		542	363	290							598	597		611	05900	1,195	FT	15" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11	
		98	1,435	38							786	785		611	06100	1,571	FT	15" CONDUIT, TYPE C	
			70								35	35		611	06100	70	FT	15" CONDUIT, TYPE C, 706.02, JOINTS PER 706.11	
			55								28	27		611	06700	55	FT	15" CONDUIT, TYPE F, 707.05, TYPE C	
											53	52		611	07400	105	FT	18" CONDUIT, TYPE B	
											62	61		611	07400	123	FT	18" CONDUIT, TYPE B, 706.02, JOINTS PER 706.11	
											113	113		611	07600	226	FT	18" CONDUIT, TYPE C	
											167	167		611	09100	334	FT	21" CONDUIT, TYPE C	
											15	15		611	16600	30	FT	36" CONDUIT, TYPE C	
											109	108		611	96601	217	FT	CONDUIT, BORED OR JACKED, AS PER PLAN, 36" CASING PIPE W/ 18" CARRIER PIPE	46
											68	68		611	97400	136	FT	CONDUIT, MISC.: CONDUIT INSTALLED BY THE TRENCHLESS METHOD, 24"	47
100											50	50		611	97400	100	FT	CONDUIT, MISC.: 4" TYPE F FOR DRAINAGE DISCHARGE CONTINUANCE	48
100											50	50		611	97400	100	FT	CONDUIT, MISC.: 8" TYPE B FOR DRAINAGE DISCHARGE CONTINUANCE	48
100											50	50		611	97400	100	FT	CONDUIT, MISC.: 8" TYPE C FOR DRAINAGE DISCHARGE CONTINUANCE	48
100											50	50		611	97400	100	FT	CONDUIT, MISC.: 4" TYPE E FOR DRAINAGE DISCHARGE CONTINUANCE	48
		1									1			611	98300	1	EACH	CATCH BASIN, NO. 5	
			1								1			611	98370	1	EACH	CATCH BASIN, NO. 6	
		3	4	1							4	4		611	98410	8	EACH	CATCH BASIN, NO. 8	
		1									1			611	98434	1	EACH	CATCH BASIN, NO. 8A	
						2					2	2		611	98470	4	EACH	CATCH BASIN, NO. 2-2B	
											1			611	98630	1	EACH	CATCH BASIN ADJUSTED TO GRADE	
		9	2	5							8	8		611	98821	16	EACH	INLET, NO. 3D, AS PER PLAN	49
			1	2							2	1		611	99094	3	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE B	
		4									2	2		611	99104	4	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C	
											1			611	99105	1	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE C, AS PER PLAN	614
			5	4							5	4		611	99114	9	EACH	INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D	
		4	18	2							12	12		611	99574	24	EACH	MANHOLE, NO. 3	
		7									4	3		611	99575	7	EACH	MANHOLE, NO. 3, AS PER PLAN	48
											3	2		611	99661	5	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	48
	4						3	2			5	4		611	99710	9	EACH	PRECAST REINFORCED CONCRETE OUTLET	
20											10	10		611	99720	20	EACH	INSPECTION WELL	48
			1								1			611	99900	1	EACH	DRAINAGE STRUCTURE, MISC.: ORIFICE PLATE	597A
						2					3	3		SPECIAL	69098000	6	EACH	DOUBLE CURB AND GUTTER INLET FOR GRANITE CURBING	45, 611
											3	3		SPECIAL	69098000	6	EACH	MANHOLE ADJUSTED TO GRADE	45
											11	11		SPECIAL	69098000	22	EACH	MANHOLE, TYPE C (48")	45, 602
											2	1		SPECIAL	69098000	3	EACH	MANHOLE, TYPE C (60")	45, 602
											1	1		SPECIAL	69098000	2	EACH	MISC.: MANHOLE REHABILITATION	45, 55-57
											1	1		SPECIAL	69098000	2	EACH	STANDARD CATCH BASIN 21" DIAMETER & SMALLER PIPE	45, 608
											6	5		SPECIAL	69098000	11	EACH	STANDARD CURB AND GUTTER INLET FOR GRANITE CURBING	45, 612
											5		5	SPECIAL	69098000	5	EACH	BIORETENTION CELLS	652
						1					1			SPECIAL	69098000	1	EACH	DOUBLE CURB AND GUTTER INLET	45, 611

CALCULATED
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GENERAL SUMMARY
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NO.	DESCRIPTION	REV. BY	DATE
2	REVISE/ADD MH-3 OTYS	TAZ	11-12-2021
4	Update Funding Splits	TAZ	11-24-2021

"+" INCLUDES QUANTITIES FROM SHEET 170, 289

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SHEET NUM.

PART.

ITEM

ITEM

GRAND

UNIT

DESCRIPTION

SEE SHEET NO.

288	289	291	292								08/NHS/P V	08/NHS/P V	11/NHS/P VICOL	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
DRAINAGE (CONT.)																			
52											26	26		SPECIAL	69098100	52	FT	10" CONDUIT, TYPE 1	48
577	24										301	300		SPECIAL	69098100	601	FT	12" CONDUIT, TYPE 1	48
22											11	11		SPECIAL	69098100	22	FT	12" CONDUIT, TYPE 1, 706.02	48
25											13	12		SPECIAL	69098100	25	FT	12" CONDUIT, TYPE F, 707.05, TYPE C	48
399											200	199		SPECIAL	69098100	399	FT	15" CONDUIT, TYPE 1	48
6											3	3		SPECIAL	69098100	6	FT	15" CONDUIT, TYPE 1, 706.02	48
429											215	214		SPECIAL	69098100	429	FT	18" CONDUIT, TYPE 1	48
6											3	3		SPECIAL	69098100	6	FT	18" CONDUIT, TYPE 1, 706.02	48
192											96	96		SPECIAL	69098100	192	FT	18" CONDUIT, TYPE 1, C905, CLASS 165, DR25	49
12											6	6		SPECIAL	69098100	12	FT	21" CONDUIT, TYPE 1	48
110											55	55		SPECIAL	69098100	110	FT	24" CONDUIT, TYPE 1	48
367											184	183		SPECIAL	69098100	367	FT	24" CONDUIT, TYPE 1, C905, CLASS 165, DR25	49
100											50	50		SPECIAL	69098100	100	FT	4" CONDUIT, TYPE E, 720.08	48
		3,156	35								1,417	1,416	358	SPECIAL	69098100	3,191	FT	4" PIPE UNDERDRAIN	47

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GENERAL SUMMARY

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NO.	DESCRIPTION	REV. BY	DATE
4	Update Funding Splits	TAZ	11-24-2021

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SHEET NUM.											PART.					ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.			
276^	284*	285	286	287	295	297	298	680	OFFICE		08/NHS/P V	08/NHS/P V.	08/NHS/P V.	11/NHS/P V/COL	12/NHS/P V/INC									
											PAVEMENT													
									40		20	20				252	01000	40	SY	FULL DEPTH RIGID PAVEMENT REMOVAL AND FLEXIBLE REPLACEMENT				
8,554	860	568		1,900	340	160					5,911	5,911	163	136		252	01500	12,121	FT	FULL DEPTH PAVEMENT SAWING				
332	53			511	83	35	10	81	1,542		1,252	1,251	63	81		253	01001	2,647	SY	PAVEMENT REPAIR, AS PER PLAN	46			
									5,689		2,845	2,844				254	01000	5,689	SY	PAVEMENT PLANING, ASPHALT CONCRETE, VARIABLE DEPTH				
									3,741		1,871	1,870				302	46000	3,741	CY	ASPHALT CONCRETE BASE, PG64-22				
									4,682		2,341	2,341				302	46000	4,682	CY	ASPHALT CONCRETE BASE, PG64-22, 10.5"				
									4,769		2,385	2,384				304	20000	4,769	CY	AGGREGATE BASE, 6"				
									31		16	15				304	20000	31	CY	AGGREGATE BASE, 8"				
									2,830		1,269	1,268		293		304	20001	2,830	CY	AGGREGATE BASE, AS PER PLAN, 12"	50A			
									3,106		1,214	1,213		679		305	12010	3,106	SY	8" CONCRETE BASE, CLASS QC 1P				
									2,700		1,350	1,350				305	13010	2,700	SY	9" CONCRETE BASE, CLASS QC 1P				
									464		205	205		54		407	13900	464	GAL	TACK COAT, 702 13				
									6,200		3,080	3,079		41		407	20000	6,200	GAL	NON-TRACKING TACK COAT				
									271		124	123		24		441	50000	271	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22				
									276		122	121		33		441	50300	276	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) PG64-22				
									4,105		2,053	2,052				442	00100	4,105	CY	ANTI-SEGREGATION EQUIPMENT	49			
									998		499	499				442	10001	998	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, A	49			
									388		194	194				442	10001	388	CY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, B	17, 49			
				825					1,571		786	785				442	10100	1,571	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (446)				
									276		117	117		42		452	10011	825	SY	6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN	49			
									68		34	34				452	13010	68	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P				
200			196						251		126	125				452	15010	251	SY	12" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P				
			51								198	198		51		609	24510	396	FT	CURB, TYPE 4-C				
			254								127	127				609	30001	51	FT	CURB, TYPE 8, AS PER PLAN "B"	41			
																609	30001	254	FT	CURB, TYPE 8, AS PER PLAN "A"	557			
18			88												88	609	98000	88	FT	CURB, MISC.: STRAIGHT 16" GRANITE CURB, AS PER PLAN	47, 564			
			129												129	609	98000	129	FT	CURB, MISC.: STRAIGHT 17" GRANITE CURB, AS PER PLAN	47, 564			
			2,154											330	1,824	609	98000	2,154	FT	CURB, MISC.: STRAIGHT 18" GRANITE CURB, AS PER PLAN	47, 564			
			12								6	6				609	98000	12	FT	CURB, MISC.:INSTALL GRANITE CURB FROM STORAGE, AS PER PLAN	58			
			31								16	15				609	98000	31	FT	CURB, MISC.:STRAIGHT 16" CONCRETE CURB, AS PER PLAN	573			
			783								322	322		139		609	98000	783	FT	CURB, MISC.:STRAIGHT 18" CONCRETE CURB, AS PER PLAN	573			
									24,616		12,308	12,308				872	10000	24,616	FT	VOID REDUCING ASPHALT MEMBRANE (VRAM)	17			

CALCULATED HRB CHECKED TAZ
GENERAL SUMMARY
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1228
ms consultants, inc.

NO.	DESCRIPTION	REV. BY	DATE
1	REVISE QUANTITIES	TAZ	10-28-2021
4	Update Funding Splits	TAZ	11-24-2021
4	Update Item Description and Quantity	TAZ	11-24-2021

"A" INCLUDES QUANTITIES FROM SHEET 276, 277, 279, 280, 281
"B" INCLUDES QUANTITIES FROM SHEET 285A

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 By: tzongmeister
 34" x 22"
 Ohio DOT Workspace
 70\71 West Interchange 6R
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 60-06634_6R_Columbus

SHEET NUM.										PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
287	295	297	298				08/NHS/P V	08/NHS/P V.	08/NHS/P V.									
WATER WORK																		
			48						48	511	71100	48	CY	CONCRETE, MISC.: CONCRETE BLOCKING, CLASS C, INCREASE OR DECREASE (COL. 801)	641			
6							3	3		638	10801	6	EACH	VALVE BOX ADJUSTED TO GRADE, AS PER PLAN	45			
		1							1	638	98000	1	EACH	WATER WORK, MISC.: 3/4" WATER SERVICE TAP, TRANSFERRED (COL. 805)	641			
		1							1	638	98000	1	EACH	WATER WORK, MISC.: 8"X6" TAPPING SLEEVE AND VALVE (COL. 803)	45, 641			
		131							131	638	98600	131	FT	WATER WORK, MISC.: 12" DUCTILE IRON WATER PIPE AND FITTINGS (COL. 801)	641			
		1,354							1,354	638	98600	1,354	FT	WATER WORK, MISC.: 36" WATER PIPE AND FITTINGS (COL. 801)	641			
		379							379	638	98600	379	FT	WATER WORK, MISC.: 6" DUCTILE IRON WATER PIPE AND FITTINGS (COL. 801)	641			
		1							1	SPECIAL	69098000	1	EACH	1 1/2" CURB STOP, RELOCATED (COL 805)	641			
		2							2	SPECIAL	69098000	2	EACH	36" BUTTERFLY VALVE AND APPURTENANCES (COL 802)	45, 641			
		5							5	SPECIAL	69098000	5	EACH	6" GATE VALVE AND APPURTENANCES (COL 802)	45, 641			
			1						1	SPECIAL	69098000	1	EACH	12" GATE VALVE AND APPURTENANCES (COL 802)	45, 641			
			2						2	SPECIAL	69098000	2	EACH	FIRE HYDRANT, ABANDONED (COL 809)	641			
			4						4	SPECIAL	69098000	4	EACH	FIRE HYDRANT, RELOCATED (COL 809)	45, 641			
			1						1	SPECIAL	69098000	1	EACH	FIRE HYDRANT, TYPE A (COL 809)	45, 641			
			1						1	SPECIAL	69098000	1	EACH	FIRE HYDRANT, TYPE A MODIFIED (COL 809)	641			
			2						2	SPECIAL	69098000	2	EACH	8" WATER MAIN ABANDONED	641			
			128						128	SPECIAL	69098100	128	FT	54" CASING PIPE, 3/4" THICKNESS (COL 806)	641			
			971						971	SPECIAL	69098100	971	FT	PIPE REMOVED (COL 202)	643			
			LUMP						LUMP	SPECIAL	69098400	LS		CONTINUITY TESTING	641			
			LUMP						LUMP	SPECIAL	69098400	LS		CORROSION PROTECTION	641			
			LUMP						LUMP	SPECIAL	69098400	LS		FLANGE ISOLATION KITS FOR DUCTILE IRON PIPES	641			
			LUMP						LUMP	SPECIAL	69098400	LS		SURVEY COORDINATES	641			
			3,200						3,200	SPECIAL	69099400	3,200	LB	FITTINGS, INCREASE OR DECREASE (COL. 801)	641			
SANITARY SEWER																		
		1							1	SPECIAL	69098000	1	EACH	AIR RELEASE MANHOLE AND APPURTENANCES, COMPLETE	640			
		1							1	SPECIAL	69098000	1	EACH	MANHOLE RECONSTRUCTED TO GRADE	45, 640			
		3							3	SPECIAL	69098000	3	EACH	MANHOLE TYPE C, W/ OUTSIDE DROP (COL 901)	45, 640			
		2							2	SPECIAL	69098000	2	EACH	SEWER ABANDONED(COL 202)	640			
		1							1	SPECIAL	69098000	1	EACH	STRUCTURE REMOVED - AIR RELEASE MANHOLE VAULT (COL 202)	640			
		1							1	SPECIAL	69098000	1	EACH	STRUCTURE REMOVED - SANITARY VAULT (COL 202)	640			
		1							1	SPECIAL	69098000	1	EACH	STRUCTURE AT STATION 0+47, COMPLETE (COL 904)	640			
		251							251	SPECIAL	69098000	251	EACH	SEWER ABANDONED AND SEALED 24" AND UNDER (USACE SOP)				
		126							126	SPECIAL	69098000	126	EACH	SEWER ABANDONED AND SEALED OVER 24" (USACE SOP)				
		495							495	SPECIAL	69098100	495	FT	16" PVC C900 PIPE, WITH TYPE 1 BEDDING WITH 912 COMPACTED GRANULAR BACKFILL (COL 901)	640			
		38							38	SPECIAL	69098100	38	FT	42" PIPE, WITH TYPE 1 BEDDING WITH 912 COMPACTED GRANULAR BACKFILL (COL 901)	640			
		174							174	SPECIAL	69098100	174	FT	10" DIP FORCEMAIN W/ BEDDING AND BACKFILL PER COL 801	640			
		120							120	SPECIAL	69098100	120	FT	18" DIP FORCEMAIN W/ BEDDING AND BACKFILL PER COL 801	640			
		169							169	SPECIAL	69098100	169	FT	36" DIP OR PCCP FORCEMAIN W/ BEDDING AND BACKFILL PER COL 801	640			
		40							40	SPECIAL	69098100	40	FT	24" CASING PIPE (COL 806)	640			
		40							40	SPECIAL	69098100	40	FT	30" CASING PIPE (COL 806)	640			
		40							40	SPECIAL	69098100	40	FT	54" CASING PIPE (COL 806)	640			
		LUMP							LUMP	SPECIAL	69098400	LS		BYPASS PUMPING, COS	640			
		18							18	SPECIAL	69098700	18	CY	INCREASED OR DECREASED EARTH EXCAVATION	640			

NO.	DESCRIPTION	REV. BY	DATE
2	ADD QTY. FOR PIPE (TBR)	TAZ	11-12-2021
3	Items Deleted	ADB	11-22-2021
4	Water Quantities Revised	TAZ	11-24-2021
4	Update Funding Splits	TAZ	11-24-2021
4	Add/Rev. Sewer Quantities	TAZ	11-29-2021

GENERAL SUMMARY

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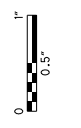
SHEET NUM.										PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
685	687	688	689	691	694	08/NHS/P V	08/NHS/P V	11/NHS/P V/COL										
TRAFFIC CONTROL (CONT.)																		
			35	48		40	39	4	630	86002	83	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL					
			10	1		5	5		630	86102	10	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL					
			7			1			630	86272	1	EACH	REMOVAL OF GROUND MOUNTED PIPE SUPPORT AND DISPOSAL					
			25	5		4	3		630	87100	7	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION					
						16	14		630	87400	30	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL					
			2	39		21	20		630	87500	41	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL					
				1		1			630	89704	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-16.21					
			4			2	2		630	89706	4	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-12.30					
			3			2	1		630	89802	3	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-7.65					
		32				16	16		630	89902	32	EACH	REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM: PARKING METER POST REMOVAL	681				
		8				4	4		630	97700	8	EACH	SIGNING, MISC.: PARKING METER POST CORE	681				
		8				4	4		630	97700	8	EACH	SIGNING, MISC.: PARKING METER POST AND INSTALLATION	681				
					1	1			630	97700	1	EACH	SIGNING, MISC.: WALL MOUNTED SIGN	681				
407						204	203		644	00700	407	FT	TRANSVERSE/DIAGONAL LINE					
						103	102		644	01200	205	FT	PARKING LOT STALL MARKING					
	13					5	4	4	644	01300	13	EACH	LANE ARROW					
1						1			644	01360	1	EACH	WRONG WAY ARROW					
	5					3	2		644	01630	5	EACH	BIKE LANE SYMBOL MARKING					
	2					1	1		644	19000	2	EACH	SHARED LANE MARKING					
204	100					152	152		644	30000	304	FT	REMOVAL OF PAVEMENT MARKING					
1	4					3	2		644	30020	5	EACH	REMOVAL OF PAVEMENT MARKING					
	685					292	292	101	644	50300	685	FT	PAVEMENT MARKING, MISC.: CHANNELIZING LINE, 10"	681				
	207					104	103		644	50300	207	FT	PAVEMENT MARKING, MISC.: DOTTED LINE, 5"	681				
	151					64	63	24	644	50300	151	FT	PAVEMENT MARKING, MISC.: STOP LINE, 20"	681				
	325					163	162		644	50300	325	FT	PAVEMENT MARKING, MISC.: TRANSVERSE/DIAGONAL LINE, 20" (WHITE)	681				
	99					25	24	50	644	50300	99	FT	PAVEMENT MARKING, MISC.: TRANSVERSE/DIAGONAL LINE, 20" (YELLOW)	681				
	0.36					0.18	0.18		644	50400	0.36	MILE	PAVEMENT MARKING, MISC.: EDGE LINE, 5"	681				
	0.26					0.13	0.13		644	50400	0.26	MILE	PAVEMENT MARKING, MISC.: LANE LINE, 5"	681				
	0.25					0.11	0.1	0.04	644	50400	0.25	MILE	PAVEMENT MARKING, MISC.: CENTER LINE, 5"	681				
239						120	119		646	10600	239	FT	TRANSVERSE/DIAGONAL LINE					
2						1	1		646	20350	2	EACH	LANE REDUCTION ARROW					
	4					2	2		647	50010	4	EACH	REMOVAL OF PAVEMENT MARKING					
	1					1			647	50100	1	EACH	PAVEMENT MARKING, MISC.: BIKE BOX	681				
	3					2	1		647	50100	3	EACH	PAVEMENT MARKING, MISC.: CARDINAL DIRECTION	696				
	3					2	1		647	50100	3	EACH	PAVEMENT MARKING, MISC.: ROUTE SHIELD	696				
1.87						0.94	0.93		807	12010	1.87	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, EDGE LINE, 6"					
1.02						0.51	0.51		807	12110	1.02	MILE	WET REFLECTIVE EPOXY PAVEMENT MARKING, LANE LINE, 6"					
2,176						1,088	1,088		807	12310	2,176	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, CHANNELIZING LINE, 12"					
660						330	330		807	12410	660	FT	WET REFLECTIVE EPOXY PAVEMENT MARKING, DOTTED LINE, 6"					
5.35						2.68	2.67		807	14010	5.35	MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, EDGE LINE, 6"					
3.72						1.86	1.86		807	14110	3.72	MILE	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, LANE LINE, 6"					
8,703						4,352	4,351		807	14310	8,703	FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, CHANNELIZING LINE, 12"					
1,028						514	514		807	14430	1,028	FT	WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING, DOTTED LINE, 12"					
4						2	2		814	00010	4	EACH	INTERSTATE ELONGATED ROUTE SHIELD SYMBOL MARKING, TYPE B125					
1						1			814	00014	1	EACH	STATE ROUTE SHIELD SYMBOL MARKING, TYPE B125					
5						3	2		814	00016	5	EACH	CARDINAL DIRECTION (NORTH, SOUTH, WEST & EAST) MARKING, TYPE B125					
9.08						4.54	4.54		850	10010	9.08	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (ASPHALT)					
8,703						4,352	4,351		850	10130	8,703	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (ASPHALT)					
2.89						1.45	1.44		850	20010	2.89	MILE	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)					
660						330	330		850	20110	660	FT	GROOVING FOR 6" RECESSED PAVEMENT MARKING, (CONCRETE)					
2,176						1,088	1,088		850	20130	2,176	FT	GROOVING FOR 12" RECESSED PAVEMENT MARKING, (CONCRETE)					

NO.	DESCRIPTION	REV. BY	DATE
4	Update Funding Splits	TAZ	11-24-2021

CALCULATED
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GENERAL SUMMARY
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653	743	755	814	847		08/NHS/P V	08/NHS/P V	10/ENH/O T/COL	11/NHS/P V/COL							
										TRAFFIC SIGNALS (CONT.)						
										633	67100	1	EACH	CABINET FOUNDATION		
										633	99000	2	EACH	CONTROLLER ITEM, MISC.: FIBER OPTIC ETHERNET TRANSCEIVER, SHORT RANGE	737	
										633	99000	1	EACH	CONTROLLER ITEM, MISC.: LAYER 2 ETHERNET SWITCH	738	
										804	32060	1,337	FT	DROP CABLE, 24 FIBER		
										804	34023	2	EACH	FIBER TERMINATION PANEL, 24 FIBER, AS PER PLAN	736	
										804	37000	1	EACH	SPLICE ENCLOSURE, BUTT STYLE		
										809	69101	1	EACH	STOP LINE RADAR DETECTION, AS PER PLAN	733	
										LANDSCAPING						
40										40	661	20020	40	EACH	DECIDUOUS SHRUB, 18" HEIGHT, (#3 CONTAINER) (RHUS AROMATICA 'GRO-LOW')	654
										40	661	20041	40	EACH	DECIDUOUS SHRUB, 2' HEIGHT, AS PER PLAN, RIBES ALPINUM 'GREEN MOUND'	824-824B
										95	661	30061	95	EACH	EVERGREEN SHRUB, 2' HEIGHT, AS PER PLAN, JUNIPERIS CHINENSIS 'SEA GREEN'	824-824B
										12	661	40081	12	EACH	DECIDUOUS TREE, 2" CALIPER, AS PER PLAN, MALUS X 'GOLDEN RAINDROPS'	824-824B
										8	661	40121	8	EACH	DECIDUOUS TREE, 3" CALIPER, AS PER PLAN, ACER RUBRUM 'FRANKSRED'	824-824B
										8	661	40141	8	EACH	DECIDUOUS TREE, 4" CALIPER, AS PER PLAN, ACER X FREEMANII 'ARMSTRONG'	824-824B
										45	661	40141	45	EACH	DECIDUOUS TREE, 4" CALIPER, AS PER PLAN, PLATANUS X ACERFOLIA	824-824B
										4	661	50160	4	EACH	EVERGREEN TREE, 8' HEIGHT, THUJA OCCIDENTALIS 'EMERALD'	824-824B
										32	661	50170	32	EACH	EVERGREEN TREE, 10' HEIGHT, PICEA OMORIKA	824-824B
										1,575	661	99900	1,575	EACH	PLANTING, MISC.: BULB, NARCISSUS ICE FOLLIES'	824
										1,575	661	99900	1,575	EACH	PLANTING, MISC.: PERENNIAL, HEMEROCALLIS X 'HAPPY RETURNS'	824
										23	SPECIAL	69098000	23	EACH	TREE GRATE, 4'X8'	824A-824B
										18	SPECIAL	69098700	18	CY	TURFGRASS SOIL MIX FURNISHED AND PLACED (12" DEPTH UPPER HORIZON)	824-826
										7	SPECIAL	69098700	7	CY	TURFGRASS BASE MIX FURNISHED AND PLACED (4 1/2" DEPTH LOWER HORIZON)	824-826
										622	SPECIAL	69098700	622	CY	TREE AND PLANTS SOIL MIX FURNISHED AND PLACED (24" DEPTH UPPER HORIZON)	824-826
										233	SPECIAL	69098700	233	CY	TREE AND PLANTS BASE MIX FURNISHED AND PLACED (9" DEPTH LOWER HORIZON)	824-826
										765	SPECIAL	69098700	765	CY	SAND-BASED STRUCTURAL SOIL FURNISHED AND PLACED (24" DEPTH UPPER HORIZON)	824-826
										287	SPECIAL	69098700	287	CY	SAND BASED STRUCTURAL SOIL BASE MIX FURNISHED AND PLACED (9" DEPTH LOWER HORIZON)	824 826
										RETAINING WALLS (E4)						
										203	20000	961	CY	EMBANKMENT		
										203	35000	2,085	CY	GRANULAR EMBANKMENT		
										203	35110	246	CY	GRANULAR MATERIAL, TYPE B		
										2	SPECIAL	20365000	2	EACH	SETTLEMENT PLATFORM	844
										203	98100	5,680	SY	ROADWAY, MISC.: COLUMN SUPPORTED WALLS	848	
										LUMP	LUMP					
										503	11101		LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	838	
										509	10001	14,932	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	838	
										93	53012	93	CY	CLASS QC2 CONCRETE, MISC.: PARAPET INCLUDING SLEEPER SLAB WITH QC/QA	838	
										348	512	10001	348	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN, (PERMANENT GRAFFITI PROTECTION)	838
										703	512	10100	703	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
										516	13200	56	SF	1/2" PREFORMED EXPANSION JOINT FILLER		
										516	13900	518	SF	2" PREFORMED EXPANSION JOINT FILLER		
										840	20001	6,894	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	839843	
										840	21000	630	CY	WALL EXCAVATION		
										840	22000	547	SY	FOUNDATION PREPARATION		
										840	23000	3,908	CY	SELECT GRANULAR BACKFILL		
										840	25010	608	FT	6" DRAINAGE PIPE, PERFORATED		
										840	26000	315	FT	CONCRETE COPING		
										840	26050	6,264	SF	AESTHETIC SURFACE TREATMENT		
										840	27000	5	DAY	ON-SITE ASSISTANCE		
										LUMP	LUMP					
										867	00101		LS	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	839	

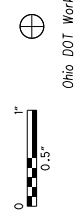
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GENERAL SUMMARY

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SHEET NUM.

SHEET NUM.										PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
857	864									08/NHS/P V.	EXT	TOTAL				
RETAINING WALLS (E5)																
438										438	203	20000	438	CY	EMBANKMENT	
LUMP										LUMP	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
24,388										24,388	509	10001	24,388	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	838
150										150	511	53012	150	CY	CLASS QC2 CONCRETE, MISC.: PARAPET INCLUDING SLEEPER SLAB WITH QC/QA	838
449										449	512	10001	449	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN, (PERMANENT GRAFFITI PROTECTION)	838
698										698	512	10100	698	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
875										875	516	13900	875	SF	2" PREFORMED EXPANSION JOINT FILLER	
179										179	607	39901	179	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN	838
5,533										5,533	840	20001	5,533	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	843
1,162										1,162	840	21000	1,162	CY	WALL EXCAVATION	
691										691	840	22000	691	SY	FOUNDATION PREPARATION	
2,164										2,164	840	23000	2,164	CY	SELECT GRANULAR BACKFILL	
997										997	840	25010	997	FT	6" DRAINAGE PIPE, PERFORATED	
438										438	840	26000	438	FT	CONCRETE COPING	
4,658										4,658	840	26050	4,658	SF	AESTHETIC SURFACE TREATMENT	
5										5	840	27000	5	DAY	ON-SITE ASSISTANCE	
RETAINING WALLS (E7)																
9,684										9,684	SPECIAL	20302000	9,684	CY	ENGINEERED FILL: LIGHTWEIGHT CELLULAR CONCRETE FILL, CLASS II	841
451										451	SPECIAL	20302000	451	CY	ENGINEERED FILL: LIGHTWEIGHT CELLULAR CONCRETE FILL, CLASS III	841
436										436	203	20000	436	CY	EMBANKMENT	
935										935	203	35110	935	CY	GRANULAR MATERIAL, TYPE B	
2										2	SPECIAL	20365000	2	EACH	SETTLEMENT PLATFORM	841
4,687										4,687	203	98000	4,687	CY	ROADWAY, MISC.: EPS GEOFOAM FILL	840
LUMP										LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	838
31,202										31,202	509	10001	31,202	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	838
199										199	511	53012	199	CY	CLASS QC2 CONCRETE, MISC.: PARAPET INCLUDING SLEEPER SLAB WITH QC/QA	838
110										110	511	53012	110	CY	CLASS QC2 CONCRETE, MISC.: LOAD DISTRIBUTION SLAB	838
5,058										5,058	511	71200	5,058	SF	CONCRETE, MISC.: PRECAST WALL PANELS	838
121										121	511	81100	121	FT	CONCRETE, MISC.: PRECAST FOOTING	838
2,080										2,080	512	10100	2,080	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
76										76	516	13200	76	SF	1/2" PREFORMED EXPANSION JOINT FILLER	
857										857	516	13900	857	SF	2" PREFORMED EXPANSION JOINT FILLER	
363										363	607	39901	363	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN	838
17,809										17,809	840	20001	17,809	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	839843
4,995										4,995	840	21000	4,995	CY	WALL EXCAVATION	
1,485										1,485	840	22000	1,485	SY	FOUNDATION PREPARATION	
2,660										2,660	840	23000	2,660	CY	SELECT GRANULAR BACKFILL	
506										506	840	25010	506	FT	6" DRAINAGE PIPE, PERFORATED	
523										523	840	26000	523	FT	CONCRETE COPING	
16,763										16,763	840	26050	16,763	SF	AESTHETIC SURFACE TREATMENT	
5										5	840	27000	5	DAY	ON-SITE ASSISTANCE	

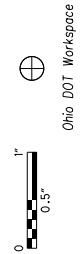
GENERAL SUMMARY

FRA - 71 - 14.36

NO.	DESCRIPTION	REV. BY	DATE
1	Removal of Item 203E35120	TAZ	11-05-2021
3	Remove Item 840E28000	TAZ	11-19-2021
3	Update Item 509 to A.P.P.	TAZ	11-19-2021
4	Update Funding Splits	TAZ	11-24-2021

275C
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34" x 22"

SHEET NUM.

