PLOTTED: 10/28/2013 3:07:10 PM

City of Dublin

# EMERALD PARKWAY - PHASE 8

## RIVERSIDE DRIVE TO BILLINGSLEY CREEK

## 07-008-CIP

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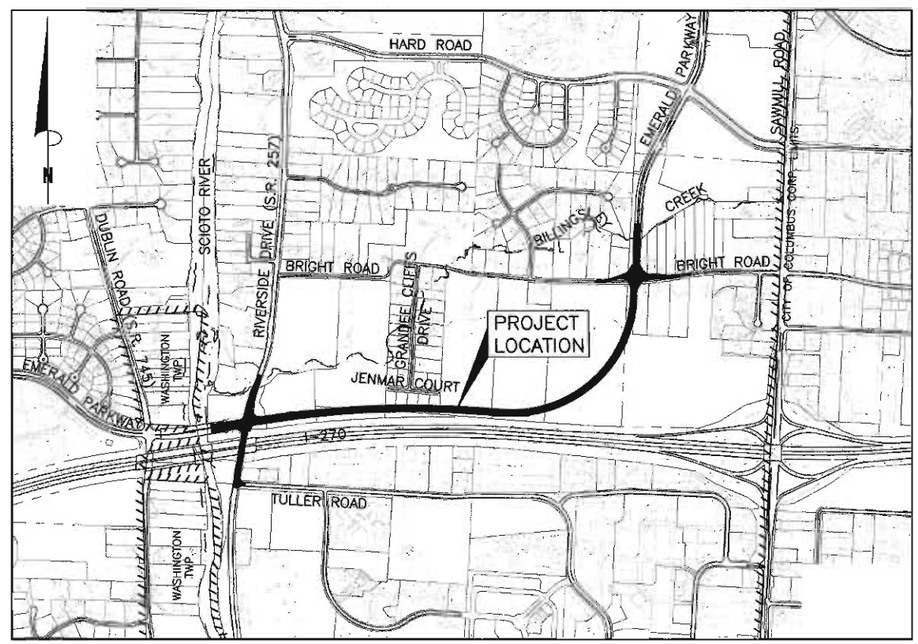
| | DESIGN SPEED | POSTED SPEED |
|---|---|---|
| EMERALD PARKWAY | 45 MPH | 40 MPH |
| BRIGHT ROAD | 35 MPH | 25 MPH |
| RIVERSIDE DRIVE | 45 MPH | 40 MPH |




LOCATION MAP

0 800 1600

SCALE: 1" = 800'

OCTOBER 2013

BURGESS & NIPLE

JAMES E. DIPPEL, P.E. 10/29/13 P.E. NO. 52444

STATE OF OHIO JAMES E. DIPPEL E-52444 REGISTERED PROFESSIONAL ENGINEER

SIGNATURES BELOW SIGNIFY CONCURRENCE WITH THE GENERAL PURPOSES AND GENERAL LOCATION OF THE PROJECT ONLY AND DO NOT CONSTITUTE ASSURANCE TO OPERATE AS INTENDED. ALL TECHNICAL DETAILS REMAIN THE RESPONSIBILITY OF THE PROFESSIONAL CIVIL ENGINEER PREPARING THE PLANS.

CITY OF DUBLIN

APPROVED:

CITY ENGINEER, CITY OF DUBLIN, OHIO — 10-29-2013 DATE

CITY OF COLUMBUS

APPROVAL ON THE PART OF THE CITY OF COLUMBUS IS GIVEN PURSUANT TO THE PROVISIONS OF THE WATER SERVICE AGREEMENT MADE BETWEEN THE CITY OF DUBLIN AND THE CITY OF COLUMBUS, OHIO, ON APRIL 13, 1993 AND ALL SUBSEQUENT AMENDMENTS THEREOF.

APPROVAL ON THE PART OF THE CITY OF COLUMBUS IS GIVEN PURSUANT TO THE PROVISIONS OF THE SEWER AGREEMENT MADE BETWEEN THE CITY OF DUBLIN AND THE CITY OF COLUMBUS, OHIO, ON APRIL 13, 1993 ORD. #2692-92 AND ALL SUBSEQUENT AMENDMENTS THEREOF.

ADMINISTRATOR, DIVISION OF WATER
CITY OF COLUMBUS, OHIO — DATE

ADMINISTRATOR, DIVISION OF SEWERAGE & DRAINAGE
CITY OF COLUMBUS, OHIO — DATE

DIRECTOR, DEPARTMENT OF PUBLIC UTILITIES
CITY OF COLUMBUS, OHIO — DATE

THIS SANITARY SEWER DESIGN MEETS OR EXCEEDS THE CITY OF COLUMBUS DESIGN STANDARDS (INCLUDING PER CAPITA FLOW, PEAKING FACTOR, AND I/I ALLOWANCE) AND MATERIAL SPECIFICATIONS.

DUBLIN CC-15711

PM-737/8

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## LEGEND

- PROPOSED CURB AND GUTTER
- PROPOSED WALK/BIKEPATH
- FULL DEPTH REMOVAL AND DISPOSAL OF CURB, CURB AND GUTTER, PAVEMENT, WALK, OR PAVERS
- PAVEMENT PLANING AND RESURFACING
- PROPOSED BRICK PAVERS
- A — ADJUST EXISTING VALVE BOX OR SERVICE BOX TO GRADE
- 12"W — PROPOSED WATER MAIN, FIRE HYDRANT AND WATER VALVE
- 12"STM — PROPOSED STORM SEWER AND MANHOLE
- PROPOSED CURB & GUTTER INLET, CATCH BASIN, AND INLINE DRAIN
- PROPOSED FLARED END SECTION
- PROPOSED DITCH FLOW DIRECTION
- 12"SAN — PROPOSED SANITARY SEWER AND MANHOLE
- 5+00 — PROPOSED UTILITY DUCT/BASELINE
- PROPOSED ELECTRIC MANHOLE (AEP)
- PROPOSED ELECTRIC POLE
- 2+00 — BASELINE/REFERENCE LINE
- EX-R/W — EXISTING RIGHT-OF-WAY LINE
- R/W — PROPOSED RIGHT-OF-WAY LINE
- TEMP. ESMT. — TEMPORARY CONSTRUCTION AND GRADING EASEMENT
- PERM. ESMT. — PROPOSED GENERAL UTILITY EASEMENT
- PL — PROPERTY LINE
- MON — MONUMENT FOUND
- IRON PIN FOUND, SET
- PK/MAG NAIL FOUND, SET
- HUB FOUND, SET
- RAILROAD SPIKE FOUND
- EXISTING EASEMENT
- EXISTING EDGE OF PAVEMENT
- EXISTING CURB AND GUTTER
- X — EXISTING FENCE
- EXISTING GUARDRAIL
- EXISTING DITCH OR SWALE
- EXISTING WALK OR BIKEPATH
- B-1 — TEST BORING
- SIGN, STREET SIGN
- MAILBOX
- BOLLARD
- GROUND LIGHT
- ROCK
- 12" / 12" — DECIDUOUS TREE, EVERGREEN TREE (SIZE INDICATES APPROXIMATE DRIP LINE, 6" AND ABOVE)
- TREE TO BE REMOVED
- HEDGE, BUSH
- STUMP
- 12"STM — EXISTING STORM SEWER, MANHOLE, AND CATCH BASIN
- RD — EXISTING ROOF DRAIN
- 12"SAN — EXISTING SANITARY SEWER AND MANHOLE,
- W 8"W W — EXISTING WATER MAIN, FIRE HYDRANT, AND VALVE
- W WS W — EXISTING WATER SERVICE
- SH SCB — EXISTING SPRINKLER HEAD AND SPRINKLER CONTROL BOX
- G 6"G GT G — EXISTING GAS MAIN, VALVE, AND TEST STATION
- GS — EXISTING GAS SERVICE
- UGE — EXISTING UNDERGROUND ELECTRIC, MANHOLE, AND PULL BOX/PEDESTAL
- UGT — EXISTING UNDERGROUND TELEPHONE, MANHOLE, AND PULL BOX/PEDESTAL
- CATV CTV — EXISTING UNDERGROUND CABLE TV, MANHOLE, AND PEDESTAL
- FO DUBLINK — EXISTING UNDERGROUND FIBER OPTIC OR DUBLINK
- G T FO — EXISTING GAS, TELEPHONE, AND FIBER OPTIC MARKERS
- ELEC. TELE. CATV CABLE — EXISTING UTILITY POLES
- EXISTING LIGHT POLE, LAMP POST
- EXISTING MISCELLANEOUS POLE
- EXISTING GUY WIRE
- TS — EXISTING TRAFFIC SIGNAL POLE AND PULL BOX
- TRAF — EXISTING TRAFFIC PULL BOX AND CONDUIT
- EX. LOOP — EXISTING TRAFFIC LOOP DETECTOR
- 925 — EXISTING INDEX CONTOUR
- 924 — EXISTING INTERMEDIATE CONTOUR
- 925 — PROPOSED CONTOUR

## STANDARD DRAWING LIST

THE STANDARD DRAWINGS LISTED BELOW SHALL BE CONSIDERED A PART OF THESE PLANS.

| CITY OF DUBLIN | CITY OF COLUMBUS | | O.D.O.T. |
|---|---|---|---|
| PD-01 | AA-S102 | L-1003 | BP-3.1 |
| PD-02 | AA-S104 | L-1004 | CB-1.2 |
| PD-03 | AA-S106 | L-6306 | CB-1.3 |
| PD-05 | AA-S107 | L-6309A | CB-2.1 |
| RD-03 | AA-S111 | L-6309B | TC-41.20 |
| RD-07 | AA-S114 | L-6309E | TC-41.30 |
| SA-01 | AA-S112 | L-6310 | TC-42.20 |
| SA-02 | AA-S117 | L-6311 | TC-85.20 |
| ST-01 | AA-S119 | L-6312 | MH-1.2 |
| ST-02 | AA-S125A | L-6316 | MT-101.60 |
| ST-03 | AA-S128 | L-6409 | MT-101.90 |
| ST-04 | AA-S133A | L-6637 | RM-5.2 |
| ST-05 | AA-S141 | L-6640 | |
| WA-01 | AA-S149 | L-7001 | |
| | AA-S150 | L-7401 | |
| | AA-S151 | L-7601 | |
| | AA-S167 | L-7102A | |
| | | L-7102B | |
| | | L-8502 | |
| | | L-9901 | |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**LEGEND AND STANDARD DRAWING LIST**

SCALE: NONE

SHEET NO. 2 OF 275

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## GENERAL

CITY OF COLUMBUS AND OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, CURRENT EDITIONS, AND ANY SUPPLEMENTS THERETO (HEREAFTER REFERRED TO AS STANDARD SPECIFICATIONS), SHALL GOVERN ALL CONSTRUCTION ITEMS UNLESS OTHERWISE NOTED.

THE CONTRACTOR INTENDING TO SUBMIT A BID FOR CITY OF DUBLIN CAPITAL IMPROVEMENT CONTRACTS SHALL BE PREQUALIFIED WITH THE OHIO DEPARTMENT OF TRANSPORTATION IN ACCORDANCE WITH SECTION 102 OF THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS, AND CHAPTER 5525 OF THE OHIO REVISED CODE CONCERNING CONSTRUCTION CONTRACTS.

ALL ITEMS OF WORK CALLED FOR ON THE PLANS FOR WHICH NO SPECIFIC METHOD OF PAYMENT IS PROVIDED SHALL BE PERFORMED BY THE CONTRACTOR WITH THE COST TO BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS RELATED ITEMS.

IT IS THE INTENTION OF THE CONTRACT DOCUMENTS TO PROVIDE AND REQUIRE A COMPLETED PROJECT READY FOR OPERATION. ANY WORK ITEMS OMITTED FROM THE CONTRACT DOCUMENTS WHICH ARE CLEARLY NECESSARY FOR COMPLETION OF THE WORK AND ITS APPURTENANCES SHALL BE CONSIDERED A PART OF SUCH WORK, THOUGH NOT DIRECTLY SPECIFIED OR CALLED FOR IN THE CONTRACT DOCUMENTS. THIS INCLUDES, BUT IS NOT LIMITED TO, SUCH INCIDENTAL ITEMS AS RELOCATION OF MAIL BOXES, SAW CUTTING, AND REMOVAL AND/OR RELOCATION OF SIGNS, SPRINKLERS, OR OTHER MISCELLANEOUS ITEMS.

THE CITY ENGINEER IS NOT RESPONSIBLE FOR MEANS, METHODS, PROCEDURES, TECHNIQUES, OR SEQUENCES OF CONSTRUCTION THAT ARE NOT SPECIFIED HEREIN. THE CITY ENGINEER IS NOT RESPONSIBLE FOR SAFETY ON THE WORK SITE, OR FOR FAILURE BY THE CONTRACTOR TO PERFORM WORK ACCORDING TO THE CONTRACT DOCUMENTS.

THE CONTRACTOR SHALL NOTIFY THE CITY OF DUBLIN DIVISION OF ENGINEERING AT LEAST 3 WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION.

THE CITY IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR COMPLYING WITH ALL FEDERAL, STATE AND LOCAL SAFETY REQUIREMENTS INCLUDING THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970. THE CONTRACTOR SHALL EXERCISE CAUTION ALWAYS FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT SHALL ALSO BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO INITIATE, MAINTAIN, AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS, AND PROGRAMS IN CONNECTION WITH THE WORK, INCLUDING THE REQUIREMENTS FOR CONFINED SPACES PER 29 CFR 1910.146.

ANY MODIFICATIONS TO THE WORK AS SHOWN ON THESE APPROVED PLANS SHALL HAVE PRIOR WRITTEN APPROVAL OF THE CITY ENGINEER.

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE CITY ENGINEER.

FOLLOWING COMPLETION OF CONSTRUCTION, A PROOF SURVEY SHALL BE PROVIDED BY THE CONTRACTOR THAT DOCUMENTS AS-BUILT INFORMATION ON ALL PUBLIC UTILITIES (SANITARY, STORM, WATER) COMPLETED AS PART OF THIS PROJECT. THE SURVEY SHALL BE PREPARED AND SIGNED BY AN OHIO PROFESSIONAL SURVEYOR. THE CONTRACTOR SHALL REVISE THE ORIGINAL MYLARS IN RED INK, TO THE SATISFACTION OF THE CITY, SHOWING ALL CHANGES IN THE WORK. THE COST OF THE PROOF SURVEY, INCLUDING MYLAR REVISIONS, WILL BE PAID AT THE LUMP SUM PRICE BID FOR ITEM SPECIAL, PROOF SURVEY.

THE CONTRACTOR SHALL RESTRICT CONSTRUCTION ACTIVITY TO PUBLIC RIGHT-OF-WAY, AREAS DEFINED AS PERMANENT AND/OR TEMPORARY CONSTRUCTION EASEMENTS, AND/OR THE LIMITS OF DISTURBANCE SHOWN.

TEMPORARY EASEMENTS ARE INTENDED FOR USE BY THE CONTRACTOR FOR CONSTRUCTION AND GRADING PURPOSES ONLY. THE CONTRACTOR SHALL NOT USE RIGHTS-OF-WAY OR TEMPORARY EASEMENTS FOR STORAGE OF EQUIPMENT OR MATERIALS UNLESS THE ADJACENT PROPERTY OWNER(S) AGREES TO SUCH USE AND THE CONTRACTOR HAS OBTAINED WRITTEN APPROVAL FROM THE CITY. COMPLIANCE WITH THIS REQUIREMENT ALONG WITH ADDITIONAL PROVISIONS OF THE CONTRACT SPECIFICATIONS SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS LEGAL RESPONSIBILITIES OR LIABILITIES FOR THE SAFETY OF THE PUBLIC. THE CONTRACTOR SHALL INFORM THE CITY OF ANY PLAN FOR ON-SITE STORAGE OF EQUIPMENT AND MATERIALS AT THE PRECONSTRUCTION MEETING.

PROPERTY BOUNDARIES, INCLUDING PROPERTY LINES AND ROAD RIGHTS-OF-WAY, ARE SHOWN FROM THE BEST INFORMATION AVAILABLE AND ARE NOT NECESSARILY COMPLETE OR CORRECT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING THE FINISHED WORK CONFORM TO THE LINES, GRADES, ELEVATIONS, AND DIMENSIONS CALLED FOR ON THE DRAWINGS AND TYPICAL SECTIONS. PAYMENT FOR CONSTRUCTION LAYOUT SHALL BE MADE AT THE LUMP SUM PRICE BID FOR ITEM 623, CONSTRUCTION LAYOUT STAKES.

THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCH MARKS, PROPERTY CORNERS, REFERENCE POINTS, STAKES, AND OTHER SURVEY REFERENCE MONUMENTS OR MARKERS. IN CASES OF DESTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORATIONS. RESETTING OF MARKERS SHALL BE PERFORMED BY AN OHIO PROFESSIONAL SURVEYOR AS APPROVED BY THE CITY ENGINEER AT THE CONTRACTOR'S EXPENSE.

SUBSURFACE INVESTIGATIONS WERE PERFORMED FOR DESIGN AND ESTIMATING PURPOSES AND ARE PROVIDED IN THE BIDDING DOCUMENTS. LOGS AND TEST DATA ARE NOT WARRANTED TO SHOW THE ACTUAL SUBSURFACE CONDITIONS. THE CONTRACTOR SHALL EXAMINE THIS INFORMATION AND OBTAIN ADDITIONAL INFORMATION AT HIS OWN EXPENSE, IF NECESSARY, IN HIS JUDGMENT.

THE CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO EQUAL OR BETTER CONDITION THAN EXISTED BEFORE CONSTRUCTION. DRAINAGE DITCHES OR WATER COURSES THAT ARE DISTURBED BY CONSTRUCTION SHALL BE RESTORED TO THE GRADES AND CROSS-SECTIONS THAT EXISTED BEFORE CONSTRUCTION.

ALL SIGNS, FENCES, LANDSCAPING, STRUCTURES, OR OTHER APPURTENANCES DISTURBED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE CITY ENGINEER. THE COST OF THIS WORK SHALL BE PAID FOR BY THE CONTRACTOR.

WHERE THE WORK REQUIRES REMOVAL OF BUSINESS SIGNS OR PRIVATE LANDSCAPING SUCH AS DECORATIVE ROCKS, CROSSTIES, FENCES, OR OTHER SALVAGEABLE AND REUSABLE ITEMS, THE CONTRACTOR SHALL COORDINATE SUCH REMOVAL WITH THE PROPERTY OWNER PRIOR TO THE START OF WORK. IF THESE ITEMS CANNOT BE REPLACED TO THEIR ORIGINAL LOCATION FOLLOWING COMPLETION OF THE WORK, THE CONTRACTOR SHALL BE OBLIGATED TO RELOCATE THESE ITEMS TO A STORAGE FACILITY OF THE OWNER'S CHOICE LOCATED ON THE SAME PROPERTY. IF THE PROPERTY OWNER DOES NOT WISH TO SALVAGE THESE ITEMS THEN THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER REMOVAL AND DISPOSAL. PUBLIC PROPERTY TO BE SALVAGED MUST BE DELIVERED BY THE CONTRACTOR TO THE MAINTENANCE FACILITY ON SHIER RINGS ROAD. THE COST FOR THIS WORK SHALL BE INCLUDED IN THE VARIOUS RELATED ITEMS OF THE CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT U.S. MAIL DELIVERY WITHIN THE PROJECT LIMITS IS NOT DISRUPTED BY CONSTRUCTION OPERATIONS. THIS RESPONSIBILITY IS LIMITED TO RELOCATION OF MAILBOXES TO A TEMPORARY LOCATION THAT WILL ALLOW THE COMPLETION OF THE WORK AND SHALL ALSO INCLUDE THE RESTORATION OF MAILBOXES TO THEIR ORIGINAL LOCATION OR APPROVED NEW LOCATION. ANY RELOCATION OF MAILBOX SERVICES MUST FIRST BE COORDINATED WITH THE U.S. POSTAL SERVICE AND AFFECTED PROPERTY OWNERS. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

BEFORE RELOCATING ANY MAILBOXES, THE CONTRACTOR SHALL CONTACT THE U.S. POSTAL SERVICE AND RELOCATE MAILBOXES ACCORDING TO POSTAL SERVICE REQUIREMENTS.

NON-RUBBER TIRED VEHICLES SHALL NOT BE MOVED ON OR ACROSS PUBLIC STREETS OR HIGHWAYS WITHOUT WRITTEN PERMISSION FROM THE CITY ENGINEER.

TRACKING OR SPILLING MUD, DIRT, OR DEBRIS UPON STREETS, RESIDENTIAL OR COMMERCIAL DRIVES, SIDEWALKS, OR BIKE PATHS IS PROHIBITED AND ANY SUCH OCCURRENCE SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. IF THE CONTRACTOR FAILS TO REMOVE THE MUD, DIRT, DEBRIS, OR SPILLAGE, THE CITY OF DUBLIN RESERVES THE RIGHT TO REMOVE THESE MATERIALS AND CLEAN AFFECTED AREAS, THE COST OF WHICH SHALL BE WITHHELD FROM MONIES THAT ARE DUE OR MAY BECOME DUE THE CONTRACTOR.

ALL PRECAST CONCRETE PRODUCTS SHALL BE INSPECTED AT THE LOCATION OF MANUFACTURE. APPROVED PRECAST CONCRETE PRODUCTS WILL BE STAMPED OR HAVE SUCH IDENTIFICATION NOTING THAT INSPECTION HAS BEEN PERFORMED BY THE CITY OF COLUMBUS. PRECAST CONCRETE PRODUCTS WITHOUT PROOF OF INSPECTION SHALL NOT BE APPROVED FOR INSTALLATION. THE COST OF INSPECTION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS RELATED ITEMS.

EXCESS EXCAVATED MATERIAL FROM THIS PROJECT SHALL BE HAULED OFFSITE BY THE CONTRACTOR AND COMPENSATION FOR HAULING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203.

THE COST OF FULL DEPTH CONCRETE PAVEMENT REMOVAL FOR STREETS AND DRIVEWAYS WILL BE PAID AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM 202 – CONCRETE PAVEMENT REMOVED AND DISPOSED OF. PAVEMENTS SHALL BE SAWCUT IN NEAT, STRAIGHT LINES TO THE FULL DEPTH OF THE EXISTING PAVEMENT. REMOVAL OF ASPHALT STREET, DRIVEWAY, AND BIKE PATH PAVEMENTS WILL BE PAID PER CUBIC YARD UNDER ITEM 203 – EXCAVATION.

THE COST FOR REMOVAL AND DISPOSAL OF CONCRETE CURB AND CONCRETE CURB AND GUTTER WILL BE PAID AT THE UNIT PRICE BID PER LINEAL FOOT UNDER THE APPROPRIATE 202 ITEM. REMOVAL AND DISPOSAL OF CONCRETE SIDEWALK WILL BE PAID AT THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM 202 – SIDEWALK REMOVED AND DISPOSED OF.

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

ALL TRENCHES WITHIN PAVEMENT, BERM, AND SHOULDER LIMITS SHALL BE BACKFILLED OR SECURELY PLATED DURING NONWORKING HOURS. TRENCHES OUTSIDE THESE AREAS SHALL BE BACKFILLED OR SHALL BE PROTECTED BY APPROVED TEMPORARY FENCING OR BARRICADES DURING NONWORKING HOURS. CLEAN UP SHALL FOLLOW CLOSELY BEHIND THE TRENCHING OPERATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONDITION OF ALL TRENCHES FOR ONE YEAR FROM THE TIME OF FINAL ACCEPTANCE OF THE WORK, AND SHALL MAKE ANY NECESSARY REPAIRS AT NO COST TO THE CITY.

THE CONTRACTOR'S CONSTRUCTION ACTIVITIES SHALL BE CONDUCTED SO AS TO ELIMINATE ALL UNNECESSARY NOISE, DUST, AND ODORS. THE USE OF OIL OR OTHER MATERIAL FOR DUST CONTROL, WHICH MAY CAUSE TRACKING, IS NOT PERMITTED.

DUST CONTROL OPERATIONS SHALL BE PERFORMED BY THE CONTRACTOR AT THE DIRECTION OF THE ENGINEER. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED AS AN ALLOWANCE FOR BIDDING PURPOSES. USE OF CALCIUM CHLORIDE WILL NOT BE PERMITTED.

| | | |
|---|---|---|
| ITEM 616 | WATER | 80 M. GALS |

IN THE EVENT THAT IT BECOMES NECESSARY FOR THE CITY TO PERFORM WORK OF AN IMMEDIATE NATURE (SUCH AS THE PLACEMENT OF BARRICADES OR REPLACEMENT OF SIGNS AND OTHER WARNING OR PROTECTIVE DEVICES) BECAUSE OF FAILURE OR REFUSAL OF THE CONTRACTOR TO PERFORM SUCH WORK AS REQUIRED BY THE CONTRACT, THE CONTRACTOR SHALL REIMBURSE THE CITY AT THE RATE OF 2.5 TIMES THE ACTUAL COST OF LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO PERFORM SUCH WORK. THE CITY SHALL BE REQUIRED TO NOTIFY OR ATTEMPT TO NOTIFY THE DESIGNATED REPRESENTATIVE OF THE CONTRACTOR OF THE NECESSITY TO PERFORM SUCH WORK. IF THE CONTRACTOR REFUSES OR FAILS WITHIN A REASONABLE TIME TO PERFORM OR CAUSE THE PERFORMANCE OF SUCH WORK, THE CITY SHALL BE REIMBURSED BY THE CONTRACTOR IN THE AMOUNT PROVIDED HEREIN BY WAY OF A DEDUCTION FROM THE CONTRACTOR'S NEXT PAYMENT UNDER THE CONTRACT. REASONABLE TIME FOR ALL STREETS INVOLVED ON THIS CONTRACT IS 1 HOUR FROM THE TIME OF NOTIFICATION BY THE CITY.

## ITEM 653-TOPSOIL FURNISHED AND PLACED, A.P.P.

A MINIMUM 3 INCHES OF TOPSOIL SHALL BE PLACED IN ALL AREAS TO BE SEEDED. PRIOR TO PLACING TOPSOIL IN CUT AREAS, THE EARTH SHALL BE EXCAVATED TO A DEPTH SUFFICIENT TO PLACE 3 INCHES OF TOPSOIL. THE COST OF EXCAVATION AND DISPOSAL OF SURPLUS MATERIALS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE INCLUDED IN THE COST OF THE VARIOUS CONTRACT ITEMS.

TOPSOIL SHALL BE REMOVED AND WASTED OR UTILIZED IN NON-LOAD BEARING FILLS IN ACCORDANCE WITH THE SPECIFICATIONS. NO EXTRA COMPENSATION SHALL BE PAID FOR THE REMOVAL OF EXCESS TOPSOIL AS REQUIRED TO OBTAIN A SUITABLE SUBGRADE. PAYMENT FOR TOPSOIL REMOVAL IS INCLUDED IN ITEM 203, EXCAVATION.

ALL TOPSOIL MATERIALS AND FINAL AREA OF SUBGRADE PREPARATION SHALL BE FREE FROM ROCK AND OTHER FOREIGN MATERIAL OF 1/2" OR GREATER IN ANY DIMENSION. TOPSOIL REMOVED ON SITE CAN BE REUSED FOR ITEM 653, TOPSOIL FURNISHED AND PLACED, A.P.P., IF SUITABLE AS APPROVED BY THE ENGINEER.

## ITEM 659-SEEDING AND MULCHING, A.P.P.

SEED. CERTIFICATION OF GRASS SEED SHALL BE PROVIDED BY SEED VENDOR FOR EACH GRASS-SEED MIXTURE STATING THE BOTANICAL AND COMMON NAME, PERCENTAGE BY WEIGHT OF EACH SPECIES AND VARIETY; AND PERCENTAGE OF PURITY, GERMINATION, AND WEED SEED. INCLUDE THE YEAR OF PRODUCTION AND DATE OF PACKAGING. FURNISH NATIONAL TURFGRASS EVALUATION PROGRAM (NTEP) DATA FOR EACH SPECIES TO BE USED.

GRASS SEED MUST BE FRESH, CLEAN, DRY, NEW-CROP SEED COMPLYING WITH THE A.O.S.A. "JOURNAL OF SEED TECHNOLOGY" RULES FOR TESTING SEEDS FOR PURITY AND GERMINATION TOLERANCES.

SEED SPECIES SHALL BE AS FOLLOWS, WITH NOT LESS THAN **90 PERCENT GERMINATION**, NOT LESS THAN **98 PERCENT PURE SEED**, AND NOT MORE THAN 0.5 PERCENT WEED SEED.

TURFGRASS SEED MIX PROPORTIONED BY WEIGHT:

A. 80 PERCENT TALL FESCUE (FESTUCA ARUNDINACEA), WITH A MINIMUM OF 3 IMPROVED TURF-TYPE VARIETIES. KENTUCKY-31 AND ALTA VARIETIES ARE NOT APPROVED.
B. 20 PERCENT PERENNIAL RYEGRASS (LOLIUM PERENNE).

SEEDING. SOW SEED AT A TOTAL RATE OF 7-9 LB. / 1,000 S.F. WITH A SPREADER OR SEEDING MACHINE. RAKE SEED LIGHTLY INTO TOP 1/8 INCH OF SOIL, ROLL LIGHTLY, AND WATER WITH FINE SPRAY.

PROTECT SEEDED AREAS WITH SLOPES EXCEEDING 3:1 WITH EROSION CONTROL BLANKETS AS DIRECTED BY THE ENGINEER. COST OF EROSION CONTROL BLANKETS, MATERIAL, AND LABOR SHALL BE PAID FOR BY THE CITY.

HYDRO-SEEDING. NOT PERMITTED.

HYDRO-MULCHING. APPLY SLURRY AT A RATE SO THAT MULCH COMPONENT IS DEPOSITED AT NOT LESS THAN 1,500 LB. / ACRE DRY WEIGHT

TURF MAINTENANCE. MAINTAIN AND ESTABLISH TURF BY WATERING, FERTILIZING, WEEDING, MOWING, TRIMMING, AND REPLANTING TO ESTABLISH HEALTHY, VIABLE TURF. ROLL, REGRADE, AND REPLANT BARE OR ERODED AREAS AND REMULCH TO PRODUCE A UNIFORMLY SMOOTH TURF. PROVIDE THE SAME MATERIALS AND INSTALLATION AS THOSE USED IN THE ORIGINAL INSTALLATION. WATER TURF WITH FINE SPRAY AT A MINIMUM RATE OF 1 INCH PER WEEK UNLESS RAINFALL PRECIPITATION IS ADEQUATE.

MOW TURFGRASS SEED MIX AREAS AS SOON AS TOP GROWTH IS TALL ENOUGH TO CUT. REPEAT MOWING TO MAINTAIN SPECIFIED HEIGHT WITHOUT CUTTING MORE THAN 1/3 OF GRASS HEIGHT. MOW AREAS TO A HEIGHT OF 2 TO 3 INCHES.

## ITEM 207-CONSTRUCTION SEEDING AND MULCHING, A.P.P.

ALL NON-PAVEMENT AREAS DISTURBED WITHIN THE DESIGNATED EASEMENTS, RIGHTS-OF-WAY, AND LIMITS OF DISTURBANCE AS SHOWN, SHALL BE SEEDED AND MULCHED IN ACCORDANCE WITH ITEM 207, "CONSTRUCTION SEEDING AND MULCHING." ALL AREAS DISTURBED OUTSIDE THESE LIMITS SHALL BE SEEDED AND MULCHED AT THE CONTRACTOR'S EXPENSE.

SEEDING AND MULCHING SHALL CONFORM TO STANDARDS SET FORTH IN CITY OF COLUMBUS SPECIFICATIONS, ITEM 207. PLACEMENT OF SEEDING AND MULCHING SLURRY MIXTURE SHALL BE MADE WITH APPROVED HYDRO-SEEDING EQUIPMENT. APPLY MULCH SLURRY AT A MINIMUM RATE OF 1,500 POUNDS PER ACRE ON 4:1 SLOPES OR FLATTER, OR BETWEEN 1,500 AND 2,000 POUNDS PER ACRE ON SLOPES STEEPER THAN 4:1. DIRECT SLURRY TO EVENLY COVER DESIGNATED SEED AREAS. THE CONTRACTOR SHALL REPAIR RUTS, DEPRESSIONS, AND ALL DAMAGE CAUSED BY HYDRO-SEEDING EQUIPMENT.

## TREES

ALL TREES WITHIN THE CONSTRUCTION AREA NOT DESIGNATED FOR REMOVAL, WHETHER SHOWN ON THE PLANS OR NOT, SHALL BE PRESERVED WITHOUT DAMAGE. TREES TO BE PRESERVED SHALL BE PROTECTED WITH HIGH VISIBILITY TREE PROTECTION FENCING AS REQUIRED ON THE TREE PRESERVATION PLAN PRIOR TO THE START OF ANY CONSTRUCTION. THE CITY RESERVES THE RIGHT TO DIRECT THE CONTRACTOR TO INSTALL ADDITIONAL FENCING IN AREAS WHERE TREES COULD BE DAMAGED DURING CONSTRUCTION. SEE THE TREE PRESERVATION PLAN FOR COMPLETE SPECIFICATIONS AND DETAILS.

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER ITEM 201, TREES OR STUMPS REMOVED. TREES WITH TRUNK DIAMETERS 12 INCHES AND LESS SHALL BE CONSIDERED BRUSH AND THEIR REMOVAL PAID UNDER ITEM 201, CLEARING AND GRUBBING. THE FOLLOWING IS AN ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED:

| SIZE | NO. OF TREES |
|---|---|
| OVER 12"-24" (18" SIZE) | 205 EA. |
| OVER 24"-36" (30" SIZE) | 25 EA. |
| OVER 36"-60" (48" SIZE) | 6 EA. |

THE ABOVE TREE REMOVAL QUANTITIES ARE APPROXIMATE AND THE CITY OF DUBLIN RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES AND/OR STUMPS WITHIN THE LIMITS OF CONSTRUCTION.

## DRAINAGE

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN AT ALL TIMES STORM SEWER, DRAIN, AND DITCH FLOWS THROUGH EXISTING FACILITIES UNTIL NEW FACILITIES ARE COMPLETED AND PUT INTO SERVICE. THE FLOW OF ALL STORM SEWERS, DRAINS, AND OTHER WATER COURSES ENCOUNTERED AND DISTURBED OR DESTROYED DURING THE PROSECUTION OF THE WORK SHALL BE RESTORED BY THE CONTRACTOR TO A CONDITION SATISFACTORY TO THE CITY ENGINEER. PAYMENT FOR THIS SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

EXISTING STORM SEWERS LOCATED WITHIN THE WORK LIMITS AND THEIR ASSOCIATED STRUCTURES SHALL BE PROTECTED FROM DAMAGE BY THE CONTRACTOR DURING THE COURSE OF THE WORK IF NOT SPECIFICALLY DESIGNATED FOR REMOVAL. STORM SEWER PIPE SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR IN ACCORDANCE WITH THE APPLICABLE 202 ITEM WHERE DESIGNATED. EXISTING HEADWALLS SHALL BE REMOVED AND DISPOSED AS INDICATED WITH NO SEPARATE PAYMENT.

ALL FIELD TILE BROKEN OR ENCOUNTERED DURING EXCAVATION SHALL BE REPLACED OR REPAIRED IN LIKE KIND AND CONNECTED TO THE NEAREST STORM SEWER OR OPEN CHANNEL OUTLET, RESTORING NORMAL FUNCTION TO THE TILE, AS DIRECTED BY THE CITY ENGINEER. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

WHERE THE WORK CALLS FOR RELOCATION OF EXISTING DITCHES OR STORM SEWER, THE CONTRACTOR SHALL REESTABLISH THE OUTLETS OF ALL PRIVATE DRAINS ENCOUNTERED SUCH AS DOWNSPOUTS, FOUNDATION DRAINS, CATCH BASINS, YARD DRAINS, ETC., INTO THE NEAREST NEW DITCH OR STORM SEWER, AS APPROVED BY THE ENGINEER. THE COST FOR REESTABLISHING PRIVATE DRAIN OUTLETS SHALL BE INCLUDED IN THE VARIOUS STORM SEWER ITEMS.

ITEM 601 ROCK CHANNEL PROTECTION WITH FILTER FABRIC SHALL BE PROVIDED AT THE OUTLET OF ALL STORM SEWERS AND CULVERTS PER ODOT STANDARD DRAWING HW-2.2M AND THE LOCATIONS AND DIMENSIONS SHOWN ON THE PLANS. ITEM 601 MATERIALS SHALL CONSIST OF NATURAL, BROKEN, OR CRUSHED ROCK. BROKEN CONCRETE MATERIALS ARE UNACCEPTABLE. THE FILTER UNDERLYING ROCK CHANNEL PROTECTION SHALL BE FILTER FABRIC AS PER SECTION 712.09, TYPE B. ROCK SIZE AND DEPTH ARE SHOWN ON THE PLANS AND PROFILES.

## BACKFILL AND EMBANKMENT

BACKFILL WITHIN A 1:1 INFLUENCE LINE OF EXISTING STRUCTURES (PAVEMENTS, SIDEWALKS, CURBS, ETC.) SHALL BE ITEM 912, COMPACTED GRANULAR MATERIAL, OR ITEM 613, TYPE 2.

TRENCHES WITHIN 2 FEET OF PROPOSED PAVEMENT, CURB AND GUTTER, BERM, SHOULDERS, SIDEWALK, BIKE PATH, OR WHERE SPECIFICALLY CALLED FOR ON THE PLANS, SHALL BE BACKFILLED WITH COMPACTED GRANULAR MATERIAL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS.

GRANULAR BACKFILL SHALL BE COMPACTED GRANULAR MATERIAL ACCORDING TO ITEM 912 OF THE STANDARD SPECIFICATIONS OR CONTROLLED DENSITY BACKFILL ACCORDING TO ITEM 613, TYPE 2, OF THE STANDARD SPECIFICATIONS AS DIRECTED BY THE CITY ENGINEER. **ITEM 912 MATERIAL SHALL CONSIST OF NATURAL, BROKEN, OR CRUSHED ROCK. SYNTHETIC OR MANMADE MATERIALS ARE UNACCEPTABLE.**

ALL NON-GRANULAR BACKFILL SHALL BE FURNISHED AND PLACED IN ACCORDANCE WITH ITEM 911. **THE COST OF ITEM 911 AND 912 BACKFILL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE VARIOUS 901 PIPE ITEMS.**

ALL TRENCHES WITHIN PAVEMENT, BERM, AND SHOULDER LIMITS SHALL BE BACKFILLED OR SECURELY PLATED DURING NON-WORKING HOURS. TRENCHES OUTSIDE THESE AREAS SHALL BE BACKFILLED OR SHALL BE PROTECTED BY APPROVED TEMPORARY FENCING OR BARRICADES DURING NON-WORKING HOURS. CLEAN UP SHALL FOLLOW CLOSELY BEHIND THE TRENCHING OPERATION.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONDITION OF THE TRENCHES FOR A PERIOD OF ONE YEAR FROM FINAL ACCEPTANCE OF THE WORK, AND SHALL MAKE ANY NECESSARY REPAIRS AT NO COST TO THE CITY.

ANY SHALE BEDROCK EXCAVATED DURING THE COURSE OF CONSTRUCTION SHALL NOT BE USED AS ENGINEERED FILL, BACKFILL, OR EMBANKMENT ON THIS PROJECT. EXCAVATED SHALE SHALL BE PLACED IN DESIGNATED WASTE AREAS OR REMOVED FROM THE SITE.

**EMBANKMENTS SHALL BE PLACED USING NATURAL SOILS CONFORMING TO ODOT 703.16A.**

## ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, NO. 2 STONE, WITH FILTER FABRIC, AS PER PLAN.

THIS ITEM IS PROVIDED FOR USE IN REPAIRING THE SLOPE PROTECTION, AFTER REGRADING, BENEATH THE I-270 OVERPASS AT RIVERSIDE DRIVE FROM APPROXIMATE STA. 32+50 TO 34+25. THE NO. 2 STONE SHALL BE FURNISHED IN ACCORDANCE WITH ITEM 703.18 AND PLACED TO A MINIMUM THICKNESS OF 6 INCHES. PAYMENT WILL BE MADE AT THE UNIT PRICE BID PER CUBIC YARD.

## SUBGRADE

THE CONTRACTOR SHALL PREPARE ALL SUBGRADES FOR PAVEMENTS AND EMBANKMENTS USING THE FOLLOWING PROCEDURES:

A. ALL EXISTING PAVEMENTS, STRUCTURES, SOD AND TOPSOIL, EXISTING TREES INCLUDING THEIR ENTIRE ROOT MASS, VEGETATION, AND OTHER MISCELLANEOUS MATERIALS SHALL BE COMPLETELY REMOVED FROM THE ENTIRE FOOTPRINT OF THE PROPOSED ROADWAY OR EMBANKMENT.

B. IN ALL AREAS TO RECEIVE EMBANKMENT FILL AND IN ALL AREAS WHERE ANY CUT HAS BEEN MADE TO THE PROPOSED PAVEMENT SUBGRADE ELEVATION THE EXPOSED SURFACE SHALL BE SCARIFIED TO A DEPTH OF 12 INCHES, MOISTURE CONDITIONED, AND RECOMPACTED IN ACCORDANCE WITH ITEM 204.03. MOISTURE CONDITIONING SHALL BE IN ACCORDANCE WITH ITEM 203.07.A.

C. SUBSEQUENT TO MOISTURE CONDITIONING AND RECOMPACTION EFFORTS, THE EXPOSED SUBGRADE FOR PAVEMENTS AND EMBANKMENTS SHALL BE PROOFROLLED IN ACCORDANCE WITH ODOT ITEM 204.06.

D. AFTER EMBANKMENT FILL HAS BEEN PLACED IN FILL AREAS TO ACHIEVE THE REQUIRED PAVEMENT SUBGRADE ELEVATION, THE PAVEMENT SUBGRADE SHALL BE PROOFROLLED IN ACCORDANCE WITH ODOT ITEM 204.06.

E. SUBGRADE COMPACTION SHALL BE REQUIRED UNDER SIDEWALKS AND BIKE PATHS, AND SHALL FOLLOW THE REQUIREMENTS FOR COMPACTION UNDER DRIVEWAYS AS DESCRIBED IN SECTION 204.03. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203, EXCAVATION.

WHERE SOFT SUBGRADE IS ENCOUNTERED DUE TO NO FAULT OF THE CONTRACTOR, AND SATISFACTORY COMPACTION CANNOT BE OBTAINED, THE UNSTABLE MATERIAL SHALL BE REMOVED AND REPLACED PER SECTION 204.04. THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED AS AN ALLOWANCE FOR BIDDING PURPOSES.

| | | |
|---|---|---|
| ITEM 204 | EXCAVATION OF SUBGRADE | 5,500 C.Y. |
| ITEM 204 | GRANULAR EMBANKMENT, NO. 2 STONE | 5,500 C.Y. |

ALL BORROW SOILS PLACED WITHIN 3 FEET OF THE FINAL SUBGRADE LEVEL SHALL BE CAPABLE OF PROVIDING SUBGRADE SUPPORT PARAMETERS EQUAL TO OR GREATER THAN THE VALUES USED TO DESIGN THE NEW PAVEMENT. PRIOR TO SUPPLYING ANY OFFSITE BORROW MATERIAL FOR THIS PROJECT, REPRESENTATIVE BULK SAMPLES OF EACH TYPE OF PROPOSED BORROW SHALL BE OBTAINED AND TESTED BY A GEOTECHNICAL TESTING LABORATORY, FURNISHED BY THE CONTRACTOR, TO VERIFY THAT THE PROPOSED BORROW SOIL IS CAPABLE OF PROVIDING A CALIFORNIA BEARING RATIO (CBR) VALUE OF AT LEAST 4% WHEN PLACED IN A PROPERLY COMPACTED STATE.

THE FOUNDATION EXCAVATIONS FOR THE CULVERT FOOTINGS AT BILLINGSLEY CREEK SHALL BE INSPECTED AND APPROVED BY THE ENGINEER PRIOR TO PLACING FOOTING CONCRETE TO VERIFY THAT THE FOOTING SUBGRADE IS CAPABLE OF PROVIDING THE ALLOWABLE BEARING PRESSURES ASSUMED IN THE DESIGN.

## PAVEMENT

PAVEMENTS SHALL BE CUT IN NEAT, STRAIGHT LINES TO THE FULL DEPTH OF THE PAVEMENT, OR AS REQUIRED BY THE CITY ENGINEER.

BUTT JOINTS BETWEEN EXISTING AND NEW PAVEMENT SHALL BE MADE IN ACCORDANCE WITH ODOT STD. CONSTRUCTION DWG. BP-3.1.

TOP OF PAVEMENT ELEVATIONS SHOWN ON THE PAVEMENT DETAILS (SHEETS 86 THROUGH 88) MAY REFLECT DEVIATIONS FROM THE ROADWAY PROFILES AND TYPICAL SECTION CROSS SLOPES IN SOME AREAS DUE TO PAVEMENT WARPING. IN ALL CASES, THE TOP OF PAVEMENT ELEVATIONS SHOWN ON THE PAVEMENT DETAILS SHALL GOVERN.

THE CONTRACTOR SHALL SUBMIT TO THE CITY ENGINEER AT THE PRECONSTRUCTION MEETING HIS PROPOSED DESIGN MIX FORMULA FOR ALL BITUMINOUS MIXTURES TO BE PLACED ON THE PROJECT FOR REVIEW AND APPROVAL. A DESIGN MIX FORMULA SHALL BE SUBMITTED FOR EACH MIXTURE AND EACH PRODUCER AND SHALL PROVIDE GRADATION OF ALL COMPONENT AGGREGATES, PERCENTAGE OF BLENDING OF AGGREGATES, PERCENTAGE OF BITUMEN, ANY ADDITIVES AND APPLICATION RATE, NAMES AND ADDRESSES OF AGGREGATE SUPPLIERS, MARSHALL MIX DESIGN DATA, AND THE THEORETICAL LABORATORY DENSITY. **THE CONTRACTOR SHALL NOT USE ANY RECLAIMED MATERIALS IN ITEM 304 OR 448 ASPHALT CONCRETE.**

ALL PLANED ASPHALT SURFACES SHALL RECEIVE A TACK COAT PER ITEM 407 PRIOR TO REPAVING. THE RATE OF APPLICATION OF ITEM 407, TACK COAT AS INDICATED ON THE PLANS SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE CITY ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.15 GALLONS PER SQUARE YARD OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

ITEM SPECIAL, CONCRETE DRIVE (COMMERCIAL OR RESIDENTIAL) AND ASPHALT DRIVE (RES.) SHALL INCLUDE ALL CONCRETE, ASPHALT, BASE COURSE, AND SCH. 80 CONDUIT IN ACCORDANCE WITH THE PLANS AND THE DUBLIN STANDARD DETAIL FOR COMMERCIAL AND RESIDENTIAL DRIVES. DRIVEWAY GRADES AND DIMENSIONS PROVIDED ON THE PLANS GOVERN OVER THOSE SHOWN ON THE DUBLIN STD. DRAWINGS. EXCAVATION, EMBANKMENT, DRAINAGE, AND OTHER APPURTENANT WORK WILL BE PAID UNDER THE OTHER APPLICABLE CONTRACT ITEMS.

## ITEM SPECIAL - TRUCK APRON PAVEMENT, AS PER PLAN

PAVERS. THE PAVERS SHALL BE REGIMENTAL FULL RANGE, WITH A CHAMFERED EDGE, AND SPACER LUGS, 8"x 4"x 2 ¾", MADE BY BELDON BRICK COMPANY, CANTON OHIO, LAID IN A RUNNING BOND PATTERN.

NEOPRENE-MODIFIED ASPHALT ADHESIVE. FURNISH NEOPRENE MODIFIED ASPHALT ADHESIVE THAT CONTAINS 2% GRADE WM1 NEOPRENE, OXIDIZED ASPHALT WITH A 150 DEGREE SOFTENING POINT (77 PENETRATION), AND 10% LONG-FIBERED INERT MATERIAL, AS SUPPLIED BY SEIDEL COMPANY, INC., NEWBURYPORT, MA, (617) 649-6740; HASTINGS PAVEMENT COMPANY, INC., LAKE SUCCESS, NY, (516) 379-3500; OR APPROVED EQUAL.

BITUMINOUS SETTING BED, 3/4 - INCH. FURNISH ASPHALT CEMENT CONFORMING TO ASTM D 3381, PG64-22. FINE AGGREGATE SHALL BE NATURAL SAND AND/OR STONE SAND COMPOSED OF HARD, DURABLE, UNCOATED PARTICLES, FREE FROM CLAY, SILT, ORGANIC MATERIAL, OR OTHER DELETERIOUS SUBSTANCES. ALL SAND SHALL BE UNIFORMLY GRADED AND PASS A NO. 4 SIEVE, MEETING THE REQUIREMENTS OF ASTM C 136. THE DRIED FINE AGGREGATE SHALL BE MIXED WITH HOT ASPHALT CEMENT AT THE PLANT AND HEATED TO APPROXIMATELY 300 DEGREES (F). APPROXIMATE MATERIAL PROPORTIONS SHALL BE 7% ASPHALT CEMENT AND 93% FINE AGGREGATE; OR 140 LBS ASPHALT TO 1,860 LBS FINE AGGREGATE PER TON.

SAND. ALL JOINTS SHALL BE FILLED WITH A POLYMERIC SAND. SAND SHALL BE ALLIANCE XXX GATOR SAND AND SLATE GRAY IN COLOR OR AN APPROVED EQUAL.

EDGING. A BRICK/PAVER EDGING SHALL BE PROVIDED ALONG ANY PAVER EDGE NOT RESTRAINED BY CURB, CURB-AND-GUTTER, SIDEWALK, MULTIUSE PATH, ETC. EDGING TO BE PERMALOC ASPHALT EDGE, BLACK, 3"X3", OR APPROVED EQUAL.

PAYMENT. PAYMENT FOR THE TRUCK APRON PAVEMENT WILL BE MADE AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM SPECIAL - TRUCK APRON PAVEMENT, AS PER PLAN, AND SHALL INCLUDE THE CONCRETE BASE SLAB, BITUMINOUS SETTING BED, ASPHALT ADHESIVE, BRICK PAVERS, EDGING, AND POLYMERIC SAND FILL. THE COST OF ALL CONCRETE CURBING WILL BE PAID UNDER THE APPROPRIATE 609 CURB ITEM. AGGREGATE BASE WILL BE PAID UNDER ITEM 304 - AGGREGATE BASE.

## ITEM SPECIAL - BRICK PAVERS, AS PER PLAN

BUILD UP FOR MEDIAN AND WALK PAVERS SHALL BE THE SAME AS FOR TRUCK APRON PAVEMENT EXCEPT THAT THE CONCRETE BASE SLAB SHALL BE 4" THICK.

PAYMENT FOR MEDIAN PAVERS AND WALK PAVERS WILL BE MADE AT THE UNIT PRICE BID PER SQUARE YARD FOR ITEM SPECIAL - BRICK PAVERS, A.P.P., AND SHALL INCLUDE THE CONCRETE BASE SLAB, BITUMINOUS SETTING BED, ASPHALT ADHESIVE, BRICK PAVERS, EDGING, AND POLYMERIC SAND FILL.

## WATER

ALL WATER MAIN MATERIALS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CURRENT RULES AND REGULATIONS OF THE CITY OF COLUMBUS DIVISION OF WATER.

NO PERSON SHALL BEGIN CONSTRUCTION OR INSTALLATION OF A PUBLIC WATER MAIN UNTIL PLANS HAVE BEEN APPROVED BY THE STATE OF OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA).

IT SHALL BE UNLAWFUL FOR ANY PERSON TO PERFORM ANY WORK ON CITY OF COLUMBUS WATERLINE SYSTEMS WITHOUT FIRST SECURING LICENSE TO ENGAGE IN SUCH WORK, AS INDICATED IN COLUMBUS CITY CODE SECTION 1103.02 AND 1103.06. THIS WORK INCLUDES ANY ATTACHMENTS, ADDITIONS TO OR ALTERATIONS IN ANY CITY SERVICE PIPE OR APPURTENANCES (INCLUDING WATER SERVICE LINES AND TAPS). THIS REQUIREMENT MAY BE MET BY UTILIZATION OF A SUBCONTRACTOR WHO HOLDS A CITY OF COLUMBUS WATER CONTRACTOR LICENSE OR A COMBINED WATER/SEWER CONTRACTOR LICENSE TO PERFORM THIS WORK. UTILIZATION OF A SUBCONTRACTOR MUST MEET THE LICENSING REQUIREMENTS OF CITY OF COLUMBUS BUILDING CODE, IN PARTICULAR SECTION 4114.119 AND 4114.529.

CONTRACTOR SHALL WRAP ALL DUCTILE IRON PIPE WITH TUBE STYLE 8 MIL LINEAR LOW DENSITY POLYETHYLENE (LLDPE) FILM MADE FROM VIRGIN POLYETHYLENE ONLY (NO RECYCLE MATERIAL) PER A.W.W.A. C-105. THIS COLOR SHALL BE BLACK WITH NOMINAL 2% CARBON BLACK UV INHIBITOR AND PRINTED PER THE A.W.W.A. C-105 STANDARD. INSTALLATION SHALL BE DONE IN ACCORDANCE WITH THE "POLYETHYLENE ENCASEMENT INSTALLATION GUIDE" WRITTEN BY THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA). ALL LUMPS OF CLAY, MUD, CINDERS, ETC. ON THE PIPE SURFACE SHALL BE REMOVED BEFORE THE PIPE IS COVERED WITH POLYETHYLENE. WHEN LIFTING POLYETHYLENE-ENCASED PIPE USE A FABRIC TYPE SLING OR PADDED CABLE. JOINTS SHALL BE OVERLAPPED AND TAPED. FOLD EXCESS SLACK OVER THE TOP OF THE PIPE AND TAPE EVERY THREE (3) FEET. SMALL HOLES OR TEARS SHALL BE REPAIRED WITH A PIECE OF TAPE PLACED OVER THE HOLE. LARGE HOLES OR TEARS SHOULD BE REPAIRED BY TAPING ANOTHER PIECE OF POLYETHYLENE OVER THE HOLE. TO AVOID DAMAGE DURING BACKFILLING ALLOW ADEQUATE SLACK IN THE FILM TUBE AT JOINTS. BACKFILL MATERIAL SHALL BE FREE OF CINDERS, ROCKS, BOULDERS, NAILS, STICKS OR OTHER MATERIAL THAT WILL DAMAGE THE POLYETHYLENE SLEEVE.

APPURTENANCES SUCH AS BOLTED JOINTS, VALVES, SERVICE TAPS SHALL ALSO BE WRAPPED WITH POLYETHYLENE FILM. FOR SERVICE TAPS, WRAP TWO/THREE LAYERS OF TAPE COMPLETELY AROUND THE POLYETHYLENE-ENCASED PIPE TO COVER THE AREA WHERE TAPPING MACHINE WILL CONTACT THE PIPE. INSTALL CORPORATION STOP DIRECTLY THROUGH THE TAPE AND POLYETHYLENE. WRAP COPPER SERVICE AT LEAST THREE FEET BACK FROM INSTALLATION WITH TAPE AND ADDITIONAL POLYETHYLENE FILM TO PREVENT ELECTROLYSIS.

ALL WORK NECESSARY TO FURNISH AND INSTALL THE POLYETHYLENE ENCASEMENT SHALL BE INCLUDED IN ITEM 801.

ONLY FIRE HYDRANTS CONFORMING TO CITY OF COLUMBUS STANDARDS WILL BE APPROVED FOR USE, EXCEPT THAT THE NOZZLE SHALL BE THREADED TO THE BARREL OF THE HYDRANT.

FIRE HYDRANT RELOCATIONS SHALL CONFORM TO APPLICABLE SECTIONS OF ITEM 809 OF THE C.M.S.C. WORK SHALL CONSIST OF REMOVING THE EXISTING HYDRANT, INSTALLING NEW 6" PIPE AND FITTINGS AS REQUIRED TO LOCATE THE FIRE HYDRANT 2 FEET FROM BACK OF PROPOSED CURB OR 8 FEET OFF EDGE OF PAVEMENT, RESETTING HYDRANT AND BLOCKING AS REQUIRED. ALL 6" PIPE SHALL BE INSTALLED AT 4'-0" MINIMUM COVER. HYDRANT EXTENSIONS SHALL BE PROVIDED PER ITEM 810, AS REQUIRED. RELOCATED FIRE HYDRANTS SHALL BE ADJUSTED TO PROPER GRADE AND FACED IN THE PROPER DIRECTION. WHEN ANY HYDRANT IS PLACED WITHIN 10 FEET OR MORE FROM THE HYDRANT VALVE AT THE MAIN, AN ADDITIONAL VALVE SHALL BE INSTALLED, AND RESTRAINED, WITHIN TWO (2) FEET OF THE RELOCATED HYDRANT. PAYMENT IS TO BE INCLUDED UNDER ITEM 809 - FIRE HYDRANT RELOCATED.

NO TWO (2) ADJACENT FIRE HYDRANTS SHALL BE TAKEN OUT OF SERVICE CONCURRENTLY.

RELOCATED FIRE HYDRANTS SHALL BE PUT BACK IN SERVICE AS SOON AS POSSIBLE.

ALL WATER LINES SHALL BE PRESSURE TESTED IN ACCORDANCE WITH SECTION 801.14 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS.

ALL WATER MAINS SHALL BE CLEANED AND FLUSHED, ALSO ANY WATER MAIN 12-INCH AND LARGER MUST BE PROPERLY PIGGED, IN ACCORDANCE WITH SECTION 801.13 OF THE CITY OF COLUMBUS, CONSTRUCTION AND MATERIAL SPECIFICATIONS.

ALL WATER MAINS SHALL BE DISINFECTED IN ACCORDANCE WITH SECTION 801.15 OF THE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS. SPECIAL ATTENTION IS DIRECTED TO APPLICABLE SECTIONS OF A.W.W.A. C-651. WHEN WATER MAINS ARE READY FOR DISINFECTION, THE CITY OF DUBLIN SHALL SUBMIT TWO (2) SETS OF "AS BUILT" PLANS, AND A LETTER STATING THAT THE WATER MAINS HAVE BEEN PRESSURE TESTED AND NEED TO BE DISINFECTED, TO THE CITY OF COLUMBUS DIVISION OF WATER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE DISINFECTION OF ALL WATER MAINS CONSTRUCTED UNDER THIS PLAN.

THE CONTRACTOR SHALL PAINT ALL FIRE HYDRANTS ACCORDING TO CITY OF DUBLIN STANDARDS DWG. (WA-01). THE COST OF PAINTING FIRE HYDRANTS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE FOR FIRE HYDRANTS.

THE CONTRACTOR SHALL NOTIFY THE CITY OF COLUMBUS DIVISION OF WATER AT 645-7788 AND THE CITY OF DUBLIN DIVISION OF ENGINEERING AT LEAST 24 HOURS BEFORE TAPPING INTO EXISTING WATER LINES.

ALL BENDS, JOINT DEFLECTIONS, AND FITTINGS SHALL BE BACKED WITH CONCRETE PER CITY OF COLUMBUS STANDARDS.

ALL WATER LINES SHALL BE LOCATED AT LEAST 10 FEET HORIZONTALLY OR 18 INCHES VERTICALLY FROM SANITARY AND STORM SEWERS. THE PROPOSED WATER MAIN SHALL BE LOCATED A MINIMUM DISTANCE OF TWENTY (20) FEET AWAY FROM ANY STRUCTURE, OVERHANG OR FOOTER.

STATIONS AND OFFSETS FOR LOCATION OF PROPOSED WATER MAINS ARE REFERENCED TO THE CONSTRUCTION BASELINE. WATER MAIN CENTERLINE STATIONING IS PROVIDED FOR THE PROFILES.

THE CONTRACTOR SHALL GIVE WRITTEN NOTICE TO ALL AFFECTED PROPERTY OWNERS AT LEAST 1 WORKING DAY BUT NOT MORE THAN 3 WORKING DAYS PRIOR TO ANY TEMPORARY INTERRUPTION OF WATER SERVICE. INTERRUPTION OF WATER SERVICE SHALL BE HELD TO A MINIMUM AND SHALL BE APPROVED BY THE CITY ENGINEER.

ALL WATER LINE TRENCHES WITHIN RIGHTS-OF-WAY SHALL BE BACKFILLED WITH ITEM 912 COMPACTED GRANULAR MATERIAL (SECTION 304.02). THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 801 - DUCTILE IRON WATER PIPE AND FITTINGS.

WATER SERVICE BOXES SHALL BE PLACED 1' FROM THE EDGE OF THE PROPOSED OR EXISTING SIDEWALK BETWEEN THE SIDEWALK AND THE CURB, OR 2 FEET INSIDE THE RIGHT-OF-WAY OR EASEMENT LINE WHEN NO SIDEWALK IS PRESENT OR PROPOSED. REFER TO STANDARD DRAWING L-9901 FOR ADDITIONAL INFORMATION.

IF THE TOP OF THE OPERATING NUT OF ANY VALVE IS GREATER THAN 36 INCHES BELOW FINISHED GRADE, AN EXTENSION STEM SHALL BE FURNISHED TO BRING THE TOP OF THE OPERATING NUT TO WITHIN 24 INCHES OF FINISHED GRADE ELEVATION.

WATER LINES SHALL BE PLACED AT A MINIMUM DEPTH OF 4 FEET MEASURED FROM TOP OF FINISHED GRADE TO TOP OF WATER LINE UNLESS OTHERWISE INDICATED ON THE PLANS. WATER LINES SHALL BE SET DEEPER AT ALL POINTS WHERE NECESSARY TO CLEAR EXISTING OR PROPOSED UTILITY LINES OR OTHER UNDERGROUND RESTRICTIONS BY A MINIMUM OF 18 INCHES.

TWO 3/4 INCH TAPS SHALL BE INSTALLED WITHIN 2 FEET OF THE END OF A LINE ON ALL DEAD-END WATER LINES.

THE CONTRACTOR SHALL ADJUST ALL EXISTING VALVE BOXES TO FINAL GRADE IN BOTH PAVEMENT AND NON-PAVEMENT AREAS IN ACCORDANCE WITH ITEM 807.

THE CONTRACTOR SHALL COORDINATE HIS WORK SUCH THAT NO WATER CUSTOMER WILL BE WITHOUT WATER MORE THAT TWO TIMES THROUGHOUT THE DURATION OF THIS PROJECT.

NO SERVICE CONNECTION PERMITS SHALL BE ISSUED OR CONNECTIONS MADE TO ANY SERVICE TAPS UNTIL WATER LINES HAVE BEEN DISINFECTED BY THE CITY OF COLUMBUS DIVISION OF WATER.

ITEM SPECIAL - SURVEY COORDINATES. SURVEY COORDINATES SHALL INCLUDE ALL MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO OBTAIN HORIZONTAL AND VERTICAL (NORTHING, EASTING, AND ELEVATION) SURVEY COORDINATES FOR THE WATER MAIN IMPROVEMENTS. THE SURVEY COORDINATES SHALL BE OBTAINED FOR THE COMPLETED WATER MAIN CONSTRUCTION AND SHALL INCLUDE ALL VALVES, TEES, CROSSES, BENDS, DEFLECTIONS, PLUGS, REDUCERS, TAPPING SLEEVES, BLOW OFFS, CHLORINATION TAPS, FIRE HYDRANTS, AIR RELEASES, CURB STOPS, CASING PIPE TERMINI, AND OTHER FITTINGS. ADDITIONAL SURVEY COORDINATES ARE REQUIRED ON THE WATER MAIN EVERY 500' WHERE NO FITTING OR OTHER WATER MAIN STRUCTURE IS BEING INSTALLED WITHIN THAT LENGTH OF THE IMPROVEMENT.

ALL SURVEY COORDINATES SHALL BE REFERENCED TO THE APPLICABLE COUNTY ENGINEER'S MONUMENTS, AND SHALL BE BASED ON THE NORTH AMERICAN DATUM OF 1983 (NAD 83) WITH THE (1986) ADJUSTMENT, WITH FURTHER REFERENCE MADE TO THE OHIO STATE PLANE SOUTH COORDINATE SYSTEM, SOUTH ZONE, WITH ELEVATIONS BASED ON NAVD 88 DATUM. ALL COORDINATES (NORTHING, EASTING, ELEVATION) SHALL BE REFERENCED TO THE NEAREST HUNDREDTH (N XXXXXX.XX, E XXXXXX.XX, ELEV. XXX.XX). ALL SURVEY COORDINATES SHALL BE ACCURATE TO WITHIN 1.0 FOOT OR LESS.

THE COORDINATES SHALL BE DOCUMENTED TO THE ENGINEER IN DIGITAL SPREADSHEET FORM AND SHALL INCLUDE THE APPLICABLE ITEM, STATION, NORTHING, EASTING, AND ELEVATION. COORDINATES SHALL BE SUBMITTED TO THE ENGINEER ON A BI-WEEKLY BASIS. COORDINATES SHALL ALSO BE REQUIRED TO BE SUBMITTED TO THE DIVISION OF WATER AS PART OF THE REQUEST FOR CHLORINATION.

LUMP SUM PAYMENT IS FULL COMPENSATION FOR ALL WORK INVOLVED IN OBTAINING AND DOCUMENTING THE SURVEY COORDINATES AS DESCRIBED IN THIS SPECIFICATION.

## AMERICANS WITH DISABILITIES ACT (ADA)

ALL SIDEWALKS, PEDESTRIAN PATHS, CURB RAMPS, AND DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST STANDARDS OF THE AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES (ADAGG).

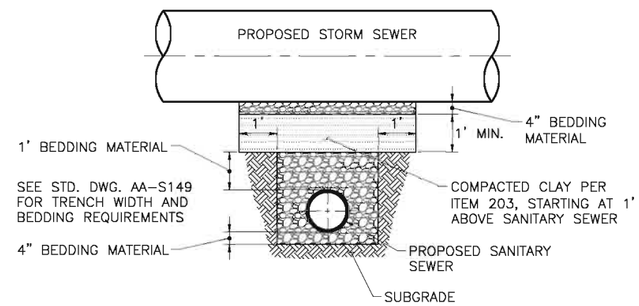
THE ELEVATIONS AND SLOPES PROVIDED ON THE DRAWINGS ARE INTENDED TO CONVEY A DESIGN THAT IS COMPATIBLE WITH ADA GUIDELINES. THE CONTRACTOR SHALL DETERMINE THE AS-BUILT ELEVATIONS OF ADJACENT NEW OR EXISTING CONCRETE CURB AND ADJACENT NEW OR EXISTING WALK PRIOR TO THE START OF RAMP CONSTRUCTION. ADJUSTMENTS IN GRADE SHALL BE MADE BY THE CONTRACTOR BASED ON THE AS-BUILT INFORMATION TO INSURE THAT THE FINISHED WORK IS IN ACCORDANCE WITH ADA GUIDELINES.

DETECTABLE WARNINGS SHALL BE PROVIDED WHEREVER A CURB RAMP CROSSES A VEHICULAR WAY, EXCLUDING UNSIGNALIZED DRIVEWAYS, IN ACCORDANCE WITH DUBLIN STANDARD DRAWING PD-03. **ALL DETECTABLE WARNINGS SHALL BE ADA SOLUTIONS RETROFIT "SURFACE APPLIED SYSTEMS", 2' x 8', BRICK RED, OR APPROVED EQUAL.** THE COST OF THIS WORK WILL BE PAID AT THE UNIT PRICE BID PER EACH, AND SHALL BE IN ADDITION TO ANY OVERLAPPING PAYMENTS PER SQUARE FOOT FOR SIDEWALK OR PEDESTRIAN PATH.

## SANITARY SEWER

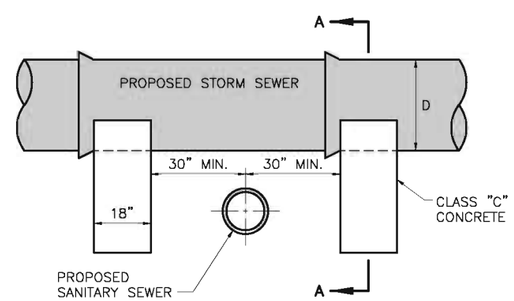
CONNECTION OF ROOF DRAINS, FOUNDATION DRAINS, AND OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM IS PROHIBITED.

IF CLEARANCE ALLOWS, THE CONTRACTOR SHALL PLACE AN IMPERVIOUS CLAY ANTI-INFILTRATION AND INFLOW BARRIER AT EACH POINT WHERE A SANITARY SEWER PASSES BENEATH A STORM SEWER IN ACCORDANCE WITH THE DETAIL SHOWN BELOW AND FOR THE LENGTHS INDICATED ON THE SANITARY SEWER PROFILES. IF CLEARANCE IS INADEQUATE FOR INSTALLATION OF A BARRIER, THEN THE STORM SEWER PIPE MUST BE INSTALLED WITH WATERTIGHT JOINTS TO THE LIMITS SHOWN ON THE STORM SEWER PROFILES AND SHALL BE SUPPORTED ON CONCRETE SADDLES AS DETAILED BELOW. THE COST FOR CLAY BARRIERS AND CONCRETE SADDLES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SANITARY SEWER.



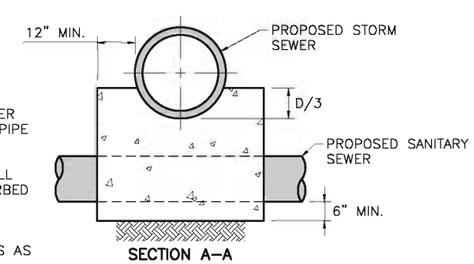

### ANTI-INFILTRATION AND INFLOW BARRIER DETAIL

NOT TO SCALE




NOTES:

1. 1. PROVIDE BOND BREAKER BETWEEN STORM SEWER PIPE AND CONCRETE SADDLE.
2. CONCRETE SADDLES SHALL BE PLACED ON UNDISTURBED EARTH.
3. SADDLES TO BE PLACED ADJACENT TO PIPE BELLS AS SHOWN.




### CONCRETE PIPE SADDLES

NOT TO SCALE

## STORM SEWER

UNLESS OTHERWISE INDICATED, STORM SEWERS SHALL BE REINFORCED CONCRETE PIPE CONFORMING TO ASTM DESIGNATION C76, WALL B, CLASS IV FOR PIPE DIAMETERS 12 INCHES TO 15 INCHES AND CLASS III FOR 18 INCHES AND LARGER. WHERE SPECIFICALLY CALLED FOR ON THE PLANS, HDPE OR DUCTILE IRON PIPE SHALL BE SUBSTITUTED FOR CONCRETE STORM SEWER PIPE. HDPE PIPE SHALL BE ITEM 720.12, ADS N-12 OR APPROVED EQUAL. DUCTILE IRON PIPE SHALL BE ITEM 801, CLASS 52.

ALL INLETS, CATCH BASINS, AND MANHOLES SHALL BE CHANNELIZED.

ALL CATCH BASINS AND CURB INLETS MUST BE FURNISHED WITH BIKE SAFE GRATES.

WHEREVER REFERENCE IS MADE TO THE ELEVATION TERM "TC" ON THE PLANS, THIS ABBREVIATION SHALL BE UNDERSTOOD AS MEANING THE FOLLOWING:

| STRUCTURE | "TC" ELEVATION LOCATION |
|---|---|
| PROPOSED MANHOLES | TOP OF CASTING |
| PROPOSED CATCH BASINS | TOP OF CASTING |
| PROPOSED CURB INLETS | TOP OF CURB |

WHERE BASELINE OFFSETS ARE NOT PROVIDED, THE CONTRACTOR SHALL PLACE CURB AND GUTTER INLETS WITHIN THE CURB LINE IN ACCORDANCE WITH THE STANDARD DRAWINGS REFERENCED. WHERE OFFSETS ARE PROVIDED FOR CURB INLETS, THEY SHALL BE MEASURED TO THE CENTERLINE OF THE STRUCTURE AT THE FACE OF CURB PER ODOT STANDARD DRAWING CB-2.1.

ROADWAY UNDERDRAINS SHALL BE DISCHARGED INTO THE NEAREST STORMWATER STRUCTURE AVAILABLE ALONG THE LINE OF FLOW. CONTRACTOR SHALL PROVIDE UNDERDRAIN BEYOND THE LIMITS CALLED FOR, AS REQUIRED, TO MAKE OUTLET CONNECTIONS.

WHERE CONCRETE ENCASEMENT IS INDICATED ON THE PLANS, OR DIRECTED BY THE ENGINEER, THE WORK SHALL BE IN ACCORDANCE WITH CITY OF COLUMBUS STANDARD DRAWING AA-S151 (RIGID PIPE), OR AA-S149 (FLEXIBLE PIPE), TYPE 1 BEDDING USING ITEM 905 CLASS "A" CONCRETE. THE TOTAL LENGTH OF BACKFILL SHALL BE FOR ALL EXPOSED PORTIONS OF PIPE, OR AS DIRECTED BY THE ENGINEER. NO SEPARATE PAYMENT.

ALL EXISTING AND PROPOSED CASTINGS SHALL BE ADJUSTED TO MATCH THE SURROUNDING FINISH GRADE BY THE CONTRACTOR. TOP OF CASTING ELEVATIONS PROVIDED ON THE PLANS ARE APPROXIMATE. PAYMENT UNDER ITEM 604, EXISTING MANHOLES ADJUSTED TO GRADE, SHALL ONLY BE FOR CASTING ADJUSTMENTS ON EXISTING MANHOLES THAT REQUIRE NO OTHER WORK. THE COST OF CASTING ADJUSTMENTS FOR NEW OR RECONSTRUCTED MANHOLES OR OTHER DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE PRICE BID FOR THOSE STRUCTURES.

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

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

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

PAYMENT FOR ALL INSPECTIONS, CLEANING, AND MAINTENANCE OF EXISTING AND NEW STORM SEWER SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RELATED ITEMS.

**WHERE PLANS CALL FOR CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES FOR BOTH LINE AND GRADE PRIOR TO THE START OF PIPE LAYING.**

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

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

PAYMENT FOR THE DETERMINATION OF LINE AND GRADE OF EXISTING UTILITIES AS REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT CONTRACT ITEMS.

THE OUTLETS OF ALL NEW STORM SEWER AND CULVERT PIPES 42" DIAMETER AND SMALLER SHALL HAVE A CONCRETE FLARED END SECTION AS MANUFACTURED BY HANSON PIPE AND PRECAST, OR APPROVED EQUAL.

MANUFACTURED SYNTHETIC STONE VENEER SHALL BE APPLIED TO ALL CONCRETE HEADWALLS AS INDICATED ON CITY OF DUBLIN STANDARD DRAWING ST-01, WITH THE COST TO BE INCLUDED IN THE UNIT PRICE BID FOR THE HEADWALL. THIS REQUIREMENT DOES NOT APPLY TO CONCRETE FLARED END SECTIONS.

## ITEM SPECIAL - STORM DETENTION CONTROL STRUCTURE

THE CONTRACTOR SHALL CONSTRUCT THE STORM DETENTION CONTROL STRUCTURE IN ACCORDANCE WITH ITEM 904 AND THE DETAILS PROVIDED ON SHEET 110. THESE DETAILS REFLECT INTENDED DIMENSIONS AND FUNCTIONALITY ONLY. THE PRECAST SUPPLIER SHALL FURNISH SHOP DRAWINGS WITH ALL STRUCTURAL ELEMENTS FOR REVIEW PRIOR TO FABRICATION. STRUCTURAL DRAWINGS SHALL BE SEALED BY AN ENGINEER REGISTERED IN THE STATE OF OHIO.

PAYMENT FOR CONSTRUCTION OF THE STORM DETENTION CONTROL STRUCTURE WILL BE MADE AT THE LUMP SUM PRICE BID INCLUDING ALL SHOP DRAWINGS, EXCAVATION, DEWATERING, BASE MATERIAL, REINFORCING STEEL, CONCRETE, PIPE CONNECTIONS, CASTINGS, BACKFILL, AND ALL OTHER APPURTENANT WORK NECESSARY FOR CONSTRUCTION OF THE CONTROL STRUCTURE, COMPLETE, AND READY FOR SERVICE.

## UTILITIES

UTILITIES KNOWN TO BE LOCATED WITHIN THE LIMITS OF THIS PROJECT ARE LISTED BELOW WITH CONTACT INFORMATION.

CITY OF DUBLIN
DIVISION OF ENGINEERING
KEN RICHARDSON, P.E.
5800 SHIER RINGS ROAD
DUBLIN, OH 43016
(614) 410-4631

COLUMBUS DIVISION OF WATER
TIM HUFFMAN
EMAIL: TEHUFFMAN@COLUMBUS.GOV
PHONE: (614) 645-7677
910 DUBLIN ROAD
COLUMBUS, OHIO 43215

CITY OF COLUMBUS
DIVISION OF SEWERAGE & DRAINAGE
ROB HERR
1250 FAIRWOOD AVENUE
COLUMBUS, OH 43206
(614) 645-0483

COLUMBIA GAS OF OHIO
ROB CALDWELL - FIELD ENGINEER
EMAIL: RCALDWELL@NISOURCE.COM
PHONE: (614) 481-1057
1600 DUBLIN ROAD
COLUMBUS, OH 43212

AMERICAN ELECTRIC POWER - TRANSMISSION
DAVID PARRISH
700 MORRISON ROAD
GAHANNA, OH 43230
(614) 552-1170

AMERICAN ELECTRIC POWER - DISTRIBUTION
ROB SLONEKER
850 TECH CENTER DRIVE
GAHANNA, OH 43230-6605
883-6817

AMERICAN ELECTRIC POWER
ROBERTA PYLE -
DISTRIBUTION NETWORK
EMAIL: RLPYLE@AEP.COM
PHONE: (614) 716-1298
1 RIVERSIDE PLAZA, 12TH FLOOR
COLUMBUS, OH 43215

AT&T OF OHIO
TOM ZIOMEK - MANAGER OSPE
EMAIL: TZ7315@ATT.COM
PHONE: (614) 223-7162
111 NORTH 4TH STREET
COLUMBUS, OH 43215

TW TELECOM
RON LEFFLER - OUTSIDE PLANT ENGINEER
EMAIL: RON.LEFFLER@TWTELECOM.COM
PHONE: (614) 255-2126
250 W. OLD WILSON BRIDGE ROAD,
SUITE 130
WORTHINGTON, OHIO 43081

TIME WARNER CABLE
RAY MAURER - CONSTRUCTION SUPERVISOR
EMAIL: RAY.MAURER@TWCABLE.COM
PHONE: (614) 481-5262
3760 INTERCHANGE ROAD,
COLUMBUS, OHIO 43204

WIDE OPEN WEST
JAYTEE NOVARIA
3675 CORPORATE DRIVE
COLUMBUS, OH 43231
(614) 948-4653

DUBLINK PROFESSIONAL
SERVICES GROUP
JOE TEPPER
PHONE: (614) 921-8620
1366 DUBLIN ROAD
COLUMBUS, OH 43215

VERIZON
WILLIAM MUETHER
550 LEADER STREET
MARION, OH 43302
(740) 383-0527

THE CONTRACTOR SHALL GIVE NOTICE OF INTENT TO CONSTRUCT TO OHIO UTILITIES PROTECTION SERVICE (TELEPHONE NUMBER 800-362-2764) AND TO OWNERS OF UNDERGROUND UTILITIES THAT ARE NOT MEMBERS OF A REGISTERED UNDERGROUND PROTECTION SERVICE. NOTICE SHALL BE GIVEN AT LEAST 2 WORKING DAYS BEFORE START OF CONSTRUCTION.

THE IDENTITY AND LOCATIONS OF EXISTING UNDERGROUND UTILITIES IN THE CONSTRUCTION AREA HAVE BEEN SHOWN ON THE PLANS AS ACCURATELY AS PROVIDED BY THE OWNER OF THE UNDERGROUND UTILITY. THE CITY OF DUBLIN AND THE CITY ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OR DEPTHS OF UNDERGROUND FACILITIES SHOWN ON THE PLANS. IF DAMAGE IS CAUSED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF THE SAME AND FOR ANY RESULTING CONTINGENT DAMAGE.

LOCATION, SUPPORT, PROTECTION AND RESTORATION OF ALL EXISTING UTILITIES AND APPURTENANCES, SHOWN OR NOT SHOWN ON THE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PRICES BID FOR THE VARIOUS ITEMS OF THE CONTRACT.

WHEN UNKNOWN OR INCORRECTLY LOCATED UNDERGROUND UTILITIES ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY OWNER AND THE CITY ENGINEER.

## ITEM SPECIAL - STEEL-BACKED TIMBER GUARDRAIL

THIS WORK CONSISTS OF CONSTRUCTING STEEL-BACKED TIMBER GUARDRAIL AND RELATED GUARDRAIL POSTS, TERMINAL SECTIONS, STRUCTURE CONNECTIONS, SPECIAL CONNECTIONS TO OTHER GUARDRAIL TYPES, AND RELATED APPURTENANCES. THE WORK SHALL INCLUDE THE FURNISHING, ASSEMBLING, AND ERECTING OF ALL COMPONENT PARTS, MATERIALS, AND INCIDENTALS, COMPLETE AND IN PLACE, IN ACCORDANCE WITH THE DETAILS AND AT THE LOCATIONS SHOWN IN THE PLANS, OR AS DIRECTED BY THE CITY ENGINEER, AND ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS, WHERE APPLICABLE.

### MATERIALS

THE CONTRACTOR SHALL FURNISH MATERIALS IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

TIMBER RAIL, POSTS AND BLOCKOUTS: FURNISH TIMBER CONFORMING TO AASHTO M 168. FABRICATE THE TIMBER RAIL, BLOCKOUTS, AND POSTS FROM DRY, WELL SEASONED, AND DRESSED ROUGH SAWN DOUGLAS FIR, SOUTHERN PINE, OR OTHER SPECIES HAVING A STRESS GRADE OF AT LEAST 1500 POUNDS PER SQUARE INCH. TREAT THE TIMBER RAIL, BLOCKOUT ELEMENTS, AND POSTS ACCORDING TO AASHTO M 133. POSTS SHALL HAVE A 10-INCH BY 12-INCH CROSS SECTIONAL DIMENSION AND SHALL BE 7 FEET IN LENGTH UNLESS OTHERWISE SPECIFIED IN THE PLANS. NO TIMBER RAIL, POST OR BLOCKOUT SHALL BE USED THAT EXHIBITS A THROUGH CHECK, SHAKE, OR END SPLIT IN THE SAME PLANE AS, OR PARALLEL TO THE BOLT HOLE AND EXTENDING FROM THE TOP OF THE RAIL, POST OR BLOCKOUT TO WITHIN 3 INCHES OF THE BOLT HOLE.

STEEL BACKING AND HARDWARE: FABRICATE THE STEEL BACKING ELEMENTS FROM 3/8-INCH STRUCTURAL STEEL THAT CONFORMS TO THE HIGH-STRENGTH, LOW-ALLOY REQUIREMENTS OF ASTM A 242. ALL FASTENER HARDWARE SHALL ALSO CONFORM TO THE STRENGTH REQUIREMENTS OF ASTM A 242. THE STEEL BACKING ELEMENTS AND FASTENER HARDWARE SHALL BE GALVANIZED IN ACCORDANCE WITH ODOT 711.02.

CONCRETE ANCHORS AND CURBING: SHALL BE CLASS C CONFORMING TO ODOT 499, ODOT 511, AND ODOT 609.

REINFORCING STEEL: SHALL CONFORM TO ODOT 509, 709.01 (ASTM A 615)

DOWEL BARS: SHALL CONFORM TO ODOT 709.13

PAINTING: TIMBER RAIL, BLOCKOUTS, AND THE EXPOSED POST LENGTHS AND HARDWARE SHALL BE PAINTED WOLF GREY, USING A COLOR APPROVED BY THE CITY ENGINEER. THE FIRST PAINT COAT SHALL BE A PRIMER AND USED ON WOOD AND GALVANIZED SURFACES. FINAL PAINT SURFACE SHALL BE APPLIED IN TWO COATS, EACH WITH A MINIMUM 2.0 MILL DRY FILM THICKNESS FOR EACH COAT. PAINT SHALL BE HIGH QUALITY, ALL WEATHER PAINT SUITABLE FOR USE ON GALVANIZED METAL, TIMBER RAIL, AND WOOD POSTS.

### CONSTRUCTION REQUIREMENTS

THE FOLLOWING REQUIREMENTS SHALL SUPPLEMENT, AND IN CASES OF PERCEIVED CONFLICT, REPLACE THE REQUIREMENTS OF ODOT 606.

POSTS: TREAT FIELD CUTS FOR WOOD POSTS WITH TWO COATS OF PRESERVATIVE APPLIED WITH A BRUSH OR SPRAYER. DO NOT PLACE FIELD CUTS IN CONTACT WITH THE GROUND.

PUNCH OR DRILL PILOT HOLES NO MORE THAN 1/2 INCH LARGER THAN THE POST DIMENSIONS. DRIVE THE POSTS INTO THE PILOT HOLES AND SET THE POSTS PLUMB. BACKFILL AND COMPACT AROUND THE POSTS WITH ACCEPTABLE MATERIAL.

WHERE AN IMPENETRABLE OBJECT IS ENCOUNTERED, USE A SHORT POST WITH A CONCRETE ANCHOR, DECREASE THE POST SPACING, OR NEST TWO RAIL ELEMENTS AS APPROVED BY THE ENGINEER. DO NOT CHANGE THE POST LENGTHS AND SPACINGS IN TERMINAL SECTIONS WITHOUT THE APPROVAL OF THE ENGINEER.

RAIL ELEMENTS: DO NOT MODIFY SPECIFIED HOLE DIAMETERS OR SLOT DIMENSIONS.

EQUALLY SPACE BOLTS ALONG THE FRONT FACE OF THE TIMBER RAIL TO MATCH THE HOLES IN THE STEEL BACKING. ALIGN TIMBER GUARDRAIL ALONG THE TOP AND FRONT OF THE TIMBER RAIL.

FIELD CUT TIMBER RAILS TO PRODUCE A CLOSE FIT AT JOINTS. TREAT FIELD CUTS WITH 2 COATS OF CHROMATED COPPER ARSENATE.

WHEN REQUIRED, FIELD DRILL HOLES IN THE STEEL BACKING ON CURVED SECTIONS TO CORRESPOND TO THE FIELD CUT WOOD RAILS AT THE JOINTS. DO NOT USE A TORCH TO CUT HOLES.

TERMINAL SECTIONS AND STRUCTURE CONNECTIONS: CONSTRUCT TERMINAL SECTIONS AND STRUCTURE CONNECTIONS IN ACCORDANCE WITH THE DETAILS AND AT THE LOCATIONS SHOWN IN THE PLANS. TERMINAL SECTIONS AND STRUCTURE CONNECTIONS CONSIST OF POSTS, RAILING, HARDWARE, TRANSITION CURBING, AND ANCHORAGE ASSEMBLIES NECESSARY TO CONSTRUCT THE TYPE OF TERMINAL SECTION OR STRUCTURE CONNECTION SPECIFIED.

WHERE CONCRETE ANCHORS ARE INSTALLED, CONSTRUCT EITHER CAST-IN-PLACE OR PRECAST UNITS. DO NOT CONNECT THE GUARDRAIL TO CAST-IN-PLACE ANCHORS UNTIL THE CONCRETE HAS CURED 7 DAYS. INSTALL END ANCHOR CABLES TIGHTLY WITHOUT SLACK.

GUARDRAIL REFLECTOR TABS: INSTALL IN ACCORDANCE WITH THE REQUIREMENTS OF ODOT 626 PERTINENT TO TYPE A, ONE-WAY GUARDRAIL BLOCKOUT REFLECTORS.

### MEASUREMENT

STEEL-BACKED TIMBER RAIL OF THE TYPE AND POST LENGTH SPECIFIED IN THE PLANS WILL BE MEASURED BY THE NUMBER OF FEET FROM CENTER-TO-CENTER OF END POSTS FURNISHED AND ERECTED COMPLETE, EXCLUDING TERMINAL SECTIONS AND STRUCTURE CONNECTIONS, AS SHOWN IN THE PLAN DETAILS.

TERMINAL SECTIONS AND STRUCTURE CONNECTIONS OF THE TYPE(S) SPECIFIED SHALL BE MEASURED BY THE NUMBER OF EACH FURNISHED AND ERECTED COMPLETE.

### PAYMENT

ALL COSTS ASSOCIATED WITH FURNISHING AND INSTALLING STEEL BACKED TIMBER GUARDRAIL, INCLUDING PAINTING AND OTHER INCIDENTALS, WILL BE PAID AT THE CONTRACT PRICE PER UNIT AS FOLLOWS:

| ITEM | UNIT | DESCRIPTION |
|---|---|---|
| SPECIAL | L.F. | STEEL-BACKED TIMBER GUARDRAIL, TYPE A |
| SPECIAL | EACH | STEEL-BACKED TIMBER GUARDRAIL, TERMINAL SECTION, TYPE SBT FAT-30 |

PAYMENT WILL BE FULL COMPENSATION FOR THE WORK PRESCRIBED IN THIS SECTION.

## ITEM 607 - FENCE, MISC: WOOD FENCE, AS PER PLAN

WOOD FENCE SHALL BE CONSTRUCTED ALONG BIKE PATHS AT THE LOCATIONS SHOWN IN ACCORDANCE WITH ODOT STANDARD ROADWAY DRAWING RM-5.2, "BIKEWAY RAILING", EXCEPT AS MODIFIED ON THE PLANS. SPECIFICALLY, THE OFFSET FROM THE EDGE OF BIKE PATH PAVEMENT TO THE FACE OF THE FENCE SHALL BE REDUCED TO 2'-0" AND THE LENGTH OF THE FLARED ENDS SHALL BE REDUCED TO 10 FEET. ALL WOOD FENCES SHALL BE PAINTED "WOLF GRAY" AS DIRECTED BY THE CITY.

PAYMENT WILL BE MADE FOR BIKEWAY RAILING AT THE UNIT PRICE BID PER LINEAL FOOT FOR ITEM 607-FENCE MISC: WOOD FENCE, A.P.P., AND SHALL INCLUDE FURNISHING AND PLACING ALL POSTS, RAILS, HARDWARE, AND PAINTING.

## ROCK EXCAVATION

SUBSURFACE INVESTIGATIONS WERE PERFORMED AND THE DATA IS PROVIDED IN THE BIDDING DOCUMENTS. **ROCK ELEVATIONS REFLECTED BY THE CROSS SECTIONS BETWEEN BORING LOCATIONS WERE ESTIMATED BY INTERPOLATION FOR DESIGN AND ESTIMATING PURPOSES ONLY. LOGS, TEST DATA, AND INTERPOLATIONS ARE NOT WARRANTED TO REFLECT ACTUAL SUBSURFACE CONDITIONS. THE CONTRACTOR SHALL EXAMINE THE AVAILABLE INFORMATION AND OBTAIN ADDITIONAL INFORMATION IF NECESSARY, IN HIS JUDGEMENT, FOR ESTIMATING, BIDDING, AND CONSTRUCTION PURPOSES.**

MASS EXCAVATION OF ROCK WILL BE PAID AT THE UNIT PRICE BID PER CUBIC YARD FOR ITEM 203 – EXCAVATION (ROCK). ROCK SHALL BE DEFINED AS HARD MATERIAL THAT CANNOT BE RIPPED BY A "300" EXCAVATOR WITH ROCK TEETH.

ROCK EXCAVATED IN UTILITY TRENCHES FOR WATER, SANITARY SEWER, STORM SEWER, ELECTRICAL DUCT, AND ANY UTILITY RELATED STRUCTURES SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ASSOCIATED UTILITY ITEM AND WILL NOT BE PAID SEPARATELY.

## BLASTING

IF NECESSARY FOR THE PROSECUTION OF THE WORK, BLASTING WILL BE PERMITTED IN ACCORDANCE WITH ITEM 208 OF THE 2013 OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS AND AS SPECIFIED BELOW:

CONTRACTOR QUALIFICATIONS AND REQUIREMENTS

1. THE BLASTING CONTRACTOR SHALL HAVE A MINIMUM OF 5 YEARS BLASTING EXPERIENCE IN URBAN AREAS TO DESIGN, REVIEW, EVALUATE, PERFORM AND MODIFY THE BLASTING OPERATION. THE BLASTING CONTRACTOR SHALL PREPARE A PLAN DETAILING ALL ASPECTS OF BLASTING OPERATIONS INCLUDING PREBLAST SURVEY AND LOCATIONS OF SEISMOGRAPHS, AND SHALL SUBMIT THE PLAN FOR THE ENGINEER'S REVIEW PRIOR TO THE START OF WORK.

2. THE BLASTING CONTRACTOR SHALL DESIGN TEST BLASTS AT EACH EXCAVATION LOCATION, AND SUPERVISE AND CONDUCT TEST BLASTS UNTIL PRODUCTION CONTROLLED BLASTS AND PATTERNS ARE DEVELOPED THAT ELIMINATE POTENTIAL DAMAGE TO RESIDENTIAL STRUCTURES, EXISTING UTILITIES, ROADS, AND BRIDGES, AND MEETS THE REQUIREMENTS FOR VIBRATION, AIR BLAST AND DUST CONTROL.

3. THE BLASTING CONTRACTOR SHALL PERIODICALLY, OR WHEN REQUESTED BY THE ENGINEER, REVIEW THE BLASTING OPERATIONS AND MAKE REQUIRED CHANGES IN THE BLASTING OPERATION TO MEET THE REQUIREMENTS OF THE SPECIFICATIONS AND CHAPTER 30 OF THE DUBLIN FIRE PREVENTION CODE.

4. IF TEST BLASTS, OR ANY OTHER BLAST CAUSES PEAK PARTICLE VELOCITIES IN EXCESS OF THOSE ALLOWED, OR RESULTS IN EXCESSIVE OVER BREAK OR EXCESSIVE FRACTURING OF THE ROCK, THE BLASTING CONTRACTOR SHALL MODIFY PROCEDURES TO THE SATISFACTION OF THE ENGINEER.

5. PRIOR TO STARTING BLASTING, THE CONTRACTOR SHALL OBTAIN ALL NECESSARY LOCAL, FEDERAL AND STATE PERMITS AND OBTAIN INSURANCE AND BOND COVERAGE AS REQUIRED BY THE CITY OF DUBLIN. THE OWNER SHALL PROVIDE ALL NECESSARY REQUIRED DOCUMENTATION TO THE PERRY TOWNSHIP FIRE DEPARTMENT FOR THE PURPOSE OF OBTAINING A BLASTING PERMIT.

6. PRIOR TO STARTING BLASTING, THE CONTRACTOR SHALL NOTIFY PERRY TOWNSHIP FIRE DEPARTMENT, OHIO DEPARTMENT OF NATURAL RESOURCES, OHIO DEPARTMENT OF TRANSPORTATION, AND THE DUBLIN CITY ENGINEER, ABUTTING PROPERTY OWNERS, THE GENERAL PUBLIC REASONABLY EXPECTED TO BE POTENTIALLY AFFECTED BY THE BLASTING, AND OTHERS AS REQUIRED BY THE LOCAL, STATE AND FEDERAL LAWS AND OTHERS AS DEEMED APPROPRIATE BY THE ENGINEER. ADDITIONALLY, NOTIFICATION OF BLASTING SHALL BE GIVEN TO ALL PROPERTIES WITHIN A MINIMUM DISTANCE OF 500 FEET OF THE BLASTING AREA.

7. THE CONTRACTOR SHALL FURNISH THE CITY ENGINEER WITH A LIST OF THOSE PARTIES NOTIFIED IN ACCORDANCE WITH THIS POLICY.

8. BLASTING SHALL BE CONDUCTED ONLY IN THE DAYLIGHT HOURS. BLASTING SHALL NOT BE CONDUCTED BETWEEN THE HOURS OF 7:00 A.M. TO 9:00 A.M., AND OTHER HOURS AS DETERMINED BY THE ENGINEER.

9. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL CLAIMS FOR DAMAGE CAUSED BY BLASTING. THE CONTRACTOR SHALL, IF SO ORDERED BY THE ENGINEER, CEASE BLASTING AND MAY CONTINUE TO EXCAVATE THE ROCK BY OTHER METHODS ACCEPTABLE TO THE ENGINEER.

STRUCTURAL SURVEY AND MONITORING OF VIBRATION

THIS WORK CONSISTS OF CONDUCTING A SURVEY OF THE CONDITION OF STRUCTURES AND THE MONITORING OF GROUND VIBRATIONS. THE SURVEY WORK IS TO BE CONDUCTED BEFORE AND AFTER ALL CONSTRUCTION WORK IS PERFORMED WHICH COULD CAUSE UNDESIRABLE GROUND VIBRATIONS. GROUND VIBRATIONS AND ACOUSTICS SHALL BE MONITORED AT THE APPROPRIATE TIMES FOR THE DURATION OF THIS PROJECT.

A PROFESSIONAL ENGINEER, REGISTERED IN THE STATE OF OHIO, SHALL BE ENGAGED BY THE CONTRACTOR TO BE IN CHARGE OF CONDUCTING A STRUCTURAL SURVEY AND MONITORING VIBRATIONS AND ACOUSTICS. THE ENGINEER IN CHARGE OF PERFORMING THE REQUIRED WORK UNDER THIS ITEM IS HEREIN REFERRED TO AS THE MONITORING FOREMAN. THE MONITORING FOREMAN AND/OR HIS TEAM OF EXPERTS SHALL HAVE COLLECTIVELY ACCRUED NOT LESS THAN 2 YEARS OF SUCCESSFUL EXPERIENCE IN PERFORMING THE TYPE OF WORK SPECIFIED BY THIS NOTE. THE MONITORING FOREMAN AND/OR HIS TEAM OF EXPERTS SHALL HAVE EXPERTISE IN: (1) CONDUCTING STRUCTURAL SURVEYS BY VIDEO METHODS; (2) MONITORING VIBRATIONS WITH A SEISMOGRAPH OR WITH OTHER APPROPRIATE INSTRUMENTATION; AND (3) ASSESSING SITES FOR POTENTIAL DAMAGE THAT MAY OCCUR AS A RESULT OF THE PROPOSED CONSTRUCTION. DOCUMENTATION OF THIS EXPERIENCE SHALL BE FURNISHED AT THE PRECONSTRUCTION MEETING. THE REQUIREMENT FOR THE MONITORING FOREMAN TO BE AN ENGINEER CAN BE WAIVED PROVIDED THAT THE MONITORING FOREMAN'S EXPERIENCE OR THE COLLECTIVE EXPERIENCE OF THE MONITORING TEAM SHOWS SUBSTANTIAL EXPERTISE IN PERFORMING THE REQUIRED WORK.

THE STRUCTURAL SURVEY SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

1. DOCUMENTATION OF THE INTEGRITY OF EXISTING BUILDING MATERIALS AND THE GENERAL OVERALL CONDITION OF THE STRUCTURES RECORDED BY WRITTEN TEXT, PHOTOGRAPHS, AND DIGITAL VIDEO RECORDING.

2. THE ESTABLISHMENT OF LOCATIONS AND ELEVATIONS OF REFERENCE POINTS, CHOSEN BY THE MONITORING FOREMAN, FOR DOCUMENTATION OF MEASUREMENTS. AT LEAST TWO SEISMOGRAPHS SHALL BE LOCATED ON THE I–270 BRIDGE AT LOCATIONS AGREEABLE TO THE ENGINEER.

3. A DETAILED ON–SITE INSPECTION CONDUCTED IN THE PRESENCE OF THE ENGINEER, THE CONTRACTOR, PROPERTY OWNERS, PROPERTY TENANTS IF APPROPRIATE, AND REPRESENTATIVES OF ANY INVOLVED UTILITY COMPANIES.

4. DOCUMENTATION OF ALL STRUCTURAL DEFICIENCIES WITH REGARD TO LOCATION, SIZE, TYPE, ETC.

THE MONITORING OF VIBRATIONS AND ACOUSTICS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

1. DETERMINATION AND DOCUMENTATION OF EXISTING LEVELS OF VIBRATIONS AND NOISE.

2. MONITORING OF ALL CONSTRUCTION OPERATIONS THAT SIGNIFICANTLY CONTRIBUTE TO THE PRODUCTION OF VIBRATIONS AND NOISE WITH A SPECIAL EFFORT MADE TO DOCUMENT THE VIBRATION AND SOUND LEVELS ASSOCIATED WITH BLASTING.

3. THE DEVELOPMENT OF CRITERIA FOR CONTROLLING CONSTRUCTION ACTIVITIES SO THAT THE MONITORING FOREMAN'S ALLOWABLE PREDETERMINED VIBRATION LEVELS ARE NOT EXCEEDED DURING CONSTRUCTION.

WHEN APPROPRIATE, WATER SAMPLES SHALL BE COLLECTED FROM WELLS, STREAMS OR PROJECT RUNOFF AREAS TO DOCUMENT BEFORE AND AFTER CONSTRUCTION CONDITIONS REGARDING THE QUALITY OF WATER AVAILABLE IN THE VICINITY OF THE PROJECT.

VIBRATION MONITORING GUIDELINES CAN BE FOUND IN FHWA'S MAY 1985 MANUAL ENTITLED "ROCK BLASTING" AND IN VARIOUS OTHER REPORTS.

THE PEAK PARTICLE VELOCITY (PPV) OF GROUND VIBRATIONS IS GENERALLY USED TO MONITOR THE EFFECT OF VIBRATIONS ON STRUCTURES. WHEN MONITORING VIBRATIONS CONSIDERATION MUST BE GIVEN TO: (1) THE TYPE OF STRUCTURE BEING EVALUATED AND (2) THE FREQUENCY OF THE VIBRATIONS (LOW FREQUENCY <40 Hz AND HIGH FREQUENCY >40 Hz). GENERALLY ALLOWABLE GROUND VIBRATION PEAK PARTICLE VELOCITIES RANGE FROM 0.5 INCHES PER SECOND TO 2.0 INCHES PER SECOND DEPENDING ON THE TYPE OF STRUCTURE UNDER CONSIDERATION. FOR THIS PROJECT THE ALLOWABLE PPV SHALL NOT EXCEED 1.0 INCH PER SECOND ON ANY STRUCTURE OR THE ALLOWABLE PREDETERMINED PPV DETERMINED BY THE MONITORING FOREMAN, WHICHEVER IS LESS. WHEN AN ALLOWABLE PPV IS EXCEEDED, THE VIBRATION PRODUCING OPERATION SHALL BE SUSPENDED AND ALTERNATIVE CONSTRUCTION PROCEDURES SHOULD BE EVALUATED. THE CITY ENGINEER SHALL BE CONSULTED WHENEVER THE MEASURED MAGNITUDE OF THE VIBRATION LEVEL IS CONSIDERED POTENTIALLY CAPABLE OF PRODUCING STRUCTURAL DAMAGE.

THE FINAL 20 PERCENT OF THE PAYMENT FOR THIS WORK SHALL NOT BE MADE UNTIL THE ENGINEER HAS RECEIVED AND APPROVED THREE COPIES OF THE MONITORING FOREMAN'S FINAL REPORT. THE FINAL REPORT SHALL BE TYPED AND CONTAIN ALL MEASUREMENTS, CONCLUSIONS, AND RECOMMENDATIONS WHICH RESULTED FROM PERFORMING THE ABOVE REQUIRED WORK. INCLUDED WITH THE REPORTS SHALL BE ONE COPY OF ALL PICTURES AND VIDEO RECORDINGS. INTERIM REPORTS SHALL BE FURNISHED TO THE ENGINEER DURING CONSTRUCTION THEREBY KEEPING THE ENGINEER INFORMED OF THE MONITORING FOREMAN'S PROGRESS AND FINDINGS. THE ORIGINAL DIGITAL FILES SHALL REMAIN IN THE EXCLUSIVE POSSESSION OF THE MONITORING FOREMAN FOR A PERIOD OF NOT LESS THAN 10 YEARS.

THE COST FOR STRUCTURAL SURVEY AND MONITORING OF VIBRATION AS DESCRIBED HEREIN SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 – EXCAVATION (ROCK).

# GENERAL SUMMARY

* DENOTES OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (LATEST EDITION). ALL OTHER ITEMS REFERENCE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS.

| ITEM | DESCRIPTION | TOTAL | UNIT |
|---|---|---|---|
| | ROADWAY | | |
| 201 | 18" TREES OR STUMPS REMOVED | 205 | EACH |
| 201 | 30" TREES OR STUMPS REMOVED | 25 | EACH |
| 201 | 48" TREES OR STUMPS REMOVED | 6 | EACH |
| 201 | CLEARING AND GRUBBING | 1 | LUMP |
| 202 | PIPE REMOVED AND DISPOSED OF | 700 | L.F. |
| 202 | CATCH BASIN OR INLET REMOVED AND DISPOSED OF | 6 | EACH |
| 202 | CONCRETE CURB REMOVED AND DISPOSED OF | 155 | L.F. |
| 202 | CONCRETE CURB & GUTTER REMOVED AND DISPOSED OF | 105 | L.F. |
| 202 | SIDEWALK REMOVED AND DISPOSED OF (CONCRETE) | 6860 | S.F. |
| 203 | EXCAVATION (SOIL) | 82700 | C.Y. |
| 203 | EXCAVATION (ROCK) | 40300 | C.Y. |
| 203 | EMBANKMENT | 13250 | C.Y. |
| 204 | SUBGRADE COMPACTION | 54250 | S.Y. |
| 204 | EXCAVATION OF SUBGRADE | 5500 | C.Y. |
| 204 | GRANULAR EMBANKMENT, NO. 2 STONE, A.P.P. | 5500 | C.Y. |
| 254 | PAVEMENT PLANING, 1 1/4" | 12050 | S.Y. |
| 254 | PAVEMENT PLANING, 3" | 140 | S.Y. |
| 607 | FENCE, MISCELLANEOUS: WOOD FENCE, A.P.P. | 207 | L.F. |
| 616 | WATER (FOR DUST CONTROL) | 80 | M.GALS |
| 619 | FIELD OFFICE, TYPE "B" | 12 | MONTHS |
| 623 | CONSTRUCTION LAYOUT STAKES | 1 | LUMP |
| 624 | MOBILIZATION | 1 | LUMP |
| 653 | TOPSOIL FURNISHED AND PLACED, A.P.P. | 4850 | C.Y. |
| 659 | SEEDING AND MULCHING, A.P.P. | 58000 | S.Y. |
| 659 | WATER | 100 | M.GALS |
| 659 | COMMERCIAL FERTILIZER | 7 | TON |
| SPECIAL | STEEL-BACKED TIMBER GUARDRAIL, TYPE A | 365 | L.F. |
| SPECIAL | STEEL-BACKED TIMBER GUARDRAIL TERMINAL SECTION, TYPE SBT FAT-30 | 4 | EACH |
| SPECIAL | PROOF SURVEY, A.P.P. | 1 | LUMP |
| | SANITARY SEWER | | |
| 604 | MANHOLE TYPE "C" (AA-S102) | 20 | EACH |
| 901 | 8" SANITARY SEWER PIPE WITH TYPE 1 BEDDING | 370 | L.F. |
| 901 | 10" SANITARY SEWER PIPE WITH TYPE 1 BEDDING | 1100 | L.F. |
| 901 | 12" SANITARY SEWER PIPE WITH TYPE 1 BEDDING | 2375 | L.F. |
| 901 | 15" SANITARY SEWER PIPE WITH TYPE 1 BEDDING | 1615 | L.F. |
| 918 | 6" SANITARY HOUSE CONNECTION SERVICE, COMPLETE | 1 | EACH |

| ITEM | DESCRIPTION | TOTAL | UNIT |
|---|---|---|---|
| | STORM SEWER | | |
| 601 | ROCK CHANNEL PROTECTION, TYPE "C" WITH FILTER FABRIC, A.P.P. | 65 | C.Y. |
| 601 | CRUSHED AGGREGATE SLOPE PROTECTION, NO. 2 STONE WITH FILTER FABRIC, A.P.P. | 200 | C.Y. |
| 604 | CURB AND GUTTER INLET (AA-S125) WITH BIKE SAFE GRATE | 47 | EACH |
| 604 | STANDARD CATCH BASIN (AA-S133) WITH BIKE SAFE GRATE (E.J. #5110, TYPE M3) | 6 | EACH |
| 604 | MANHOLE TYPE "C" (AA-S102) | 26 | EACH |
| 604 | ODOT NO. 2-3 CATCH BASIN (CB-2-3) WITH BIKE SAFE GRATE (E.J. #5110, TYPE M3) | 3 | EACH |
| 604 | ODOT NO. 2-4 CATCH BASIN (CB-2-4) WITH BIKE SAFE GRATE (E.J. #5110, TYPE M3) | 1 | EACH |
| 604 | ODOT NO. 2-5 CATCH BASIN (CB-2-5) WITH BIKE SAFE GRATE (E.J. #5110, TYPE M3) | 1 | EACH |
| 604 | ODOT NO. 3 CATCH BASIN (CB-3) WITH BIKE SAFE GRATE (E.J. #5110, TYPE M3) | 1 | EACH |
| 604 | ODOT NO. 3 MANHOLE | 2 | EACH |
| 605 | 4-INCH PIPE UNDERDRAIN (INCLUDING #57 AGGREGATE BASE) | 12500 | L.F. |
| 895 | MANUFACTURED WATER QUALITY STRUCTURE, A.P.P. | 1 | LUMP |
| 901 | 12" STORM SEWER PIPE; ADS N-12 OR APPROVED EQUAL, WITH TYPE 1 BEDDING | 80 | L.F. |
| 901 | 12" STORM SEWER PIPE; ASTM C-76, CL. IV, WITH TYPE 1 BEDDING | 2015 | L.F. |
| 901 | 12" STORM SEWER PIPE; ASTM C-76, CL. IV, WITH TYPE 1 BEDDING & WATERTIGHT JOINTS | 145 | L.F. |
| 901 | 15" STORM SEWER PIPE; ASTM C-76, CL. IV, WITH TYPE 1 BEDDING | 540 | L.F. |
| 901 | 15" STORM SEWER PIPE; ASTM C-76, CL. IV, WITH TYPE 1 BEDDING & WATERTIGHT JOINTS | 50 | L.F. |
| 901 | 18" STORM SEWER PIPE; ASTM C-76, CL. III, WITH TYPE 1 BEDDING | 1520 | L.F. |
| 901 | 21" STORM SEWER PIPE; ASTM C-76, CL. III, WITH TYPE 1 BEDDING | 2110 | L.F. |
| 901 | 24" STORM SEWER PIPE; ASTM C-76, CL. III, WITH TYPE 1 BEDDING | 710 | L.F. |
| 901 | 27" STORM SEWER PIPE; ASTM C-76, CL. III, WITH TYPE 1 BEDDING | 305 | L.F. |
| 901 | 30" STORM SEWER PIPE; ASTM C-76, CL. III, WITH TYPE 1 BEDDING | 265 | L.F. |
| 901 | 36" STORM SEWER PIPE; ASTM C-76, CL. III, WITH TYPE 1 BEDDING | 125 | L.F. |
| 901 | 42" STORM SEWER PIPE; ASTM C-76, CL. III, WITH TYPE 1 BEDDING | 150 | L.F. |
| 901 | 54" STORM SEWER PIPE; ASTM C-76, CL. III, WITH TYPE 1 BEDDING | 25 | L.F. |
| 901 | 60" STORM SEWER PIPE; ASTM C-76, CL. III, WITH TYPE 1 BEDDING | 225 | L.F. |
| 901 | 24"x38" STM. SEWER PIPE; ASTM C-507, CL. HE-III, W/ TYPE 1 BED. & WATERTIGHT JNTS. | 70 | L.F. |
| 901 | 29"x45" STM. SEWER PIPE; ASTM C-507, CL. HE-III, W/ TYPE 1 BEDDING | 15 | L.F. |
| SPECIAL | CAST-IN-PLACE PIPE CULVERT HEADWALL (AA-S167) | 1 | EACH |
| SPECIAL | REINFORCED CONCRETE FLARED END SECTION | 3 | EACH |
| SPECIAL | ADS FLARED END SECTION WITH N-12 ADAPTER FITTING | 2 | EACH |
| SPECIAL | STORM DETENTION CONTROL STRUCTURE (MH 78) | 1 | LUMP |
| | CULVERT (BILLINGSLEY CREEK) * | | |
| 503 | COFFERDAMS, CRIBS, AND SHEETING | 1 | LUMP |
| 509 | EPOXY COATED REINFORCING STEEL | 9780 | LBS |
| 511 | CLASS "C" CONCRETE, FOOTING | 123 | C.Y. |
| 512 | TYPE 2 WATERPROOFING | 611 | S.Y. |
| 601 | ROCK CHANNEL PROTECTION, TYPE "B" WITH FILTER FABRIC | 230 | C.Y. |
| 601 | ROCK CHANNEL PROTECTION, TYPE "C" WITH FILTER FABRIC | 203 | C.Y. |
| 603 | CONDUIT, TYPE "A" PRECAST REINFORCED CONCRETE ARCH SECTIONS, A.P.P. (28' SPAN x 10' RISE INCLUDING PRECAST HEADWALLS AND WINGWALLS) | 114 | L.F. |
| 613 | FLOWABLE CONTROLLED DENSITY FILL, TYPE 2, MUD MAT | 20 | C.Y. |
| SPECIAL | STRUCTURE; MISC: MANUFACTURED STONE VENEER | 2070 | S.F. |
| SPECIAL | POLYURETHANE CAULKING (BEIGE) | 150 | L.F. |

| ITEM | DESCRIPTION | TOTAL | UNIT |
|---|---|---|---|
| | WATER | | |
| 801 | 6" DUCTILE IRON WATER PIPE AND FITTINGS, CL. 52 | 120 | L.F. |
| 801 | 8" DUCTILE IRON WATER PIPE AND FITTINGS, CL. 52 | 220 | L.F. |
| 801 | 12" DUCTILE IRON WATER PIPE AND FITTINGS, CL. 52 | 6260 | L.F. |
| 802 | 6" GATE VALVE AND APPURTENANCES | 21 | EACH |
| 802 | 8" GATE VALVE AND APPURTENANCES | 2 | EACH |
| 802 | 12" GATE VALVE AND APPURTENANCES | 1 | EACH |
| 805 | 1" WATER SERVICE TAP, COMPLETE | 1 | EACH |
| 807 | STANDARD HEAVY DUTY VALVE BOX | 35 | EACH |
| 809 | FIRE HYDRANT | 19 | EACH |
| SPECIAL | SURVEY COORDINATES | 1 | LUMP |
| | PAVEMENT | | |
| 301 | BITUMINOUS AGGREGATE BASE (ROADWAY) | 17520 | TON |
| 301 | BITUMINOUS AGGREGATE BASE (BIKEPATH) | 1900 | TON |
| 304 | AGGREGATE BASE (ROADWAY) | 6465 | C.Y. |
| 304 | AGGREGATE BASE (BIKEPATH) | 2110 | C.Y. |
| 407 | TACK COAT, BITUMINOUS | 1830 | GAL. |
| 448 | ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, MEDIUM TRAFFIC | 3410 | TON |
| 448 | ASPHALT CONCRETE SURFACE COURSE, TYPE 1, MEDIUM TRAFFIC (ROADWAY) | 3265 | TON |
| 448 | ASPHALT CONCRETE SURFACE COURSE, TYPE 1, MEDIUM TRAFFIC (BIKEPATH) | 850 | TON |
| 608 | CURB RAMPS, A.P.P. | 12 | EACH |
| 608 | 4" CONCRETE WALK (INCLUDING #57 AGGREGATE BASE) | 5550 | S.F. |
| 608 | 4" CONCRETE WALK WITH INTEGRAL CURB (INCLUDING ITEM 304 AGGREGATE BASE), A.P.P. | 975 | S.F. |
| 609 | SPECIAL MOUNTABLE CONCRETE CURB, A.P.P. | 375 | L.F. |
| 609 | 6" CONCRETE COMBINATION CURB AND GUTTER (INCLUDING #57 AGGREGATE BASE) | 11925 | L.F. |
| 609 | STRAIGHT 18" CONCRETE CURB (INCLUDING #57 AGGREGATE BASE) | 11170 | L.F. |
| SPECIAL | TRUCK APRON PAVEMENT, A.P.P. | 377 | S.Y. |
| SPECIAL | BRICK PAVERS, A.P.P. | 1110 | S.Y. |
| SPECIAL | ASPHALT DRIVEWAY - RESIDENTIAL, A.P.P. | 210 | S.Y. |
| SPECIAL | CONCRETE DRIVEWAY - RESIDENTIAL, A.P.P. | 40 | S.Y. |
| SPECIAL | GRAVEL DRIVEWAY - RESIDENTIAL, A.P.P. | 105 | S.Y. |
| SPECIAL | DETECTABLE WARNING, ADA SOLUTIONS RETROFIT, SURFACE APPLIED, 2' x 8', BRICK RED | 20 | EACH |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

GENERAL SUMMARY

SCALE: NONE

SHEET NO. 9 OF 275

PLOTTED: 10/30/2013 9:26:25 AM
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# GENERAL SUMMARY

** ITEM TO BE PERFORMED BY CITY OF DUBLIN FORCES

* DENOTES OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (LATEST EDITION). ALL OTHER ITEMS REFERENCE CITY OF COLUMBUS CONSTRUCTION AND MATERIAL SPECIFICATIONS.

| ITEM | DESCRIPTION | TOTAL | UNIT |
|---|---|---|---|
| | ELECTRICAL (480V)* | | |
| 625 | CONNECTOR KIT, TYPE II | 59 | EACH |
| 625 | CONNECTOR KIT, TYPE III | 118 | EACH |
| 625 | CABLE SPLICE KITS | 27 | EACH |
| 625 | TRANSFORMER BASE | 59 | EACH |
| 625 | LIGHT POLE, 25'-0", 10" DIA., BANNER ARM | 1 | EACH |
| 625 | LIGHT POLE, 35'-0", 10" DIA., BANNER ARM | 58 | EACH |
| 625 | LIGHT POLE FOUNDATION, 10" DIA., 10'-6" DEPTH | 59 | EACH |
| 625 | #4 AWG, STR, CU, 600V, RHW | 33768 | L.F. |
| 625 | #4 AWG, SOLID, CU, BARE, GROUND CONDUCTOR | 295 | L.F. |
| 625 | #12 AWG, SOLID, CU, 600V, XHHW | 579 | L.F. |
| 625 | #10 AWG, SOLID, CU, 600V, XHHW, POLE AND BRACKET CABLE | 6519 | L.F. |
| 625 | CONDUIT, 2" PVC, 713.07 | 10912 | L.F. |
| 625 | CONDUIT, 3" SLEEVE, PVC, SCH 80, 713.05 | 185 | L.F. |
| 625 | LUMINAIRE, 100 LED, TYPE 2, STREET LIGHT, 480 VOLT, 1ø | 59 | EACH |
| 625 | TRENCH, INCL EXCAVATION, BACKFILL & SEEDING, A.P.P. | 10721 | L.F. |
| 625 | PULL BOX, 725.06, POLYMER CONCRETE, 24" | 6 | EACH |
| 625 | GROUND ROD | 60 | EACH |
| 625 | CADWELD CONNECTION | 60 | EACH |
| 625 | POWER SERVICE | 1 | EACH |
| 625 | ELASTIC, METALIZED CAUTION TAPE | 10721 | L.F. |
| 625 | ELECTRICAL TEST | 1 | LUMP |
| SPECIAL | HALF-BLIND COUPLING CAPS, ALUMINUM, INSTALLED, A.P.P. | 118 | EACH |
| | EROSION CONTROL | | |
| 207 | CONSTRUCTION SEEDING AND MULCHING, A.P.P. | 40000 | S.Y. |
| 207 | INLET PROTECTION, A.P.P. | 58 | EACH |
| 207 | FILTER FABRIC FENCE | 4300 | L.F. |
| 207 | ROCK CHECK DAM | 115 | C.Y. |
| 207 | ROCK WATER BAR, A.P.P. | 3 | EACH |
| 207 | STABILIZED CONSTRUCTION ENTRANCE | 60 | C.Y. |
| * 671 | EROSION CONTROL MAT | 36600 | S.Y. |
| SPECIAL | TREE PROTECTION FENCE | 3500 | L.F. |

| ITEM | DESCRIPTION | TOTAL | UNIT |
|---|---|---|---|
| | AEP DUCT SYSTEM | | |
| SPECIAL | TRENCH TYPE 1 – ASPHALT ROADWAY, A.P.P. | 250 | L.F. |
| SPECIAL | TRENCH TYPE 2 – NON-PAVED AREA, A.P.P. | 80 | L.F. |
| SPECIAL | TRENCH TYPE 3 – FUTURE PAVED AREA, A.P.P. | 5400 | L.F. |
| SPECIAL | 6" PVC CONDUIT, TYPE EB | 33400 | L.F. |
| SPECIAL | CONCRETE ENCASEMENT, PEA GRAVEL, CLASS "A" | 565 | C.Y. |
| SPECIAL | PRECAST CONCRETE ELECTRIC MANHOLE | 9 | EACH |
| | SIGNAL INTERCONNECT* | | |
| 625 | CONDUIT, 2", 725.05 | 5210 | L.F. |
| 625 | CONDUIT, 3", 725.05 | 405 | L.F. |
| 625 | CONDUIT, 3", 725.05, A.P.P. | 85 | L.F. |
| 625 | TRENCH, A.P.P. | 5210 | L.F. |
| 625 | PULL BOX, 725.06, 18" | 15 | EACH |
| 625 | PLASTIC CAUTION TAPE, A.P.P. | 5125 | L.F. |
| | TRAFFIC CONTROL* | | |
| **630 | GROUND MOUNTED SUPPORT, NO. 3 POST, TYPE "S", A.P.P. | 410 | L.F. |
| **630 | GROUND MOUNTED SUPPORT, NO. 4 POST, TYPE "S", A.P.P. | 210 | L.F. |
| **630 | GROUND MOUNTED SUPPORT, SQUARE ANCHOR POST, A.P.P. | 220 | L.F. |
| **630 | STREET NAME SIGN POST AND SUPPORT, A.P.P. | 54 | L.F. |
| **630 | SIGN, FLAT SHEET, TYPE H, VIP | 440 | S.F. |
| **630 | SIGN, STREET NAME, A.P.P. | 4 | EACH |
| **630 | SIGN POST REFLECTOR | 16 | EACH |
| 630 | REMOVAL OF GROUND MOUNTED SIGN AND STORAGE, A.P.P. | 12 | EACH |
| 630 | REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL | 13 | EACH |
| 644 | EDGE LINE, 4" | 2.59 | MILE |
| 644 | LANE LINE, 4" | 2.30 | MILE |
| 644 | CENTER LINE, 4" | 0.43 | MILE |
| 644 | CHANNELIZING LINE, 8" | 2453 | L.F. |
| 644 | CHANNELIZING LINE, 12" | 220 | L.F. |
| 644 | STOP LINE, 24" | 270 | L.F. |
| 644 | CROSSWALK LINE, 12" | 1110 | L.F. |
| 644 | CROSSWALK LINE, 12", A.P.P. | 72 | L.F. |
| 644 | TRANSVERSE LINE, 12" | 53 | L.F. |
| 644 | LANE ARROW, 72" | 32 | EACH |
| 644 | DASHED LINE, 4" | 163 | L.F. |
| 644 | DASHED LINE, 8" (6' LONG, 6' GAP) | 162 | L.F. |
| 644 | DASHED LINE, 12", (3' LONG, 3' GAP) | 220 | L.F. |
| 644 | WORD ON PAVEMENT, 84" | 8 | EACH |
| 644 | SHARED LANE MARKING | 32 | EACH |
| 644 | REMOVAL OF PAVEMENT MARKING | 6 | EACH |

| ITEM | DESCRIPTION | TOTAL | UNIT |
|---|---|---|---|
| | MAINTENANCE OF TRAFFIC * | | |
| 614 | MAINTAINING TRAFFIC | 1 | LUMP |
| 614 | DETOUR SIGNING | 1 | LUMP |
| 614 | LAW ENFORCEMENT OFFICER WITH PATROL CAR | 150 | HOURS |
| 614 | PORTABLE CHANGEABLE MESSAGE SIGN, A.P.P. | 2 | EACH |
| 614 | WORK ZONE EDGE LINE | 0.14 | MILE |
| 614 | WORK ZONE DOUBLE CENTER LINE, YELLOW | 0.29 | MILE |
| 615 | PAVEMENT FOR MAINTAINING TRAFFIC | 141 | S.Y. |
| | TRAFFIC SIGNAL* | | |
| 625 | CONDUIT, 2", 725.05 | 630 | L.F. |
| 625 | TRENCH, A.P.P. | 630 | L.F. |
| 625 | PULL BOX, 725.06, 18" | 6 | EACH |
| 625 | REMOVED PULL BOX | 4 | EACH |
| 625 | PLASTIC CAUTION TAPE, A.P.P. | 630 | L.F. |
| 632 | VEHICULAR SIGNAL HEAD (LED), 3 SECTION, 12" LENS, 1-WAY, A.P.P. | 2 | EACH |
| 632 | DETECTOR LOOP | 10 | EACH |
| 632 | LOOP DETECTOR UNIT, 2 CHANNEL | 2 | EACH |
| 632 | LOOP DETECTOR, LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG | 1637 | L.F. |
| 632 | REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: SIGNAL HEAD | 2 | EACH |
| 632 | SIGNALIZATION, MISC.: LOOP LEAD-IN CABLE SPLICE | 7 | EACH |
| 632 | SIGNALIZATION, MISC.: CONNECT SIGNAL HEAD INDICATION | 12 | EACH |
| | HARDSCAPE | | |
| SPECIAL | DRY-LAID STONE WALL, A.P.P. | 126 | L.F. |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

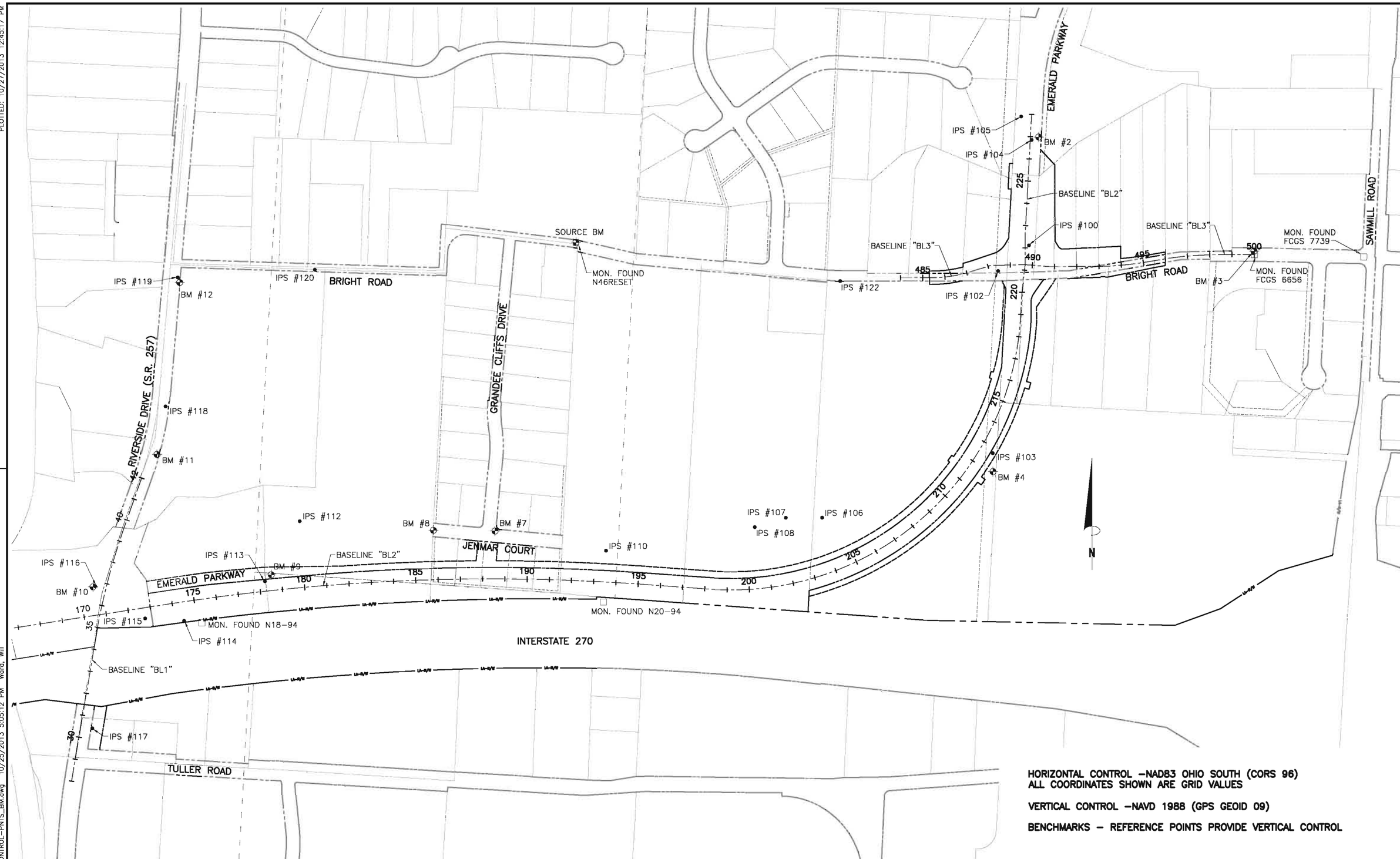
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

GENERAL SUMMARY

SCALE: NONE

SHEET NO. 10 OF 275

PLOTTED: 10/30/2013 9:26:44 AM
P:\PR44959\cadd\GENERAL-SUMMARY.dwg 10/29/2013 9:42:21 PM Ward, Will




HORIZONTAL CONTROL –NAD83 OHIO SOUTH (CORS 96)
ALL COORDINATES SHOWN ARE GRID VALUES

VERTICAL CONTROL –NAVD 1988 (GPS GEOID 09)

BENCHMARKS – REFERENCE POINTS PROVIDE VERTICAL CONTROL

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

OVERALL CONTROL PLAN

SCALE: 1" = 200'

SHEET NO. 11 OF 275

PLOTTED: 10/27/2013 12:45:17 PM

P:\PR44959\cadd\CONTROL-PNTS_BM.dwg 10/25/2013 5:05:12 PM Ward, Will

PLOTTED: 10/27/2013 12:46:11 PM

# BENCHMARKS (NAVD 1988)

BM #2 CHISELED "X" ON WEST BONNET BOLT OF FIRE HYDRANT ON THE EAST SIDE OF EMERALD PARKWAY BETWEEN HARD ROAD AND BILLINGSLEY CREEK.

ELEVATION = 893.19 FT.

BM #3 RAILROAD SPIKE SET IN SOUTH SIDE OF POWER POLE #3862 75 30 IN FRONT OF BUILDING #7281 ON THE NORTH SIDE OF BRIGHT ROAD.

ELEVATION = 902.65 FT.

BM #4 RAILROAD SPIKE SET IN WEST SIDE OF WOODEN POWER POLE WITH HIGH TENSION WIRES.

ELEVATION = 894.14 FT.

BM #7 CHISELED "X" IN CONCRETE ON THE NORTH SIDE OF CATCH BASIN LOCATED AT THE NORTH WEST CORNER OF JENMAR COURT AND GRANDEE CLIFFS DRIVE.

ELEVATION = 856.85 FT.

BM #8 BENCH TIE SET IN 12" CHERRY TREE AT THE SOUTH WEST CORNER OF RESIDENCE #3614 ON JENMAR COURT

ELEVATION = 853.84 FT.

BM #9 BENCH TIE SET IN 12" HACKBERRY TREE LOCATED 42' NORTHEAST OF IRON PIN SET #113.

ELEVATION = 845.32 FT.

BM #10 BENCH TIE SET IN POWER POLE #SW5993 LOCATED ON THE NORTHWEST CORNER OF RIVERSIDE DRIVE AND EMERALD PARKWAY.

ELEVATION = 808.03 FT.

BM #11 BENCH TIE SET IN POWER POLE #322B198 ON THE EAST SIDE OF RIVERSIDE DRIVE.

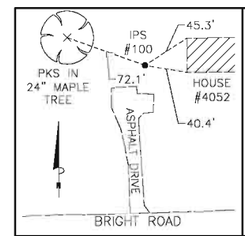
ELEVATION = 826.28 FT.

BM #12 BENCH TIE SET IN POWER POLE #823B1 LOCATED ON THE SOUTHEAST CORNER OF RIVERSIDE DRIVE AND BRIGHT ROAD.

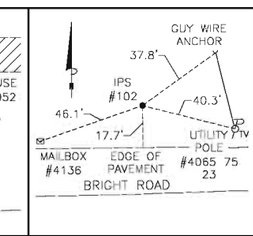
ELEVATION = 827.43 FT.

SOURCE BM N46RESET BRASS PLUG ON THE NORTH END OF THE EAST ABUTMENT OF BRIGHT ROAD CULVERT PER 166-0.36, 0.35 MILES EAST OF RIVERSIDE DRIVE (S.R. 257), 15.6' NORTH OF THE CENTERLINE OF BRIGHT ROAD.

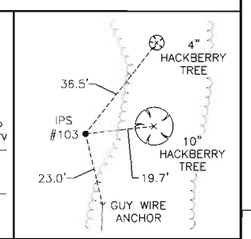
ELEVATION = 858.565 NAVD88



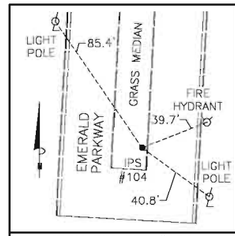

**IRON PIN SET #100**
**NORTHING: 770651.72**
**EASTING: 1801761.88**



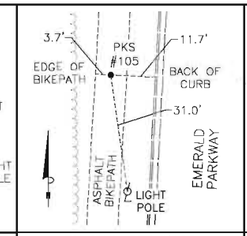

**IRON PIN SET #102**
**NORTHING: 770536.62**
**EASTING: 1801623.59**



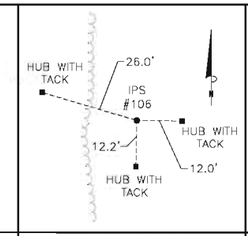

**IRON PIN SET #103**
**NORTHING: 769718.75**
**EASTING: 1801599.08**



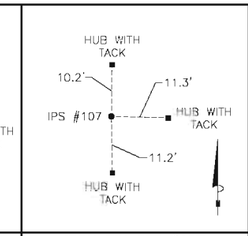

**IRON PIN SET #104**
**NORTHING: 771125.41**
**EASTING: 1801774.06**



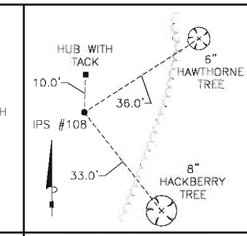

**PK NAIL SET #105**
**NORTHING: 771230.30**
**EASTING: 1801726.94**



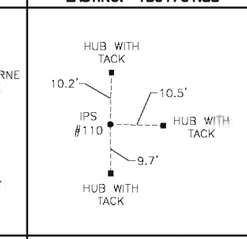

**IRON PIN SET #106**
**NORTHING: 769429.53**
**EASTING: 1800832.61**



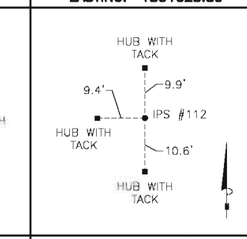

**IRON PIN SET #107**
**NORTHING: 769428.68**
**EASTING: 1800669.45**



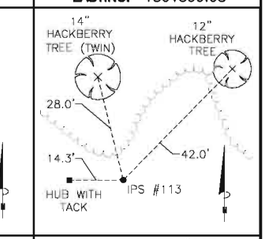

**IRON PIN SET #108**
**NORTHING: 769386.73**
**EASTING: 1800530.06**



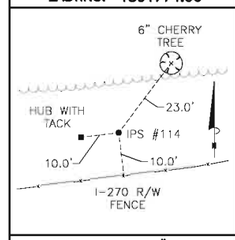

**IRON PIN SET #110**
**NORTHING: 769281.17**
**EASTING: 1799861.96**



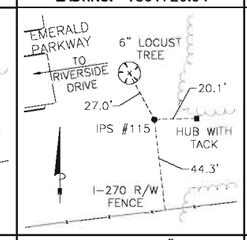

**IRON PIN SET #112**
**NORTHING: 769413.28**
**EASTING: 1798485.47**



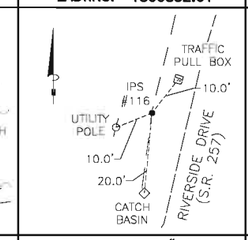

**IRON PIN SET #113**
**NORTHING: 769143.50**
**EASTING: 1798329.40**



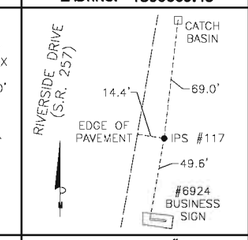

**IRON PIN SET #114**
**NORTHING: 768966.19**
**EASTING: 1797966.20**



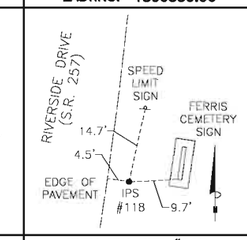

**IRON PIN SET #115**
**NORTHING: 768976.78**
**EASTING: 1797791.07**



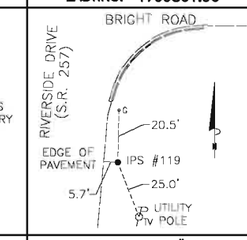

**IRON PIN SET #116**
**NORTHING: 769121.32**
**EASTING: 1797566.01**



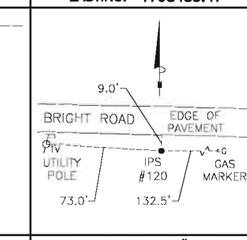

**IRON PIN SET #117**
**NORTHING: 768483.93**
**EASTING: 1797553.82**



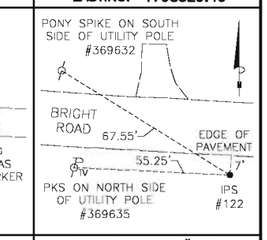

**IRON PIN SET #118**
**NORTHING: 769928.67**
**EASTING: 1797882.67**




**IRON PIN SET #119**
**NORTHING: 770507.52**
**EASTING: 1797937.88**




**IRON PIN SET #120**
**NORTHING: 770542.29**
**EASTING: 1798553.39**




**IRON PIN SET #122**
**NORTHING: 770491.30**
**EASTING: 1800913.84**

REFERENCE POINTS

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY - PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**CONTROL POINTS AND BENCHMARKS**

SCALE: NONE

SHEET NO. 12 OF 275

P:\PR44959\cadd\CONTROL-PNTS_BM.dwg 10/25/2013 5:05:12 PM Ward, Will

PLOTTED: 10/27/2013 4:14:41 PM

## CURVE DATA

| BASE LINE | CURVE NAME | P.I. STATION | P.I. NORTHING | P.I. EASTING | Δ | TANGENT LENGTH (FT.) | ARC LENGTH (FT.) | RADIUS (FT.) | CURVE BEGIN STATION | CURVE END STATION |
|---|---|---|---|---|---|---|---|---|---|---|
| "BL1" | *A* | 37+14.12 | 769147.99 | 1797612.32 | 10° 01' 42" | 252.69 | 504.08 | 2880.00 | P.C. 34+61.43 | P.T. 39+65.51 |
| "BL2" | *B* | 184+57.47 | 769206.09 | 1798957.64 | 12° 52' 10" | 1060.14 | 2111.37 | 9400.00 | P.C. 173+97.32 | P.T. 195+08.69 |
| "BL2" | *C* | 211+51.42 | 769014.79 | 1801653.74 | 90° 57' 52" | 1322.07 | 2063.92 | 1300.00 | P.C. 198+29.35 | P.T. 218+93.27 |
| "BL3" | *D* | 486+31.69 | 770506.70 | 1801416.37 | 17° 22' 05" | 91.64 | 181.88 | 600.00 | P.C. 485+40.05 | P.T. 487+21.93 |
| "BL3" | *E* | 493+98.47 | 770557.58 | 1802175.66 | 9° 27' 02" | 123.99 | 247.42 | 1500.00 | P.C. 492+74.48 | P.T. 495+21.89 |
| "BL3" | *F* | 497+07.49 | 770609.36 | 1802480.88 | 9° 22' 16" | 122.94 | 245.33 | 1500.00 | P.C. 495+84.54 | P.T. 498+29.88 |

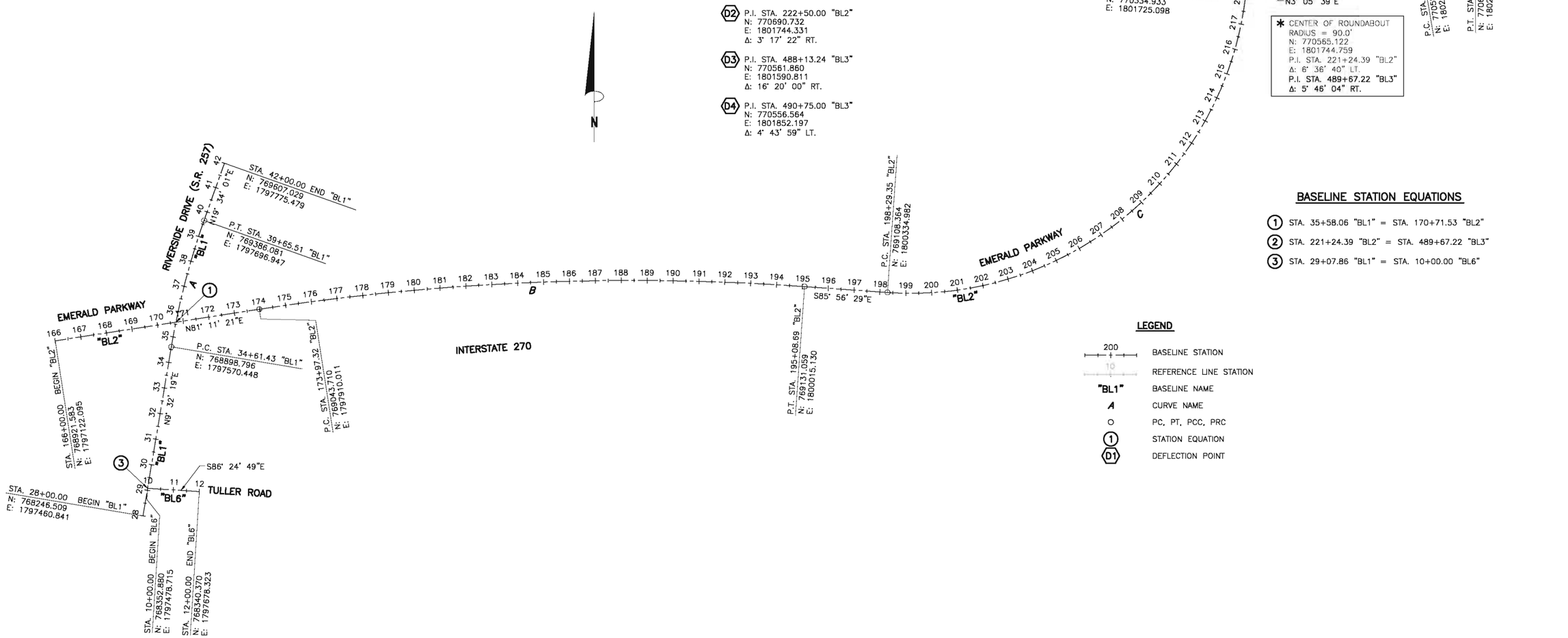
### BASELINE DEFLECTIONS NEAR ROUNDABOUT

(D1) P.I. STA. 220+00.00 "BL2"
N: 770441.511
E: 1801730.859
Δ: 3° 19' 18" RT.

(D2) P.I. STA. 222+50.00 "BL2"
N: 770690.732
E: 1801744.331
Δ: 3° 17' 22" RT.

(D3) P.I. STA. 488+13.24 "BL3"
N: 770561.860
E: 1801590.811
Δ: 16° 20' 00" RT.

(D4) P.I. STA. 490+75.00 "BL3"
N: 770556.564
E: 1801852.197
Δ: 4° 43' 59" LT.




### BASELINE STATION EQUATIONS

(1) STA. 35+58.06 "BL1" = STA. 170+71.53 "BL2"
(2) STA. 221+24.39 "BL2" = STA. 489+67.22 "BL3"
(3) STA. 29+07.86 "BL1" = STA. 10+00.00 "BL6"

### LEGEND

| | |
|---|---|
| 200 | BASELINE STATION |
| 10 | REFERENCE LINE STATION |
| "BL1" | BASELINE NAME |
| *A* | CURVE NAME |
| ○ | PC, PT, PCC, PRC |
| (1) | STATION EQUATION |
| (D1) | DEFLECTION POINT |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**BASELINE LAYOUT PLAN**

SCALE: 1" = 200'

SHEET NO. 13 OF 275

P:\PR44959\cadd\LAYOUT-PLAN-BL.dwg 10/25/2013 5:05:22 PM Ward, Will

PLOTTED: 10/29/2013 11:25:07 AM

## CURVE DATA

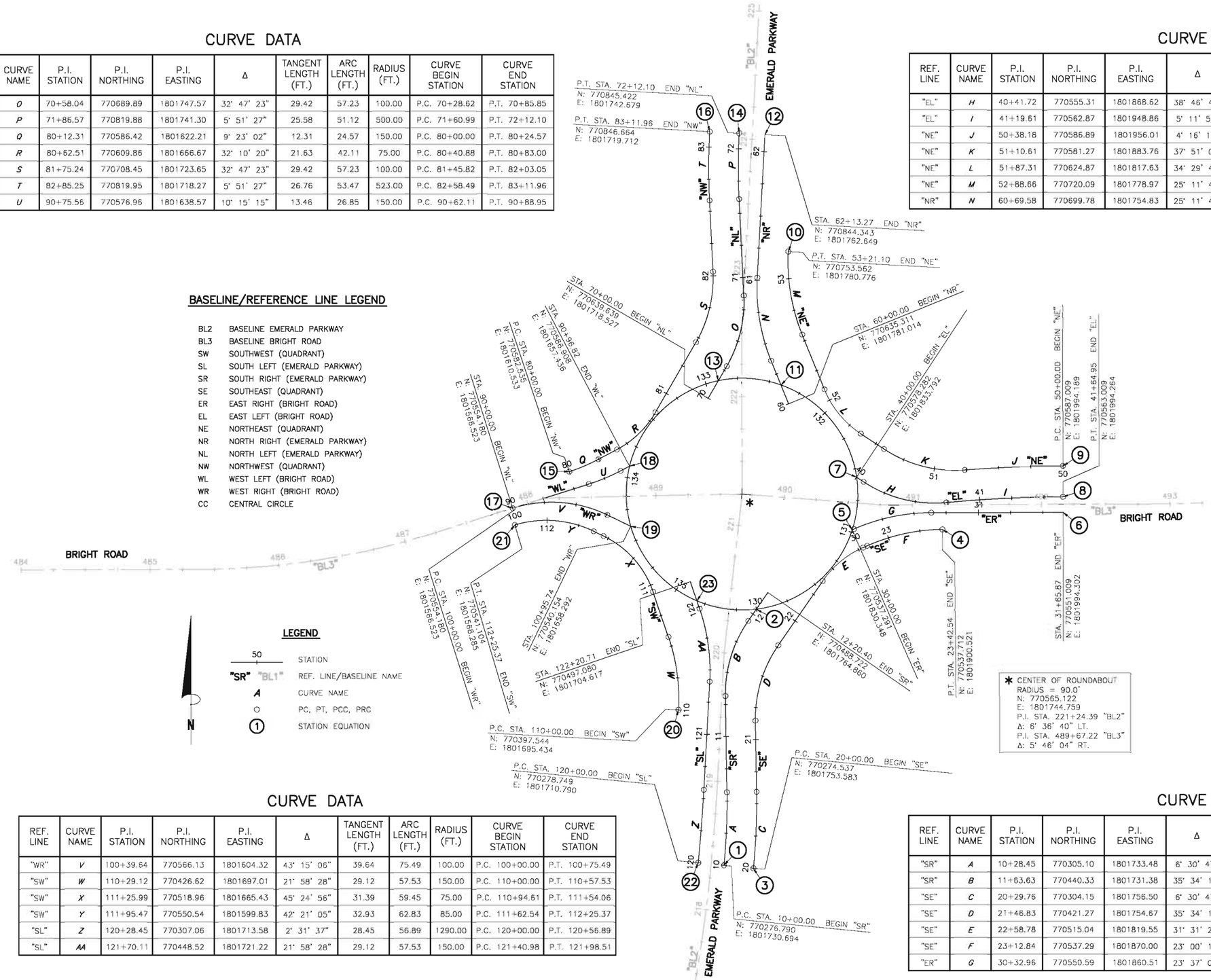
| REF. LINE | CURVE NAME | P.I. STATION | P.I. NORTHING | P.I. EASTING | Δ | TANGENT LENGTH (FT.) | ARC LENGTH (FT.) | RADIUS (FT.) | CURVE BEGIN STATION | CURVE END STATION |
|---|---|---|---|---|---|---|---|---|---|---|
| "NL" | O | 70+58.04 | 770689.89 | 1801747.57 | 32° 47' 23" | 29.42 | 57.23 | 100.00 | P.C. 70+28.62 | P.T. 70+85.85 |
| "NL" | P | 71+86.57 | 770819.88 | 1801741.30 | 5° 51' 27" | 25.58 | 51.12 | 500.00 | P.C. 71+60.99 | P.T. 72+12.10 |
| "NW" | Q | 80+12.31 | 770586.42 | 1801622.21 | 9° 23' 02" | 12.31 | 24.57 | 150.00 | P.C. 80+00.00 | P.T. 80+24.57 |
| "NW" | R | 80+62.51 | 770609.86 | 1801666.67 | 32° 10' 20" | 21.63 | 42.11 | 75.00 | P.C. 80+40.88 | P.T. 80+83.00 |
| "NW" | S | 81+75.24 | 770708.45 | 1801723.65 | 32° 47' 23" | 29.42 | 57.23 | 100.00 | P.C. 81+45.82 | P.T. 82+03.05 |
| "NW" | T | 82+85.25 | 770819.95 | 1801718.27 | 5° 51' 27" | 26.76 | 53.47 | 523.00 | P.C. 82+58.49 | P.T. 83+11.96 |
| "WL" | U | 90+75.56 | 770576.96 | 1801638.57 | 10° 15' 15" | 13.46 | 26.85 | 150.00 | P.C. 90+62.11 | P.T. 90+88.95 |

## CURVE DATA

| REF. LINE | CURVE NAME | P.I. STATION | P.I. NORTHING | P.I. EASTING | Δ | TANGENT LENGTH (FT.) | ARC LENGTH (FT.) | RADIUS (FT.) | CURVE BEGIN STATION | CURVE END STATION |
|---|---|---|---|---|---|---|---|---|---|---|
| "EL" | H | 40+41.72 | 770555.31 | 1801868.62 | 38° 46' 48" | 35.20 | 67.68 | 100.00 | P.C. 40+06.53 | P.R.C. 40+74.21 |
| "EL" | I | 41+19.61 | 770562.87 | 1801948.86 | 5° 11' 56" | 45.40 | 90.74 | 1000.00 | P.R.C. 40+74.21 | P.T. 41+64.95 |
| "NE" | J | 50+38.18 | 770586.89 | 1801956.01 | 4° 16' 14" | 38.18 | 76.32 | 1024.00 | P.C. 50+00.00 | P.R.C. 50+76.32 |
| "NE" | K | 51+10.61 | 770581.27 | 1801883.76 | 37° 51' 06" | 34.29 | 66.06 | 100.00 | P.R.C. 50+76.32 | P.T. 51+42.39 |
| "NE" | L | 51+87.31 | 770624.87 | 1801817.63 | 34° 29' 46" | 23.29 | 45.16 | 75.00 | P.C. 51+64.03 | P.T. 52+09.18 |
| "NE" | M | 52+88.66 | 770720.09 | 1801778.97 | 25° 11' 45" | 33.52 | 65.96 | 150.00 | P.C. 52+55.14 | P.T. 53+21.10 |
| "NR" | N | 60+69.58 | 770699.78 | 1801754.83 | 25° 11' 45" | 33.52 | 65.96 | 150.00 | P.C. 60+36.06 | P.T. 61+02.02 |

## BASELINE/REFERENCE LINE LEGEND

| | |
|---|---|
| BL2 | BASELINE EMERALD PARKWAY |
| BL3 | BASELINE BRIGHT ROAD |
| SW | SOUTHWEST (QUADRANT) |
| SL | SOUTH LEFT (EMERALD PARKWAY) |
| SR | SOUTH RIGHT (EMERALD PARKWAY) |
| SE | SOUTHEAST (QUADRANT) |
| ER | EAST RIGHT (BRIGHT ROAD) |
| EL | EAST LEFT (BRIGHT ROAD) |
| NE | NORTHEAST (QUADRANT) |
| NR | NORTH RIGHT (EMERALD PARKWAY) |
| NL | NORTH LEFT (EMERALD PARKWAY) |
| NW | NORTHWEST (QUADRANT) |
| WL | WEST LEFT (BRIGHT ROAD) |
| WR | WEST RIGHT (BRIGHT ROAD) |
| CC | CENTRAL CIRCLE |




## BASELINE/REFERENCE LINE STATION EQUATIONS

1. STA. 218+35.93, 10.00' RT. "BL2" = STA. 10+00.00 "SR"
2. STA. 130+00.00 "CC" = STA. 12+04.71 "SR"
   = STA. 135+65.49 "CC"
3. STA. 218+35.93, 33.00' RT. "BL2" = STA. 20+00.00 "SE"
4. STA. 491+23.26, 19.00' RT. "BL3" = STA. 23+42.54 "SE"
5. STA. 131+01.87 "CC" = STA. 30+00.00 "ER"
6. STA. 492+17.09, 6.00' RT. "BL3" = STA. 31+65.87 "ER"
7. STA. 131+43.38 "CC" = STA. 40+00.00 "EL"
8. STA. 492+17.09, 6.00' LT. "BL3" = STA. 41+64.95 "EL"
9. STA. 492+17.09, 30.00' LT. "BL3" = STA. 50+00.00 "NE"
10. STA. 223+14.71, 33.00' RT. "BL2" = STA. 53+21.10 "NE"
11. STA. 132+40.58 "CC" = STA. 60+15.69 "NR"
12. STA. 224+04.38, 10.00' RT. "BL2" = STA. 62+13.27 "NR"
13. STA. 132+90.05 "CC" = STA. 70+15.69 "NL"
14. STA. 224+04.38, 10.00' LT. "BL2" = STA. 72+12.10 "NL"
15. STA. 488+33.39, 20.25' LT. "BL3" = STA. 80+00.00 "NW"
16. STA. 224+04.38, 33.00' LT. "BL2" = STA. 83+11.96 "NW"
17. STA. 487+87.77 "BL3" = STA. 90+00.00 "WL"
    = STA. 100+00.00 "WR"
18. STA. 133+90.91 "CC" = STA. 90+96.82 "WL"
19. STA. 134+38.21 "CC" = STA. 100+95.74 "WR"
20. STA. 219+54.19, 33.00' LT. "BL2" = STA. 110+00.00 "SW"
21. STA. 487+85.50, 13.00' RT. "BL3" = STA. 112+25.37 "SW"
22. STA. 218+35.93, 10.00' LT. "BL2" = STA. 120+00.00 "SL"
23. STA. 135+18.27 "CC" = STA. 122+05.02 "SL"

## LEGEND

| | |
|---|---|
| 50 | STATION |
| "SR" "BL1" | REF. LINE/BASELINE NAME |
| A | CURVE NAME |
| ○ | PC, PT, PCC, PRC |
| ① | STATION EQUATION |

✱ CENTER OF ROUNDABOUT
RADIUS = 90.0'
N: 770565.122
E: 1801744.759
P.I. STA. 221+24.39 "BL2"
Δ: 6° 36' 40" LT.
P.I. STA. 489+67.22 "BL3"
Δ: 5° 46' 04" RT.

## CURVE DATA

| REF. LINE | CURVE NAME | P.I. STATION | P.I. NORTHING | P.I. EASTING | Δ | TANGENT LENGTH (FT.) | ARC LENGTH (FT.) | RADIUS (FT.) | CURVE BEGIN STATION | CURVE END STATION |
|---|---|---|---|---|---|---|---|---|---|---|
| "WR" | V | 100+39.64 | 770566.13 | 1801604.32 | 43° 15' 06" | 39.64 | 75.49 | 100.00 | P.C. 100+00.00 | P.T. 100+75.49 |
| "SW" | W | 110+29.12 | 770426.62 | 1801697.01 | 21° 58' 28" | 29.12 | 57.53 | 150.00 | P.C. 110+00.00 | P.T. 110+57.53 |
| "SW" | X | 111+25.99 | 770518.96 | 1801665.43 | 45° 24' 56" | 31.39 | 59.45 | 75.00 | P.C. 110+94.61 | P.T. 111+54.06 |
| "SW" | Y | 111+95.47 | 770550.54 | 1801599.83 | 42° 21' 05" | 32.93 | 62.83 | 85.00 | P.C. 111+62.54 | P.T. 112+25.37 |
| "SL" | Z | 120+28.45 | 770307.06 | 1801713.58 | 2° 31' 37" | 28.45 | 56.89 | 1290.00 | P.C. 120+00.00 | P.T. 120+56.89 |
| "SL" | AA | 121+70.11 | 770448.52 | 1801721.22 | 21° 58' 28" | 29.12 | 57.53 | 150.00 | P.C. 121+40.98 | P.T. 121+98.51 |

## CURVE DATA

| REF. LINE | CURVE NAME | P.I. STATION | P.I. NORTHING | P.I. EASTING | Δ | TANGENT LENGTH (FT.) | ARC LENGTH (FT.) | RADIUS (FT.) | CURVE BEGIN STATION | CURVE END STATION |
|---|---|---|---|---|---|---|---|---|---|---|
| "SR" | A | 10+28.45 | 770305.10 | 1801733.48 | 6° 30' 47" | 28.45 | 56.84 | 500.00 | P.C. 10+00.00 | P.T. 10+56.84 |
| "SR" | B | 11+63.63 | 770440.33 | 1801731.38 | 35° 34' 14" | 32.08 | 62.08 | 100.00 | P.C. 11+31.55 | P.T. 11+93.63 |
| "SE" | C | 20+29.76 | 770304.15 | 1801756.50 | 6° 30' 47" | 29.76 | 59.45 | 523.00 | P.C. 20+00.00 | P.T. 20+59.45 |
| "SE" | D | 21+46.83 | 770421.27 | 1801754.67 | 35° 34' 14" | 32.08 | 62.08 | 100.00 | P.C. 21+14.75 | P.T. 21+76.83 |
| "SE" | E | 22+58.78 | 770515.04 | 1801819.55 | 31° 31' 27" | 21.17 | 41.26 | 75.00 | P.C. 22+37.61 | P.T. 22+78.88 |
| "SE" | F | 23+12.84 | 770537.29 | 1801870.00 | 23° 00' 18" | 30.52 | 60.23 | 150.00 | P.C. 22+82.32 | P.T. 23+42.54 |
| "ER" | G | 30+32.96 | 770550.59 | 1801860.51 | 23° 37' 05" | 31.36 | 61.83 | 150.00 | P.C. 30+01.60 | P.T. 30+63.43 |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

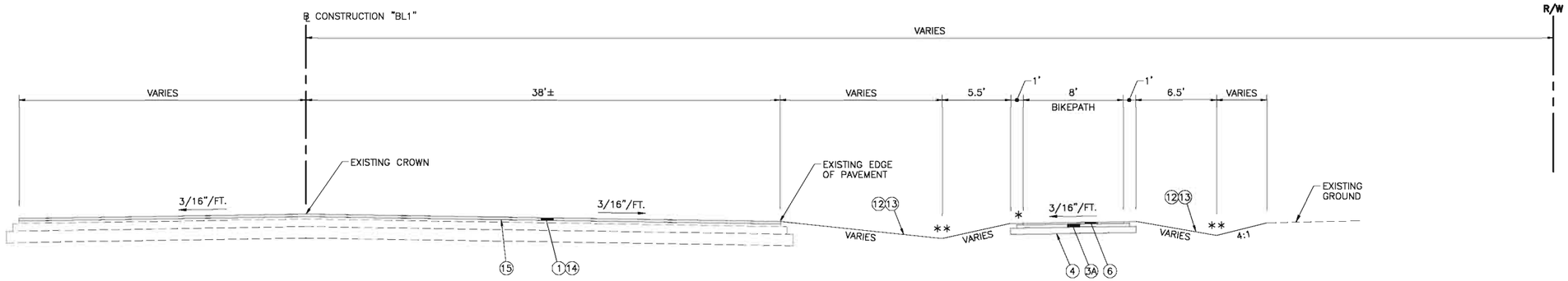
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

REFERENCE LINE
LAYOUT PLAN

SCALE: 1" = 40'

SHEET NO. 14 OF 275

P:\PR44959\cadd\LAYOUT-PLAN-RL.dwg 10/25/2013 5:05:26 PM Ward, Will

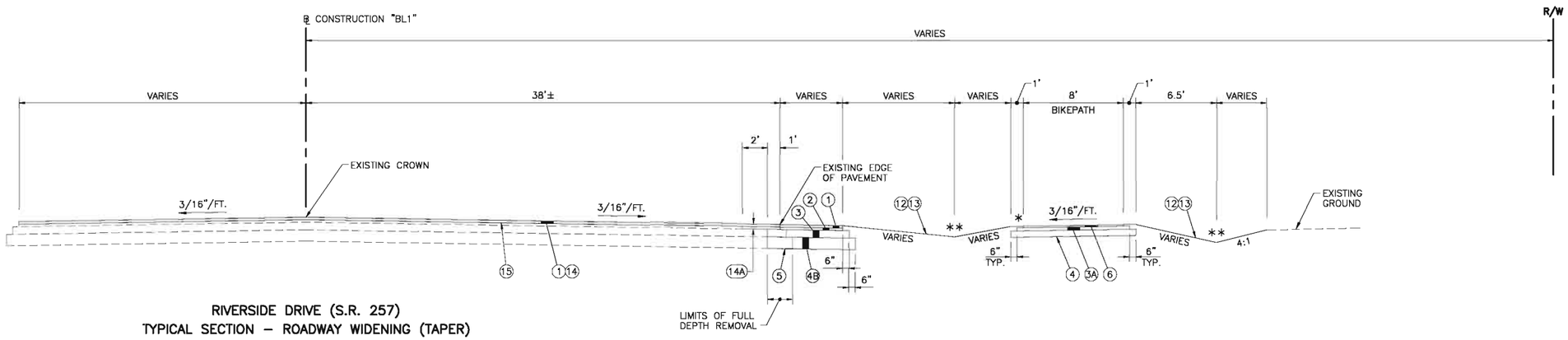



RIVERSIDE DRIVE (S.R. 257)
TYPICAL SECTION – ROADWAY WIDENING

STA. 29+76.2 "BL1" TO STA. 30+75.0 "BL1"

* SEE RIVERSIDE DRIVE PAVEMENT DETAILS FOR BIKEPATH ELEVATIONS.

** SEE CROSS SECTIONS FOR DITCH ELEVATIONS




RIVERSIDE DRIVE (S.R. 257)
TYPICAL SECTION – ROADWAY WIDENING (TAPER)

STA. 30+75.0 "BL1" TO STA. 31+25.0 "BL1"

## LEGEND

1. ITEM 448 – 1 1/4" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64-22, MED. TRAFFIC
2. ITEM 448 – 1 3/4" ASPH. CONC. INTERMEDIATE COURSE, TYPE 2, PG64-22, MED. TRAFFIC
3. ITEM 301 – 9" BITUMINOUS AGGREGATE BASE COURSE, PG64-22
3A. ITEM 301 – 3" BITUMINOUS AGGREGATE BASE COURSE, PG64-22
4. ITEM 304 – 6" AGGREGATE BASE
4A. ITEM 304 – 4" AGGREGATE BASE
4B. ITEM 304 – 11" AGGREGATE BASE
5. ITEM 204 – SUBGRADE COMPACTION
6. ITEM 448 – 1 1/2" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64-22, MED. TRAFFIC
7. ITEM 608 – 4" CONCRETE WALK
8. 4" MIN. – #57 AGGREGATE BASE
9. ITEM 608 – 4" CONCRETE WALK WITH INTEGRAL CURB
10. ITEM SPECIAL – TRUCK APRON PAVEMENT, A.P.P.
11. ITEM 612 – CONCRETE MEDIAN
12. ITEM 653 – 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 659 – SEEDING AND MULCHING, A.P.P.
14. ITEM 254 – 1 1/4" PAVEMENT PLANING
14A. ITEM 254 – 3" PAVEMENT PLANING
15. ITEM 407 – TACK COAT, BITUMINOUS
16. ITEM SPECIAL – PAVERS, A.P.P.
17. ITEM 601 – CRUSHED AGGREGATE SLOPE PROTECTION NO. 2 STONE, WITH FILTER FABRIC

## BASELINE LEGEND

| | |
|---|---|
| BL1 | ℄ CONSTRUCTION (RIVERSIDE DRIVE NEAR EMERALD PARKWAY) |
| BL2 | ℄ CONSTRUCTION (EMERALD PARKWAY) |
| BL3 | ℄ CONSTRUCTION (BRIGHT ROAD) |
| BL4 | NOT USED |
| BL5 | NOT USED |
| BL6 | ℄ CONSTRUCTION (TULLER ROAD) |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

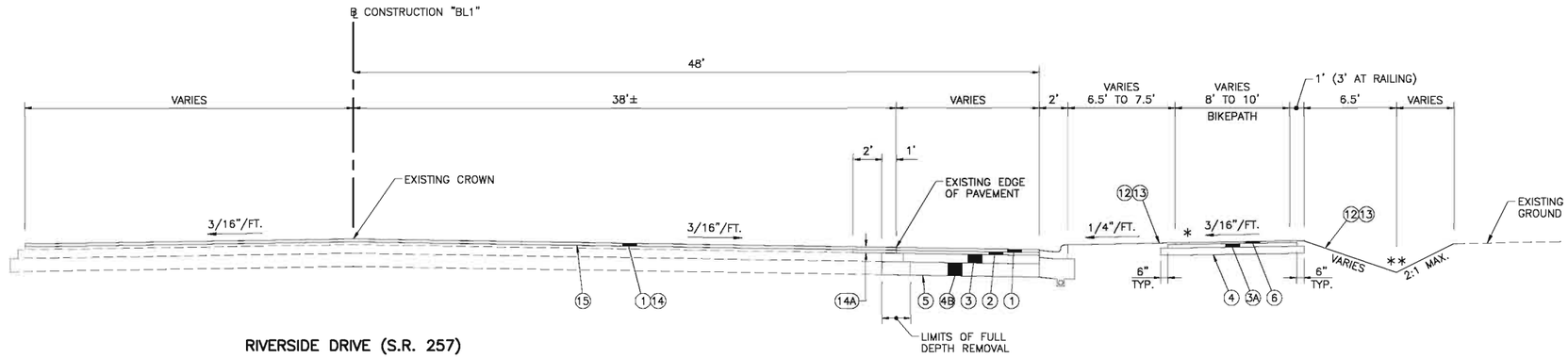
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

TYPICAL SECTIONS
RIVERSIDE DRIVE (S.R. 257)

SCALE: 1" = 5'

SHEET NO. 15 OF 275

PLOTTED: 10/27/2013 12:47:07 PM
P:\PR44959\cadd\TYPICAL_SECTIONS.dwg 10/25/2013 5:12:43 PM Ward, Will



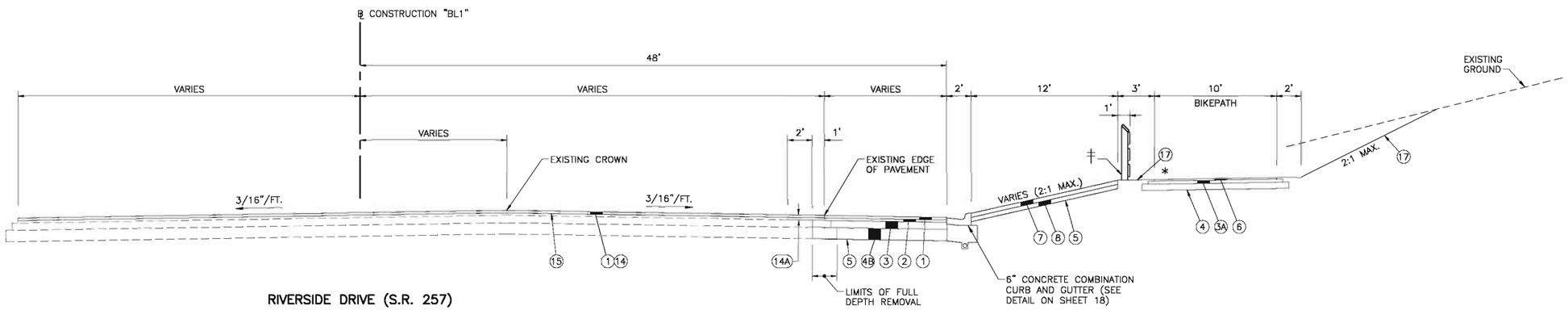

RIVERSIDE DRIVE (S.R. 257)
TYPICAL SECTION – ROADWAY WIDENING

STA. 31+25.0 "BL1" TO STA. 32+00.0 "BL1"

* SEE RIVERSIDE DRIVE PAVEMENT DETAILS FOR BIKEPATH ELEVATIONS.

** SEE CROSS SECTIONS FOR DITCH ELEVATIONS

‡ WOOD BIKEWAY RAILING ODOT STD. DWG. RM-5.2 (EXCEPT AS MODIFIED)




RIVERSIDE DRIVE (S.R. 257)
TYPICAL SECTION – ROADWAY WIDENING

STA. 32+63.0 "BL1" TO STA. 34+50.0 "BL1"

## LEGEND

1. ITEM 448 – 1 1/4" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64-22, MED. TRAFFIC
2. ITEM 448 – 1 3/4" ASPH. CONC. INTERMEDIATE COURSE, TYPE 2, PG64-22, MED. TRAFFIC
3. ITEM 301 – 9" BITUMINOUS AGGREGATE BASE COURSE, PG64-22
3A. ITEM 301 – 3" BITUMINOUS AGGREGATE BASE COURSE, PG64-22
4. ITEM 304 – 6" AGGREGATE BASE
4A. ITEM 304 – 4" AGGREGATE BASE
4B. ITEM 304 – 11" AGGREGATE BASE
5. ITEM 204 – SUBGRADE COMPACTION
6. ITEM 448 – 1 1/2" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64-22, MED. TRAFFIC
7. ITEM 608 – 4" CONCRETE WALK
8. 4" MIN. – #57 AGGREGATE BASE
9. ITEM 608 – 4" CONCRETE WALK WITH INTEGRAL CURB
10. ITEM SPECIAL – TRUCK APRON PAVEMENT, A.P.P.
11. ITEM 612 – CONCRETE MEDIAN
12. ITEM 653 – 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 659 – SEEDING AND MULCHING, A.P.P.
14. ITEM 254 – 1 1/4" PAVEMENT PLANING
14A. ITEM 254 – 3" PAVEMENT PLANING
15. ITEM 407 – TACK COAT, BITUMINOUS
16. ITEM SPECIAL – PAVERS, A.P.P.
17. ITEM 601 – CRUSHED AGGREGATE SLOPE PROTECTION NO. 2 STONE, WITH FILTER FABRIC

## BASELINE LEGEND

BL1 ℄ CONSTRUCTION (RIVERSIDE DRIVE NEAR EMERALD PARKWAY)
BL2 ℄ CONSTRUCTION (EMERALD PARKWAY)
BL3 ℄ CONSTRUCTION (BRIGHT ROAD)
BL4 NOT USED
BL5 NOT USED
BL6 ℄ CONSTRUCTION (TULLER ROAD)

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

TYPICAL SECTIONS
RIVERSIDE DRIVE (S.R. 257)

SCALE: 1" = 5'

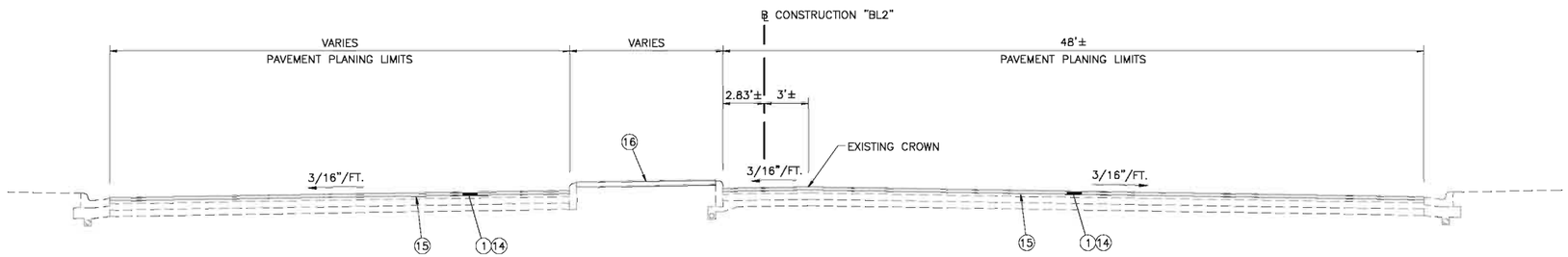
SHEET NO. 16 OF 275

PLOTTED: 10/27/2013 12:47:33 PM
P:\PR44959\cadd\TYPICAL_SECTIONS.dwg 10/25/2013 5:12:43 PM Ward, Will

PLOTTED: 10/27/2013 12:47:51 PM

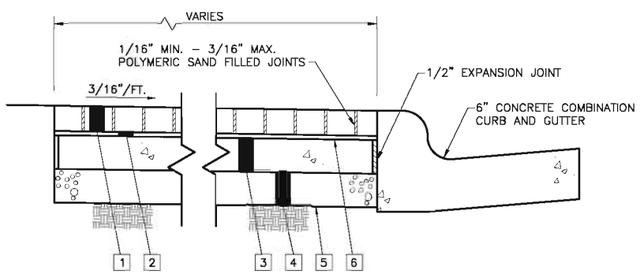
## BASELINE LEGEND

| | |
|---|---|
| BL1 | ℄ CONSTRUCTION (RIVERSIDE DRIVE NEAR EMERALD PARKWAY) |
| BL2 | ℄ CONSTRUCTION (EMERALD PARKWAY) |
| BL3 | ℄ CONSTRUCTION (BRIGHT ROAD) |
| BL4 | NOT USED |
| BL5 | NOT USED |
| BL6 | ℄ CONSTRUCTION (TULLER ROAD) |

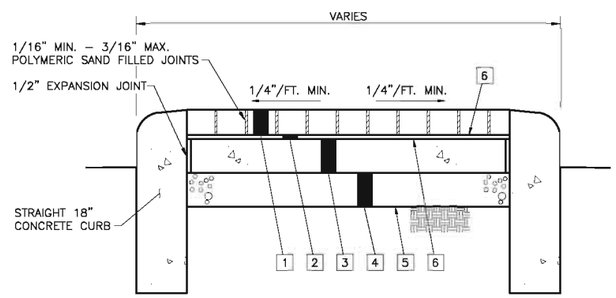



**EMERALD PARKWAY**
**TYPICAL SECTION – ROADWAY PLANING AND PAVING**

**STA. 168+67.7 "BL2" TO STA. 169+80.0 "BL2"**




**WALK PAVER DETAIL**
NOT TO SCALE




**MEDIAN PAVER DETAIL**
NOT TO SCALE

1. 8" x 4" x 2 3/4" BRICK PAVERS
2. 3/4" – BITUMIMOUS ASPHALT SETTING BED (PG64–22)

2A. 3 1/4" – BITUMIMOUS ASPHALT SETTING BED (PG64–22)

3. 4" – ITEM 305 COLS. CLASS "C" CONCRETE BASE
4. 4" – ITEM 304 COMPACTED AGGREGATE BASE
5. ITEM 204 – SUBGRADE COMPACTION
6. NEOPRENE – MODIFIED ASPHALT ADHESIVE

SEE GENERAL NOTES FOR DETAILED SPECIFICATIONS

## LEGEND

1. ITEM 448 – 1 1/4" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC
2. ITEM 448 – 1 3/4" ASPH. CONC. INTERMEDIATE COURSE, TYPE 2, PG64–22, MED. TRAFFIC
3. ITEM 301 – 9" BITUMINOUS AGGREGATE BASE COURSE, PG64–22

3A. ITEM 301 – 3" BITUMINOUS AGGREGATE BASE COURSE, PG64–22

4. ITEM 304 – 6" AGGREGATE BASE

4A. ITEM 304 – 4" AGGREGATE BASE

4B. ITEM 304 – 11" AGGREGATE BASE

5. ITEM 204 – SUBGRADE COMPACTION
6. ITEM 448 – 1 1/2" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC
7. ITEM 608 – 4" CONCRETE WALK
8. 4" MIN. – #57 AGGREGATE BASE
9. ITEM 608 – 4" CONCRETE WALK WITH INTEGRAL CURB
10. ITEM SPECIAL – TRUCK APRON PAVEMENT, A.P.P.
11. ITEM 612 – CONCRETE MEDIAN
12. ITEM 653 – 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 659 – SEEDING AND MULCHING, A.P.P.
14. ITEM 254 – 1 1/4" PAVEMENT PLANING

14A. ITEM 254 – 3" PAVEMENT PLANING

15. ITEM 407 – TACK COAT, BITUMINOUS
16. ITEM SPECIAL – PAVERS, A.P.P.
17. ITEM 601 – CRUSHED AGGREGATE SLOPE PROTECTION NO. 2 STONE, WITH FILTER FABRIC

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

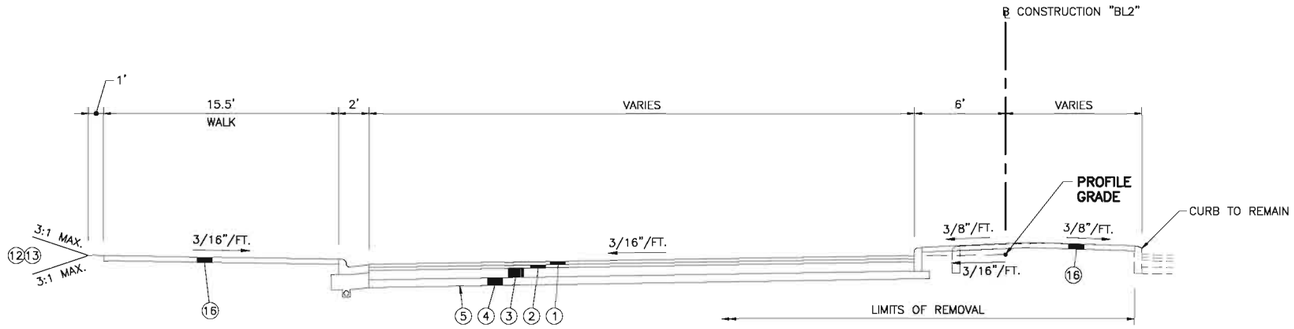
**TYPICAL SECTIONS AND PAVER/MEDIAN DETAILS EMERALD PARKWAY**

SCALE: 1" = 5'

SHEET NO. 17 OF 275

P:\PR44959\cadd\TYPICAL_SECTIONS.dwg 10/25/2013 5:12:43 PM Ward, Will

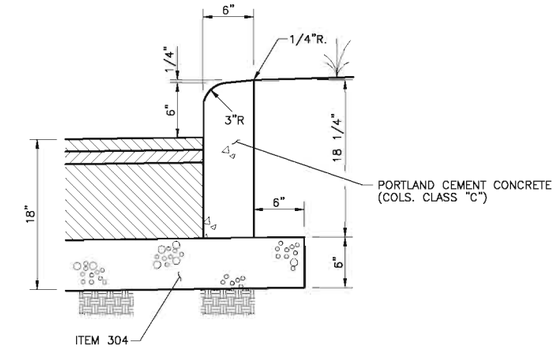
PLOTTED: 10/29/2013 3:49:47 PM




## BASELINE LEGEND

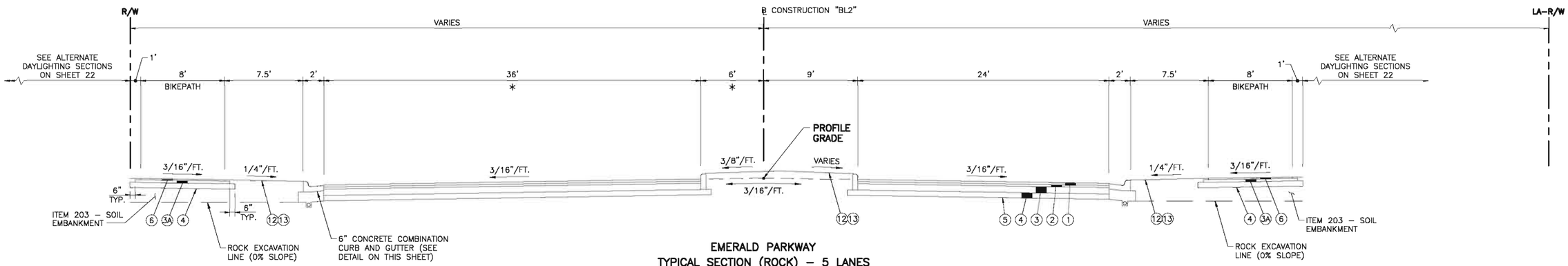
BL1 ℄ CONSTRUCTION (RIVERSIDE DRIVE NEAR EMERALD PARKWAY)
BL2 ℄ CONSTRUCTION (EMERALD PARKWAY)
BL3 ℄ CONSTRUCTION (BRIGHT ROAD)
BL4 NOT USED
BL5 NOT USED
BL6 ℄ CONSTRUCTION (TULLER ROAD)

EMERALD PARKWAY
TYPICAL SECTION A–A
TYPICAL SECTION AT NORTHEAST RADIUS RETURN




## STRAIGHT 18" CONCRETE CURB

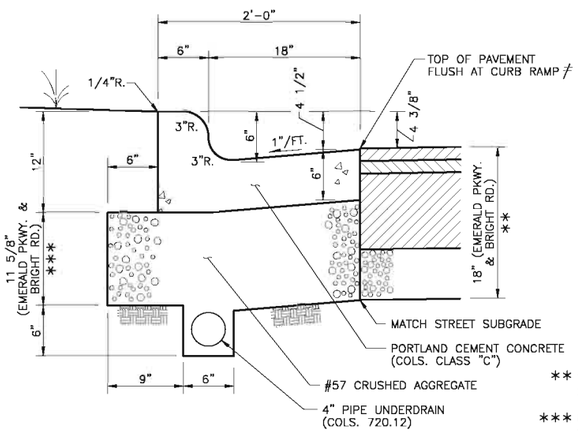
NOT TO SCALE




EMERALD PARKWAY
TYPICAL SECTION (ROCK) – 5 LANES

STA. 172+22.5 "BL2" TO STA. 175+75.0 "BL2"

* VARIES AT TAPER




** 15" AT BRIGHT ROAD CUL–DE–SAC
23" AT RIVERSIDE DRIVE

*** 8 5/8" AT BRIGHT ROAD CUL–DE–SAC
16 5/8" AT RIVERSIDE DRIVE

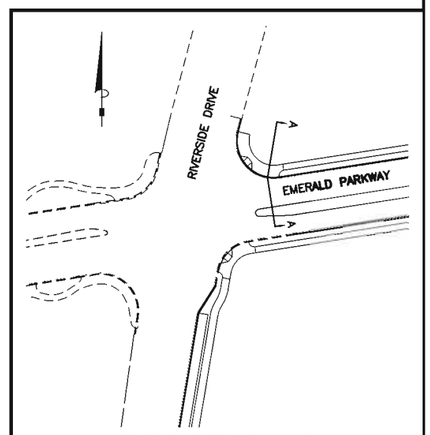
≠ SEE DUBLIN STD. DRAWING RD–03 FOR GUTTER TRANSITION AT CURB RAMP

## 6" CONCRETE COMBINATION CURB AND GUTTER DETAIL

NOT TO SCALE

## LEGEND

1. ITEM 448 – 1 1/4" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC
2. ITEM 448 – 1 3/4" ASPH. CONC. INTERMEDIATE COURSE, TYPE 2, PG64–22, MED. TRAFFIC
3. ITEM 301 – 9" BITUMINOUS AGGREGATE BASE COURSE, PG64–22
3A. ITEM 301 – 3" BITUMINOUS AGGREGATE BASE COURSE, PG64–22
4. ITEM 304 – 6" AGGREGATE BASE
4A. ITEM 304 – 4" AGGREGATE BASE
4B. ITEM 304 – 11" AGGREGATE BASE
5. ITEM 204 – SUBGRADE COMPACTION
6. ITEM 448 – 1 1/2" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC
7. ITEM 608 – 4" CONCRETE WALK
8. 4" MIN. – #57 AGGREGATE BASE
9. ITEM 608 – 4" CONCRETE WALK WITH INTEGRAL CURB
10. ITEM SPECIAL – TRUCK APRON PAVEMENT, A.P.P.
11. ITEM 612 – CONCRETE MEDIAN
12. ITEM 653 – 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 659 – SEEDING AND MULCHING, A.P.P.
14. ITEM 254 – 1 1/4" PAVEMENT PLANING
14A. ITEM 254 – 3" PAVEMENT PLANING
15. ITEM 407 – TACK COAT, BITUMINOUS
16. ITEM SPECIAL – PAVERS, A.P.P.
17. ITEM 601 – CRUSHED AGGREGATE SLOPE PROTECTION NO. 2 STONE, WITH FILTER FABRIC




SECTION LOCATION MAP

NOT TO SCALE

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

| | |
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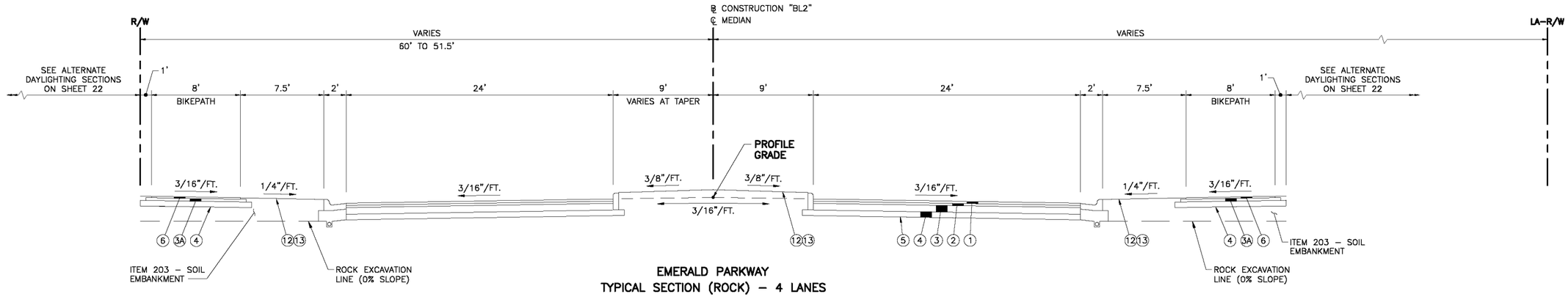
| DATE: | OCTOBER 2013 |

TYPICAL SECTIONS AND CURB DETAILS EMERALD PARKWAY

SCALE: 1" = 5'

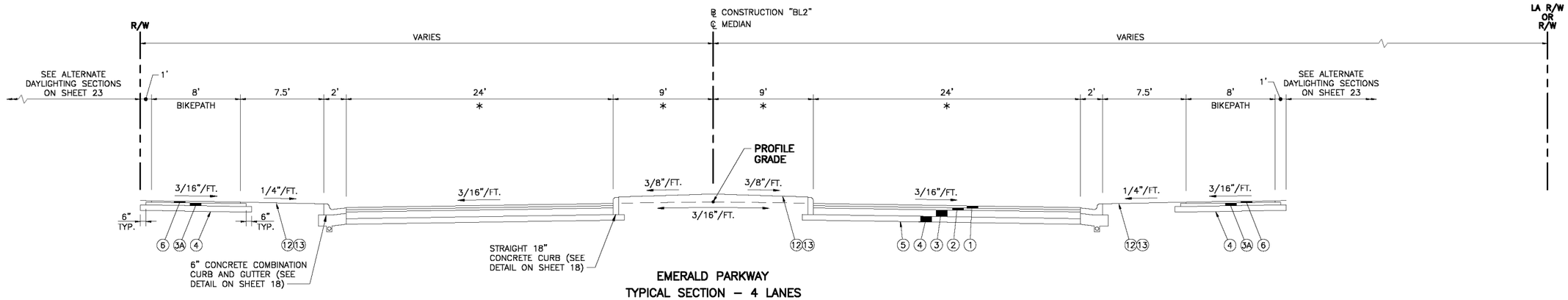
SHEET NO. 18 OF 275

P:\PR44959\cadd\TYPICAL_SECTIONS.dwg 10/28/2013 8:25:57 PM Ward, Will




**EMERALD PARKWAY**
**TYPICAL SECTION (ROCK) – 4 LANES**

**STA. 175+75.0 "BL2" TO STA. 182+75 (APPROX.) "BL2"**




**EMERALD PARKWAY**
**TYPICAL SECTION – 4 LANES**

**STA. 182+75.0 (APPROX.) "BL2" TO STA. 207+00.0 "BL2"**
**STA. 208+50.0 "BL2" TO STA. 218+35.9 "BL2"**

* VARIES AT MEDIAN NOSE

## LEGEND

1. ITEM 448 – 1 1/4" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC
2. ITEM 448 – 1 3/4" ASPH. CONC. INTERMEDIATE COURSE, TYPE 2, PG64–22, MED. TRAFFIC
3. ITEM 301 – 9" BITUMINOUS AGGREGATE BASE COURSE, PG64–22
3A. ITEM 301 – 3" BITUMINOUS AGGREGATE BASE COURSE, PG64–22
4. ITEM 304 – 6" AGGREGATE BASE
4A. ITEM 304 – 4" AGGREGATE BASE
4B. ITEM 304 – 11" AGGREGATE BASE
5. ITEM 204 – SUBGRADE COMPACTION
6. ITEM 448 – 1 1/2" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC
7. ITEM 608 – 4" CONCRETE WALK
8. 4" MIN. – #57 AGGREGATE BASE
9. ITEM 608 – 4" CONCRETE WALK WITH INTEGRAL CURB
10. ITEM SPECIAL – TRUCK APRON PAVEMENT, A.P.P.
11. ITEM 612 – CONCRETE MEDIAN
12. ITEM 653 – 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 659 – SEEDING AND MULCHING, A.P.P.
14. ITEM 254 – 1 1/4" PAVEMENT PLANING
14A. ITEM 254 – 3" PAVEMENT PLANING
15. ITEM 407 – TACK COAT, BITUMINOUS
16. ITEM SPECIAL – PAVERS, A.P.P.
17. ITEM 601 – CRUSHED AGGREGATE SLOPE PROTECTION NO. 2 STONE, WITH FILTER FABRIC

## BASELINE LEGEND

| | |
|---|---|
| BL1 | ℄ CONSTRUCTION (RIVERSIDE DRIVE NEAR EMERALD PARKWAY) |
| BL2 | ℄ CONSTRUCTION (EMERALD PARKWAY) |
| BL3 | ℄ CONSTRUCTION (BRIGHT ROAD) |
| BL4 | NOT USED |
| BL5 | NOT USED |
| BL6 | ℄ CONSTRUCTION (TULLER ROAD) |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

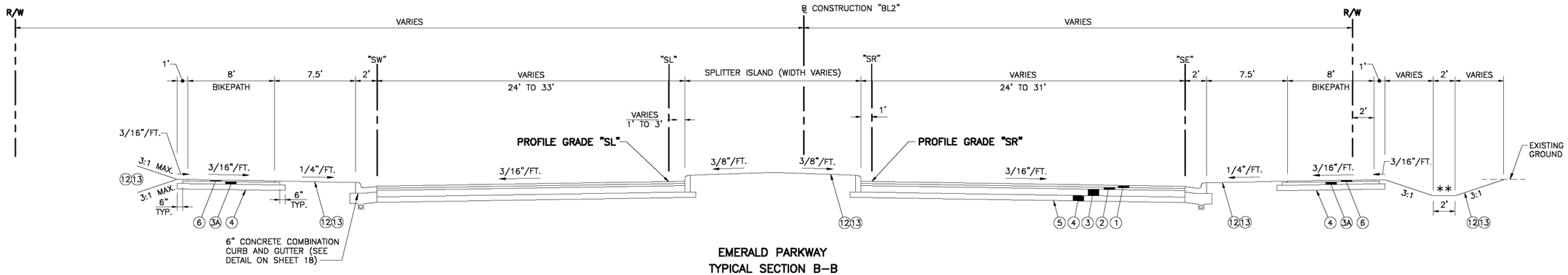
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**TYPICAL SECTIONS**
**EMERALD PARKWAY**

SCALE: 1" = 5'

SHEET NO. 19 OF 275

PLOTTED: 10/28/2013 8:16:58 PM
P:\PR44959\cadd\TYPICAL_SECTIONS.dwg 10/27/2013 1:02:57 PM Ward, Will

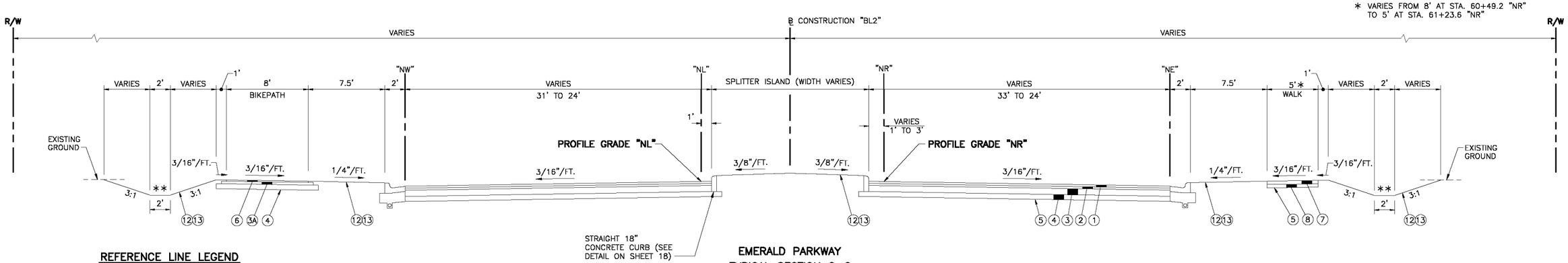



EMERALD PARKWAY
TYPICAL SECTION B–B

STA. 120+00.0 "SL" TO STA. 122+10.7 "SL"
STA. 10+00.0 "SR" TO STA. 12+11.9 "SR"

** SEE CROSS SECTIONS FOR DITCH ELEVATIONS

* VARIES FROM 8' AT STA. 60+49.2 "NR" TO 5' AT STA. 61+23.6 "NR"




EMERALD PARKWAY
TYPICAL SECTION C–C

STA. 70+08.5 "NL" TO STA. 72+12.1 "NL"
STA. 60+10.1 "NR" TO STA. 62+13.3 "NR"

## REFERENCE LINE LEGEND

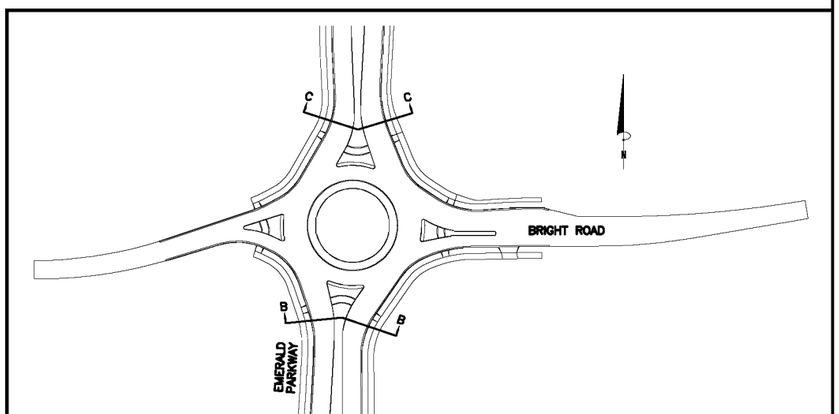
| | |
|---|---|
| SW | SOUTHWEST (QUADRANT) |
| SL | SOUTH LEFT (EMERALD PARKWAY) |
| SR | SOUTH RIGHT (EMERALD PARKWAY) |
| SE | SOUTHEAST (QUADRANT) |
| ER | EAST RIGHT (BRAND ROAD) |
| EL | EAST LEFT (BRAND ROAD) |
| NE | NORTHEAST (QUADRANT) |
| NR | NORTH RIGHT (EMERALD PARKWAY) |
| NL | NORTH LEFT (EMERALD PARKWAY) |
| NW | NORTHWEST (QUADRANT) |
| WL | WEST LEFT (BRAND ROAD) |
| WR | WEST RIGHT (BRAND ROAD) |
| CC | CENTRAL CIRCLE |

## BASELINE LEGEND

| | |
|---|---|
| BL1 | ℄ CONSTRUCTION (RIVERSIDE DRIVE NEAR EMERALD PARKWAY) |
| BL2 | ℄ CONSTRUCTION (EMERALD PARKWAY) |
| BL3 | ℄ CONSTRUCTION (BRIGHT ROAD) |
| BL4 | NOT USED |
| BL5 | NOT USED |
| BL6 | ℄ CONSTRUCTION (TULLER ROAD) |

## LEGEND

1. ITEM 448 – 1 1/4" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC
2. ITEM 448 – 1 3/4" ASPH. CONC. INTERMEDIATE COURSE, TYPE 2, PG64–22, MED. TRAFFIC
3. ITEM 301 – 9" BITUMINOUS AGGREGATE BASE COURSE, PG64–22
3A. ITEM 301 – 3" BITUMINOUS AGGREGATE BASE COURSE, PG64–22
4. ITEM 304 – 6" AGGREGATE BASE
4A. ITEM 304 – 4" AGGREGATE BASE
4B. ITEM 304 – 11" AGGREGATE BASE
5. ITEM 204 – SUBGRADE COMPACTION
6. ITEM 448 – 1 1/2" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC
7. ITEM 608 – 4" CONCRETE WALK
8. 4" MIN. – #57 AGGREGATE BASE
9. ITEM 608 – 4" CONCRETE WALK WITH INTEGRAL CURB
10. ITEM SPECIAL – TRUCK APRON PAVEMENT, A.P.P.
11. ITEM 612 – CONCRETE MEDIAN
12. ITEM 653 – 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 659 – SEEDING AND MULCHING, A.P.P.
14. ITEM 254 – 1 1/4" PAVEMENT PLANING
14A. ITEM 254 – 3" PAVEMENT PLANING
15. ITEM 407 – TACK COAT, BITUMINOUS
16. ITEM SPECIAL – PAVERS, A.P.P.
17. ITEM 601 – CRUSHED AGGREGATE SLOPE PROTECTION NO. 2 STONE, WITH FILTER FABRIC




SECTION LOCATION MAP
NOT TO SCALE

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

| | |
|---|---|
| JOB NO. | 44959 |
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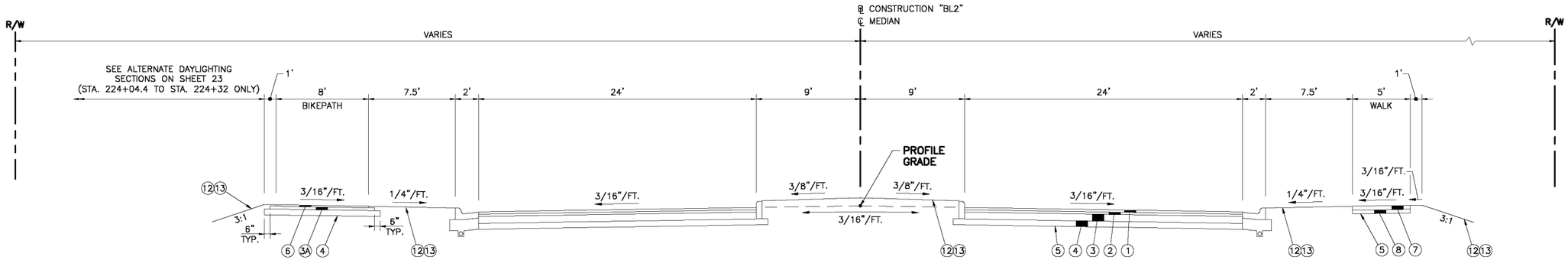
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

TYPICAL SECTIONS
EMERALD PARKWAY

SCALE: 1" = 5'

SHEET NO. 20 OF 275

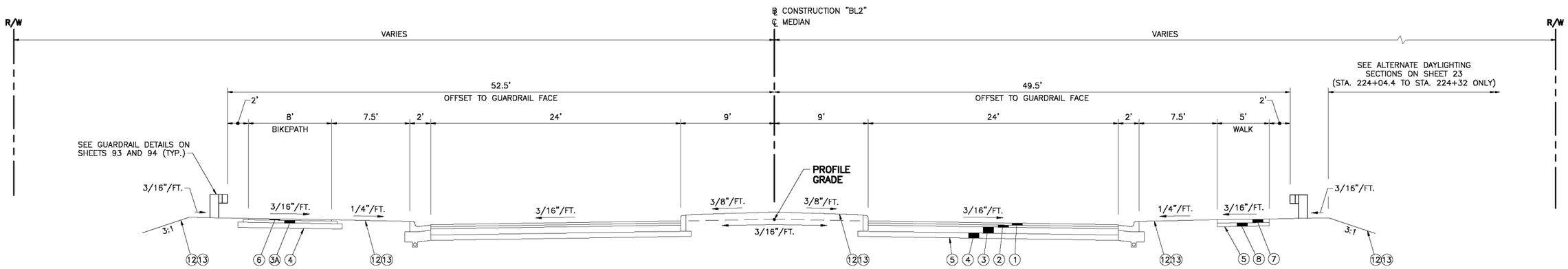
PLOTTED: 10/28/2013 8:22:44 PM
P:\PR44959\cadd\TYPICAL_SECTIONS.dwg 10/28/2013 8:19:55 PM Ward, Will




EMERALD PARKWAY
TYPICAL SECTION – 4 LANES

STA. 224+04.4 "BL2" TO STA. 224+45.0 "BL2" (LEFT SIDE)

STA. 226+05.0 "BL2" TO STA. 226+49.6 "BL2" (RIGHT SIDE)




EMERALD PARKWAY
TYPICAL SECTION (GUARDRAIL) – 4 LANES

STA. 224+45.0 "BL2" TO STA. 226+49.6 "BL2" (LEFT SIDE)

STA. 224+04.4 "BL2" TO STA. 226+05.0 "BL2" (RIGHT SIDE)

## LEGEND

1. ITEM 448 – 1 1/4" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC
2. ITEM 448 – 1 3/4" ASPH. CONC. INTERMEDIATE COURSE, TYPE 2, PG64–22, MED. TRAFFIC
3. ITEM 301 – 9" BITUMINOUS AGGREGATE BASE COURSE, PG64–22
3A. ITEM 301 – 3" BITUMINOUS AGGREGATE BASE COURSE, PG64–22
4. ITEM 304 – 6" AGGREGATE BASE
4A. ITEM 304 – 4" AGGREGATE BASE
4B. ITEM 304 – 11" AGGREGATE BASE
5. ITEM 204 – SUBGRADE COMPACTION
6. ITEM 448 – 1 1/2" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC
7. ITEM 608 – 4" CONCRETE WALK
8. 4" MIN. – #57 AGGREGATE BASE
9. ITEM 608 – 4" CONCRETE WALK WITH INTEGRAL CURB
10. ITEM SPECIAL – TRUCK APRON PAVEMENT, A.P.P.
11. ITEM 612 – CONCRETE MEDIAN
12. ITEM 653 – 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 659 – SEEDING AND MULCHING, A.P.P.
14. ITEM 254 – 1 1/4" PAVEMENT PLANING
14A. ITEM 254 – 3" PAVEMENT PLANING
15. ITEM 407 – TACK COAT, BITUMINOUS
16. ITEM SPECIAL – PAVERS, A.P.P.
17. ITEM 601 – CRUSHED AGGREGATE SLOPE PROTECTION NO. 2 STONE, WITH FILTER FABRIC

## BASELINE LEGEND

BL1 ℄ CONSTRUCTION (RIVERSIDE DRIVE NEAR EMERALD PARKWAY)
BL2 ℄ CONSTRUCTION (EMERALD PARKWAY)
BL3 ℄ CONSTRUCTION (BRIGHT ROAD)
BL4 NOT USED
BL5 NOT USED
BL6 ℄ CONSTRUCTION (TULLER ROAD)

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

TYPICAL SECTIONS
EMERALD PARKWAY

SCALE: 1" = 5'

SHEET NO. 21 OF 275

PLOTTED: 10/27/2013 1:00:50 PM
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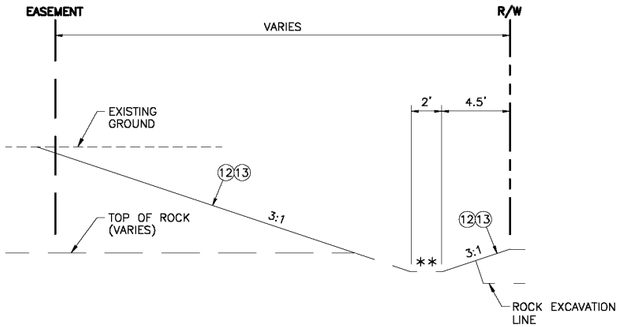
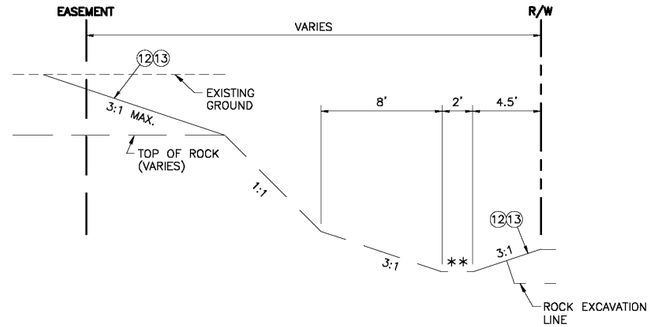
PLOTTED: 10/27/2013 1:01:06 PM




ALTERNATE DAYLIGHTING SECTION – LEFT
DITCH (EARTH SLOPE)

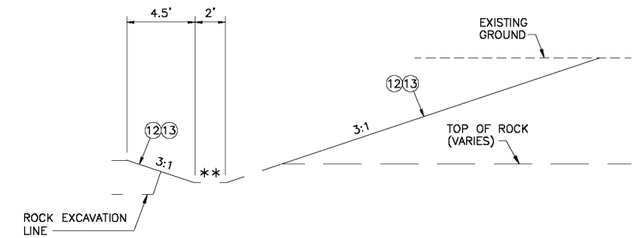
STA. 172+22.5 "BL2" TO STA. 172+40.0 "BL2"
STA. 180+40.0 "BL2" TO STA. 181+25.0 (APPROX.) "BL2"




ALTERNATE DAYLIGHTING SECTION – LEFT
DITCH (ROCK SLOPE)

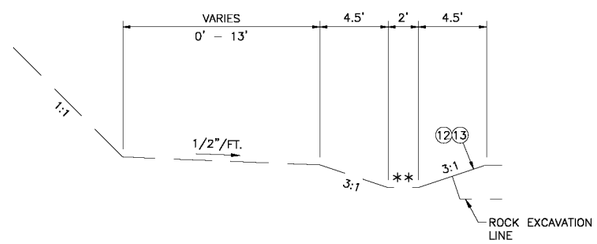
STA. 172+40.0 "BL2" TO STA. 172+49.6 "BL2"
STA. 172+76.4 "BL2" TO STA. 180+40.0 "BL2"

** SEE CROSS SECTIONS FOR DITCH ELEVATIONS



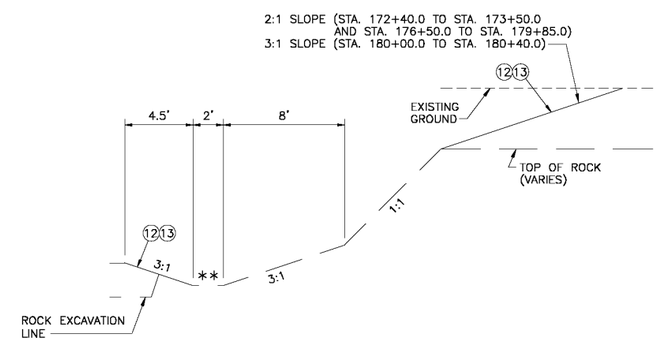

ALTERNATE DAYLIGHTING SECTION – RIGHT
DITCH (EARTH SLOPE)

STA. 172+22.5 "BL2" TO STA. 172+40.0 "BL2"
STA. 180+40.0 "BL2" TO STA. 181+25.0 (APPROX.) "BL2"



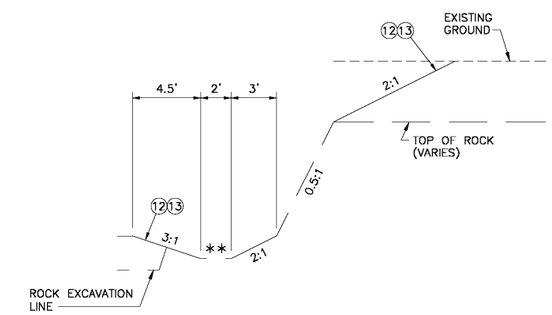

DITCH SECTION AT WATER QUALITY STRUCTURE
(ROCK SLOPE)

STA. 172+49.6 "BL2" TO STA. 172+76.4 "BL2"




ALTERNATE DAYLIGHTING SECTION – RIGHT
DITCH (ROCK SLOPE)

STA. 172+40.0 "BL2" TO STA. 173+25.0 "BL2"
STA. 176+50.0 "BL2" TO STA. 180+40.0 "BL2"




ALTERNATE DAYLIGHTING SECTION – RIGHT
DITCH (ROCK SLOPE)

STA. 173+75.0 "BL2" TO STA. 176+50.0 "BL2"

## LEGEND

1. ITEM 448 – 1 1/4" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64-22, MED. TRAFFIC
2. ITEM 448 – 1 3/4" ASPH. CONC. INTERMEDIATE COURSE, TYPE 2, PG64-22, MED. TRAFFIC
3. ITEM 301 – 9" BITUMINOUS AGGREGATE BASE COURSE, PG64-22
3A. ITEM 301 – 3" BITUMINOUS AGGREGATE BASE COURSE, PG64-22
4. ITEM 304 – 6" AGGREGATE BASE
4A. ITEM 304 – 4" AGGREGATE BASE
4B. ITEM 304 – 11" AGGREGATE BASE
5. ITEM 204 – SUBGRADE COMPACTION
6. ITEM 448 – 1 1/2" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64-22, MED. TRAFFIC
7. ITEM 608 – 4" CONCRETE WALK
8. 4" MIN. – #57 AGGREGATE BASE
9. ITEM 608 – 4" CONCRETE WALK WITH INTEGRAL CURB
10. ITEM SPECIAL – TRUCK APRON PAVEMENT, A.P.P.
11. ITEM 612 – CONCRETE MEDIAN
12. ITEM 653 – 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 659 – SEEDING AND MULCHING, A.P.P.
14. ITEM 254 – 1 1/4" PAVEMENT PLANING
14A. ITEM 254 – 3" PAVEMENT PLANING
15. ITEM 407 – TACK COAT, BITUMINOUS
16. ITEM SPECIAL – PAVERS, A.P.P.
17. ITEM 601 – CRUSHED AGGREGATE SLOPE PROTECTION NO. 2 STONE, WITH FILTER FABRIC

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

TYPICAL SECTIONS
EMERALD PARKWAY DAYLIGHTING ALTERNATES
(ROCK EXCAVATION)

SCALE: 1" = 5'



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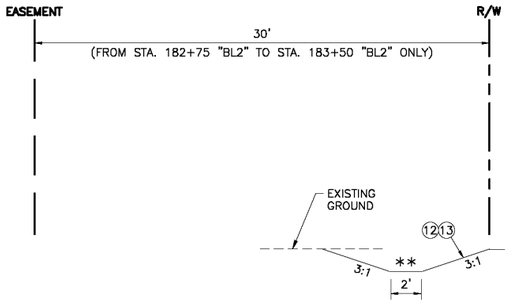
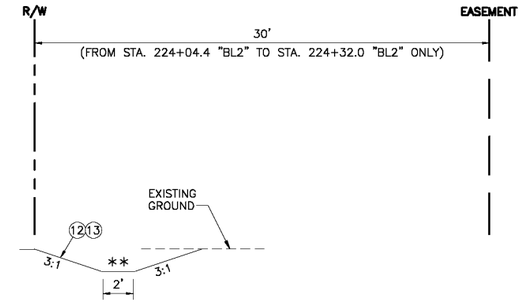


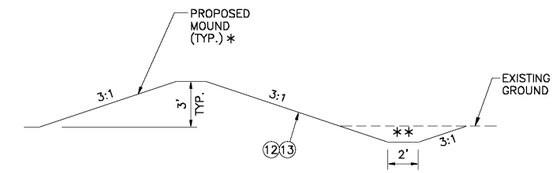

ALTERNATE DAYLIGHTING SECTION – LEFT
DITCH ONLY

STA. 181+25.0 (APPROX.) "BL2" TO STA. 183+50.0 "BL2"
STA. 224+04.4 "BL2" TO STA. 224+32.0 "BL2"



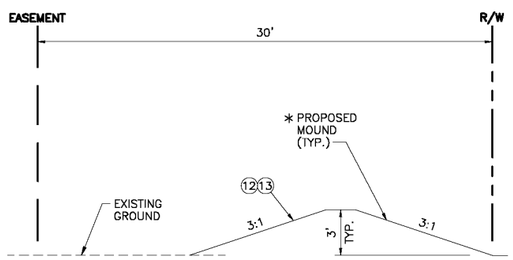

ALTERNATE DAYLIGHTING SECTION – RIGHT
DITCH ONLY

STA. 181+25.0 (APPROX.) "BL2" TO STA. 183+00.0 "BL2"
STA. 192+00.0 "BL2" TO STA. 202+50.0 "BL2"
STA. 224+04.4 "BL2" TO STA. 224+32.0 "BL2"




ALTERNATE DAYLIGHTING SECTION – RIGHT
MOUND AND DITCH

STA. 184+00.0 "BL2" TO STA. 188+00.0 "BL2"
STA. 203+50.0 "BL2" TO STA. 216+46.0 "BL2"
STA. 216+74.0 "BL2" TO STA. 218+35.9 "BL2"

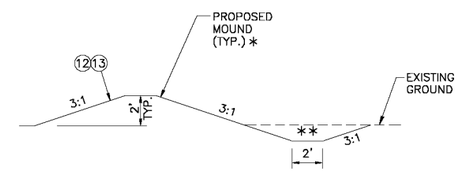



ALTERNATE DAYLIGHTING SECTION – LEFT
MOUND ONLY

STA. 184+00.0 "BL2" TO STA. 216+46.0 "BL2"
STA. 216+74.0 "BL2" TO STA. 218+35.9 "BL2"

* SEE GRADING INFORMATION ON PLAN SHEETS FOR VARIATIONS IN MOUNDING. FIELD ADJUSTMENTS MAY ALSO BE MADE BY THE ENGINEER, AS NEEDED, TO MINIMIZE DAMAGE TO EXISTING TREES AND IMPROVE INTERSECTION SIGHT DISTANCES.

** SEE CROSS SECTIONS FOR DITCH ELEVATIONS




ALTERNATE DAYLIGHTING SECTION – RIGHT
MOUND AND DITCH

STA. 188+00.0 "BL2" TO STA. 191+00.0 "BL2"

## LEGEND

1. ITEM 448 – 1 1/4" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC
2. ITEM 448 – 1 3/4" ASPH. CONC. INTERMEDIATE COURSE, TYPE 2, PG64–22, MED. TRAFFIC
3. ITEM 301 – 9" BITUMINOUS AGGREGATE BASE COURSE, PG64–22
3A. ITEM 301 – 3" BITUMINOUS AGGREGATE BASE COURSE, PG64–22
4. ITEM 304 – 6" AGGREGATE BASE
4A. ITEM 304 – 4" AGGREGATE BASE
4B. ITEM 304 – 11" AGGREGATE BASE
5. ITEM 204 – SUBGRADE COMPACTION
6. ITEM 448 – 1 1/2" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC
7. ITEM 608 – 4" CONCRETE WALK
8. 4" MIN. – #57 AGGREGATE BASE
9. ITEM 608 – 4" CONCRETE WALK WITH INTEGRAL CURB
10. ITEM SPECIAL – TRUCK APRON PAVEMENT, A.P.P.
11. ITEM 612 – CONCRETE MEDIAN
12. ITEM 653 – 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 659 – SEEDING AND MULCHING, A.P.P.
14. ITEM 254 – 1 1/4" PAVEMENT PLANING
14A. ITEM 254 – 3" PAVEMENT PLANING
15. ITEM 407 – TACK COAT, BITUMINOUS
16. ITEM SPECIAL – PAVERS, A.P.P.
17. ITEM 601 – CRUSHED AGGREGATE SLOPE PROTECTION NO. 2 STONE, WITH FILTER FABRIC

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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| JOB NO. | 44959 |
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| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

TYPICAL SECTIONS
EMERALD PARKWAY DAYLIGHTING ALTERNATES

SCALE: 1" = 5'

SHEET NO. 23 OF 275

PLOTTED: 10/27/2013 1:01:23 PM
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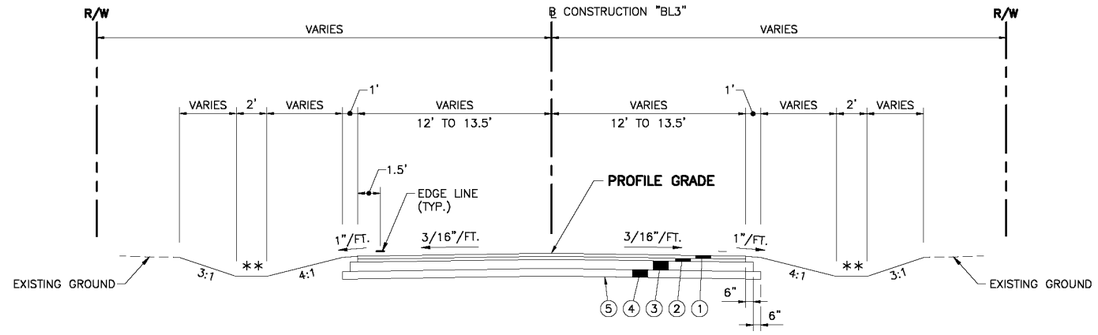
## LEGEND

1. ITEM 448 – 1 1/4" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC
2. ITEM 448 – 1 3/4" ASPH. CONC. INTERMEDIATE COURSE, TYPE 2, PG64–22, MED. TRAFFIC
3. ITEM 301 – 9" BITUMINOUS AGGREGATE BASE COURSE, PG64–22
3A. ITEM 301 – 3" BITUMINOUS AGGREGATE BASE COURSE, PG64–22
4. ITEM 304 – 6" AGGREGATE BASE
4A. ITEM 304 – 4" AGGREGATE BASE
4B. ITEM 304 – 11" AGGREGATE BASE
5. ITEM 204 – SUBGRADE COMPACTION
6. ITEM 448 – 1 1/2" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC
7. ITEM 608 – 4" CONCRETE WALK
8. 4" MIN. – #57 AGGREGATE BASE
9. ITEM 608 – 4" CONCRETE WALK WITH INTEGRAL CURB
10. ITEM SPECIAL – TRUCK APRON PAVEMENT, A.P.P.
11. ITEM 612 – CONCRETE MEDIAN
12. ITEM 653 – 3" TOPSOIL FURNISHED AND PLACED
13. ITEM 659 – SEEDING AND MULCHING, A.P.P.
14. ITEM 254 – 1 1/4" PAVEMENT PLANING
14A. ITEM 254 – 3" PAVEMENT PLANING
15. ITEM 407 – TACK COAT, BITUMINOUS
16. ITEM SPECIAL – PAVERS, A.P.P.
17. ITEM 601 – CRUSHED AGGREGATE SLOPE PROTECTION NO. 2 STONE, WITH FILTER FABRIC



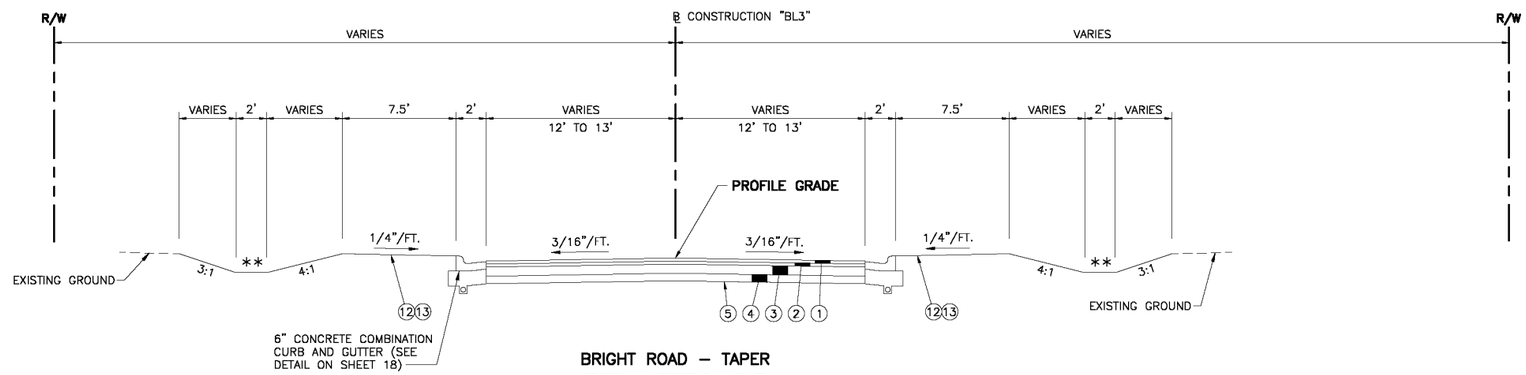

BRIGHT ROAD – TAPER
TYPICAL SECTION D–D

STA. 485+40.1 "BL3" TO STA. 487+21.9 "BL3"

** SEE CROSS SECTIONS FOR DITCH ELEVATIONS

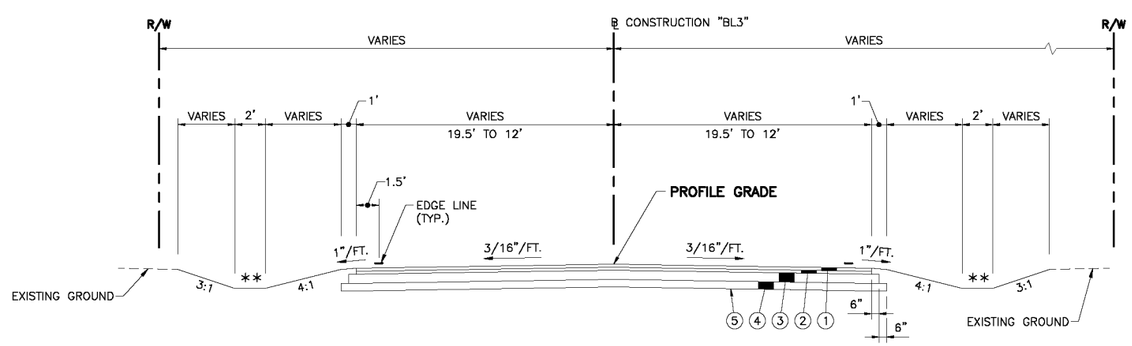
## BASELINE LEGEND

BL1 ℄ CONSTRUCTION (RIVERSIDE DRIVE NEAR EMERALD PARKWAY)
BL2 ℄ CONSTRUCTION (EMERALD PARKWAY)
BL3 ℄ CONSTRUCTION (BRIGHT ROAD)
BL4 NOT USED
BL5 NOT USED
BL6 ℄ CONSTRUCTION (TULLER ROAD)



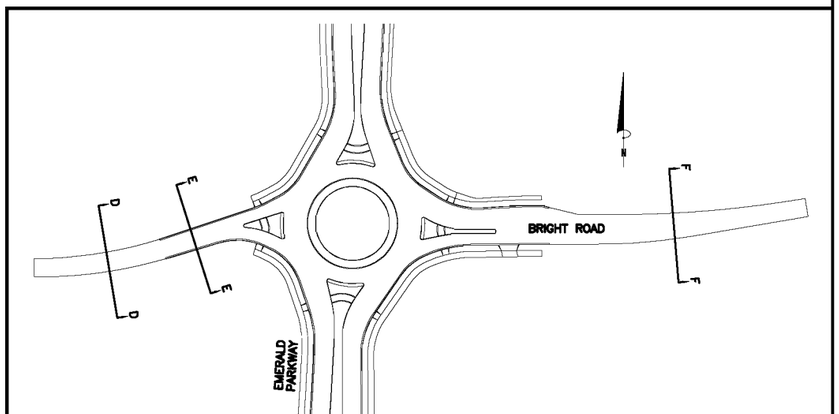

BRIGHT ROAD – TAPER
TYPICAL SECTION E–E

STA. 487+21.9 "BL3" TO STA. 487+85.5 "BL3"




BRIGHT ROAD
TYPICAL SECTION F–F

STA. 492+67.1 "BL3" TO STA. 495+68.6 "BL3"




SECTION LOCATION MAP
NOT TO SCALE

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

TYPICAL SECTIONS
BRIGHT ROAD

SCALE: 1" = 5'

SHEET NO. 24 OF 275

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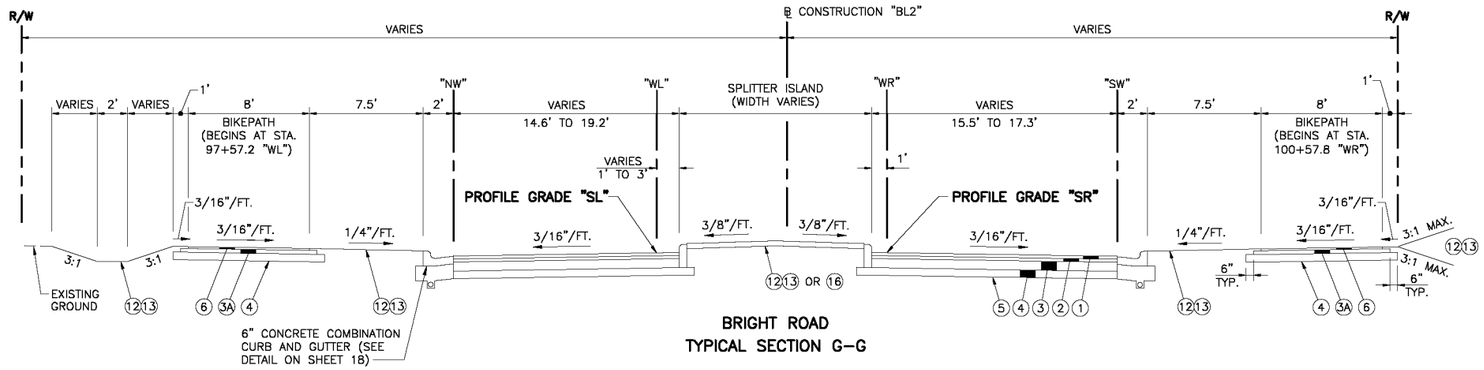
PLOTTED: 10/27/2013 1:02:22 PM

## REFERENCE LINE LEGEND

| | |
|---|---|
| SW | SOUTHWEST (QUADRANT) |
| SL | SOUTH LEFT (EMERALD PARKWAY) |
| SR | SOUTH RIGHT (EMERALD PARKWAY) |
| SE | SOUTHEAST (QUADRANT) |
| ER | EAST RIGHT (BRAND ROAD) |
| EL | EAST LEFT (BRAND ROAD) |
| NE | NORTHEAST (QUADRANT) |
| NR | NORTH RIGHT (EMERALD PARKWAY) |
| NL | NORTH LEFT (EMERALD PARKWAY) |
| NW | NORTHWEST (QUADRANT) |
| WL | WEST LEFT (BRAND ROAD) |
| WR | WEST RIGHT (BRAND ROAD) |
| CC | CENTRAL CIRCLE |




**BRIGHT ROAD**
**TYPICAL SECTION G–G**

**STA. 90+35.0 "WL" TO STA. 90+87.4 "WL"**
**STA. 100+34.6 "WR" TO STA. 100+87.3 "WR"**

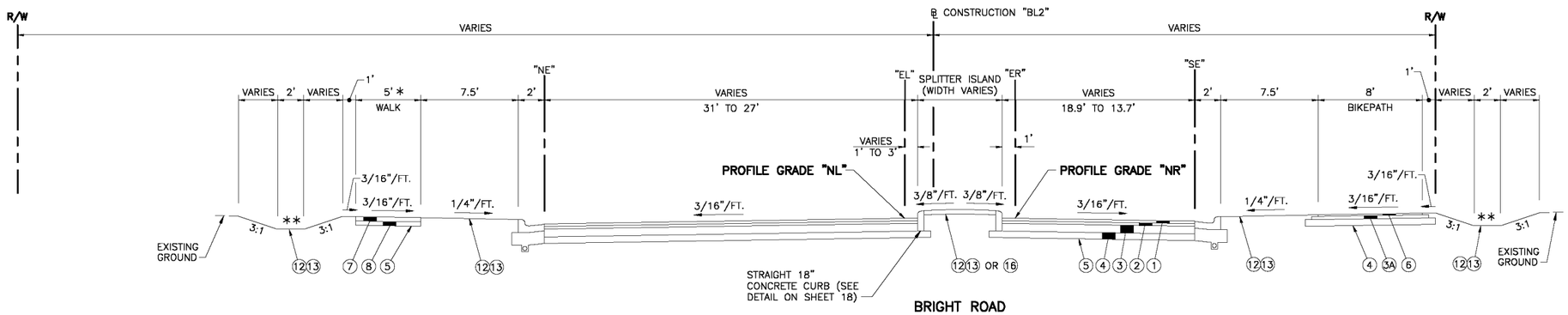
## BASELINE LEGEND

| | |
|---|---|
| BL1 | ℄ CONSTRUCTION (RIVERSIDE DRIVE NEAR EMERALD PARKWAY) |
| BL2 | ℄ CONSTRUCTION (EMERALD PARKWAY) |
| BL3 | ℄ CONSTRUCTION (BRIGHT ROAD) |
| BL4 | NOT USED |
| BL5 | NOT USED |
| BL6 | ℄ CONSTRUCTION (TULLER ROAD) |

## LEGEND

| | |
|---|---|
| 1 | ITEM 448 – 1 1/4" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC |
| 2 | ITEM 448 – 1 3/4" ASPH. CONC. INTERMEDIATE COURSE, TYPE 2, PG64–22, MED. TRAFFIC |
| 3 | ITEM 301 – 9" BITUMINOUS AGGREGATE BASE COURSE, PG64–22 |
| 3A | ITEM 301 – 3" BITUMINOUS AGGREGATE BASE COURSE, PG64–22 |
| 4 | ITEM 304 – 6" AGGREGATE BASE |
| 4A | ITEM 304 – 4" AGGREGATE BASE |
| 4B | ITEM 304 – 11" AGGREGATE BASE |
| 5 | ITEM 204 – SUBGRADE COMPACTION |
| 6 | ITEM 448 – 1 1/2" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC |
| 7 | ITEM 608 – 4" CONCRETE WALK |
| 8 | 4" MIN. – #57 AGGREGATE BASE |
| 9 | ITEM 608 – 4" CONCRETE WALK WITH INTEGRAL CURB |
| 10 | ITEM SPECIAL – TRUCK APRON PAVEMENT, A.P.P. |
| 11 | ITEM 612 – CONCRETE MEDIAN |
| 12 | ITEM 653 – 3" TOPSOIL FURNISHED AND PLACED |
| 13 | ITEM 659 – SEEDING AND MULCHING, A.P.P. |
| 14 | ITEM 254 – 1 1/4" PAVEMENT PLANING |
| 14A | ITEM 254 – 3" PAVEMENT PLANING |
| 15 | ITEM 407 – TACK COAT, BITUMINOUS |
| 16 | ITEM SPECIAL – PAVERS, A.P.P. |
| 17 | ITEM 601 – CRUSHED AGGREGATE SLOPE PROTECTION NO. 2 STONE, WITH FILTER FABRIC |

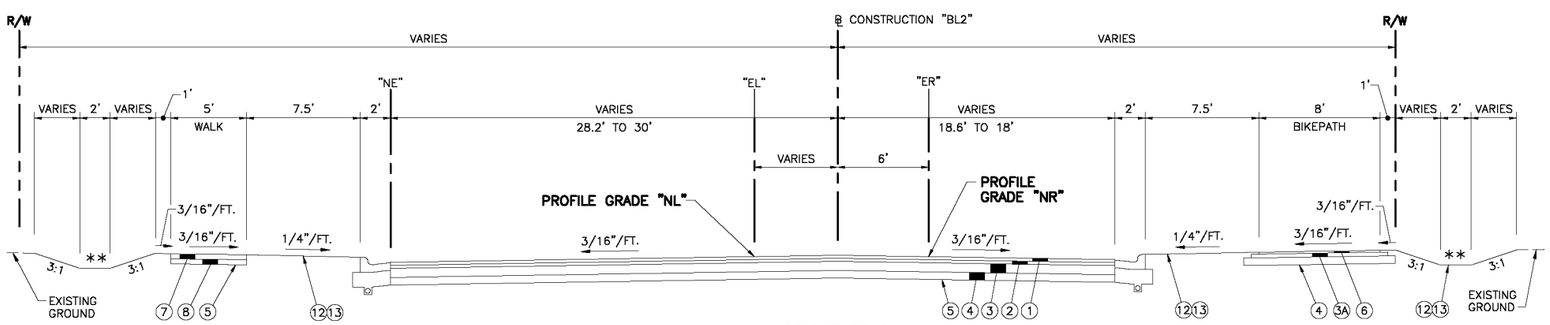
* VARIES FROM 8' AT STA. 40+41.5 "EL" TO 5' AT STA. 40+90.4 "EL"




** SEE CROSS SECTIONS FOR DITCH ELEVATIONS

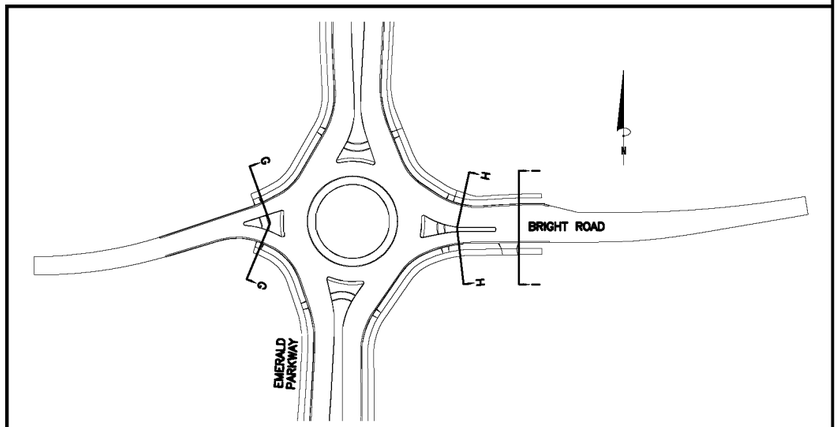
**BRIGHT ROAD**
**TYPICAL SECTION H–H**

**STA. 40+08.3 "EL" TO STA. 41+04.7 "EL"**
**STA. 30+08.9 "ER" TO STA. 31+05.9 "ER"**




**BRIGHT ROAD**
**TYPICAL SECTION I–I**

**STA. 41+04.7 "EL" TO STA. 41+65.0 "EL"**
**STA. 31+05.9 "ER" TO STA. 31+65.9 "ER"**




SECTION LOCATION MAP
NOT TO SCALE

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| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

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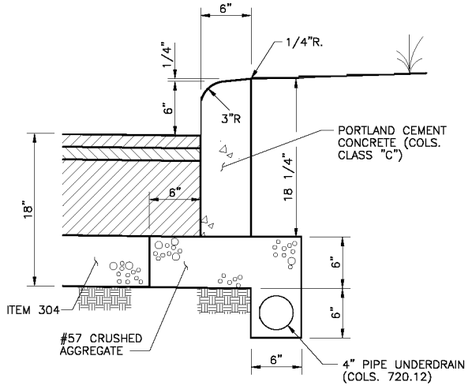
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**TYPICAL SECTIONS**
**BRIGHT ROAD**

SCALE: 1" = 5'

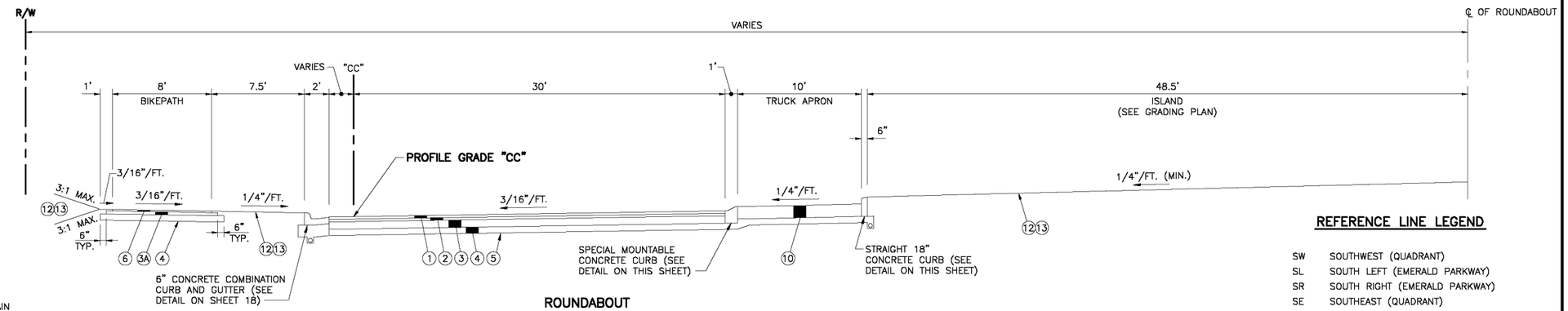
SHEET NO. 25 OF 275

PLOTTED: 10/27/2013 1:02:48 PM




## STRAIGHT 18" CONCRETE CURB WITH UNDERDRAIN

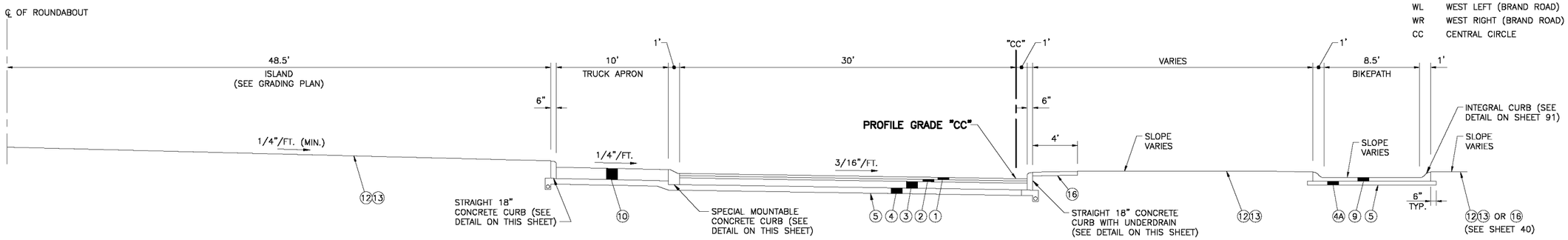
NOT TO SCALE



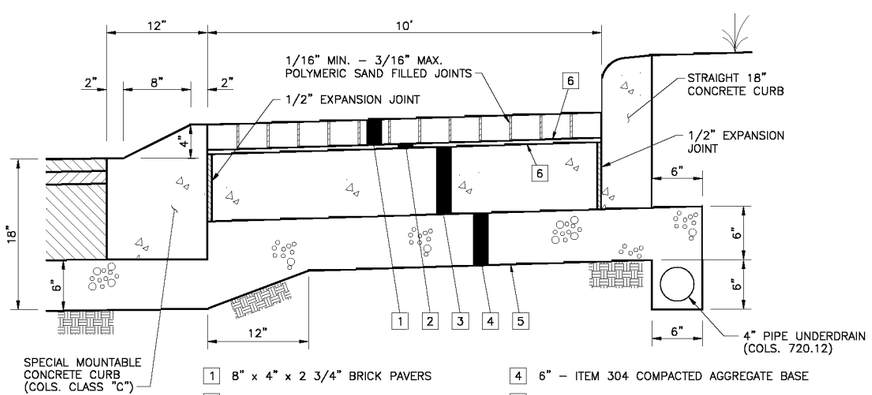

## ROUNDABOUT
## TYPICAL SECTION J–J (LEFT HALF)

## REFERENCE LINE LEGEND

| | |
|---|---|
| SW | SOUTHWEST (QUADRANT) |
| SL | SOUTH LEFT (EMERALD PARKWAY) |
| SR | SOUTH RIGHT (EMERALD PARKWAY) |
| SE | SOUTHEAST (QUADRANT) |
| ER | EAST RIGHT (BRAND ROAD) |
| EL | EAST LEFT (BRAND ROAD) |
| NE | NORTHEAST (QUADRANT) |
| NR | NORTH RIGHT (EMERALD PARKWAY) |
| NL | NORTH LEFT (EMERALD PARKWAY) |
| NW | NORTHWEST (QUADRANT) |
| WL | WEST LEFT (BRAND ROAD) |
| WR | WEST RIGHT (BRAND ROAD) |
| CC | CENTRAL CIRCLE |




## ROUNDABOUT
## TYPICAL SECTION J–J (RIGHT HALF)




SEE GENERAL NOTES FOR DETAILED SPECIFICATIONS

1. 8" x 4" x 2 3/4" BRICK PAVERS
2. 3/4" – BITUMIMOUS ASPHALT SETTING BED (PG64–22)
3. 8 1/2" – ITEM 305 COLS. CLASS "C" CONCRETE BASE
4. 6" – ITEM 304 COMPACTED AGGREGATE BASE
5. ITEM 204 – SUBGRADE COMPACTION
6. NEOPRENE – MODIFIED ASPHALT ADHESIVE

## TRUCK APRON PAVEMENT DETAIL WITH BRICK PAVERS

NOT TO SCALE

## LEGEND

1. ITEM 448 – 1 1/4" ASPH. CONC. SURFACE COURSE, TYPE 1, PG64–22, MED. TRAFFIC
2. ITEM 448 – 1 3/4" ASPH. CONC. INTERMEDIATE COURSE, TYPE 2, PG64–22, MED. TRAFFIC
3. ITEM 301 – 9" BITUMINOUS AGGREGATE BASE COURSE, PG64–22
3A. ITEM 301 – 3" BITUMINOUS AGGREGATE BASE COURSE, PG64–22
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14A. ITEM 254 – 3" PAVEMENT PLANING
15. ITEM 407 – TACK COAT, BITUMINOUS
16. ITEM SPECIAL – PAVERS, A.P.P.
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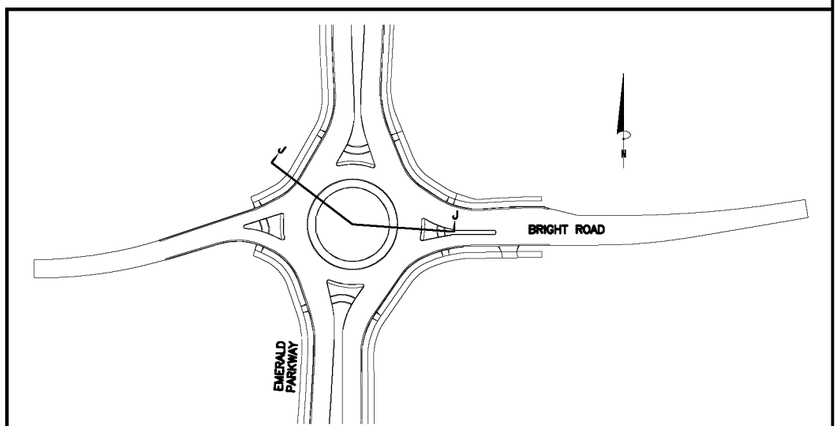


## SECTION LOCATION MAP

NOT TO SCALE

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

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| DRAWN BY: | WHW |
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| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**TYPICAL SECTIONS AND CURB DETAILS ROUNDABOUT**

SCALE: 1" = 5'

SHEET NO. 26 OF 275

P:\PR44959\cadd\TYPICAL_SECTIONS.dwg 10/25/2013 5:12:43 PM Ward, Will

300 CATCH BASIN (AA–S133)
STA. 30+75.0 "BL2", 49.0' RT.
STM. STA. 1+95.8

301 CURB & GUTTER INLET (AA–S125)
STA. 31+30.0 "BL2"
STM. STA. 1+40.8

302 54" PIPE DEFLECTION (17')
STA. 31+70.7 "BL2", 61.5' RT.
STM. STA. 1+08.1

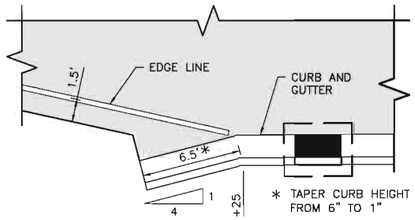
303 CURB & GUTTER INLET (AA–S125)
STA. 32+85.2 "BL2"
STM. STA. 2+14.4

304 CURB & GUTTER INLET (AA–S125)
STA. 33+71.8 "BL2"
STM. STA. 3+01.0

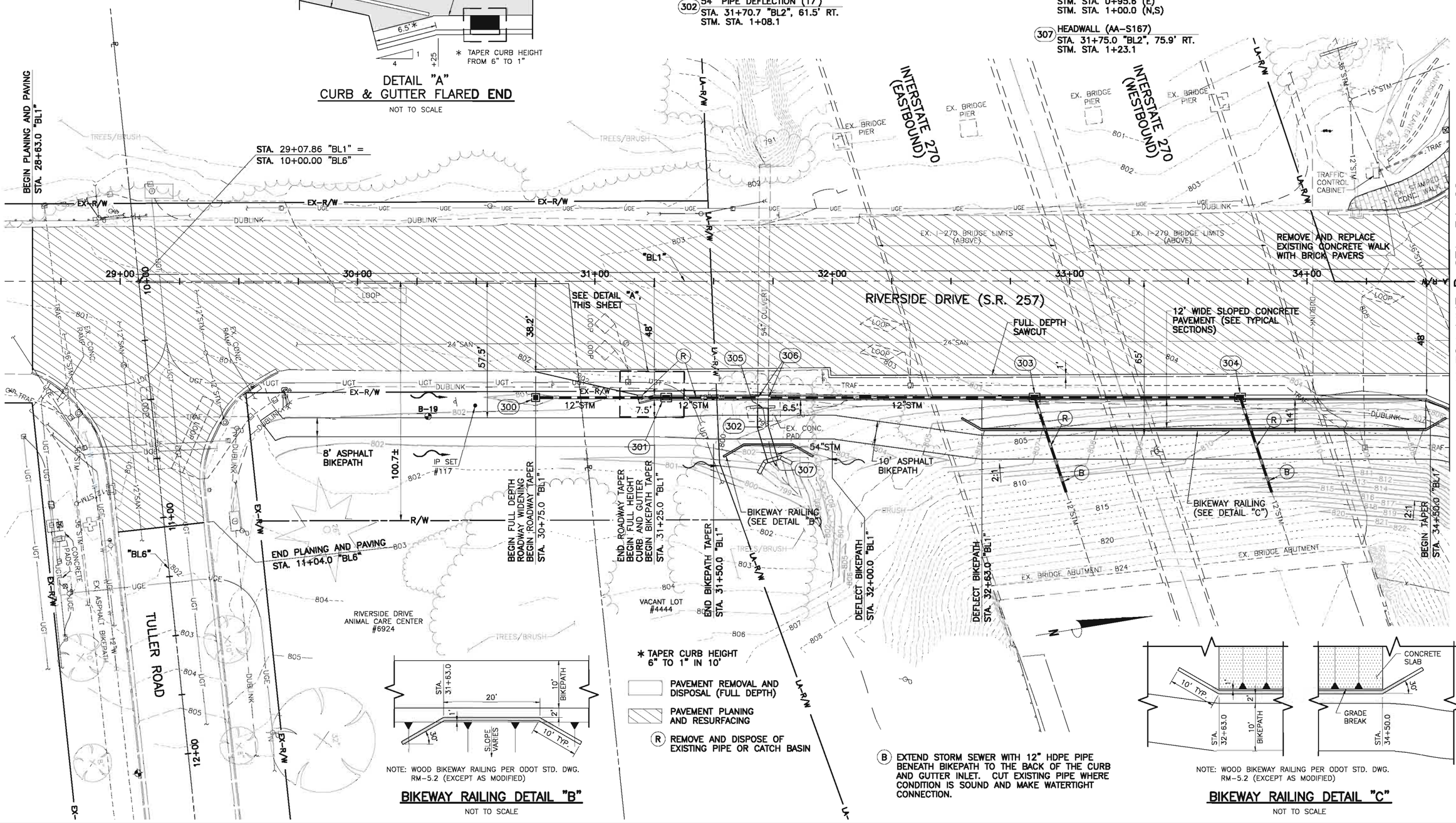
305 REMOVE AND DISPOSE OF EXISTING HEADWALL AND CONNECT TO EXISTING PIPE (NO SEPARATE PAYMENT)
STA. 31+70.8 "BL2", 53.4' RT.
STM. STA. 1+00.0

306 BLIND TAP EXISTING 54" PIPE
STA. 31+70.8 "BL2", 49.0' RT.
STM. STA. 0+95.6 (E)
STM. STA. 1+00.0 (N,S)

307 HEADWALL (AA–S167)
STA. 31+75.0 "BL2", 75.9' RT.
STM. STA. 1+23.1




DETAIL "A"
CURB & GUTTER FLARED END
NOT TO SCALE




* TAPER CURB HEIGHT 6" TO 1" IN 10'

PAVEMENT REMOVAL AND DISPOSAL (FULL DEPTH)

PAVEMENT PLANING AND RESURFACING

(R) REMOVE AND DISPOSE OF EXISTING PIPE OR CATCH BASIN

(B) EXTEND STORM SEWER WITH 12" HDPE PIPE BENEATH BIKEPATH TO THE BACK OF THE CURB AND GUTTER INLET. CUT EXISTING PIPE WHERE CONDITION IS SOUND AND MAKE WATERTIGHT CONNECTION.




NOTE: WOOD BIKEWAY RAILING PER ODOT STD. DWG. RM–5.2 (EXCEPT AS MODIFIED)

BIKEWAY RAILING DETAIL "B"
NOT TO SCALE




NOTE: WOOD BIKEWAY RAILING PER ODOT STD. DWG. RM–5.2 (EXCEPT AS MODIFIED)

BIKEWAY RAILING DETAIL "C"
NOT TO SCALE

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Burgess & Niple, Inc. COLUMBUS, OH

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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
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PLAN VIEW
RIVERSIDE DRIVE
STA. 28+63 "BL1" TO STA. 34+60 "BL1

SCALE: 1" = 20'

SHEET NO. 27 OF 275

PLOTTED: 10/27/2013 1:37:27 PM
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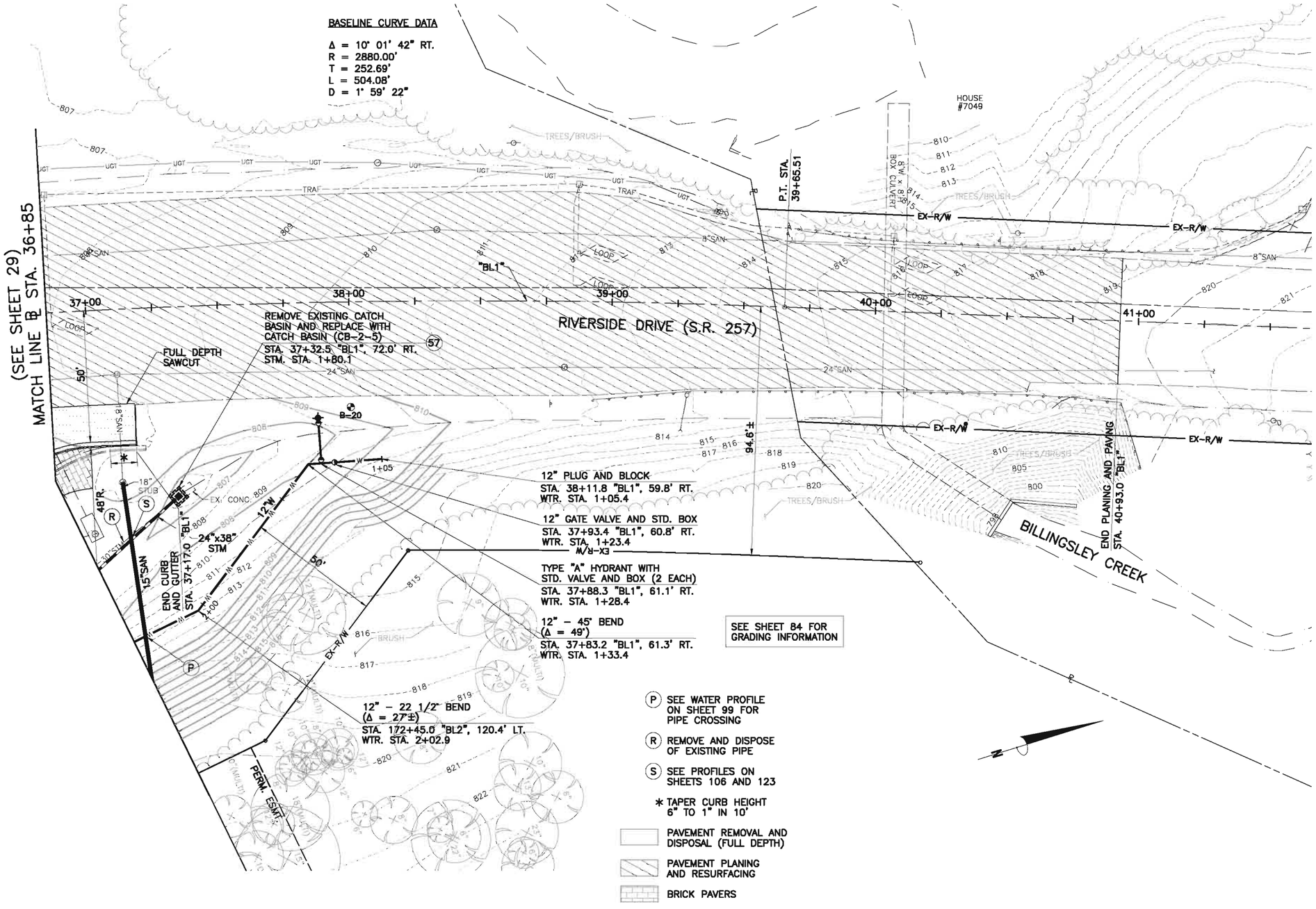


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PLAN VIEW
RIVERSIDE DRIVE
STA. 38+85 "BL1" TO STA. 40+93 "BL1"

SCALE: 1" = 20'



P:\PR44959\cadd\RIVERSIDE-PP3.dwg 10/27/2013 2:32:17 PM Ward, Will

(24) ODOT MANHOLE NO. 3
STA. 172+22.5 "BL2", 55.5' LT.
STM. STA. 3+07.9 (S,E)
STM. STA. 1+00.0 (N)

CURB & GUTTER INLET (CB-3)
(25) CONNECT TO EX. 30" PIPE (S)
STA. 172+22.5 "BL2"
STM. STA. 2+95.4 (S,N)
STM. STA. 1+00.0 (E)

CONNECT TO EXISTING
(26) CURB AND GUTTER INLET
STA. 172+22.0 "BL2"
STM. STA. 2+18.2 (S,N)
STM. STA. 1+00.0 (E)

(27) CATCH BASIN (CB-2-3)
STA. 172+22.5 "BL2", 57.0' RT.
STM. STA. 1+95.4

CONNECT TO EXISTING
(28) CATCH BASIN
STA. 171+33.9 "BL2", 92.4' RT.
STM. STA. 1+00.0

(58) CATCH BASIN (CB-2-3)
STA. 172+22.5 "BL2", 66.0' RT.
STM. STA. 1+10.5

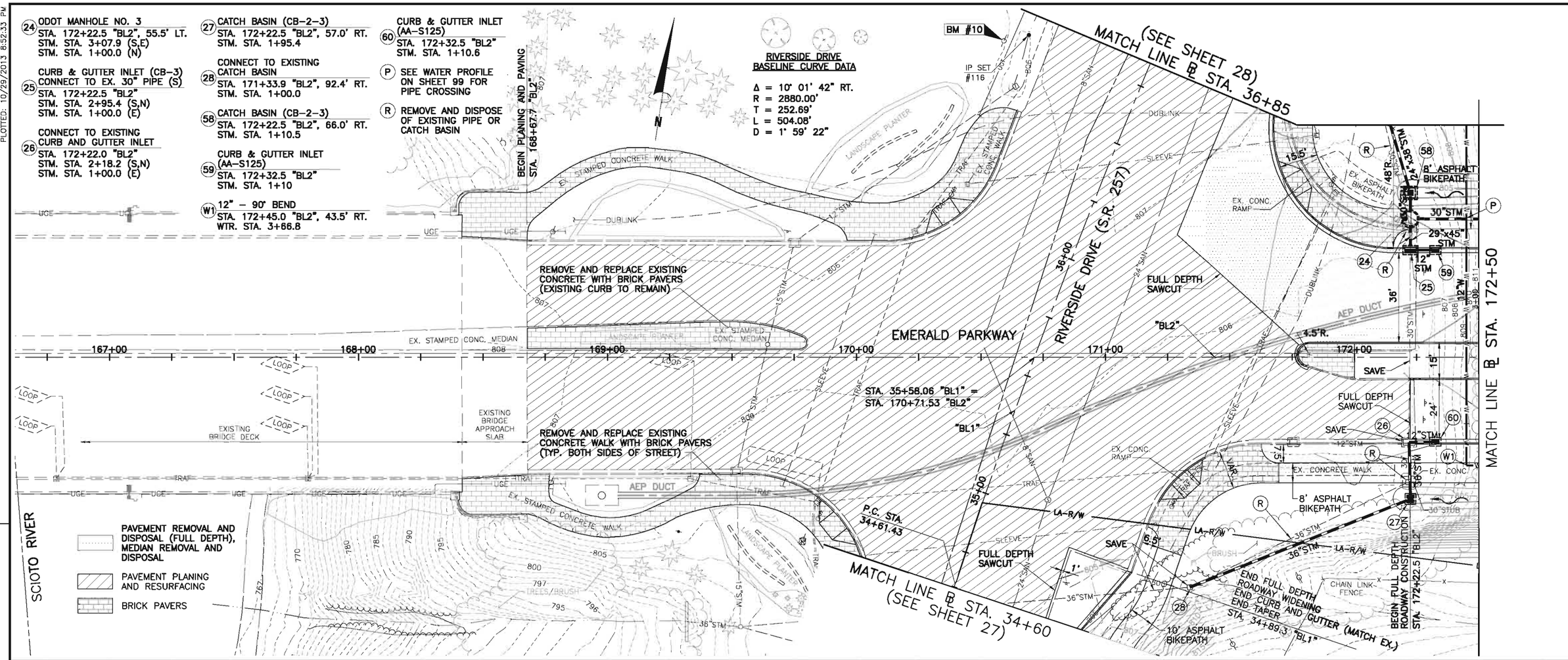
(59) CURB & GUTTER INLET (AA-S125)
STA. 172+32.5 "BL2"
STM. STA. 1+10

(W1) 12" - 90° BEND
STA. 172+45.0 "BL2", 43.5' RT.
WTR. STA. 3+66.8

(60) CURB & GUTTER INLET (AA-S125)
STA. 172+32.5 "BL2"
STM. STA. 1+10.6

(P) SEE WATER PROFILE ON SHEET 99 FOR PIPE CROSSING

(R) REMOVE AND DISPOSE OF EXISTING PIPE OR CATCH BASIN



| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

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CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8
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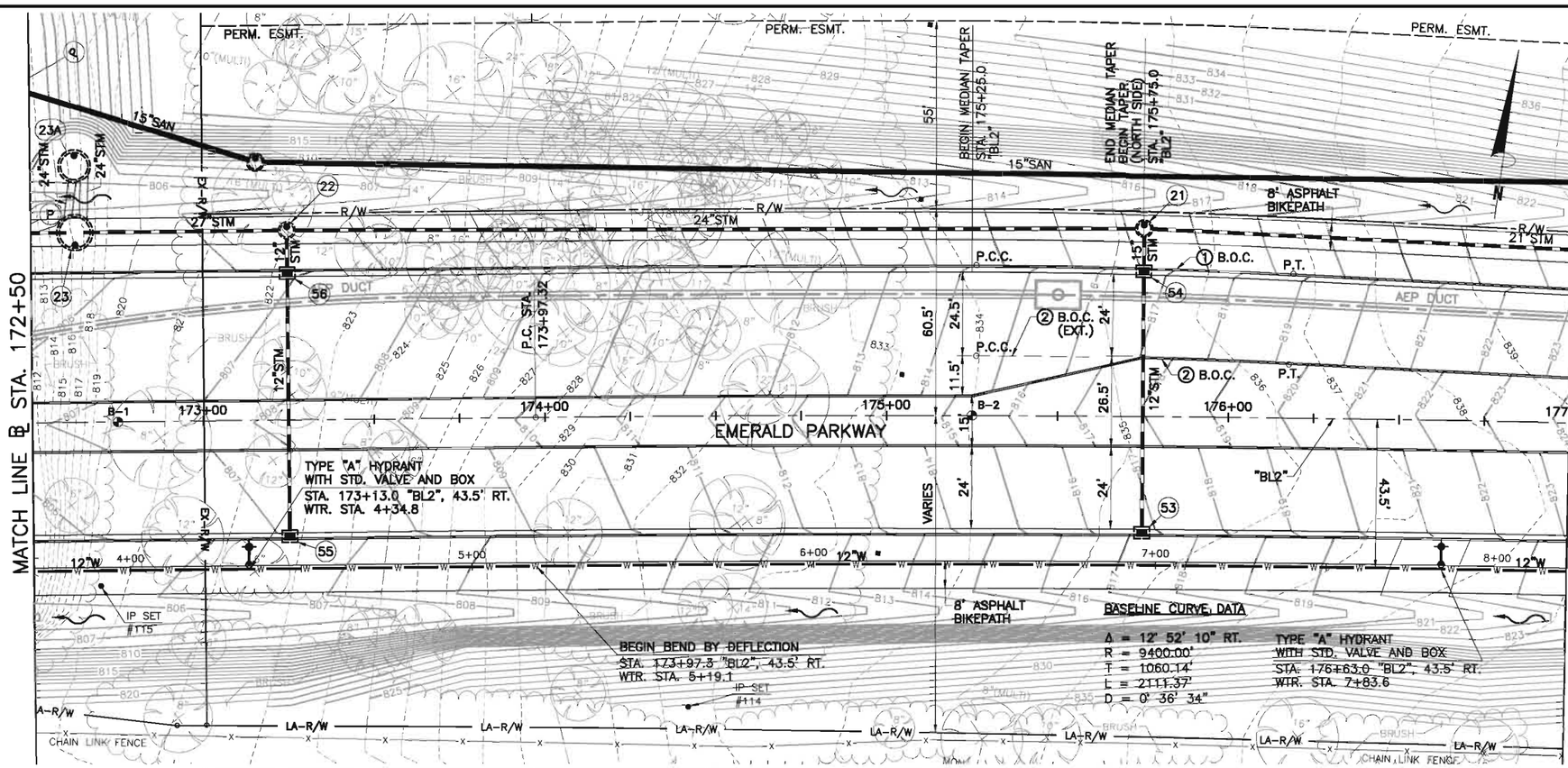
PLAN AND PROFILE
EMERALD PARKWAY
STA. 167+00 "BL2" TO STA. 172+50 "BL2"

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 29 OF 275

PLOTTED: 10/29/2013 8:52:33 PM
P:\PR44959\cadd\EMERALD-PP1.dwg 10/29/2013 8:49:48 PM Ward, Will

PLOTTED: 10/29/2013 8:57:18 PM




**B.O.C. CURVE DATA – CURVE ①**

Δ = 2° 47' 56" RT.
R = 1900.00'
T = 46.42'
L = 92.82'
D = 3° 00' 56"
P.C.C. = N: 769106.147
E: 1798031.361
P.I. = N: 769112.627
E: 1798077.325

**B.O.C. CURVE DATA – CURVE ②**

Δ = 2° 47' 56" RT.
R = 1873.50'
T = 45.77'
L = 91.52'
D = 3° 03' 30"
P.C.C. = N: 769079.906
E: 1798035.061
P.I. = N: 769086.296
E: 1798080.384

(21) TYPE "C" MANHOLE (AA–S102)
STA. 175+75.0 "BL2", 55.0' LT.
STM. STA. 6+61.5 (W,E)
STM. STA. 1+00.0 (S)

(22) TYPE "C" MANHOLE (AA–S102)
STA. 173+25.0 "BL2", 55,5' LT.
STM. STA. 4+10.4 (W,E)
STM. STA. 1+00.0 (N)

(23) ODOT MANHOLE NO. 3
STA. 172+63.0 "BL2", 55.5' LT.
STM. STA. 3+48.4

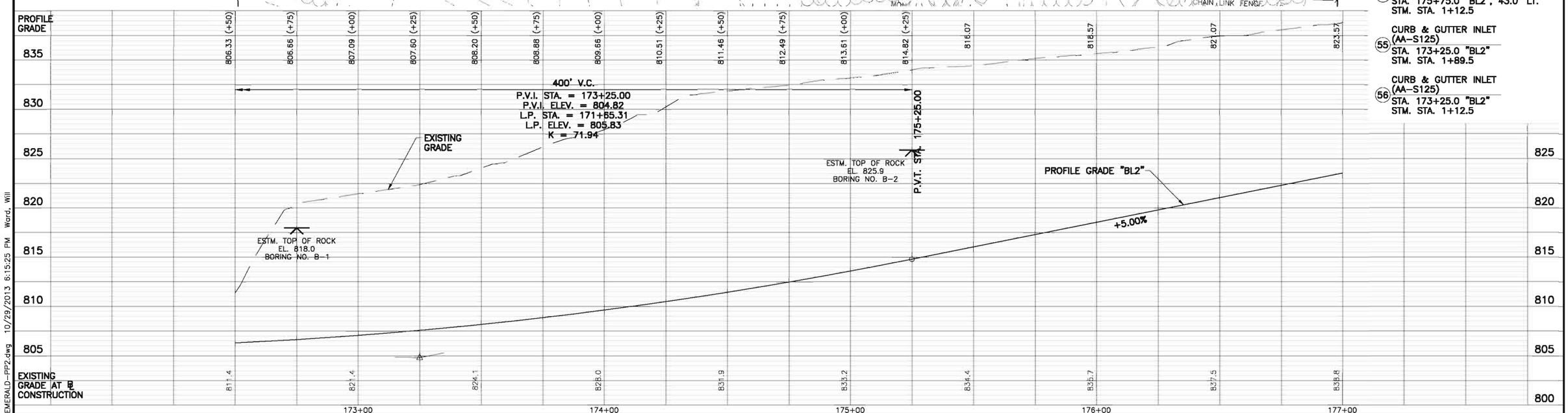
(23A) ITEM 895 – MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4
STA. 172+63.0 "BL2", 75.0' LT.

(53) CURB & GUTTER INLET (AA–S125)
STA. 175+75.0 "BL2"
STM. STA. 1+89.0

(54) CURB & GUTTER INLET (AA–S125)
STA. 175+75.0 "BL2", 43.0' LT.
STM. STA. 1+12.5

(55) CURB & GUTTER INLET (AA–S125)
STA. 173+25.0 "BL2"
STM. STA. 1+89.5

(56) CURB & GUTTER INLET (AA–S125)
STA. 173+25.0 "BL2"
STM. STA. 1+12.5

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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

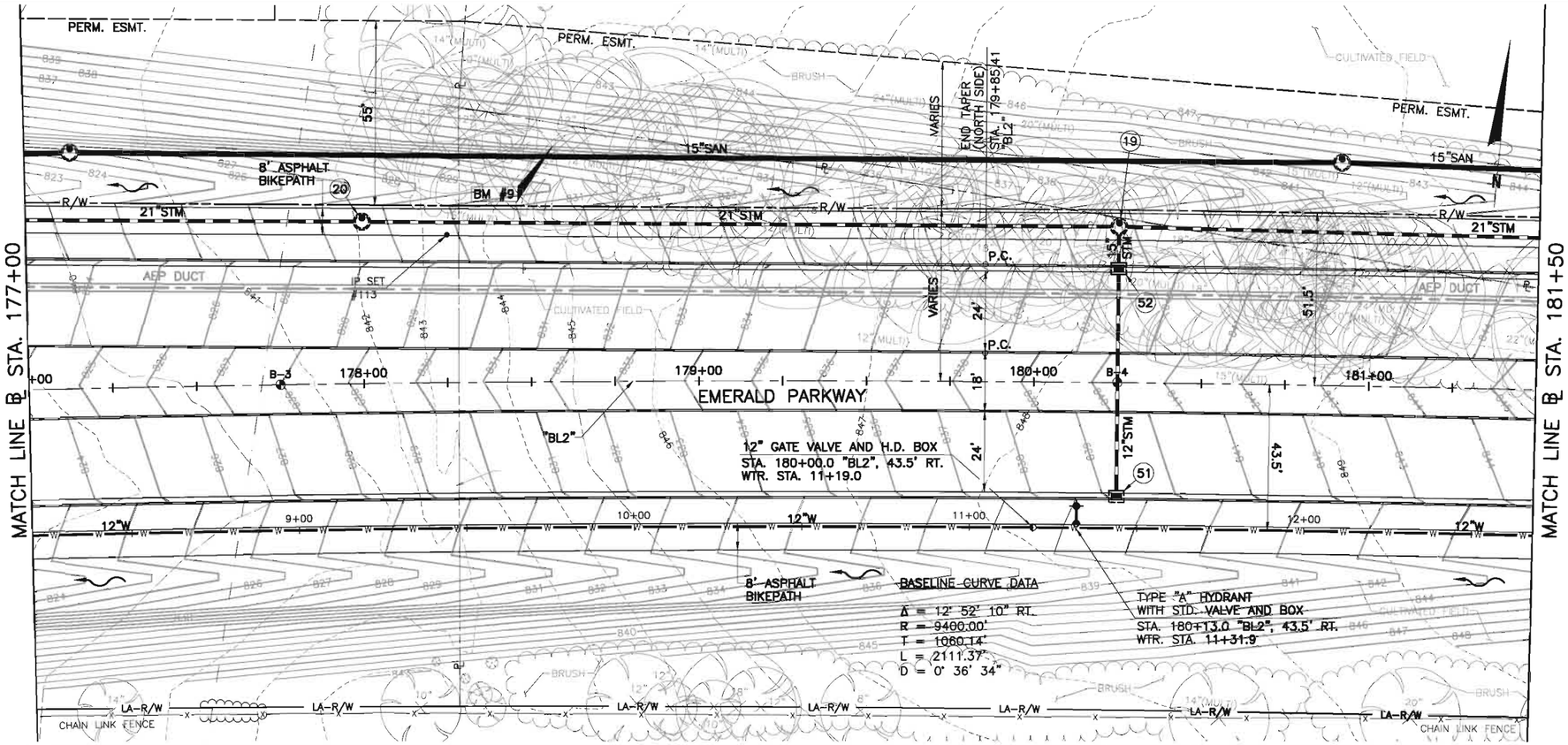
**PLAN AND PROFILE**
**EMERALD PARKWAY**
**STA. 172+50 "BL2" TO STA. 177+00 "BL2"**

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 30 OF 275

P:\PR44959\cadd\EMERALD-PP2.dwg 10/29/2013 6:15:25 PM Ward, Will

PLOTTED: 10/30/2013 8:33:15 AM

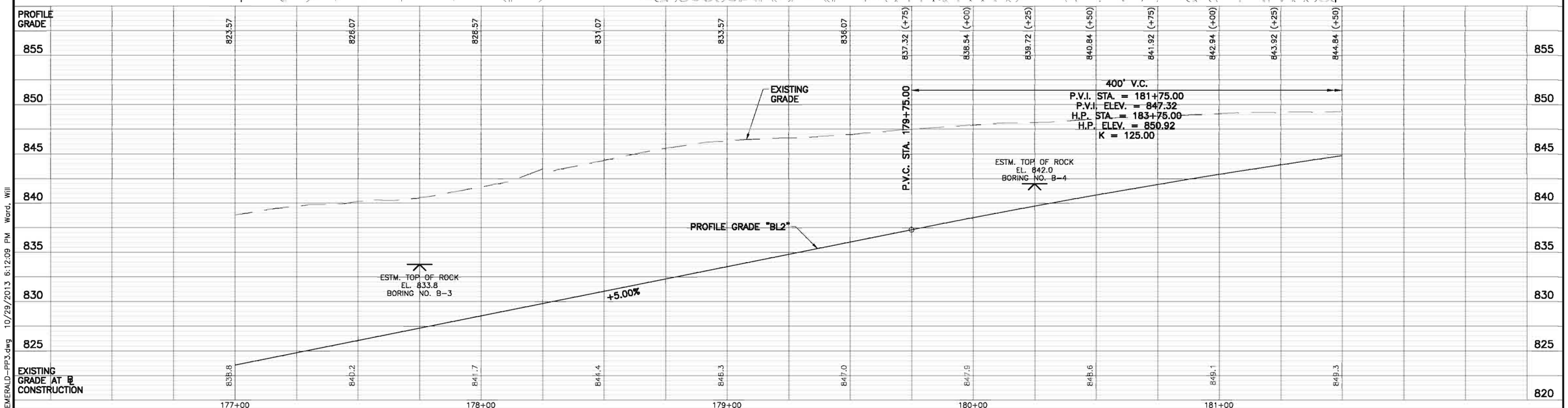



(19) TYPE "C" MANHOLE (AA-S102)
STA. 180+25.0 "BL2", 46.5' LT.
STM. STA. 11+13.9 (W,E)
STM. STA. 1+00.0 (S)

(20) TYPE "C" MANHOLE (AA-S102)
STA. 178+00.0 "BL2", 48.3' LT.
STM. STA. 8+87.8

(51) CURB & GUTTER INLET (AA-S125)
STA. 181+25.0 "BL2"
STM. STA. 1+80.5

(52) CURB & GUTTER INLET (AA-S125)
STA. 181+25.0 "BL2"
STM. STA. 1+12.5

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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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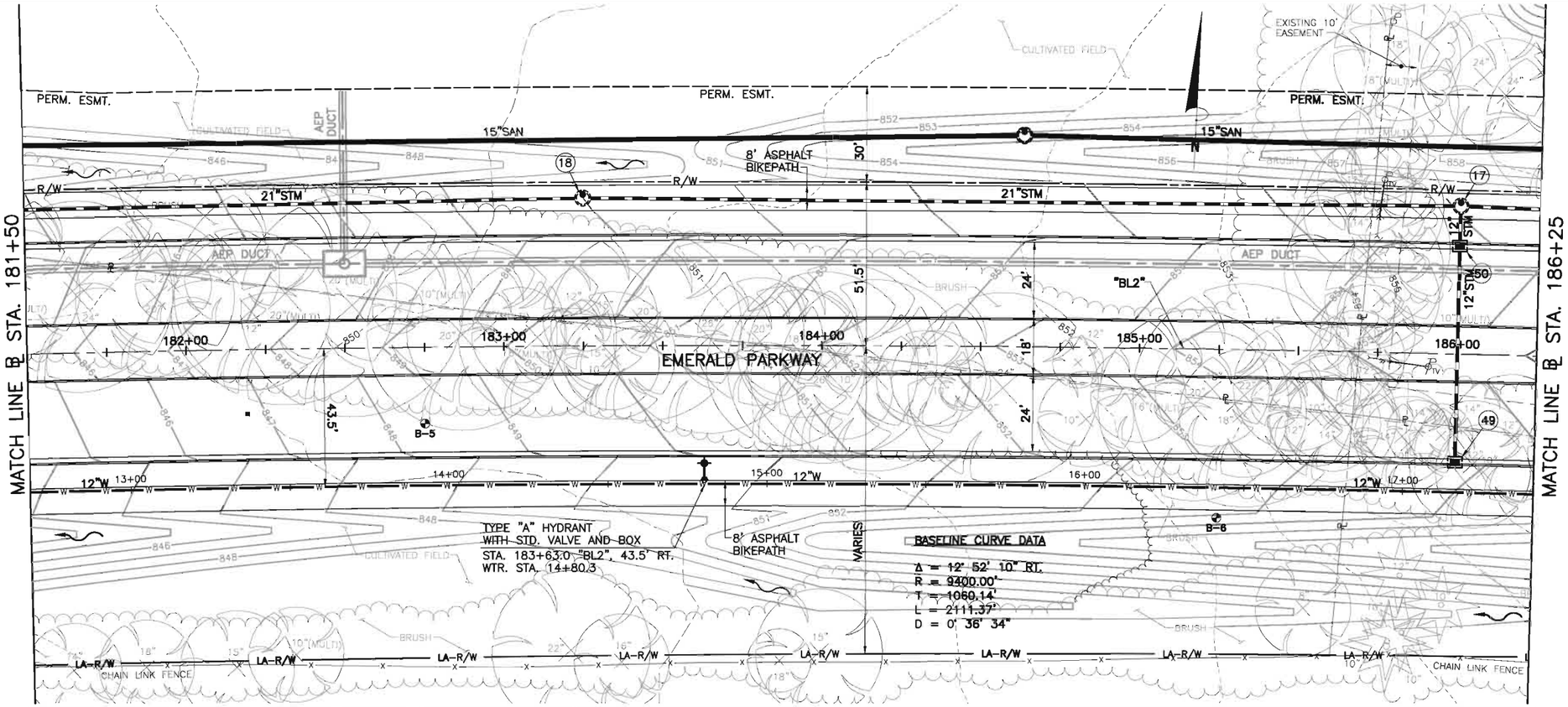
| DATE: | OCTOBER 2013 |

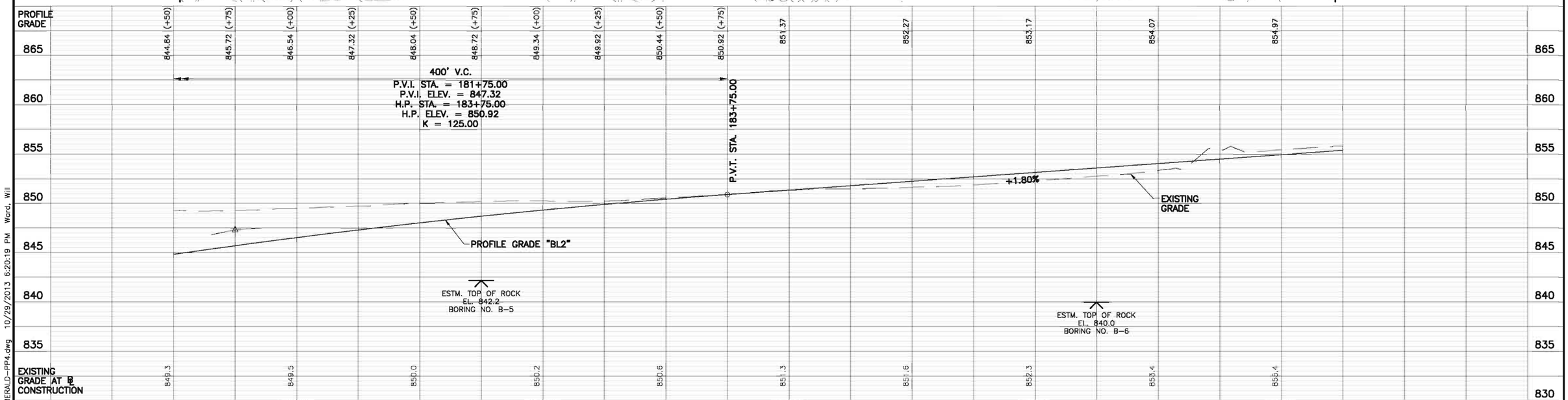
PLAN AND PROFILE
EMERALD PARKWAY
STA. 177+00 "BL2" TO STA. 181+50 "BL2"

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 31 OF 275

P:\PR44959\cadd\EMERALD-PP3.dwg 10/29/2013 6:12:09 PM Ward, Will

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**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

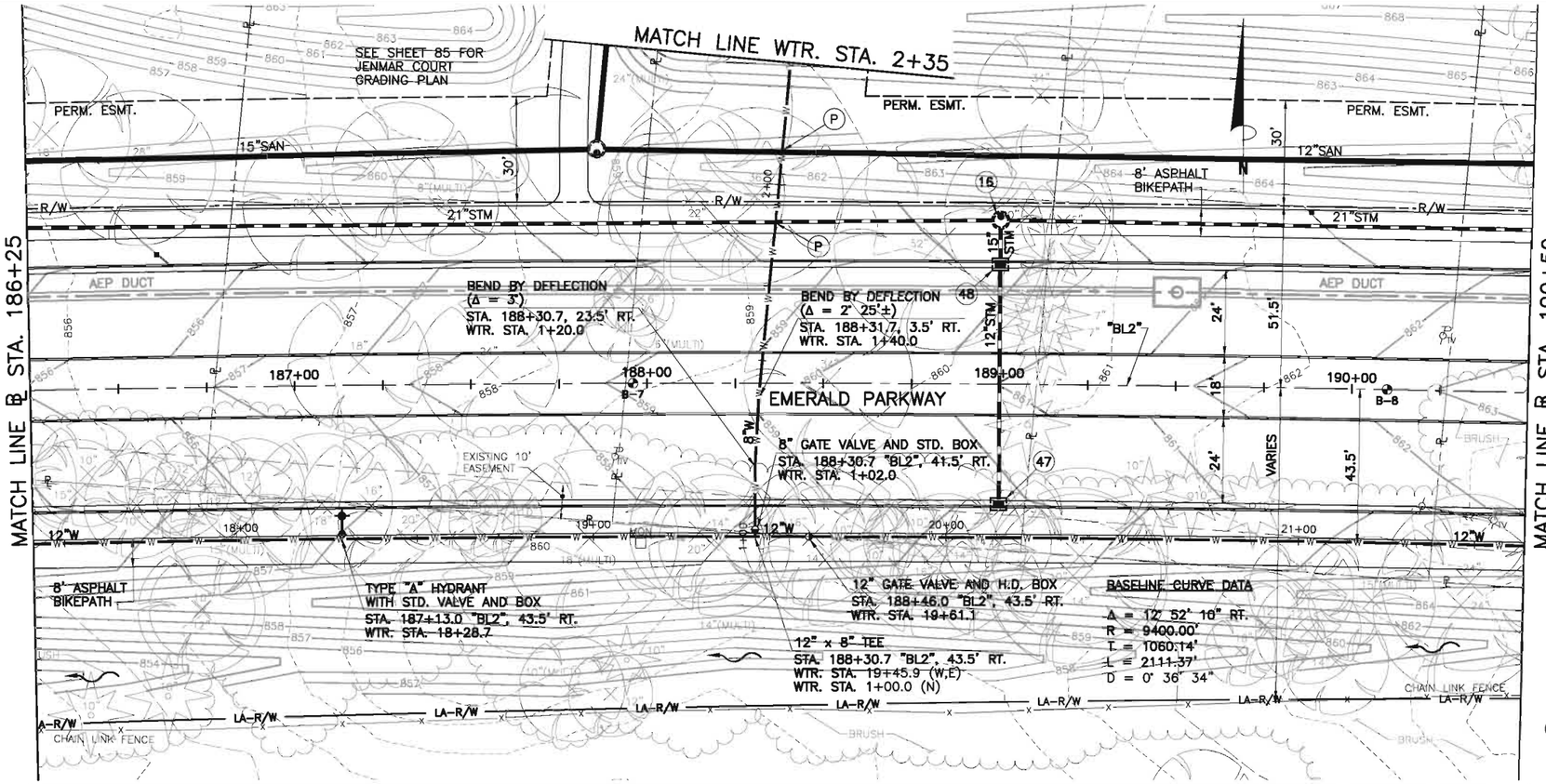
**PLAN AND PROFILE**
**EMERALD PARKWAY**
**STA. 181+50 "BL2" TO STA. 186+25 "BL2"**

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 32 OF 275

PLOTTED: 10/29/2013 9:06:18 PM
P:\PR44959\cadd\EMERALD-PP4.dwg 10/29/2013 6:20:19 PM Ward, Will

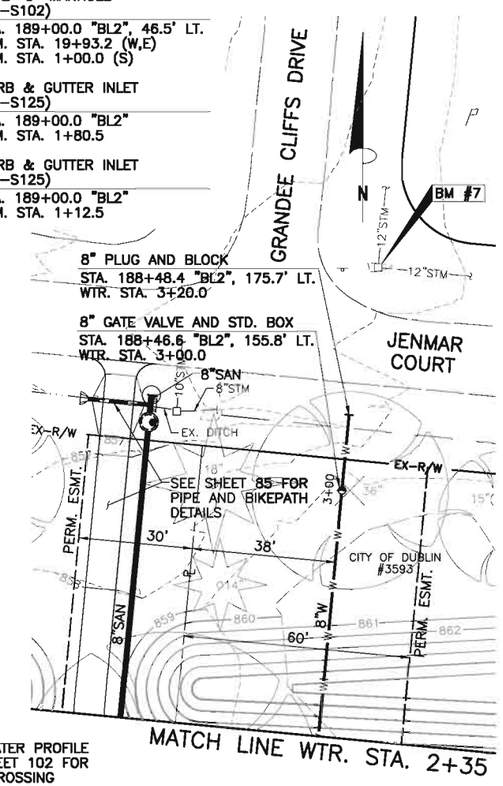
PLOTTED: 10/29/2013 9:10:36 PM



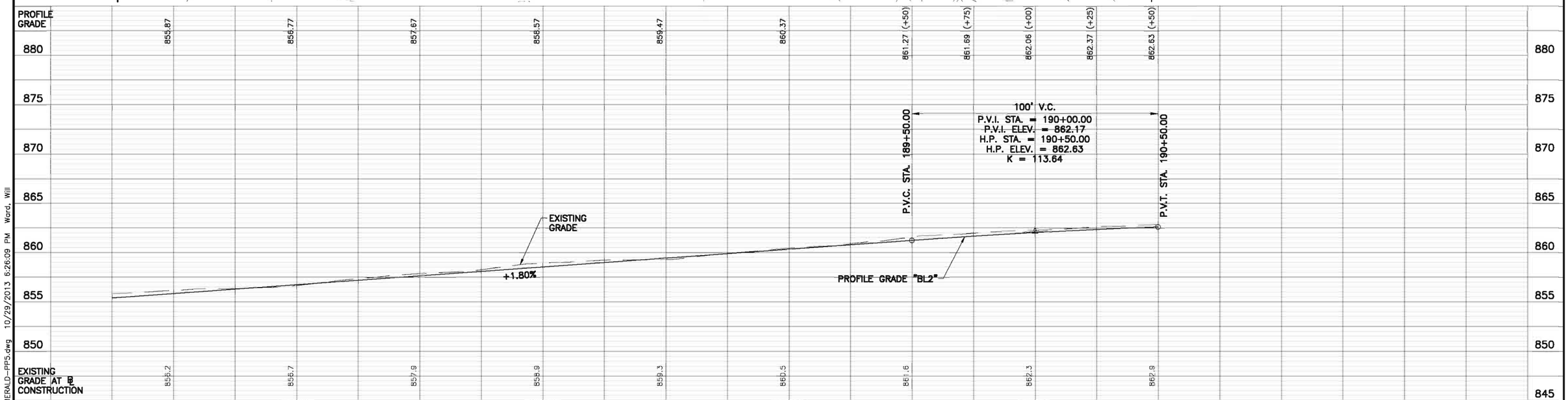

TYPE "C" MANHOLE (AA-S102)
(16) STA. 189+00.0 "BL2", 46.5' LT.
STM. STA. 19+93.2 (W,E)
STM. STA. 1+00.0 (S)

CURB & GUTTER INLET (AA-S125)
(47) STA. 189+00.0 "BL2"
STM. STA. 1+80.5

CURB & GUTTER INLET (AA-S125)
(48) STA. 189+00.0 "BL2"
STM. STA. 1+12.5




(P) SEE WATER PROFILE ON SHEET 102 FOR PIPE CROSSING

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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| DATE: | OCTOBER 2013 |

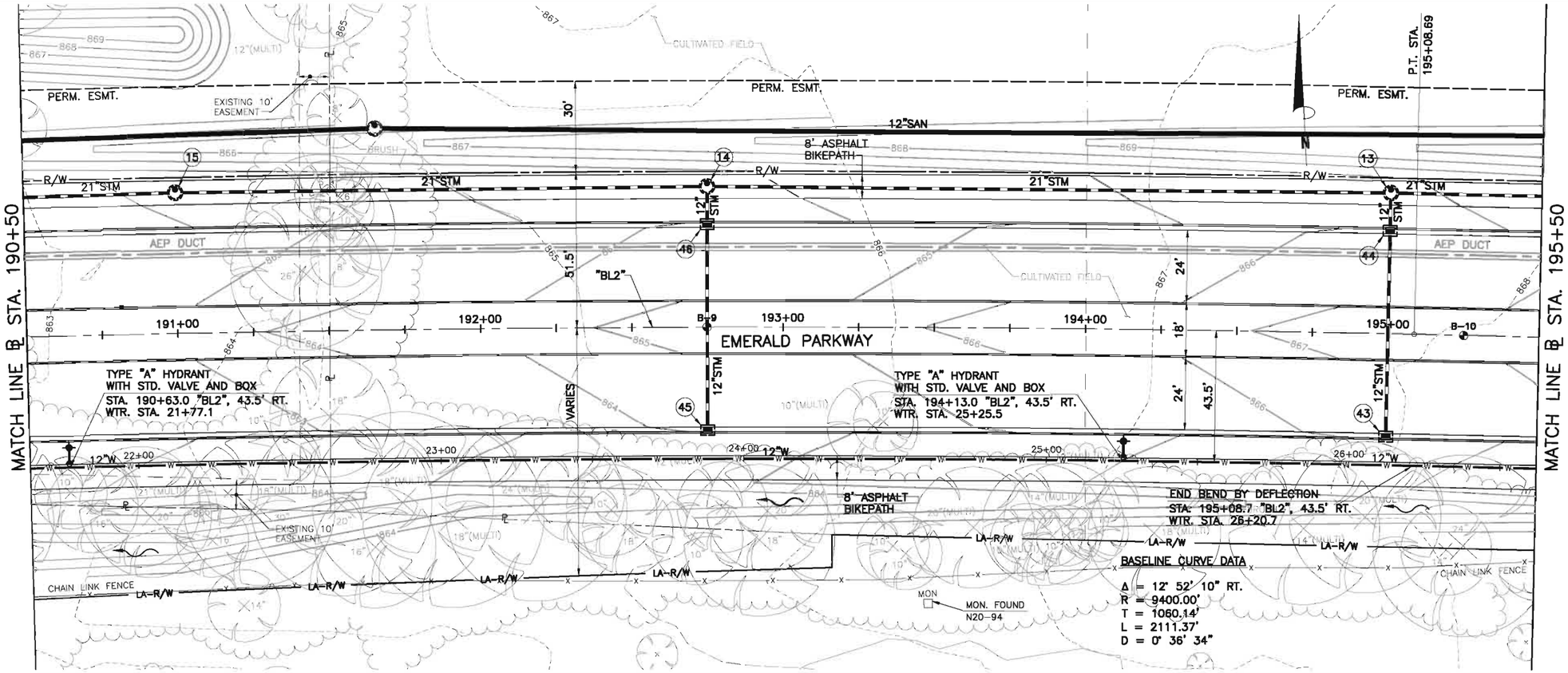
PLAN AND PROFILE
EMERALD PARKWAY
STA. 186+25 "BL2" TO STA. 190+50 "BL2"

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 33 OF 275

P:\PR44959\cadd\EMERALD-PP5.dwg 10/29/2013 6:26:09 PM Ward, Will

PLOTTED: 10/29/2013 9:15:29 PM




TYPE "C" MANHOLE (AA-S102)
(13) STA. 195+00.0 "BL2", 46.5' LT.
STM. STA. 25+96.2 (W,E)
STM. STA. 1+00.0 (S)

TYPE "C" MANHOLE (AA-S102)
(14) STA. 192+75.0 "BL2", 46.5' LT.
STM. STA. 23+70.1 (W,E)
STM. STA. 1+00.0 (S)

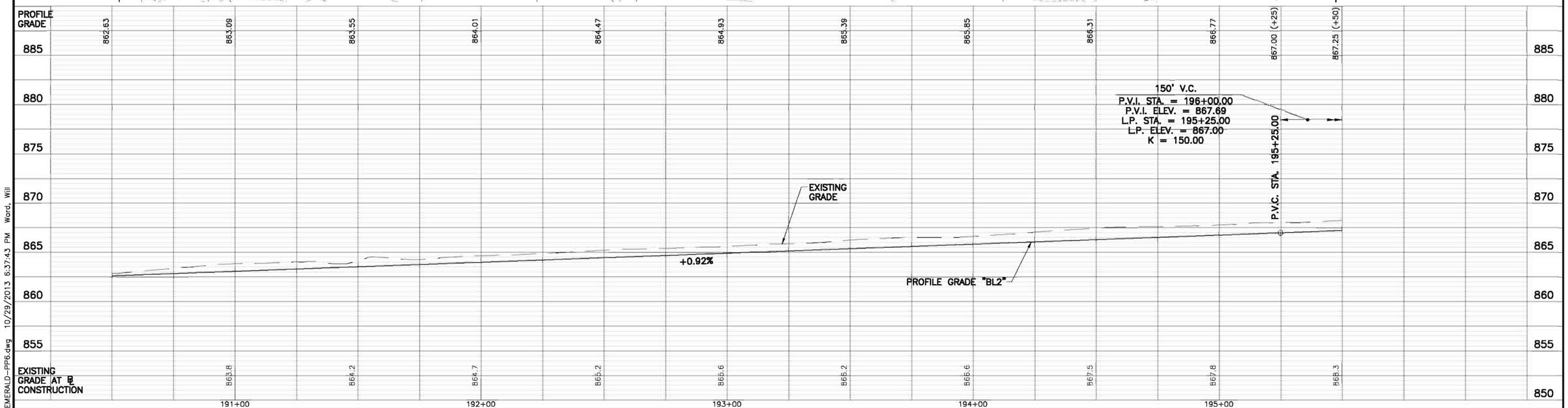
TYPE "C" MANHOLE (AA-S102)
(15) STA. 191+00.0 "BL2", 46.5' LT.
STM. STA. 21+94.2

CURB & GUTTER INLET (AA-S125)
(43) STA. 195+00.0 "BL2"
STM. STA. 1+80.5

CURB & GUTTER INLET (AA-S125)
(44) STA. 195+00.0 "BL2"
STM. STA. 1+12.5

CURB & GUTTER INLET (AA-S125)
(45) STA. 192+75.0 "BL2"
STM. STA. 1+80.5

CURB & GUTTER INLET (AA-S125)
(46) STA. 192+75.0 "BL2"
STM. STA. 1+12.5

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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| DRAWN BY: | WHW |
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| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

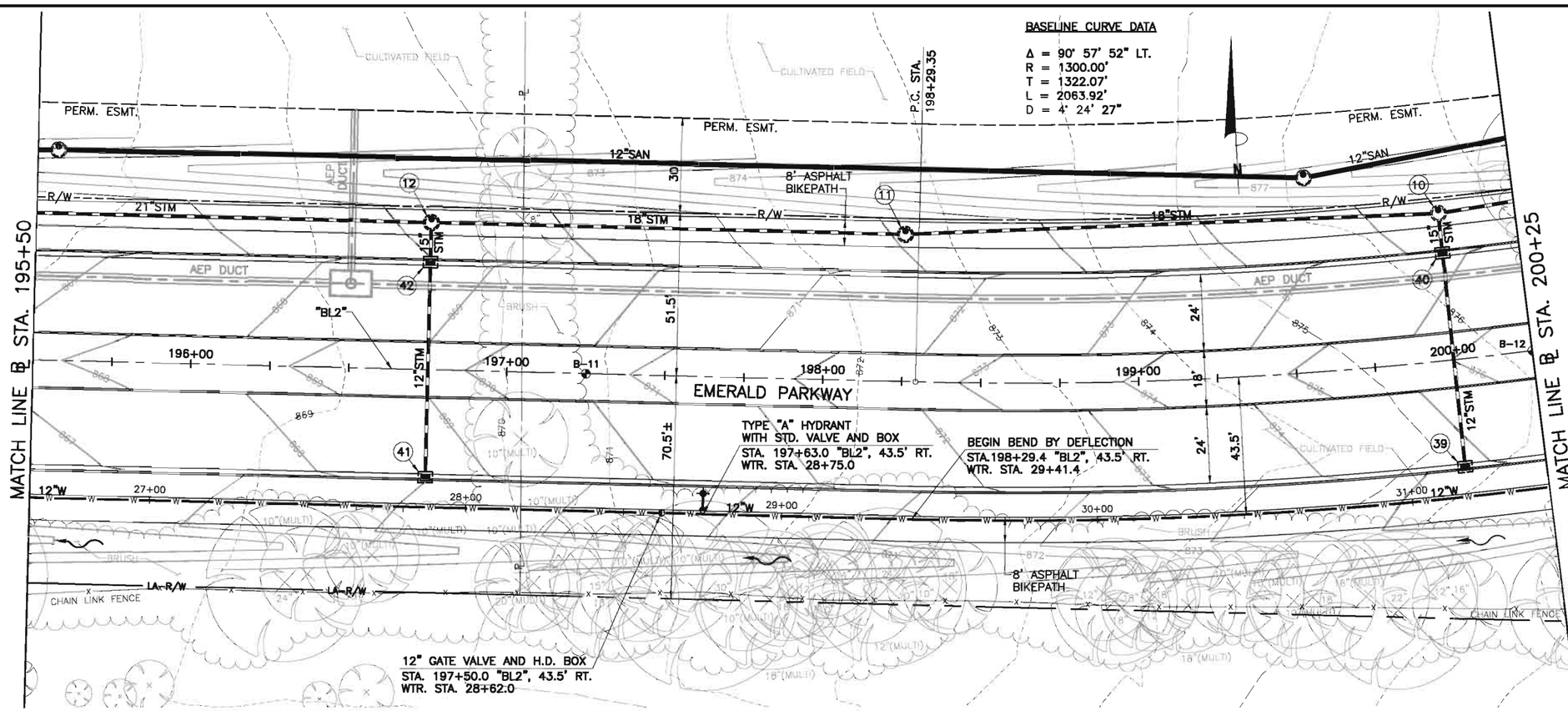
PLAN AND PROFILE
EMERALD PARKWAY
STA. 190+50 "BL2" TO STA. 195+50 "BL2"

SCALE:
1" = 20' HORIZ.
1" = 5' VERT.

SHEET NO. 34 OF 275

P:\PR44959\cadd\EMERALD-PP6.dwg 10/29/2013 6:37:43 PM Ward, Will

PLOTTED: 10/30/2013 8:37:36 AM




(10) TYPE "C" MANHOLE (AA-S102)
STA. 200+00.0 "BL2", 46.5' LT.
STM. STA. 30+90.0 (W,E)
STM. STA. 1+00.0 (S)

(11) TYPE "C" MANHOLE (AA-S102)
STA. 198+25.0 "BL2", 46.5' LT.
STM. STA. 29+21.2

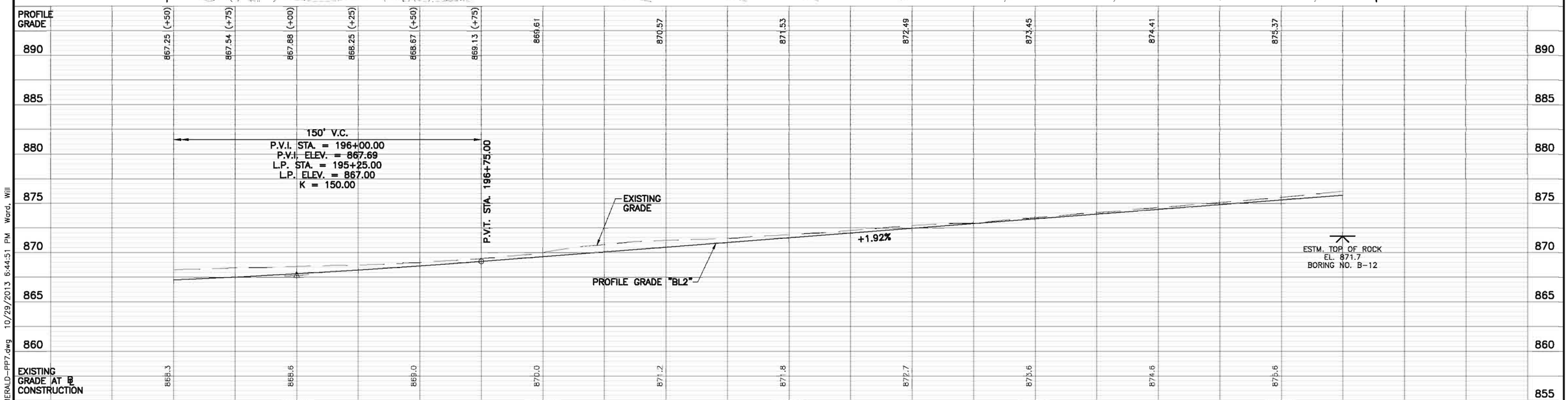
(12) TYPE "C" MANHOLE (AA-S102)
STA. 196+75.0 "BL2", 46.5' LT.
STM. STA. 27+71.2 (W,E)
STM. STA. 1+00.0 (S)

(41) CURB & GUTTER INLET (AA-S125)
STA. 196+75.0 "BL2"
STM. STA. 1+80.5

(42) CURB & GUTTER INLET (AA-S125)
STA. 196+75.0 "BL2"
STM. STA. 1+12.5

(39) CURB & GUTTER INLET (AA-S125)
STA. 200+00.0 "BL2"
STM. STA. 1+80.5

(40) CURB & GUTTER INLET (AA-S125)
STA. 200+00.0 "BL2"
STM. STA. 1+12.5

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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

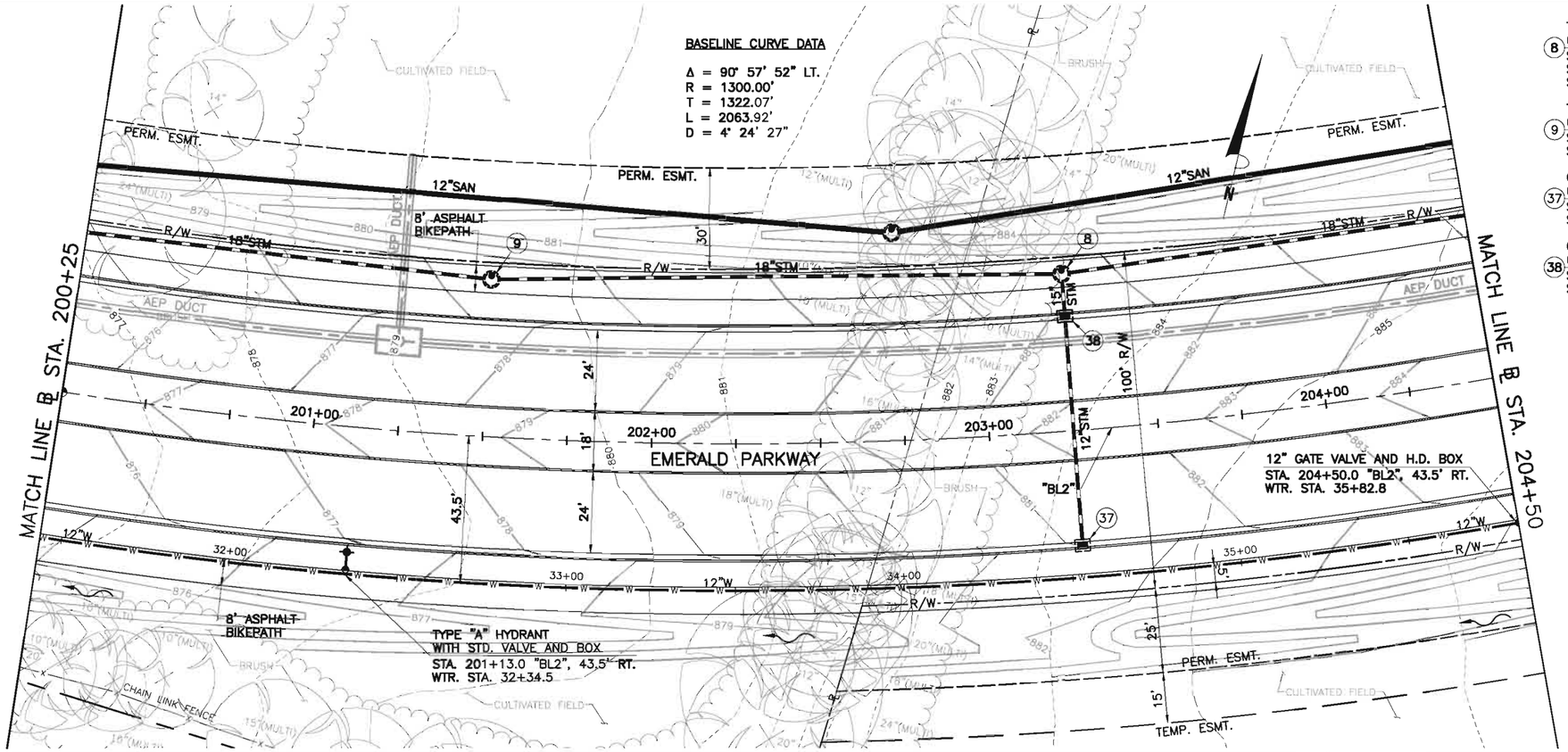
PLAN AND PROFILE
EMERALD PARKWAY
STA. 195+50 "BL2" TO STA. 200+25 "BL2"

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 35 OF 275

P:\PR44959\cadd\EMERALD-PP7.dwg 10/29/2013 6:44:51 PM Ward, Will

PLOTTED: 10/29/2013 9:24:59 PM

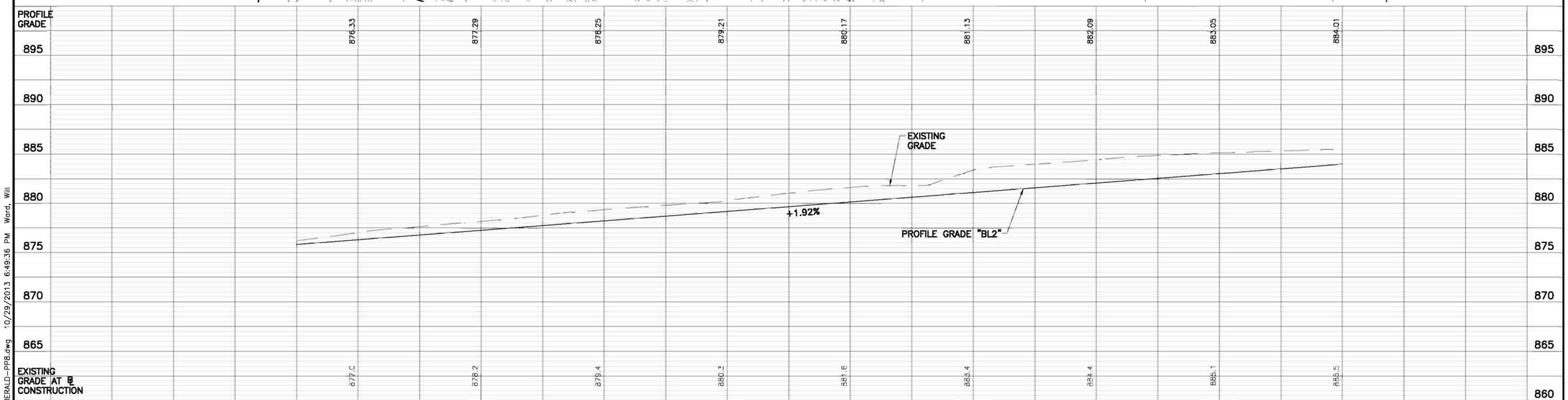



(8) TYPE "C" MANHOLE (AA–S102)
STA. 203+25.0 "BL2", 46.5' LT.
STM. STA. 34+03.2 (SW,NE)
STM. STA. 1+00.0 (SE)

(9) TYPE "C" MANHOLE (AA–S102)
STA. 201+50.0 "BL2", 46.5' LT.
STM. STA. 32+34.6

(37) CURB & GUTTER INLET (AA–S125)
STA. 203+25.0 "BL2"
STM. STA. 1+80.5

(38) CURB & GUTTER INLET (AA–S125)
STA. 203+25.0 "BL2"
STM. STA. 1+12.5

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EMERALD PARKWAY – PHASE 8
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07–008–CIP

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| DATE: | OCTOBER 2013 |

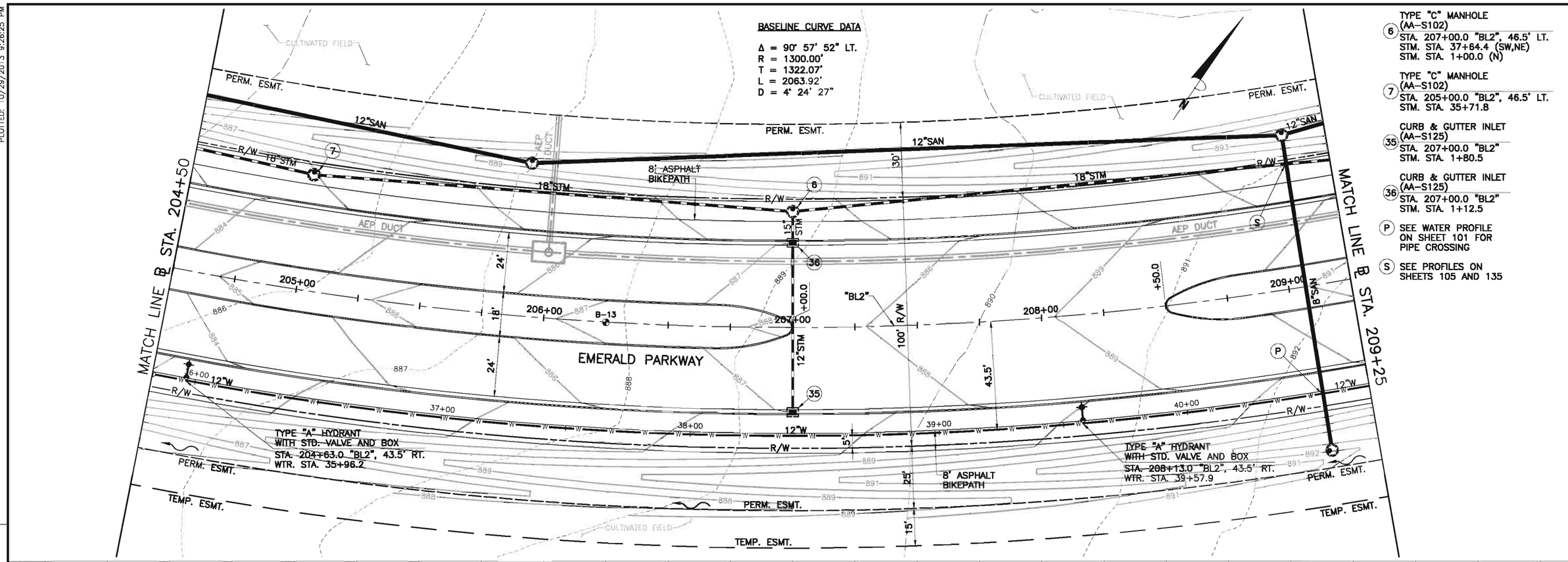
PLAN AND PROFILE
EMERALD PARKWAY
STA. 200+25 "BL2" TO STA. 204+50 "BL2"

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 36 OF 275

P:\PR44959\cadd\EMERALD-PP8.dwg 10/29/2013 6:49:36 PM Ward, Will

PLOTTED: 10/29/2013 9:26:25 PM

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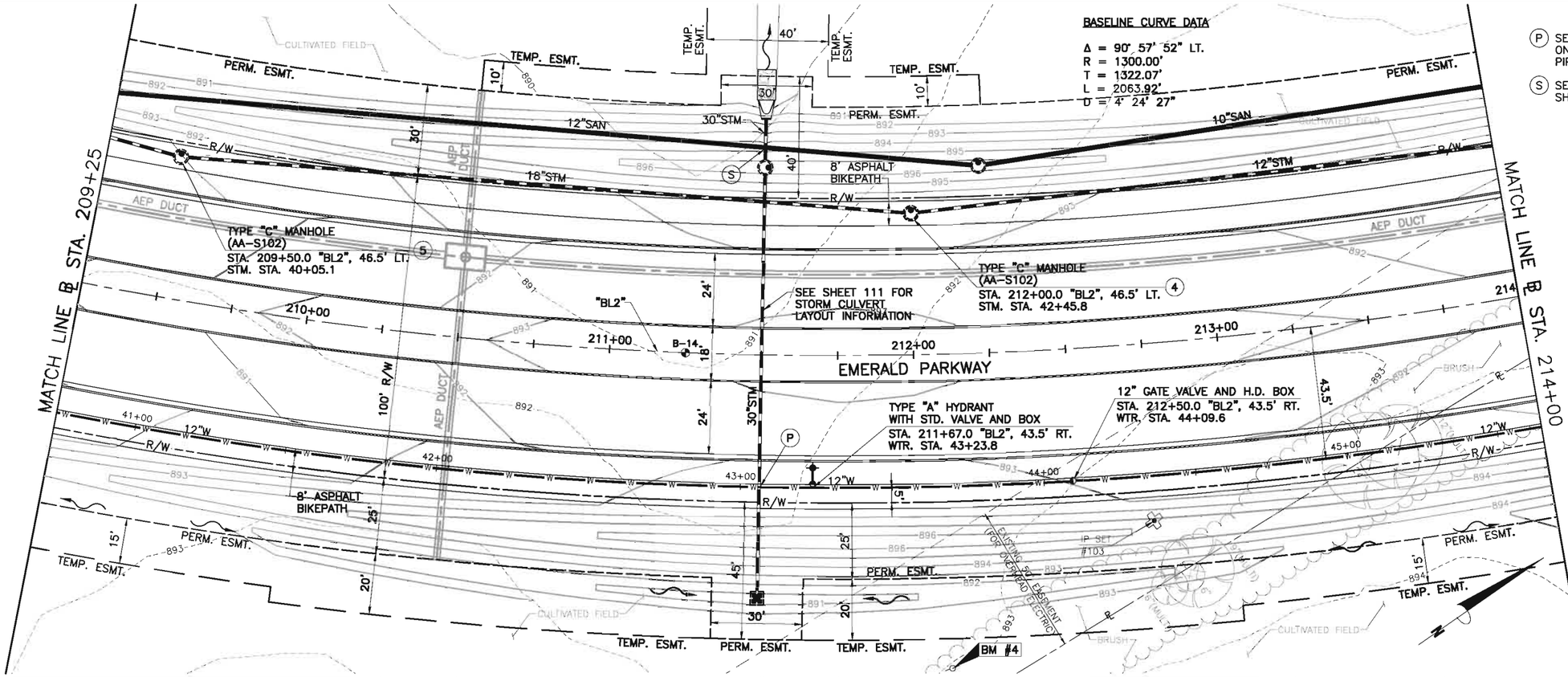
**PLAN AND PROFILE**
**EMERALD PARKWAY**
**STA. 204+50 "BL2" TO STA. 209+25 "BL2"**

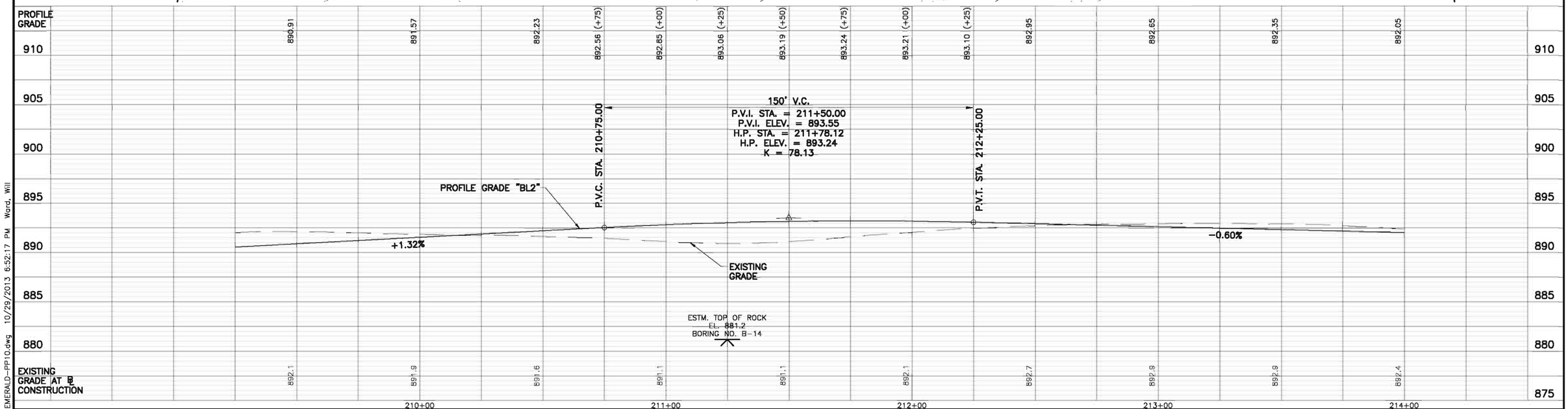
SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 37 OF 275

P:\PR44959\cadd\EMERALD-PP9.dwg 10/29/2013 8:58:56 PM Ward, Will

PLOTTED: 10/29/2013 9:30:16 PM

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| APPROVED BY: | DKM |
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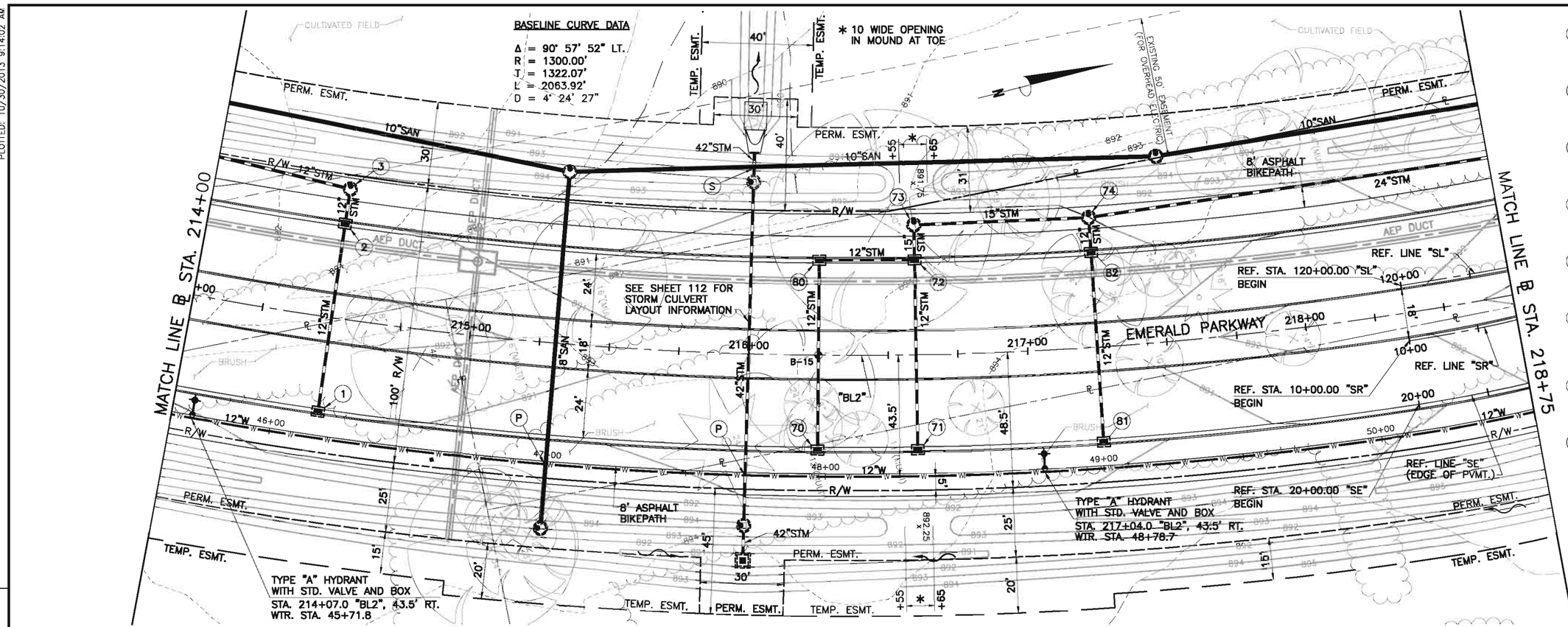
**PLAN AND PROFILE**
**EMERALD PARKWAY**
**STA. 209+25 "BL2" TO STA. 214+00 "BL2"**

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 38 OF 275

P:\PR44959\cadd\EMERALD-PP10.dwg 10/29/2013 6:52:17 PM Word, Will

PLOTTED: 10/30/2013 9:14:02 AM




1 CURB & GUTTER INLET (AA–S125)
STA. 214+50.0 "BL2"
STM. STA. 45+67.0

2 CURB & GUTTER INLET (AA–S125)
STA. 214+50.0 "BL2"
STM. STA. 44+99.0

3 TYPE "C" MANHOLE (AA–S102)
STA. 214+50.0 "BL2", 46.5' LT.
STM. STA. 44+86.5

70 CURB & GUTTER INLET (AA–S125)
STA. 216+25.0 "BL2"
STM. STA. 2+02.1

71 CURB & GUTTER INLET (AA–S125)
STA. 216+60.0 "BL2"
STM. STA. 12+99.9

72 CURB & GUTTER INLET (AA–S125)
STA. 216+60.0 "BL2"
STM. STA. 12+31.9 (W,E)
STM. STA. 1+00.0 (S)

73 TYPE "C" MANHOLE (AA–S102)
STA. 216+60.0 "BL2", 46.5' LT.
STM. STA. 12+19.4

74 TYPE "C" MANHOLE (AA–S102)
STA. 217+25.0 "BL2", 46.5' LT.
STM. STA. 11+56.8 (N,S)
STM. STA. 1+00.0 (E)

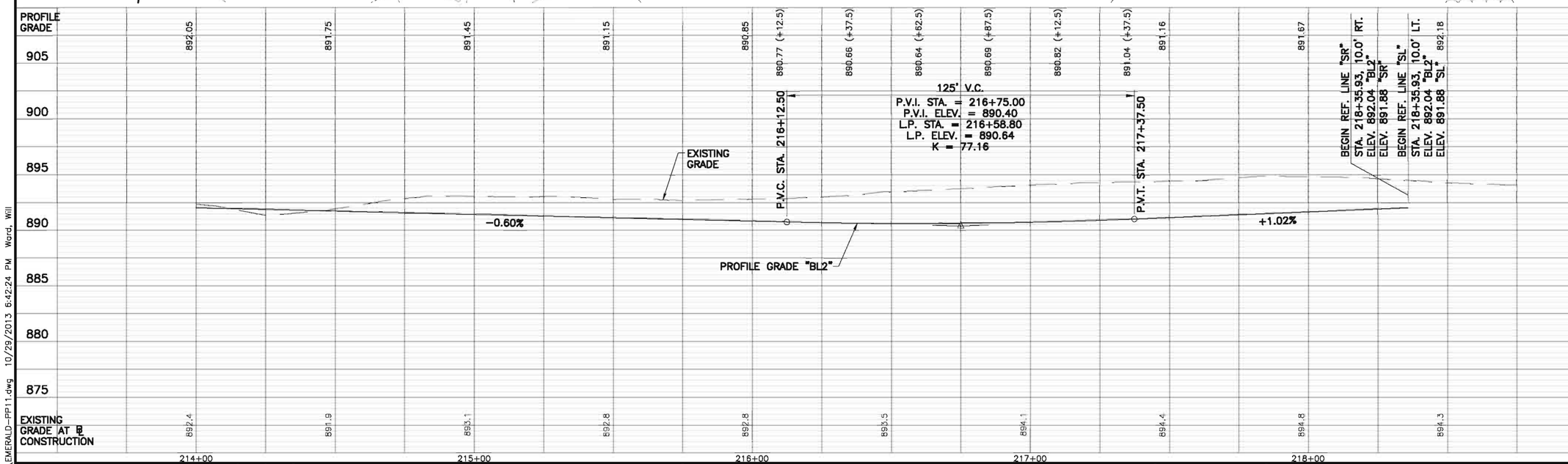
80 CURB & GUTTER INLET (AA–S125)
STA. 216+25.0 "BL2"
STM. STA. 1+34.1

81 CURB & GUTTER INLET (AA–S125)
STA. 217+25.0 "BL2"
STM. STA. 1+80.5

82 CURB & GUTTER INLET (AA–S125)
STA. 217+25.0 "BL2"
STM. STA. 1+12.5

P SEE WATER PROFILE ON SHEET 101 FOR PIPE CROSSING

S SEE PROFILES ON SHEETS 112 AND 132

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| DATE: | OCTOBER 2013 |

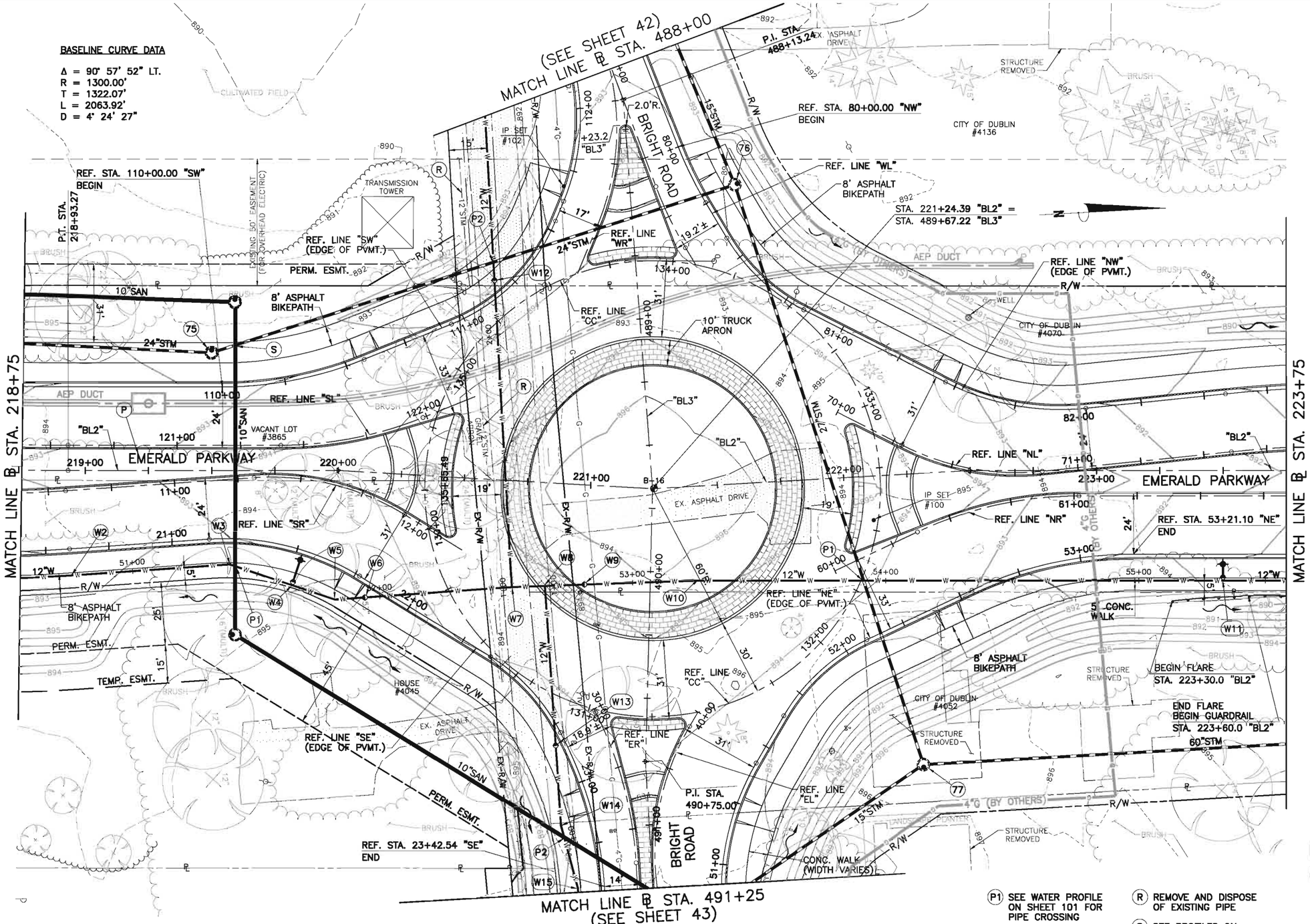
PLAN AND PROFILE
EMERALD PARKWAY
STA. 214+00 "BL2" TO STA. 218+75 "BL2"

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 39 OF 275

P:\PR44959\cadd\EMERALD-PP11.dwg 10/29/2013 6:42:24 PM Ward, Will

PLOTTED: 10/29/2013 9:38:08 PM




(75) TYPE "C" MANHOLE (AA–S102)
STA. 219+50.0 "BL2", 46.5' LT.
STM. STA. 9+38.0

(76) TYPE "C" MANHOLE (AA–S102)
STA. 488+50.0 "BL3", 41.4' LT.
STM. STA. 7+20.9 (S,E)
STM. STA. 1+00.0 (W)

(77) TYPE "C" MANHOLE (AA–S102)
STA. 222+25.0 "BL2", 114.9' RT.
STM. STA. 4+80.2 (W,N)
STM. STA. 1+00.0 (SE)

(W2) END BEND BY DEFLECTION
STA. 218+94.6 "BL2", 41.4' RT.
WTR. STA. 50+75.7

(W3) 12" – 22 1/2° BEND
STA. 219+57.1 "BL2", 37.1' RT.
WTR. STA. 51+38.4

(W4) TYPE "A" HYDRANT WITH STD. VALVE AND BOX
STA. 219+81.7 "BL2", 45.3' RT.
WTR. STA. 51+64.3

(W5) 12" – 22 1/2° BEND
STA. 220+01.6 "BL2", 50.9' RT.
WTR. STA. 51+82.1

(W6) 12" GATE VALVE AND STD. BOX
STA. 220+13.4 "BL2", 49.4' RT.
WTR. STA. 51+94.1

(W7) 12" x 12" TEE BEND BY DEFLECTION (Δ = 1° 59')
STA. 220+71.1 "BL2", 42.0' RT.
WTR. STA. 52+52.3 (N,S)
WTR. STA. 1+00.0 (W)

(W8) 12" x 12" TEE
STA. 220+84.1 "BL2", 40.8' RT.
WTR. STA. 52+65.3 (N,S)
WTR. STA. 1+00.0 (E)

(W9) 12" GATE VALVE AND STD. BOX
STA. 220+99.6 "BL2", 39.4' RT.
WTR. STA. 52+80.9

(W10) BEND BY DEFLECTION (Δ = 2°)
STA. 221+40.4 "BL2", 37.3' RT.
WTR. STA. 53+26.0

(W11) TYPE "A" HYDRANT WITH STD. VALVE AND BOX
STA. 223+50.0 "BL2", 43.5' RT.
WTR. STA. 55+33.3

(W12) 12" GATE VALVE AND STD. BOX
STA. 488+80.5 "BL3", 55.8' RT.
WTR. STA. 2+21.3

(W13) 12" GATE VALVE AND STD. BOX
STA. 490+69.6 "BL3", 35.7' RT.
WTR. STA. 1+63.1

(W14) 12" – 11 1/4° BEND
STA. 490+98.3 "BL3", 34.8' RT.
WTR. STA. 1+94.8

(W15) 12" – 11 1/4° BEND
STA. 491+23.4 "BL3", 29.5' RT.
WTR. STA. 2+20.4

PAVEMENT REMOVAL AND DISPOSAL (FULL DEPTH)

BRICK PAVERS

(P1) SEE WATER PROFILE ON SHEET 101 FOR PIPE CROSSING

(P2) SEE WATER PROFILE ON SHEET 102 FOR PIPE CROSSING

(R) REMOVE AND DISPOSE OF EXISTING PIPE

(S) SEE PROFILES ON SHEETS 108 AND 133

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

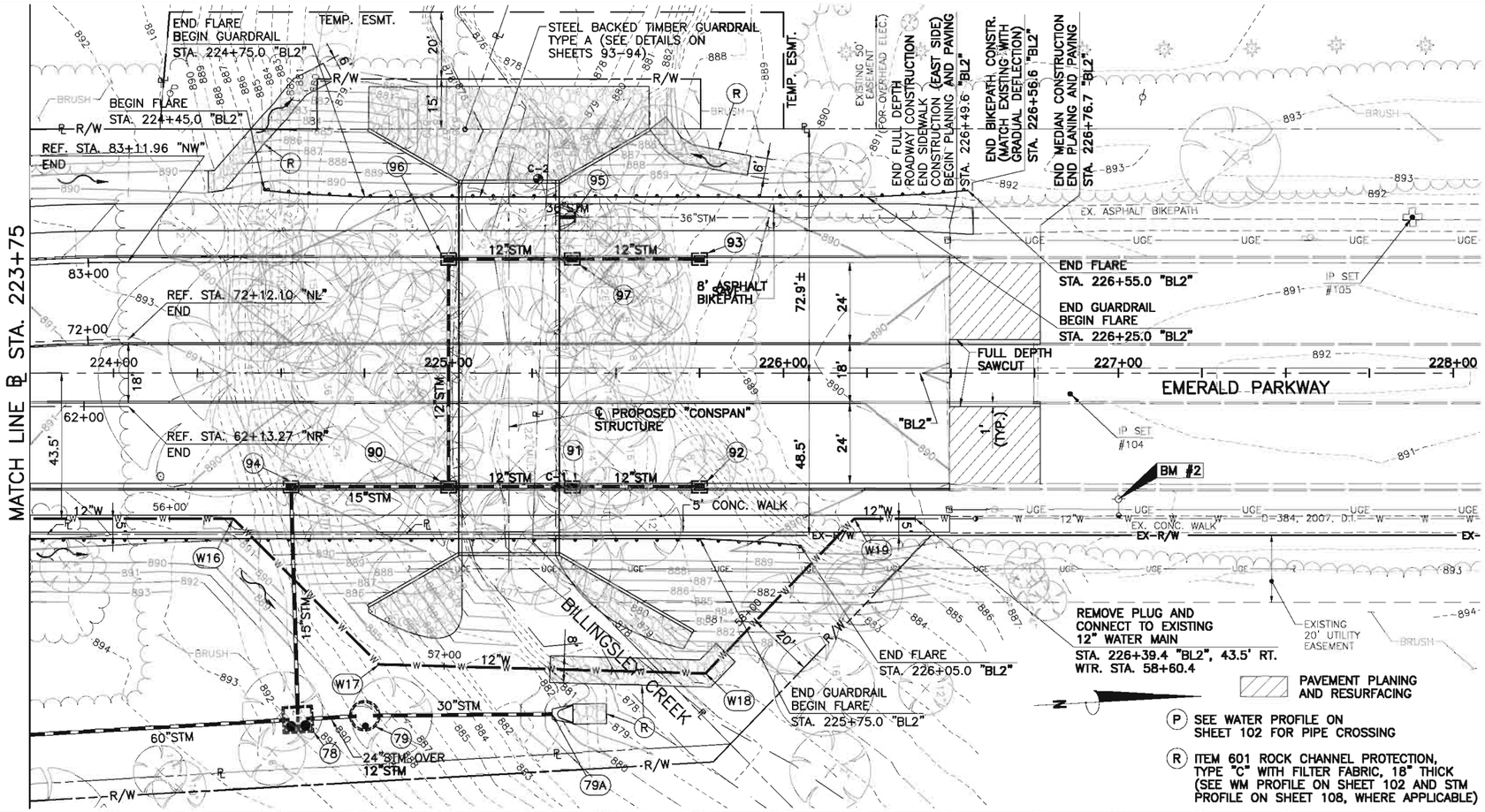
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

ROUNDABOUT PLAN VIEW
EMERALD PARKWAY/BRIGHT ROAD
STA. 218+75 "BL2" TO STA. 223+75 "BL2"
STA. 488+00 "BL3" TO STA. 491+25 "BL3"

SCALE: 1" = 20'

SHEET NO. 40 OF 275

P:\PR44959\cadd\EMERALD-PP12.dwg 10/29/2013 6:34:02 PM Ward, Will




(78) DETENTION CONTROL STRUCTURE (SEE SHEET 110 FOR DETAILS)
STA. 224+55.0 "BL2", 103.5' RT.
STM. STA. 2+56.4
STM. STA. 1+00.0 (W)

(79) TYPE "C" MANHOLE (AA-S102)
STA. 224+75.0 "BL2", 102.3' RT.
STM. STA. 2+36.4

(79A) CONCRETE FLARED END SECTION
STA. 225+31.0 "BL2", 101.9' RT.
STM. STA. 1+80.5

(90) CURB & GUTTER INLET (AA-S125)
STA. 225+00.0 "BL2"
STM. STA. 2+14.5 (W,S)
STM. STA. 1+00.0 (N)

(91) CURB & GUTTER INLET (AA-S125)
STA. 225+37.0 "BL2"
STM. STA. 1+37.0

(92) CURB & GUTTER INLET (AA-S125)
STA. 225+75.0 "BL2"
STM. STA. 1+75.0

(93) CURB & GUTTER INLET (AA-S125)
STA. 225+75.0 "BL2"
STM. STA. 3+57.5

(94) CURB & GUTTER INLET (AA-S125)
STA. 224+55.0 "BL2"
STM. STA. 1+69.5

(95) REMOVE EXISTING FLARED END SECTION AND EXTEND 36" PIPE TO CONSPAN WALL
STA. 225+37.8 "BL2", 46.5' LT.