SHEET NUM.										PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
874	884									08/NHS/P V.		EXT	TOTAL			
RETAINING WALLS (E10)																
1,346										1,346	SPECIAL	20302000	1,346	CY	ENGINEERED FILL: LIGHTWEIGHT CELLULAR CONCRETE FILL, CLASS II	841
122										122	SPECIAL	20302000	122	CY	ENGINEERED FILL: LIGHTWEIGHT CELLULAR CONCRETE FILL, CLASS III	841
678										678	203	20000	678	CY	EMBANKMENT	
827										827	203	35110	827	CY	GRANULAR MATERIAL, TYPE B	
6,138										6,138	203	98000	6,138	CY	ROADWAY, MISC.:EPS GEOFOAM FILL	840
LUMP										LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	838
39,409										39,409	509	10001	39,409	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	838
247										247	511	53012	247	CY	CLASS QC2 CONCRETE, MISC.: PARAPET INCLUDING SLEEPER SLAB WITH QC/QA	838
4,628										4,628	511	71200	4,628	SF	CONCRETE, MISC.: PRECAST WALL PANELS	838
152										152	511	81100	152	FT	CONCRETE, MISC.: PRECAST FOOTING	838
1,240										1,240	512	10100	1,240	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
10,345										10,345	840	20001	10,345	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	839
4,104										4,104	840	21000	4,104	CY	WALL EXCAVATION	
743										743	840	22000	743	SY	FOUNDATION PREPARATION	
1,748										1,748	840	23000	1,748	CY	SELECT GRANULAR BACKFILL	
455										455	840	25010	455	FT	6" DRAINAGE PIPE, PERFORATED	
5										5	840	27000	5	DAY	ON-SITE ASSISTANCE	
RETAINING WALLS (W2)																
	2,649									2,649	203	20000	2,649	CY	EMBANKMENT	
	LUMP									LUMP	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
	87,095									87,095	509	10001	87,095	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	838
	560									560	511	53012	560	CY	CLASS QC2 CONCRETE, MISC.: PARAPET INCLUDING SLEEPER SLAB WITH QC/QA	838
	1,627									1,627	512	10001	1,627	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN, (PERMANENT GRAFFITI PROTECTION)	838
	4,459									4,459	512	10100	4,459	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
	216									216	516	13200	216	SF	1/2" PREFORMED EXPANSION JOINT FILLER	
	2,217									2,217	516	13900	2,217	SF	2" PREFORMED EXPANSION JOINT FILLER	
	431									431	601	37500	431	FT	PAVED GUTTER, TYPE 1-2	
	36,756									36,756	840	20001	36,756	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	843
	6,905									6,905	840	21000	6,905	CY	WALL EXCAVATION	
	3,332									3,332	840	22000	3,332	SY	FOUNDATION PREPARATION	
	27,781									27,781	840	23000	27,781	CY	SELECT GRANULAR BACKFILL	
	924									924	840	23050	924	CY	NATURAL SOIL	
	3,135									3,135	840	25010	3,135	FT	6" DRAINAGE PIPE, PERFORATED	
	1,555									1,555	840	26000	1,555	FT	CONCRETE COPING	
	33,647									33,647	840	26050	33,647	SF	AESTHETIC SURFACE TREATMENT	
	5									5	840	27000	5	DAY	ON-SITE ASSISTANCE	

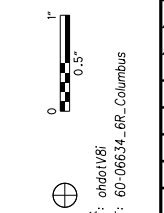
NO.	DESCRIPTION	REV. BY	DATE
1	Removal of Item 203E35120	TAZ	11-05-2021
3	Remove Item 840E28000	TAZ	11-19-2021
3	Update Item 509 to A.P.P.	TAZ	11-19-2021
4	Update Funding Splits	TAZ	11-24-2021

GENERAL SUMMARY

FRA - 71 - 14.36



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View: FENCE - MEWT
By: tzongmeister

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	
170	277	278	894	909A	279	280	281	286	281A	282	199E	08/NHS/P V	08/NHS/P V							
									RETAINING WALLS (W5)											
			3,578										3,578	203	20000	3,578	CY	EMBANKMENT		
			278										278	203	35110	278	CY	GRANULAR MATERIAL, TYPE B		
			2										2	SPECIAL	20365000	2	EACH	SETTLEMENT PLATFORM	844	
			1,912										1,912	203	98100	1,912	SY	ROADWAY, MISC.: COLUMN SUPPORTED WALLS	901	
			LUMP										LUMP	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING		
			31,723										31,723	509	10001	31,723	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	838	
			524										524	511	53012	524	CY	CLASS QC2 CONCRETE, MISC.: PARAPET INCLUDING SLEEPER SLAB WITH QC/QA	838	
			5,418										5,418	512	10100	5,418	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
			419										419	516	13200	419	SF	1/2" PREFORMED EXPANSION JOINT FILLER		
			1,962										1,962	516	13900	1,962	SF	2" PREFORMED EXPANSION JOINT FILLER		
			746										746	601	37500	746	FT	PAVED GUTTER, TYPE 1-2		
			47,388										47,388	840	20001	47,388	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	843	
			12,124										12,124	840	21000	12,124	CY	WALL EXCAVATION		
			6,296										6,296	840	22000	6,296	SY	FOUNDATION PREPARATION		
			62,184										62,184	840	23000	62,184	CY	SELECT GRANULAR BACKFILL		
			9,690										9,690	840	23050	9,690	CY	NATURAL SOIL		
			4,033										4,033	840	25010	4,033	FT	6" DRAINAGE PIPE, PERFORATED		
			1,777										1,777	840	26000	1,777	FT	CONCRETE COPING		
			43,836										43,836	840	26050	43,836	SF	AESTHETIC SURFACE TREATMENT		
			5										5	840	27000	5	DAY	ON-SITE ASSISTANCE		
									RETAINING WALLS (W3)											
			1,393										1,393	203	20000	1,393	CY	EMBANKMENT		
			LUMP										LUMP	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING		
			30,007										30,007	509	10001	30,007	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	838	
			192										192	511	53012	192	CY	CLASS QC2 CONCRETE, MISC.: PARAPET INCLUDING SLEEPER SLAB WITH QC/QA	838	
			2,629										2,629	512	10100	2,629	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	838	
			196										196	516	13200	196	SF	1/2" PREFORMED EXPANSION JOINT FILLER		
			720										720	516	13900	720	SF	2" PREFORMED EXPANSION JOINT FILLER		
			392										392	601	37500	392	FT	PAVED GUTTER, TYPE 1-2		
			27,132										27,132	840	20001	27,132	SF	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	843	
			3,256										3,256	840	21000	3,256	CY	WALL EXCAVATION		
			1,835										1,835	840	22000	1,835	SY	FOUNDATION PREPARATION		
			18,250										18,250	840	23000	18,250	CY	SELECT GRANULAR BACKFILL		
			701										701	840	23050	701	CY	NATURAL SOIL		
			1,090										1,090	840	25010	1,090	FT	6" DRAINAGE PIPE, PERFORATED		
			25										25	840	25020	25	FT	6" DRAINAGE PIPE, NON-PERFORATED		
			871										871	840	26000	871	FT	CONCRETE COPING		
			25,394										25,394	840	26050	25,394	SF	AESTHETIC SURFACE TREATMENT		
			5										5	840	27000	5	DAY	ON-SITE ASSISTANCE		
			LUMP										LUMP	867	00101	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	839	
									MISCELLANEOUS STRUCTURE											
			LUMP										LUMP	LUMP	202	11200	LS		PORTIONS OF STRUCTURE REMOVED	
													13,000	12,000	202	11501	25,000	EACH	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	46
			50				78						64	64	202	22900	128	SY	APPROACH SLAB REMOVED	
			LUMP										LUMP	LUMP	503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
									LUMP	LUMP			LUMP	LUMP	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	47
			2,096										2,983	2,982	512	10000	5,965	SY	SEALING OF CONCRETE SURFACES	
													LUMP	LUMP	867	00100	LS		TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL	199E

NO.	DESCRIPTION	REV.	BY	DATE
1	Removal of Item 203L35120	1A	1A	11-05-2021
1	Change 203L98100 Desc.	1A	1A	11-05-2021
3	Remove Duplicate Pay Qty	1A	1A	11-19-2021
3	Remove Multi-Sheet Ref.	1A	1A	11-19-2021
3	Remove Item 840E28000	1A	1A	11-19-2021
3	Update Item 509 To A P P.	1A	1A	11-19-2021
4	Revise 202E1500 To 1501	1A	1A	11-19-2021
4	Update Funding Split	1A	1A	11-24-2021

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GENERAL SUMMARY

FRA - 71 - 14.36

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Ohio DOT Workspace
70\71 West Interchange 6R
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SHEET NUM.		PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION		SEE SHEET NO.
1200		09/NHS/B R..		EXT	TOTAL				
STRUCTURE (FRA-70-1373B)									
3		3	203	35110	3	CY	GRANULAR MATERIAL, TYPE B		
LUMP		LUMP	505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION		
855		855	507	00100	855	FT	STEEL PILES HP10X42, FURNISHED		
810		810	507	00150	810	FT	STEEL PILES HP10X42, DRIVEN		
9		9	507	93300	9	EACH	STEEL POINTS OR SHOES		
133,381		133,381	509	10001	133,381	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN		1199
309		309	511	34446	309	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK		
98		98	511	34450	98	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)		
168		168	511	41012	168	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		
171		171	511	43512	171	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING		
116		116	512	10001	116	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN, (PERMANENT GRAFFITI PROTECTION)		1199
1,383		1,383	512	10100	1,383	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
27		27	512	33000	27	SY	TYPE 2 WATERPROOFING		
361,373		361,373	513	10300	361,373	LB	STRUCTURAL STEEL MEMBERS, LEVEL 5		
3,135		3,135	513	20000	3,135	EACH	WELDED STUD SHEAR CONNECTORS		
5,704		5,704	514	00060	5,704	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT		
5,704		5,704	514	00067	5,704	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN		1199
75		75	516	10010	75	FT	ARMORLESS PREFORMED JOINT SEAL		
75		75	516	11210	75	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL		
160		160	516	13900	160	SF	2" PREFORMED EXPANSION JOINT FILLER		
88		88	516	25000	88	SF	NYLON REINFORCED NEOPRENE SHEETING		
3		3	516	44100	3	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE)(1'-4" x 5 1/8" x 1'-7" PAD WITH 1'-5" x 2" x 1'-9" STEEL LOAD PLATE)		
1		1	516	44100	1	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE)(1'-4" x 5 1/8" x 1'-7" PAD WITH 1'-5" x 2" x 2'-1" STEEL LOAD PLATE)		
3		3	516	44101	3	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN(1'-4" x 5 1/8" x 1'-7" PAD WITH 1'-5" x 2 3/8" x 1'-9" BEVELED STEEL LOAD PLATE)		1199
1		1	516	44101	1	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN(1'-4" x 5 1/8" x 1'-7" PAD WITH 1'-5" x 2 3/8" x 2'-1" BEVELED STEEL LOAD PLATE)		1199
3		3	516	44101	3	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN(2'-0 1/2" x 5 3/8" x 2'-0 1/2" PAD WITH 2'-1 1/2" x 2 1/4" x 2'-8" BEVELED STEEL LOAD PLATE)		1199
1		1	516	44101	1	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE), AS PER PLAN(2' 0 1/2" x 5 3/8" x 2' 0 1/2" PAD WITH 2' 1 1/2" x 2 1/4" x 3' 0" BEVELED STEEL LOAD PLATE)		1199
1		1	518	12000	1	EACH	SCUPPERS, INCLUDING SUPPORTS		
20		20	518	21200	20	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC		
75		75	518	40000	75	FT	6" PERFORATED CORRUGATED PLASTIC PIPE		
25		25	518	40010	25	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		
52		52	518	51200	52	FT	PIPE DOWNSPOUT, INCLUDING SPECIALS, 10"		
108		108	524	94700	108	FT	DRILLED SHAFTS, 36" DIAMETER		
156		156	524	94704	156	FT	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK		
372		372	524	94802	372	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK		
249		249	526	30000	249	SY	REINFORCED CONCRETE APPROACH SLABS (T=17")		
75		75	526	90030	75	FT	TYPE C INSTALLATION		
205		205	607	39901	205	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN		1199

CALCULATED HRB CHECKED TAZ
GENERAL SUMMARY
FRA-71-14.36
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NO.	DESCRIPTION	REV. BY	DATE
3	Update Item 509 to A.P.P.	TAZ	11-19-2021
3	511E34451 to 511E34450	TAZ	11-19-2021
4	Update Funding Splits	TAZ	11-24-2021



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View: FENCE - NEW!
By: tzongmeister

SHEET NUM.							PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
912	944					09/NHS/B R	09/NHS/B R	09/NHS/B R							
STRUCTURE REPAIR (FRA-70-1373L)															
LUMP							LUMP	202	11203	LS			PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	911	
157							157	202	22900	157	SY		APPROACH SLAB REMOVED		
705							705	202	23501	705	SY		WEARING COURSE REMOVED, AS PER PLAN	911	
3							3	202	98100	3	EACH		REMOVAL MISC.: PILE REMOVED, EXISTING STRUCTURE	917	
8							8	407	20000	8	GAL		NON-TRACKING TACK COAT		
5							5	441	10000	5	CY		ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22		
LUMP							LUMP	503	11100	LS			COFFERDAMS AND EXCAVATION BRACING		
11,409							11,409	509	25000	11,409	LB		UNCOATED REINFORCING STEEL		
372							372	510	10000	372	EACH		DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT		
48							48	511	21521	48	CY		CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN	911	
117							117	512	33010	117	SY		TYPE 3 WATERPROOFING		
494							494	513	10200	494	LB		STRUCTURAL STEEL MEMBERS, LEVEL UF		
1,005							1,005	513	10240	1,005	LB		STRUCTURAL STEEL MEMBERS, LEVEL 2		
4							4	518	12200	4	EACH		SCUPPERS, INCLUDING SUPPORTS		
32							32	SPECIAL	51912510	32	SY		PATCHING CONCRETE BRIDGE DECK	911	
4							4	846	00110	4	CF		POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM		
STRUCTURE (FRA-71-1503L)															
LUMP						LUMP	LUMP	202	11003	LS			STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	941	
LUMP						LUMP	LUMP	202	11201	LS			PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	941	
159						80	79	202	22900	159	SY		APPROACH SLAB REMOVED		
2,034						1,017	1,017	202	23500	2,034	SY		WEARING COURSE REMOVED		
21						11	10	202	98100	21	EACH		REMOVAL MISC.: PILE REMOVED, EXISTING STRUCTURE	946	
LUMP						LUMP	LUMP	503	11101	LS			COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	942	
6,586						3,293	3,293	503	21101	6,586	CY		UNCLASSIFIED EXCAVATION, AS PER PLAN	942	
LUMP						LUMP	LUMP	505	11100	LS			PILE DRIVING EQUIPMENT MOBILIZATION		
980						490	490	507	00100	980	FT		STEEL PILES HP10X42, FURNISHED		
935						468	467	507	00150	935	FT		STEEL PILES HP10X42, DRIVEN		
1,760						880	880	507	00200	1,760	FT		STEEL PILES HP12X53, FURNISHED		
1,680						840	840	507	00250	1,680	FT		STEEL PILES HP12X53, DRIVEN		
27						14	13	507	93300	27	EACH		STEEL POINTS OR SHOES		
6,011,221						3,005,611	3,005,610	509	10001	6,011,221	LB		EPOXY COATED REINFORCING STEEL, AS PER PLAN	942	
8,950						4,475	4,475	511	34447	8,950	CY		CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN	942	
1,506						753	753	511	34451	1,506	CY		CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN	942, 1143	
278						139	139	511	43512	278	CY		CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT INCLUDING FOOTING		
11,516						5,758	5,758	511	45602	11,516	CY		CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA		
1,642						821	821	512	10001	1,642	SY		SEALING OF CONCRETE SURFACES, AS PER PLAN, (PERMANENT GRAFFITI PROTECTION)	942, 1143	
22,021						11,011	11,010	512	10100	22,021	SY		SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		
19						10	9	512	33000	19	SY		TYPE 2 WATERPROOFING		
13,156,600						6,578,300	6,578,300	513	10401	13,156,600	LB		STRUCTURAL STEEL MEMBERS, HYBRID GIRDER, LEVEL SIX (6) FABRICATION, AS PER PLAN	942, 1035	
84,927						42,464	42,463	513	20000	84,927	EACH		WELDED STUD SHEAR CONNECTORS		
154,349						77,175	77,174	514	00060	154,349	SF		FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT		
154,349						77,175	77,174	514	00066	154,349	SF		FIELD PAINTING STRUCTURAL STEEL, FINISH COAT		
118						59	59	516	10010	118	FT		ARMORLESS PREFORMED JOINT SEAL		
263						132	131	SPECIAL	51612400	263	FT		MODULAR EXPANSION JOINT	943	
26						13	13	516	13600	26	SF		1" PREFORMED EXPANSION JOINT FILLER		
10						5	5	518	12200	10	EACH		SCUPPERS, INCLUDING SUPPORTS		
83						42	41	518	21200	83	CY		POROUS BACKFILL WITH GEOTEXTILE FABRIC		
46						23	23	518	40000	46	FT		6" PERFORATED CORRUGATED PLASTIC PIPE		
38						19	19	518	40010	38	FT		6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS		
229						115	114	518	51200	229	FT		PIPE DOWNSPOUT, INCLUDING SPECIALS, 10"		
130						65	65	524	94804	130	FT		DRILLED SHAFTS, 42" DIAMETER, INTO BEDROCK		
1,340						670	670	524	94902	1,340	FT		DRILLED SHAFTS, 48" DIAMETER, ABOVE BEDROCK		
725						363	362	524	94904	725	FT		DRILLED SHAFTS, 48" DIAMETER, INTO BEDROCK		
2,854						1,427	1,427	524	94906	2,854	FT		DRILLED SHAFTS, 54" DIAMETER, ABOVE BEDROCK		
290						145	145	524	94994	290	FT		DRILLED SHAFTS, 90" DIAMETER, INTO BEDROCK		
633						317	316	524	94996	633	FT		DRILLED SHAFTS, 96" DIAMETER, ABOVE BEDROCK		

NO.	DESCRIPTION	REV.	BY	DATE
2	DOWEL PILE ITEM INCLUDED	TAZ	TAZ	11-10-2021
3	Update Item & QTY	TAZ	TAZ	11-19-2021
4	Update Funding Splits	TAZ	TAZ	11-24-2021

GENERAL SUMMARY

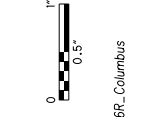
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Main data table with columns: SHEET NUM., PART., ITEM, ITEM EXT, GRAND TOTAL, UNIT, DESCRIPTION, SEE SHEET NO.

GENERAL SUMMARY table with columns: NO., DESCRIPTION, REV. BY, DATE, TAZ, and Update/Funding/Sp/Its

FRA - 71 - 14.36
275H
1228
ms consultants, inc.

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NO.	DESCRIPTION	REV.	BY	DATE	202	202	202	202	202	202	202	202	202	202	SPECIAL	202	202	202	202	202	252	253	202	
4	Revise Item Description	TAZ		11-24-2021	WALK REMOVED, AS PER PLAN "A"	PAVEMENT REMOVED	WALK REMOVED	REMOVAL MISC.; STEPS REMOVED, AS PER PLAN	CURB REMOVED		PIPE REMOVED, 24" AND UNDER	MANHOLE REMOVED	MANHOLE REMOVED, AS PER PLAN	CATCH BASIN REMOVED	INLET REMOVED	FILL AND PLUG EXISTING CONDUIT	MANHOLE ABANDONED	MANHOLE ABANDONED, AS PER PLAN	REMOVAL MISC.; TRASH RECEPTACLES REMOVED, AS PER PLAN	REMOVAL MISC.; TREE GRATES REMOVED, AS PER PLAN	FENCE REMOVED, AS PER PLAN "B"	FULL DEPTH PAVEMENT SAWING	PAVEMENT REPAIR, AS PER PLAN	GRANITE CURB REMOVED FOR REUSE
REF NO.	SHEET NO.	STATION TO STATION			SF	SY	SF	EACH	FT		FT	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	FT	FT	SY	FT
FRONT ST. = (F) MOUND ST. = (M) SHORT ST. = (SS) SECOND ST. = (2ND) RAMP D6 = (D6)																								
R310	348-353	16+59.76 R/L (M)	TO	26+92.75 L/R (M)		5366																		
R311	356,358	12+50.00 R/L (SS)	TO	14+83.90 L/R (SS)		771																		
R312	362	4+10.26 R/L (2ND)	TO	5+36.76 L/R (2ND)		814																		
R313	353	26+26.85 LT (M)	TO	26+88.31 LT (M)		15																		
R314	353	25+53.74 LT (M)	TO	26+87.41 LT (M)		91																		
R315	348,350	18+70.27 RT (M)	TO	19+30.20 RT (M)											67	1								
R316	350	19+30.20 RT (M)	TO	20+95.95 RT (M)											162	1								
R317	358	20+95.95 RT (M)	TO	22+98.19 RT (M)						20					182	1								
R318	350	22+98.19 RT (M)	TO	23+28.93 RT (M)							1				36									
R320	351, 358	13+82.11 RT (SS)	TO	6000+85.05 LT (D6)																	202			
R321	346	13+67.55 RT (M)	TO	13+79.53 RT (M)						12														
R322	346	11+58.87 RT (M)										1												
R323	350	22+28.62 LT (M)										1												
R324	350	22+46.79 RT (M)										1												
R325	353	26+49.34 LT (M)										1												
R327	362	4+99.73 LT (2ND)	TO	5+23.63 LT (2ND)			207																	
R328	362	5+34.26 LT (2ND)	TO	6+22.04 LT (2ND)			707															18		
R329	353	26+92.75 LT (M)	TO	27+12.41 LT (M)	74																	37		
R330	353	156+03.49 L/R (F)	TO	156+17.31 L/R (F)		85																113		
R331	353	156+00.81 LT (F)	TO	156+10.83 LT (F)																			12	
R332	362	6+04.78 LT (2ND)	TO	6+06.47 LT (2ND)					2															
R333	348	18+72.07 RT (M)	TO									1												
R334	348	18+70.54 RT (M)	TO	18+72.07 RT (M)											19									
R335	356	10+11.49 RT (SS)	TO	10+29.15 RT (SS)			78																	
R336	346	10+02.40 LT (M)	TO	10+91.06 LT (M)																		163	53	
R337	358	13+20.85 LT (SS)	TO	13+30.61 LT (SS)													2							
R338	358	13+62.84 LT (SS)															1							
TOTALS CARRIED TO SUBSUMMARY					74	7142	992		2		32	2	4		466	6					202	331	53	12

REF NO.	SHEET NO.	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL
		16" PVC C900 PIPE, WITH TYPE 1 BEDDING WITH 912 COMPACTED GRANULAR BACKFILL (COL 901)	42" PIPE, WITH TYPE 1 BEDDING WITH BACKFILL (COL 901)	SEWER ABANDONED(COL 202)	SEWER ABANDONED AND SEALED 24" AND UNDER (USACE SOP)	SEWER ABANDONED AND SEALED 24" AND OVER (USACE SOP)	10" DIP FORCEMAIN W/ BEDDING AND BACKFILL PER COL 801	18" DIP FORCEMAIN W/ BEDDING AND BACKFILL PER COL 801	36" DIP OR PCOP FORCEMAIN W/ BEDDING AND BACKFILL PER COL 801	24" CASING PIPE (COL 806)	30" CASING PIPE (COL 806)	54" CASING PIPE (COL 806)	STRUCTURE AT STATION 0+47, COMPLETE (COL 904)	MANHOLE RECONSTRUCTED TO GRADE	MANHOLE TYPE C, W/ OUTSIDE DROP (COL 901)	STRUCTURE REMOVED - AIR RELEASE MANHOLE VAULT (COL 202)	STRUCTURE REMOVED - SANITARY VAULT (COL 202)	INCREASED OR DECREASED EARTH EXCAVATION (COL 902)	MANHOLE MISC.: AIR RELEASE MANHOLE AND APPURTENANCES, COMPLETE	PAVEMENT REPAIR, AS PER PLAN	FULL DEPTH PAVEMENT SAWING	BYPASS PUMPING, COC SS-3	
FT	FT	EACH	FT	FT	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	CY	EACH	SY	FT	LS			
633	495																						
634			38	1																			
635					126	43		43				1	1	3									
636					120			126															
637					131			120															
639							131			40	40	40											
CONT																							
																		18					
																		1					
TOTAL		495	38	2	251	126	174	120	169	40	40	40	1	1	3	1	1	83	340	1			

NO.	DESCRIPTION	REV.	BY	DATE
4	Quantities/Items Revised	LM		11-24-2021
4	Revised Item Description	TAZ		11-24-2021

CALCULATED
TAZ
CHECKED
DLT

SANITARY SEWER RELOCATION SUBSUMMARY

FRA - 71 - 14.36

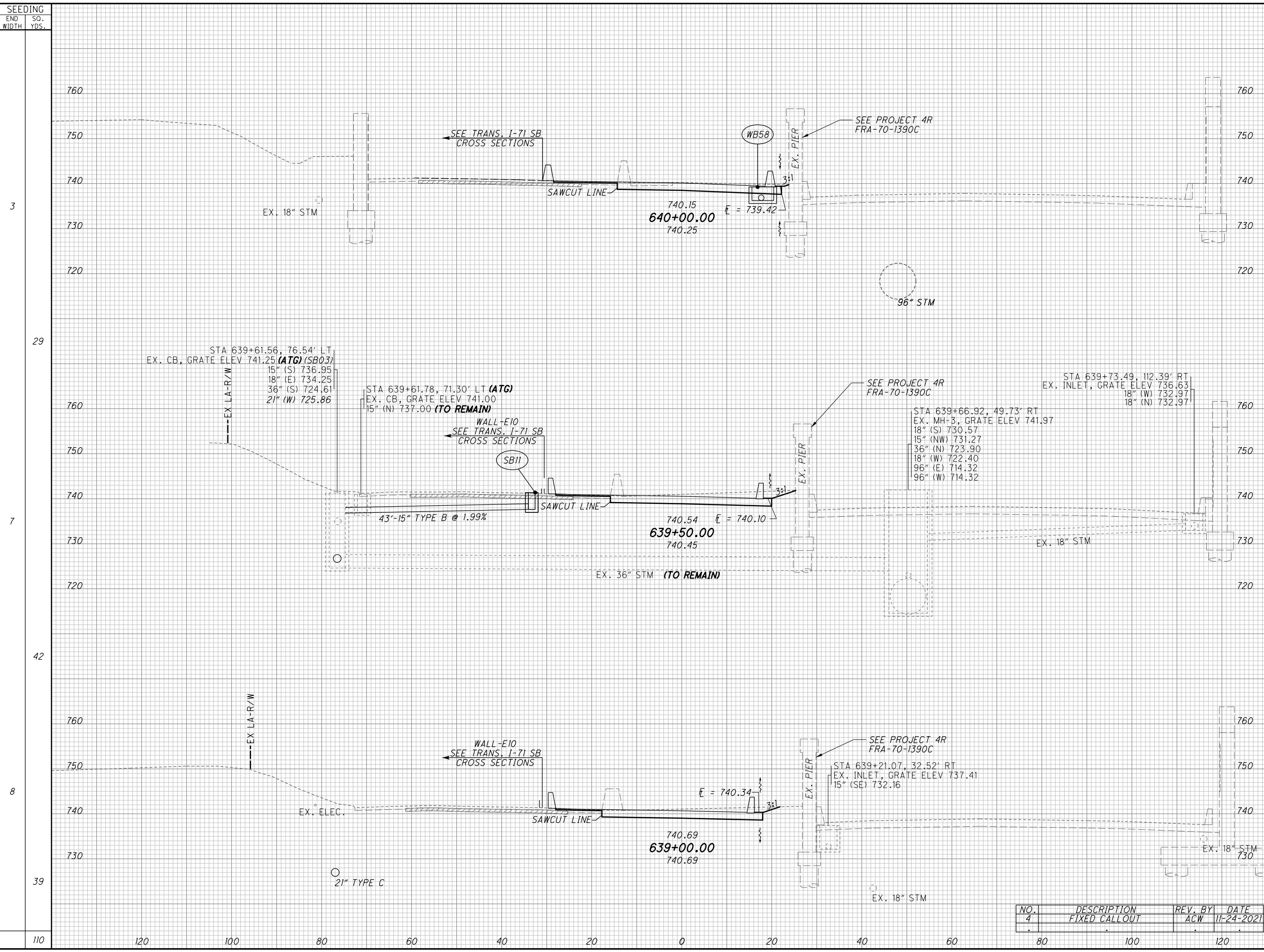
295
1228

REF NO.	SHEET NO.	638	638	638	638	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL		SPECIAL	SPECIAL	SPECIAL	638		SPECIAL	SPECIAL		SPECIAL	253	252					
		WATER WORK, MISC.: 6" DUCTILE IRON WATER PIPE AND FITTINGS (COL. 801) FT	WATER WORK, MISC.: 12" DUCTILE IRON WATER PIPE AND FITTINGS (COL. 801) FT	WATER WORK, MISC.: 36" WATER PIPE AND FITTINGS (COL. 801) FT	WATER WORK, MISC.: 3/4" WATER SERVICE TAP, TRANSFERRED (COL. 805) EACH	FIRE HYDRANT, TYPE A (COL. 809) EACH	FIRE HYDRANT, TYPE A MODIFIED (COL. 809) EACH	FIRE HYDRANT, ABANDONED (COL. 809) EACH	FIRE HYDRANT, RELOCATED (COL. 809) EACH	1 1/2" CURB STOP, RELOCATED (COL. 805) EACH		6" GATE VALVE AND APPURTENANCES (COL. 802) EACH	12" GATE VALVE AND APPURTENANCES (COL. 802) EACH	36" BUTTERFLY VALVE AND APPURTENANCES (COL. 802) EACH	WATER WORK.: 8"X6" TAPPING SLEEVE AND VALVE (COL. 803) EACH		54" CASING PIPE, 3/4" THICKNESS (COL. 806) FT	8-INCH WATER MAIN ABANDONED (COL. 808) EACH			PIPE REMOVED (COL. 202) FT	PAVEMENT REPAIR, AS PER PLAN SY	FULL DEPTH PAVEMENT SAWING FT				
643				350		1									1					342							
644				450												128				460							
645			131	94																169							
646		15																			35	160					
647		314		460	1		1	2																			
648		50											4	1													
642																											
TOTAL		379	131	1354	1	1	1	2	4	1						128	3		971	35	160						

NO.	DESCRIPTION	REV. BY	DATE
2	ITEM & QUANTITY ADDED	ADB	11-12-21
3	REMOVED ITEM 690E98400	ADB	11-18-2021
3	REMOVED ITEM 690E98000	ADB	11-22-2021
4	CHANGE IN QUANTITY	ADB	11-24-2021
4	Revise Item Description	TAZ	11-24-2021

REF NO.	SHEET NO.	NO.	DESCRIPTION	REV. BY	DATE	SPECIAL				659	253	511	SPECIAL				
		4	Revise Item Description	TAZ	11-24-21	LS	LS	LS	LS	SY	SY	CY	LB				
	643									780							
	644									1000							
	645									100	10						
	646																
	647									350							
	648																
	CONT					1	1	1	1			48	3200				
TOTAL						1	1	1	1	2230	10	48	3200				

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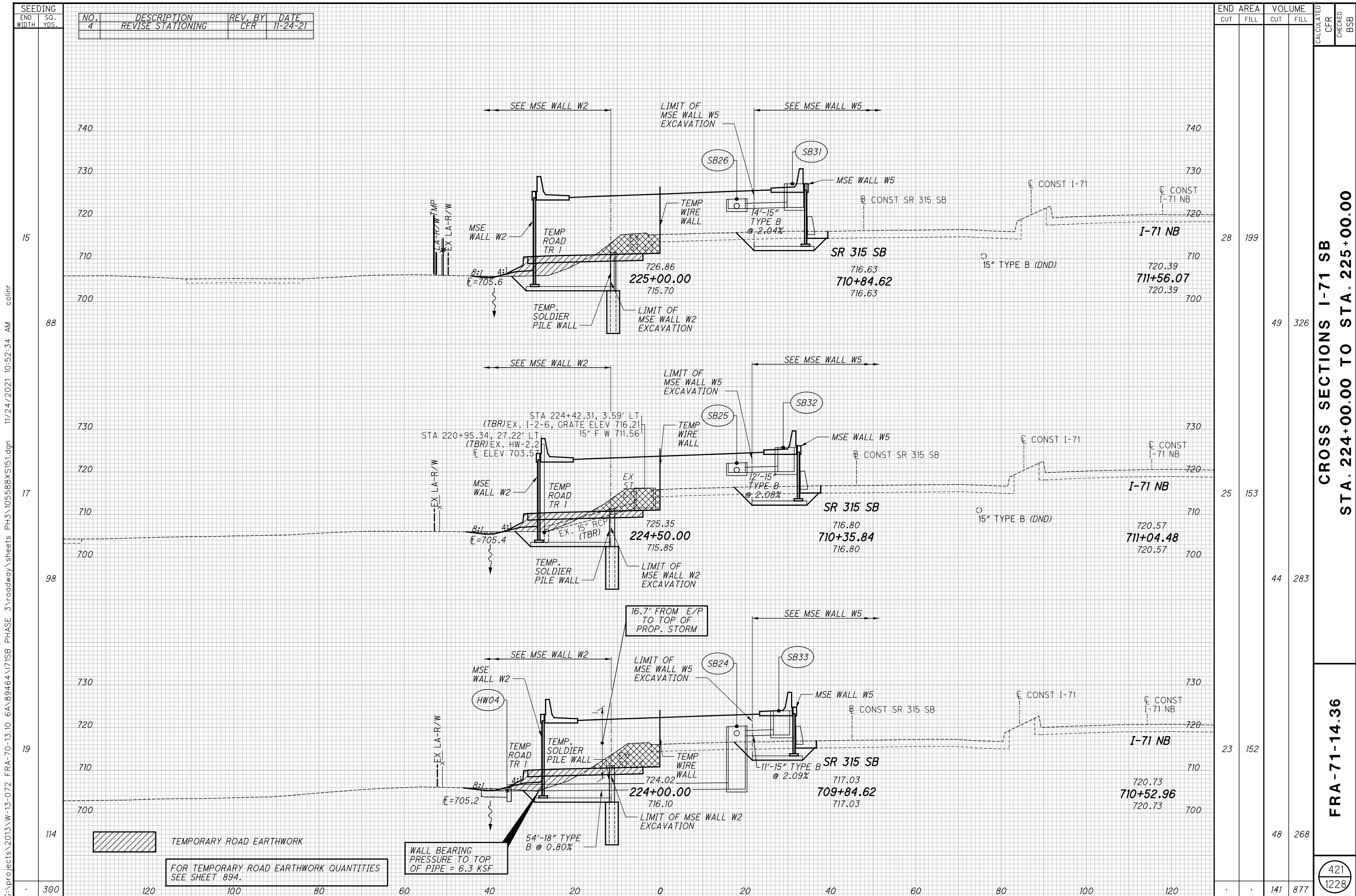
SEEDING	END AREA		VOLUME		CALCULATED	CHECKED
	CUT	FILL	CUT	FILL		
3	67	1				
29	140	2				
7	84	1				
42	149	2				
8	76	1				
39	129	2				
110	418	6				

**CROSS SECTIONS TRANSITIONAL I-70 WB
STA. 639+00.00 TO STA. 640+00.00**

FRA-71-14.36

NO.	DESCRIPTION	REV. BY	DATE
4	FIXED CALLOUT	ACW	11-24-2021

403
1228



NO.	DESCRIPTION	REV. BY	DATE
4	REVISE STATIONING	CFR	11-24-21

END AREA	VOLUME	CALCULATED	CHECKED	BSB
28	199			
49	326			
25	153			
44	283			
23	152			
48	268			
		141	877	

CROSS SECTIONS I-71 SB
STA. 224+00.00 TO STA. 225+00.00

FRA-71-14.36

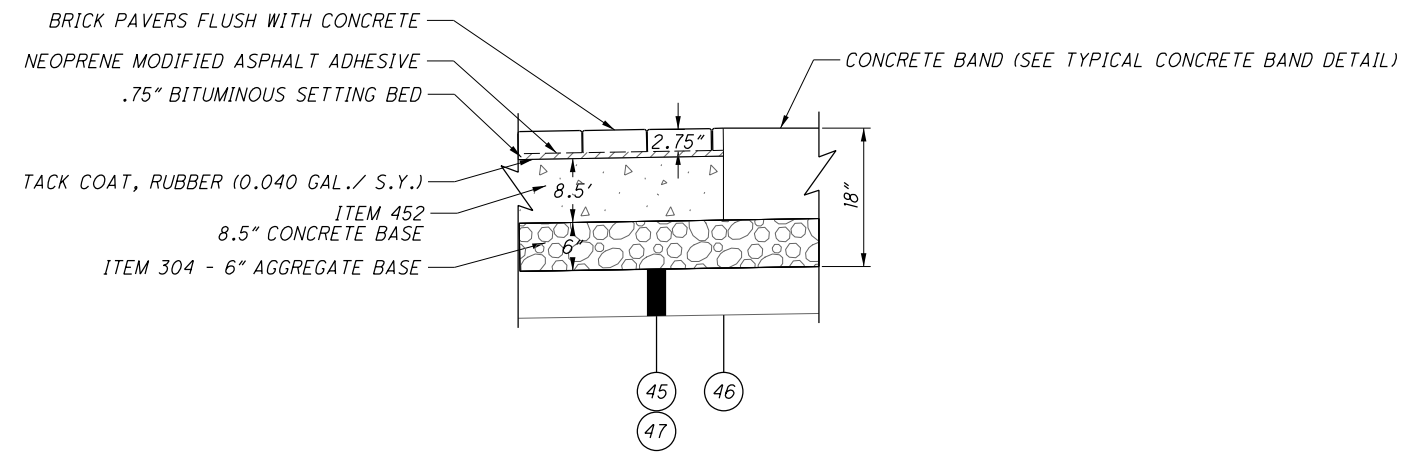
421
 1228

TEMPORARY ROAD EARTHWORK
 FOR TEMPORARY ROAD EARTHWORK QUANTITIES SEE SHEET 894.