(96) CURB & GUTTER INLET (AA-S125)
STA. 225+00.0 "BL2"
STM. STA. 2+82.5

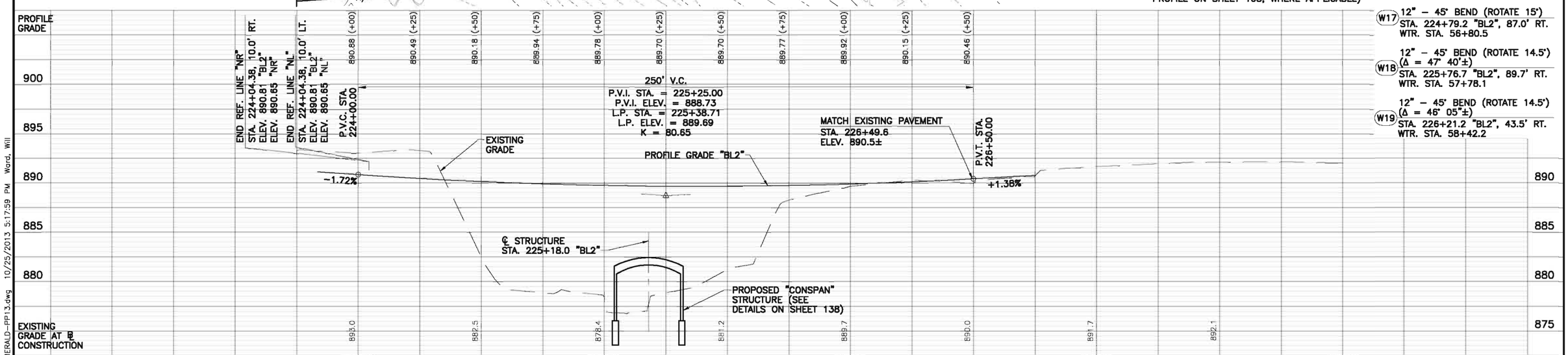
(97) CURB & GUTTER INLET (AA-S125)
STA. 225+37.0 "BL2"
STM. STA. 3+19.5

(W16) 12" - 45° BEND (ROTATE 15°)
STA. 224+35.7 "BL2", 43.5' RT.
WTR. STA. 56+19.0

(W17) 12" - 45° BEND (ROTATE 15°)
STA. 224+79.2 "BL2", 87.0' RT.
WTR. STA. 56+80.5

(W18) 12" - 45° BEND (ROTATE 14.5°) (Δ = 47° 40'±)
STA. 225+76.7 "BL2", 89.7' RT.
WTR. STA. 57+78.1

(W19) 12" - 45° BEND (ROTATE 14.5°) (Δ = 46° 05"±)
STA. 226+21.2 "BL2", 43.5' RT.
WTR. STA. 58+42.2




| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

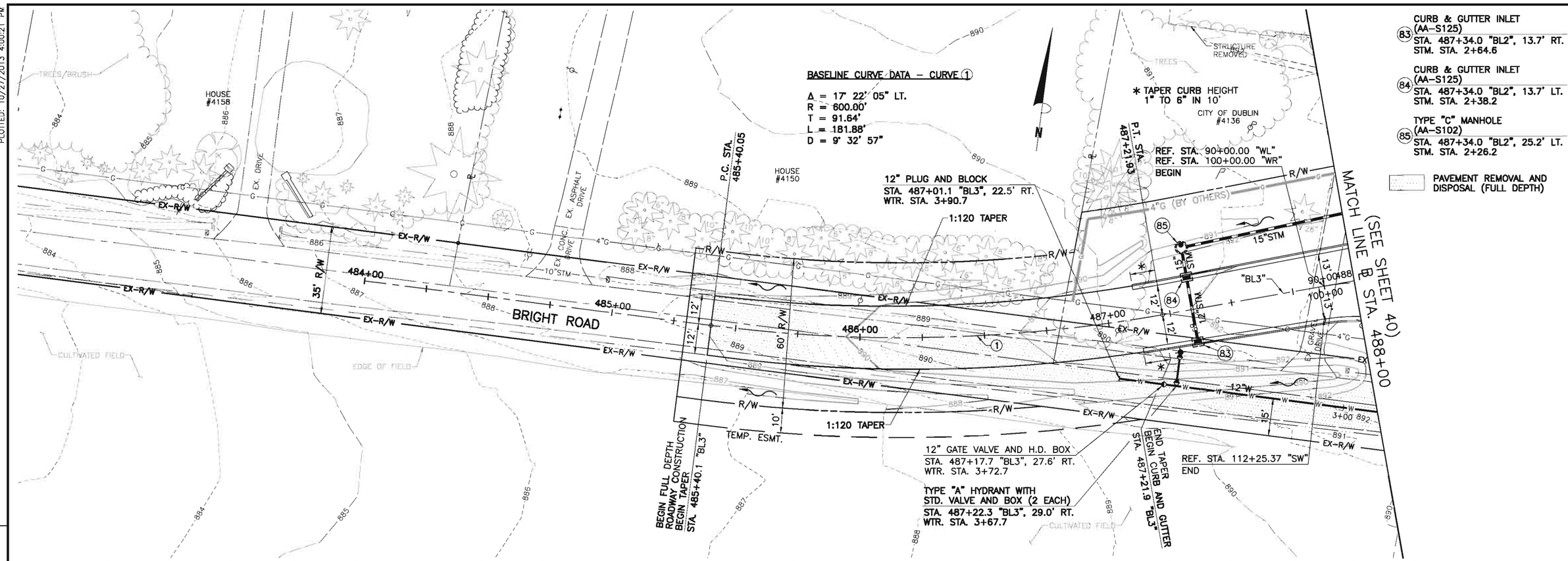
PLAN AND PROFILE
EMERALD PARKWAY
STA. 223+75 "BL2" TO STA. 226+76.7 "BL2"

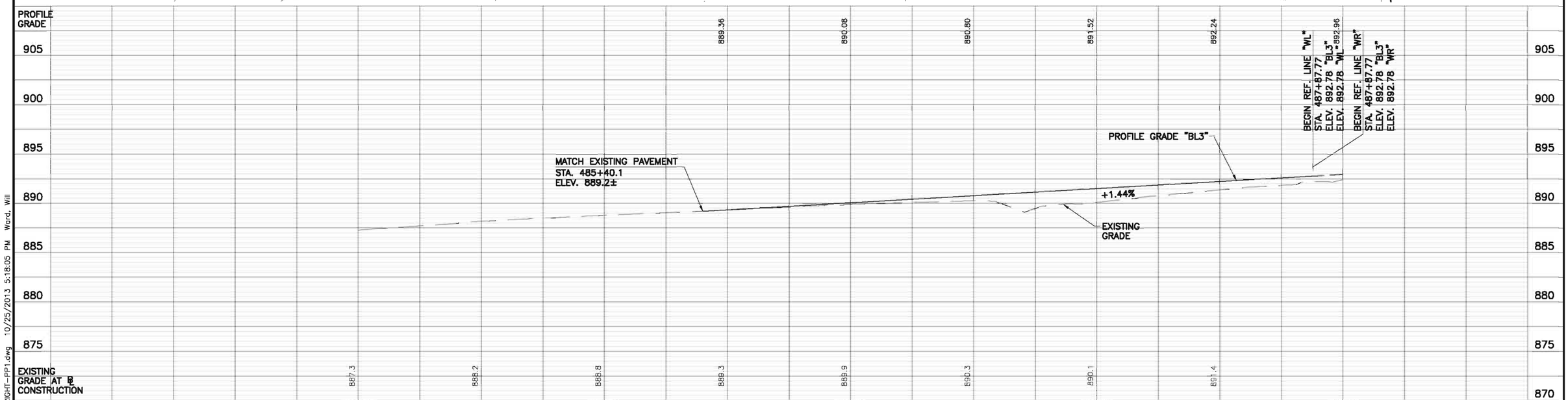
SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 41 OF 275

PLOTTED: 10/27/2013 3:47:35 PM
P:\PR44959\cadd\EMERALD-PP13.dwg 10/25/2013 5:17:59 PM Ward, Will

PLOTTED: 10/27/2013 4:00:21 PM

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**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

| | |
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| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

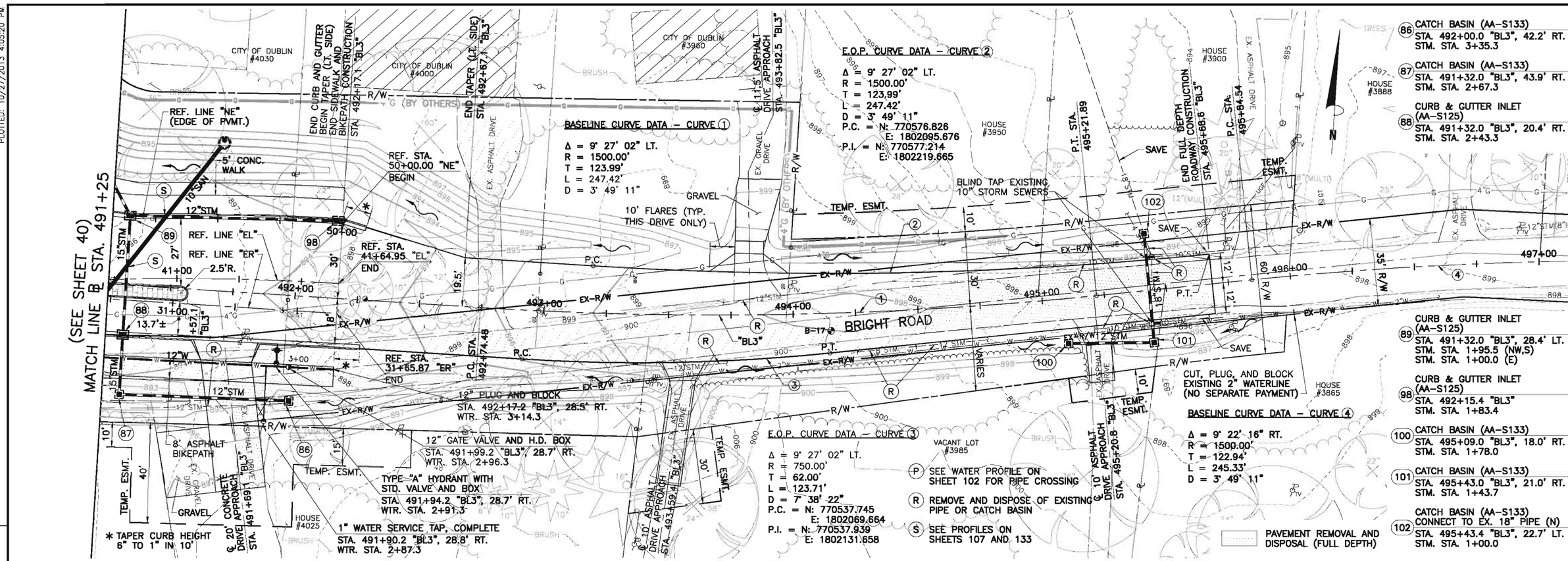
**PLAN AND PROFILE**
**BRIGHT ROAD**
**STA. 485+40.1 "BL3" TO STA. 488+00 "BL3"**

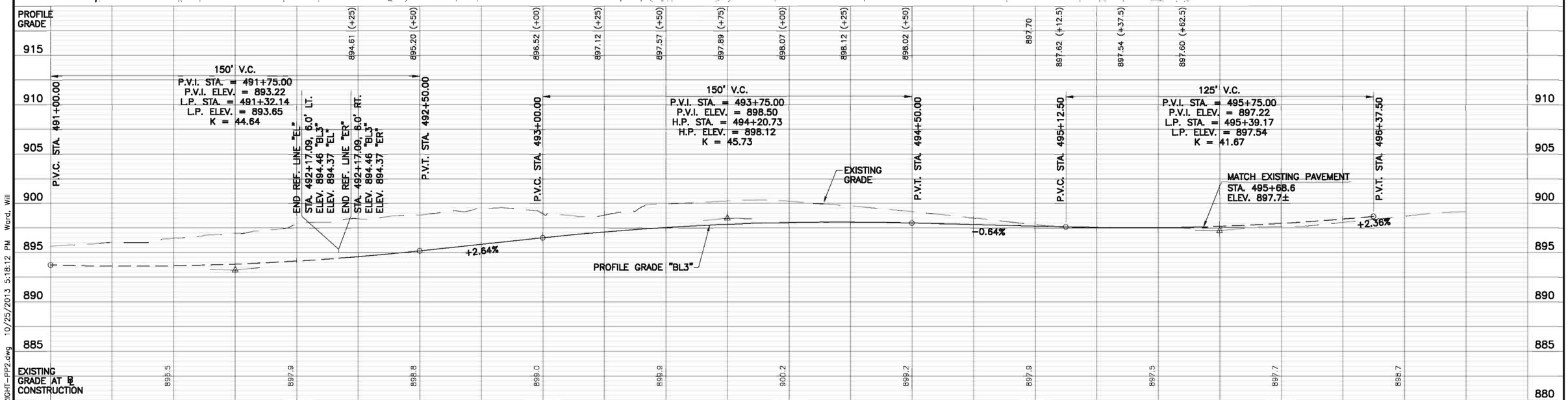
SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 42 OF 275

P:\PR44959\cadd\BRIGHT-PP1.dwg 10/25/2013 5:18:05 PM Ward, Will

PLOTTED: 10/27/2013 4:05:20 PM

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**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

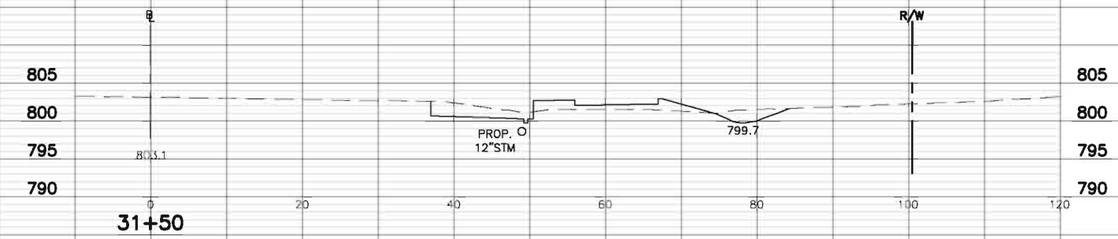
**PLAN AND PROFILE**
**BRIGHT ROAD**
**STA. 491+25 "BL3" TO STA 495+68.6 "BL3"**

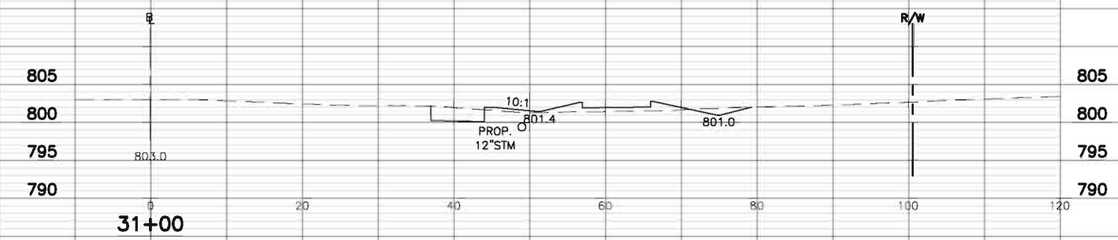
SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

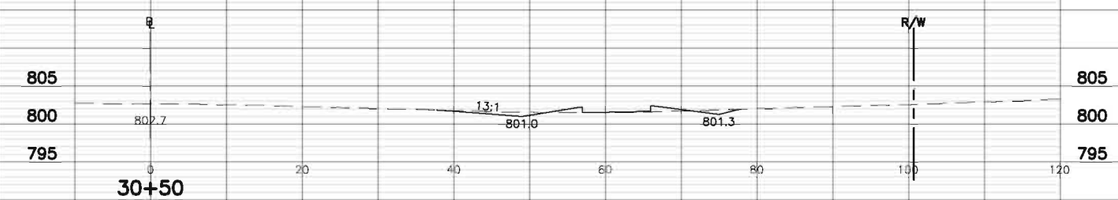
SHEET NO. 43 OF 275

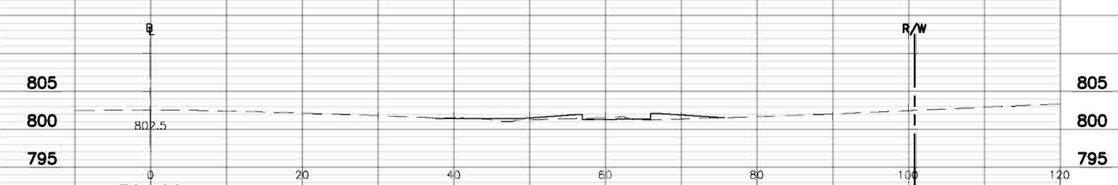
P:\PR44959\cadd\BRIGHT-PP2.dwg 10/25/2013 5:18:12 PM Ward, Will

PLOTTED: 10/29/2013 8:28:02 PM




| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 30+50 | 29.2 | – | 19.4 | | | |
| | | | | 42 | – | 31 |
| 31+00 | 16.3 | – | 14.5 | | | |
| | | | | 20 | – | 18 |
| 30+50 | 5.7 | – | 4.9 | | | |
| | | | | 7 | – | 14 |
| 30+00 | 1.6 | – | 9.7 | | | |

CROSS SECTIONS DO NOT SHOW EXISTING UTILITIES

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| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
RIVERSIDE DRIVE (SOUTH OF EMERALD PKWY.)
STA. 30+00 "BL1" TO STA. 31+50 "BL1"

SCALE: 1" = 10'

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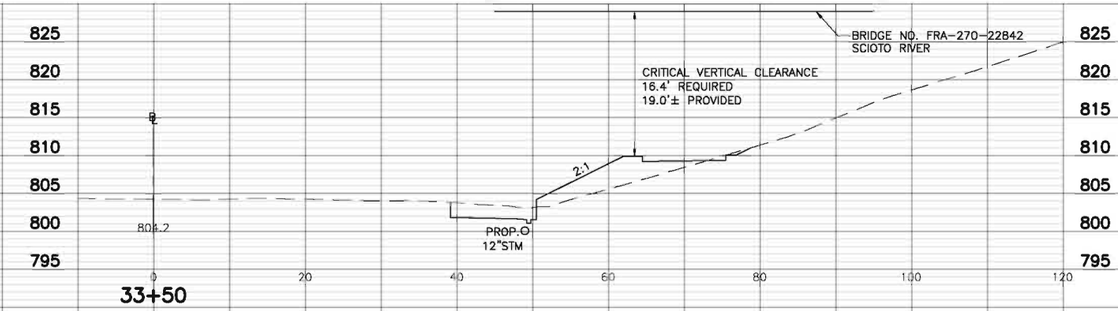


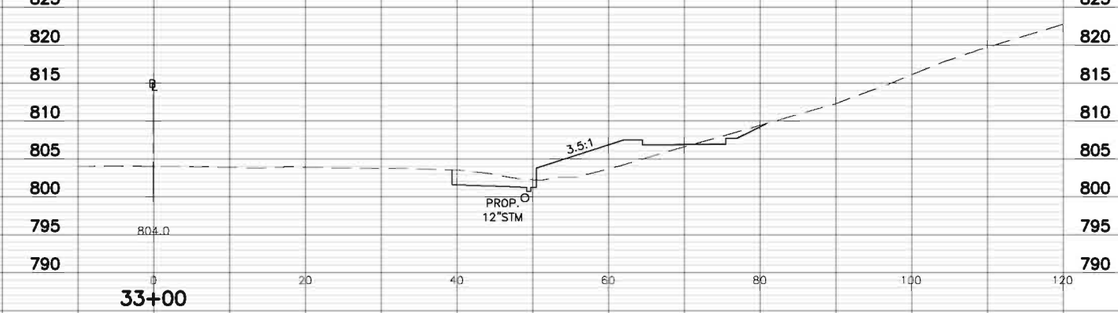


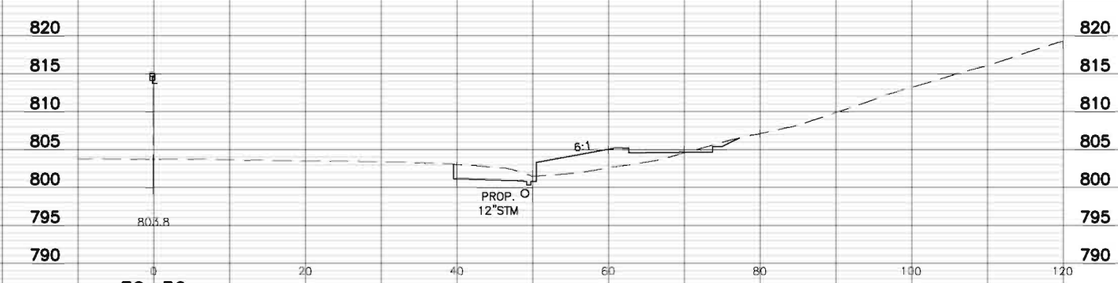


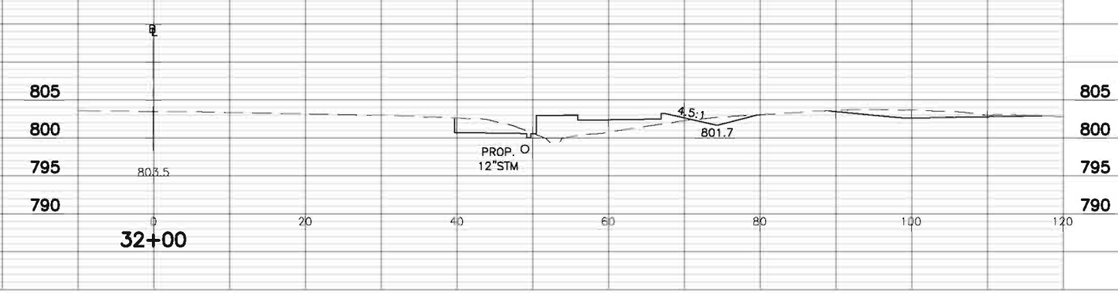


| END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|
| CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 23.6 | – | 47.2 | | | |
| | | | 45 | – | 82 |
| 25.3 | – | 41.0 | | | |
| | | | 47 | – | 70 |
| 25.0 | – | 34.9 | | | |
| | | | 55 | – | 66 |
| 34.5 | – | 36.4 | | | |
| | | | 59 | – | 52 |

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| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

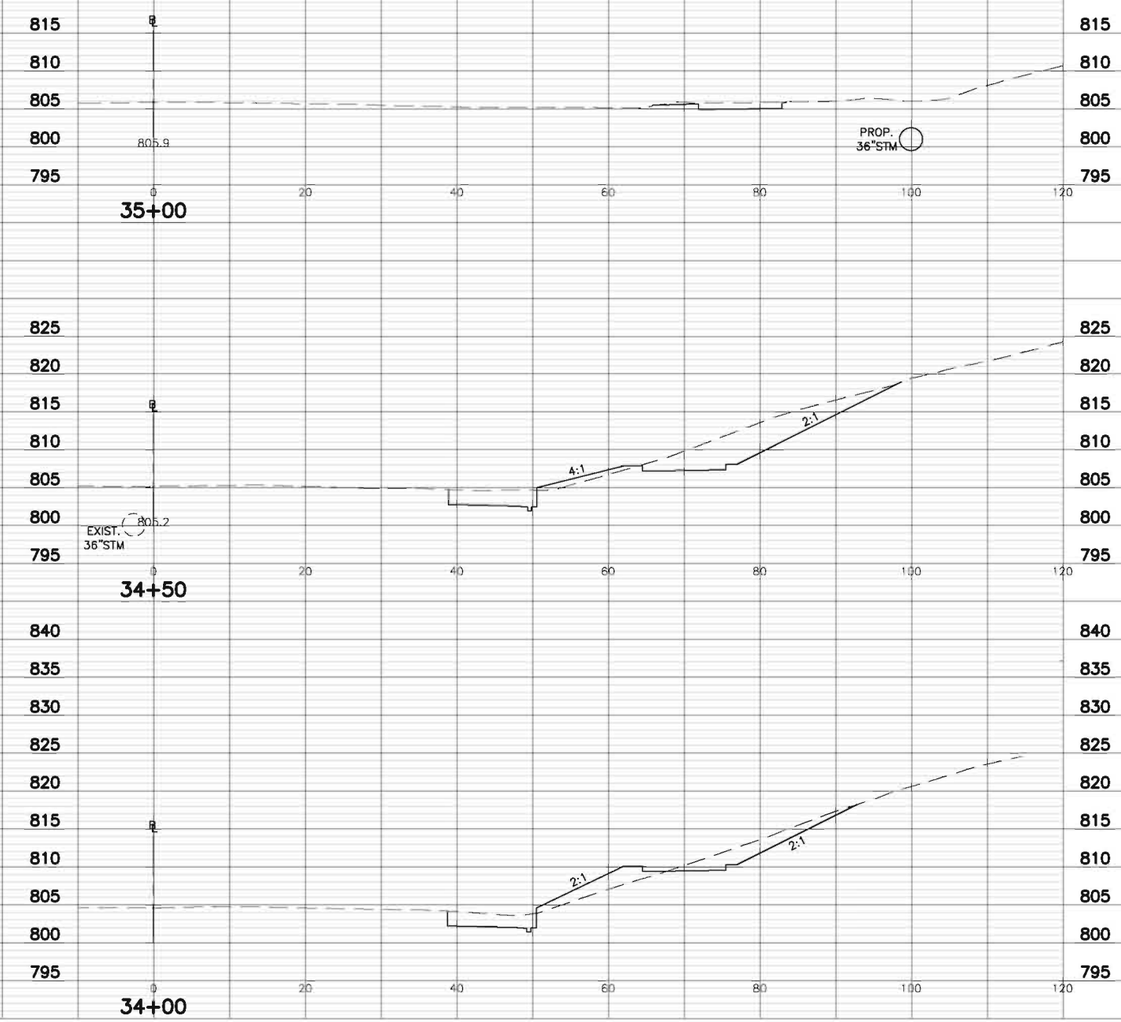
BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
RIVERSIDE DRIVE (SOUTH OF EMERALD PKWY.)
STA. 32+00 "BL1" TO STA. 33+50 "BL1"

SCALE: 1" = 10'




| END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|
| CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 8.4 | – | 0.0 | | | |
| | | | 113 | – | 8 |
| 113.1 | – | 8.9 | | | |
| | | | 156 | – | 29 |
| 55.2 | – | 22.8 | | | |
| | | | 73 | – | 65 |

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

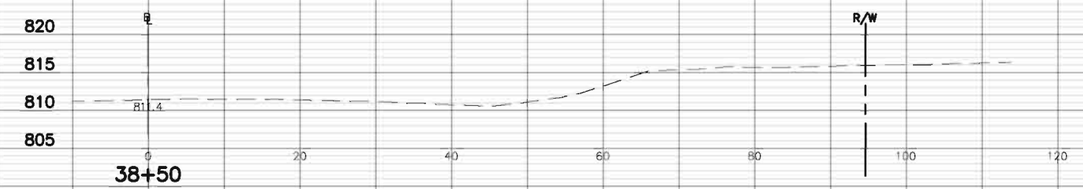
CROSS SECTIONS
RIVERSIDE DRIVE (SOUTH OF EMERALD PKWY.)
STA. 34+00 "BL1" TO STA. 35+00 "BL1"

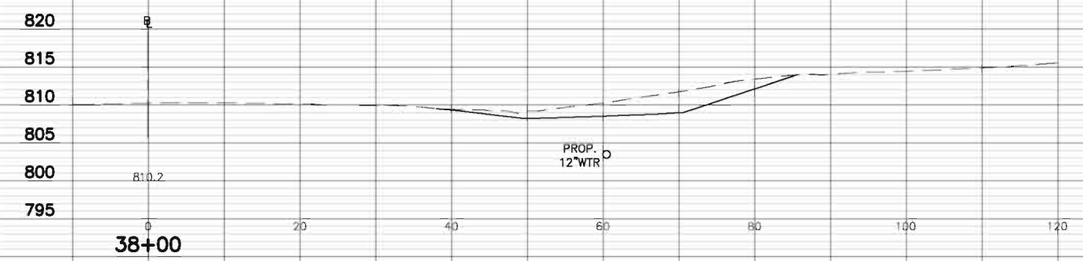
SCALE: 1" = 10'

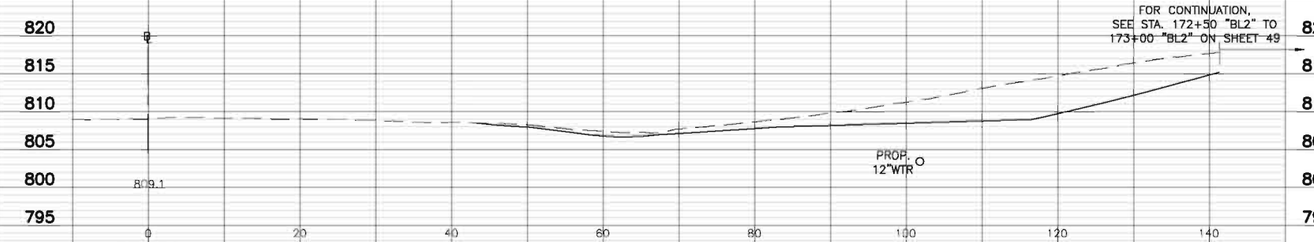
SHEET NO. 46 OF 275

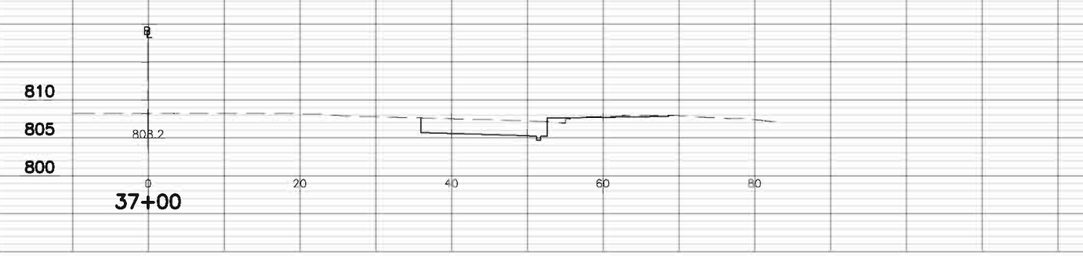
PLOTTED: 10/29/2013 8:28:24 PM
P:\PR44959\cadd\CROSS-SECTIONS-RIVERSIDE.dwg 10/28/2013 8:33:17 PM Ward, Will

PLOTTED: 10/29/2013 8:28:39 PM




| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 0.0 | – | 0.0 | | | |
| | | | | 61 | – | 0 |
| | 66.0 | – | 0.0 | | | |
| | | | | 266 | – | 0 |
| | 220.8 | – | 0.0 | | | |
| | | | | 236 | – | 1 |
| | 34.0 | – | 1.6 | | | |

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Burgess & Niple, Inc. COLUMBUS,OH

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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
RIVERSIDE DRIVE (NORTH OF EMERALD PKWY.)
STA. 37+00 "BL1" TO STA. 38+50 "BL1"

SCALE: 1" = 10'

SHEET NO. 47 OF 275

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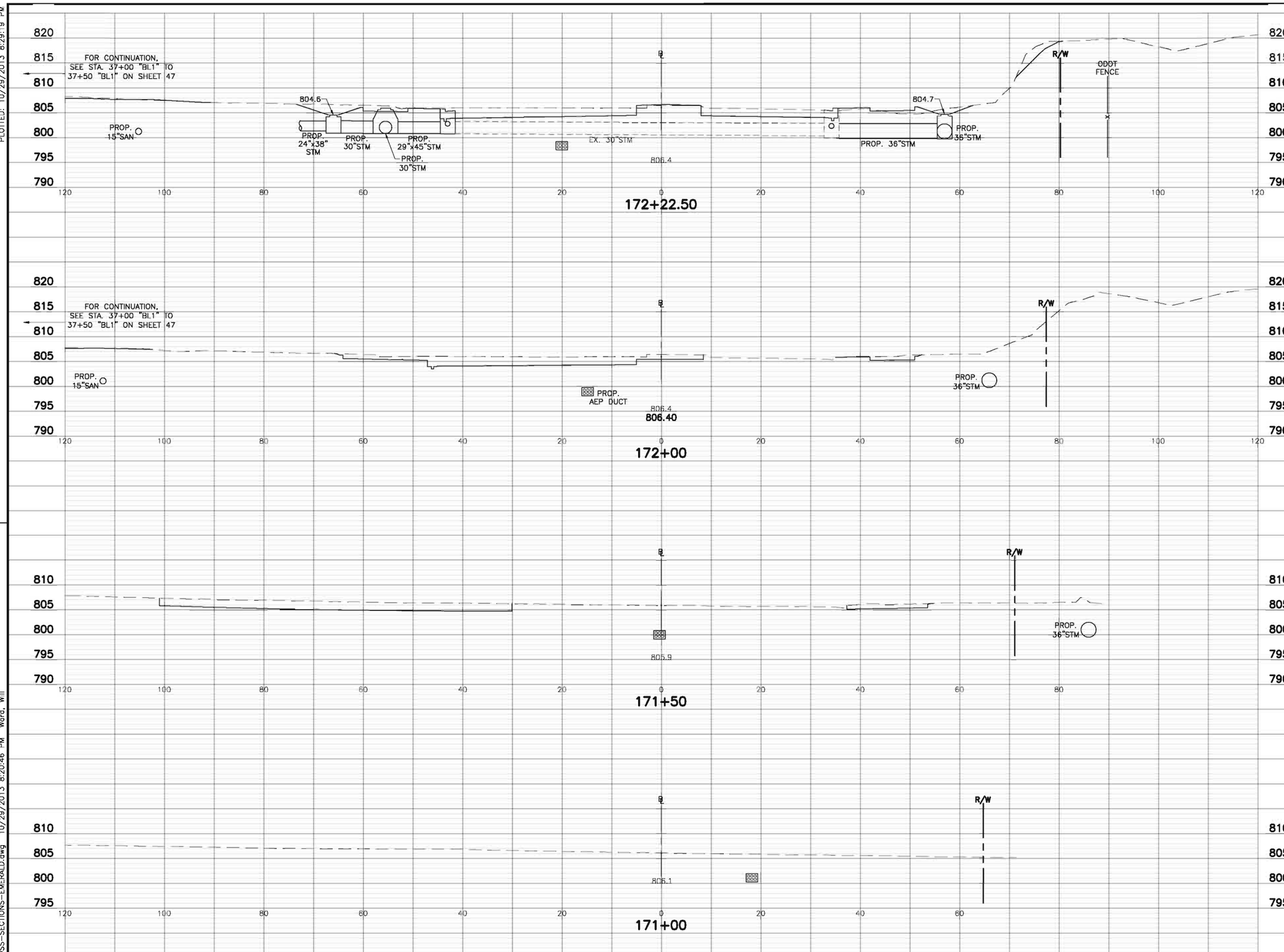


| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 172+22.50 | 15.4 | 141.6 | 12.5 | | | |
| | | | | 52 | 59 | 5 |
| 172+00 | 109.1 | – | 0.0 | | | |
| | | | | 219 | 0 | 0 |
| 171+50 | 127.2 | – | 0.0 | | | |
| | | | | 118 | 0 | 0 |
| 171+00 | 0.0 | – | 0.0 | | | |

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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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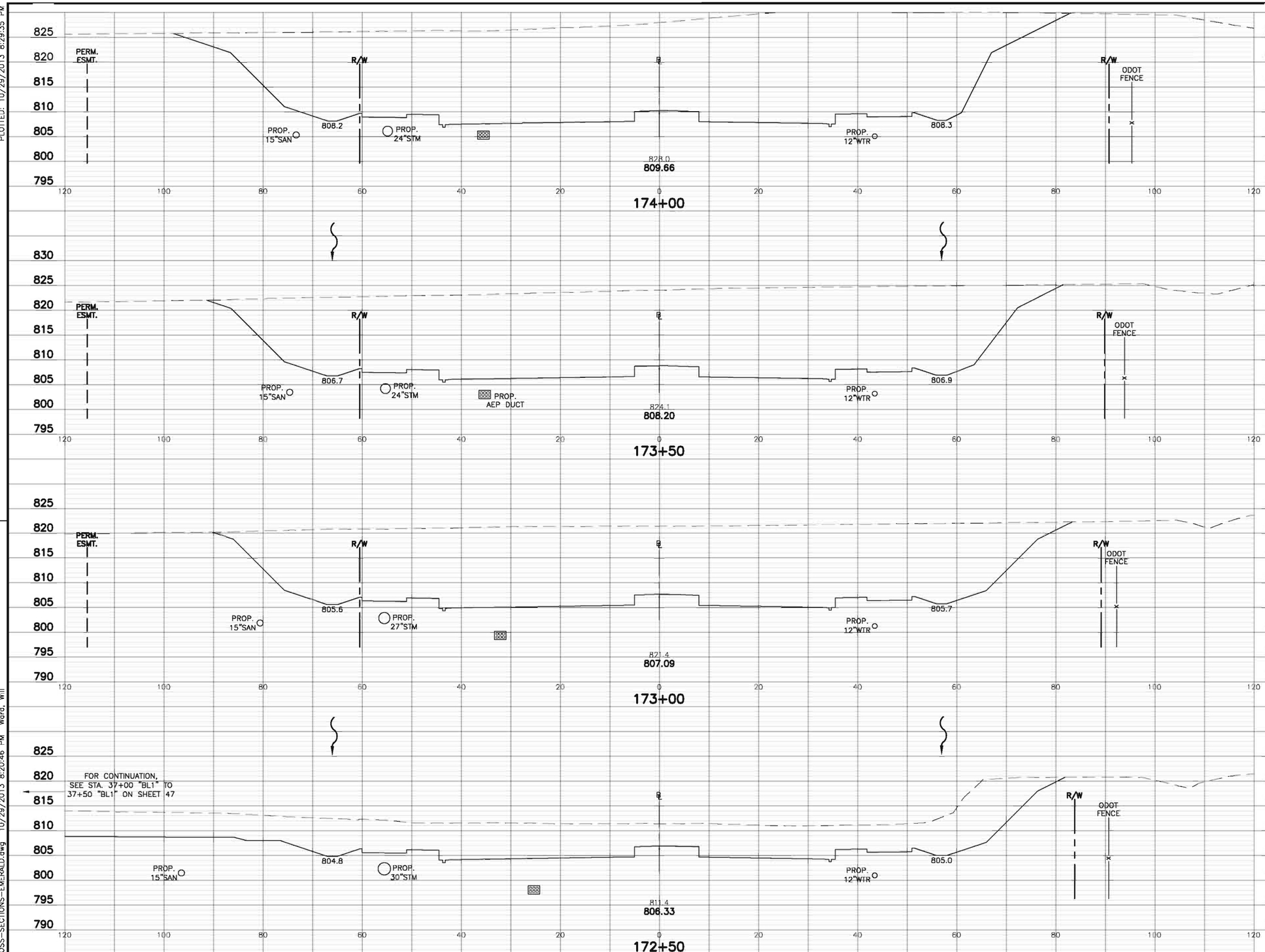
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 171+00 "BL2" TO STA. 172+22.50 "BL2"

SCALE: 1" = 10'

SHEET NO. 48 OF 275

PLOTTED: 10/29/2013 8:29:19 PM
P:\PR44959\cadd\CROSS-SECTIONS-EMERALD.dwg 10/29/2013 8:20:46 PM Ward, Will




| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 174+00 | 996.6 | 1923.7 | 0.0 | | | |
| | | | | 1448 | 3586 | 0 |
| 173+50 | 567.3 | 1948.8 | 0.0 | | | |
| | | | | 927 | 3573 | 0 |
| 173+00 | 434.0 | 1910.3 | 0.0 | | | |
| | | | | 636 | 2681 | 0 |
| 172+50 | 252.7 | 985.6 | 0.0 | | | |
| | | | | 137 | 574 | 6 |

| NO. | REVISIONS | DATE | BY | CHK. |
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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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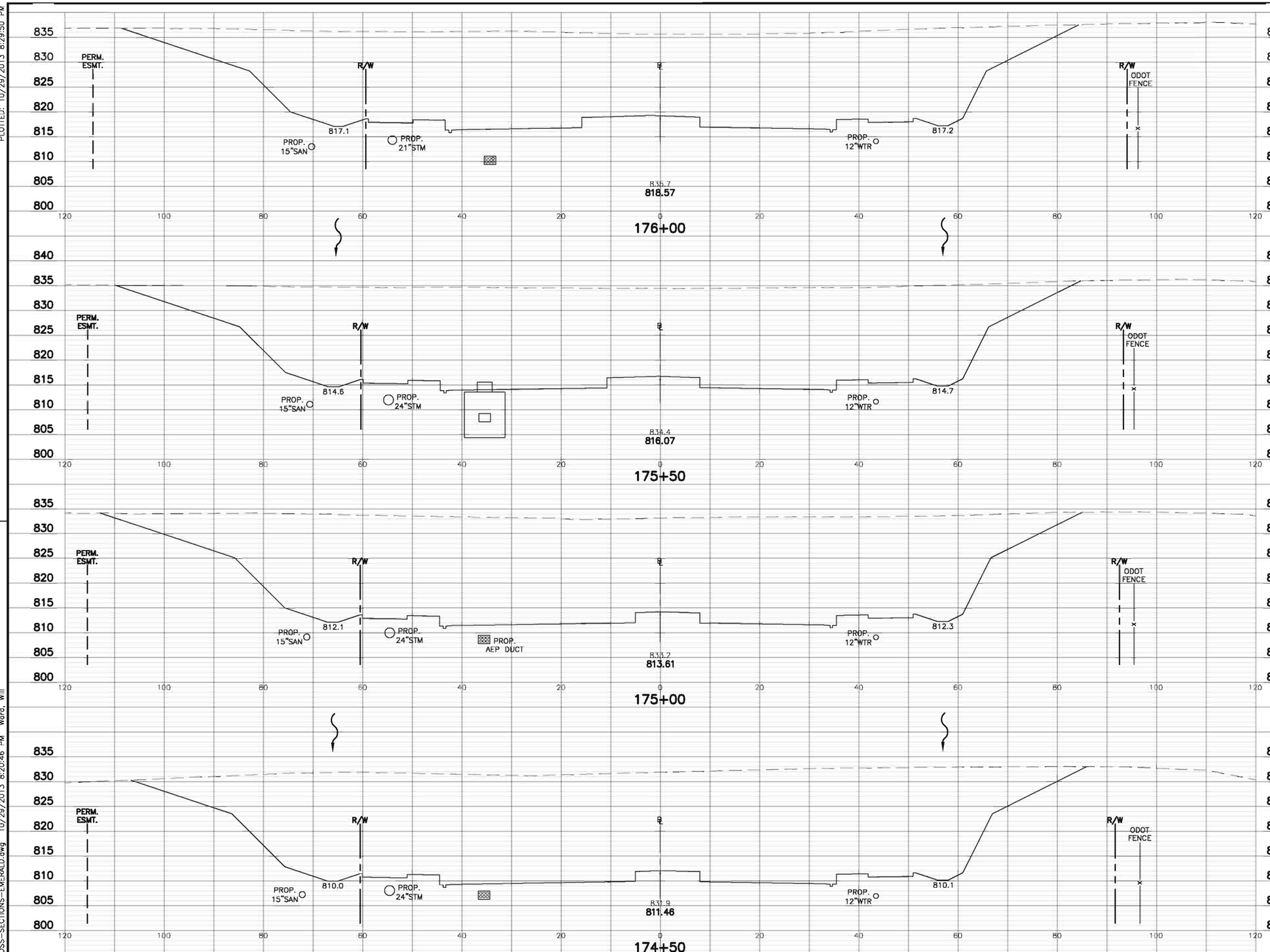
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

# CROSS SECTIONS
## EMERALD PARKWAY
## STA. 172+50 "BL2" TO STA. 174+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 49 OF 275

PLOTTED: 10/29/2013 8:29:35 PM
P:\PR44959\cadd\CROSS-SECTIONS-EMERALD.dwg 10/29/2013 8:20:46 PM Ward, Will




| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 1357.8 | 1491.3 | 0 | | | |
| 176+00 | | | | 2538 | 2913 | 0 |
| | 1383.1 | 1654.6 | 0.0 | | | |
| 175+50 | | | | 2648 | 3200 | 0 |
| | 1476.5 | 1801.5 | 0.0 | | | |
| 175+00 | | | | 2724 | 3417 | 0 |
| | 1465.0 | 1888.7 | 0.0 | | | |
| 174+50 | | | | 2279 | 3530 | 0 |

| NO. | REVISIONS | DATE | BY | CHK. |
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07-008-CIP

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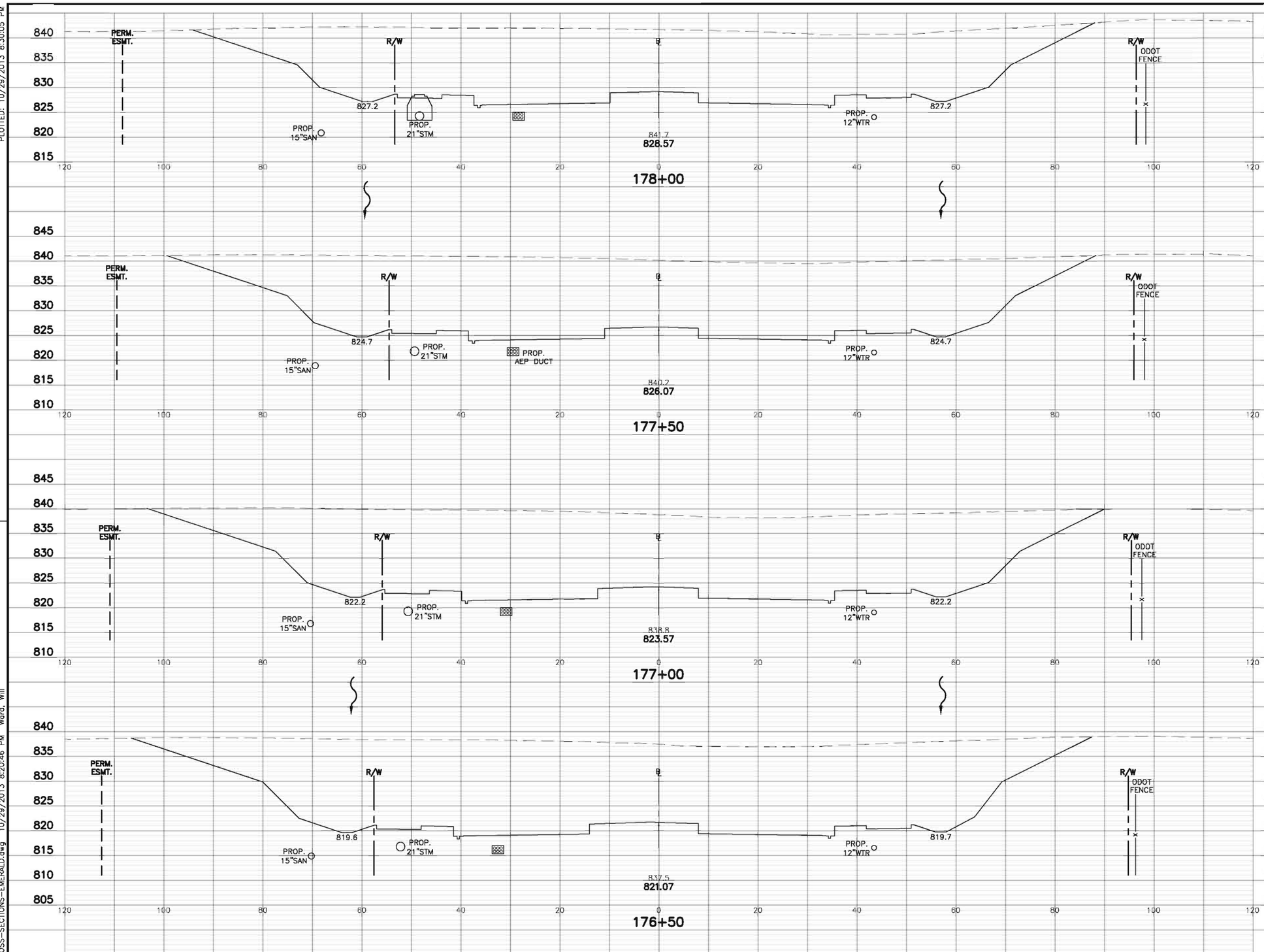
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 174+50 "BL2" TO STA. 176+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 50 OF 275

PLOTTED: 10/29/2013 8:29:50 PM
P:\PR44959\cadd\CROSS-SECTIONS-EMERALD.dwg 10/29/2013 8:20:46 PM Ward, Will




| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 178+00 | 1150.6 | 953.3 | 0.0 | | | |
| | | | | 2222 | 1893 | 0 |
| 177+50 | 1248.9 | 1090.8 | 0.0 | | | |
| | | | | 2415 | 2156 | 0 |
| 177+00 | 1359.4 | 1238.2 | 0.0 | | | |
| | | | | 2251 | 2407 | 0 |
| 176+50 | 1395.5 | 1361.4 | 0.0 | | | |
| | | | | 2549 | 2641 | 0 |

| NO. | REVISIONS | DATE | BY | CHK. |
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07-008-CIP

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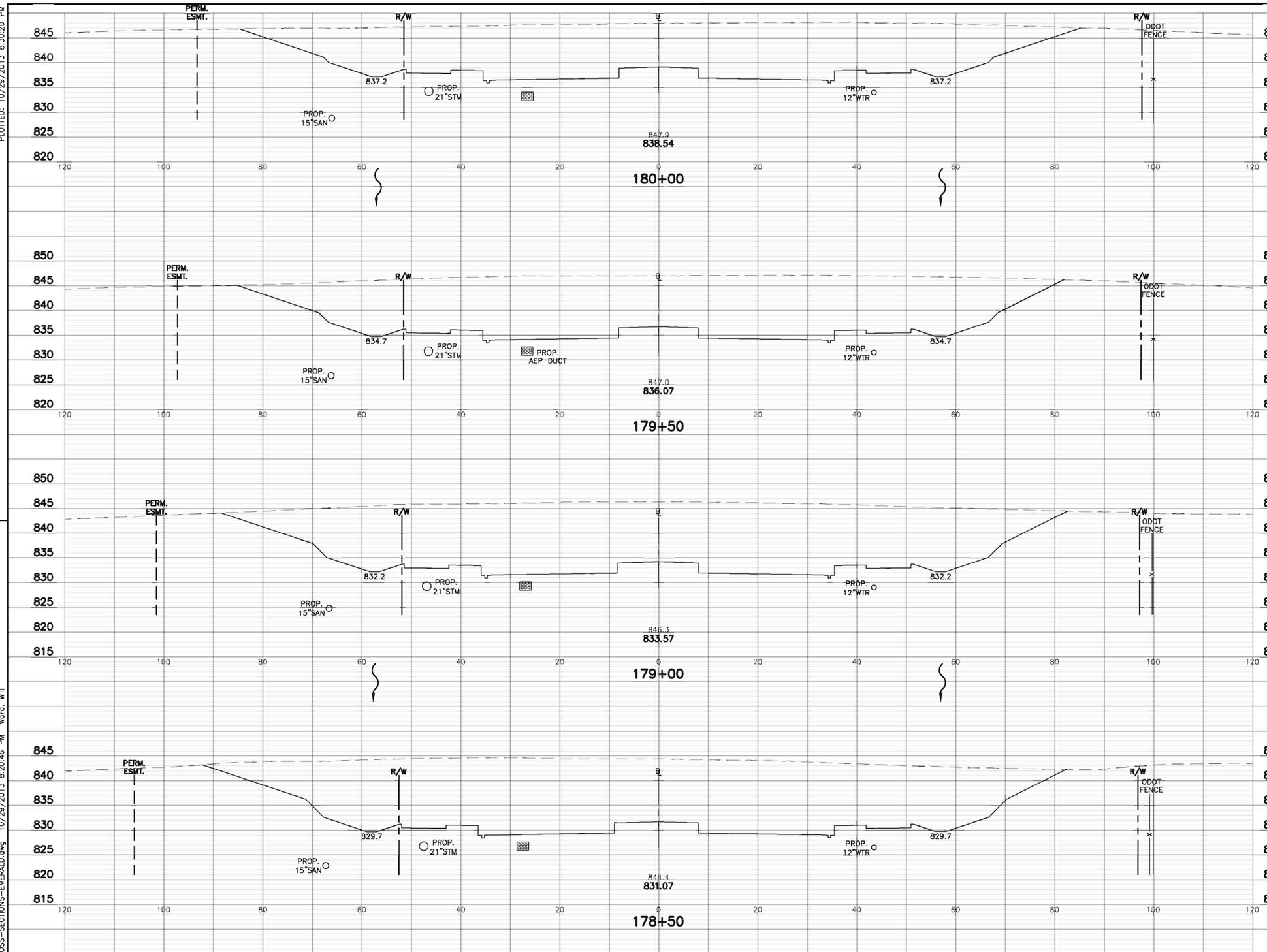
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 176+50 "BL2" TO STA. 178+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 51 OF 275

PLOTTED: 10/29/2013 8:30:05 PM
P:\PR44959\cadd\CROSS-SECTIONS-EMERALD.dwg 10/29/2013 8:20:46 PM Ward, Will




| END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|
| CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 994.7 | 466.3 | 0.0 | | | |
| | | | 1932 | 970 | 0 |
| 1091.8 | 580.8 | 0.0 | | | |
| | | | 2139 | 1187 | 0 |
| 1218.7 | 700.9 | 0.0 | | | |
| | | | 2249 | 1413 | 0 |
| 1209.7 | 825.2 | 0.0 | | | |
| | | | 2185 | 1647 | 0 |

| NO. | REVISIONS | DATE | BY | CHK. |
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07-008-CIP

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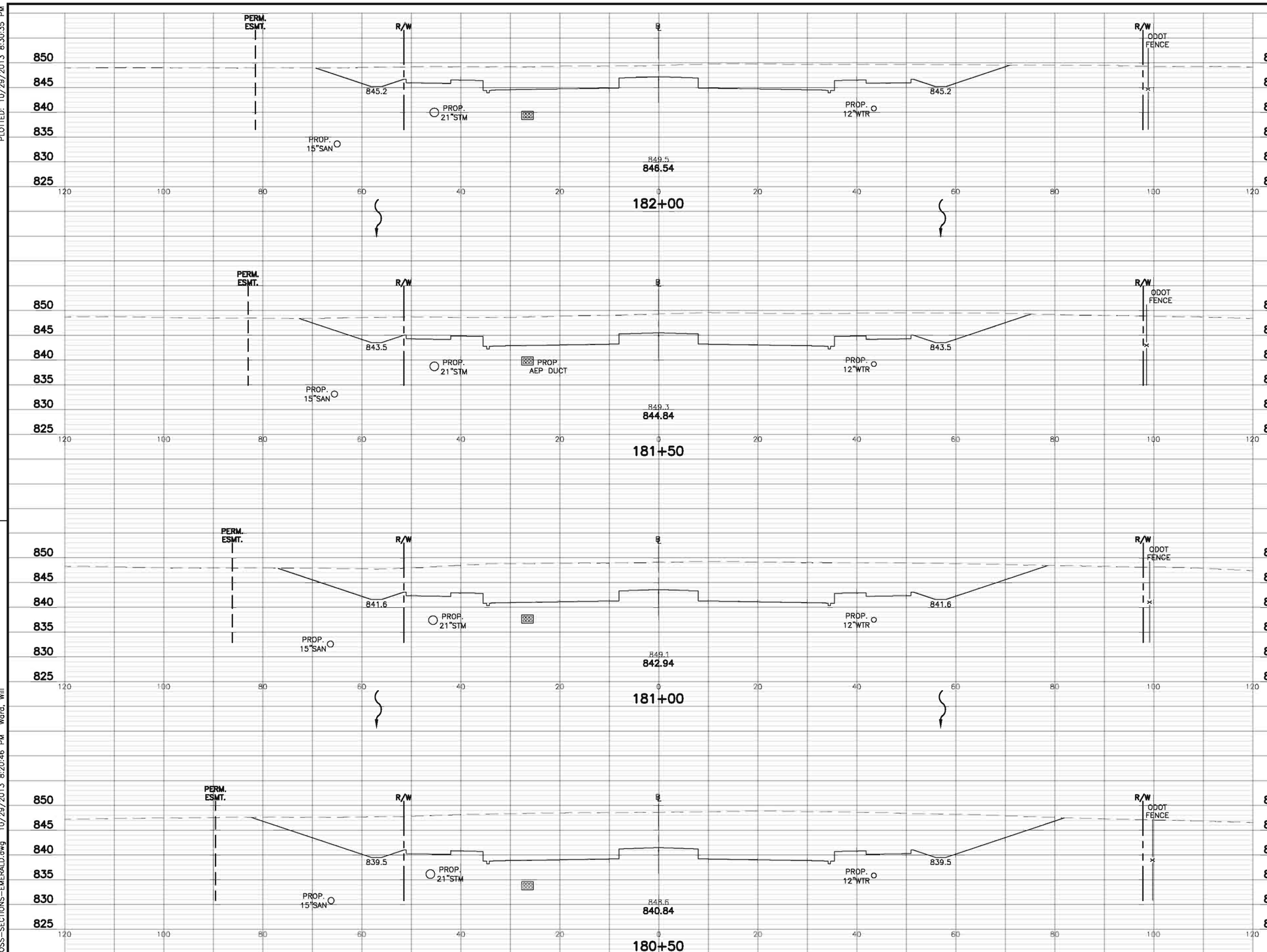
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 178+50 "BL2" TO STA. 180+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 52 OF 275

PLOTTED: 10/29/2013 8:30:20 PM
P:\PR44959\cadd\CROSS-SECTIONS-EMERALD.dwg 10/29/2013 8:20:46 PM Ward, Will




| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 503.0 | – | 0.0 | | | |
| | | | | 1114 | – | 0 |
| | 699.8 | – | 0.0 | | | |
| | | | | 1459 | 52 | 0 |
| | 875.6 | 56.4 | 0.0 | | | |
| | | | | 1673 | 304 | 0 |
| | 930.9 | 272.0 | 0.0 | | | |
| | | | | 1783 | 684 | 0 |

| NO. | REVISIONS | DATE | BY | CHK. |
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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
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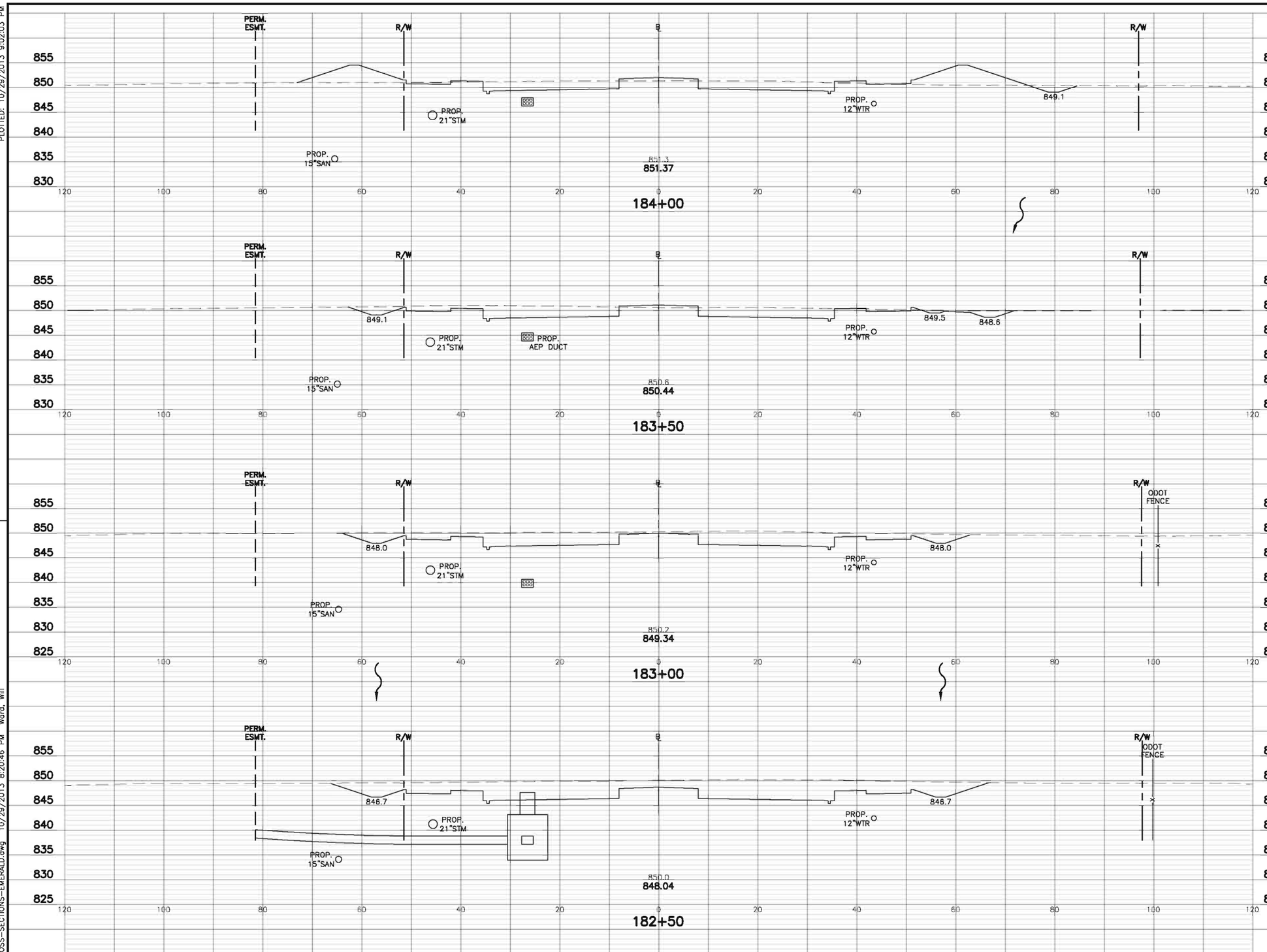
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 180+50 "BL2" TO STA. 182+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 53 OF 275

PLOTTED: 10/29/2013 8:30:35 PM
P:\PR44959\cadd\CROSS-SECTIONS-EMERALD.dwg 10/29/2013 8:20:46 PM Ward, Will




| END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|
| CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 106.0 | – | 113.7 | | | |
| | | | 241 | – | 112 |
| 154.1 | – | 7.1 | | | |
| | | | 154.1 | – | 7.1 |
| 216.7 | – | 0.0 | | | |
| | | | 532 | – | 0 |
| 358.3 | – | 0.0 | | | |
| | | | 798 | – | 0 |

| NO. | REVISIONS | DATE | BY | CHK. |
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07–008–CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 182+50 "BL2" TO STA. 184+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 54 OF 275

PLOTTED: 10/29/2013 9:02:03 PM
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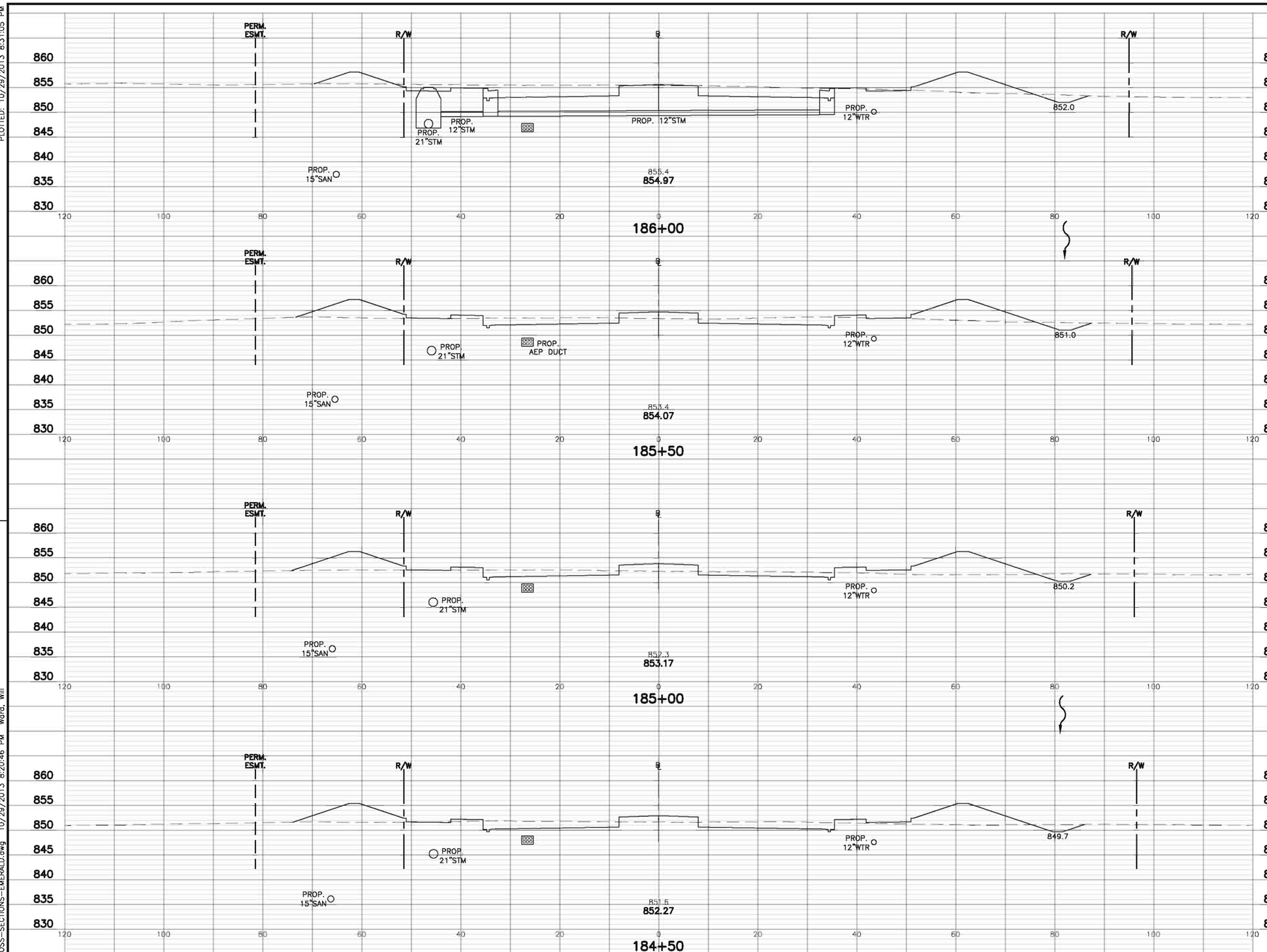


| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 147.7 | – | 82.2 | | | |
| | | | | 210 | – | 203 |
| | 79.6 | – | 137.3 | | | |
| | | | | 134 | – | 280 |
| | 65.2 | – | 165.6 | | | |
| | | | | 135 | – | 285 |
| | 80.6 | – | 142.6 | | | |
| | | | | 173 | – | 237 |

| NO. | REVISIONS | DATE | BY | CHK. |
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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 184+50 "BL2" TO STA. 186+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 55 OF 275

PLOTTED: 10/29/2013 8:31:05 PM
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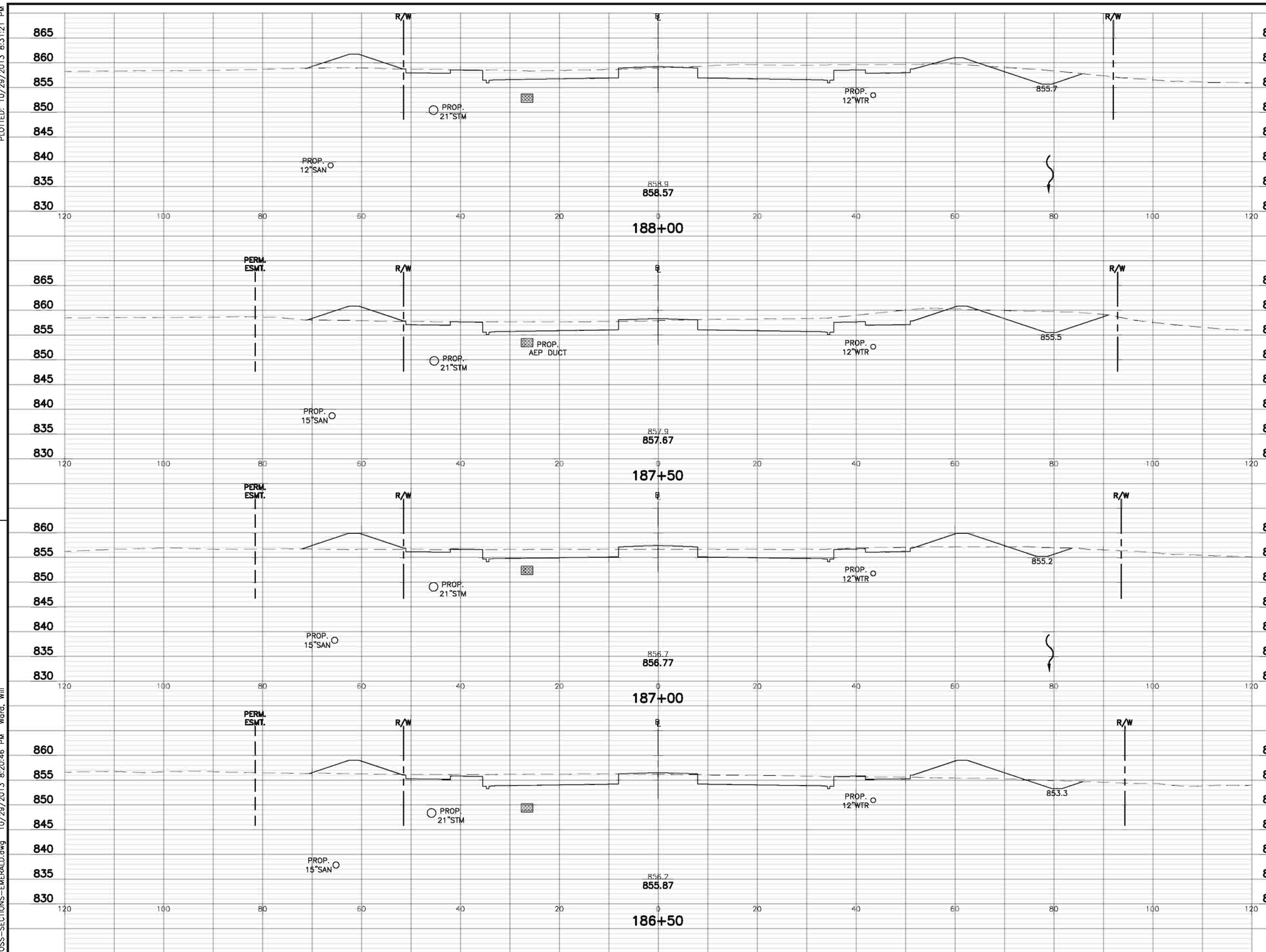


| END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|
| CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 185.7 | – | 41.8 | | | |
| | | | 382 | – | 75 |
| 226.4 | – | 38.9 | | | |
| | | | 325 | – | 108 |
| 124.3 | – | 78.0 | | | |
| | | | 241 | – | 145 |
| 136.4 | – | 79.1 | | | |
| | | | 263 | – | 149 |

| NO. | REVISIONS | DATE | BY | CHK. |
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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
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CROSS SECTIONS
EMERALD PARKWAY
STA. 186+50 "BL2" TO STA. 188+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 56 OF 275

PLOTTED: 10/29/2013 8:31:21 PM
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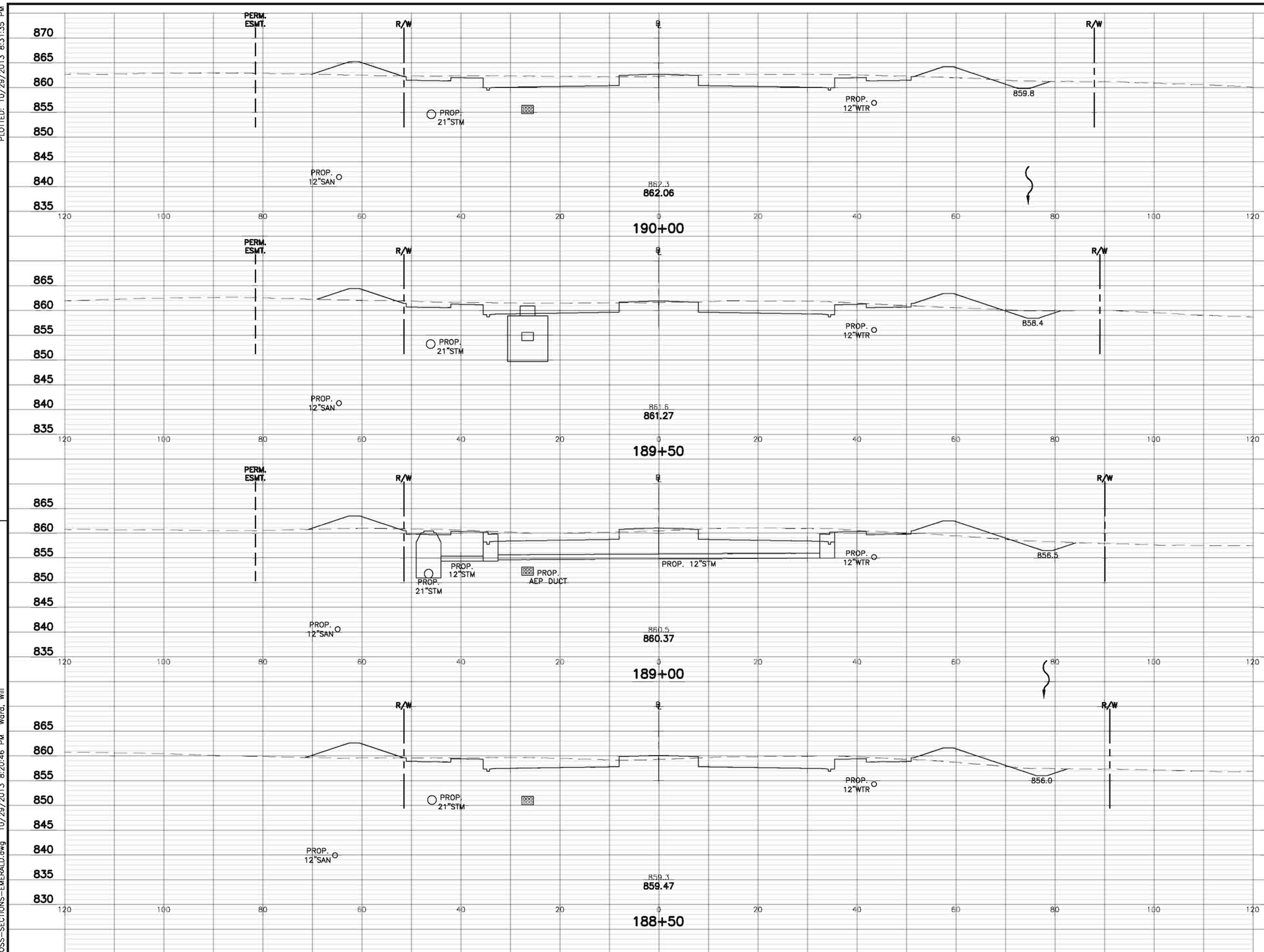


| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 156.6 | – | 51.2 | | | |
| 190+00 | | | | 288 | – | 98 |
| | 154.5 | – | 54.2 | | | |
| 189+50 | | | | 274 | – | 113 |
| | 141.2 | – | 68.1 | | | |
| 189+00 | | | | 259 | – | 134 |
| | 139.0 | – | 76.1 | | | |
| 188+50 | | | | 301 | – | 109 |

| NO. | REVISIONS | DATE | BY | CHK. |
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| JOB NO. | 44959 |
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| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 188+50 "BL2" TO STA. 190+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 57 OF 275

PLOTTED: 10/29/2013 8:31:35 PM
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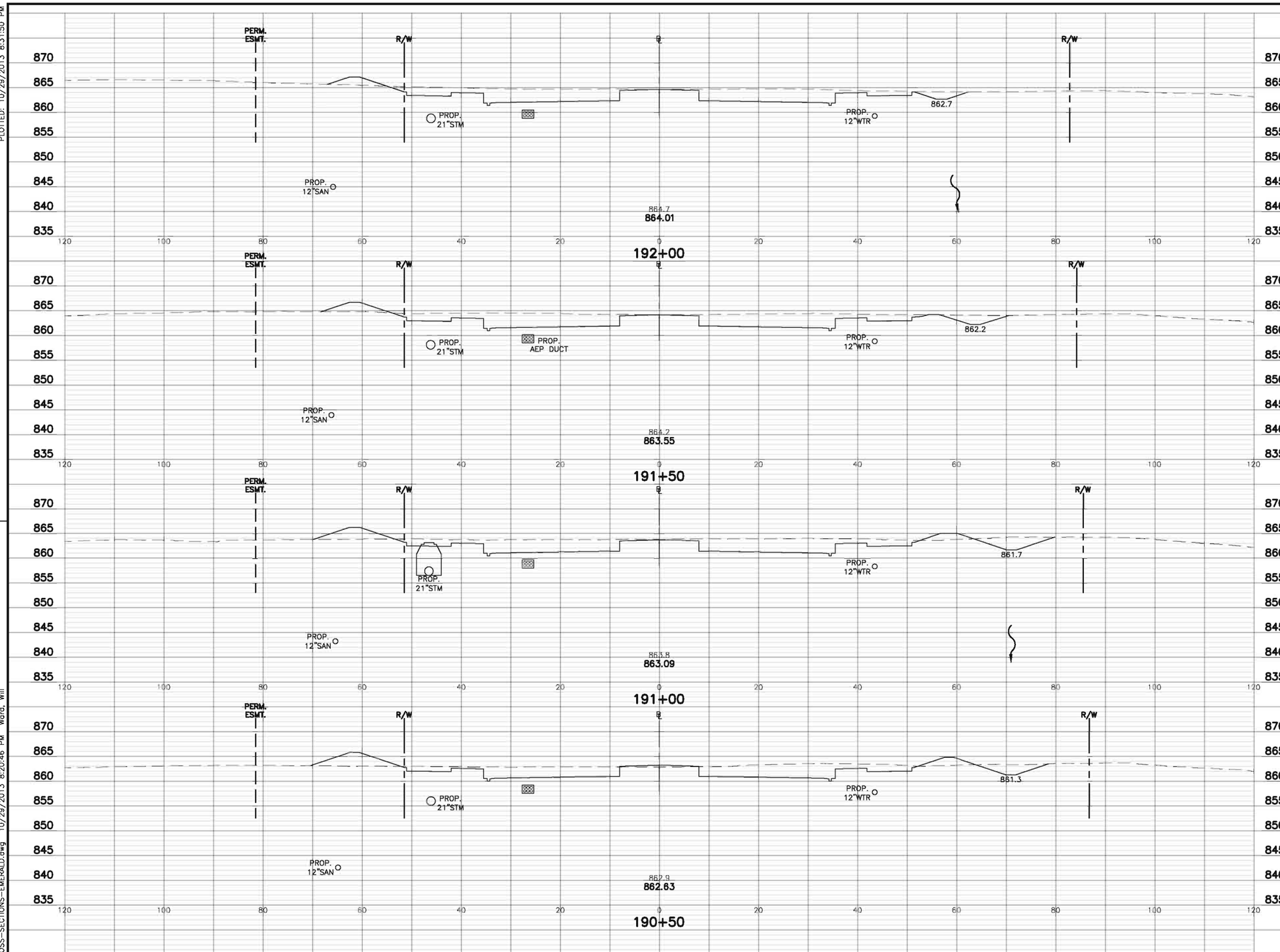


| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 185.3 | – | 11.8 | | | |
| | | | | 359 | – | 25 |
| | 202.2 | – | 15.4 | | | |
| | | | | 376 | – | 44 |
| | 204.2 | – | 31.7 | | | |
| | | | | 348 | – | 69 |
| | 172.1 | – | 43.3 | | | |
| | | | | 304 | – | 88 |

| NO. | REVISIONS | DATE | BY | CHK. |
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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
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| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 190+50 "BL2" TO STA. 192+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 58 OF 275

PLOTTED: 10/29/2013 8:31:50 PM

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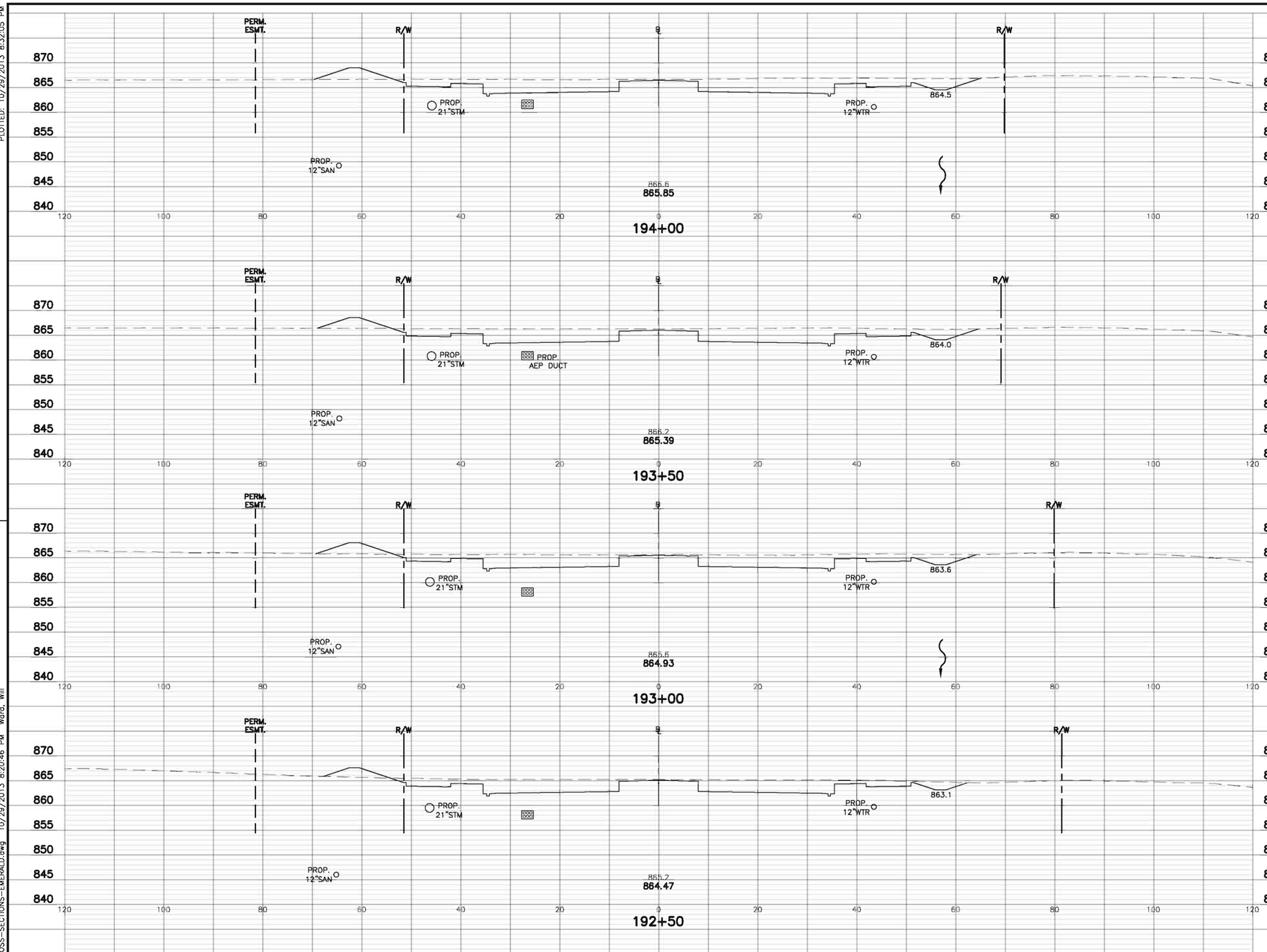


| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 213.8 | – | 21.5 | | | |
| 194+00 | | | | 401 | – | 37 |
| | 219.2 | – | 18.6 | | | |
| 193+50 | | | | 382 | – | 36 |
| | 193.8 | – | 20.8 | | | |
| 193+00 | | | | 357 | – | 33 |
| | 192.2 | – | 14.9 | | | |
| 192+50 | | | | 350 | – | 25 |

| NO. | REVISIONS | DATE | BY | CHK. |
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EMERALD PARKWAY – PHASE 8
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| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 192+50 "BL2" TO STA. 194+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 59 OF 275

PLOTTED: 10/29/2013 8:32:05 PM
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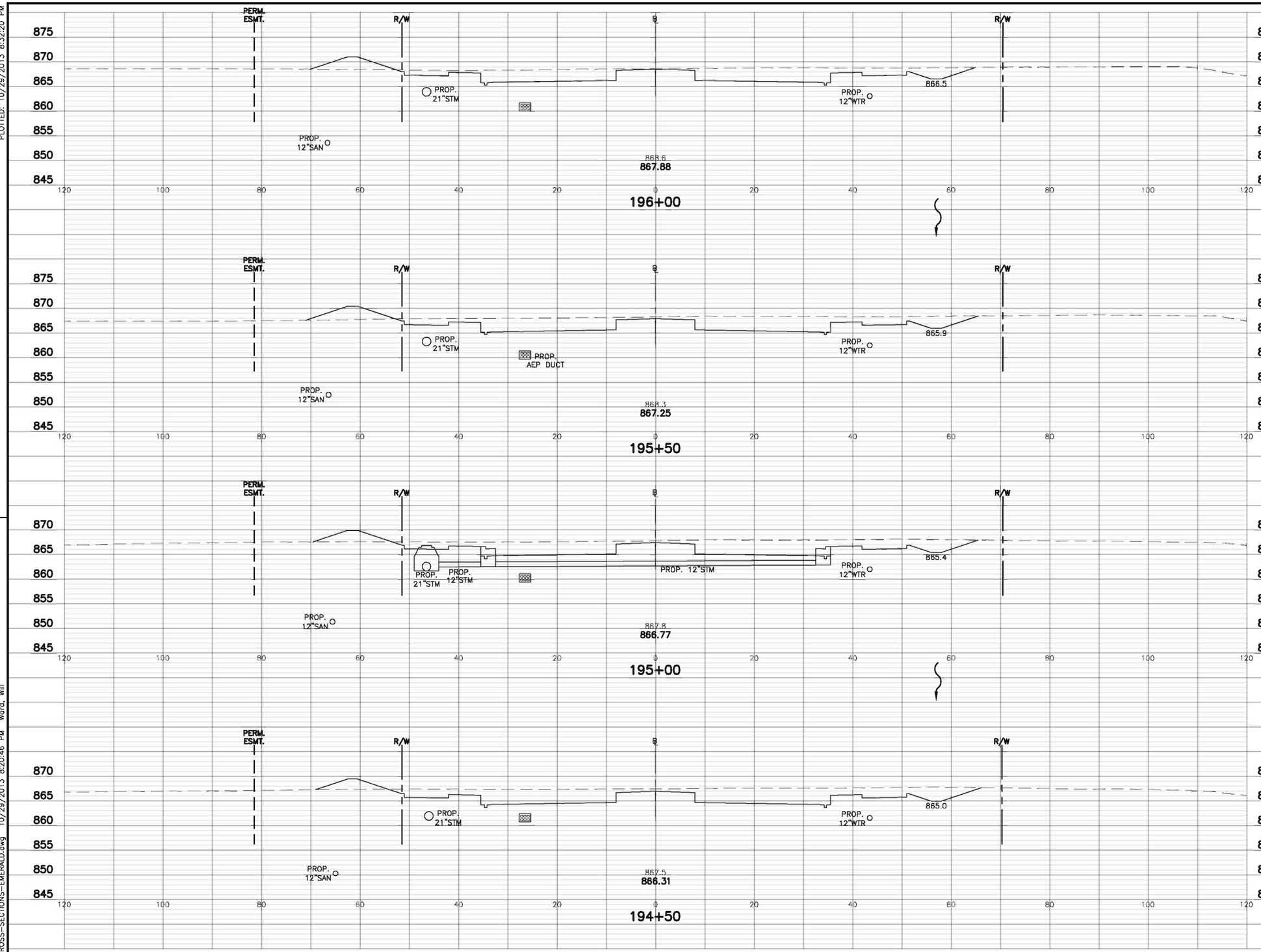


| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 196+00 | 194.1 | – | 25.4 | | | |
| | | | | 384 | – | 49 |
| 195+50 | 221.1 | – | 27.4 | | | |
| | | | | 423 | – | 45 |
| 195+00 | 235.6 | – | 21.0 | | | |
| | | | | 218 | – | 19 |
| 194+50 | 253.3 | – | 17.8 | | | |
| | | | | 433 | – | 36 |

| NO. | REVISIONS | DATE | BY | CHK. |
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07-008-CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 194+50 "BL2" TO STA. 196+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 60 OF 275

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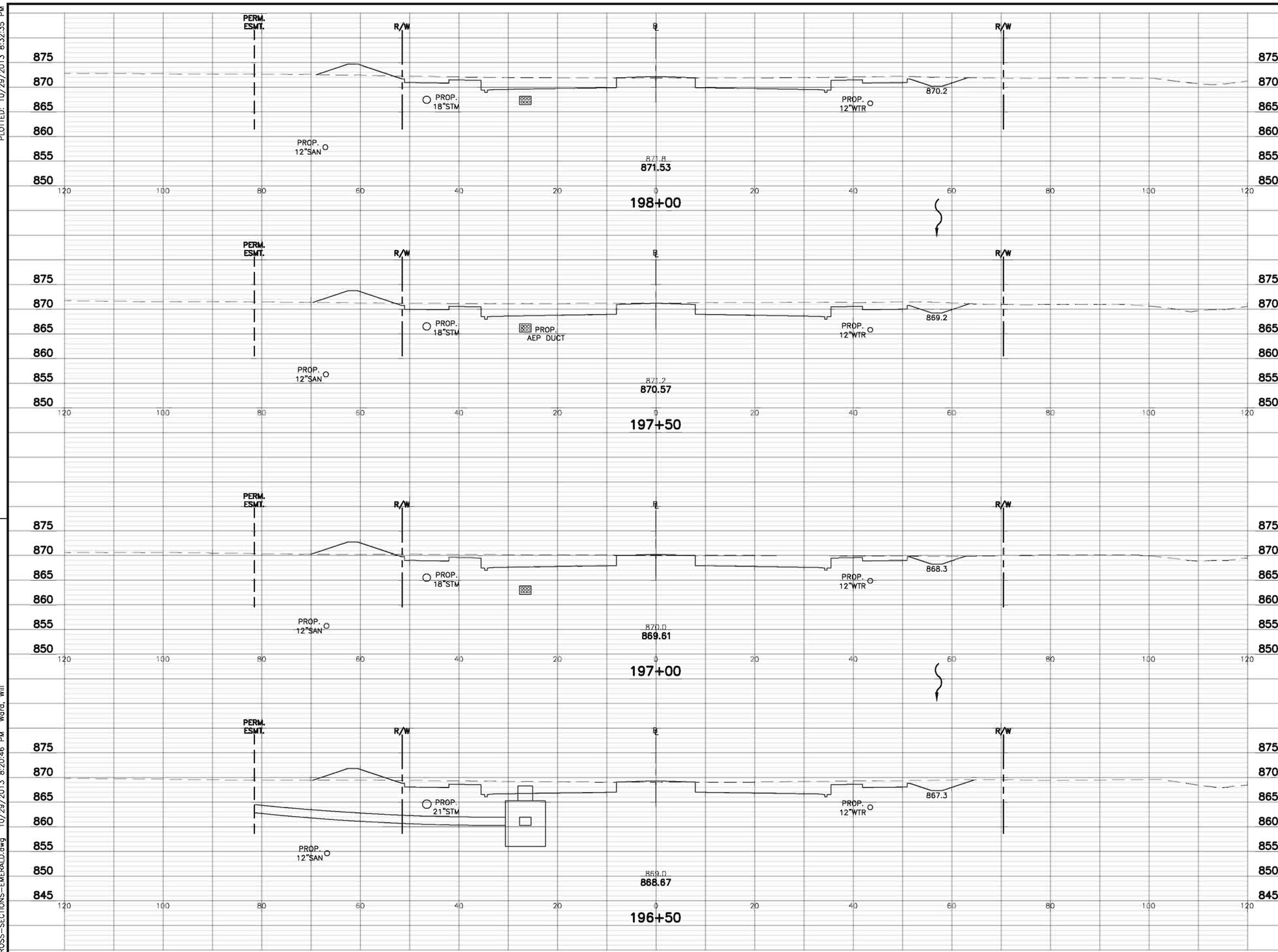
PLOTTED: 10/29/2013 8:32:20 PM




| END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|
| CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | | | | | |
| | | | | | |
| 166.9 | – | 23.5 | | | |
| | | | | | |
| | | | | | |
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| | | | 333 | – | 43 |
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| 192.8 | – | 22.7 | | | |
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| | | | 330 | – | 45 |
| | | | | | |
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| 164.0 | – | 26.3 | | | |
| | | | | | |
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| | | | 316 | – | 47 |
| | | | | | |
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| 177.7 | – | 24.5 | | | |
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| | | | 344 | – | 46 |

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 196+50 "BL2" TO STA. 198+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 61 OF 275

PLOTTED: 10/29/2013 8:32:35 PM
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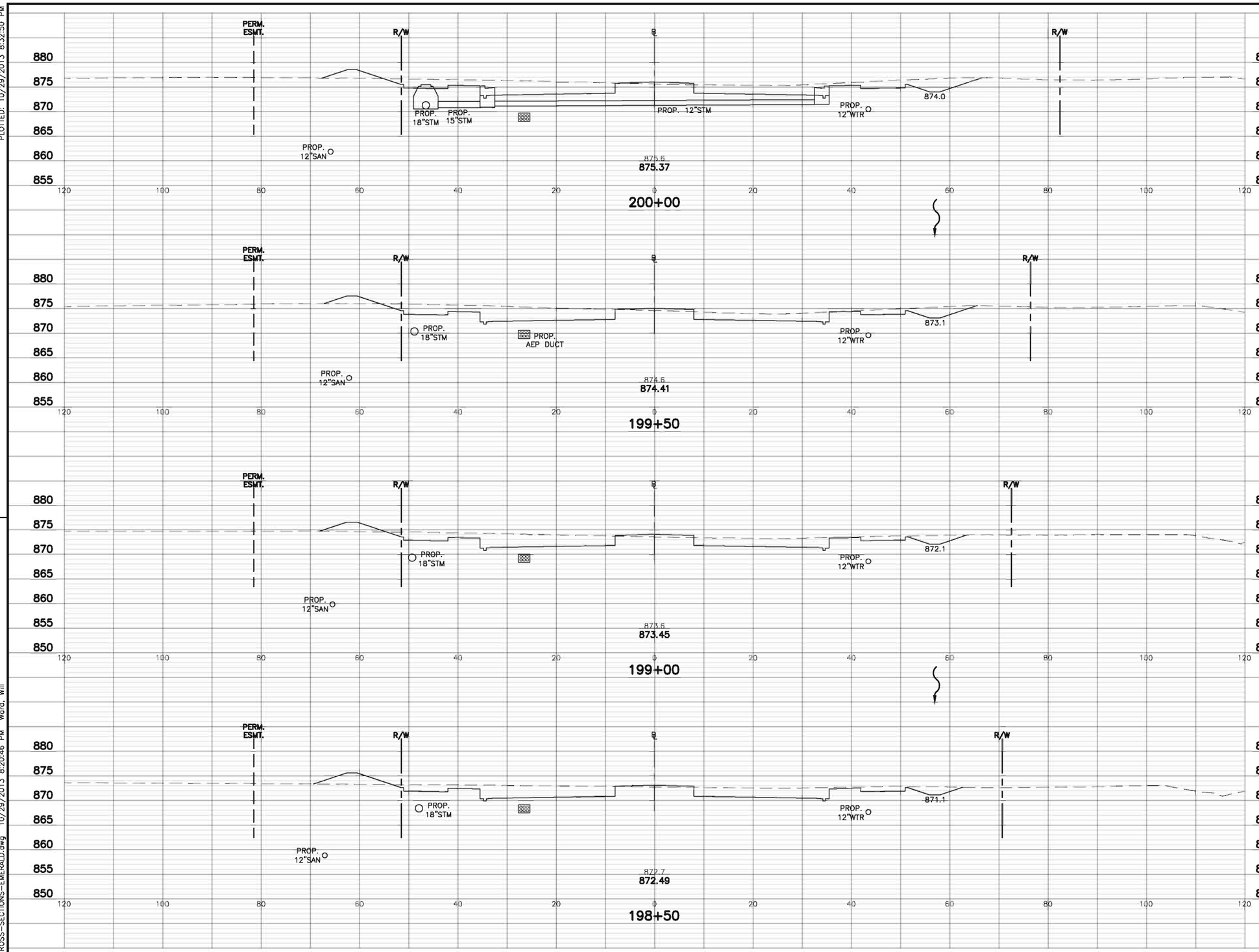


| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 192.7 | – | 17.4 | | | |
| | | | | 339 | – | 31 |
| | 173.5 | – | 16.2 | | | |
| | | | | 306 | – | 35 |
| | 156.9 | – | 22.0 | | | |
| | | | | 290 | – | 44 |
| | 156.1 | – | 25.6 | | | |
| | | | | 299 | – | 45 |

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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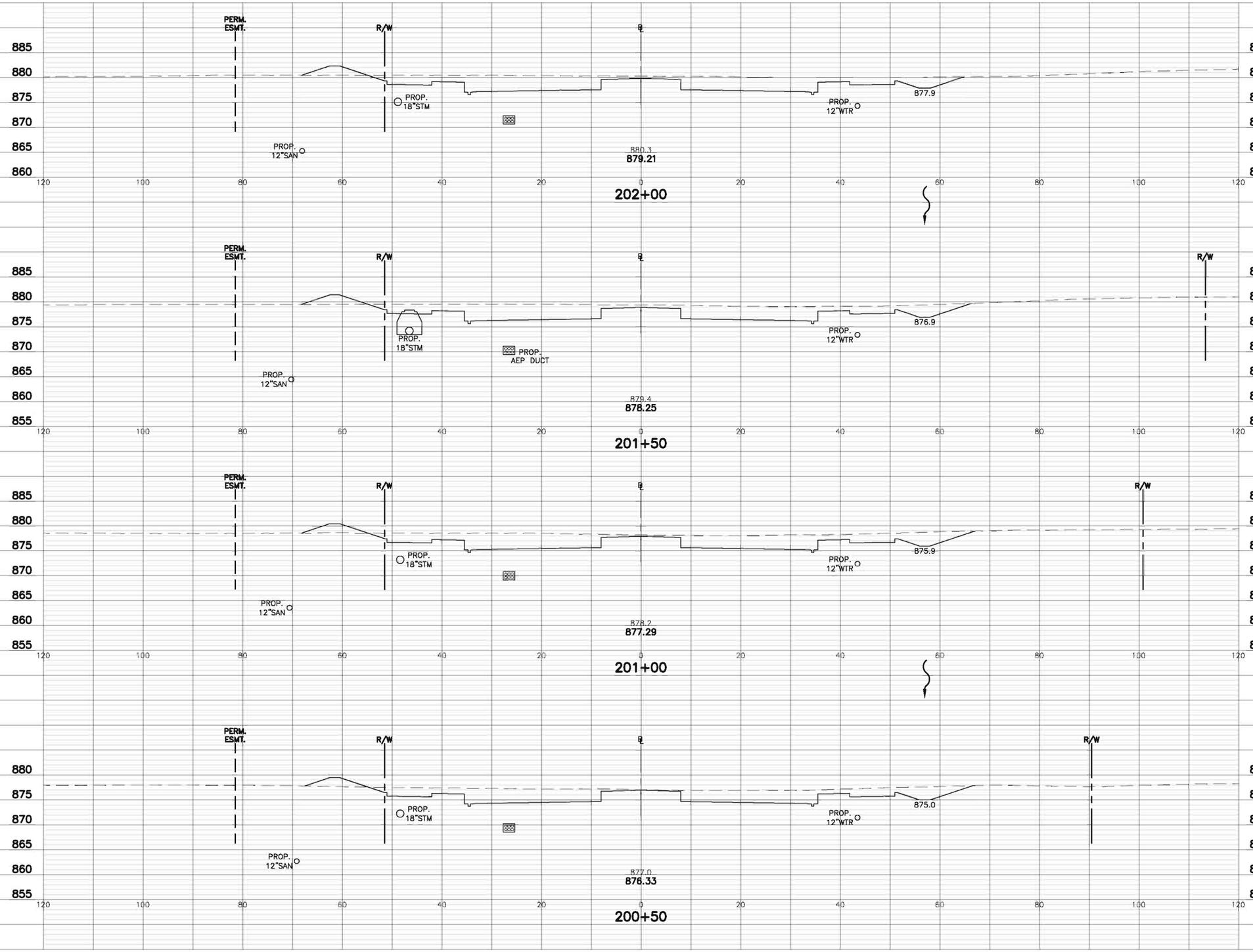
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 198+50 "BL2" TO STA. 200+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 62 OF 275

PLOTTED: 10/29/2013 8:32:50 PM
P:\PR44959\cadd\CROSS-SECTIONS-EMERALD.dwg 10/29/2013 8:20:46 PM Ward, Will




| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 231.3 | – | 14.8 | | | |
| | | | | 437 | – | 28 |
| | 240.3 | – | 15.1 | | | |
| | | | | 446 | – | 27 |
| | 241.0 | – | 14.2 | | | |
| | | | | 423 | – | 26 |
| | 216.3 | – | 13.6 | | | |
| | | | | 379 | – | 29 |

| NO. | REVISIONS | DATE | BY | CHK. |
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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 200+50 "BL2" TO STA. 202+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 63 OF 275

PLOTTED: 10/29/2013 8:33:05 PM
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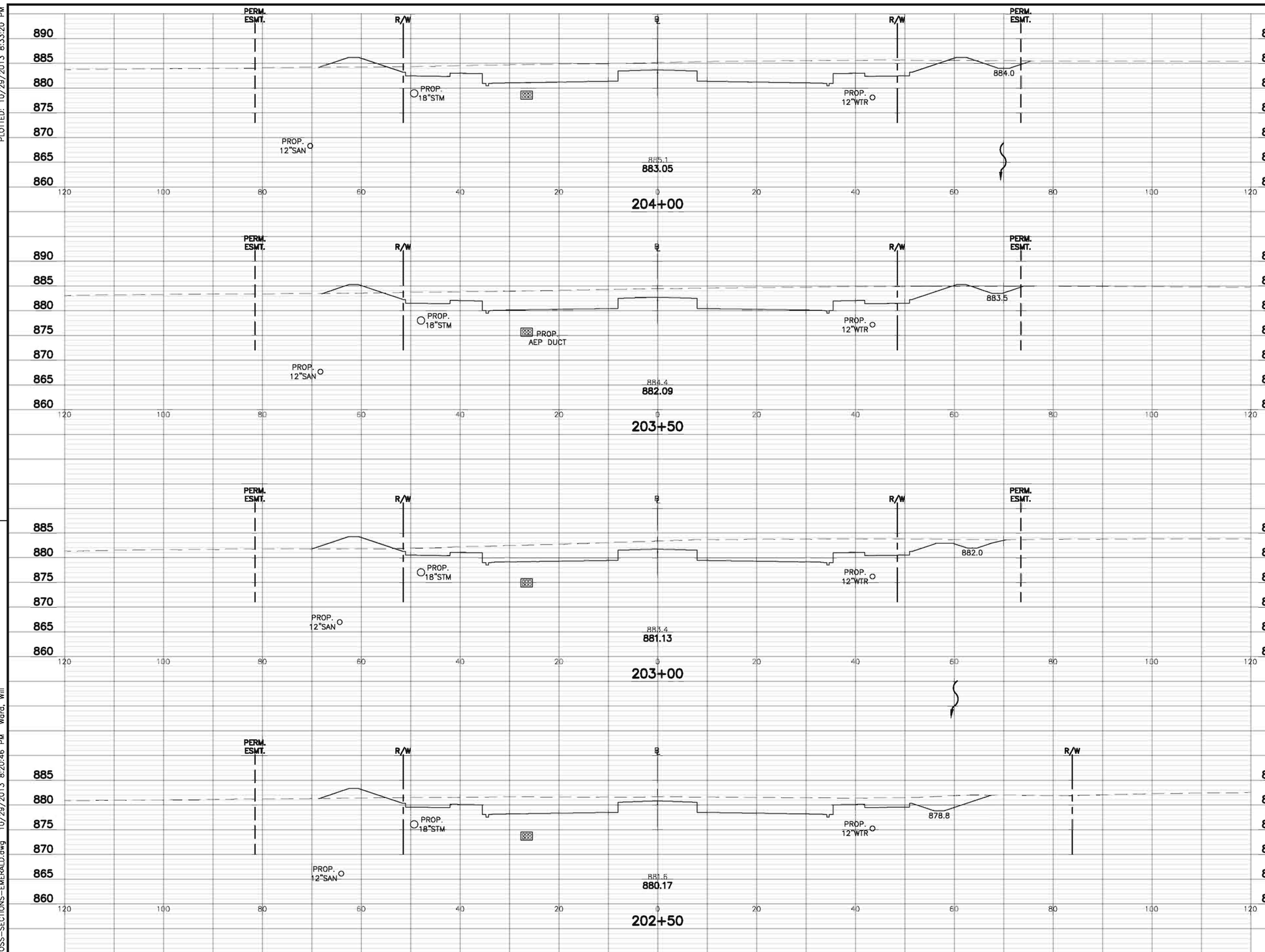


| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 204+00 | 336.8 | – | 18.0 | | | |
| | | | | 647 | – | 29 |
| 203+50 | 361.7 | – | 13.4 | | | |
| | | | | 646 | – | 34 |
| 203+00 | 335.9 | – | 23.2 | | | |
| | | | | 311 | – | 21 |
| 202+50 | 279.3 | – | 15.2 | | | |
| | | | | 473 | – | 28 |

| NO. | REVISIONS | DATE | BY | CHK. |
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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 202+50 "BL2" TO STA. 204+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 64 OF 275

PLOTTED: 10/29/2013 8:33:20 PM
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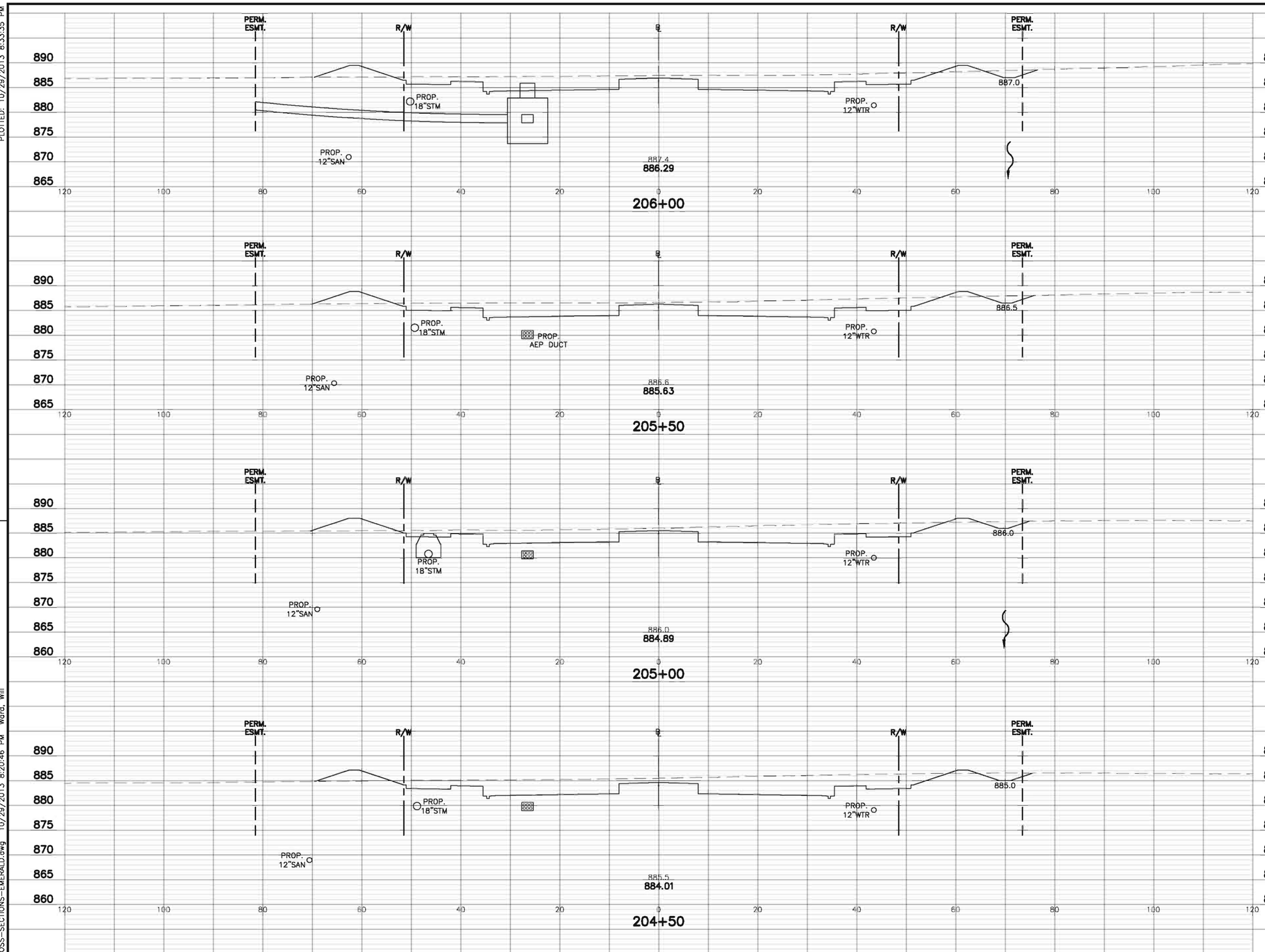


| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 234.4 | – | 28.7 | | | |
| | | | | 436 | – | 53 |
| | 236.2 | – | 28.1 | | | |
| | | | | 447 | – | 53 |
| | 246.4 | – | 29.3 | | | |
| | | | | 494 | – | 48 |
| | 286.7 | – | 22.6 | | | |
| | | | | 577 | – | 38 |

| NO. | REVISIONS | DATE | BY | CHK. |
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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 205+50 "BL2" TO STA. 206+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 65 OF 275

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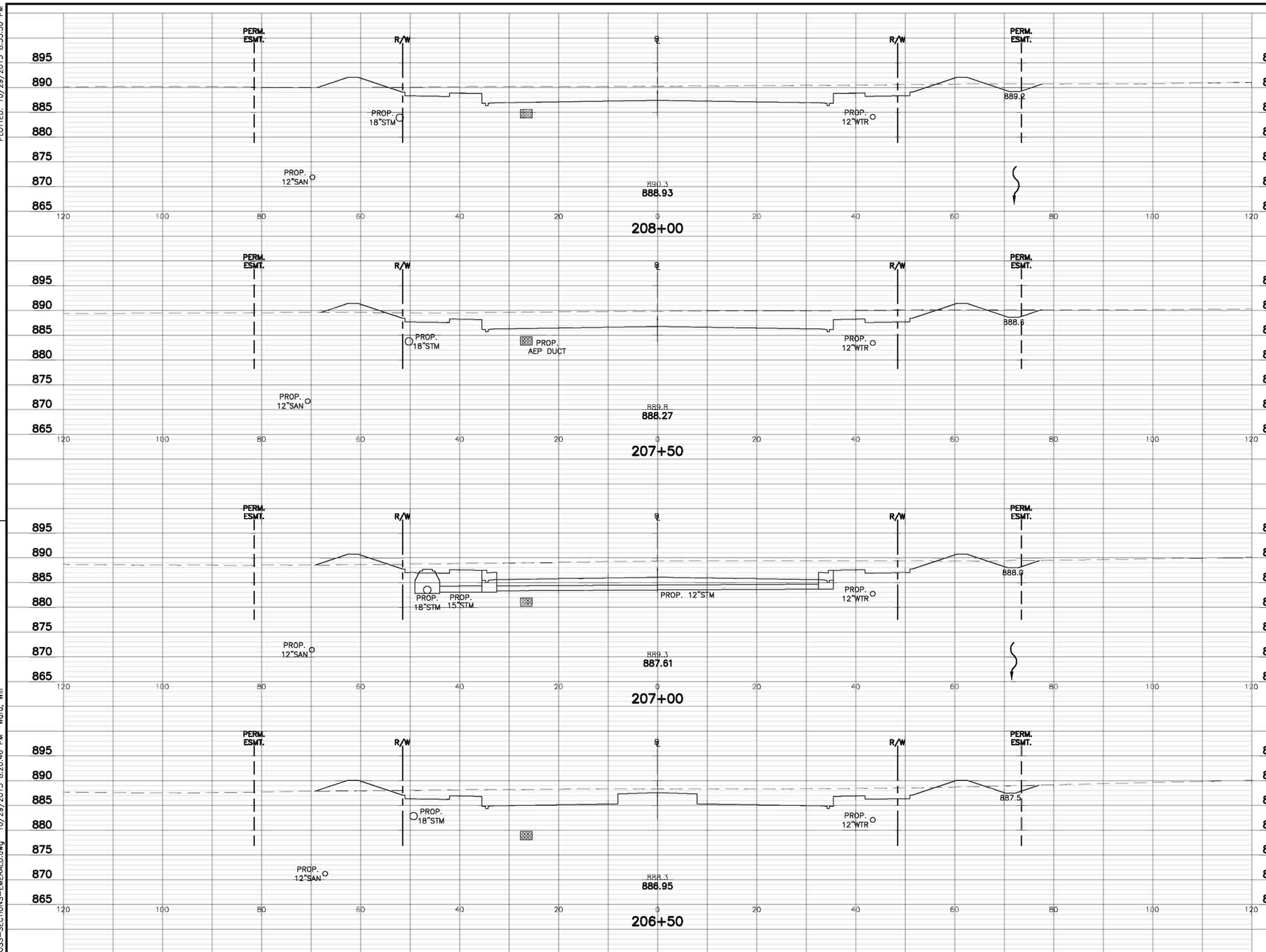


| END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|
| CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 293.0 | – | 26.2 | | | |
| | | | 559 | – | 45 |
| 310.4 | – | 21.9 | | | |
| | | | 580 | – | 46 |
| 316.1 | – | 27.7 | | | |
| | | | 531 | – | 50 |
| 257.9 | – | 26.8 | | | |
| | | | 456 | – | 51 |

| NO. | REVISIONS | DATE | BY | CHK. |
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RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 206+50 "BL2" TO STA. 208+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 66 OF 275

PLOTTED: 10/29/2013 8:33:50 PM
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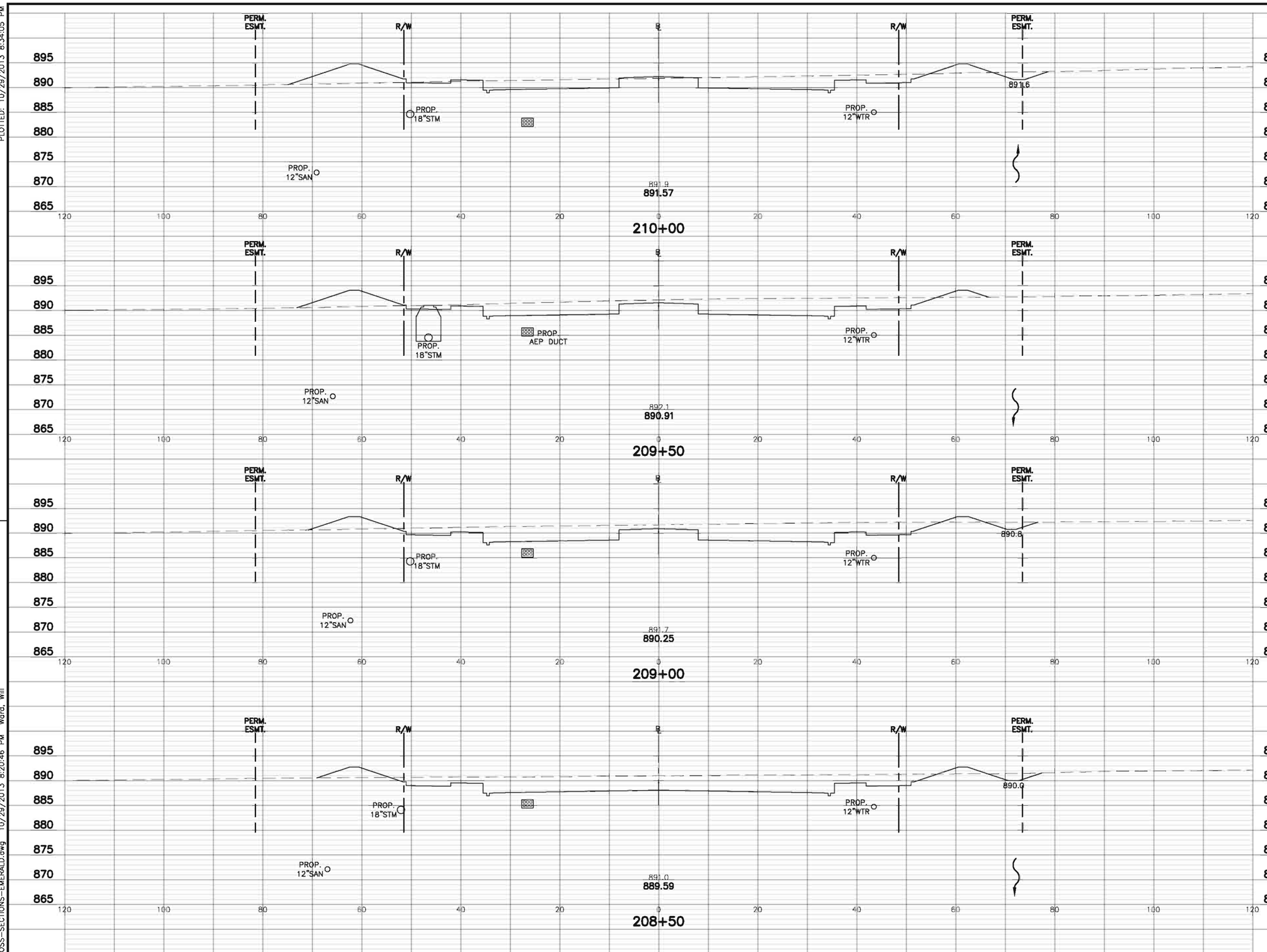


| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 153.7 | – | 70.9 | | | |
| | | | | 344 | – | 111 |
| | 217.4 | – | 49.0 | | | |
| | | | | 448 | – | 75 |
| | 266.5 | – | 32.4 | | | |
| | | | | 520 | – | 55 |
| | 295.1 | – | 26.6 | | | |
| | | | | 545 | – | 49 |

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 208+50 "BL2" TO STA. 210+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 67 OF 275

PLOTTED: 10/29/2013 8:34:05 PM
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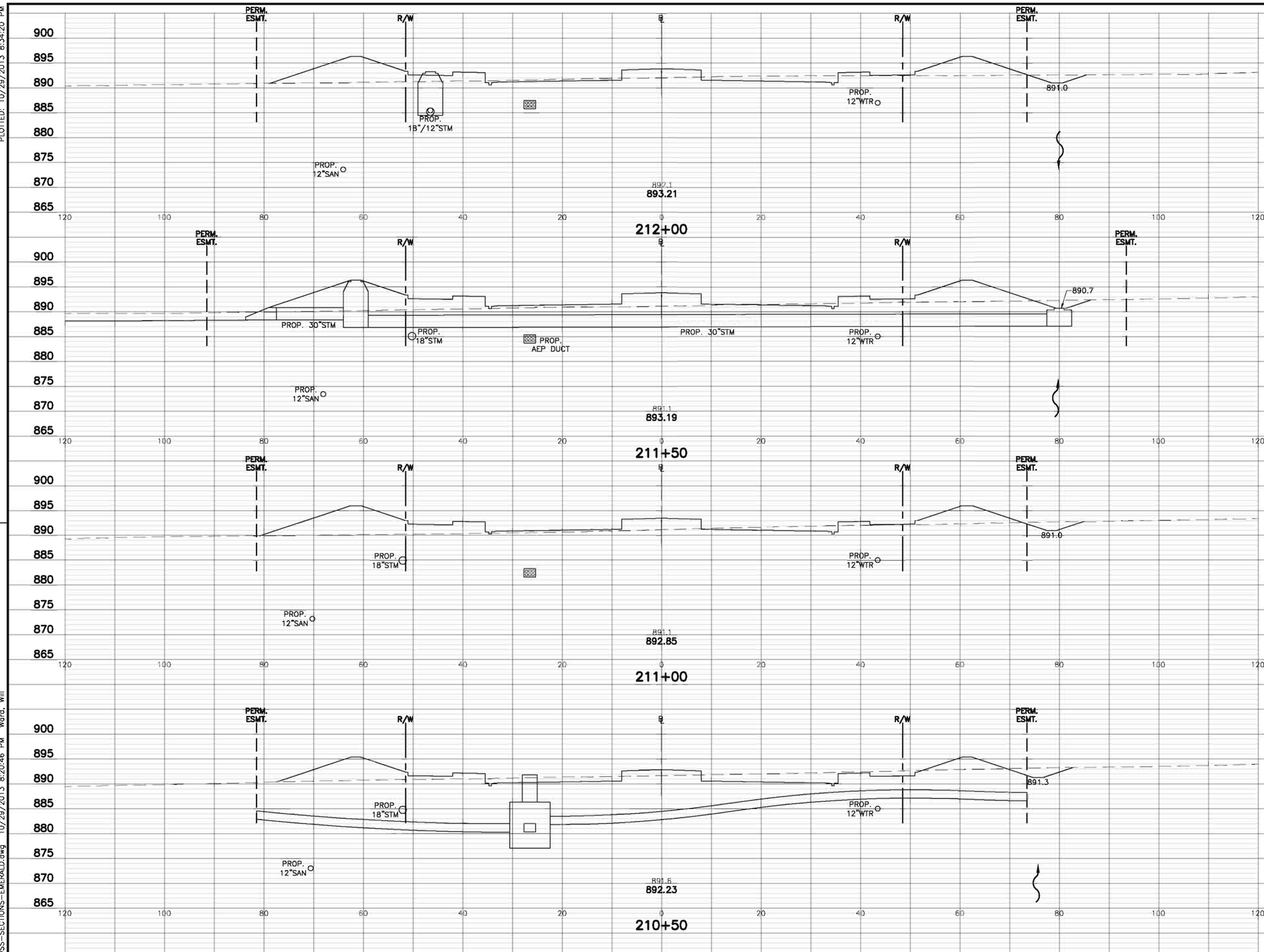


| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 47.7 | – | 196.2 | | | |
| | | | | 60 | – | 443 |
| | 16.9 | – | 282.4 | | | |
| | | | | 44 | – | 483 |
| | 30.7 | – | 239.0 | | | |
| | | | | 28 | – | 221 |
| | 97.4 | – | 127.9 | | | |
| | | | | 233 | – | 184 |

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 210+50 "BL2" TO STA. 212+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 68 OF 275

PLOTTED: 10/29/2013 8:34:20 PM
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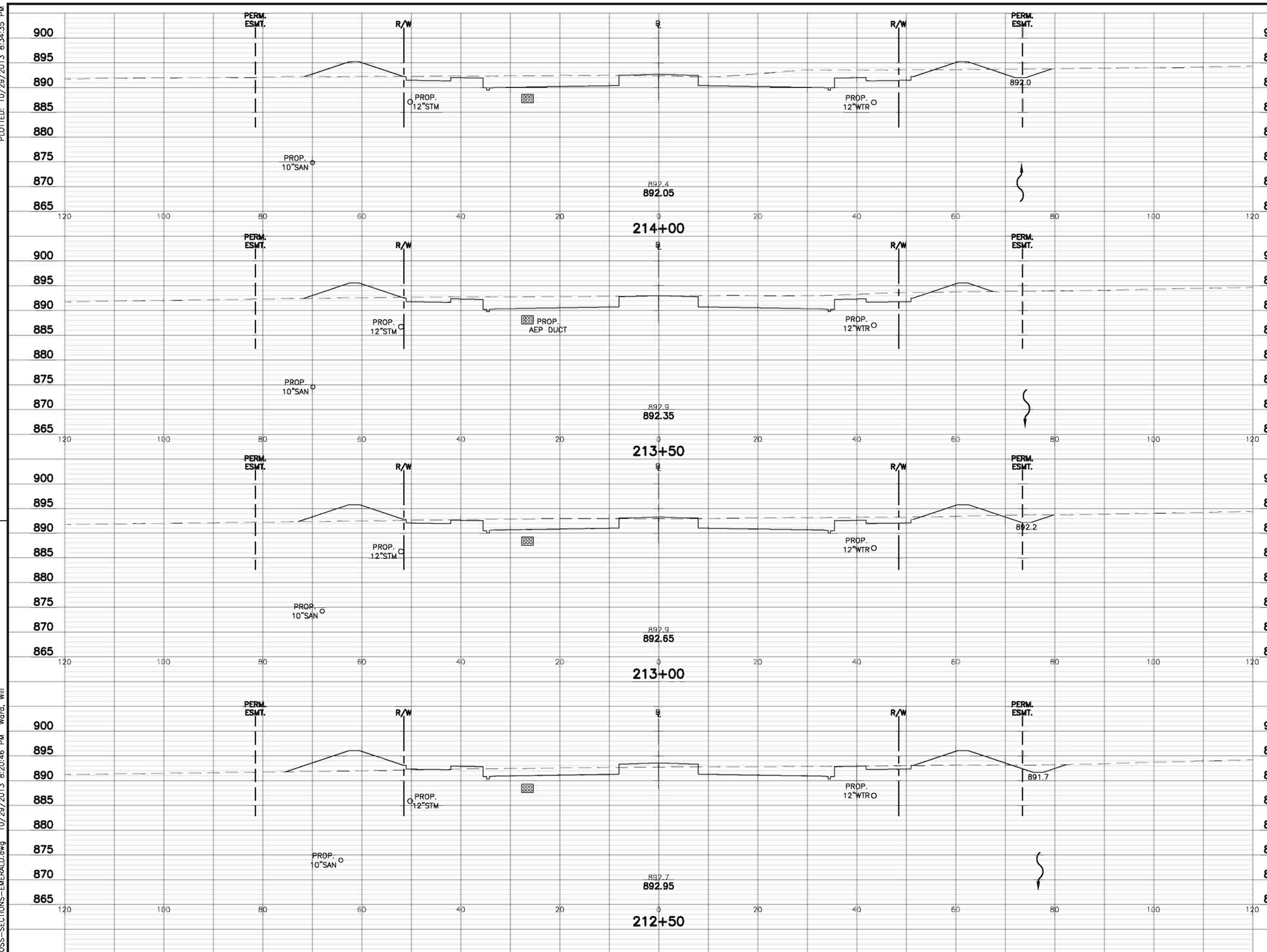


| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 189.1 | – | 47.3 | | | |
| | | | | 330 | – | 86 |
| | 167.8 | – | 45.9 | | | |
| | | | | 298 | – | 103 |
| | 153.6 | – | 65.1 | | | |
| | | | | 238 | – | 156 |
| | 103.6 | – | 103.3 | | | |
| | | | | 96 | – | 96 |

| NO. | REVISIONS | DATE | BY | CHK. |
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RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 212+50 "BL2" TO STA. 214+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 69 OF 275

PLOTTED: 10/29/2013 8:34:35 PM
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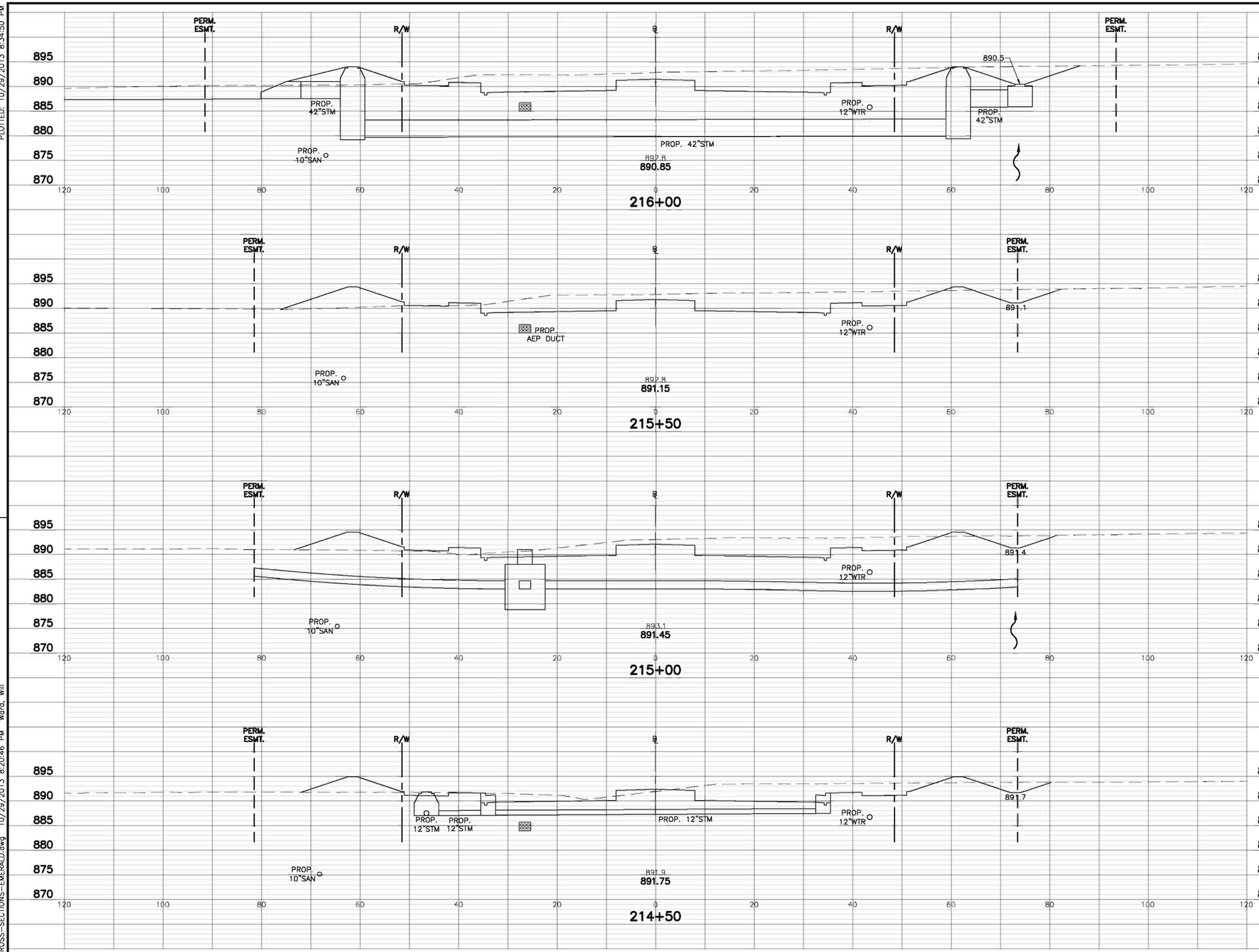


| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 352.1 | – | 55.4 | | | |
| | | | | 583 | – | 112 |
| | 277.8 | – | 65.5 | | | |
| | | | | 471 | – | 120 |
| | 231.2 | – | 64.5 | | | |
| | | | | 393 | – | 107 |
| | 193.1 | – | 50.9 | | | |
| | | | | 354 | – | 91 |

| NO. | REVISIONS | DATE | BY | CHK. |
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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 214+50 "BL2" TO STA. 216+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 70 OF 275

PLOTTED: 10/29/2013 8:34:50 PM
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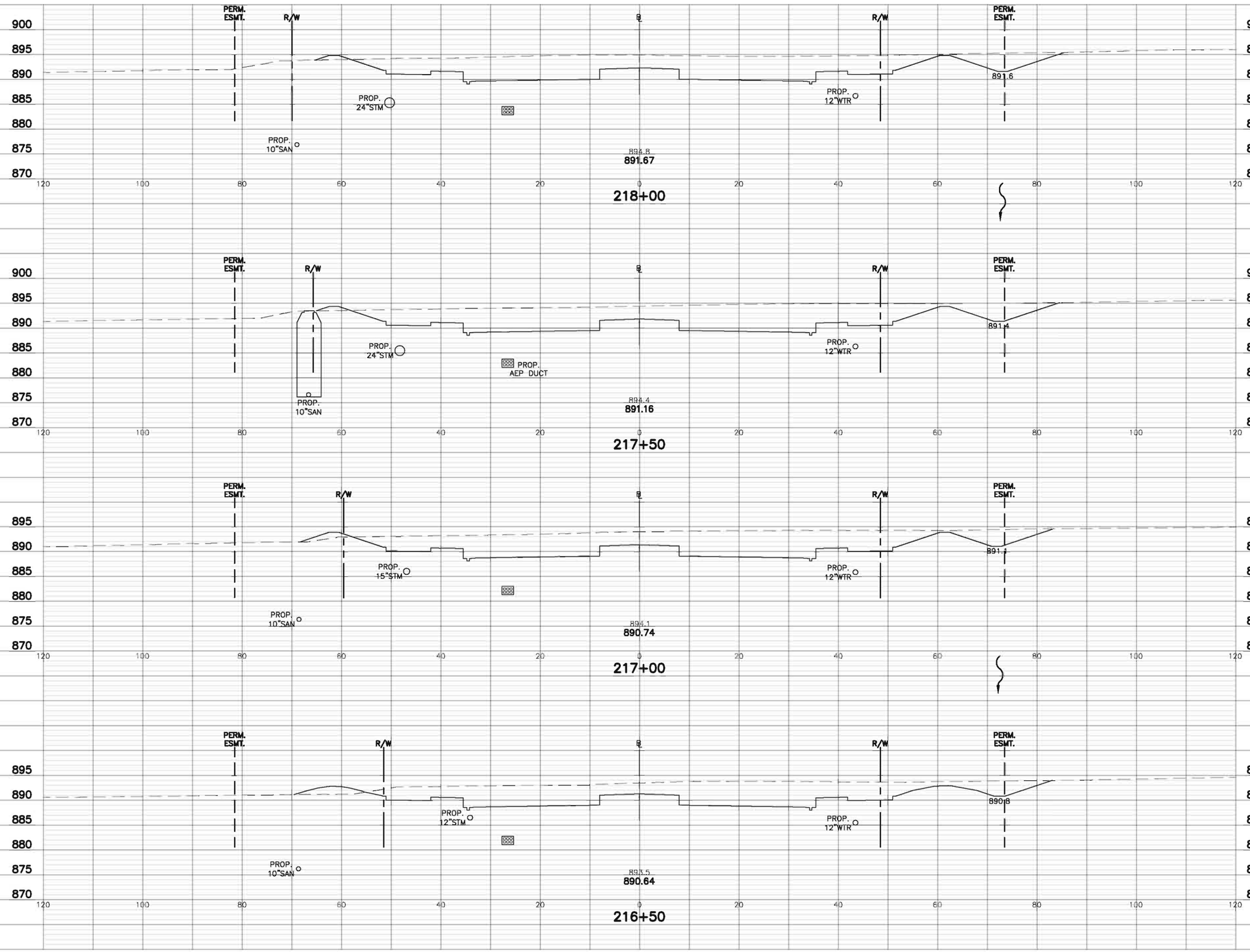


| END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|
| CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 477.6 | – | 4.2 | | | |
| | | | 916 | – | 7 |
| 511.9 | – | 3.6 | | | |
| | | | 925 | – | 11 |
| 487.6 | – | 7.8 | | | |
| | | | 857 | – | 21 |
| 437.6 | – | 15.0 | | | |
| | | | 731 | – | 65 |

| NO. | REVISIONS | DATE | BY | CHK. |
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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 216+50 "BL2" TO STA. 218+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 71 OF 275

PLOTTED: 10/29/2013 8:35:05 PM
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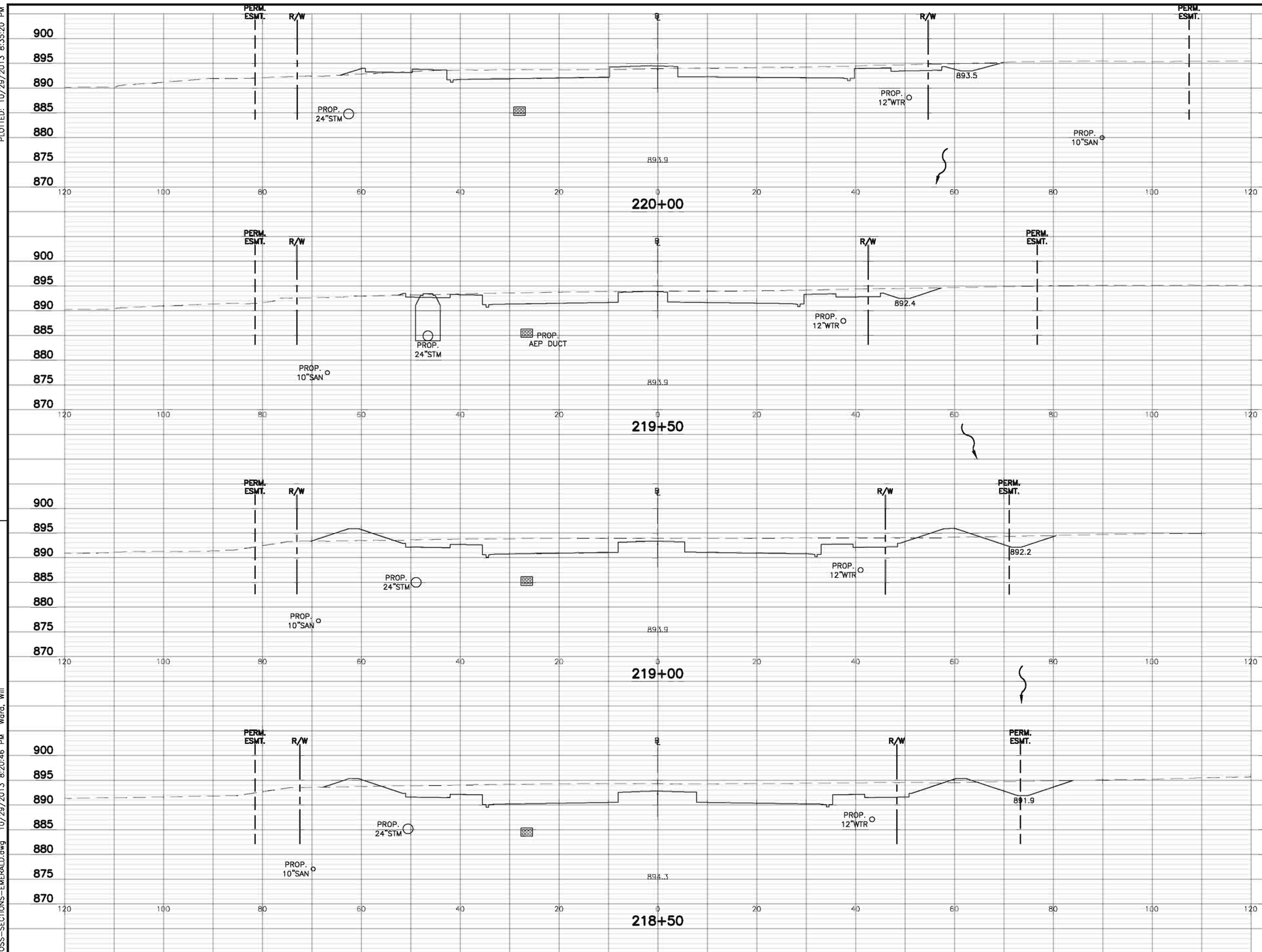


| END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|
| CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | | | | | |
| 157.4 | – | 13.9 | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | 305 | – | 13 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| 171.9 | – | 0.3 | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | 384 | – | 34 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| 242.8 | – | 36.6 | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | 559 | – | 48 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| 360.5 | – | 15.0 | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | 776 | – | 18 |

| NO. | REVISIONS | DATE | BY | CHK. |
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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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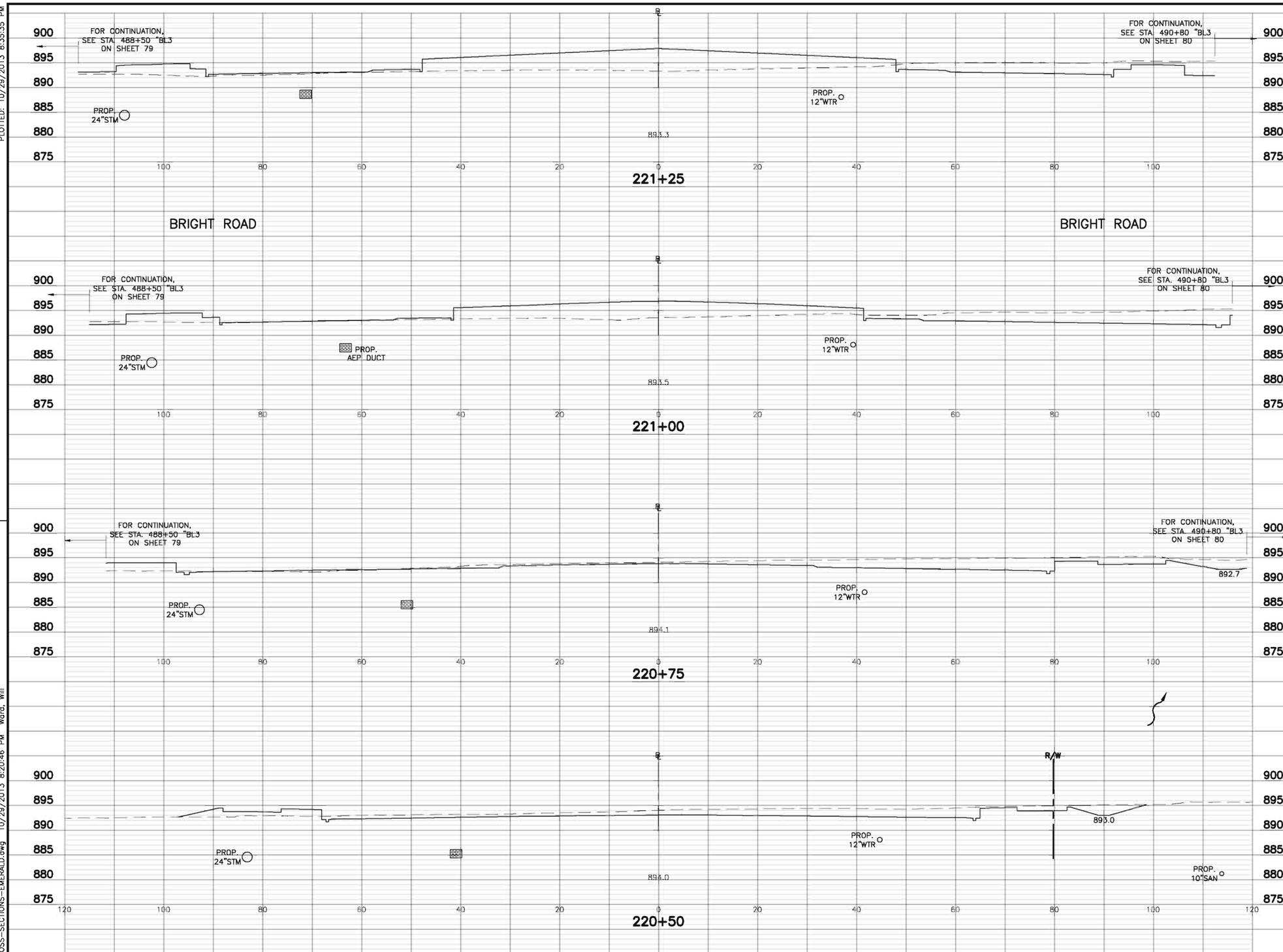
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 218+50 "BL2" TO STA. 220+00 "BL2"

SCALE: 1" = 10'

SHEET NO. 72 OF 275

PLOTTED: 10/29/2013 8:35:20 PM
P:\PR44959\cadd\CROSS-SECTIONS-EMERALD.dwg 10/29/2013 8:20:46 PM Ward, Will




| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 115.6 | – | 355.4 | | | |
| | | | | 123 | – | 281 |
| | 150.9 | – | 252.6 | | | |
| | | | | 155 | – | 130 |
| | 182.9 | – | 29.1 | | | |
| | | | | 164 | – | 28 |
| | 171.5 | – | 30.7 | | | |
| | | | | 305 | – | 41 |

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

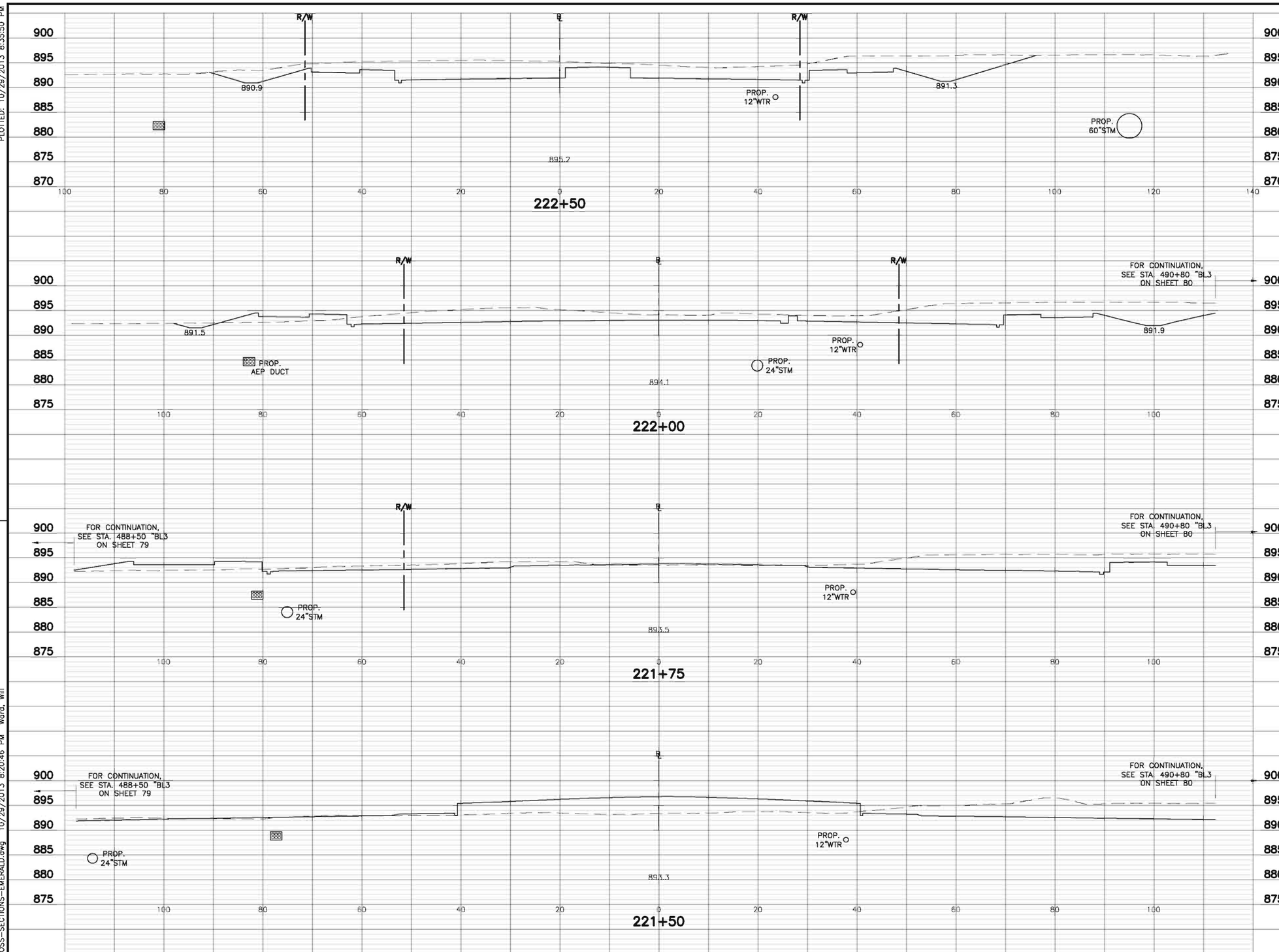
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 220+50 "BL2" TO STA. 221+25 "BL2"

SCALE: 1" = 10'

SHEET NO. 73 OF 275

PLOTTED: 10/29/2013 8:35:35 PM
P:\PR44959\cadd\CROSS-SECTIONS-EMERALD.dwg 10/29/2013 8:20:46 PM Ward, Will




| END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|
| CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 435.4 | – | 0.0 | | | |
| | | | 789 | – | 25 |
| 416.4 | – | 27.3 | | | |
| | | | 304 | – | 39 |
| 240.9 | – | 56.1 | | | |
| | | | 202 | – | 135 |
| 196.4 | – | 234.8 | | | |
| | | | 144 | – | 273 |

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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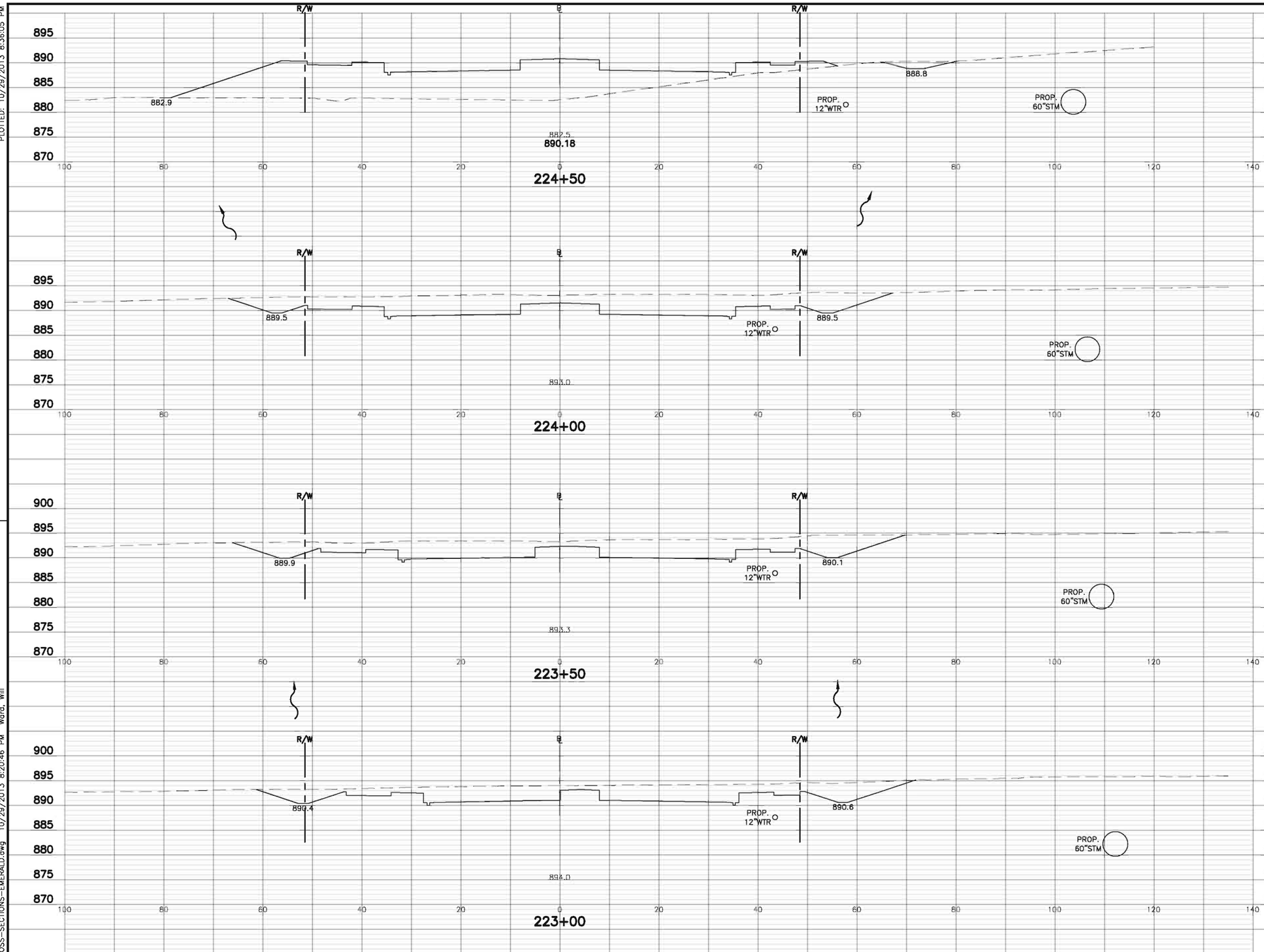
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 221+50 "BL2" TO STA. 222+50 "BL2"

SCALE: 1" = 10'

SHEET NO. 74 OF 275

PLOTTED: 10/29/2013 8:35:50 PM
P:\PR44959\cadd\CROSS-SECTIONS-EMERALD.dwg 10/29/2013 8:20:46 PM Ward, Will




| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 224+50 | 12.9 | – | 634.6 | | | |
| | | | | 385 | – | 588 |
| 224+00 | 402.9 | – | 0.0 | | | |
| | | | | 713 | – | 0 |
| 223+50 | 367.5 | – | 0.0 | | | |
| | | | | 631 | – | 0 |
| 223+00 | 313.9 | – | 0.0 | | | |
| | | | | 694 | – | 0 |

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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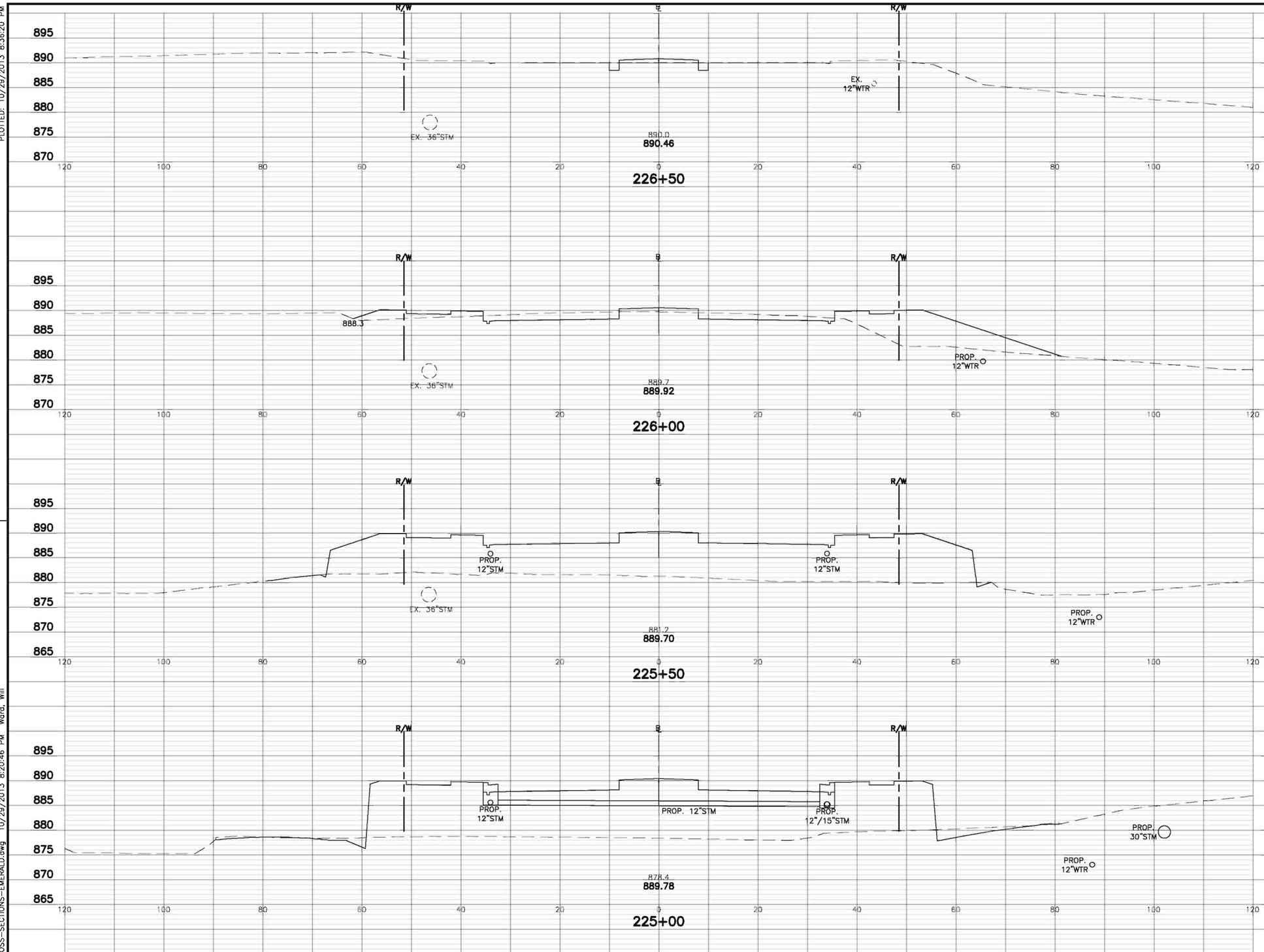
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 223+00 "BL2" TO STA. 224+50 "BL2"

SCALE: 1" = 10'

SHEET NO. 75 OF 275

PLOTTED: 10/29/2013 8:36:05 PM
10/29/2013 8:20:46 PM Ward, Will
P:\PR44959\cadd\CROSS-SECTIONS-EMERALD.dwg




| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 6.1 | – | 10.3 | | | |
| | | | | 66 | – | 216 |
| | 64.8 | – | 222.5 | | | |
| | | | | 60 | – | 1130 |
| | 0.0 | – | 997.5 | | | |
| | | | | 28 | – | 2001 |
| | 30.5 | – | 1163.9 | | | |
| | | | | 40 | – | 1665 |

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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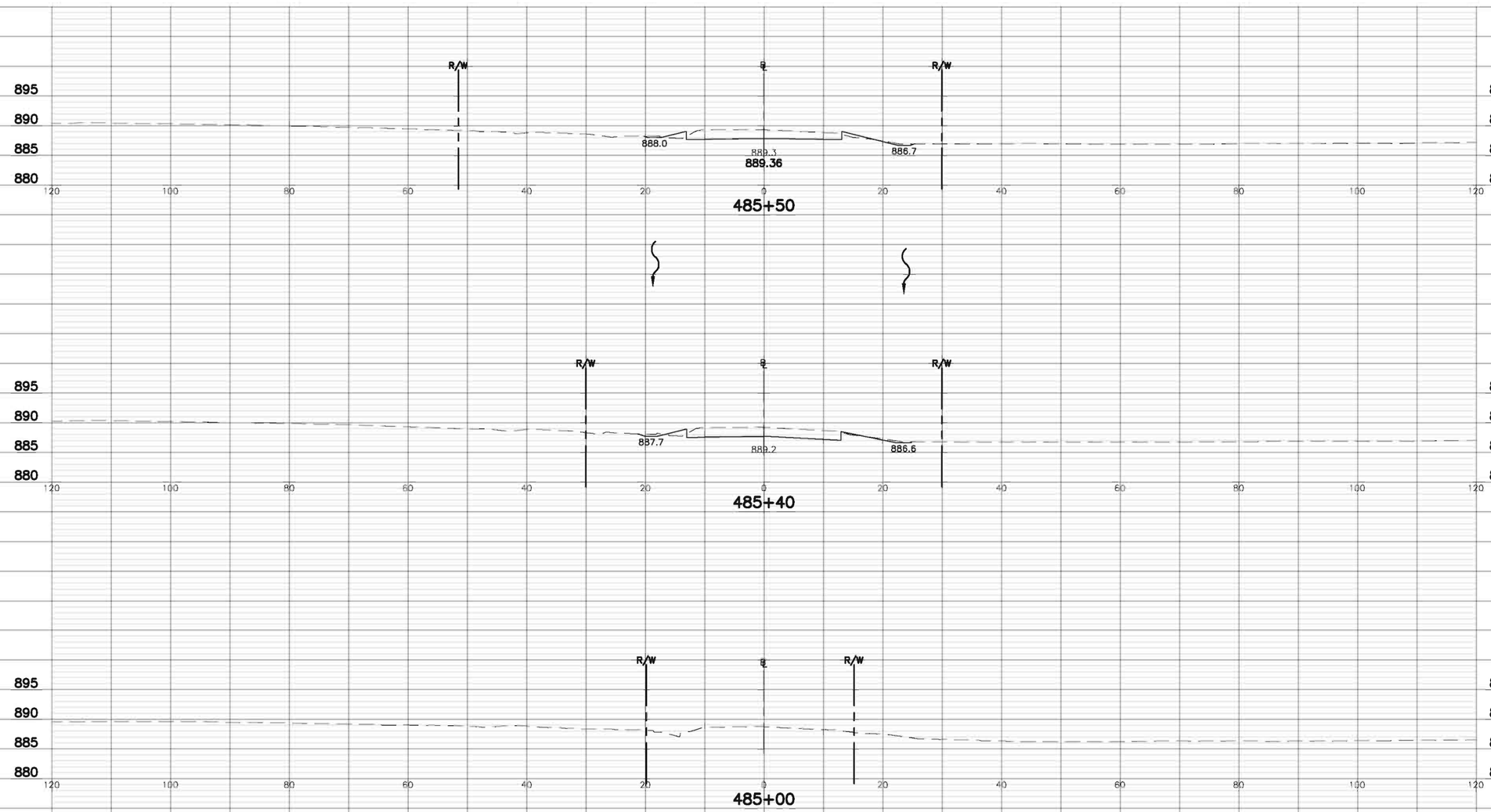
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
EMERALD PARKWAY
STA. 225+00 "BL2" TO STA. 226+50 "BL2"

SCALE: 1" = 10'

SHEET NO. 76 OF 275

PLOTTED: 10/29/2013 8:36:20 PM
P:\PR44959\cadd\CROSS-SECTIONS-EMERALD.dwg 10/29/2013 8:20:46 PM Ward, Will




| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 485+50 | 37.2 | – | 4.4 | | | |
| | | | | 15 | – | 1 |
| 485+40 | 41.8 | – | 2.9 | | | |
| | | | | 31 | – | 2 |
| 485+00 | 0.0 | – | 0.0 | | | |
| | | | | x | – | x |

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
BRIGHT ROAD
STA. 485+00 "BL3" TO STA. 485+50 "BL3"

SCALE: 1" = 10'



PLOTTED: 10/29/2013 8:36:57 PM
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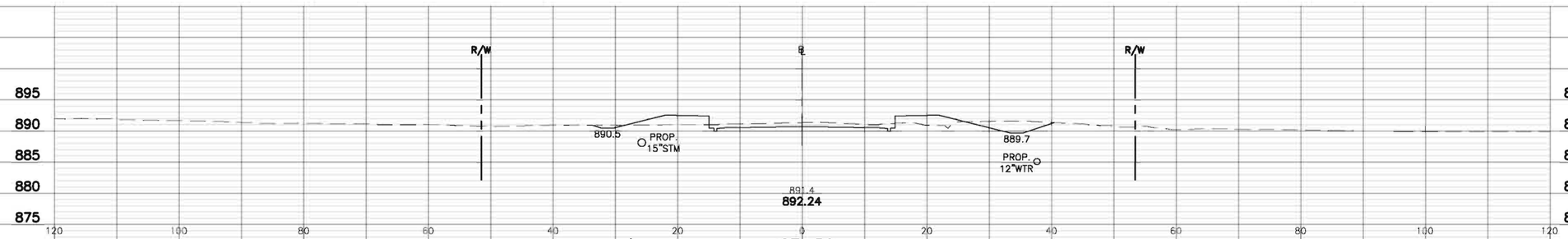


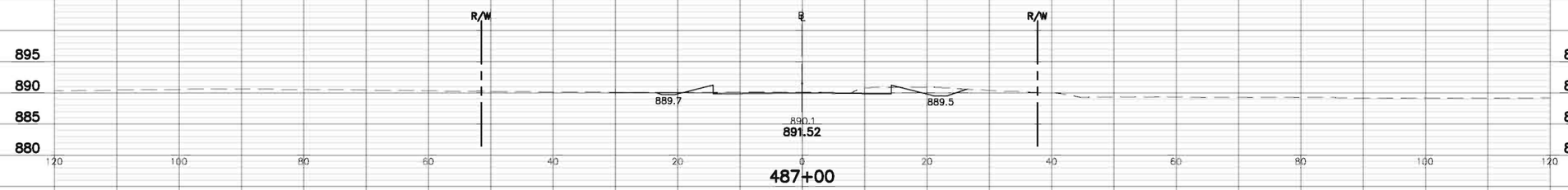


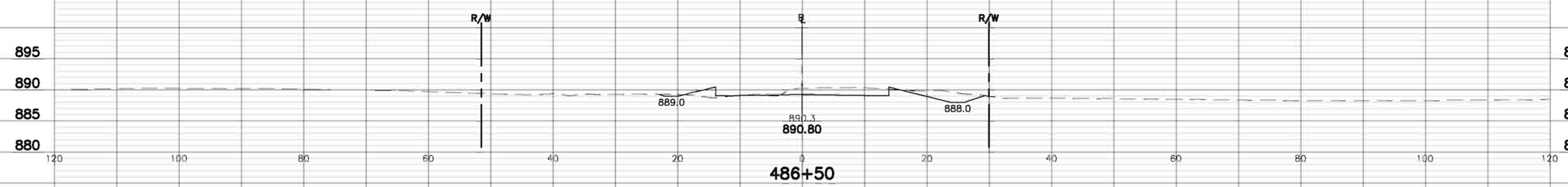


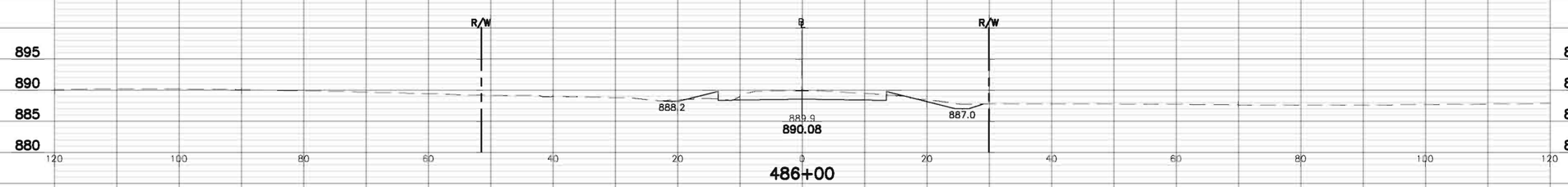


| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 36.0 | – | 29.1 | | | |
| | | | | 51 | – | 30 |
| | 18.9 | – | 2.9 | | | |
| | | | | 46 | – | 8 |
| | 31.2 | – | 5.6 | | | |
| | | | | 31.2 | – | 5.6 |
| | 35.2 | – | 3.7 | | | |
| | | | | 67 | – | 8 |

| NO. | REVISIONS | DATE | BY | CHK. |
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BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

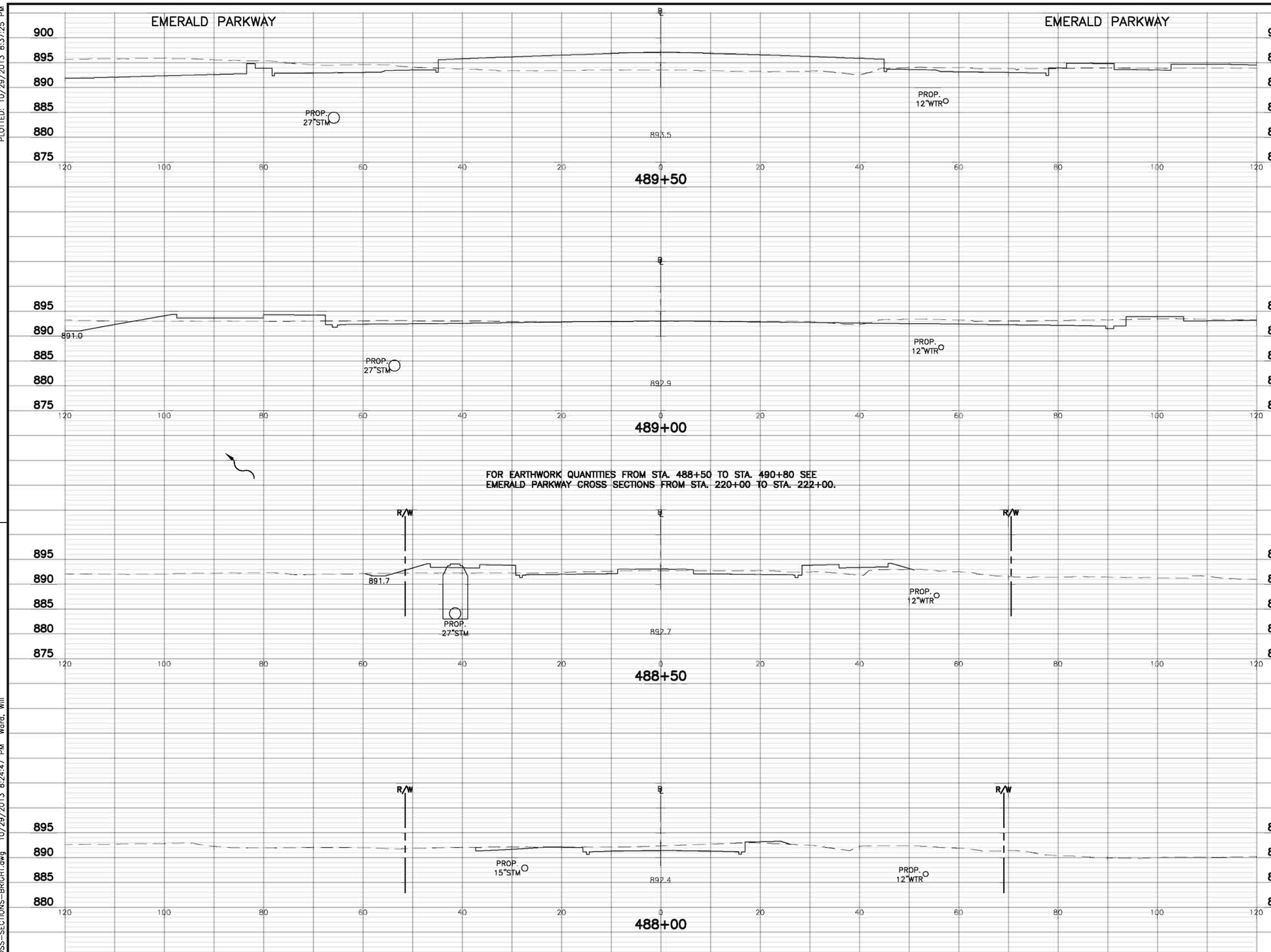
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
BRIGHT ROAD
STA. 486+00 "BL3" TO STA. 487+50 "BL3"

SCALE: 1" = 10'



PLOTTED: 10/29/2013 8:37:10 PM
P:\PR44959\cadd\CROSS-SECTIONS-BRIGHT.dwg 10/29/2013 8:24:47 PM Ward, Will




| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 488+50 | 25.5 | – | 61.2 | | | |
| | | | | 64 | – | 59 |
| 488+00 | 43.7 | – | 2.9 | | | |
| | | | | 74 | – | 30 |

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

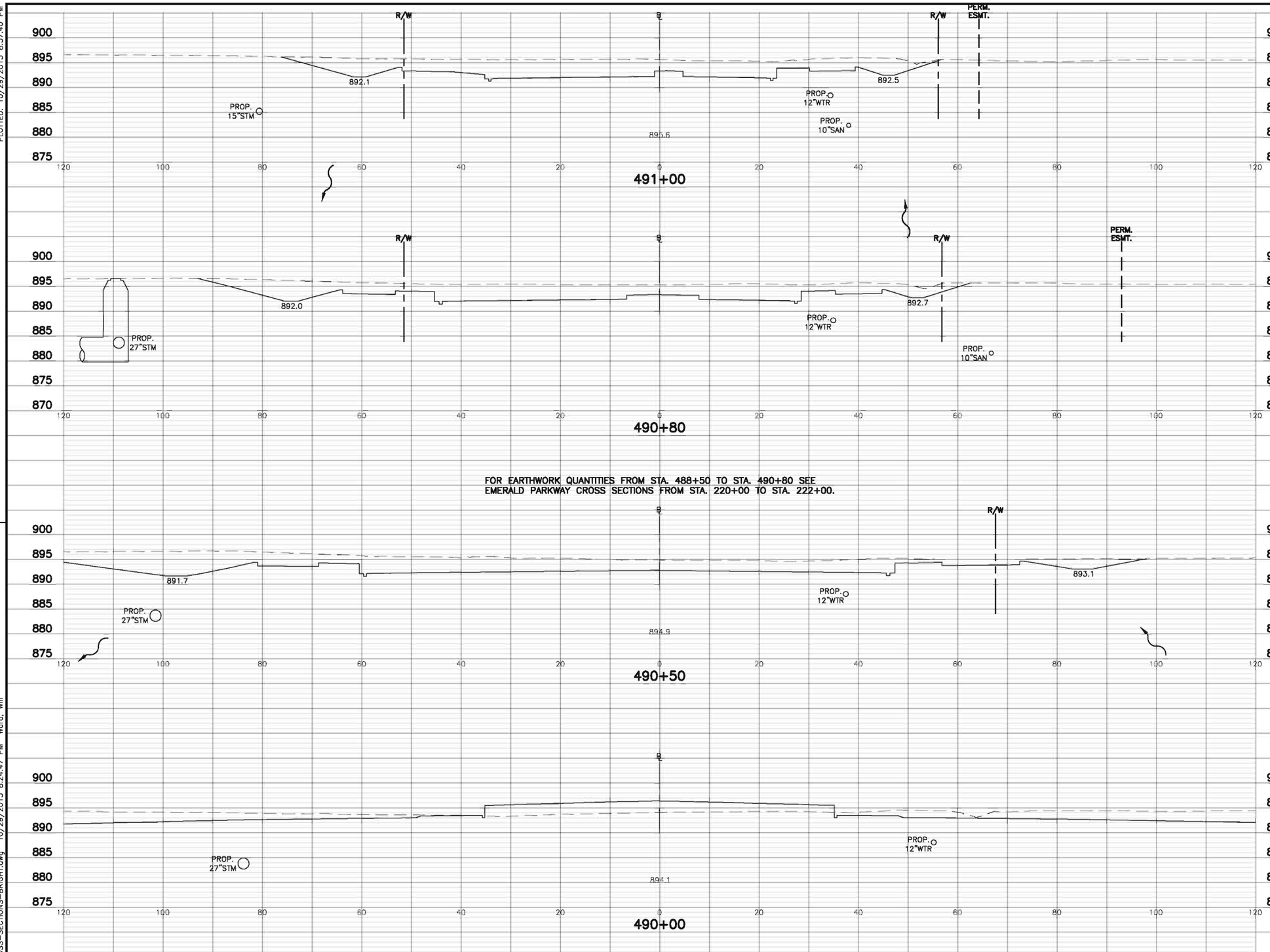
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
BRIGHT ROAD
STA. 488+00 "BL3" TO STA. 489+50 "BL3"

SCALE: 1" = 10'

SHEET NO. 79 OF 275

PLOTTED: 10/29/2013 8:37:25 PM
P:\PR44959\cadd\CROSS-SECTIONS-BRIGHT.dwg 10/29/2013 8:24:47 PM Ward, Will




| END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|
| CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 362.3 | – | 0.0 | | | |
| | | | 277 | – | 0 |
| 384.7 | – | 0.0 | | | |

| NO. | REVISIONS | DATE | BY | CHK. |
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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

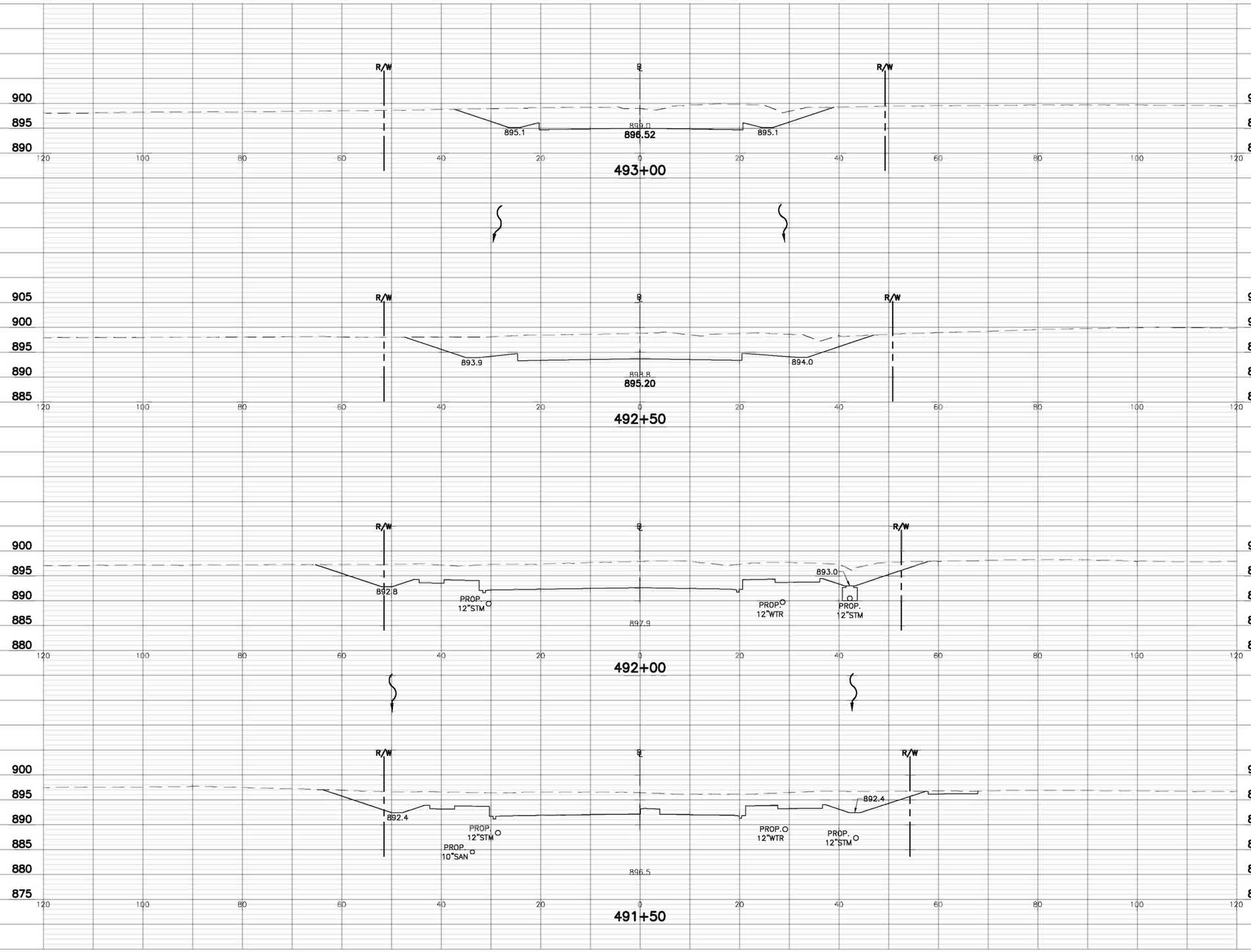
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
BRIGHT ROAD
STA. 490+00 "BL3" TO STA. 491+00 "BL3"

SCALE: 1" = 10'

SHEET NO. 80 OF 275

PLOTTED: 10/29/2013 8:37:40 PM
P:\PR44959\cadd\CROSS-SECTIONS-BRIGHT.dwg 10/29/2013 8:24:47 PM Ward, Will




| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 270.7 | – | 0.0 | | | |
| | | | | 602 | – | 0 |
| | 379.2 | – | 0.0 | | | |
| | | | | 798 | – | 0 |
| | 482.6 | – | 0.0 | | | |
| | | | | 832 | – | 0 |
| | 416.2 | – | 0.0 | | | |
| | | | | 721 | – | 0 |

| NO. | REVISIONS | DATE | BY | CHK. |
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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

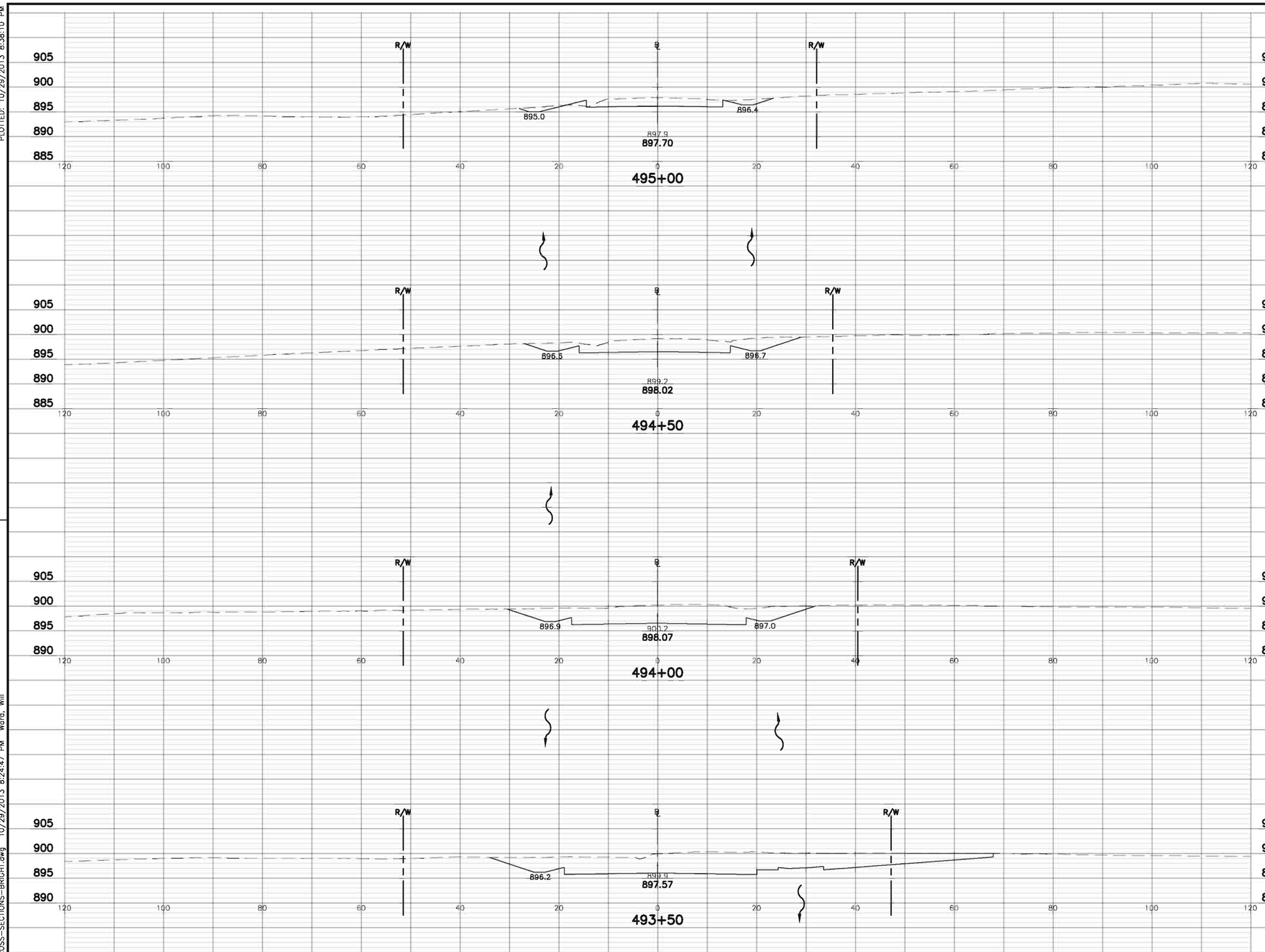
CROSS SECTIONS
BRIGHT ROAD
STA. 491+50 "BL3" TO STA. 493+00 "BL3"

SCALE: 1" = 10'

SHEET NO. 81 OF 275

PLOTTED: 10/29/2013 8:37:55 PM
P:\PR44959\cadd\CROSS-SECTIONS-BRIGHT.dwg 10/29/2013 8:24:47 PM Ward, Will

PLOTTED: 10/29/2013 8:38:10 PM




| | END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|---|
| | CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| | 51.6 | – | 2.5 | | | |
| | | | | 148 | – | 2 |
| | 107.8 | – | 0.0 | | | |
| | | | | 261 | – | X |
| | 173.7 | – | 0.0 | | | |
| | | | | 432 | – | 0 |
| | 293.2 | – | 0.0 | | | |
| | | | | 522 | – | 0 |

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

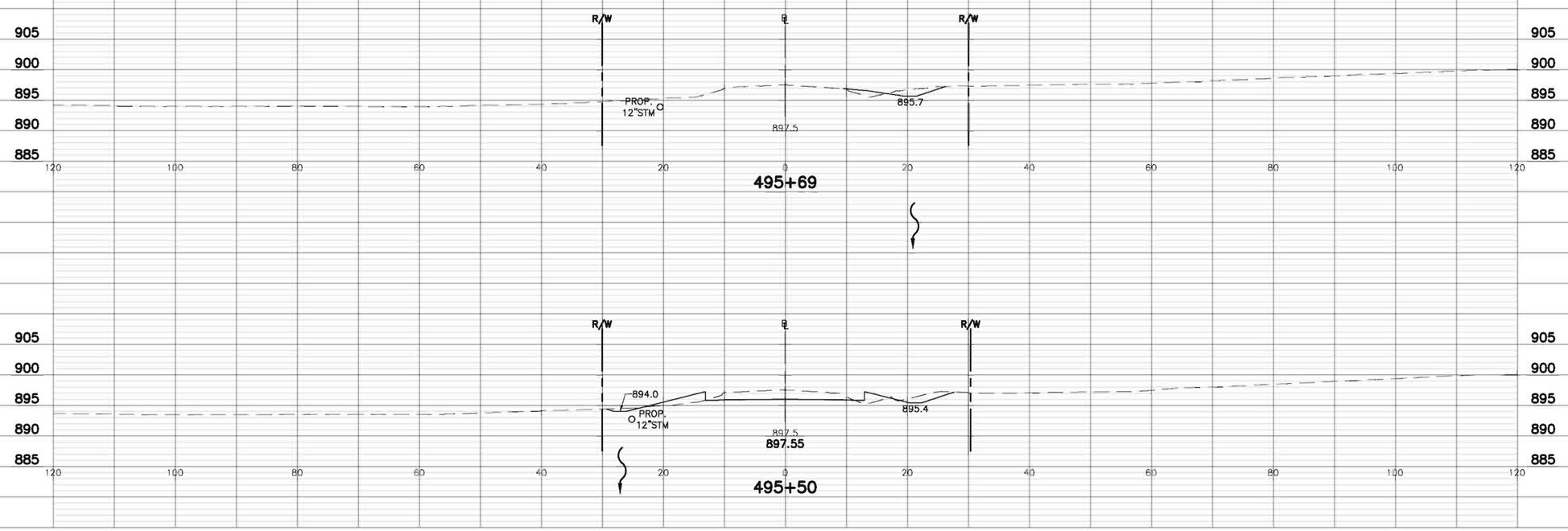
CROSS SECTIONS
BRIGHT ROAD
STA. 493+50 "BL3" TO STA. 495+00 "BL3"

SCALE: 1" = 10'

SHEET NO. 82 OF 275

P:\PR44959\cadd\CROSS-SECTIONS-BRIGHT.dwg 10/29/2013 8:24:47 PM Ward, Will

PLOTTED: 10/29/2013 8:38:25 PM




| END AREA (S.F.) | | | VOLUME (C.Y.) | | |
|---|---|---|---|---|---|
| CUT(SOIL) | CUT(ROCK) | FILL | CUT(SOIL) | CUT(ROCK) | FILL(203) |
| 6.6 | – | 3.9 | | | |
| | | | 15 | – | 6 |
| 36.8 | – | 13.5 | | | |
| | | | 82 | – | 15 |

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

CROSS SECTIONS
BRIGHT ROAD
STA. 495+50 "BL3" TO STA. 495+69 "BL3"

SCALE: 1" = 10'

SHEET NO. 83 OF 275

P:\PR44959\cadd\CROSS-SECTIONS-BRIGHT.dwg 10/29/2013 8:24:47 PM Ward, Will

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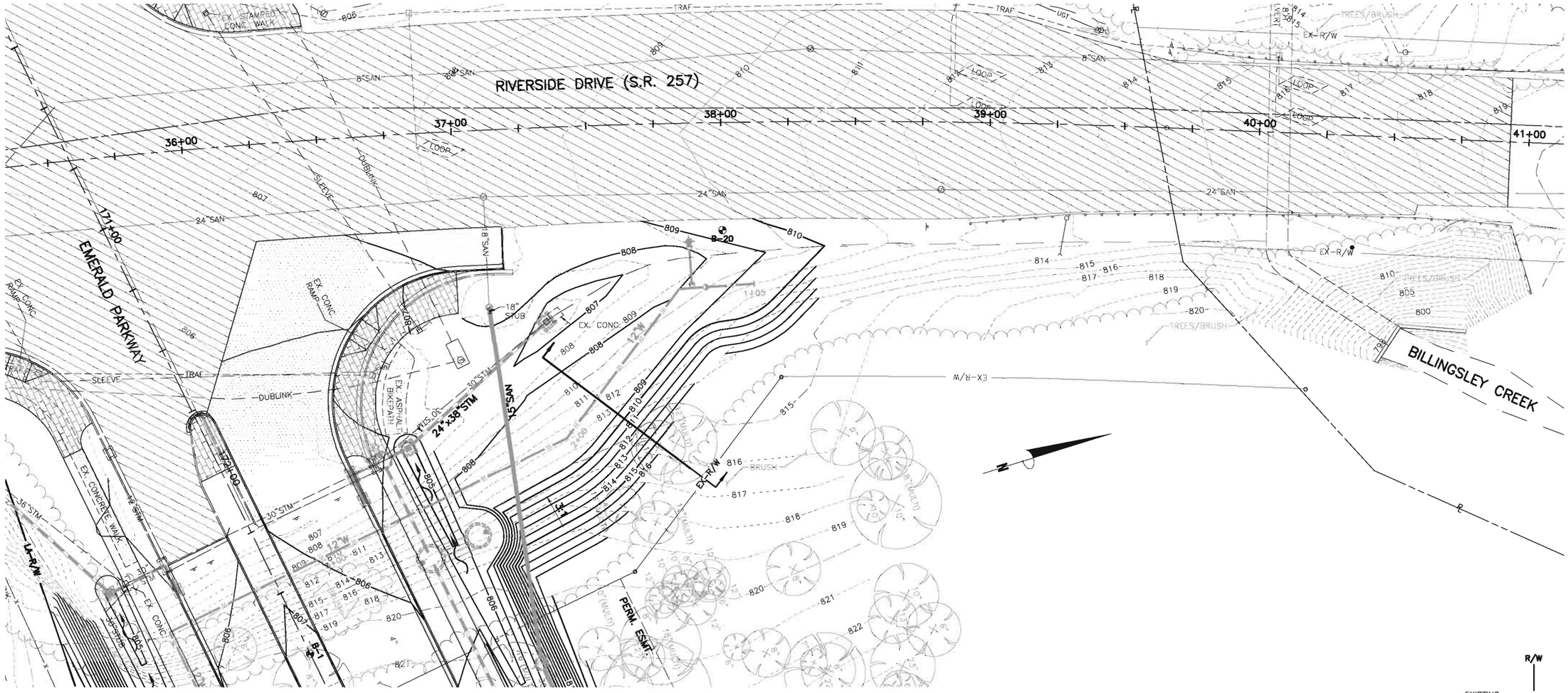


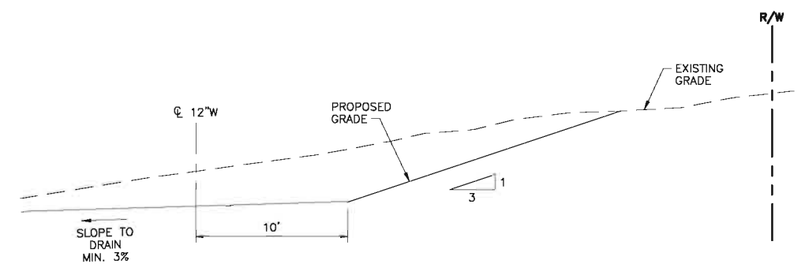


TYPICAL GRADING SECTION

NOT TO SCALE

| NO. | REVISIONS | DATE | BY | CHK. |
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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

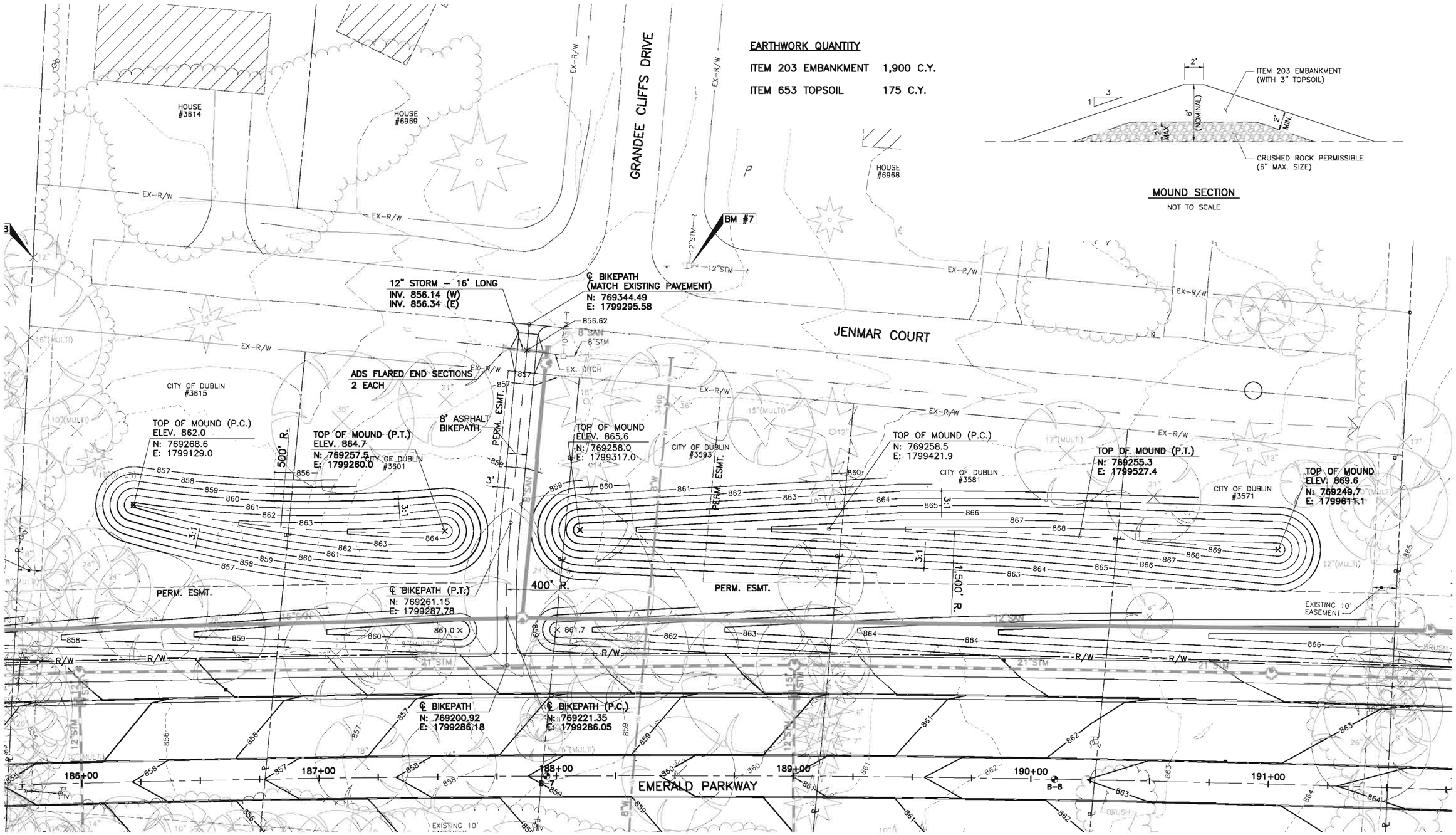
GRADING PLAN
EMERALD PARKWAY/RIVERSIDE DRIVE
(NORTHEAST CORNER)

SCALE: 1" = 20'

SHEET NO. 84 OF 275

P:\PR44959\cadd\GRADING-PLANS.dwg 10/25/2013 6:56:32 PM Ward, Will

PLOTTED: 10/27/2013 4:58:26 PM




## EARTHWORK QUANTITY

| | |
|---|---|
| ITEM 203 EMBANKMENT | 1,900 C.Y. |
| ITEM 653 TOPSOIL | 175 C.Y. |




**MOUND SECTION**

NOT TO SCALE

| NO. | REVISIONS | DATE | BY | CHK. |
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**Burgess & Niple, Inc.** COLUMBUS, OH

**BURGESS & NIPLE**

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

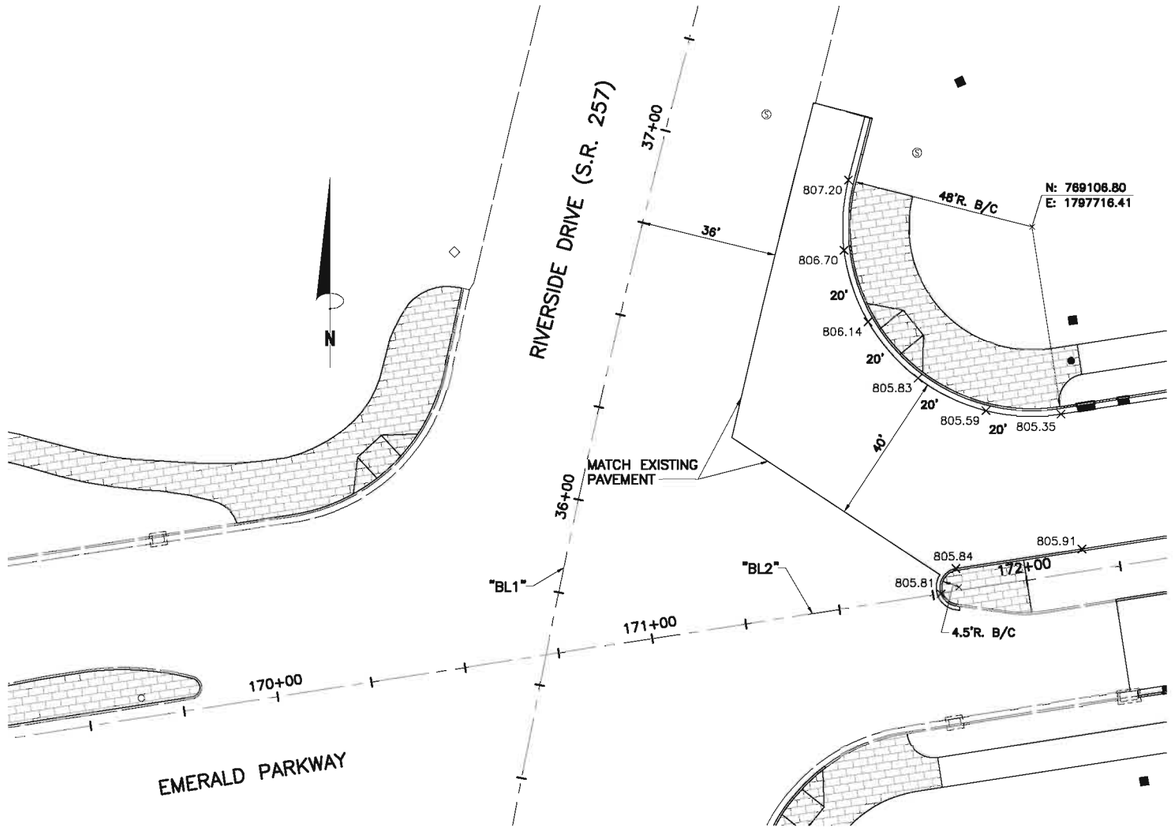
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**GRADING PLAN**
**JENMAR COURT MOUND**

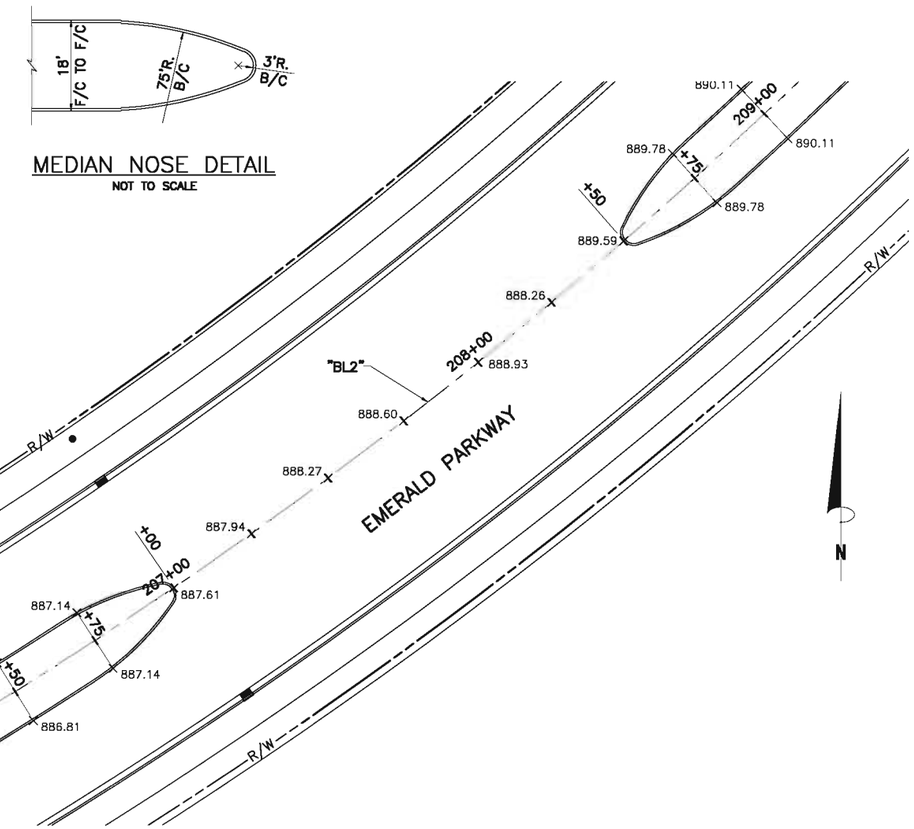
SCALE: 1" = 20'

SHEET NO. 85 OF 275

P:\PR44959\cadd\GRADING-PLANS.dwg 10/25/2013 6:56:32 PM Ward, Will




NORTHEAST CORNER – EMERALD PARKWAY/RIVERSIDE DRIVE




EMERALD PARKWAY – MEDIAN OPENING

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

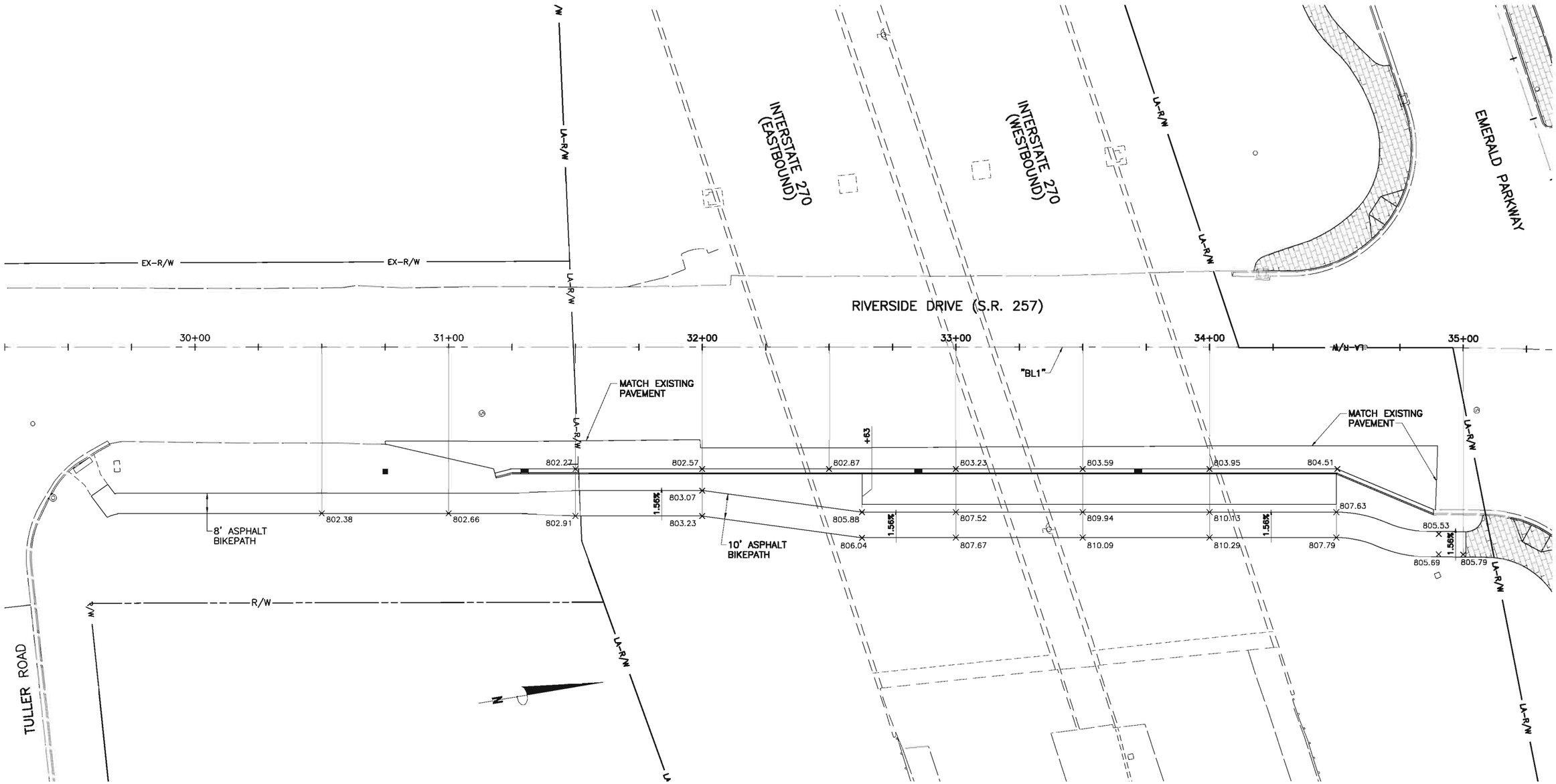
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

PAVEMENT DETAILS
EMERALD PARKWAY/RIVERSIDE DRIVE INTERSECTION
EMERALD PARKWAY MEDIAN OPENING

SCALE: 1" = 20'

SHEET NO. 86 OF 275

PLOTTED: 10/27/2013 4:21:48 PM
P:\PR44959\cadd\PAVEMENT-DETAILS.dwg 10/25/2013 5:25:45 PM Ward, Will




NEW PAVEMENT EDGE AND BIKEPATH

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| DATE: | OCTOBER 2013 |

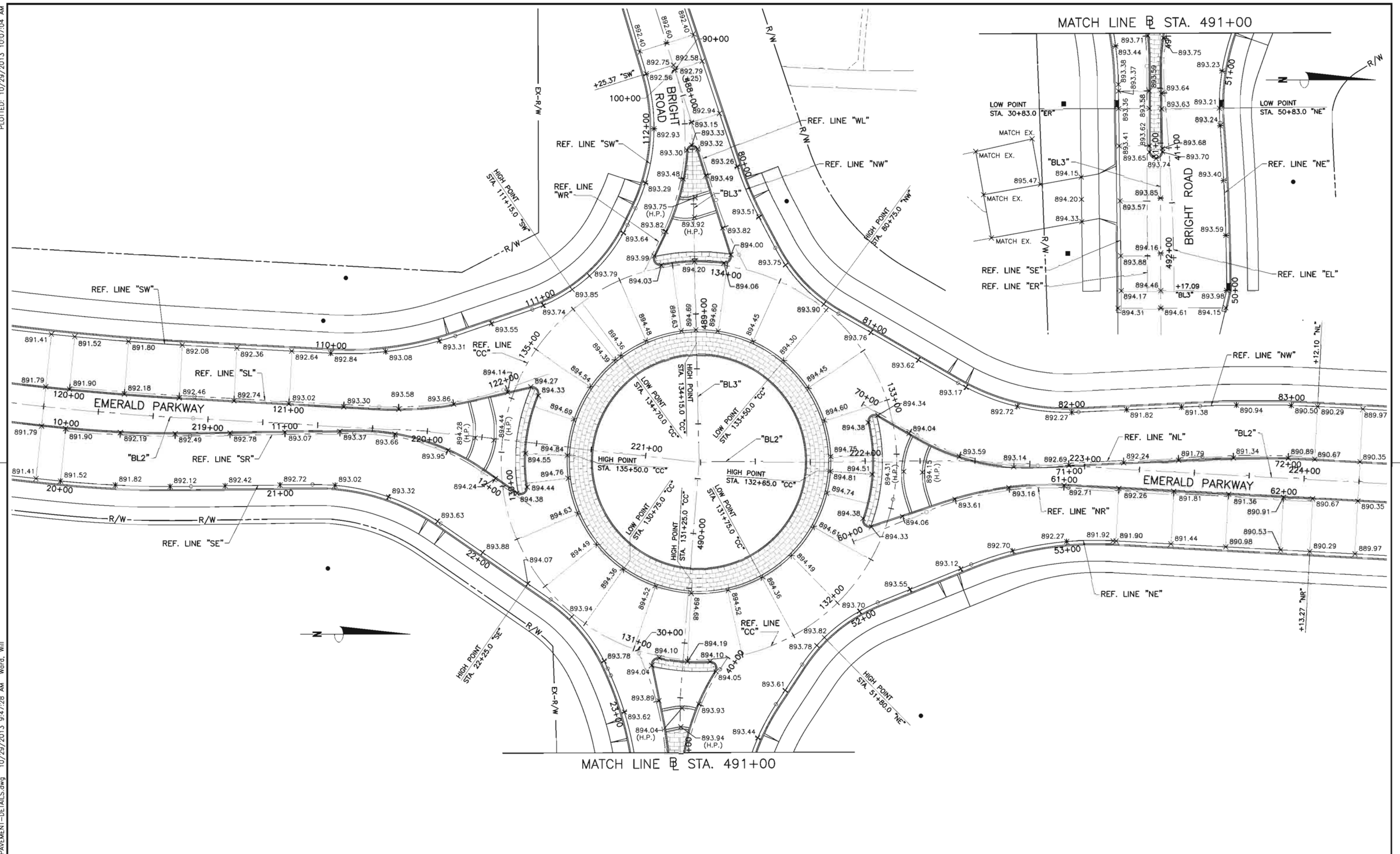
PAVEMENT DETAIL
RIVERSIDE DRIVE

SCALE: 1" = 20'

SHEET NO. 87 OF 275

PLOTTED: 10/29/2013 10:05:31 AM
P:\PR44959\cadd\PAVEMENT-DETAILS.dwg 10/29/2013 9:47:28 AM Ward, Will

PLOTTED: 10/29/2013 10:07:04 AM




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| JOB NO. | 44959 |
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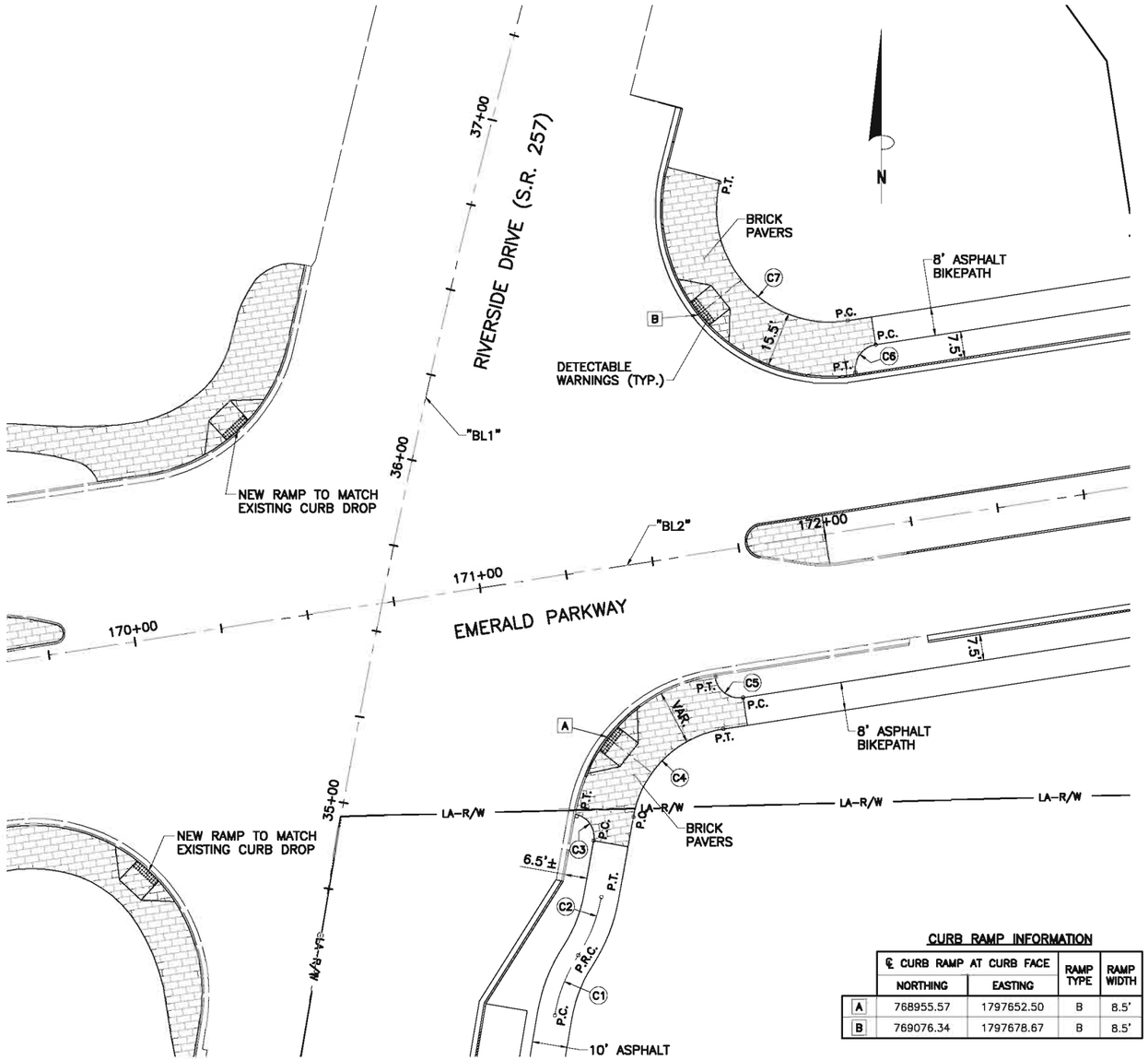
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

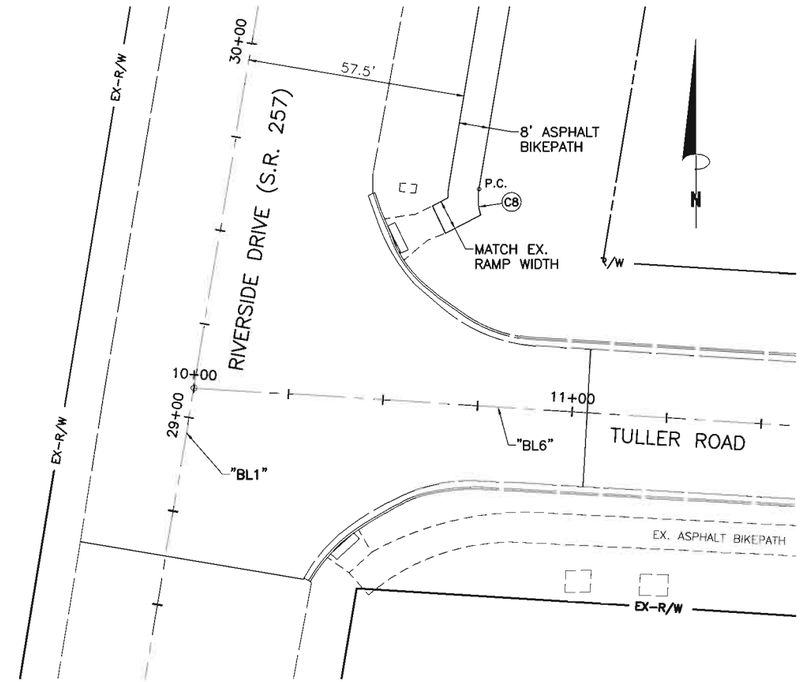
PAVEMENT DETAILS
ROUNDABOUT

SCALE: 1" = 20'

SHEET NO. 88 OF 275

P:\PR44959\cadd\PAVEMENT-DETAILS.dwg 10/29/2013 9:47:28 AM Ward, Will




## CURB RAMP INFORMATION

| | ℄ CURB RAMP AT CURB FACE | | RAMP TYPE | RAMP WIDTH |
|---|---|---|---|---|
| | NORTHING | EASTING | | |
| A | 768955.57 | 1797652.50 | B | 8.5' |
| B | 769076.34 | 1797678.67 | B | 8.5' |

## CURVE LAYOUT DATA

| CURVE NO. | RADIUS | CENTER POINT | |
|---|---|---|---|
| | | NORTHING | EASTING |
| C1 | 45.0 | 768868.47 | 1797681.96 |
| C2 | 45.0 | 768917.68 | 1797606.61 |
| C3 | 6.5 | 768927.06 | 1797642.32 |
| C4 | 31.0 | 768927.23 | 1797690.60 |
| C5 | 7.0 | 768973.75 | 1797690.45 |
| C6 | 7.0 | 769060.93 | 1797730.60 |
| C7 | 32.5 | 769106.80 | 1797716.41 |
| C8 | 15.0 | 768402.85 | 1797568.74 |

## NOTES

ALL RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE CITY OF DUBLIN STANDARD CURB RAMP DRAWING, EXCEPT THAT THE WIDTH SHALL BE 8.5 FEET WHERE DETECTABLE WARNINGS ARE USED.

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

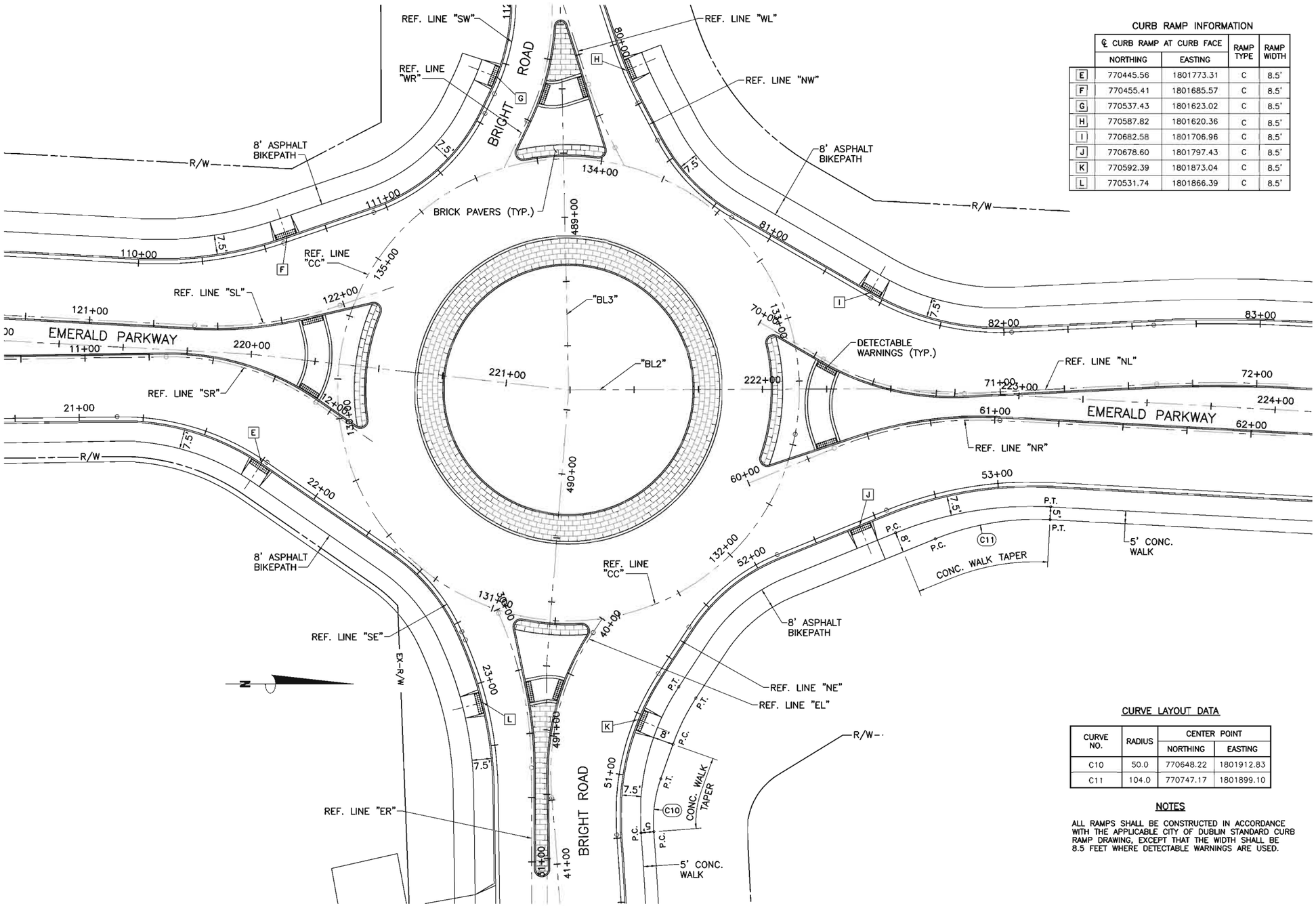
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

BIKEPATH, SIDEWALK, AND CURB RAMP LAYOUT AND DETAILS
EMERALD PARKWAY/RIVERSIDE DRIVE
RIVERSIDE DRIVE/TULLER ROAD

SCALE: 1" = 20'

SHEET NO. 89 OF 275

PLOTTED: 10/27/2013 4:24:02 PM
P:\PR44959\cadd\BIKEPATH-SIDEWALK-RAMP-DETAILS.dwg 10/25/2013 7:11:20 PM Ward, Will




CURB RAMP INFORMATION

| | ℄ CURB RAMP AT CURB FACE | | RAMP TYPE | RAMP WIDTH |
|---|---|---|---|---|
| | NORTHING | EASTING | | |
| E | 770445.56 | 1801773.31 | C | 8.5' |
| F | 770455.41 | 1801685.57 | C | 8.5' |
| G | 770537.43 | 1801623.02 | C | 8.5' |
| H | 770587.82 | 1801620.36 | C | 8.5' |
| I | 770682.58 | 1801706.96 | C | 8.5' |
| J | 770678.60 | 1801797.43 | C | 8.5' |
| K | 770592.39 | 1801873.04 | C | 8.5' |
| L | 770531.74 | 1801866.39 | C | 8.5' |

CURVE LAYOUT DATA

| CURVE NO. | RADIUS | CENTER POINT | |
|---|---|---|---|
| | | NORTHING | EASTING |
| C10 | 50.0 | 770648.22 | 1801912.83 |
| C11 | 104.0 | 770747.17 | 1801899.10 |

NOTES

ALL RAMPS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE CITY OF DUBLIN STANDARD CURB RAMP DRAWING, EXCEPT THAT THE WIDTH SHALL BE 8.5 FEET WHERE DETECTABLE WARNINGS ARE USED.

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

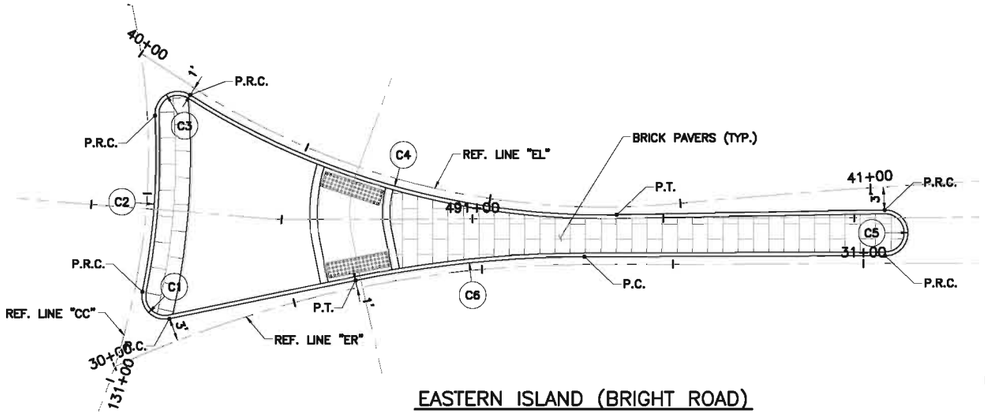
BIKEPATH, SIDEWALK, AND CURB RAMP LAYOUT AND DETAILS AT ROUNDABOUT

SCALE: 1" = 20'

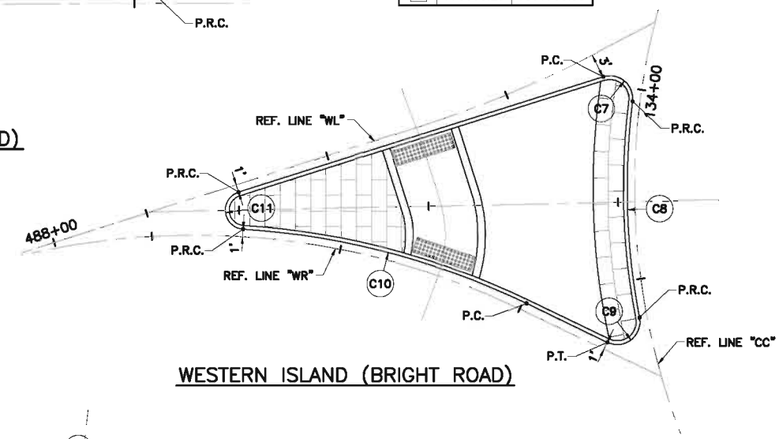
SHEET NO. 90 OF 275

PLOTTED: 10/29/2013 10:09:12 AM
P:\PR44959\cadd\BIKEPATH-SIDEWALK-RAMP-DETAILS.dwg 10/25/2013 7:11:20 PM Ward, Will

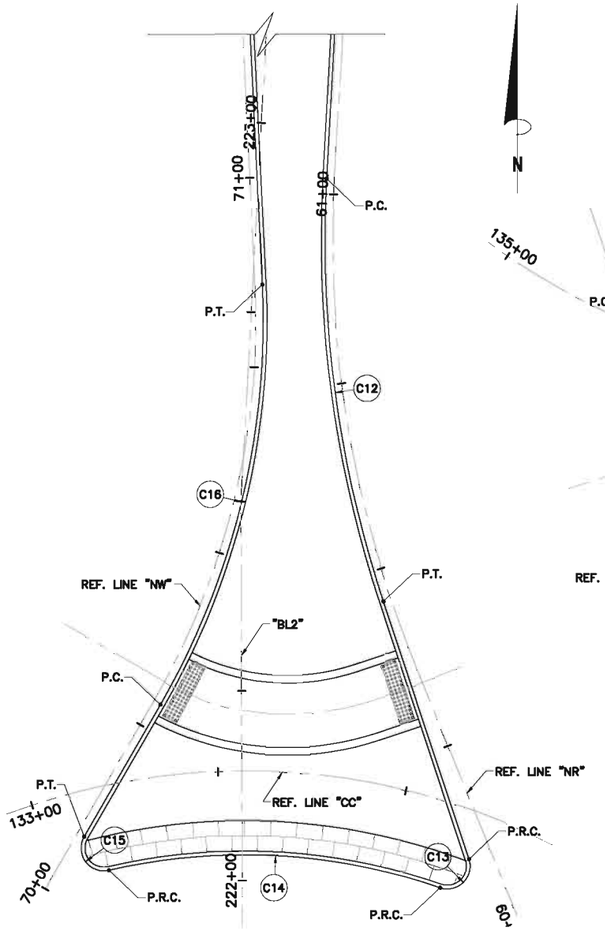
PLOTTED: 10/27/2013 4:25:40 PM



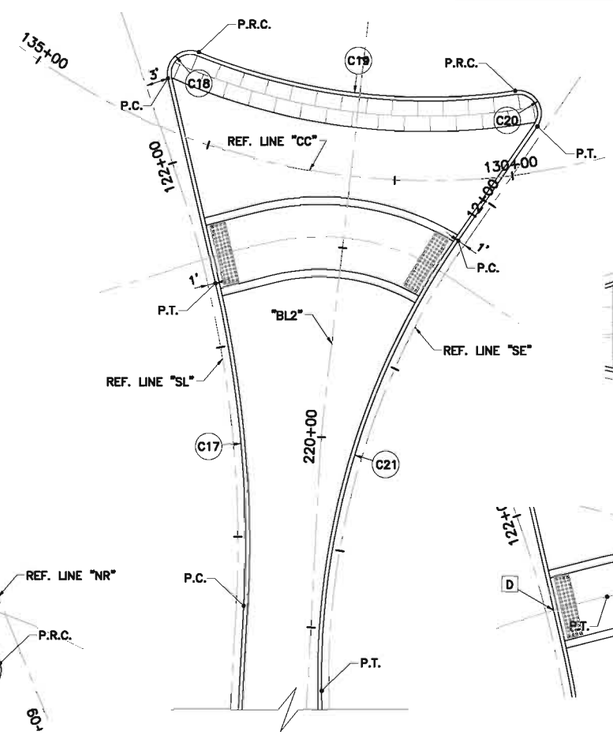

EASTERN ISLAND (BRIGHT ROAD)




WESTERN ISLAND (BRIGHT ROAD)




NORTHERN ISLAND (EMERALD PARKWAY)




SOUTHERN ISLAND (EMERALD PARKWAY)

## DROPPED CURB LOCATIONS

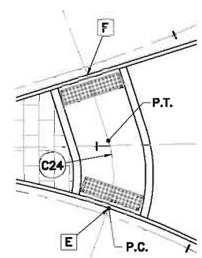
| ℄ AT FACE OF CURB | | |
|---|---|---|
| ID | NORTHING | EASTING |
| A | 770562.49 | 1801861.95 |
| B | 770548.72 | 1801862.56 |
| C | 770463.41 | 1801746.26 |
| D | 770465.04 | 1801716.18 |
| E | 770554.46 | 1801629.17 |
| F | 770572.05 | 1801626.34 |
| G | 770666.34 | 1801735.07 |
| H | 770666.20 | 1801766.90 |

## CURVE LAYOUT DATA

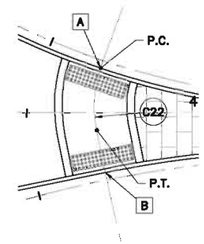
| CURVE NO. | RADIUS | CENTER POINT | | BEGIN CURVE | | | END CURVE | | |
|---|---|---|---|---|---|---|---|---|---|
| | | NORTHING | EASTING | | NORTHING | EASTING | | NORTHING | EASTING |
| 1 | 3.0 | 770546.51 | 1801836.90 | P.C. | 770543.57 | 1801837.50 | P.R.C. | 770547.10 | 1801833.96 |
| 2 | 91.0 | 770565.12 | 1801744.76 | P.R.C. | 770547.10 | 1801833.96 | P.R.C. | 770570.16 | 1801835.62 |
| 3 | 3.0 | 770570.33 | 1801838.61 | P.R.C. | 770570.16 | 1801835.62 | P.R.C. | 770572.86 | 1801840.22 |
| 4 | 101.0 | 770658.17 | 1801894.29 | P.R.C. | 770572.86 | 1801840.22 | P.T. | 770557.19 | 1801896.09 |
| 5 | 3.0 | 770554.81 | 1801931.27 | P.C. | 770557.81 | 1801931.21 | P.T. | 770551.81 | 1801931.28 |
| 6 | 151.0 | 770400.69 | 1801892.34 | P.C. | 770551.69 | 1801891.86 | P.T. | 770548.59 | 1801861.89 |
| 7 | 3.0 | 770576.85 | 1801651.49 | P.C. | 770579.71 | 1801650.59 | P.R.C. | 770576.48 | 1801654.47 |
| 8 | 91.0 | 770565.12 | 1801744.76 | P.R.C. | 770576.48 | 1801654.47 | P.R.C. | 770547.97 | 1801655.39 |
| 9 | 3.0 | 770547.41 | 1801652.44 | P.R.C. | 770547.97 | 1801655.39 | P.T. | 770544.71 | 1801651.14 |
| 10 | 101.0 | 770458.83 | 1801596.67 | P.C. | 770549.84 | 1801640.48 | P.R.C. | 770559.63 | 1801603.10 |
| 11 | 2.5 | 770562.12 | 1801603.25 | P.R.C. | 770559.63 | 1801603.10 | P.T. | 770564.51 | 1801602.50 |
| 12 | 151.0 | 770725.16 | 1801906.43 | P.C. | 770733.31 | 1801755.65 | P.T. | 770677.54 | 1801763.13 |
| 13 | 3.0 | 770642.61 | 1801771.57 | P.C. | 770643.56 | 1801774.42 | P.R.C. | 770639.78 | 1801770.59 |
| 14 | 79.0 | 770565.12 | 1801744.76 | P.R.C. | 770639.78 | 1801770.59 | P.R.C. | 770642.08 | 1801726.93 |
| 15 | 3.0 | 770645.01 | 1801726.25 | P.R.C. | 770642.08 | 1801726.93 | P.T. | 770646.51 | 1801723.65 |
| 16 | 101.0 | 770714.46 | 1801646.27 | P.C. | 770663.92 | 1801733.71 | P.T. | 770719.33 | 1801747.15 |
| 17 | 151.0 | 770427.54 | 1801569.87 | P.C. | 770419.39 | 1801720.65 | P.T. | 770461.71 | 1801716.95 |
| 18 | 3.0 | 770489.26 | 1801713.63 | P.C. | 770488.58 | 1801710.71 | P.R.C. | 770492.03 | 1801714.77 |
| 19 | 79.0 | 770565.12 | 1801744.76 | P.R.C. | 770492.03 | 1801714.77 | P.R.C. | 770486.97 | 1801756.29 |
| 20 | 3.0 | 770484.00 | 1801756.73 | P.R.C. | 770486.97 | 1801756.29 | P.T. | 770482.29 | 1801759.20 |
| 21 | 101.0 | 770409.81 | 1801831.86 | P.C. | 770467.27 | 1801748.80 | P.T. | 770408.24 | 1801730.87 |
| 22 | 16.0 | 770557.45 | 1801877.13 | P.C. | 770562.49 | 1801861.95 | P.T. | 770554.29 | 1801861.44 |
| 23 | 30.0 | 770437.78 | 1801730.67 | P.C. | 770463.41 | 1801746.26 | P.T. | 770466.84 | 1801723.22 |
| 24 | 15.0 | 770558.82 | 1801614.81 | P.C. | 770554.46 | 1801629.17 | P.T. | 770563.37 | 1801629.11 |
| 25 | 33.0 | 770695.52 | 1801750.48 | P.C. | 770666.34 | 1801735.07 | P.T. | 770664.20 | 1801760.89 |

## NOTES

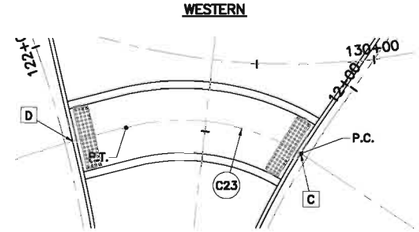
ALL DIMENSIONS AND COORDINATES ARE TO THE FACE OF CURB UNLESS OTHERWISE SHOWN.



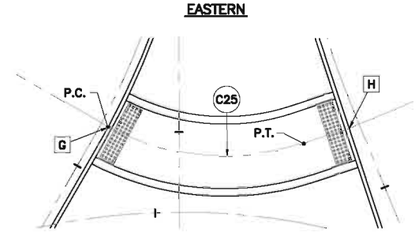

WESTERN




EASTERN

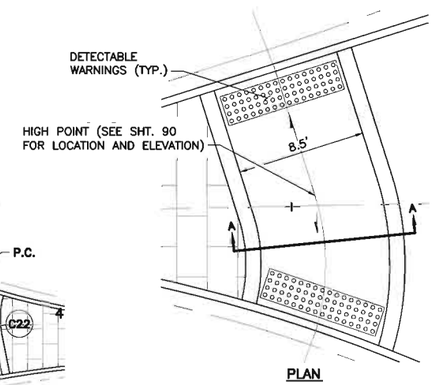



SOUTHERN

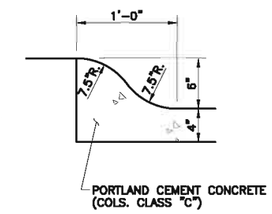



NORTHERN

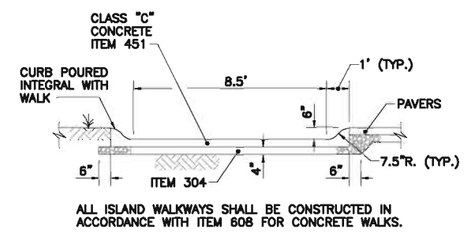
ISLAND WALKWAY LAYOUT




PLAN




INTEGRAL CURB DETAIL
NOT TO SCALE




ALL ISLAND WALKWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH ITEM 608 FOR CONCRETE WALKS.

SECTION A–A

ISLAND WALKWAY DETAILS
(TYPICAL ALL 4 LOCATIONS)
NOT TO SCALE

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

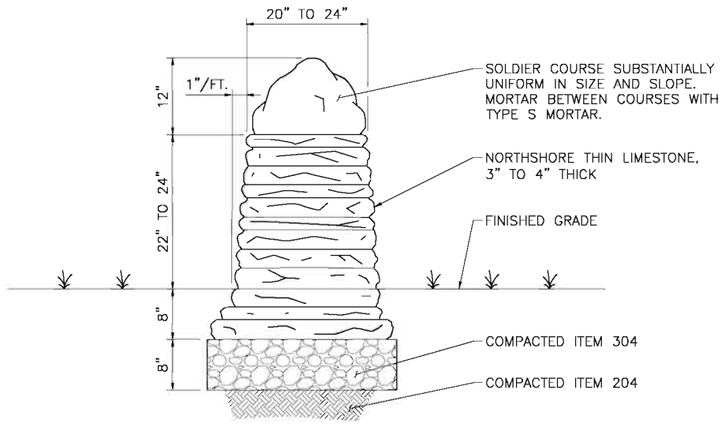
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | AFJP |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

SPLITTER ISLAND LAYOUT
PLAN AND DETAILS

SCALE: 1" = 10'

SHEET NO. 91 OF 275

P:\PR44959\cadd\ISLAND-DETAILS.dwg 10/25/2013 5:26:56 PM Ward, Will

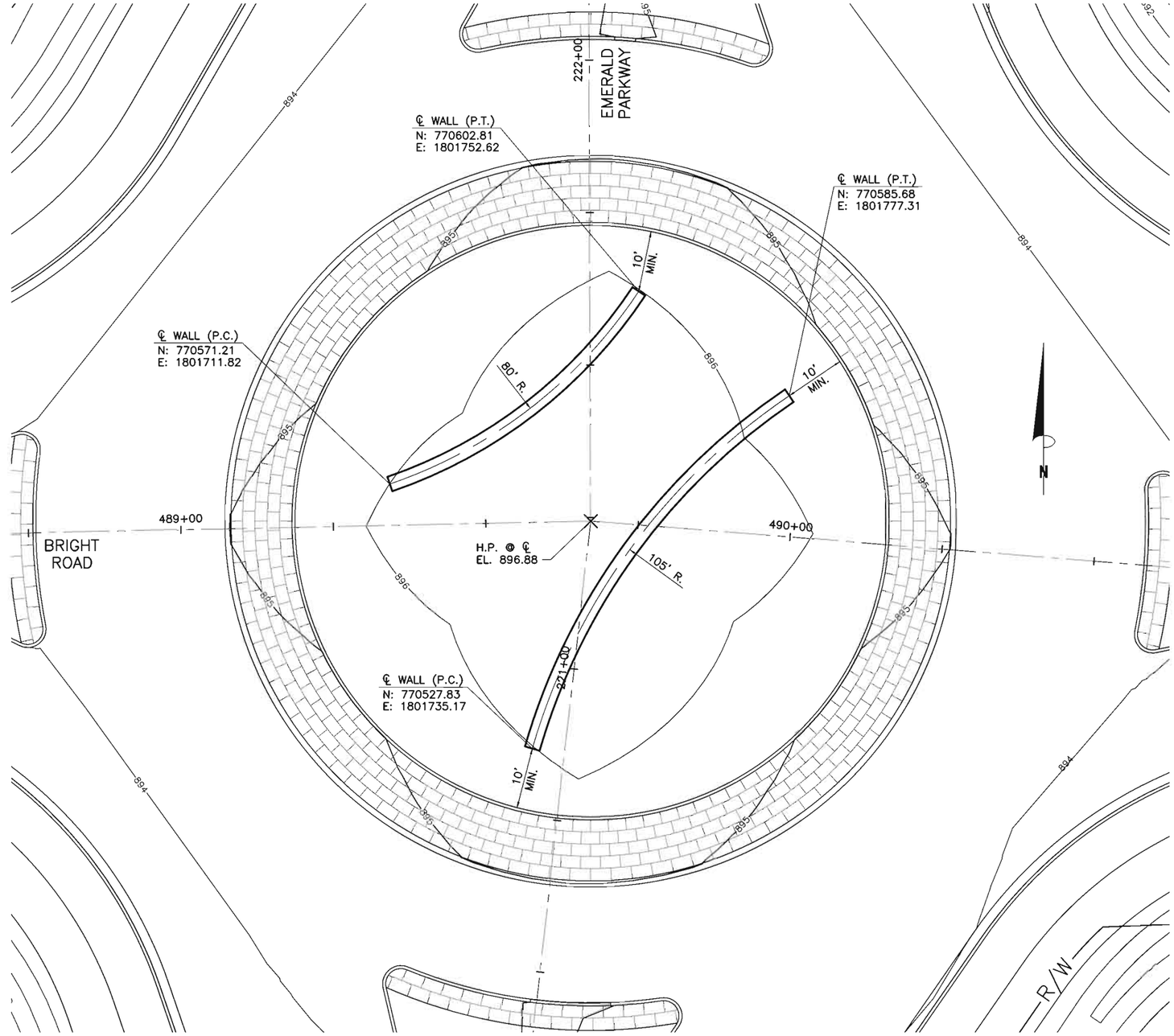



DRY–LAID STONE WALL SECTION

NOT TO SCALE

NOTES:

1. BATTER WALL 1–INCH PER VERTICAL FOOT, BOTH SIDES. MAINTAIN COURSES LEVEL AND SHIM WITH STONE TO PROVIDE STABLE COURSING. AMOUNT OF SHIMS TO BE APPROVED BY ENGINEER.
2. NORTHSHORE LIMESTONE (BUFF TO BLUE VEIN COLOR) QUARRIED IN OHIO PROVIDED BY NORTHSHORE OF COLUMBUS (OR APPROVED EQUAL).
3. MORTAR BACK HALF OF ALL STONE COURSES WITH TYPE S MORTAR.
4. PAYMENT WILL BE MADE AT THE UNIT PRICE BID PER LINEAL FOOT FOR ITEM SPECIAL – DRY–LAID STONE WALL, A.P.P., INCLUDING ALL EXCAVATION, STONE, BASE, AND MORTAR, COMPLETE.




WALL PLAN

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

| | |
|---|---|
| JOB NO. | 44959 |
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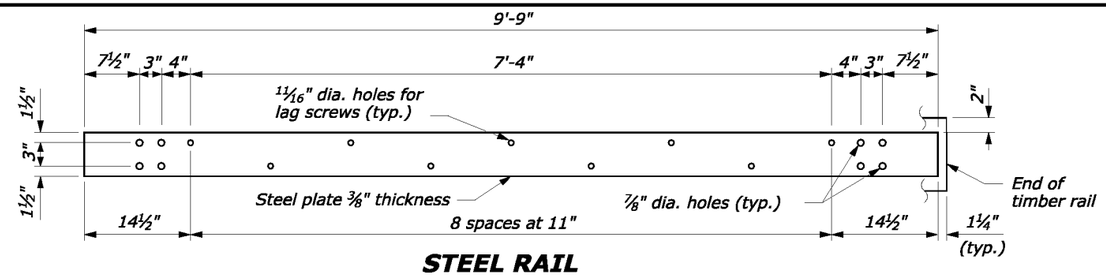
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

ROUNDABOUT
CENTER ISLAND WALL
PLAN AND DETAILS

SCALE: 1" = 10'

SHEET NO. 92 OF 275

PLOTTED: 10/27/2013 4:27:44 PM
P:\PR44959\cadd\ROUNDABOUT WALL DETAILS.dwg 10/25/2013 5:27:03 PM Ward, Will




**STEEL RAIL**

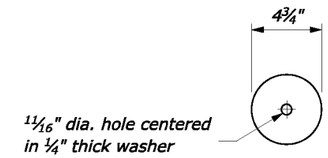
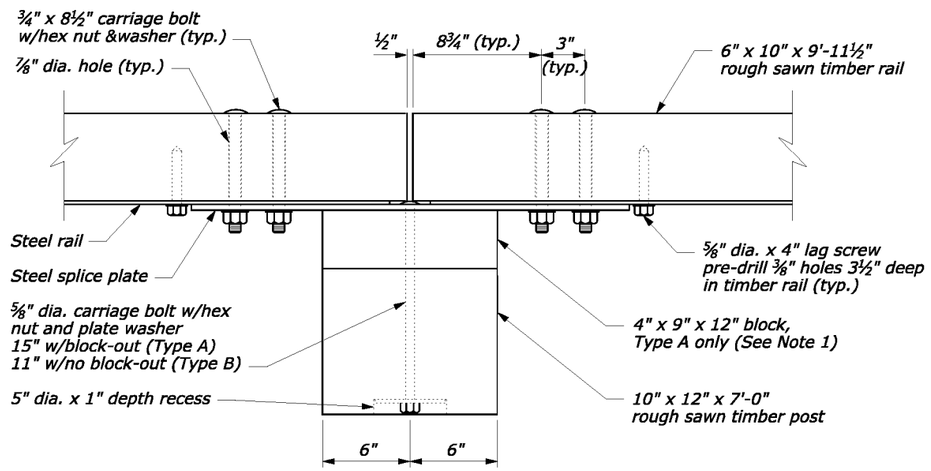


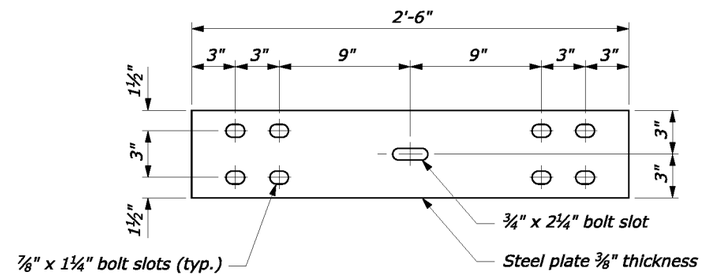

**PLATE WASHER**

## NOTE:

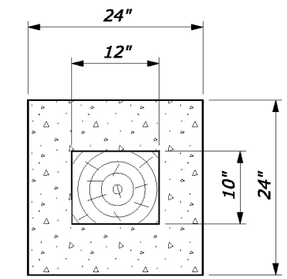
1. Use the Type A, blocked-out, system or the Type B, non-blocked-out, system as specified in the plans.
2. Use weathering steel for all structural steel and fastener hardware as specified.
3. Place a terminal section (See Standards 617-61 and 617-62) on both approach and trailing ends of barrier installations.

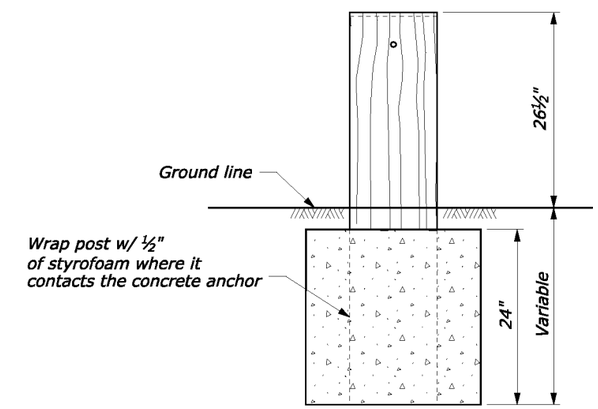



**PLAN**



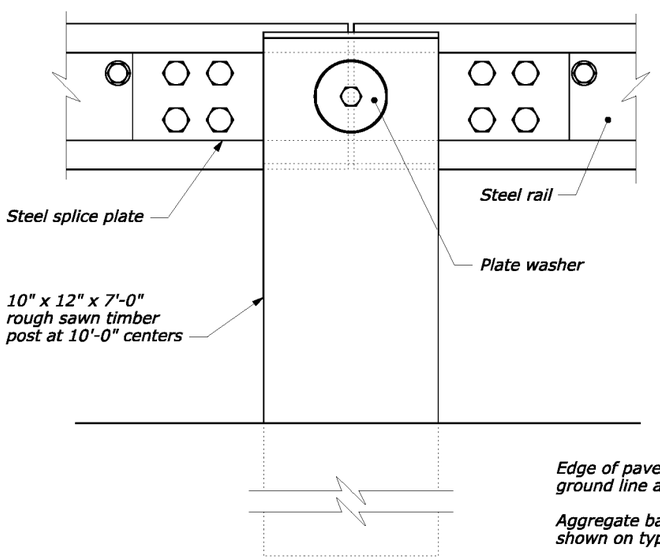

**STEEL SPLICE PLATE**



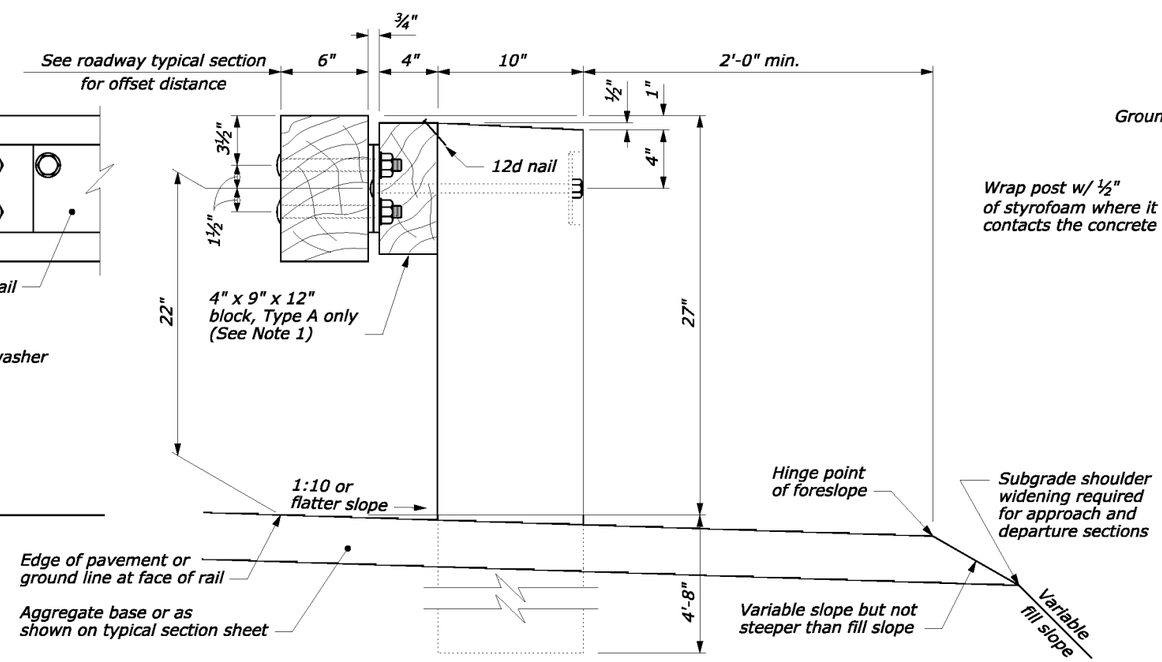

24" dia. round anchor is an acceptable alternative.
Reduced size acceptable in solid rock.

**CONCRETE ANCHOR FOR SHORT GUARDRAIL POST**




ELEVATION

**POST CONNECTION**




**TYPICAL GUARDRAIL CROSS SECTION**

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

# STEEL-BACKED TIMBER GUARDRAIL TYPE A & TYPE B

STANDARD APPROVED FOR USE 3/1990
REVISED: 4/1994 6/2005

STANDARD 617-60

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

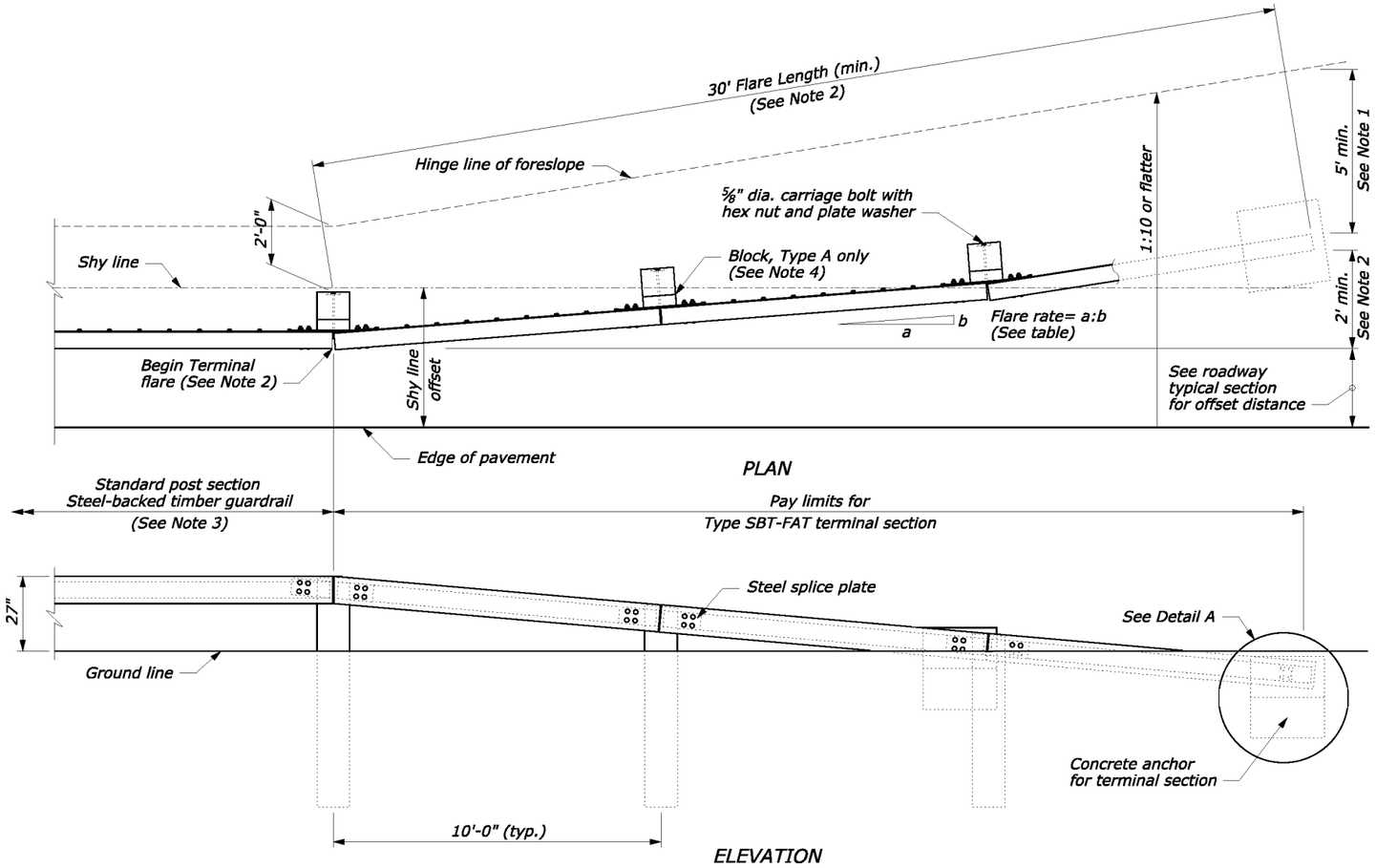
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | AFJP |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

ITEM SPECIAL
STEEL-BACKED TIMBER GUARDRAIL
TYPE A

SCALE: NONE

SHEET NO. 93 OF 275

P:\(PR44959)\cadd\Steel-Backed-Timber-Guardrail-617-60.dgn



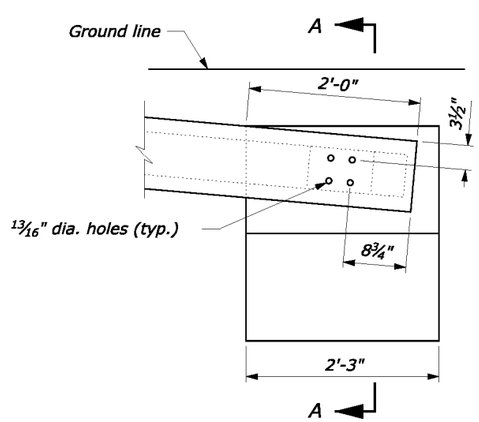

## APPROACH & DEPARTURE FLARE WITH FLARED ANCHOR TERMINAL (FAT)

## NOTE:

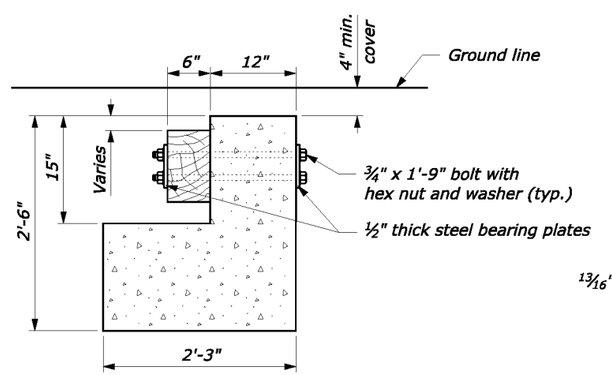
1. Extend the fill widening a minimum of 5 feet behind the guardrail, unless otherwise directed by the CO.
2. The guardrail flare shown in the plan view is the minimum length and rate required. As directed by the CO, flare the guardrail so that the terminal section is outside the clear zone. If the terminal section cannot be located outside the clear zone, it should be flared as far as practical from the road at the maximum rate indicated on the Guardrail Flare Rates table.
3. See Standard 617-60, Steel-Backed Timber Guardrail, Type SBTA and SBTB, for timber, structural steel, and hardware details.
4. On the Type A, blocked-out guardrail, include the blocks in terminal section, except on the concrete anchor. For the Type B, non-blocked-out guardrail, no blocks are included.

**GUARDRAIL FLARE RATE TABLE**

| Design Speed (mph) | Shy line offset (ft) | Flare rate inside shy line (a:b) | Flare rate outside shy line (a:b) |
|---|---|---|---|
| 60 | 8.0 | 26:1 | 14:1 |
| 50 | 6.5 | 21:1 | 11:1 |
| 40 | 5.0 | 16:1 | 8:1 |
| 30 and less | 3.5 | 13:1 | 7:1 |

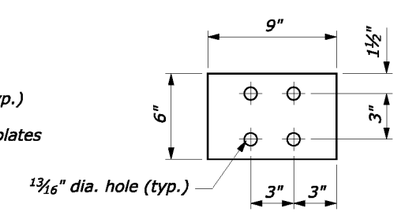



DETAIL A




SECTION A-A

## CONCRETE ANCHOR




## STEEL BEARING PLATE

NO SCALE

U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
FEDERAL LANDS HIGHWAY

U.S. CUSTOMARY STANDARD

**STEEL-BACKED TIMBER GUARDRAIL TERMINAL SECTION TYPE SBT-FAT**

STANDARD APPROVED FOR USE 1/1990
REVISED: 4/1994 6/2005
DRAFT: 9/2007

STANDARD 617-61

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

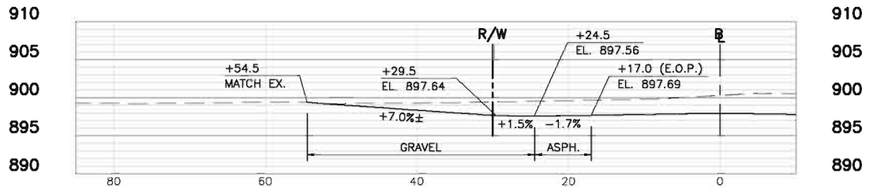
JOB NO. 44959
DESIGNED BY: JED
DRAWN BY: AFJP
CHECKED BY: JED
APPROVED BY: DKM
DATE: OCTOBER 2013

ITEM SPECIAL
STEEL-BACKED TIMBER GUARDRAIL
TERMINAL SECTION TYPE FAT-30

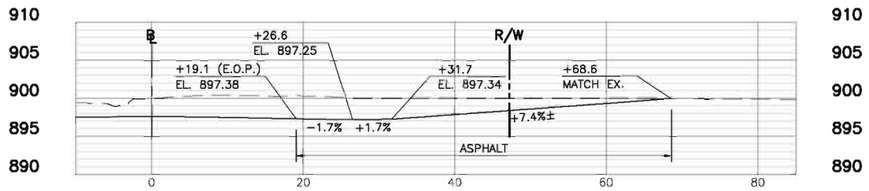
SCALE: NONE

SHEET NO. 94 OF 275

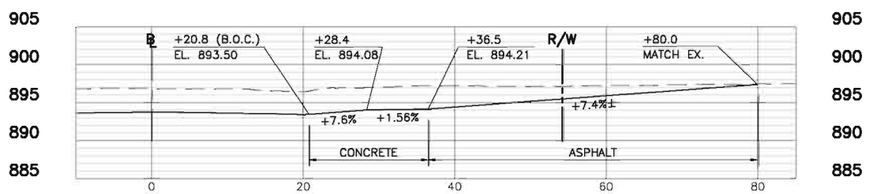
P:\PR44959\cadd\Steel-Backed-Timber-Guardrail-617-61.dgn



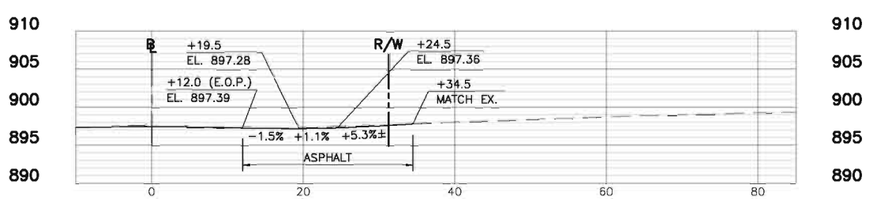

**493+82.5 (LT.)**
**(HOUSE #3960)**




**493+59.4 (RT.)**
**(#3985 – VACANT LOT)**



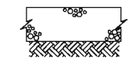

**491+69.1 (RT.)**
**(HOUSE #4025)**




**495+20.8 (RT.)**
**(#3985 – VACANT LOT)**

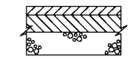
## DRIVEWAY PAVEMENT TYPES

GRAVEL DRIVEWAY – RESIDENTIAL



6" ITEM 304

ASPHALT DRIVEWAY – RESIDENTIAL



1 1/2" ITEM 448
3" ITEM 301
4" ITEM 304

CONCRETE DRIVEWAY – RESIDENTIAL

6" ITEM 451
(CLASS "C")

## NOTES

DRIVEWAY APPROACHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH DUBLIN STANDARD DRAWING NO. RD–07 EXCEPT AS MODIFIED HEREIN.

EACH NEW DRIVE APPROACH SHALL HAVE 1–4" DIAMETER SCHEDULE 80 CONDUIT INSTALLED UNDERNEATH AS INDICATED ON STD. DWG. NO. RD–07. THIS CONDUIT IS NOT SHOWN ON THE PLANS.

DRIVE OFFSETS ARE MEASURED ALONG DRIVE CENTERLINE, NOT PERPENDICULAR TO THE ROADWAY BASELINE.

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

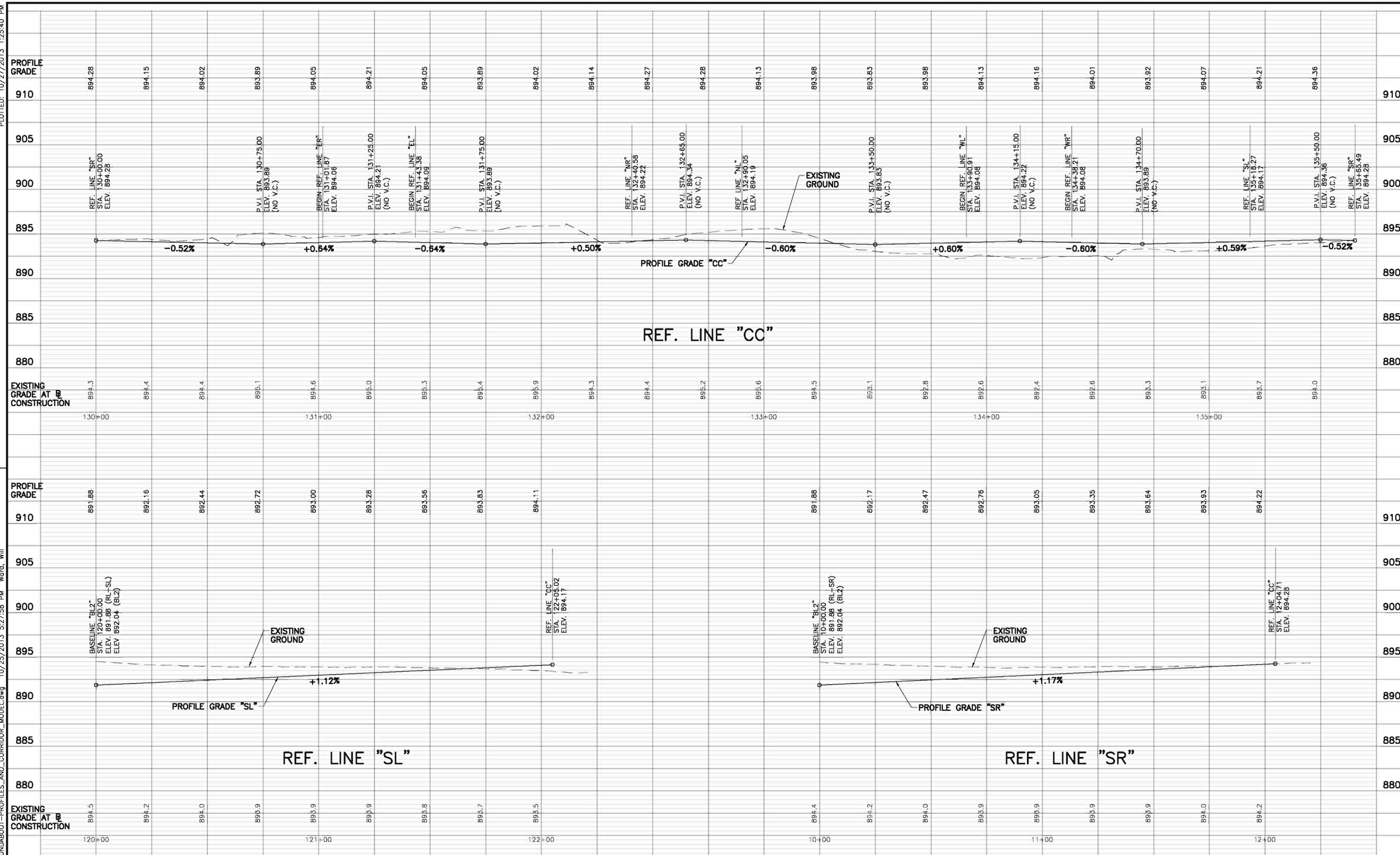
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | MDS |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

DRIVEWAY PROFILES
BRIGHT ROAD

SCALE: 1" = 10'

SHEET NO. 95 OF 275

PLOTTED: 10/27/2013 4:29:11 PM
P:\PR44959\cadd\DRIVEWAY-PROFILES.dwg 10/25/2013 5:27:26 PM Ward, Will

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P:\PR44959\cadd\ROUNDABOUT-PROFILES_AND_CORRIDOR_MODEL.dwg 10/25/2013 5:27:58 PM Ward, Will

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

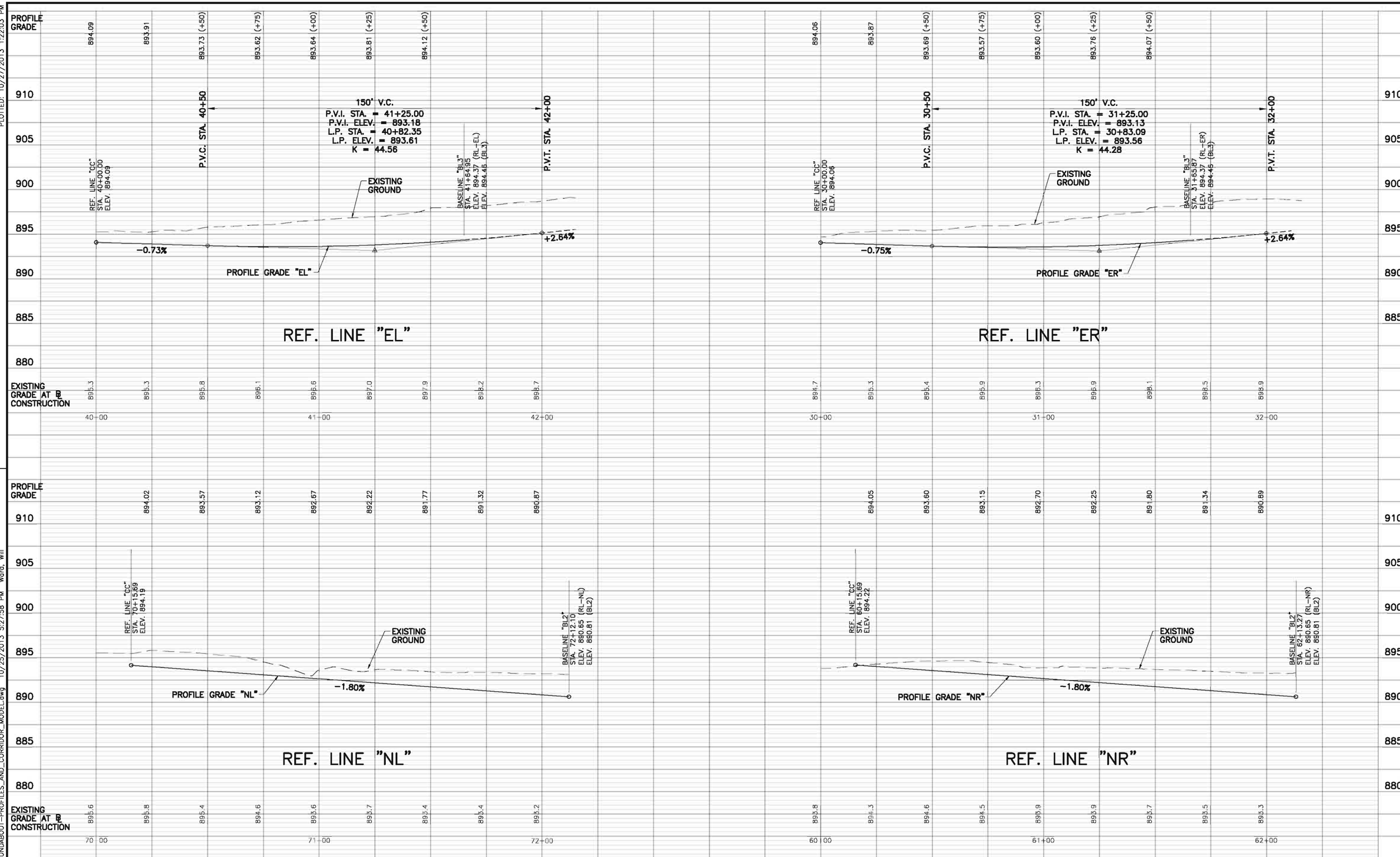
CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | MDS |
| DRAWN BY: | MDS |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

ROUNDABOUT PROFILES
REF. LINES "CC", "SL", AND "SR"

SCALE:
1" = 20' HORIZ.
1" = 5' VERT.

SHEET NO. 96 OF 275




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | MDS |
| DRAWN BY: | MDS |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

ROUNDABOUT PROFILES
REF. LINES "EL", "ER", "NL", AND "NR"

SCALE:
1" = 20' HORIZ.
1" = 5' VERT.

SHEET NO. 97 OF 275

PLOTTED: 10/27/2013 1:22:03 PM

P:\PR44959\cadd\ROUNDABOUT-PROFILES_AND_CORRIDOR_MODEL.dwg 10/25/2013 5:27:58 PM Ward, Will

PLOTTED: 10/27/2013 1:21:23 PM

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

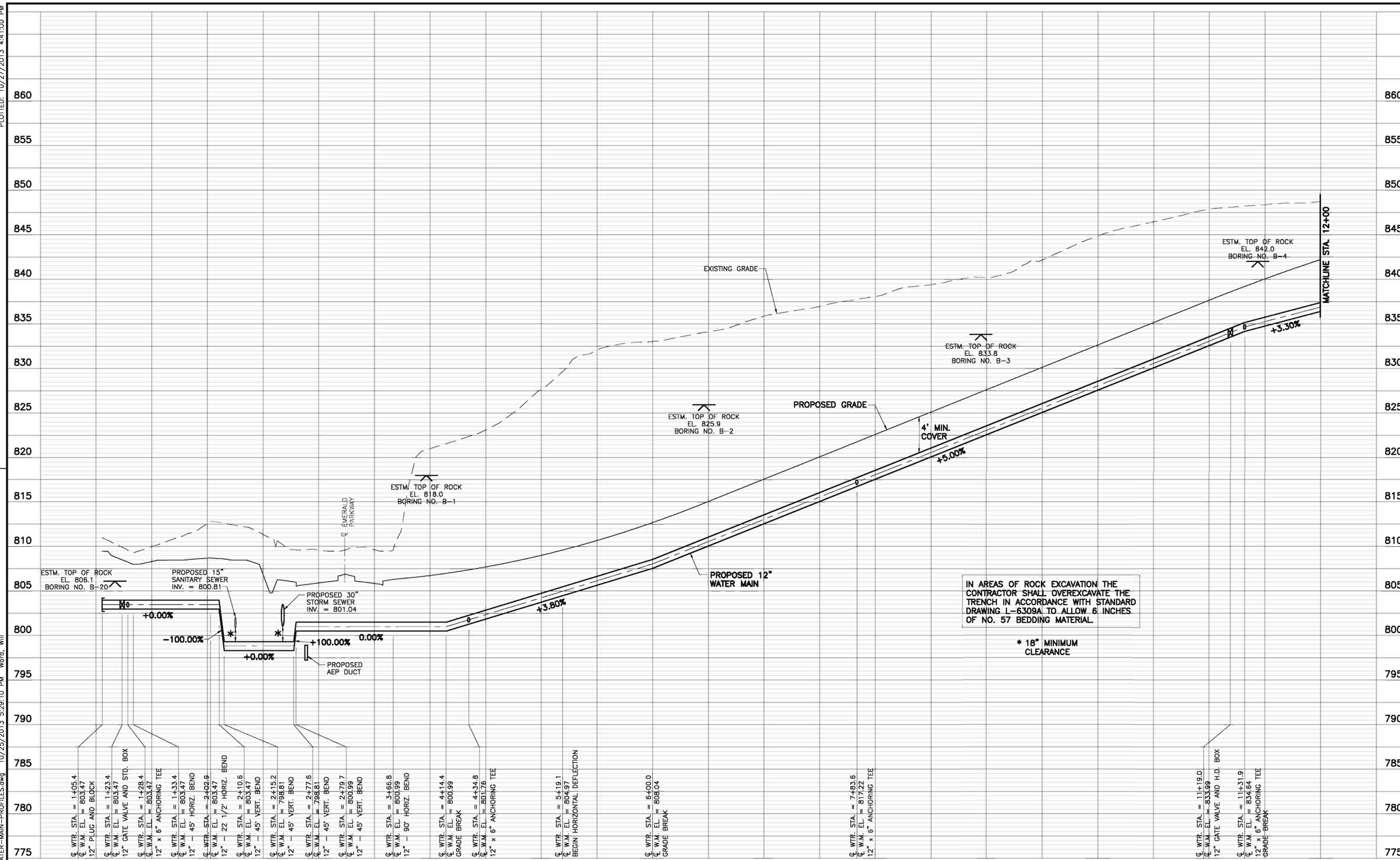
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | MDS |
| DRAWN BY: | MDS |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

ROUNDABOUT PROFILES
REF. LINES. "WL AND "WR"

SCALE:
1" = 20' HORIZ.
1" = 5' VERT.

| SHEET NO. | OF |
|---|---|
| 98 | 275 |

P:\PR44959\cadd\ROUNDABOUT-PROFILES_AND_CORRIDOR_MODEL.dwg 10/25/2013 5:27:58 PM Ward, Will




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | MDS |
| DRAWN BY: | MDS |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**WATER MAIN PROFILES**
**EMERALD PARKWAY**
**WTR. STA. 1+05 TO WTR. STA. 12+00**

SCALE:
1" = 40' HORIZ.
1" = 5' VERT.

SHEET NO. 99 OF 275

PLOTTED: 10/27/2013 4:41:00 PM

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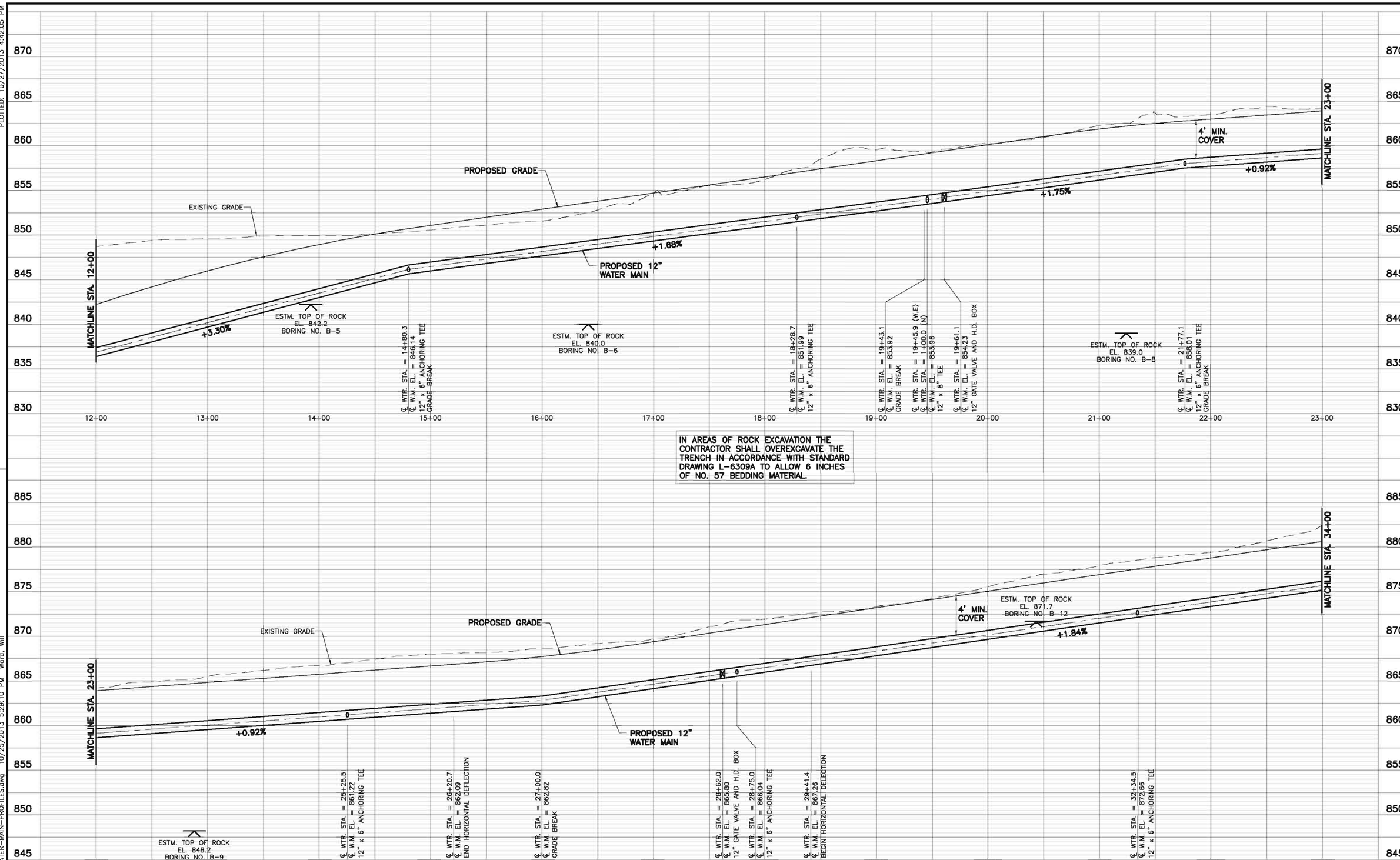



IN AREAS OF ROCK EXCAVATION THE CONTRACTOR SHALL OVEREXCAVATE THE TRENCH IN ACCORDANCE WITH STANDARD DRAWING L-6309A TO ALLOW 6 INCHES OF NO. 57 BEDDING MATERIAL.

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | MDS |
| DRAWN BY: | MDS |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

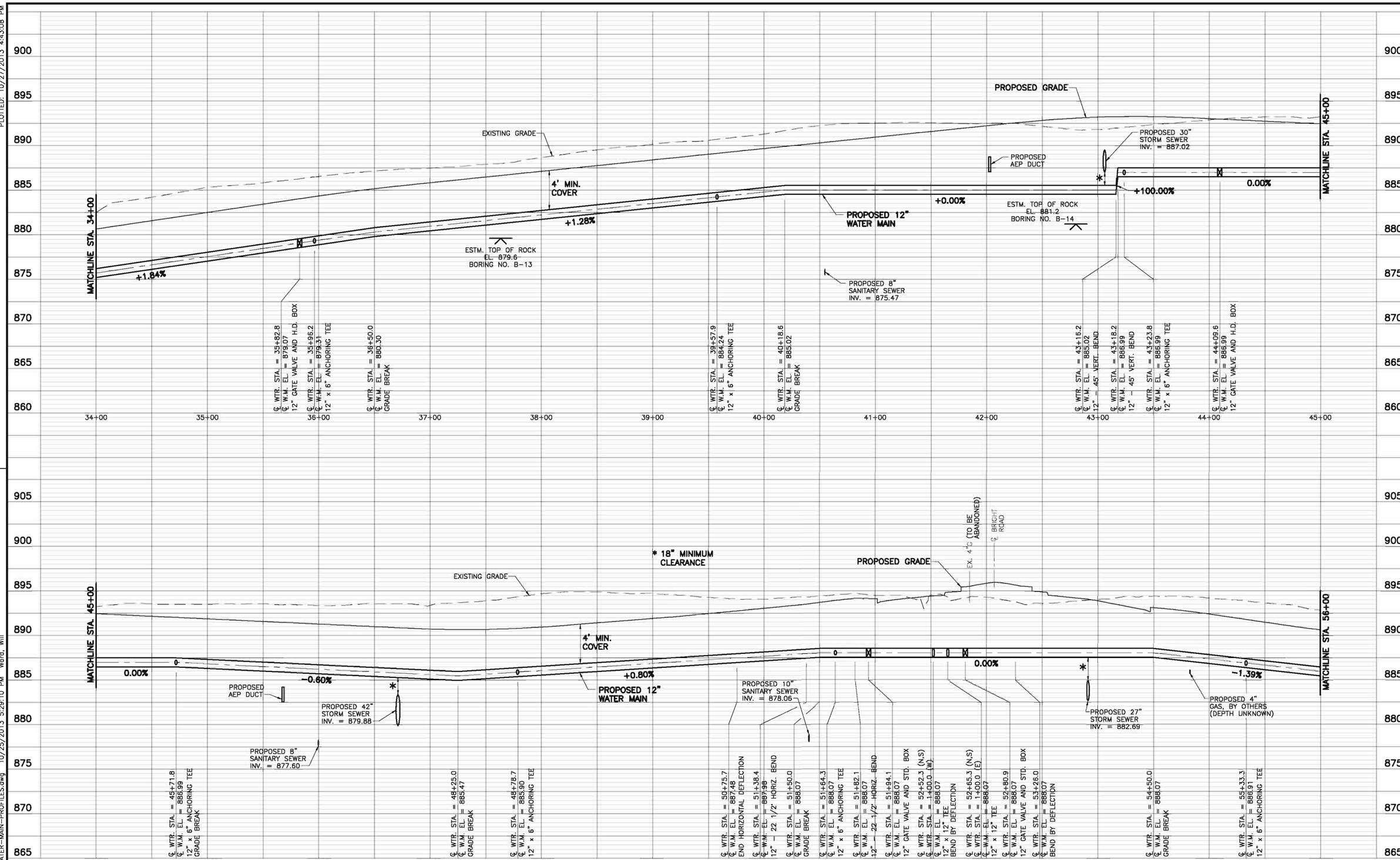
WATER MAIN PROFILES
EMERALD PARKWAY
WTR. STA. 12+00 TO WTR. STA. 34+00

SCALE: 1" = 40' HORIZ. 1" = 5' VERT.

SHEET NO. 100 OF 275

PLOTTED: 10/27/2013 4:42:05 PM

P:\PR44959\cadd\WATER-MAIN-PROFILES.dwg 10/25/2013 5:29:10 PM Ward, Will




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | MDS |
| DRAWN BY: | MDS |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**WATER MAIN PROFILES**
**EMERALD PARKWAY**
**WTR. STA. 34+00 TO WTR. STA. 56+00**

SCALE: 1" = 40' HORIZ. 1" = 5' VERT.

SHEET NO. 101 OF 275

PLOTTED: 10/27/2013 4:43:08 PM

P:\PR44959\cadd\WATER-MAIN-PROFILES.dwg 10/25/2013 5:29:10 PM Ward, Will

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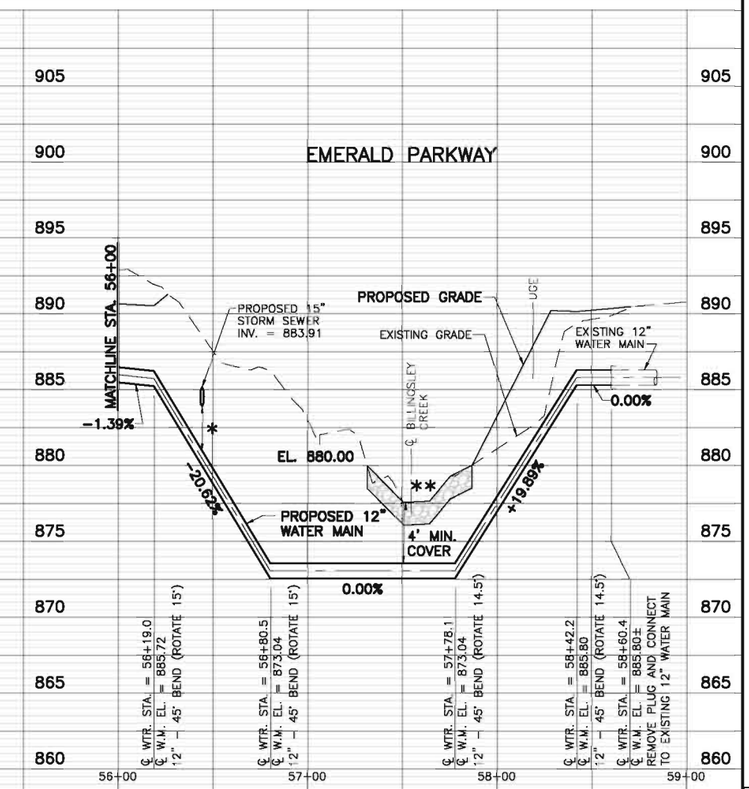
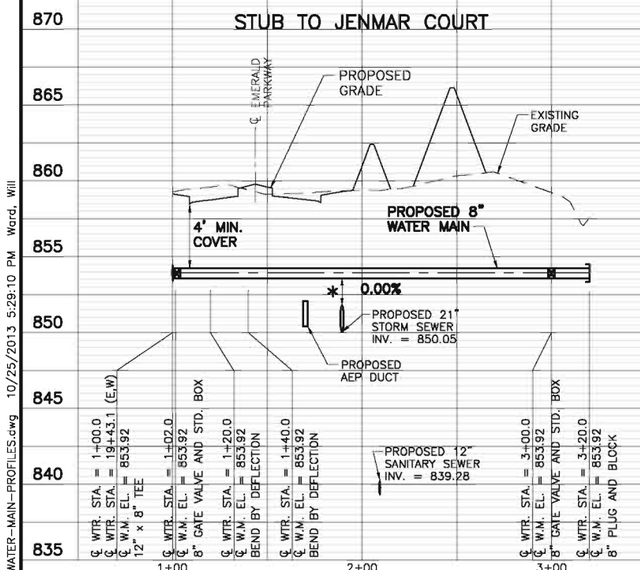
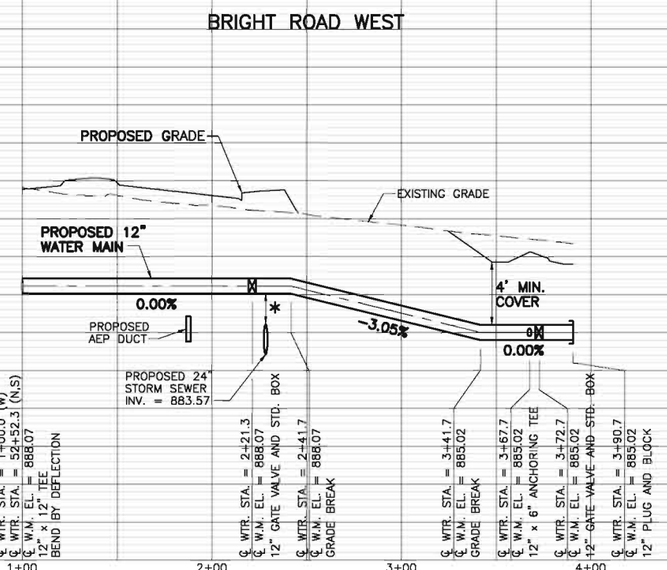
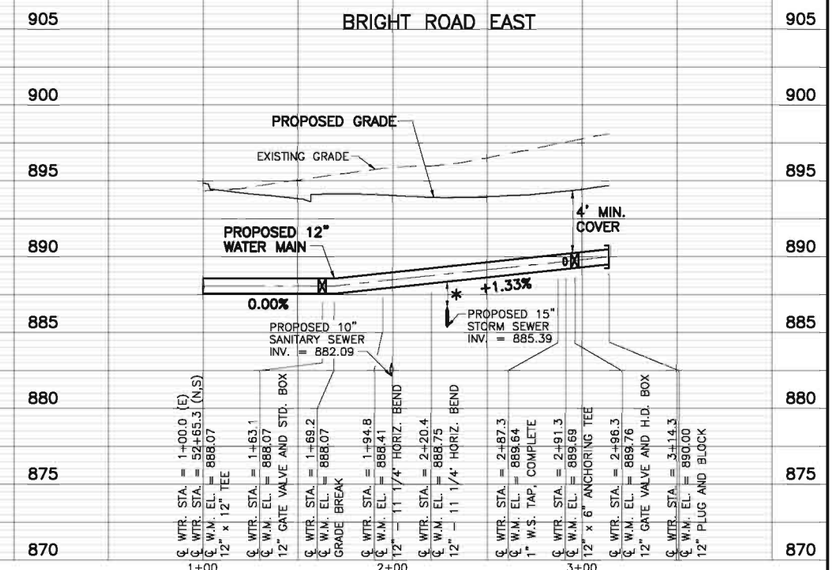



* 18" MINIMUM CLEARANCE

** ITEM 601 ROCK CHANNEL PROTECTION, TYPE "C" WITH FILTER FABRIC, 18" THICK (SEE PLAN ON SHEET 41)




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | MDS |
| DRAWN BY: | MDS |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

WATER MAIN PROFILES
WTR. STA. 56+00 TO WTR. STA. 58+61 (EMERALD)
BRIGHT ROAD (WEST AND EAST)
WATER MAIN TO JENMAR COURT

SCALE: 1" = 40' HORIZ. 1" = 5' VERT.

SHEET NO. 102 OF 275

P:\PR44959\cadd\WATER-MAIN-PROFILES.dwg 10/25/2013 5:29:10 PM Ward, Will

## 12" WATER MAIN ALONG EMERALD PARKWAY

| | | | DESIGN | | | AS-BUILT | | |
|---|---|---|---|---|---|---|---|---|
| SHEET # | WAT. STATION | DESCRIPTION | NORTHING | EASTING | ELEV. (TOP) | NORTHING | EASTING | ELEV. (TOP) |
| 28, 99 | 1+05.4 | 12" PLUG AND BLOCK | 769222.92 | 1797706.73 | 804.01 | | | |
| 28, 99 | 1+23.4 | 12" GATE VALVE AND STD. BOX | 769205.40 | 1797702.63 | 804.01 | | | |
| 28, 99 | 1+28.4 | 12" x 6" ANCHORING TEE | 769200.53 | 1797701.49 | 804.01 | | | |
| 28, 99 | 1+33.4 | 12" – 45° BEND | 769195.66 | 1797700.35 | 804.01 | | | |
| 28, 99 | 2+02.9 | 12" – 22 1/2° BEND | 769139.31 | 1797741.05 | 804.01 | | | |
| 28, 99 | 2+10.6 | 12" – 45° VERT. BEND | 769131.74 | 1797742.22 | 804.01 | | | |
| 28, 99 | 2+15.2 | 12" – 45° VERT. BEND | 769127.19 | 1797742.93 | 799.35 | | | |
| 29, 99 | 2+77.6 | 12" – 45° VERT. BEND | 769065.53 | 1797752.49 | 799.35 | | | |
| 29, 99 | 2+79.7 | 12" – 45° VERT. BEND | 769063.45 | 1797752.81 | 801.53 | | | |
| 29, 99 | 3+66.8 | 12" – 90° BEND | 768977.39 | 1797766.15 | 801.54 | | | |
| 30, 99 | 4+14.4 | GRADE BREAK | 768984.68 | 1797813.20 | 801.53 | | | |
| 30, 99 | 4+34.8 | 12" x 6" ANCHORING TEE | 768987.81 | 1797833.34 | 802.30 | | | |
| 30, 99 | 5+19.1 | BEGIN BEND BY DEFLECTION | 769000.72 | 1797916.67 | 805.51 | | | |
| 30, 99 | 6+00.0 | GRADE BREAK | 769012.77 | 1797996.66 | 808.58 | | | |
| 30, 99 | 7+83.6 | 12" x 6" ANCHORING TEE | 769037.53 | 1798178.54 | 817.76 | | | |
| 31, 99 | 11+19.0 | 12" GATE VALVE AND H.D. BOX | 769073.55 | 1798512.02 | 834.53 | | | |
| 31, 99 | 11+31.9 | 12" x 6" ANCHORING TEE | 769074.70 | 1798524.91 | 835.18 | | | |
| 31, 99 | 11+31.9 | GRADE BREAK | 769074.70 | 1798524.91 | 835.18 | | | |
| 32, 100 | 14+80.3 | 12" x 6" ANCHORING TEE | 769098.95 | 1798872.42 | 846.68 | | | |
| 32, 100 | 14+80.3 | GRADE BREAK | 769098.95 | 1798872.42 | 846.68 | | | |
| 33, 100 | 18+28.7 | 12" x 6" ANCHORING TEE | 769110.24 | 1799220.60 | 852.53 | | | |
| 33, 100 | 19+43.1 | GRADE BREAK | 769111.12 | 1799335.01 | 854.46 | | | |
| 33, 100 | 19+45.9 | 12" x 8" TEE | 769111.13 | 1799337.75 | 854.50 | | | |
| 33, 100 | 19+61.1 | 12" GATE VALVE AND H.D. BOX | 769111.13 | 1799353.00 | 854.77 | | | |
| 34, 100 | 21+77.1 | 12" x 6" ANCHORING TEE | 769108.57 | 1799568.96 | 858.55 | | | |
| 34, 100 | 21+77.1 | GRADE BREAK | 769108.57 | 1799568.96 | 858.55 | | | |
| 34, 100 | 25+25.5 | 12" x 6" ANCHORING TEE | 769093.93 | 1799917.01 | 861.76 | | | |
| 34, 100 | 26+20.7 | END BEND BY DEFLECTION | 769087.67 | 1800012.05 | 862.63 | | | |
| 35, 100 | 27+00.0 | GRADE BREAK | 769082.06 | 1800091.14 | 863.36 | | | |
| 35, 100 | 28+62.0 | 12" GATE VALVE AND H.D. BOX | 769070.59 | 1800252.76 | 866.34 | | | |
| 35, 100 | 28+75.0 | 12" x 6" ANCHORING TEE | 769069.67 | 1800265.72 | 866.58 | | | |
| 35, 100 | 29+41.4 | BEGIN BEND BY DEFLECTION | 769064.97 | 1800331.90 | 867.80 | | | |
| 36, 100 | 32+34.5 | 12" x 6" ANCHORING TEE | 769076.16 | 1800624.25 | 873.20 | | | |
| 36, 101 | 35+82.8 | 12" GATE VALVE AND H.D. BOX | 769171.13 | 1800958.32 | 879.61 | | | |
| 37, 101 | 35+96.2 | 12" x 6" ANCHORING TEE | 769176.51 | 1800970.63 | 879.85 | | | |
| 37, 101 | 36+50.0 | GRADE BREAK | 769199.25 | 1801019.36 | 880.84 | | | |
| 37, 101 | 39+57.9 | 12" x 6" ANCHORING TEE | 769365.37 | 1801277.84 | 884.78 | | | |
| 38, 101 | 40+18.6 | GRADE BREAK | 769404.84 | 1801323.91 | 885.56 | | | |
| 38, 101 | 43+16.2 | 12" – 45° VERT. BEND | 769626.33 | 1801521.76 | 885.56 | | | |
| 38, 101 | 43+18.2 | 12" – 45° VERT. BEND | 769627.96 | 1801522.92 | 887.53 | | | |
| 38, 101 | 43+23.8 | 12" x 6" ANCHORING TEE | 769632.52 | 1801526.13 | 887.53 | | | |
| 38, 101 | 44+09.6 | 12" GATE VALVE AND H.D. BOX | 769704.22 | 1801573.18 | 887.53 | | | |
| 39, 101 | 45+71.8 | 12" x 6" ANCHORING TEE | 769847.41 | 1801649.28 | 887.53 | | | |
| 39, 101 | 45+71.8 | GRADE BREAK | 769847.41 | 1801649.28 | 887.53 | | | |
| 39, 101 | 48+25.0 | GRADE BREAK | 770086.28 | 1801732.11 | 886.01 | | | |
| 39, 101 | 48+78.7 | 12" x 6" ANCHORING TEE | 770138.73 | 1801743.82 | 886.44 | | | |
| 40, 101 | 50+75.7 | END BEND BY DEFLECTION | 770334.07 | 1801766.53 | 888.02 | | | |
| 40, 101 | 51+38.4 | 12" – 22 1/2° BEND | 770396.72 | 1801765.56 | 888.52 | | | |
| 40, 101 | 51+50.0 | GRADE BREAK | 770407.51 | 1801769.83 | 888.61 | | | |
| 40, 101 | 51+64.3 | 12" x 6" ANCHORING TEE | 770420.75 | 1801775.08 | 888.61 | | | |
| 40, 101 | 51+82.1 | 12" – 22 1/2° BEND | 770437.37 | 1801781.66 | 888.61 | | | |
| 40, 101 | 51+94.1 | 12" GATE VALVE AND STD. BOX | 770449.32 | 1801781.47 | 888.61 | | | |

## 12" WATER MAIN ALONG EMERALD PARKWAY (CONTINUED)

| | | | DESIGN | | | AS-BUILT | | |
|---|---|---|---|---|---|---|---|---|
| SHEET # | WAT. STATION | DESCRIPTION | NORTHING | EASTING | ELEV. (TOP) | NORTHING | EASTING | ELEV. (TOP) |
| 40, 101 | 52+52.3 | 12" x 12" TEE | 770507.51 | 1801780.57 | 888.61 | | | |
| 40, 101 | 52+52.3 | BEND BY DEFLECTION | 770507.51 | 1801780.57 | 888.61 | | | |
| 40, 101 | 52+65.3 | 12" x 12" TEE | 770520.56 | 1801780.82 | 888.61 | | | |
| 40, 101 | 52+80.9 | 12" GATE VALVE AND STD. BOX | 770536.13 | 1801781.11 | 888.61 | | | |
| 40, 101 | 53+26.0 | BEND BY DEFLECTION | 770581.22 | 1801781.98 | 888.61 | | | |
| 40, 101 | 54+50.0 | GRADE BREAK | 770705.05 | 1801788.67 | 888.61 | | | |
| 40, 101 | 55+33.3 | 12" x 6" ANCHORING TEE | 770788.24 | 1801793.16 | 887.45 | | | |
| 41, 102 | 56+19.0 | 12" – 45° BEND (ROTATE 15°) | 770873.82 | 1801797.79 | 886.26 | | | |
| 41, 102 | 56+80.5 | 12" – 45° BEND (ROTATE 15°) | 770914.91 | 1801843.58 | 873.58 | | | |
| 41, 102 | 57+78.1 | 12" – 45° BEND (ROTATE 14.5°) | 771012.11 | 1801851.55 | 873.58 | | | |
| 41, 102 | 58+42.2 | 12" – 45° BEND (ROTATE 14.5°) | 771059.04 | 1801807.80 | 886.34 | | | |
| 41, 102 | 58+60.4 | REMOVE PLUG AND CONNECT TO EX. 12" W.M. | 771077.21 | 1801808.79 | 886.34 | | | |

## 8" WATER MAIN TO JENMAR COURT

| | | | DESIGN | | | AS-BUILT | | |
|---|---|---|---|---|---|---|---|---|
| SHEET # | WAT. STATION | DESCRIPTION | NORTHING | EASTING | ELEV. (TOP) | NORTHING | EASTING | ELEV. (TOP) |
| 33, 102 | 1+00.0 | 12" x 8" TEE | 769111.13 | 1799337.75 | 854.50 | | | |
| 33, 102 | 1+02.0 | 8" GATE VALVE AND STD. BOX | 769113.13 | 1799337.75 | 854.28 | | | |
| 33, 102 | 1+20.0 | BEND BY DEFLECTION | 769131.13 | 1799337.72 | 854.28 | | | |
| 33, 102 | 1+40.0 | BEND BY DEFLECTION | 769151.10 | 1799338.74 | 854.28 | | | |
| 33, 102 | 3+00.0 | 8" GATE VALVE AND STD. BOX | 769310.40 | 1799353.65 | 884.28 | | | |
| 33, 102 | 3+20.0 | 8" PLUG AND BLOCK | 769330.32 | 1799355.51 | 884.28 | | | |

## 12" WATER MAIN ALONG BRIGHT ROAD (WEST OF EMERALD PARKWAY)

| | | | DESIGN | | | AS-BUILT | | |
|---|---|---|---|---|---|---|---|---|
| SHEET # | WAT. STATION | DESCRIPTION | NORTHING | EASTING | ELEV. (TOP) | NORTHING | EASTING | ELEV. (TOP) |
| 40, 102 | 1+00.0 | 12" x 12" TEE | 770507.51 | 1801780.57 | 888.61 | | | |
| 40, 102 | 1+00.0 | BEND BY DEFLECTION | 770507.51 | 1801780.57 | 888.61 | | | |
| 40, 102 | 2+21.3 | 12" GATE VALVE AND STD. BOX | 770507.17 | 1801659.25 | 888.61 | | | |
| 40, 102 | 2+41.7 | GRADE BREAK | 770507.11 | 1801638.84 | 888.61 | | | |
| 42, 102 | 3+41.7 | GRADE BREAK | 770506.83 | 1801538.84 | 885.56 | | | |
| 42, 102 | 3+67.7 | 12" x 6" ANCHORING TEE | 770506.75 | 1801512.87 | 885.56 | | | |
| 42, 102 | 3+72.7 | 12" GATE VALVE AND STD. BOX | 770506.74 | 1801507.87 | 885.56 | | | |
| 42, 102 | 3+90.7 | 12" PLUG AND BLOCK | 770506.69 | 1801489.87 | 885.56 | | | |

## 12" WATER MAIN ALONG BRIGHT ROAD (EAST OF EMERALD PARKWAY)

| | | | DESIGN | | | AS-BUILT | | |
|---|---|---|---|---|---|---|---|---|
| SHEET # | WAT. STATION | DESCRIPTION | NORTHING | EASTING | ELEV. (TOP) | NORTHING | EASTING | ELEV. (TOP) |
| 40, 102 | 1+00.0 | 12" x 12" TEE | 770520.56 | 1801780.82 | 888.61 | | | |
| 40, 102 | 1+63.1 | 12" GATE VALVE AND STD. BOX | 770521.43 | 1801843.94 | 888.61 | | | |
| 40, 102 | 1+69.2 | GRADE BREAK | 770521.51 | 1801850.01 | 888.61 | | | |
| 40, 102 | 1+94.8 | 12" – 11 1/4° BEND | 770521.87 | 1801875.60 | 888.95 | | | |
| 40, 102 | 2+20.4 | 12" – 11 1/4° BEND | 770527.21 | 1801900.67 | 889.29 | | | |
| 43, 102 | 2+87.3 | 1" WATER SERVICE TAP, COMPLETE | 770528.14 | 1801967.47 | 890.18 | | | |
| 43, 102 | 2+91.3 | 12" x 6" ANCHORING TEE | 770528.19 | 1801971.49 | 890.23 | | | |
| 43, 102 | 2+96.3 | 12" GATE VALVE AND H.D. BOX | 770528.26 | 1801976.49 | 890.30 | | | |
| 43, 102 | 3+14.3 | 12" PLUG AND BLOCK | 770528.51 | 1801994.48 | 890.54 | | | |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

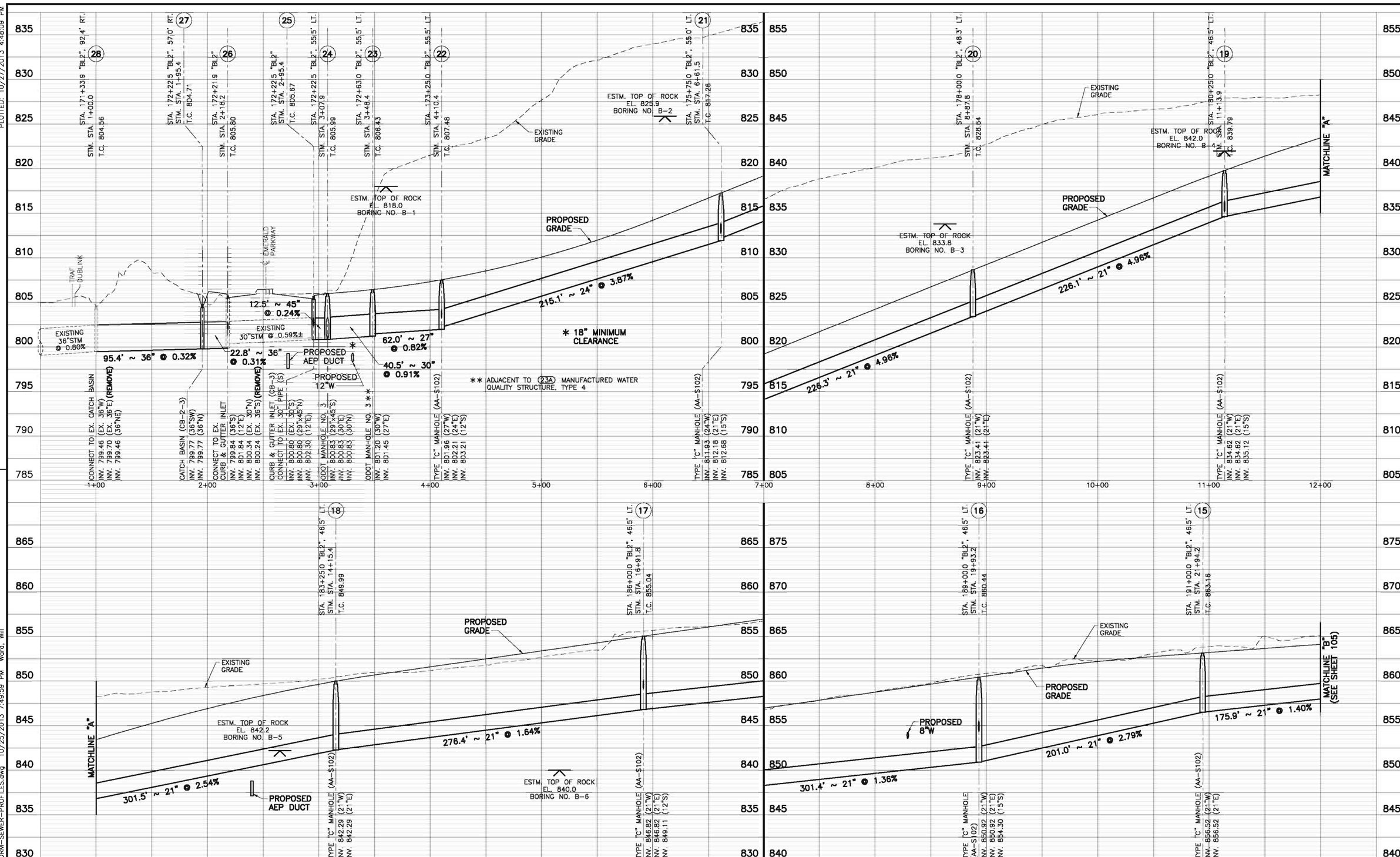
JOB NO. 44959
DESIGNED BY: JED
DRAWN BY: WHW
CHECKED BY: JED
APPROVED BY: DKM
DATE: OCTOBER 2013

WATER MAIN COORDINATE TABLES

SCALE: NONE

SHEET NO. 103 OF 275

PLOTTED: 10/27/2013 4:46:19 PM
P:\PR44959\cadd\WATER-COORDINATE-TABLE.dwg 10/25/2013 5:29:30 PM Ward, Will




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

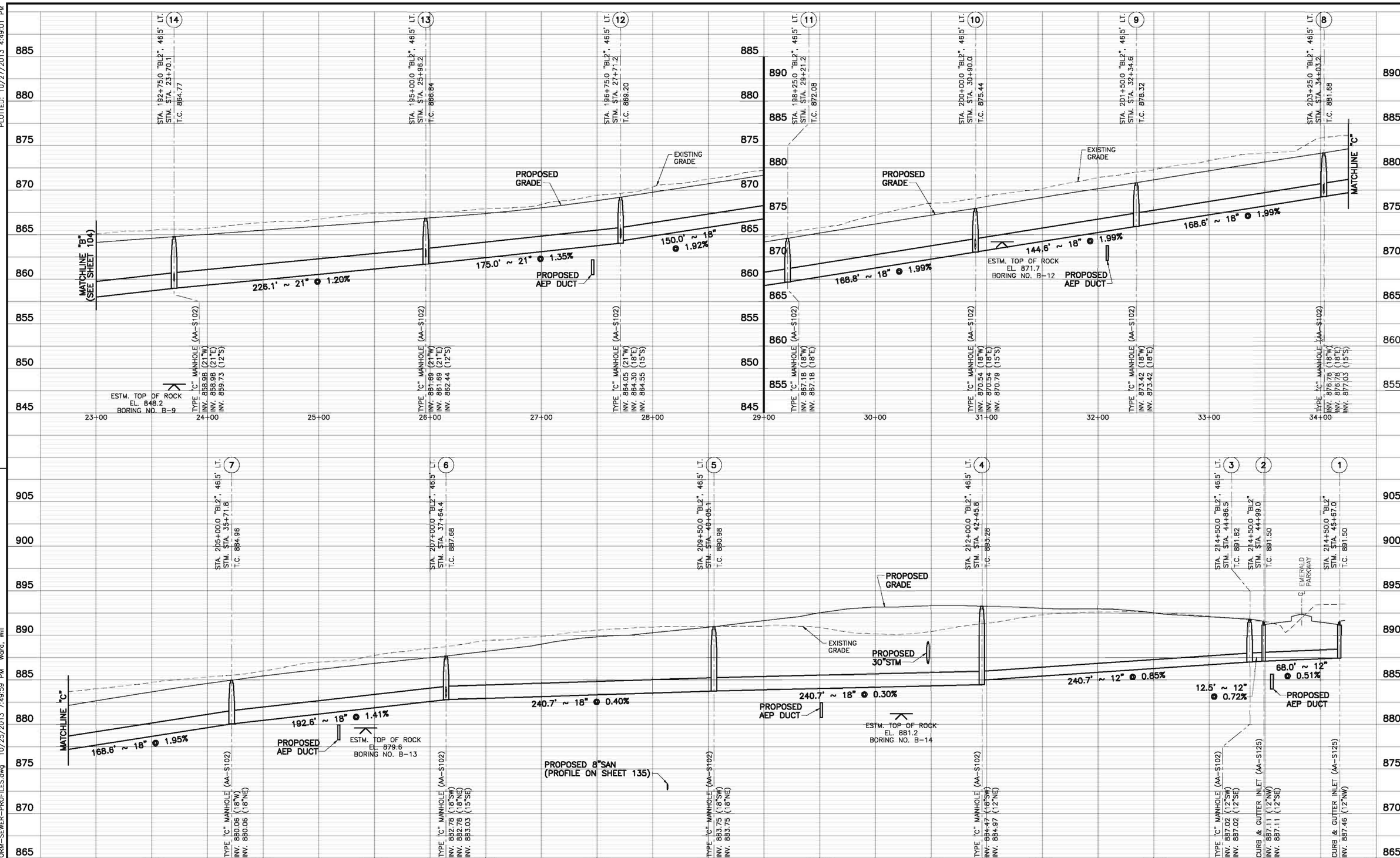
**STORM SEWER PROFILES**
**EMERALD PARKWAY**

SCALE: 1" = 40' HORIZ. 1" = 5' VERT.

SHEET NO. 104 OF 275

PLOTTED: 10/27/2013 4:48:09 PM

P:\PR44959\cadd\STORM-SEWER-PROFILES.dwg 10/25/2013 7:49:59 PM Ward, Will

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| NO. | REVISIONS | DATE | BY | CHK. |
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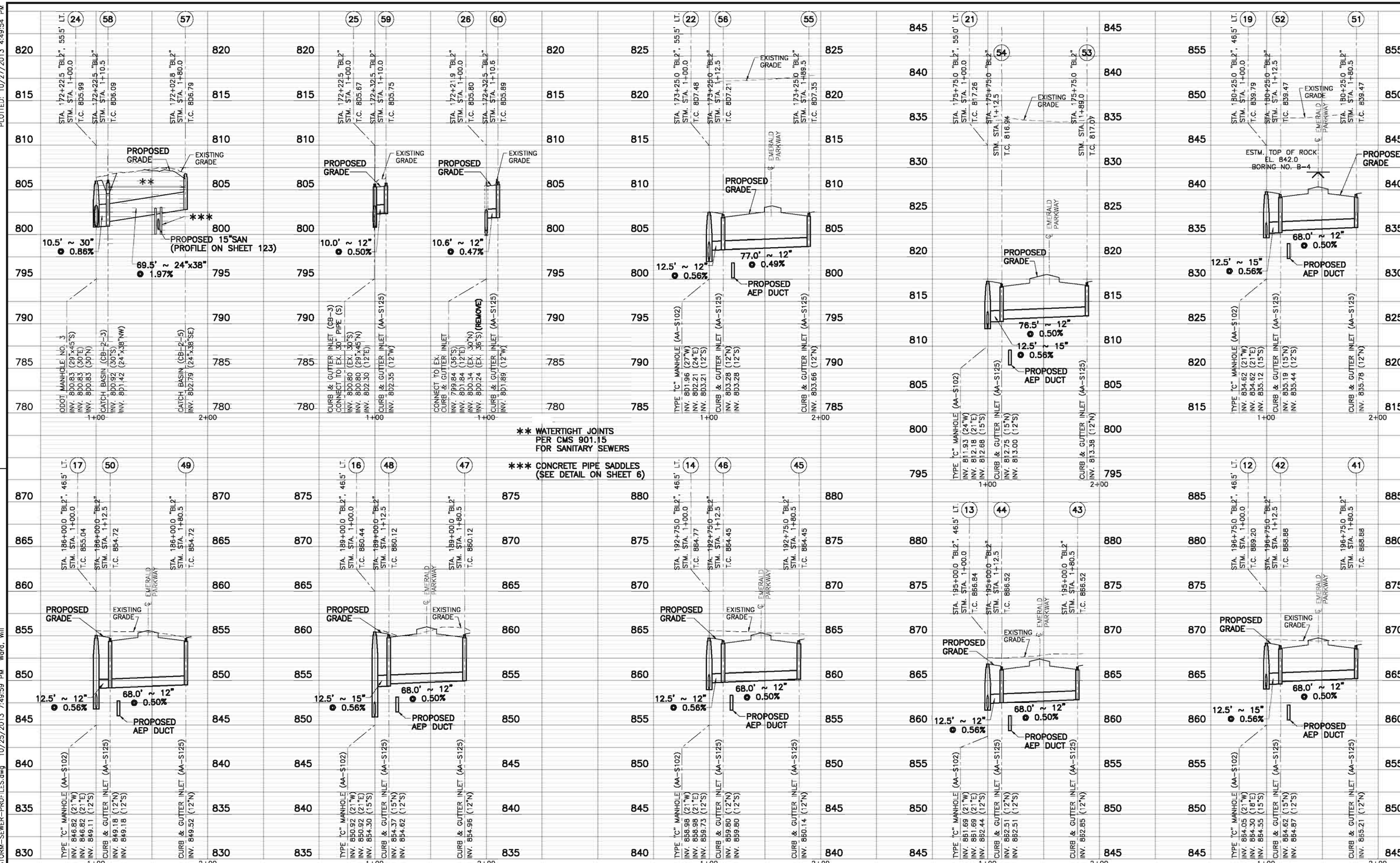
**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**STORM SEWER PROFILES**
**EMERALD PARKWAY**

SCALE:
1" = 40' HORIZ.
1" = 5' VERT.

SHEET NO. 105 OF 275




| NO. | REVISIONS | DATE | BY | CHK. |
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**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**STORM SEWER PROFILES**
**EMERALD PARKWAY**

SCALE: 1" = 40' HORIZ. 1" = 5' VERT.

SHEET NO. 106 OF 275

PLOTTED: 10/27/2013 4:49:54 PM

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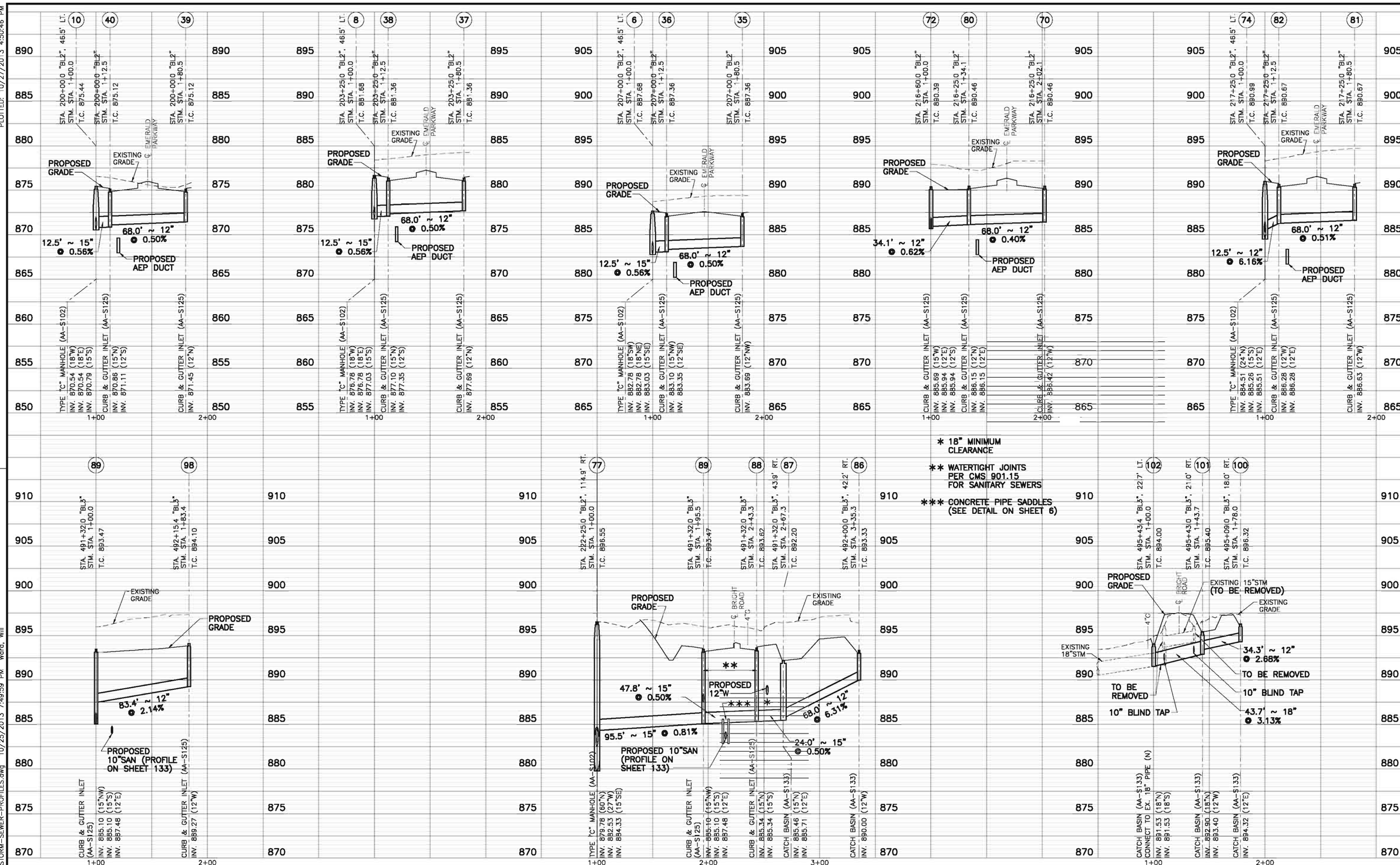


| NO. | REVISIONS | DATE | BY | CHK. |
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**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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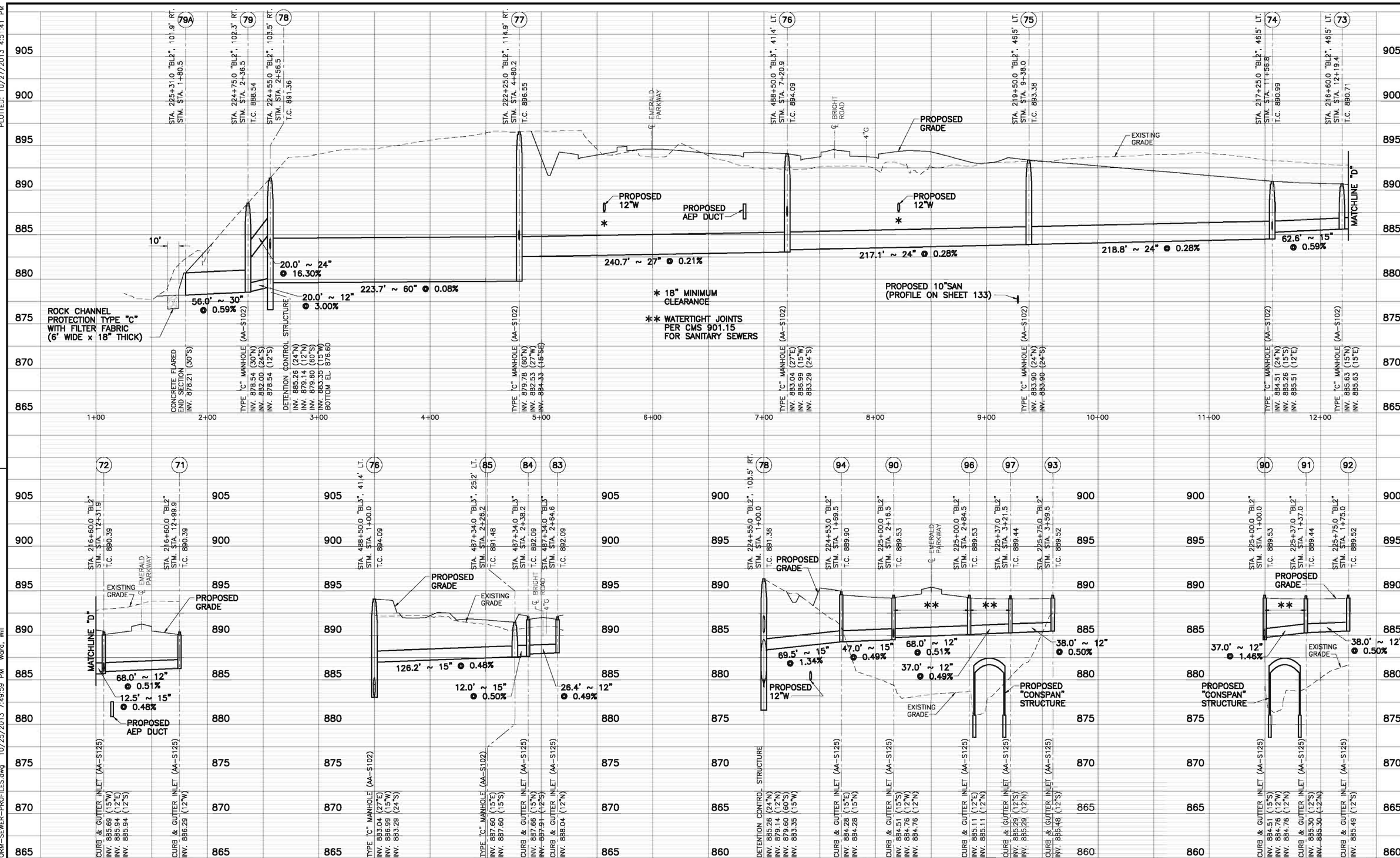
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**STORM SEWER PROFILES**
**EMERALD PARKWAY AND BRIGHT ROAD**

SCALE: 1" = 40' HORIZ. 1" = 5' VERT.

SHEET NO. 107 OF 275

PLOTTED: 10/27/2013 4:50:46 PM
P:\PR44959\cadd\STORM-SEWER-PROFILES.dwg 10/25/2013 7:49:59 PM Ward, Will




| NO. | REVISIONS | DATE | BY | CHK. |
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BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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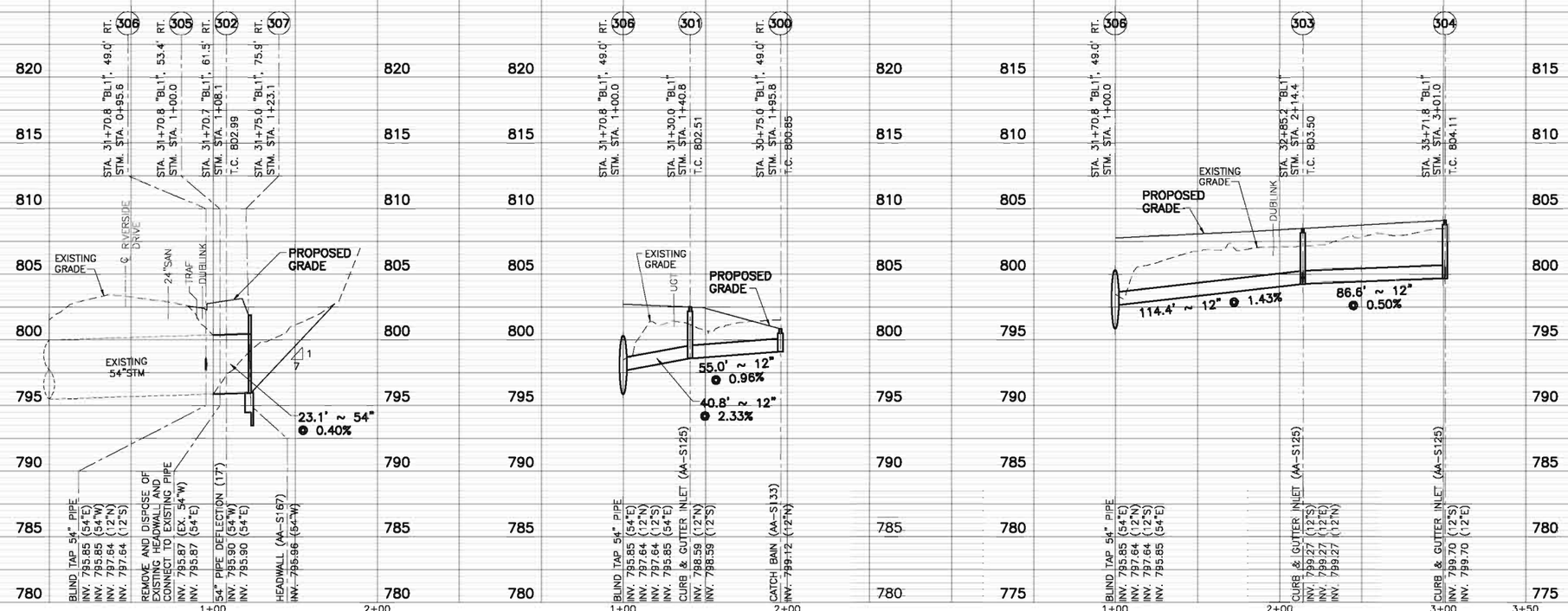
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**STORM SEWER PROFILES**
**EMERALD PARKWAY**
**AND BRIGHT ROAD**

SCALE: 1" = 40' HORIZ. 1" = 5' VERT.

SHEET NO. 108 OF 275

PLOTTED: 10/27/2013 4:51:41 PM
P:\PR44959\cadd\STORM-SEWER-PROFILES.dwg 10/25/2013 7:49:59 PM Ward, Will




| NO. | REVISIONS | DATE | BY | CHK. |
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**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**STORM SEWER PROFILES**
**RIVERSIDE DRIVE**

SCALE:
1" = 40' HORIZ.
1" = 5' VERT.

SHEET NO. 109 OF 275

PLOTTED: 10/27/2013 4:52:33 PM
P:\PR44959\cadd\STORM-SEWER-PROFILES.dwg 10/25/2013 7:49:59 PM Ward, Will

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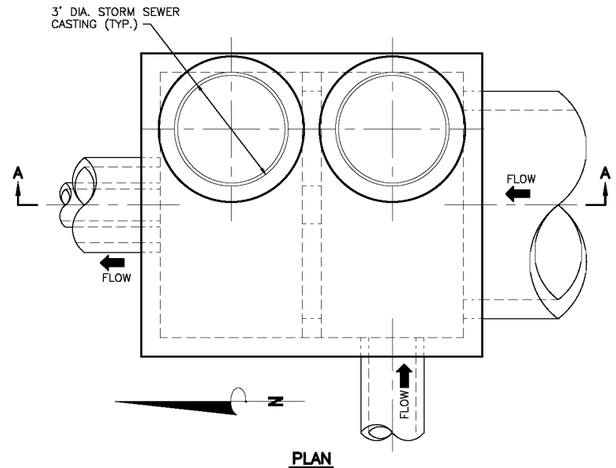
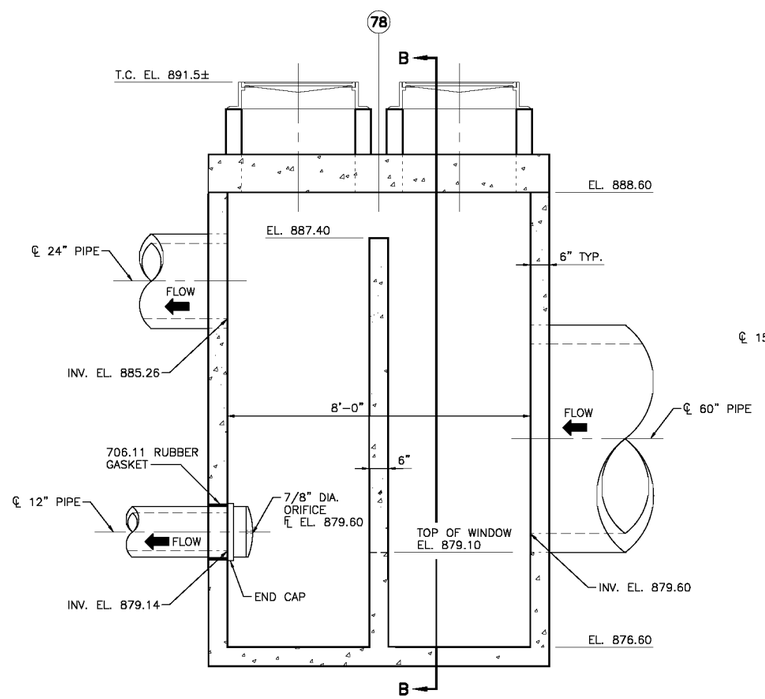


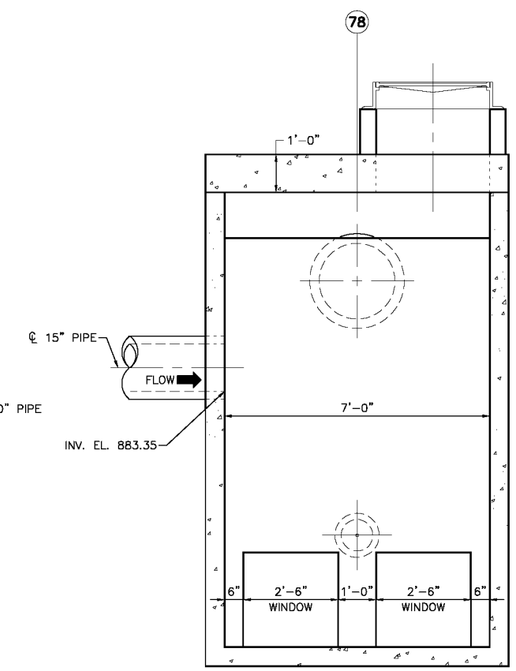

**PLAN**

NOTE:

DETAILS ON THIS SHEET REFLECT INTENDED DIMENSIONS AND FUNCTIONALITY ONLY. THE PRECAST SUPPLIER SHALL FURNISH SHOP DRAWINGS WITH ALL STRUCTURAL ELEMENTS FOR REVIEW PRIOR TO FABRICATION. STRUCTURAL DRAWINGS SHALL BE SEALED BY AN ENGINEER REGISTERED IN THE STATE OF OHIO.