WALL BEARING PRESSURE TO TOP OF PIPE = 6.3 KSF

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**ITEM 608 - WALKWAY, MISC.:
 BRICK PAVER CROSSWALK, AS PER PLAN**

CONCRETE BASE, CONCRETE BAND, AGGREGATE BASE, SUBGRADE COMPACTION AND APPURTENANCES SHALL BE INCLUDED IN ITEM 608 - WALKWAY, MISC.: BRICK PAVER CROSSWALK, AS PER PLAN, PER S.F..

MATERIAL NOTES

BRICK PAVER'S CONCRETE BASE

SEE GENERAL NOTE SHEET 47 FOR WEEP HOLE REQUIREMENTS.

BRICK PAVER

SEE GENERAL NOTE SHEET 47 FOR SUPPLIER.
 SEE DETAIL SHEET 560 FOR PATTERN.

NEOPRENE - MODIFIED ASPHALT ADHESIVE

- FURNISH NEOPRENE-MODIFIED ASPHALT ADHESIVE THAT CONTAINS 2 PERCENT NEOPRENE, GRADE WMI, OXIDIZED ASPHALT WITH A 150 DEGREE SOFTEN POINT (77 PENETRATION), AND 10 PERCENT LONG-FIBERED INERT MATERIAL, AS SUPPLIED BY:

KARNAK
 330 CENTRAL AVENUE
 CLARK, NJ 07066
 (800) 526-4236
<http://www.karnakcorp.com>

HANOVER ARCHITECTURAL PRODUCTS
 5000 HANOVER ROAD
 HANOVER, PA 17331
 (717) 637-0500
<http://www.hanoverpavers.com>

OR APPROVED EQUAL

BITUMINOUS SETTING BED

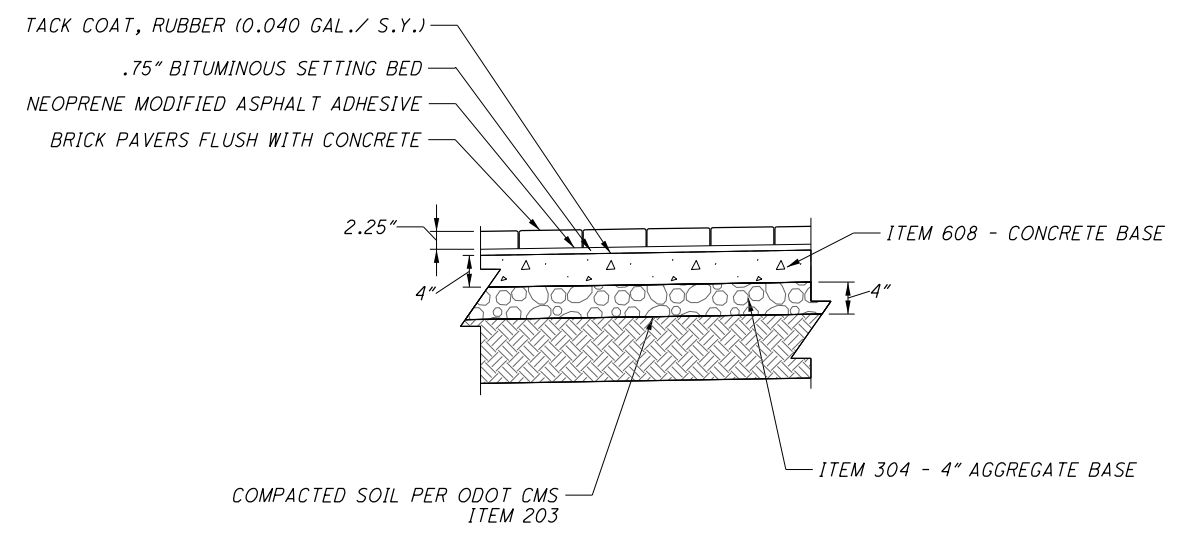
- FURNISH ASPHALT CEMENT CONFORMING TO ASTM 03381, VISCOSITY GRADE PG64-22.
- FURNISH FINE AGGREGATE OF NATURAL SAND AND/OR STONE SAND, COMPOSED OF HARD, TOUGH, DURABLE, UNCOATED PARTICLES, FREE FROM CLAY, SILT, ORGANIC MATERIAL OR OTHER DELETERIOUS SUBSTANCES. INSURE THE SAND IS UNIFORMLY GRADED WITH ALL MATERIAL PASSING THE NO. 4 SIEVE AND MEETING THE REQUIREMENTS OF ASTM C136.
- COMBINE THE DRIED FINE AGGREGATE WITH HOT ASPHALT CEMENT AND HEAT MIX TO APPROXIMATELY 300°F AT AN ASPHALT PLANT.
 - PROVIDE AN APPROXIMATE PROPORTION OF MATERIALS OF 7 PERCENT ASPHALT CEMENT AND 93 PERCENT FINE AGGREGATE.
 - PROVIDE EACH TON APPORTIONED BY WEIGHT TO 140 POUNDS OF ASPHALT CEMENT AND 1,860 POUNDS OF FINE AGGREGATE.

ITEM SPECIAL - MISC: BRICK PAVER CROSSWALK, AS PER PLAN SHALL BE PLACED IN LOCATIONS AS SHOWN ON PLAN SHEETS AND DETAIL SHEETS.

ITEM 608 - WALKWAY, MISC.: BRICK PAVER CROSSWALK, AS PER PLAN SHALL BE PLACED IN HERRINGBONE PATTERN.

- FOR PROTECTION OF THE BRICK PAVERS IN THE CROSSWALK FROM CONSTRUCTION ACTIVITIES OF THIS PROJECT, SEE NOTE BRICK PAVER CROSSWALK CONSTRUCTION PROTECTION IN THE GENERAL NOTES.
- BRICK PAVERS CONSTRUCTION FOR CROSSWALKS SHALL ALSO FOLLOW THE CITY OF COLUMBUS SUPPLEMENTAL SPECIFICATION 1524. SEE GENERAL NOTE SHEETS 47 FOR COLORS AND SUPPLIERS.

SEE SHEET 17 FOR LEGEND

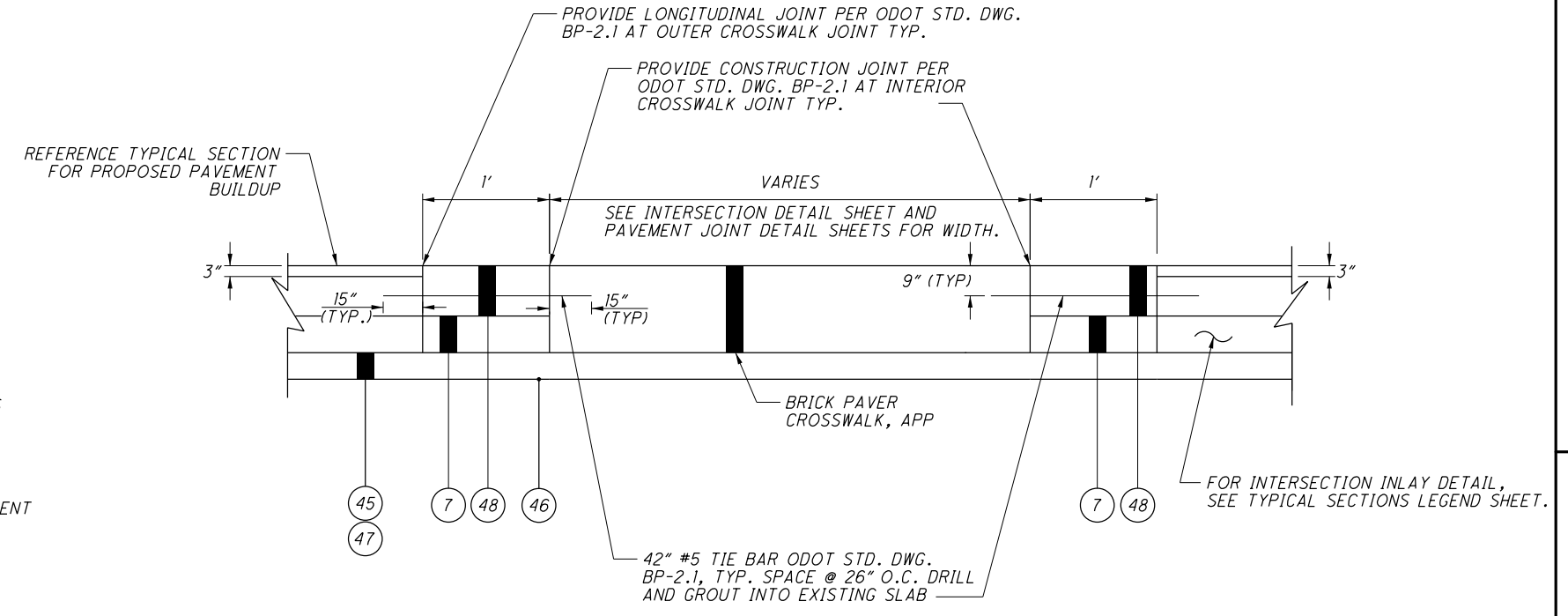


ITEM 608 - WALKWAY MISC: BRICK PAVER WALK, AS PER PLAN

SEE ITEM 608 - WALKWAY, MISC.: BRICK PAVER CROSSWALK, AS PER PLAN FOR MATERIAL NOTES, WITH THE EXCEPTION OF NOTE 5 ON THIS SHEET.

ITEM 608 - WALKWAY, MISC.: BRICK PAVER WALK, AS PER PLAN SHALL BE PLACED IN LOCATIONS SHOWN ON PLAN SHEETS AND MISC. DETAIL SHEETS.

CONCRETE BASE, CONCRETE APRON AROUND STRUCTURES, AGGREGATE BASE, SUBGRADE COMPACTION AND APPURTENANCES SHALL BE INCLUDED IN ITEM 608 - WALKWAY, MISC.: BRICK PAVER WALK, AS PER PLAN.

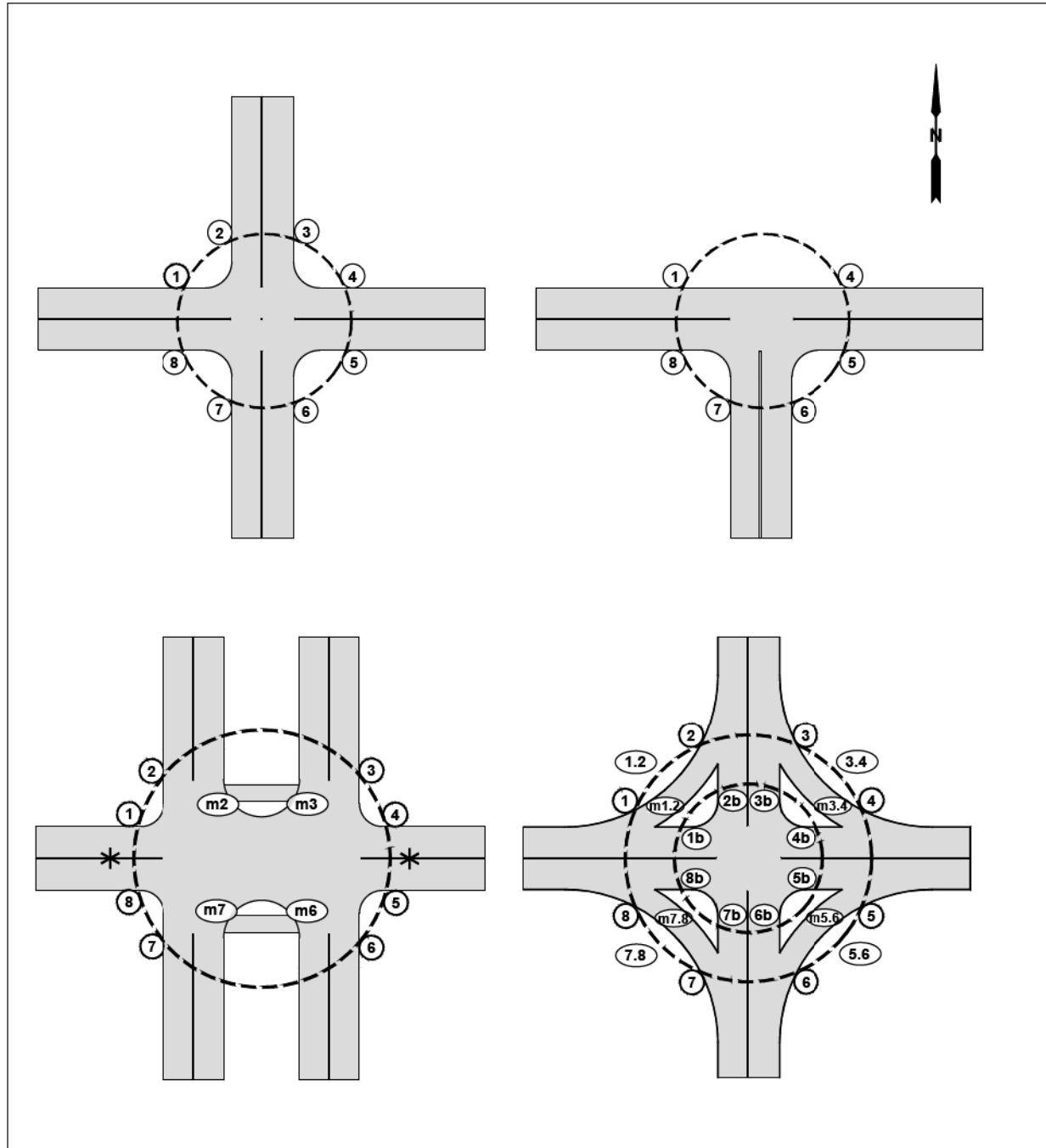


**ITEM 452 - 12" NON-REINFORCED CONCRETE PAVEMENT
 TYPICAL CONCRETE BAND SECTION AT CROSS WALKS**

NO.	DESCRIPTION	REV. BY	DATE
4	Remove Conflicting Note	TAZ	11-24-2021

CALCULATED
 CHECKED
 MISC. DETAILS - BRICK CROSSWALK AND BRICK WALK
 FRA-71-14.36
 559
 1228
 ms consultants, inc.

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ALL NUMBERING BEGINS FROM THE NORTHWEST CORNER AND GOES CLOCKWISE. EACH CORNER HAS ITS SPECIFIC NUMBER THAT SHALL BE USED IF CURB RAMPS ARE IN THESE LOCATIONS.

* MEDIAN RAMPS ON THE WEST AND/OR EAST LEGS WOULD BE M1, M8, AND M4, M5 RESPECTIVELY.

INTERSECTION CURB RAMP NUMBERING SYSTEM

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE DIVISION OF DESIGN AND CONSTRUCTION CITY ENGINEER	STD DWG 2319 07/01/20 SHT 1 OF 22
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GENERAL NOTES, CURB RAMPS

- CURB RAMPS SHALL BE INSTALLED PER STD DWGS 2300, 2303, 2319, CMSC 608, AND DPS ADA RULES AND REGULATIONS.
- MATERIAL: THE RAMP PANEL AND FLARED SIDES SHALL BE CONCRETE.
- RAMP TYPES ARE CATEGORIZED BELOW IN TIERS BY REQUIRED ORDER OF USE. LOCATING THE RAMP AS CLOSE AS POSSIBLE TO THE INTERSECTION FOLLOWING THE CURB RAMP DESIGN BOUNDARY CONTAINED IN THE ADA RULES AND REGULATIONS IS THE FIRST PRIORITY. THE DESIGNER SHALL NOT USE A LOWER TIERED RAMP WITHOUT FIRST DETERMINING AND HAVING JUSTIFICATION THAT THE UPPER TIER RAMPS ARE NOT CONSTRUCTIBLE.

CITY OF COLUMBUS RAMP TYPE HIERARCHY

TIER 1 (THESE PERPENDICULAR RAMPS SHOULD BE UTILIZED WHENEVER POSSIBLE.)

- TYPE D
- TYPE C
- TYPE A

TIER 2 (PARALLEL RAMPS SHOULD ONLY BE USED DUE TO RIGHT OF WAY (ROW) OR OTHER SPACE CONSTRAINTS WHERE A TIER 1 RAMP CANNOT BE USED.)

- TYPE P-6 (6' OF ROW AVAILABLE)
- TYPE P-7 (7' OF ROW AVAILABLE)
- TYPE P-5 (5' OF ROW AVAILABLE)
- TYPE P-4 (4' OF ROW AVAILABLE)

TIER 3 (TIER 3 RAMPS CAN ONLY BE USED WITH WRITTEN APPROVAL BY THE CITY ENGINEER OR DESIGNEE. TIER 3 RAMPS SHALL BE IDENTIFIED IN THE DESIGN SCOPE OR APPROVAL REQUESTED BY THE DESIGNER JUSTIFYING THAT THIS RAMP TYPE IS NECESSARY.)

- TYPE J (MODIFIED ALLEY RAMP), USE SHOULD BE LIMITED DUE TO DRAINAGE CONCERNS
- RADIAL RAMPS
- SINGLE SHARED RAMPS

SPECIALTY RAMPS (SHALL ONLY BE USED FOR THE LISTED SITUATION, OR WRITTEN APPROVAL BY THE CITY ENGINEER OR DESIGNEE.)

- TYPE G - ONLY TO BE USED ON ALLEY CROSSINGS
- TYPE H - ONLY TO BE USED ON ALLEY CROSSINGS
- TYPE L-1 - ONLY FOR MEDIAN CROSSINGS
- TYPE L-2 - ONLY FOR MEDIAN CROSSINGS
- PEDESTRIAN PADS - USED FOR ACCESS TO PUSHBUTTONS WHERE THERE IS NO EXISTING SIDEWALK. THE INTENT IS TO PROVIDE ACCESS TO CROSS THE INTERSECTION IN BOTH DIRECTIONS WITHOUT ENTERING THE STREET TO ACCESS TO OTHER CROSSING. THE FOLLOWING IS THE ORDER OF PREFERENCE ON PEDESTRIAN PADS:
 - PP-1 TWO CONNECTED RAMPS WITH UTILITY STRIP
 - PP-2 TWO CONNECTED RAMPS WITH SIDEWALK AGAINST CURB
 - PP-3 USED AS SINGLE SHARED RAMP THAT CAN ACCESS BOTH CROSSWALK LEGS AND THE PUSHBUTTON
 - PP-3 USED TO ONLY ACCESS THE LEG OF THE INTERSECTION CONTROLLED BY THE PUSHBUTTON

4. RAMP RUNNING SLOPE: THE RUNNING SLOPE SHALL BE NO GREATER THAN 7.69%. THE MINIMUM SLOPE FOR ANY RAMP SHALL BE 5% AND SHOULD BE MAXIMIZED UP TO 7.69% WHENEVER POSSIBLE FOR DRAINAGE.

5. ALL JOINTS BETWEEN NEW AND EXISTING MATERIALS SHALL BE FLUSH.

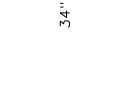
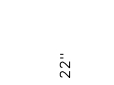
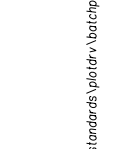
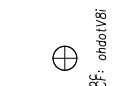
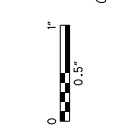
6. LANDINGS:

- LANDINGS SHALL HAVE A MAXIMUM 1.56% SLOPE IN ALL DIRECTIONS FOR ALL CURB RAMP TYPES.
- A PARALLEL RAMP, CONSTRAINED ON TWO (2) SIDES, E.G., TYPE P-7, SHALL HAVE A LANDING 5-FT WIDE BY 5-FT DEEP A PARALLEL RAMP, CONSTRAINED ON ONE (1) SIDE, E.G., TYPES P-4, 5, & 6, SHALL HAVE A LANDING NO LESS THAN 4-FT MINIMUM BY 5-FT. THE 5-FT DIMENSION SHALL BE PROVIDED AS SHOWN IN THESE STANDARD DRAWINGS.

CURB RAMP GENERAL NOTES

CITY OF COLUMBUS, OHIO DEPARTMENT OF PUBLIC SERVICE DIVISION OF DESIGN AND CONSTRUCTION	STD DWG 2319 07/01/20 SHT 2 OF 22
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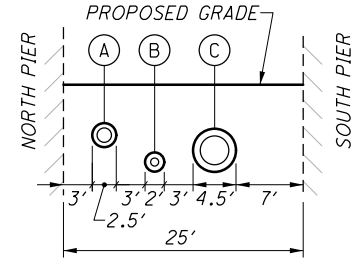
NO.	DESCRIPTION	REV. BY	DATE
4	STD DWG CORRECTED	ACW	11-22-21



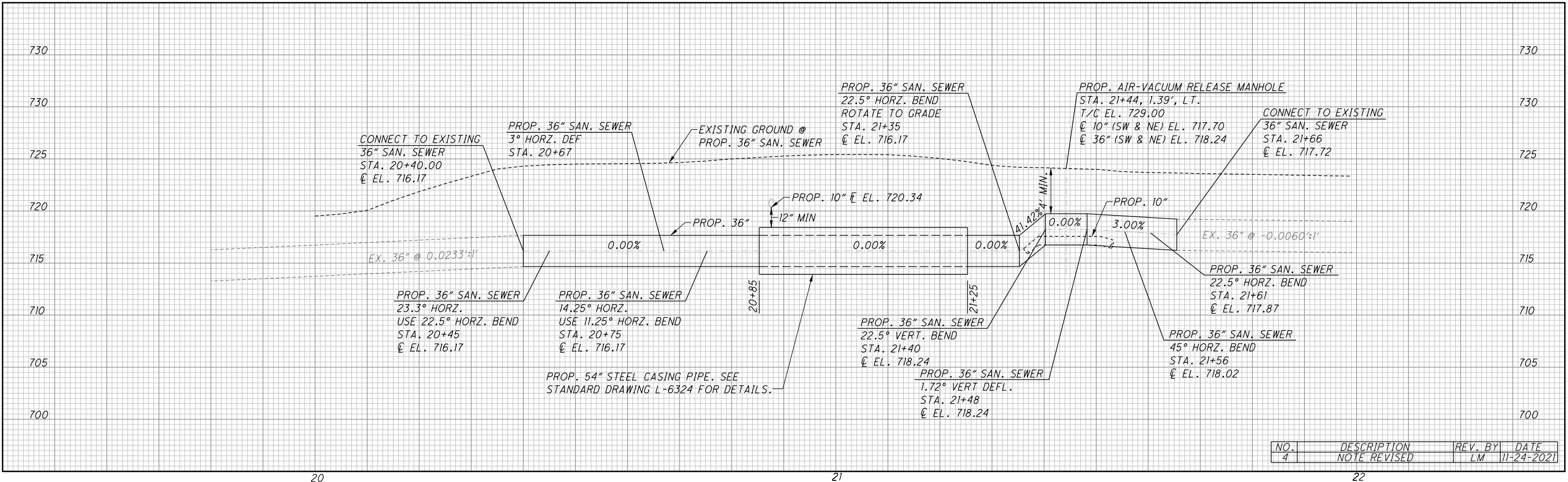
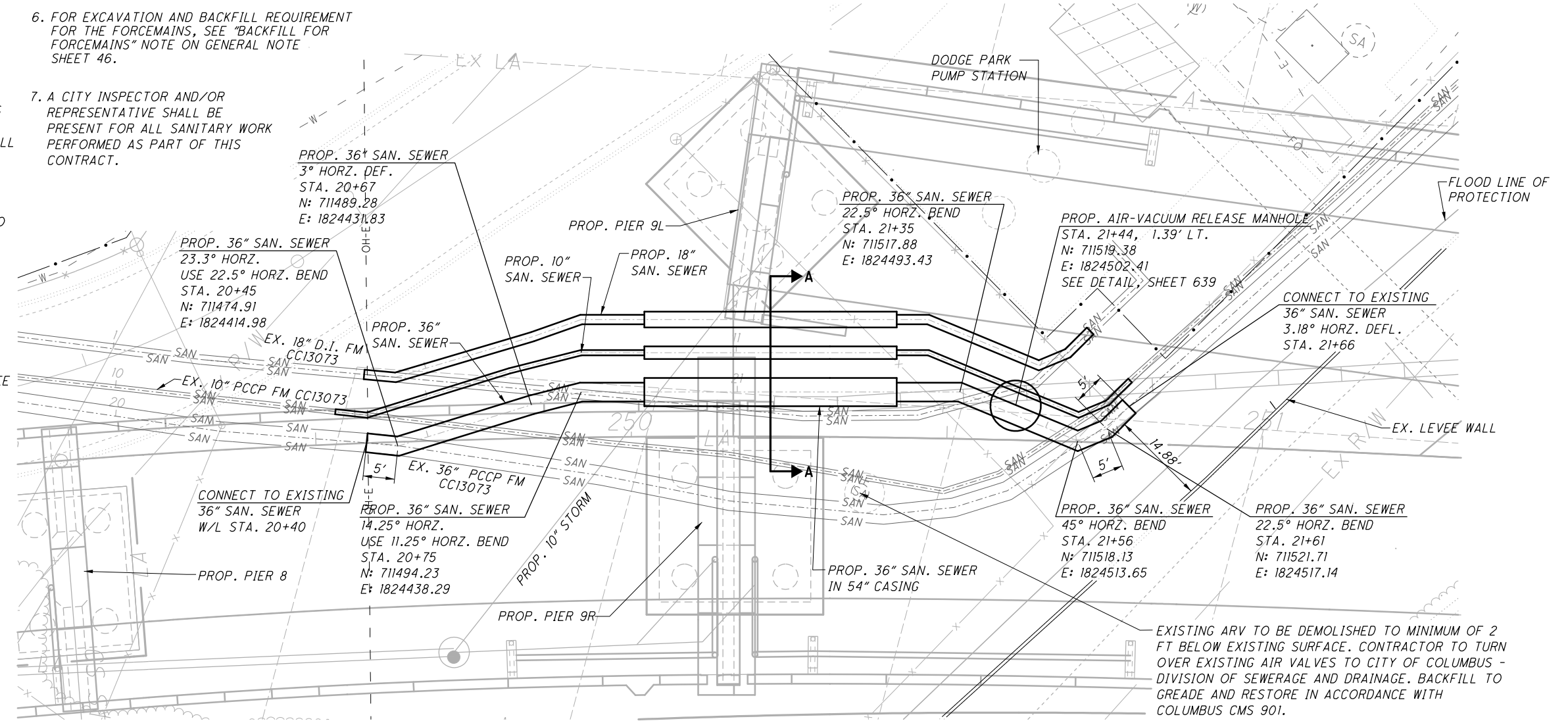
NOTES:

- SEE SHEET 640 FOR PROPOSED CONSTRUCTION SEQUENCE ON THE FORCEMAIN RELOCATIONS.
- ALL NECESSARY JOINTS SHALL UTILIZE RESTRAINED JOINT FITTINGS PER THE RESTRAINED JOINT LENGTH TABLE, SHEET 640. AT NO TIME SHALL CONCRETE THRUST BLOCKS BE USED.
- CONTRACTORS SHALL VERIFY EXISTING 36-INCH FM LOCATION, MATERIAL, AND ELEVATION PRIOR TO COMMENCING RELOCATION WORK.
- CONTRACTOR SHALL MAINTAIN THE HIGH POINT ELEVATION FOR THE FORCEMAIN WITHIN THE AIR-VACUUM RELEASE MANHOLE.
- CONTRACTOR TO MAINTAIN EXCAVATION OF PROPOSED 36" FM A MINIMUM OF 10' FROM EXISTING LEVEE WALL.

- FOR EXCAVATION AND BACKFILL REQUIREMENT FOR THE FORCEMAINS, SEE "BACKFILL FOR FORCEMAINS" NOTE ON GENERAL NOTE SHEET 46.
- A CITY INSPECTOR AND/OR REPRESENTATIVE SHALL BE PRESENT FOR ALL SANITARY WORK PERFORMED AS PART OF THIS CONTRACT.



- (A) PROP. 18" FM IN 30" CASING
- (B) PROP. 10" FM IN 24" CASING
- (C) PROP. 36" IN 54" CASING



NO.	DESCRIPTION	REV. BY	DATE
4	NOTE REVISED	LM	11-24-2021



CALCULATED
CHECKED

**SANITARY PLAN AND PROFILE
36" SANITARY LINE**

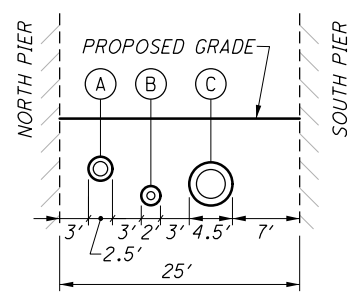
FRA-71-14.34

635
1228



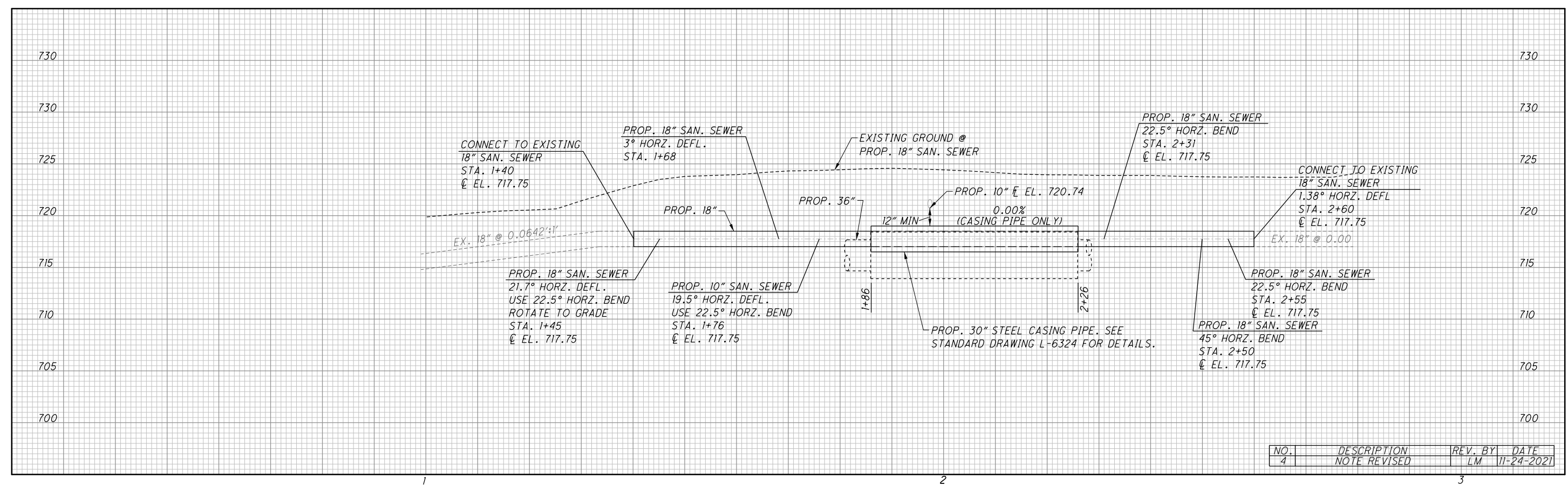
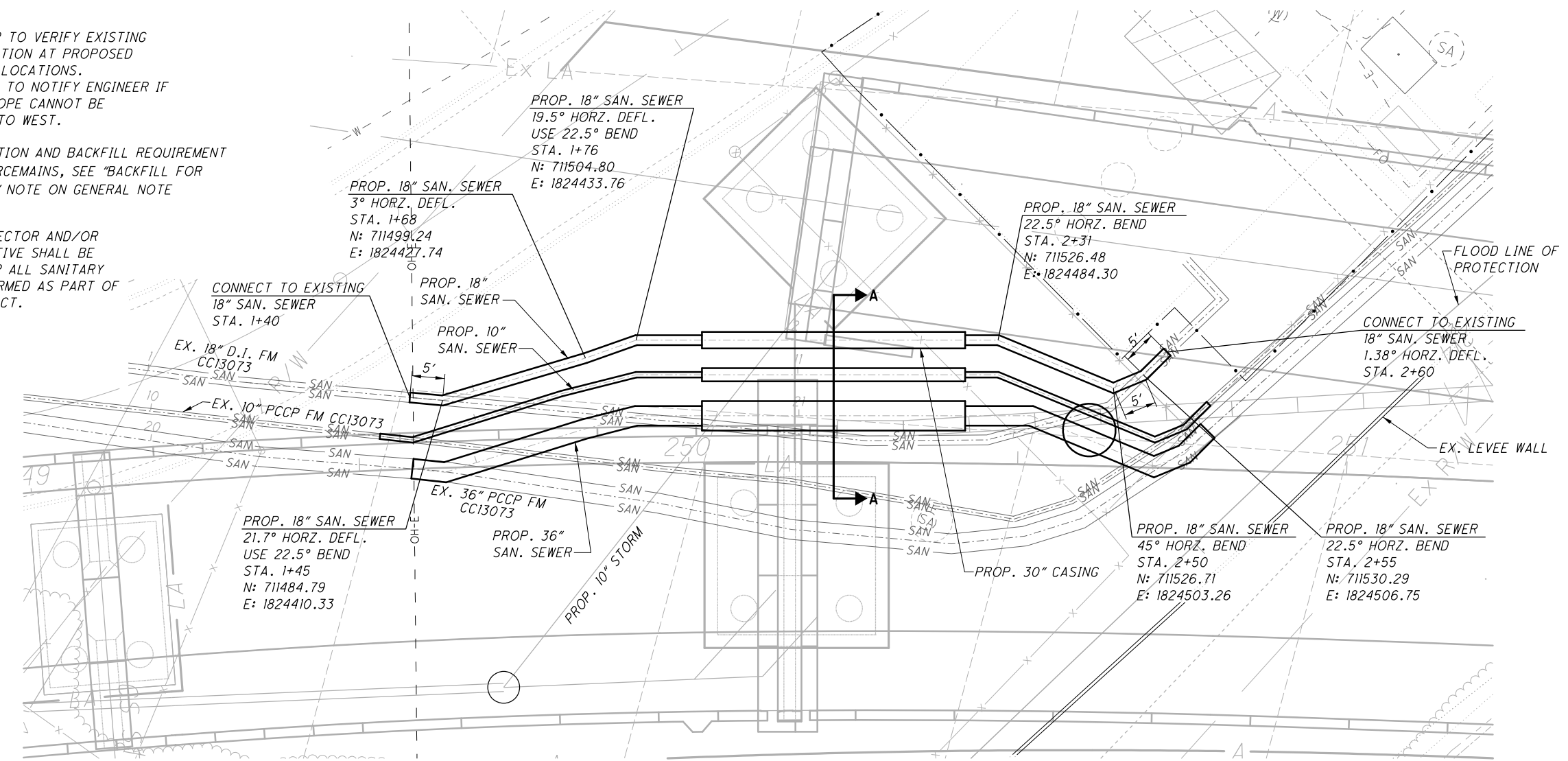
NOTES:

- SEE SHEET 640 FOR PROPOSED CONSTRUCTION SEQUENCE ON THE FORCEMAIN RELOCATIONS.
- ALL NECESSARY JOINTS SHALL UTILIZE RESTRAINED JOINT FITTINGS PER THE RESTRAINED JOINT LENGTH TABLE, SHEET 640. AT NO TIME SHALL CONCRETE THRUST BLOCKS BE USED.
- CONTRACTORS SHALL VERIFY EXISTING 36-INCH FM LOCATION, MATERIAL, AND ELEVATION PRIOR TO COMMENCING RELOCATION WORK.
- 18-INCH FM RELOCATION SHALL MAINTAIN POSITIVE SLOPE SUCH THAT LINE DRAINS WEST FOR ENTIRETY OF RELOCATION. AT NO POINT SHALL SLOPE BE LESS THAN 0%.
- CONTRACTOR TO VERIFY EXISTING 18" FM ELEVATION AT PROPOSED CONNECTION LOCATIONS. CONTRACTOR TO NOTIFY ENGINEER IF POSITIVE SLOPE CANNOT BE MAINTAINED TO WEST.
- FOR EXCAVATION AND BACKFILL REQUIREMENT FOR THE FORCEMAINS, SEE "BACKFILL FOR FORCEMAINS" NOTE ON GENERAL NOTE SHEET 46.
- A CITY INSPECTOR AND/OR REPRESENTATIVE SHALL BE PRESENT FOR ALL SANITARY WORK PERFORMED AS PART OF THIS CONTRACT.



- (A) PROP. 18" FM IN 30" CASING
- (B) PROP. 10" FM IN 24" CASING
- (C) PROP. 36" IN 54" CASING

SECTION A-A
SCALE: 1"=10'



NO.	DESCRIPTION	REV. BY	DATE
4	NOTE REVISED	LM	11-24-2021



CALCULATED
CHECKED

SANITARY PLAN AND PROFILE
18" SANITARY LINE

FRA-71-14.34

636
1228



ms consultants, inc.
msconsultants.com

Ohio DOT Workspace
70171 West Interchange 6R
www.msconsultants.com

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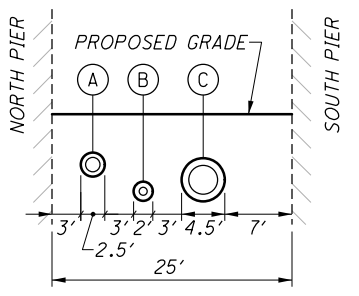
0.5'

0.5'

NOTES:

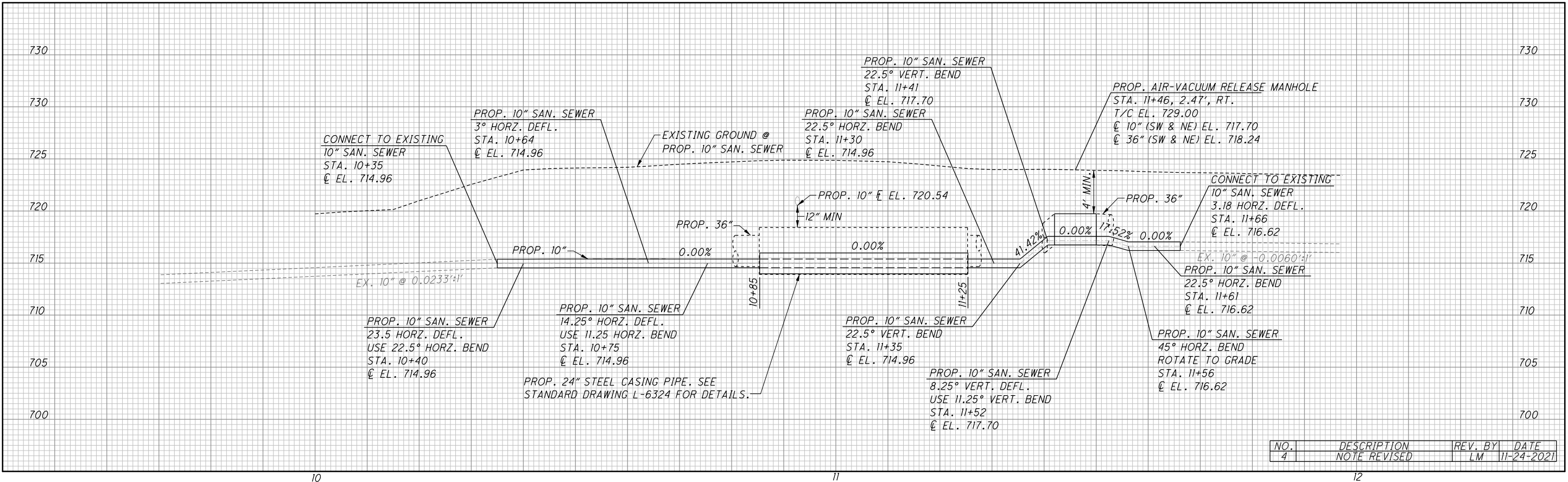
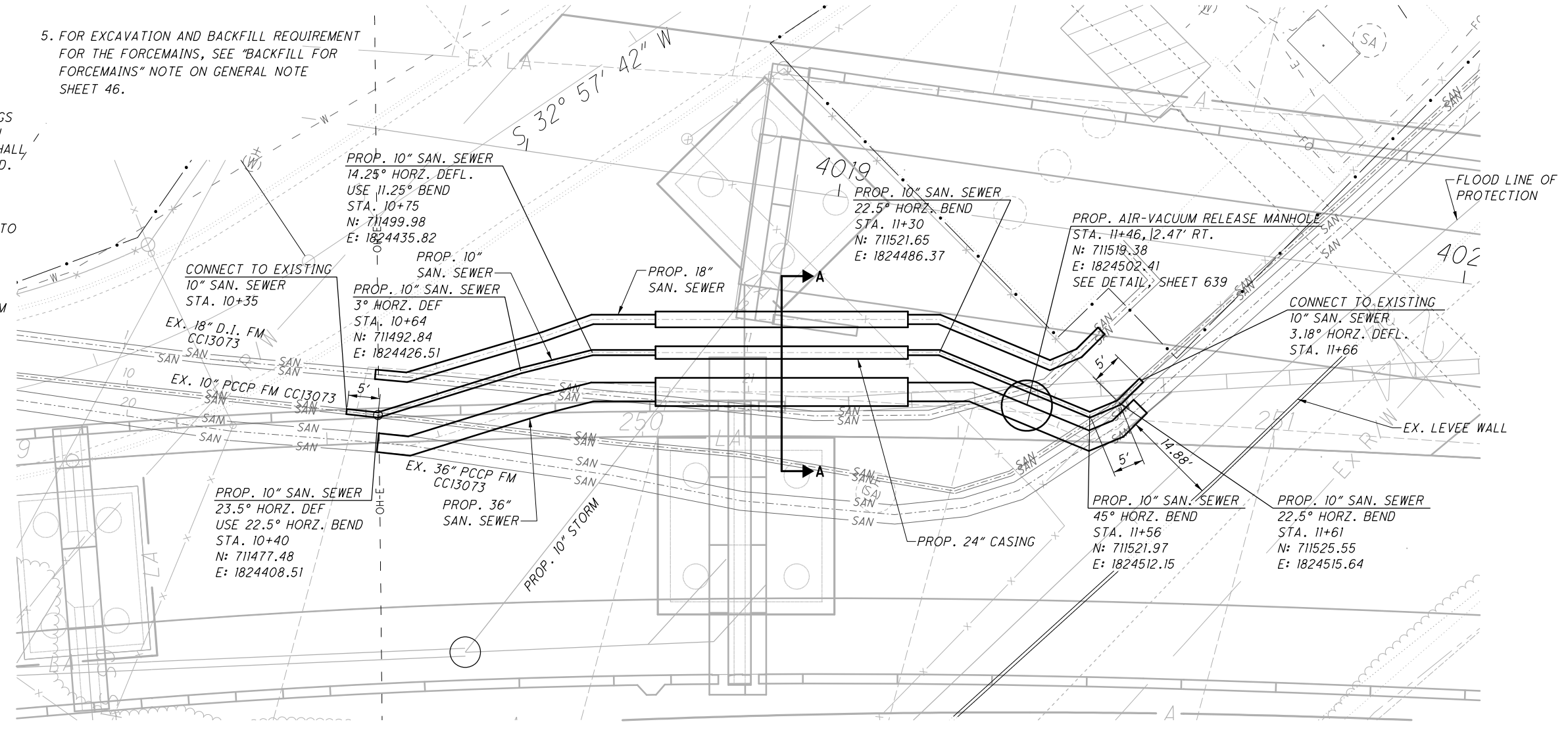
- 1. SEE SHEET 640 FOR PROPOSED CONSTRUCTION SEQUENCE ON THE FORCEMAIN RELOCATIONS.
- 2. ALL NECESSARY JOINTS SHALL UTILIZE RESTRAINED JOINT FITTINGS PER THE RESTRAINED JOINT LENGTH TABLE, SHEET 640. AT NO TIME SHALL CONCRETE THRUST BLOCKS BE USED.
- 3. CONTRACTORS SHALL VERIFY EXISTING 36-INCH FM LOCATION, MATERIAL, AND ELEVATION PRIOR TO COMMENCING RELOCATION WORK.
- 4. CONTRACTOR SHALL MAINTAIN THE HIGH POINT ELEVATION FOR THE FORCEMAIN WITHIN THE AIR-VACUUM RELEASE MANHOLE.

5. FOR EXCAVATION AND BACKFILL REQUIREMENT FOR THE FORCEMAINS, SEE "BACKFILL FOR FORCEMAINS" NOTE ON GENERAL NOTE SHEET 46.



- A) PROP. 18" FM IN 30" CASING
- B) PROP. 10" FM IN 24" CASING
- C) PROP. 36" IN 54" CASING

SECTION A-A
SCALE: 1"=10'



NO.	DESCRIPTION	REV. BY	DATE
4	NOTE REVISED	LM	11-24-2021

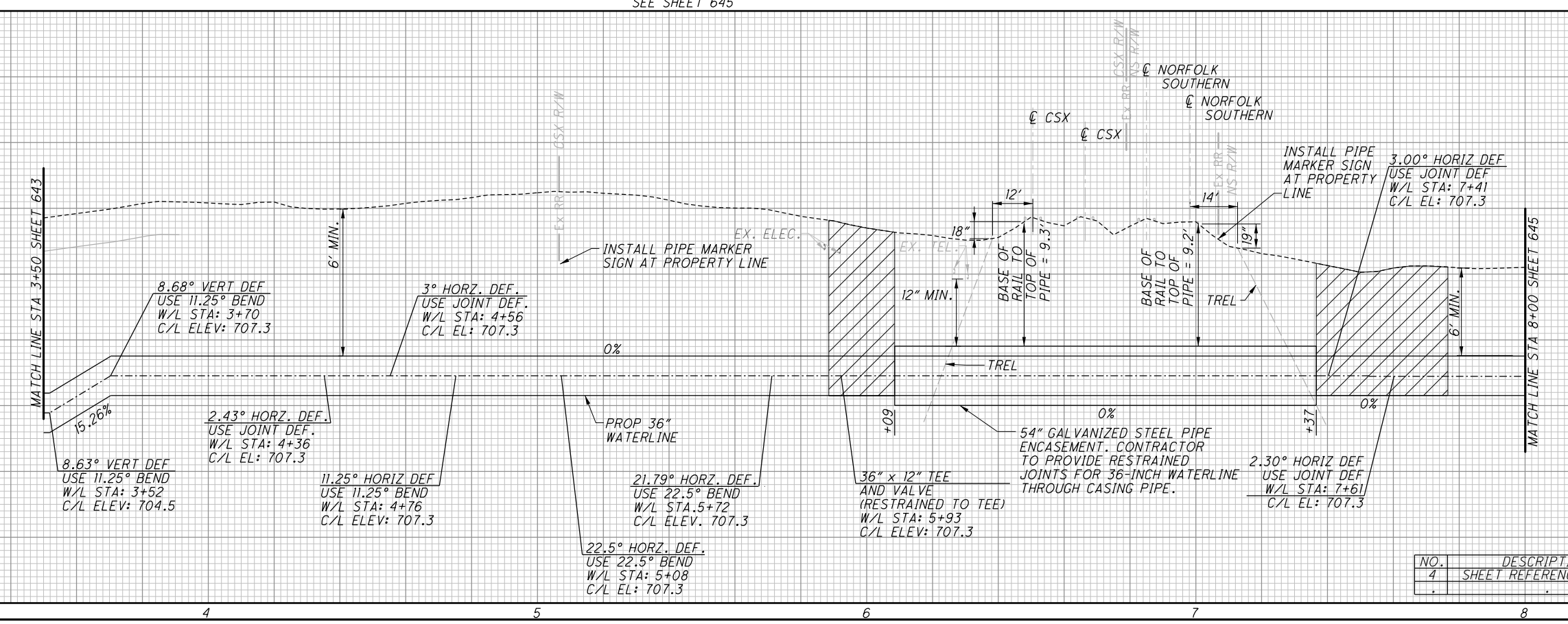
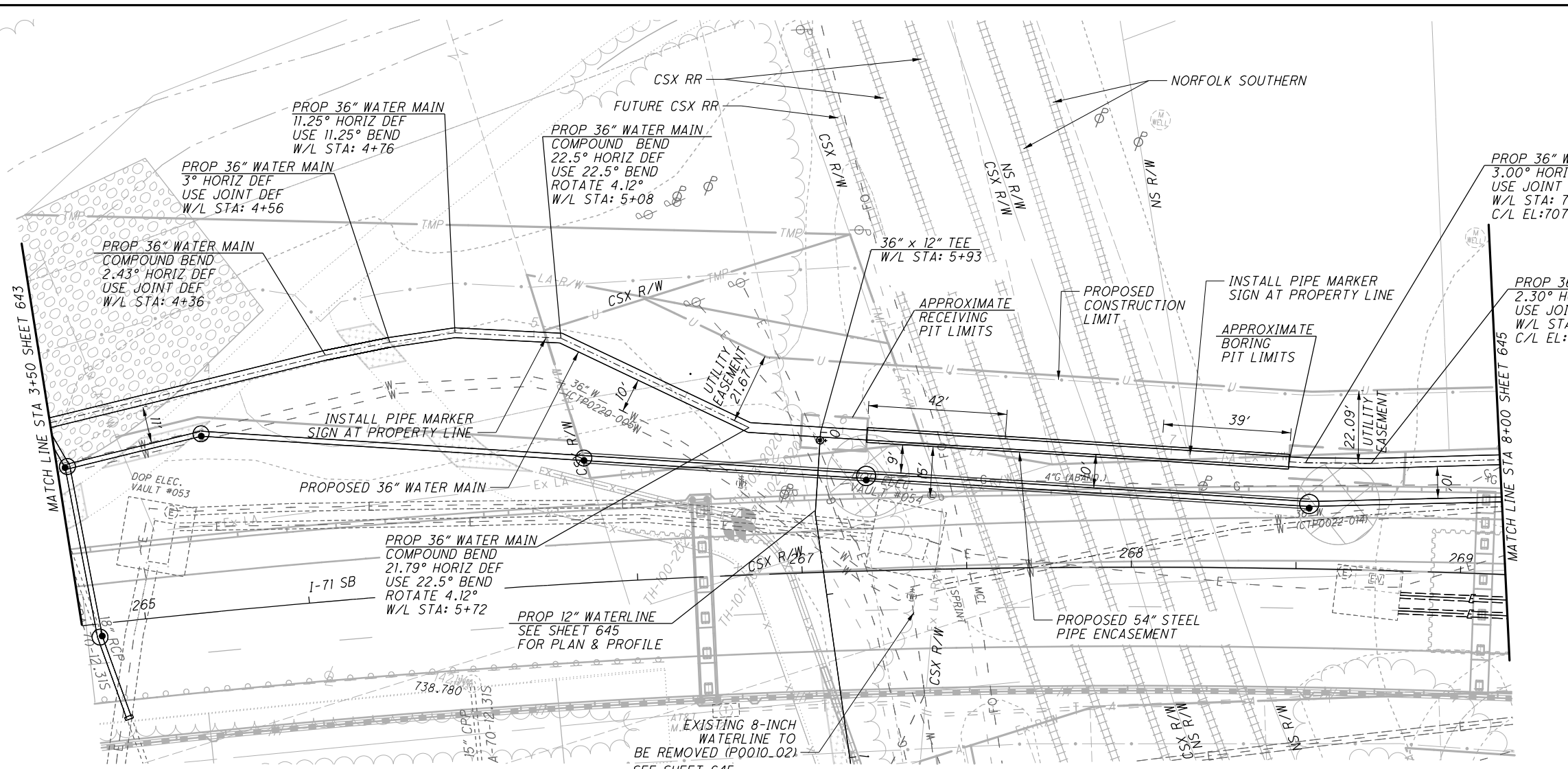


SANITARY PLAN AND PROFILE
10" SANITARY LINE

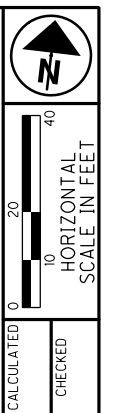
FRA-71-14.34

637
1228

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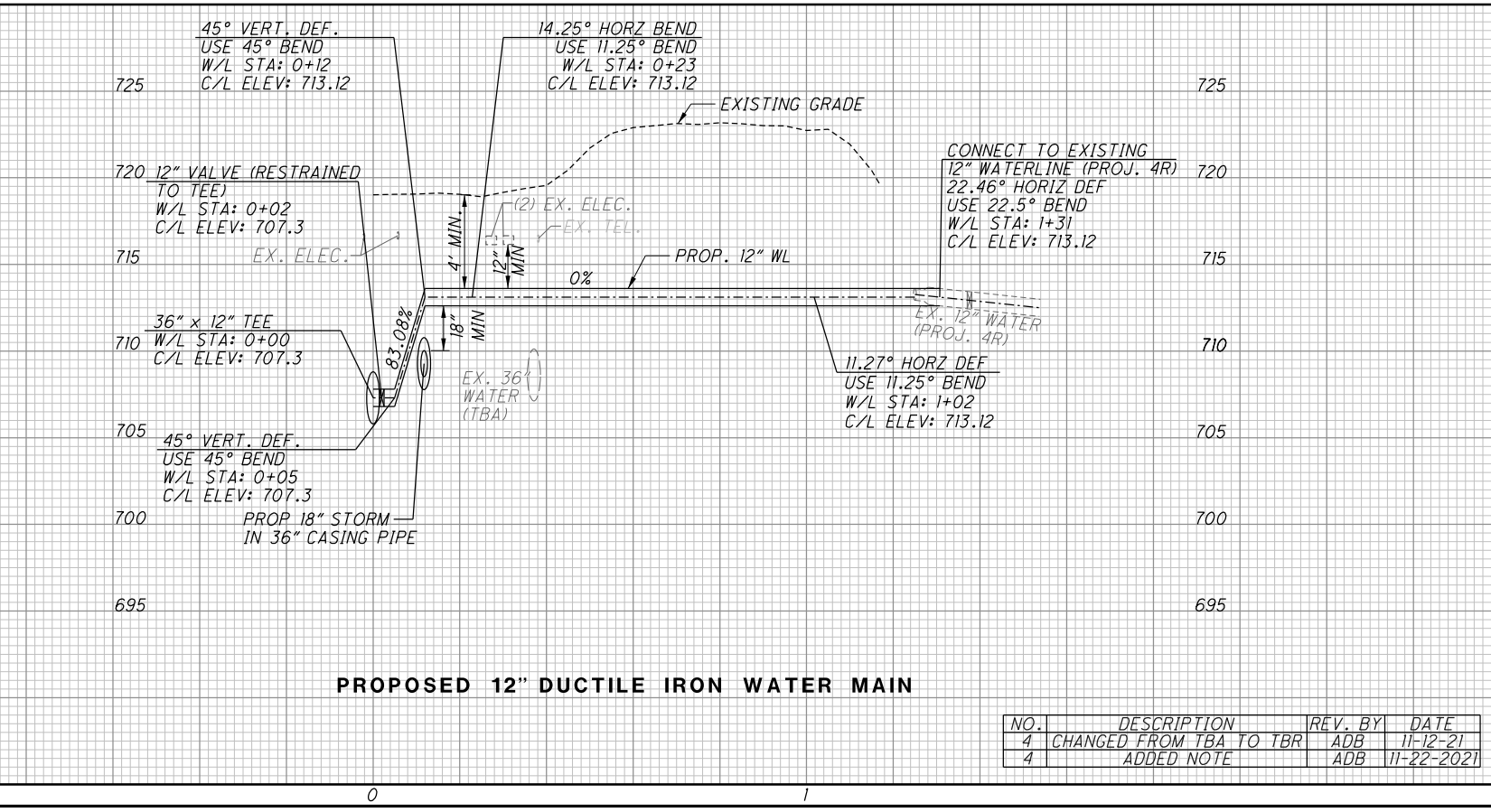
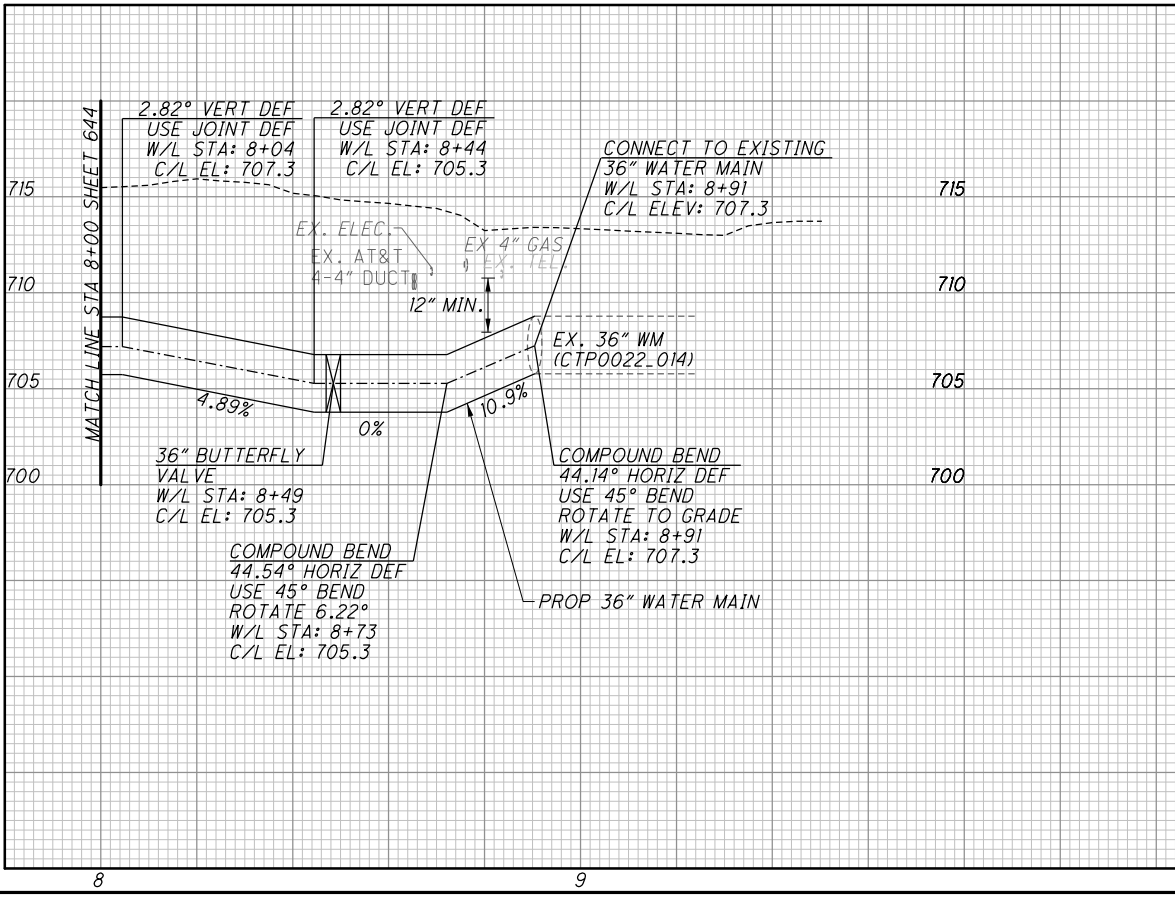
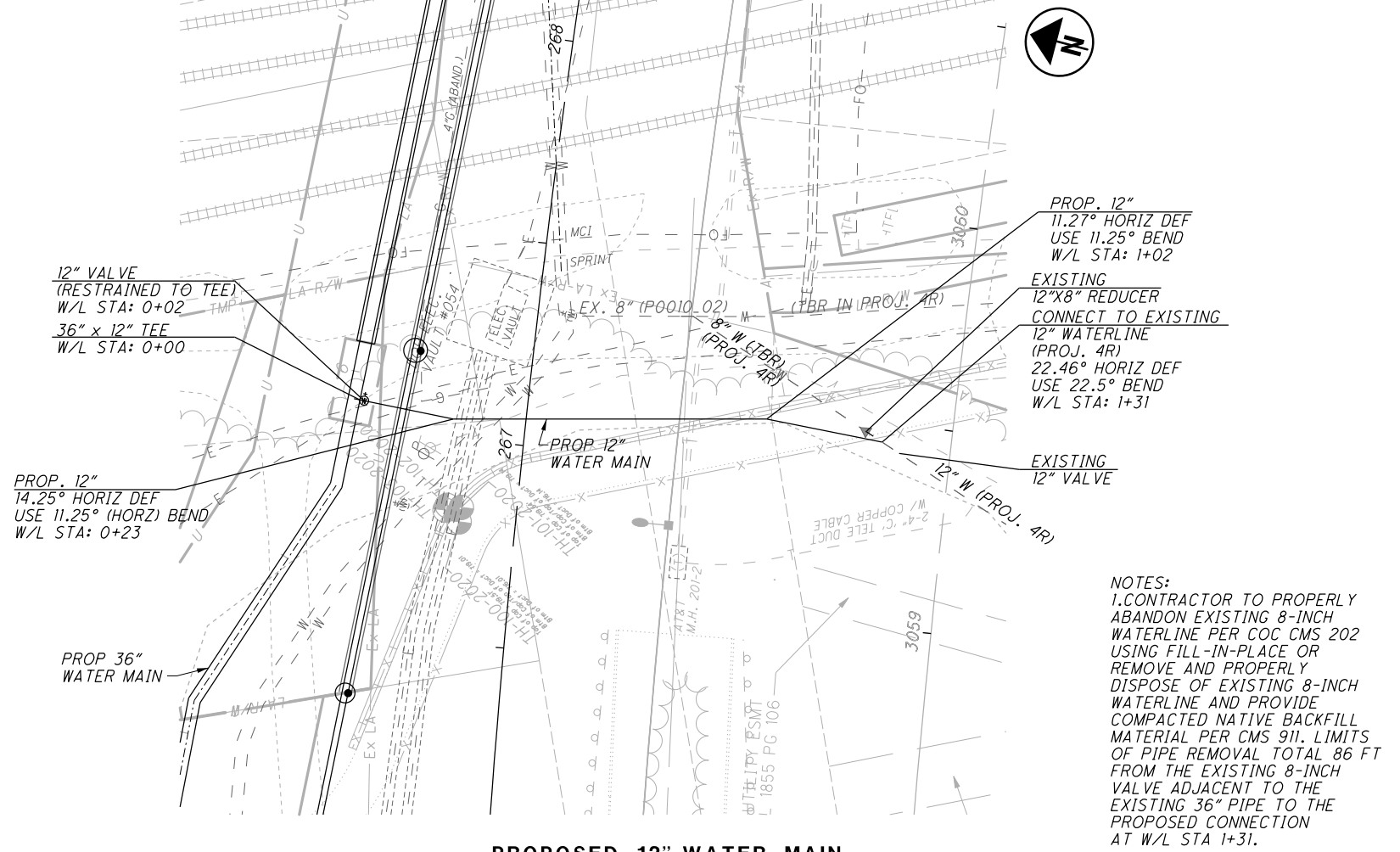
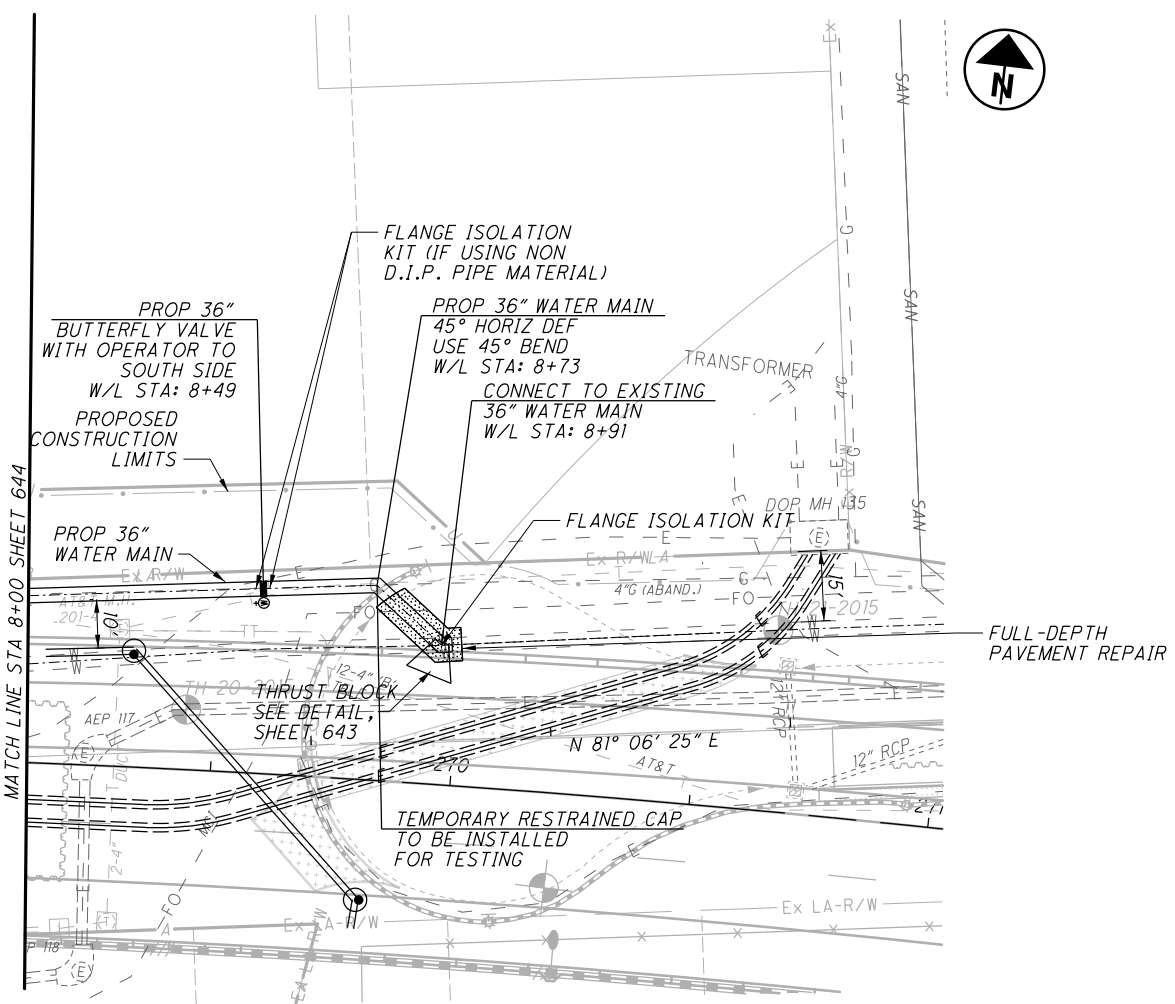
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4	SHEET REFERENCE ADDED	ADB	11-22-21



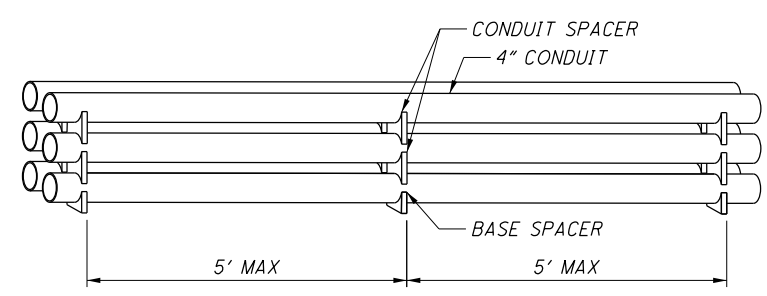
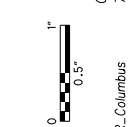
PLAN AND PROFILE 36" (EAST)
STA. 3+50 TO STA. 8+00