**SECTION A–A**




**SECTION B–B**

| NO. | REVISIONS | DATE | BY | CHK. |
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**Burgess & Niple, Inc.** COLUMBUS,OH

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**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

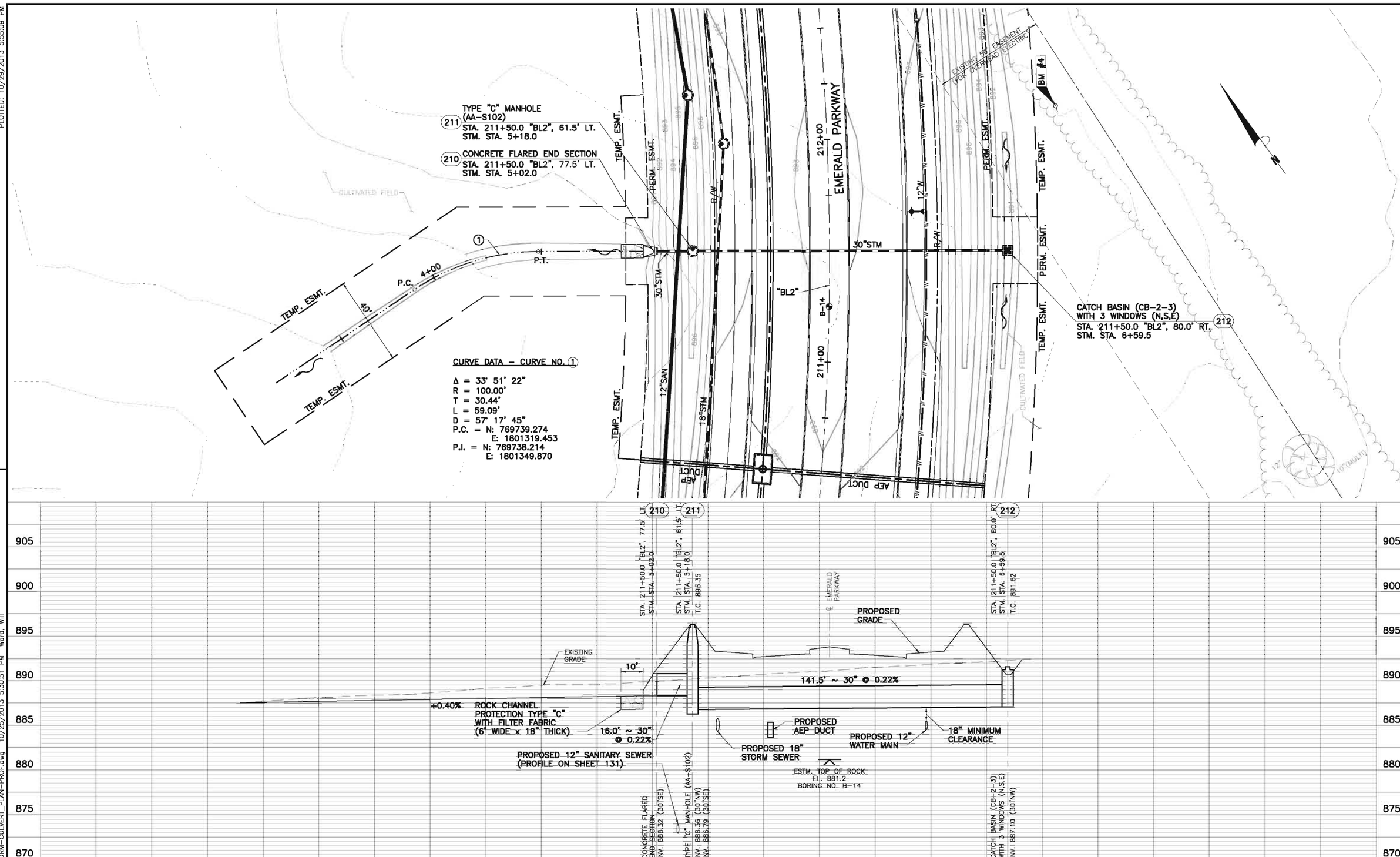
**STORM DETENTION CONTROL STRUCTURE**

SCALE: 1" = 2'-0"

SHEET NO. 110 OF 275

P:\PR44959\cadd\MISC-DETAILS.dwg 10/25/2013 5:30:29 PM Ward, Will

PLOTTED: 10/29/2013 5:55:09 PM




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

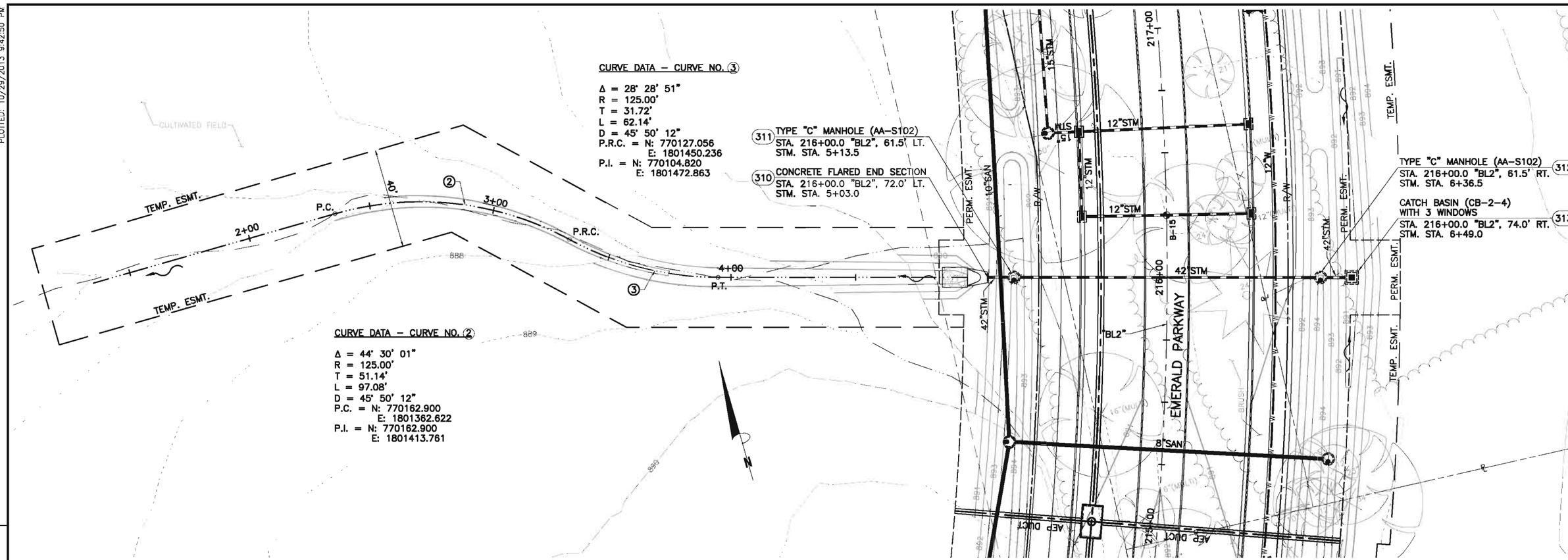
**STORM CULVERT PLAN AND PROFILE AT STA. 211+50 "BL2"**

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 111 OF 275

P:\PR44959\cadd\STORM-CULVERT_PLAN-PROF.dwg 10/25/2013 5:30:51 PM Ward, Will

PLOTTED: 10/29/2013 9:42:50 PM




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

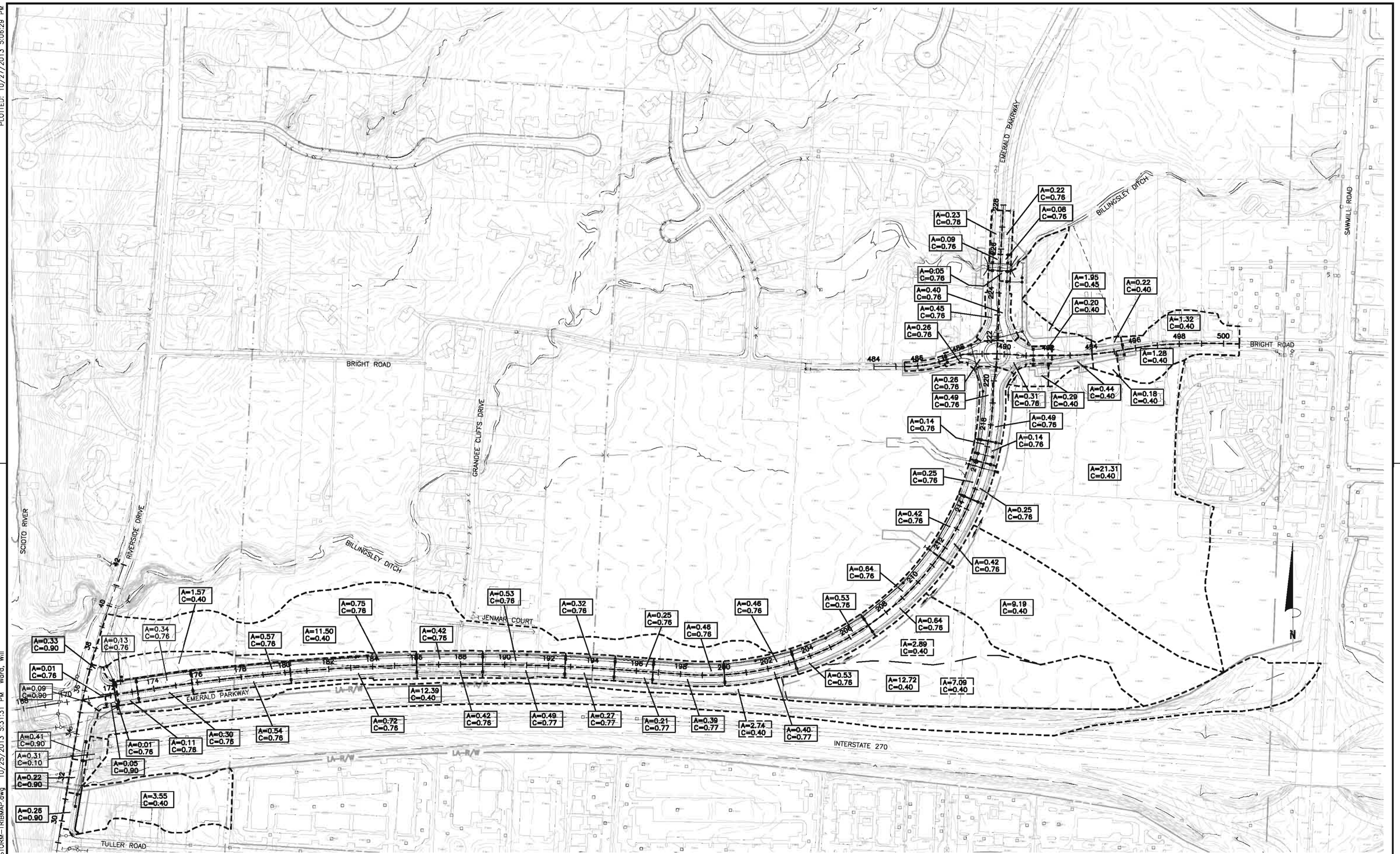
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

STORM CULVERT PLAN AND PROFILE
AT STA. 216+00 "BL2"

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 112 OF 275

P:\PR44959\cadd\STORM-CULVERT_PLAN-PROF.dwg 10/29/2013 6:12:48 PM Ward, Will




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | AFJP |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

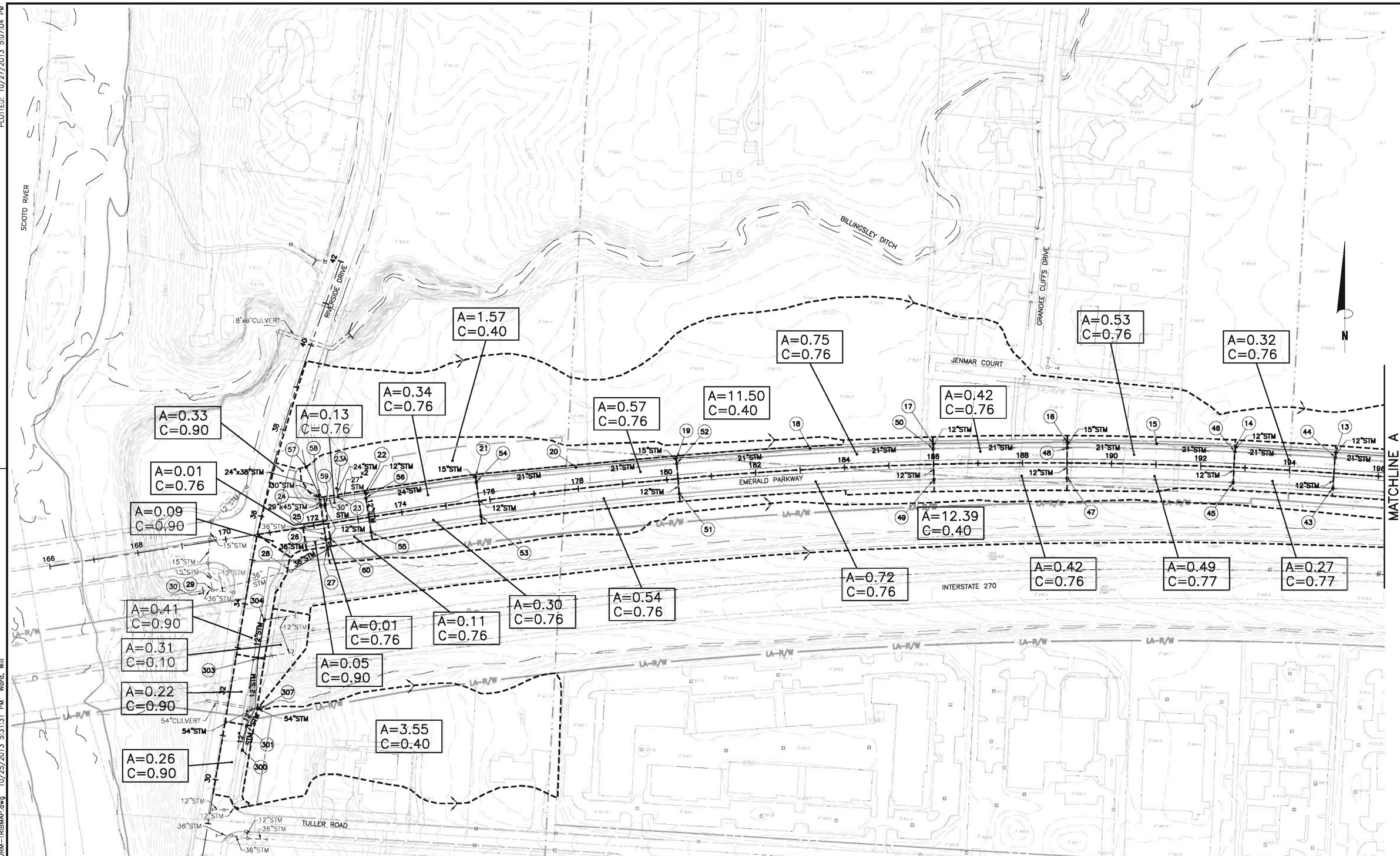
STORM SEWER TRIBUTARY AREA MAP
(OVERALL)

SCALE: 1" = 200'

SHEET NO. 113 OF 275

PLOTTED: 10/27/2013 5:06:29 PM

P:\PR44959\cadd\STORM-TRIBMAP.dwg 10/25/2013 5:31:31 PM Ward, Will




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | AFJP |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

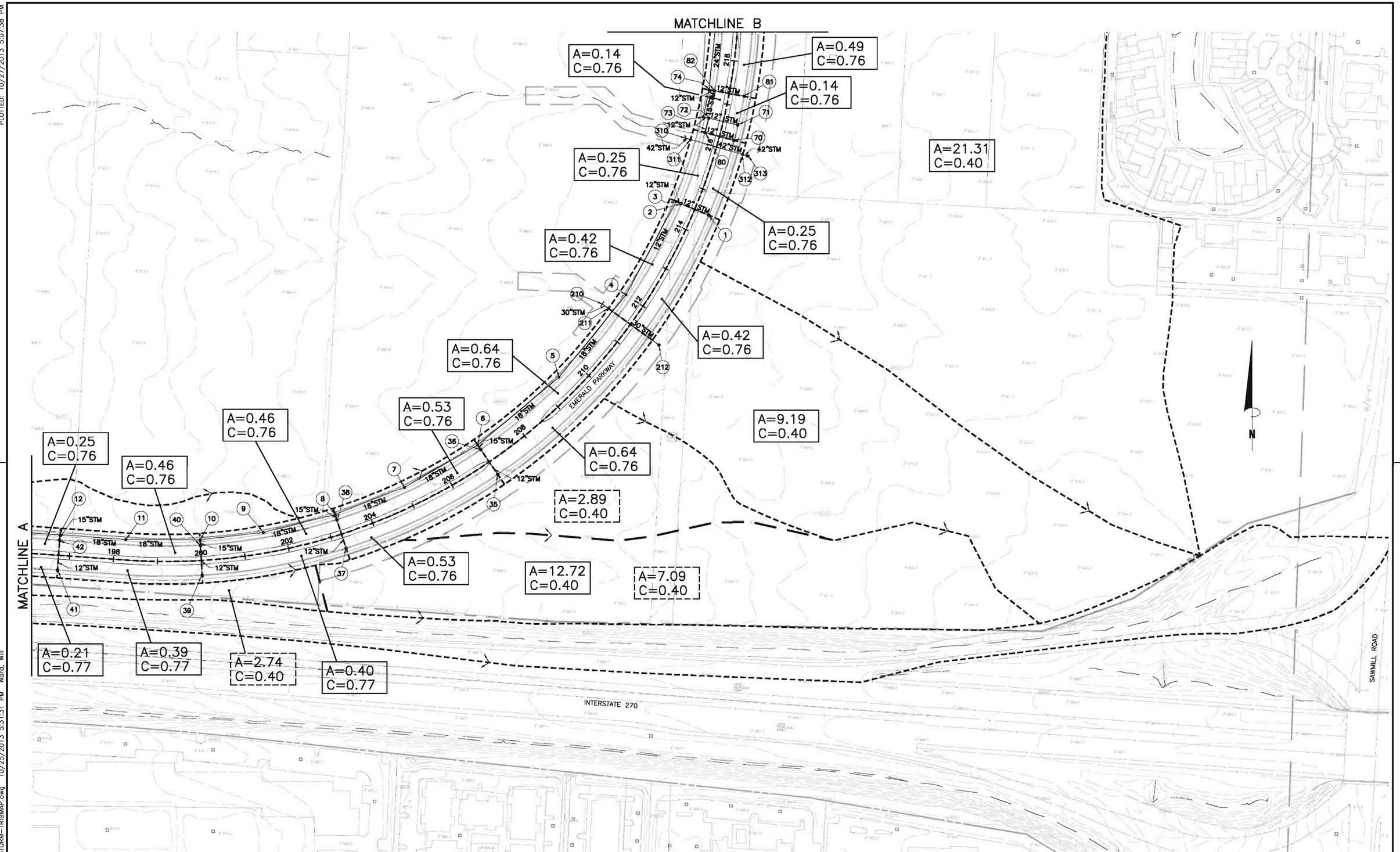
STORM SEWER TRIBUTARY AREA MAP
(ENLARGED WEST PLAN)

SCALE: 1" = 100'

SHEET NO. 114 OF 275

PLOTTED: 10/27/2013 5:07:04 PM

P:\PR44959\cadd\STORM-TRIBMAP.dwg 10/25/2013 5:31:31 PM Ward, Will




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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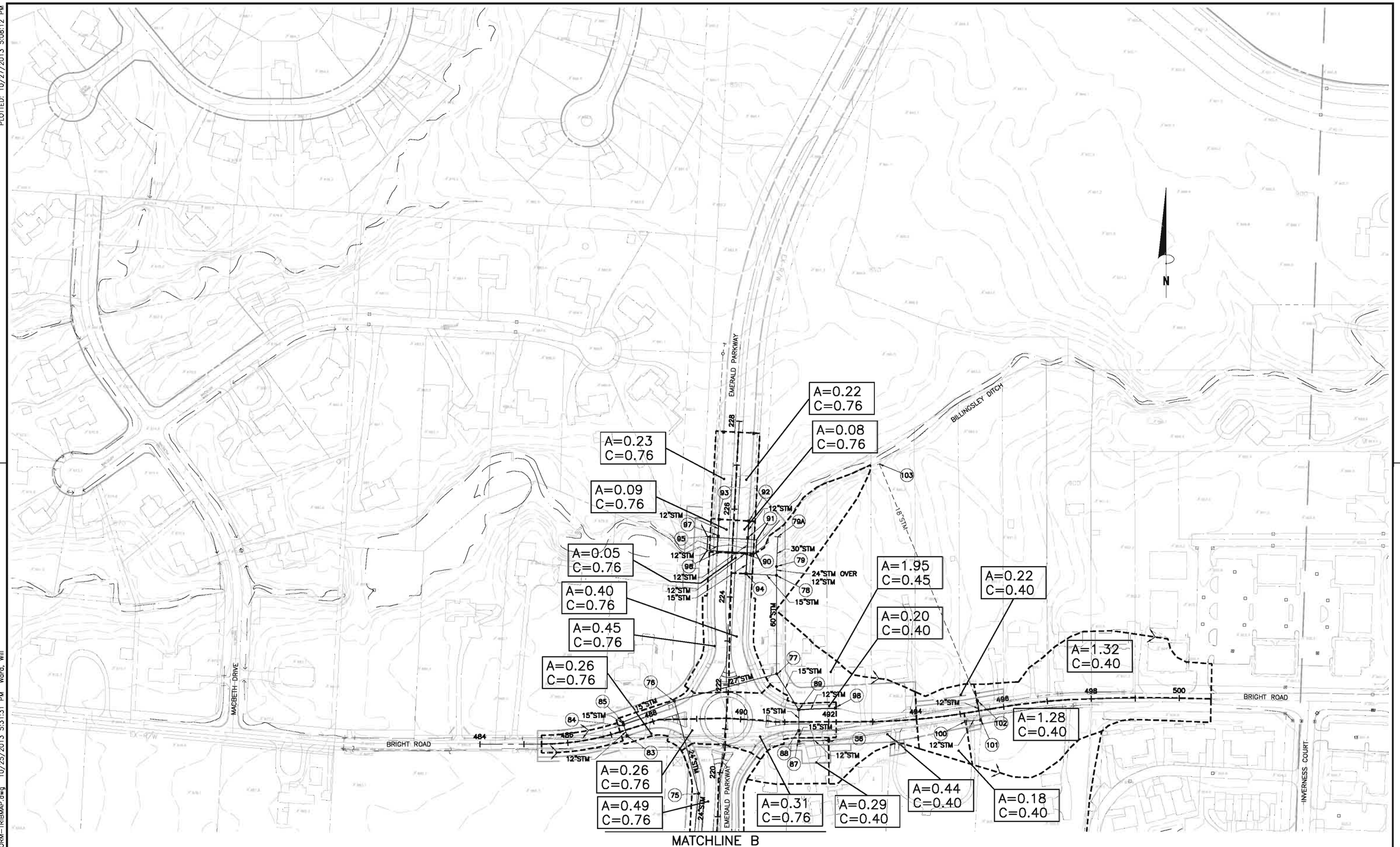
| DATE: | OCTOBER 2013 |

STORM SEWER TRIBUTARY AREA MAP
(ENLARGED EAST PLAN)

SCALE: 1" = 100'

SHEET NO. 115 OF 275

P:\PR44959\cadd\STORM-TRIBMAP.dwg 10/25/2013 5:31:31 PM Ward, Will
PLOTTED: 10/27/2013 5:07:38 PM




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | AFJP |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**STORM SEWER TRIBUTARY AREA MAP**
**(ENLARGED NORTH PLAN)**

SCALE: 1" = 100'

SHEET NO. 116 OF 275

PLOTTED: 10/27/2013 5:08:12 PM

P:\PR44959\cadd\STORM-TRIBMAP.dwg 10/25/2013 5:31:31 PM Ward, Will

| REF NO. | LOCATION | SUB AREA AC. | SUM AREA AC. | C | SUB CA AC. | SUM CA AC. | TIME IN PIPE | SUM TIME MIN | 5 YEAR DESIGN STORM I IN/HR | Q CFS | GRATE * ELEV. | INVERT ELEV. IN | INVERT ELEV. OUT | PIPE DIA. IN | PIPE LENGTH FT | PIPE SLOPE FT/FT | PIPE V FPS | PIPE Q CFS | 10 YEAR HYDRAULIC GRADIENT I IN/HR | Q CFS | MINOR LOSS COEFF. K | MINOR LOSSES Hm (FT) | SLOPE FT/FT | GRADIENT ELEV. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | St214+50;34.5'R | 0.42 | 0.42 | 0.76 | 0.32 | 0.32 | | 10.00 | 4.2 | 1.3 | 890.96 | | 887.46 | | | | | | 4.84 | 1.5 | 0.10 | | | 859.09 |
| | | | | | | | 0.32 | | | | | | | 12 | 68.00 | 0.0051 | 3.53 | 2.77 | | | | | 0.0016 | 0.11 |
| 2 | St214+50;34.5'L | 0.42 | 0.84 | 0.76 | 0.32 | 0.64 | | 10.32 | 4.1 | 2.6 | 890.96 | 887.11 | 887.11 | | | | | | 4.78 | 3.1 | 0.10 | 0.02 | | 858.98 |
| | | | | | | | 0.05 | | | | | | | 12 | 12.50 | 0.0072 | 4.17 | 3.28 | | | | | 0.0063 | 0.08 |
| 3 | St214+50;46.5'L | 0.00 | 0.84 | 0.00 | 0.00 | 0.64 | | 10.37 | 4.1 | 2.6 | 891.82 | 887.02 | 887.02 | | | | | | 4.78 | 3.0 | 0.50 | 0.14 | | 858.89 |
| | | | | | | | 0.89 | | | | | | | 12 | 241.00 | 0.0085 | 4.53 | 3.56 | | | | | 0.0062 | 1.50 |
| 4 | St212+00;46.5'L | 0.00 | 0.84 | 0.00 | 0.00 | 0.64 | | 11.26 | 4.0 | 2.6 | 893.28 | 884.97 | 884.47 | | | | | | 4.64 | 3.0 | 0.10 | 0.03 | | 857.25 |
| | | | | | | | 1.14 | | | | | | | 18 | 241.00 | 0.0030 | 3.52 | 6.22 | | | | | 0.0007 | 0.16 |
| 5 | St209+50;46.5'L | 0.00 | 0.84 | 0.00 | 0.00 | 0.64 | | 12.40 | 3.9 | 2.5 | 890.98 | 883.75 | 883.75 | | | | | | 4.47 | 2.9 | 0.10 | 0.02 | | 857.05 |
| | | | | | | | 0.98 | | | | | | | 18 | 241.00 | 0.0040 | 4.09 | 7.22 | | | | | 0.0006 | 0.15 |
| 6 | St207+00;46.5'L | 1.28 | 2.12 | 0.76 | 0.97 | 1.61 | | 13.38 | 3.8 | 6.0 | 887.68 | 882.78 | 882.78 | | | | | | 4.34 | 7.0 | 0.50 | 0.13 | | 856.88 |
| | | | | | | | 0.42 | | | | | | | 18 | 193.00 | 0.0141 | 7.65 | 13.51 | | | | | 0.0038 | 0.73 |
| 7 | St205+00;46.5'L | 0.00 | 2.12 | 0.00 | 0.00 | 1.61 | | 13.80 | 3.7 | 6.0 | 884.96 | 880.06 | 880.06 | | | | | | 4.28 | 6.9 | 0.10 | 0.09 | | 856.03 |
| | | | | | | | 0.31 | | | | | | | 18 | 169.00 | 0.0194 | 8.97 | 15.85 | | | | | 0.0037 | 0.62 |
| 8 | St203+25;46.5'L | 1.06 | 3.18 | 0.76 | 0.81 | 2.42 | | 14.12 | 3.7 | 8.9 | 891.68 | 876.78 | 876.78 | | | | | | 4.25 | 10.3 | 0.50 | 0.62 | | 855.31 |
| | | | | | | | 0.31 | | | | | | | 18 | 169.00 | 0.0199 | 9.08 | 16.05 | | | | | 0.0081 | 1.37 |
| 9 | St201+50;46.5'L | 0.00 | 3.18 | 0.00 | 0.00 | 2.42 | | 14.43 | 3.6 | 8.8 | 878.32 | 873.42 | 873.42 | | | | | | 4.21 | 10.2 | 0.10 | 0.13 | | 853.31 |
| | | | | | | | 0.27 | | | | | | | 18 | 145.00 | 0.0199 | 9.08 | 16.04 | | | | | 0.0007 | 0.10 |
| 10 | St200+00;46.5'L | 0.86 | 4.04 | 0.77 | 0.66 | 3.08 | | 14.69 | 3.6 | 11.1 | 875.44 | 870.54 | 870.54 | | | | | | 4.18 | 12.9 | 0.50 | 0.64 | | 853.08 |
| | | | | | | | 0.31 | | | | | | | 18 | 169.00 | 0.0199 | 9.08 | 16.05 | | | | | 0.0007 | 0.11 |
| 11 | St198+25;46.5'L | 0.00 | 4.04 | 0.00 | 0.00 | 3.08 | | 15.00 | 3.6 | 11.0 | 872.08 | 867.18 | 867.18 | | | | | | 4.14 | 12.8 | 0.10 | 0.13 | | 852.33 |
| | | | | | | | 0.28 | | | | | | | 18 | 150.00 | 0.0192 | 8.92 | 15.77 | | | | | 0.0126 | 1.88 |
| 12 | St196+75;46.5'L | 0.85 | 4.89 | 0.77 | 0.65 | 3.73 | | 15.28 | 3.6 | 13.3 | 869.20 | 864.30 | 864.05 | | | | | | 4.11 | 15.3 | 0.50 | 0.62 | | 850.32 |
| | | | | | | | 0.35 | | | | | | | 21 | 175.00 | 0.0135 | 8.29 | 19.94 | | | | | 0.0080 | 1.40 |
| 13 | St195+00;46.5'L | 0.46 | 5.35 | 0.77 | 0.35 | 4.09 | | 15.64 | 3.5 | 14.4 | 866.84 | 861.69 | 861.69 | | | | | | 4.07 | 16.6 | 0.50 | 0.53 | | 848.30 |
| | | | | | | | 0.48 | | | | | | | 21 | 226.00 | 0.0120 | 7.82 | 18.80 | | | | | 0.0094 | 2.12 |
| 14 | St192+75;46.5'L | 0.59 | 5.94 | 0.77 | 0.45 | 4.54 | | 16.12 | 3.5 | 15.8 | 864.77 | 858.98 | 858.98 | | | | | | 4.02 | 18.3 | 0.50 | 0.47 | | 845.64 |
| | | | | | | | 0.35 | | | | | | | 21 | 176.00 | 0.0140 | 8.44 | 20.30 | | | | | 0.0113 | 1.99 |
| 15 | St191+00;46.5'L | 0.00 | 5.94 | 0.00 | 0.00 | 4.54 | | 16.46 | 3.4 | 15.6 | 863.16 | 856.52 | 856.52 | | | | | | 3.98 | 18.1 | 0.10 | 0.11 | | 843.18 |
| | | | | | | | 0.28 | | | | | | | 21 | 201.00 | 0.0279 | 11.91 | 28.65 | | | | | 0.0111 | 2.23 |
| 16 | St189+00;46.5'L | 1.02 | 6.96 | 0.77 | 0.79 | 5.33 | | 16.75 | 3.4 | 18.2 | 860.44 | 850.92 | 850.92 | | | | | | 3.95 | 21.1 | 0.50 | 1.10 | | 840.84 |
| | | | | | | | 0.60 | | | | | | | 21 | 301.50 | 0.0136 | 8.32 | 20.02 | | | | | 0.0150 | 4.54 |
| 17 | St186+00;46.5'L | 0.84 | 7.80 | 0.76 | 0.64 | 5.97 | | 17.35 | 3.4 | 20.1 | 855.04 | 846.82 | 846.82 | | | | | | 3.89 | 23.2 | 0.50 | 0.54 | | 835.20 |
| | | | | | | | 0.50 | | | | | | | 21 | 276.40 | 0.0164 | 9.14 | 21.98 | | | | | 0.0183 | 5.06 |
| 18 | St183+25;46.5'L | 0.00 | 7.80 | 0.00 | 0.00 | 5.97 | | 17.85 | 3.3 | 19.8 | 849.99 | 842.29 | 842.29 | | | | | | 3.84 | 22.9 | 0.10 | 0.13 | | 829.61 |
| | | | | | | | 0.44 | | | | | | | 21 | 302.00 | 0.0254 | 11.37 | 27.36 | | | | | 0.0178 | 5.39 |
| 19 | St180+25;46.5'L | 1.47 | 9.27 | 0.76 | 1.12 | 7.08 | | 18.30 | 3.3 | 23.3 | 839.79 | 834.62 | 834.62 | | | | | | 3.80 | 26.9 | 0.50 | 1.00 | | 824.09 |
| | | | | | | | 0.24 | | | | | | | 21 | 226.00 | 0.0496 | 15.90 | 38.23 | | | | | 0.0246 | 5.56 |
| 20 | St178+00;46.5'L | 0.00 | 9.27 | 0.00 | 0.00 | 7.08 | | 18.53 | 3.3 | 23.2 | 828.64 | 823.41 | 823.41 | | | | | | 3.78 | 26.8 | 0.10 | 0.39 | | 817.53 |
| | | | | | | | 0.24 | | | | | | | 21 | 226.00 | 0.0497 | 15.91 | 38.27 | | | | | 0.0243 | 5.49 |
| 21 | St175+75;54.0'L | 1.11 | 10.38 | 0.76 | 0.84 | 7.93 | | 18.77 | 3.3 | 25.8 | 817.26 | 812.18 | 811.93 | | | | | | 3.76 | 29.8 | 0.50 | 1.97 | | 811.65 |
| | | | | | | | 0.27 | | | | | | | 24 | 251.00 | 0.0387 | 15.35 | 48.23 | | | | | 0.0148 | 3.70 |
| 22 | St173+25;54.5'L | 0.64 | 11.02 | 0.76 | 0.49 | 8.41 | | 19.04 | 3.2 | 27.2 | 807.48 | 802.21 | 801.96 | | | | | | 3.73 | 31.4 | 0.25 | 0.91 | | 805.98 |
| | | | | | | | 0.14 | | | | | | | 27 | 62.00 | 0.0082 | 7.65 | 30.43 | | | | | 0.0088 | 0.54 |
| 23 | St172+63;55.5'L | 0.00 | 11.02 | 0.00 | 0.00 | 8.41 | | 19.18 | 3.2 | 27.1 | 806.42 | 801.45 | 801.20 | | | | | | 3.72 | 31.3 | 0.25 | 0.23 | | 804.52 |
| | | | | | | | 0.08 | | | | | | | 30 | 41.00 | 0.0090 | 8.60 | 42.21 | | | | | 0.0050 | 0.20 |
| 24 | St172+22;55.5'L | 13.07 | 24.09 | 0.40 | 5.23 | 13.64 | | 36.00 | 2.3 | 31.2 | 805.97 | 800.83 | 800.83 | | | | | | 2.64 | 36.0 | 0.25 | 0.29 | | 804.09 |
| | | | | | | | 0.04 | | | | | | | 36 ** | 12.00 | 0.0025 | 5.11 | 36.13 | | | | | 0.0025 | 0.03 |
| 25 | St172+22;43.5'L | 0.47 | 24.56 | 0.86 | 0.40 | 14.05 | | 36.04 | 2.3 | 32.1 | 805.13 | 800.80 | 800.80 | | | | | | 2.63 | 37.0 | 0.50 | 0.20 | | 803.77 |
| | | | | | | | 0.19 | | | | | | | 30 | 78.00 | 0.0059 | 6.95 | 34.13 | | | | | 0.0069 | 0.54 |
| 26 | St172+22;34.5'R | 0.26 | 24.82 | 0.83 | 0.22 | 14.26 | | 36.23 | 2.3 | 32.5 | 805.26 | 800.34 | 799.84 | | | | | | 2.63 | 37.4 | 0.50 | 0.38 | | 803.03 |
| | | | | | | | 0.06 | | | | | | | 36 | 22.00 | 0.0032 | 5.77 | 40.76 | | | | | 0.0027 | 0.06 |
| 27 | St172+22;57'R | 12.72 | 37.54 | 0.40 | 5.09 | 19.35 | | 45.50 | 1.9 | 37.5 | 804.70 | 799.77 | 799.77 | | | | | | 2.23 | 43.2 | 0.25 | 0.13 | | 802.59 |
| | | | | | | | 0.27 | | | | | | | 36 | 95.40 | 0.0032 | 5.83 | 41.19 | | | | | 0.0036 | 0.34 |
| 28 | St171+34;92.4'R | 12.39 | 49.93 | 0.40 | 4.96 | 24.31 | | 45.77 | 1.9 | 46.9 | 804.56 | 799.46 | 799.46 | | | | | | 2.22 | 54.0 | 0.25 | 0.13 | | 802.12 |
| | | | | | | | 0.33 | | | | | | | 36 EX. | 184.00 | 0.0080 | 9.17 | 64.80 | | | | | 0.0056 | 1.03 |
| 29 | St169+54;106'R | 2.39 | 52.32 | 0.80 | 1.91 | 26.22 | | 46.11 | 1.9 | 50.3 | 804.83 | 797.98 | 797.98 | | | | | | 2.21 | 58.0 | 0.50 | 0.65 | | 800.96 |
| | | | | | | | 0.03 | | | | | | | 36 EX. | 20.00 | 0.0100 | 10.22 | 72.26 | | | | | 0.0064 | 0.13 |
| 30 | St169+32;106'R | | 52.32 | | 0.00 | 26.22 | | 46.14 | 1.9 | 50.3 | | 797.78 | | | | | | | 2.21 | 57.9 | 0.10 | 0.16 | | 800.18 |

* GRATE ELEVATION AT THE FACE OF CURB INCLUDING 1/2" DEPRESION

** 36" EQUIVALENT 29" x 45"

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

JOB NO. 44959
DESIGNED BY: JED
DRAWN BY: MKK
CHECKED BY: JED
APPROVED BY: DKM
DATE: OCTOBER 2013

STORM SEWER COMPUTATIONS
EMERALD PARKWAY (TO SCIOTO RIVER)

SCALE: NONE

SHEET NO. 117 OF 275

PLOTTED: 10/29/2013 11:25:55 AM
P:\PR44959\cadd\STORM-COMPS.dwg 10/25/2013 5:32:21 PM Ward, Will

| REF NO. | LOCATION | SUB AREA AC. | SUM AREA AC. | C | SUB CA AC. | SUM CA AC. | TIME IN PIPE | SUM TIME MIN | 100 YEAR DESIGN STORM I IN/HR | Q CFS | GRATE * ELEV. | INVERT ELEV. IN | INVERT ELEV. OUT | PIPE DIA. IN | PIPE LENGTH FT | PIPE SLOPE FT/FT | PIPE V FPS | PIPE Q CFS | 100 YEAR HYDRAULIC GRADIENT I IN/HR | Q CFS | MINOR LOSS COEFF. K | MINOR LOSSES Hm (FT) | SLOPE FT/FT | GRADIENT ELEV. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 71 | St216+60;34.5'R | 0.14 | 0.14 | 0.76 | 0.11 | 0.11 | | 10.00 | 7.6 | 0.8 | 889.85 | | 886.29 | | | | | | 7.60 | 0.8 | 0.25 | | | 890.59 |
| | | | | | | | 0.32 | | | | | | | 12 | 68.00 | 0.0051 | 3.53 | 2.77 | | | | | 0.0004 | 0.03 |
| 72 | St216+60;34.5'L | 0.39 | 0.53 | 0.76 | 0.30 | 0.40 | | 10.32 | 7.5 | 3.0 | 889.85 | 885.94 | 885.69 | | | | | | 7.52 | 3.0 | 0.10 | 0.02 | | 890.56 |
| | | | | | | | 0.05 | | | | | | | 15 | 12.50 | 0.0048 | 3.95 | 4.85 | | | | | 0.0019 | 0.02 |
| 73 | St216+60;46.5'L | | 0.53 | | 0.00 | 0.40 | | 10.37 | 7.5 | 3.0 | 890.71 | 885.63 | 885.63 | | | | | | 7.50 | 3.0 | 0.50 | 0.12 | | 890.52 |
| | | | | | | | 0.24 | | | | | | | 15 | 62.70 | 0.0059 | 4.38 | 5.38 | | | | | 0.0019 | 0.12 |
| 74 | St.217+25;46.5'L | 0.98 | 1.51 | 0.76 | 0.74 | 1.15 | | 10.61 | 7.4 | 8.5 | 890.99 | 885.26 | 884.51 | | | | | | 7.44 | 8.5 | 0.50 | 0.15 | | 890.28 |
| | | | | | | | 0.89 | | | | | | | 24 | 218.80 | 0.0028 | 4.12 | 12.94 | | | | | 0.0012 | 0.27 |
| 75 | St219+50;46.5'L | | 1.51 | | 0.00 | 1.15 | | 11.50 | 7.2 | 8.3 | 893.27 | 883.90 | 883.90 | | | | | | 7.22 | 8.3 | 0.10 | 0.03 | | 889.86 |
| | | | | | | | 0.87 | | | | | | | 24 | 217.00 | 0.0028 | 4.14 | 12.99 | | | | | 0.0011 | 0.25 |
| 76 | St480+50;42.0'L | 0.52 | 2.03 | 0.76 | 0.40 | 1.54 | | 12.37 | 7.0 | 10.8 | 894.09 | 883.29 | 883.04 | | | | | | 7.03 | 10.8 | 0.50 | 0.13 | | 889.59 |
| | | | | | | | 1.03 | | | | | | | 27 | 240.00 | 0.0021 | 3.89 | 15.47 | | | | | 0.0010 | 0.25 |
| 77 | St222+25;115R | 1.56 | 3.59 | 0.62 | 0.97 | 2.51 | | 13.40 | 6.8 | 17.1 | 896.55 | 882.53 | 879.78 | | | | | | 6.81 | 17.1 | 0.50 | 0.12 | | 889.21 |
| | | | | | | | 0.92 | | | | | | | 60 | 225.00 | 0.0008 | 4.06 | 79.80 | | | | | 0.0000 | 0.01 |
| 78 | St224+55;103.5'R | 1.52 | 5.11 | 0.76 | 1.16 | 3.67 | | 14.32 | 6.6 | 24.3 | 891.36 | 879.60 | 885.26 | | | | | | 6.63 | 24.3 | 0.10 | 0.03 | | 889.08 |
| | | | | | | | 0.01 | | | | | | | 24 | 20.00 | 0.1630 | 31.50 | 98.95 | | | | | 0.0098 | 0.20 |
| 79 | St224+75;102.3'R | 0.00 | 5.11 | | 0.00 | 3.67 | | 14.33 | 6.6 | 24.3 | 888.54 | 882.00 | 878.54 | | | | | | 6.63 | 24.3 | 0.10 | 1.54 | | 881.88 |
| | | | | | | | 0.16 | ` | | | | | | 30 | 68.00 | 0.0059 | 6.94 | 34.08 | | | | | 0.0030 | 0.20 |
| 79A | St225+42.9;98.5'R | 0.00 | 5.11 | | 0.00 | 3.67 | | 14.50 | 6.6 | 24.2 | | 878.14 | 878.14 | | | | | | 6.60 | 24.2 | 0.50 | 0.37 | | 880.14 |
| 70 | St216+25;34.5'R | 0.25 | 0.25 | 0.76 | 0.19 | 0.19 | | 10.00 | 7.6 | 1.4 | 889.82 | | 886.42 | | | | | | 7.60 | 1.4 | 0.25 | 0.00 | | 886.96 |
| | | | | | | | 0.37 | | | | | | | 12 | 68.00 | 0.0040 | 3.10 | 2.43 | | | | | 0.0014 | |
| 80 | St216+25;34.5'L | 0.25 | 0.78 | 0.76 | 0.19 | 0.38 | | 10.37 | 7.5 | 2.9 | 889.92 | 886.15 | 886.15 | | | | | | 7.50 | 2.9 | 0.25 | 0.04 | | 886.96 |
| | | | | | | | 0.15 | | | | | | | 12 | 34.10 | 0.0062 | 3.86 | 3.03 | | | | | 0.0055 | 0.19 |
| 72 | St216+60;34.5'L | | 0.78 | | 0.00 | 0.38 | | 10.51 | 7.5 | 2.8 | 889.85 | 885.94 | 885.94 | | | | | | 7.47 | 2.8 | 0.50 | 0.12 | | 886.74 |
| 81 | St217+25;34.5'R | 0.49 | 0.49 | 0.76 | 0.37 | 0.37 | | 10.00 | 7.6 | 2.8 | 890.13 | | 886.63 | | | | | | 7.60 | 2.8 | 0.25 | 0.00 | | 887.04 |
| | | | | | | | 0.32 | | | | | | | 12 | 68.00 | 0.0051 | 3.53 | 2.77 | | | | | 0.0054 | 0.37 |
| 82 | St217+25;34.5'L | 0.49 | 0.98 | 0.76 | 0.37 | 0.74 | | 10.32 | 7.5 | 5.6 | 890.13 | 886.28 | 886.28 | | | | | | 7.52 | 5.6 | 0.50 | 0.10 | | 886.67 |
| | | | | | | | 0.02 | | | | | | | 12 | 12.50 | 0.0616 | 12.20 | 9.58 | | | | | 0.0210 | 0.26 |
| 74 | St217+25;46.5'L | | 0.76 | | 0.00 | 0.74 | | 10.34 | 7.5 | 5.6 | 890.99 | 885.51 | 885.26 | | | | | | 7.51 | 5.6 | 0.50 | 1.16 | | 886.31 |
| 83 | St487+34;13.7'R | 0.26 | 0.26 | 0.76 | 0.20 | 0.20 | | 10.00 | 7.6 | 1.5 | 891.64 | | 888.04 | | | | | | 7.60 | 1.5 | 0.25 | 0.00 | | 888.50 |
| | | | | | | | 0.13 | | | | | | | 12 | 26.40 | 0.0049 | 3.45 | 2.71 | | | | | 0.0015 | 0.04 |
| 84 | St487+34;13.7'L | 0.26 | 0.52 | 0.76 | 0.20 | 0.40 | | 10.13 | 7.6 | 3.0 | 891.64 | 887.91 | 887.66 | | | | | | 7.57 | 3.0 | 0.50 | 0.09 | | 888.46 |
| | | | | | | | 0.05 | | | | | | | 15 | 12.00 | 0.0050 | 4.03 | 4.95 | | | | | 0.0018 | 0.02 |
| 85 | St487+34;25.7'L | | 0.52 | | 0.00 | 0.40 | | 10.18 | 7.6 | 3.0 | 892.27 | 887.60 | 887.60 | | | | | | 7.55 | 3.0 | 0.50 | 0.13 | | 888.35 |
| | | | | | | | 0.53 | | | | | | | 15 | 126.20 | 0.0048 | 3.96 | 4.87 | | | | | 0.0018 | 0.23 |
| 76 | St480+50;42'L | | 0.52 | | 0.00 | 0.40 | | 10.71 | 7.4 | 2.9 | 894.09 | 886.99 | 883.04 | | | | | | 7.42 | 2.9 | 0.50 | 0.12 | | 887.99 |
| 86 | St492+00;42.2'R | 0.44 | 0.44 | 0.76 | 0.33 | 0.33 | | 15.00 | 6.5 | 2.2 | 893.00 | | 890.00 | | | | | | 6.51 | 2.2 | 0.25 | 0.00 | | 887.11 |
| | | | | | | | 0.09 | | | | | | | 12 | 68.00 | 0.0631 | 12.34 | 9.70 | | | | | 0.0032 | 0.22 |
| 87 | St491+32;44'R | 0.29 | 0.73 | 0.40 | 0.12 | 0.45 | | 15.09 | 6.5 | 2.9 | 892.20 | 885.71 | 885.46 | | | | | | 6.49 | 2.9 | 0.50 | 1.18 | | 886.90 |
| | | | | | | | 0.10 | | | | | | | 15 | 24.00 | 0.0050 | 4.03 | 4.95 | | | | | 0.0017 | 0.04 |
| 88 | St491+32;19.9'R | 0.31 | 1.04 | 0.76 | 0.24 | 0.69 | | 15.19 | 6.5 | 4.4 | 893.18 | 885.34 | 885.34 | | | | | | 6.47 | 4.4 | 0.50 | 0.13 | | 885.67 |
| | | | | | | | 0.20 | | | | | | | 15 | 47.80 | 0.0050 | 4.04 | 4.96 | | | | | 0.0028 | 0.13 |
| 89 | St491+32;27.9'L | 0.52 | 1.56 | 0.54 | 0.28 | 0.97 | | 15.39 | 6.4 | 6.2 | 893.03 | 885.10 | 885.10 | | | | | | 6.44 | 6.2 | 0.50 | 0.13 | | 885.41 |
| | | | | | | | 0.31 | | | | | | | 15 | 95.50 | 0.0081 | 5.12 | 6.28 | | | | | 0.0079 | 0.76 |
| 77 | St222+25;115'R | | 1.56 | | 0.00 | 0.97 | | 15.70 | 6.4 | 6.2 | 896.55 | 884.33 | 879.78 | | | | | | 6.38 | 6.2 | 0.50 | 0.20 | | 884.53 |
| 98 | St492+86;25.5'L | 0.20 | 0.20 | 0.40 | 0.08 | 0.08 | | 15.00 | 6.5 | 0.5 | 894.77 | | 890.77 | | | | | | 6.51 | 0.5 | 0.25 | 0.00 | | 889.20 |
| | | | | | | | 0.36 | | | | | | | 12 | 154.00 | 0.0214 | 7.18 | 5.64 | | | | | 0.0002 | 0.03 |
| 89 | St491+32;27.4'L | | 0.20 | | 0.00 | 0.08 | | 15.36 | 6.4 | 0.5 | 893.03 | 887.48 | 885.10 | | | | | | 6.44 | 0.5 | 0.50 | 0.40 | | 889.17 |

* GRATE ELEVATION AT THE FACE OF CURB INCLUDING 1/2" DEPRESION

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

JOB NO. 44959
DESIGNED BY: JED
DRAWN BY: MKK
CHECKED BY: JED
APPROVED BY: DKM
DATE: OCTOBER 2013

STORM SEWER COMPUTATIONS
EMERALD PARKWAY (TO BILLINGSLEY CREEK)
BRIGHT ROAD (WEST & EAST OF ROUNDABOUT)

SCALE: NONE

SHEET NO. 118 OF 275

PLOTTED: 10/29/2013 11:26:57 AM
P:\PR44959\cadd\STORM-COMPS.dwg 10/25/2013 5:32:21 PM Ward, Will

| REF NO. | LOCATION | SUB AREA AC. | SUM AREA AC. | C | SUB CA AC. | SUM CA AC. | TIME IN PIPE | SUM TIME MIN | 5 YEAR DESIGN STORM I IN/HR | Q CFS | GRATE * ELEV. | INVERT ELEV. IN | INVERT ELEV. OUT | PIPE DIA. IN | PIPE LENGTH FT | PIPE SLOPE FT/FT | PIPE V FPS | PIPE Q CFS | 10 YEAR HYDRAULIC GRADIENT I IN/HR | Q CFS | MINOR LOSS COEFF. K | MINOR LOSSES Hm (FT) | SLOPE FT/FT | GRADIENT ELEV. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 93 | St.225+75;34.5'L | 0.23 | 0.23 | 0.76 | 0.17 | 0.17 | | 10.00 | 4.2 | 0.7 | 888.98 | | 885.48 | | | | | | 4.84 | 0.8 | 0.25 | | | 886.15 |
| | | | | | | | 0.18 | | | | | | | 12 | 38.00 | 0.0050 | 3.48 | 2.73 | | | | | 0.0005 | 0.02 |
| 97 | St225+37;34.5'L | 0.09 | 0.32 | 0.76 | 0.07 | 0.24 | | 10.18 | 4.2 | 1.0 | 888.91 | 885.29 | 885.29 | | | | | | 4.81 | 1.2 | 0.10 | 0.02 | | 886.13 |
| | | | | | | | 0.18 | | | | | | | 12 | 37.00 | 0.0049 | 3.43 | 2.69 | | | | | 0.0009 | 0.03 |
| 96 | St225+00;34.5'L | 0.45 | 0.77 | 0.76 | 0.34 | 0.59 | | 10.36 | 4.1 | 2.4 | 888.99 | 885.11 | 885.11 | | | | | | 4.78 | 2.8 | 0.50 | 0.09 | | 886.08 |
| | | | | | | | 0.32 | | | | | | | 12 | 68.00 | 0.0051 | 3.53 | 2.77 | | | | | 0.0052 | 0.36 |
| 90 | St225+00;34.5'R | 0.05 | 0.82 | 0.76 | 0.04 | 0.62 | | 10.68 | 4.1 | 2.5 | 888.98 | 884.76 | 884.51 | | | | | | 4.73 | 2.9 | 0.50 | 0.10 | | 885.63 |
| | | | | | | | 0.20 | | | | | | | 15 | 47.00 | 0.0049 | 3.99 | 4.90 | | | | | 0.0018 | 0.08 |
| 94 | St225+53;34.5'R | 0.40 | 1.22 | | 0.00 | 0.62 | | 10.88 | 4.1 | 2.5 | 889.36 | 884.28 | 884.28 | | | | | | 4.69 | 2.9 | 0.50 | 0.12 | | 885.45 |
| | | | | | | | 0.18 | | | | | | | 15 | 69.50 | 0.0134 | 6.60 | 8.10 | | | | | 0.0017 | 0.12 |
| 78 | St224+55:103.5'R | | 1.22 | | 0.00 | 0.62 | | 11.06 | 4.0 | 2.5 | 891.36 | 883.35 | | | | | | | 4.67 | 2.9 | 0.50 | 0.34 | | 884.35 |
| 92 | St225+75;34.5'R | 0.22 | 0.22 | 0.76 | 0.17 | 0.17 | | 10.00 | 4.2 | 0.7 | 888.99 | | 885.49 | | | | | | 4.84 | 0.8 | 0.25 | 0.00 | | 885.79 |
| | | | | | | | 0.18 | | | | | | | 12 | 38.00 | 0.0050 | 3.48 | 2.73 | | | | | 0.0004 | 0.02 |
| 91 | St225+37;34.5'R | 0.08 | 0.30 | 0.76 | 0.06 | 0.23 | | 10.18 | 4.2 | 0.9 | 888.91 | 885.30 | 885.30 | | | | | | 4.81 | 1.1 | 0.10 | 0.02 | | 885.77 |
| | | | | | | | 0.10 | | | | | | | 12 | 37.00 | 0.0146 | 5.94 | 4.66 | | | | | 0.0052 | 0.19 |
| 90 | St225+00;34.5'R | | 0.77 | | 0.00 | 0.23 | | 10.47 | 4.1 | 0.9 | 888.98 | 884.76 | 884.51 | | | | | | 4.76 | 1.1 | 0.50 | 0.27 | | 885.56 |
| 100 | St495+09;18.0'R | 0.18 | 0.18 | 0.40 | 0.07 | 0.07 | | 15.00 | 3.6 | 0.3 | 896.32 | | 894.32 | | | | | | 4.14 | 0.3 | 0.25 | 0.00 | | 883.59 |
| | | | | | | | 0.07 | | | | | | | 12 | 34.30 | 0.0268 | 8.05 | 6.32 | | | | | 0.0001 | 0.00 |
| 101 | St495+43;21.0'R | 1.28 | 1.46 | 0.40 | 0.51 | 0.58 | | 15.07 | 3.6 | 2.1 | 895.40 | 893.40 | 893.40 | | | | | | 4.13 | 2.4 | 0.50 | 0.50 | | 883.58 |
| | | | | | | | 0.09 | | | | | | | 12 | 48.00 | 0.0338 | 9.03 | 7.09 | | | | | 0.0039 | 0.19 |
| 102 | St495+43;27.0'L | 1.54 | 3.00 | 0.40 | 0.62 | 1.20 | | 15.16 | 3.6 | 4.3 | 894.00 | 891.78 | 891.28 | | | | | | 4.12 | 4.9 | 0.50 | 0.63 | | 882.89 |
| | | | | | | | 1.11 | | | | | | | 18 | 593.00 | 0.0191 | 8.91 | 15.74 | | | | | 0.0019 | 1.12 |
| 103 | St493+44;585'L | | 3.00 | | 0.00 | 1.20 | | 16.27 | 3.5 | 4.2 | | 879.94 | | | | | | | 4.00 | 4.8 | 0.10 | 0.12 | | 881.14 |
| 104 | St496+02;13'L | 1.26 | 1.26 | 0.40 | 0.50 | 0.50 | | 15.00 | 3.6 | 1.8 | | | 895.48 | | | | | | 4.14 | 2.1 | 0.10 | 0.00 | | 892.76 |
| | | | | | | | 0.08 | | | | | | | 12 | 61.00 | 0.0607 | 12.10 | 9.51 | | | | | 0.0029 | 0.18 |
| 102 | St495+43;27'L | | 1.26 | | 0.00 | 0.50 | | 15.08 | 3.6 | 1.8 | 894.00 | 891.78 | 891.28 | | | | | | 4.13 | 2.1 | 0.50 | 1.14 | | 892.58 |

* GRATE ELEVATION AT THE FACE OF CURB INCLUDING 1/2" DEPRESION

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

JOB NO. 44959
DESIGNED BY: JED
DRAWN BY: MKK
CHECKED BY: JED
APPROVED BY: DKM
DATE: OCTOBER 2013

STORM SEWER COMPUTATIONS
EMERALD PARKWAY (NORTH OF ROUNDABOUT)
BRIGHT ROAD (EAST OF ROUNDABOUT)

SCALE: NONE

SHEET NO. 119 OF 275

PLOTTED: 10/27/2013 5:09:15 PM
P:\PR44959\cadd\STORM-COMPS.dwg 10/25/2013 5:32:21 PM Ward, Will

| REF NO. | LOCATION | SUB AREA AC. | SUM AREA AC. | C | SUB CA AC. | SUM CA AC. | TIME IN PIPE | SUM TIME MIN | 5 YEAR DESIGN STORM I IN/HR | Q CFS | GRATE * ELEV. | INVERT ELEV. IN | INVERT ELEV. OUT | PIPE DIA. IN | PIPE LENGTH FT | PIPE SLOPE FT/FT | PIPE V FPS | PIPE Q CFS | 10 YEAR HYDRAULIC GRADIENT I IN/HR | Q CFS | MINOR LOSS COEFF. K | MINOR LOSSES Hm (FT) | SLOPE FT/FT | GRADIENT ELEV. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 51 | St180+25;34.5'R | 0.72 | 0.72 | 0.76 | 0.55 | 0.55 | | 10.00 | 4.2 | 2.3 | 838.93 | | 835.78 | | | | | | 4.84 | 2.6 | 0.25 | | | 836.53 |
| | | | | | | | 0.33 | | | | | | | 12 | 68.00 | 0.0050 | 3.48 | 2.73 | | | | | 0.0047 | 0.32 |
| 52 | St180+25;34.5'L | 0.75 | 1.47 | 0.76 | 0.57 | 1.12 | | 10.33 | 4.1 | 4.6 | 838.93 | 835.44 | 835.19 | | | | | | 4.78 | 5.3 | 0.10 | 0.02 | | 836.21 |
| | | | | | | | 0.05 | | | | | | | 15 | 12.50 | 0.0056 | 4.27 | 5.24 | | | | | 0.0058 | 0.07 |
| 19 | St180+25;46.5'L | | 1.47 | | 0.00 | 1.12 | | 10.37 | 4.1 | 4.6 | 839.79 | 835.12 | 834.62 | | | | | | 4.78 | 5.3 | 0.50 | 0.14 | | 836.12 |
| 49 | St186+00;34.5'R | 0.42 | 0.42 | 0.76 | 0.32 | 0.32 | | 10.00 | 4.2 | 1.3 | 854.18 | | 849.52 | | | | | | 4.84 | 1.5 | 0.25 | 0.00 | | 850.12 |
| | | | | | | | 0.33 | | | | | | | 12 | 68.00 | 0.0050 | 3.48 | 2.73 | | | | | 0.0016 | 0.11 |
| 50 | St186+00;34.5'L | 0.42 | 0.84 | 0.76 | 0.32 | 0.64 | | 10.33 | 4.1 | 2.6 | 854.18 | 849.18 | 849.18 | | | | | | 4.78 | 3.1 | 0.10 | 0.02 | | 850.01 |
| | | | | | | | 0.06 | | | | | | | 12 | 12.50 | 0.0056 | 3.68 | 2.89 | | | | | 0.0063 | 0.08 |
| 17 | St186+00;46.5'L | | 0.84 | | 0.00 | 0.64 | | 10.38 | 4.1 | 2.6 | 855.04 | 849.11 | 848.36 | | | | | | 4.77 | 3.0 | 0.50 | 0.11 | | 849.91 |
| 53 | St175+75;34.5'R | 0.54 | 0.54 | 0.76 | 0.41 | 0.41 | | 10.00 | 4.2 | 1.7 | 816.53 | | 813.38 | | | | | | 4.84 | 2.0 | 0.25 | 0.00 | | 813.99 |
| | | | | | | | 0.37 | | | | | | | 12 | 77.00 | 0.0049 | 3.45 | 2.71 | | | | | 0.0026 | 0.20 |
| 54 | St175+75;42.0'L | 0.57 | 1.11 | 0.76 | 0.43 | 0.84 | | 10.75 | 4.1 | 3.4 | 816.41 | 813.00 | 812.75 | | | | | | 4.72 | 4.0 | 0.10 | 0.02 | | 813.79 |
| | | | | | | | 0.05 | | | | | | | 15 | 12.50 | 0.0056 | 4.27 | 5.24 | | | | | 0.0032 | 0.04 |
| 21 | St175+75;54.0'L | | 1.11 | | | 0.84 | | 0.05 | 12.1 | 10.2 | 817.26 | 812.68 | 812.18 | | | | | | 13.99 | 11.8 | 0.50 | 0.14 | | 813.73 |
| 55 | St173+25;34.5'R | 0.30 | 0.30 | 0.76 | 0.23 | 0.23 | | 10.00 | 4.2 | 1.0 | 808.09 | | 803.66 | | | | | | 4.84 | 1.1 | 0.25 | 0.00 | | 804.74 |
| | | | | | | | 0.37 | | | | | | | 12 | 77.00 | 0.0049 | 3.45 | 2.71 | | | | | 0.0008 | 0.06 |
| 56 | St173+25;42.5'L | 0.34 | 0.64 | 0.76 | 0.26 | 0.49 | | 10.37 | 4.1 | 2.0 | 807.97 | 803.28 | 803.28 | | | | | | 4.78 | 2.3 | 0.10 | 0.02 | | 804.67 |
| | | | | | | | 0.06 | | | | | | | 12 | 12.50 | 0.0056 | 3.68 | 2.89 | | | | | 0.0036 | 0.05 |
| 22 | St173+25;54.5'L | | 0.64 | | 0.00 | 0.49 | | 10.43 | 4.1 | 2.0 | 807.48 | 803.21 | 801.96 | | | | | | 4.77 | 2.3 | 0.50 | 0.11 | | 804.61 |
| 57 | St37+32.8;73.5'L | 11.50 | 11.50 | 0.40 | 4.60 | 4.60 | | 10.00 | 4.2 | 19.2 | 806.19 | | 802.79 | | | | | | 4.84 | 22.3 | 0.25 | 0.00 | | 803.29 |
| | | | | | | | 0.09 | | | | | | | 30 | 69.50 | 0.0197 | 12.71 | 62.39 | | | | | 0.0025 | 0.17 |
| 58 | St172+21;66'L | 1.57 | 13.07 | 0.40 | 0.63 | 5.23 | | 10.09 | 4.2 | 21.8 | 804.60 | 801.42 | 800.92 | | | | | | 4.82 | 25.2 | 0.10 | 0.25 | | 803.11 |
| | | | | | | | 0.02 | | | | | | | 30 | 10.50 | 0.0086 | 8.38 | 41.14 | | | | | 0.0032 | 0.03 |
| 24 | St172+22;55.5'L | | 13.07 | | 0.00 | 5.23 | | 10.11 | 4.2 | 21.8 | 805.99 | 800.83 | | | | | | | 4.82 | 25.2 | 0.50 | 0.55 | | 802.83 |
| 59 | St172+32;43.5'L | 0.13 | 0.13 | 0.76 | 0.10 | 0.10 | | 10.00 | 4.2 | 0.4 | 805.21 | | 802.35 | | | | | | 4.84 | 0.5 | 0.25 | 0.00 | | 803.09 |
| | | | | | | | 0.05 | | | | | | | 12 | 10.00 | 0.0050 | 3.48 | 2.73 | | | | | 0.0002 | 0.00 |
| 25 | St172+22;43.5'L | | | | 0.00 | 0.10 | | 10.05 | 4.2 | 0.4 | 805.13 | 802.30 | 800.80 | | | | | | 4.83 | 0.5 | 0.10 | 0.02 | | 803.09 |
| 60 | St172+32;34.5'R | 0.11 | 0.11 | 0.76 | 0.08 | 0.08 | | 10.00 | 4.2 | 0.3 | 805.35 | | 801.89 | | | | | | 4.84 | 0.4 | 0.25 | 0.00 | | 802.64 |
| | | | | | | | 0.05 | | | | | | | 12 | 10.00 | 0.0050 | 3.48 | 2.73 | | | | | 0.0001 | 0.00 |
| 26 | St172+22;34.5'R | | 0.11 | 0.76 | 0.00 | 0.08 | | 10.05 | 4.2 | 0.3 | 805.26 | 801.84 | 800.34 | | | | | | 4.83 | 0.4 | 0.10 | 0.02 | | 802.64 |

* GRATE ELEVATION AT THE FACE OF CURB
INCLUDING 1/2" DEPRESION

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

JOB NO. 44959
DESIGNED BY: JED
DRAWN BY: MKK
CHECKED BY: JED
APPROVED BY: DKM
DATE: OCTOBER 2013

STORM SEWER COMPUTATIONS
EMERALD PARKWAY LATERALS
(SOUTH OF ROUNDABOUT)

SCALE: NONE

SHEET NO. 120 OF 275

PLOTTED: 10/29/2013 11:27:26 AM
P:\PR44959\cadd\STORM-COMPS.dwg 10/25/2013 5:32:21 PM Ward, Will

| REF NO. | LOCATION | SUB AREA AC. | SUM AREA AC. | C | SUB CA AC. | SUM CA AC. | TIME IN PIPE | SUM TIME MIN | 5 YEAR DESIGN STORM I IN/HR | Q CFS | GRATE * ELEV. | INVERT ELEV. IN | INVERT ELEV. OUT | PIPE DIA. IN | PIPE LENGTH FT | PIPE SLOPE FT/FT | PIPE V FPS | PIPE Q CFS | 10 YEAR HYDRAULIC GRADIENT I IN/HR | Q CFS | MINOR LOSS COEFF. K | MINOR LOSSES Hm (FT) | SLOPE FT/FT | GRADIENT ELEV. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 35 | St207+0;34.5'R | 0.64 | 0.64 | 0.76 | 0.49 | 0.49 | | 10.00 | 4.2 | 2.0 | 886.82 | | 883.69 | | | | | | 4.84 | 2.4 | 0.25 | | | 884.36 |
| | | | | | | | 0.33 | | | | | | | 12 | 68.00 | 0.0050 | 3.48 | 2.73 | | | | | 0.0037 | 0.25 |
| 36 | St207+00;34.5'L | 0.64 | 1.28 | 0.76 | 0.49 | 0.97 | | 10.33 | 4.1 | 4.0 | 886.82 | 883.35 | 883.10 | | | | | | 4.78 | 4.7 | 0.10 | 0.02 | | 884.10 |
| | | | | | | | 0.05 | | | | | | | 15 | 12.50 | 0.0056 | 4.27 | 5.24 | | | | | 0.0044 | 0.06 |
| 6 | St207+00;46.5'L | | 1.28 | | 0.00 | 0.97 | | 10.37 | 4.1 | 4.0 | 887.68 | 883.03 | 882.78 | | | | | | 4.78 | 4.6 | 0.50 | 0.14 | | 884.03 |
| 37 | St203+25;34.5'R | 0.53 | 0.53 | 0.76 | 0.40 | 0.40 | | 10.00 | 4.2 | 1.7 | 880.82 | | 877.69 | | | | | | 4.84 | 1.9 | 0.25 | 0.00 | | 878.26 |
| | | | | | | | 0.33 | | | | | | | 12 | 68.00 | 0.0050 | 3.48 | 2.73 | | | | | 0.0025 | 0.17 |
| 38 | St203+25;34.5'L | 0.53 | 1.06 | 0.76 | 0.40 | 0.81 | | 10.33 | 4.1 | 3.3 | 880.82 | 877.35 | 877.10 | | | | | | 4.78 | 3.9 | 0.10 | 0.02 | | 878.09 |
| | | | | | | | 0.05 | | | | | | | 15 | 12.50 | 0.0056 | 4.27 | 5.24 | | | | | 0.0030 | 0.04 |
| 8 | St203+25;46.5'L | | 1.06 | | 0.00 | 0.81 | | 10.37 | 4.1 | 3.3 | 881.68 | 877.03 | 876.78 | | | | | | 4.78 | 3.8 | 0.50 | 0.14 | | 878.03 |
| 39 | St200+00;34.5'R | 0.40 | 0.40 | 0.77 | 0.31 | 0.31 | | 10.00 | 4.2 | 1.3 | 874.58 | | 871.45 | | | | | | 4.84 | 1.5 | 0.25 | 0.00 | | 871.93 |
| | | | | | | | 0.33 | | | | | | | 12 | 68.00 | 0.0050 | 3.48 | 2.73 | | | | | 0.0015 | 0.10 |
| 40 | St200+00;34.5'L | 0.46 | 0.86 | 0.76 | 0.35 | 0.66 | | 10.70 | 4.1 | 2.7 | 874.58 | 871.11 | 870.86 | | | | | | 4.72 | 3.1 | 0.10 | 0.02 | | 871.83 |
| | | | | | | | 0.05 | | | | | | | 15 | 12.50 | 0.0056 | 4.27 | 5.24 | | | | | 0.0020 | 0.02 |
| 10 | St200+00;46.5'L | | 0.86 | | | 0.66 | | 0.05 | 12.1 | 7.9 | 875.44 | 870.79 | 870.54 | | | | | | 13.99 | 9.2 | 0.50 | 0.14 | | 871.79 |
| 41 | St196+75;34.5'R | 0.39 | 0.39 | 0.77 | 0.30 | 0.30 | | 10.00 | 4.2 | 1.3 | 868.34 | | 865.21 | | | | | | 4.84 | 1.5 | 0.25 | 0.00 | | 865.69 |
| | | | | | | | 0.33 | | | | | | | 12 | 68.00 | 0.0050 | 3.48 | 2.73 | | | | | 0.0014 | 0.10 |
| 42 | St196+75;34.5'L | 0.46 | 0.85 | 0.76 | 0.35 | 0.65 | | 10.33 | 4.1 | 2.7 | 868.34 | 864.87 | 864.62 | | | | | | 4.78 | 3.1 | 0.10 | 0.02 | | 865.59 |
| | | | | | | | 0.05 | | | | | | | 15 | 12.50 | 0.0056 | 4.27 | 5.24 | | | | | 0.0020 | 0.02 |
| 12 | St196+75;46.5'L | | 0.85 | | 0.00 | 0.65 | | 10.37 | 4.1 | 2.7 | 869.20 | 864.55 | 864.30 | | | | | | 4.78 | 3.1 | 0.50 | 0.14 | | 865.55 |
| 43 | St195+00;34.5'R | 0.21 | 0.21 | 0.77 | 0.16 | 0.16 | | 10.00 | 4.2 | 0.7 | 865.98 | | 862.85 | | | | | | 4.84 | 0.8 | 0.25 | 0.00 | | 863.31 |
| | | | | | | | 0.33 | | | | | | | 12 | 68.00 | 0.0050 | 3.48 | 2.73 | | | | | 0.0004 | 0.03 |
| 44 | St195+00;34.5'L | 0.25 | 0.46 | 0.76 | 0.19 | 0.35 | | 10.33 | 4.1 | 1.5 | 865.98 | 862.51 | 862.51 | | | | | | 4.78 | 1.7 | 0.10 | 0.02 | | 863.28 |
| | | | | | | | 0.06 | | | | | | | 12 | 12.50 | 0.0056 | 3.68 | 2.89 | | | | | 0.0019 | 0.02 |
| 13 | St195+00;46.5'L | | 0.46 | | 0.00 | 0.35 | | 10.38 | 4.1 | 1.5 | 866.84 | 862.44 | 861.69 | | | | | | 4.77 | 1.7 | 0.50 | 0.11 | | 863.24 |
| 45 | St192+75;34.5'R | 0.27 | 0.27 | 0.77 | 0.21 | 0.21 | | 10.00 | 4.2 | 0.9 | 863.91 | | 860.14 | | | | | | 4.84 | 1.0 | 0.25 | 0.00 | | 885.59 |
| | | | | | | | 0.33 | | | | | | | 12 | 68.00 | 0.0050 | 3.48 | 2.73 | | | | | 0.0007 | 0.05 |
| 46 | St192+75;34.5'L | 0.32 | 0.59 | 0.76 | 0.24 | 0.45 | | 10.33 | 4.1 | 1.9 | 863.91 | 859.80 | 859.80 | | | | | | 4.78 | 2.2 | 0.10 | 0.02 | | 885.55 |
| | | | | | | | 0.06 | | | | | | | 12 | 12.50 | 0.0056 | 3.68 | 2.89 | | | | | 2.0000 | 25.00 |
| 14 | St192+75;46.5'L | | 0.59 | | 0.00 | 0.45 | | 10.38 | 4.1 | 1.9 | 864.77 | 859.73 | 858.98 | | | | | | 4.77 | 2.2 | 0.50 | 0.11 | | 860.53 |
| 47 | St189+00;34.5'R | 0.49 | 0.49 | 0.77 | 0.38 | 0.38 | | 10.00 | 4.2 | 1.6 | 859.58 | | 854.96 | | | | | | 4.84 | 1.8 | 0.25 | 0.00 | | 855.56 |
| | | | | | | | 0.33 | | | | | | | 12 | 68.00 | 0.0050 | 3.48 | 2.73 | | | | | 0.0022 | 0.15 |
| 48 | St189+00;34.5"L | 0.53 | 1.02 | 0.76 | 0.40 | 0.78 | | 10.33 | 4.1 | 3.2 | 859.58 | 854.62 | 854.37 | | | | | | 4.78 | 3.7 | 0.10 | 0.02 | | 855.40 |
| | | | | | | | 0.05 | | | | | | | 15 | 12.50 | 0.0056 | 4.27 | 5.24 | | | | | 0.0028 | 0.04 |
| 16 | St189+00;46.5'L | | 1.02 | | 0.00 | 0.78 | | 10.37 | 4.1 | 3.2 | 860.44 | 854.30 | 853.80 | | | | | | 4.78 | 3.7 | 0.50 | 0.14 | | 855.35 |

* GRATE ELEVATION AT THE FACE OF CURB INCLUDING 1/2" DEPRESION

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

JOB NO. 44959
DESIGNED BY: JED
DRAWN BY: MKK
CHECKED BY: JED
APPROVED BY: DKM
DATE: OCTOBER 2013

STORM SEWER COMPUTATIONS
EMERALD PARKWAY LATERALS
(SOUTH OF ROUNDABOUT)

SCALE: NONE

SHEET NO. 121 OF 275

PLOTTED: 10/29/2013 11:27:48 AM
P:\PR44959\cadd\STORM-COMPS.dwg 10/25/2013 5:32:21 PM Ward, Will

| REF NO. | LOCATION | SUB AREA AC. | SUM AREA AC. | C | SUB CA AC. | SUM CA AC. | TIME IN PIPE | SUM TIME MIN | 5 YEAR DESIGN STORM I IN/HR | Q CFS | GRATE * ELEV. | INVERT ELEV. IN | INVERT ELEV. OUT | PIPE DIA. IN | PIPE LENGTH FT | PIPE SLOPE FT/FT | PIPE V FPS | PIPE Q CFS | 10 YEAR HYDRAULIC GRADIENT I IN/HR | Q CFS | MINOR LOSS COEFF. K | MINOR LOSSES Hm (FT) | SLOPE FT/FT | GRADIENT ELEV. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 300 | Sta. 30+75;49'R | 0.26 | 0.26 | 0.90 | 0.23 | 0.23 | | 15.00 | 3.6 | 0.8 | 800.86 | | 799.12 | | | | | | 4.14 | 1.0 | 0.25 | | | 799.18 |
| | | | | | | | 0.19 | | | | | | | 12 | 55.00 | 0.0096 | 4.82 | 3.79 | | | | | 0.0006 | 0.03 |
| 301 | Sta. 31+30;49.5'R | 0.21 | 0.47 | 0.90 | 0.19 | 0.42 | | 15.19 | 3.6 | 1.5 | 801.98 | 798.59 | 798.59 | | | | | | 4.12 | 1.7 | 0.25 | 0.09 | | 799.15 |
| | | | | | | | 0.15 | | | | | | | 12 | 42.60 | 0.0099 | 4.88 | 3.83 | | | | | 0.0020 | 0.09 |
| 302 | Sta. 31+70.7;61.5'R | | 0.47 | | 0.00 | 0.42 | | 15.34 | 3.6 | 1.5 | 802.73 | 798.17 | 795.87 | | | | | | 4.10 | 1.7 | 0.50 | 0.18 | | 798.97 |
| 303 | Sta. 32+75;49.5'R | 0.42 | 0.42 | 0.90 | 0.38 | 0.38 | | 10.00 | 4.2 | 1.6 | 802.88 | | 799.27 | | | | | | 4.84 | 1.8 | 0.25 | 0.00 | | 799.21 |
| | | | | | | | 0.35 | | | | | | | 12 | 105.00 | 0.0105 | 5.03 | 3.95 | | | | | 0.0022 | 0.24 |
| 302 | Sta. 31+70.7;61.5'R | | 0.42 | | 0.00 | 0.38 | | 10.35 | 4.1 | 1.6 | | 798.17 | 795.87 | | | | | | 4.78 | 1.8 | 0.50 | 0.20 | | 798.97 |

* GRATE ELEVATION AT THE FACE OF CURB
INCLUDING 1/2" DEPRESION

| REF NO. | LOCATION | SUB AREA AC. | SUM AREA AC. | C | SUB CA AC. | SUM CA AC. | TIME IN PIPE | SUM TIME MIN | 100 YEAR DESIGN STORM I IN/HR | Q CFS | GRATE * ELEV. | INVERT ELEV. IN | INVERT ELEV. OUT | PIPE DIA. IN | PIPE LENGTH FT | PIPE SLOPE FT/FT | PIPE V FPS | PIPE Q CFS | 100 YEAR HYDRAULIC GRADIENT I IN/HR | Q CFS | MINOR LOSS COEFF. K | MINOR LOSSES Hm (FT) | SLOPE FT/FT | GRADIENT ELEV. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 400 | Sta. 211+50;80.0'R | 9.19 | 9.19 | 0.40 | 3.68 | 3.68 | | 20.00 | 5.7 | 21.1 | 890.70 | | 887.10 | | | | | | 5.73 | 21.1 | 0.25 | | | 890.71 |
| | | | | | | | 0.56 | | | | | | | 30 | 141.50 | 0.0022 | 4.24 | 20.80 | | | | | 0.0022 | 0.32 |
| 401 | Sta. 211+50;61.5'L | | 9.19 | | 0.00 | 3.68 | | 20.56 | 5.7 | 20.8 | 896.35 | 886.79 | 888.36 | | | | | | 5.66 | 20.8 | 0.10 | 0.03 | | 890.39 |
| | | | | | | | 0.07 | | | | | | | 30 | 18.00 | 0.0022 | 4.27 | 20.95 | | | | | 0.0022 | 0.04 |
| 402 | Sta. 211+50;79.5'L | | 9.19 | | 0.00 | 3.68 | | 20.63 | 5.6 | 20.8 | | 888.32 | | | | | | | 5.65 | 20.8 | 0.10 | 0.03 | | 890.32 |
| 500 | Sta. 216+00;74'R | 21.31 | 21.31 | 0.40 | 8.52 | 8.52 | | 25.00 | 5.1 | 43.7 | 890.50 | | 885.85 | | | | | | 5.13 | 43.7 | 0.25 | 0.00 | | 890.62 |
| | | | | | | | 0.05 | | | | | | | 42 | 12.50 | 0.0016 | 4.53 | 43.60 | | | | | 0.0016 | 0.02 |
| 501 | Sta. 216+00;61.5'R | | 21.31 | | 0.00 | 8.52 | | 25.05 | 5.1 | 43.7 | 894.01 | 885.83 | 883.88 | | | | | | 5.12 | 43.7 | 0.10 | 0.03 | | 890.60 |
| | | | | | | | 0.40 | | | | | | | 42 | 123.00 | 0.0020 | 5.11 | 49.14 | | | | | 0.0016 | 0.20 |
| 502 | Sta. 216+00;61.5'L | | 21.31 | | 0.00 | 8.52 | | 25.45 | 5.1 | 43.3 | 894.01 | 883.63 | 887.54 | | | | | | 5.08 | 43.3 | 0.10 | 0.04 | | 890.37 |
| | | | | | | | 0.04 | | | | | | | 42 | 13.50 | 0.0022 | 5.34 | 51.38 | | | | | 0.0016 | 0.02 |
| 503 | Sta. 216+00;75'L | | 21.31 | | 0.00 | 8.52 | | 25.49 | 5.1 | 43.3 | | 887.51 | | | | | | | 5.08 | 43.3 | 0.10 | 0.04 | | 890.31 |

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

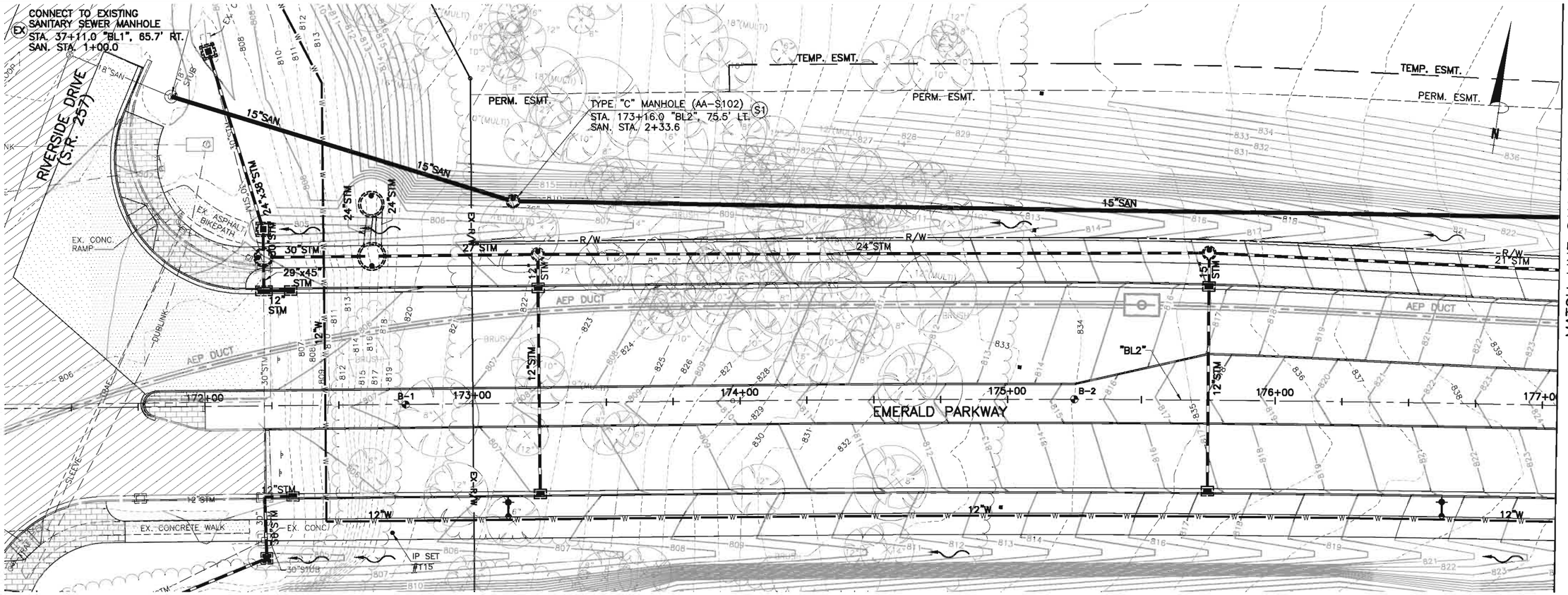
JOB NO. 44959
DESIGNED BY: JED
DRAWN BY: MKK
CHECKED BY: JED
APPROVED BY: DKM
DATE: OCTOBER 2013

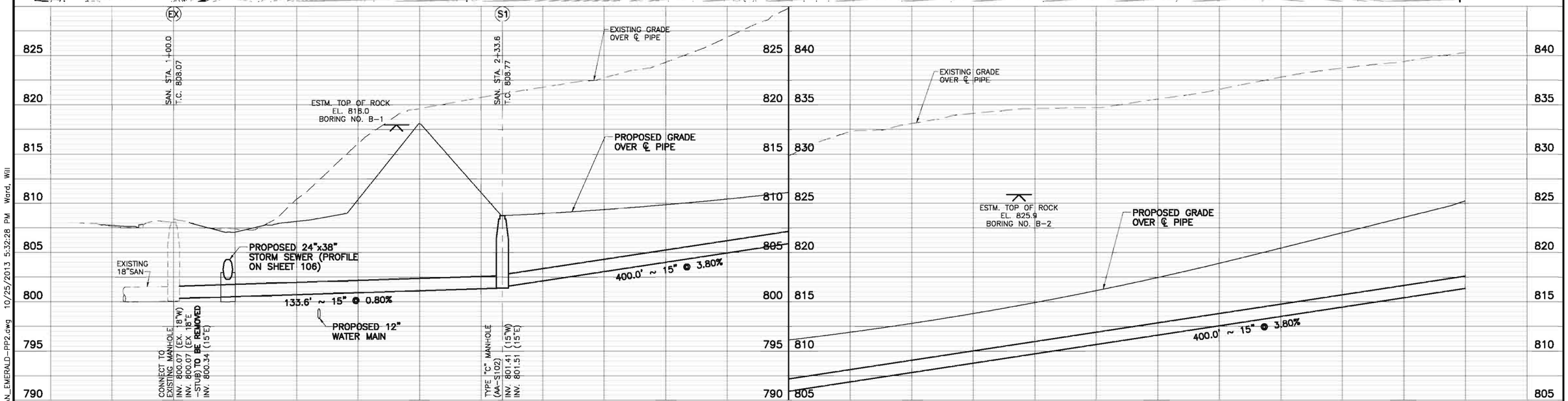
STORM SEWER COMPUTATIONS
RIVERSIDE DRIVE (SOUTH OF EMERALD PARKWAY)
EMERALD PARKWAY CULVERTS
(AT. STA. 211+50 & STA. 216+00)

SCALE: NONE

SHEET NO. 122 OF 275

PLOTTED: 10/29/2013 11:28:07 AM
P:\PR44959\cadd\STORM-COMPS.dwg 10/25/2013 5:32:21 PM Ward, Will




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

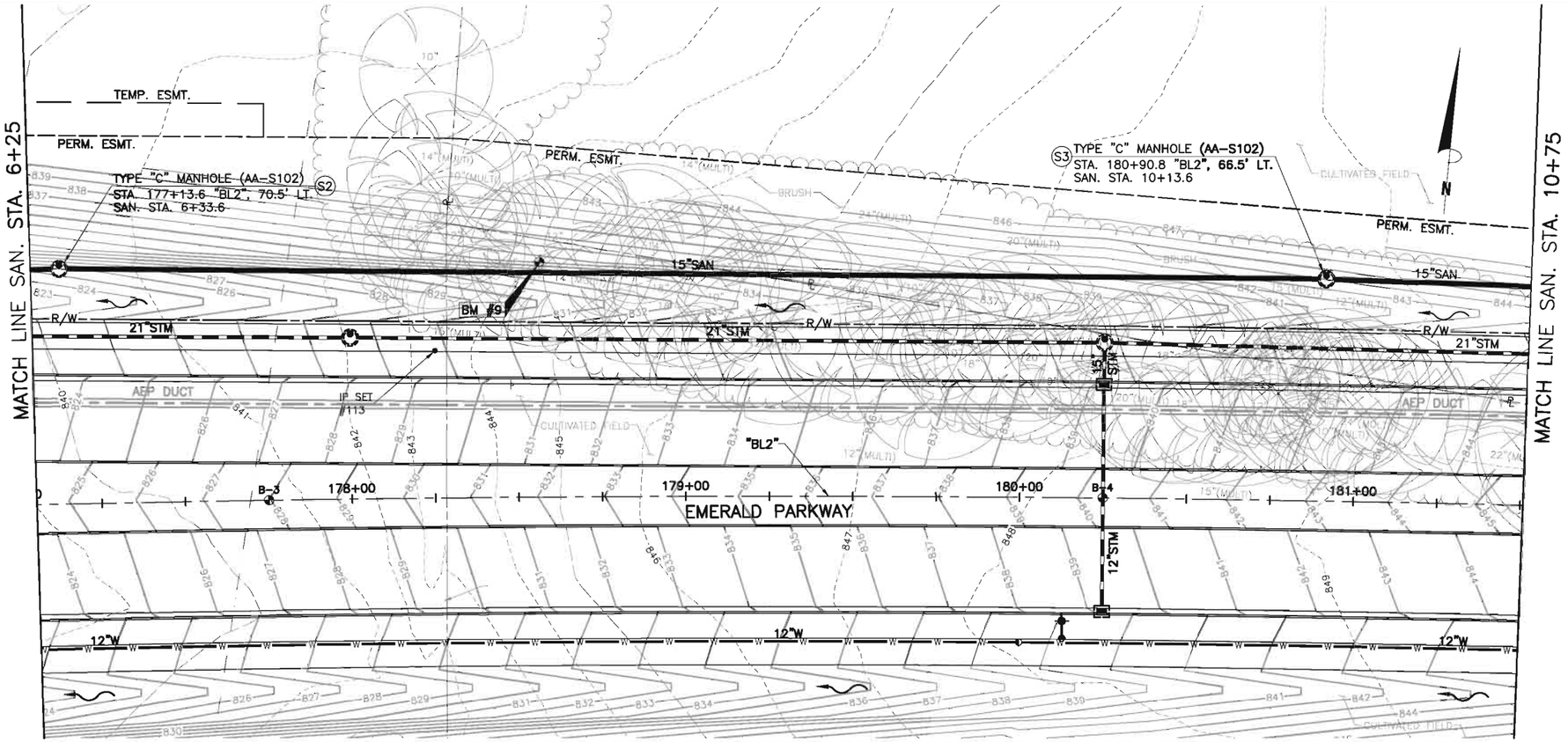
SANITARY SEWER PLAN AND PROFILE
SAN. STA. 1+00 TO SAN. STA. 6+25

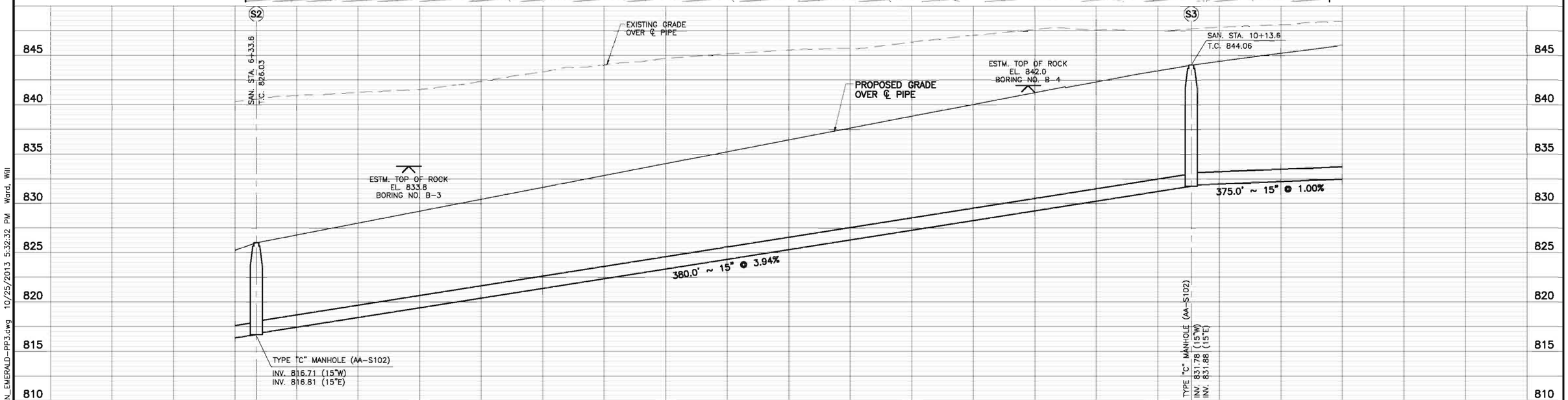
SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 123 OF 275

PLOTTED: 10/28/2013 3:43:35 PM

P:\PR44959\cadd\SAN_EMERALD-PP2.dwg 10/25/2013 5:32:28 PM Ward, Will




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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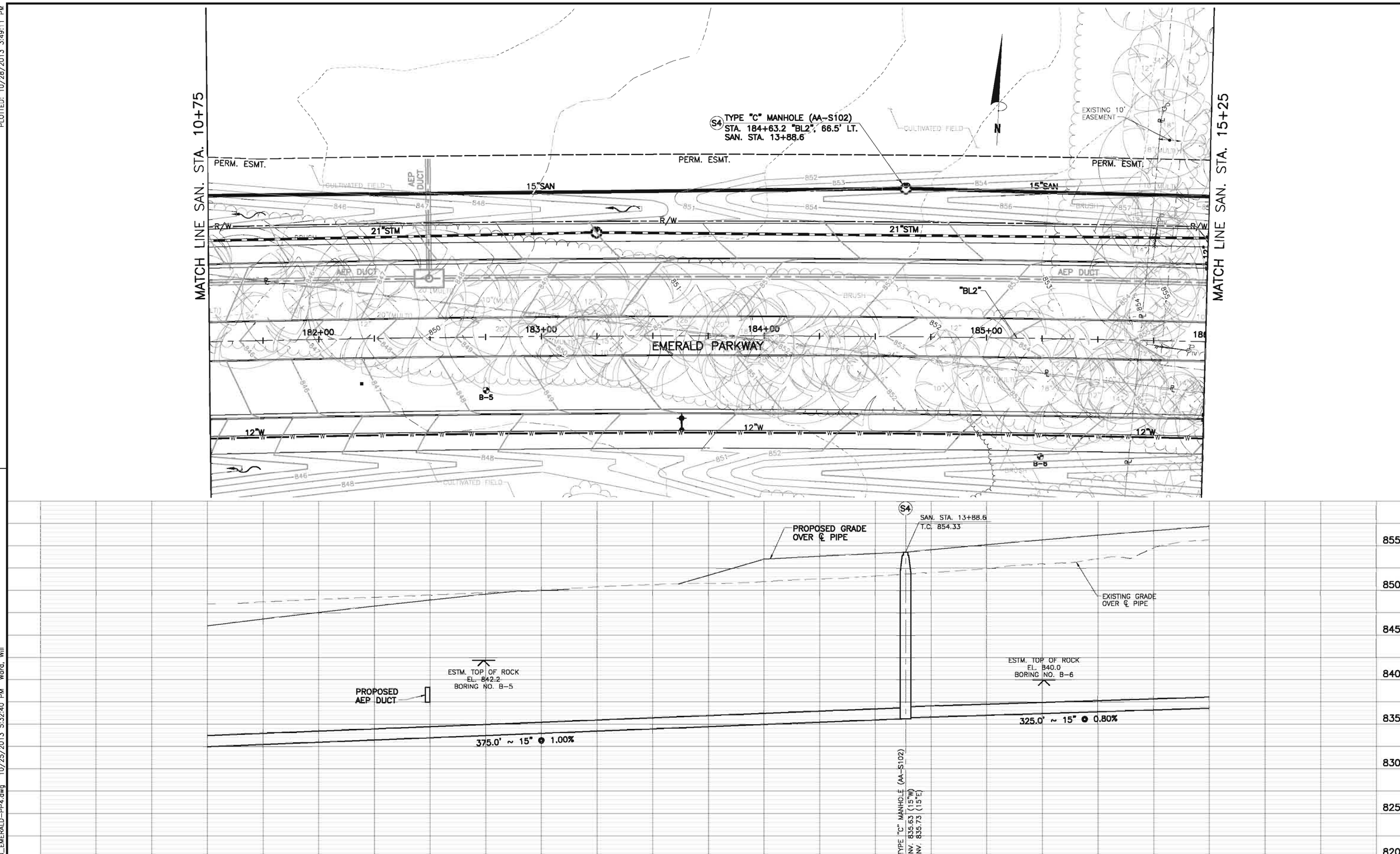
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**SANITARY SEWER PLAN AND PROFILE**
**SAN. STA. 6+25 TO SAN. STA. 10+75**

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 124 OF 275

PLOTTED: 10/28/2013 3:46:20 PM
P:\PR44959\cadd\SAN_EMERALD-PP3.dwg 10/25/2013 5:32:32 PM Ward, Will




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

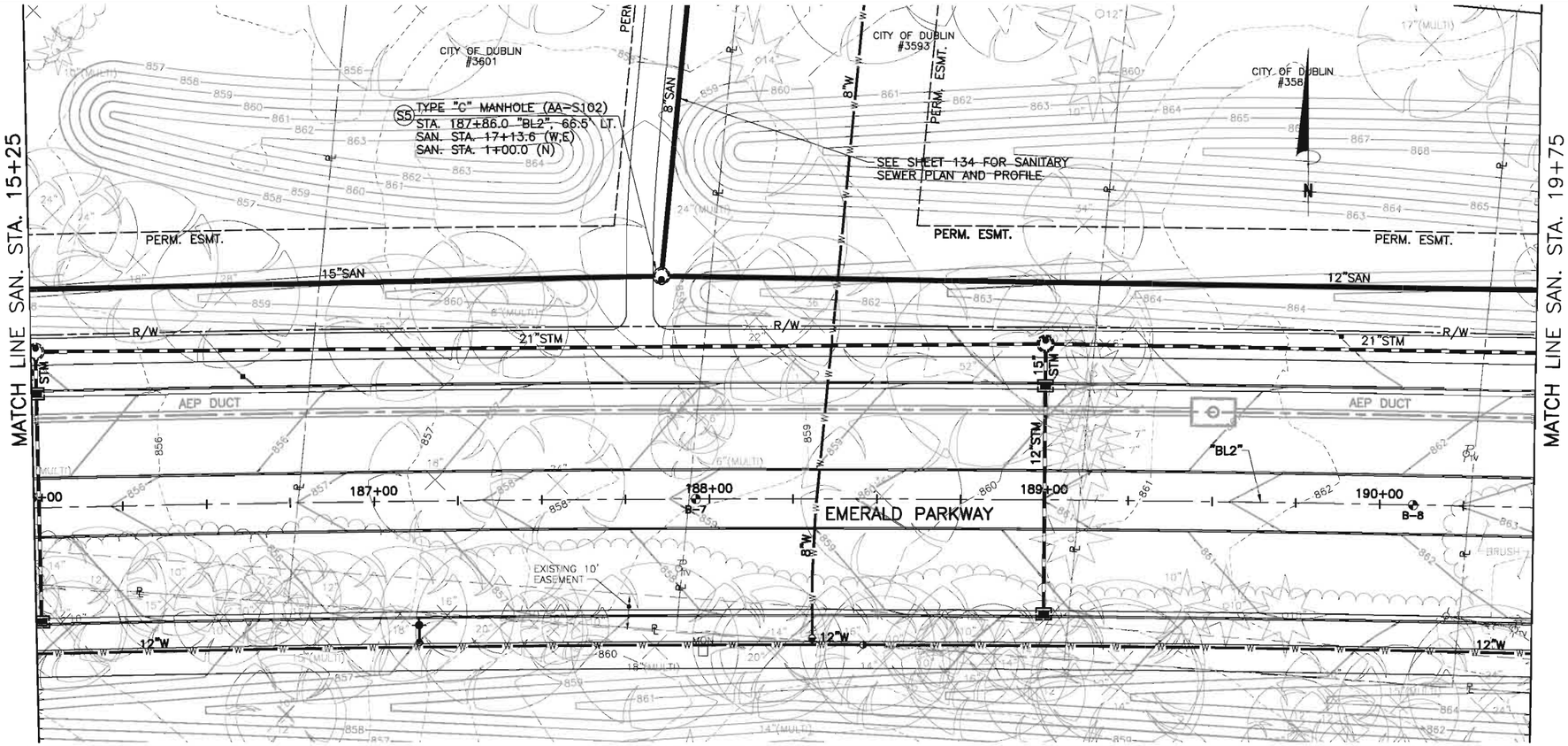
SANITARY SEWER PLAN AND PROFILE
SAN. STA. 10+75 TO SAN. STA. 15+25

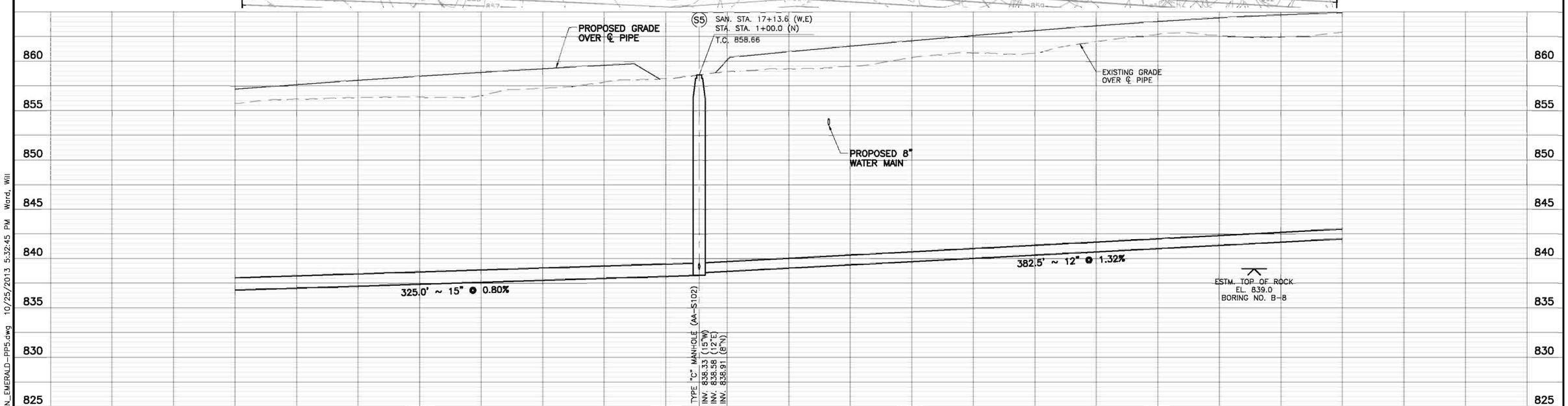
SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 125 OF 275

PLOTTED: 10/28/2013 3:49:11 PM

P:\PR44959\cadd\SAN_EMERALD-PP4.dwg 10/25/2013 5:32:40 PM Ward, Will




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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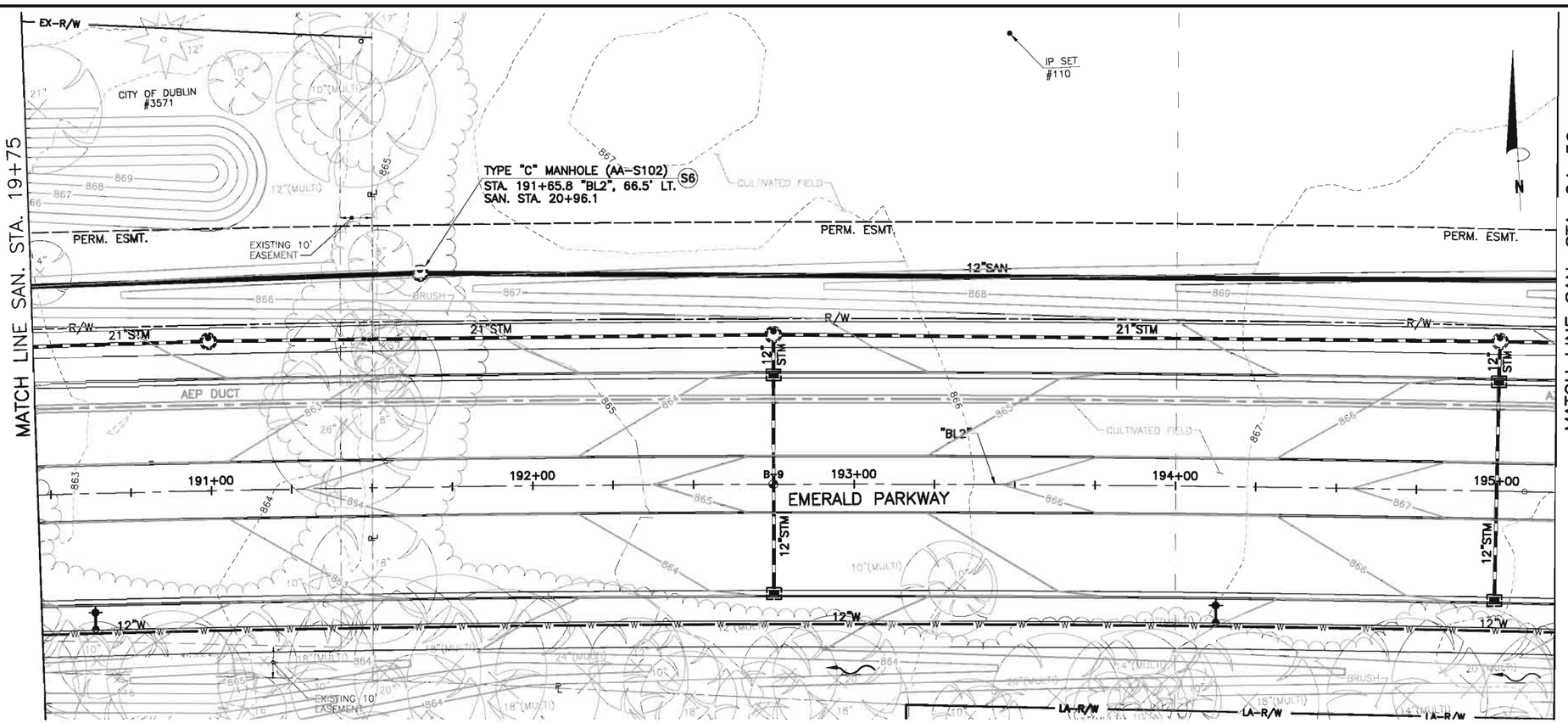
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

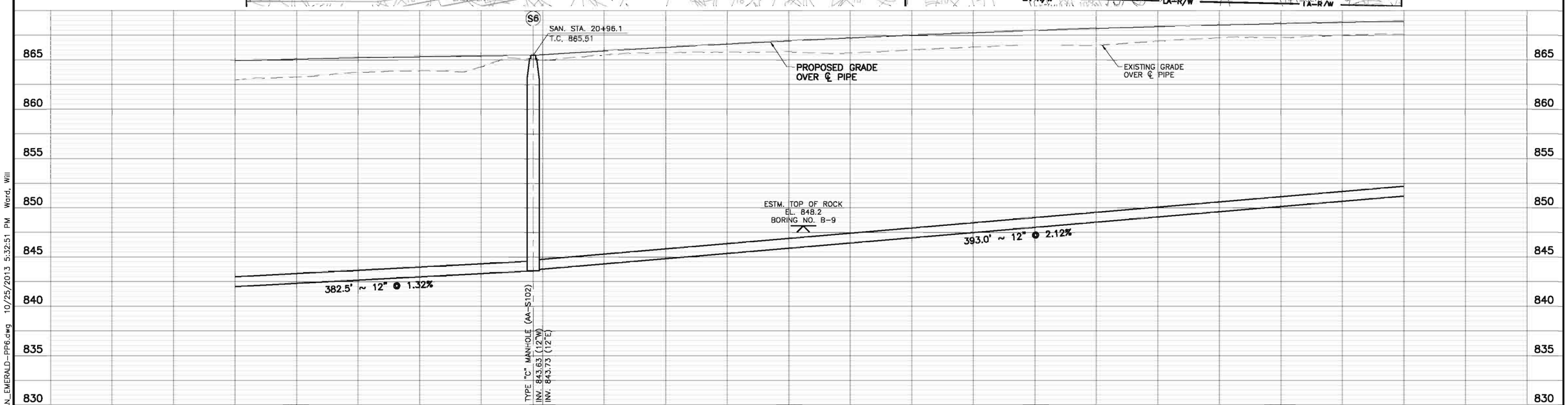
**SANITARY SEWER PLAN AND PROFILE**
**SAN. STA. 15+25 TO SAN. STA. 19+75**

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 126 OF 275

PLOTTED: 10/28/2013 3:52:04 PM
P:\PR44959\cadd\SAN_EMERALD-PP5.dwg 10/25/2013 5:32:45 PM Ward, Will




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

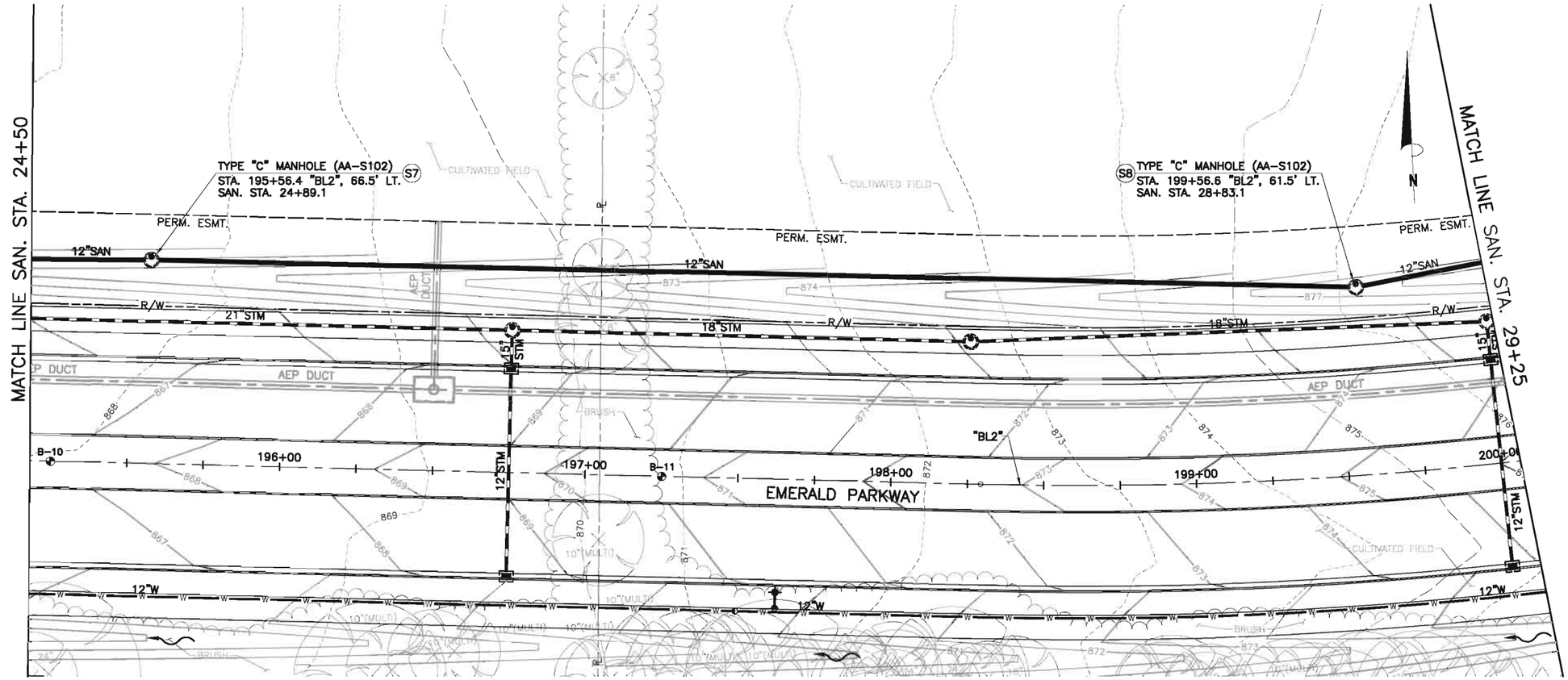
**SANITARY SEWER PLAN AND PROFILE**
**SAN. STA. 19+75 TO SAN. STA. 24+50**

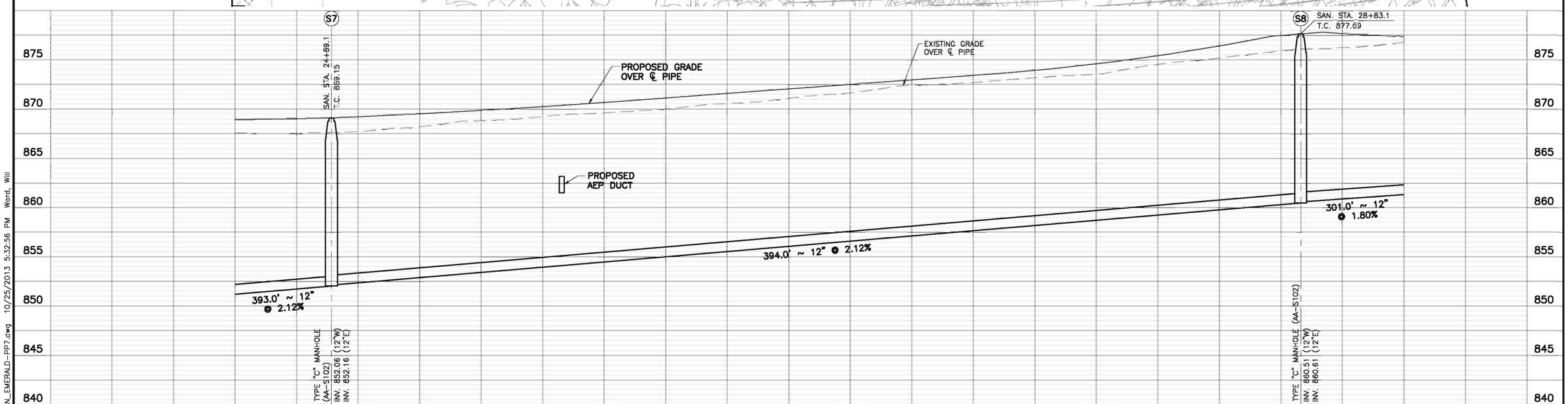
SCALE:
1" = 20' HORIZ.
1" = 5' VERT.

SHEET NO. 127 OF 275

PLOTTED: 10/28/2013 3:55:02 PM

P:\PR44959\cadd\SAN_EMERALD-PP6.dwg 10/25/2013 5:32:51 PM Ward, Will




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**SANITARY SEWER PLAN AND PROFILE**
**SAN. STA. 24+50 TO SAN. STA. 29+25**

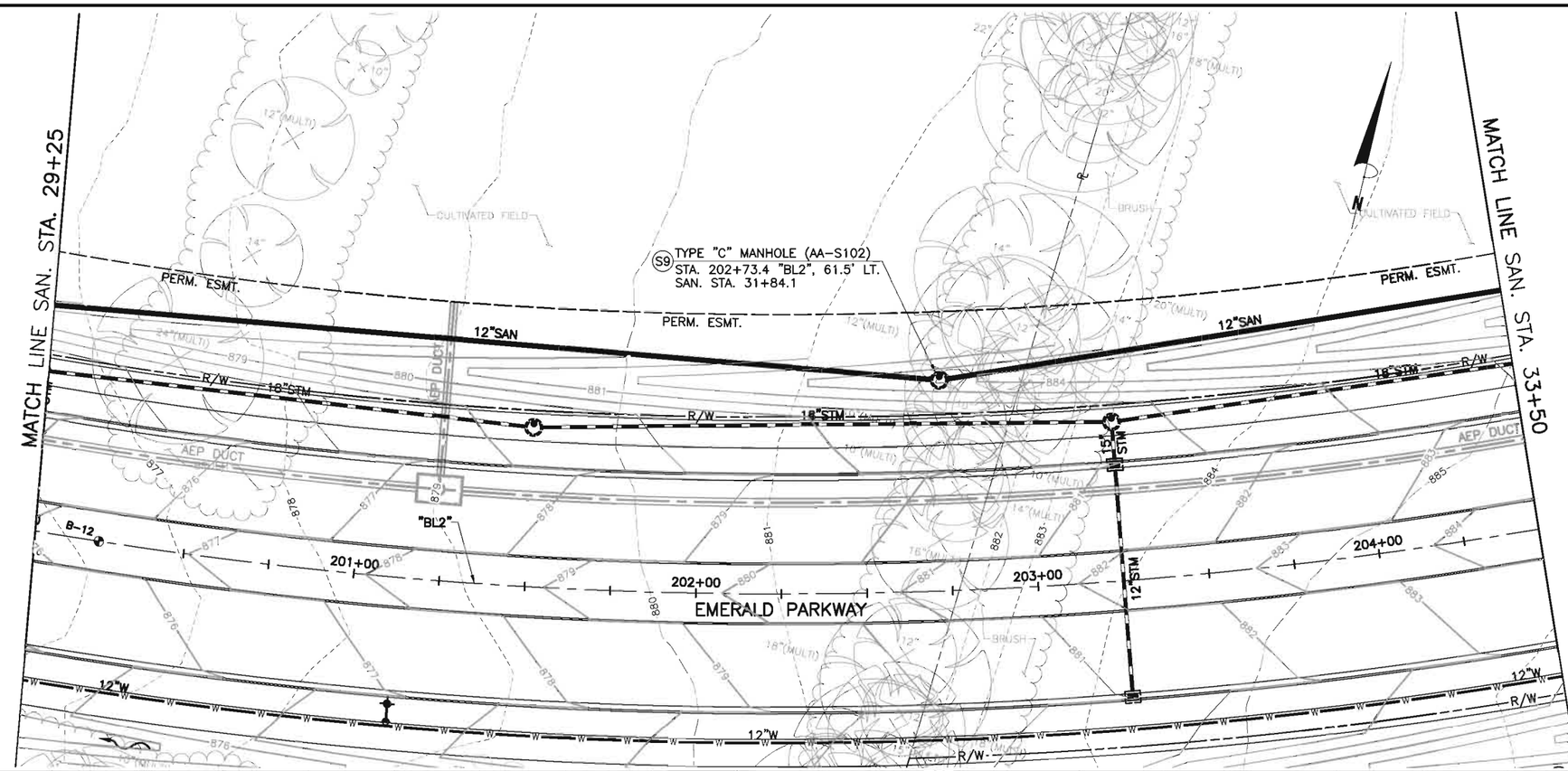
SCALE:
1" = 20' HORIZ.
1" = 5' VERT.

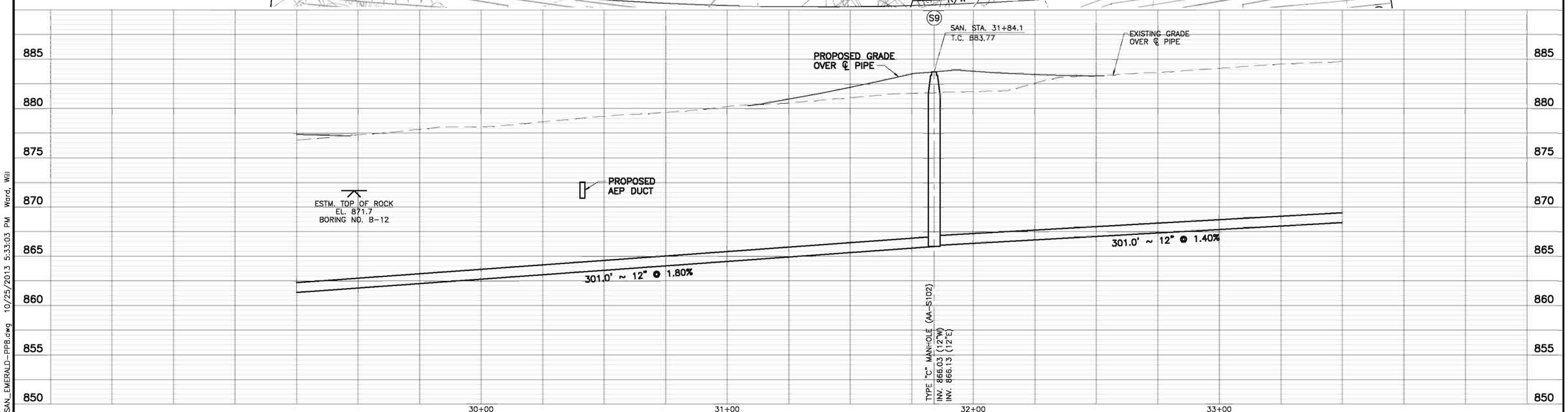
SHEET NO. 128 OF 275

PLOTTED: 10/28/2013 3:57:15 PM

P:\PR44959\cadd\SAN_EMERALD-PP7.dwg 10/25/2013 5:32:56 PM Ward, Will

PLOTTED: 10/28/2013 4:00:33 PM




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

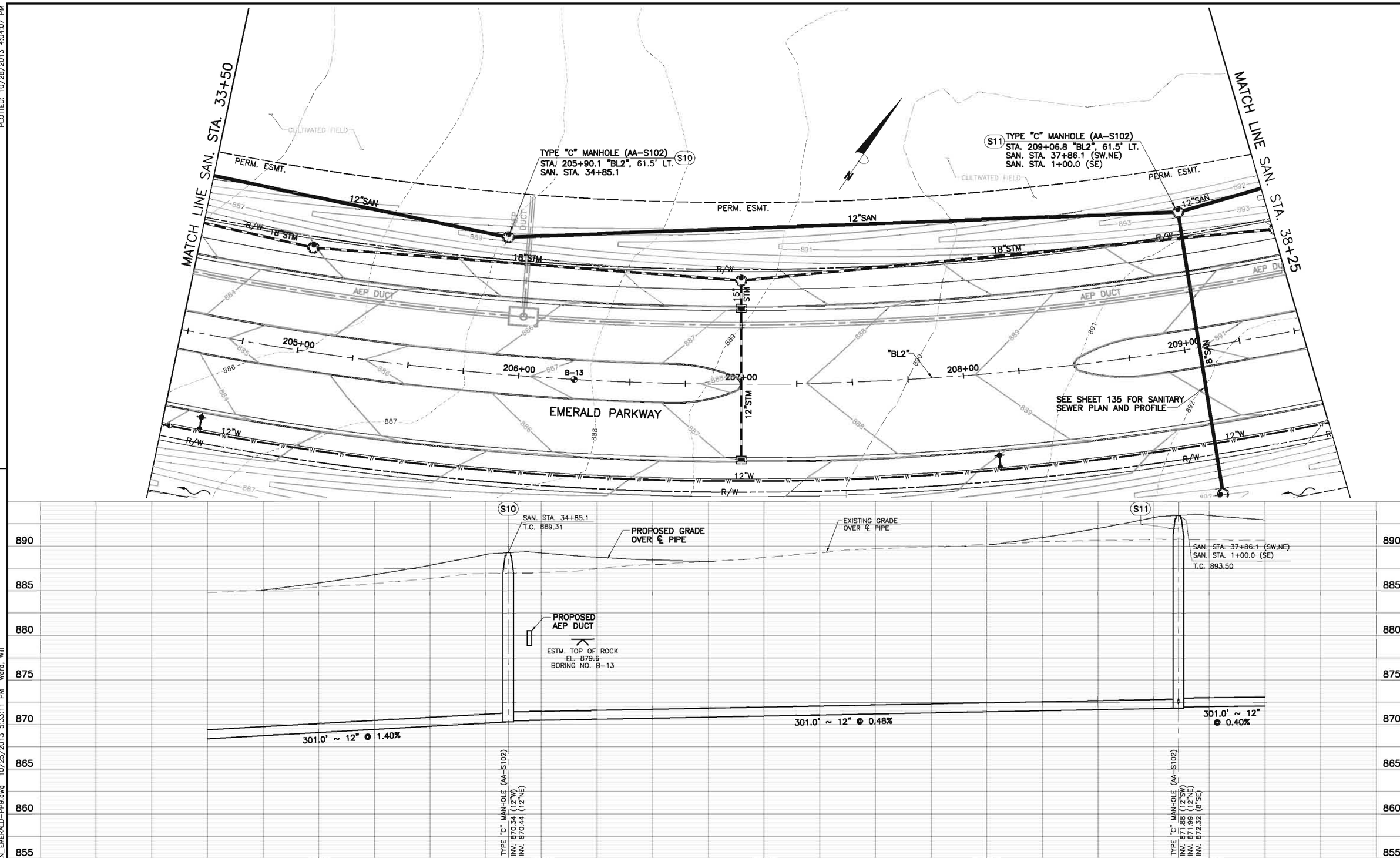
SANITARY SEWER PLAN AND PROFILE
SAN. STA. 29+25 TO SAN. STA. 33+50

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 129 OF 275

P:\PR44959\cadd\SAN_EMERALD-PP8.dwg 10/25/2013 5:33:03 PM Ward, Will

PLOTTED: 10/28/2013 4:04:07 PM




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

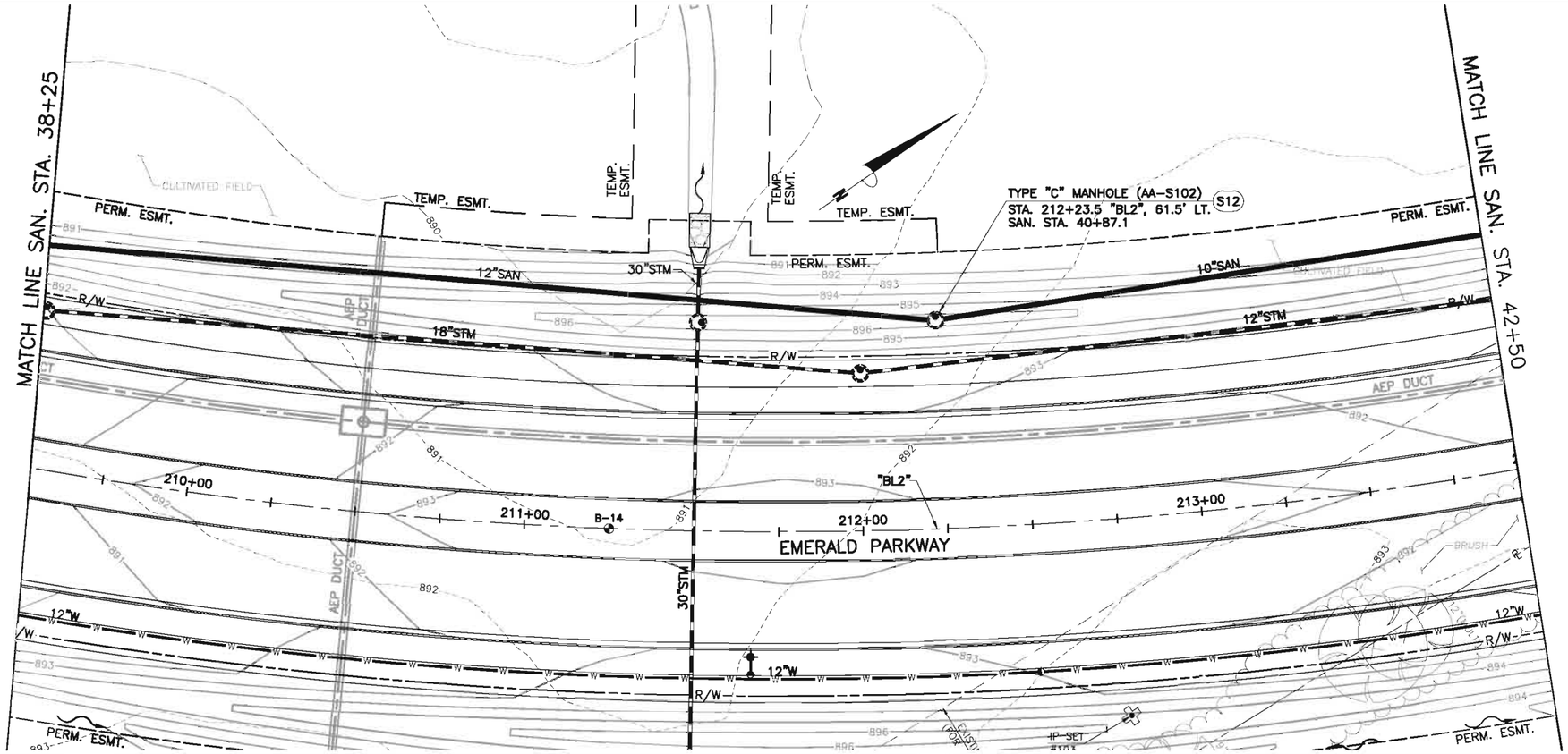
**SANITARY SEWER PLAN AND PROFILE**
**SAN. STA. 33+50 TO SAN. STA. 38+25**

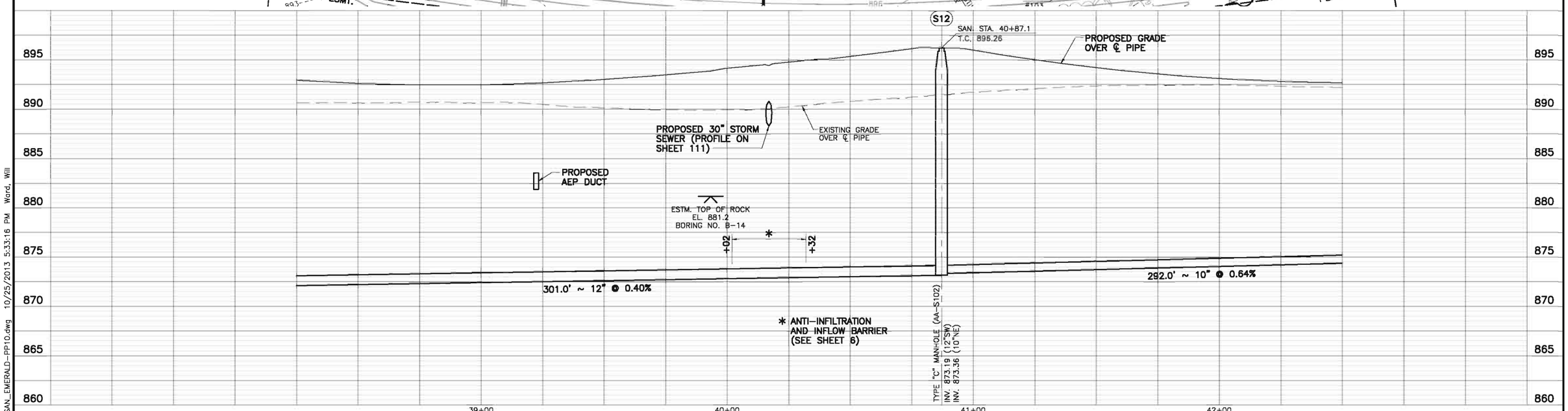
SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 130 OF 275

P:\PR44959\cadd\SAN_EMERALD-PP9.dwg 10/25/2013 5:33:11 PM Ward, Will

PLOTTED: 10/28/2013 4:07:52 PM

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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**SANITARY SEWER PLAN AND PROFILE**
**SAN. STA. 38+25 TO SAN. STA. 42+50**

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 131 OF 275

P:\PR44959\cadd\SAN_EMERALD-PP10.dwg 10/25/2013 5:33:16 PM Ward, Will

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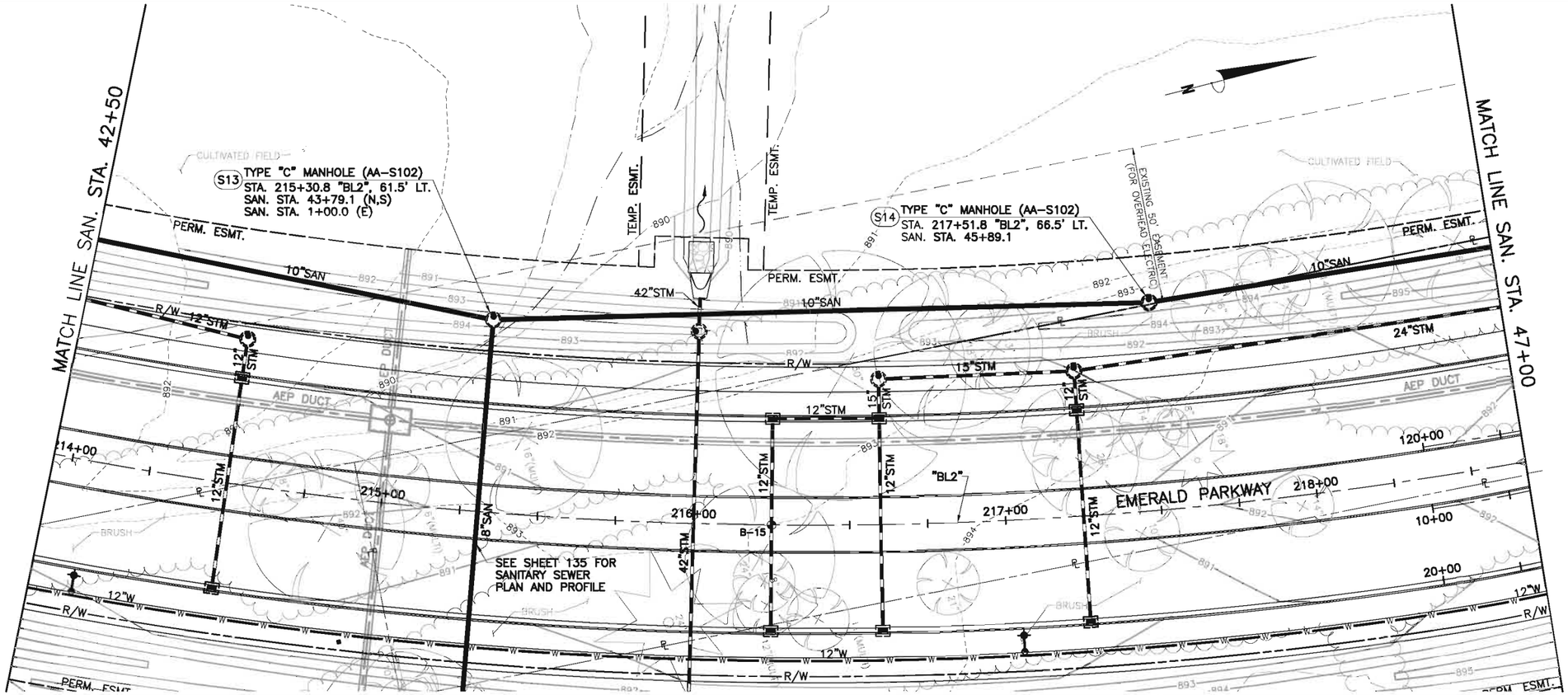


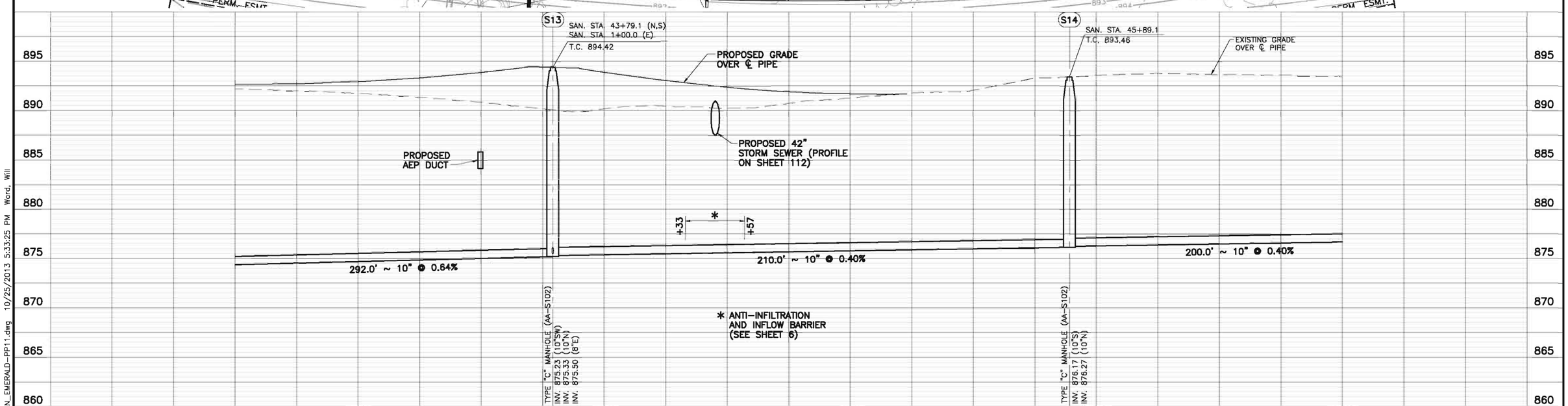


| NO. | REVISIONS | DATE | BY | CHK. |
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BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**SANITARY SEWER PLAN AND PROFILE**
**SAN. STA. 42+50 TO SAN. STA. 47+00**

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.



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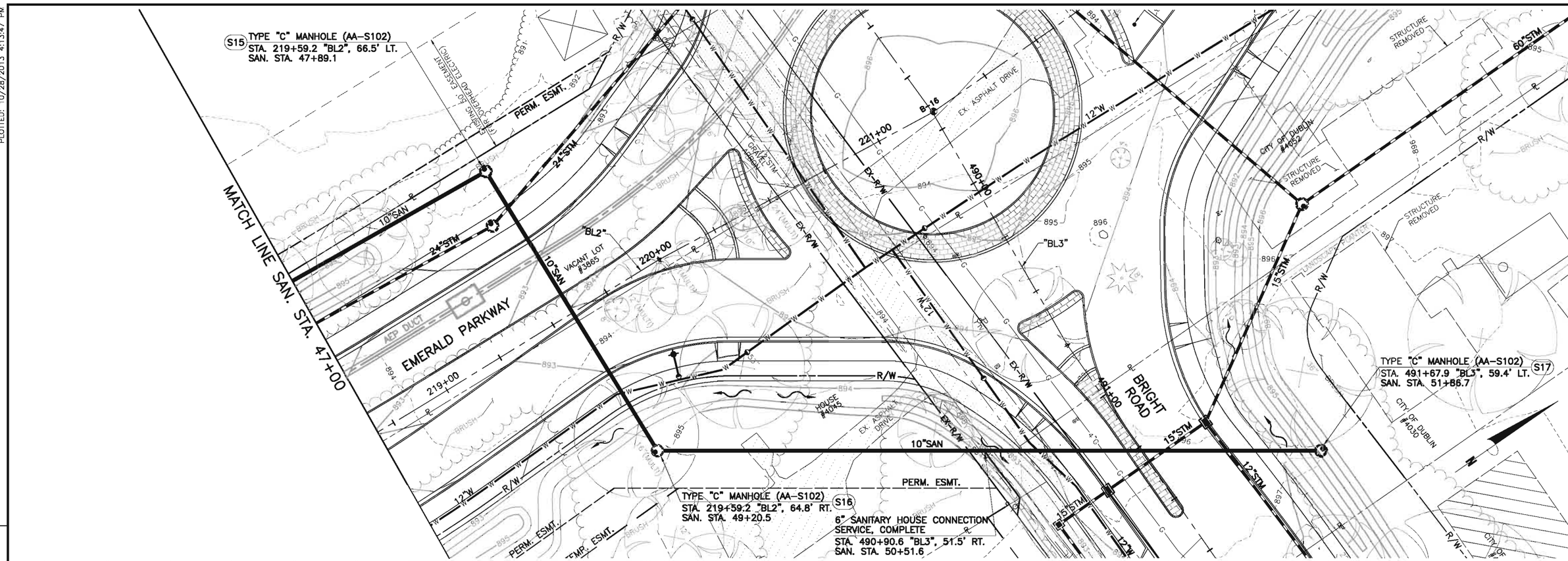


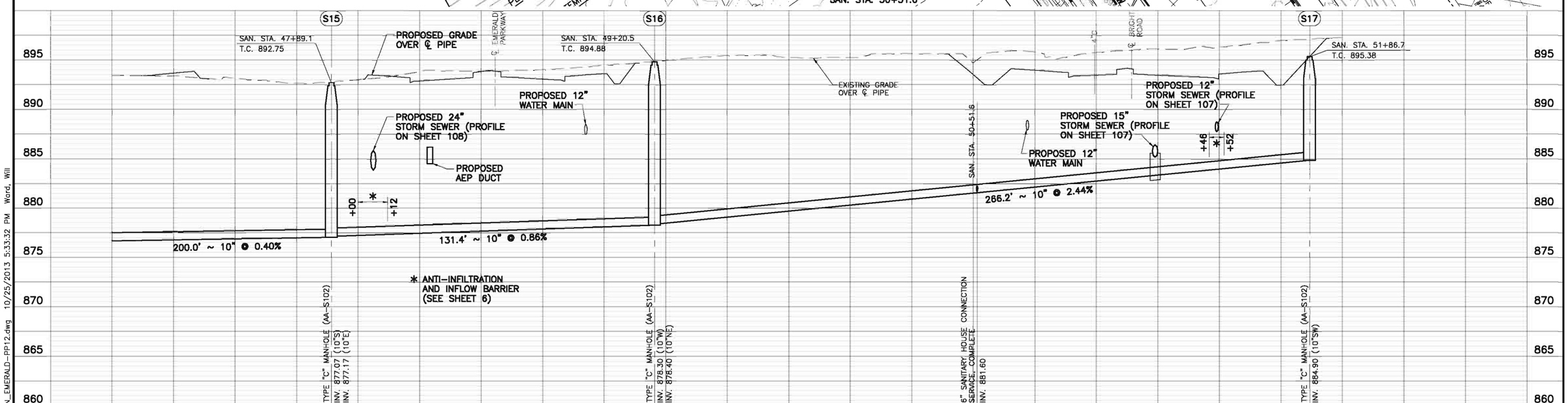


| NO. | REVISIONS | DATE | BY | CHK. |
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BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**SANITARY SEWER PLAN AND PROFILE**
**SAN. STA. 47+00 TO SAN. STA. 51+87**

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 133 OF 275

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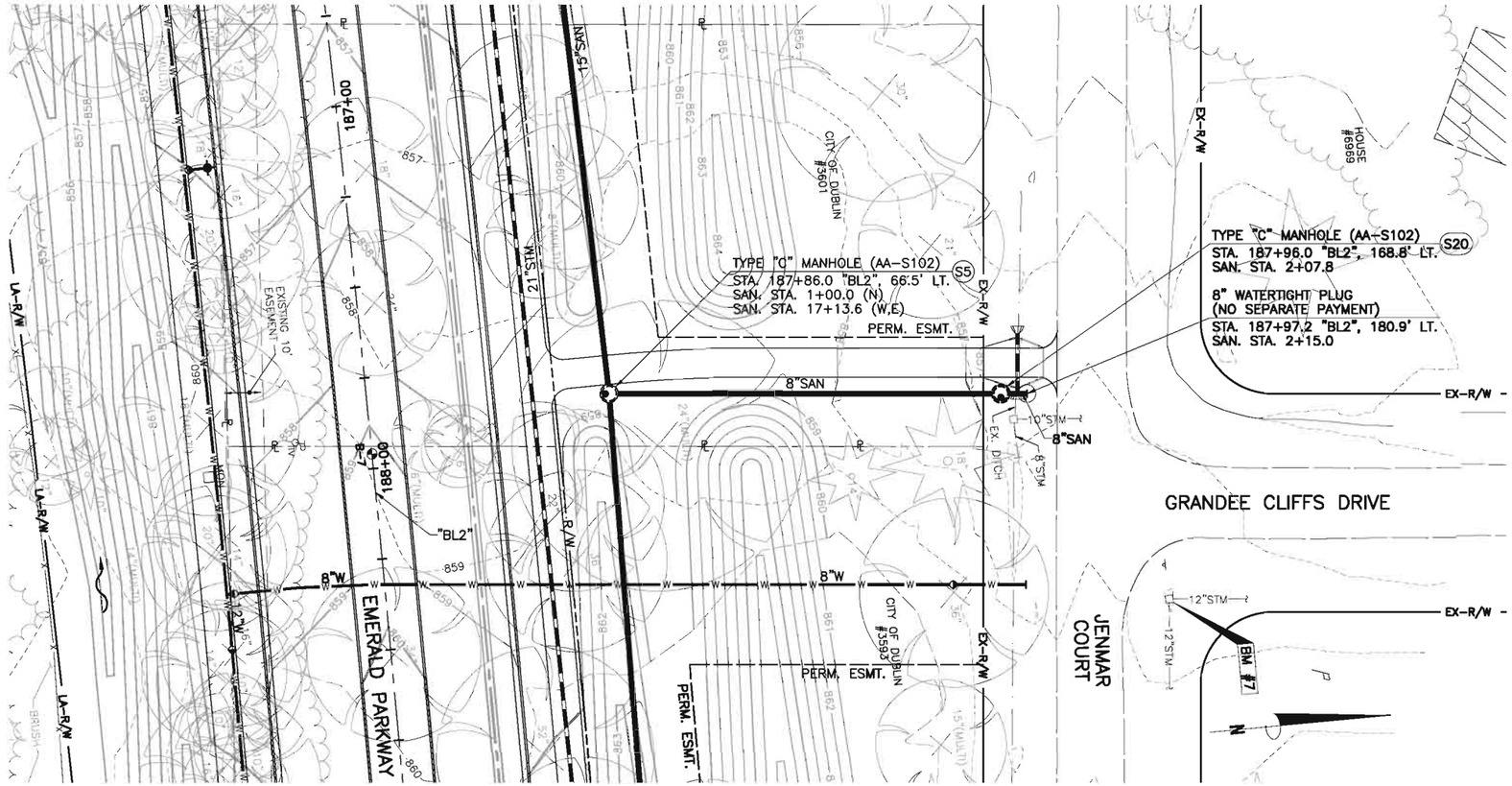


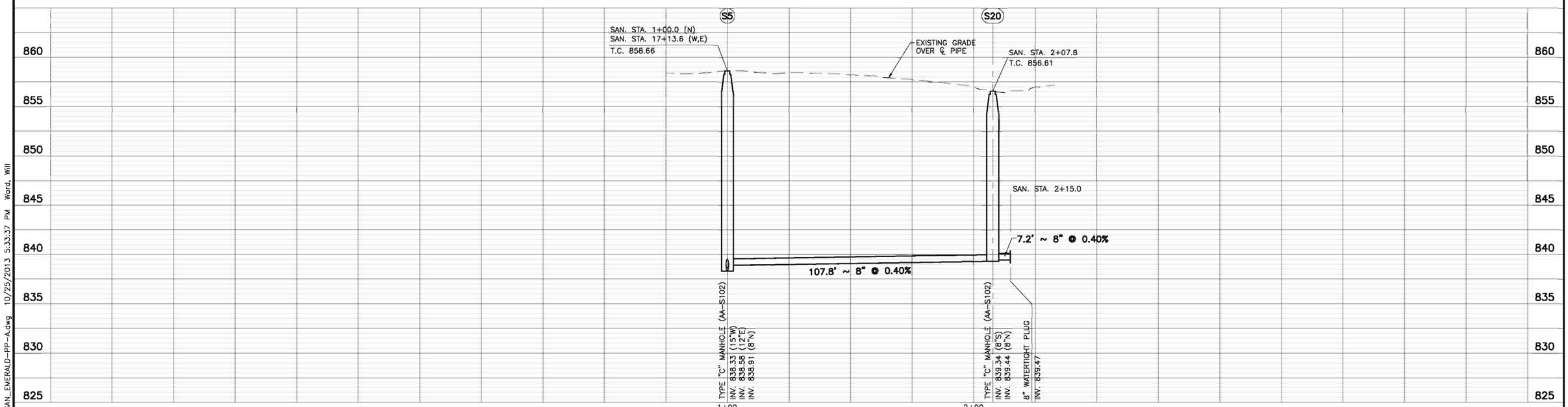


| NO. | REVISIONS | DATE | BY | CHK. |
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BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**SANITARY SEWER PLAN AND PROFILE**
**TO JENMAR COURT**
**STA. 187+86.0**

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 134 OF 275

PLOTTED: 10/28/2013 4:16:40 PM
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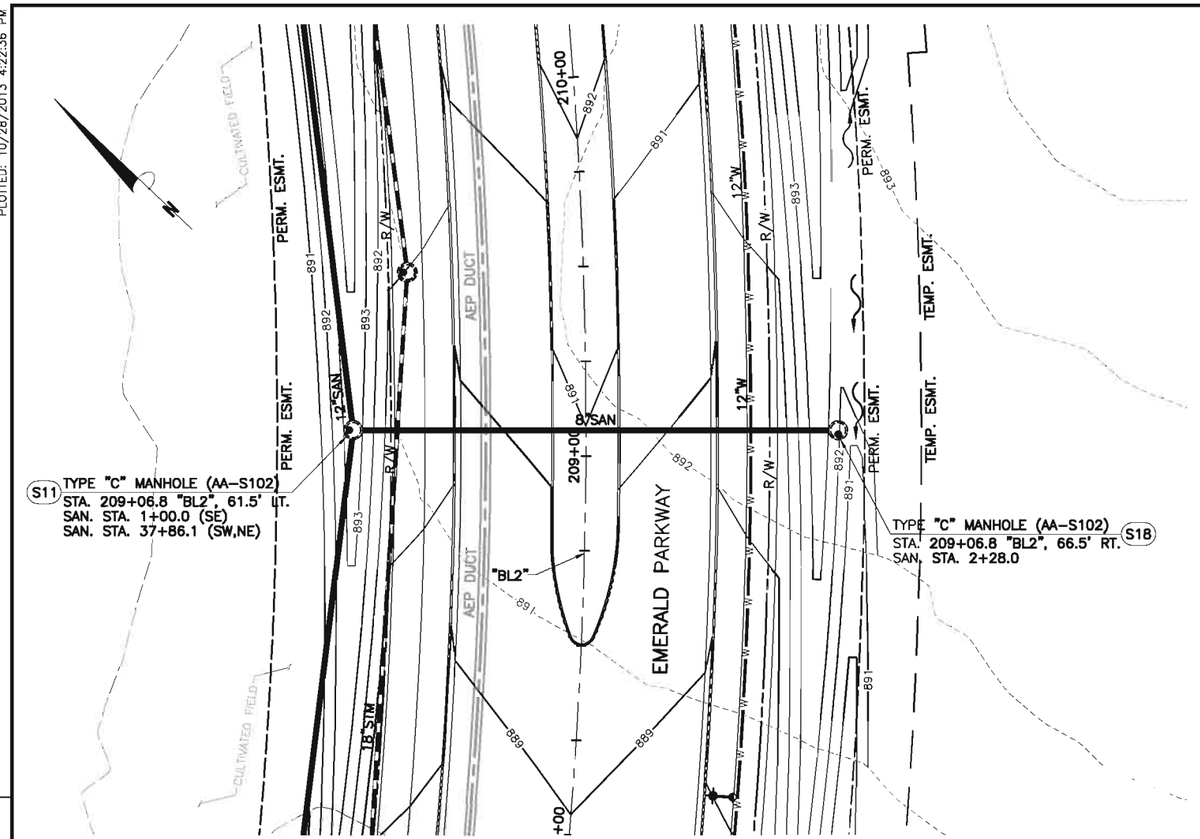


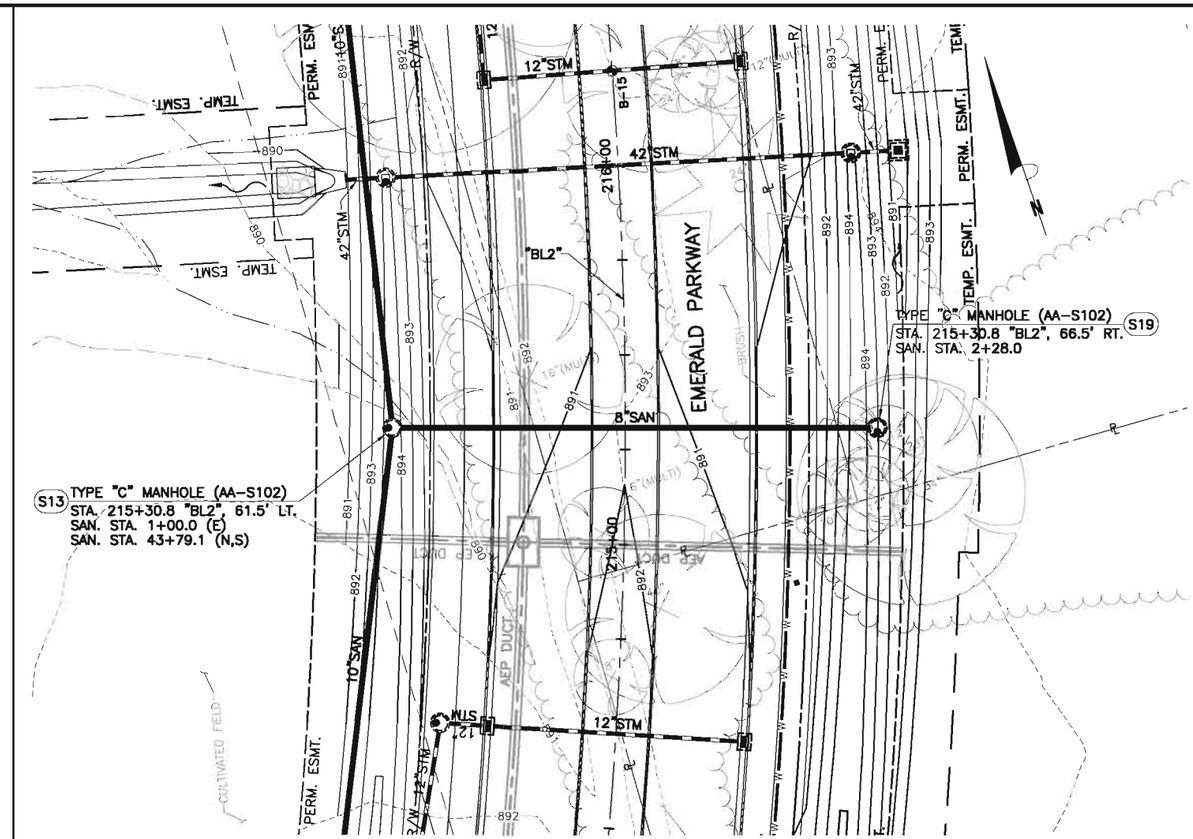


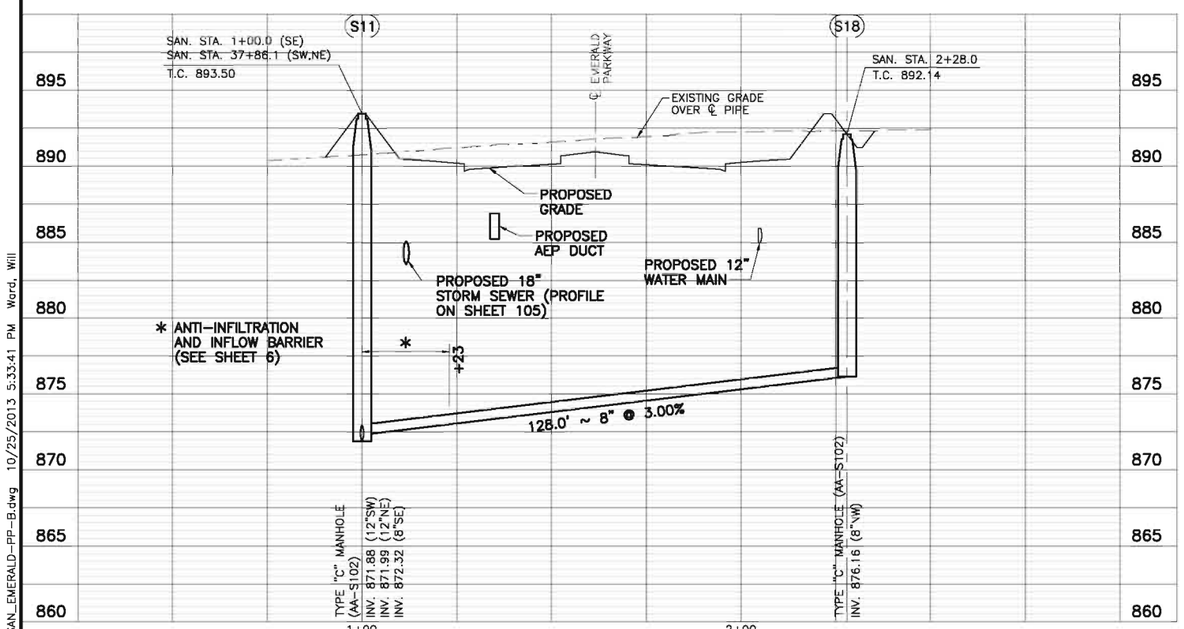


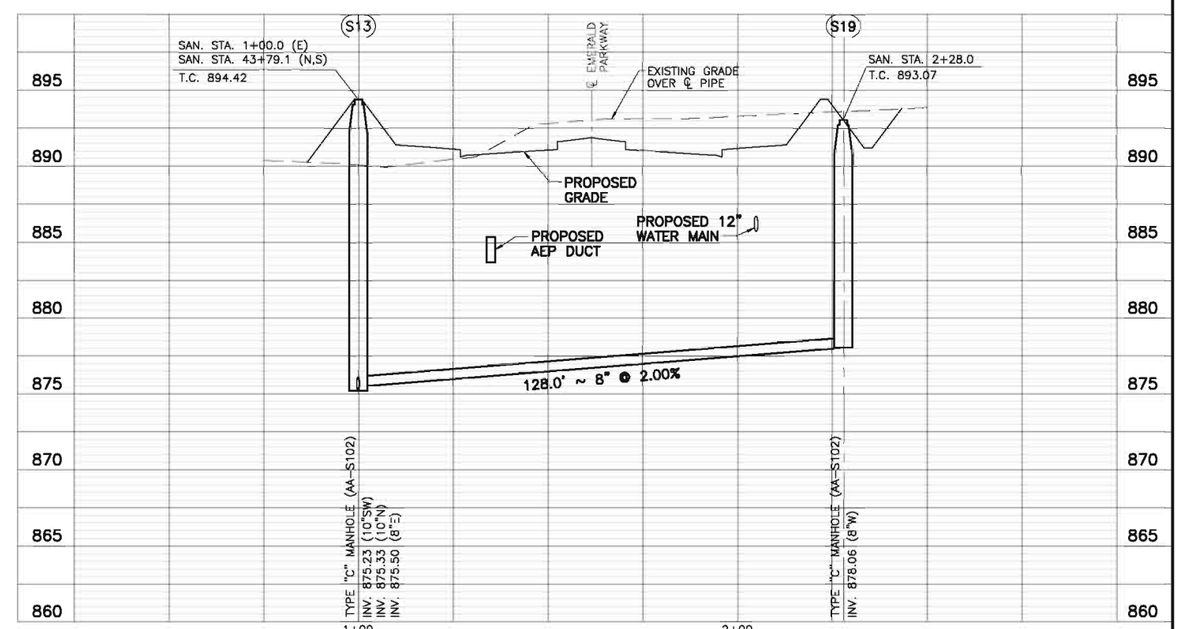


| NO. | REVISIONS | DATE | BY | CHK. |
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BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

SANITARY SEWER PLAN AND PROFILE
AT STA. 209+06.8
AND STA. 215+30.8

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.



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| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | AFJP |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**SANITARY SEWER TRIBUTARY AREA MAP**

SCALE: 1" = 200'

SHEET NO. 136 OF 275

| Location | Area - ac | | Population | | | Rates of Flow - cfs | | | | Sewer Data | | | | | Pipe Design | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MH No. | Local | Cumulative | Per Acre | Per Dist. | Cumulative | Average | Peak | I/I | Design | Dia. (in.) | Slope (%) | Vel (fps) | Q (cfs) | % Full | Invert | Invert | Length |
| | | | | | | (0.0002) | (3.5) | (0.003) | (8)+(9) | | | | | | (up) | (down) | (ft.) |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) |
| 17-16 | 24.5 | 24.5 | 10.0 | 245.0 | 245 | 0.0490 | 0.172 | 0.074 | 0.25 | 10 | 2.44 | 6.27 | 3.42 | 7.2% | 884.90 | 878.40 | 266.2 |
| 16-15 | 7.3 | 31.8 | 17.5 | 127.8 | 373 | 0.0746 | 0.261 | 0.095 | 0.36 | 10 | 0.86 | 3.73 | 2.03 | 17.5% | 878.30 | 877.17 | 131.3 |
| 15-14 | 22.3 | 54.1 | 6.9 | 153.9 | 527 | 0.1053 | 0.369 | 0.162 | 0.53 | 10 | 0.40 | 2.54 | 1.39 | 38.3% | 877.07 | 876.27 | 200.0 |
| 14-13 | 0.0 | 54.1 | 10.0 | 0.0 | 527 | 0.1053 | 0.369 | 0.162 | 0.53 | 10 | 0.40 | 2.54 | 1.39 | 38.3% | 876.17 | 875.33 | 210.0 |
| 13-12 | 22.4 | 76.5 | 11.7 | 262.1 | 789 | 0.1577 | 0.552 | 0.230 | 0.78 | 10 | 0.64 | 3.21 | 1.75 | 44.6% | 875.23 | 873.36 | 292.0 |
| 12-11 | 9.9 | 86.4 | 10.0 | 99.0 | 888 | 0.1775 | 0.621 | 0.259 | 0.88 | 12 | 0.40 | 2.87 | 2.25 | 39.1% | 873.19 | 871.99 | 301.0 |
| 11-10 | 19.8 | 106.2 | 10.0 | 198.0 | 1086 | 0.2171 | 0.760 | 0.319 | 1.08 | 12 | 0.48 | 3.14 | 2.47 | 43.7% | 871.88 | 870.44 | 301.0 |
| 10-9 | 0.0 | 106.2 | 10.0 | 0.0 | 1086 | 0.2171 | 0.760 | 0.319 | 1.08 | 12 | 1.40 | 5.37 | 4.22 | 25.6% | 870.34 | 866.13 | 301.0 |
| 9-8 | 0.0 | 106.2 | 10.0 | 0.0 | 1086 | 0.2171 | 0.760 | 0.319 | 1.08 | 12 | 1.80 | 6.09 | 4.78 | 22.6% | 866.03 | 860.61 | 301.0 |
| 8-7 | 12.6 | 118.8 | 8.6 | 108.4 | 1194 | 0.2388 | 0.836 | 0.356 | 1.19 | 12 | 2.12 | 6.60 | 5.19 | 23.0% | 860.51 | 852.16 | 394.0 |
| 7-6 | 13.5 | 132.3 | 7.4 | 99.9 | 1294 | 0.2588 | 0.906 | 0.397 | 1.30 | 12 | 2.12 | 6.60 | 5.19 | 25.1% | 852.06 | 843.73 | 393.0 |
| 6-5 | 15.7 | 148.0 | 6.6 | 103.6 | 1398 | 0.2795 | 0.978 | 0.444 | 1.42 | 12 | 1.32 | 5.21 | 4.09 | 34.8% | 843.63 | 838.58 | 382.5 |
| 5-4 | 30.2 | 178.2 | 5.6 | 169.1 | 1567 | 0.3133 | 1.097 | 0.535 | 1.63 | 15 | 0.80 | 4.71 | 5.78 | 28.2% | 838.33 | 835.73 | 325.0 |
| 4-3 | 3.1 | 181.3 | 10.0 | 31.0 | 1598 | 0.3195 | 1.118 | 0.544 | 1.66 | 15 | 1.00 | 5.26 | 6.46 | 25.7% | 835.63 | 831.88 | 375.0 |
| 3-2 | 4.7 | 186.0 | 10.0 | 47.0 | 1645 | 0.3289 | 1.151 | 0.558 | 1.71 | 15 | 3.94 | 10.45 | 12.82 | 13.3% | 831.78 | 816.81 | 380.0 |
| 2-1 | 4.9 | 190.9 | 10.0 | 49.0 | 1694 | 0.3387 | 1.186 | 0.573 | 1.76 | 15 | 3.80 | 10.26 | 12.59 | 14.0% | 816.71 | 801.51 | 400.0 |
| 1-EX | 5.1 | 196.0 | 10.0 | 51.0 | 1745 | 0.3489 | 1.221 | 0.588 | 1.81 | 15 | 0.80 | 4.71 | 5.78 | 31.3% | 801.41 | 800.34 | 133.6 |
| EX | | | | | | | | | | 18 | | | | | 800.07 | | |

| Location | Area - ac | | Population | | | Rates of Flow - cfs | | | | Sewer Data | | | | | Pipe Design | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MH No. | Local | Cumulative | Per Acre | Per Dist. | Cumulative | Average | Peak | I/I | Design | Dia. (in.) | Slope (%) | Vel (fps) | Q (cfs) | % Full | Invert | Invert | Length |
| | | | | | | (0.0002) | (3.5) | (0.003) | (8)+(9) | | | | | | (up) | (down) | (ft.) |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) |
| 19-13 | 22.4 | 22.4 | 11.7 | 262.1 | 262 | 0.0524 | 0.183 | 0.067 | 0.25 | 8 | 2.00 | 4.90 | 1.71 | 14.7% | 878.06 | 875.50 | 128.0 |
| 18-11 | 19.8 | 19.8 | 10.0 | 198.0 | 198 | 0.0396 | 0.139 | 0.059 | 0.20 | 8 | 3.00 | 6.00 | 2.09 | 9.5% | 876.16 | 872.32 | 128.0 |
| 20-5 | 30.2 | 30.2 | 5.6 | 169.1 | 169 | 0.0338 | 0.118 | 0.091 | 0.21 | 8 | 0.40 | 2.19 | 0.76 | 27.3% | 839.34 | 838.91 | 107.8 |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

JOB NO. 44959
DESIGNED BY: JED
DRAWN BY: WHW
CHECKED BY: JED
APPROVED BY: DKM
DATE: OCTOBER 2013

SANITARY SEWER COMPUTATIONS

SCALE: NONE

SHEET NO. 137 OF 275

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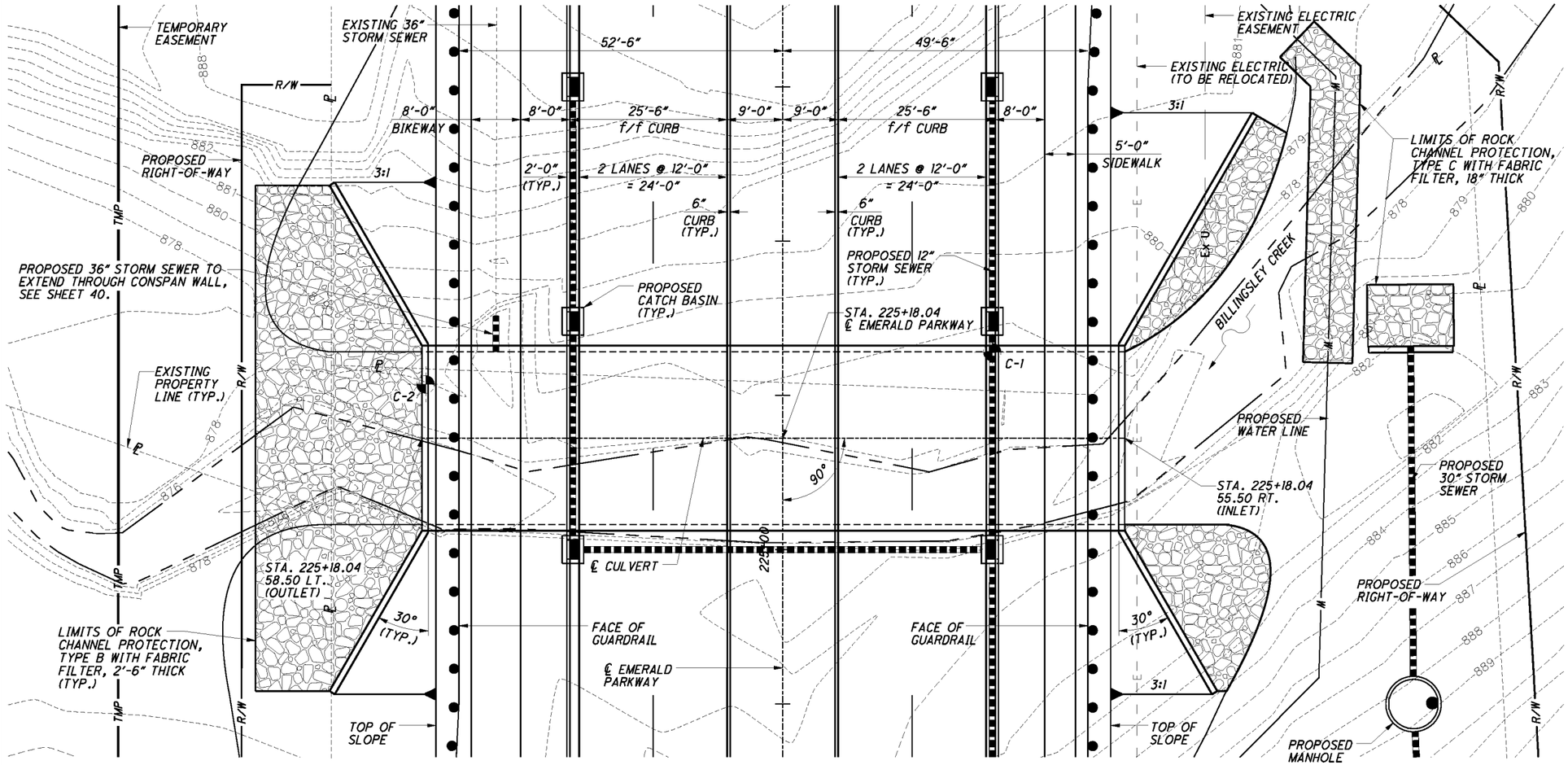
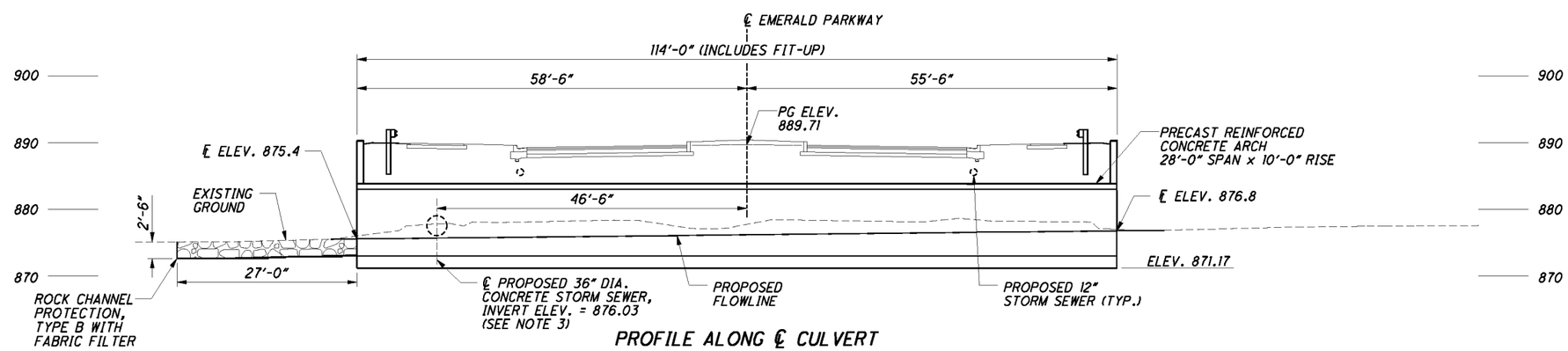



## PLAN




## PROFILE ALONG ℄ CULVERT

## NOTES:

1. EARTHWORK LIMITS SHOWN ARE APPROXIMATE. ACTUAL SLOPE SHALL CONFORM TO PROPOSED CONTOURS SHOWN ON SHEET 40, AND PLAN CROSS SECTIONS.
2. PROPOSED CHANNEL CROSS-SECTION AND ALIGNMENT SHALL BE AS CLOSE TO EXISTING AS POSSIBLE WITH MINIMAL DISTURBANCE DURING CONSTRUCTION.
3. SEE PIPE DETAIL ON SHEET 137L FOR ADDITIONAL DETAILS.

## LEGEND:

= FOUNDATION INVESTIGATION BORING LOCATION

PG = PROFILE GRADE

## PROPOSED STRUCTURE

TYPE: PRECAST REINFORCED CONCRETE ARCH-TOPPED THREE SIDED CULVERT
SIZE: 28' SPAN x 10' RISE
SKEW: NONE
ALIGNMENT: TANGENT
LOADING: HS25 AND THE ALTERNATE MILITARY LOADING

## HYDRAULIC DESIGN DATA

DRAINAGE AREA = 1.08 SQ. MI.

| | |
|---|---|
| $Q_{25}$ = 630 cfs | $Q_{100}$ = 850 cfs |
| $HW_{25}$ = 881.83 | $HW_{100}$ = 882.61 |
| $V_{25}$ = 8.26 ft/s | $V_{100}$ = 10.29 ft/s |

## SOIL BORING INFORMATION

| BORING NO. | STATION | OFFSET |
|---|---|---|
| C-1 | 225+32 | 34' (RT) |
| C-2 | 225+27 | 58' (LT) |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | TTK |
| DRAWN BY: | TTK |
| CHECKED BY: | RMK |
| APPROVED BY: | JED |
| DATE: | OCTOBER 2013 |

CULVERT SITE PLAN
EMERALD PARKWAY OVER BILLINGSLEY CREEK

SCALE: 1" = 10'

SHEET NO. 138 OF 275

P:/PR44959/Culvert/Cadd/Final/Site Plan.dgn

UTILITY LINES: THE UTILITIES SHALL BEAR ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

ITEM 611, CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE ARCH SECTIONS, AS PER PLAN (28' SPAN X 10' RISE INCLUDING PRECAST HEADWALLS AND WINGWALLS): THIS ITEM SHALL BE A CON/SPAN® BRIDGE SYSTEM THAT INCLUDES THE PRECAST REINFORCED CONCRETE ARCHED CULVERT UNITS, PRECAST REINFORCED CONCRETE WINGWALL UNITS, AND PRECAST REINFORCED CONCRETE HEADWALL UNITS. **THE PRECAST REINFORCED CONCRETE WINGWALL UNITS SHALL BE NO MORE THAN 1" OUT OF PLUMB FROM THE TOP OF FOOTING TO THE TOP OF WALL DURING AND AFTER PLACEMENT. NO OFFSETS OF MORE THAN ¼" BETWEEN THE PRECAST REINFORCED CONCRETE WINGWALL UNITS ARE PERMITTED AT ANY POINT ALONG THE HEIGHT OF THE JOINT.** PAYMENT SHALL INCLUDE FURNISHING AND INSTALLING A COMPLETE AND FUNCTIONAL STURCTURE WHICH SHALL INCLUDE ALL LABOR, MATERIALS, EXCAVATION, AND ALL INCIDENTALS REQUIRED TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER, UNLESS SEPARATELY ITEMIZED IN THE PLANS.

PRECAST CONCRETE FOR ARCH CULVERTS:

THE DESIGN OF THE PRECAST REINFORCED CONCRETE ARCH SECTIONS SHALL BE IN ACCORDANCE WITH THE 2013 ODOT CMS (CONSTRUCTION AND MATERIAL SPECIFICATIONS) ITEM 706.052. THE CONTRACTOR AND/OR FABRICATOR SHALL PRODUCE A LETTER OF CERTIFICATION VERIFYING THAT THE PRECAST COMPONENTS MEET THE STATED LOADING CRITERIA. THIS CERTIFICATION SHALL BE SUBMITTED TO THE CITY OF DUBLIN FOR RECORD PURPOSES. DETAILED PLANS FOR THE CULVERT SECTIONS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OHIO.

THE PRECAST CONCRETE ARCH BRIDGE CULVERT MUST BE PROVIDED BY A SUPPLIER THAT HAS A MINIMUM OF TWO (2) REGISTERED PROFESSIONAL ENGINEERS ON STAFF THAT ARE DEDICATED TO THE DESIGN OF THIS STRUCTURE TYPE. SUPPLIER MUST PROVIDE THESE NAMES, P.E. LICENSE NUMBERS, AND DATES OF HIRE. IN ADDITION, THE PRECAST CONCRETE ARCH PROVIDER MUST PROVIDE EVIDENCE OF FIVE (5) PRECAST ARCH BRIDGES OF SIMILIAR SPAN AND RISE INSTALLED IN THE STATE OF OHIO IN THE LAST THREE YEARS INCLUDING AT LEAST ONE (1) PRECAST ARCH BRIDGE THAT HAS BEEN INSTALLED FOR INTERSTATE APPLICATIONS INCORPORATING HS-25 LOADING DESIGN. INFORMATION BEING PROVIDED MUST INCLUDE SPAN, RISE, LENGTH OF STRUCTURE, DESIGN LOADING, AND DATE OF INSTALLATION.

ITEM SPECIAL - STRUCTURE, MISC.: MANUFACTURED STONE VENEER:

DESCRIPTION: THIS WORK SHALL CONSIST OF FURNISHING ALL MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO PROVIDE ACCEPTABLE MANUFACTURED STONE VENEER AS DESCRIBED BY THE PLAN AND THESE PROVISIONS.

MATERIALS: MATERIALS SHALL BE AS FOLLOWS:

CEMENT FOR MORTAR: 701.07

SAND FOR MORTAR: 703.03

COLORING AGENTS FOR MORTAR: MINERAL OXIDES ACCEPTABLE TO THE ENGINEER.

JOINT SEALANT: MULTICOMPONENT POLYURETHANE SEALANT AS PER FEDERAL SPECIFICATION TT-S-00227E, TYPE II. THE COLOR SHALL BE BEIGE, AND MATCH THE MORTAR COLOR TO THE SATISFACTION OF THE ENGINEER.

METAL LATH: 3.4 POUND FLAT DIAMOND MESH, GALVANIZED.

MANUFACTURED STONE:

1. MANUFACTURED STONE SHALL BE GREAT LAKE LIMESTONE. THE MANUFACTURED STONE SHALL BE REASONABLY UNIFORM IN COLOR, DURABLE AND FREE OF SEAMS, CRACKS, INCLUSIONS, OR OTHER STRUCTURAL DEFECTS. THE MANUFACTURED STONE SHALL BE AS MANUFACTURED BY DUTCH QUALITY STONE, OR AN APPROVED ALTERNATIVE.

2. PHYSICAL PROPERTIES:

   A. COMPRESSIVE STRENGTH - ASTM C67: MINIMUM 2,500 PSI.
   B. SHEAR (ADHESION) STRENGTH - ASTM C482: MINIMUM 115 PSI.
   C. TENSILE STRENGTH: MINIMUM 590 PSI.
   D. ABSORPTION - ASTM C140: MAXIMUM 13.5 PERCENT.
   E. DURABILITY - ASTM C666: AFTER 300 CYCLES THE RELATIVE DYNAMIC MODULUS IS 92 PERCENT.

3. INSTALLED WEIGHT: APPROXIMATELY 10 - 12 POUNDS PER SQUARE FOOT.

4. COLORS:

   A. GREAT LAKE LIMESTONE BY DUTCH QUALITY STONE OR AN APPROVED ALTERNATIVE.

MORTAR:

1. SETTING MORTAR SHALL BE COMPOSED OF ONE PART MASONRY CEMENT AND BETWEEN TWO AND ONE-FOURTH AND TWO AND THREE-FOURTHS PART SAND MIXED WITH POTABLE WATER.

2. THE MORTAR SHALL BE HAND OR MACHINE MIXED, AS MAY BE REQUIRED BY THE ENGINEER. IN THE PREPARATION OF HAND MIXED MORTAR, THE SAND AND CEMENT SHALL BE THOROUGHLY MIXED TOGETHER IN A CLEAN, TIGHT MORTAR BOX UNTIL THE MIXTURE IS OF UNIFORM COLOR, AFTER WHICH CLEAN WATER SHALL BE ADDED IN SUCH QUANTITY AS TO FORM A STIFF PLASTIC MASS. MACHINE MIXED MORTAR SHALL BE PREPARED IN AN APPROVED MIXER AND SHALL BE MIXED NOT LESS THAN 3 MINUTES NOR MORE THAN 10 MINUTES. MORTAR SHALL BE USED WITHIN 1-1#2 HOURS AFTER MIXING AND BEFORE FINAL SET BEGINS. RETEMPERING OF MORTAR SHALL BE DONE AS NECESSARY TO MAINTAIN PROPER CONSISTENCY DURING PLACEMENT.

3. GROUTING MORTAR SHALL APPROXIMATE THE STONE COLOR.

SAMPLE PANEL: A SAMPLE PANEL SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE FOLLOWING:

1. CONSTRUCT WHERE APPROVED BY ENGINEER.

2. THE PANEL SHALL BE AT LEAST 3 FEET LONG BY 4 FEET HIGH AND SHALL SHOW ALL DETAILS OF CONSTRUCTION THAT WILL BE USED IN THE COMPLETED WORK, INCLUDING AT LEAST ONE 90 DEGREE CORNER IF ANY 90 DEGREE CORNERS ARE SHOWN IN THE PLANS.

3. ADDITIONAL PANELS SHALL BE CONSTRUCTED AS REQUIRED BY THE ENGINEER IF THE ORIGINAL PANEL CONSTRUCTION IS NOT ACCEPTABLE.

4. MANUFACTURED STONE APPLICATION SHALL NOT BEGIN UNTIL THE SAMPLE PANEL IS APPROVED BY THE ENGINEER.

5. THE ACCEPTABLE SAMPLE SHALL BE RETAINED AS A REFERENCE STANDARD FOR THE PROJECT.

6. THE SAMPLE PANEL SHALL BE REMOVED FROM SITE AFTER COMPLETION AND ACCEPTANCE OF THE MANUFACTURED STONE WORK.

SUBSTRATE PREPARATION: METAL LATH SHALL BE APPLIED TO CONCRETE OR MASONRY SURFACES WITH GALVANIZED CONCRETE NAILS 6 INCHES APART, 16 INCHES ON CENTER.

VENEER APPLICATION: APPLY IN STRICT CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS FOR THE TYPES OF SUBSTRATES ENCOUNTERED.

THE STONE MUST COVER ALL EXPOSED FACES OF THE HEADWALLS/WINGWALLS AND EXPOSED END FACES OF THE CONCRETE ARCHES. STONE VENEER SHALL EXTEND 6 INCHES BELOW FINISH GRADE.

PATTERN AND JOINTS: STONE SHALL BE PLACED IN A RANDOM ASHLAR PATTERN SIMILAR TO AVERY-MURFIELD BRIDGE OVER US 33/SR 161 IN DUBLIN, OHIO.

RAKE, CLEAN, AND FINISH JOINTS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.

TEMPERATURE LIMITATIONS OF ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS, SECTION 602.03, SHALL GOVERN.

SPECIAL CARE SHALL BE TAKEN IN PLACING STONE ADJACENT TO EXPANSION JOINTS TO INSURE CLEAR OPENINGS AS SHOWN. IF NECESSARY, THESE STONES SHALL BE CUT, GROUND, OR BUSH-HAMMERED TO EFFECT THE REQUIRED CLEARANCES.

ALL MORTAR JOINTS SHALL BE PROTECTED AND KEPT WET FOR A PERIOD OF THREE DAYS AFTER COMPLETION.

JOINT SEALING: PRIMER, WHEN REQUIRED, SHALL BE NONSTAINING AND NONACIDIC, AND SHALL BE USED AS RECOMMENDED BY MANUFACTURER OF SEALANT, HAVING BEEN TESTED BEFORE FOR STAINING AND DURABILITY ON SAMPLES OF ACTUAL SURFACES TO BE SEALED.

(IF PRIMERS ARE REQUIRED, THEY SHOULD BE APPLIED TO THE CONFINES OF JOINT SURFACES AFTER STONE IS INSTALLED INTO THE WALL. IN SOME INSTANCES IT MAY BE ADVISABLE TO APPLY PRIMER TO THE STONE BEFORE THE STONE IS INSTALLED INTO THE WALL. APPLICATION PROCEDURES SHOULD BE AS RECOMMENDED BY MANUFACTURER OF THE SEALANT.)

BACK-UP MATERIALS AND PREFORMED JOINT FILLERS SHALL BE NONSTAINING, COMPATIBLE WITH SEALANT AND PRIMER, AND OF A RESILIENT NATURE, SUCH AS CLOSED CELL RESILIENT FOAM, SPONGE RUBBER, OR OF A SUPPORTING TYPE, SUCH AS CLOSED CELL RIGID FOAM, CORK OR NONIMPREGNATED FIBERBOARD. MATERIALS IMPREGNATED WITH OIL, BITUMEN OR SIMILAR MATERIALS SHALL NOT BE USED. SIZE AND SHAPE SHALL BE AS INDICATED BY JOINT DETAIL IN DRAWINGS.

SEALANT SHALL NOT ADHERE TO BACK-UP MATERIAL AND SHALL BE AS RECOMMENDED BY SEALANT MANUFACTURER.

BOND BREAKERS, WHEN REQUIRED, SHALL BE AS RECOMMENDED BY MANUFACTURER OF SEALANT.

SOLVENTS, CLEANING AGENTS AND OTHER ACCESSORY MATERIALS SHALL BE NONSTAINING TO THE STONE AND SHALL BE RECOMMENDED BY SEALANT MANUFACTURER.

PROTECTION OF FINISHED WORK: RECEIPT, STORAGE, AND PROTECTION OF MANUFACTURED STONE WORK PRIOR TO, DURING, AND SUBSEQUENT TO INSTALLATION SHALL BE THE RESPONSIBILITY OF THE MASON CONTRACTOR.

DURING CONSTRUCTION, TOPS OF WALLS SHALL BE CAREFULLY COVERED AT NIGHT, AND ESPECIALLY DURING ANY PRECIPITATION OR OTHER INCLEMENT WEATHER.

AT ALL TIMES, WALLS SHALL BE ADEQUATELY PROTECTED FROM DROPPINGS.

CLEANING: FINISHED STONEWORK SHALL BE WASHED CLEAN AND FREE OF DIRT, MORTAR, AND OTHER OBJECTIONABLE ACCUMULATIONS. MORTAR DROPPINGS AND SMEARS SHALL BE REMOVED AS WORK PROGRESSES. FINAL CLEANDOWN SHALL INCLUDE BRUSHING WITH FIBER BRUSHES AND MILD SOAP OR DETERGENT, AND RINSING WITH CLEAR WATER. NO ACIDS SHALL BE USED WITHOUT PRIOR APPROVAL. STONEWORK SHALL BE PROTECTED FROM RUNDOWN OR SPLASH WHEN USING ACID ON ADJACENT MATERIALS.

METHOD OF MEASUREMENT: THE AREA TO BE PAID FOR SHALL BE THE ACTUAL AREA IN SQUARE FEET OF ALL EXPOSED FACES AND THE AREA EXTENDING BELOW THE FINAL GRADE AS SHOWN IN THE PLANS OF MANUFACTURED STONE VENEER, COMPLETED, AND ACCEPTED.

BASIS OF PAYMENT: THE AREA, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT BID FOR MANUFACTURED STONE VENEER, WHICH PRICE SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING AND PREPARING ALL MATERIALS, PLACING, INCLUDING ALL LATH, FINISHING AND CLEANING, AND ALL LABOR, EQUIPMENT, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

ITEM SPECIAL - POLYURETHANE CAULKING

CAULK VERTICAL JOINTS OF STONE VENEER WITH POLYURETHANE CAULKING MATERIAL, BEIGE IN COLOR, MANUFACTURED FOR OUTDOOR MASONRY. MATERIALS AND APPLICATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

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# NOTES

## GENERAL NOTES:

1. THIS BRIDGE HAS BEEN DESIGNED FOR GENERAL SITE CONDITIONS. THE PROJECT ENGINEER SHALL BE RESPONSIBLE FOR THE STRUCTURE'S SUITABILITY TO THE EXISTING SITE CONDITIONS AND FOR THE HYDRAULIC EVALUATION -- INCLUDING SCOUR AND CONFIRMATION OF SOIL CONDITIONS.

2. PRIOR TO CONSTRUCTION, CONTRACTOR MUST VERIFY ALL ELEVATIONS SHOWN THROUGH THE ENGINEER.

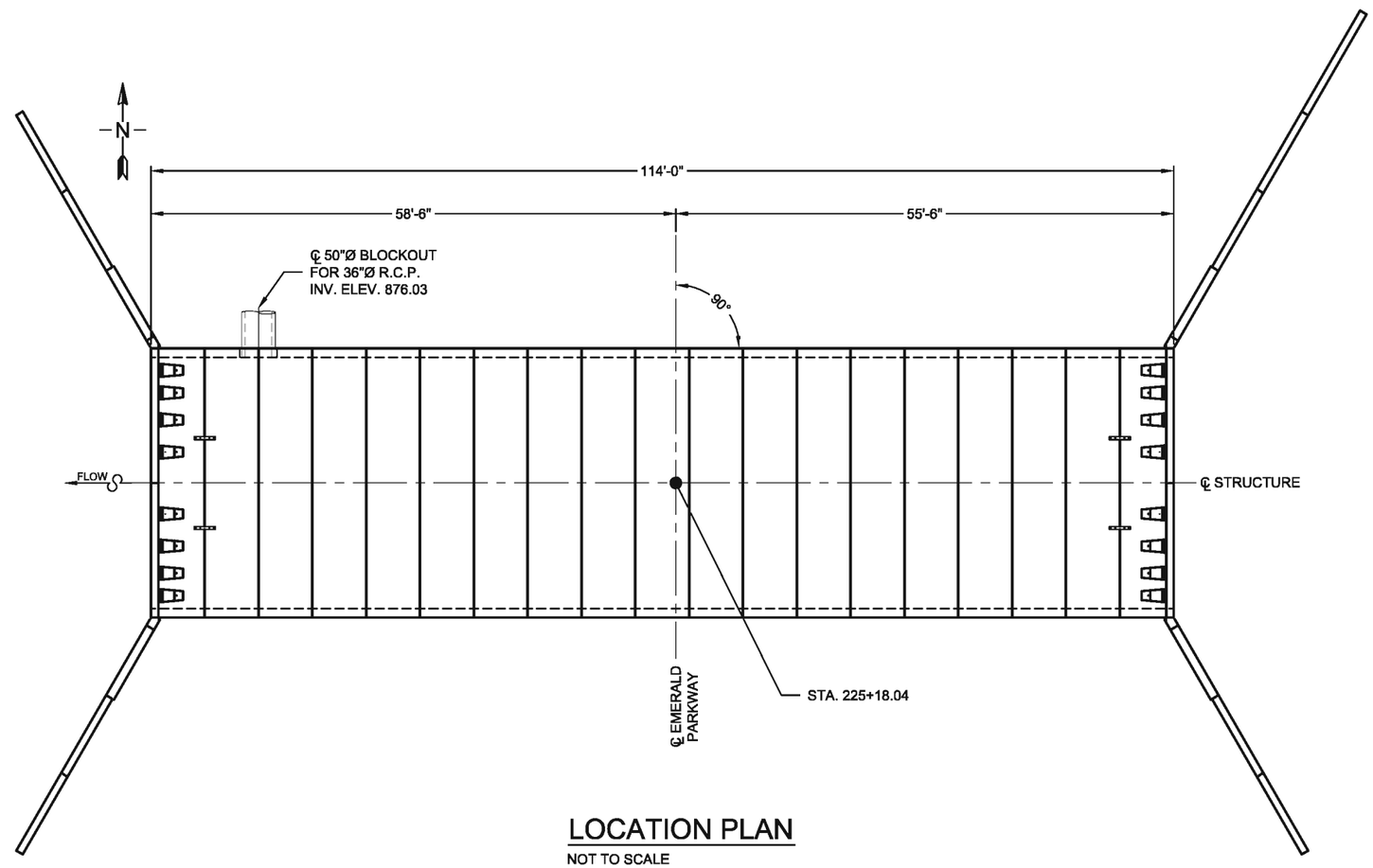
## DESIGN DATA

DESIGN LOADING:
BRIDGE UNITS: HS25-44 WITH ALTERNATE MILITARY
HEADWALLS: EARTH PRESSURE + LIVE LOAD SURCHARGE
WINGWALLS: EARTH PRESSURE + LIVE LOAD SURCHARGE
DESIGN FILL HEIGHT: 2'-0" MIN. TO 6'-0" MAX.
FROM TOP OF CROWN TO TOP OF PAVEMENT.
DESIGN METHOD: LOAD FACTOR PER AASHTO SPECIFICATION
NET ALLOWABLE SOIL BEARING PRESSURE: 4000 PSF *
GROSS ALLOWABLE SOIL BEARING PRESSURE: 4000 PSF *

*FOUNDATION EXCAVATION AND SUBGRADE PREPARATION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT FOR THIS PROJECT PREPARED BY BBC & M ENGINEERING INC. DATED JULY, 2009.

## MATERIALS

PRECAST UNITS SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH CON/SPAN® SPECIFICATIONS. CONCRETE FOR FOOTINGS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI. REINFORCING STEEL FOR FOOTINGS SHALL CONFORM TO ASTM A615 OR A996-GRADE 60.




## LOCATION PLAN

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CULVERT DETAILS 1

CT1 / CT9

SHEET NO. 140 OF 275

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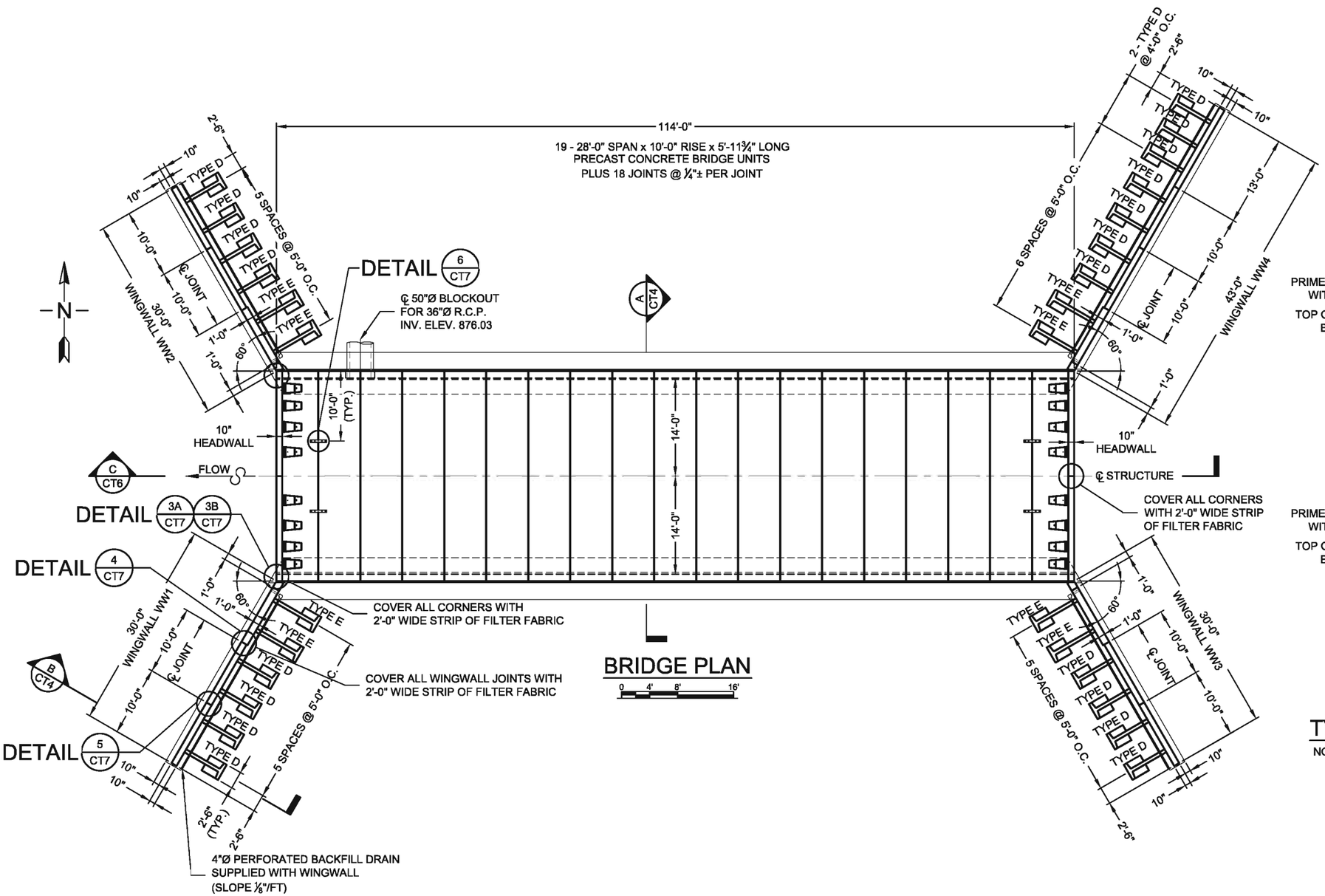


## BRIDGE PLAN

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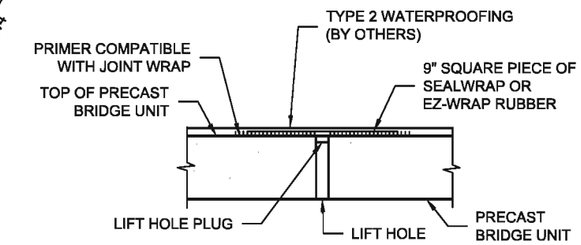
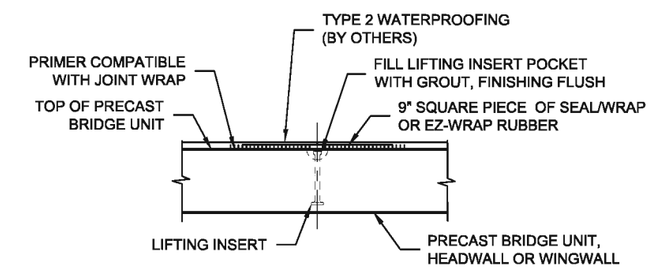



## LIFTING HOLES




## LIFTING INSERTS

## TYPICAL LIFT POINT SEALING DETAIL

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CULVERT DETAILS 2

CT2 / CT9

SHEET NO. 141 OF 275

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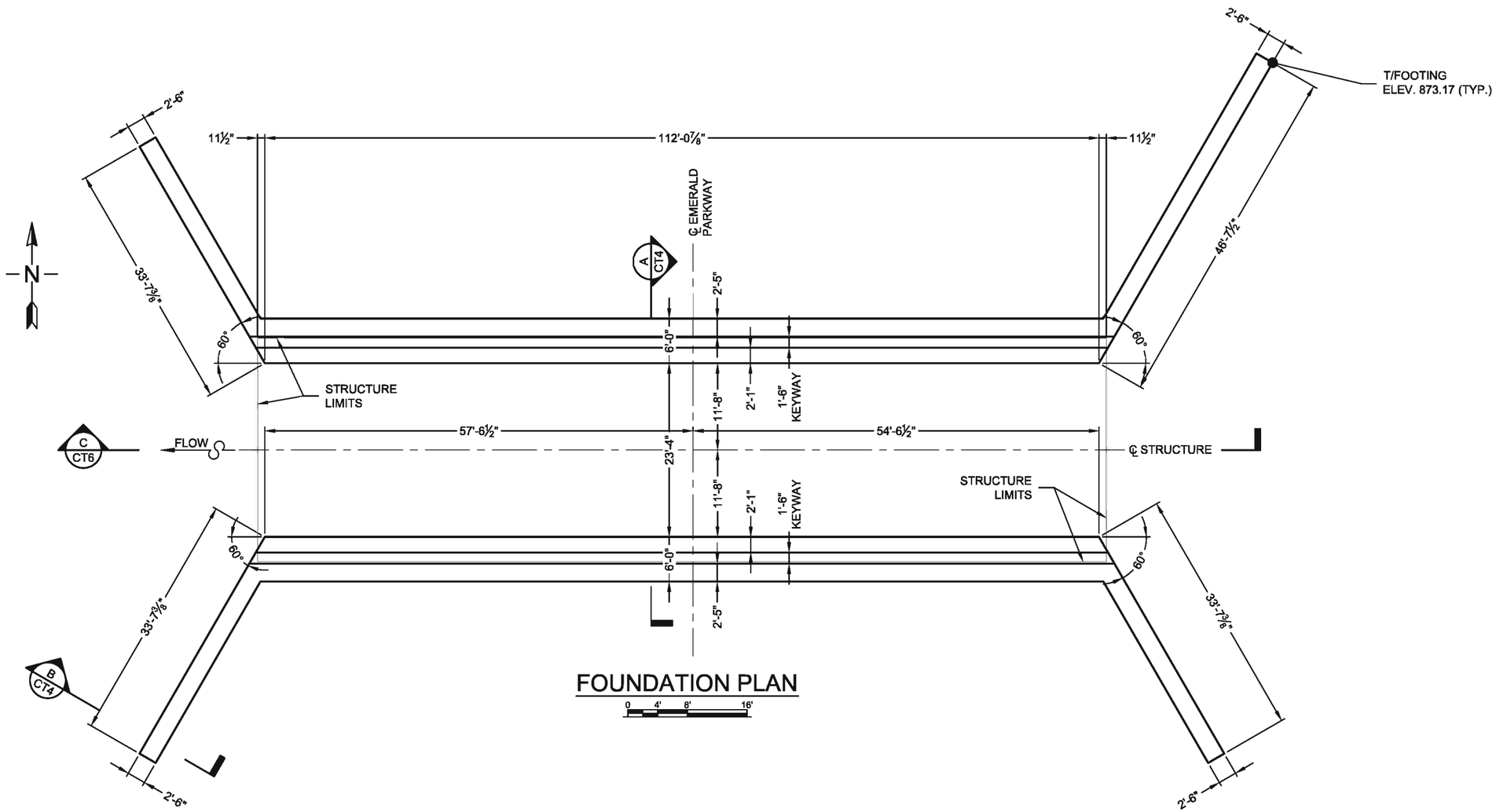


FOUNDATION PLAN

0 4' 8' 16'

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CULVERT DETAILS 3

CT3 / CT9

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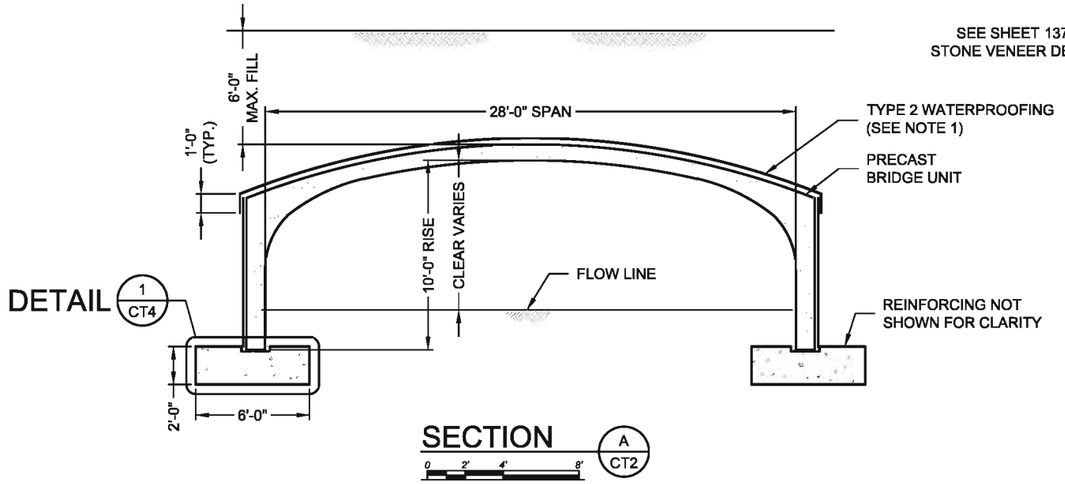
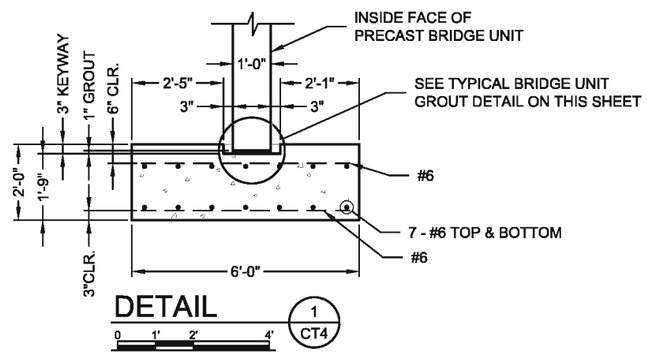
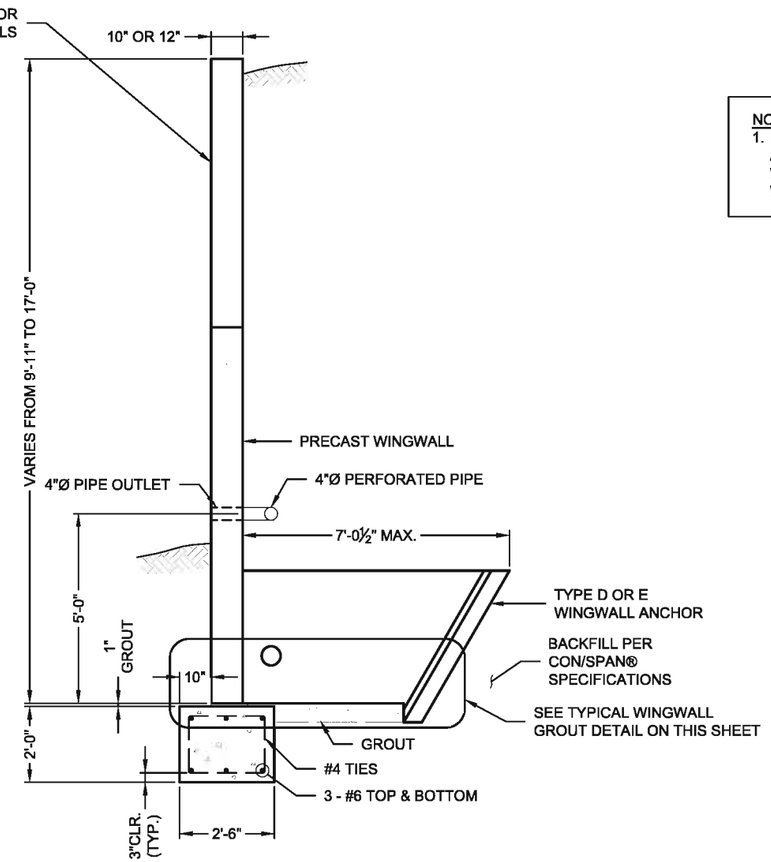



SECTION A CT2

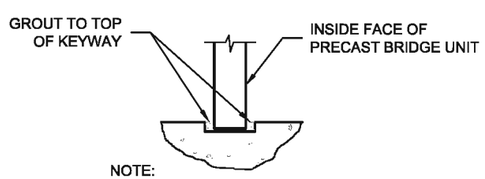



DETAIL 1 CT4




SECTION B CT2

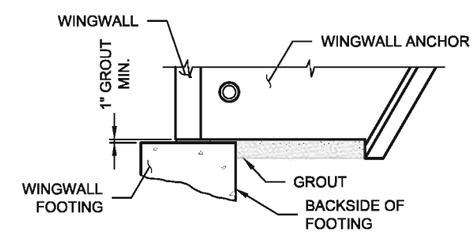
NOTE:
1. APPLY WATERPROOFING TO ALL PORTIONS OF CULVERT WHICH SHALL BE IN CONTACT WITH THE BACKFILL




NOTE:
FILL ENTIRE KEYWAY INCLUDING NOMINAL 1" VOID BETWEEN BOTTOM OF KEYWAY AND BOTTOM OF PRECAST BRIDGE UNIT LEG WITH GROUT.

## TYPICAL BRIDGE UNIT GROUT DETAIL

NOT TO SCALE




NOTES:
- MINIMUM 1" GROUT UNDER WINGWALL LEG & ANCHOR STEM.
- AREA BETWEEN WINGWALL FOOTING AND WINGWALL ANCHOR SHALL BE GROUTED SOLID BEFORE BACKFILL.
- FORM BACKSIDE OF FOOTING TO DIMENSIONS SHOWN ON FOUNDATION PLAN.

## TYPICAL WINGWALL GROUT DETAIL

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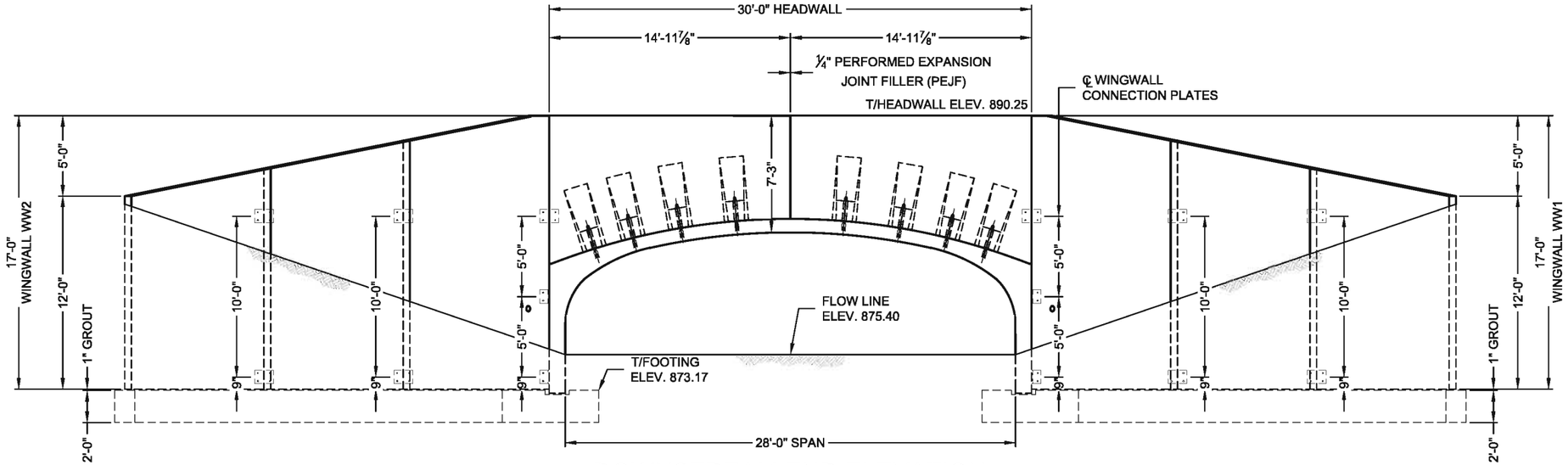
CULVERT DETAILS 4

CT4 / CT9

SHEET NO. 143 OF 275




## DOWNSTREAM END ELEVATION

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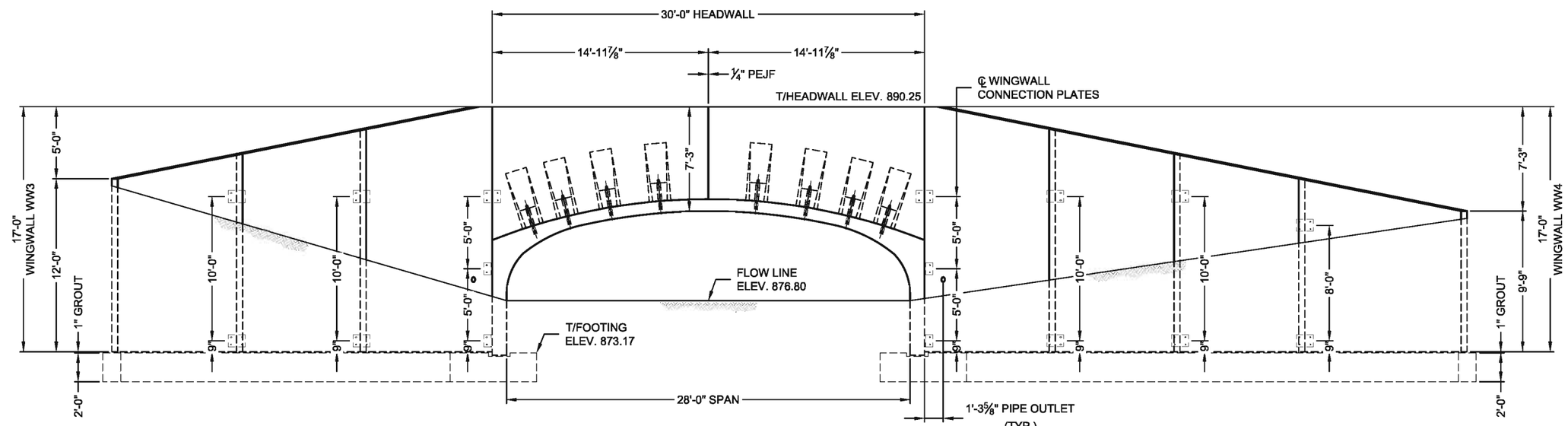


## UPSTREAM END ELEVATION

0 2' 4' 8'

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CULVERT DETAILS 5

CT5 / CT9

SHEET NO. 144 OF 275

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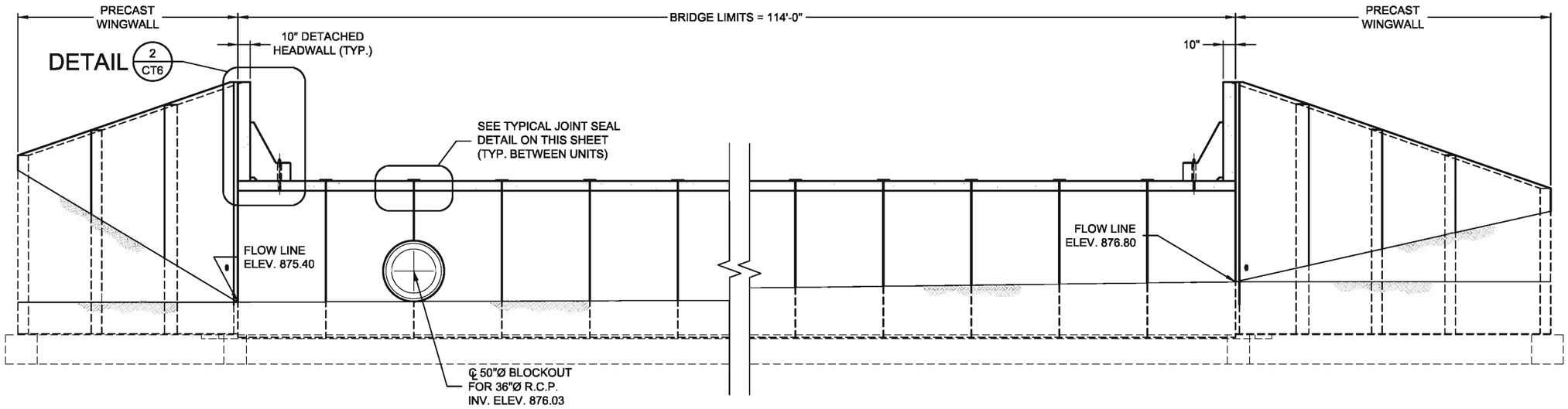
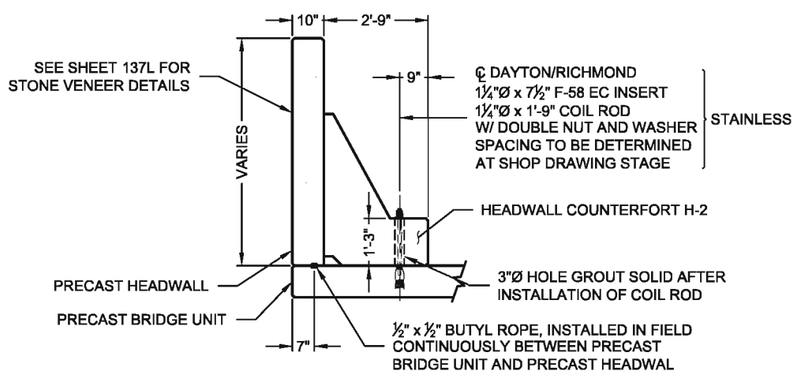


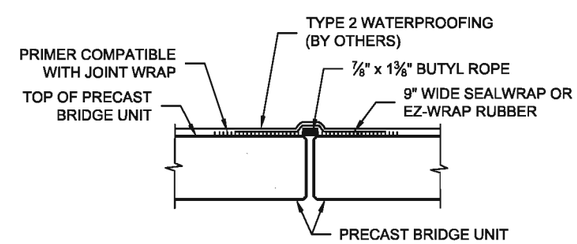

## SECTION C / CT2

0 2' 4' 8'




## DETAIL 2 / CT6

0 1' 2' 4'




## TYPICAL JOINT SEAL DETAIL

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CULVERT DETAILS 6

CT6 / CT9

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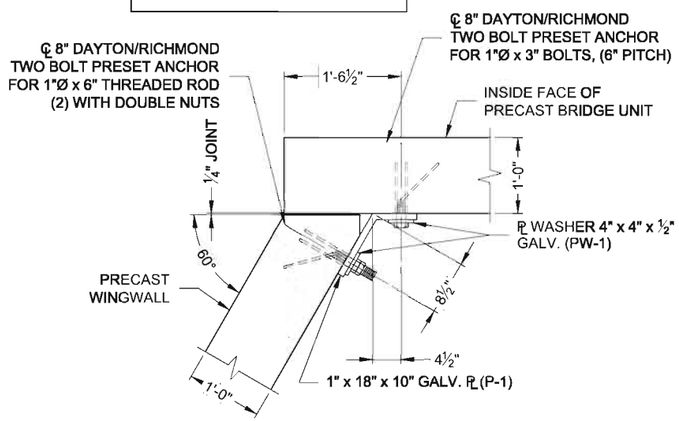
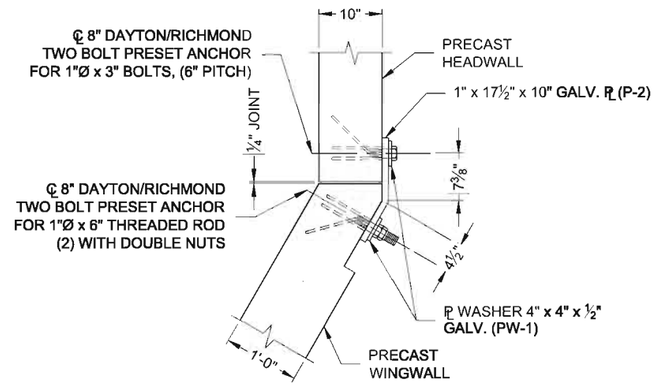
NOTE:
CONNECTION PL'S (P-1) MUST BE POSITIONED WITH SMALL Ø HOLES TOWARD PRECAST BRIDGE UNIT




DETAIL @ UNIT LEG 3A CT2

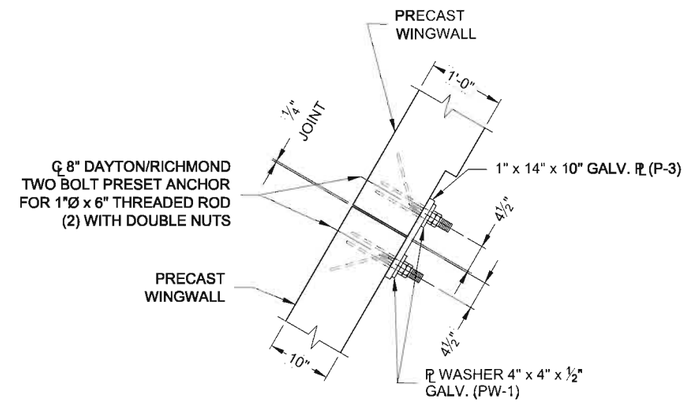
0 1' 2'

NOTE:
CONNECTION PL'S (P-2) MUST BE POSITIONED WITH SMALL Ø HOLES TOWARD PRECAST HEADWALL



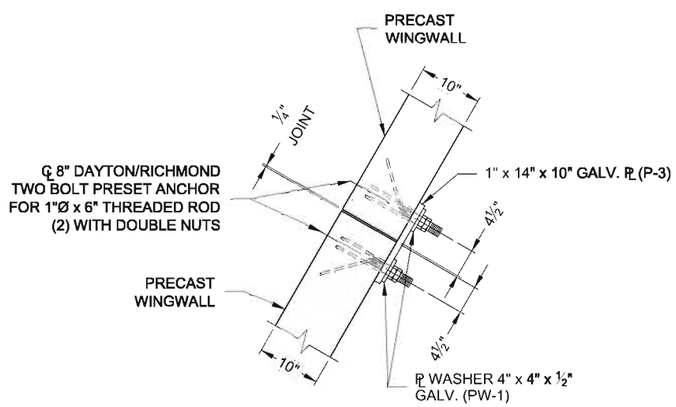

DETAIL @ HEADWALL 3B CT2

0 1' 2'




DETAIL 4 CT2

0 1' 2'




DETAIL 5 CT2

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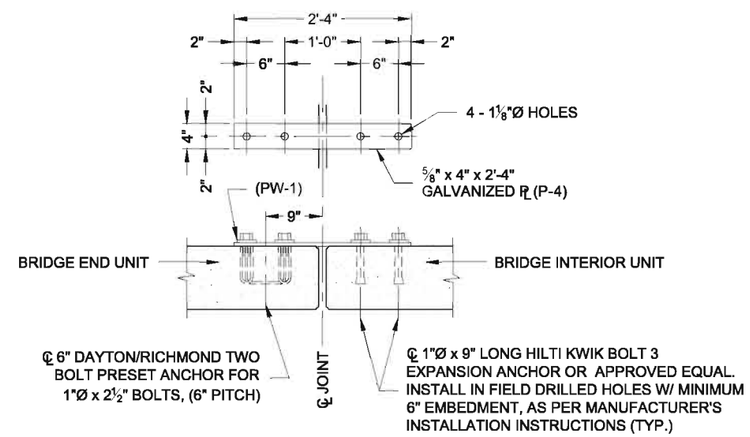


DETAIL 6 CT2

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CULVERT DETAILS 7

CT1 / CT9

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# SPECIFICATIONS FOR MANUFACTURE AND INSTALLATION OF CON/SPAN® BRIDGE SYSTEMS

1. DESCRIPTION
   1.1. TYPE - THIS WORK SHALL CONSIST OF FURNISHING AND CONSTRUCTING A CON/SPAN® BRIDGE SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN AND DIMENSIONS SHOWN ON THE PLANS OR AS ESTABLISHED BY THE ENGINEER. IN SITUATIONS WHERE TWO OR MORE SPECIFICATIONS APPLY TO THIS WORK, THE MOST STRINGENT REQUIREMENTS SHALL GOVERN.
   1.2. DESIGNATION - PRECAST REINFORCED CONCRETE CON/SPAN® BRIDGE UNITS MANUFACTURED IN ACCORDANCE WITH THIS SPECIFICATION SHALL BE DESIGNATED BY SPAN AND RISE. PRECAST REINFORCED CONCRETE CON/SPAN® WINGWALLS AND HEADWALLS MANUFACTURED IN ACCORDANCE WITH THIS SPECIFICATION SHALL BE DESIGNATED BY LENGTH, HEIGHT, AND DEFLECTION ANGLE.

2. DESIGN
   2.1. SPECIFICATIONS - THE PRECAST ELEMENTS ARE DESIGNED IN ACCORDANCE WITH THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" 17TH EDITION, ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002. A MINIMUM OF ONE FOOT OF COVER ABOVE THE CROWN OF THE BRIDGE UNITS IS REQUIRED IN THE INSTALLED CONDITION. (UNLESS NOTED OTHERWISE ON THE SHOP DRAWINGS AND DESIGNED ACCORDINGLY.)

3. MATERIALS
   3.1. CONCRETE - THE CONCRETE FOR THE PRECAST ELEMENTS SHALL BE AIR-ENTRAINED WHEN INSTALLED IN AREAS SUBJECT TO FREEZE-THAW CONDITIONS, COMPOSED OF PORTLAND CEMENT, FINE AND COARSE AGGREGATES, ADMIXTURES AND WATER. AIR-ENTRAINED CONCRETE SHALL CONTAIN 6 ± 2 PERCENT AIR. THE AIR- ENTRAINING ADMIXTURE SHALL CONFORM TO AASHT0 M154. THE MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE AS SHOWN ON THE SHOP DRAWINGS.
      3.1.1. PORTLAND CEMENT - SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATIONS C150-TYPE I, TYPE II, OR TYPE III CEMENT.
      3.1.2. COARSE AGGREGATE - SHALL CONSIST OF STONE HAVING A MAXIMUM SIZE OF 1 INCH. AGGREGATE SHALL MEET REQUIREMENTS FOR ASTM C33.
      3.1.3. WATER REDUCING ADMIXTURE - THE MANUFACTURER MAY SUBMIT, FOR APPROVAL BY THE ENGINEER, A WATER-REDUCING ADMIXTURE FOR THE PURPOSE OF INCREASING WORKABILITY AND REDUCING THE WATER REQUIREMENT FOR THE CONCRETE.
      3.1.4. CALCIUM CHLORIDE - THE ADDITION TO THE MIX OF CALCIUM CHLORIDE OR ADMIXTURES CONTAINING CALCIUM CHLORIDE WILL NOT BE PERMITTED.
      3.1.5. MIXTURE - THE AGGREGATES, CEMENT AND WATER SHALL BE PROPORTIONED AND MIXED IN A BATCH MIXER TO PRODUCE A HOMOGENEOUS CONCRETE MEETING THE STRENGTH REQUIREMENTS OF THIS SPECIFICATION. THE PROPORTION OF PORTLAND CEMENT IN THE MIXTURE SHALL NOT BE LESS THAN 564 POUNDS (6 SACKS) PER CUBIC YARD OF CONCRETE.
   3.2. STEEL REINFORCEMENT
      3.2.1. THE MINIMUM STEEL YIELD STRENGTH SHALL BE 60,000 PSI, UNLESS OTHERWISE NOTED ON THE SHOP DRAWINGS.
      3.2.2. ALL REINFORCING STEEL FOR THE PRECAST ELEMENTS SHALL BE FABRICATED AND PLACED IN ACCORDANCE WITH THE DETAILED SHOP DRAWINGS SUBMITTED BY THE MANUFACTURER.
      3.2.3. REINFORCEMENT SHALL CONSIST OF WELDED WIRE FABRIC CONFORMING TO ASTM SPECIFICATION A 185 OR A 497, OR DEFORMED BILLET STEEL BARS CONFORMING TO ASTM SPECIFICATION A 615, GRADE 60. LONGITUDINAL DISTRIBUTION REINFORCEMENT MAY CONSIST OF WELDED WIRE FABRIC OR DEFORMED BILLET-STEEL BARS.
   3.3. STEEL HARDWARE
      3.3.1. BOLTS AND THREADED RODS FOR WINGWALL CONNECTIONS SHALL CONFORM TO ASTM A 307. NUTS SHALL CONFORM TO AASHTO M292 (ASTM A194) GRADE 2H. ALL BOLTS, THREADED RODS AND NUTS USED IN WINGWALL CONNECTIONS SHALL BE MECHANICALLY ZINC COATED IN ACCORDANCE WITH ASTM B695 CLASS 50.
      3.3.2. STRUCTURAL STEEL FOR WINGWALL CONNECTION PLATES AND PLATE WASHERS SHALL CONFORM TO AASHTO M 270 (ASTM A 709) GRADE 36 AND SHALL BE HOT DIP GALVANIZED AS PER AASHTO M111 (ASTM A123).
      3.3.3. INSERTS FOR WINGWALLS SHALL BE 1" DIAMETER TWO-BOLT PRESET WINGWALL ANCHORS AS MANUFACTURED BY DAYTON/RICHMOND CONCRETE ACCESSORIES, MIAMISBURG, OHIO, (800) 745-3700.
      3.3.4. FERRULE LOOP INSERTS SHALL BE F-64 FERRULE LOOP INSERTS AS MANUFACTURED BY DAYTON/RICHMOND CONCRETE ACCESSORIES, MIAMISBURG, OHIO, (800) 745-3700.
      3.3.5. HOOK BOLTS USED IN ATTACHED HEADWALL CONNECTIONS SHALL BE ASTM A307.
      3.3.6. INSERTS FOR DETACHED HEADWALL CONNECTIONS SHALL BE AISI TYPE 304 STAINLESS STEEL, F-58 EXPANDED COIL INSERTS AS MANUFACTURED BY DAYTON/RICHMOND CONCRETE ACCESSORIES, MIAMISBURG, OHIO, (800) 745-3700. COIL RODS AND NUTS USED IN HEADWALL CONNECTIONS SHALL BE AISI TYPE 304 STAINLESS STEEL. WASHERS USED IN HEADWALL CONNECTIONS SHALL BE EITHER AISI TYPE 304 STAINLESS STEEL PLATE WASHERS OR AASHTO M270 (ASTM A709) GRADE 36 PLATE WASHERS HOT DIP GALVANIZED AS PER AASHTO M111 (ASTM A123).
      3.3.7. REINFORCING BAR SPLICES SHALL BE MADE USING THE DOWEL BAR SPLICER SYSTEM AS MANUFACTURED BY DAYTON/RICHMOND CONCRETE ACCESSORIES, MIAMISBURG, OHIO, (800) 745-3700, AND SHALL CONSIST OF THE DOWEL BAR SPLICER (DB-SAE) AND DOWEL-IN (DI).

4. MANUFACTURE OF PRECAST ELEMENTS - SUBJECT TO THE PROVISIONS OF SECTION 5, BELOW, THE PRECAST ELEMENT DIMENSION AND REINFORCEMENT DETAILS SHALL BE AS PRESCRIBED IN THE PLAN AND SHOP DRAWINGS PROVIDED BY THE MANUFACTURER.
   4.1. FORMS - THE FORMS USED IN MANUFACTURE SHALL BE SUFFICIENTLY RIGID AND ACCURATE TO MAINTAIN THE REQUIRED PRECAST ELEMENT DIMENSIONS WITHIN THE PERMISSIBLE VARIATIONS GIVEN IN SECTION 5 OF THESE SPECIFICATIONS. ALL CASTING SURFACES SHALL BE OF A SMOOTH MATERIAL.
   4.2. PLACEMENT OF REINFORCEMENT
      4.2.1. PLACEMENT OF REINFORCEMENT IN PRECAST BRIDGE UNITS - THE COVER OF CONCRETE OVER THE OUTSIDE CIRCUMFERENTIAL REINFORCEMENT SHALL BE 2" MINIMUM. THE COVER OF CONCRETE OVER THE INSIDE CIRCUMFERENTIAL REINFORCEMENT SHALL BE 1½" MINIMUM, UNLESS OTHERWISE NOTED ON THE SHOP DRAWINGS. THE CLEAR DISTANCE OF THE END CIRCUMFERENTIAL WIRES SHALL NOT BE LESS THAN 1" NOR MORE THAN 2" FROM THE ENDS OF EACH SECTION. REINFORCEMENT SHALL BE ASSEMBLED UTILIZING SINGLE OR MULTIPLE LAYERS OF WELDED WIRE FABRIC (NOT TO EXCEED 3 LAYERS), SUPPLEMENTED WITH A SINGLE LAYER OF DEFORMED BILLET-STEEL BARS, WHEN NECESSARY. WELDED WIRE FABRIC SHALL BE COMPOSED OF CIRCUMFERENTIAL AND LONGITUDINAL WIRES MEETING THE SPACING REQUIREMENTS OF 4.3, BELOW, AND SHALL CONTAIN SUFFICIENT LONGITUDINAL WIRES EXTENDING THROUGH THE BRIDGE UNIT TO MAINTAIN THE SHAPE AND POSITION OF THE REINFORCEMENT. LONGITUDINAL DISTRIBUTION REINFORCEMENT MAY BE WELDED WIRE FABRIC OR DEFORMED BILLET-STEEL BARS AND SHALL MEET THE SPACING REQUIREMENTS OF 4.3, BELOW. THE ENDS OF THE LONGITUDINAL DISTRIBUTION REINFORCEMENT SHALL BE NOT MORE THAN 3" AND NOT LESS THAN 1½" FROM THE ENDS OF THE BRIDGE UNIT.
      4.2.2. BENDING OF REINFORCEMENT FOR PRECAST BRIDGE UNITS - THE OUTSIDE AND INSIDE CIRCUMFERENTIAL REINFORCING STEEL FOR THE CORNERS OF THE BRIDGE SHALL BE BENT TO SUCH AN ANGLE THAT IS APPROXIMATELY EQUAL TO THE CONFIGURATION OF THE BRIDGE'S OUTSIDE CORNER.
      4.2.3. PLACEMENT OF REINFORCEMENT FOR PRECAST WINGWALLS AND HEADWALLS - THE COVER OF CONCRETE OVER THE LONGITUDINAL AND TRANSVERSE REINFORCEMENT SHALL BE 2" MINIMUM. THE CLEAR DISTANCE FROM THE END OF EACH PRECAST ELEMENT TO THE END OF REINFORCING STEEL SHALL NOT BE LESS THAN 1½" NOR MORE THAN 3". REINFORCEMENT SHALL BE ASSEMBLED UTILIZING A SINGLE LAYER OF WELDED WIRE FABRIC, OR A SINGLE LAYER OF DEFORMED BILLET-STEEL BARS. WELDED WIRE FABRIC SHALL BE COMPOSED OF TRANSVERSE AND LONGITUDINAL WIRES MEETING THE SPACING REQUIREMENTS OF 4.3, BELOW, AND SHALL CONTAIN SUFFICIENT LONGITUDINAL WIRES EXTENDING THROUGH THE ELEMENT TO MAINTAIN THE SHAPE AND POSITION OF THE REINFORCEMENT. LONGITUDINAL REINFORCEMENT MAY BE WELDED WIRE FABRIC OR DEFORMED BILLET-STEEL BARS AND SHALL MEET THE SPACING REQUIREMENTS OF 4.3, BELOW.
   4.3. LAPS, WELDS, SPACING
      4.3.1. LAPS, WELDS, AND SPACING FOR PRECAST BRIDGE UNITS - TENSION SPLICES IN THE CIRCUMFERENTIAL REINFORCEMENT SHALL BE MADE BY LAPPING. LAPS MAY BE TACK WELDED TOGETHER FOR ASSEMBLY PURPOSES. FOR SMOOTH WELDED WIRE FABRIC, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 8.30.2 AND 8.32.6. FOR DEFORMED WELDED WIRE FABRIC, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 8.30.1 AND 8.32.5. THE OVERLAP OF WELDED WIRE FABRIC SHALL BE MEASURED BETWEEN THE OUTER-MOST LONGITUDINAL WIRES OF EACH FABRIC SHEET. FOR DEFORMED BILLET-STEEL BARS, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 8.25. FOR SPLICES OTHER THAN TENSION SPLICES, THE OVERLAP SHALL BE A MINIMUM OF 1'-0" FOR WELDED WIRE FABRIC OR DEFORMED BILLET-STEEL BARS. THE SPACING CENTER TO CENTER OF THE CIRCUMFERENTIAL WIRES IN A WIRE FABRIC SHEET SHALL BE NOT LESS THAN 2" NOR MORE THAN 4". THE SPACING CENTER TO CENTER OF THE LONGITUDINAL WIRES SHALL NOT BE MORE THAN 8". THE SPACING CENTER TO CENTER OF THE LONGITUDINAL DISTRIBUTION STEEL FOR EITHER LINE OF REINFORCING IN THE TOP SLAB SHALL BE NOT MORE THAN 1'-4".
      4.3.2. LAPS, WELDS, AND SPACING FOR PRECAST WINGWALLS AND HEADWALLS - SPLICES IN THE REINFORCEMENT SHALL BE MADE BY LAPPING. LAPS MAY BE TACK WELDED TOGETHER FOR ASSEMBLY PURPOSES. FOR SMOOTH WELDED WIRE FABRIC, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 8.30.2 AND 8.32.6. FOR DEFORMED WELDED WIRE FABRIC, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 8.30.1 AND 8.32.5. FOR DEFORMED BILLET-STEEL BARS, THE OVERLAP SHALL MEET THE REQUIREMENTS OF AASHTO 8.25. THE SPACING CENTER-TO-CENTER OF THE WIRES IN A WIRE FABRIC SHEET SHALL BE NOT LESS THAN 2" NOR MORE THAN 8".
   4.4. CURING - THE PRECAST CONCRETE ELEMENTS SHALL BE CURED FOR A SUFFICIENT LENGTH OF TIME SO THAT THE CONCRETE WILL DEVELOP THE SPECIFIED COMPRESSIVE STRENGTH IN 28 DAYS OR LESS. ANY ONE OF THE FOLLOWING METHODS OF CURING OR COMBINATIONS THERE OF SHALL BE USED:
      4.4.1. STEAM CURING - THE PRECAST ELEMENTS MAY BE LOW-PRESSURE STEAM CURED BY A SYSTEM THAT WILL MAINTAIN A MOIST ATMOSPHERE.
      4.4.2. WATER CURING - THE PRECAST ELEMENTS MAY BE WATER CURED BY ANY METHOD THAT WILL KEEP THE SECTIONS MOIST.
      4.4.3. MEMBRANE CURING - A SEALING MEMBRANE CONFORMING TO THE REQUIREMENTS OF ASTM SPECIFICATION C309 MAY BE APPLIED AND SHALL BE LEFT INTACT UNTIL THE REQUIRED CONCRETE COMPRESSIVE STRENGTH IS ATTAINED. THE CONCRETE TEMPERATURE AT THE TIME OF STRENGTH IS ATTAINED. THE CONCRETE TEMPERATURE AT THE TIME OF APPLICATION SHALL BE WITHIN +/- 10 DEGREES F OF THE ATMOSPHERIC TEMPERATURE. ALL SURFACES SHALL BE KEPT MOIST PRIOR TO THE APPLICATION OF THE COMPOUNDS AND SHALL BE DAMP WHEN THE COMPOUND IS APPLIED.
   4.5. STORAGE, HANDLING & DELIVERY
      4.5.1. STORAGE - PRECAST CONCRETE BRIDGE ELEMENTS SHALL BE LIFTED AND STORED IN "AS-CAST" POSITION. PRECAST CONCRETE HEADWALL AND WINGWALL UNITS ARE CAST, STORED AND SHIPPED IN A FLAT POSITION. THE PRECAST ELEMENTS SHALL BE STORED IN SUCH A MANNER TO PREVENT CRACKING OR DAMAGE. STORE ELEMENTS USING TIMBER SUPPORTS AS APPROPRIATE. THE UNITS SHALL NOT BE MOVED UNTIL THE CONCRETE COMPRESSIVE STRENGTH HAS REACHED A MINIMUM OF 2500 PSI, AND THEY SHALL NOT BE STORED IN AN UPRIGHT POSITION.
      4.5.2. HANDLING - HANDLING DEVICES SHALL BE PERMITTED IN EACH PRECAST ELEMENT FOR THE PURPOSE OF HANDLING AND SETTING. SPREADER BEAMS MAY BE REQUIRED FOR THE LIFTING OF PRECAST CONCRETE BRIDGE ELEMENTS TO PRECLUDE DAMAGE FROM BENDING OR TORSION FORCES.
      4.5.3. DELIVERY - PRECAST CONCRETE ELEMENTS MUST NOT BE SHIPPED UNTIL THE CONCRETE HAS ATTAINED THE SPECIFIED DESIGN COMPRESSIVE STRENGTH, OR AS DIRECTED BY THE DESIGN ENGINEER. PRECAST CONCRETE ELEMENTS MAY BE UNLOADED AND PLACED ON THE GROUND AT THE SITE UNTIL INSTALLED. STORE ELEMENTS USING TIMBER SUPPORTS AS APPROPRIATE.
   4.6. QUALITY ASSURANCE - THE PRECASTER SHALL DEMONSTRATE ADHERENCE TO THE STANDARDS SET FORTH IN THE NPCA QUALITY CONTROL MANUAL. THE PRECASTER SHALL MEET EITHER SECTION 4.7.1 OR 4.7.2
      4.6.1. CERTIFICATION - THE PRECASTER SHALL BE CERTIFIED BY THE PRECAST/PRESTRESSED CONCRETE INSTITUTE PLANT CERTIFICATION PROGRAM OR THE NATIONAL PRECAST CONCRETE ASSOCIATION'S PLANT CERTIFICATION PROGRAM PRIOR TO AND DURING PRODUCTION OF THE PRODUCTS COVERED BY THIS SPECIFICATION.
      4.6.2. QUALIFICATIONS, TESTING AND INSPECTION
         4.6.2.1. THE PRECASTER SHALL HAVE BEEN IN THE BUSINESS OF PRODUCING PRECAST CONCRETE PRODUCTS SIMILAR TO THOSE SPECIFIED FOR A MINIMUM OF THREE YEARS. HE SHALL MAINTAIN A PERMANENT QUALITY CONTROL DEPARTMENT OR RETAIN AN INDEPENDENT TESTING AGENCY ON A CONTINUING BASIS. THE AGENCY SHALL ISSUE A REPORT, CERTIFIED BY A LICENSED ENGINEER, DETAILING THE ABILITY OF THE PRECASTER TO PRODUCE QUALITY PRODUCTS CONSISTENT WITH INDUSTRY STANDARDS.
         4.6.2.2. THE PRECASTER SHALL SHOW THAT THE FOLLOWING TESTS ARE PERFORMED IN ACCORDANCE WITH THE ASTM STANDARDS INDICATED. TESTS SHALL BE PERFORMED AS INDICATED IN SECTION 6 OF THESE SPECIFICATIONS.
            4.6.2.2.1. AIR CONTENT: C231 OR C173
            4.6.2.2.2. COMPRESSIVE STRENGTH: C31,C39,C497
         4.6.2.3. THE PRECASTER SHALL PROVIDE DOCUMENTATION DEMONSTRATING COMPLIANCE WITH THIS SECTION TO CONTECH® BRIDGE SOLUTIONS AT REGULAR INTERVALS OR UPON REQUEST.
         4.6.2.4. THE OWNER MAY PLACE AN INSPECTOR IN THE PLANT WHEN THE PRODUCTS COVERED BY THIS SPECIFICATION ARE BEING MANUFACTURED.
      4.6.3. DOCUMENTATION - THE PRECASTER SHALL SUBMIT PRECAST PRODUCTION REPORTS TO CONTECH® BRIDGE SOLUTIONS AS REQUIRED.

5. PERMISSIBLE VARIATIONS
   5.1. BRIDGE UNITS
      5.1.1. INTERNAL DIMENSIONS - THE INTERNAL DIMENSION SHALL VARY NOT MORE THAN 1% FROM THE DESIGN DIMENSIONS NOR MORE THAN 1½" WHICHEVER IS LESS.
      5.1.2. SLAB AND WALL THICKNESS - THE SLAB AND WALL THICKNESS SHALL NOT BE LESS THAN THAT SHOWN IN THE DESIGN BY MORE THAN ¼". A THICKNESS MORE THAN THAT REQUIRED IN THE DESIGN SHALL NOT BE CAUSE FOR REJECTION.
      5.1.3. LENGTH OF OPPOSITE SURFACES - VARIATIONS IN LAYING LENGTHS OF TWO OPPOSITE SURFACES OF THE BRIDGE UNIT SHALL NOT BE MORE THAN ½" IN ANY SECTION, EXCEPT WHERE BEVELED ENDS FOR LAYING OF CURVES ARE SPECIFIED BY THE PURCHASER.
      5.1.4. LENGTH OF SECTION - THE UNDERRUN IN LENGTH OF A SECTION SHALL NOT BE MORE THAN ½" IN ANY BRIDGE UNIT.
      5.1.5. POSITION OF REINFORCEMENT - THE MAXIMUM VARIATION IN POSITION OF THE REINFORCEMENT SHALL BE ± ½". IN NO CASE SHALL THE COVER OVER THE REINFORCEMENT BE LESS THAN 1½" FOR THE OUTSIDE CIRCUMFERENTIAL STEEL OR BE LESS THAN 1" FOR THE INSIDE CIRCUMFERENTIAL STEEL AS MEASURED TO THE EXTERNAL OR INTERNAL SURFACE OF THE BRIDGE. THESE TOLERANCES OR COVER REQUIREMENTS DO NOT APPLY TO MATING SURFACES OF THE JOINTS.
      5.1.6. AREA OF REINFORCEMENT - THE AREAS OF STEEL REINFORCEMENT SHALL BE THE DESIGN STEEL AREAS AS SHOWN IN THE MANUFACTURER'S SHOP DRAWINGS. STEEL AREAS GREATER THAN THOSE REQUIRED SHALL NOT BE CAUSE FOR REJECTION. THE PERMISSIBLE VARIATION IN DIAMETER OF ANY REINFORCEMENT SHALL CONFORM TO THE TOLERANCES PRESCRIBED IN THE ASTM SPECIFICATION FOR THAT TYPE OF REINFORCEMENT.
   5.2. WINGWALLS & HEADWALLS
      5.2.1. WALL THICKNESS - THE WALL THICKNESS SHALL NOT VARY FROM THAT SHOWN IN THE DESIGN BY MORE THAN ½".
      5.2.2. LENGTH/HEIGHT OF WALL SECTIONS - THE LENGTH AND HEIGHT OF THE WALL SHALL NOT VARY FROM THAT SHOWN IN THE DESIGN BY MORE THAN ½".
      5.2.3. POSITION OF REINFORCEMENT - THE MAXIMUM VARIATION IN THE POSITION OF THE REINFORCEMENT SHALL BE ± ½". IN NO CASE SHALL THE COVER OVER THE REINFORCEMENT BE LESS THAN 1½".
      5.2.4. SIZE OF REINFORCEMENT - THE PERMISSIBLE VARIATION IN DIAMETER OF ANY REINFORCING SHALL CONFORM TO THE TOLERANCES PRESCRIBED IN THE ASTM SPECIFICATION FOR THAT TYPE OF REINFORCING. STEEL AREA GREATER THAN THAT REQUIRED SHALL NOT BE CAUSE FOR REJECTION.

6. TESTING/ INSPECTION
   6.1. TESTING
      6.1.1. TYPE OF TEST SPECIMEN - CONCRETE COMPRESSIVE STRENGTH SHALL BE DETERMINED FROM COMPRESSION TESTS MADE ON CYLINDERS OR CORES. FOR CYLINDER TESTING, A MINIMUM OF 4 CYLINDERS SHALL BE TAKEN FOR EACH BRIDGE ELEMENT. EACH ELEMENT SHALL BE CONSIDERED SEPARATELY FOR THE PURPOSE OF TESTING AND ACCEPTANCE.
      6.1.2. COMPRESSION TESTING - CYLINDERS SHALL BE MADE AND TESTED AS PRESCRIBED BY THE ASTM C39 SPECIFICATION. CYLINDERS SHALL BE CURED IN THE SAME ENVIRONMENT AS THE BRIDGE ELEMENTS. CORES SHALL BE OBTAINED AND TESTED FOR COMPRESSIVE STRENGTH IN ACCORDANCE WITH THE PROVISIONS OF THE ASTM C42 SPECIFICATION.
      6.1.3. ACCEPTABILITY OF CYLINDER TESTS - WHEN THE AVERAGE COMPRESSIVE STRENGTH OF ALL CYLINDERS TESTED IS EQUAL TO OR GREATER THAN THE DESIGN COMPRESSIVE STRENGTH, AND NOT MORE THAN 10% OF THE CYLINDERS TESTED HAVE A COMPRESSIVE STRENGTH LESS THAN THE DESIGN CONCRETE STRENGTH, AND NO CYLINDER TESTED HAS A COMPRESSIVE STRENGTH LESS THAN 80% OF THE DESIGN COMPRESSIVE STRENGTH, THEN THE ELEMENT SHALL BE ACCEPTED. WHEN THE COMPRESSIVE STRENGTH OF THE CYLINDERS TESTED DOES NOT CONFORM TO THESE ACCEPTANCE CRITERIA, THE ACCEPTABILITY OF THE ELEMENT MAY BE DETERMINED AS DESCRIBED IN SECTION 6.1.4, BELOW.
      6.1.4. ACCEPTABILITY OF CORE TESTS - THE COMPRESSIVE STRENGTH OF THE CONCRETE IN A BRIDGE ELEMENT IS ACCEPTABLE WHEN THE AVERAGE CORE TEST STRENGTH IS EQUAL TO OR GREATER THAN THE DESIGN CONCRETE STRENGTH. WHEN THE COMPRESSIVE STRENGTH OF A CORE TESTED IS LESS THAN THE DESIGN CONCRETE STRENGTH, THE PRECAST ELEMENT FROM WHICH THAT CORE WAS TAKEN MAY BE RE-CORED. WHEN THE COMPRESSIVE STRENGTH OF THE RE-CORE IS EQUAL TO OR GREATER THAN THE DESIGN CONCRETE STRENGTH, THE COMPRESSIVE STRENGTH OF THE CONCRETE IN THAT BRIDGE ELEMENT IS ACCEPTABLE.
         6.1.4.1. WHEN THE COMPRESSIVE STRENGTH OF ANY RECORE IS LESS THAN THE DESIGN CONCRETE STRENGTH, THE PRECAST ELEMENT FROM WHICH THAT CORE WAS TAKEN SHALL BE REJECTED.
         6.1.4.2. PLUGGING CORE HOLES - THE CORE HOLES SHALL BE PLUGGED AND SEALED BY THE MANUFACTURER IN A MANNER SUCH THAT THE ELEMENTS WILL MEET ALL OF THE TEST REQUIREMENTS OF THIS SPECIFICATION. PRECAST ELEMENTS SO SEALED SHALL BE CONSIDERED SATISFACTORY FOR USE.
         6.1.4.3. TEST EQUIPMENT - EVERY MANUFACTURER FURNISHING PRECAST ELEMENTS UNDER THIS SPECIFICATION SHALL FURNISH ALL FACILITIES AND PERSONNEL NECESSARY TO CARRY OUT THE TEST REQUIRED.
   6.2. INSPECTION - THE QUALITY OF MATERIALS, THE PROCESS OF MANUFACTURE, AND THE FINISHED PRECAST ELEMENTS SHALL BE SUBJECT TO INSPECTION BY THE PURCHASER.

7. JOINTS
   THE BRIDGE UNITS SHALL BE PRODUCED WITH FLAT BUTT ENDS. THE ENDS OF THE BRIDGE UNITS SHALL BE SUCH THAT WHEN THE SECTIONS ARE LAID TOGETHER THEY WILL MAKE A CONTINUOUS LINE WITH A SMOOTH INTERIOR FREE OF APPRECIABLE IRREGULARITIES, ALL COMPATIBLE WITH THE PERMISSIBLE VARIATIONS IN SECTION 5, ABOVE. THE JOINT WIDTH BETWEEN ADJACENT PRECAST UNITS SHALL NOT EXCEED ¾".

8. WORKMANSHIP/ FINISH
   THE BRIDGE UNITS, WINGWALLS, AND HEADWALLS SHALL BE SUBSTANTIALLY FREE OF FRACTURES. THE ENDS OF THE BRIDGE UNITS SHALL BE NORMAL TO THE WALLS AND CENTERLINE OF THE BRIDGE SECTION, WITHIN THE LIMITS OF THE VARIATIONS GIVEN IN SECTION 5, ABOVE, EXCEPT WHERE BEVELED ENDS ARE SPECIFIED. THE FACES OF THE WINGWALLS AND HEADWALLS SHALL BE PARALLEL TO EACH OTHER, WITHIN THE LIMITS OF VARIATIONS GIVEN IN SECTION 5, ABOVE. THE SURFACE OF THE PRECAST ELEMENTS SHALL BE A SMOOTH STEEL FORM OR TROWELED SURFACE. TRAPPED AIR POCKETS CAUSING SURFACE DEFECTS SHALL BE CONSIDERED AS PART OF A SMOOTH, STEEL FORM FINISH.

9. REPAIRS
   PRECAST ELEMENTS MAY BE REPAIRED, IF NECESSARY, BECAUSE OF IMPERFECTIONS IN MANUFACTURE OR HANDLING DAMAGE AND WILL BE ACCEPTABLE IF, IN THE OPINION OF THE PURCHASER, THE REPAIRS ARE SOUND, PROPERLY FINISHED AND CURED, AND THE REPAIRED SECTION CONFORMS TO THE REQUIREMENTS OF THIS SPECIFICATION.

10. REJECTION
   THE PRECAST ELEMENTS SHALL BE SUBJECT TO REJECTION ON ACCOUNT OF ANY OF THE SPECIFICATION REQUIREMENTS. INDIVIDUAL PRECAST ELEMENTS MAY BE REJECTED BECAUSE OF ANY OF THE FOLLOWING:
   10.1. FRACTURES OR CRACKS PASSING THROUGH THE WALL, EXCEPT FOR A SINGLE END CRACK THAT DOES NOT EXCEED ONE HALF THE THICKNESS OF THE WALL.
   10.2. DEFECTS THAT INDICATE PROPORTIONING, MIXING, AND MOLDING NOT IN COMPLIANCE WITH SECTION 4 OF THESE SPECIFICATIONS.
   10.3. HONEYCOMBED OR OPEN TEXTURE.
   10.4. DAMAGED ENDS, WHERE SUCH DAMAGE WOULD PREVENT MAKING A SATISFACTORY JOINT.

11. MARKING
   EACH BRIDGE UNIT SHALL BE CLEARLY MARKED BY WATERPROOF PAINT. THE FOLLOWING SHALL BE SHOWN ON THE INSIDE OF THE VERTICAL LEG OF THE BRIDGE SECTION:
   BRIDGE SPAN x BRIDGE RISE
   DATE OF MANUFACTURE
   NAME OR TRADEMARK OF THE MANUFACTURER

CONTECH® CONSTRUCTION PRODUCTS INC.
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CONTECH PROJECT NO. 216219-001

CON/SPAN® BRIDGE SYSTEMS

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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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| APPROVED BY: | JED |
| DATE: | OCTOBER 2013 |

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# SPECIFICATIONS FOR MANUFACTURE AND INSTALLATION OF CON/SPAN® BRIDGE SYSTEMS (CONT'D)

12. INSTALLATION PREPARATION
TO ENSURE CORRECT INSTALLATION OF THE PRECAST CONCRETE BRIDGE SYSTEM, CARE AND CAUTION MUST BE EXERCISED IN FORMING THE SUPPORT AREAS FOR BRIDGE UNITS, HEADWALL, AND WINGWALL ELEMENTS. EXERCISING SPECIAL CARE WILL FACILITATE THE RAPID INSTALLATION OF THE PRECAST COMPONENTS.

12.1. FOOTINGS
DO NOT OVER EXCAVATE FOUNDATIONS UNLESS DIRECTED BY SITE SOIL ENGINEER TO REMOVE UNSUITABLE SOIL.

THE SITE SOILS ENGINEER SHALL CERTIFY THAT THE BEARING CAPACITY MEETS OR EXCEEDS THE FOOTING DESIGN REQUIREMENTS, PRIOR TO THE CONTRACTOR POURING OF THE FOOTINGS. A COPY OF THE REPORT SHALL BE SUBMITTED TO CONTECH® BRIDGE SOLUTIONS PRIOR TO SHIPMENT OF PRECAST CONCRETE ELEMENTS.

THE BRIDGE UNITS AND WINGWALLS SHALL BE INSTALLED ON CAST-IN-PLACE CONCRETE FOOTINGS. THE SIZE AND ELEVATION OF THE FOOTINGS SHALL BE AS SPECIFIED IN THE PLANS. A KEYWAY SHALL BE FORMED IN THE TOP SURFACE OF THE BRIDGE FOOTING AS SPECIFIED ON THE PLANS. NO KEYWAY IS REQUIRED IN THE WINGWALL FOOTINGS, UNLESS OTHERWISE SPECIFIED ON THE PLANS.

THE FOOTINGS SHALL BE GIVEN A SMOOTH FLOAT FINISH AND SHALL REACH A COMPRESSIVE STRENGTH OF 2,000 PSI BEFORE PLACEMENT OF THE BRIDGE AND WINGWALL ELEMENTS. BACKFILLING SHALL NOT BEGIN UNTIL THE FOOTING HAS REACHED THE FULL DESIGN COMPRESSIVE STRENGTH WITHOUT WRITTEN APPROVAL FROM CONTECH® BRIDGE SOLUTIONS.

THE FOOTING SURFACE SHALL BE CONSTRUCTED IN ACCORDANCE WITH GRADES SHOWN ON THE PLANS. WHEN TESTED WITH A 10'-0" STRAIGHT EDGE, THE SURFACE SHALL NOT VARY MORE THAN ¼" IN 10'-0".

THE FOUNDATIONS FOR PRECAST CONCRETE BRIDGE ELEMENTS AND WINGWALLS MUST BE CONNECTED BY REINFORCEMENT TO FORM ONE MONOLITHIC BODY. EXPANSION JOINTS SHALL NOT BE USED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION OF THE FOUNDATIONS PER THE PLANS AND SPECIFICATIONS.

13. INSTALLATION
13.1. GENERAL - THE INSTALLATION OF THE PRECAST CONCRETE ELEMENTS SHALL BE AS EXPLAINED IN THE PUBLICATION CON/SPAN BRIDGE SYSTEMS INSTALLATION HANDBOOK.
13.1.1. LIFTING - IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT A CRANE OF THE CORRECT LIFTING CAPACITY IS AVAILABLE TO HANDLE THE PRECAST CONCRETE UNITS. THIS CAN BE ACCOMPLISHED BY USING THE WEIGHTS GIVEN FOR THE PRECAST CONCRETE COMPONENTS AND BY DETERMINING THE LIFTING REACH FOR EACH CRANE UNIT. SITE CONDITIONS MUST BE CHECKED WELL IN ADVANCE OF SHIPPING TO ENSURE PROPER CRANE LOCATION AND TO AVOID ANY LIFTING RESTRICTIONS. THE LIFT ANCHORS OR HOLES PROVIDED IN EACH UNIT ARE THE ONLY MEANS TO BE USED TO LIFT THE ELEMENTS. THE PRECAST CONCRETE ELEMENTS MUST NOT BE SUPPORTED OR RAISED BY OTHER MEANS THAN THOSE GIVEN IN THE MANUALS AND DRAWINGS WITHOUT WRITTEN APPROVAL FROM CONTECH® BRIDGE SOLUTIONS.
13.1.2. CONSTRUCTION EQUIPMENT WEIGHT RESTRICTIONS - IN NO CASE SHALL EQUIPMENT OPERATING IN EXCESS OF THE DESIGN LOAD (HS20 OR HS25) BE PERMITTED OVER THE BRIDGE UNITS UNLESS APPROVED BY CONTECH® BRIDGE SOLUTIONS.
13.1.2.1. IN THE IMMEDIATE AREA OF THE BRIDGE UNITS, THE FOLLOWING RESTRICTIONS FOR THE USE OF HEAVY CONSTRUCTION MACHINERY DURING BACKFILLING OPERATIONS APPLY:
- NO CONSTRUCTION EQUIPMENT SHALL CROSS THE BARE PRECAST CONCRETE BRIDGE UNIT.
- AFTER THE COMPACTED FILL LEVEL HAS REACHED A MINIMUM OF 4" OVER THE CROWN OF THE BRIDGE, CONSTRUCTION EQUIPMENT WITH A WEIGHT OF LESS THAN 10 TONS MAY CROSS THE BRIDGE.
- AFTER THE COMPACTED FILL LEVEL HAS REACHED A MINIMUM OF 1'-0" OVER THE CROWN OF THE BRIDGE, CONSTRUCTION EQUIPMENT WITH A WEIGHT OF LESS THAN 30 TONS MAY CROSS THE BRIDGE.
- AFTER THE COMPACTED FILL LEVEL HAS REACHED THE DESIGN COVER, OR 2'-0" MINIMUM, OVER THE CROWN OF THE PRECAST CONCRETE BRIDGE, CONSTRUCTION EQUIPMENT WITHIN THE DESIGN LOAD LIMITS FOR THE ROAD MAY CROSS THE PRECAST CONCRETE BRIDGE.

13.2. LEVELING PAD/SHIMS - THE BRIDGE UNITS AND WINGWALLS SHALL BE SET ON MASONITE OR STEEL SHIMS MEASURING 6" x 6", MINIMUM, UNLESS SHOWN OTHERWISE ON THE PLANS. A MINIMUM GAP OF ½" SHALL BE PROVIDED BETWEEN THE FOOTING AND THE BOTTOM OF THE BRIDGE'S VERTICAL LEGS OR THE BOTTOM OF THE WINGWALL.

13.3. PLACEMENT OF BRIDGE UNITS - THE BRIDGE UNITS SHALL BE PLACED AS SHOWN ON THE ENGINEER'S PLAN DRAWINGS. SPECIAL CARE SHALL BE TAKEN IN SETTING THE ELEMENTS TO THE TRUE LINE AND GRADE. THE JOINT WIDTH BETWEEN ADJACENT PRECAST UNITS SHALL NOT EXCEED ¾".

IT IS IMPERATIVE THAT ANY LATERAL SPREADING OF THE BRIDGE ELEMENTS BE AVOIDED DURING AND AFTER THEIR PLACEMENT. GENERALLY, HORIZONTAL CABLE TIES ARE SHIPPED IN THE LARGER BRIDGE ELEMENTS TO PREVENT THIS SPREADING. THESE TIES MUST BE REMOVED PRIOR TO PLACEMENT OF THE BRIDGE ELEMENT, THE CONTRACTOR MUST PROVIDE HARDWOOD WEDGES ON SITE. THESE HARDWOOD WEDGES ARE PLACED IN THE KEYWAY OUTSIDE THE LEGS OF THE BRIDGE ELEMENTS, AND SMALLER SHIMS AND WEDGES ARE ADDED BEFORE COMPLETE RELEASE OF THE BRIDGE ELEMENT FROM THE CRANE. ALSO, A SUPPLY OF ¼", ½" & ⅛" THICK STEEL OR MASONITE SHIMS FOR VARIOUS SHIMMING PURPOSES SHOULD BE ON SITE, PER SECTION 13.2.

13.4. PLACEMENT OF WINGWALLS & HEADWALLS - THE WINGWALLS AND HEADWALLS SHALL BE PLACED AS SHOWN ON THE PLAN DRAWINGS. SPECIAL CARE SHALL BE TAKEN IN SETTING THE ELEMENTS TO THE TRUE LINE AND GRADE.

13.5. WATERPROOFING/JOINT PROTECTION AND SUBSURFACE DRAINAGE
13.5.1. EXTERNAL PROTECTION OF JOINTS - THE BUTT JOINT MADE BY TWO ADJOINING BRIDGE UNITS SHALL BE COVERED WITH A ⅞" x 1⅜" PREFORMED BITUMINOUS JOINT SEALANT AND A MINIMUM OF A 9" WIDE JOINT WRAP. THE SURFACE SHALL BE FREE OF DIRT BEFORE APPLYING THE JOINT MATERIAL. A PRIMER COMPATIBLE WITH THE JOINT WRAP TO BE USED SHALL BE APPLIED FOR A MINIMUM WIDTH OF 9" ON EACH SIDE OF THE JOINT. THE EXTERNAL WRAP SHALL BE EITHER EZ-WRAP RUBBER BY PRESS-SEAL GASKET CORPORATION, SEAL WRAP BY MAR MAC MANUFACTURING CO. INC. OR APPROVED EQUAL. THE JOINT SHALL BE COVERED CONTINUOUSLY FROM THE BOTTOM OF ONE BRIDGE SECTION LEG, ACROSS THE TOP OF THE BRIDGE AND TO THE OPPOSITE BRIDGE SECTION LEG. ANY LAPS THAT RESULT IN THE JOINT WRAP SHALL BE A MINIMUM OF 6" LONG WITH THE OVERLAP RUNNING DOWNHILL.
13.5.2. IN ADDITION TO THE JOINTS BETWEEN BRIDGE UNITS, THE JOINT BETWEEN THE END BRIDGE UNIT AND THE HEADWALL SHALL ALSO BE SEALED AS DESCRIBED ABOVE. IF PRECAST WINGWALLS ARE USED, THE JOINT BETWEEN THE END BRIDGE UNIT AND THE WINGWALL SHALL BE SEALED WITH A 2'-0" STRIP OF FILTER FABRIC. ALSO, IF LIFT HOLES ARE FORMED IN THE BRIDGE UNITS, THEY SHALL BE PRIMED AND COVERED WITH A 9" x 9" SQUARE OF JOINT WRAP.
13.5.3. DURING THE BACKFILLING OPERATION, CARE SHALL BE TAKEN TO KEEP THE JOINT WRAP IN ITS PROPER LOCATION OVER THE JOINT.
13.5.4. SUBSOIL DRAINAGE SHALL BE AS DIRECTED BY THE ENGINEER.

13.6. GROUTING
13.6.1. GROUTING SHALL NOT BE PERFORMED WHEN TEMPERATURES ARE EXPECTED TO GO BELOW 35° FOR A PERIOD OF 72 HOURS. FILL THE BRIDGE-FOUNDATION KEYWAY WITH CEMENT GROUT (PORTLAND CEMENT AND WATER OR CEMENT MORTAR COMPOSED OF PORTLAND CEMENT, SAND AND WATER) WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 3000 PSI. VIBRATE AS REQUIRED TO ENSURE THAT THE ENTIRE KEY AROUND THE BRIDGE ELEMENT IS COMPLETELY FILLED. IF BRIDGE ELEMENTS HAVE BEEN SET WITH TEMPORARY TIES (CABLES, BARS, ETC.) GROUT MUST ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 1500 PSI BEFORE TIES MAY BE REMOVED.
13.6.2. ALL GROUT SHALL HAVE A MAXIMUM AGGREGATE SIZE OF ¼".
13.6.3. LIFTING AND ERECTION ANCHOR RECESSES SHALL BE FILLED WITH GROUT.

13.7. BACKFILL
13.7.1. DO NOT PERFORM BACKFILLING DURING WET OR FREEZING WEATHER.
13.7.2. NO BACKFILL SHALL BE PLACED AGAINST ANY STRUCTURAL ELEMENTS UNTIL THEY HAVE BEEN APPROVED BY THE ENGINEER.
13.7.3. BACKFILL SHALL BE CONSIDERED AS ALL REPLACED EXCAVATION AND NEW EMBANKMENT ADJACENT TO THE PRECAST CONCRETE ELEMENTS. THE PROJECT CONSTRUCTION AND MATERIAL SPECIFICATIONS, WHICH INCLUDE THE SPECIFICATIONS FOR EXCAVATION FOR STRUCTURES AND ROADWAY EXCAVATION AND EMBANKMENT CONSTRUCTION, SHALL APPLY EXCEPT AS MODIFIED IN THIS SECTION.
13.7.4. BACKFILL ZONES:
- IN-SITU SOIL
- ZONE A: CONSTRUCTED EMBANKMENT OR OVERFILL.
- ZONE B: FILL THAT IS DIRECTLY ASSOCIATED WITH PRECAST CONCRETE BRIDGE INSTALLATION.
- ZONE C: ROAD STRUCTURE.

13.7.5. REQUIRED BACKFILL PROPERTIES
13.7.5.1. IN-SITU SOIL - NATURAL GROUND IS TO BE SUFFICIENTLY STABLE TO ALLOW EFFECTIVE SUPPORT TO THE PRECAST CONCRETE BRIDGE UNITS. AS A GUIDE, THE EXISTING NATURAL GROUND SHOULD BE OF SIMILAR QUALITY AND DENSITY TO ZONE B MATERIAL FOR MINIMUM LATERAL DIMENSION OF ONE BRIDGE SPAN OUTSIDE OF THE BRIDGE FOOTING.
13.7.5.2. ZONE A - ZONE A REQUIRES FILL MATERIAL WITH SPECIFICATIONS AND COMPACTING PROCEDURES EQUAL TO THAT FOR NORMAL ROAD EMBANKMENTS.
13.7.5.3. ZONE B - GENERALLY, SOILS SHALL BE REASONABLY FREE OF ORGANIC MATTER, AND, NEAR CONCRETE SURFACES, FREE OF STONES LARGER THAN 3" IN DIAMETER SEE CHARTS FOR DETAILED DESCRIPTIONS OF ACCEPTABLE SOILS.
13.7.5.4. ZONE C - ZONE C IS THE ROAD SECTION OF GRAVEL, ASPHALT OR CONCRETE BUILT IN COMPLIANCE WITH LOCAL ENGINEERING PRACTICES.

13.7.6. PLACING AND COMPACTING BACKFILL
DUMPING FOR BACKFILLING IS NOT ALLOWED ANY NEARER THAN 3'-0" FROM THE BRIDGE LEG.

THE FILL MUST BE PLACED AND COMPACTED IN LAYERS NOT EXCEEDING 8". THE MAXIMUM DIFFERENCE IN THE SURFACE LEVELS OF THE FILL ON OPPOSITE SIDES OF THE BRIDGE MUST NOT EXCEED 2'-0".

THE FILL BEHIND WINGWALLS MUST BE PLACED AT THE SAME TIME AS THAT OF THE BRIDGE FILL. IT MUST BE PLACED IN PROGRESSIVELY PLACED HORIZONTAL LAYERS NOT EXCEEDING 8" PER LAYER.

THE BACKFILL OF ZONE B SHALL BE COMPACTED TO A MINIMUM DENSITY OF 95% OF THE STANDARD PROCTOR, AS REQUIRED BY AASHTO T-99.

SOIL WITHIN 1'-0" OF CONCRETE SURFACES SHOULD BE HAND-COMPACTED. ELSEWHERE, USE OF ROLLERS IS ACCEPTABLE. IF VIBRATING ROLLER-COMPACTORS ARE USED, THEY SHOULD NOT BE STARTED OR STOPPED WITHIN ZONE B AND THE VIBRATION FREQUENCY SHOULD BE AT LEAST 30 REVOLUTIONS PER SECOND.

THE BACKFILL MATERIAL AND COMPACTING BEHIND WINGWALLS SHOULD SATISFY THE CRITERIA FOR THE BRIDGE BACKFILL, ZONE B.

BACKFILL AGAINST A WATERPROOFED SURFACE SHALL BE PLACED CAREFULLY TO AVOID DAMAGE TO THE WATERPROOFING MATERIAL.

13.7.7. BRIDGE UNITS
FOR FILL HEIGHTS OVER 12'-0", NO BACKFILLING MAY BEGIN UNTIL A BACKFILL COMPACTION TESTING PLAN HAS BEEN COORDINATED WITH AND APPROVED BY CONTECH® BRIDGE SOLUTIONS. COST OF THE BACKFILL COMPACTION TESTING SHALL BE INCLUDED IN THE COST OF THE PRECAST UNITS. THIS INCLUDED COST APPLIES ONLY TO PROJECTS WITH FILL HEIGHTS OVER 12'-0" (AS MEASURED FROM TOP CROWN OF BRIDGE TO FINISHED GRADE).

13.7.8. WINGWALLS
BACKFILL IN FRONT OF WINGWALLS SHALL BE CARRIED TO GROUND LINES SHOWN IN THE PLANS.

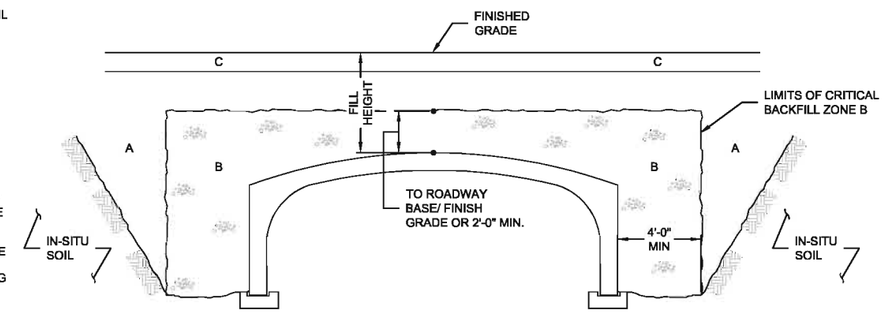
13.7.9. MONITORING
THE CONTRACTOR SHALL CHECK SETTLEMENTS AND HORIZONTAL DISPLACEMENT OF FOUNDATION TO ENSURE THAT THEY ARE WITHIN THE ALLOWABLE LIMIT PROVIDED BY THE ENGINEER. THESE MEASUREMENTS SHOULD GIVE AN INDICATION OF THE SETTLEMENTS AND DEFORMATIONS ALONG THE LENGTH OF THE FOUNDATIONS.

THE FIRST MEASUREMENT ROW SHOULD TAKE PLACE AFTER THE ERECTION OF ALL PRECAST BRIDGE SYSTEM ELEMENTS, A SECOND AFTER COMPLETION OF BACKFILLING, AND A THIRD BEFORE OPENING OF THE BRIDGE TO TRAFFIC. FURTHER MEASUREMENTS MAY BE MADE ACCORDING TO LOCAL CONDITIONS.

THE MAXIMUM DIFFERENCE IN VERTICAL DISPLACEMENTS 'V' SHOULD NOT EXCEED 1" ALONG THE LENGTH OF ONE FOUNDATION.

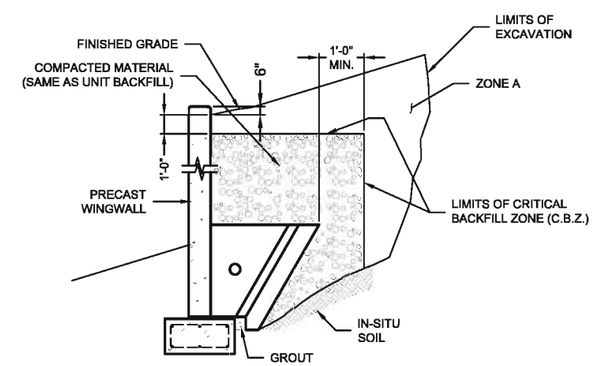
**ACCEPTABLE SOILS FOR USE IN ZONE B BACKFILL**

| TYPICAL USCS MATERIALS | AASHTO GROUP | AASHTO SUBGROUP | PERCENT PASSING US SIEVE NO. #10 | #40 | #200 | CHARACTER OF FRACTION PASSING NO. 40 SIEVE LIQUID LIMIT | PLASTICITY INDEX | SOIL DESRIPTION |
|---|---|---|---|---|---|---|---|---|
| GW, GP, SP | A1 | A-1a | 50 MAX | 30 MAX | 15 MAX | | 6 MAX | LARGELY GRAVEL BUT CAN INCLUDE SAND AND FINES |
| GM, SW, SP, SM | | A-1b | | 50 MAX | 25 MAX | | 6 MAX | GRAVELLY SAND OR GRADED SAND, MAY INCLUDE FINES |
| GM, SM, ML, SP, GP | A2 | A-2-4 | | | 35 MAX | 40 MAX | 10 MAX | SANDS, GRAVELS WITH LOW-PLASTICITY SILT FINES |
| SC, GC, GM | | A-2-5 | | | 35 MAX | 41 MIN | 10 MAX | SANDS, GRAVELS WITH PLASTIC SILT FINES |
| SP, SM, SW | A3 | | | 51 MIN | 10 MAX | | NON-PLASTIC | FINE SANDS |
| ML, SM, SC | A4 | | | | 36 MIN | 40 MAX | 10 MAX | LOW-COMPRESSIBILTY SILTS |




| SPAN | FILL HEIGHT | ACCEPTABLE MATERIAL INSIDE ZONE B |
|---|---|---|
| ≤ 24'-0" | ≥ 12'-0" | A1, A3 |
| ≤ 24'-0" | < 12'-0" | A1, A2, A3, A4 |
| > 24'-0" | ALL | A1, A3 |

BACKFILL REQUIREMENTS




WALL BACKFILL REQUIREMENTS

CONTECH® CONSTRUCTION PRODUCTS INC.
www.contech-cpi.com
CONTECH PROJECT NO. 216219-001

CON/SPAN® BRIDGE SYSTEMS

| NO. | REVISION | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

JOB NO. 44959
DESIGNED BY: RAU
DRAWN BY: JA
CHECKED BY: BAP
APPROVED BY: JED
DATE: OCTOBER 2013

CULVERT DETAILS 9

CT9 / CT9

SHEET NO. 148 OF 275

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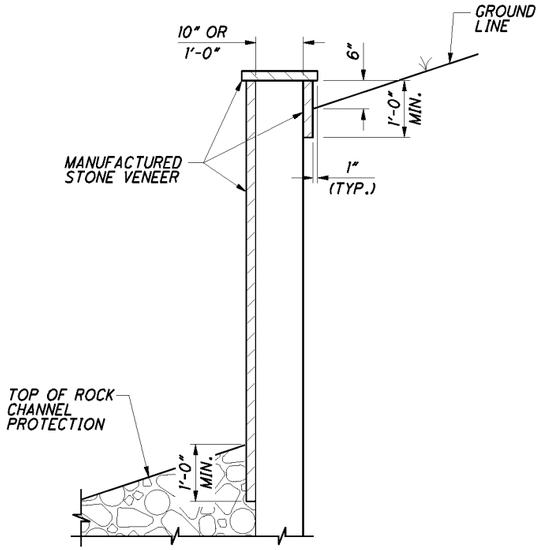
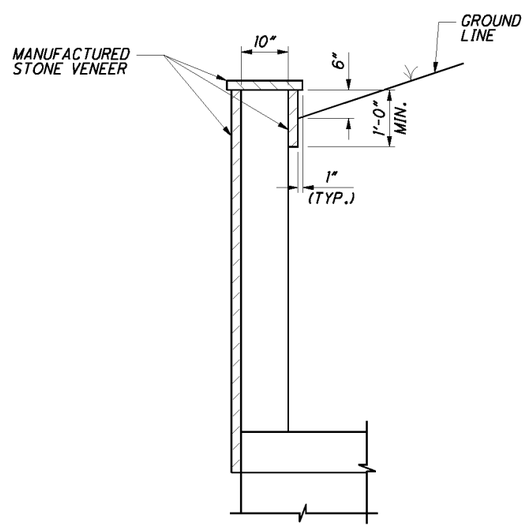



**WINGWALL STONE VENEER DETAIL**

(SEE NOTE 1)




**HEADWALL STONE VENEER DETAIL**

(SEE NOTE 2)

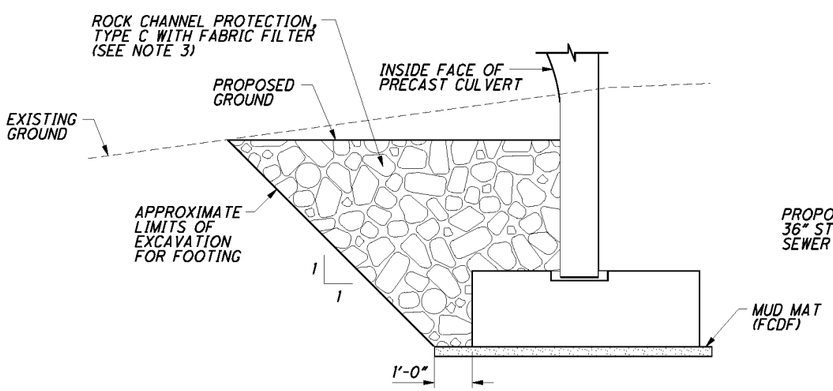
## ESTIMATED QUANTITIES

| ITEM | ITEM EXT. | TOTAL | UNIT | DESCRIPTION |
|---|---|---|---|---|
| | | | | |
| 503 | 11100 | LUMP | | COFFERDAMS, CRIBS AND SHEETING |
| 509 | 10000 | 9780 | POUND | EPOXY COATED REINFORCING STEEL |
| 511 | 46500 | 123 | CU YD | CLASS C CONCRETE, FOOTING |
| 512 | 33000 | 611 | SQ YD | TYPE 2 WATERPROOFING |
| SPECIAL | 53000600 | 2070 | SQ FT | STRUCTURE; MISC.: MANUFACTURED STONE VENEER |
| SPECIAL | | 150 | FT | POLYURETHANE CAULKING (BEIGE) |
| | | | | |
| 601 | 32104 | 230 | CU YD | ROCK CHANNEL PROTECTION, TYPE B WITH FABRIC FILTER |
| 601 | 34204 | 203 | CU YD | ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER |
| 603 | 71001 | 114 | FT | CONDUIT, TYPE A, PRECAST REINFORCED CONCRETE |
| | | | | ARCH SECTIONS, AS PER PLAN (28' SPAN X 10' RISE |
| | | | | INCLUDING PRECAST HEADWALLS AND WINGWALLS) |
| 613 | | 20 | CU YD | FCDF, TYPE 2, MUD MAT |
| | | | | |

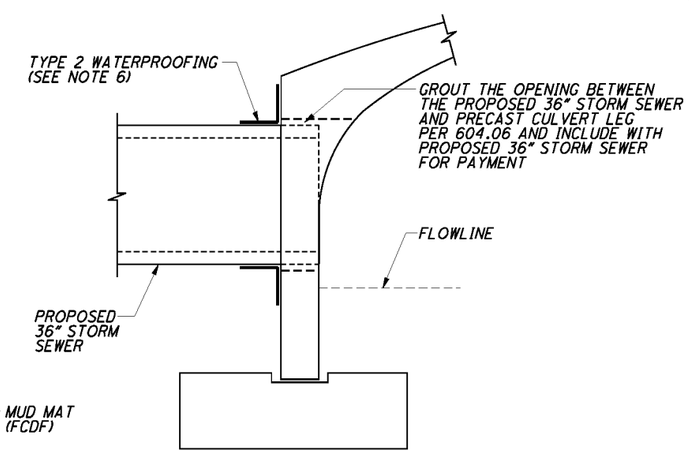
ALL ESTIMATED QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY SHEET.

## REINFORCING STEEL LIST

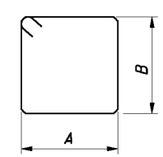
| MARK | NO. | LENGTH | WEIGHT | TYPE | DIM A | DIM B | DIM C | DIM D | INCR. |
|---|---|---|---|---|---|---|---|---|---|
| C401 | 85 | 7'-6" | 426 | 16 | 2'-0" | 1'-6" | | | |
| C601 | 336 | 5'-6" | 2776 | STR | | | | | |
| C602 | 118 | 30'-0" | 5317 | STR | | | | | |
| | 4 | 31'-0" | | | | | 28'-1" | | |
| C603 | S.O. | TO | 605 | 20 | 2'-7" | 1'-6" | TO | | 2'-6½" |
| | 3 | 36'-1" | | | | | 33'-2" | | |
| | 2 | 19'-10" | | | 5'-0" | 2'-11" | 14'-1" | | |
| C604 | S.O. | TO | 198 | 20 | TO | TO | TO | | 2'-1½" |
| | 3 | 24'-1" | | | 4'-3" | 2'-6" | 19'-2" | | |
| C605 | 18 | 4'-0" | 108 | STR | | | | | |
| C606 | 6 | 2'-10" | 26 | STR | | | | | |
| | 2 | 33'-10" | | | 5'-0" | 2'-11" | 28'-1" | | |
| C607 | S.O. | TO | 324 | 20 | TO | TO | TO | | 2'-1½" |
| | 3 | 38'-1" | | | 4'-3" | 2'-6" | 33'-2" | | |
| | | TOTAL | 9780 | | | | | | |



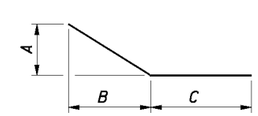

**ROCK CHANNEL PROTECTION INSIDE CULVERT**




**PIPE DETAIL**




**TYPE 16**




**TYPE 20**

## NOTES:

1. SEE SHEET CT4/CT9 FOR ADDITIONAL DIMENSIONS NOT SHOWN.
2. SEE SHEET CT6/CT9 FOR ADDITIONAL DIMENSIONS NOT SHOWN.
3. ANY STREAMBED MATERIAL DISTURBED DURING CONSTRUCTION OF THE NEW STRUCTURE SHALL BE REPLACED WITH TYPE C ROCK CHANNEL PROTECTION.
4. ALL BARS SHALL BE EPOXY COATED.
5. BAR DIMENSIONS SHOWN ARE OUT TO OUT.
6. PLACE TYPE 2 WATERPROOFING, 2' WIDE, CENTERED ON THE OPENING BETWEEN THE PROPOSED 36" STORM SEWER AND PRECAST CULVERT LEG, AROUND PERIMETER OF THE PROPOSED 36" STORM SEWER.

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | TTK |
| DRAWN BY: | AAA |
| CHECKED BY: | JHL |
| APPROVED BY: | JED |
| DATE: | OCTOBER 2013 |

CULVERT ESTIMATED QUANTITIES,
REINFORCING STEEL LIST AND MISC. DETAILS
EMERALD PARKWAY OVER BILLINGSLEY CREEK

SCALE: NOT TO SCALE



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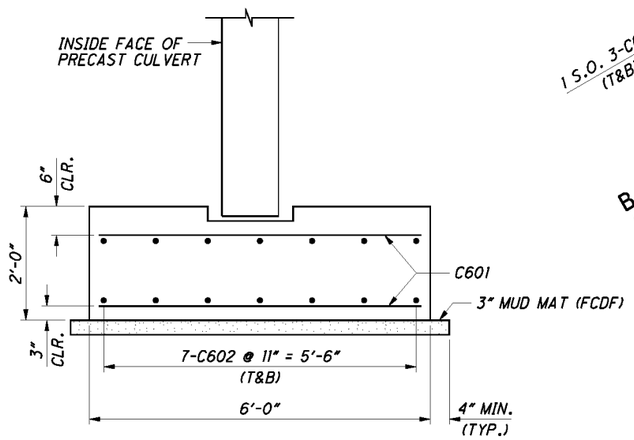
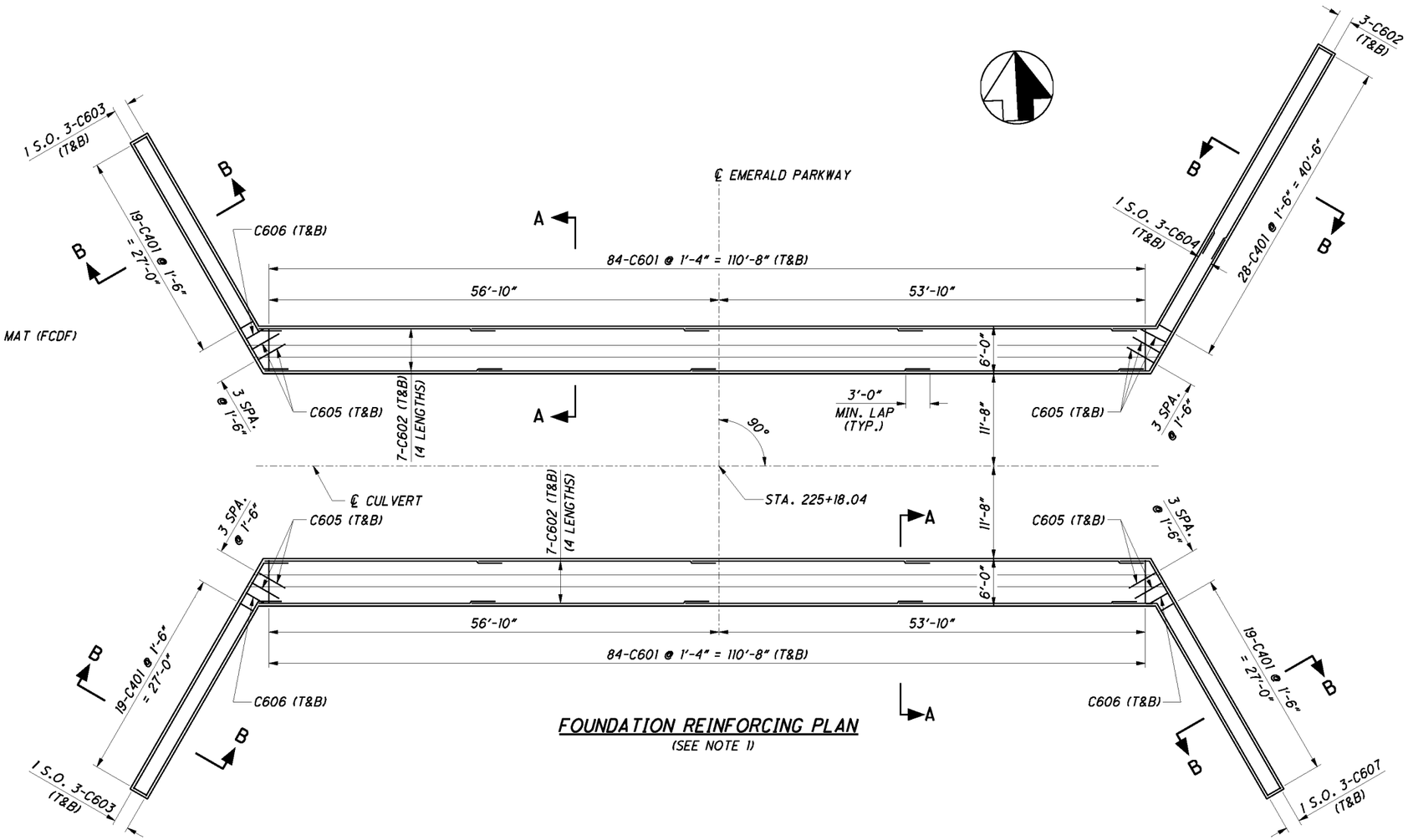
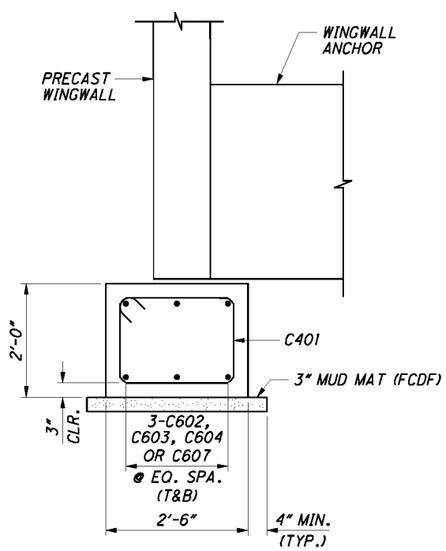



**SECTION A-A**
(SEE NOTE 2)




**FOUNDATION REINFORCING PLAN**
(SEE NOTE 1)




**SECTION B-B**
(SEE NOTE 2)

## NOTES:

1. SEE SHEET CT3/CT9 FOR ADDITIONAL DIMENSIONS NOT SHOWN.
2. SEE SHEET CT4/CT9 FOR ADDITIONAL DIMENSIONS NOT SHOWN.

## LEGEND:

S.O. = SERIES OF
T&B = TOP AND BOTTOM

| NO. | REVISIONS | DATE | BY | CHK. |
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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| DESIGNED BY: | TTK |
| DRAWN BY: | AAA |
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| APPROVED BY: | JED |
| DATE: | OCTOBER 2013 |

CULVERT FOUNDATION REINFORCING DETAILS
EMERALD PARKWAY OVER BILLINGSLEY CREEK

SCALE: NOT TO SCALE

SHEET NO. 150 OF 275

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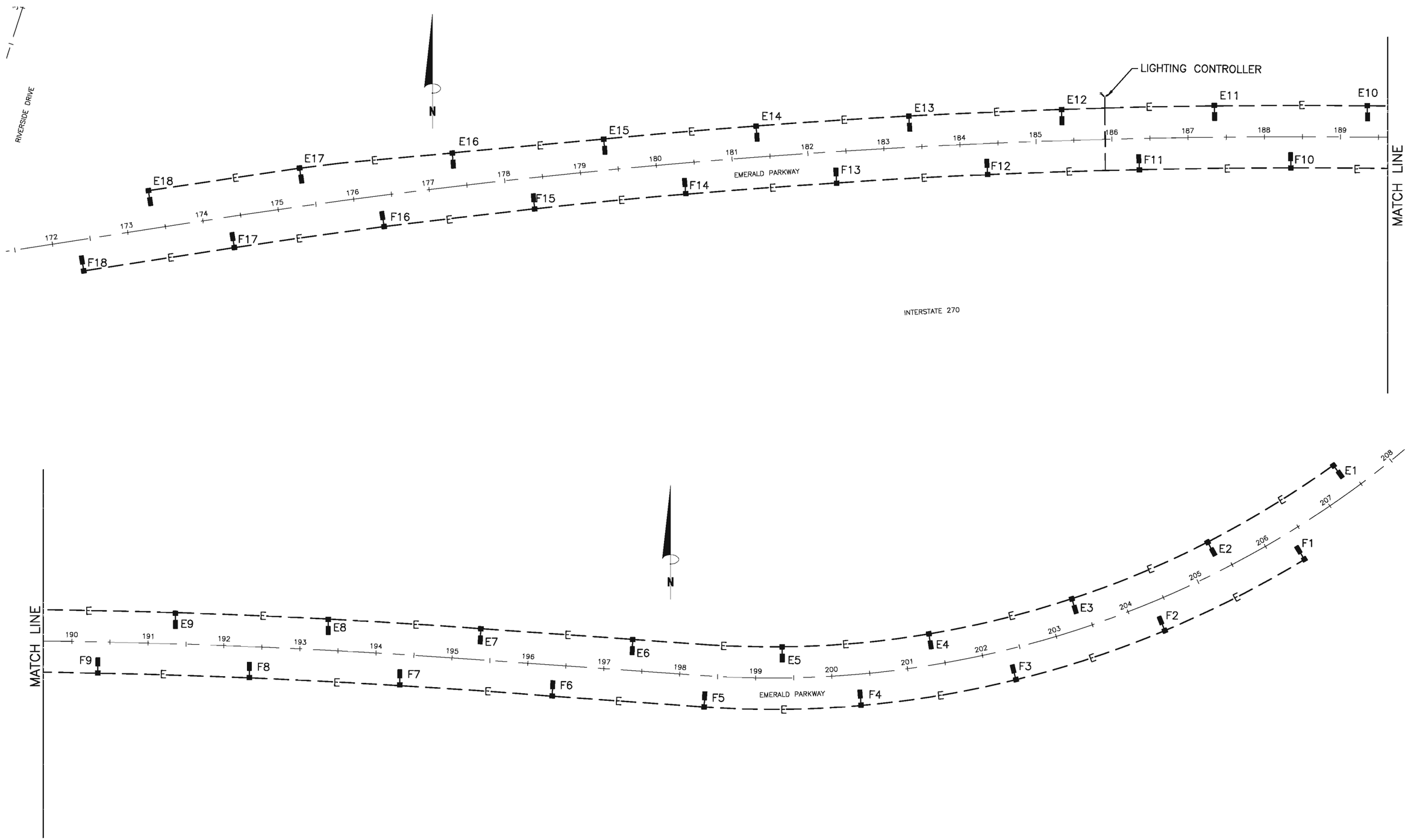


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**BURGESS & NIPLE**

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

**EMERALD PARKWAY**
**STREET LIGHTING SCHEMATIC**
**CIRCUITS E&F**

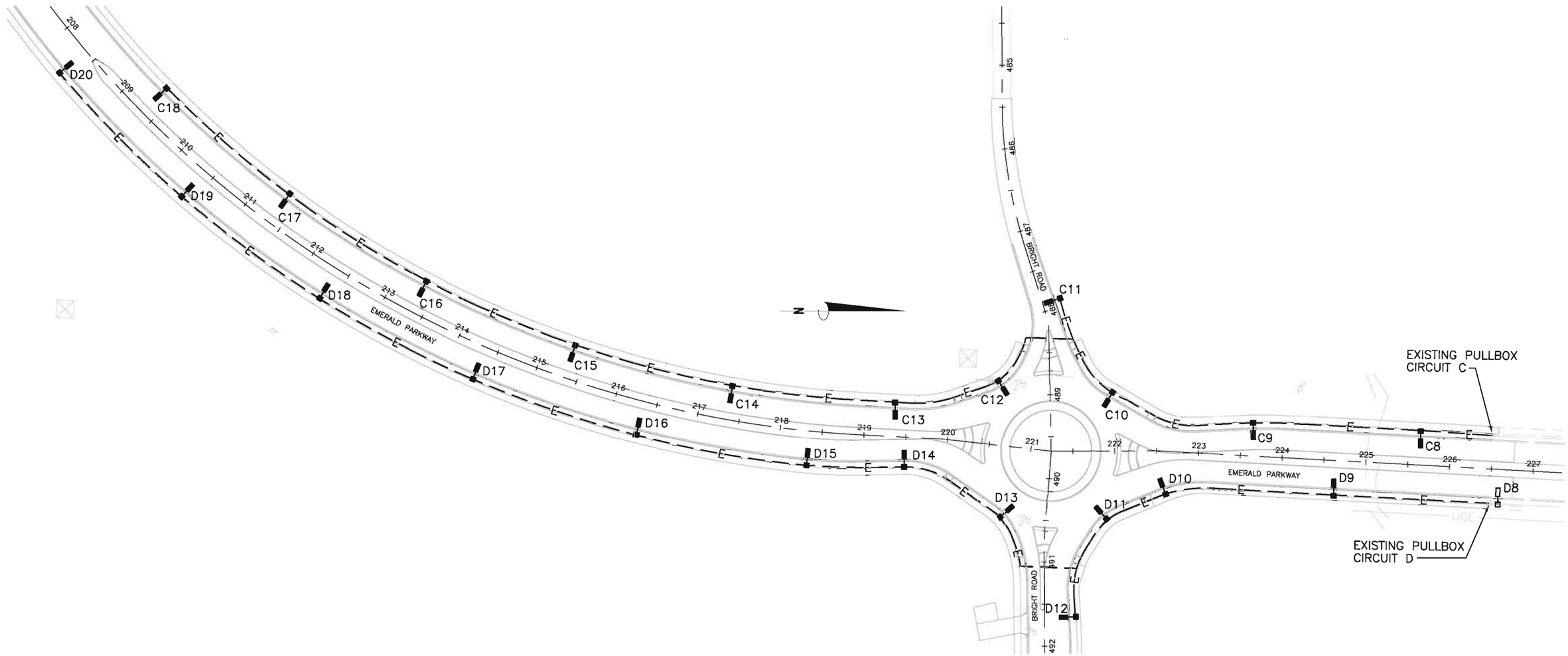
E–1 / E–20

SCALE: NONE

SHEET NO. 151 OF 275

PLOTTED: 10/28/2013 12:14:47 PM

P:\PR44959\cadd\LIGHTING\Lighting Plan E1.dwg 10/25/2013 5:35:31 PM Ward, Will




| NO. | REVISIONS | DATE | BY | CHK. |
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**Burgess & Niple, Inc.** COLUMBUS,OH

**BURGESS & NIPLE**

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

**EMERALD PARKWAY**
**STREET LIGHTING SCHEMATIC**
**CIRCUITS C&D**

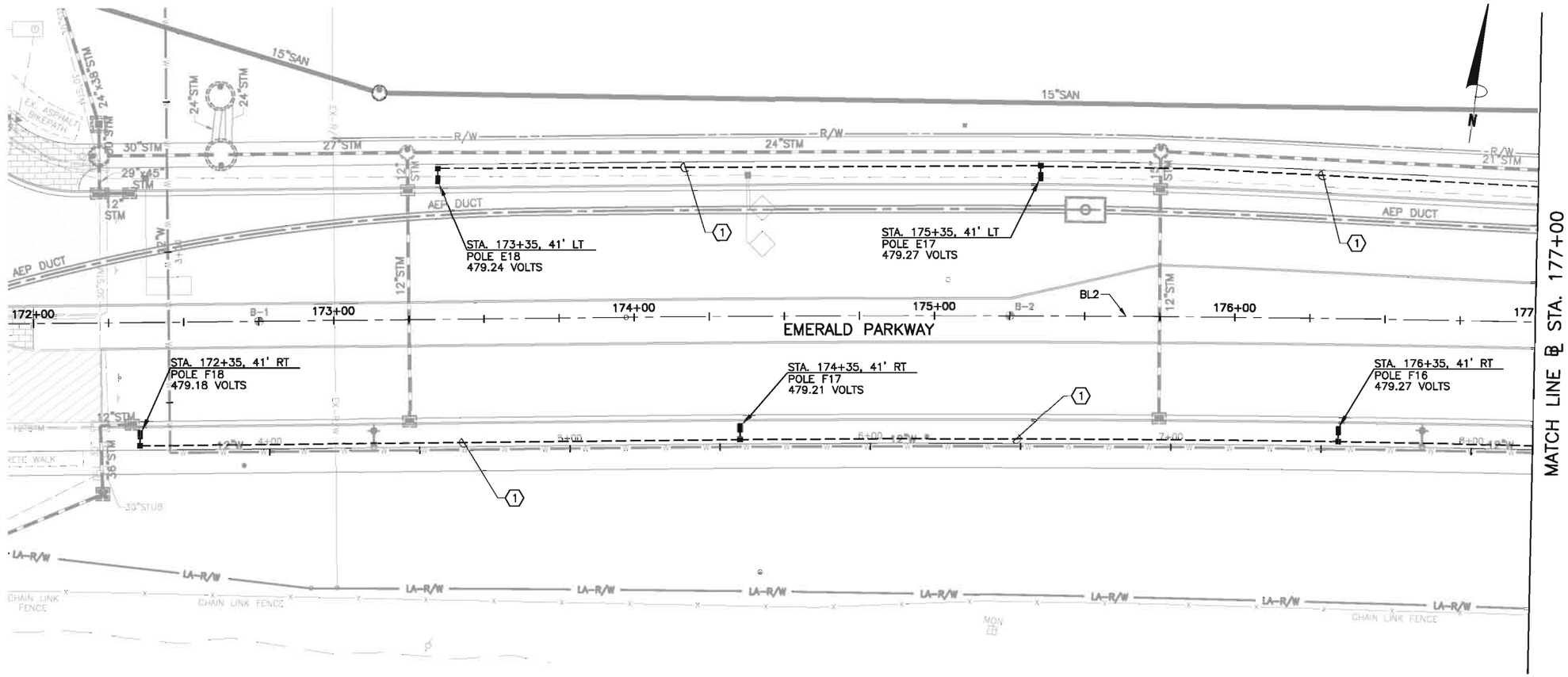
E–2 / E–20

SCALE: NONE

SHEET NO. 152 OF 275

PLOTTED: 10/28/2013 12:15:08 PM

P:\PR44959\cadd\LIGHTING\Lighting Plan E2.dwg 10/25/2013 5:35:37 PM Ward, Will




| STREET LIGHTING PHOTOMETRIC RESULTS (PROVIDED BY DUBLIN) | | | | | |
|---|---|---|---|---|---|
| DESCRIPTION | AVG. | MAX | MIN | MAX/MIN | AVG/MIN |
| INTERSECTION | 1.0 FC | 1.6 FC | 0.4 FC | 4.0:1 | 2.5:1 |
| TYPICAL SECTION | 0.9 FC | 1.3 FC | 0.4 FC | 3.2:1 | 2.2:1 |

CODED NOTES ⬡ :

(1) 2-#4, 1-#4 GRD. IN 2" C.

E-3 / E-20

| NO. | REVISIONS | DATE | BY | CHK. |
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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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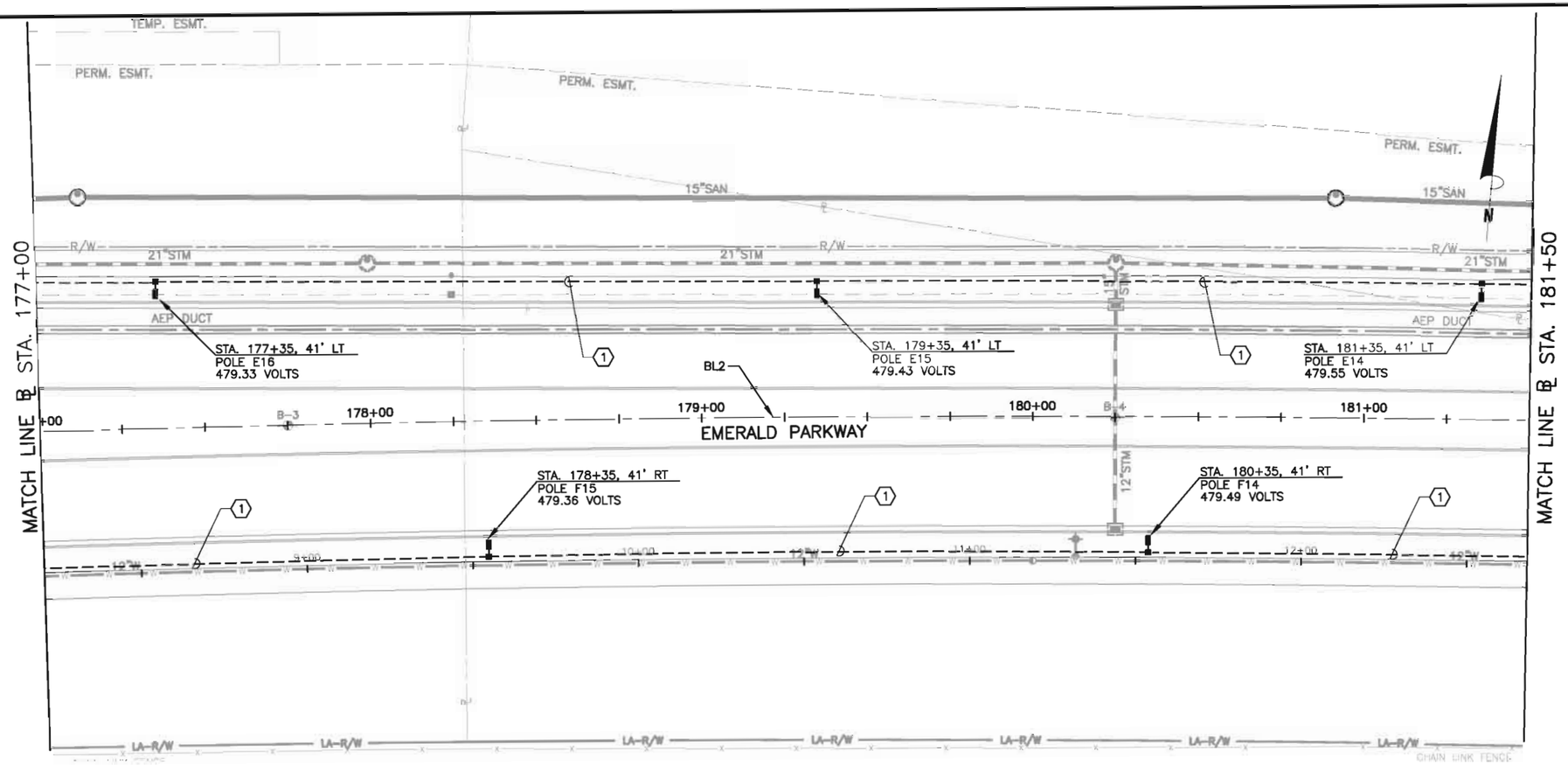
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

EMERALD PARKWAY
STREET LIGHTING PLAN
STA. 172+00 "BL2" STA. 177+00 "BL2"

SCALE: 1" = 20'

SHEET NO. 153 OF 275

PLOTTED: 10/30/2013 8:39:49 AM
P:\PR44959\cadd\LIGHTING\EMERALD-E3.dwg 10/29/2013 9:09:57 PM Ward, Will




CODED NOTES ⬡ :

⟨1⟩ 2-#4, 1-#4 GRD. IN 2" C.

E-4 / E-20

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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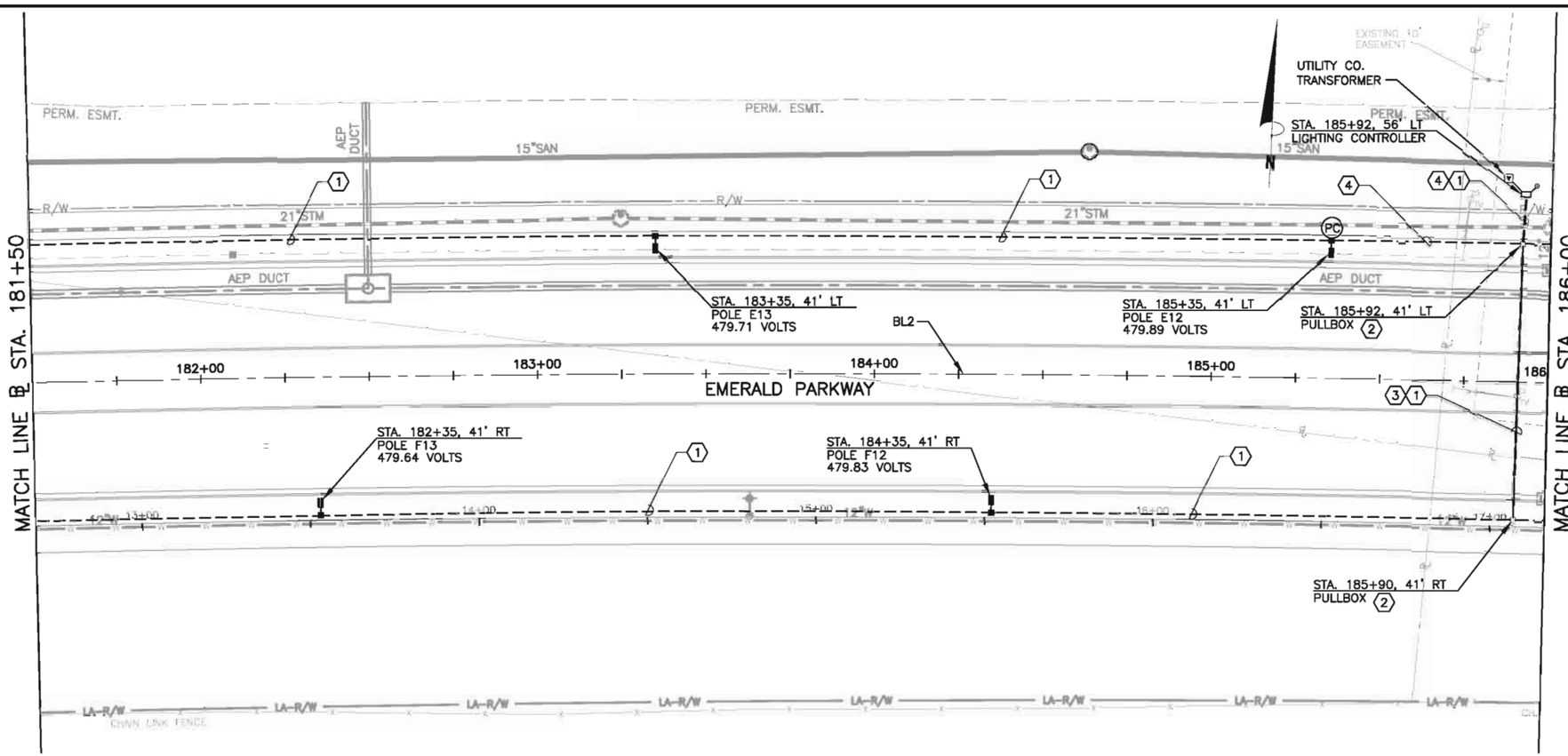
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

EMERALD PARKWAY
STREET LIGHTING PLAN
STA. 177+00 "BL2" STA. 181+50 "BL2"

SCALE: 1" = 20'

SHEET NO. 154 OF 275

PLOTTED: 10/30/2013 8:54:14 AM
P:\PR44959\cadd\LIGHTING\EMERALD-E4.dwg 10/29/2013 9:17:22 PM Ward, Will




CODED NOTES ⬡ :

1. 2–#4, 1–#4 GRD. IN 2" C.
2. PULLBOX–SPLICE KITS. PULLBOX TO BE SET LEVEL WITH SIDEWALK, BIKE PATH OR CURB AS SHOWN. EXACT LOCATION OF BOX TO BE DETERMINED BY LOCATION OF EXISTING LIGHTING CABLE.
3. 3" STEEL SLEEVE WITH A 2" PVC CONDUIT INSTALLED PER SL–05 EXCEPT 1–3" STEEL SLEEVE AND NO CONCRETE ENCASEMENT.
4. 2–#4, 3–#12, 1–#4 GRD. IN 2" C.

E–5 / E–20

| NO. | REVISIONS | DATE | BY | CHK. |
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EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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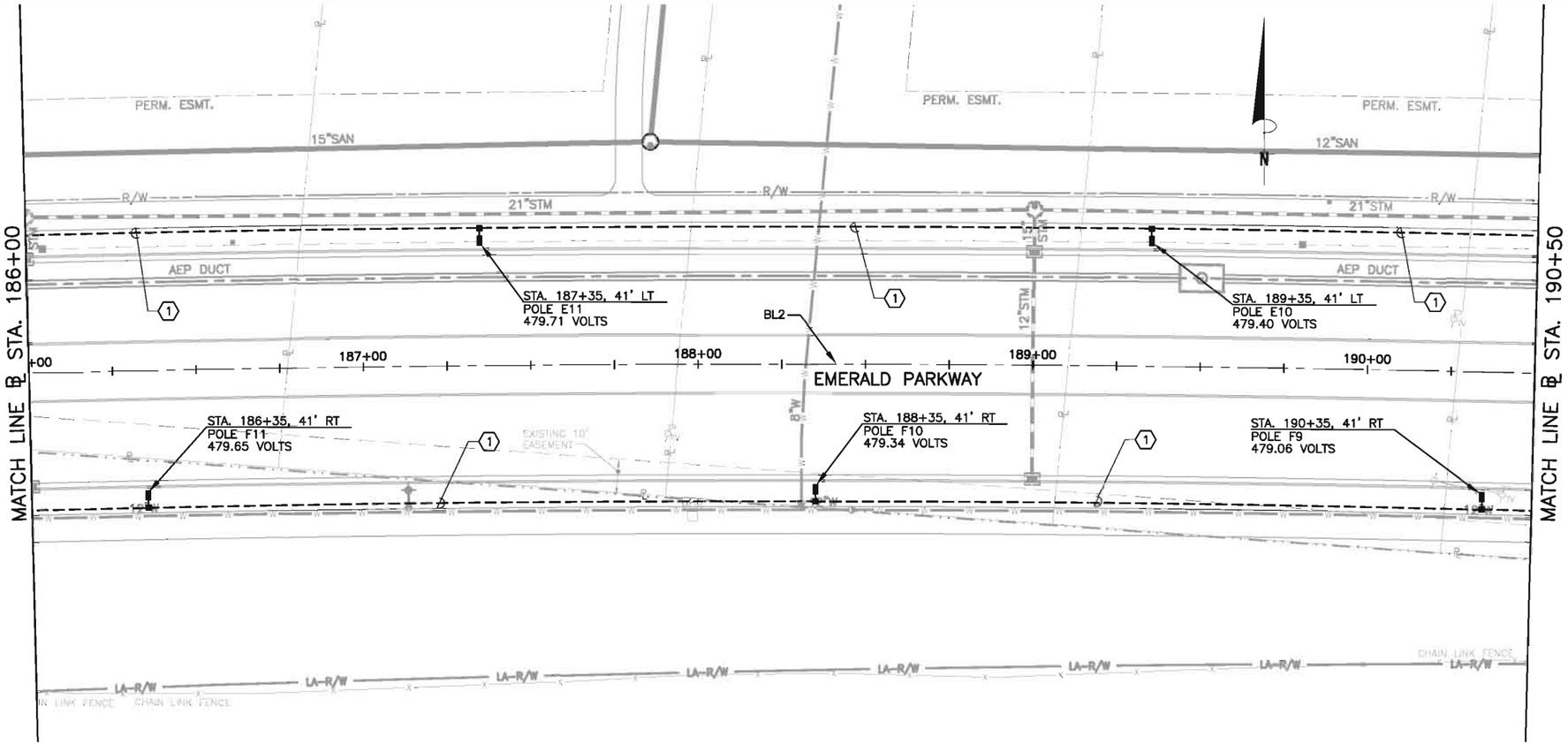
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

EMERALD PARKWAY
STREET LIGHTING PLAN
STA. 181+50 "BL2" STA. 186+00 "BL2"

SCALE: 1" = 20'

SHEET NO. 155 OF 275

PLOTTED: 10/30/2013 8:59:41 AM
P:\PR44959\cadd\LIGHTING\EMERALD-E5.dwg 10/29/2013 9:20:48 PM Ward, Will




CODED NOTES ⬡ :

(1) 2-#4, 1-#4 GRD. IN 2" C.

E-6 / E-20

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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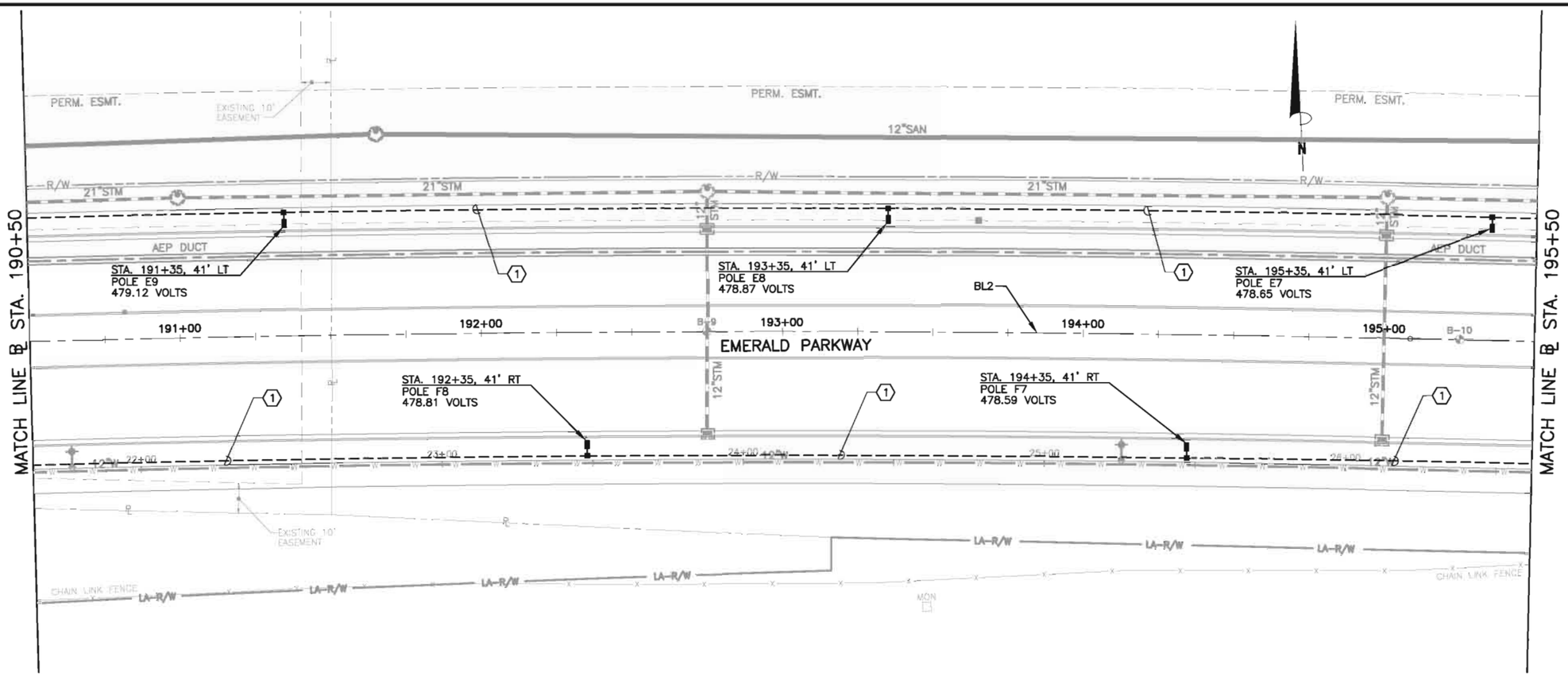
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

EMERALD PARKWAY
STREET LIGHTING PLAN
STA. 186+00 "BL2" STA. 190+50 "BL2"

SCALE: 1" = 20'

SHEET NO. 156 OF 275

PLOTTED: 10/30/2013 8:42:19 AM
P:\PR44959\cadd\LIGHTING\EMERALD-E6.dwg 10/29/2013 9:27:54 PM Ward, Will




CODED NOTES ⬡ :

(1) 2-#4, 1-#4 GRD. IN 2" C.

E-7 / E-20

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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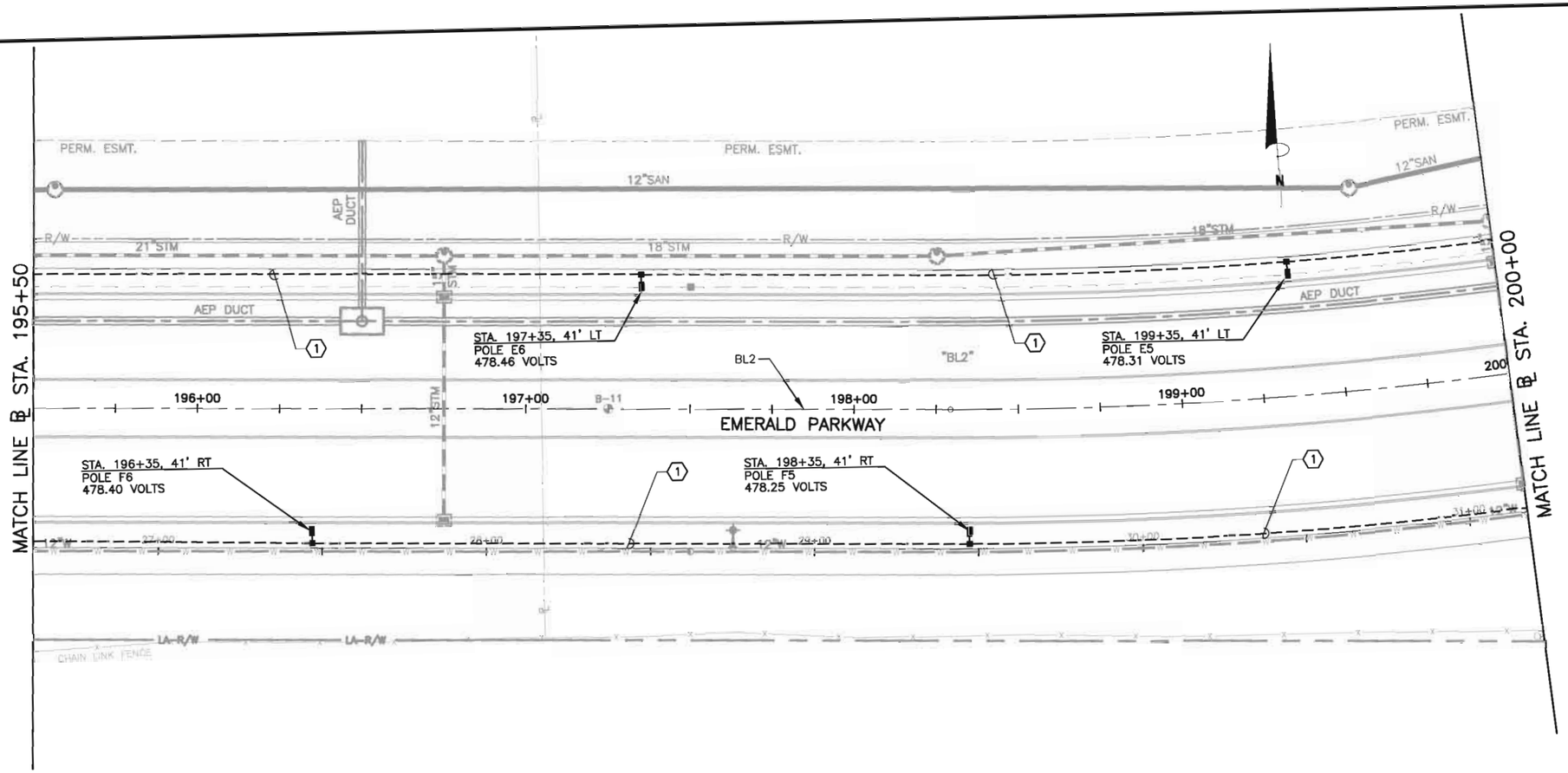
| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

EMERALD PARKWAY
STREET LIGHTING PLAN
STA. 190+50 "BL2" STA. 195+50 "BL2"

SCALE: 1" = 20'

SHEET NO. 157 OF 275

PLOTTED: 10/29/2013 9:32:42 PM
P:\PR44959\cadd\LIGHTING\EMERALD-E7.dwg 10/29/2013 11:33:42 AM Ward, Will




CODED NOTES ⬡ :

(1) 2-#4, 1-#4 GRD. IN 2" C.

E-8 / E-20

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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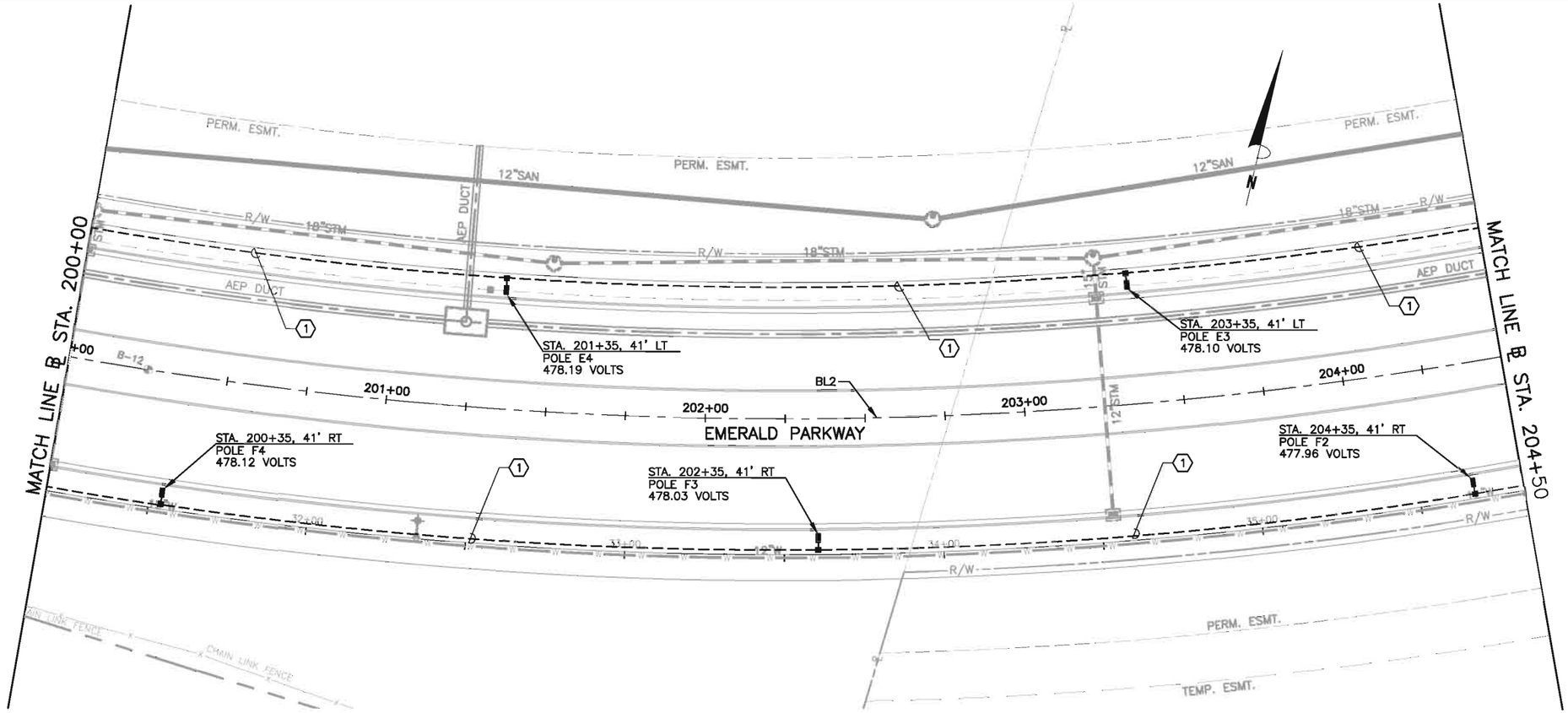
| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

EMERALD PARKWAY
STREET LIGHTING PLAN
STA. 195+50 "BL2" STA. 200+00 "BL2"

SCALE: 1" = 20'

SHEET NO. 158 OF 275

PLOTTED: 10/29/2013 9:37:25 PM
P:\PR44959\cadd\LIGHTING\EMERALD-E8.dwg 10/29/2013 11:37:04 AM Ward, Will




CODED NOTES ⬡ :

(1) 2-#4, 1-#4 GRD. IN 2" C.

E-9 / E-20

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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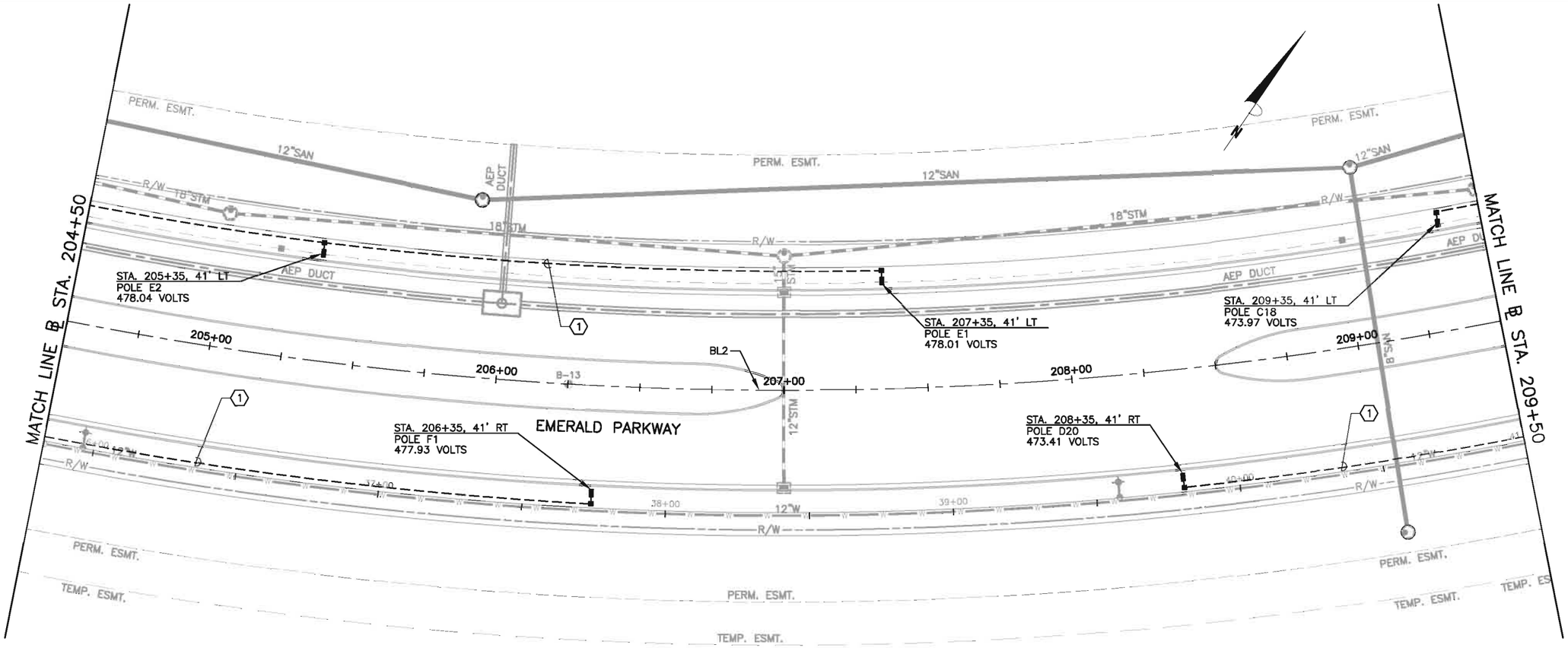
| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

EMERALD PARKWAY
STREET LIGHTING PLAN
STA. 200+00 "BL2" STA. 204+50 "BL2"

SCALE: 1" = 20'

SHEET NO. 159 OF 275

PLOTTED: 10/29/2013 9:41:15 PM
P:\PR44959\cadd\LIGHTING\EMERALD-E9.dwg 10/29/2013 11:40:55 AM Ward, Will




CODED NOTES ⬡ :

(1) 2-#4, 1-#4 GRD. IN 2" C.

E-10 / E-20

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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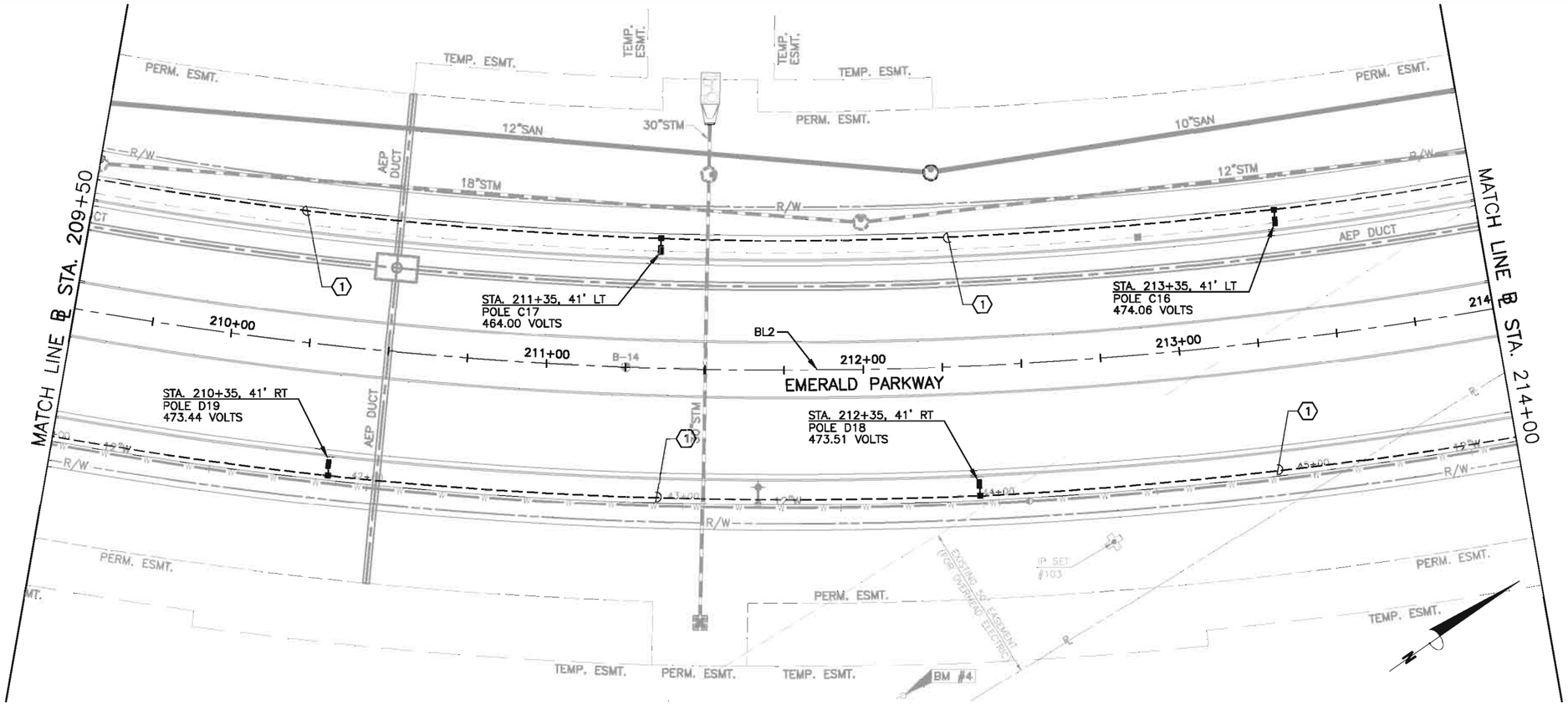
| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

EMERALD PARKWAY
STREET LIGHTING PLAN
STA. 204+50 "BL2" STA. 209+50 "BL2"

SCALE: 1" = 20'

SHEET NO. 160 OF 275

PLOTTED: 10/29/2013 9:55:35 PM
P:\PR44959\cadd\LIGHTING\EMERALD-E10.dwg 10/27/2013 4:17:32 PM Ward, Will




CODED NOTES ⬡ :

(1) 2-#4, 1-#4 GRD. IN 2" C.

E-11/E-20

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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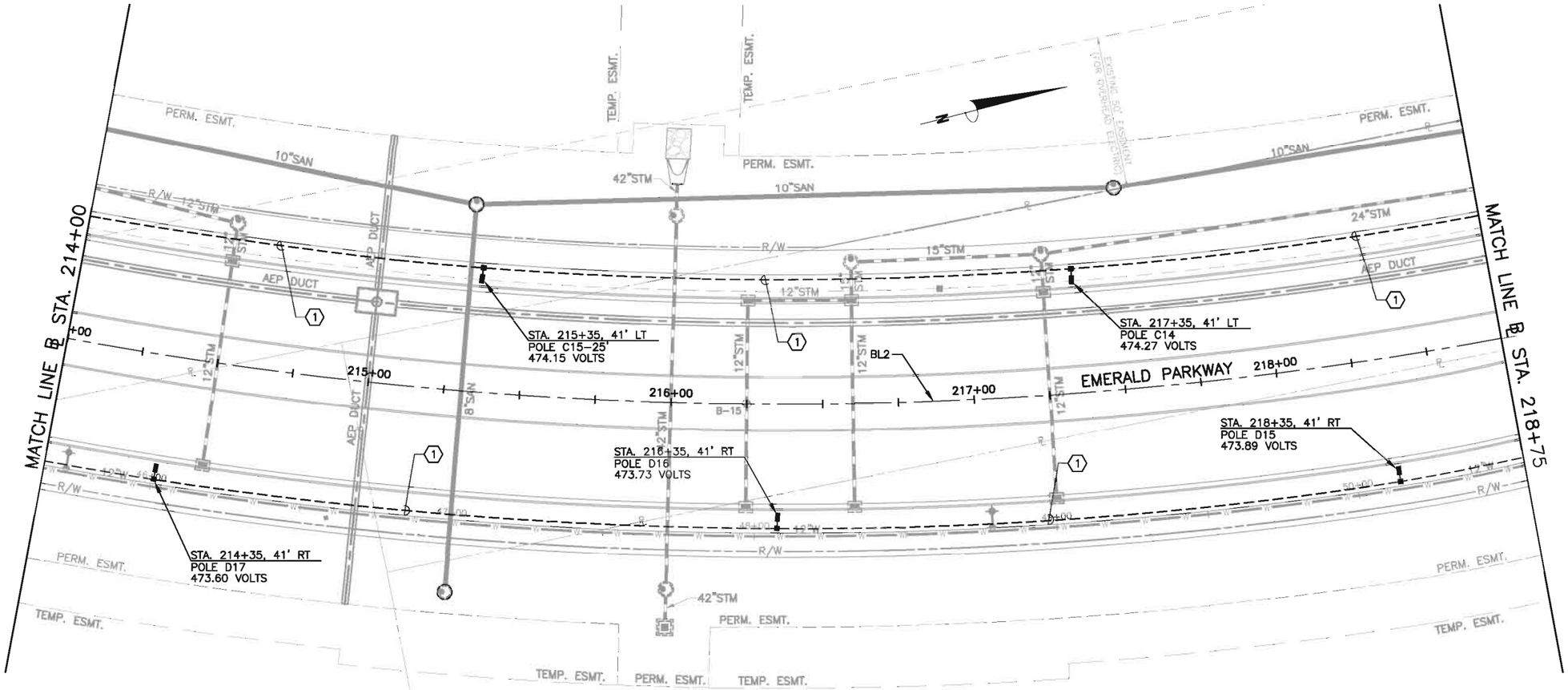
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

EMERALD PARKWAY
STREET LIGHTING PLAN
STA. 209+50 "BL2" STA. 214+00 "BL2"

SCALE: 1" = 20'

SHEET NO. 161 OF 275

PLOTTED: 10/29/2013 10:01:12 PM
P:\PR44959\cadd\LIGHTING\EMERALD-E11.dwg 10/27/2013 4:27:14 PM Ward, Will




CODED NOTES ⬡ :

(1) 2-#4, 1-#4 GRD. IN 2" C.

E-12/E-20

| NO. | REVISIONS | DATE | BY | CHK. |
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EMERALD PARKWAY - PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

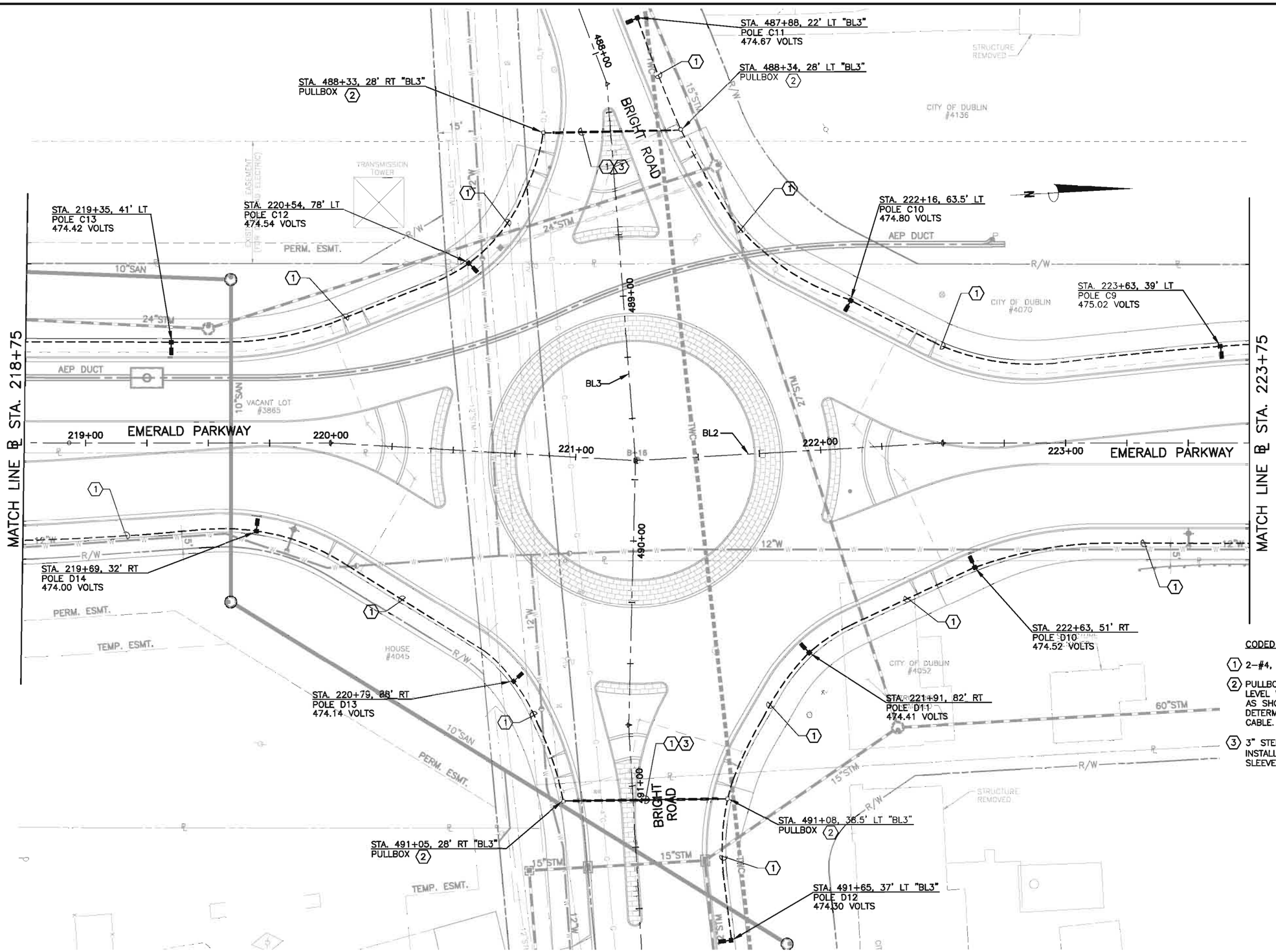
EMERALD PARKWAY
STREET LIGHTING PLAN
STA. 214+00 "BL2" STA. 218+75 "BL2"

SCALE: 1" = 20'

SHEET NO. 162 OF 275

PLOTTED: 10/29/2013 10:05:07 PM
P:\PR44959\cadd\LIGHTING\EMERALD-E12.dwg 10/27/2013 4:34:58 PM Ward, Will

PLOTTED: 10/29/2013 10:08:38 PM




CODED NOTES ⬡ :

1. 2–#4, 1–#4 GRD. IN 2" C.
2. PULLBOX–SPLICE KITS. PULLBOX TO BE SET LEVEL WITH SIDEWALK, BIKE PATH OR CURB AS SHOWN. EXACT LOCATION OF BOX TO BE DETERMINED BY LOCATION OF EXISTING LIGHTING CABLE.
3. 3" STEEL SLEEVE WITH A 2" PVC CONDUIT INSTALLED PER SL–05 EXCEPT 1–3" STEEL SLEEVE AND NO CONCRETE ENCASEMENT.

E–13 / E–20

| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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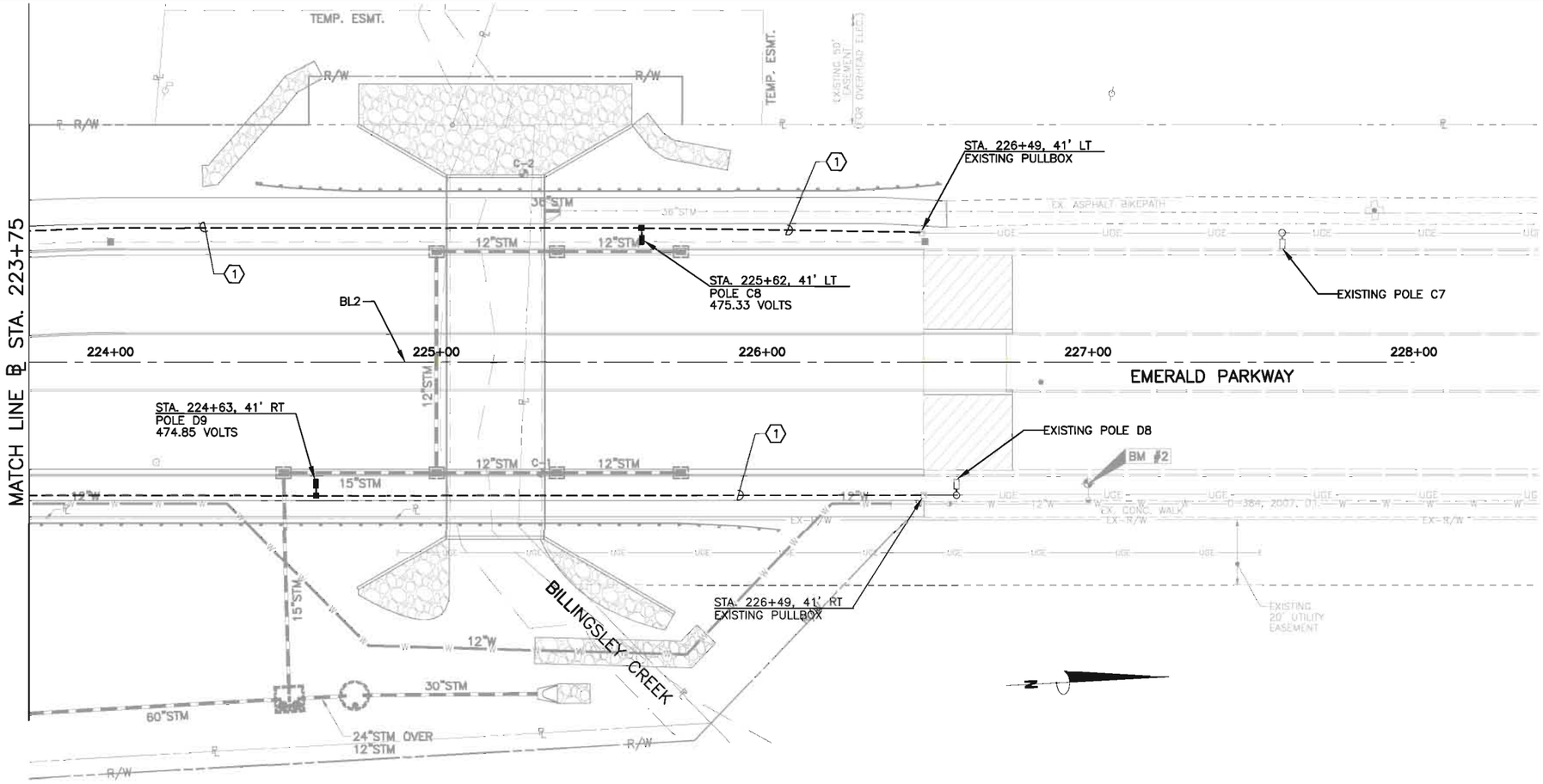
| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

EMERALD PARKWAY
STREET LIGHTING PLAN
ROUNDABOUT PLAN

SCALE: 1" = 20'

SHEET NO. 163 OF 275

P:\PR44959\cadd\LIGHTING\EMERALD-E13.dwg 10/27/2013 4:51:24 PM Ward, Will




CODED NOTES ⬡ :

(1) 2-#4, 1-#4 GRD. IN 2" C.

(2) PULLBOX-SPLICE KITS. PULLBOX TO BE SET LEVEL WITH SIDEWALK, BIKE PATH OR CURB AS SHOWN. EXACT LOCATION OF BOX TO BE DETERMINED BY LOCATION OF EXISTING LIGHTING CABLE.

(3) 3" STEEL SLEEVE WITH A 2" PVC CONDUIT INSTALLED PER SL-05 EXCEPT 1-3" STEEL SLEEVE AND NO CONCRETE ENCASEMENT.



| NO. | REVISIONS | DATE | BY | CHK. |
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CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| JOB NO. | 44959 |
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| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

EMERALD PARKWAY
STREET LIGHTING PLAN
STA. 223+75 "BL2" STA. 228+00 "BL2"

SCALE: 1" = 20'

SHEET NO. 164 OF 275

PLOTTED: 10/29/2013 10:11:55 PM
P:\PR44959\cadd\LIGHTING\EMERALD-E14.dwg 10/27/2013 3:32:00 PM Ward, Will

PLOTTED: 10/29/2013 11:41:21 AM

QUANTITY SUMMARY
EMERALD PARKWAY PHASE 8 ROADWAY LIGHTING

| ITEM | DESCRIPTION | QUANTITY | UNIT |
|---|---|---|---|
| 625 | CONNECTOR KIT, TYPE II | 59 | EA |
| 625 | CONNECTOR KIT, TYPE III | 118 | EA |
| 625 | CABLE SPLICE KITS | 27 | EA |
| 625 | TRANSFORMER BASE | 59 | EA |
| 625 | LIGHT POLE, 25'-0", 10" DIA., BANNER ARM | 1 | EA |
| 625 | LIGHT POLE, 35'-0", 10" DIA., BANNER ARM | 58 | EA |
| 625 | LIGHT POLE FOUNDATION, 10" DIA., 10'-6" DEPTH | 59 | EA |
| | | | |
| 625 | #4 AWG, STR, CU, 600V, RHW | 33768 | LF |
| 625 | #4 AWG, SOLID, CU, BARE, GROUND CONDUCTOR | 295 | LF |
| 625 | #12 AWG, SOLID, CU, 600V, XHHW | 579 | LF |
| 625 | #10 AWG, SOLID, CU, 600V, XHHW, POLE AND BRACKET CABLE | 6519 | LF |
| 625 | CONDUIT, 2" PVC, 713.07 | 10912 | LF |
| 625 | CONDUIT, 3" SLEEVE, PVC, SCH 80, 713.05 | 185 | LF |
| | | | |
| 625 | LUMINAIRE, 100 LED, TYPE 2, STREET LIGHT, 480 VOLT, 1ø | 59 | EA |
| | | | |
| 625 | TRENCH, INCL EXCAVATION, BACKFILL & SEEDING, A.P.P. | 10721 | LF |
| | | | |
| 625 | PULL BOX, 725.06, POLYMER CONC., 24" | 6 | EA |
| | | | |
| 625 | GROUND ROD | 60 | EA |
| 625 | CADWELD CONNECTION | 60 | EA |
| 625 | POWER SERVICE | 1 | EA |
| 625 | PLASTIC, METALIZED CAUTION TAPE | 10721 | LF |
| | | | |
| 625 | ELECTRICAL TEST | 1 | LUMP |
| | | | |
| SPL | HALF-BLIND COUPLING CAPS, ALUMINUM, INSTALLED, A.P.P. | 118 | EACH |

## ELECTRICAL LEGEND

- PROPOSED STREET LIGHT POLE WITH TRANSFORMER BASE, CONCRETE FOUNDATION AND LUMINAIRE. SEE CITY OF DUBLIN DETAILS SL-01, SL-02, SL-03, SL-04.
- EXISTING STREET LIGHTING LUMINAIRE ON POLE.
- PROPOSED UNDERGROUND ELECTRIC CIRCUIT. SEE CITY OF DUBLIN DETAIL SL-05, EXCEPT NO CONCRETE ENCASEMENT.
- EXISTING UNDERGROUND ELECTRIC CIRCUIT.
- CONDUIT INSIDE A RGS SLEEVE. SEE CITY OF DUBLIN DETAIL SL-05, EXCEPT 1-3" RGS SLEEVE AND NO CONCRETE ENCASEMENT.
- EXISTING UTILITY COMPANY PAD MOUNTED TRANSFORMER.
- EXISTING GROUND ROD.
- EXISTING FOUR CIRCUIT LIGHTING CONTROLLER.
- PROPOSED PULL BOX.
- PROPOSED UTILITY POLE PROVIDED BY AEP CO.
- EXISTING AEP CO. UTILITY POLE.

E-15/E-20

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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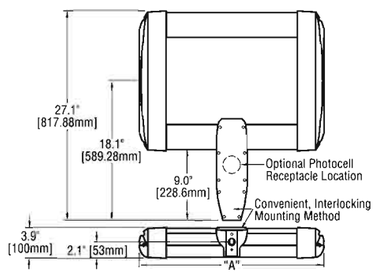
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

EMERALD PARKWAY
ELECTRICAL SYMBOLS

SCALE: NO SCALE

SHEET NO. 165 OF 275

P:\PR44959\cadd\LIGHTING\EMERALD-E15.dwg 10/25/2013 5:37:22 PM Ward, Will




| # of LEDs | Dim. "A" |
|---|---|
| 20 | 12.06" [306mm] |
| 40 | 12.06" [306mm] |
| 60 | 14.06" [357mm] |
| 80 | 16.06" [408mm] |
| 100 | 18.06" [459mm] |
| 120 | 20.06" [510mm] |
| 140 | 22.06" [560mm] |
| 160 | 24.06" [611mm] |
| 200 | 28.06" [713mm] |
| 240 | 32.06" [814mm] |

## A STREET LIGHTING LUMINAIRE DETAIL

SCALE: NONE

LIGHTING DESIGN CRITERIA
MIN = 0.5 fc
AVG/MIN RATIO = 3:1
MAX/MIN RATIO = 6:1
CROSSWALK AREA = 1.2–1.4 fc

ITEM 625 – LUMINAIRE, AS PER PLAN

THIS ITEM SHALL CONSIST OF A CREE EDGE AREA LIGHT, LED LUMINAIRE WITH TYPE II DISTRIBUTION, DIRECT MOUNTING, 100 LED, SERIES D, 480 VOLT SINGLE PHASE, BRONZE COLOR, 525 MA DRIVE CURRENT, 4000 KELVIN.

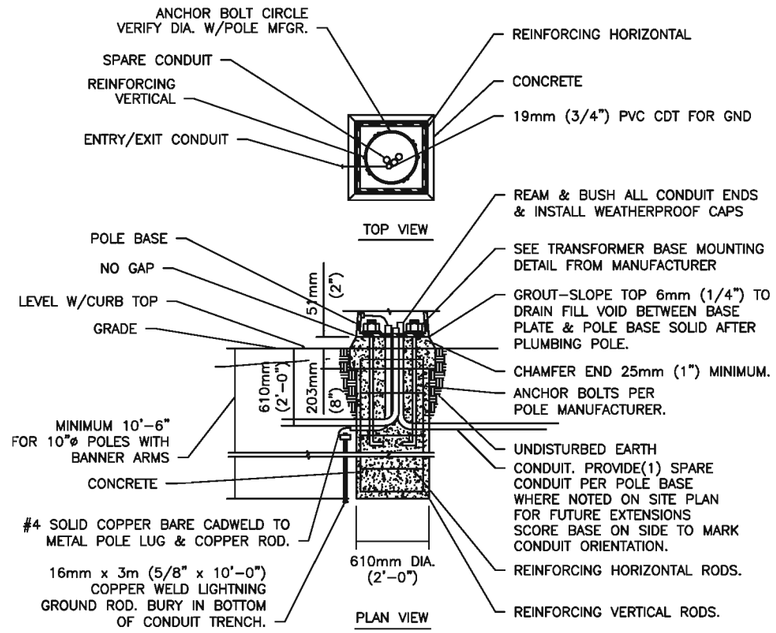
APPROVED MANUFACTURERS:
CREE LIGHTING: ARE–EDG–2M–DA–10–D–UH–BZ–525–40K

CABLE – PROVIDE #10 XHHW, STRANDED COPPER 600V, 90 DEGREES CELCIUS CONDUCTORS. WIRE TO LUMINAIRE. SECURE TO LUMINAIRE ARM WITH CABLE GRIP PROVIDED WITH LUMINAIRE. PROVIDE ADEQUATE LENGTH TO EXTEND MIN. 2 FEET OUT OF HAND HOLE.

EXECUTION – ALL LUMINAIRES SHALL BE PLUMB AND LEVEL. ALL LAMPS SHALL BE OPERATIONAL PRIOR TO INSPECTION. ALL SURFACES SHALL BE CLEANED OF DIRT, DEBRIS, ETC. FREE OF SCRATCHES, DENTS, ETC.

METHOD OF MEASUREMENT – SEE ODOT SPECIFICATIONS SECTION 625.

BASIS OF PAYMENT – SEE ODOT SPECIFICATIONS SECTION 625.




## B LIGHT POLE FOUNDATION DETAIL

SCALE: NONE

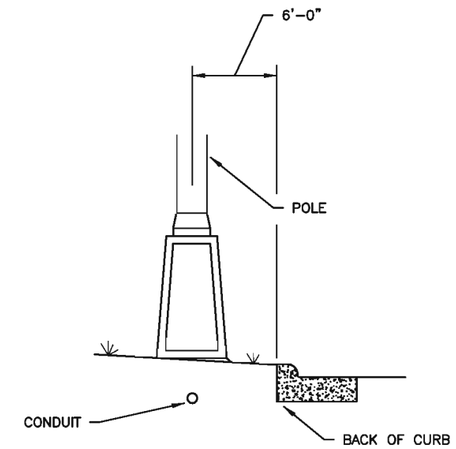
CONCRETE – CLASS C, 4000 PSI, 5–7% AIR ENTRAINED. FILL ALL EXPOSED SURFACE VOIDS. CHAMFER ALL EDGES 1", SLOPE TOP 6mm (1/4") WITH GROUT TO DRAIN WATER (FILL VOID BETWEEN BASE PLATE & POLE BASE SOLID, AFTER PLUMBING POLE), ADJUST SO TRANSFORMER BASE HAS NO GAP TO GROUTED SURFACE. HOT OR COLD WEATHER – FOLLOW CITY OF COLUMBUS CONSTRUCTION & MATERIAL SPECIFICATIONS SECTION 1000.

CONCRETE FINISH – REMOVE ALL FORM MARKS, HAND RUB EXPOSED TOP AND SIDES WITH CARBIDE STONE.

REINFORCING – ASTM A–615 GRADE 60, TYPE S DEFORMED BILLET: #6 VERTICALS, (6 TOTAL), #4 HORIZONTALS 305mm (12") O.C., CIRCULAR FORMED. WIRE TIE ALL CONNECTIONS, MAINTAIN 76mm (3") MINIMUM CONCRETE COVER.

GROUNDING – PROVIDE 16mm X 3m (5/8" X 10'–0") COPPER WELD ONE–PIECE GROUND ROD. DRIVE A MINIMUM OF 610mm (2'–0") BELOW GRADE. RUN #4 AWG SOLID COPPER GROUNDING ELECTRODE CONDUCTOR IN 19mm (3/4") PVC CONDUIT FROM ROD TO ENCLOSURE GROUND BAR. CADWELD WIRE CONNECTION AT ROD.

EMBEDMENT LENGTH – 6' – 4". THIS VALUE IS BASED ON A MAXIMUM LATERAL PASSIVE FORCE = 300 PCF. THIS VALUE SHOULD BE FIELD VERIFIED.




## C TYPICAL FOUNDATION LOCATION

SCALE: NONE

ANCHORAGE – PROVIDE A SET OF FOUR – 50,000 PSI – MIN YIELD STEEL STRENGTH ANCHOR BOLTS, THREADED, HOT–DIPPED GALVANIZED AT THE THREADED END FOR AT LEAST 254mm (10"). THE BOLTS SHALL INCLUDE A 102mm (4") MINIMUM RIGHT ANGLE HOOK AT THE UNTHREADED END. PROVIDE GALVANIZED NUT, LOCK WASHERS AND FLAT WASHERS FOR EACH BOLT.