FRA-71-14.34

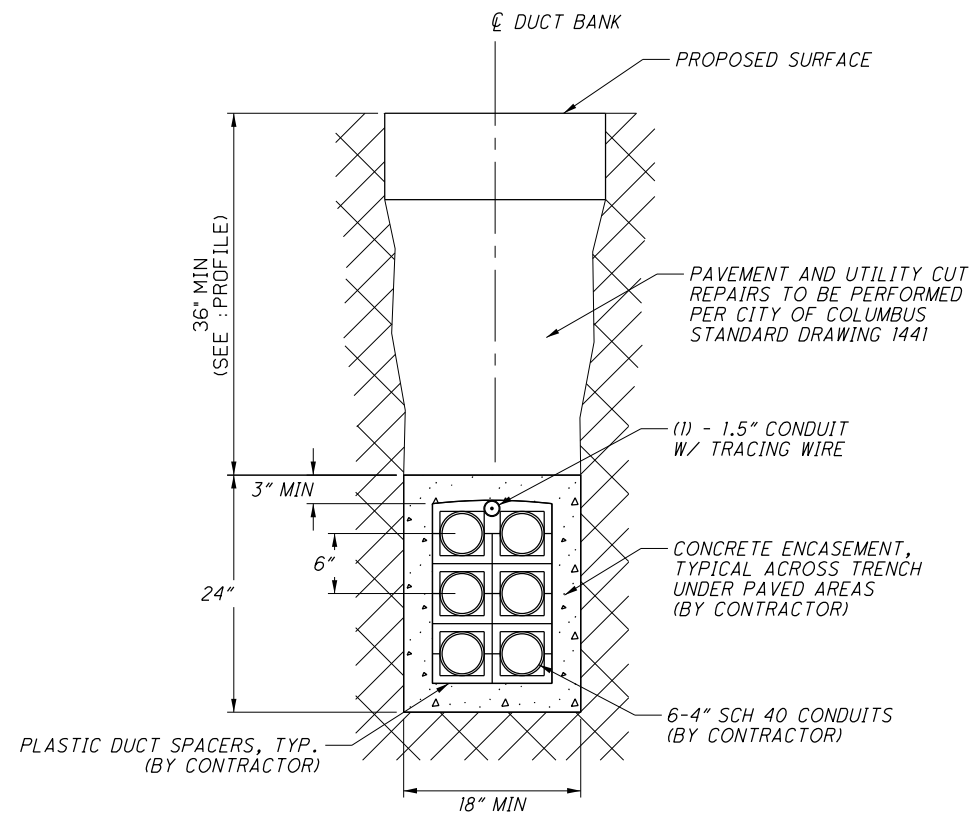
644
1228



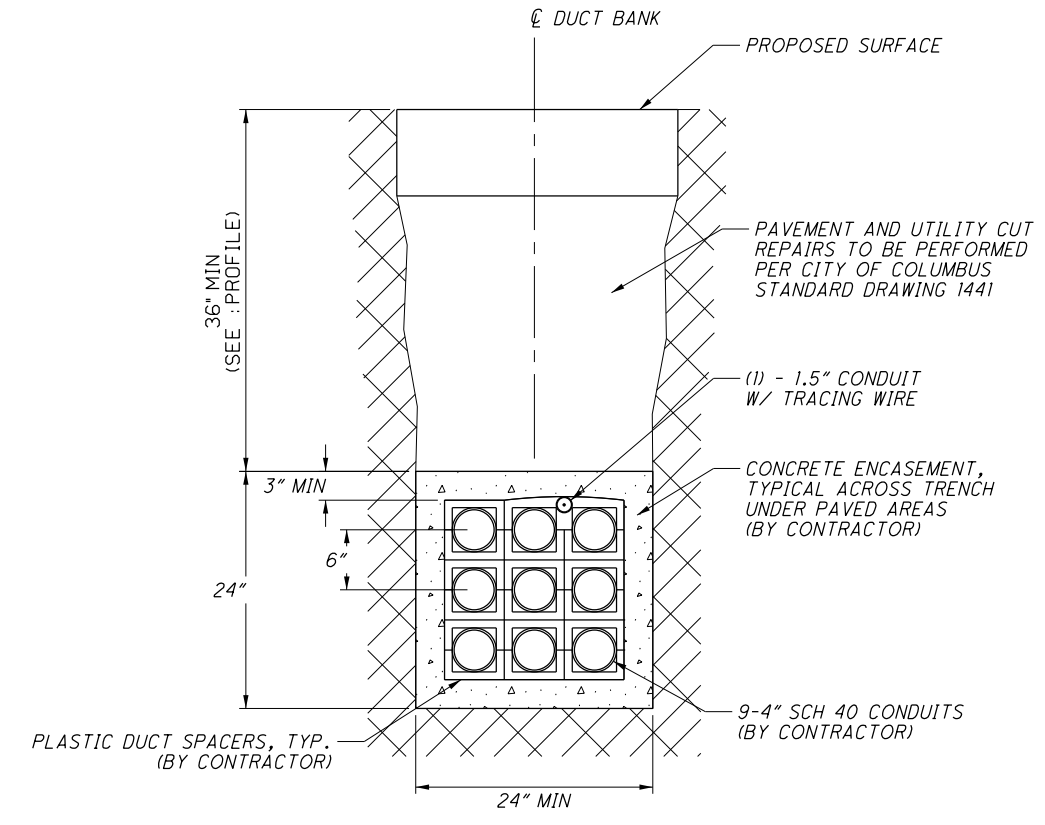
NO.	DESCRIPTION	REV. BY	DATE
4	CHANGED FROM TBA TO TBR	ADB	11-12-21
4	ADDED NOTE	ADB	11-22-2021



TYPICAL CONDUIT STACKING DETAIL [TYP]
NTS



2x3: 6-4" CONDUIT, ENCASED DETAIL
NTS



3x3: 9-4" CONDUIT, ENCASED DETAIL
NTS

REF NO.	SHEET NO.	STATION TO STATION				253	252	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL	SPECIAL
						PAVEMENT REPAIR, AS PER PLAN	FULL DEPTH PAVEMENT SAVING	4" RISER	JOINT-USE MANHOLE, 8'x6'	COMMUNICATIONS PULLBOX, 13"x24"	1.5" CONDUIT WITH TRACING WIRE, ENCASED	4" CONDUIT, ENCASED	11-2" CONDUIT, ENCASED	3-4" CONDUIT, ENCASED	6-4" CONDUIT, ENCASED
					SY	FT	EACH	EACH	EACH	FT	FT	FT	FT	FT	FT
JC1	678	18+53.86 (M)	RT	TO	20+70.89 (M)	RT				217				217	
JC2	678-679	20+70.89 (M)	RT	TO	26+38.62 (M)	RT				564					564
MH1	678	18+53.86 (M)	RT					1							
MH2	678	20+70.89 (M)	RT					1							
MH3	679	22+45.83 (M)	RT					1							
MH4	679	26+38.62 (M)	RT					1							
CC1	678	17+42.51 (M)	LT	TO	18+75.15 (M)	RT			1				135		
CC2	678	17+99.42 (M)	LT	TO	18+49.81 (M)	RT				55					
CC3	678	17+66.69 (M)	LT	TO	18+49.81 (M)	RT				86					
CC4	678	2+38.11 (CC)	RT	TO	18+53.86 (M)	RT					48				
CC5	678	20+28.60 (M)	RT	TO	3+46.99 (J)	RT		3	1				72		
CC6	678	20+70.89 (M)	RT	TO	3+46.99 (J)	RT		1		48					
CC7	679	24+58.65 (M)	RT	TO	6+38.36 (L)	LT	22	1		155					
CC8	679	26+42.62 (M)	RT	TO	26+82.91 (M)	LT				44					
CC9	679	26+42.62 (M)	RT	TO	26+83.12 (M)	LT					45				
TOTALS CARRIED TO GENERAL SUMMARY					81	279	5	4	2	781	388	93	207	217	564

NO.	DESCRIPTION	REV. BY	DATE
4	Revise Item Description	TAZ	11-24-2021

CALCULATED
CHECKED

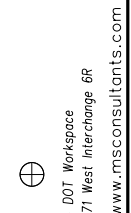
JOINT-USE COMMUNICATION DETAILS

FRA-71-14.34

680
1228

SHEET NO.	LOCATION	STATION TO STATION				644	644	644	644	644	644	644	644	644	644	647	647	647	644	644	647	SPECIAL					
		FT/MI	FT/MI	FT/MI	FT/MI	PAVEMENT MARKING, MISC.: EDGE LINE, 5" (WHITE)	PAVEMENT MARKING, MISC.: EDGE LINE, 5" (YELLOW)	PAVEMENT MARKING, MISC.: LANE LINE, 5"	PAVEMENT MARKING, MISC.: CENTER LINE, 5"	PAVEMENT MARKING, MISC.: CHANNELIZING LINE, 10"	PAVEMENT MARKING, MISC.: STOP LINE, 20"	PAVEMENT MARKING, MISC.: DOTTED LINE, 5"	PAVEMENT MARKING, MISC.: TRANSVERSE/DIAGONAL LINE, 20" (WHITE)	PAVEMENT MARKING, MISC.: TRANSVERSE/DIAGONAL LINE, 20" (YELLOW)	PARKING LOT STALL MARKING	LANE ARROW	SHARED LANE MARKING	BIKE LANE SYMBOL MARKING	PAVEMENT MARKING, MISC.: ROUTE SHIELD	PAVEMENT MARKING, MISC.: CARDINAL DIRECTION	PAVEMENT MARKING, MISC.: BIKE BOX	REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING	REMOVAL OF PAVEMENT MARKING	REBOUNDBLE TUBULAR PYLON		
715	MOUND ST.	25+61	RT											7													
		25+84	RT											7													
		26+07	RT											7													
		26+30	RT											7													
		26+48	RT																								
		26+50	LT																	3							
		26+53	RT												7		1										
		26+68	RT																	3							
		12+58	LT/RT								46																
		12+58	LT			13+51	LT						93														
		12+58	LT/RT			15+50	LT/RT	292		584				88													
		12+92	LT																1								
		13+51	LT			15+50	LT	199										1									
		14+92	LT															1									
716		15+50	LT	16+40	LT	90		90					29														
		15+50	RT	16+40	RT	90		90																			
		17+60	RT	18+95	RT			135																			
		17+90	RT												1												
		19+11	RT												1												
		20+48	RT												1												
718		12+00	CL	14+00	CL			200																			
		12+00	RT	13+00	RT	100							40														
		13+00	RT											7													
		13+20	RT											7													
719	THIRD ST.	153+56	LT																								
		153+87	LT	157+00	LT	626							104														
		154+01	LT																								
		154+08	LT																								
		154+28	LT																								
		154+49	LT																								
		155+09	LT																								
		155+33	LT																								
		155+47	LT																								
		155+49	LT																								
		156+00	LT	157+00	LT																						
		156+04	LT																								
156+06	LT																										
156+89	LT																										
TOTALS FROM THIS SHEET					1397		899	200		46	93	261		49	3	1	5	3	3	1	100	4	4				
TOTALS CARRIED FROM SHEET 686					245	253	484	1144	685	105	114	64	99	156	10	1									4		
TOTAL FEET/EACH					1642	253	1383	1344	685	151	207	325	99	205	13	2	5	3	3	1	100	4	4	4			
TOTAL MILES					0.31	0.05	0.26	0.25																			
FUNDING SPLIT (08/NHS/PV)					0.16	0.03	0.13	0.11	292	64	104	163	25	103	5	1	3	2	2	1	50	2	2	2			
FUNDING SPLIT (08/NHS/PV)					0.15	0.02	0.13	0.10	292	63	103	162	24	102	4	1	2	1	1	1	50	2	2	2			
FUNDING SPLIT (11/NHS/PV/COL)								0.04	101	24				4													
TOTALS CARRIED TO GENERAL SUMMARY					0.31	0.05	0.26	0.25	685	151	207	325	99	205	13	2	5	3	3	1	100	4	4	4			

NO.	DESCRIPTION	REV. BY	DATE
	4	MJB	11-18-2021
PAVEMENT MARKING SUBSUMMARY (CITY)			
FRA - 71 - 14.36			
CALCULATED		KWR	JML
CHECKED			



SHEET NO.	REF. NO.	LOCATION	STATION	SIDE	METER HEAD (SINGLE OR DOUBLE)	630	630	630																					
						REMOVAL OF MISCELLANEOUS TRAFFIC CONTROL ITEM: PARKING METER POST REMOVAL EACH	SIGNING, MISC.: PARKING METER POST CORE EACH	SIGNING, MISC.: PARKING METER POST AND INSTALLATION EACH																					
720	PM-1	MOUND ST.	21+12	LT	DOUBLE																								
720	PM-2	MOUND ST.	21+58	LT	DOUBLE		1	1																					
720	PM-3	MOUND ST.	21+84	LT	SINGLE		1	1																					
720	PM-4	CIVIC CENTER DR.	2+73	RT	SINGLE		1	1																					
720	PM-5	CIVIC CENTER DR.	2+93	RT	SINGLE		1	1																					
720	RM-1	MOUND ST.	18+07	RT		1																							
720	RM-2	MOUND ST.	18+33	RT		1																							
720	RM-3	MOUND ST.	18+54	RT		1																							
720	RM-4	MOUND ST.	18+83	RT		1																							
720	RM-5	MOUND ST.	18+99	RT		1																							
720	RM-6	MOUND ST.	19+24	LT		1																							
720	RM-7	MOUND ST.	19+45	LT		1																							
720	RM-8	MOUND ST.	19+69	LT		1																							
720	RM-9	MOUND ST.	19+77	RT		1																							
720	RM-10	MOUND ST.	19+92	LT		1																							
720	RM-11	MOUND ST.	19+95	RT		1																							
720	RM-12	MOUND ST.	20+13	LT		1																							
720	RM-13	MOUND ST.	20+21	RT		1																							
720	RM-14	MOUND ST.	20+42	RT		1																							
720	RM-15	MOUND ST.	20+88	LT		1																							
720	RM-16	MOUND ST.	21+07	LT		1																							
720	RM-17	MOUND ST.	21+28	LT		1																							
720	RM-18	MOUND ST.	21+53	LT		1																							
720	RM-19	MOUND ST.	21+77	LT		1																							
720	RM-20	MOUND ST.	23+13	LT		1																							
720	RM-21	MOUND ST.	23+33	LT		1																							
720	RM-22	CIVIC CENTER DR.	2+51	RT		1																							
720	RM-23	CIVIC CENTER DR.	2+74	RT		1																							
720	RM-24	CIVIC CENTER DR.	2+92	RT		1																							
721	PM-6	MOUND ST.	23+52	LT	DOUBLE		1	1																					
721	PM-7	MOUND ST.	23+98	LT	DOUBLE		1	1																					
721	PM-8	MOUND ST.	24+44	LT	DOUBLE		1	1																					
721	RM-25	MOUND ST.	23+94	LT		1																							
721	RM-26	MOUND ST.	24+14	LT		1																							
721	RM-27	MOUND ST.	24+36	LT		1																							
721	RM-28	MOUND ST.	25+66	RT		1																							
721	RM-29	MOUND ST.	26+01	RT		1																							
721	RM-30	MOUND ST.	26+26	RT		1																							
721	RM-31	MOUND ST.	26+44	RT		1																							
721	RM-32	MOUND ST.	26+70	RT		1																							
		FUNDING SPLIT (08/NHS/PV)				16	4	4																					
		FUNDING SPLIT (08/NHS/PV)				16	4	4																					
		TOTALS CARRIED TO GENERAL SUMMARY				32	8	8																					

NO.	DESCRIPTION	REV. BY	DATE
4	REVISED PART. CODE	MJB	11-18-2021

FRA - 71 - 14.36

PARKING METER SUBSUMMARY

CALCULATED	KWR
CHECKED	JML

688
1228

SHEET NO.	REF. NO.	LOCATION	STATION	SIDE	630					
					REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	REMOVAL OF GROUND MOUNTED PIPE SUPPORT AND DISPOSAL	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	REMOVAL OF OVERHEAD SIGN SUPPORT AND DISPOSAL, TYPE TC-16.21
					EACH	EACH	EACH	EACH	EACH	EACH
716	R98	MOUND ST.	15+53	LT	1	1				
716	R99	MOUND ST.	17+78	RT	1	1				
716	R100	MOUND ST.	18+70	RT					1	
716	R101	MOUND ST.	19+22	LT	1	1				
717	R102	MOUND ST.	22+11	RT	2	1				
717	R103	3RD ST.	NO STATION						2	
717	R104	3RD ST.	157+08	LT	2	1				
718	R105	SHORT ST.	13+76	LT	2	1				
718	R106	SHORT ST.	13+95	RT	1	1				
719	R107	3RD ST.	152+63	LT				1		
719	R108	3RD ST.	152+94	LT					1	
719	R109	3RD ST.	152+93	LT	1	2				
719	R110	3RD ST.	152+94	LT				1		
719	R111	3RD ST.	153+17	LT	1	2				
719	R112	3RD ST.	153+91	LT	1	1				
719	R113	3RD ST.	154+60	LT					1	
719	R114	3RD ST.	155+63	LT	1	1				
719	R115	3RD ST.	156+30	LT					6	
719	R116	3RD ST.	156+30	LT				1		
719	R117	FULTON ST.	30+76	RT	1	1				
711	R118	2ND ST.	NO STATION		1					
TOTALS THIS SHEET					16	14		3	11	
TOTALS CARRIED FROM SHEET 690					49	34	1	2	28	1
FUNDING SPLIT (08/NHS/PV)					29	22	1	3	20	1
FUNDING SPLIT (08/NHS/PV)					29	22		2	19	
FUNDING SPLIT (11/NHS/PV/COL)					7	4				
TOTALS CARRIED TO GENERAL SUMMARY					65	48	1	5	39	1

NO.	DESCRIPTION	REV. BY	DATE
4	REVISED PART. CODE	MJB	11-18-2021

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SHEET NUM.										PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
756										08/NHS/PV	08/NHS/PV						
1										1		625	14001	1	EACH	LIGHT POLE FOUNDATION, 24" X 6' DEEP, AS PER PLAN	753
1										1		625	14301	1	EACH	MEDIAN LIGHT POLE FOUNDATION, 8' DEEP, AS PER PLAN	753
740										370	370	625	25408	740	FT	CONDUIT, 2", 725.051	
76										38	38	625	25504	76	FT	CONDUIT, 3", 725.051	
2,214										1,107	1,107	625	25740	2,214	FT	CONDUIT, MULTICELL, 4", 725.20, AS PER PLAN	753
896										448	448	625	29101	896	FT	TRENCH, 36" DEEP, AS PER PLAN	753
302										151	151	625	29400	302	FT	TRENCH IN PAVED AREA	
1										1		625	29931	1	EACH	MEDIAN JUNCTION BOX, AS PER PLAN	761
3										2	1	625	30700	3	EACH	PULL BOX, 725.08, 18"	
6										3	3	625	30710	6	EACH	PULL BOX, 725.08, 32"	
2										1	1	630	84901	2	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL, AS PER PLAN	753
92										46	46	632	62810	92	FT	INTERCONNECT CABLE, MISC.:SFRD CABLE	754
296										148	148	632	69300	296	FT	POWER CABLE, 3 CONDUCTOR, NO. 4 AWG	
1										1		632	70001	1	EACH	POWER SERVICE, AS PER PLAN	753
3										2	1	632	90101	3	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	753
1										1		633	67101	1	EACH	CABINET FOUNDATION, AS PER PLAN	753
1										1		633	67200	1	EACH	CONTROLLER WORK PAD	
1,743										872	871	804	32060	1,743	FT	DROP CABLE, 24 FIBER, AS PER PLAN	753
1										1		804	37000	1	EACH	SPLICE ENCLOSURE, BUTT STYLE	754
98										49	49	809	64550	98	FT	ETHERNET CABLE, OUTDOOR-RATED	
1										1		809	65990	1	EACH	ITS DEVICE, MISC.: RELOCATE ITS POLE	754
1										1		809	65990	1	EACH	ITS DEVICE, MISC.: RELOCATE ITS CABINET	754
LS										LS		809	70000	LS		MAINTAINING ITS DURING CONSTRUCTION	754

ITS GENERAL SUMMARY

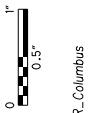
FRA - 71 - 14.36

NO.	DESCRIPTION	REV. BY	DATE
4	REVISED PART. CODE	RGF	11/18/2021

755
1228



Ohio DOT Workspace
70171 West Interchange 6R
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34" x 22"

View: FENCE_V.EWT
By: MBarbieri

Model: Sheet
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SHEET NO.	STATION		SIDE	POLE / PULL BOX NO.	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625	625								
	FROM	TO			EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA						
CKT #810 MOUND STREET																												
10+23																												
10+23		9+99	L/R	LP - P																								
9+99			RT	P	1																							
9+99		10+36	RT	P - LP																								
10+36			RT	LP	1																							
10+36		11+23	RT	LP - LP																								
11+23			RT	LP	1																							
11+23		12+59	RT	LP - LP																								
12+59			RT	LP	1																							
12+59		13+92	RT	LP - LP																								
13+92			RT	LP	1																							
13+92		14+00	RT	LP - ML																								
14+00			RT	ML - LP	1																							
14+00		15+29	RT	LP																								
15+29			RT	LP - LP	1																							
15+29		16+56	RT	LP																								
16+56			RT	LP	1																							
16+56		14+79 'S'	R/L	LP - P																								
14+79			LT	P	1																							
14+79		14+79	L/R	P - P																								
14+79			RT	P	1																							
14+00		14+05	RT	ML - LP																								
14+05			RT	LP	1																							
14+05		14+79	RT	LP - P																								
14+79			RT	P - P	1																							
17+67		17+67	RT	P																								
17+67			R/L	P - P	1																							
17+67		17+67	LT	P																								
17+56			LT	L	1																							
17+56		17+67	LT	L - P																								
17+67			LT	P - L	1																							
18+36		18+36	LT	L																								
18+36			LT	L - P	1																							
18+36		2+35 'CC'	LT	L - P																								
2+35			LT	P	1																							
2+35		2+35	L/R	P - P																								
2+35			RT	P	1																							
2+35		18+99 'M'	RT	P - P																								
18+99			LT	P	1																							
18+99		19+12	LT	P - WOOD POLE																								
19+12			LT	WOOD POLE	1																							
18+99		19+37	LT	P - L																								
19+37			LT	L	1																							
19+37		19+50	LT	L - ML																								
OVERHEAD LIGHTING (BRIGADIER ALLEY)																												
OVERHEAD LIGHTING (BRIGADIER ALLEY/JEWETT ST.)																												
19+50		20+06	LT	ML - P																								
20+06			LT	P	1																							
20+06		20+11	LT	P - WOOD POLE																								
20+11			LT	WOOD POLE	1																							
FUNDING SPLIT (08/NHS/PV)																												
FUNDING SPLIT (08/NHS/PV)																												
FUNDING SPLIT (12/NHS/PV/INC)																												
TOTALS CARRIED TO GENERAL SUMMARY																												

NO.	DESCRIPTION	REV. BY	DATE
4	REVISD PART. CODE	MJB	11-18-2021

FRA-71-14.36

795
1228

CALCULATED
KWR
CHECKED
DRB

LIGHTING SUBSUMMARY (CITY)

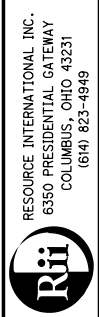
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CALCULATED BY: KSJ DATE: 03/04/2020
 CHECKED BY: MMS DATE: 03/04/2020

ESTIMATED QUANTITIES					AS PER PLAN REFERENCE SHEET
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	
203	20000	961	CU YD	EMBANKMENT	
203	35000	2085	CU YD	GRANULAR EMBANKMENT	
203	35110	246	CU YD	GRANULAR MATERIAL, TYPE B	
203	65000	2	EACH	SPECIAL - SETTLEMENT PLATFORM	
203	98100	5680	SQ YD	ROADWAY MISC.: COLUMN SUPPORTED WALLS *	
503	11101	LS	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN	838
509	10001	14932	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	838
511	53012	93	CU YD	CLASS QC2 CONCRETE, MISC.: PARAPET INCLUDING SLEEPER SLAB WITH QC/QA	
512	10001	348	SQ YD	SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)	838
512	10100	703	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)	
516	13200	56	SQ FT	1/2" PREFORMED EXPANSION JOINT FILLER	
516	13900	518	SQ FT	2" PREFORMED EXPANSION JOINT FILLER	
840	20001	6894	SQ FT	MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN	839 & 843
840	21000	630	CU YD	WALL EXCAVATION	
840	22000	547	SQ YD	FOUNDATION PREPARATION	
840	23000	3908	CU YD	SELECT GRANULAR BACKFILL	
840	25010	608	FT	6" DRAINAGE PIPE, PERFORATED	
840	26000	315	FT	CONCRETE COPING	
840	26050	6264	SQ FT	AESTHETIC SURFACE TREATMENT	
840	27000	5	DAY	ON-SITE ASSISTANCE	
867	00101	LS	LS	TEMPORARY WIRE FACED MECHANICALLY STABILIZED EARTH WALL, AS PER PLAN (WALL T1)	839

* - QUANTITY FOR COLUMN SUPPORTED WALLS
 INCLUDE GROUND IMPROVEMENT UP TO RAMP D7
 STA. 7002+25.00

NO.	DESCRIPTION	REV. BY	DATE
1	CHANGED CONTROLLED MODULUS COLUMNS TO COLUMN SUPPORTED WALLS	MMS	11/5/21
3	UPDATED ITEM 509 TO AS PER PLAN	MMS	11/18/21
3	REMOVED ITEM 840E28000 - SGB INSPECTION AND COMPACTION TESTING	MMS	11/18/21
4	UPDATED CSW QUANTITY	MMS	11/24/21



REVIEWED DATE
 NCK 6/23/2021
 STRUCTURE FILE NUMBER

DRAWN MMS
 REVISED

DESIGNED KSJ
 CHECKED MMS

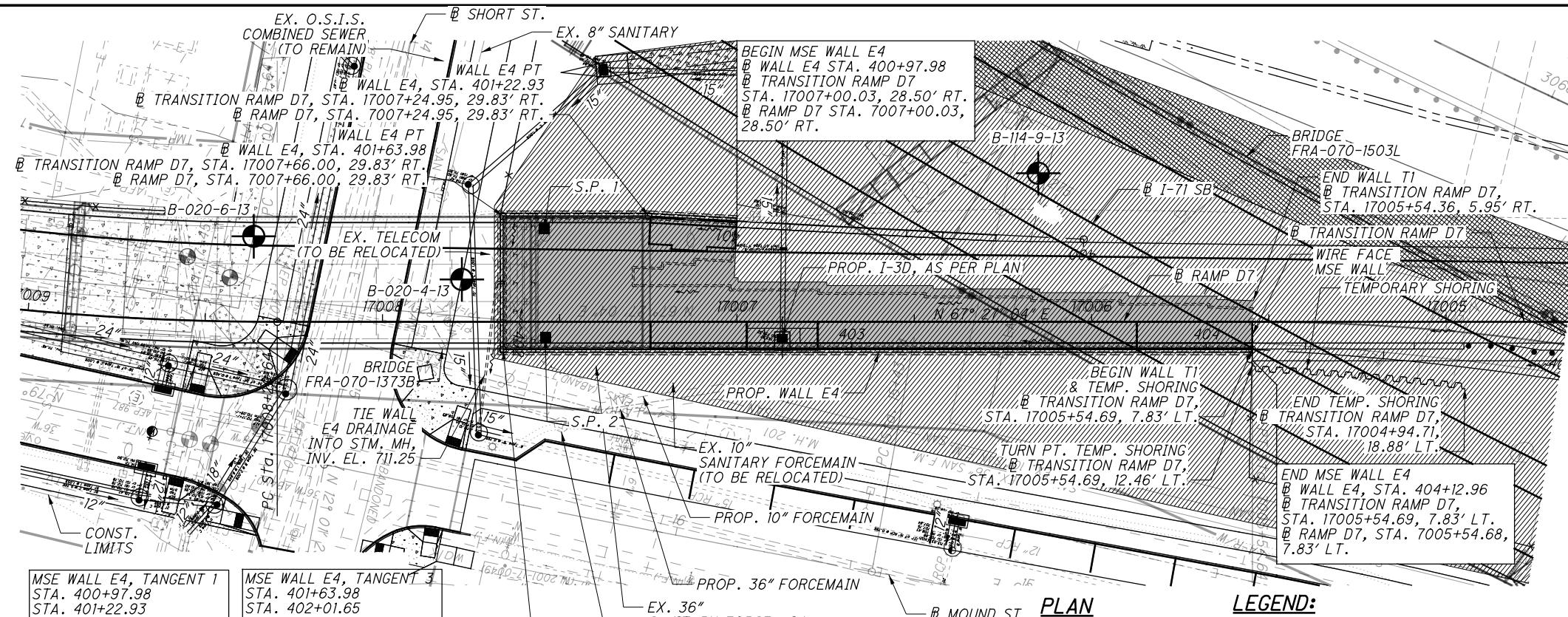
ESTIMATED QUANTITIES
 RETAINING WALL E4
 I-70/I-71 WEST INTERCHANGE PROJECT

FRA-71-14.36
 PID No. 105588

1/10

847
 1228

G:\projects\2013\W-13-072_FRA-70-13-10_6A\89464_structures_wall_OE4\sheets\105588_OE4WP001.dgn 11/24/2021 11:35:50 AM meets



NO.	DESCRIPTION	REV. BY	DATE
1	CHANGED CONTROLLED MODULUS COLUMNS TO COLUMN SUPPORTED WALLS (CSW)	MMS	11/5/21
4	UPDATED GROUND IMPROVEMENT AREA	MMS	11/24/21
4	UPDATED NOTE	MMS	11/24/21

NOTES:

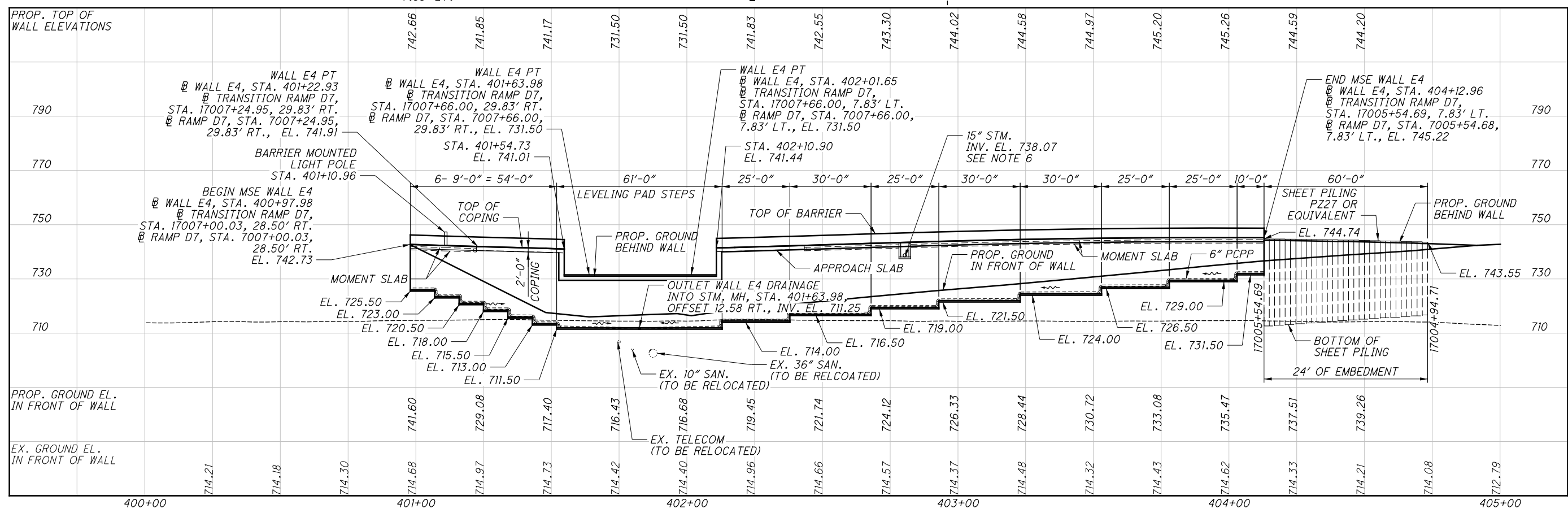
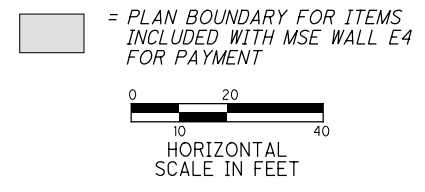
- ITEM 503, COFFERDAMS AND EXCAVATION BRACINGS, AS PER PLAN: THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATIONS. IF CONSTRUCTING AN ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. NO ADDITIONAL PAYMENT WILL BE MADE FOR PROVIDING AN ALTERNATE DESIGN.
- LEVELING PAD ELEVATIONS ARE GIVEN AT BOTTOM OF PAD.
- ALL EXISTING UTILITIES TO BE REMOVED/RELOCATED UNLESS NOTED OTHERWISE.
- STATIONING IS ALONG @ WALL E4.
- STATIONS AND OFFSETS ARE GIVEN AT BACK FACE OF THE WALL.
- TOP OF WALL ELEVATIONS ARE GIVEN AT TOP OF COPING.
- SOIL REINFORCEMENT SHALL BE CONSTRUCTED SO AS TO AVOID INTERFERENCE WITH PROPOSED DRAINAGE STRUCTURES.
- GROUND IMPROVEMENT SHALL BE IN THE FORM OF CSW COLUMNS AND DENSE GRADE AGGREGATE LOAD TRANSFER PLATFORM (LTP). THE BOTTOM 1'-0" OF THE LTP IS CONSIDERED A WORKING PLATFORM. FOR ADDITIONAL INFORMATION, SEE NOTES FROM SHEET 842. FOR SECTION VIEWS, SEE SHEET 851.
- FOR TEMPORARY WIRE MESH WALL T1 DETAIL, SEE SHEET 852.

MSE WALL E4, TANGENT 1 STA. 400+97.98 STA. 401+22.93 L = 24.95' BRG. = N 70°30'27" E	MSE WALL E4, TANGENT 3 STA. 401+63.98 STA. 402+01.65 L = 37.67' BRG. = S 22°32'56" E
MSE WALL E4, TANGENT 2 STA. 401+22.93 STA. 401+63.98 L = 41.05' BRG. = N 67°27'04" E	MSE WALL E4, TANGENT 4 STA. 402+01.65 STA. 404+12.96 L = 211.31' BRG. = N 67°27'04" E

WALL E4 PT
@ WALL E4, STA. 402+01.65
@ TRANSITION RAMP D7,
STA. 17007+66.00, 7.83' LT.
@ RAMP D7, STA. 7007+66.00,
7.83' LT.