LUMINAIRE FUSING – REFER TO CITY OF DUBLIN TRANSFORMER BASE DETAIL SL–02.

GROUNDING LEG – REFER TO CITY OF DUBLIN TRANSFORMER BASE DETAIL SL–02.

GROUT – 10,000 PSI, HIGH STRENGTH, NON–SHRINK, NON–METALLIC, COMPLY WITH CRD–C–621, PROVIDE SAND COAT FINISH (PROVIDE SONNOGROUT OR APPROVED EQUAL).

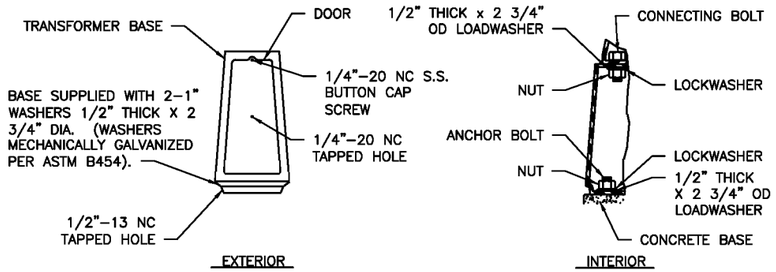
WEATHERPROOFING – PROVIDE PENETRATING SURFACE APPLIED, 1 COAT CONCRETE WATERPROOFING AGENT. MATERIAL SHALL BE CLEAR PENETRATING, WATER BASED, ALKYALKOXYSILANE AND CONTAIN A MINIMUM OF 40% BY WEIGHT SOLIDS AND BE APPLIED PRE MANUFACTURER'S DIRECTIONS. COVERAGE SHALL BE 150 SQ. FEET PER GALLON (PROVIDE HYDROZO ENVIROSEAL 40 OR APPROVED EQUAL). APPLY 1 COAT TO ALL CONCRETE EXPOSED SURFACES ABOVE GRADE.

FIELD CONDITIONS – CONSULT ENGINEER FOR ABNORMAL SOIL CONDITIONS SILTS AND CLAY WITH WATER LIMITS GREATER THAN 50% HIGH ORGANIC SOILS, SHALLOW BEDROCK, ETC.

CONDUIT – SHALL BE HEAVY WALL 51mm (2") OR 19mm (3/4") PER GRAPHIC. RIGID NON–METALLIC SCHEDULE 40 PVC FOR USE ABOVE & BELOW GROUND. RATED FOR 90 DEGREES CELSIUS CONDUCTORS AND USE IN DIRECT SUNLIGHT. MATERIAL SHALL BE UL LISTED AND COMPLY WITH NEMA TC2–1978 AND F.S. #WC–1094A. PROVIDE IN 3m (10') SECTIONS. SEAL ALL JOINTS WATERTIGHT. GLUE JOINTS WITH PVC CEMENT. BUSH ALL ENDS. ALL BENDS SHALL USE LONG RADIUS PRE FORMED ELBOWS. EXTEND CONDUIT TO MINIMUM 610mm (2'–0") BELOW GRADE. LOCATION TO BE COORDINATED WITH LANDSCAPING AND UTILITIES.

IF UNIT TYPE DUCT CABLE IS UTILIZED IN TRENCHES IN LIEU OF PVC CONDUIT, AT POLE FOUNDATIONS RETAIN THE PVC CONDUIT SPECIFIED ABOVE IT SHALL FUNCTION AS A SLEEVE FOR THE DUCT CABLE. OVERSIZE PVC CONDUIT EITHER 64mm (2 1/2") OR 76mm (3") AS REQUIRED BASED ON DUCT CABLE OUTSIDE DIAMETER.

CONDUIT CAPS – TERMINAL POINTS OF ALL CONDUIT AND DUCT CABLE SHALL BE SEALED PROMPTLY AFTER INSTALLATION BY MEANS OF A MOLDED PLASTIC OR RUBBER CAPPING DEVICE THAT ONLY PERMITS WIRE PASS THROUGH.



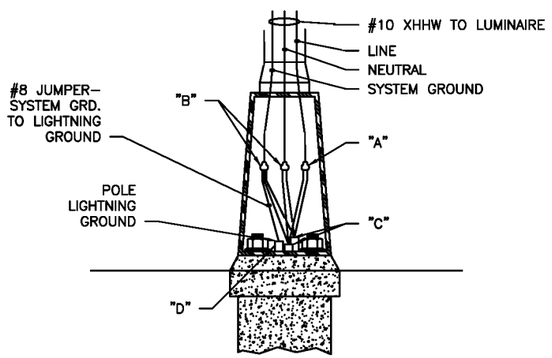

## D TRANSFORMER BASE DETAIL

SCALE: NONE

TRANSFORMER BASE – PROVIDE A ONE-PIECE CAST ALUMINUM ALLOY 356 BREAKAWAY TRANSFORMER BASE MINIMUM 508mm (20") HIGH WITH A REMOVABLE MATCHING ACCESS DOOR HELD IN PLACE WITH STAINLESS STEEL TAMPERPROOF SCREWS. THE DOOR SHALL BE A MINIMUM OF 330mm (13") HIGH, 203mm (8") WIDE AT TOP AND 229mm (9") AT BOTTOM. DOOR SHALL BE FIELD POSITIONED ON SIDE AWAY FROM ROADWAY. THE BASE SHALL BE DESIGNED TO BE ATTACHED WITH ANCHOR BOLTS PROVIDED WITH A TEMPLATE FOR MOUNTING IN A CONCRETE BASE. PROVIDE A GALVANIZED STEEL HEX-HEAD MACHINE BOLT WITH NUTS AND LOCKWASHERS TO ATTACH POLE BASE FLANGE TO TRANSFORMER BASE. PROVIDE LOAD DISTRIBUTION NON-CORROSIVE WASHERS TO EQUALIZE BOLT FORCES AT FLANGE MATING SURFACES.

GROUNDING – EACH TRANSFORMER BASE SHALL CONTAIN AN INTERNAL LUG WITH DRILLED HOLE FOR ATTACHING A GROUND CONDUCTOR.

NAMEPLATE – STAINLESS STEEL SCREW ATTACHED PROVIDE PERMANENT WEATHER RESISTANT ENGRAVED LAMICOID NAMEPLATE 76mm (3") SQUARE MINIMUM 19mm (3/4") HELVETICA WHITE LETTERS ON A DARK BRONZE BACKGROUND WITH POLE NUMBER, CIRCUIT AND LOCATION EMBOSSED INTO IT PER PLAN SCHEDULE.




## E TYPICAL STREET LIGHTING CONNECTION DETAIL

SCALE: NONE

CONNECTIONS

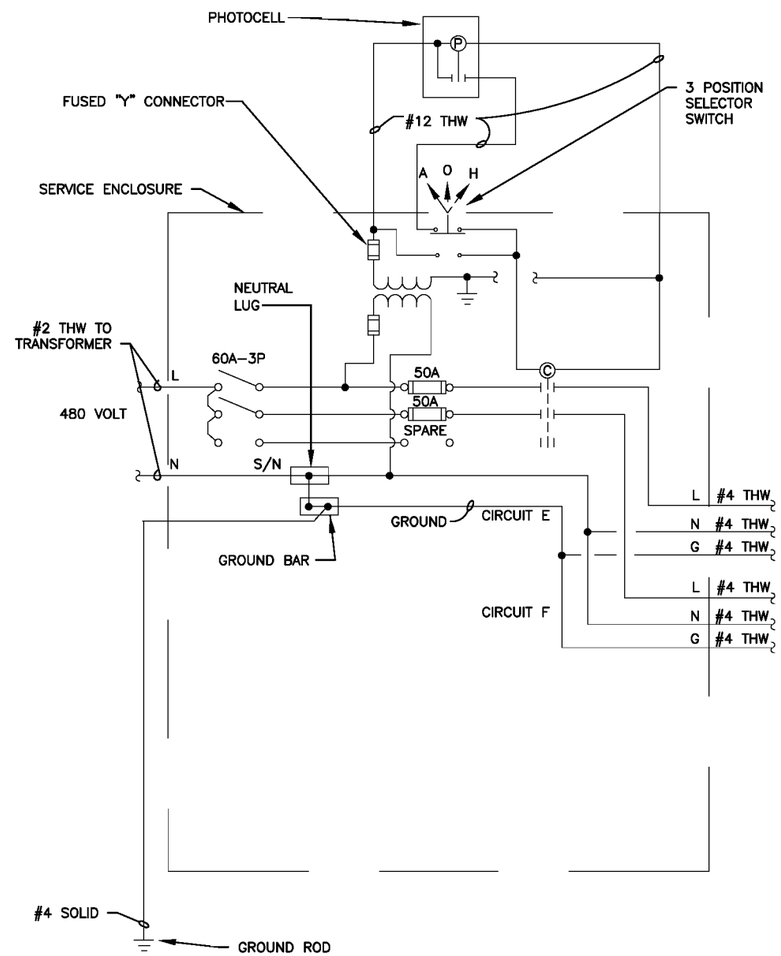
"A" FUSED – INLINE Y CONNECTOR KIT TYPE II WITH WATERPROOF BOOTS AND BREAKAWAY RECEPTACLE. FUSE AT 5 AMPS, HOMAC FY SERIES, BUSS KTK-R FUSE.

"B" UNFUSED – INLINE 7 CONNECTOR KIT TYPE III WITH WATERPROOF BOOTS AND BREAKAWAY RECEPTACLE, ELASTIMOLD 83 SERIES OR HOMAC DY SERIES.

"C" PROVIDE MOLDED PLASTIC OR RUBBER CAPPING DEVICE THAT ONLY PERMITS WIRE PASS THROUGH WHILE PREVENTING DIRT, WATER, ETC. ENTRY.

"D" POLE LIGHTNING GROUND LUG UNINSULATED COPPER COMPRESSION TERMINAL UL LISTED FOR 600V. SIZE FOR WIRE SPECIFIED. DRILL, TAP, AND BOLT TO TRANSFORMER BASE BURNDY YA SERIES. BOND SYSTEM GROUND TO LIGHTNING ROD GROUND.

PROVIDE 2' SLACK IN ALL WIRING TO BRING CONNECTORS AND FUSE HOLDERS OUT THROUGH HANDHOLE.




## F POWER SERVICE SCHEMATIC DIAGRAM

SCALE: NONE

COORDINATION – COORDINATE LOCATION OF TRANSFORMER AND PAD WITH POWER COMPANY.

TRANSFORMER – PROVIDE, INSTALLED AND WIRED BY POWER COMPANY.

TRANSFORMER PAD – INSTALL PER POWER COMPANY REQUIREMENTS FOR SIZE AND LOCATION. REFER TO SERVICE ENCLOSURE PAD FOR MATERIAL SPECIFICATIONS.

SERVICE ENCLOSURE PAD – STRUCTURE SHALL BE SET NOT LESS THAN 3'-0" NOR MORE THAN 5'-0" FROM POWER COMPANY TRANSFORMER PAD. CONCRETE SHALL BE CLASS "C", 4000 PSI, 5-7% AIR ENTRAINED. FILL ALL EXPOSED SURFACE VOIDS. CHAMFER ALL EDGES. SLOPE TOP 1/4" TO DRAIN WATER. HOT OR COLD WEATHER – FOLLOW CITY OF COLUMBUS CONSTRUCTION & MATERIAL SPECIFICATIONS SECTION 1000. FINISH – REMOVE ALL FORM MARKS, PROVIDE FLOATED AND STEEL TROWELED FINISH.

WELDED WIRE FABRIC – PROVIDE 6 X 6 – W2.9 X W2.9 (6X6-6X6). MOUNT ON ALL SIDES AND TOP. MAINTAIN 76mm (3") MINIMUM COVER.

SERVICE ENCLOSURE – PROVIDE A NEMA WATERTIGHT ** ENCLOSURE. 914mm H X 762mm W X 305mm D (36"H X 30"W X 12"D); HAVING A SINGLE CONTINUOUS HINGED LOCKING DOOR, INTERIOR MOUNTING PANEL. 152mm (6") MINIMUM ** MATCHING FLOOR STAND. CONCRETE AND OR BOLT TYPE ANCHOR AND LEVEL TO PAD VIA STAINLESS STEEL MACHINE BOLT, NUTS & LOCK WASHERS. DRILL BOTTOM OF ENCLOSURE WITH 6mm (1/4") WEEP HOLE AT LOW POINT.

** ALUMINUM OR STAINLESS STEEL

SERVICE ENCLOSURE FINISH – A DARK BRONZE APPROVED BY THE CITY ENGINEER. THE PAINT SHALL BE A POWDER PAINT FINISHED TO A GLOSS OF 35% (AT 60 DEGREES).

SERVICE ENCLOSURE LOCK – KEY ALL LOCKING MECHANISMS ALIKE TO NEMA TRAFFIC SIGNAL NUMBER 2 KEY.

LIGHTING CONTROLLER – A CLASS R FUSIBLE COMBINATION LIGHTING CONTACTOR TYPE CONTROLLER ASSEMBLY RATED 600V, 60A-3P, 60HZ WITH SOLID NEUTRAL, ELECTRICALLY HELD WITH CONTROL FUSE, 120V CONTROL VOLTAGE 3 POSITION HAND – OFF – AUTO SELECTOR SWITCH AND PHOTOCELL CONTROL. MOUNT ALL DEVICES IN A SERVICE ENCLOSURE LESS PHOTO CONTROL.

APPROVED MANUFACTURER – SQUARE "D" NIGHT-MASTER SPC-61 (OR APPROVED EQUAL).

PHOTOCELL CONTROLLER – PROVIDE AN ON-OFF PHOTO INITIATED CONTROLLER WITH SEALED CADMIUM SULFIDE PHOTOCELL TO OPERATE IN -30 DEGREES F TO =140 DEGREES F TEMPERATURES, THERMAL INERTIA OF 15 SECONDS MINIMUM, THREADED PIPE NIPPLE, RATED 16 AMPS 2000 WATTS AT 120V, AND SINGLE POLE SINGLE THROW SWITCH. LIGHT SHALL BE 2 FOOT CANDLES FOR TURN ON AND 10 FOOT CANDLES FOR TURN OFF. PROVIDE IN WEATHERPROOF ENCLOSURE. LOAD SHALL REMAIN "ON" IN CASE OF CELL FAILURE. MOUNT ATOP FIRST POLE FROM SERVICE ENCLOSURE.

APPROVED MANUFACTURER – PARAGON #PJ201-00.

GROUNDING – PROVIDE 16mm X 3M (5/8" X 10') COPPER WELD ONE PIECE GROUND ROD. DRIVE A MINIMUM OF 610mm (2'-0") BELOW GRADE. RUN #8 AWG SOLID COPPER GROUNDING ELECTRODE CONDUCTOR IN 19mm (3/4") PVC CONDUIT FROM ROD TO ENCLOSURE GROUND BAR. CAD WELD WIRE CONNECTION TO ROD.

FUSING – SERVICE ENTRANCE – PROVIDE DUAL ELEMENT, TIME DELAY FUSES, UL CLASS RK-1, 600V, REJECTION TYPE.

APPROVED MANUFACTURER – BUSS #LP-RK.

CONTROL CIRCUIT – PROVIDE SINGLE ELEMENT, PAST ACTING TYPE FUSE, UL CLASS CC, 120V, REJECTION TYPE.

APPROVED MANUFACTURER – BUSS #KTK-R.

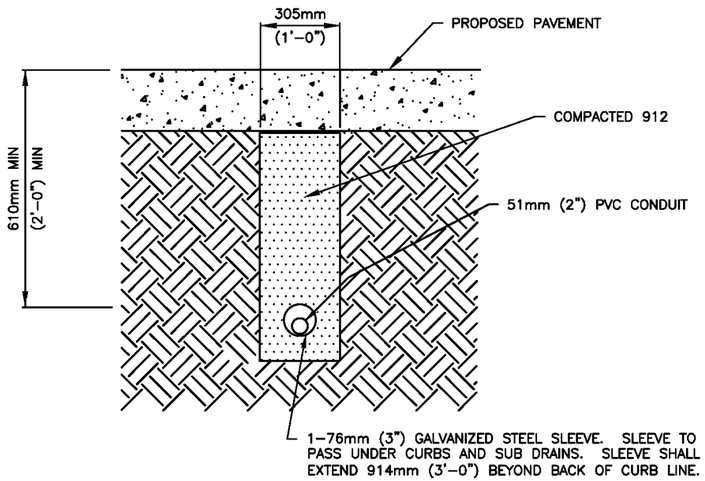
NAMEPLATE – STAINLESS STEEL SCREW ATTACHED. PROVIDE PERMANENT WEATHER RESISTANT ENGRAVED LAMINCOID NAMEPLATE 3" SQUARE MINIMUM 3/4" HELVETICA WHITE LETTERS ON A DARK BRONZE BACKGROUND WITH CABINET CIRCUIT EMBOSSED INTO IT PER PLAN SCHEDULE.

CONDUIT – SHALL BE HEAVY WALL 51mm (2") OR 19mm (3/4") PER GRAPHIC. RIGID NON METALLIC SCHEDULE 40 PVC FOR USE ABOVE AND BELOW GROUND OR CONCRETE ENCASE. RATED FOR 90 DEGREES CELSIUS CONDUCTORS AND USE IN DIRECT SUNLIGHT. MATERIAL SHALL BE UL LISTED AND COMPLY WITH NEMA TC2-1978 AND F.S. #WC-1094A. PROVIDE IN 3m (10') SECTIONS. SEAL ALL JOINTS WATERTIGHT. GLUE JOINTS WITH PVC CEMENT BUSH ALL ENDS. ALL BENDS SHALL USE LONG RADIUS PRE FORMED ELBOWS. EXTEND CONDUIT TO MINIMUM 610mm (2'-0") BELOW GRADE. LOCATION TO BE COORDINATED WITH LANDSCAPING AND UTILITIES.

IF UNIT TYPE DUCT CABLE IS UTILIZED IN TRENCHES IN LIEU OF PVC CONDUIT, AT POLE FOUNDATIONS RETAIN THE PVC CONDUIT SPECIFIED ABOVE IT SHALL FUNCTION AS A SLEEVE FOR THE DUCT CABLE. OVERSIZE PVC CONDUIT EITHER 64mm (2 1/2") OR 76mm (3") AS REQUIRED BASED ON DUCT CABLE OUTSIDE DIAMETER.

WEATHERPROOFING – PROVIDE PENETRATING SURFACE APPLIED, 1 COAT CONCRETE WATERPROOFING AGENT. MATERIAL SHALL BE CLEAR PENETRATING, WATER BASED, ALKYALKOXYSILANE AND CONTAIN A MINIMUM OF 40% BY WEIGHT SOLIDS AND BE APPLIED PER MANUFACTURER'S DIRECTIONS. COVERAGE SHALL BE 150 SQ. FEET PER GALLON (PROVIDE HYDROZO ENVIROSEAL 40 OR APPROVED EQUAL). APPLY 1 COAT TO ALL CONCRETE SURFACES ABOVE GRADE.

WIRING – REFER TO GENERAL SPECIFICATIONS.

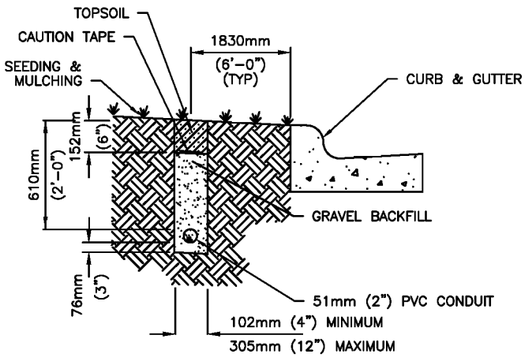



## G CONDUIT SLEEVE UNDER PROPOSED PAVED AREA DETAIL
SCALE: NONE

TRENCHING – SLEEVE TRENCHES SHALL HAVE VERTICAL WALLS AND BE EXCAVATED TO A DEPTH THAT PERMITS SLEEVES TO BE LAID AT 610mm (2'-0") BELOW FINISHED GRADE WITH 76mm (3") COMPACTED MATERIAL AROUND CONDUIT SLEEVES. SLEEVE TRENCHES SHALL BE LOCATED PERPENDICULAR TO THE ROAD CENTERLINE UNLESS OTHERWISE SPECIFICALLY NOTED. MAINTAIN INLINE WITH CONDUIT SETBACK DIMENSIONS AT INTERSECTIONS AND CURB CUTS.

BACKFILL – SHALL COMPLY WITH CITY OF COLUMBUS, OHIO CONSTRUCTION AND MATERIAL SPECIFICATIONS SECTION 636, TYPE 3 (CONTROLLED DENSITY FILL OR ITEM 912 COMPACTED GRANULAR BACKFILL).

CONDUIT SLEEVES – SHALL BE PVC, SCH 80, 713.05. EXTEND 914mm (3'-0") MINIMUM BEYOND BACK OF CURB LINE. CAP ALL UNUSED SLEEVES. INSTALL CONDUITS IN SLEEVES AS PER PLAN.




## H TYPICAL STREET LIGHTING TRENCH DETAIL
SCALE: NONE

TRENCHING – CONDUIT TRENCHES SHALL HAVE VERTICAL WALLS AND BE EXCAVATED TO A DEPTH THAT PERMITS CONDUIT TO BE LAID AT 610mm (2'-0") BELOW FINISH GRADE WITH A GRAVEL COVER ABOVE AND BELOW. BACKFILL GRAVEL TO TOPSOIL LIMIT. TRENCHES SHALL BE LOCATED ADJACENT TO AND PARALLEL WITH CURBS OR PAVEMENTS AND SHALL NOT DEVIATE MORE THAN 152mm (6") FROM THE LINES DESIGNATED. TRENCHES SHALL NOT EXCEED 305mm (12") IN WIDTH. REMOVE EXCESS SOIL AFTER BACK FILLING.

GRAVEL – SHALL BE UNCRUSHED WASHED GRAVEL AND PASS A 13mm (1/2") SIEVE. PLACE AND COMPACT TO 95% STANDARD PROCTOR IN LAYERS NOT EXCEEDING 203mm (8") EACH.

TOPSOIL – FOR BACK FILLING SHALL BE CLEAN, LOOSE, FRIABLE, LOAMY TOPSOIL FREE OF SUBSOIL, REFUSE AND/OR ROCKS OVER 1/2". TOPSOIL MAY BE FROM THE SITE OR IMPORTED. TOPSOIL SHALL BE PLACED AND SPREAD OVER THE AREAS DESIGNATED TO A DEPTH SUFFICIENTLY GREATER THAN THAT SHOWN SO THAT AFTER NATURAL SETTLEMENT THE COMPLETED WORK WILL CONFORM TO THE ELEVATIONS SHOWN.

SEEDING AND MULCHING – SHALL COMPLY WITH CITY OF COLUMBUS, OHIO CONSTRUCTION AND MATERIAL SPECIFICATIONS SECTION 653.

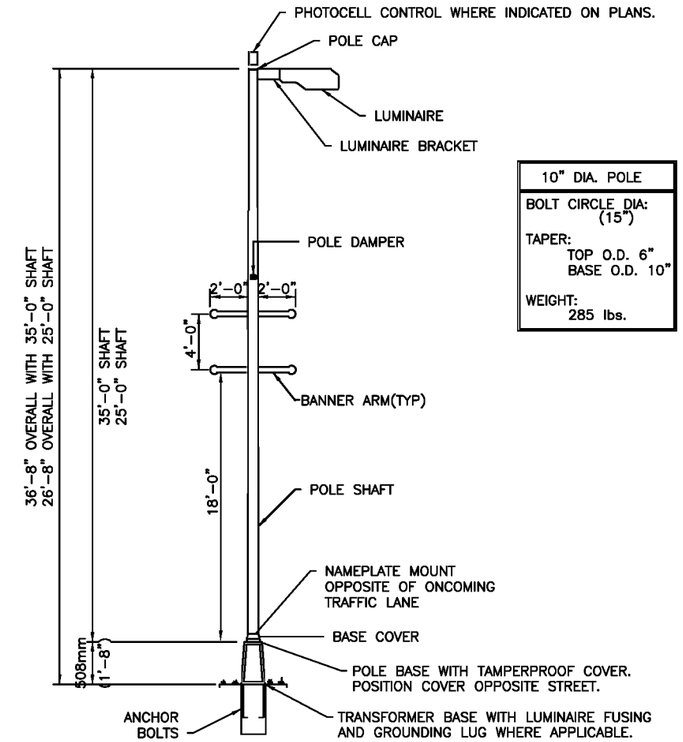
CONDUIT – SHALL BE HEAVY WALL RIGID NON-METALLIC SCHEDULE 40 PVC FOR USE ABOVE AND BELOW GROUND. RATED FOR 90 DEGREES CELSIUS CONDUCTORS AND USE IN DIRECT SUNLIGHT. MATERIAL SHALL BE UL LISTED AND COMPLY WITH NEMA TC2-1978 AND F.S. #WC-1094A. PROVIDE IN 10 FOOT SECTIONS. SEAL ALL JOINTS WATERTIGHT. GLUE JOINTS WITH PVC CEMENT. BUSH ALL ENDS. ALL BENDS SHALL USE LONG RADIUS PREFORMED ELBOWS.

CONDUIT CAPS – PROVIDE MOLDED PLASTIC OR RUBBER CAPPING DEVICE THAT ONLY PERMITS WIRE TO PASS THROUGH WHILE PREVENTING DIRT, WATER, ETC. FROM ENTERING.

PULL WIRE – ALL EMPTY CONDUITS INSTALLED FOR FUTURE LIGHTING SHALL CONTAIN A NO. 10 AWG COPPER-CLAD OR ALUMINUM-CLAD PULL WIRE.

WIRING – REFER TO GENERAL SPECIFICATIONS.

CAUTION TAPE – 76mm (3") WIDE YELLOW PLASTIC TAPE WITH BLACK LETTERS READING "CAUTION BURIED LINE BELOW". BURY ABOVE CONDUIT 152mm (6") MAX. BELOW GRADE. RUN CONTINUOUS IN ALL TRENCHES NOT COVERED BY ASPHALT PAVEMENT.




## J TYPICAL GROUND AND STRUCTURE MOUNTED POLE DETAIL
SCALE: NONE

GENERAL DESCRIPTION – ALUMINUM ROUND TAPERED ANCHOR BASE IN DARK BRONZE OR APPROVED EQUAL. THE PAINT SHALL BE A POWDER PAINT FINISHED TO A GLOSS OF 35% (AT 60° F.). SPUN ALUMINUM FINISH WITH POLE CAP, TRANSFORMER BASE, BASE COVER AND ANCHOR BOLTS WHERE SPECIFIED. PAINT CHIP SAMPLES SHALL BE SUBMITTED TO THE CITY ENGINEER WITH SHOP DRAWINGS.

POLE CAP – PROVIDE AN ORNAMENTAL ALUMINUM ALLOY CAP FASTENED VIA STAINLESS STEEL SCREWS.

POLE DAMPER – PROVIDE A SECOND MODE VIBRATION DAMPER ATTACHED TO MIDPOINT VIA WELDING. LOCATE INSIDE POLE. FACTORY INSTALLED.

BASE FLANGE – PROVIDE A ONE PIECE CAST SOCKET OF ALUMINUM ALLOY 356. THE FLANGE SHALL BE JOINED TO THE SHAFT BY MEANS OF CONTINUOUS WELD EXTERNALLY AND INTERNALLY.

BASE COVER – PROVIDE ANCHOR BOLT COVERS OF ALUMINUM ALLOY 43 AND STAINLESS STEEL SCREWS FOR ATTACHMENT.

MISCELLANEOUS HARDWARE – ALL NUTS, BOLTS, AND WASHERS USED IN THE FABRICATION OF THE POLE SHALL BE GRADE 18-8 STAINLESS STEEL EXCEPT FOR ANCHOR HARDWARE.

WRAPPING – EACH POLE SHAFT SHALL BE WRAPPED WITH PROTECTIVE PAPER SECURED IN PLACE. ALL PARTS SHALL BE BOXED AND/OR BANDED.

POLE SHALL BE MANUFACTURED BY VALMONT(LEXINGTON), OR APPROVED EQUAL.

POLE SHAFT – THE SHAFT SHALL BE ONE-PIECE SEAMLESS WITH A MINIMUM WALL THICKNESS OF 0.188" FOR SHAFTS 10" DIA. WITH OR WITHOUT BANNER ARMS. ROUND TAPERED TUBE OF ALLOY 6063 AND SHALL BE FULL LENGTH TEMPERED AFTER WELDING ON TOP BASE FLANGE TO PRODUCE THE T6 TEMPER. THE ENTIRE POLE ASSEMBLY SHALL BE RATED @ 90 MPH WITH A 30% GUST FACTOR FOR AN EPA MAXIMUM OF 5 FOR SHAFTS WITH BANNER ARMS AND BANNERS FOR A FIXTURE LOCATED AT THE TOP OF THE POLE. TEMPLATE CUT FOR LUMINAIRE.

BANNER ARMS – BANNER ARMS SHALL BE PROVIDED ON ALL POLE SHAFTS PROVIDED. BANNER SIZE SHALL BE 2'X4'. THERE SHALL BE 2 BANNERS PER DESIGNATED POLE AT 180°. THE MOUNTING CONFIGURATION SHALL BE 4 POINT. PROVIDE AND INSTALL ALUMINUM CAPS FOR BANNER ARM MOUNTING HOLES.

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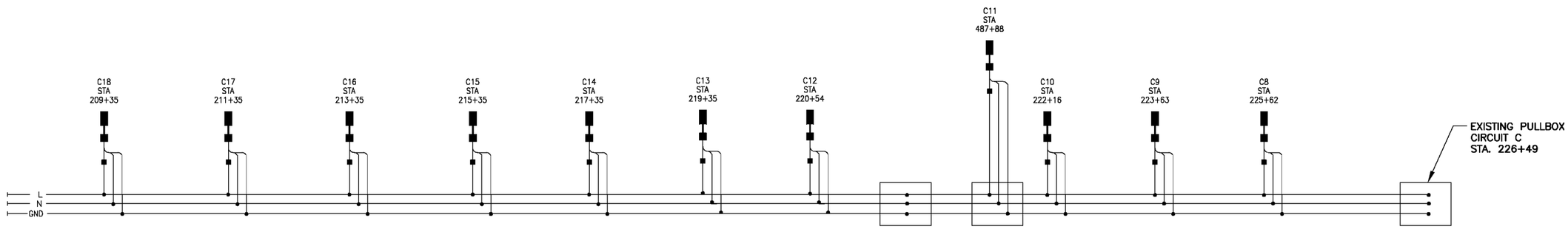
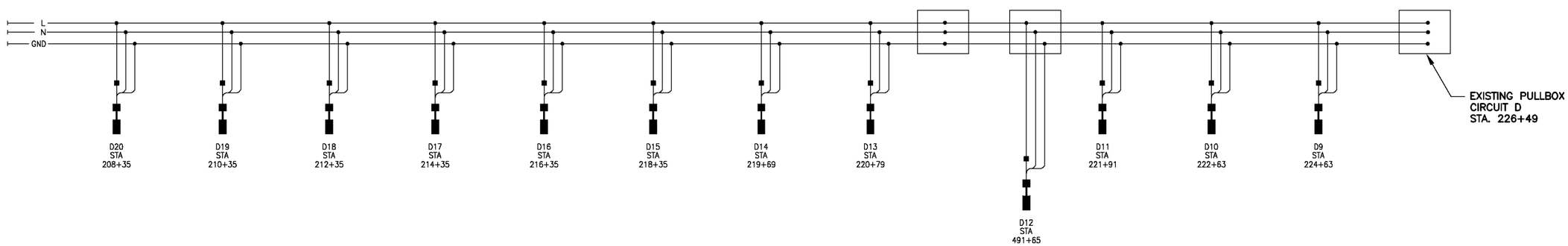
LEGEND

- STRUCTURE MOUNTED JUNCTION BOX.
- GROUND LEVEL PULL BOX.
- FUSED 'Y' SPLICE KIT.
- UNFUSED 'Y' SPLICE KIT.
- FUSED 'Y' CONNECTOR KITS IN HAND HOLE OF LIGHT POLE.
- UNFUSED 'Y' CONNECTOR KITS IN HAND HOLE OF LIGHT POLE.

SEE SHEET E-7 FOR LUMINAIRE DESCRIPTIONS.




K SCHEMATIC DIAGRAM

CIRCUITS C & D

E-19 / E-20

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

EMERALD PARKWAY
ELECTRICAL DETAILS

SCALE: NO SCALE

SHEET NO. 169 OF 275

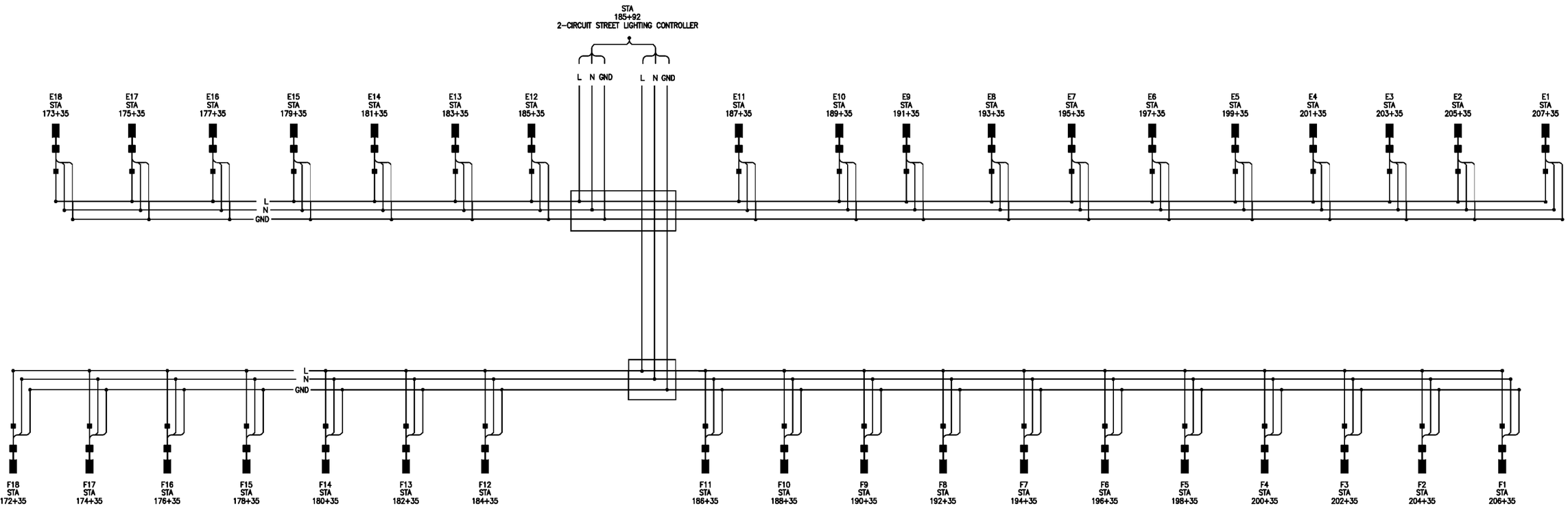
P:\PR44959\cadd\LIGHTING\EMERALD-E19.dwg 10/25/2013 5:38:25 PM Ward, Will

PLOTTED: 10/29/2013 11:42:51 AM

LEGEND

- STRUCTURE MOUNTED JUNCTION BOX.
- GROUND LEVEL PULL BOX.
- FUSED 'Y' SPLICE KIT.
- UNFUSED 'Y' SPLICE KIT.
- FUSED 'Y' CONNECTOR KITS IN HAND HOLE OF LIGHT POLE.
- UNFUSED 'Y' CONNECTOR KITS IN HAND HOLE OF LIGHT POLE.

SEE SHEET E-7 FOR LUMINAIRE DESCRIPTIONS.




K SCHEMATIC DIAGRAM

CIRCUITS E & F

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| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | TEB |
| DRAWN BY: | TEB |
| CHECKED BY: | RJC |
| APPROVED BY: | RJC |
| DATE: | OCTOBER 2013 |

EMERALD PARKWAY
ELECTRICAL DETAILS

E-20 / E-20

SCALE: NO SCALE

SHEET NO. 170 OF 275

## UTILITY BURIAL (GENERAL)

THE CONTRACTOR SHALL FURNISH ALL MATERIALS AND LABOR TO CONSTRUCT ALL CONCRETE ENCASED DUCT, NON-ENCASED DUCT, AND MANHOLES, INCLUDING EARTHWORK AND GRADING, REQUIRED FOR PLACEMENT OF UNDERGROUND UTILITIES AS SHOWN ON THE PLANS AND SPECIFIED HEREIN. OTHER WORK INCLUDES INSTALLATION OF MATERIALS FURNISHED BY THE UTILITY COMPANIES.

INSPECTION. ALL OPEN CUT WORK PERFORMED BY THE CONTRACTOR, INCLUDING DUCT AND MANHOLES, THAT BECOMES THE PROPERTY OF THE UTILITY COMPANY, SHALL BE THOROUGHLY INSPECTED AND APPROVED BY A REPRESENTATIVE OF THE AFFECTED UTILITY COMPANY PRIOR TO COVERING. **ALL DUCT RUNS MUST BE APPROVED BY THE AFFECTED UTILITY COMPANY PRIOR TO PLACEMENT OF CONCRETE.** THE CONTRACTOR MUST GIVE THE UTILITY COMPANIES AT LEAST 48 HOURS NOTICE BEFORE CONCRETE POURS OR BACKFILLING DUCT AND/OR STRUCTURES. ANY WORK NOT APPROVED BY THE UTILITY COMPANY REPRESENTATIVE WILL NOT BE ACCEPTED FOR PAYMENT.

UTILITY COMPANY WORK. UPON ACCEPTANCE OF THE WORK BY THE AFFECTED UTILITY COMPANY, UTILITY FORCES WILL FURNISH AND INSTALL ANY PAD MOUNTED EQUIPMENT, ALL WIRE AND CABLE THROUGH THE COMPLETED DUCT SYSTEM, AND ALL RISER POLES, COMPLETE. REMOVAL OF ANY EXISTING OVERHEAD WIRE WILL BE PERFORMED BY THE UTILITY COMPANIES IMMEDIATELY FOLLOWING ENERGIZING OF THE NEW UNDERGROUND FACILITIES. POLES WILL BE REMOVED BY THE RESPONSIBLE UTILITY COMPANY.

DUCT. CONDUIT SHALL BE INSTALLED BY THE CONTRACTOR USING OPEN CUT METHODS. THE COST OF CONDUIT INSTALLATION, INCLUDING SAWCUTTING, TRENCH EXCAVATION IN SOIL, TRENCH EXCAVATION IN ROCK, CONDUIT, COUPLINGS, SPACERS, AND REINFORCEMENTS, WILL BE PAID AT THE UNIT PRICE BID PER LINEAL FOOT FOR **ITEM SPECIAL – 6" PVC CONDUIT.** CONCRETE ENCASEMENT WILL BE PAID AT THE UNIT PRICE BID PER CUBIC YARD.

**ITEM SPECIAL – TRENCH TYPE 1, 2, OR 3.** TRENCH BACKFILL AND SURFACE RESTORATION WILL BE PAID AT THE UNIT PRICE BID PER LINEAL FOOT FOR EACH TRENCH TYPE AND SURFACE AS DETAILED ON SHEET 172, INCLUDING CONTROLLED DENSITY FILL, GRANULAR BACKFILL, COMPACTED BACKFILL, AGGREGATE BASE, ASPHALT BASE, AND ASPHALT SURFACING. TOPSOIL, SEEDING, AND MULCHING WILL BE PAID SEPARATELY UNDER THE APPROPRIATE ITEM.

EARTHWORK. WHEN APPLICABLE, THE CONTRACTOR SHALL COMPLETE THE EARTHWORK AND GRADING NECESSARY FOR PROPER PLACEMENT OF ALL ABOVE-GROUND EQUIPMENT (SWITCHES, TRANSFORMERS, VAULTS, ETC.) TO THE ELEVATIONS SHOWN ON THE DRAWINGS. **ACTUAL PLACEMENT OF EQUIPMENT WILL BE PERFORMED BY THE UTILITY COMPANIES.** THE COST OF EARTHWORK AND GRADING NECESSARY TO PREPARE FOR PLACEMENT OF UTILITY EQUIPMENT WILL NOT BE PAID SEPARATELY, BUT SHALL BE INCLUDED IN THE PRICE BID FOR THE RELATED ITEMS.

SURFACE RESTORATION. PAY LIMITS FOR SURFACE RESTORATION OVER THE TRENCH SHALL BE THE TRENCH WIDTH PLUS 2 FEET FOR ASPHALT ROADWAY AND THE TRENCH WIDTH PLUS 10 FEET FOR NON-PAVEMENT AREAS. DISTURBANCE BEYOND THESE LIMITS SHALL BE RESTORED BY THE CONTRACTOR AT HIS EXPENSE. COORDINATE TOP SOIL PLACEMENT WITH THE OTHER SITE WORK.

ELEVATIONS. PAD, BOX, OR MANHOLE CASTING ELEVATIONS PROVIDED ON THE PLANS ARE APPROXIMATE AND SHALL BE ADJUSTED, IF NEEDED, IN THE FIELD BY THE CONTRACTOR TO MATCH SURROUNDING FINISH GRADES.

METHOD OF MEASUREMENT. THE LENGTH OF DUCT AND TRENCH, BY TYPE, SHALL BE PAID FOR BY THE ACTUAL NUMBER OF FEET MEASURED BETWEEN MANHOLES, PADS, ETC. DEDUCTIONS SHALL BE MADE FOR MANHOLE LENGTHS.

## AEP UTILITY DUCT

ALL UNDERGROUND CONDUIT SYSTEM WORK SHALL BE DONE ACCORDING TO THE MOST RECENT REVISION OF THE FOLLOWING AEP SPECIFICATIONS:

AMERICAN ELECTRIC POWER –
SPECIFICATION FOR STRUCTURAL CONCRETE
SPECIFICATION NO. CE-1000-A

AMERICAN ELECTRIC POWER
SPECIFICATION FOR UNDERGROUND DISTRIBUTION CONSTRUCTION
SPECIFICATION TDO-003

AN AEP INSPECTOR MUST APPROVE ALL DUCT AND MANHOLE INSTALLATION PRIOR TO CONCRETE PLACEMENT OR BURIAL OF CONDUIT.

1. MATERIALS

A. CONDUIT – NONMETALLIC CONDUIT SHALL BE TYPE EB-20 POLYVINYL CHLORIDE (PVC). IT SHALL BE DESIGNED TO FORM A SOUND, STRONG DUCT, FREE FROM DEFECTS. IT SHALL BE NONMAGNETIC, RESISTANT TO CORROSIVE ACTION, UNAFFECTED BY ELECTROLYSIS AND SHALL NOT SOFTEN, DEFORM OR DETERIORATE WHEN EXPOSED TO THE MAXIMUM SAFE OPERATING TEMPERATURE OF THE CABLES. THE INSIDE SURFACE OF THE CONDUIT SHALL BE SMOOTH, ROUND, AND HAVE A **6-INCH NOMINAL INSIDE DIAMTER.** THE CONDUIT SHALL BE CARLON HEAVY WALL "PV-DUIT PLUS" CONDUIT OR AN APPROVED EQUAL.

B. COUPLINGS – THE COUPLINGS SHALL BE OF THE SAME MATERIAL AS THE CONDUIT AND SHALL BE SUFFICIENTLY TIGHT TO PREVENT SILT OR CONCRETE FROM ENTERING THE CONDUIT.

C. SPACERS – THE SPACERS SHALL BE PLASTIC BASE AND INTERMEDIATE TYPE FOR PVC CONDUIT.

D. REINFORCEMENTS – ALL REINFORCING SHALL BE #4, GRADE 60, DEFORMED STEEL BARS, PLACED AS SHOWN, WITH A MINIMUM 9-INCH LAP SPACE.

2. INSTALLATION

A. THE CONDUIT SHALL BE INSTALLED AS SHOWN ON THE PLANS.

B. EXCAVATION FOR THE UNDERGROUND CONDUIT DUCTS SHALL EXTEND TO THE PROFILE OF THE LOWER SIDE OF THE CONDUIT ENCASEMENT, EXCEPT WHERE SPECIFIED IN THE PLANS OR DIRECTED BY THE ENGINEER. THE DUCTS SHALL HAVE A **MINIMUM DEPTH OF COVER OF 36 INCHES** FROM THE TOP OF THE ENCASEMENT TO THE FINISHED GRADE. THE PROFILE BETWEEN STRUCTURES SHALL BE SET SO THAT THE CONDUITS ARE LEVEL OR SLOPED TO THE NEXT STRUCTURE. WHERE CONDUITS ENTER A STRUCTURE AT A LOWER LEVEL THAN THE APPROACHING PROFILE OF THE CONDUIT, THE CONDUIT SHALL BE SLOPED DOWN TO THE STRUCTURE AT A RATE NOT-TO-EXCEED 5 PERCENT.

C. THE TRENCH SHALL BE EXCAVATED SO THAT ANY CURVE RADIUS WILL BE AS LARGE AS POSSIBLE (30 FOOT RADIUS MINIMUM UNLESS OTHERWISE INDICATED). THE TRENCH SHALL BE EXCAVATED NO WIDER THAN NECESSARY TO ACCOMMODATE THE CONDUIT AND CONCRETE ENCASEMENT AS SHOWN ON THE DETAILS. THE BOTTOM OF THE TRENCH SHALL BE UNDISTURBED, TAMPED, AND RELATIVELY SMOOTH EARTH. TRENCHES WHICH HAVE BEEN EXCAVATED TOO DEEP AT ANY POINT ARE TO BE PARTIALLY REFILLED AND TAMPED SOLID. THE SIDES OF THE TRENCH SHALL BE TRIMMED SMOOTH TO PROVIDE FOR A UNIFORM SHEATH OF CONCRETE AROUND THE CONDUITS. THE SIDES OF THE EXCAVATION SHALL BE FORMED WHERE NECESSARY TO MAINTAIN A UNIFORM ENCASEMENT.

D. WHERE A CONDUIT CROSSES A SEWER OR WATERLINE, OR ANY OTHER UNDERGROUND UTILITY, THE CLEARANCE BETWEEN THEM SHALL BE LARGE ENOUGH TO PERMIT MAINTENANCE OF THE SYSTEM WITHOUT DAMAGE TO THE STRUCTURES. THE MINIMUM CLEARANCE SHALL BE DETERMINED BY THE UTILITIES INVOLVED. A SUITABLE SUPPORT, ON EACH SIDE OF THE STRUCTURE, SHALL BE CONSTRUCTED TO AVOID TRANSFERRING ANY DIRECT LOAD ONTO THE STRUCTURE.

E. THE CONDUIT RUNS SHALL BE AS STRAIGHT AS POSSIBLE. TYPE EB-20, 5-DEGREE ANGLE COUPLINGS OR COMBINATIONS OF 5-DEGREE ANGLE COUPLINGS WITH STRAIGHT SECTIONS OF CONDUIT ARE RECOMMENDED TO NEGOTIATE CURVES. NO FIELD BENDS.

F. PRECAST PLASTIC BASE AND INTERMEDIATE SPACERS SHALL BE PLACED AT 5-FOOT INTERVALS THAT SHALL SEPARATE THE CONDUITS A MINIMUM OF 2 INCHES APART AND PROVIDE A 3-INCH MINIMUM OUTSIDE ENCASEMENT. BURRS ON THE ENDS OF THE CONDUIT, AS THE RESULT OF SAWING, MUST BE REMOVED PRIOR TO COMPLETING A JOINT. JOINTS SHALL FORM A CONTINUOUS SMOOTH INTERIOR SURFACE BETWEEN CONDUIT SECTIONS SO THAT THE CABLE WILL NOT BE DAMAGED WHEN PULLING PAST THE JOINT. SURFACES TO BE JOINED SHALL BE CLEAN AND FREE FROM DIRT, FOREIGN MATERIALS, AND MOISTURE. THE JOINTS SHALL BE SEALED WITH PROPER CEMENT SPECIFIED BY THE CONDUIT MANUFACTURER. THE CONDUITS SHALL BE TIED TOGETHER WITH HEAVY CORD SO AS TO SECURELY HOLD THE CONDUITS IN PLACE. THE OPEN ENDS OF THE CONDUITS SHALL BE CLOSED WITH TIGHT FITTING PLUGS TO PREVENT MUD OR OTHER FOREIGN MATERIAL FROM GETTING INTO THE CONDUIT. AFTER THE CONDUIT IS PLACED, IT SHALL BE INSPECTED BEFORE THE CONCRETE IS POURED.

G. PEA GRAVEL CONCRETE SHALL BE POURED AS SOON AS POSSIBLE AFTER THE CONDUITS HAVE BEEN PLACED. THE CONDUITS SHALL BE TIED DOWN TO HOLD THEM IN POSITION WHILE THE PEA GRAVEL CONCRETE IS POURED. THE PEA GRAVEL CONCRETE SHALL HAVE A SLUMP OF 4 TO 5 INCHES. THE CONCRETE DELIVERY CHUTE SHALL BE ADJUSTED SO THAT THE FALL OF THE PEA GRAVEL CONCRETE INTO THE TRENCH IS MINIMAL. A SPLASHBOARD SHALL BE USED TO DIVERT THE FLOW OF PEA GRAVEL CONCRETE AWAY FROM THE TRENCH SIDES TO AVOID DISLODGING SOIL AND STONES. PEA GRAVEL CONCRETE SHALL BE PLACED FROM ONE END OF THE DUCT SECTION TO THE OTHER END OF THE SECTION. CONTINUOUS SPADING SHALL BE DONE TO ENSURE A FLOW OF CONCRETE BETWEEN AND UNDER THE INDIVIDUAL CONDUITS. A LONG FLAT TOOL OR SPATULA SHALL BE WORKED CAREFULLY UP AND DOWN BETWEEN EACH VERTICAL LINE OF CONDUITS TO ELIMINATE ANY VOIDS. THE TOP OF THE PEA GRAVEL CONCRETE SHALL THEN BE SMOOTHED.

H. AFTER THE CONCRETE HAS TAKEN ITS INITIAL SET, THE TRENCH CAN BE BACKFILLED.

I. **AFTER THE DUCTS ARE INSTALLED, A FLEXIBLE STEEL MANDREL NOT LESS THAN 12 INCHES LONG WITH A CROSS SECTION OF 5 3/4 INCHES (FITTED WITH A PULLING EYE AT EACH END) SHALL BE PULLED THROUGH EACH CONDUIT.** BY WORKING THE MANDREL BACK AND FORTH, OBSTRUCTIONS SUCH AS CONCRETE WILL BE REMOVED. AFTER THE MANDREL HAS BEEN PULLED THROUGH, A STIFF 5-INCH CIRCULAR WIRE BRUSH AND A SWAB SHALL BE PULLED THROUGH THE CONDUITS TO REMOVE ANY OBJECTS, BITS OF CONCRETE, DIRT, ETC.

J. **A 1/2-INCH P-LINE SHALL BE INSTALLED IN ALL CONDUITS.** ENDS OF THE CONDUIT SHALL BE SEALED IN AN APPROVED MANNER TO KEEP ALL MOISTURE AND FOREIGN MATERIALS OUT OF THE CONDUIT.

## ITEM SPECIAL PRECAST CONCRETE ELECTRIC MANHOLE

1. ELECTRIC MANHOLE MATERIALS

THE PRECAST CONCRETE ELECTRIC MANHOLES SHALL BE FURNISHED BY THE CONTRACTOR AND MEET THE FOLLOWING SPECIFICATIONS:

A. THE MANHOLES SHALL BE AS MANUFACTURED BY UNITED PRECAST, NORWALK CONCRETE INDUSTRIES, INC., OR AN APPROVED EQUAL.

B. THE MANHOLES SHALL BE MANUFACTURED IN ACCORDANCE WITH THE DETAILS SHOWN ON SHEETS 173 AND 174. OPENINGS FOR CONDUIT PENETRATION SHALL BE FIELD CORED IN A NEAT, WORKMANLIKE MANNER BY THE CONTRACTOR, **NO FACTORY KNOCK-OUTS.**

C. THE MANHOLES SHALL HAVE OVERALL NOMINAL DIMENSIONS OF 8'-2" x 13'-2". DEPTH SHALL BE 7-10" FEET NOMINAL INSIDE DIMENSION.

D. THE MANHOLES SHALL BE DESIGNED IN ACCORDANCE WITH AASHTO STANDARD HS-20-44 FOR TRUCK LOADING.

E. THE TOP OPENING SHALL BE 38 INCHES IN DIAMETER AT THE GEOMETRIC CENTER OF THE TOP SLAB.

F. THE MANHOLE FRAMES WITH HEAVY DUTY SOLID LIDS, SIMILAR TO NEENAH FOUNDRY CO., R-1753A, SHALL INSTALLED AT EACH TOP OPENING. CASTING TO BE FURNISHED BE AEP.

G. PULLING EYES SHALL BE PROVIDED ON THE OPPOSITE SIDE OF EACH DUCT OPENING. PULLING EYES SHALL BE AS THAT MANUFACTURED BY LINE MATERIAL COMPANY, STYLE NO. DU 2T3, OR AN APPROVED EQUAL. PULLING EYES MUST BE PLATED BEHIND THE NUT TO PREVENT PULL-THROUGH.

H. ALL CONCRETE USED IN CONSTRUCTION OF THE MANHOLES SHALL BE CLASS "C".

2. INSTALLATION

A. THE CONTRACTOR SHALL PROVIDE ALL EXCAVATION AND BACKFILL NECESSARY FOR MANHOLES AND UNDERGROUND CONDUIT DUCT INSTALLATIONS.

B. EXCAVATION FOR MANHOLES SHALL EXTEND A MINIMUM OF 6 INCHES BELOW THE BOTTOM OF THEIR BASES OR AS NECESSARY FOR PROPER INSTALLATION OF DRAINAGE AND THE COMPLETION OF THE WORK. NO. 8 AGGREGATE OR SIMILAR DRAINAGE MEDIUM SHALL BE PLACED UNDER THE MANHOLES.

C. THE TOP OF THE PRECAST STRUCTURE SHALL BE AT LEAST 24" BELOW EXISTING/PROPOSED GROUND. IF THE BOX IS LOCATED IN A SLOPED AREA THE MINIMUM DEPTH WILL BE MEASURED FROM THE LOWEST GROUND POINT.

D. AFTER THE MANHOLES ARE SET AND CONDUITS ARE INSTALLED, BACKFILL SHALL BE BROUGHT TO PROPER LEVEL AND SHALL BE COMPACTED IN ACCORDANCE WITH ITEM 604, SECTION 604.04 OF THE "CONSTRUCTION AND MATERIAL SPECIFICATIONS." BACKFILL SHALL BE BROUGHT TO THE BOTTOM OF THE PROPOSED PAVING BASE IN PAVED AREAS. RESTORATION OF THE SURFACE SHALL BE AS DETAILED ON THE PLANS AND SHALL BE IN KIND WITH THE SURROUNDING MATERIALS.

E. WORK SHALL BE PLANNED SO THAT EXCAVATIONS ARE OPEN FOR A MINIMUM OF TIME. NO LOAD OR BACKFILL SHALL BE APPLIED OR OTHER WORK CONDUCTED THAT WOULD DAMAGE THE NEW CONCRETE OR INTERFERE WITH CURING.

F. ALL OPEN TRENCHES SHALL BE BARRICADED AND PROPERLY PROTECTED.

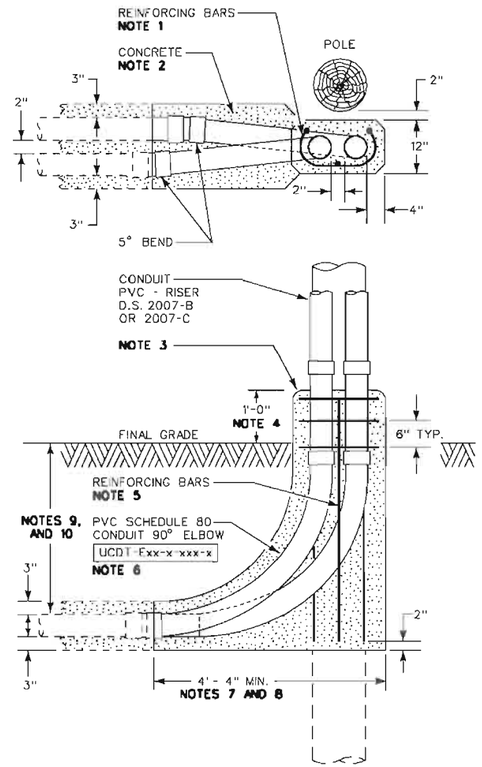
G. AFTER MANHOLES ARE PLACED, THE MANHOLE COVER FRAMES SHALL BE PLACED AND THE TOP ADJUSTED TO GROUND OR PAVING LEVEL. FINAL ADJUSTMENTS WILL BE REQUIRED FOR FINAL RESURFACING. A 6-INCH THICK CONCRETE OR BRICK ADJUSTING RING SHALL BE PROVIDED TO ENSURE CLOSURE BETWEEN THE TOP SLAB OF THE MANHOLE AND THE FRAME.

3. BASIS OF PAYMENT

THE WORK INCLUDED IN THESE ITEMS, INCLUDING EXCAVATION, BACKFILL, AND ALL EQUIPMENT AND MATERIALS NECESSARY, SHALL BE PAID FOR AT THE CONTRACT PRICE, COMPLETED IN PLACE.

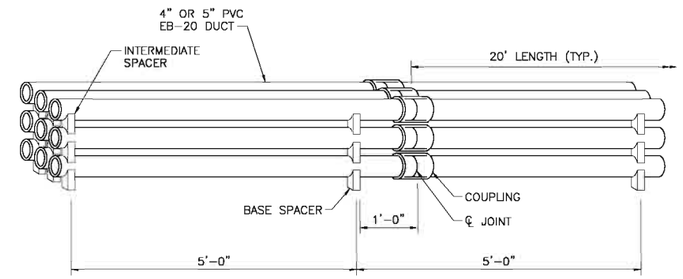
NOTES:

1. THREE HORIZONTAL REINFORCING BARS: ¼" STEEL (NO. 2 PLAIN ROUND) ASTM-A615 GRADE 40KSI.
2. 3000 PSI AT 28 DAYS: 5% ± 1% AIR ENTRAINED.
3. SLOPE FINISHED TOP TO DRAIN WATER.
4. INCREASE TO 3 FEET WHEN IN CONGESTED AREAS. EXTEND HORIZONTAL REINFORCING BARS WITH SHOWN SPACING.
5. THREE VERTICAL REINFORCING BARS: ½" STEEL (NO. 4 DEFORMED) ASTM-A615 GRADE 40KSI.
6. ENGINEER TO SPECIFY SIZE AND DIRECTION OF CONDUIT.
7. SLOPE DUCT LINE TO VAULT OR MANHOLE.
8. CONCRETE ENCASEMENT SHALL TERMINATE AT SHOWN DIMENSION FOR DIRECT BURIED CONDUIT SYSTEMS. ENGINEER SHALL SPECIFY CONCRETE ARRANGEMENT TO TIE INTO OTHER UNDERGROUND SYSTEMS.
9. BURIAL DEPTH FOR DIRECT BURIED CABLE OR CONDUIT IS DEFINED AS THE DISTANCE BETWEEN FINAL GRADE AND THE TOP OF THE CABLE OR CONDUIT. DIRECT BURIED PRIMARY SUPPLY CABLES OR CONDUITS SHALL BE INSTALLED AT A BURIAL DEPTH OF NOT LESS THAN 3'-0" AND SECONDARY SUPPLY CABLES OR CONDUITS SHALL BE INSTALLED AT A BURIAL DEPTH OF NOT LESS THAN 2'-6". THESE INITIAL DEPTHS ARE TO ALLOW FOR CHANGES TO SURFACE CONDITIONS. LOCAL AGREEMENTS AND CODES MAY REQUIRE ADDITIONAL DEPTH. IF THERE ARE KNOWN, EXTENSIVE CHANGES TO THE FINAL GRADE SUCH THAT THESE DEPTHS ARE NOT MAINTAINED CORRECTIVE ACTION SHALL BE TAKEN.
10. BURIAL DEPTH FOR CONCRETE ENCASED CONDUITS IS THE DISTANCE BETWEEN FINAL GRADE AND THE TOP OF THE CONCRETE. CONCRETE ENCASED CONDUITS (DS 2060) SHOULD BE INSTALLED AT A BURIAL DEPTH OF 36 INCHES MINIMUM. DEPTH LESS THAN THIS MAY BE ACCEPTABLE AFTER AN ENGINEERING EVALUATION.
11. TERMINATION OF UNDERGROUND CONDUIT AT RISER POLES WILL NOT BE PAID SEPARATELY. ALL COST FOR RISER CONSTRUCTION SHALL BE INCLUDED IN THE RELATED DUCT ITEMS.




## TERMINATION OF UNDERGROUND CONDUIT AT RISER POLES

ALL DISTRIBUTION VOLTAGES
CONCRETE ENCASED, MULTI-RISERS OR SINGLE RISER

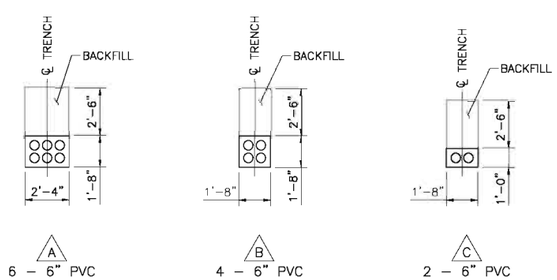



## DUCT STACKING DETAIL

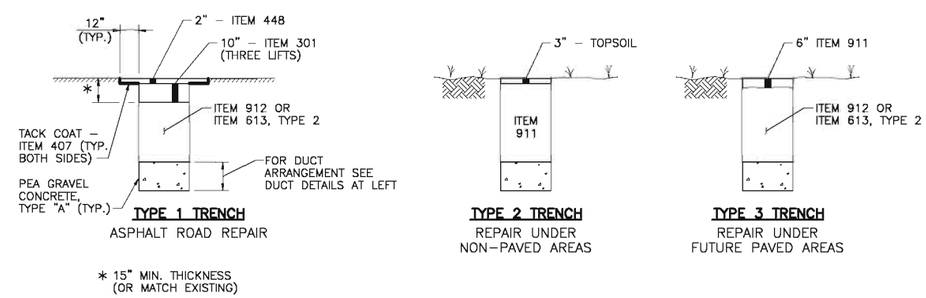
NOT TO SCALE – FOR INFORMATION ONLY

## NOTES

TRENCH. ALL 6" PVC DUCT SHALL HAVE A 2" MIN. SEPARATION, A 3" MIN. ENVELOPE, AND BE ENCASED IN PEA GRAVEL CONCRETE, CLASS "A".




## CONDUIT TRENCH DETAILS




## TRENCH AND SURFACE RESTORATION DETAILS

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| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

AEP DUCT SYSTEM
CONDUIT TRENCH DETAILS

SCALE: NONE

SHEET NO. 172 OF 275

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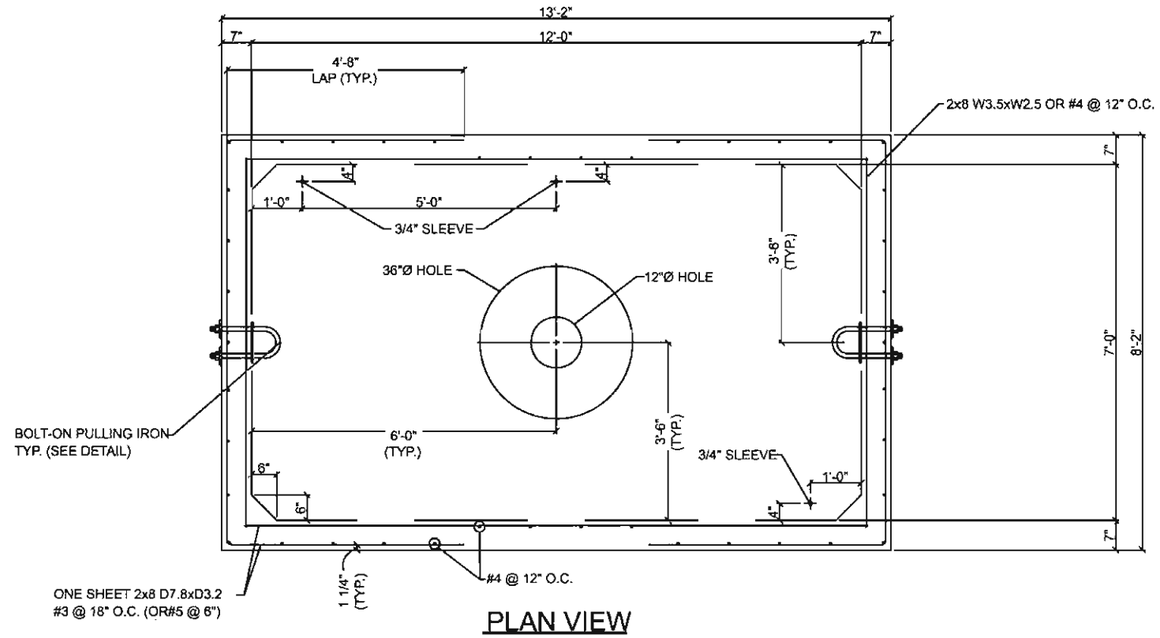
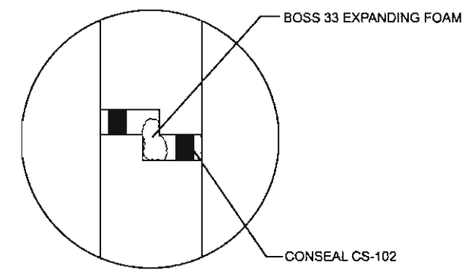


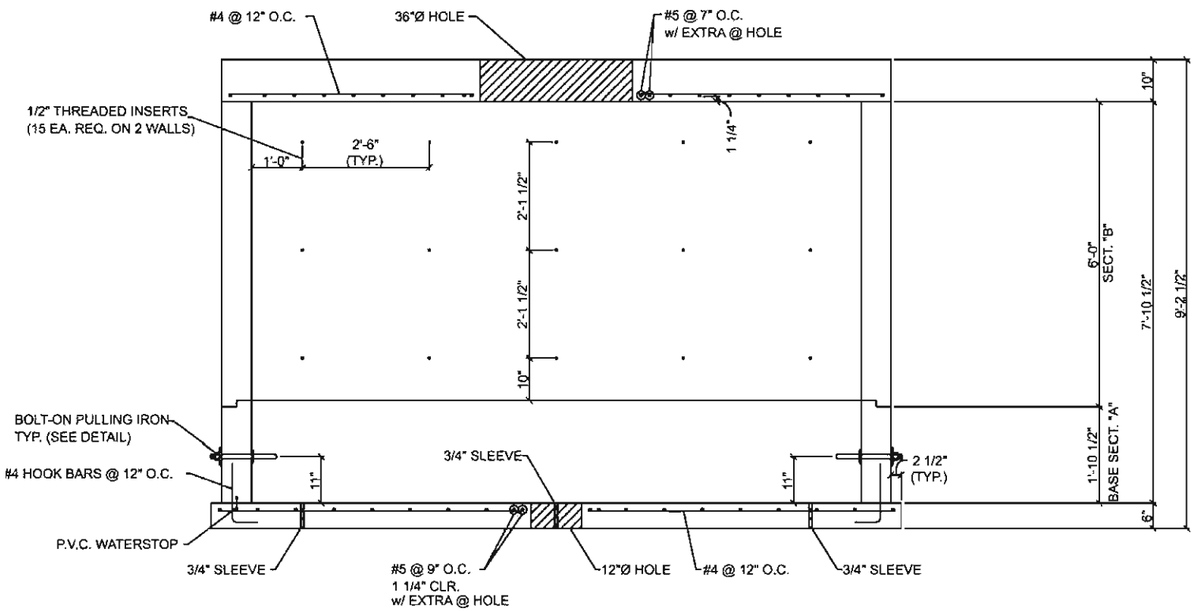

PLAN VIEW



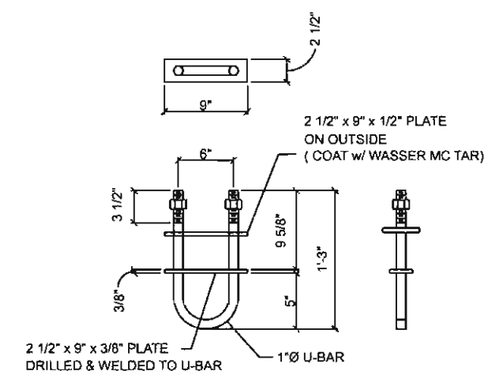

JOINT DETAIL

## WEIGHTS:

BASE SECTION "A": 15,600#
SECTION "B": 21,700#
TOP SLAB: 13,300#




ELEVATION VIEW




BOLT-ON PULLING IRON DETAIL

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| DATE: | OCTOBER 2013 |

AEP DUCT SYSTEM
PRECAST ELECTRIC MANHOLE DETAILS

SCALE: NONE

SHEET NO. 173 OF 275

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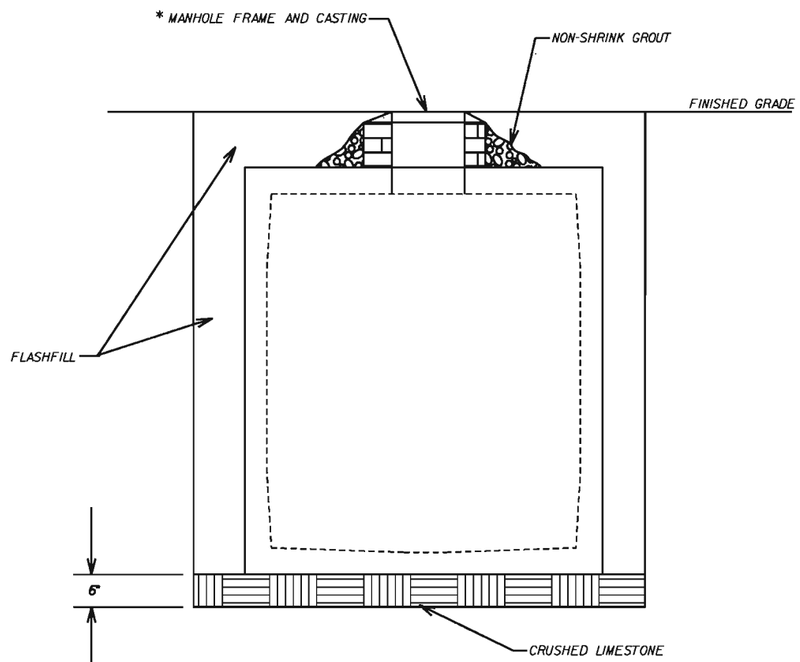
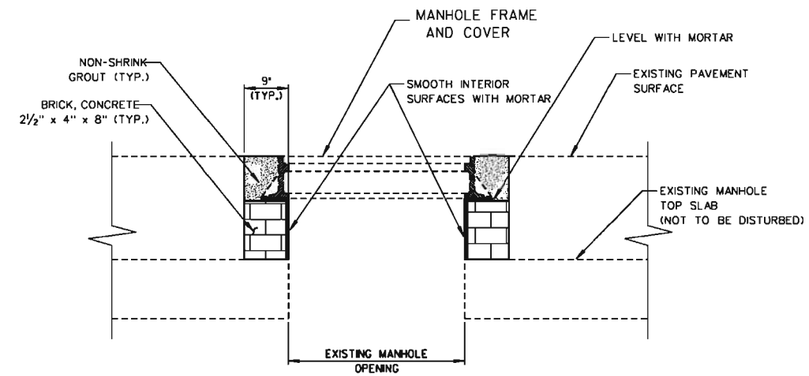
## GENERAL NOTES

1. GROUT SHALL BE NON-SHRINK GROUT WITH A COMPRESSIVE SURFACES STRENGTH OF 5,000 PSI AT 7 DAYS. CONCRETE RECEIVING GROUT SHALL BE CLEAN AND FREE OF DEBRIS AND OTHER FOREIGN SUBSTANCES.
2. TOP ELEVATION, TRANSVERSE AND LONGITUDINAL SLOPE SHALL MATCH EXISTING.
3. TRAFFIC SHALL NOT BE ALLOWED ON THE STRUCTURE FOR A MINIMUM OF 7 DAYS FROM THE COMPLETION OF THE CONSTRUCTION
4. ANY PAVEMENT DAMAGE BEYOND THE WORK LIMITS THAT OCCURED DUE TO CONSTRUCTION, SHALL BE REPAIRED.




ELEVATION VIEW




MANHOLE RISER DETAIL

* SEE PLAN AND PROFILE SHEETS FOR TOP OF CASTING ELEVATION.

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AEP DUCT SYSTEM
PRECAST ELECTRIC MANHOLE DETAILS

SCALE: NONE

SHEET NO. 174 OF 275

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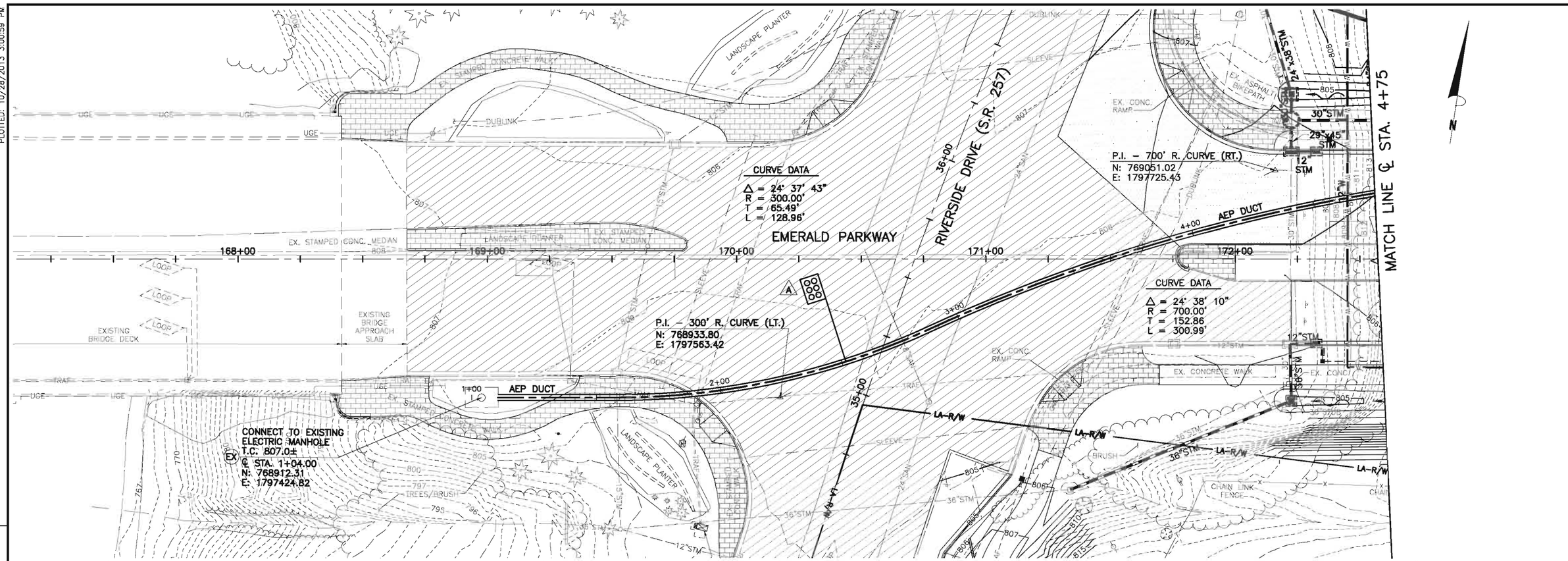


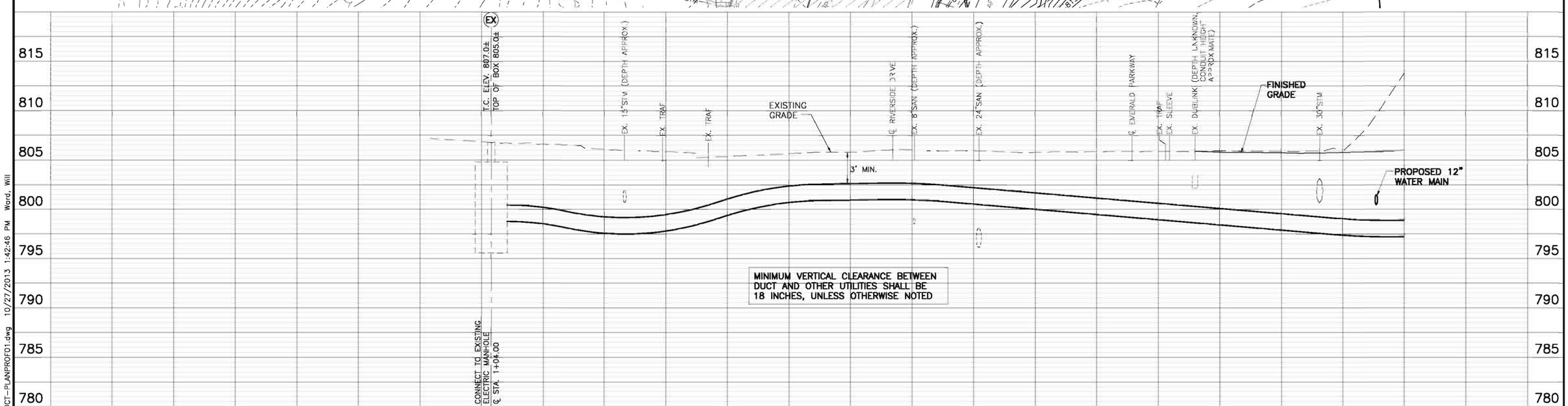


MINIMUM VERTICAL CLEARANCE BETWEEN DUCT AND OTHER UTILITIES SHALL BE 18 INCHES, UNLESS OTHERWISE NOTED

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**AEP DUCT SYSTEM**
**PLAN AND PROFILE**
**℄ STA. 1+04 TO ℄ STA. 4+75**

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 175 OF 275

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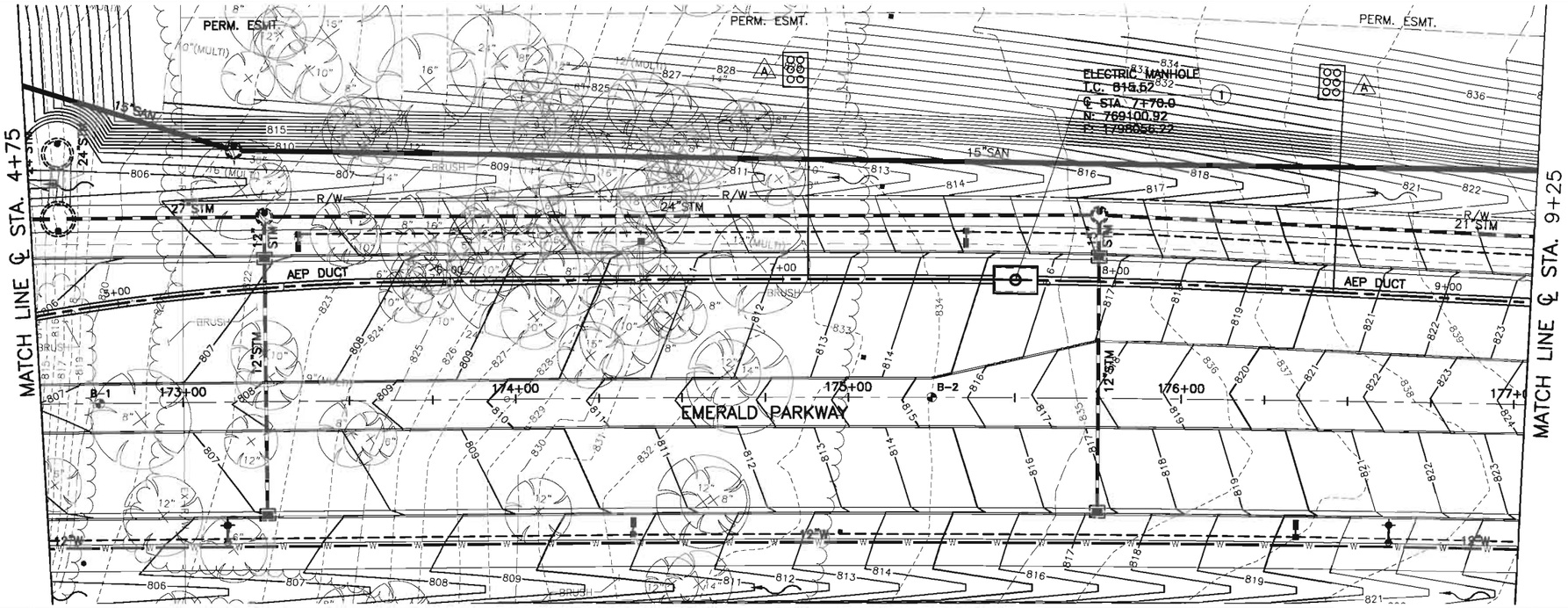


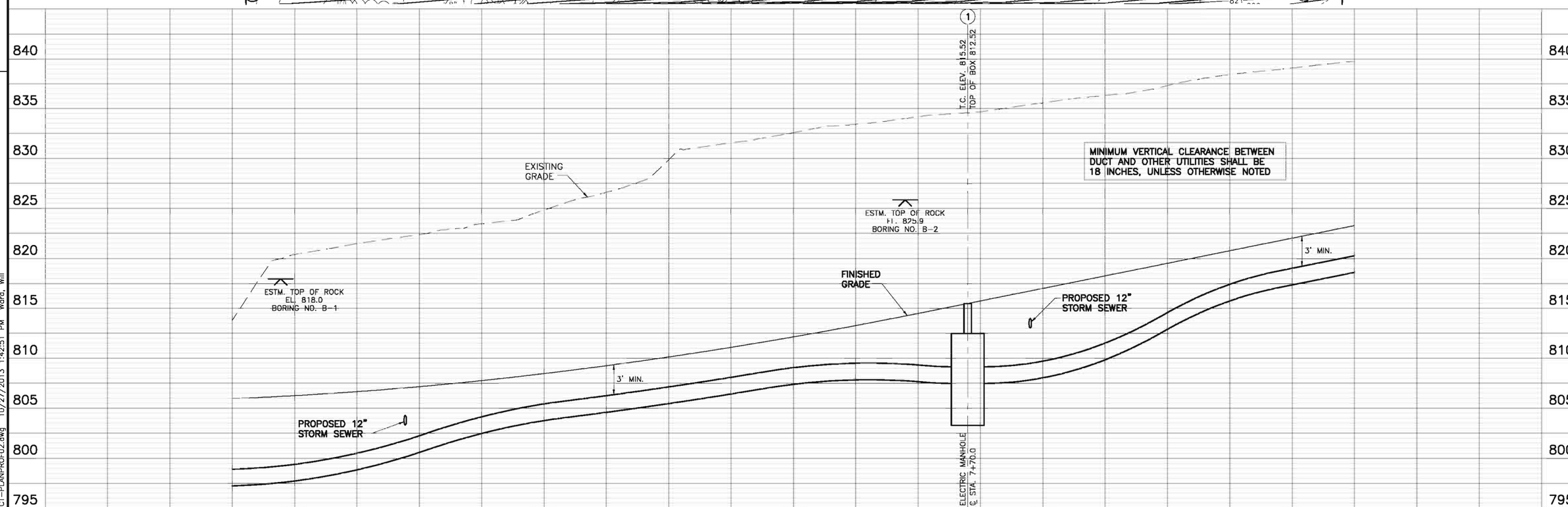


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**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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| DATE: | OCTOBER 2013 |

**AEP DUCT SYSTEM**
**PLAN AND PROFILE**
**℄ STA. 4+75 TO ℄ STA. 9+25**

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 176 OF 275

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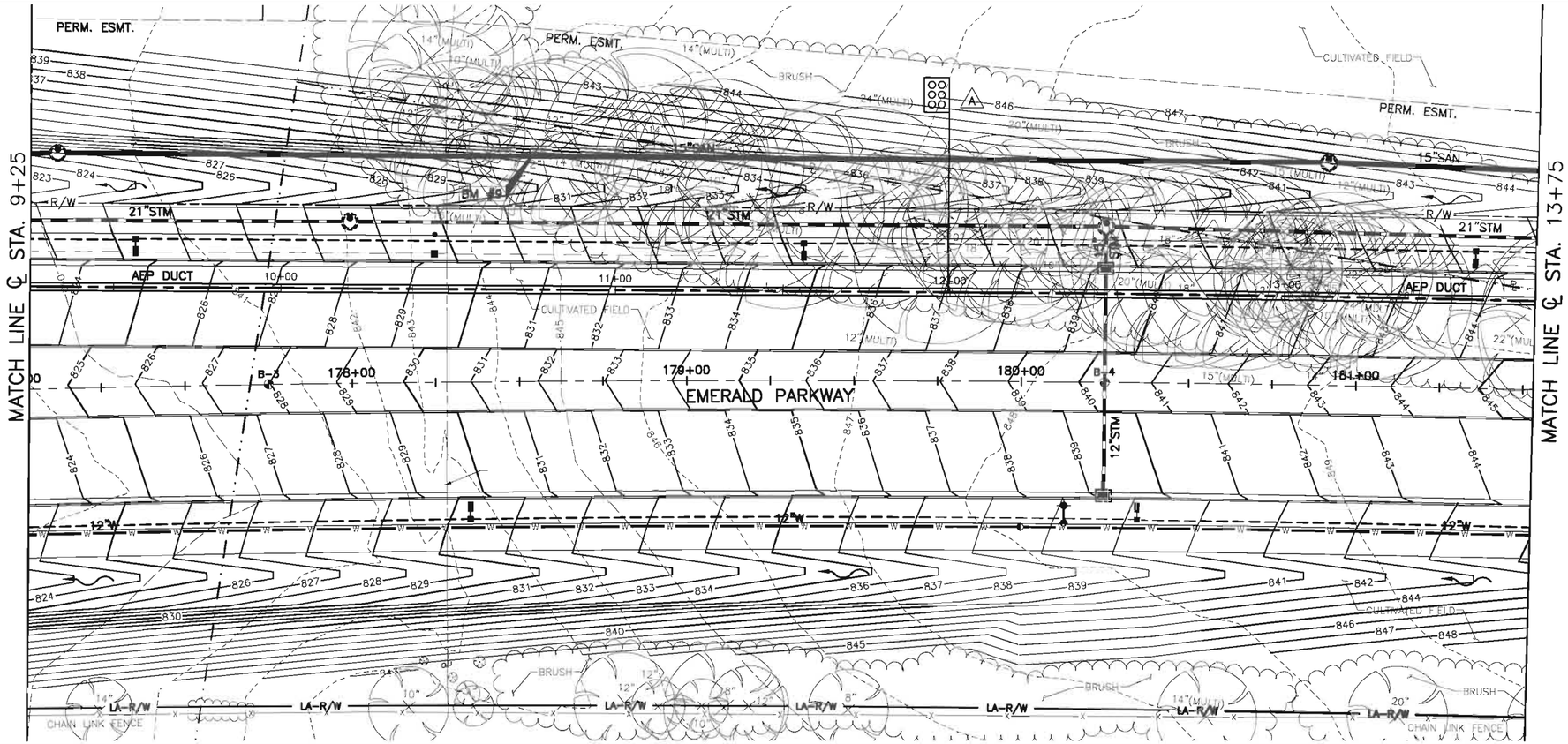


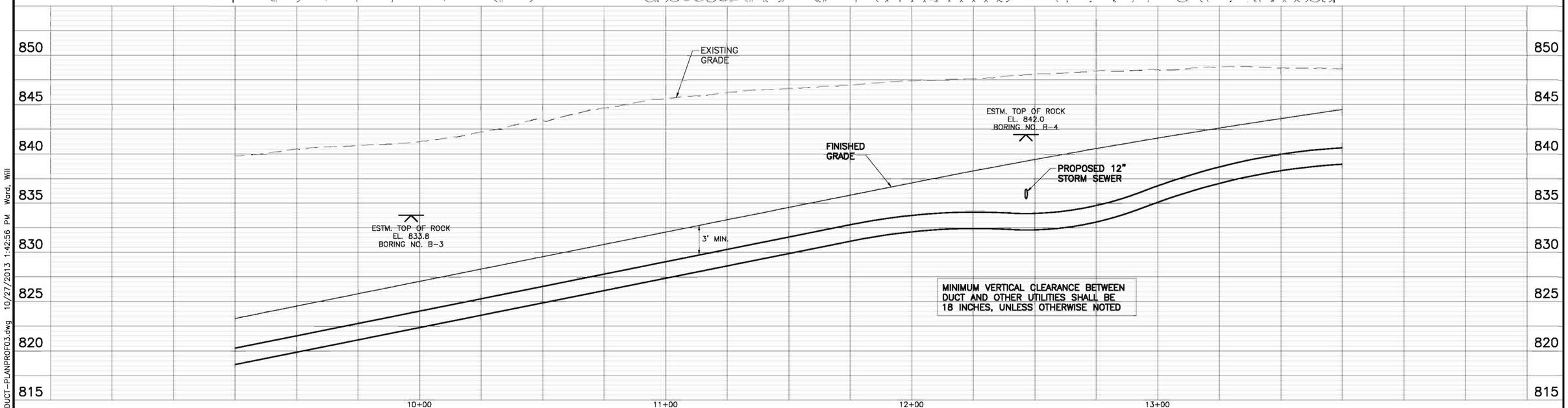


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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| DRAWN BY: | WHW |
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| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

AEP DUCT SYSTEM
PLAN AND PROFILE
℄ STA. 9+25 TO ℄ STA. 13+75

SCALE:
1" = 20' HORIZ.
1" = 5' VERT.

SHEET NO. 177 OF 275

PLOTTED: 10/28/2013 2:34:55 PM

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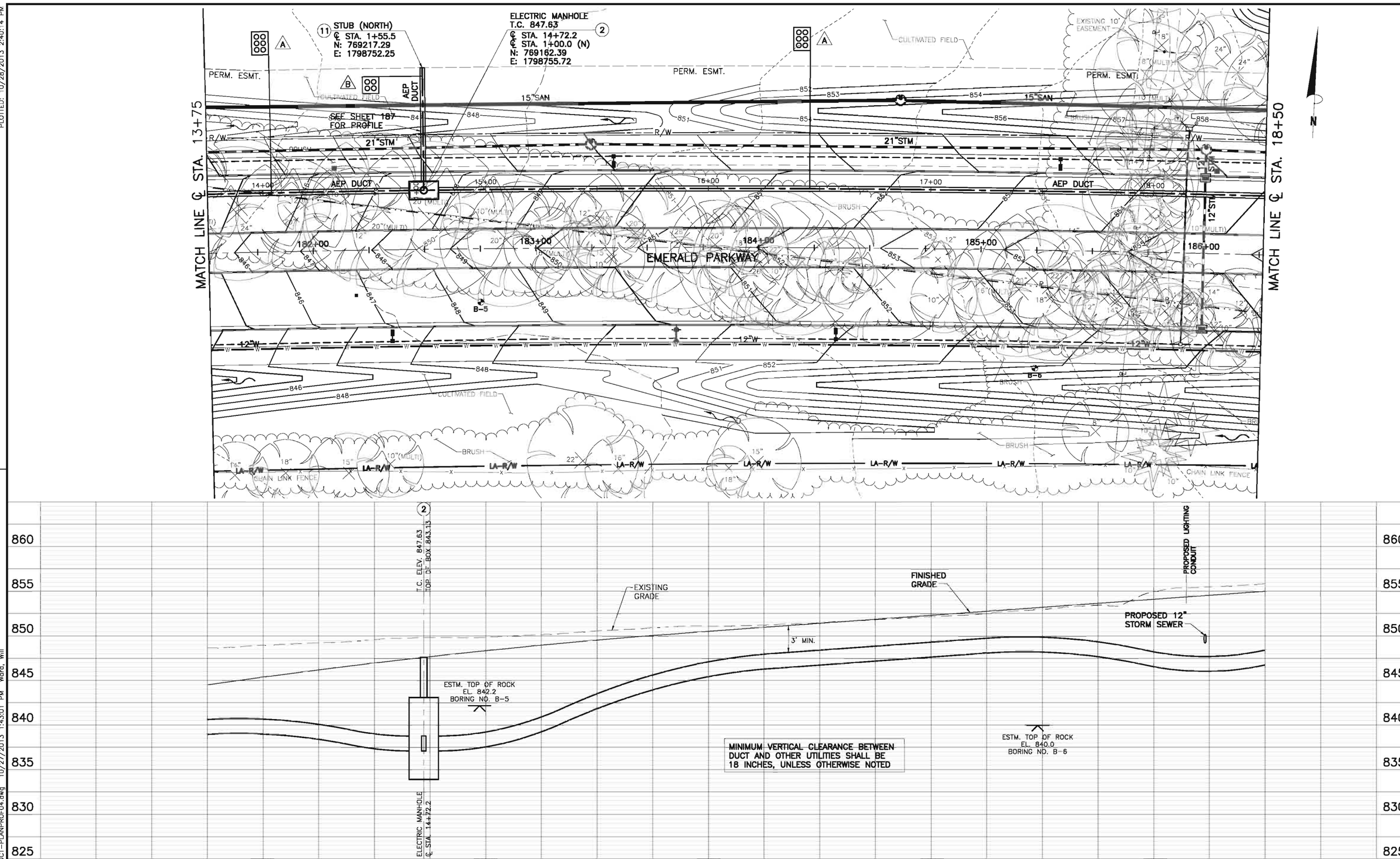


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**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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| JOB NO. | 44959 |
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| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**AEP DUCT SYSTEM**
**PLAN AND PROFILE**
**℄ STA. 13+75 TO ℄ STA. 18+50**

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 178 OF 275

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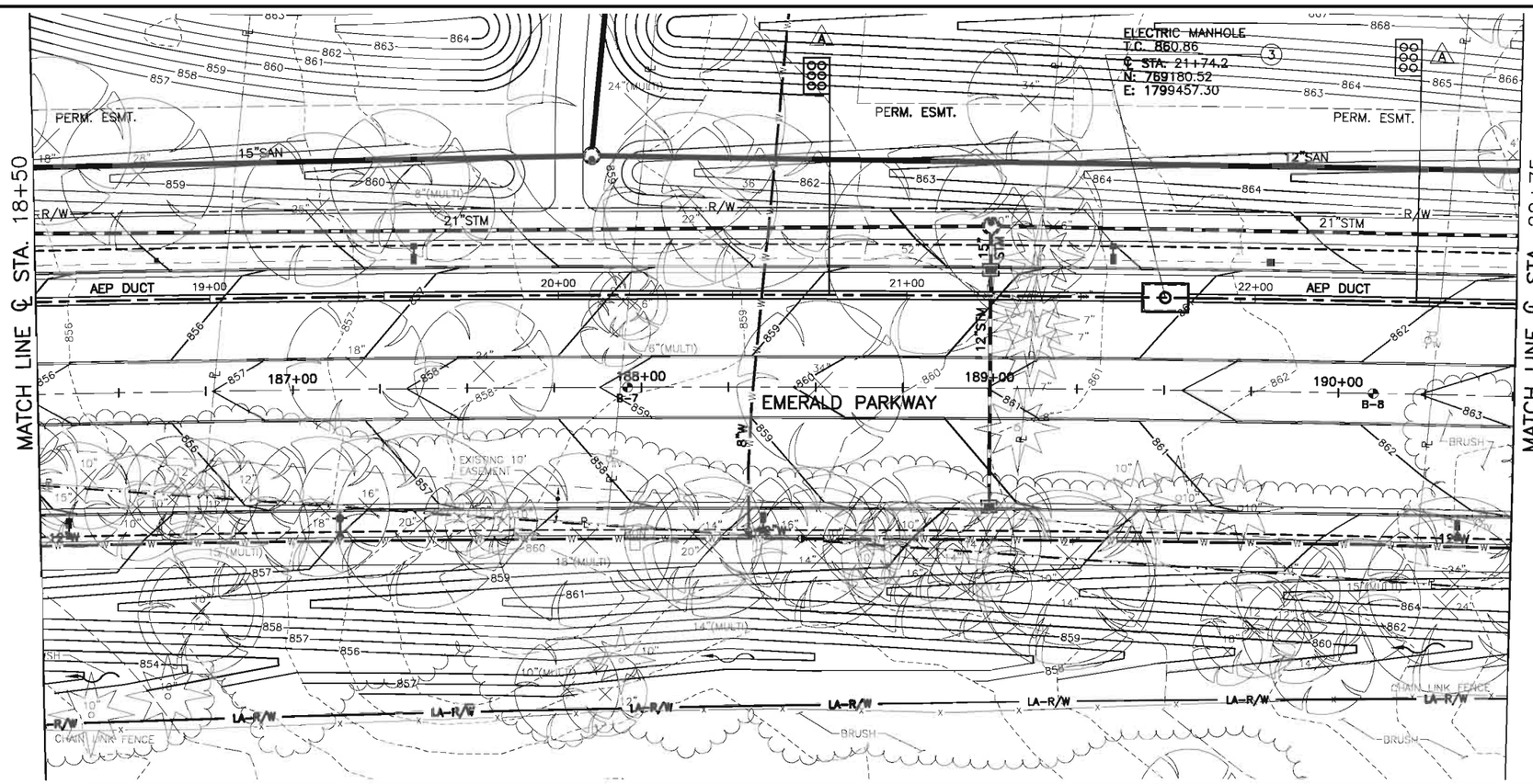


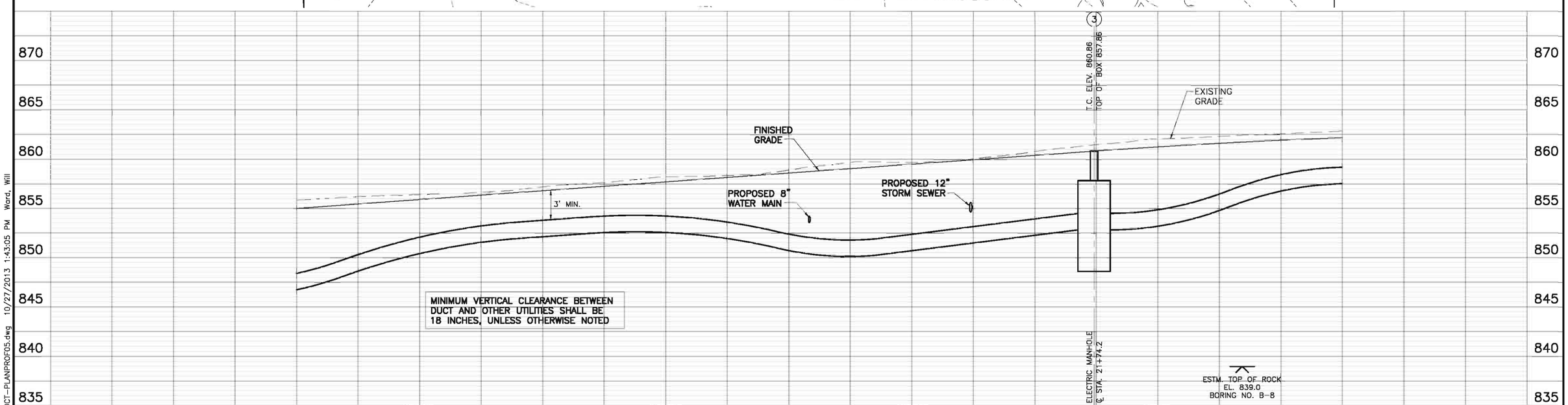


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**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**AEP DUCT SYSTEM**
**PLAN AND PROFILE**
**℄ STA. 18+50 TO ℄ STA. 22+75**

SCALE:
1" = 20' HORIZ.
1" = 5' VERT.

SHEET NO. 179 OF 275

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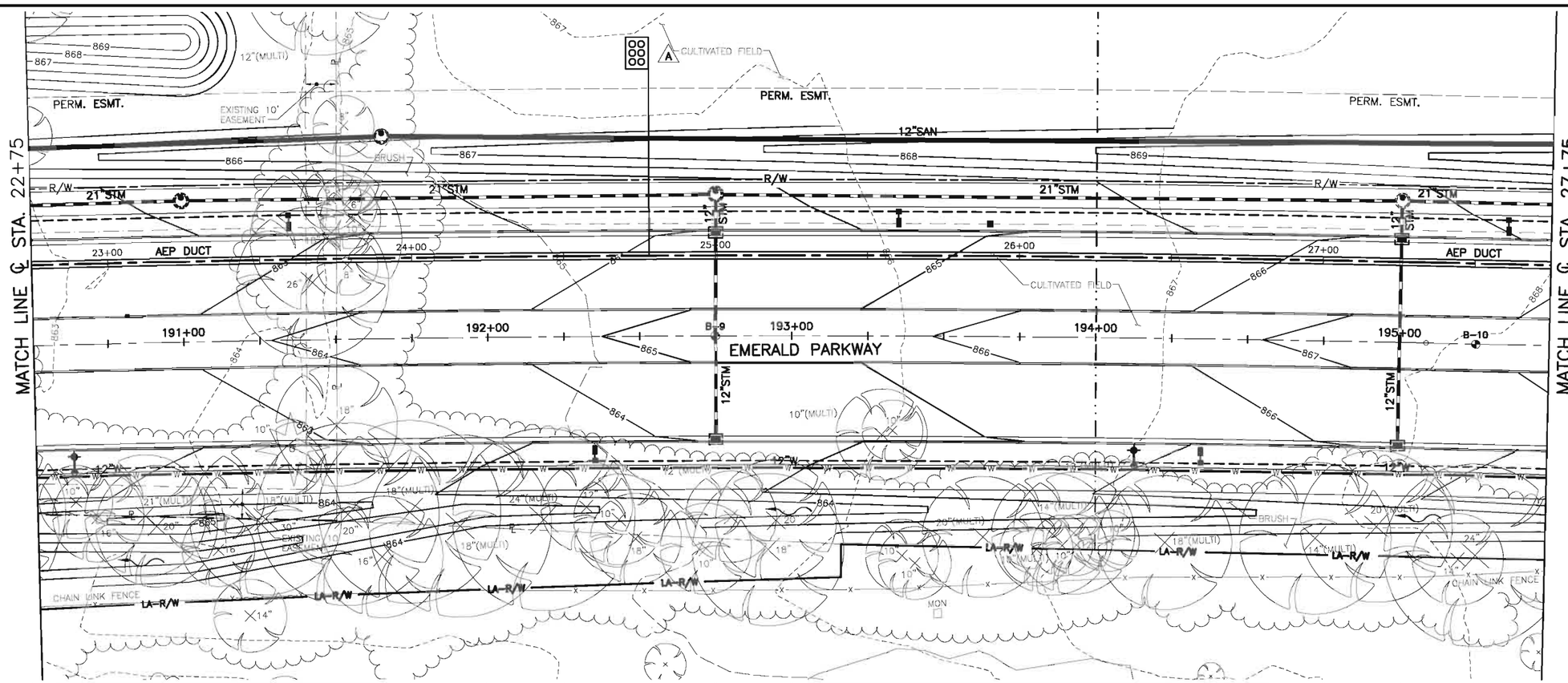


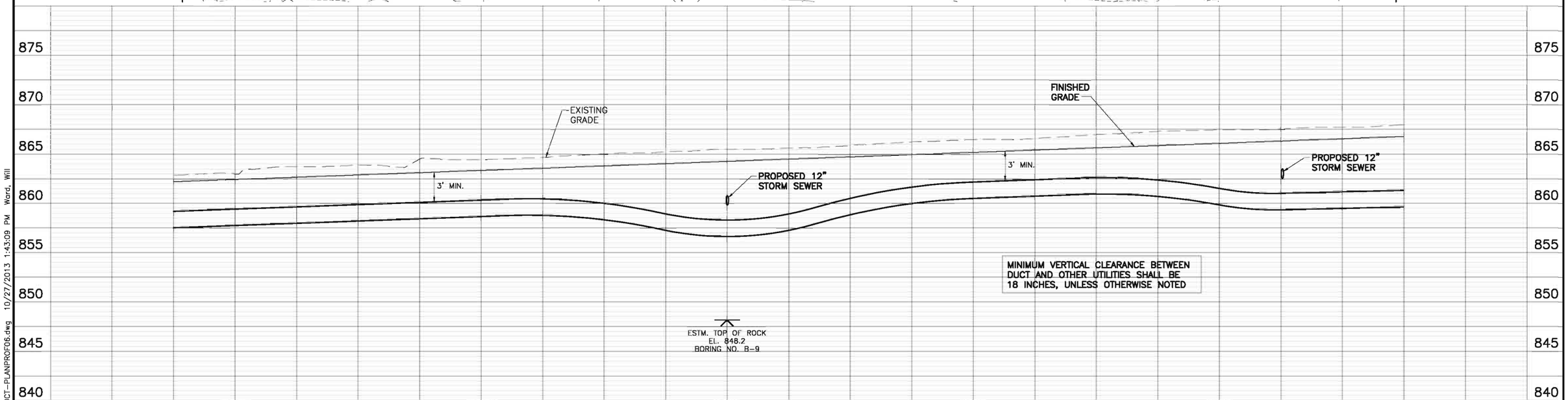


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**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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| JOB NO. | 44959 |
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| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**AEP DUCT SYSTEM**
**PLAN AND PROFILE**
**℄ STA. 22+75 TO ℄ STA. 27+75**

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 180 OF 275

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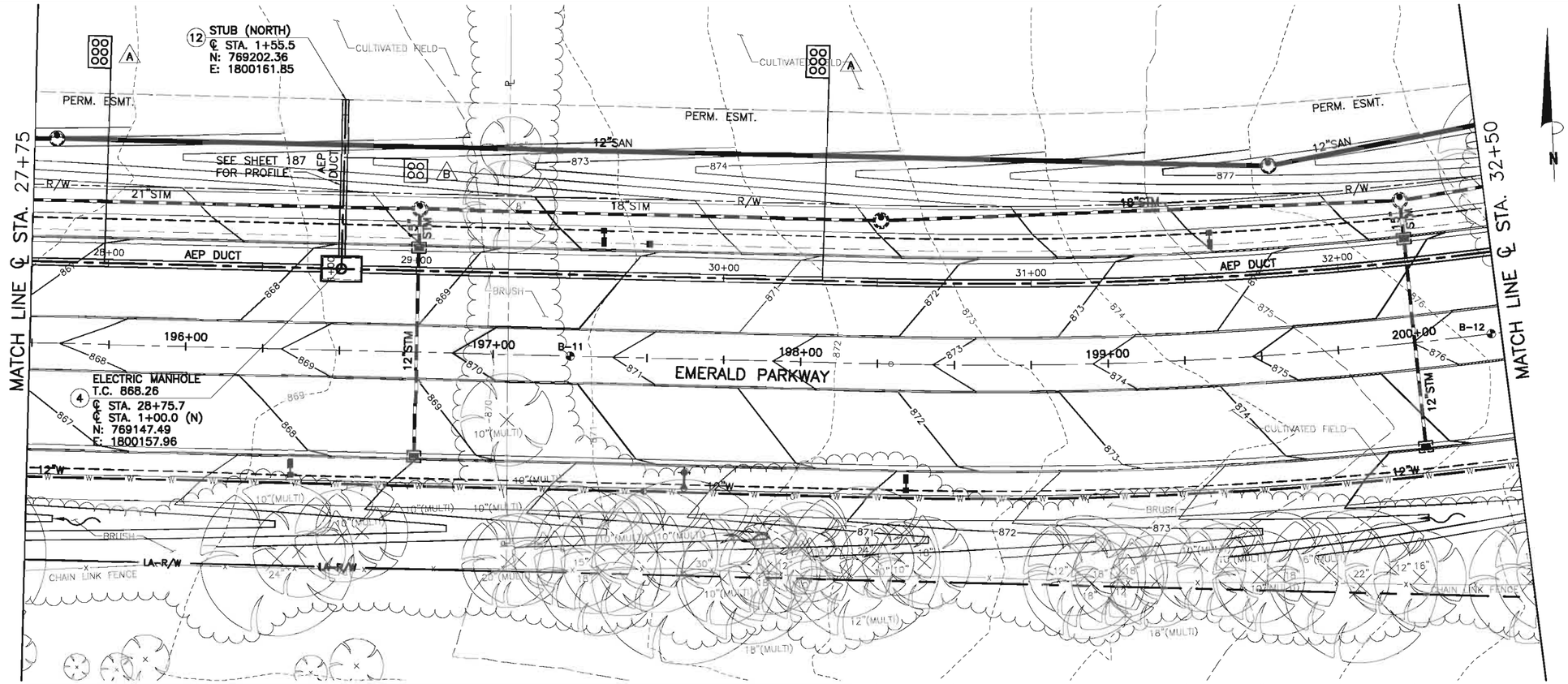


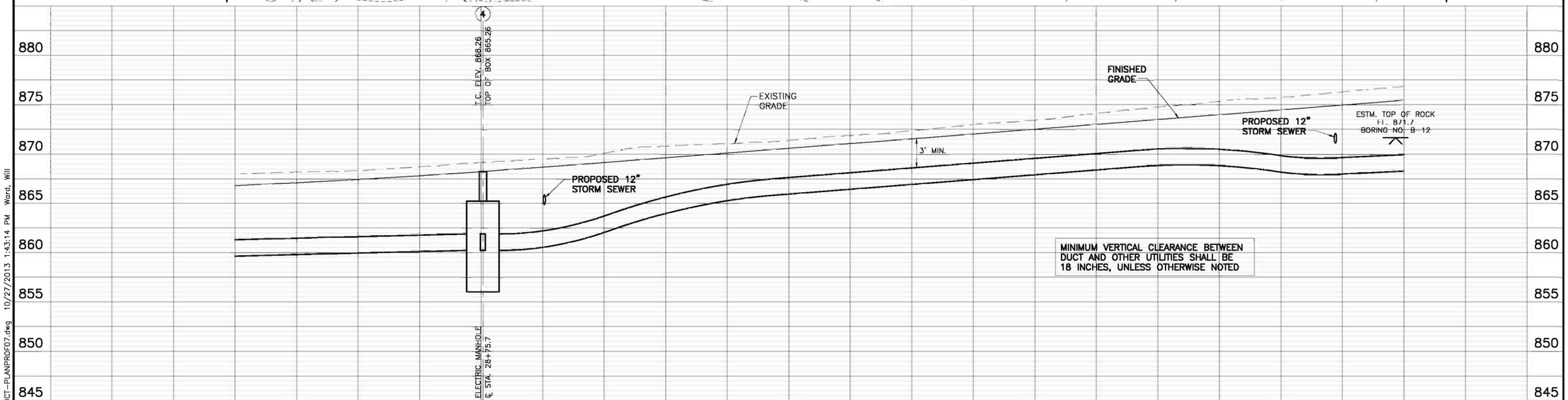


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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| APPROVED BY: | DKM |
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AEP DUCT SYSTEM
PLAN AND PROFILE
℄ STA. 27+75 TO ℄ STA. 32+50

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 181 OF 275

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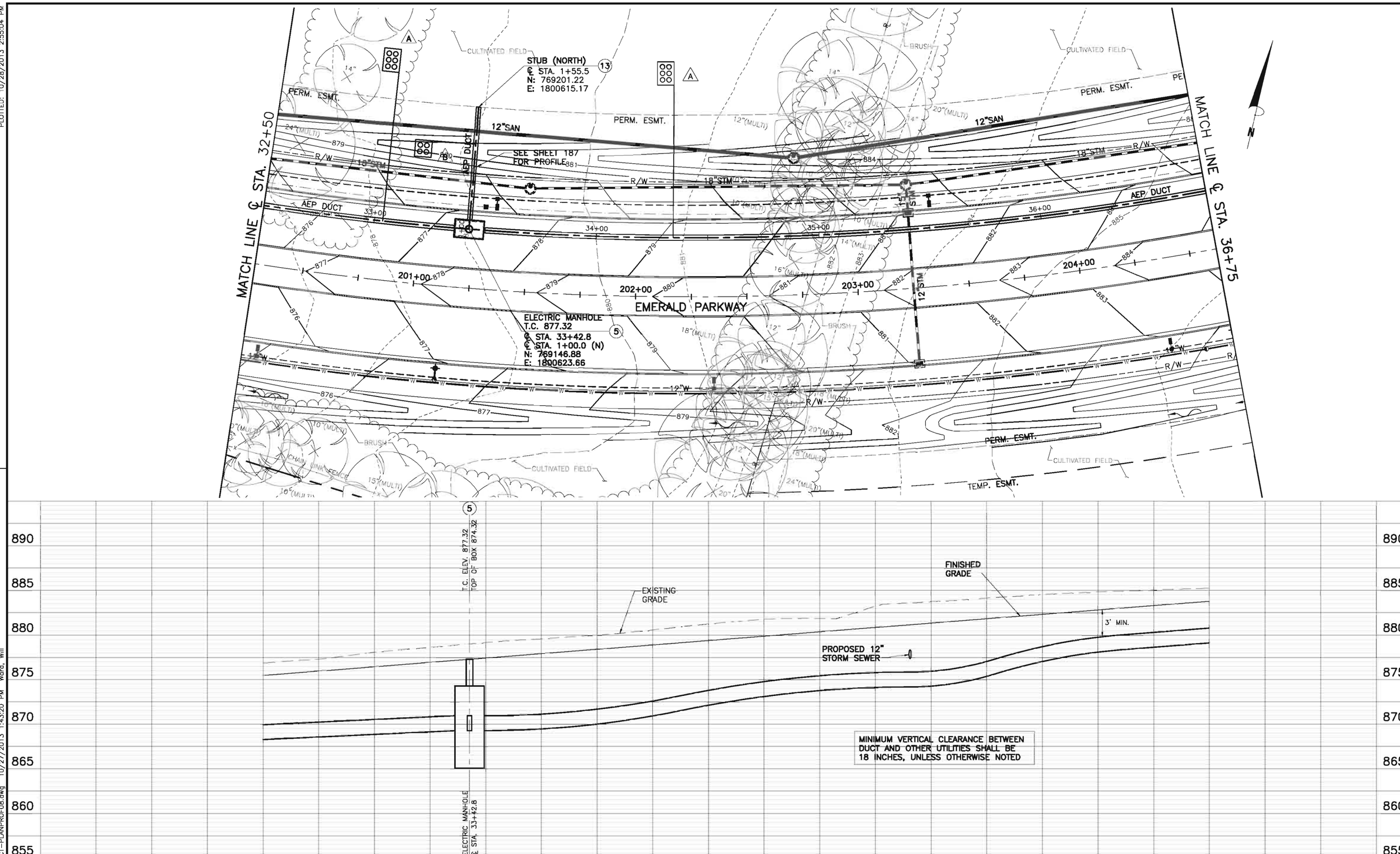


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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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AEP DUCT SYSTEM
PLAN AND PROFILE
℄ STA. 32+50 TO ℄ STA. 36+75

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 182 OF 275

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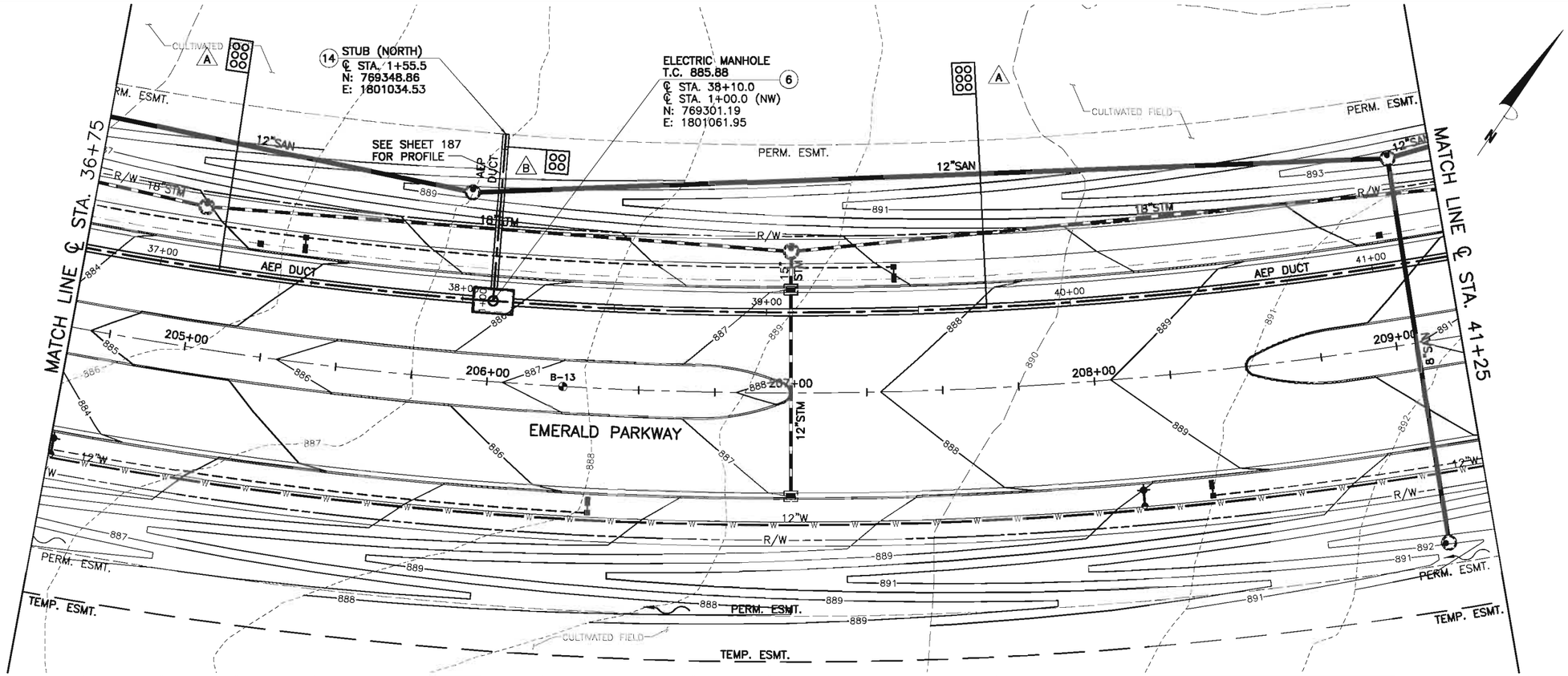


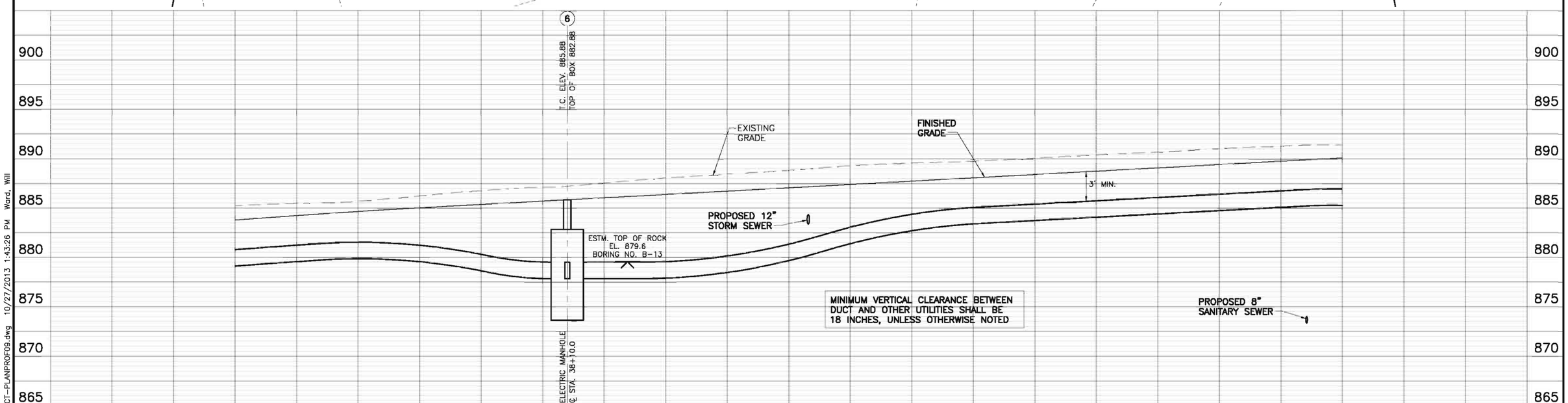


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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
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| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

AEP DUCT SYSTEM
PLAN AND PROFILE
℄ STA. 36+75 TO ℄ STA. 41+25

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 183 OF 275

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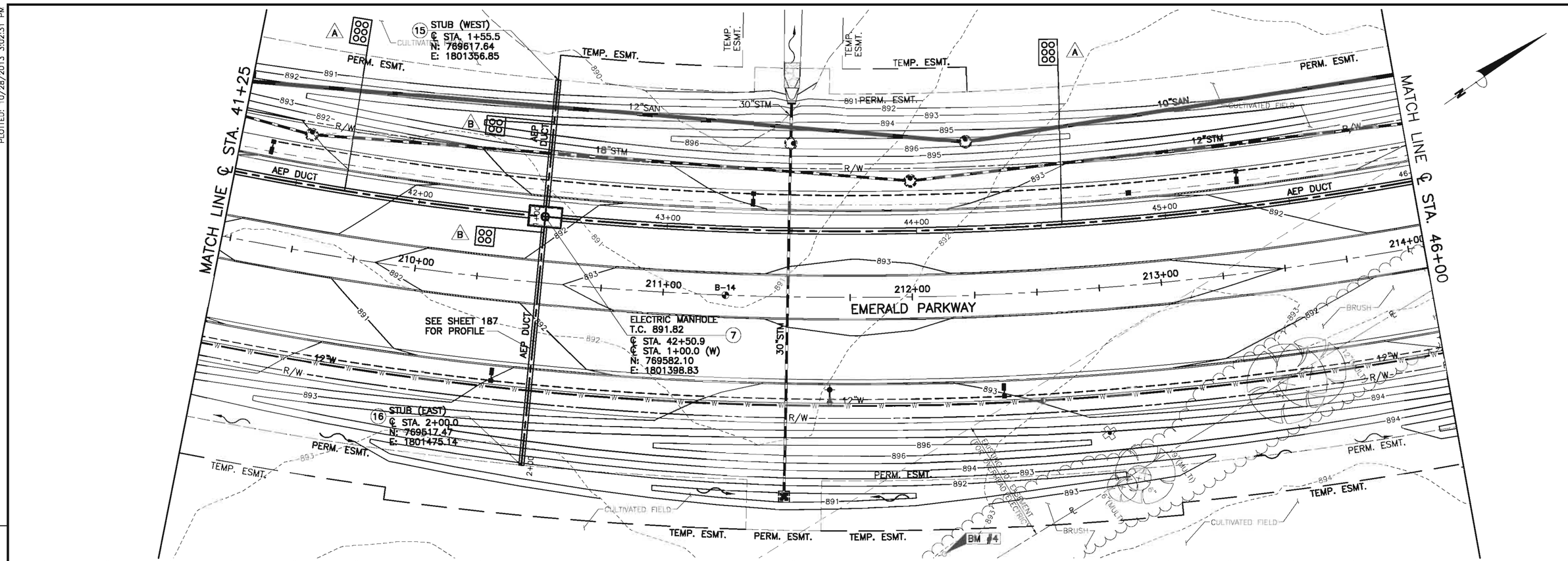


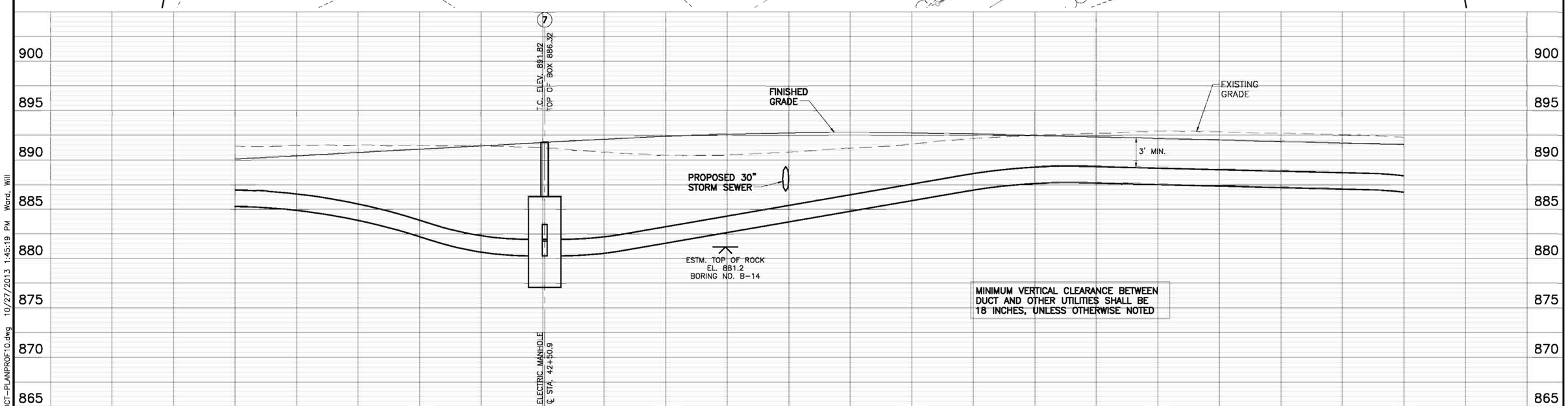


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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| DATE: | OCTOBER 2013 |

AEP DUCT SYSTEM
PLAN AND PROFILE
℄ STA. 41+25 TO ℄ STA. 46+00

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 184 OF 275

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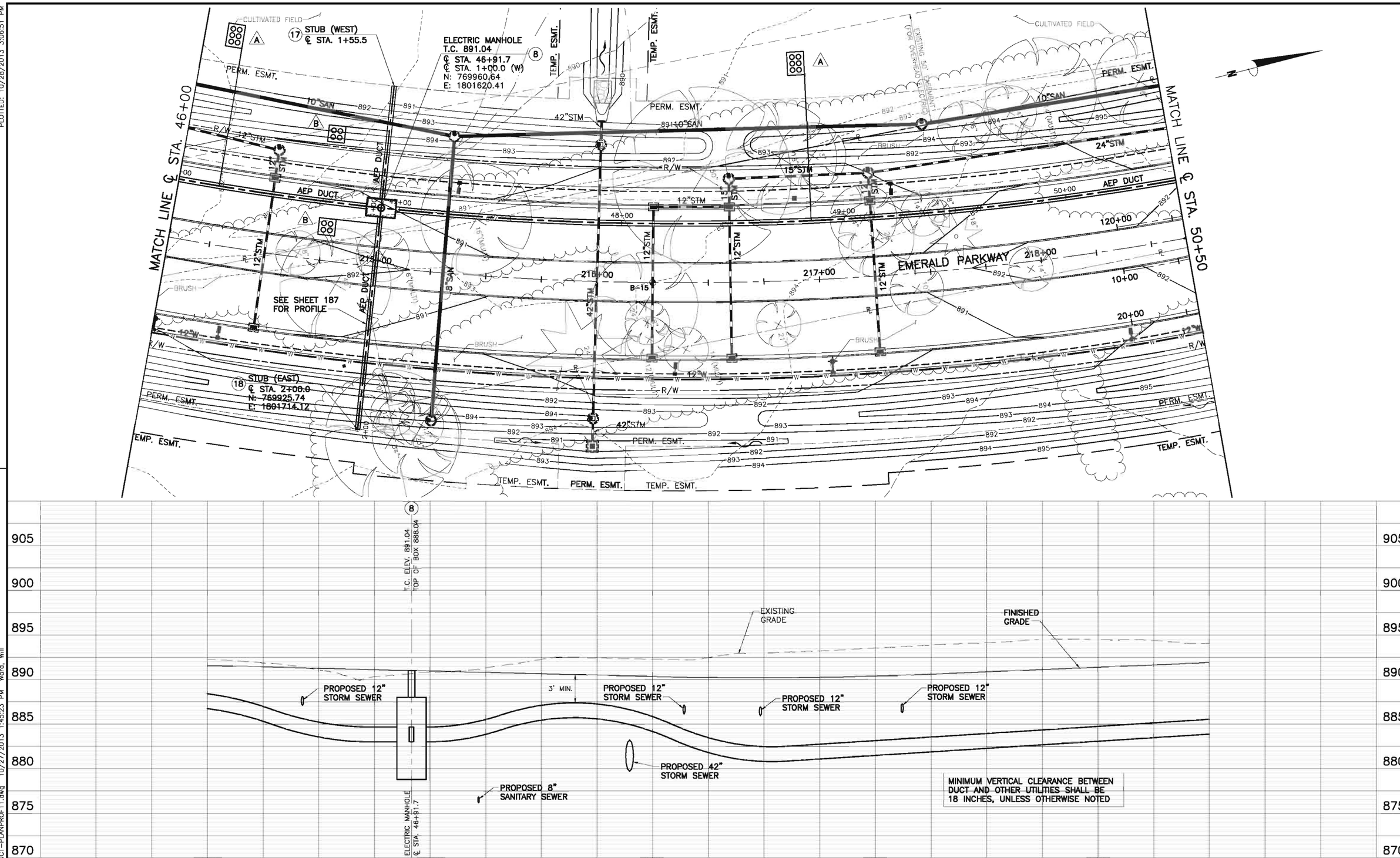





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**CITY OF DUBLIN, OHIO**
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**AEP DUCT SYSTEM**
**PLAN AND PROFILE**
**℄ STA. 46+00 TO ℄ STA. 50+50**

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 185 OF 275

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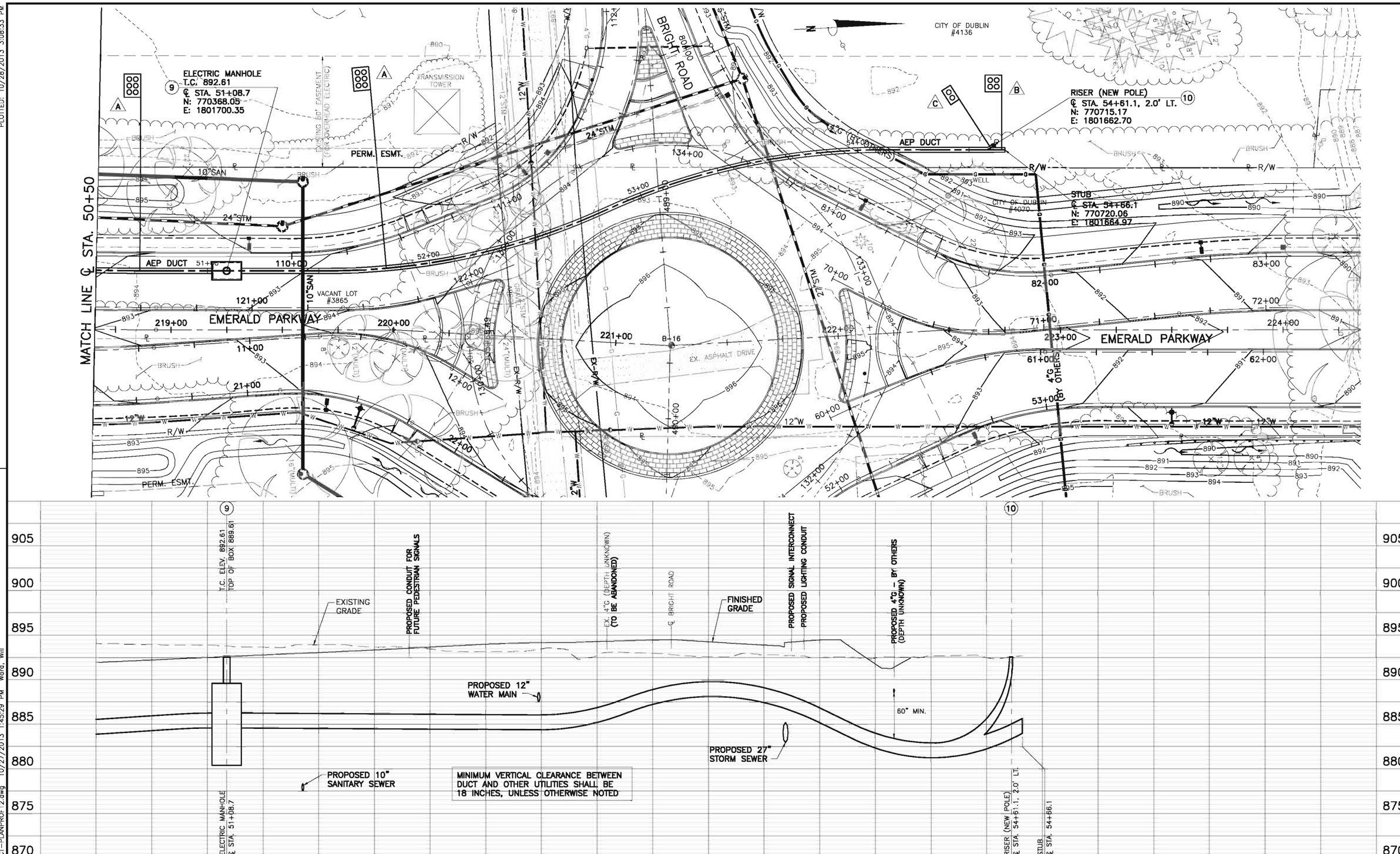


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CITY OF DUBLIN, OHIO
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AEP DUCT SYSTEM
PLAN AND PROFILE
℄ STA. 50+50 TO ℄ STA. 54+61.5

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 186 OF 275

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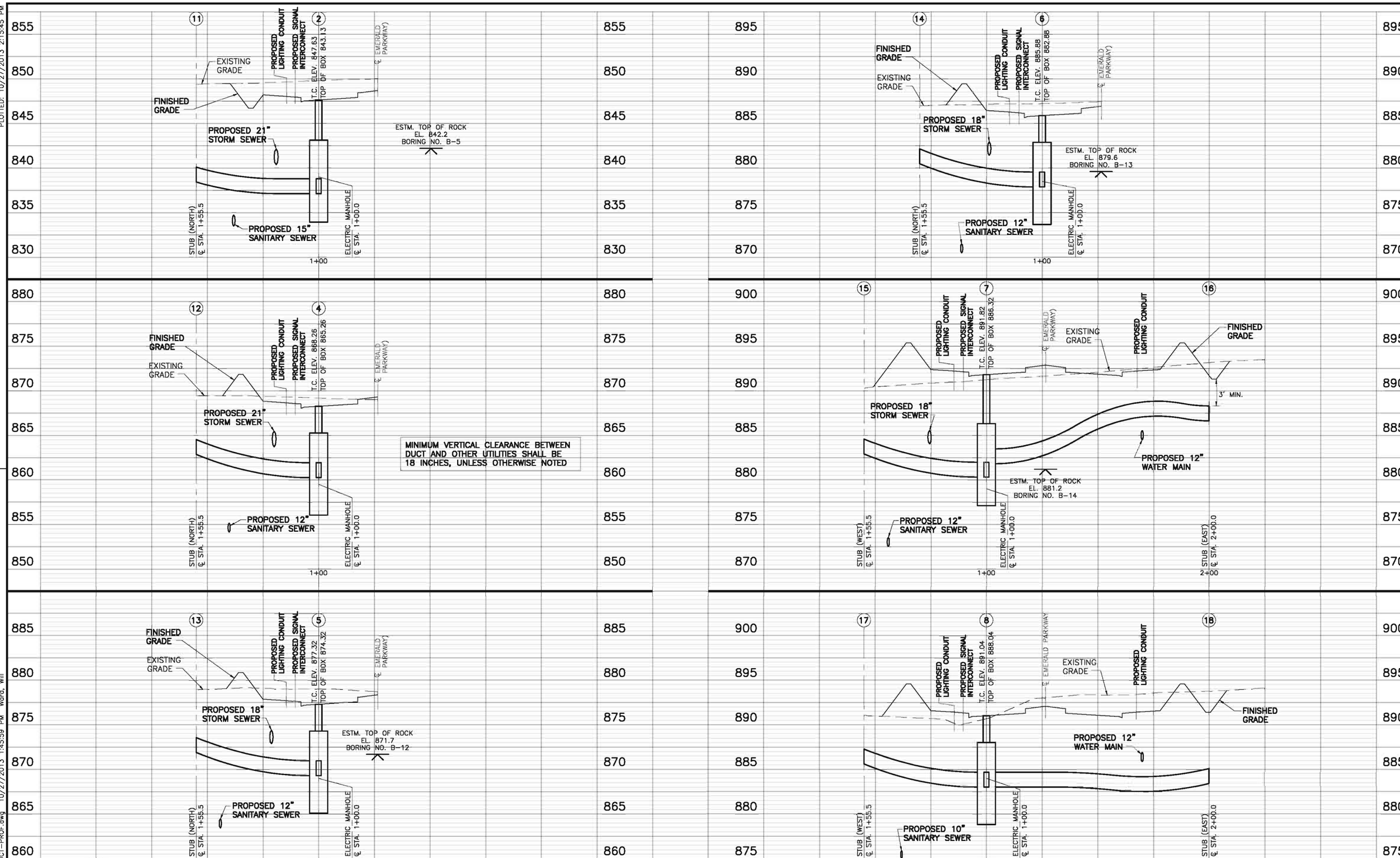


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EMERALD PARKWAY – PHASE 8
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AEP DUCT SYSTEM
MISCELLANEOUS PROFILES

SCALE: 1" = 20' HORIZ. 1" = 5' VERT.

SHEET NO. 187 OF 275

PLOTTED: 10/27/2013 2:15:45 PM

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## GENERAL TRAFFIC

THE CONTRACTOR SHALL FURNISH AND INSTALL TRAFFIC SIGNAL EQUIPMENT, IN CONFORMANCE WITH THE CITY OF DUBLIN SPECIFICATIONS, INCLUDING THE SPECIFICATIONS OF THESE PLANS AS WELL AS IN CONFORMANCE WITH THE LATEST EDITION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS AND ALL SUPPLEMENTAL SPECIFICATIONS. THE CONTRACTOR SHALL INSTALL ALL TRAFFIC SIGNAL EQUIPMENT IN CONFORMANCE TO THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS AND IN CONFORMANCE TO THE OHIO DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION DRAWINGS.

EACH BIDDER, WITH HIS BID, SHALL SUBMIT TWO (2) COMPLETE SETS OF CATALOG CUTS, DIAGRAMS, BROCHURES OR OTHER DESCRIPTIVE DATA FOR THE ITEMS HE INTENDS TO FURNISH. EACH BIDDER SHALL ALSO PROVIDE A DETAILED LIST OF ALL VARIANCES FROM ODOT SPECIFICATIONS AND FROM THE SPECIFICATIONS CONTAINED HEREIN FOR EACH ITEM THAT DOES NOT COMPLY 100% WITH THE STATED SPECIFICATIONS. ANY BIDDER THAT DOES NOT COMPLY WITH THIS REQUIREMENT SHALL BE RULED INELIGIBLE AND SHALL NOT BE AWARDED A CONTRACT. UNLESS OTHERWISE STATED BY THE BIDDER, THE PROPOSAL WILL BE CONSIDERED AS BEING IN STRICT ACCORDANCE WITH THE SPECIFICATIONS.

THE SIGNAL CONTROLLER(S), CONFLICT MONITOR(S), TERMINAL FACILITIES, FLASHERS, AND LOAD SWITCHES SHALL PREFERABLY BE OF THE SAME MANUFACTURER. ALL LOAD SWITCHES AND INTERFACE RELAYS SHALL BE FURNISHED WITH INPUT SIDE LED'S.

## GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL EQUIPMENT INSTALLED AS PART OF THE CONTRACT SHALL OPERATE SATISFACTORY FOR A PERIOD OF NINETY (90) DAYS FOLLOWING COMPLETION OF THE TEN (10) DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATIONS, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS FROM THE SAME MANUFACTURER. MATERIAL AND LABOR COSTS INCURRED IN CORRECTING THE UNSATISFACTORY OPERATIONS SHALL BE BORNE BY THE CONTRACTOR. CUSTOMARY MANUFACTURER'S GUARANTEE FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE CITY OR MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT. THE COST OF GUARANTEEING THE TRAFFIC CONTROL EQUIPMENT SHALL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SIGNAL INSTALLATION.

## ITEM 614 MAINTAINING TRAFFIC

FOR MAINTENANCE OF TRAFFIC DETAILS REFER TO MAINTENANCE OF TRAFFIC NOTES.

## ITEM 625 TRENCH, AS PER PLAN

IN ADDITION TO THE ODOT ITEM 625, THE TRENCH SIZE, DEPTH, AND BACKFILL SHALL MEET CITY SPECIFICATIONS, WHICH INCLUDES 3 INCH YELLOW PLASTIC CAUTION TAPE. IT IS ALSO THE INTENT OF THIS ITEM THAT CONDUIT TO BE LOCATED UNDER NEW PAVEMENT SHALL BE INSTALLED PRIOR TO PLACEMENT OF THE PAVEMENT, AND THAT COMPACTED ITEM 304 BACKFILL SHALL BE USED AT THOSE LOCATIONS (AS PER CITY SPECIFICATIONS). NO CONCRETE ENCASEMENT SHALL BE PROVIDED. THE COST OF THE BACKFILL SHALL BE INCLUDED IN THE UNIT COST BID FOR THIS ITEM. THE COST OF THE PLASTIC CAUTION TAPE SHALL BE PAID AS A SEPARATE ITEM.

PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID PER LINEAR FOOT.

## ITEM 625 - PLASTIC CAUTION TAPE, AS PER PLAN

IN ADDITION TO ITEM 625 AND 725 OF THE ODOT STANDARD SPECIFICATIONS, THE FOLLOWING SHALL ALSO APPLY:

THE TAPE SHALL BE THREE (3") INCH YELLOW PLASTIC CAUTION TAPE. THE TAPE SHALL BE INSTALLED OVER ALL 725.05 CONDUIT, OUTSIDE OF DRIVEWAYS AND ROADWAYS, AS PER CITY SPECIFICATIONS.

PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID FOR THIS ITEM, COMPLETE AND IN PLACE.

## ITEM 632 VEHICULAR SIGNAL HEAD, (LED), BY SECTION, 12" LENS, 1-WAY, AS PER PLAN

IN ADDITION TO ITEM 632 AND 732 OF THE ODOT STANDARD SPECIFICATIONS, THE FOLLOWING SHALL ALSO APPLY:

THE VEHICULAR SIGNAL HEADS SHALL BE MADE OF POLYCARBONATE MATERIAL (YELLOW) AND SUPPLIED WITH CUT AWAY VISORS AND LOUVERED ALUMINUM VEHICULAR SIGNAL HEAD BACK PLATES. THE SIGNAL HEADS SHALL BE INSTALLED BY RIGID MOUNT TO THE MAST ARMS, AS PER TC-85.20 OF THE ODOT STANDARD CONSTRUCTION DRAWINGS. LEDS SHALL BE GE LUMINATION TYPE GT1 OR APPROVED EQUAL.

PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID FOR THIS ITEM, COMPLETE AND IN PLACE, ALL CONNECTIONS TESTED AND ACCEPTED.

## ITEM 632 DETECTOR LOOP

AS DESCRIBED IN THE LAST PARAGRAPH OF 632.11 OF THE 2013 CONSTRUCTION AND MATERIAL SPECIFICATIONS, ALL PROPOSED DETECTOR LOOPS WHICH ARE LOCATED IN NEW PAVEMENT SHALL BE SAWED AND EMBEDDED WITH SEALANT IN A SUBSURFACE COURSE WITH SUBSEQUENT COVERING BY THE SURFACE COURSE.

## ITEM 632 SIGNALIZATION, MISC.: LOOP LEAD-IN CABLE SPLICE

THIS ITEM INCLUDES THE SPLICE FOR EACH NEW DETECTOR LOOP TO AN EXISTING LOOP LEAD-IN CABLE. THE SPLICE SHALL BE A POURED EPOXY INSULATED SPLICE PER ITEM 632.

## ITEM 632 SIGNALIZATION, MISC.: CONNECT SIGNAL HEAD INDICATION

THIS ITEM INCLUDES CONNECTING AN EXISTING OR PROPOSED SIGNAL HEAD INDICATION TO THE ASSOCIATED SIGNAL CABLE. THIS CONNECTION SHALL BE PER ITEM 632.

## ITEM 632 REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: SIGNAL HEAD

REMOVAL OF ANY VEHICULAR SIGNAL HEADS SHALL BE IN ACCORDANCE WITH ODOT CMS 632.26 AND AS INDICATED ON THE PLANS. THESE ITEMS SHALL BE STORED ON THE PROJECT FOR SALVAGE BY THE CITY OF DUBLIN. IN THE EVENT THE ITEMS STORED ON THE PROJECT FOR SALVAGE BY THE LOCAL AGENCY ARE NOT REMOVED, THE CONTRACTOR SHALL, WHEN DIRECTED BY THE ENGINEER IN WRITING, REMOVE AND DISPOSE OF THE ITEMS AT NO ADDITIONAL COST TO THE PROJECT.

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## SIGNAL PLAN LEGEND

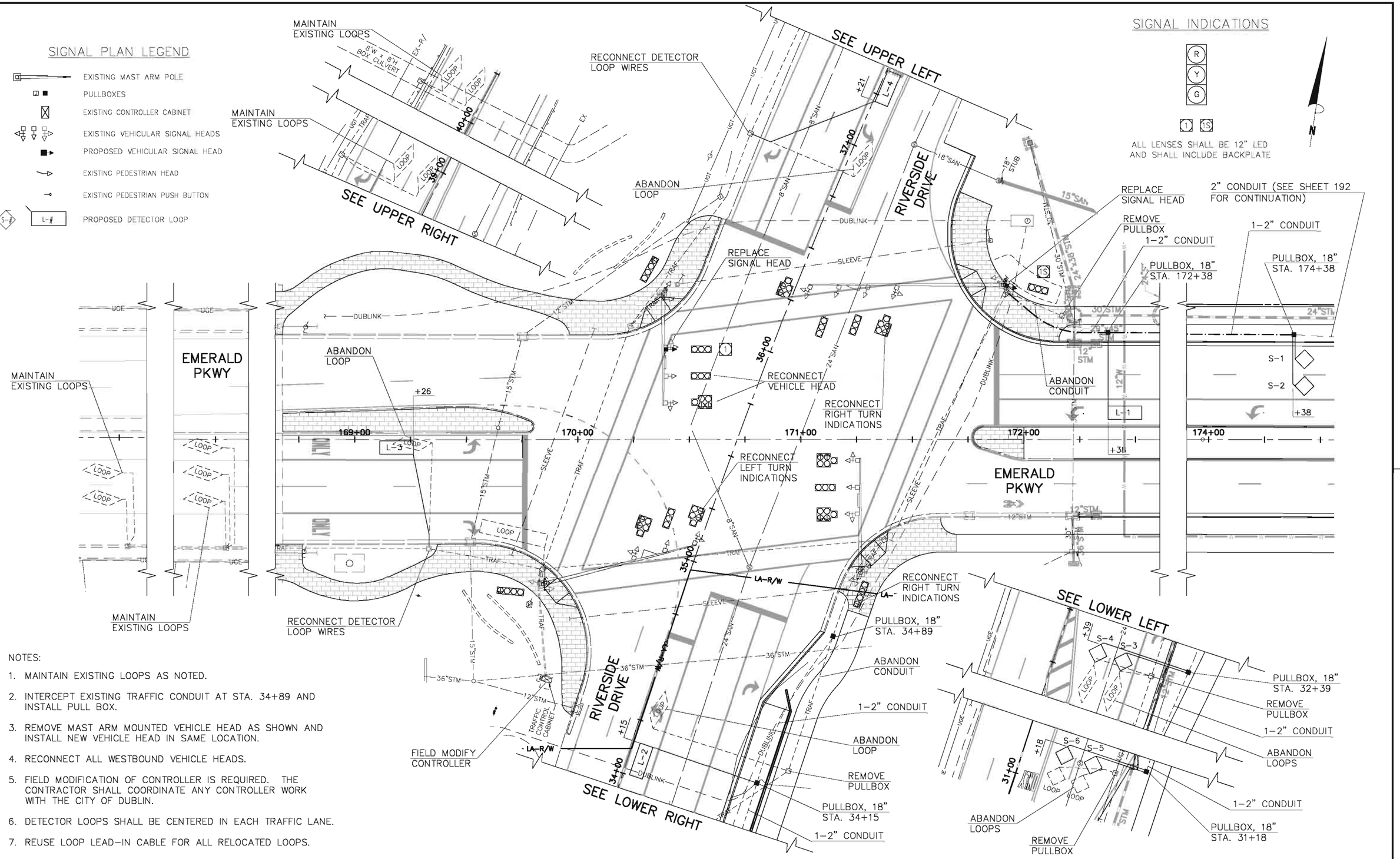
- EXISTING MAST ARM POLE
- PULLBOXES
- EXISTING CONTROLLER CABINET
- EXISTING VEHICULAR SIGNAL HEADS
- PROPOSED VEHICULAR SIGNAL HEAD
- EXISTING PEDESTRIAN HEAD
- EXISTING PEDESTRIAN PUSH BUTTON
- S-# L-# PROPOSED DETECTOR LOOP

## SIGNAL INDICATIONS

R Y G

1 1S

ALL LENSES SHALL BE 12" LED AND SHALL INCLUDE BACKPLATE




NOTES:

1. MAINTAIN EXISTING LOOPS AS NOTED.
2. INTERCEPT EXISTING TRAFFIC CONDUIT AT STA. 34+89 AND INSTALL PULL BOX.
3. REMOVE MAST ARM MOUNTED VEHICLE HEAD AS SHOWN AND INSTALL NEW VEHICLE HEAD IN SAME LOCATION.
4. RECONNECT ALL WESTBOUND VEHICLE HEADS.
5. FIELD MODIFICATION OF CONTROLLER IS REQUIRED. THE CONTRACTOR SHALL COORDINATE ANY CONTROLLER WORK WITH THE CITY OF DUBLIN.
6. DETECTOR LOOPS SHALL BE CENTERED IN EACH TRAFFIC LANE.
7. REUSE LOOP LEAD-IN CABLE FOR ALL RELOCATED LOOPS.

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**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

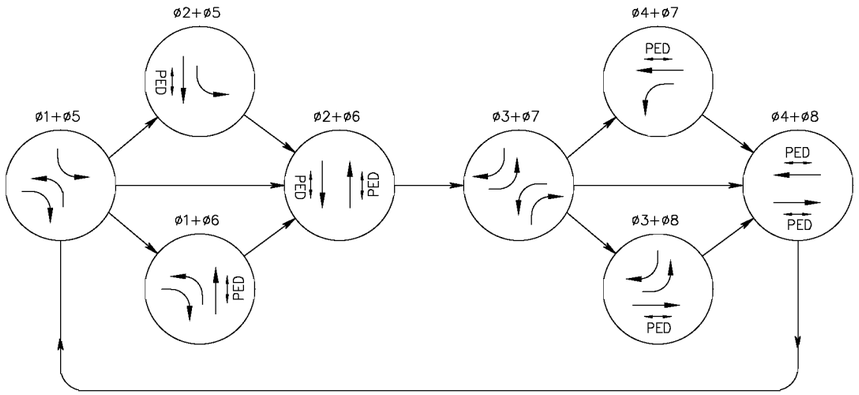
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | ACW |
| DRAWN BY: | ACW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**TRAFFIC SIGNAL PLAN**

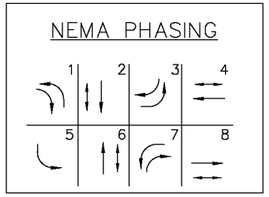
**EMERALD PARKWAY & RIVERSIDE DRIVE**

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

## SIGNAL PHASING




## NEMA PHASING




## SIGNAL DISPLAY SCHEDULE*

| SIGNAL HEAD # | INDICATION | FIELD TERMINAL | FLASH |
|---|---|---|---|
| 1, 1S (WB) | R | ø4 R | R |
| | Y | ø4 Y | |
| | G | ø4 G | |

* NEW SIGNAL HEADS ONLY

## TRAFFIC SIGNAL QUANTITIES

| ITEM | QUAN. | UNITS | DESCRIPTION |
|---|---|---|---|
| | | | |
| 625 | 630 | LIN. FT. | CONDUIT, 2", 725.05 |
| 625 | 630 | LIN. FT. | TRENCH, AS PER PLAN |
| 625 | 6 | EACH | PULL BOX, 725.06, 18" |
| 625 | 4 | EACH | PULL BOX REMOVED |
| 625 | 630 | LIN. FT. | PLASTIC CAUTION TAPE, AS PER PLAN |
| | | | |
| 632 | 2 | EACH | VEHICULAR SIGNAL HEAD (LED), 3 SECTION, 12" LENS, 1-WAY, |
| | | | AS PER PLAN |
| 632 | 10 | EACH | DETECTOR LOOP |
| 632 | 2 | EACH | LOOP DETECTOR UNIT, 2 CHANNEL |
| 632 | 1637 | LIN. FT. | LOOP DETECTOR, LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG |
| | | | |
| 632 | 2 | EACH | REMOVAL OF MISCELLANEOUS TRAFFIC SIGNAL ITEM: SIGNAL HEAD |
| 632 | 7 | EACH | SIGNALIZATION, MISC.: LOOP LEAD-IN CABLE SPLICE |
| 632 | 12 | EACH | SIGNALIZATION, MISC.: CONNECT SIGNAL HEAD INDICATION |

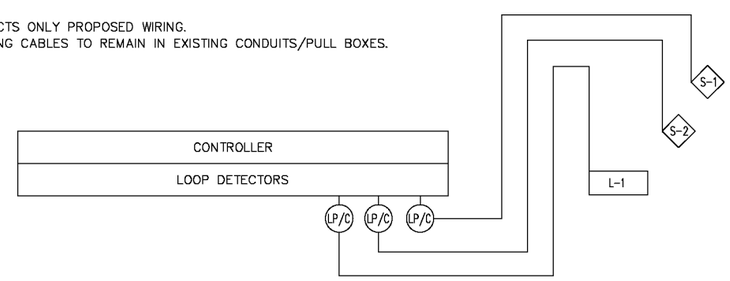
## SIGNAL TIMING IN SECONDS *

| TIMING INTERVAL | ø1 (NBLT) | ø2 (SB) | ø3 (EBLT) | ø4 (WB) | ø5 (SBLT) | ø6 (NB) | ø7 (WBLT) | ø8 (EB) |
|---|---|---|---|---|---|---|---|---|
| MINIMUM INITIAL GREEN | 4.0 | 7.0 | 4.0 | 7.0 | 4.0 | 7.0 | 4.0 | 7.0 |
| MAXIMUM GREEN | 24.0 | 42.0 | 11.0 | 43.0 | 8.0 | 58.0 | 14.0 | 40.0 |
| VEHICLE EXTENSION | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| VEHICLE CLEARANCE | 3.0 | 4.0 | 3.0 | 4.0 | 3.0 | 4.0 | 3.0 | 4.0 |
| ALL RED | 0.5 | 2.0 | 0.5 | 2.0 | 0.5 | 2.0 | 0.5 | 2.0 |
| WALK | – | 5 | – | 5 | – | 5 | – | 5 |
| FLASH "DONT WALK" | – | 30 | – | 32 | – | 27 | – | 29 |
| PEDESTRIAN RECALL | – | OFF | – | OFF | – | OFF | – | OFF |
| VEHICLE RECALL | OFF | ON | OFF | ON | OFF | ON | OFF | ON |
| MEMORY | LOCK | NON-LOCK | LOCK | NON-LOCK | LOCK | NON-LOCK | LOCK | NON-LOCK |
| CYCLE LENGTH | 120 SECONDS | | | | | | | |

* INITIAL SIGNAL TIMING. CITY OF DUBLIN TO ADJUST TIMINGS PER FIELD CONDITIONS.

## WIRING DIAGRAM *

* REFLECTS ONLY PROPOSED WIRING.
EXISTING CABLES TO REMAIN IN EXISTING CONDUITS/PULL BOXES.




## WIRING DIAGRAM LEGEND

LP/C — 2/C LOOP DETECTOR LEAD-IN CABLE

S-# L-# — DETECTOR LOOP I.D. NUMBER

## LOOP DETECTORS

| LOOP | STATION (Front of Loop) | SIZE | No. OF TURNS | ASSOC. PHASE | DETECTOR AMP. | DETECTOR CHAN. | AMP. MODE | DELAY (SEC.) |
|---|---|---|---|---|---|---|---|---|
| L-1 | 172+38 | 6 x 15 | 3 | ø7 | 1 | 1 | PRESENCE | 0 |
| L-2* | 34+15 | 6 x 15 | 3 | ø1 | * | * | PRESENCE | 0 |
| L-3* | 169+26 | 6 x 15 | 3 | ø3 | * | * | PRESENCE | 0 |
| L-4* | 37+21 | 6 x 15 | 3 | ø5 | * | * | PRESENCE | 0 |
| S-1 | 174+38 | 6 x 6 | 3 | ø4 | 2 | 1 | PULSE | 0 |
| S-2 | 174+38 | 6 x 6 | 3 | ø4 | 2 | 2 | PULSE | 0 |
| S-3* | 32+39 | 6 x 6 | 3 | ø6 | * | * | PULSE | 0 |
| S-4* | 32+39 | 6 x 6 | 3 | ø6 | * | * | PULSE | 0 |
| S-5* | 31+18 | 6 x 6 | 3 | ø6 | * | * | PULSE | 0 |
| S-6* | 31+18 | 6 x 6 | 3 | ø6 | * | * | PULSE | 0 |

* RELOCATED EXISTING LOOP/EXISTING LOOP DETECTOR UNIT

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BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

JOB NO. 44959
DESIGNED BY: ACW
DRAWN BY: ACW
CHECKED BY: SLT
APPROVED BY: DKM
DATE: OCTOBER 2013

TRAFFIC SIGNAL DETAILS

EMERALD PARKWAY & RIVERSIDE DRIVE

SCALE: NONE



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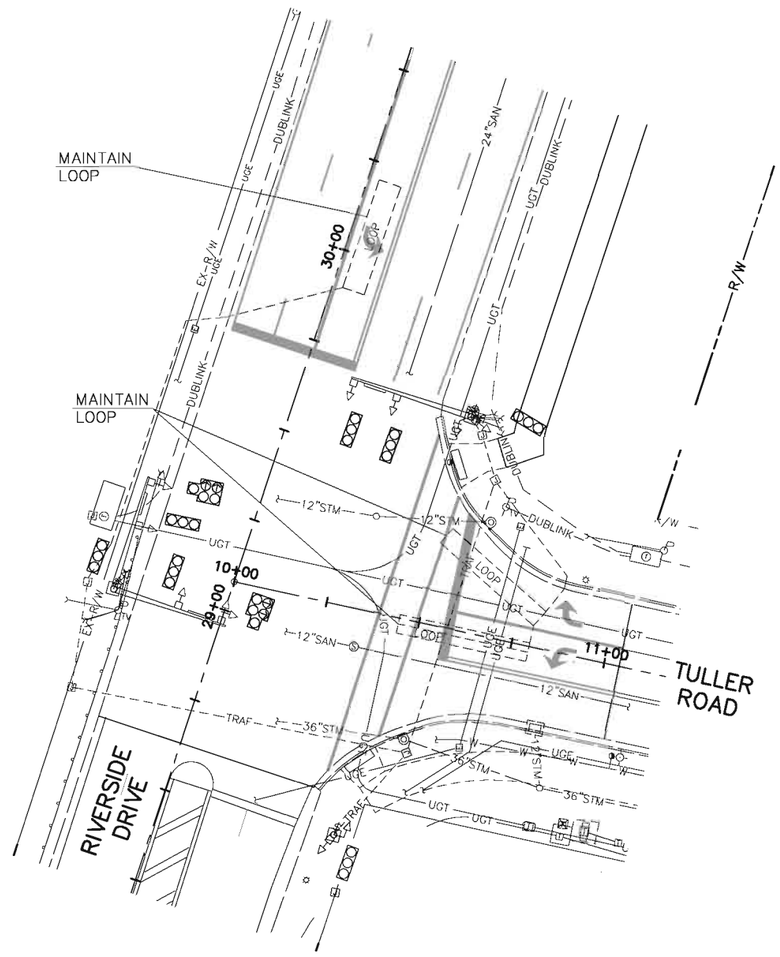
## SIGNAL PLAN LEGEND

- EXISTING MAST ARM POLE
- PULLBOXES
- EXISTING CONTROLLER CABINET
- EXISTING VEHICULAR SIGNAL HEADS
- EXISTING PEDESTRIAN HEAD
- PROPOSED DETECTOR LOOP




NOTES:

1. MAINTAIN EXISTING SIGNAL AND LOOPS.

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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| JOB NO. | 44959 |
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| DRAWN BY: | ACW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

TRAFFIC SIGNAL PLAN

TULLER ROAD & RIVERSIDE DRIVE

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

| SHEET NO. | OF |
|---|---|
| 191 | 275 |

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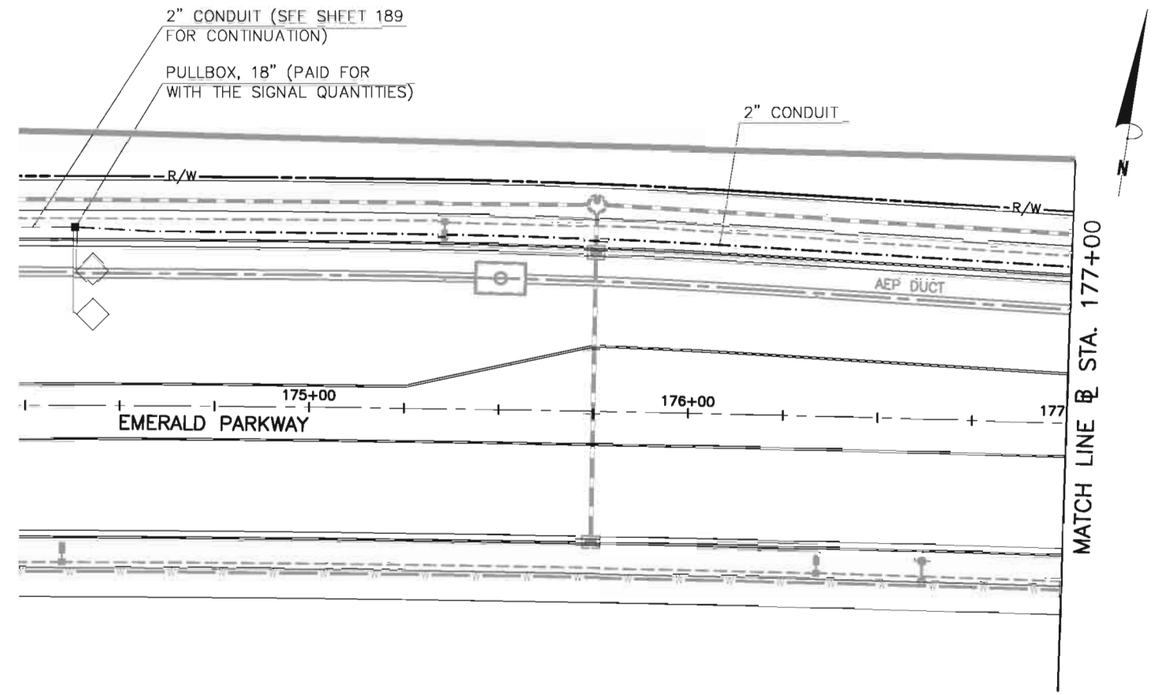
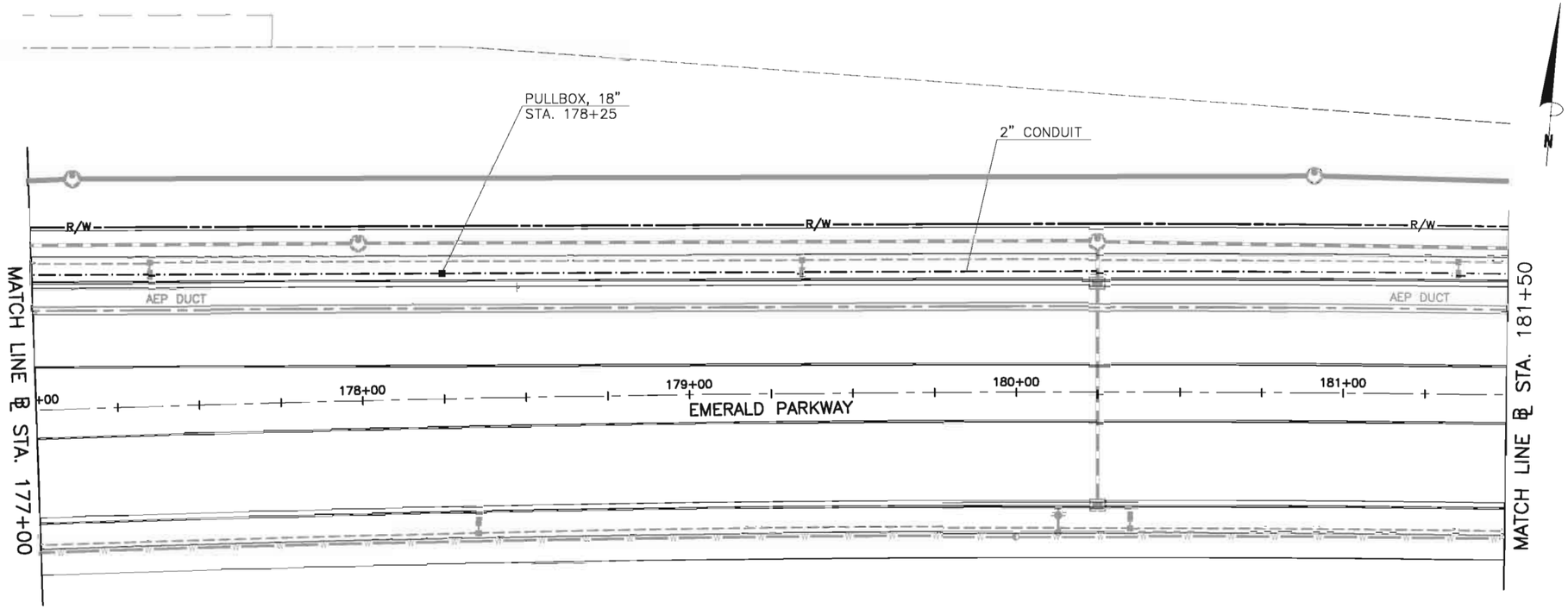
## NOTES

1. THE CONTRACTOR SHALL PLACE THE CONDUIT NOMINALLY 2 FEET BEHIND THE CURB UNLESS OTHERWISE NOTED ON THE PLAN.
2. CONTRACTOR SHALL USE CONDUIT BENDS AND NOT CONDUIT ELBOWS TO CHANGE THE DIRECTION OF THE CONDUIT RUN.
3. A 3 INCH (3") PVC (SCHEDULE 80) SLEEVE SHALL BE USED TO CROSS ALL DRIVEWAYS AND STREETS. THIS SLEEVE SHALL BE DIRECTIONAL BORED UNDER THE DRIVEWAY/STREET. THE CONDUIT SLEEVE SHALL EXTEND FROM 3 FEET BEHIND CURB TO 3 FEET BEHIND THE OPPOSITE CURB. 2" CONDUIT SHALL BE PLACED INSIDE OF THE SLEEVE.
4. THE SPACING OF THE PULLBOXES SHALL NOT EXCEED 400 FEET. CONTRACTOR SHALL ADJUST THE PLACEMENT OF THE PULLBOXES IF DICTATED BY FIELD CONDITIONS.
5. THE PULLBOXES SHALL NOT INTERFERE WITH THE ADJACENT BIKEWAYS OR SIDEWALKS.