LEGEND:

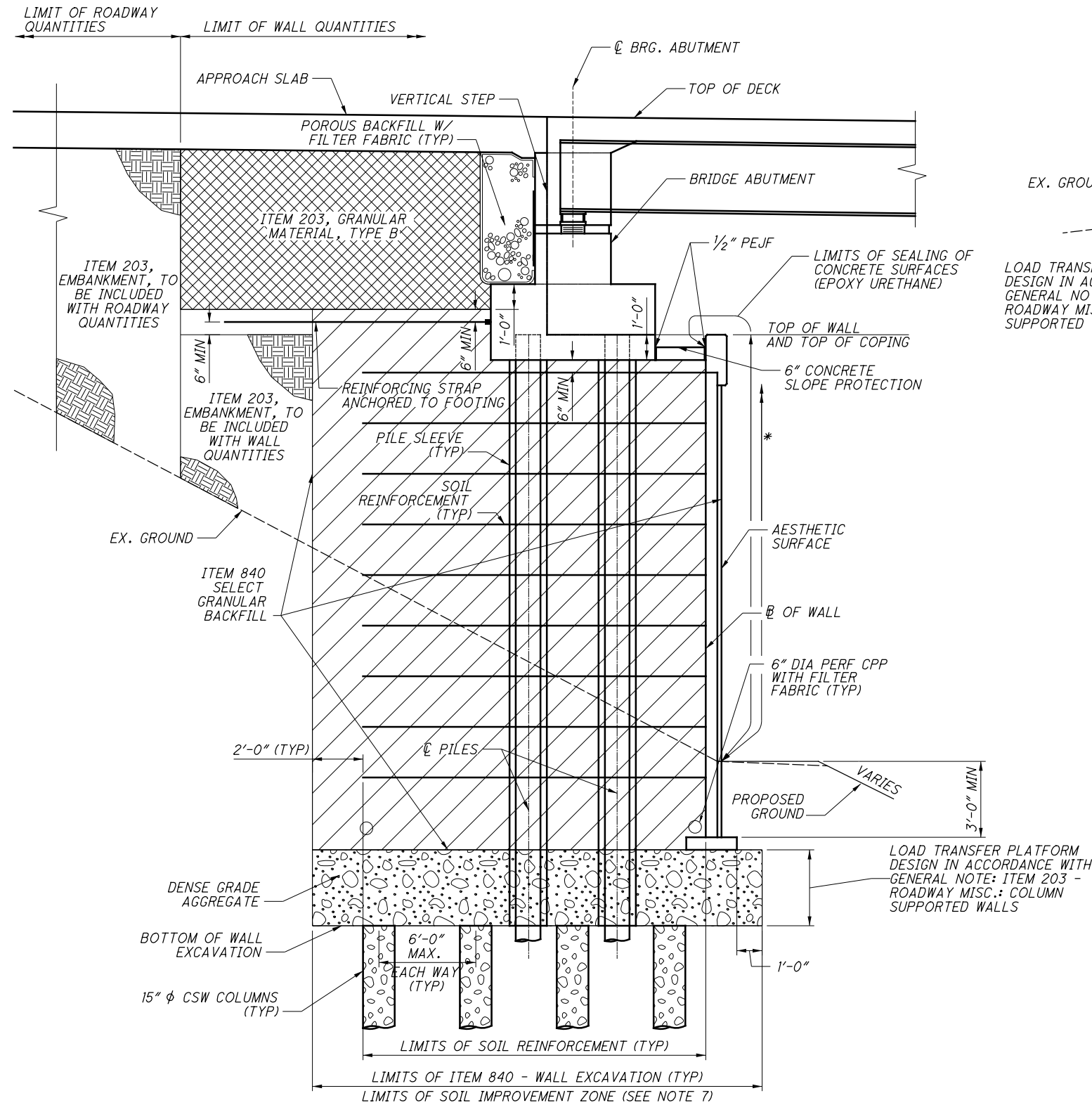
- 6" DIA PERF CPP
- - PROJECT BORING LOCATION
- - SETTLEMENT PLATFORM
- - HISTORIC BORING LOCATION
- ▨ = LIMIT OF GROUND IMPROVEMENT NEEDED OVER EXIST. 1-70 EMBANKMENT: 1310 SQ. YD.
- ▩ = LIMIT OF GROUND IMPROVEMENT NEEDED: 4,370 SQ. YD.



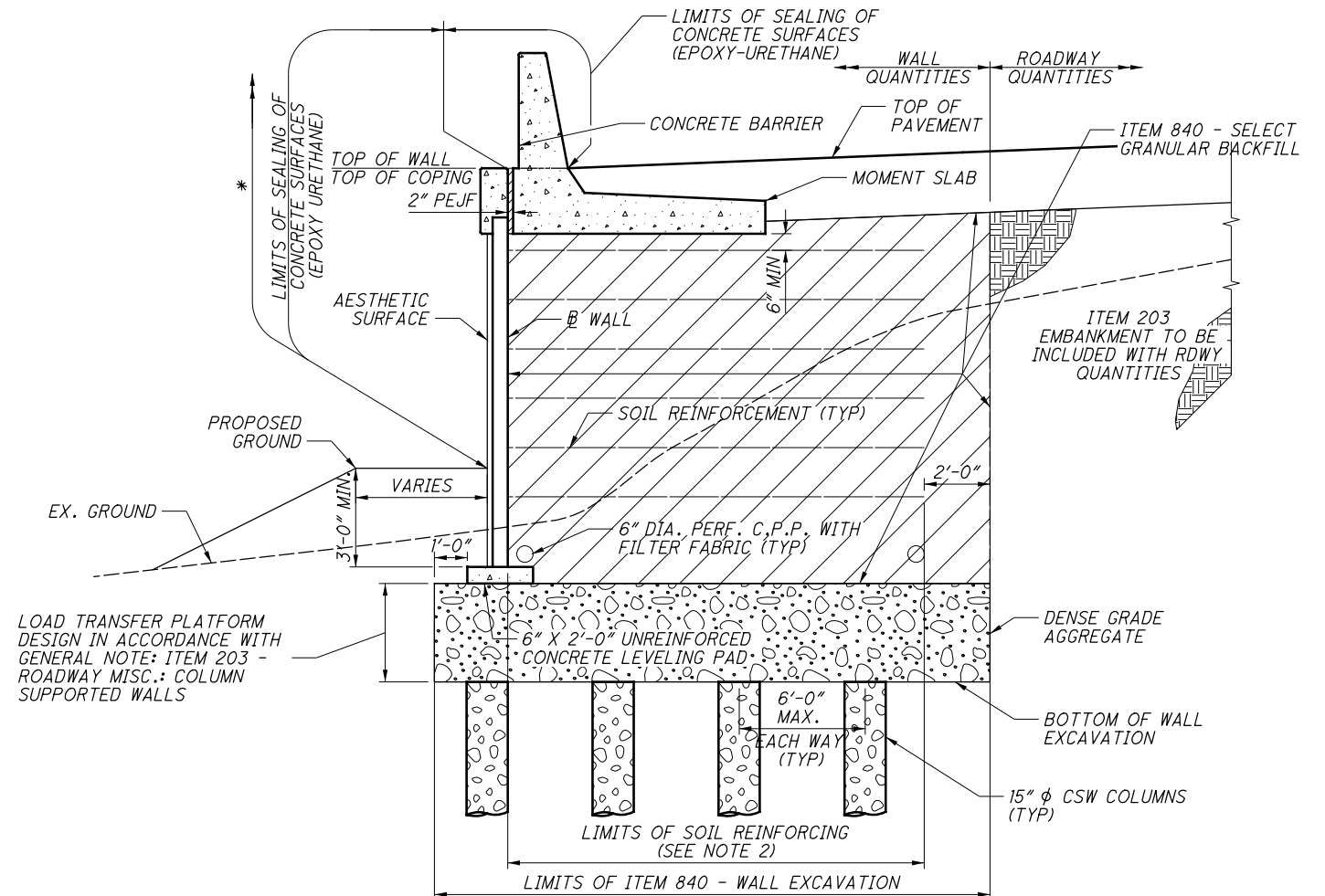
ELEVATION ALONG BACK OF WALL

NO.	DESCRIPTION	REV. BY	DATE
1	CHANGED CONTROLLED MODULUS COLUMNS TO COLUMN SUPPORTED WALLS (CSW)	MMS	11/5/21
4	REMOVED 3'-0" DIMENSION & UPDATED CALLOUT	MMS	11/24/21

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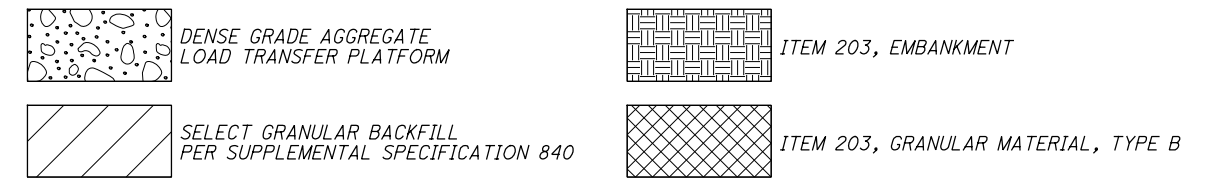
**TYPICAL SECTION
MSE WALL AT BRIDGE ABUTMENTS
WALL E4**



TYPICAL SECTION: WALL E4

LEGEND:

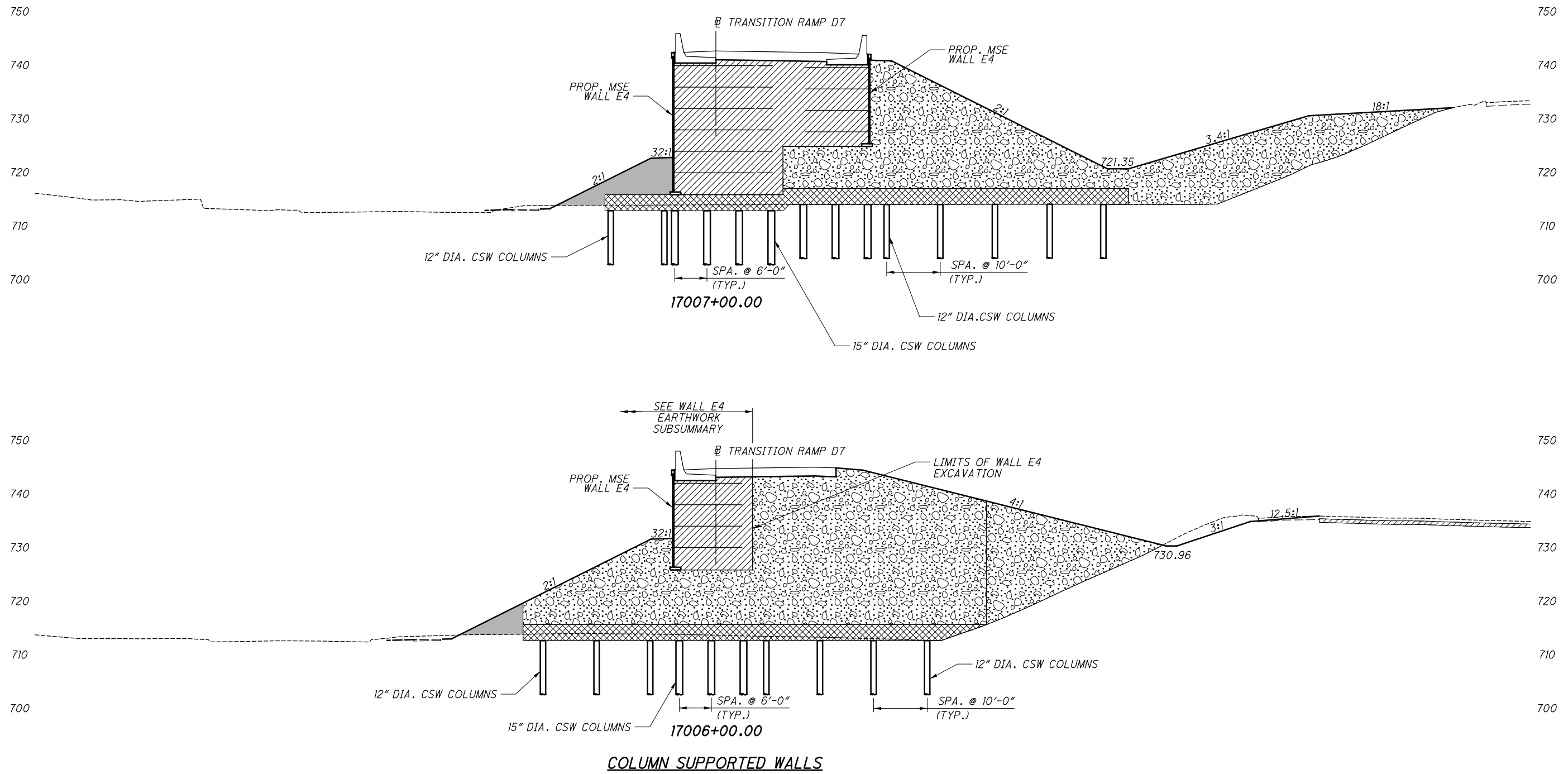
- * LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION) SEAL ALL EXPOSED SURFACES EXTENDING 10'-0" VERTICAL FROM GROUND LINE
- # GRADING SLOPES AWAY FROM BARRIER. SEE WALL PLAN SHEETS AND ROADWAY CROSS SECTIONS FOR MORE INFORMATION.



NOTES:

1. FLOW LINE OF 6" DIA. PERFORATED PLASTIC PIPE WILL VARY TO PROVIDE POSITIVE DRAINAGE AT OUTLET. MINIMUM SLOPE OF PIPE SHALL BE 1/8" PER FOOT.
2. SOIL REINFORCEMENT LENGTH TO BE DETERMINED BY WALL SUPPLIER OF THE APPROVED WALL SYSTEM, AND SHALL COMPLY WITH THE REQUIREMENTS LISTED ON SHEET 843.
3. AS SHOWN IN THE PLANS, THE MAXIMUM DESIGN HEIGHT OF THE MSE WALL VARIES FROM 16'-9" TO 29'-6" (ACTUAL HEIGHT VARIES FROM 16'-9" TO 29'-6"), FINAL HEIGHTS TO BE DETERMINED BY WALL SUPPLIER.
4. THE THICKNESS OF MSE WALL PANELS IS ASSUMED AT 5 1/2".
5. COPING EXPANSION JOINTS SHALL BE SPACED NO MORE THAN 20 FEET APART AND ALIGNED WITH JOINTS BETWEEN FACING PANELS.
6. INSTALL PILE SLEEVES DURING THE CONSTRUCTION OF THE MSE WALL. PILE SLEEVES SHALL EXTEND FROM BOTTOM OF ABUTMENT FOOTING TO BOTTOM OF WALL EXCAVATION/ITEM 203, ROADWAY MISC.: COLUMN SUPPORTED WALLS AND SHALL BE INSTALLED AS PER SS 840.06.J.
7. CSW COLUMNS SHALL BE INSTALLED TO IMPROVE THE SOIL IN THE AREAS AS SHOWN ON SHEET 909K
8. SIZE AND SPACING OF CSW COLUMNS ARE SHOWN FOR REPRESENTATION ONLY. ACTUAL SIZE AND SPACING TO BE DETERMINED BY CONTRACTOR.

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LEGEND:

- SELECT GRANULAR BACKFILL
- ITEM 203 GRANULAR EMBANKMENT
- DENSE GRADE AGGREGATE LOAD TRANSFER PLATFORM
- ITEM 203 EMBANKMENT

NO.	DESCRIPTION	REV. BY	DATE
1	CHANGED CONTROLLED MODULUS COLUMNS TO COLUMN SUPPORTED WALLS (CSW)	MMS	11/5/21
4	UPDATED GROUND IMPROVEMENT LIMITS	MMS	11/24/21

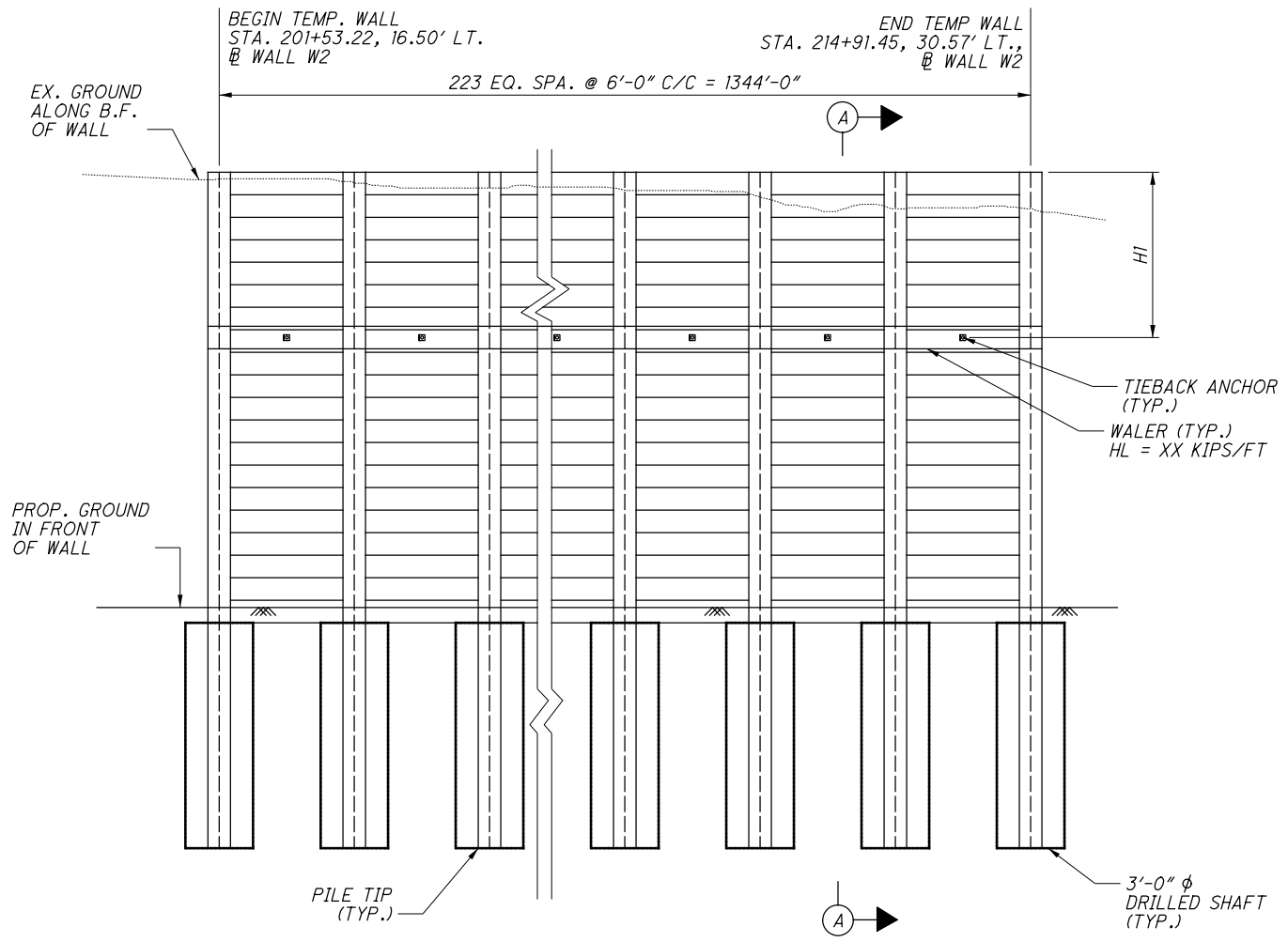
NOTES:

1. SIZE AND SPACING OF CSW COLUMNS ARE SHOWN FOR REPRESENTATION ONLY. ACTUAL SIZE AND SPACING TO BE DETERMINED BY CONTRACTOR.

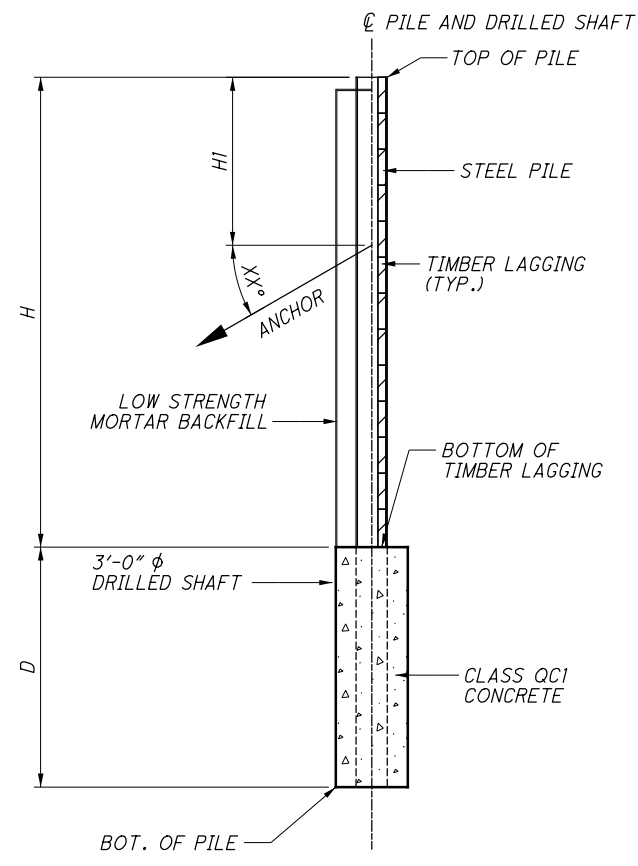
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DESIGN	H (FT.)	D (FT.)	HI (FT.)	HL (KIPS/FT)	STEEL PILE
1	<= 8.5	16	-		HP 12X53
2	8.5 TO 12.5	10	4	6.94	HP 12X53
3	12.5 TO 20.5	10	6	17.24	HP 12X53

WALL W2 STA.	Top OF SPL WALL EL.	BOTTOM OF EXCAVATION EL.	H (FT.)	DESIGN
201+53.22	713.65	703.50	10.15	2
202+00	713.20	701.00	12.20	3
202+50	712.67	699.50	13.17	3
203+00	712.26	699.50	12.76	3
203+50	711.54	699.50	12.04	3
204+00	710.85	699.50	11.35	2
204+50	710.33	699.50	10.83	2
205+00	710.09	699.50	10.59	2
205+50	710.14	699.50	10.64	2
206+00	710.36	699.50	10.86	2
206+50	709.63	699.50	10.13	2
207+00	708.89	702.00	6.89	1
207+50	709.19	702.00	7.19	1
208+00	709.45	702.00	7.45	1
208+50	709.70	702.00	7.70	1
209+00	709.96	702.00	7.96	1
209+50	710.35	702.00	8.35	2
210+00	710.81	702.00	8.81	2
210+50	711.21	702.00	9.21	2
211+00	712.56	699.50	13.06	3
211+50	713.59	699.50	14.09	3
212+00	713.47	699.50	13.97	3
212+50	713.46	697.00	16.46	3
213+00	713.48	697.00	16.48	3
213+50	713.00	692.80	20.20	3
214+00	713.61	693.00	20.61	3
214+50	712.79	693.25	19.54	3
214+91.45	712.30	693.25	19.05	3



SCHEMATIC SOLDIER PILE WALL - ELEVATION



SECTION A-A

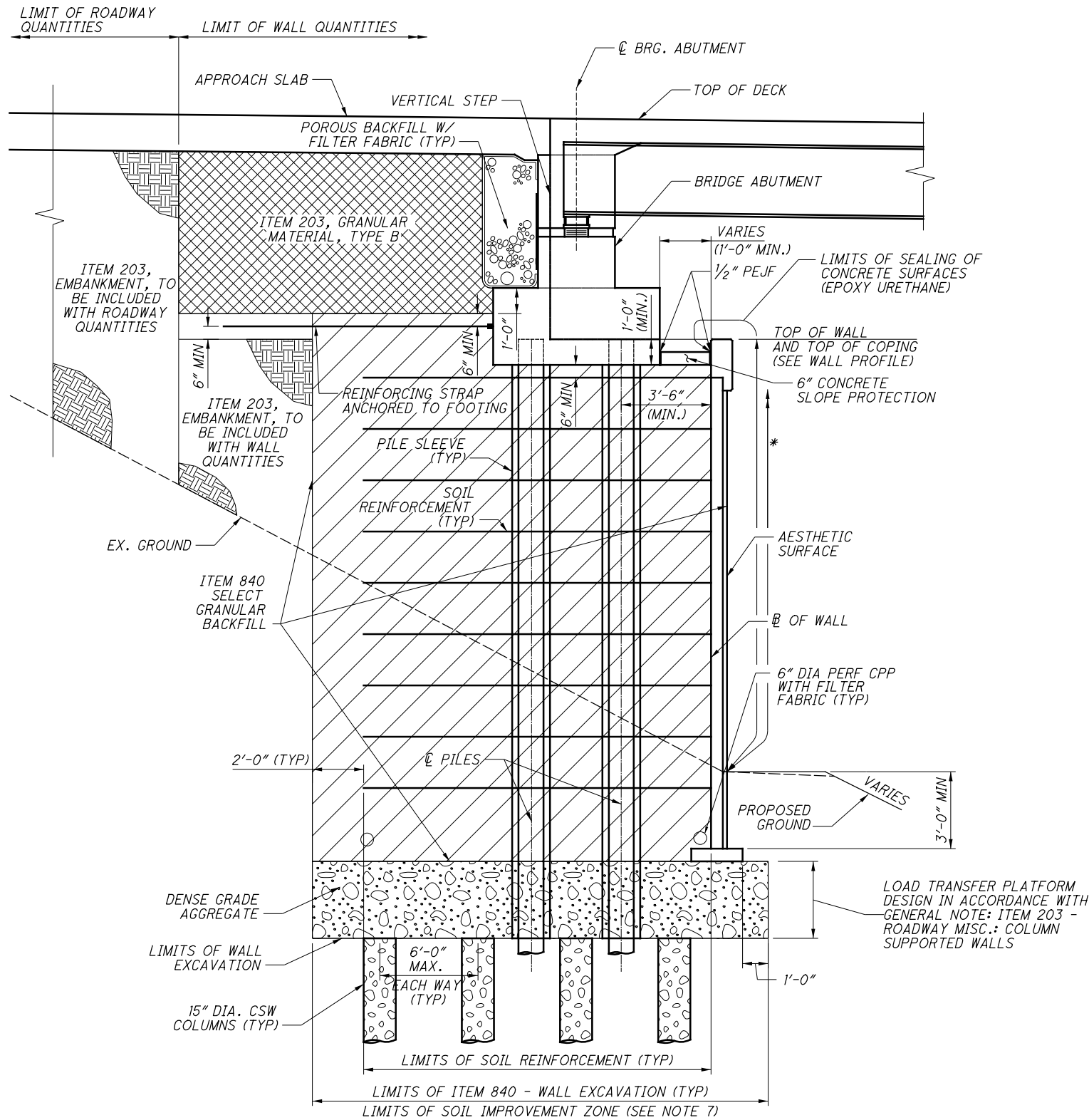
NO.	DESCRIPTION	REV. BY	DATE
4	CHANGED CLASS QC1 CONCRETE TO LOW STRENGTH MORTAR	MMS	11/22/2021
4	CHANGED CLASS QC4 CONCRETE TO CLASS QC1 CONCRETE	MMS	11/22/2021

- NOTES:**
1. CONTRACTOR SHALL DESIGN AND INSTALL TIMBER LAGGING AND BLOCKING AS REQUIRED. (LAGGING SHALL HAVE A 4" NOMINAL THICKNESS MIN.)
 2. SOLDIER PILES SHALL BE ASTM A572, GRADE 50.
 3. THE SOLDIER PILES ARE TO BE INSTALLED PRIOR TO EXCAVATION AND THE WOOD LAGGINGS ARE TO BE INSTALLED AS EXCAVATION PROCEEDS DOWNWARD.
 4. BACKFILL, PREDRILLED HOLES WITH LOW STRENGTH MORTAR TO BOTTOM OF TIMBER LAGGING.
 5. CONTRACTOR TO ADJUST DRILLED SHAFT SPACING TO AVOID INTERFERENCE WITH ANY EXISTING AND PROPOSED UTILITIES.
 6. ALL COSTS ASSOCIATED WITH TEMPORARY SHORING INCLUDING ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL INCLUDED WITH WALL 2, ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, FOR PAYMENT.

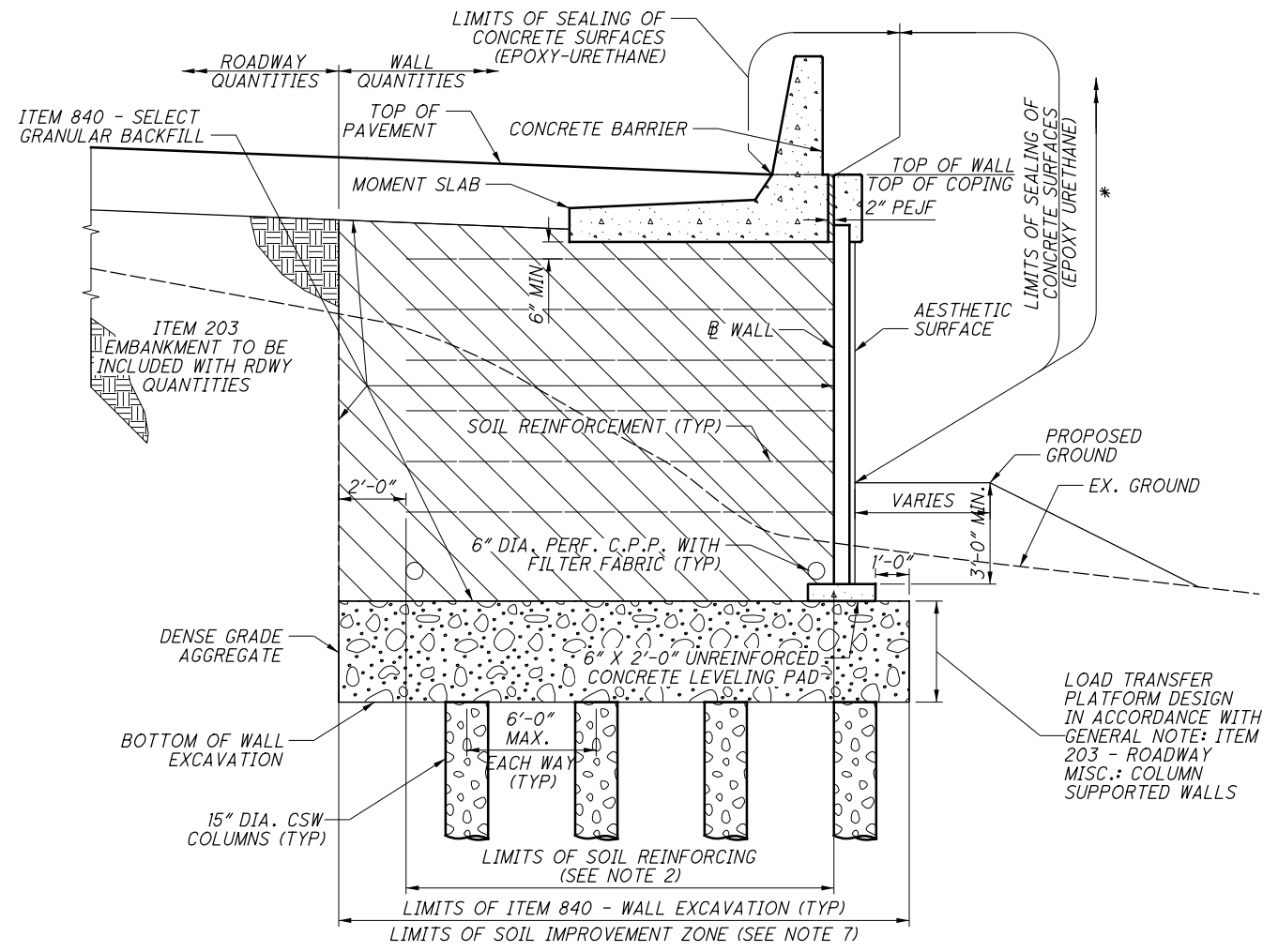
- LEGEND:**
- H - DESIGN HEIGHT
 - D - EMBEDMENT DEPTH
 - HI - HEIGHT OF TIEBACK ANCHOR FROM THE TOP OF WALL
 - HL - HORIZONTAL COMPONENT OF REQUIRED SOIL ANCHOR DESIGN LOAD

NO.	DESCRIPTION	REV. BY	DATE
1	CHANGED CONTROLLED MODULUS COLUMNS TO COLUMN SUPPORTED WALLS (CSW)	KSJ	11/5/21
4	REMOVED 3'-0" DIMENSION & UPDATED CALLOUT	MMS	11/24/21

G:\projects\2013\W-13-072_FRA-70-13-10_6A\89464\71SB_PHASE_3\structures_wall_OW5_Ph3\sheets\105588_OW5WD108.dgn 11/24/2021 1:42:12 PM meets



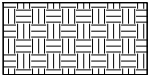
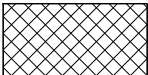


**TYPICAL SECTION
MSE WALL AT BRIDGE ABUTMENTS
WALL W5**



TYPICAL SECTION: WALL W5
WALL W5 STA. 507+00.00 TO STA. 509+43.60
& STA. 600+19.08 TO STA 601+17.17

LEGEND:

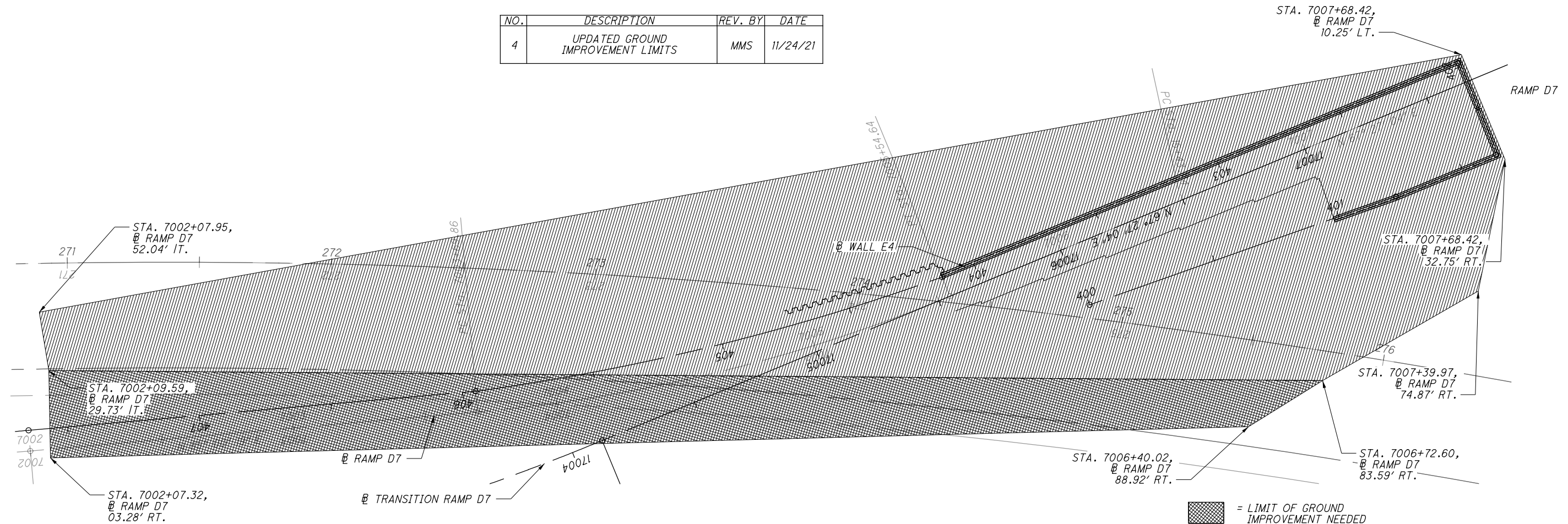
- * LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION) SEAL ALL EXPOSED SURFACES EXTENDING 10'-0" VERTICAL FROM GROUND LINE
-  DENSE GRADE AGGREGATE LOAD TRANSFER PLATFORM
-  SELECT GRANULAR BACKFILL PER SUPPLEMENTAL SPECIFICATION 840
-  ITEM 203, EMBANKMENT
-  ITEM 203, GRANULAR MATERIAL, TYPE B

NOTES:



1. FLOW LINE OF 6" DIA. PERFORATED PLASTIC PIPE WILL VARY TO PROVIDE POSITIVE DRAINAGE AT OUTLET. MINIMUM SLOPE OF PIPE SHALL BE 1/8" PER FOOT.
2. SOIL REINFORCEMENT LENGTH TO BE DETERMINED BY WALL SUPPLIER OF THE APPROVED WALL SYSTEM, AND SHALL COMPLY WITH THE REQUIREMENTS LISTED ON SHEET 843.
3. AS SHOWN IN THE PLANS, THE MAXIMUM DESIGN HEIGHT OF THE MSE WALL VARIES FROM 10'-9" TO 48'-9" (ACTUAL HEIGHT VARIES FROM 10'-9" TO 48'-9"), FINAL HEIGHTS TO BE DETERMINED BY WALL SUPPLIER.
4. THE THICKNESS OF MSE WALL PANELS IS ASSUMED AT 5 1/2".
5. COPING EXPANSION JOINTS SHALL BE SPACED NO MORE THAN 20 FEET APART AND ALIGNED WITH JOINTS BETWEEN FACING PANELS.
6. INSTALL PILE SLEEVES DURING THE CONSTRUCTION OF THE MSE WALL. PILE SLEEVES SHALL EXTEND FROM BOTTOM OF ABUTMENT FOOTING TO BOTTOM OF WALL EXCAVATION/ITEM 203, ROADWAY MISC.: COLUMN SUPPORTED WALLS AND SHALL BE INSTALLED AS PER SS 840.06.J.
7. CSW COLUMNS SHALL BE INSTALLED TO IMPROVE THE SOIL IN THE AREAS AS SHOWN ON SHEET 909K
8. SIZE AND SPACING OF CSW COLUMNS ARE SHOWN FOR REPRESENTATION ONLY. ACTUAL SIZE AND SPACING TO BE DETERMINED BY CONTRACTOR.

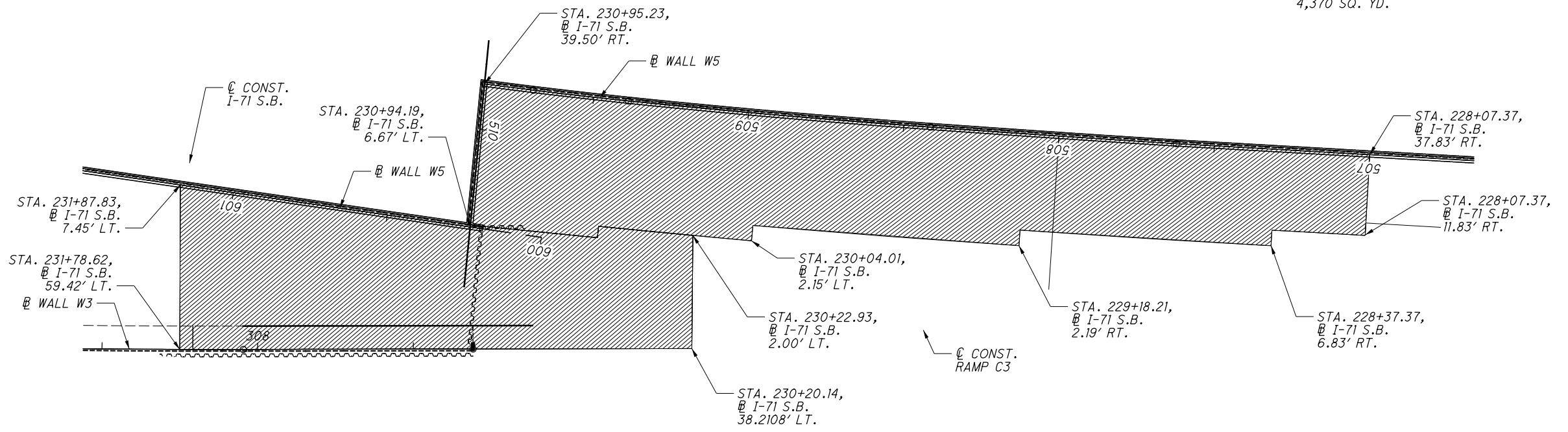
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NO.	DESCRIPTION	REV. BY	DATE
4	UPDATED GROUND IMPROVEMENT LIMITS	MMS	11/24/21




EAST SIDE

-  = LIMIT OF GROUND IMPROVEMENT NEEDED OVER EXIST. I-70 EMBANKMENT: 1310 SQ. YD.
-  = LIMIT OF GROUND IMPROVEMENT NEEDED: 4,370 SQ. YD.



WEST SIDE

-  = LIMIT OF GROUND IMPROVEMENT NEEDED: 1,912 SQ. YD.

RESOURCE INTERNATIONAL INC.
6350 PRESIDENTIAL GATEWAY
COLUMBUS, OHIO 43231
(614) 823-4949



DESIGNED	DRAWN	REVIEWED	DATE
MMS	MMS	NCK	6/23/2021
CHECKED	REVISED	STRUCTURE FILE NUMBER	
JGM			

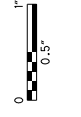
GROUND IMPROVEMENT AREA
RETAINING WALLS
I-70/I-71 WEST INTERCHANGE PROJECT

FRA-71-14.36
PID No. 105588





Ohio DOT Workspace
70171 West Interchange BR
www.msconsultants.com



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PARTICIPATION		ESTIMATED QUANTITIES				
09/NHS/BR	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SHEET REF.
	202	11203		LUMP	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	2/12
705	202	23501	705	SY	WEARING COURSE REMOVED, AS PER PLAN	2/12
157	202	22900	157	SY	APPROACH SLAB REMOVED	
3	202	98100	3	EACH	REMOVAL MISC.: PILE REMOVED, EXISTING STRUCTURE	
8	407	20000	8	GAL	NON-TRACKING TACK COAT	
5	441	10000	5	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (446), PG64-22	
	503	11100		LUMP	COFFERDAMS AND EXCAVATION BRACING	
11,409	509	25000	11,409	LB	REINFORCING STEEL	
372	510	10000	372	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
48	511	21521	48	CY	CLASS OC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN	2/12
117	512	33010	117	SY	TYPE 3 WATERPROOFING	2/12
494	513	10200	494	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF	
1,005	513	10240	1,005	LB	STRUCTURAL STEEL MEMBERS, LEVEL 2	
4	518	12200	4	EACH	SCUPPERS, INCLUDING SUPPORTS	
32	519	12510	32	SY	SPECIAL - PATCHING CONCRETE BRIDGE DECK - TYPE A	
4	846	00110	4	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	10/12

NO.	DESCRIPTION	REV. BY	DATE
2	DOWEL PAY ITEM INCLUDED	DEA	11-09-2021
4	PARTICIPATION CODE	DEA	11-23-2021

DESIGN AGENCY
ms consultants, inc.
2221 Schrock Road
Columbus, Ohio 43229

REVIEWED
GLG
DATE
20-APR
STRUCTURE FILE NUMBER
2504537

DRAWN
CDH
CHECKED
ELP

ESTIMATED QUANTITIES
BRIDGE NO. FRA-70-1373L
I-70 OVER SHORT STREET

FRA-71-14.36
PID No. 105588

3 / 12

912
1228

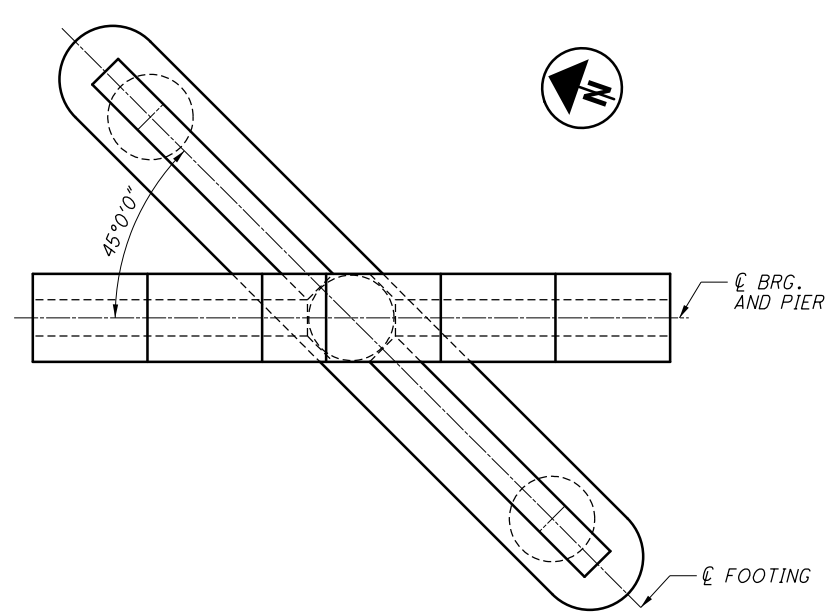
PARTICIPATION		ESTIMATED QUANTITIES					ABUT.	CALC.	DATE	CHK'D	DATE
09/NHS/BR	09/NHS/BR	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION		DBL	4/6/2020	DEA / ATM	4/9/2020
								PIERS	SUPER.	GEN.	SHEET REF.
		202	11003	LUMP	LS	STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				1	20/276
		202	11201	LUMP	LS	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN				1	20/276
80	79	202	22900	159	SY	APPROACH SLAB REMOVED				159	
1017	1017	202	23500	2034	SY	WEARING COURSE REMOVED				2,034	
11	10	202	98100	21	EACH	REMOVAL MISC.: PILE REMOVED, EXISTING STRUCTURE				21	
		503	11101	LUMP	LS	COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN				1	21/276
3293	3293	503	21101	6586	CY	UNCLASSIFIED EXCAVATION, AS PER PLAN		6,586			21/276
		505	11100	LUMP	LS	PILE DRIVING EQUIPMENT MOBILIZATION				1	
495	495	507	00100	990	FT	STEEL PILES HPI0X42, FURNISHED	990				
468	467	507	00150	935	FT	STEEL PILES HPI0X42, DRIVEN	935				
880	880	507	00200	1760	FT	STEEL PILES HPI2X53, FURNISHED	1,760				
840	840	507	00250	1680	FT	STEEL PILES HPI2X53, DRIVEN	1,680				
14	13	507	93300	27	EACH	STEEL POINTS OR SHOES	27				
3005611	3005610	509	10001	6011221	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	34,142	3,181,074	2,796,005		21/276
4475	4475	511	34447	8950	CY	CLASS QC2 CONCRETE WITH OC/OA, BRIDGE DECK, AS PER PLAN			8,950		21/276
753	753	511	34451	1506	CY	CLASS QC2 CONCRETE WITH OC/OA, BRIDGE DECK (PARAPET), AS PER PLAN			1,506		21/276, 222/276
139	139	511	43512	278	CY	CLASS QC1 CONCRETE WITH OC/OA, ABUTMENT INCLUDING FOOTING	278				
5758	5758	511	45602	11516	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH OC/OA		11,516			
821	821	512	10001	1642	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN, (PERMANENT GRAFFITI PROTECTION)		1,642			21/276
11011	11010	512	10100	22021	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	638	11,903	9,480		
10	9	512	33000	19	SY	TYPE 2 WATERPROOFING	19				
6578300	6578300	513	10401	13156600	LB	STRUCTURAL STEEL MEMBERS, HYBRID GIRDER, LEVEL SIX (6) FABRICATION, AS PER PLAN			13,156,600		21/276, 114/276
42464	42463	513	20000	84927	EACH	WELDED STUD SHEAR CONNECTORS			84,927		
77175	77174	514	00060	154349	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			154,349		
77175	77174	514	00066	154349	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			154,349		
59	59	516	10010	118	FT	ARMORLESS PREFORMED JOINT SEAL				118	
132	131	SPECIAL	12400	263	FT	SPECIAL - MODULAR EXPANSION JOINT	115	148			22/276
13	13	516	13600	26	SF	1" PREFORMED EXPANSION JOINT FILLER				26	
5	5	518	12200	10	EACH	SCUPPERS, INCLUDING SUPPORTS			10		
115	114	518	51200	229	FT	10" PIPE DOWNSPOUT, INCLUDING SPECIALS		229			
42	41	518	21200	83	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	83				
23	23	518	40000	46	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	46				
19	19	518	40010	38	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	38				
65	65	524	94804	130	FT	DRILLED SHAFTS, 42" DIAMETER, INTO BEDROCK		130			
670	670	524	94902	1340	FT	DRILLED SHAFTS, 48" DIAMETER, ABOVE BEDROCK		1340			
363	362	524	94904	725	FT	DRILLED SHAFTS, 48" DIAMETER, INTO BEDROCK		725			
1427	1427	524	94906	2854	FT	DRILLED SHAFTS, 54" DIAMETER, ABOVE BEDROCK		2854			
145	145	524	94994	290	FT	DRILLED SHAFTS, 90" DIAMETER, INTO BEDROCK		290			
317	316	524	94996	633	FT	DRILLED SHAFTS, 96" DIAMETER, ABOVE BEDROCK		633			
47	46	524	95100	93	EACH	DRILLED SHAFTS, MISC.: THERMAL INTEGRITY PROFILER (T.I.P.) WIRE CABLE TESTING OF DRILLED SHAFTS		93			
		524	95200	LUMP	LS	DRILLED SHAFTS, MISC.: SHAFT INSPECTION DEVICE				1	
196	196	526	30010	392	SY	REINFORCED CONCRETE APPROACH SLABS WITH OC/OA (T=17")				392	
58	58	526	90030	116	FT	TYPE C INSTALLATION				116	
		SPECIAL	530E00200	LUMP	LS	STRUCTURE, MISC.: SOLDIER PILE RETAINING WALL				1	21/276
60	60	605	14000	120	FT	6" BASE PIPE UNDERDRAINS *	120				
233	232	607	39901	465	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN				465	21/276
285	285	SPECIAL	690E98100	570	LF	SPECIAL - COVERED WALKWAY SYSTEM				570	20/276
		SPECIAL	690E98400	LUMP	LS	SPECIAL - EMERGENCY ACTION PLAN COORDINATION				1	20/276
74	74	869	00100	148	EACH	HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS	11	137			

LEGEND:

* QUANTITY CARRIED TO ROADWAY GENERAL SUMMARY

NO.	DESCRIPTION	REV. BY	DATE
3	UPDATED ITEM NO. AND QUANTITY	DBL	11/18/21
4	PARTICIPATION CODE	DEA	11/23/21

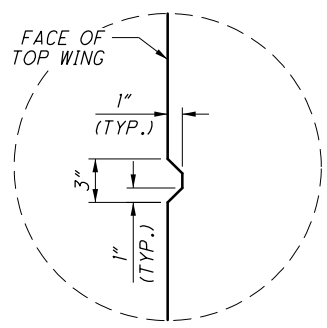
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 msc consultants.com
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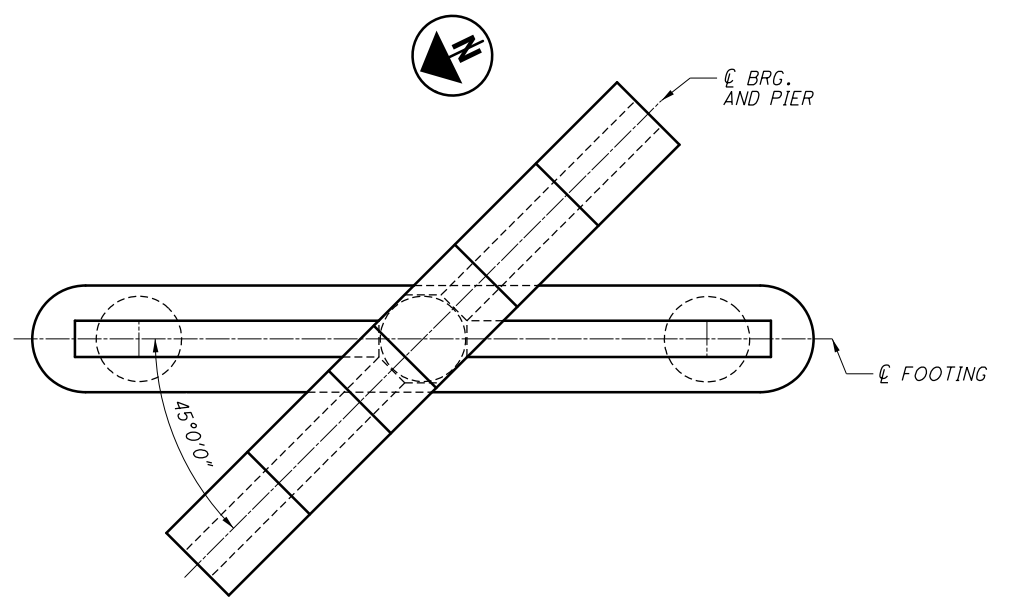
PLAN

NOTES:

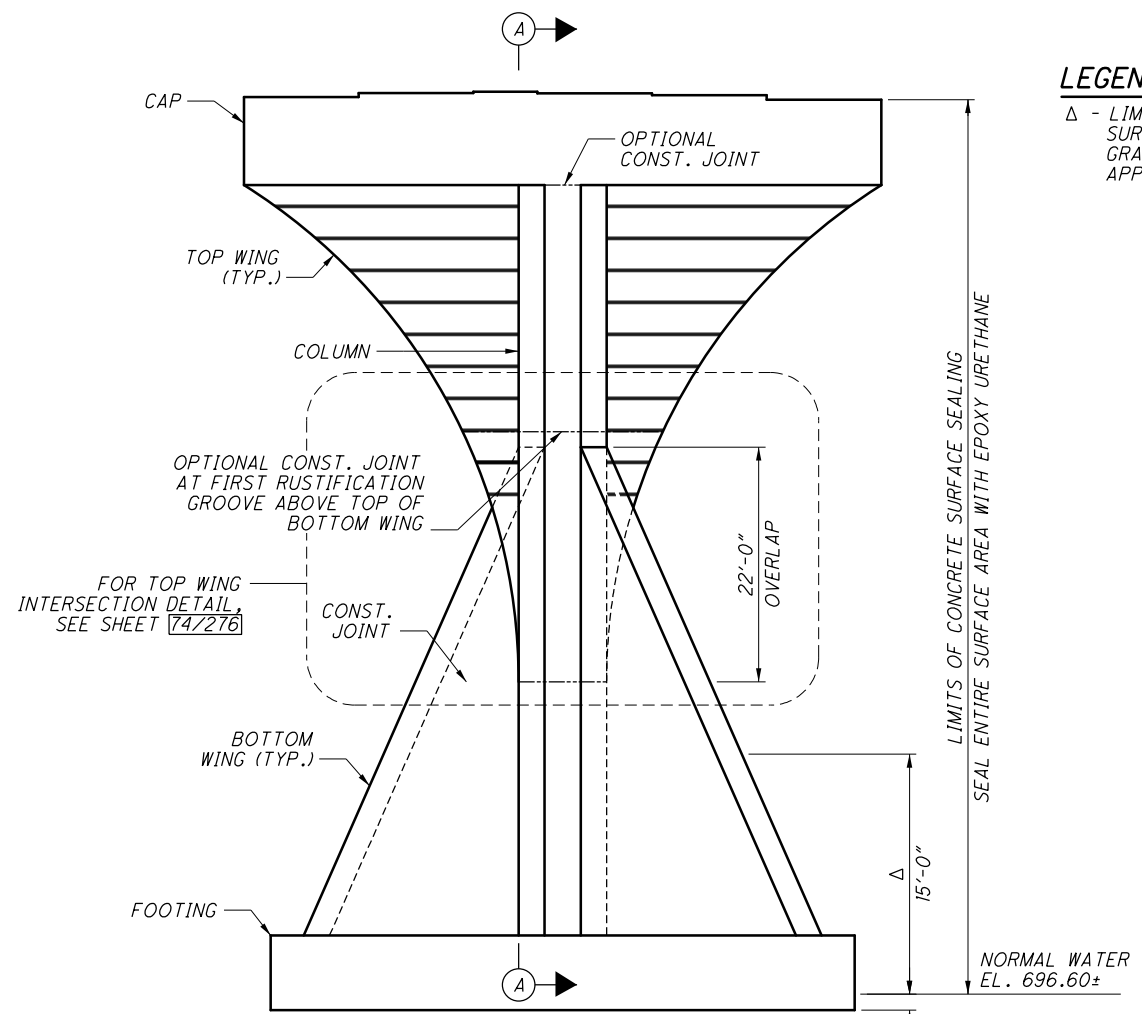
1. CAPS, COLUMNS AND FOOTINGS TO BE PAID FOR UNDER ITEM 511 - CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/OA.



DETAIL A



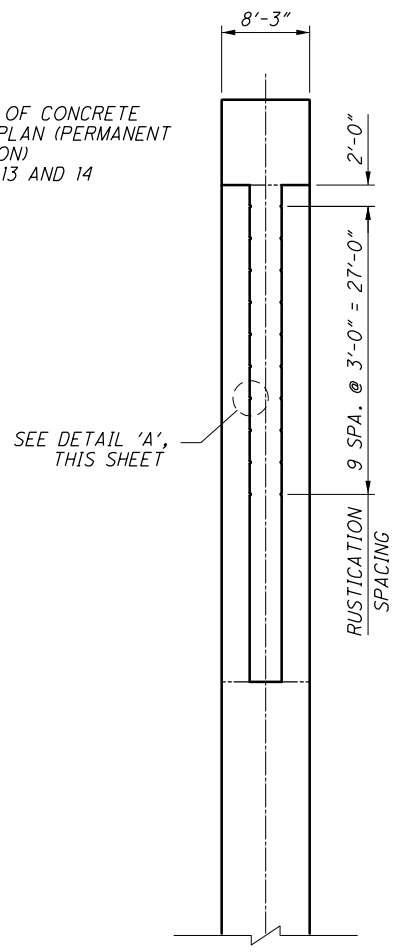
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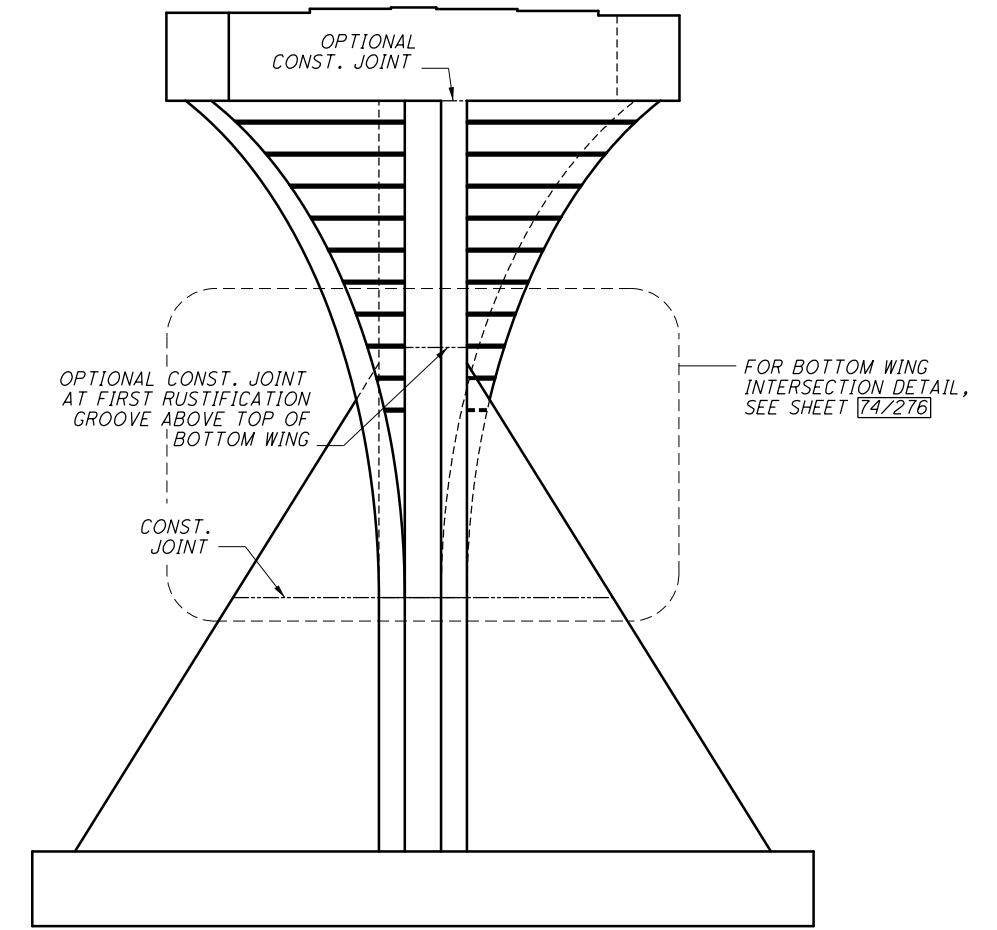
ELEVATION LOOKING UPSTATION
 PIER 13 SHOWN
 DRILLED SHAFTS AND REINFORCING NOT SHOWN

LEGEND

Δ - LIMITS OF SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION) APPLY TO PIER 10, 13 AND 14



SECTION A-A
 BOTTOM WING AND FOOTING NOT SHOWN



ELEVATION FACING BOTTOM WING
 PIER 13 SHOWN
 DRILLED SHAFTS AND REINFORCING NOT SHOWN

DESIGN AGENCY
ms consultants, inc.
 2221 Schrock Road
 Columbus, Ohio 43229

DATE
 20-APR
 2510025

REVIEWED
 FBW

DRAWN
 ABD

DESIGNED
 AKS

CHECKED
 TGH

UNIT 2 - PIER 10 THRU 14 PLAN, ELEVATION & SECTION
 BRIDGE NO. FRA-71-1503L
 I-71 SB OVER SCIOTO RIVER

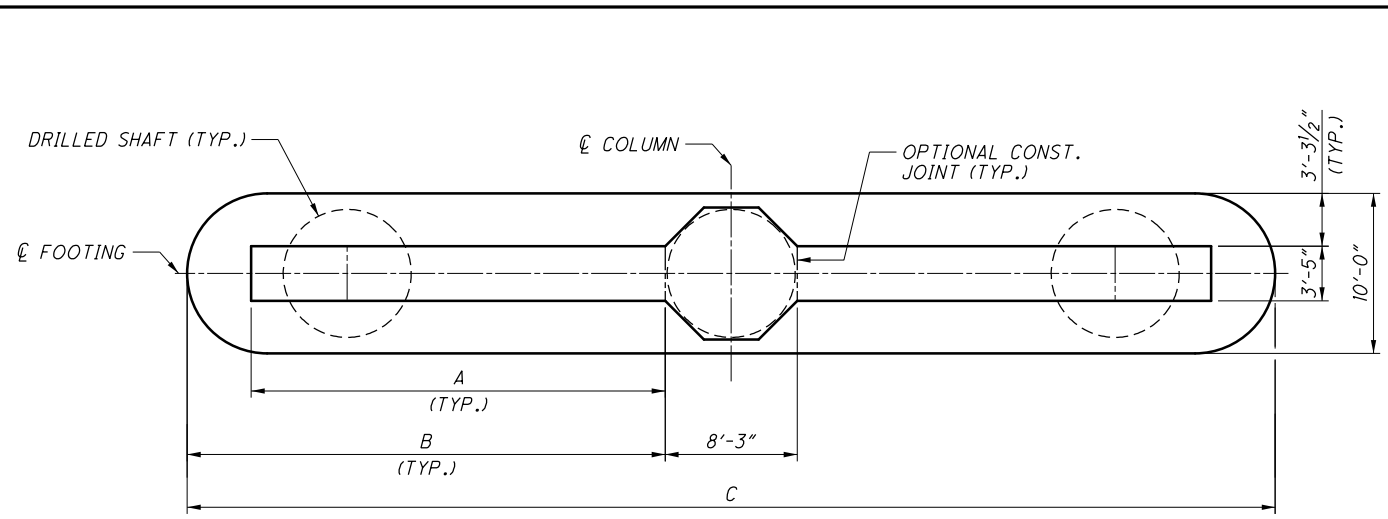
FRA-71-14.36
 PID No. 105588

67/276

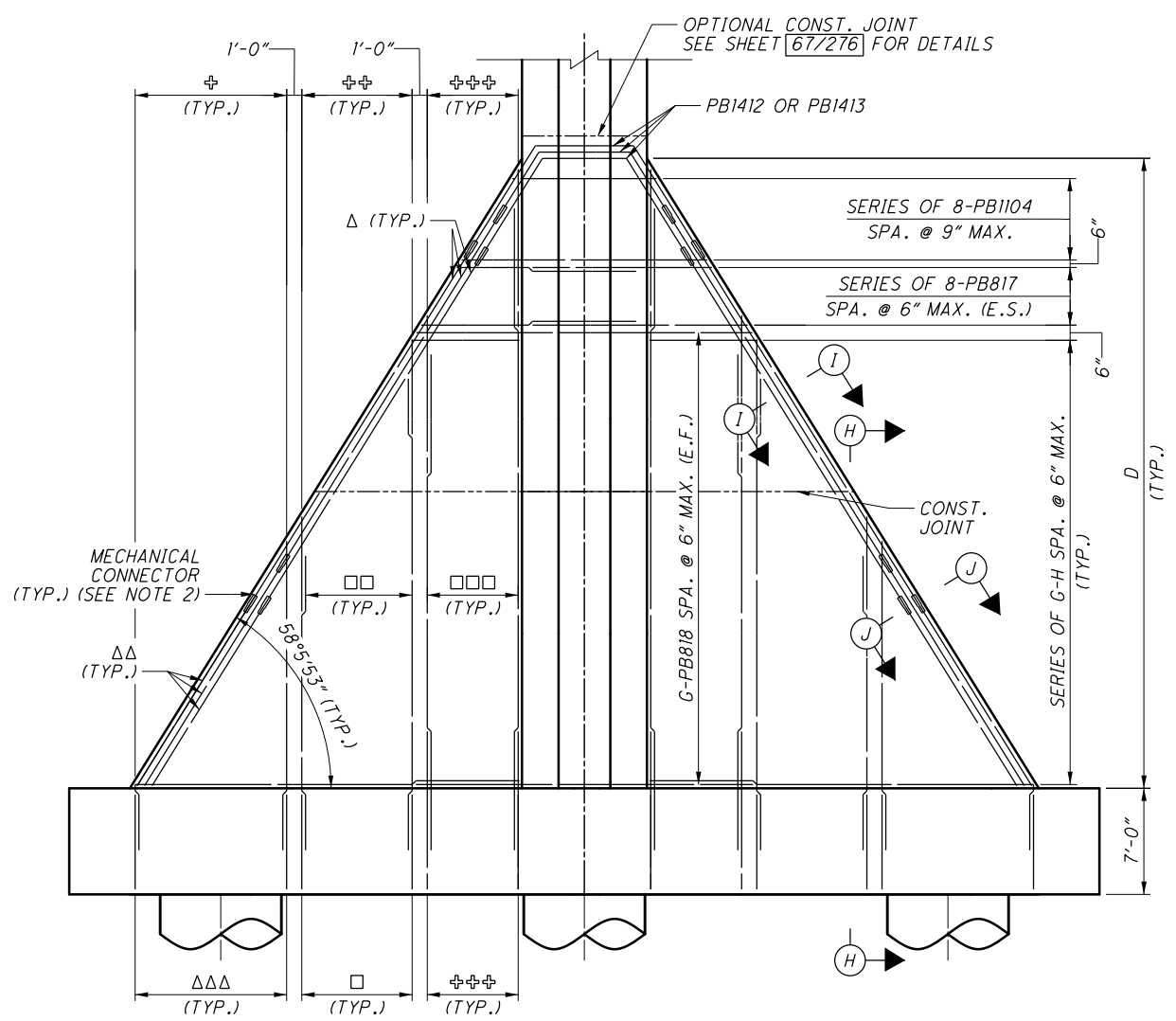
NO.	DESCRIPTION	REV. BY	DATE
4	ADDED OPTIONAL CONSTRUCTION JOINT	DBL	11/23/21

988
 1228

ms consultants, inc.



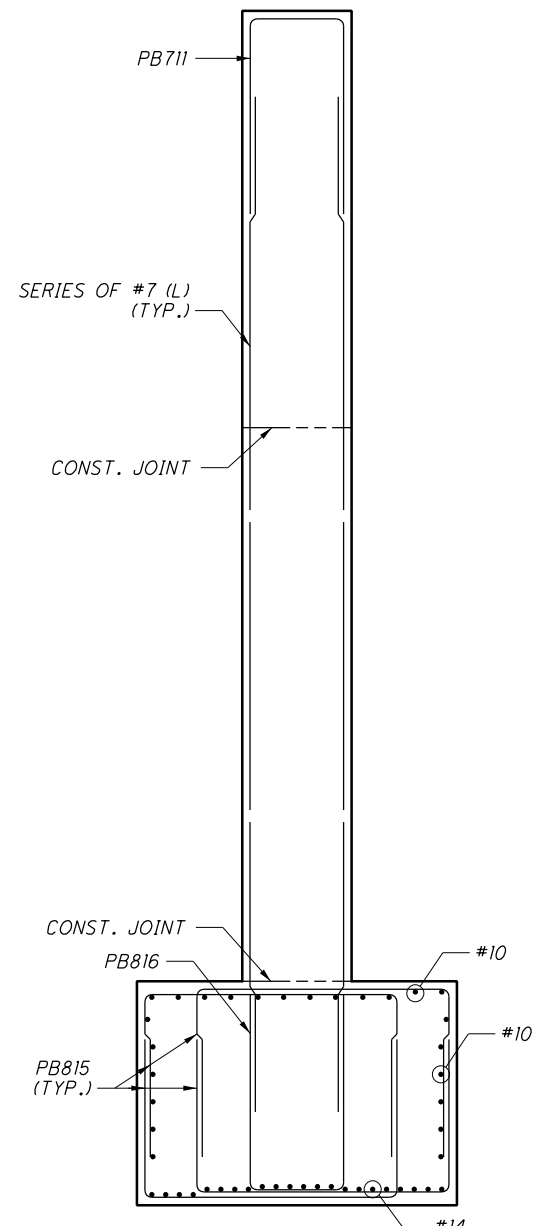
BOTTOM PLAN
TOP PORTION OF PIER NOT SHOWN



BOTTOM WINGS ELEVATION

COLUMN AND FOOTING REINFORCEMENT, TOP PORTION OF PIER AND DRILLED SHAFTS NOT SHOWN

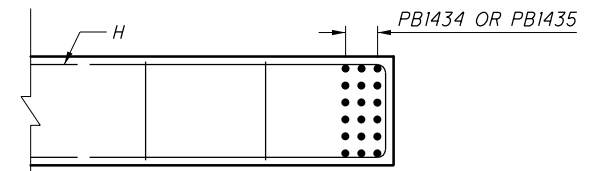
NO.	DESCRIPTION	REV. BY	DATE
4	ADDED OPTIONAL CONSTRUCTION JOINT	DBL	11/23/21



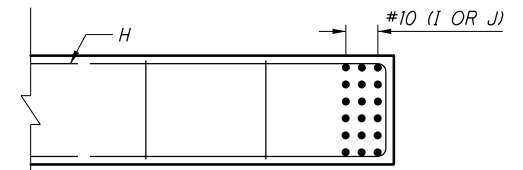
SECTION H-H

	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14
A	25' 10-1/2"	26' 9-3/8"	27' 7-7/8"	28' 6-1/8"	29' 7/8"
B	29' 10-1/2"	30' 9-3/8"	31' 7-7/8"	32' 6-1/8"	33' 7/8"
C	68' 0"	69' 9-3/4"	71' 6-7/8"	73' 3-1/8"	74' 4-3/4"
D	41' 6-3/4"	43' 3/8"	44' 5-1/4"	45' 9-1/2"	46' 8-1/2"
E	10	11	13	14	15
F	PB1022	PB1023	PB1024	PB1025	PB1026
G	60	63	66	68	70
H	PB819	PB820	PB821	PB822	PB823
I	PB1027	PB1029	PB1031	PB1033	PB1035
J	PB1028	PB1030	PB1032	PB1034	PB1036
K	PB712	PB713	PB714	PB715	PB716
L	PB717	PB718	PB719	PB720	PB721

MIN. REBAR LAP	
#7	= 3'-8"
#8 VERT.	= 4'-11"
#8 HORIZ.	= 6'-10"
#10	= 7'-10"



SECTION I-I



SECTION J-J

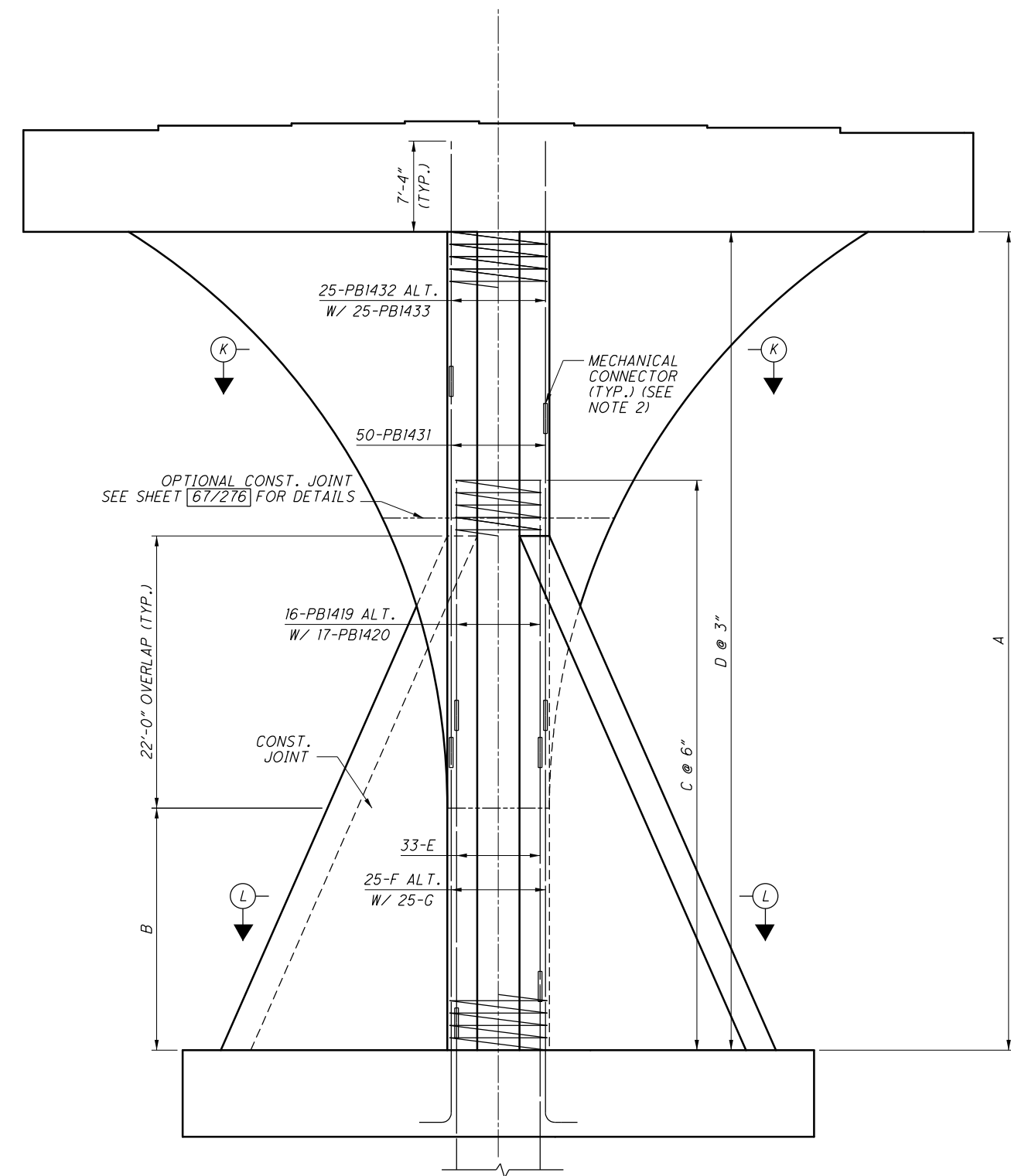
LEGEND:

- Δ 3-PBI434 ALT. W/ 3-PBI435
- ΔΔ 3-1 ALT. W/ 3-J
- ΔΔΔ 21-PB816 SPA. @ 6"
- ⊕ SERIES OF 21-K SPA. @ 6"
- ⊕⊕ 9-PB711 SPA. @ 12" MAX.
- ⊕⊕⊕ E SETS OF 2-PB1021 SPA. @ 8" MAX.
- 9-PB816 SPA. @ 12" MAX.
- SERIES OF 9-L SPA. @ 12" MAX. (E.F.)
- SERIES OF E SETS OF 2-F SPA. @ 8" MAX. (E.F.)

NOTES:

1. FOR FOOTING DETAILS, SEE SHEETS 68/276 THRU 70/276.
2. MECHANICAL CONNECTORS TO BE STAGGERED AT 3'-0" IN ALL DIRECTIONS IN ORDER TO OBTAIN AMPLE SPACE TO MAKE THE CONNECTION. MECHANICAL CONNECTORS SHALL BE INCIDENTAL TO ITEM 509 - EPOXY COATED REINFORCING STEEL.





COLUMN ELEVATION
PIER 10 SHOWN
LOOKING UPSTATION
DRILLED SHAFTS AND ALL OTHER REINFORCEMENT NOT SHOWN

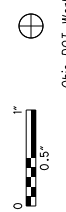
	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14
A	66' 1-3/4"	67' 7-1/4"	69' 1/8"	70' 4-1/2"	71' 3-3/8"
B	19' 6-3/4"	21' 3/8"	22' 5-1/4"	23' 9-1/2"	24' 8-1/2"
C	SPB401	SPB402	SPB403	SPB404	SPB405
D	SPB501	SPB502	SPB503	SPB504	SPB505
E	PB1414	PB1415	PB1416	PB1417	PB1418
F	PB1421	PB1423	PB1425	PB1427	PB1429
G	PB1422	PB1424	PB1426	PB1428	PB1430

- NOTES:**
- FOR SECTIONS K-K AND L-L, SEE SHEET 73/276.
 - MECHANICAL CONNECTORS TO BE STAGGERED AT 3'-0" IN ALL DIRECTIONS IN ORDER TO OBTAIN AMPLE SPACE TO MAKE THE CONNECTION. MECHANICAL CONNECTORS SHALL BE INCIDENTAL TO ITEM 509 - EPOXY COATED REINFORCING STEEL.

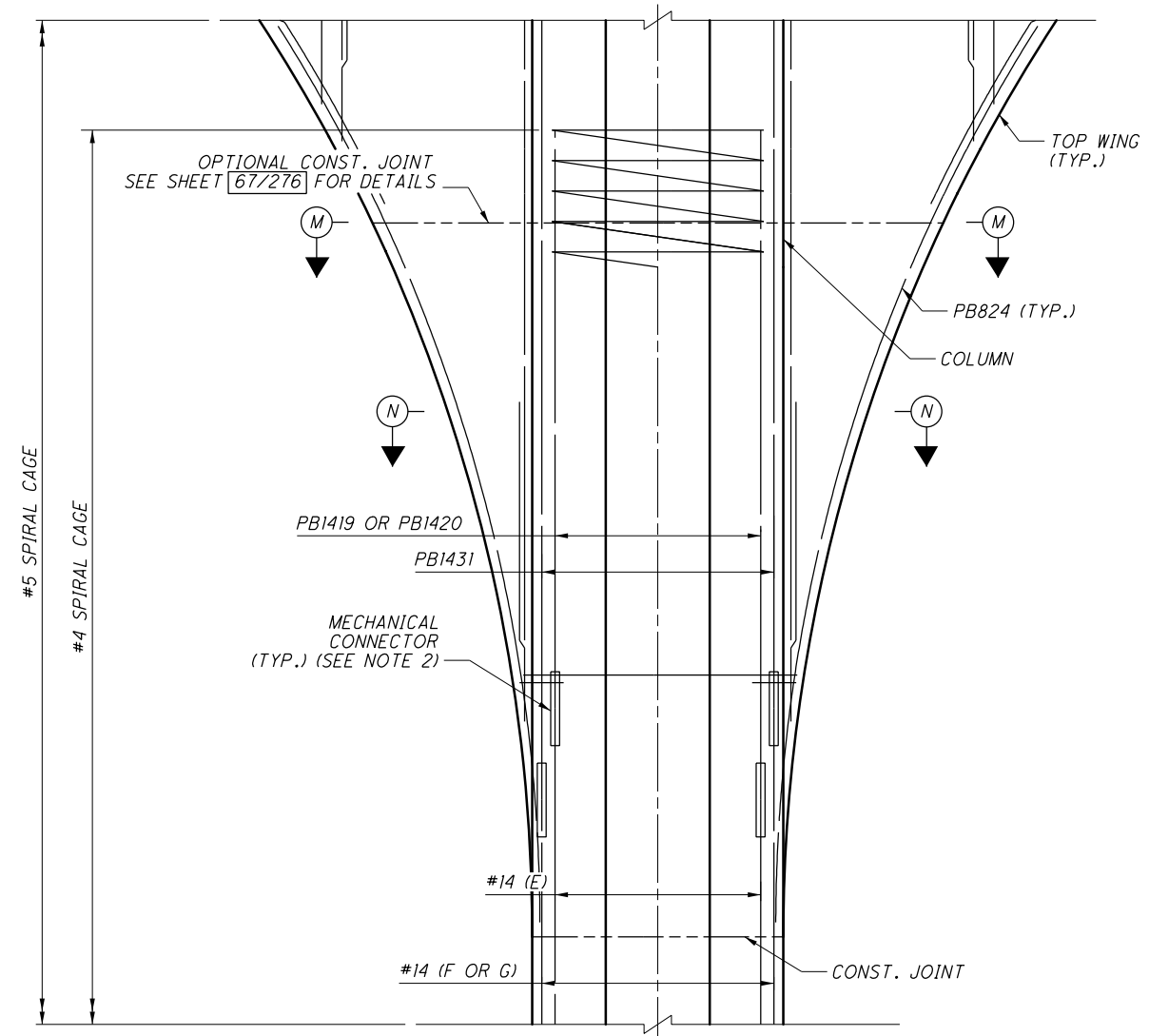
NO.	DESCRIPTION	REV. BY	DATE
4	ADDED OPTIONAL CONSTRUCTION JOINT	DBL	11/23/21

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 Ohio DOT Workspace
 70171 West Interchange 6R
 www.msconsultants.com

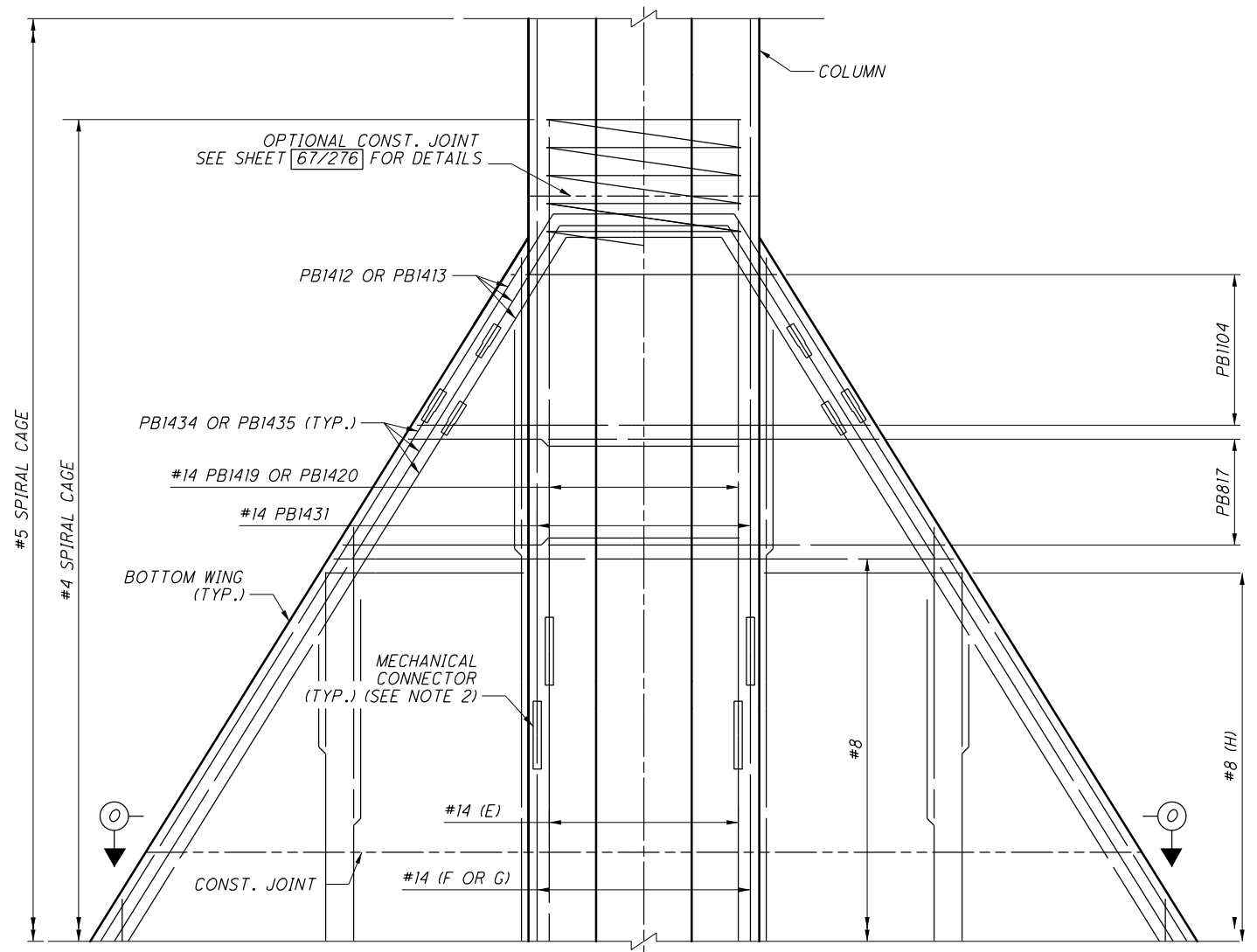
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 View: SHEET
 By: Bl ester



34" x 22"



TOP WING INTERSECTION DETAIL
 LOOKING UPSTATION
 BOTTOM WING NOT SHOWN



BOTTOM WING INTERSECTION DETAIL
 FACING BOTTOM WINGS
 TOP WING NOT SHOWN

NO.	DESCRIPTION	REV. BY	DATE
4	ADDED OPTIONAL CONSTRUCTION JOINT	DBL	11/23/21

- NOTES:**
- FOR LOCATION OF INTERSECTION DETAILS, SEE SHEET 67/276.
 - FOR SECTIONS M-M THRU O-O, SEE SHEET 75/276.
 - MECHANICAL CONNECTORS TO BE STAGGERED AT 3'-0" IN ALL DIRECTIONS IN ORDER TO OBTAIN AMPLE SPACE TO MAKE THE CONNECTION. MECHANICAL CONNECTORS SHALL BE INCIDENTAL TO ITEM 509 - EPOXY COATED REINFORCING STEEL.

DESIGN AGENCY: ms consultants, inc.
 2221 Schrock Road
 Columbus, Ohio 43229

DATE: 20-ADP
 REVIEWED: FBW
 DRAWN: ABD
 DESIGNED: AKS
 CHECKED: TGH

STRUCTURE FILE NUMBER: 2510025

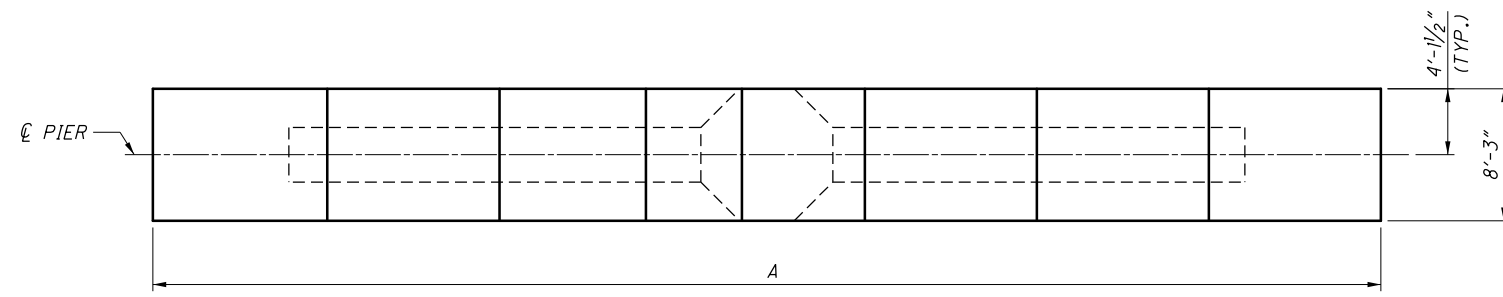
UNIT 2 - PIER 10 THRU 14 COLUMN INTERSECTION DETAILS
 BRIDGE NO. FRA-71-1503L
 I-71 SB OVER SCIOTO RIVER

FRA-71-14.36
PID No. 105588

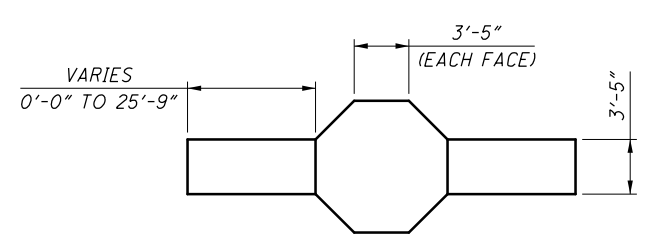
74/276

995
1228

ms consultants, inc.

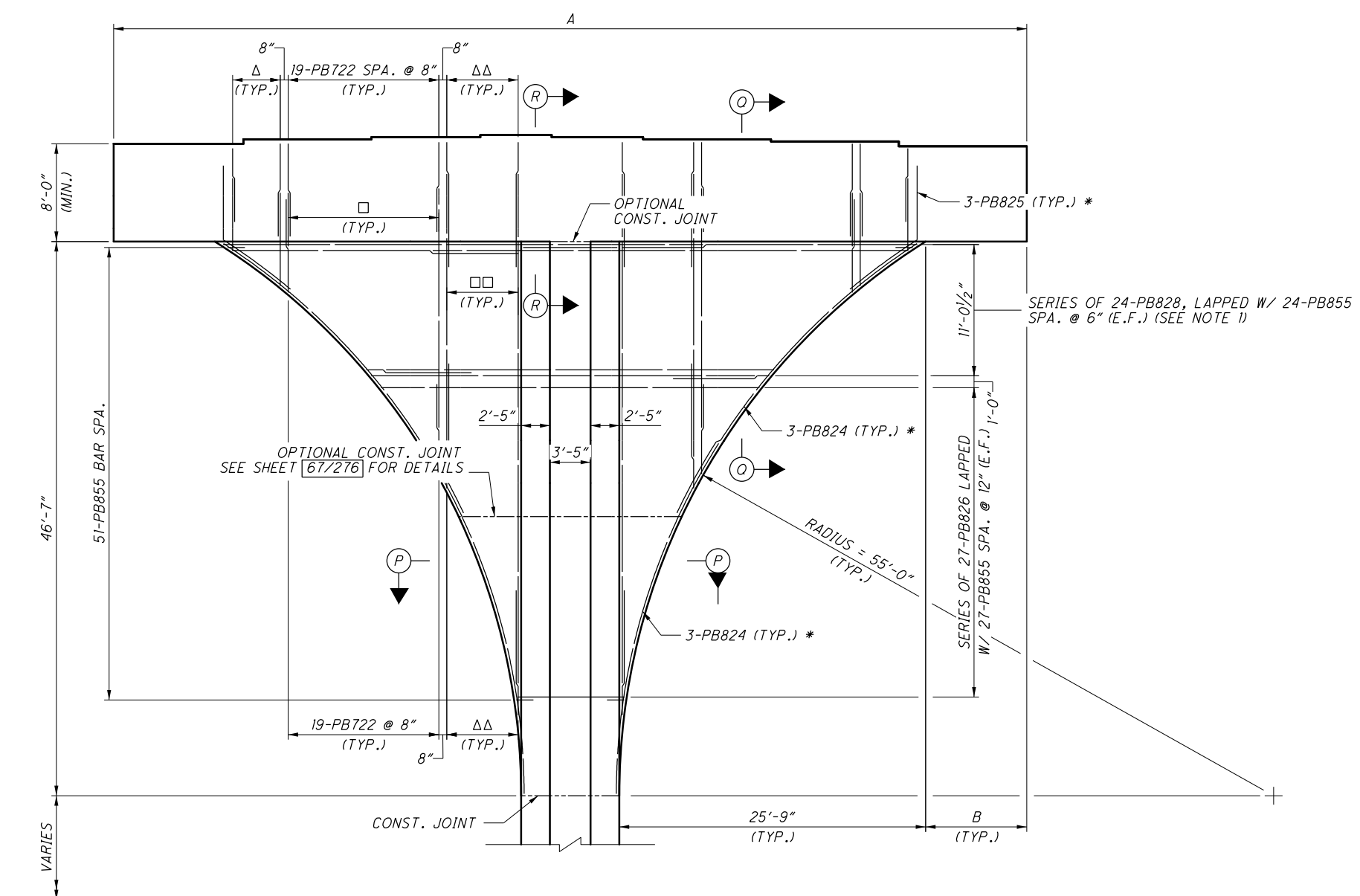


TOP PLAN
BOTTOM PORTION OF PIER NOT SHOWN



SECTION P-P

	PIER 10	PIER 11	PIER 12	PIER 13	PIER 14
A	76'-9"	66'-0"	61'-0"	59'-9"	59'-9"
B	8'-6"	3'-1 1/2"	0'-7 1/2"	0'-0"	0'-0"



TOP ELEVATION
PIER 10 SHOWN
LOOKING UPSTATION
BOTTOM PORTION OF PIER, AND CAP & COLUMN REINFORCEMENT NOT SHOWN

LEGEND:

- △ 7 SETS OF A SERIES OF PB724 SPA. @ 8" (TOP AND BOTTOM)
- △△ 13-PB1037 SPA. @ 6"
- SERIES OF 19-PB723 SPA. @ 8" (E.F.)
- SERIES OF 13-PB1038 SPA. @ 6" (E.F.)

MIN. REBAR LAP	
#7	= 3'-8"
#8	= 6'-10"
* #8	= 4'-11"
#10	= 7'-10"

NOTES:

1. SPLICE LOCATION TO ALTERNATE IN ALL DIRECTIONS.
2. FOR SECTIONS Q-Q AND R-R, SEE SHEET [79/276].

NO.	DESCRIPTION	REV. BY	DATE
3	UPDATED REBAR CALLOUTS	DBL	11/17/21
4	ADDED OPTIONAL CONSTRUCTION JOINT	DBL	11/23/21

070_1373BE0001.dgn Sheet 11/23/2021 9:40:35 AM 89464_Half_BW.pltcf 89464_Pen_BW.tbl PDF-XChange Standard mpierce

PARTICIPATION					ESTIMATED QUANTITIES					
09/NHS/BR	ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
3	203	35110	3	CY	GRANULAR MATERIAL, TYPE B				3	
	505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION				LS	
855	507	00100	855	FT	STEEL PILES HPI0X42, FURNISHED	855				
810	507	00150	810	FT	STEEL PILES HPI0X42, DRIVEN	810				
9	507	93300	9	EACH	STEEL POINTS OR SHOES	9				
133381	509	10001	133381	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	16880	5927	98338	12236	
309	511	34446	309	CY	CLASS QC2 CONCRETE WITH QC/OA, BRIDGE DECK			309		
98	511	34450	98	CY	CLASS QC2 CONCRETE WITH QC/OA, BRIDGE DECK (PARAPET)			98		
168	511	41012	168	CY	CLASS QC1 CONCRETE WITH QC/OA, PIER ABOVE FOOTINGS		31		137	
171	511	43512	171	CY	CLASS QC1 CONCRETE WITH QC/OA, ABUTMENT INCLUDING FOOTING	171				
116	512	10001	116	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)				116	
1383	512	10100	1383	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	174	96	695	418	
27	512	33000	27	SY	TYPE 2 WATERPROOFING	27				
361373	513	10300	361373	LB	STRUCTURAL STEEL MEMBERS, LEVEL 5			361373		
3135	513	20000	3135	EACH	WELDED STUD SHEAR CONNECTORS			3135		
5704	514	00060	5704	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			5704		
5704	514	00067	5704	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN			5704	4/33	
75	516	10010	75	FT	ARMORLESS PREFORMED JOINT SEAL			75		
75	516	11210	75	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			75		
160	516	13900	160	SF	2" PREFORMED EXPANSION JOINT FILLER	82			78	
88	516	25000	88	SF	NYLON REINFORCED NEOPRENE SHEETING	88				
1	516	44100	1	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-4" x 5/8" x 1'-7" PAD WITH 1'-5" x 2" x 2'-1" STEEL LOAD PLATE)	1				
3	516	44100	3	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-4" x 5/8" x 1'-7" PAD WITH 1'-5" x 2" x 1'-9" STEEL LOAD PLATE)	3				
1	516	44101	1	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-4" x 5/8" x 1'-7" PAD WITH 1'-5" x 2 3/8" x 2'-1" BEVELED STEEL LOAD PLATE), AS PER PLAN	1				4/33
3	516	44101	3	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (1'-4" x 5/8" x 1'-7" PAD WITH 1'-5" x 2 3/8" x 1'-9" BEVELED STEEL LOAD PLATE), AS PER PLAN	3				4/33
1	516	44101	1	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (2'-0 1/2" x 5 3/8" x 2'-0 1/2" PAD WITH 2'-1 1/2" x 2 1/4" x 3'-0" BEVELED STEEL LOAD PLATE), AS PER PLAN		1			4/33
3	516	44101	3	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (2'-0 1/2" x 5 3/8" x 2'-0 1/2" PAD WITH 2'-1 1/2" x 2 1/4" x 2'-8" BEVELED STEEL LOAD PLATE), AS PER PLAN		3			4/33
1	518	12000	1	EACH	SCUPPERS, INCLUDING SUPPORTS			1		
20	518	21200	20	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	20				
75	518	40000	75	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	75				
25	518	40010	25	FT	6" NON-PERFORATED CORRUGATED PLASTIC PIPE, INCLUDING SPECIALS	25				
52	518	51200	52	FT	10" PIPE DOWNSPOUT, INCLUDING SPECIALS		52			
108	524	94700	108	FT	DRILLED SHAFTS, 36" DIAMETER				108	
156	524	94704	156	FT	DRILLED SHAFTS, 36" DIAMETER, INTO BEDROCK	81	75			
372	524	94802	372	FT	DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK	192	180			
249	526	30000	249	SY	REINFORCED CONCRETE APPROACH SLABS (T=17")				249	
75	526	90030	75	FT	TYPE C INSTALLATION				75	
38	605	14000	38	FT	6" BASE PIPE UNDERDRAINS*				38	
205	607	39901	205	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN				205	4/33

* QUANTITY CARRIED TO ROADWAY GENERAL SUMMARY

ABBREVIATIONS

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS:

& = AND @ = AT ° = DEGREES ' = FEET OR MINUTES " = INCHES OR SECONDS ± = PLUS OR MINUS AASHTO = AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS ABUT. = ABUTMENT ADT = AVERAGE DAILY TRAFFIC ADTT = AVERAGE DAILY TRUCK TRAFFIC A.P.P. = AS PER PLAN APPR. = APPROACH APPROX. = APPROXIMATE ASTM = AMERICAN SOCIETY OF TESTING AND MATERIALS BM = BENCHMARK BOT. = BOTTOM BOT./FTG. = BOTTOM OF FOOTING BRGS. = BEARINGS B/W = BETWEEN C = CENTERLINE C/C = CENTER TO CENTER CFS = CUBIC FEET PER SECOND CJ = CONSTRUCTION JOINT CLR. = CLEAR CMP = CORRUGATED METAL PIPE CMS = CONSTRUCTION AND MATERIAL SPECIFICATIONS CONSTR./CONST. = CONSTRUCTION CON'T = CONTINUED COL. = COLUMN C.R./CR = COUNTY ROAD CU = CUBIC CVN = CHARPY V-NOTCH DEF.L. = DEFLECTION φ/DIA. = DIAMETER DIM. = DIMENSION DL = DEAD LOAD DWG. = DRAWING E = EAST EA. = EACH EF = EACH FACE EL./ELEV. = ELEVATION	EMBED. = EMBEDMENT EQ. = EQUAL EX./EXIST. = EXISTING EXP. = EXPANSION EXT. = EXTENSION F = FAHRENHEIT FF = FAR FACE F/F = FACE TO FACE FS = FIELD SPLICE FT. = FEET FT/FT. = FOOT/FOOT FT/S = FEET PER SECOND FTG. = FOOTING FWD. = FORWARD FWS = FUTURE WEARING SURFACE GEN. = GENERAL HR = HOUR HW = HIGH WATER IN. = INCHES INT. = INTERMEDIATE JT. = JOINT LF = LEFT FORWARD LONG. = LONGITUDINAL LT. = LEFT MAX. = MAXIMUM MIN. = MINIMUM MISC. = MISCELLANEOUS N = NORTH NF = NEAR FACE NPCPP = NON-PERFORATED CORRUGATED PLASTIC PIPE #/NO. = NUMBER OHWM = ORDINARY HIGH WATER MARK OUT/OUT = OUT TO OUT PEJF = PREFORMED EXPANSION JOINT FILLER SHLDR. = SHOULDER SPA. = SPACING SQ = SQUARE	PCPP = PERFORATED CORRUGATED PLASTIC PIPE P/PL = PLATE PSF = POUND PER SQUARE FOOT PSI = POUND PER SQUARE INCH PT. = POINT PVI = POINT OF VERTICAL INTERSECTION O = FLOW R = RADIUS REF. = REFERENCE REINF. = REINFORCED REQ'D. = REQUIRED RF = RIGHT FORWARD RT. = RIGHT STA. = STATION STD. = STANDARD STR. = STRAIGHT SUPER = SUPERSTRUCTURE T = THICKNESS TELE = TELEPHONE TRANS. = TRANSVERSE TWP. = TOWNSHIP TYP. = TYPICAL UBV = ULTIMATE BEARING VALUE V = VELOCITY V.C. = VERTICAL CURVE VERT. = VERTICAL W = WEST W/O = WITH W/O = WITHOUT W.P. = WORKING POINT WT. = WEIGHT YD = YARD
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NO.	DESCRIPTION	REV. BY	DATE
3	GFRP PAYMENT MOVED TO ITEM 509	DGS	11/17/21
4	PARTICIPATION CODE	DGS	11/23/21

DESIGN AGENCY
ch2m
 2 Easton Oval, Suite 500
 Columbus, Ohio 43219

DATE
 05/15

REVIEWED VS
 STRUCTURE FILE NUMBER
 2510030

DRAWN JBA
 REVISIONS

DESIGNED DGS
 CHECKED JTC

ESTIMATED QUANTITIES
 BRIDGE NO. FRA-070-1373B
 RAMP D7 OVER SHORT STREET

FRA-71-14.36
 PID No. 105588

5 / 33

1200
 1228