## INTERCONNECT PLAN LEGEND

- ■ PULLBOX
- — — — — CONDUIT

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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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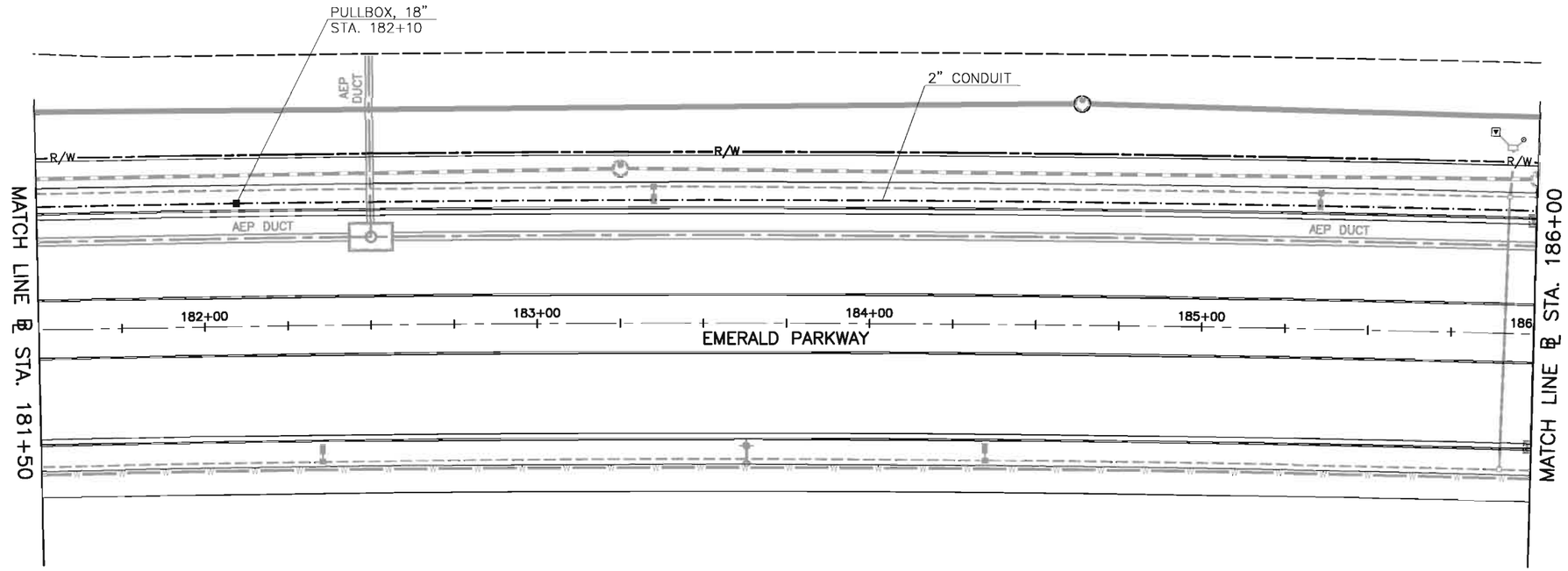
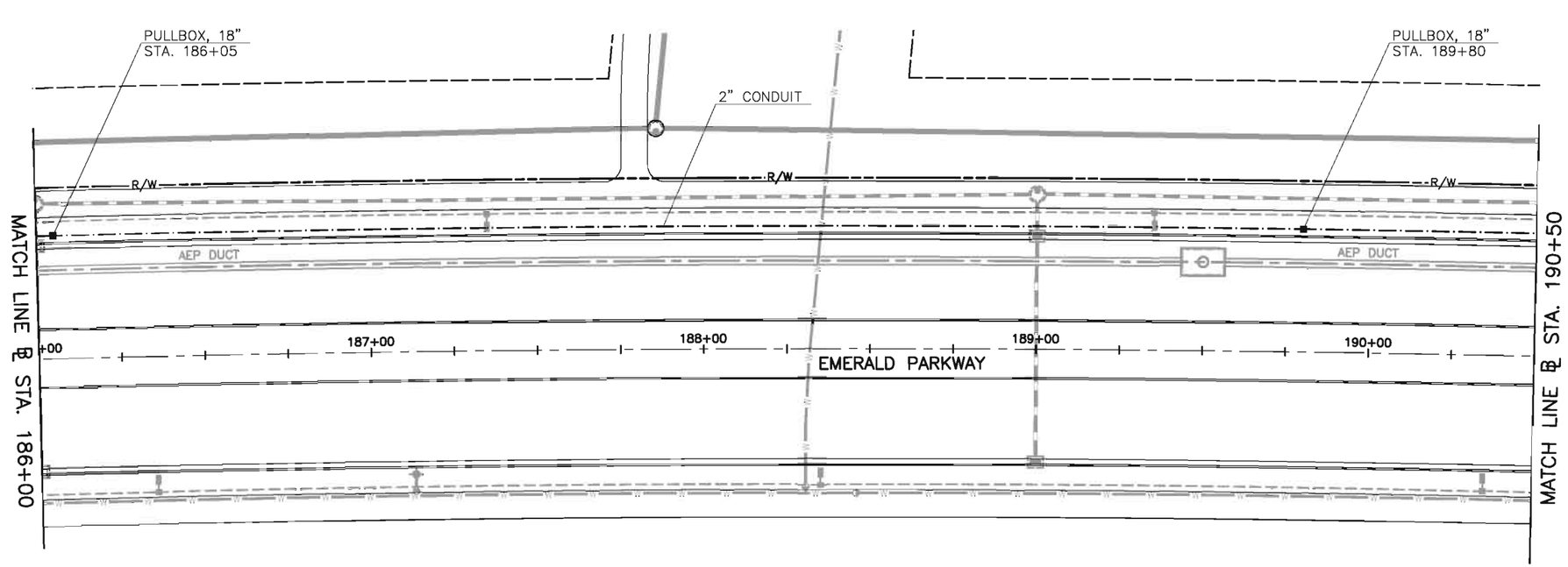
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

INTERCONNECT PLAN
EMERALD PARKWAY
STA. 174+38 TO STA. 181+50

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

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**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

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| JOB NO. | 44959 |
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| DRAWN BY: | WHW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**INTERCONNECT PLAN**
**EMERALD PARKWAY**
**STA. 181+50 TO STA. 190+50**

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

| SHEET NO. | OF |
|---|---|
| 193 | 275 |

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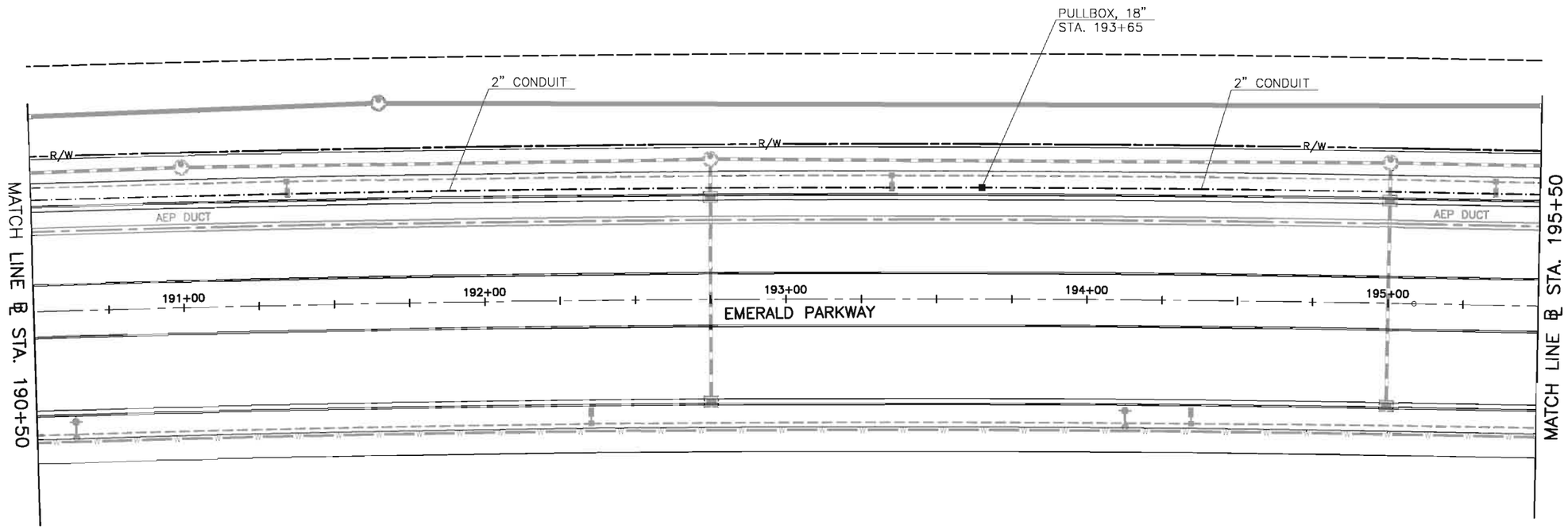


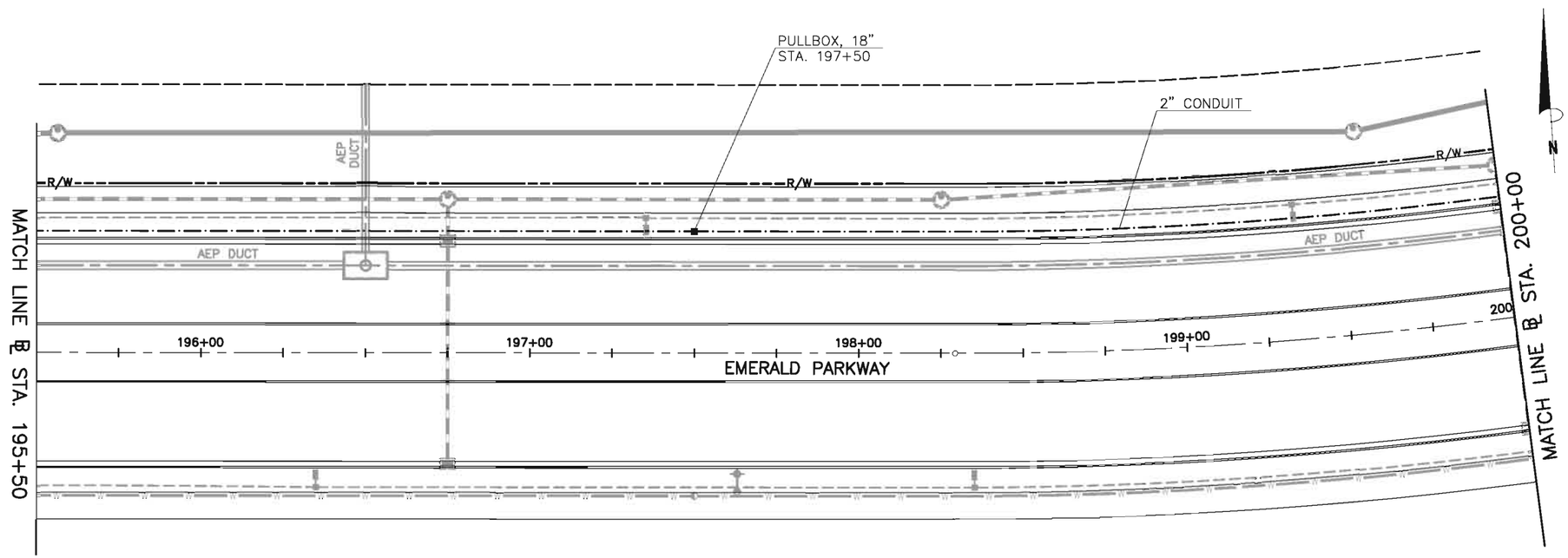


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**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

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| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
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| DATE: | OCTOBER 2013 |

**INTERCONNECT PLAN**
**EMERALD PARKWAY**
**STA. 109+50 TO STA. 195+50**

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

| SHEET NO. | OF |
|---|---|
| 194 | 275 |

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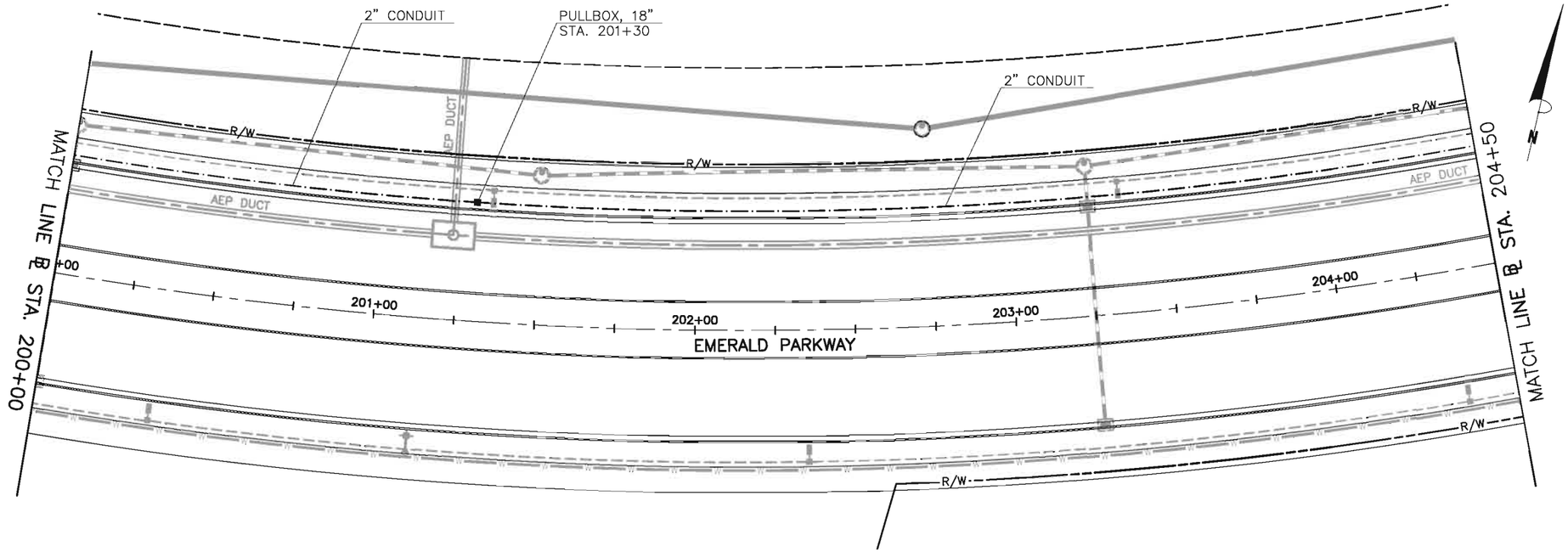


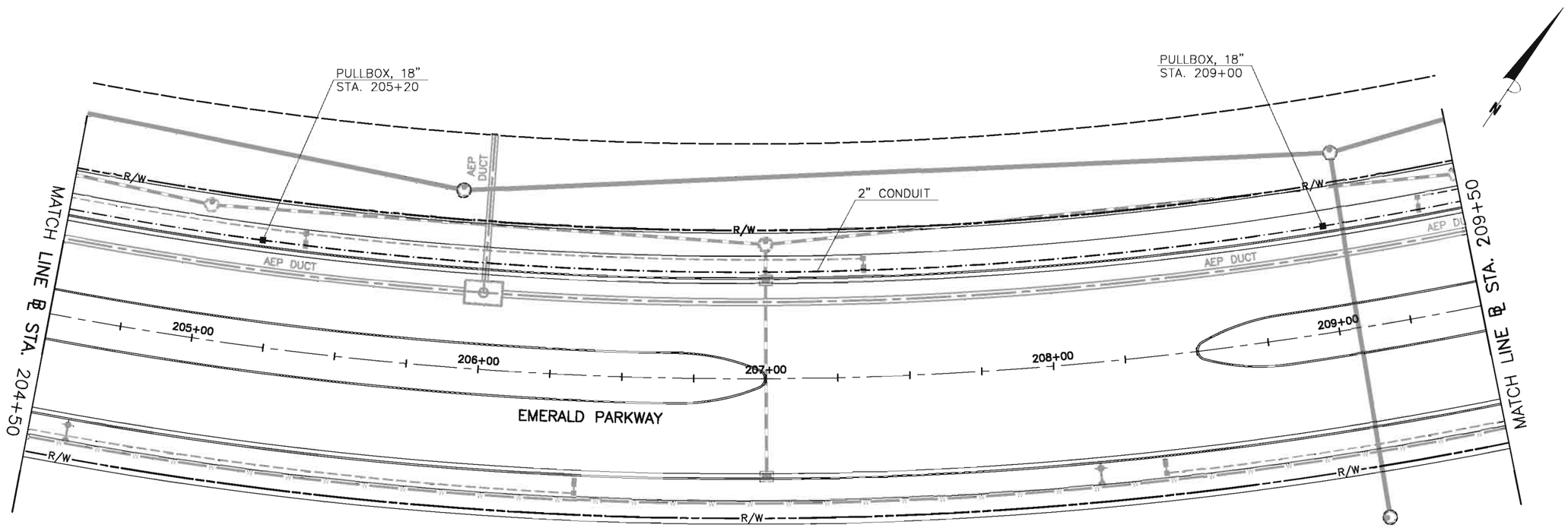


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**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

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| JOB NO. | 44959 |
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| DRAWN BY: | WHW |
| CHECKED BY: | SLT |
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| DATE: | OCTOBER 2013 |

**INTERCONNECT PLAN**
**EMERALD PARKWAY**
**STA. 200+00 TO STA. 209+50**

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 195 OF 275

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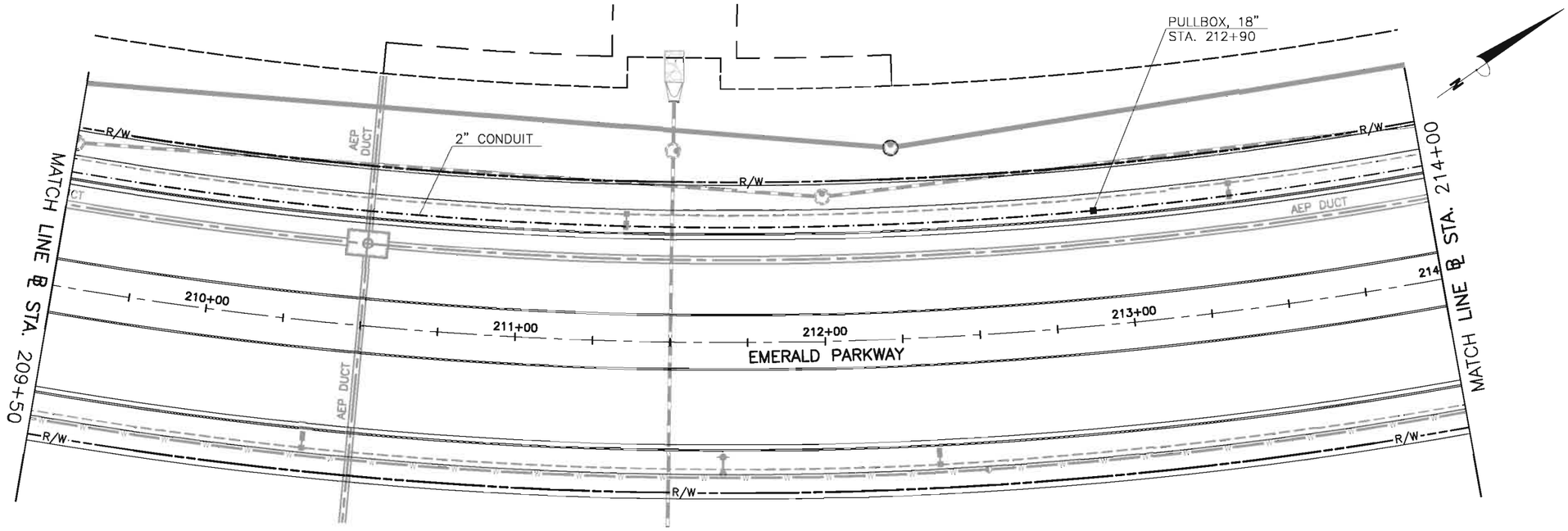


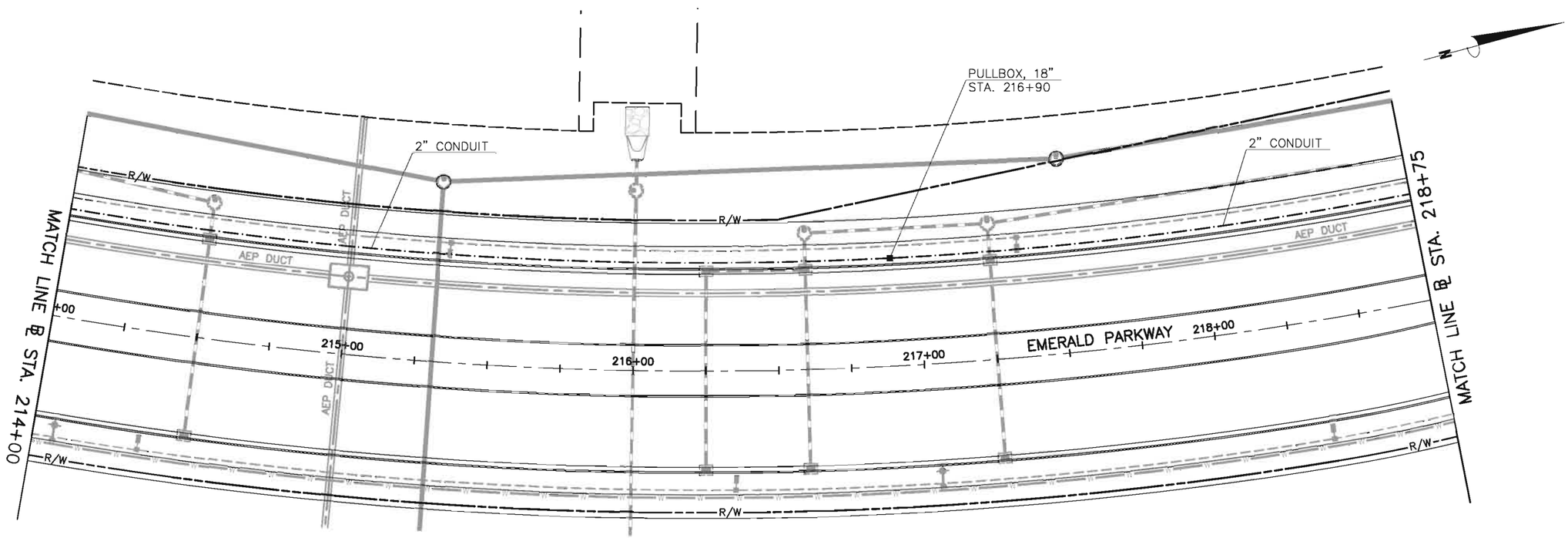


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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | WHW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

INTERCONNECT PLAN
EMERALD PARKWAY
STA. 209+50 TO STA. 214+00

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 196 OF 275

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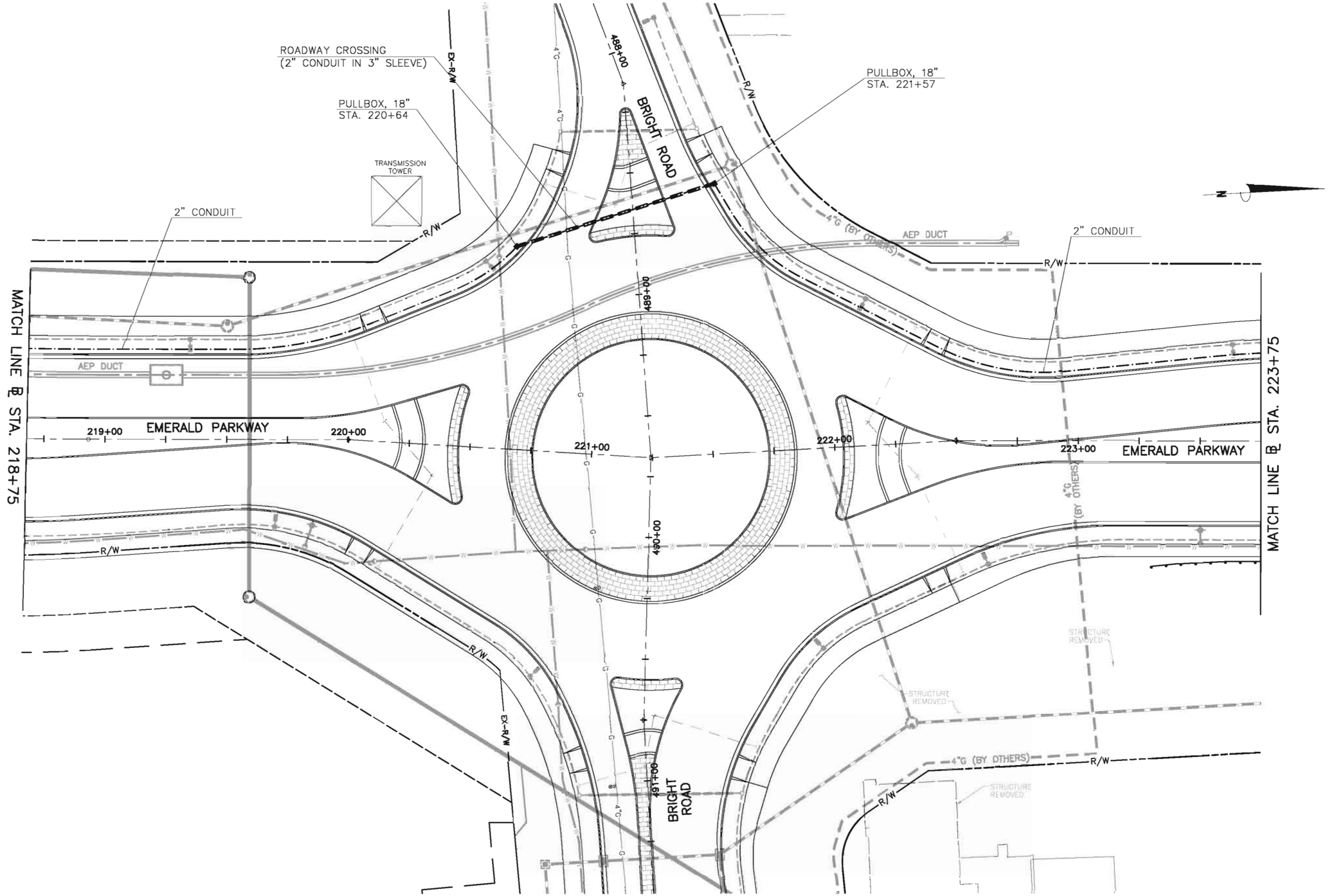


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**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

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| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | WHW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**INTERCONNECT PLAN**
**EMERALD PARKWAY**
**STA. 218+75 TO STA. 223+75**

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 197 OF 275

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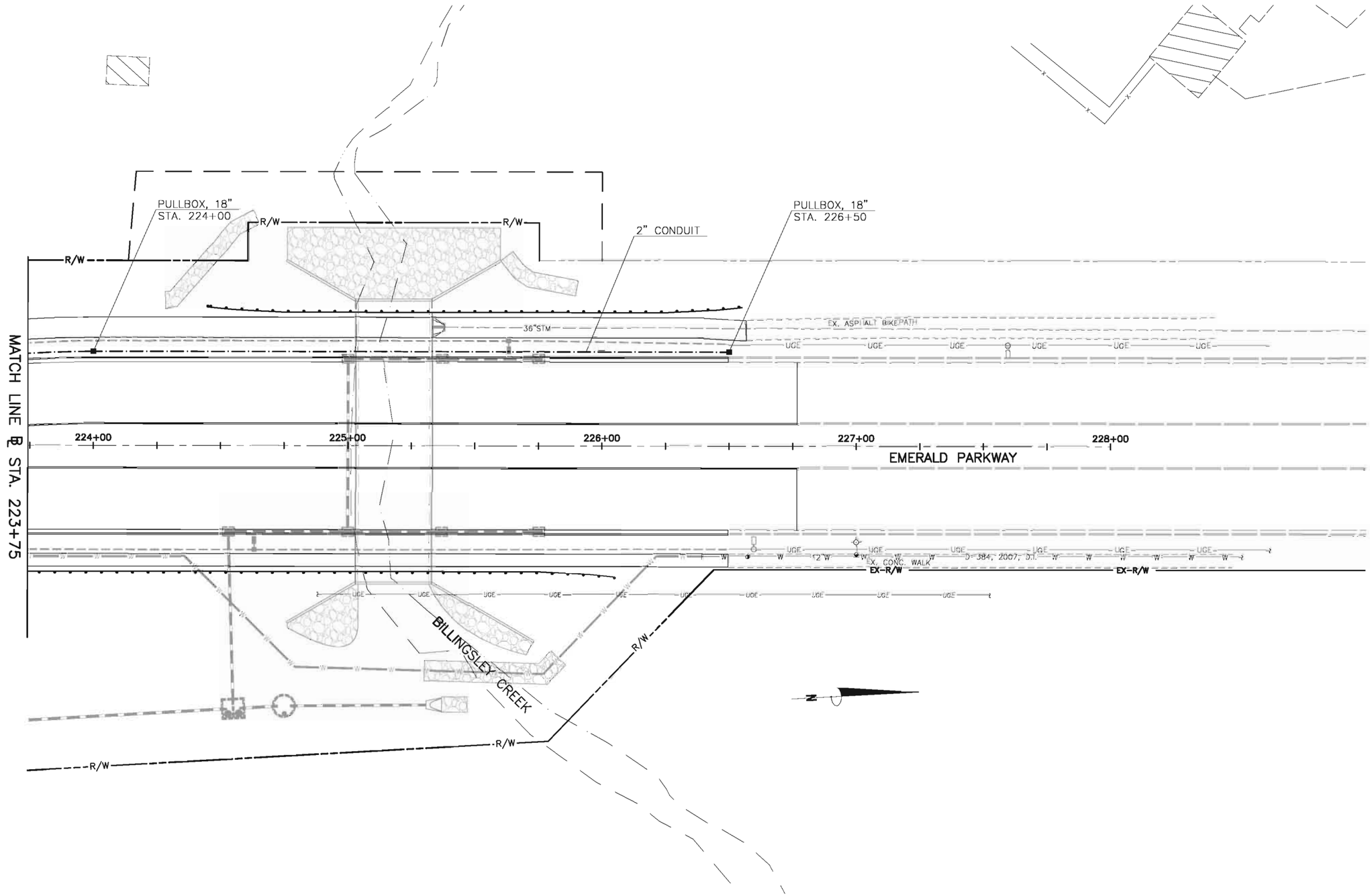


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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | WHW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

INTERCONNECT PLAN
EMERALD PARKWAY
STA. 223+75 TO STA. 226+50

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 198 OF 275

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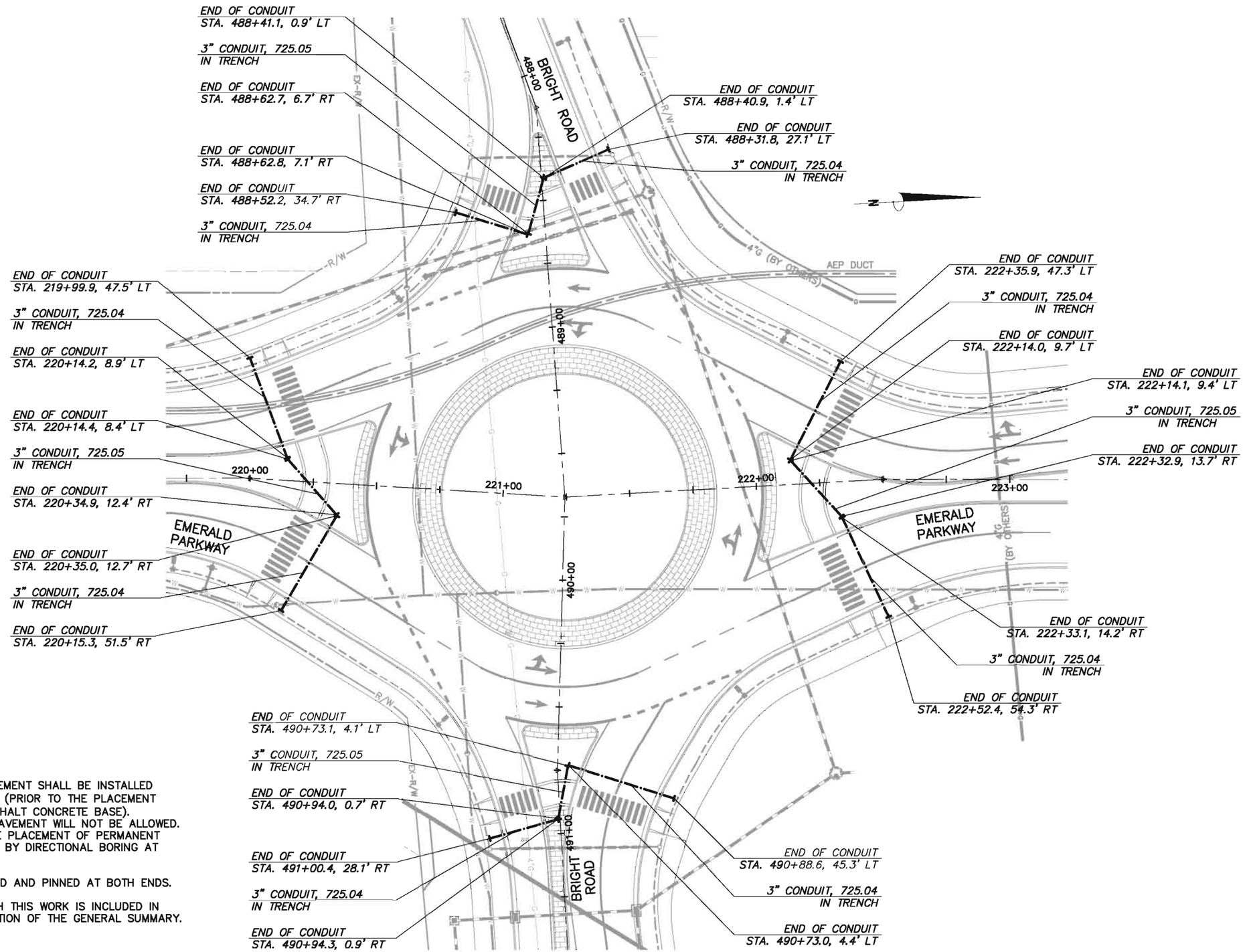


NOTES:

1. ALL CONDUITS UNDER NEW PAVEMENT SHALL BE INSTALLED WHEN ROAD BASE IS INSTALLED (PRIOR TO THE PLACEMENT OF ASPHALT CONCRETE OR ASPHALT CONCRETE BASE). SAW CUTTING OF PERMANENT PAVEMENT WILL NOT BE ALLOWED. CONDUITS INSTALLED AFTER THE PLACEMENT OF PERMANENT PAVEMENT SHALL BE INSTALLED BY DIRECTIONAL BORING AT NO ADDITIONAL COST.
2. ALL CONDUITS SHALL BE CAPPED AND PINNED AT BOTH ENDS.
3. THE QUANTITIES ASSOCIATE WITH THIS WORK IS INCLUDED IN THE SIGNAL INTERCONNECT SECTION OF THE GENERAL SUMMARY.

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | WHW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

EMERALD PARKWAY AND BRIGHT ROAD
FUTURE PEDESTRIAN SIGNALS CONDUIT

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE



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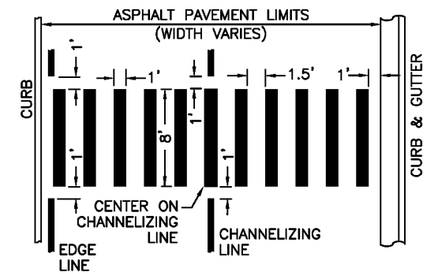
CROSSWALK DETAIL




1.5' TYPICAL SPACING MAY VARY SLIGHTLY FOR PROPER PLACEMENT WITH CHANNELIZING LINE AND CURB AND GUTTER.

**ITEM 630 - GROUND MOUNTED SUPPORT. (BY SIZE). TYPE S. AS PER PLAN**

ALL SIGN SUPPORTS SHALL BE TYPE S (SQUARE) GALVANIZED POSTS WITH DIE CUT KNOCK OUTS (ALLIED QUICK-PUNCH SUPPORTS OR APPROVED EQUAL). A SINGLE BREAKAWAY ANCHOR SHALL BE USED. ALL SIGNS SHALL BE ERECTED WITH A 7-FOOT VERTICAL CLEARANCE BETWEEN THE TOP OF CURB AND THE BOTTOM OF EACH SIGN, UNLESS OTHERWISE DESIGNATED BY THE CITY ENGINEER. HORIZONTAL CLEARANCE FOR BOTH CURB AND DITCH SECTIONS SHALL BE AS PER ODOT STANDARDS. THE ANCHOR POST SHALL BE PAID FOR SEPARATELY.

PAYMENT FOR THIS ITEM SHALL BE FOR THE LENGTH ONLY, INCLUDING THE 8" OVERLAP IN THE ANCHOR POST, AND ALL MISCELLANEOUS ATTACHMENT HARDWARE.

**ITEM 630 - GROUND MOUNTED SUPPORT. SQUARE ANCHOR POST. AS PER PLAN**

IN ADDITION TO ITEMS 630 AND 730, THE ANCHOR POST PROVIDED AND INSTALLED WITH THE GROUND MOUNTED SIGN SUPPORT SHALL BE AS PER ODOT STANDARD DRAWING TC-41.20. IT SHALL BE 48" IN LENGTH AND BE THE CORRECT ANCHOR DIMENSIONS FOR THE COORDINATING SIGN POST SIZE. THE ANCHOR SHALL BE 12 GAGE, WITH A 2 1/2-INCH OVERSLEEVE 18-INCHES LONG OVER TOP OF THE ANCHOR.

THIS ITEM SHALL BE PAID FOR AT THE UNIT PRICE BID PER LINEAL FOOT.

**ITEM 630 - STREET NAME SIGN POST AND SUPPORT. AS PER PLAN**

THE SIGN POSTS SHALL BE 2-INCH SQUARE POST, 14 GAGE, WITH DIE CUT KNOCK OUT HOLES ON ONE INCH CENTERS (ALLIED QUICK-PUNCH OR APPROVED EQUAL). THE ANCHOR SHALL BE 2 1/4-INCHES SQUARE, 12 GAGE, 36-INCHES LONG WITH A 2 1/2-INCH OVERSLEEVE 18-INCHES LONG OVER TOP OF THE ANCHOR. ALL POST SYSTEMS MUST MEET NCHRP 350 CRASH TESTS. IN addition TO THESE REQUIREMENTS, THE BRACKET WHICH IS USED TO ATTACH THE STREET NAME SIGN TO THE SUPPORT SHALL BE "XCCESSORIES SQUARED" MODEL CSB200SQS-Z USED IN CONJUNCTION WITH "T" EXTRUSION #WXAT175 OR APPROVED EQUAL. THE REQUIRED POST, ANCHOR, AND BRACKET SYSTEM SHALL BE POWDER COATED MAHOGANY BROWN (TIGER DRYLAC RAL 8016 49/66080).

**ITEM 630 - REMOVAL OF GROUND MOUNTED SIGN AND STORAGE. AS PER PLAN**

ALL EXISTING GROUND MOUNTED SIGNS WITHIN THE PROJECT AREA SHALL BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE CITY AT A LOCATION TO BE DETERMINED WITHIN THE DUBLIN CITY LIMITS. THE CONTRACTOR SHALL COMPENSATE THE CITY IN AN AMOUNT EQUAL TO THE REPLACEMENT COST OF ANY SIGN DAMAGED AS A RESULT OF THE CONSTRUCTION OPERATIONS. PAYMENT FOR THIS ITEM SHALL BE MADE AT THE UNIT PRICE BID PER EACH SIGN REMOVED AND DELIVERED.

**ITEM 630 - SIGN. STREET NAME. AS PER PLAN**

THE ROUNDABOUT STREET NAME SIGNS SHALL BE MANUFACTURED TO THE CURRENT CITY OF DUBLIN SPECIFICATIONS.

THE ALUMINUM SIGN BLANK SHALL BE 12 INCHES IN HEIGHT. THE LEGEND SHALL BE WHITE IN COLOR ON FOREST BROWN BACKGROUND. THE LETTERING SHALL BE 10 INCH CAPITAL LETTERS FOR THE STREET NAME AND 5 INCH CAPITAL LETTERS FOR THE STREET NAME SUFFIX. THE WHITE CHEVRON SHALL BE PROPORTIONAL TO THE CHEVRON USED ON THE W1-8 SIGN, BUT TO THE HEIGHT SHOWN IN THE DETAIL BELOW. THE FONT FOR ALL LETTERING SHALL BE HIGHWAY GOTHIC, SERIES C. THE SIGNS SHALL BE DOUBLE POSTED AND MOUNTED 5 FEET ABOVE THE GROUND.

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE UNIT PRICE BID PER EACH SIGN FABRICATED, INCLUDING ALL NECESSARY HARDWARE TO PROPERLY MOUNT SIGN ON SUPPORTS.

THE ROADWAY SIGNING WILL BE FURNISHED AND INSTALLED BY THE CITY OF DUBLIN INCLUDING, BUT NOT LIMITED TO, SUPPORTS, ANCHOR POSTS, SUPPORT ASSEMBLIES, FLAT SHEET, AND POST REFLECTORS.

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

TRAFFIC CONTROL NOTES AND DETAILS

SCALE: NONE

SHEET NO. 200 OF 275

PLOTTED: 10/29/2013 3:51:04 PM
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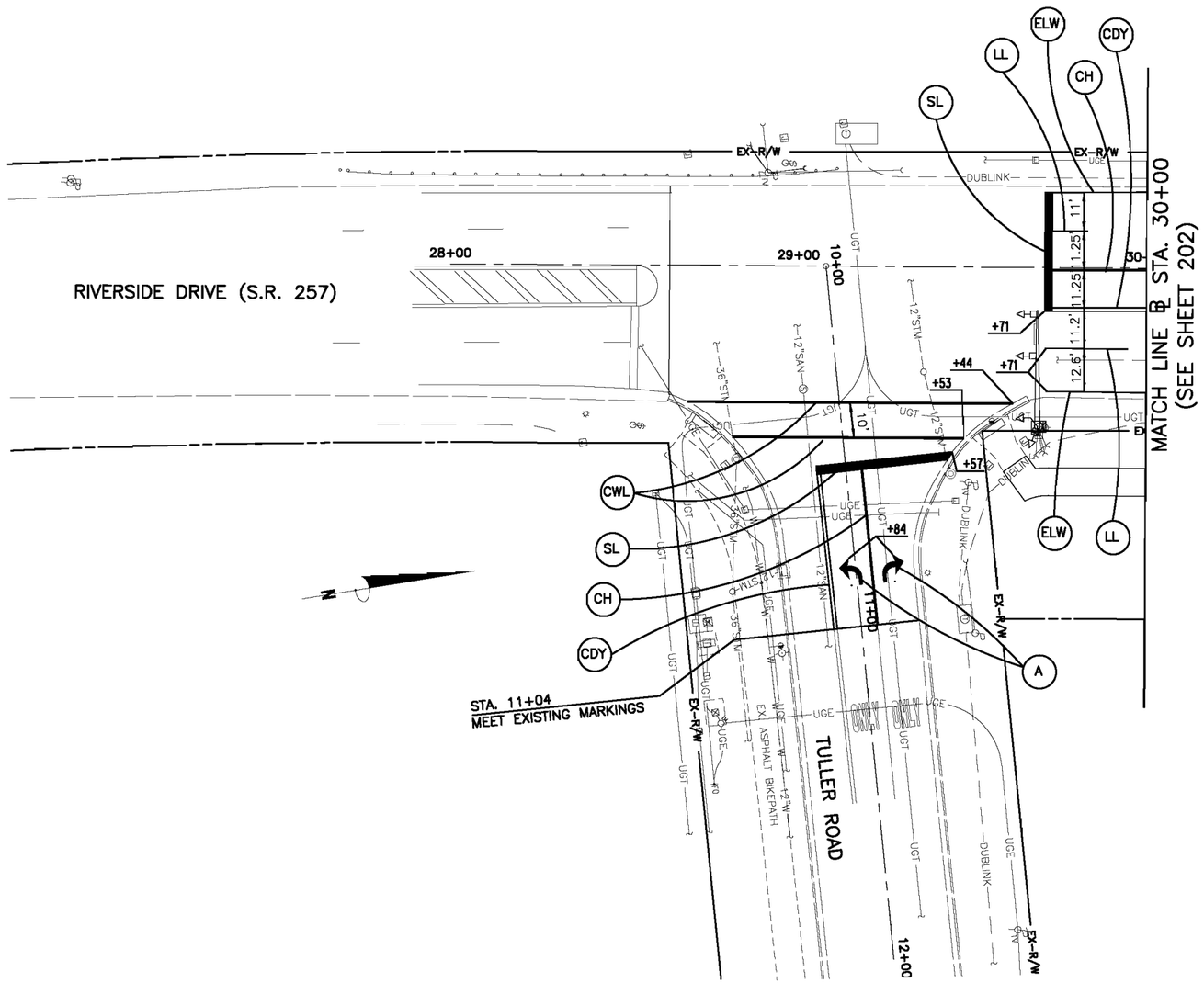
## PAVEMENT MARKING LEGEND

| | |
|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW |
| ELY | ITEM 644, EDGE LINE, 4", YELLOW |
| ELW | ITEM 644, EDGE LINE, 4", WHITE |
| SL | ITEM 644, STOP LINE, 24", WHITE |
| CH | ITEM 644, CHANNELIZING LINE, 8", WHITE |
| CWL | ITEM 644, CROSSWALK LINE, 12", WHITE |
| WOP | ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| A | ITEM 644, 72", ARROW, WHITE |

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**SIGNING AND PAVEMENT MARKING PLAN**
**RIVERSIDE DRIVE**
**BEGIN PROJECT TO STA. 30+00**

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 201 OF 275

PLOTTED: 10/28/2013 8:30:18 AM
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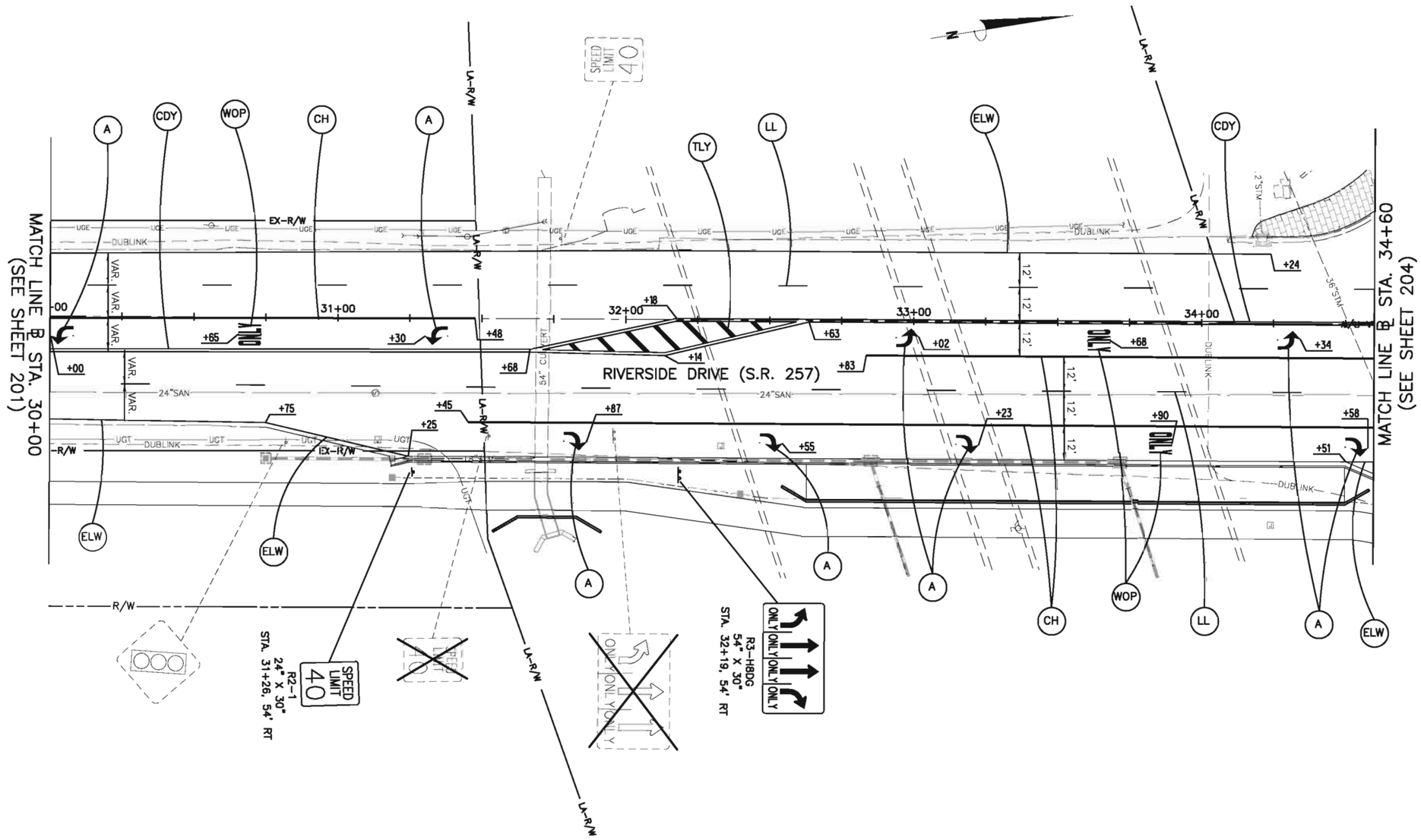
## PAVEMENT MARKING LEGEND

| | | | |
|---|---|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE | CH | ITEM 644, CHANNELIZING LINE, 8", WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW | CWL | ITEM 644, CROSSWALK LINE, 12", WHITE |
| ELY | ITEM 644, EDGE LINE, 4", YELLOW | WOP | ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| ELW | ITEM 644, EDGE LINE, 4", WHITE | A | ITEM 644, 72", ARROW, WHITE |
| SL | ITEM 644, STOP LINE, 24", WHITE | TLY | ITEM 644, TRANSVERSE LINE, 24", YELLOW (12' SPACING) |

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED

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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**SIGNING AND PAVEMENT MARKING PLAN**
**RIVERSIDE DRIVE**
**STA. 30+00 TO STA. 34+60**

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 202 OF 275

PLOTTED: 10/28/2013 8:31:28 AM
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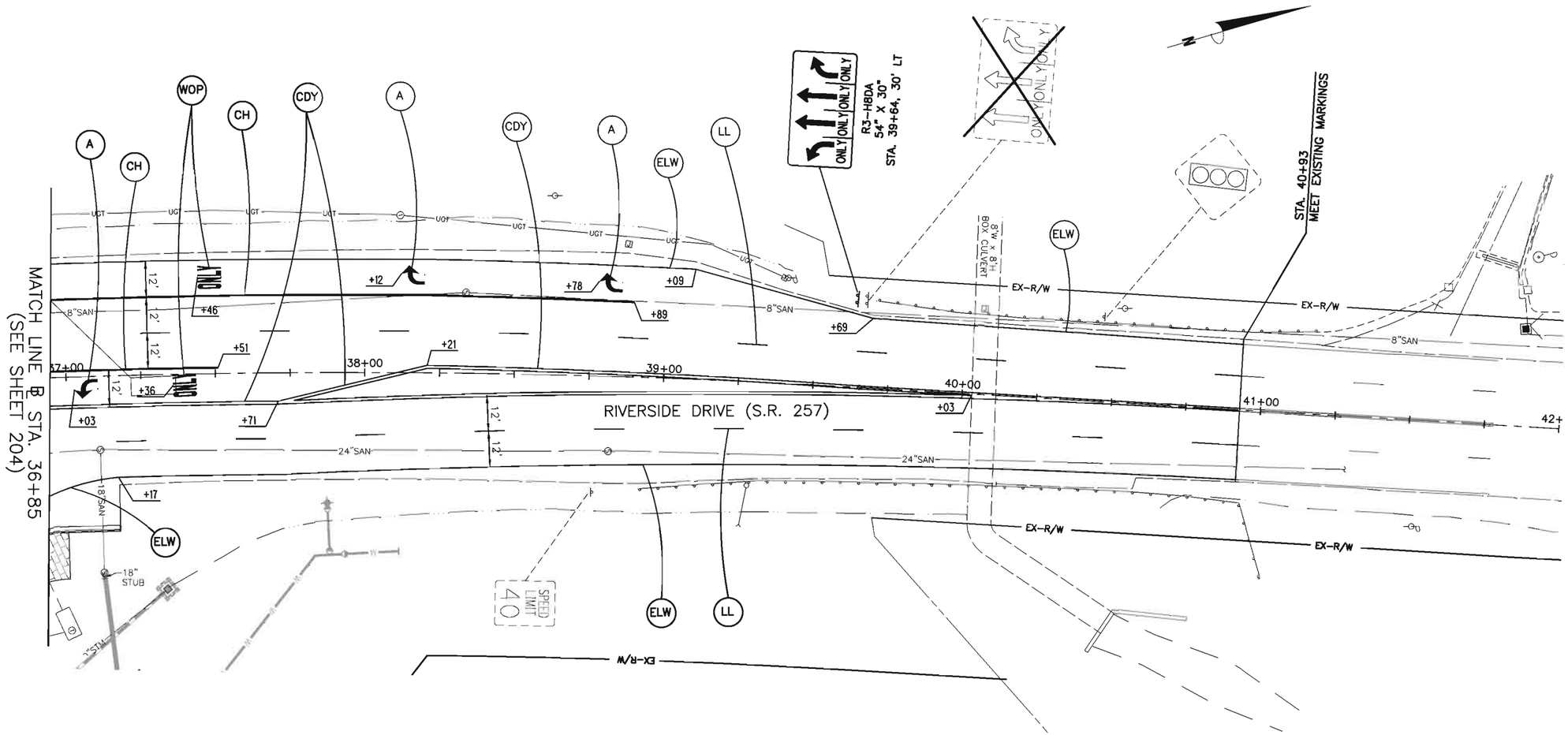
## PAVEMENT MARKING LEGEND

| | | | |
|---|---|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE | CH | ITEM 644, CHANNELIZING LINE, 8", WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW | CWL | ITEM 644, CROSSWALK LINE, 12", WHITE |
| ELY | ITEM 644, EDGE LINE, 4", YELLOW | WOP | ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| ELW | ITEM 644, EDGE LINE, 4", WHITE | A | ITEM 644, 72", ARROW, WHITE |
| SL | ITEM 644, STOP LINE, 24", WHITE | TLY | ITEM 644, TRANSVERSE LINE, 24", YELLOW (12' SPACING) |

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED

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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**SIGNING AND PAVEMENT MARKING PLAN**
**RIVERSIDE DRIVE**
**STA. 36+85 TO STA. 41+00**

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 203 OF 275

PLOTTED: 10/28/2013 8:32:35 AM
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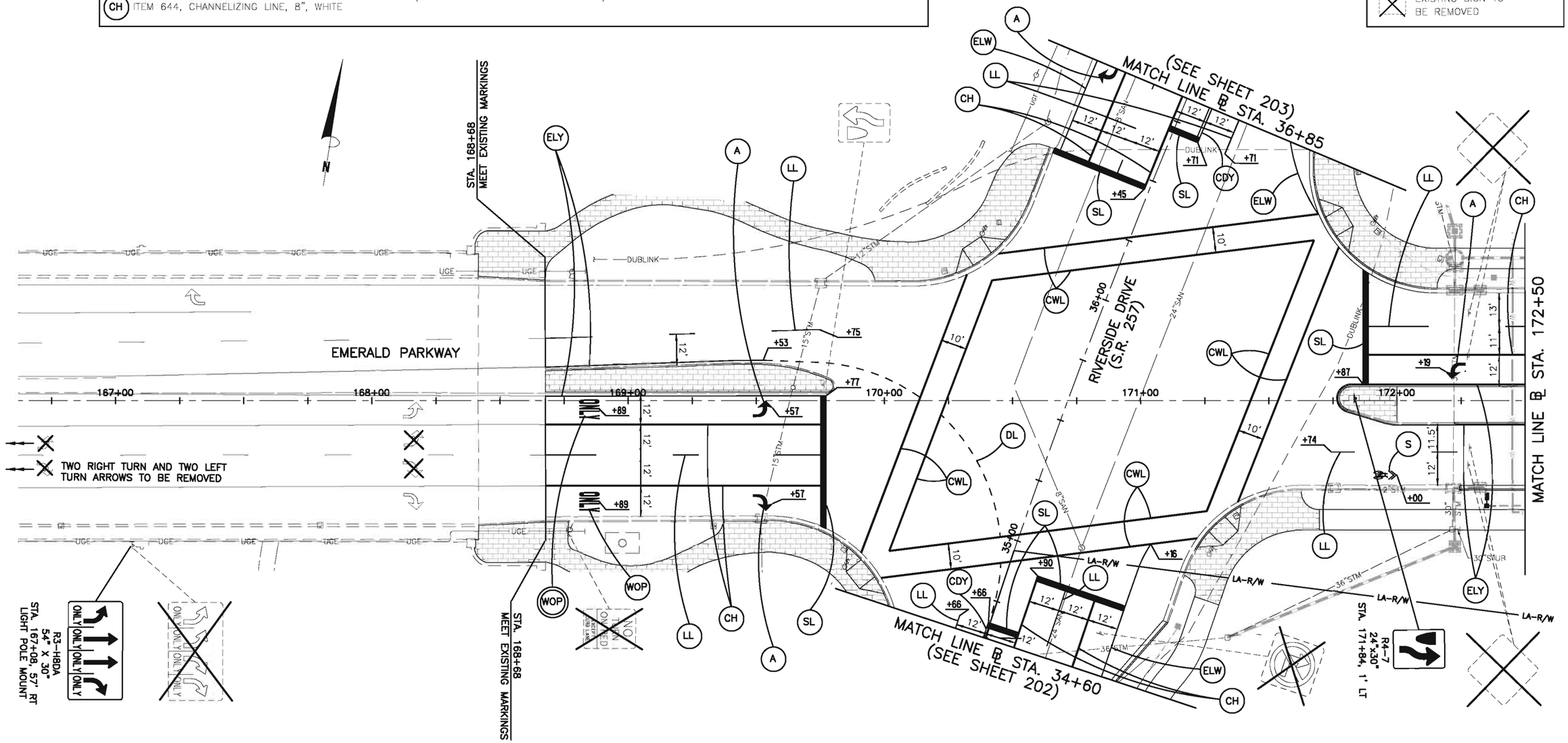
PLOTTED: 10/28/2013 8:33:44 AM

## PAVEMENT MARKING LEGEND

- (LL) ITEM 644, LANE LINE, 4", WHITE
- (CDY) ITEM 644, CENTER LINE, 4", DOUBLE YELLOW
- (ELY) ITEM 644, EDGE LINE, 4", YELLOW
- (SL) ITEM 644, STOP LINE, 24", WHITE
- (X) PAVEMENT MARKING TO BE REMOVED
- (CH) ITEM 644, CHANNELIZING LINE, 8", WHITE
- (CWL) ITEM 644, CROSSWALK LINE, 12", WHITE
- (WOP) ITEM 644, 84", WORD ON PAVEMENT, WHITE
- (A) ITEM 644, 72", ARROW, WHITE
- (DL) ITEM 644, DASHED LINE, 4", YELLOW
- (S) ITEM 644, SHARED LANE MARKING, WHITE (CENTERED 4' OFF EDGE OF GUTTER)
- (ELY) ITEM 646, EDGE LINE, 4", YELLOW (ON BRIDGE DECK)
- (CH) ITEM 646, CHANNELIZING LINE, 8", WHITE (ON BRIDGE DECK)
- (WOP) ITEM 646, 84", WORD ON PAVEMENT, WHITE (ON BRIDGE DECK)
- (A) ITEM 646, 72", ARROW, WHITE (ON BRIDGE DECK)

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED

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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

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| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**SIGNING AND PAVEMENT MARKING PLAN**
**EMERALD PARKWAY**
**BEGIN PROJECT TO STA. 172+50**

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 204 OF 275

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## PAVEMENT MARKING LEGEND

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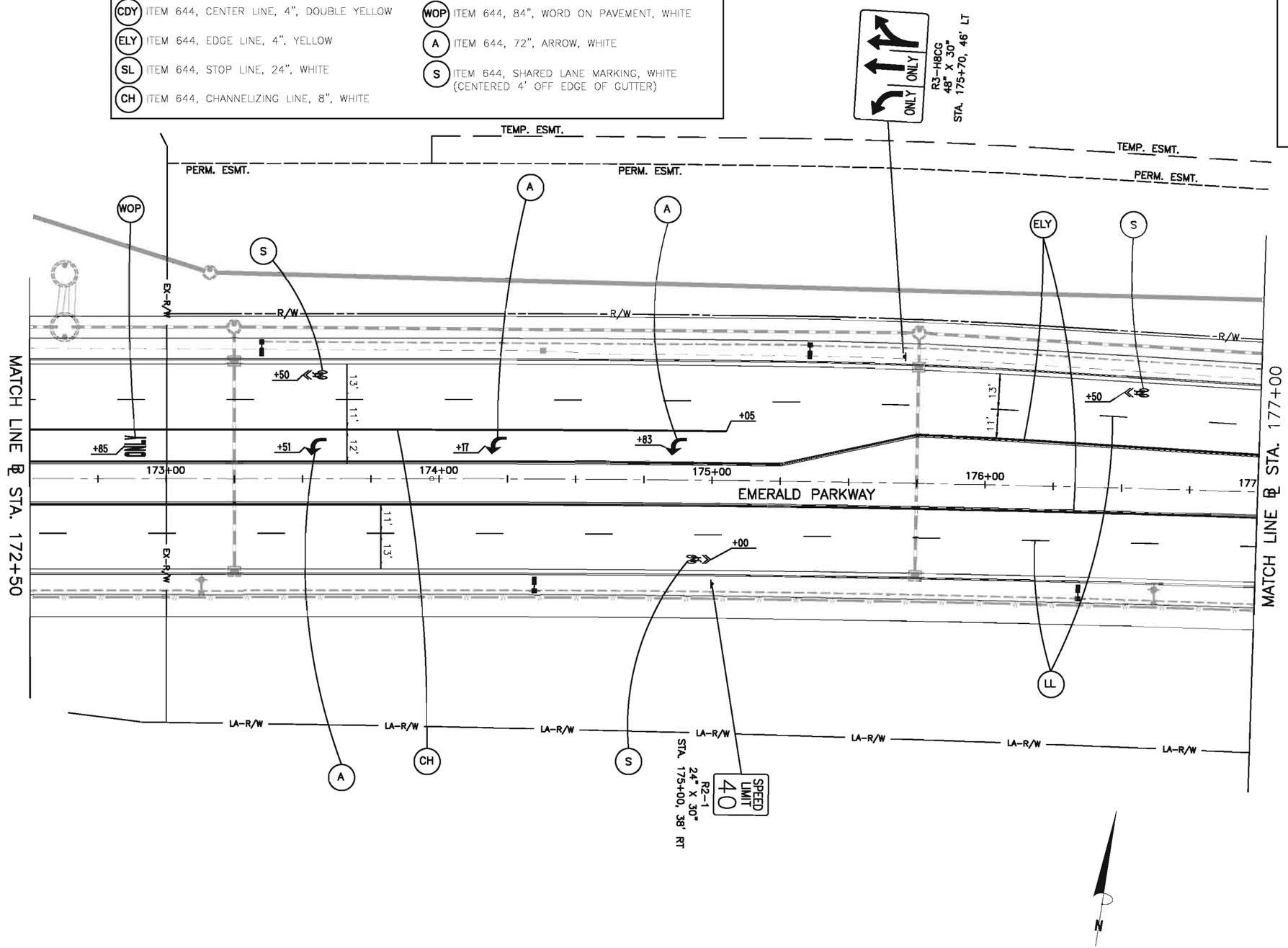
|---|---|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE | CWL | ITEM 644, CROSSWALK LINE, 12", WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW | WOP | ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| ELY | ITEM 644, EDGE LINE, 4", YELLOW | A | ITEM 644, 72", ARROW, WHITE |
| SL | ITEM 644, STOP LINE, 24", WHITE | S | ITEM 644, SHARED LANE MARKING, WHITE (CENTERED 4' OFF EDGE OF GUTTER) |
| CH | ITEM 644, CHANNELIZING LINE, 8", WHITE | | |

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED

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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

SIGNING AND PAVEMENT MARKING PLAN
EMERALD PARKWAY
STA. 172+50 TO STA. 177+00

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 205 OF 275

PLOTTED: 10/28/2013 8:35:25 AM
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PLOTTED: 10/29/2013 12:04:39 PM

## PAVEMENT MARKING LEGEND

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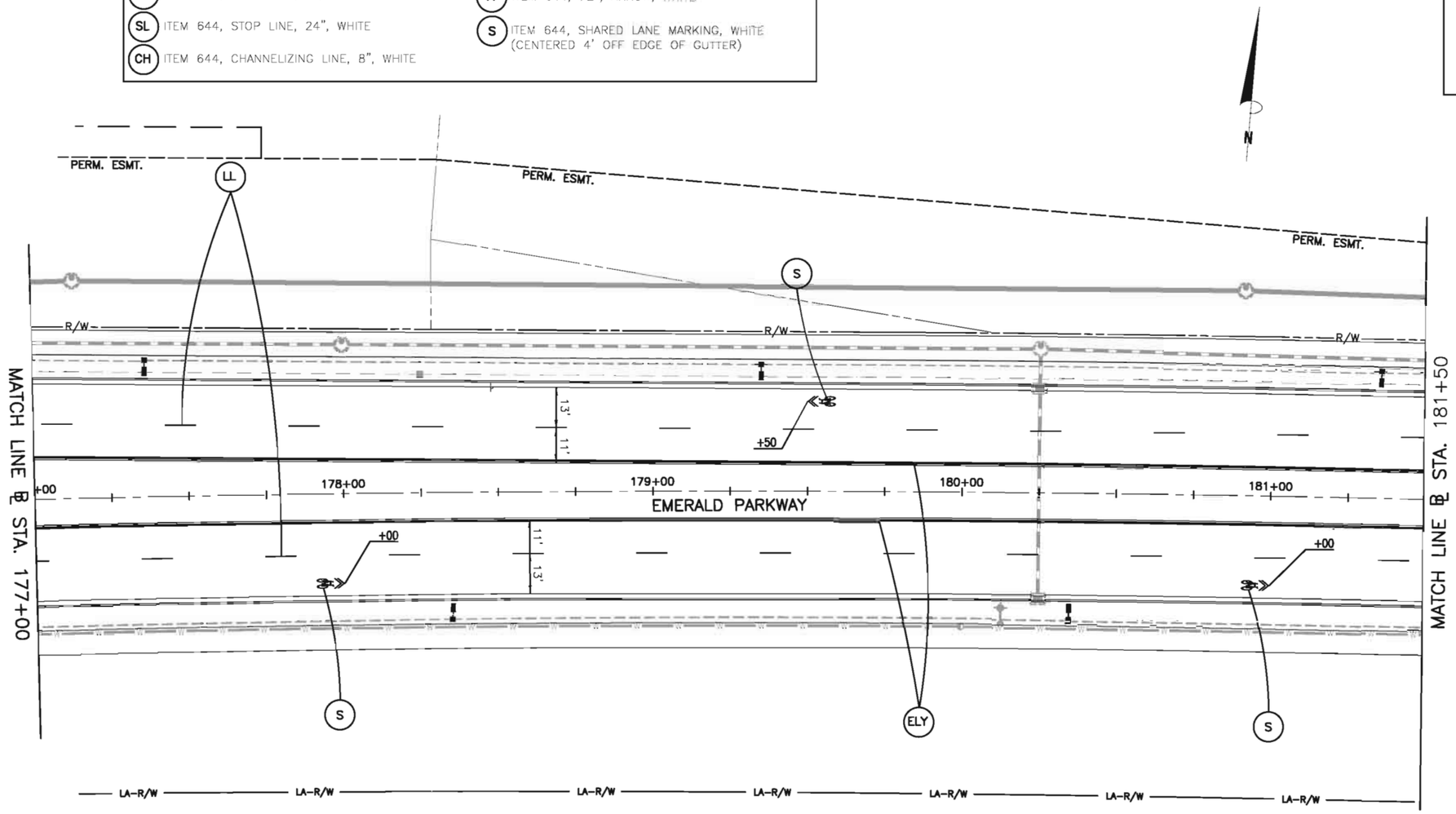
|---|---|
| LL ITEM 644, LANE LINE, 4", WHITE | CWL ITEM 644, CROSSWALK LINE, 12", WHITE |
| CDY ITEM 644, CENTER LINE, 4", DOUBLE YELLOW | WOP ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| ELY ITEM 644, EDGE LINE, 4", YELLOW | A ITEM 644, 72", ARROW, WHITE |
| SL ITEM 644, STOP LINE, 24", WHITE | S ITEM 644, SHARED LANE MARKING, WHITE (CENTERED 4' OFF EDGE OF GUTTER) |
| CH ITEM 644, CHANNELIZING LINE, 8", WHITE | |

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED

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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

SIGNING AND PAVEMENT MARKING PLAN
EMERALD PARKWAY
STA. 177+00 TO STA. 181+50

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 206 OF 275

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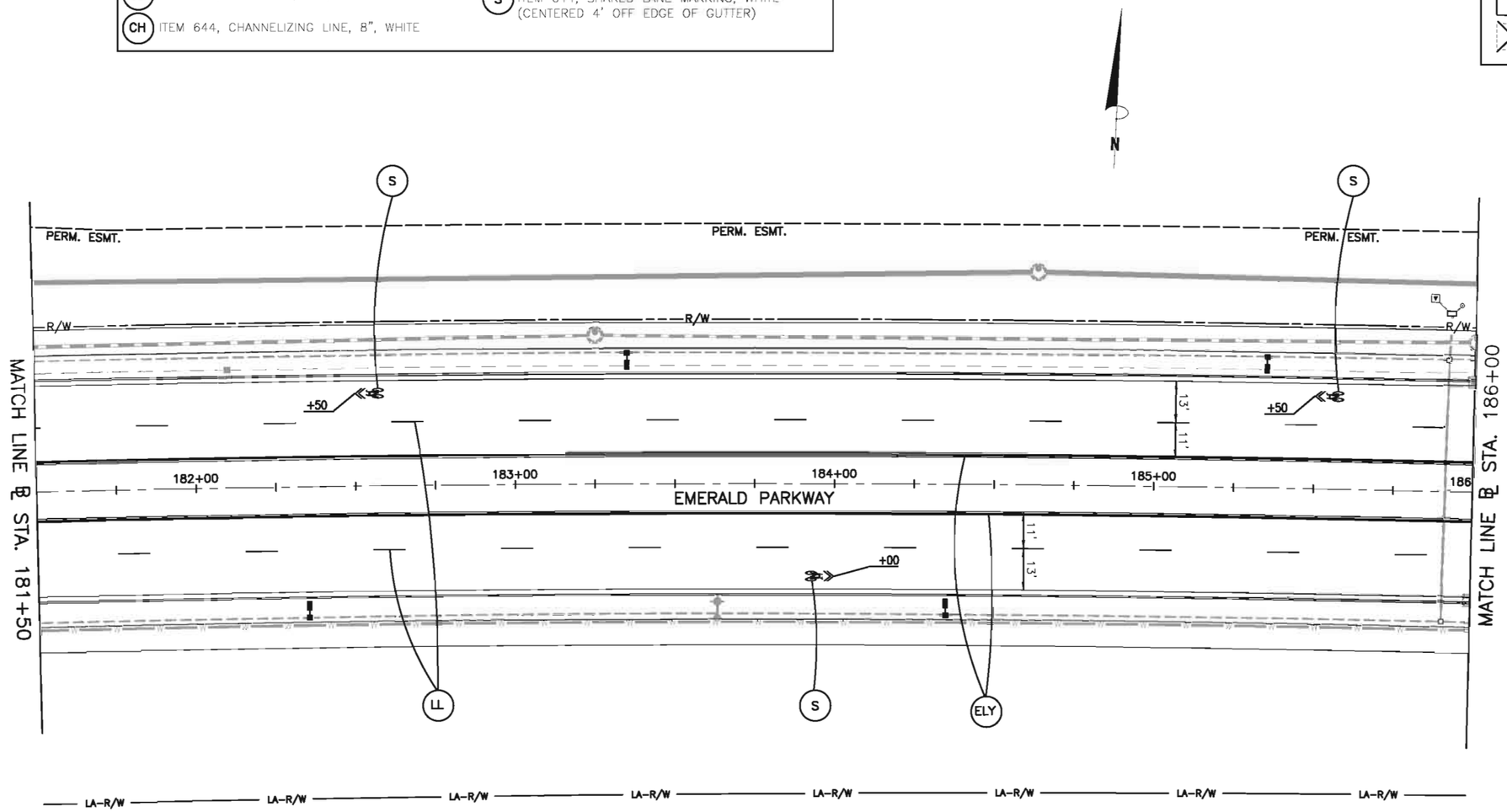
PLOTTED: 10/29/2013 12:14:38 PM

## PAVEMENT MARKING LEGEND

| | |
|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW |
| ELY | ITEM 644, EDGE LINE, 4", YELLOW |
| SL | ITEM 644, STOP LINE, 24", WHITE |
| CH | ITEM 644, CHANNELIZING LINE, 8", WHITE |
| CWL | ITEM 644, CROSSWALK LINE, 12", WHITE |
| WOP | ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| A | ITEM 644, 72", ARROW, WHITE |
| S | ITEM 644, SHARED LANE MARKING, WHITE (CENTERED 4' OFF EDGE OF GUTTER) |

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

SIGNING AND PAVEMENT MARKING PLAN
EMERALD PARKWAY
STA. 181+50 TO STA. 186+00

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 207 OF 275

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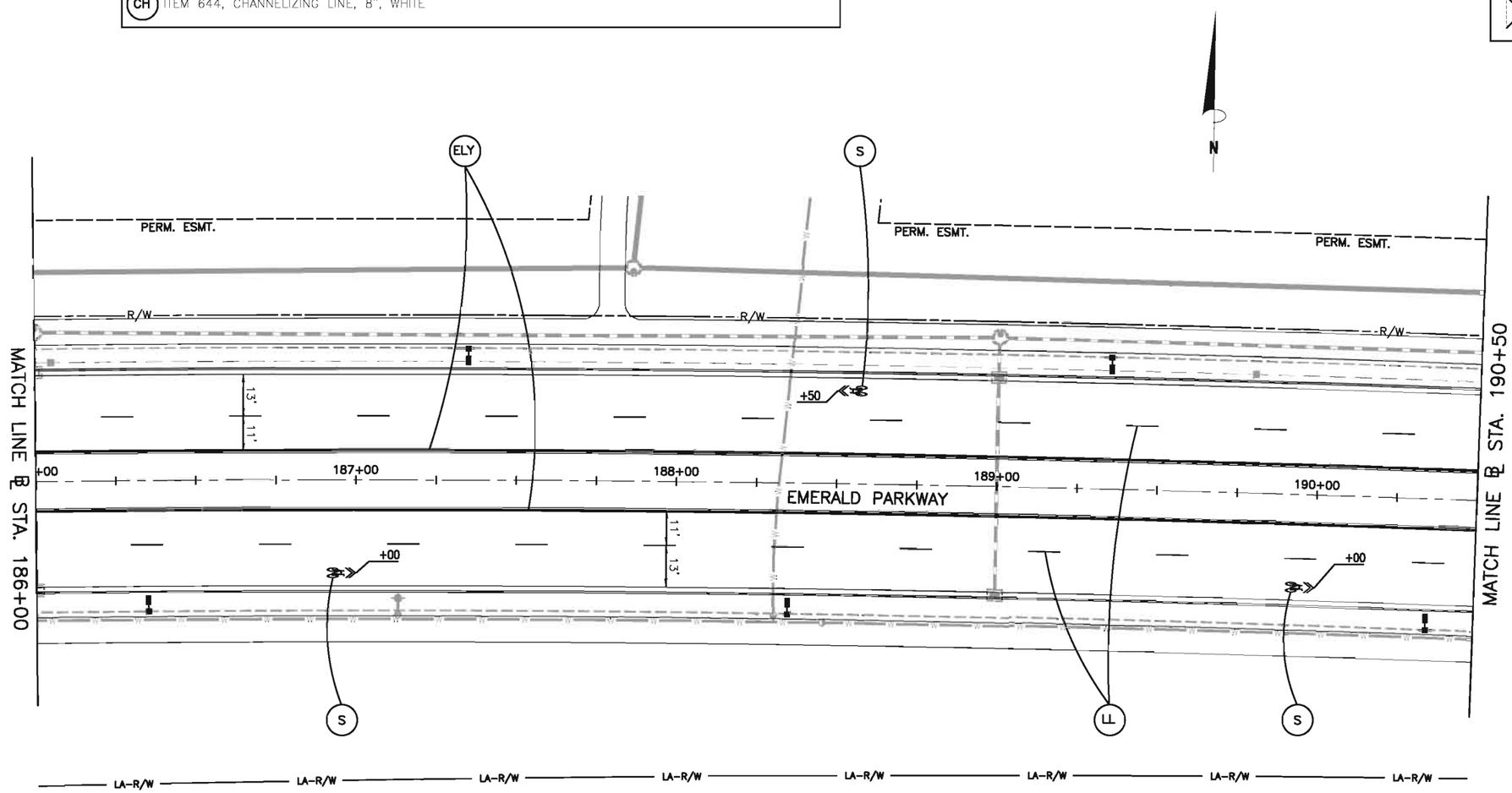
## PAVEMENT MARKING LEGEND

| | |
|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW |
| ELY | ITEM 644, EDGE LINE, 4", YELLOW |
| SL | ITEM 644, STOP LINE, 24", WHITE |
| CH | ITEM 644, CHANNELIZING LINE, 8", WHITE |
| CWL | ITEM 644, CROSSWALK LINE, 12", WHITE |
| WOP | ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| A | ITEM 644, 72", ARROW, WHITE |
| S | ITEM 644, SHARED LANE MARKING, WHITE (CENTERED 4' OFF EDGE OF GUTTER) |

## SIGNING LEGEND

| | |
|---|---|
| | EXISTING GROUND MTD. SIGN SUPPORT |
| | PROPOSED GROUND MTD. SIGN SUPPORT |
| | EXISTING SIGN TO REMAIN |
| | PROPOSED SIGN |
| | EXISTING SIGN TO BE REMOVED |




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

SIGNING AND PAVEMENT MARKING PLAN
EMERALD PARKWAY
STA. 186+00 TO STA. 190+50

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE



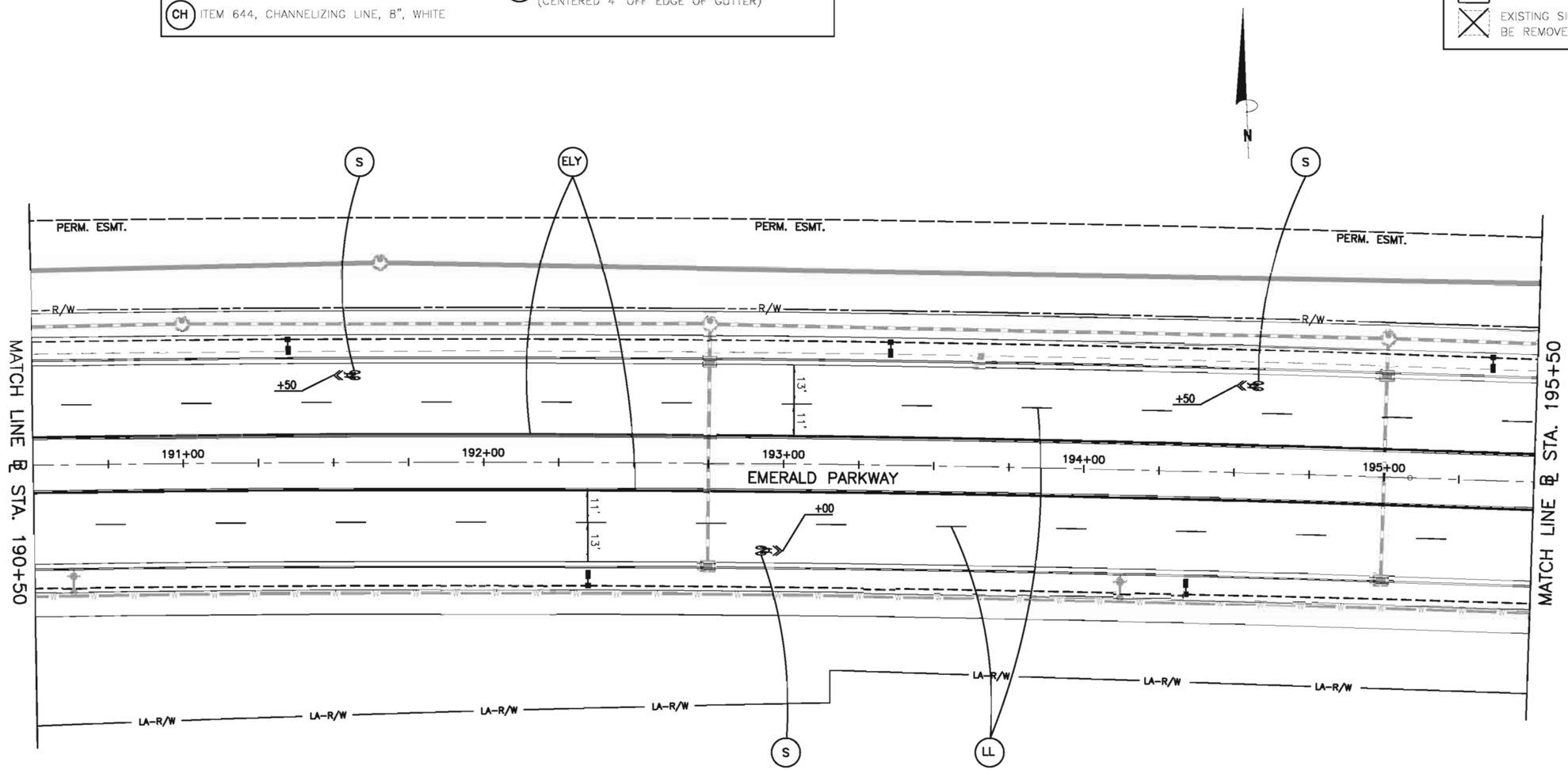
PLOTTED: 10/28/2013 12:17:31 PM
P:\PR44959\cadd\Sign and PM 005.dwg 10/25/2013 5:45:02 PM Ward, Will

## PAVEMENT MARKING LEGEND

| | | | |
|---|---|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE | CWL | ITEM 644, CROSSWALK LINE, 12", WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW | WOP | ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| ELY | ITEM 644, EDGE LINE, 4", YELLOW | A | ITEM 644, 72", ARROW, WHITE |
| SL | ITEM 644, STOP LINE, 24", WHITE | S | ITEM 644, SHARED LANE MARKING, WHITE (CENTERED 4' OFF EDGE OF GUTTER) |
| CH | ITEM 644, CHANNELIZING LINE, 8", WHITE | | |

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

SIGNING AND PAVEMENT MARKING PLAN
EMERALD PARKWAY
STA. 190+50 TO STA. 195+50

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 209 OF 275

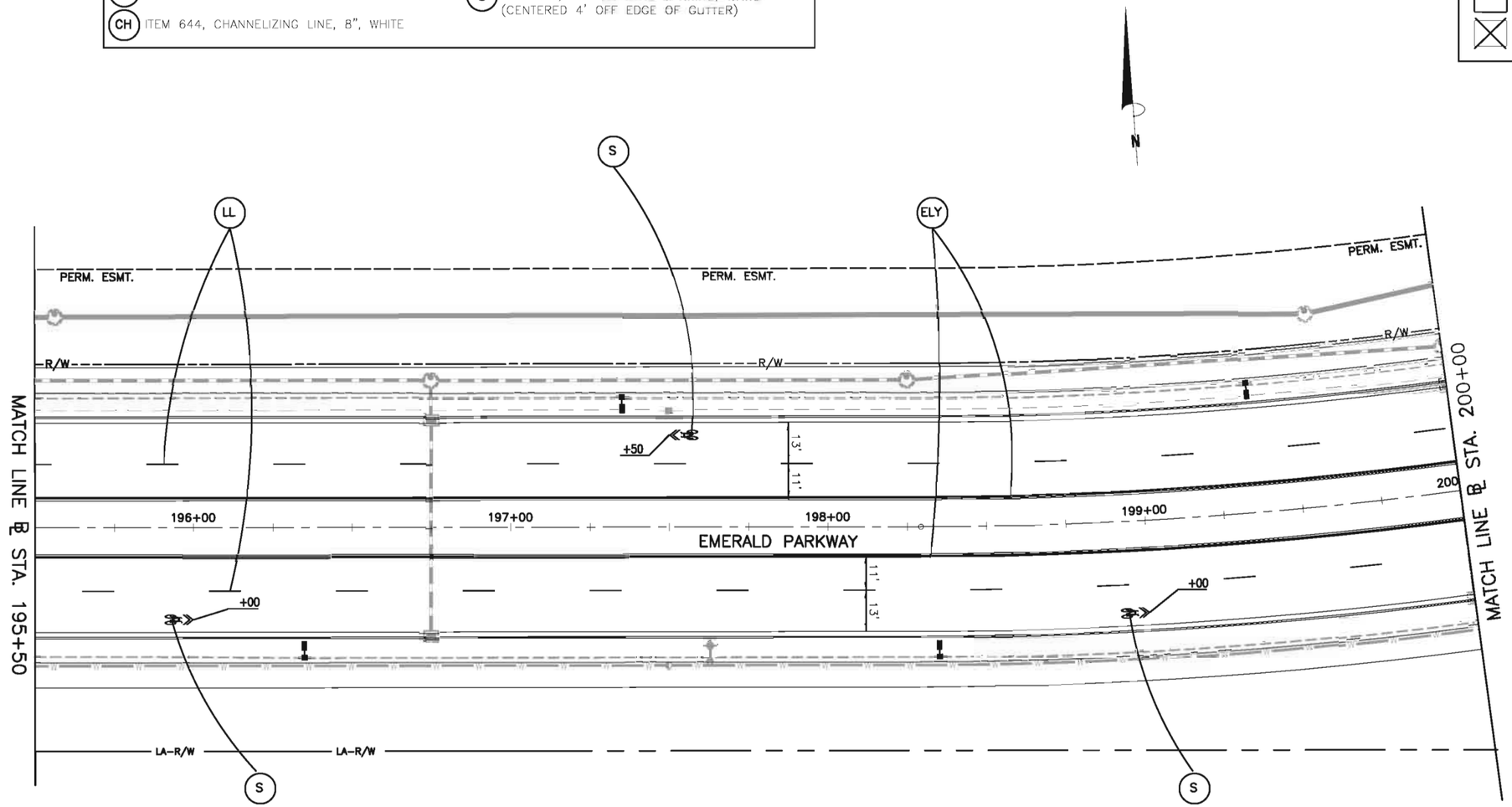
PLOTTED: 10/28/2013 12:19:45 PM
P:\PR44959\cadd\Sign and PM 006.dwg 10/25/2013 5:45:10 PM Ward, Will

## PAVEMENT MARKING LEGEND

| | | | |
|---|---|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE | CWL | ITEM 644, CROSSWALK LINE, 12", WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW | WOP | ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| ELY | ITEM 644, EDGE LINE, 4", YELLOW | A | ITEM 644, 72", ARROW, WHITE |
| SL | ITEM 644, STOP LINE, 24", WHITE | S | ITEM 644, SHARED LANE MARKING, WHITE (CENTERED 4' OFF EDGE OF GUTTER) |
| CH | ITEM 644, CHANNELIZING LINE, 8", WHITE | | |

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

SIGNING AND PAVEMENT MARKING PLAN
EMERALD PARKWAY
STA. 195+50 TO STA. 200+00

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 210 OF 275

PLOTTED: 10/29/2013 12:22:35 PM
P:\PR44959\cadd\Sign and PM 007.dwg 10/25/2013 5:45:17 PM Ward, Will

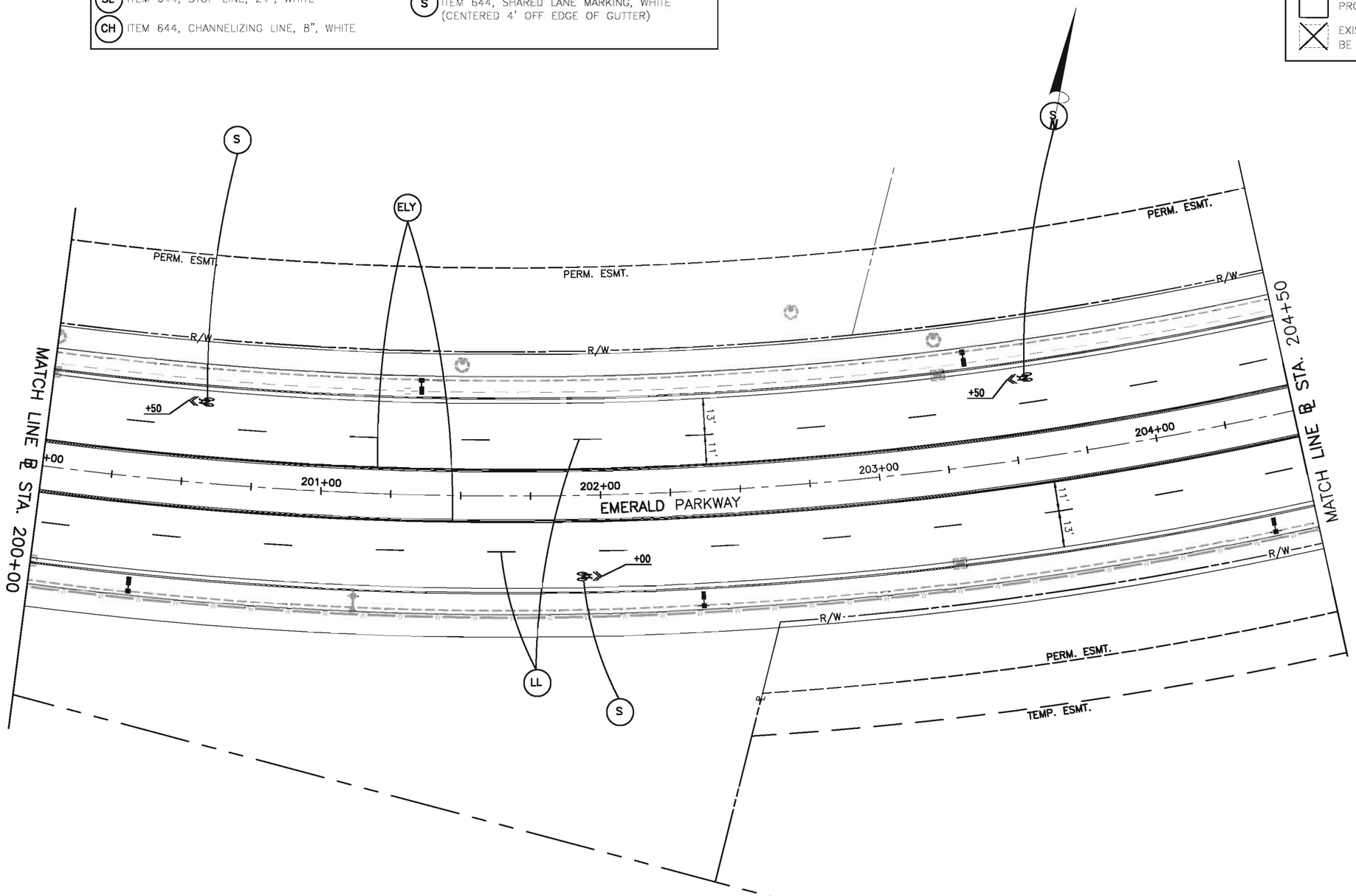
PLOTTED: 10/28/2013 7:05:06 PM

## PAVEMENT MARKING LEGEND

| | |
|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW |
| ELY | ITEM 644, EDGE LINE, 4", YELLOW |
| SL | ITEM 644, STOP LINE, 24", WHITE |
| CH | ITEM 644, CHANNELIZING LINE, 8", WHITE |
| CWL | ITEM 644, CROSSWALK LINE, 12", WHITE |
| WOP | ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| A | ITEM 644, 72", ARROW, WHITE |
| S | ITEM 644, SHARED LANE MARKING, WHITE (CENTERED 4' OFF EDGE OF GUTTER) |

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED




P:\PR44959\cadd\Sign and PM 008.dwg 10/25/2013 5:45:24 PM Ward, Will

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

SIGNING AND PAVEMENT MARKING PLAN
EMERALD PARKWAY
STA. 200+00 TO STA. 204+50

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

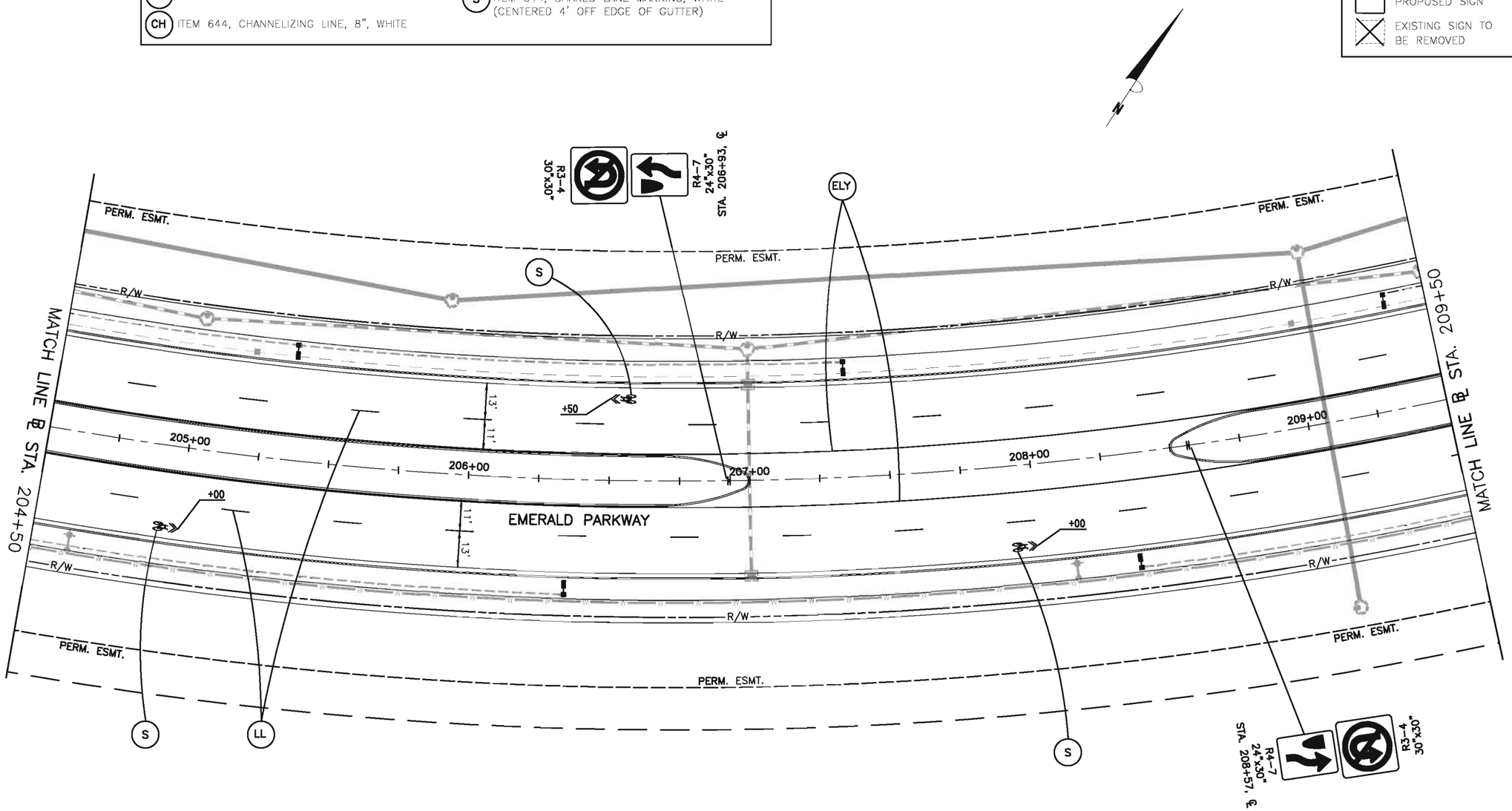
PLOTTED: 10/28/2013 7:07:37 PM

## PAVEMENT MARKING LEGEND

| | |
|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW |
| ELY | ITEM 644, EDGE LINE, 4", YELLOW |
| SL | ITEM 644, STOP LINE, 24", WHITE |
| CH | ITEM 644, CHANNELIZING LINE, 8", WHITE |
| CWL | ITEM 644, CROSSWALK LINE, 12", WHITE |
| WOP | ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| A | ITEM 644, 72", ARROW, WHITE |
| S | ITEM 644, SHARED LANE MARKING, WHITE (CENTERED 4' OFF EDGE OF GUTTER) |

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

SIGNING AND PAVEMENT MARKING PLAN
EMERALD PARKWAY
STA. 204+50 TO STA. 209+50

SCALE: 1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 212 OF 275

P:\PR44959\cadd\Sign and PM 008.dwg 10/25/2013 5:45:35 PM Ward, Will

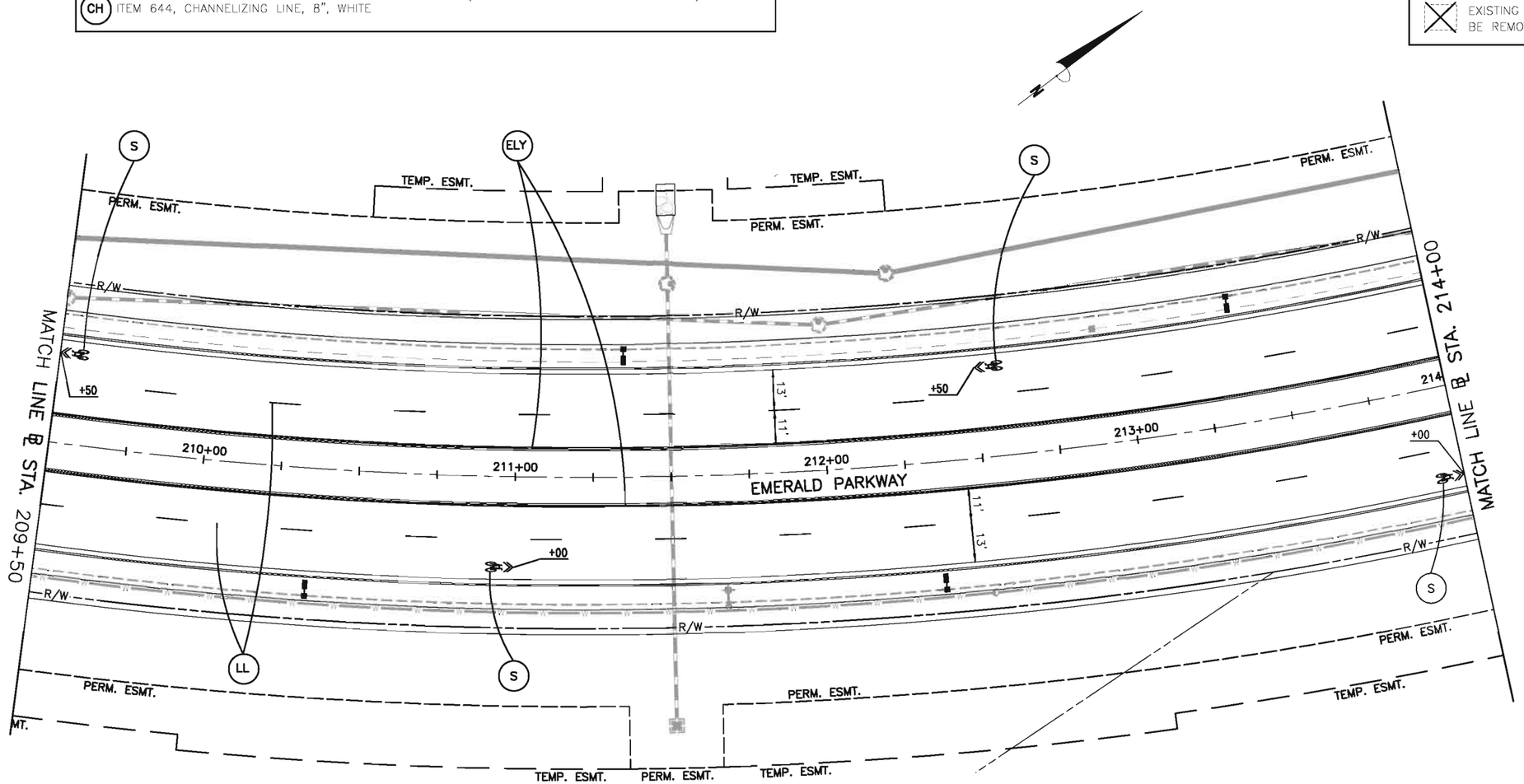
PLOTTED: 10/28/2013 7:09:28 PM

## PAVEMENT MARKING LEGEND

| | |
|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW |
| ELY | ITEM 644, EDGE LINE, 4", YELLOW |
| SL | ITEM 644, STOP LINE, 24", WHITE |
| CH | ITEM 644, CHANNELIZING LINE, 8", WHITE |
| CWL | ITEM 644, CROSSWALK LINE, 12", WHITE |
| WOP | ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| A | ITEM 644, 72", ARROW, WHITE |
| S | ITEM 644, SHARED LANE MARKING, WHITE (CENTERED 4' OFF EDGE OF GUTTER) |

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**SIGNING AND PAVEMENT MARKING PLAN**
**EMERALD PARKWAY**
**STA. 209+50 TO STA. 214+00**

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

| SHEET NO. | OF |
|---|---|
| 213 | 275 |

P:\PR44959\cadd\Sign and PM 010.dwg 10/25/2013 5:45:43 PM Ward, Will

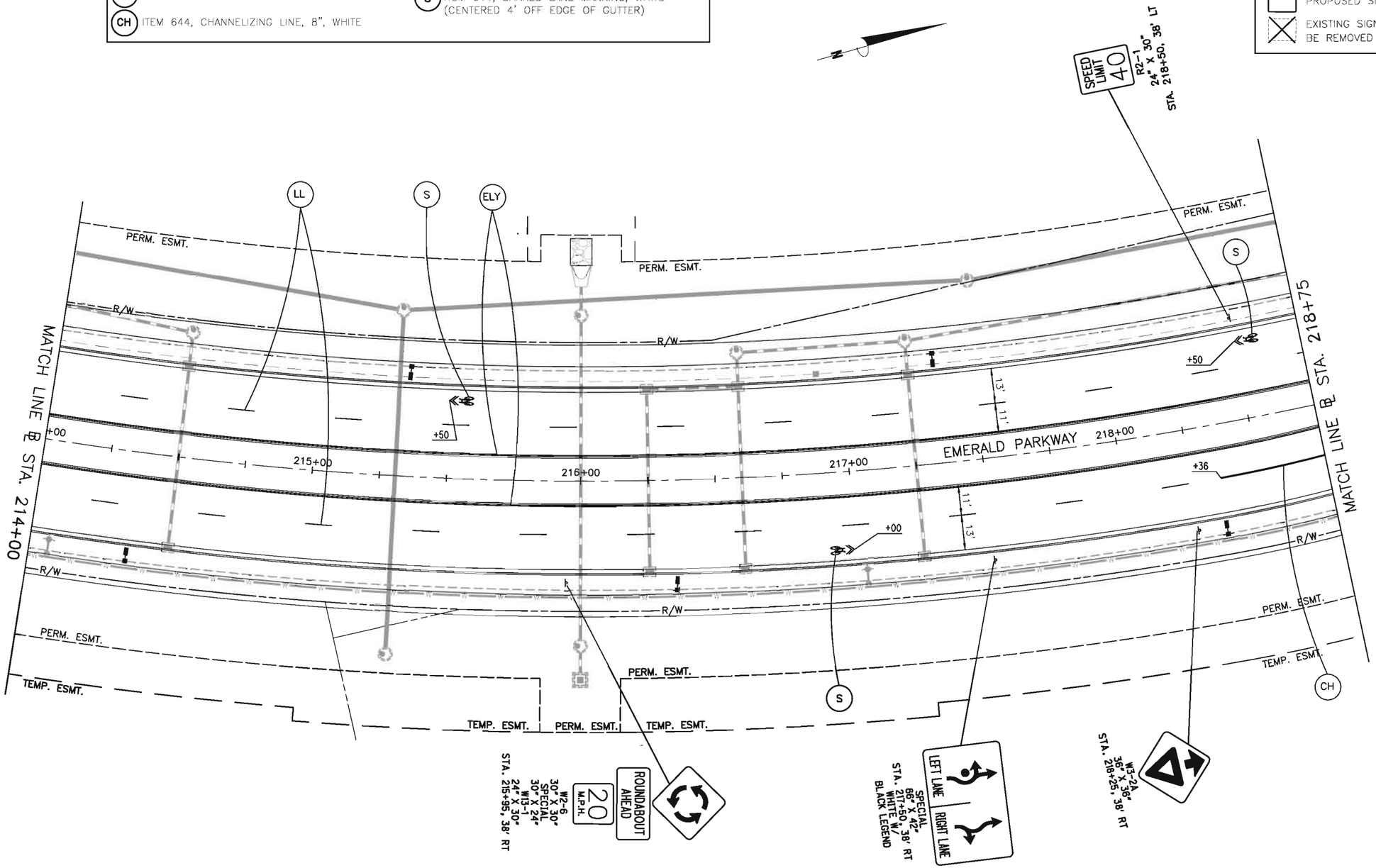
PLOTTED: 10/28/2013 7:14:52 PM

## PAVEMENT MARKING LEGEND

| | | | |
|---|---|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE | CWL | ITEM 644, CROSSWALK LINE, 12", WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW | WOP | ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| ELY | ITEM 644, EDGE LINE, 4", YELLOW | A | ITEM 644, 72", ARROW, WHITE |
| SL | ITEM 644, STOP LINE, 24", WHITE | S | ITEM 644, SHARED LANE MARKING, WHITE (CENTERED 4' OFF EDGE OF GUTTER) |
| CH | ITEM 644, CHANNELIZING LINE, 8", WHITE | | |

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

SIGNING AND PAVEMENT MARKING PLAN
EMERALD PARKWAY
STA. 214+00 TO STA. 218+75

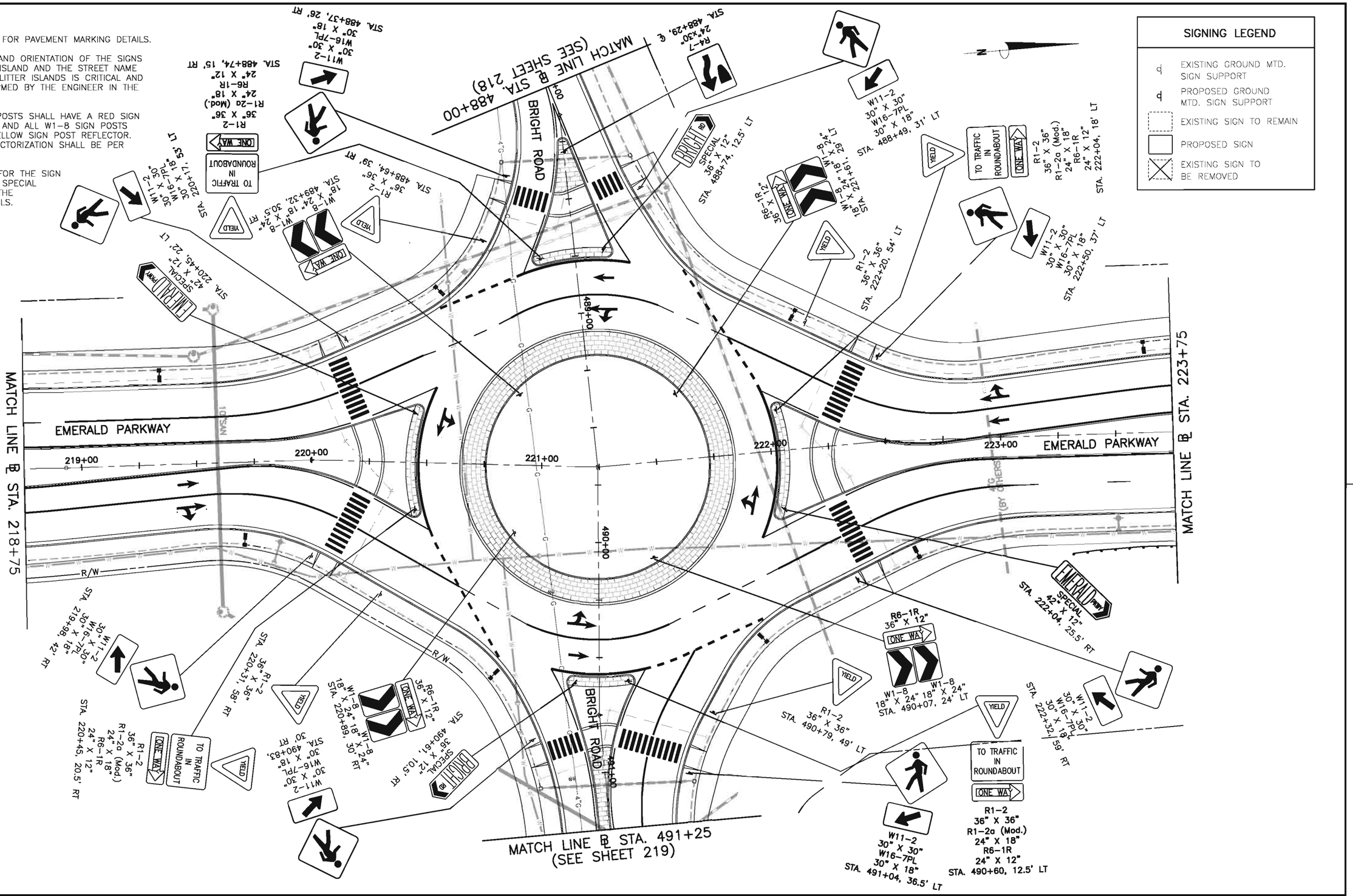
SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 214 OF 275

P:\PR44959\cadd\Sign and PM 011.dwg 10/25/2013 5:45:51 PM Ward, Will

NOTES:

1. SEE NEXT SHEET FOR PAVEMENT MARKING DETAILS.
2. THE PLACEMENT AND ORIENTATION OF THE SIGNS IN THE CENTRAL ISLAND AND THE STREET NAME SIGNS IN THE SPLITTER ISLANDS IS CRITICAL AND SHALL BE CONFIRMED BY THE ENGINEER IN THE FIELD.
3. ALL YIELD SIGN POSTS SHALL HAVE A RED SIGN POST REFLECTOR AND ALL W1-8 SIGN POSTS SHALL HAVE A YELLOW SIGN POST REFLECTOR. SIGN POST REFLECTORIZATION SHALL BE PER SCD TC-41.30.
4. SEE SHEET 200 FOR THE SIGN DETAILS FOR ALL SPECIAL SIGNS AND FOR THE CROSSWALK DETAILS.




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

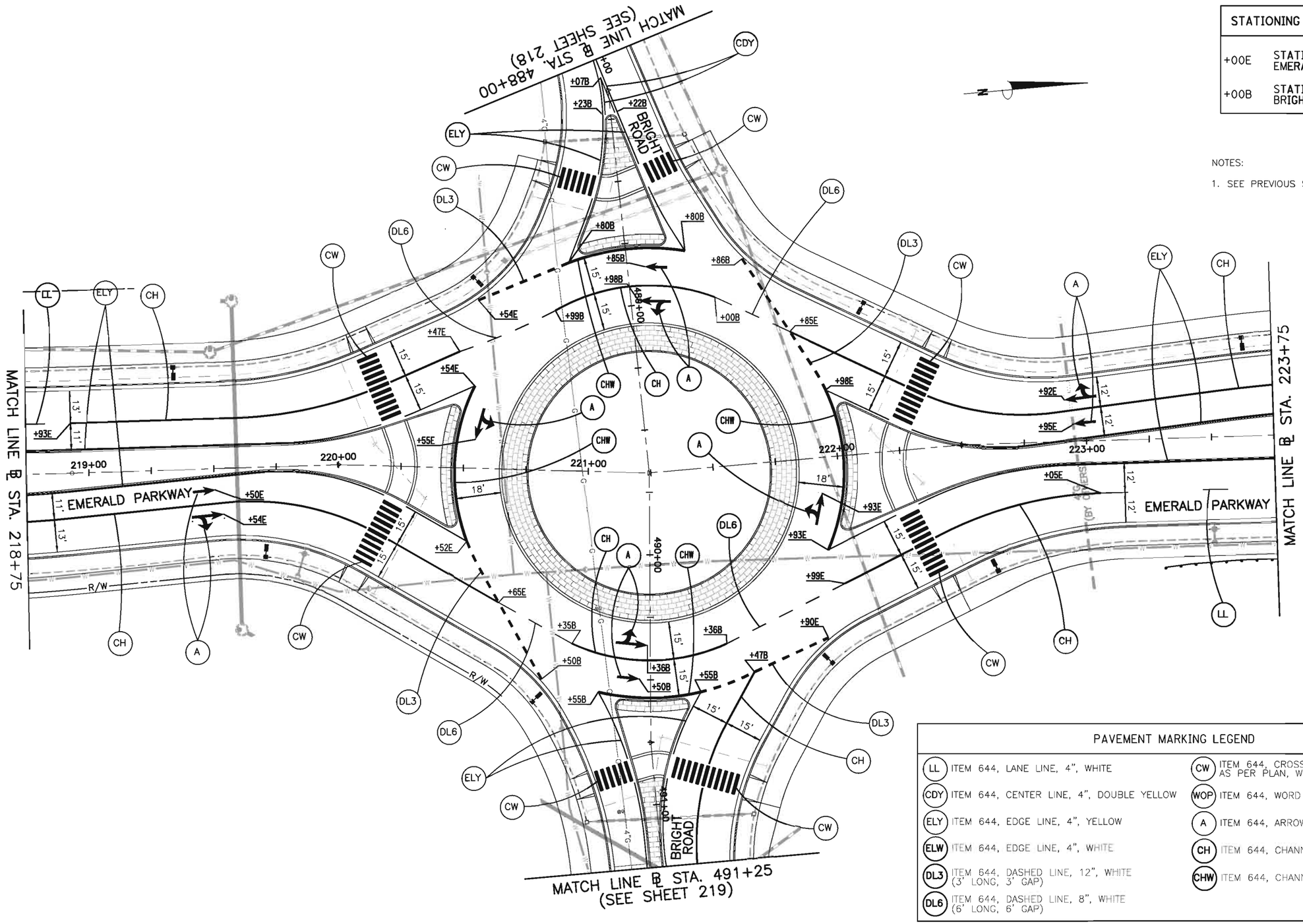
SIGNING PLAN
EMERALD PKWY. AT BRIGHT RD.
ROUNDABOUT

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 215 OF 275

PLOTTED: 10/29/2013 12:29:32 PM
P:\PR44959\cadd\Sign and PM 012.dwg 10/25/2013 5:45:59 PM Word, Will

PLOTTED: 10/28/2013 1:32:20 PM




| STATIONING CALLOUTS | |
|---|---|
| +00E | STATIONED OFF EMERALD PARKWAY |
| +00B | STATIONED OFF BRIGHT ROAD |

NOTES:

1. SEE PREVIOUS SHEET FOR SIGNING.

| PAVEMENT MARKING LEGEND | | | |
|---|---|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE | CW | ITEM 644, CROSSWALK LINE, AS PER PLAN, WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW | WOP | ITEM 644, WORD ON PAVEMENT, 84", WHITE |
| ELY | ITEM 644, EDGE LINE, 4", YELLOW | A | ITEM 644, ARROW, 72", WHITE |
| ELW | ITEM 644, EDGE LINE, 4", WHITE | CH | ITEM 644, CHANNELIZING LINE, 8", WHITE |
| DL3 | ITEM 644, DASHED LINE, 12", WHITE (3' LONG, 3' GAP) | CHW | ITEM 644, CHANNELIZING LINE, 12", WHITE |
| DL6 | ITEM 644, DASHED LINE, 8", WHITE (6' LONG, 6' GAP) | | |

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

PAVEMENT MARKING PLAN
EMERALD PKWY. AT BRIGHT RD.
ROUNDABOUT

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

| SHEET NO. | OF |
|---|---|
| 216 | 275 |

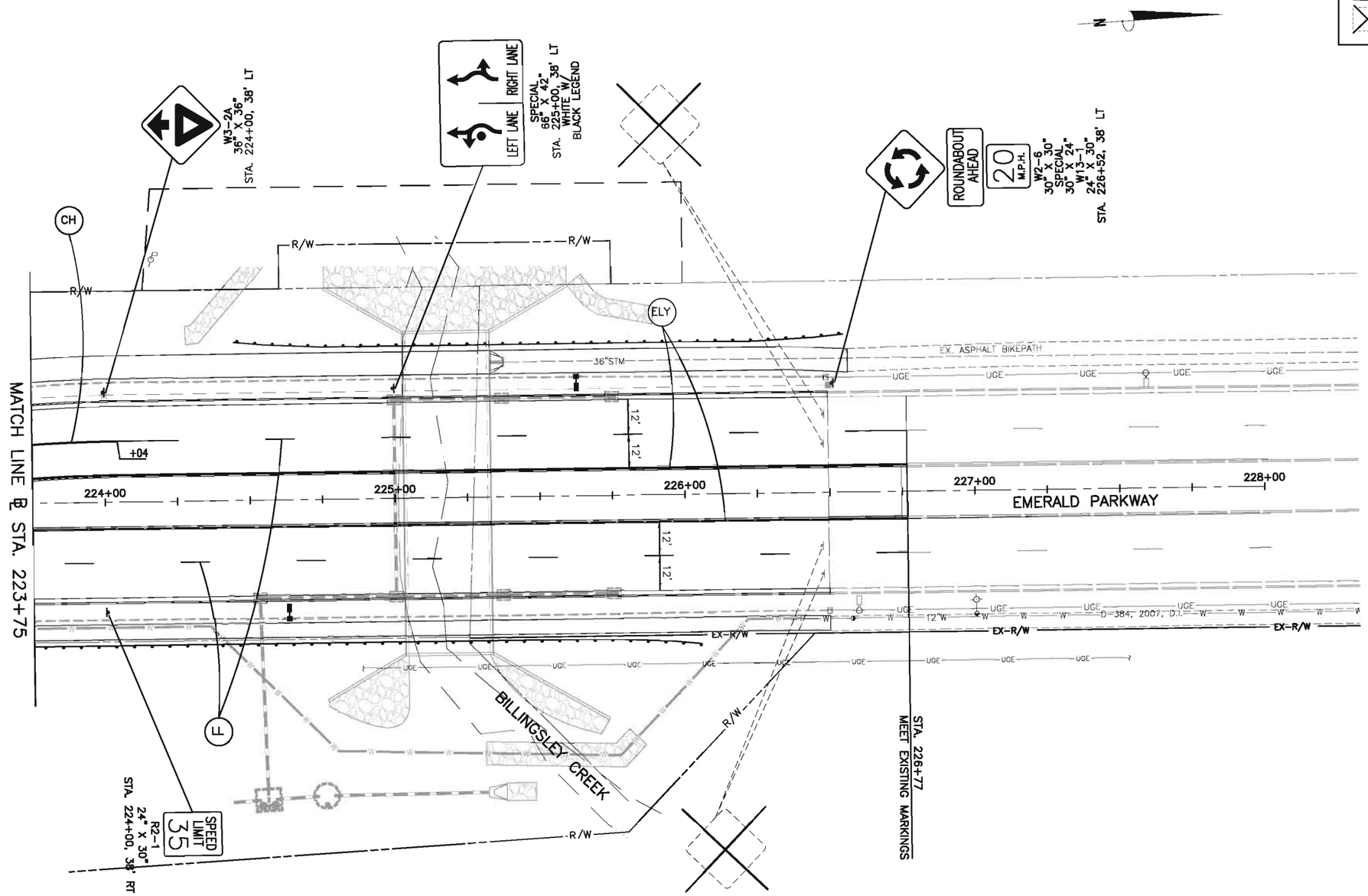
P:\PR44959\cadd\Sign and PM 012c.dwg 10/28/2013 9:21:11 AM Ward, Will

## PAVEMENT MARKING LEGEND

| | | | |
|---|---|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE | CH | ITEM 644, CHANNELIZING LINE, 8", WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW | CWL | ITEM 644, CROSSWALK LINE, 12", WHITE |
| ELY | ITEM 644, EDGE LINE, 4", YELLOW | WOP | ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| SL | ITEM 644, STOP LINE, 24", WHITE | A | ITEM 644, 72", ARROW, WHITE |

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**SIGNING AND PAVEMENT MARKING PLAN**
**EMERALD PARKWAY**
**STA. 223+75 TO STA. 228+00**

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 217 OF 275

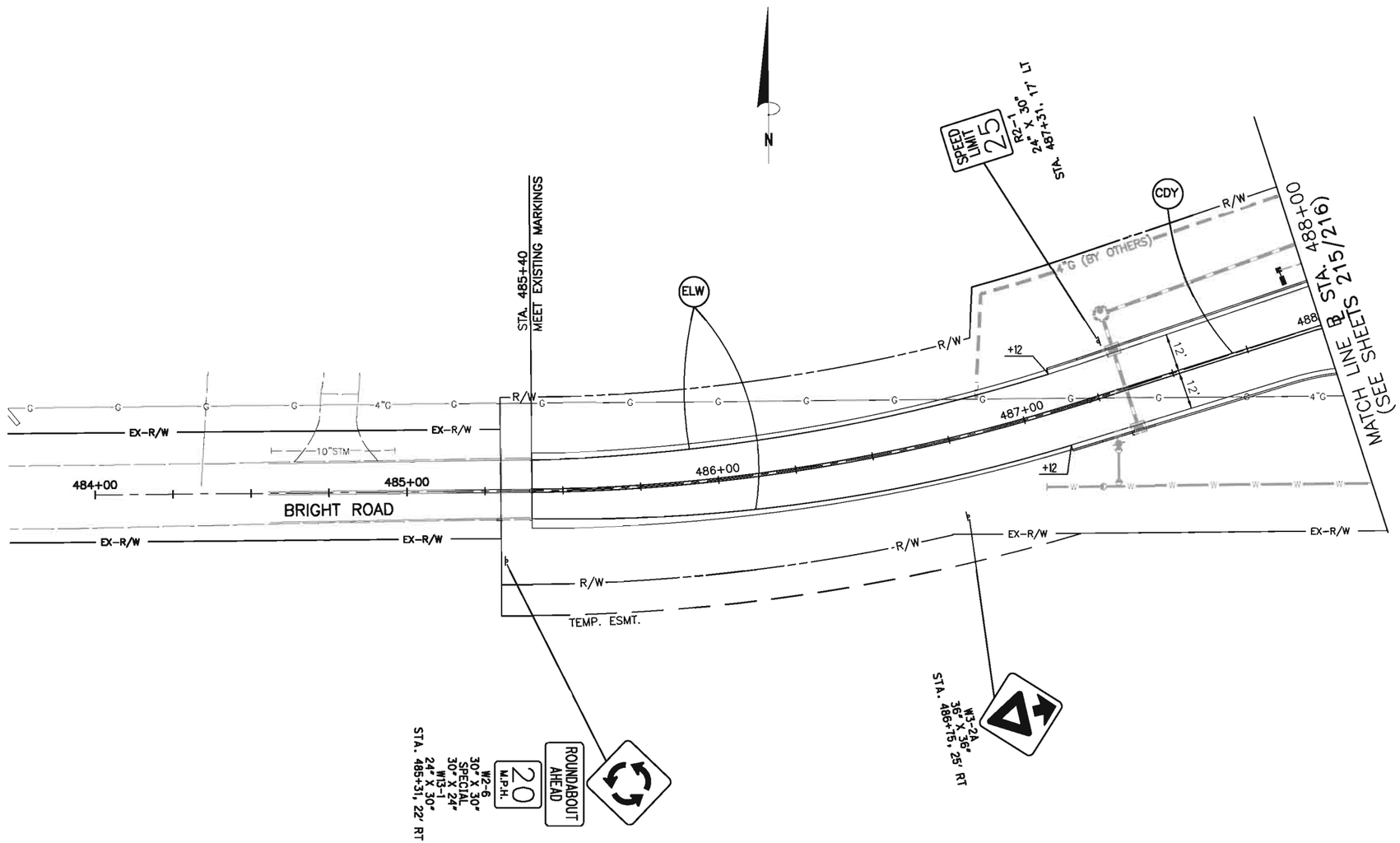
PLOTTED: 10/29/2013 12:33:53 PM
P:\PR44959\cadd\Sign and PM 013.dwg 10/25/2013 5:53:36 PM Ward, Will

## PAVEMENT MARKING LEGEND

| | | | |
|---|---|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE | CH | ITEM 644, CHANNELIZING LINE, 8", WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW | CWL | ITEM 644, CROSSWALK LINE, 12", WHITE |
| ELW | ITEM 644, EDGE LINE, 4", WHITE | WOP | ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| SL | ITEM 644, STOP LINE, 24", WHITE | A | ITEM 644, 72", ARROW, WHITE |

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**SIGNING AND PAVEMENT MARKING PLAN**
**BRIGHT ROAD**
**STA. 484+00 TO STA. 488+00**

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 218 OF 275

PLOTTED: 10/28/2013 7:11:46 PM
P:\PR44959\cadd\Sign and PM 014.dwg 10/25/2013 5:53:42 PM Ward, Will

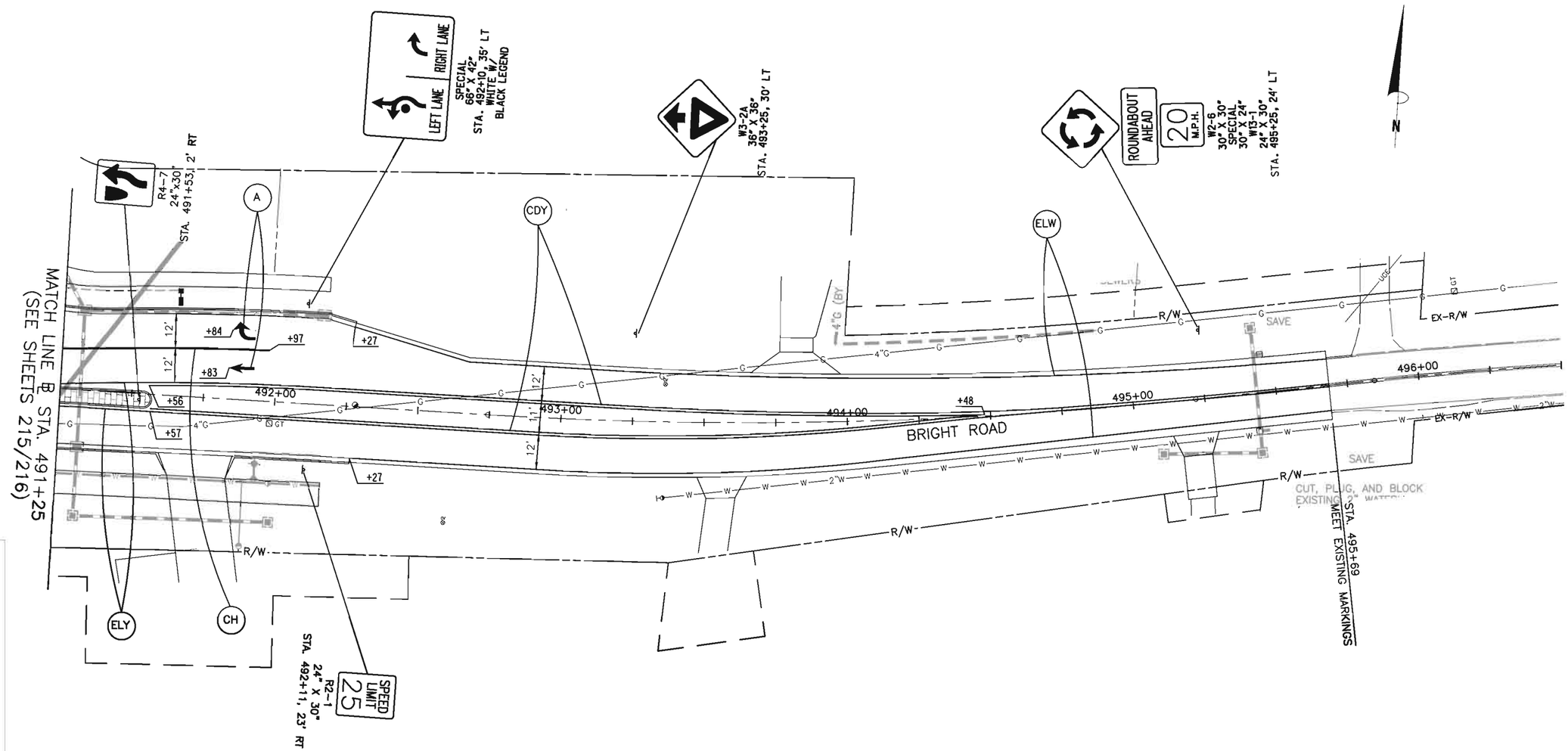
PLOTTED: 10/28/2013 8:56:09 AM

## PAVEMENT MARKING LEGEND

| | | | |
|---|---|---|---|
| LL | ITEM 644, LANE LINE, 4", WHITE | CH | ITEM 644, CHANNELIZING LINE, 8", WHITE |
| CDY | ITEM 644, CENTER LINE, 4", DOUBLE YELLOW | CWL | ITEM 644, CROSSWALK LINE, 12", WHITE |
| ELW | ITEM 644, EDGE LINE, 4", WHITE | WOP | ITEM 644, 84", WORD ON PAVEMENT, WHITE |
| SL | ITEM 644, STOP LINE, 24", WHITE | A | ITEM 644, 72", ARROW, WHITE |

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- EXISTING SIGN TO REMAIN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | EMW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**SIGNING AND PAVEMENT MARKING PLAN**
**BRIGHT ROAD**
**STA. 491+25 TO STA. 496+50**

SCALE:
1" = 20' FULL SIZE
1" = 40' HALF SIZE

SHEET NO. 219 OF 275

P:\PR44959\cadd\Sign and PM 015.dwg 10/27/2013 6:13:46 PM Ward, Will

## ITEM 614 - MAINTAINING TRAFFIC

NO LANE CLOSURES ON RIVERSIDE DRIVE AND EMERALD PARKWAY WILL BE PERMITTED DURING THE WEEK OF THE MEMORIAL TOURNAMENT. THE TOURNAMENT IS TYPICALLY SCHEDULED FOR THE FIRST WEEKEND OF JUNE AND INCLUDES THE WEEK PRECEDING THAT WEEKEND. THE MEMORIAL TOURNAMENT IS MAY 26 TO JUNE 1, 2014.

A MINIMUM OF ONE (1) LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, INCLUDING ALL DRIVEWAYS, BY USE OF THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT, AND TEMPORARY SURFACES USING ITEMS 410 AND 614.

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

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE CITY OF DUBLIN AT LEAST 14 DAYS IN ADVANCE OF ANY PLANNED LANE CLOSURES OR OTHER DISRUPTION OF TRAFFIC.

THE CONTRACTOR SHALL PROVIDE, ERECT AND MAINTAIN STANDARD 48 X 30 INCH "ROAD CLOSED" SIGNS, SIGN SUPPORTS, BARRICADES AND LIGHTS, AS DETAILED IN SCD MT-101.60 AT THE FOLLOWING LOCATIONS DURING PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC.

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|---|---|
| EMERALD PARKWAY NEAR STA. 226+75 | TYPE III BARRICADES |
| EMERALD PARKWAY NEAR STA. 172+25 | TYPE III BARRICADES |
| BRIGHT ROAD NEAR STA. 488+00 | TYPE III BARRICADES |
| BRIGHT ROAD NEAR STA. 491+50 | TYPE III BARRICADES |

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

## CONSTRUCTION INITIATION

THE CONTRACTOR WILL NOTIFY THE ENGINEER AND THE CITY OF DUBLIN 14 DAYS PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. THE CONTRACTOR WILL IMMEDIATELY INFORM THE ENGINEER AND THE CITY OF DUBLIN OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION PROJECT.

## MAINTENANCE OF TRAFFIC PHASING NOTES

THE PROJECT WILL CONSTRUCT THE PORTION OF EMERALD PARKWAY BETWEEN RIVERSIDE DRIVE AND THE EXISTING TERMINATION OF EMERALD PARKWAY SOUTH OF HARD ROAD. THE PROJECT ALSO INCLUDES THE CONSTRUCTION OF A ROUNDABOUT AT THE INTERSECTION OF BRIGHT ROAD AND EMERALD PARKWAY, A NORTHBOUND RIGHT TURN LANE ON RIVERSIDE DRIVE AT EMERALD PARKWAY AND AN AEP DUCT SYSTEM THAT CROSSES THE INTERSECTION OF RIVERSIDE DRIVE AND EMERALD PARKWAY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFE TRANSITION OF TRAFFIC BETWEEN MOT PHASES.

PHASE 1

A. MAINTAIN EXISTING TRAFFIC AS IS IN ALL AREAS OF THE PROJECT; HOWEVER, DURING THE TIMES/DATES STATED BELOW RIVERSIDE DRIVE MAY BE REDUCED TO ONE (1) LANE IN EACH DIRECTION AND THE EASTBOUND EMERALD PARKWAY LANES WEST OF RIVERSIDE DRIVE WILL NEED TO BE ADJUSTED TO MATCH THE RECEIVING LANES. A MINIMUM OF ONE (1) EASTBOUND LANE ON EMERALD PARKWAY SHALL BE MAINTAINED. MAINTAIN TURN LANES ON RIVERSIDE DRIVE AT THE EMERALD PARKWAY INTERSECTION WHEN POSSIBLE.

B. CLEARING AND GRUBBING MAY BEGIN. INSTALL APPROPRIATE EROSION CONTROL. WORK ON THE EAST SIDE OF RIVERSIDE MAY BE PERFORMED DURING ANY PHASE. MASS EXCAVATION AND EMBANKMENT MAY START. PROPOSED STORM, SANITARY, AND WATER MAIN WORK MAY BEGIN.

C. CONSTRUCT THE AEP DUCT BANK UNDER THE RIVERSIDE DRIVE AND EMERALD PARKWAY INTERSECTION VIA OPEN TRENCH METHODS BETWEEN THE HOURS OF 9PM TO 6AM, MONDAY THROUGH FRIDAY. OPEN TRENCHES SHALL BE PLATED OVER DURING ALL OTHER HOURS OR WHEN NOT WORKING IN THE VICINITY. THIS WORK SHALL NOT BEGIN UNTIL AFTER APRIL 20 AND MUST BE COMPLETED IN ONE (1) WEEK.

D. TWO (2) LEOs SHALL BE ON SITE FROM THE START OF THE MOT SET-UP UNTIL IT IS REMOVED EACH NIGHT WHILE COMPLETING THIS WORK.

PHASE 2

A. MAINTAIN EXISTING TRAFFIC AS IS IN ALL AREAS OF THE PROJECT EXCEPT AS STATED BELOW.

B. BEGIN CONSTRUCTION OF ALL PORTIONS OF EMERALD PARKWAY AND THE ROUNDABOUT THAT IS OUTSIDE OF THE CLEARZONE OF RIVERSIDE DRIVE AND BRIGHT ROAD. TRAFFIC SHALL NOT BE AFFECTED DURING THIS WORK.

## MAINTENANCE OF TRAFFIC PHASING NOTES (CONT.)

PHASE 2 (CONTINUED)

C. PROPOSED UTILITY CROSSINGS INCLUDING SEWER, WATER, AND AEP DUCT, UNDER BRIGHT ROAD MAY BE CONSTRUCTED DURING THIS PHASE VIA PART-WIDTH METHODS USING FLAGGERS TO MAINTAIN TWO-WAY TRAFFIC ON ONE (1) LANE ON BRIGHT ROAD. ROAD PLATES SHALL BE USED AND TEMPORARY TRENCH PAVING SHALL BE CONCRETE OR ASPHALT.

D. COMPLETE EMERALD PARKWAY NORTH OF BRIGHT ROAD AND COMPLETE THE PORTION OF PAVEMENT FOR THE WEST AND NORTH LEGS OF THE ROUNDABOUT NECESSARY FOR THE TIE IN OF EMERALD PARKWAY WITH BRIGHT ROAD WEST OF THE ROUNDABOUT AS DETAILED IN THESE PLANS. THIS WORK WILL REQUIRE CONSTRUCTION OF THE ARCH CULVERT, PARAPET, AND WING WALLS AT BILLINGSLEY CREEK. THE TIE IN SHALL BE CONSTRUCTED VIA PART-WIDTH METHODS USING FLAGGERS TO MAINTAIN TWO-WAY TRAFFIC ON ONE (1) LANE ON BRIGHT ROAD.

PHASE 3

A. MAINTAIN EXISTING TRAFFIC AS IS IN ALL AREAS OF THE PROJECT EXCEPT AS STATED BELOW.

B. CONSTRUCT NORTHBOUND RIGHT-TURN-ONLY LANE AND NORTHEAST CORNER IMPROVEMENTS ALONG RIVERSIDE DRIVE. CONTRACTOR MAY IMPLEMENT LANE CLOSURES ALONG RIVERSIDE DRIVE/EMERALD PARKWAY AS DETAILED IN THESE PLANS DURING WORK HOURS. CLOSING OF ONE NORTHBOUND LANE ON RIVERSIDE DRIVE AND ONE LEFT TURN LANE ON EMERALD PARKWAY IS PERMITTED DURING WORK HOURS EXCEPT FOR THE HOURS OF 3PM TO 7PM, MONDAY THROUGH FRIDAY.

C. THE WORK ON RIVERSIDE DRIVE SHALL NOT BEGIN UNTIL THE AEP DUCT BANK INSTALLATION IS COMPLETE, AND SHALL BE COMPLETED PRIOR TO JULY 30, 2014.

D. IMPLEMENT TRAFFIC SIGNAL IMPROVEMENTS AT EMERALD PARKWAY AND RIVERSIDE DRIVE.

E. WHEN THE WEST AND NORTH LEGS OF THE ROUNDABOUT ARE PAVED WITH INTERMEDIATE COURSE, CLOSE BRIGHT ROAD AT EMERALD PARKWAY TO COMPLETE THE ROUNDABOUT EXCEPT THE PORTIONS OF THE WESTERN SPLITTER ISLAND THAT CAN NOT BE CONSTRUCTED IN ORDER TO MAINTAIN TWO (2) LANES AS DETAILED IN THESE PLANS. MAINTAIN LOCAL TRAFFIC EAST OF EMERALD PARKWAY ON BRIGHT ROAD. TRAFFIC ON BRIGHT ROAD WEST OF EMERALD PARKWAY WILL BE DETOURED UP EMERALD PARKWAY TO HARD ROAD VIA THE WEST AND NORTH LEGS OF THE ROUNDABOUT AS SHOWN ON THE DETOUR PLAN. BRIGHT ROAD SHALL REMAIN OPEN TO RIVERSIDE DRIVE FOR THE DURATION OF THE PROJECT.

PHASE 4

A. COMPLETE PROJECT IMPROVEMENTS ALONG ALL AFFECTED ROADS. ALL LANES OPEN TO TRAFFIC (10' MINIMUM LANE WIDTH MAINTAINED).

B. THE CONTRACTOR SHALL MAINTAIN TWO-WAY TRAFFIC DURING MILLING AND OVERLAYING OPERATIONS, INCLUDING TRAFFIC LOOP PLACEMENT.

C. PLACE PAVEMENT MARKINGS AT THE RIVERSIDE DRIVE/EMERALD PARKWAY INTERSECTION BETWEEN 8 PM AND 6 AM WEEKDAYS. COMPLETE SURFACE COURSE AND PAVEMENT MARKINGS ON THE ROUNDABOUT AND THE REMAINDER OF EMERALD PARKWAY.

## ALTERNATE METHODS

THE CONTRACTOR MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS FROM THE CHANGE. NO ALTERNATIVE PLANS SHALL BE PLACED IN EFFECT UNTIL APPROVAL HAS BEEN RECEIVED FROM THE ENGINEER IN WRITING.

## PLACEMENT OF ASPHALT CONCRETE

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

## TEMPORARY PAVEMENT MARKINGS

ALL MATERIALS AND LABOR ASSOCIATED WITH THE INSTALLATION AND REMOVAL OF TEMPORARY PAVEMENT MARKINGS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 – MAINTAINING TRAFFIC.

## CONFLICTING MARKINGS

THE CONTRACTOR SHALL, PRIOR TO PLACING TEMPORARY MARKINGS, REMOVE ALL EXISTING CONFLICTING MARKINGS VISIBLE TO THE TRAVELING PUBLIC DURING DAYLIGHT OR NIGHTTIME HOURS IN ACCORDANCE WITH 614.11 AND 641.10. THE COST FOR REMOVAL OF CONFLICTING MARKINGS SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS.

## COVERING OF SIGNS

THE CONTRACTOR SHALL COVER ALL EXISTING SIGNS THAT CONFLICT WITH THE MAINTENANCE OF TRAFFIC SIGNAGE. COVERING OF SIGNS SHALL BE INCLUDED IN ACCORDANCE WITH 614.07. COSTS FOR COVERING SIGNS SHALL BE INCLUDED WITH ITEM 614 – MAINTAINING TRAFFIC.

## EXISTING TRAFFIC SIGN MAINTENANCE

SPECIAL CARE SHALL BE TAKEN TO MAINTAIN EXISTING STREET NAME SIGNS AND STOP SIGNS DURING CONSTRUCTION. IF NECESSARY, THE CONTRACTOR SHALL RELOCATE THESE SIGNS OUT OF THE WAY OF CONSTRUCTION, BUT IN CONFORMANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

## TRENCH FOR WIDENING

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

## ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOs) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOs SHOULD NOT BE USED WHERE THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD) INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS:

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

- DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G. DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF CMS 614 AND THE OMUTCD, A UNFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURE/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOs SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

- WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

LEOs SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOs WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOs WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOs. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOs' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

LEOs (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614 – LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614 – LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 150 HOURS

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

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614 – LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

## ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, CHANGEABLE MESSAGE SIGNS ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE 'SERVICES' MENU, THEN CLICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FEET AND 475 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON THE PLAN SHEETS. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE CITY ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE TYPE G RETROREFLECTIVE SHEETS SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE CITY PERSONNEL TO OPERATE AND TROUBLESHOOT TO UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY OR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGNS BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND/OR THE CITY TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE CITY DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614 PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN - 2 EACH

## MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

1. EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.

2. NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE CITY OF DUBLIN AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO, AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE CITY OF DUBLIN FOR POLICE SERVICES AND MAINTENANCE SERVICES BY CITY FORCES SHALL BE DEDUCTED FROM MONEYS DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE CITY OF DUBLIN TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM. WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 6 HOURS AND SHALL NOT INCLUDE THE HOURS OF 6 AM TO 9AM AND 4 PM TO 7 PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY 'STOP' SIGNS, EXCEPT FOR THE FOLLOWING INTERSECTIONS WHICH SHALL BE PROTECTED BY OFF-DUTY CITY OF DUBLIN POLICE, THE FRANKLIN COUNTY SHERIFF'S DEPARTMENT, OR THE STATE HIGHWAY PATROL, HIRED BY THE CONTRACTOR:

1. EMERALD PARKWAY AND RIVERSIDE DRIVE
2. TULLER ROAD AND RIVERSIDE DRIVE

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.25.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

1. TIME OF NOTIFICATION OF MALFUNCTION
2. TIME OF WORK CREW'S ARRIVAL TO CORRECT THE MALFUNCTION
3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED.
4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE
5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

## SIGNS, VERTICAL PANELS AND DRUMS

ALL CONSTRUCTION SIGNS, VERTICAL PANELS, AND DRUMS SHALL CONFORM TO THE OMUTCD AND THE LATEST REVISION OF THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS.

ALL CONSTRUCTION SIGNAGE SHALL BE INSTALLED AND COVERED BEFORE CONSTRUCTION BEGINS. AFTER CONSTRUCTION SIGN INSTALLATION, THE CONTRACTOR SHALL NOTIFY THE ENGINEER 3 WORKINGS DAYS BEFORE WORK BEGINS AND REQUEST AN INSPECTION OF ALL SIGNAGE.

FACES OF CONSTRUCTION SIGNS SHALL BE TYPE "H" (VIP). ALL ORANGE CONSTRUCTION SIGNS SHALL BE FLUORESCENT ORANGE. ALL SHEETING WILL BE TESTED FOR REFLECTIVITY PER ODOT 730.192. VERTICAL PANELS AND DRUM BANDS SHALL BE REFLECTORIZED WITH TYPE "G" (HIGH INTENSITY) SHEETING COMPLYING WITH THE REQUIREMENTS OF 730.19. ALL SIGNS, VERTICAL PANELS, AND DRUMS WILL BE LIKE NEW AND IN GOOD CONDITION IN CONFORMANCE WITH "QUALITY STANDARDS FOR WORK ZONE TRAFFIC CONTROL DEVICES" PUBLISHED BY ATSSA.

MAINTENANCE OF ALL CONTRACTOR SUPPLIED SIGNS, VERTICAL PANELS, AND DRUMS IS THE CONTRACTOR'S RESPONSIBILITY. IF THE CONTRACTOR FAILS TO CORRECT DEFICIENCIES WITHIN 4 HOURS OF NOTIFICATION, THE CITY WILL CORRECT OR HIRE SOMEONE TO CORRECT THE DEFICIENCIES. THE CONTRACTOR WILL THEN BE BACK-CHARGED PER ODOT 614.14. IN THE CASE THAT BACK-CHARGING THE CONTRACTOR IS NOT APPLICABLE, THE CITY WILL RESCIND AND WITHHOLD ALL PERMITS ISSUED TO THE CONTRACTOR TO WORK WITHIN CITY RIGHT-OF-WAY UNTIL THE ISSUE IS SETTLED.

THESE PROVISIONS SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF ANY OF HIS LEGAL RESPONSIBILITIES OR LIABILITIES FOR THE SAFETY OF THE PUBLIC.

ALL DRUMS IN TAPERS AND CURVES SHALL HAVE YELLOW "C" STEADY BURN LIGHTS.

CHANGEABLE MESSAGE SIGN
(PRE–CLOSURE NOTIFICATION)

| | | | |
|---|---|---|---|
| A | BRIGHT ROAD CONST | B | BRIGHT ROAD CONST |
| | STARTING DATE | | STARTING DATE |

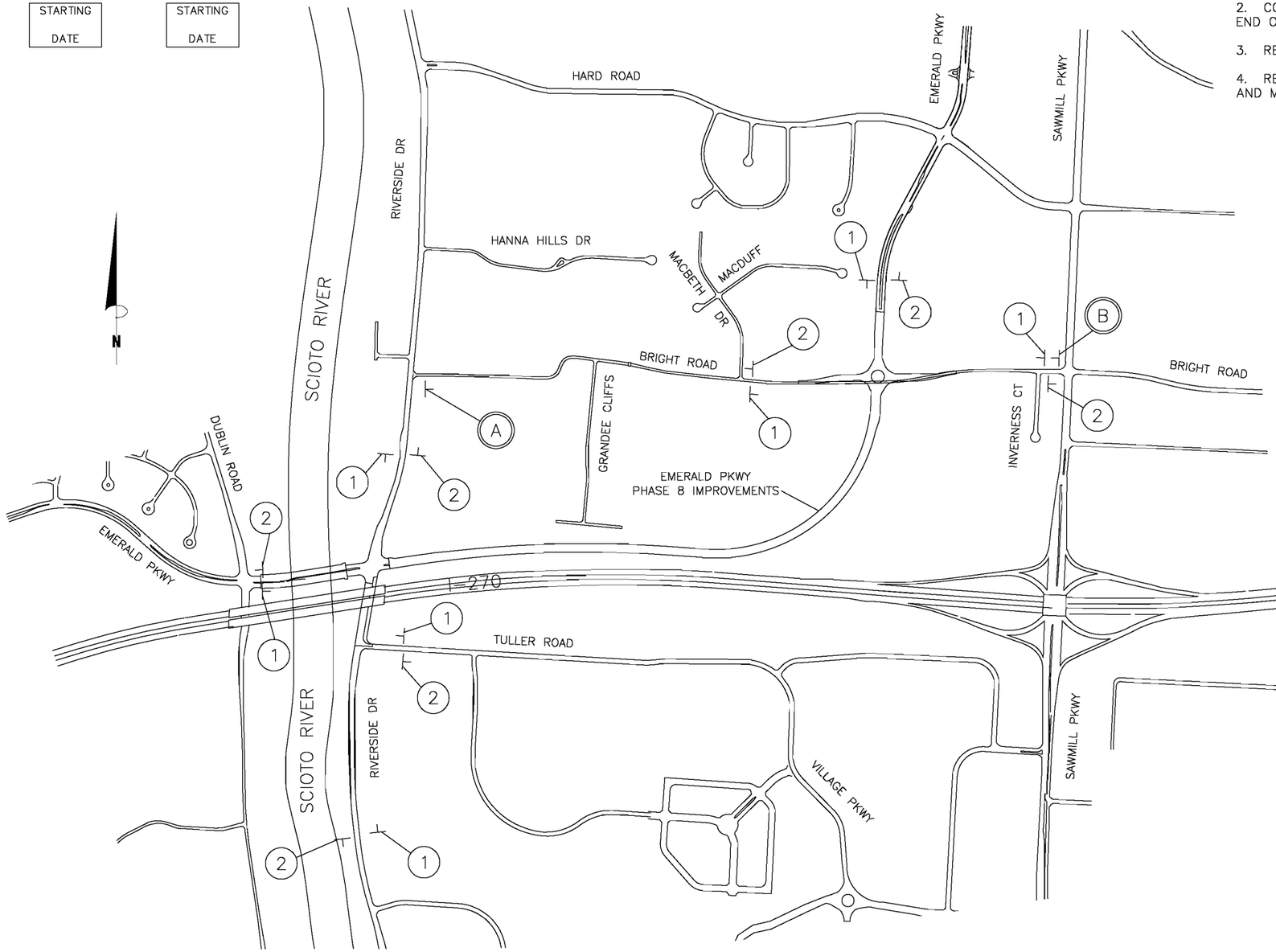
NOTES:

1. INSTALL PORTABLE CHANGEABLE MESSAGE SIGNS AT LEAST ONE WEEK PRIOR TO CLOSURE. COORDINATE PLACEMENT AND REMOVAL OF PCMS WITH THE ENGINEER.

2. CONTRACTOR TO MAINTAIN THE SIGNS SHOWN ON THIS SHEET UNTIL THE END OF THE PROJECT, UNLESS OTHERWISE DIRECTED BY THE ENGINER.

3. REFER TO SHEET 223 FOR PHASE–SPECIFIC DETOUR SIGNING.

4. REFER TO SEPARATE MOT PHASE SHEETS FOR PHASE–SPECIFIC MOT SIGNING AND MARKING DETAILS.




SIGN LEGEND
(PLACE FOR ALL PHASES)

| | | |
|---|---|---|
| 1 | ROAD WORK AHEAD | W20–1–36 |
| 2 | END ROAD WORK | G20–2–48 |

PHASE 1 & 2

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | ACW |
| DRAWN BY: | ACW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

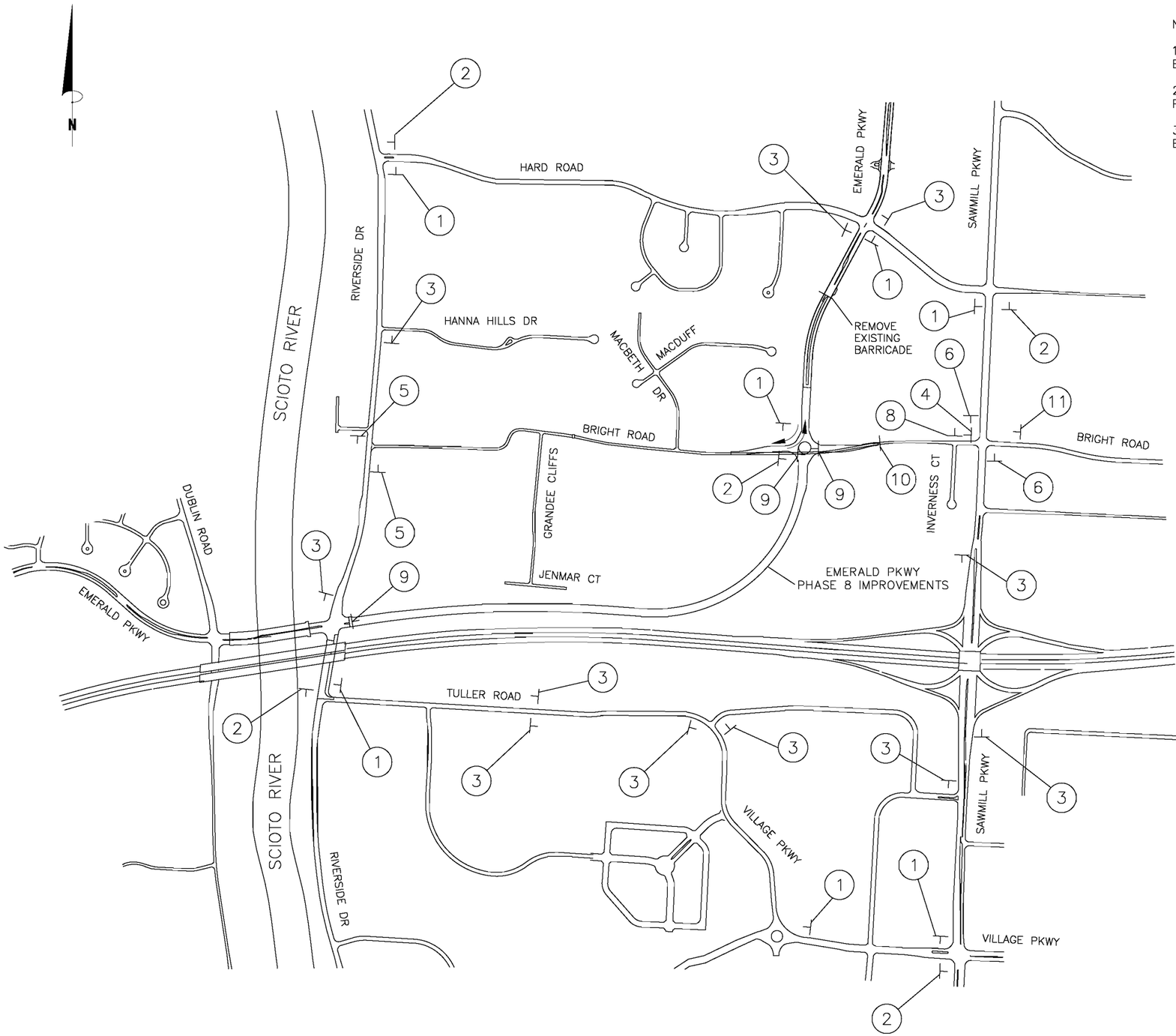
MAINTENANCE OF TRAFFIC
WORK ZONE SIGNING

SCALE: FULL SIZE 1"=500' HALF SIZE 1"=1000'

SHEET NO. 222 OF 275

PLOTTED: 10/30/2013 9:09:07 AM
P:\PR44959\cadd\MOT Detour 02.dwg 10/30/2013 8:57:44 AM Spielberg, Michael

PLOTTED: 10/30/2013 11:01:47 AM




NOTES:

1. SEE STANDARD CONSTRUCTION DRAWING MT-101.60 FOR FULL ROAD CLOSURE BARRICADE SET UP AT WORK AREA AND APPROACH SIGNING.

2. CONTRACTOR SHALL MAINTAIN ACCESS TO PROPERTIES AFFECTED BY THE PROJECT.

3. THE ENGINEER SHALL HAVE THE RIGHT TO RELOCATE THE SIGNS AS DRIVER BEHAVIOR AND CONDITIONS CHANGE.

## SIGN LEGEND (PHASE 3 ONLY)

1. BRIGHT RD / DETOUR →
2. BRIGHT RD / DETOUR ←
3. BRIGHT RD / DETOUR ↑
4. ROAD CLOSED TO THRU TRAFFIC 0.2 MILES — R11-4-48
5. BRIGHT RD CLOSED TO THRU TRAFFIC / DETOUR ↑
6. BRIGHT RD CLOSED TO THRU TRAFFIC WEST OF SAWMILL RD / DETOUR ↑
7. DETOUR ← NOT USED
8. DETOUR →
9. ROAD CLOSED / DO NOT ENTER
10. ROAD CLOSED / DO NOT ENTER / ACCESS TO DRIVEWAYS MAINTAINED
11. BRIGHT ROAD CLOSED TO THRU TRAFFIC AHEAD 0.2 MILES / DETOUR →

PHASE 3 & 4

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

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BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

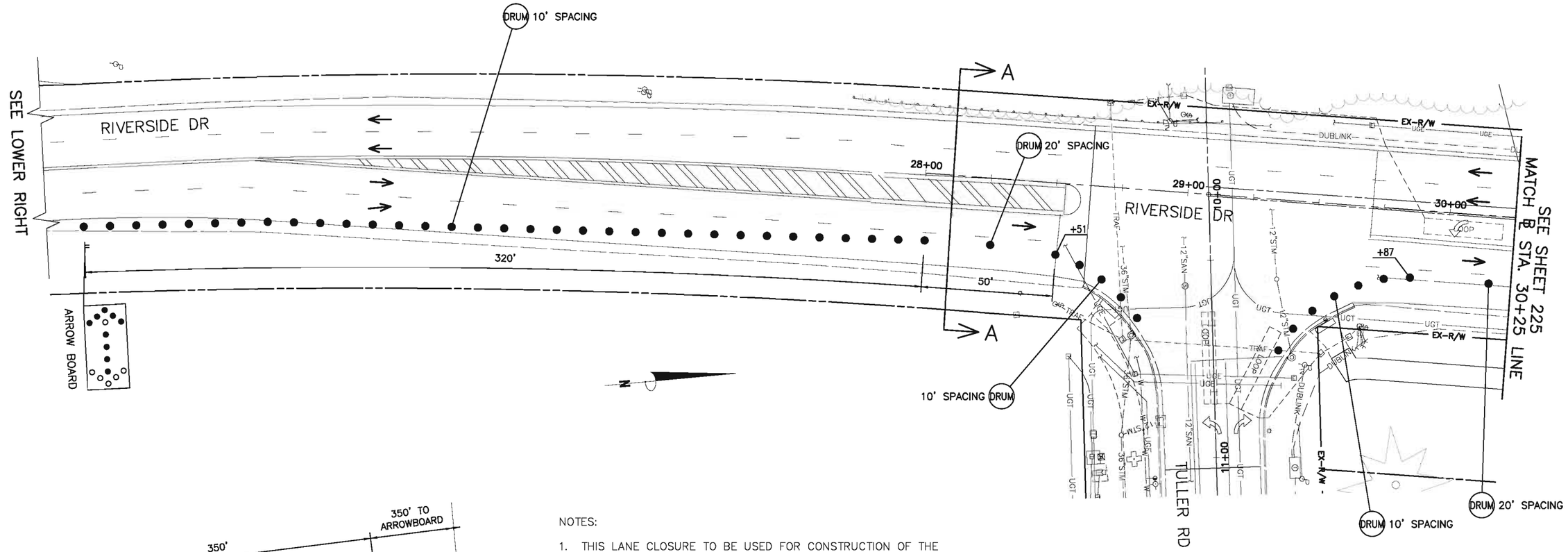
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | ACW |
| DRAWN BY: | ACW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

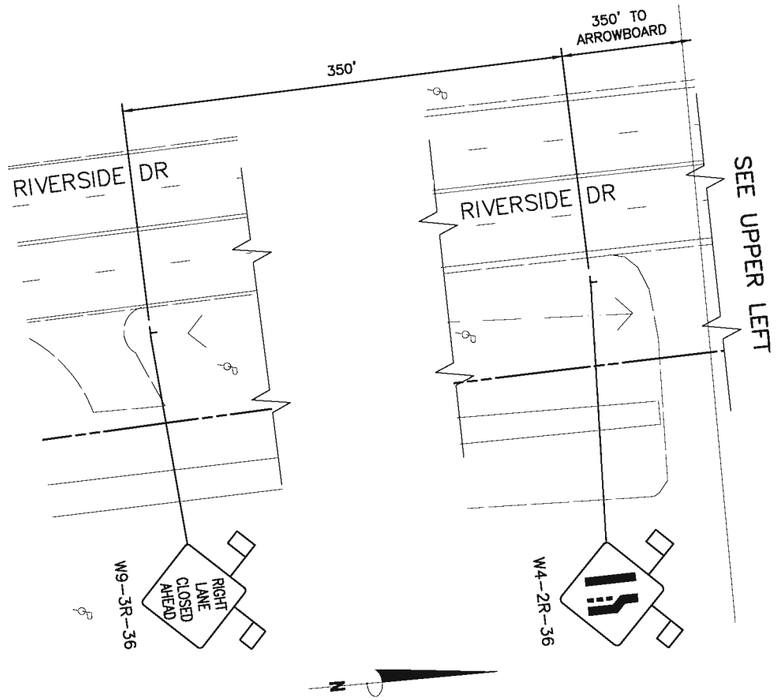
**MAINTENANCE OF TRAFFIC DETOUR SIGNING**

SCALE: FULL SIZE 1"=500' HALF SIZE 1"=1000'

SHEET NO. 223 OF 275

P:\PR44959\cadd\MOT Detour 02.dwg 10/30/2013 9:09:36 AM Ward, Will

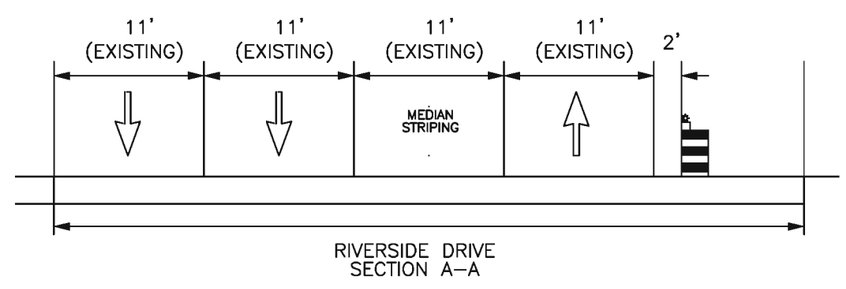



NOTES:

1. THIS LANE CLOSURE TO BE USED FOR CONSTRUCTION OF THE NEW EDGE OF ROADWAY ALONG RIVERSIDE DRIVE BETWEEN TULLER ROAD AND EMERALD PARKWAY.
2. IMPLEMENT THIS LANE CLOSURE ONLY DURING APPROVED WEEKDAY AND/OR WEEKEND CONSTRUCTION HOURS. REFER TO MOT NOTES SHEET 220 FOR APPROVED CONSTRUCTION HOURS.
3. THE DROP-OFF REQUIREMENTS STATED IN SCD MT-101.90 SHALL BE MET AT ALL TIMES. DURING WORK HOURS AND AT THE END OF EACH WORK DAY WHEN TRAVEL LANES ARE RESTORED, ANY DROP-OFF CONDITION SHALL MEET THE REQUIREMENTS OF MT-101.90.
4. THESE PLANS ARE SUPPLEMENTED BY THE WORK ZONE SIGNING REQUIREMENTS SHOWN ON SHEET 222.

| MAINTENANCE OF TRAFFIC LEGEND | |
|---|---|
| DRUM | DRUMS (WITH SPACING) |
| ← | DIRECTION OF TRAVEL |




RIVERSIDE DRIVE
SECTION A-A

| SIGNING LEGEND | |
|---|---|
| | EXISTING GROUND MTD. SIGN SUPPORT |
| | PROPOSED GROUND MTD. SIGN SUPPORT |
| • | DRUM |
| | TYPE III BARRICADE |
| | EXISTING SIGN |
| | PROPOSED SIGN |
| | EXISTING SIGN TO BE REMOVED |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | ACW |
| DRAWN BY: | ACW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

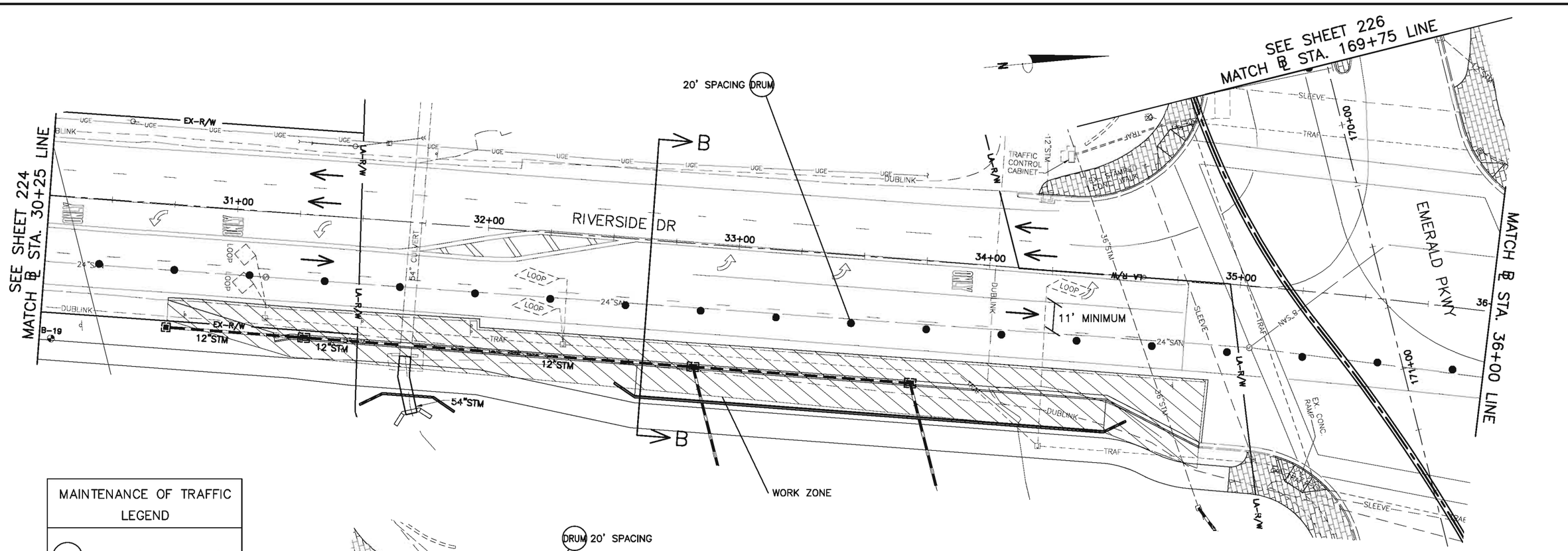
MOT PHASE 3 DETAILS

SCALE: 1" = 20'

SHEET NO. 224 OF 275

PLOTTED: 10/30/2013 9:12:28 AM
P:\PR44959\cadd\MOT Phase 3 - Riverside.dwg 10/30/2013 8:46:56 AM Spielberg, Michael

PLOTTED: 10/30/2013 9:17:33 AM

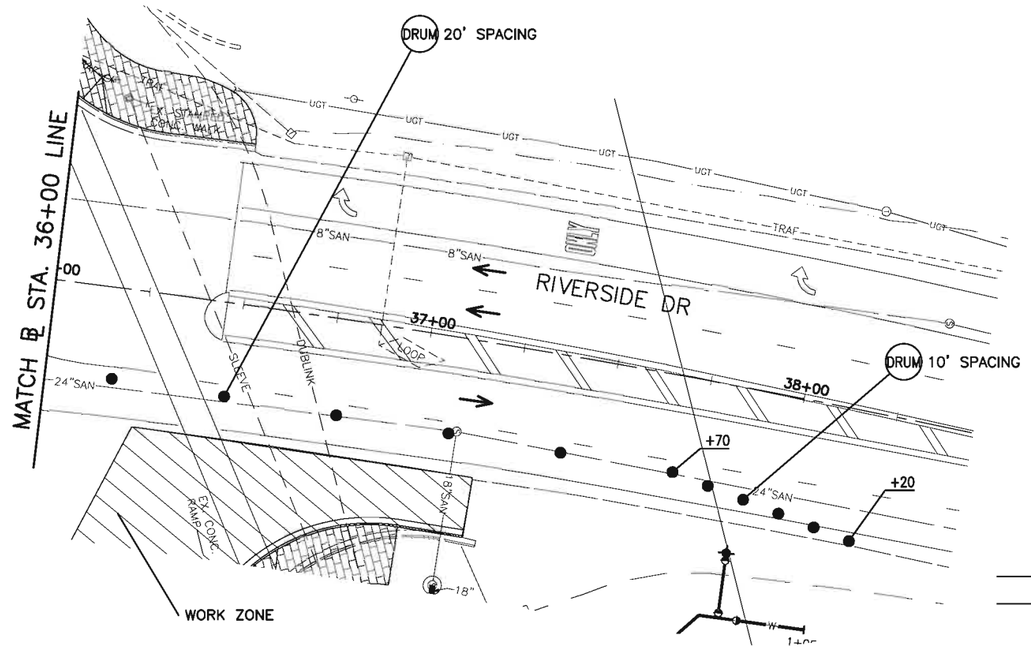



## MAINTENANCE OF TRAFFIC LEGEND

- (DRUM) DRUMS (WITH SPACING)
- ← DIRECTION OF TRAVEL

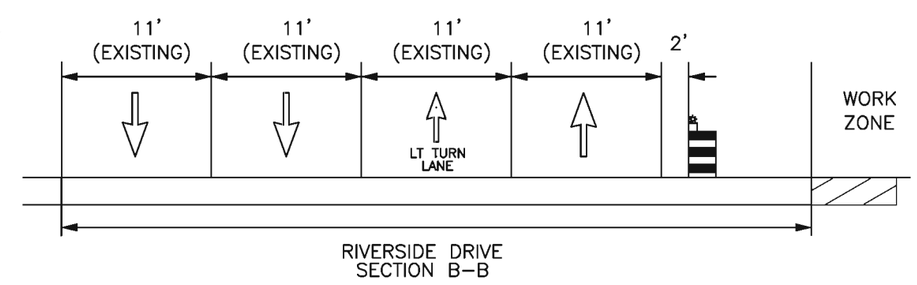
## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- DRUM
- TYPE III BARRICADE
- EXISTING SIGN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED




NOTES:

1. THIS LANE CLOSURE TO BE USED FOR CONSTRUCTION OF THE NEW EDGE OF ROADWAY ALONG RIVERSIDE DRIVE BETWEEN TULLER ROAD AND EMERALD PARKWAY.
2. IMPLEMENT THIS LANE CLOSURE ONLY DURING APPROVED WEEKDAY AND/OR WEEKEND CONSTRUCTION HOURS. REFER TO MOT NOTES SHEET 220 FOR APPROVED CONSTRUCTION HOURS.
3. THE DROP-OFF REQUIREMENTS STATED IN SCD MT-101.90 SHALL BE MET AT ALL TIMES. DURING WORK HOURS AND AT THE END OF EACH WORK DAY WHEN TRAVEL LANES ARE RESTORED, ANY DROP-OFF CONDITION SHALL MEET THE REQUIREMENTS OF MT-101.90.
4. THESE PLANS ARE SUPPLEMENTED BY THE WORK ZONE SIGNING REQUIREMENTS SHOWN ON SHEET 222.




RIVERSIDE DRIVE
SECTION B-B

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

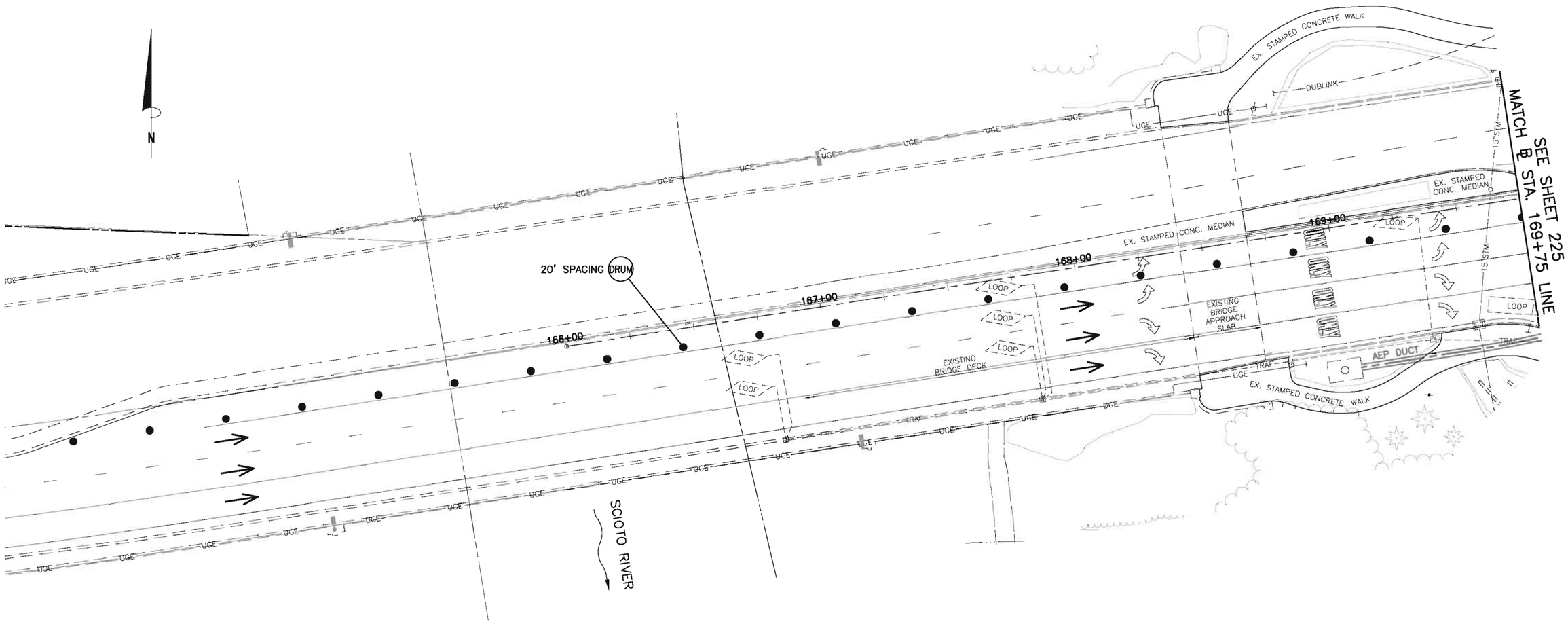
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | ACW |
| DRAWN BY: | ACW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

MOT PHASE 3 DETAILS

SCALE: 1" = 20'

SHEET NO. 225 OF 275

P:\PR44959\cadd\MOT Phase 3 – Riverside.dwg 10/30/2013 8:46:56 AM Spielberg, Michael




| MAINTENANCE OF TRAFFIC LEGEND | |
|---|---|
| DRUM | DRUMS (WITH SPACING) |
| ← | DIRECTION OF TRAVEL |

| SIGNING LEGEND | |
|---|---|
| | EXISTING GROUND MTD. SIGN SUPPORT |
| | PROPOSED GROUND MTD. SIGN SUPPORT |
| • | DRUM |
| | TYPE III BARRICADE |
| | EXISTING SIGN |
| | PROPOSED SIGN |
| | EXISTING SIGN TO BE REMOVED |

NOTES:

1. THIS LANE CLOSURE TO BE USED FOR CONSTRUCTION OF THE NEW EDGE OF ROADWAY ALONG RIVERSIDE DRIVE BETWEEN TULLER ROAD AND EMERALD PARKWAY.
2. IMPLEMENT THIS LANE CLOSURE ONLY DURING APPROVED WEEKDAY AND/OR WEEKEND CONSTRUCTION HOURS. REFER TO MOT NOTES SHEET 220 FOR APPROVED CONSTRUCTION HOURS.
3. THE DROP-OFF REQUIREMENTS STATED IN SCD MT-101.90 SHALL BE MET AT ALL TIMES. DURING WORK HOURS AND AT THE END OF EACH WORK DAY WHEN TRAVEL LANES ARE RESTORED, ANY DROP-OFF CONDITION SHALL MEET THE REQUIREMENTS OF MT-101.90.
4. THESE PLANS ARE SUPPLEMENTED BY THE WORK ZONE SIGNING REQUIREMENTS SHOWN ON SHEET 222.

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

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CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | ACW |
| DRAWN BY: | ACW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

MOT PHASE 3 DETAILS

SCALE: 1" = 20'

SHEET NO. 226 OF 275

PLOTTED: 10/30/2013 9:19:27 AM
P:\PR44959\cadd\MOT Phase 3 - Riverside.dwg 10/30/2013 8:46:56 AM Spielberg, Michael

PLOTTED: 10/30/2013 9:20:59 AM

## SIGNING LEGEND

- EXISTING GROUND MTD. SIGN SUPPORT
- PROPOSED GROUND MTD. SIGN SUPPORT
- DRUM
- TYPE III BARRICADE
- EXISTING SIGN
- PROPOSED SIGN
- EXISTING SIGN TO BE REMOVED

## MAINTENANCE OF TRAFFIC LEGEND

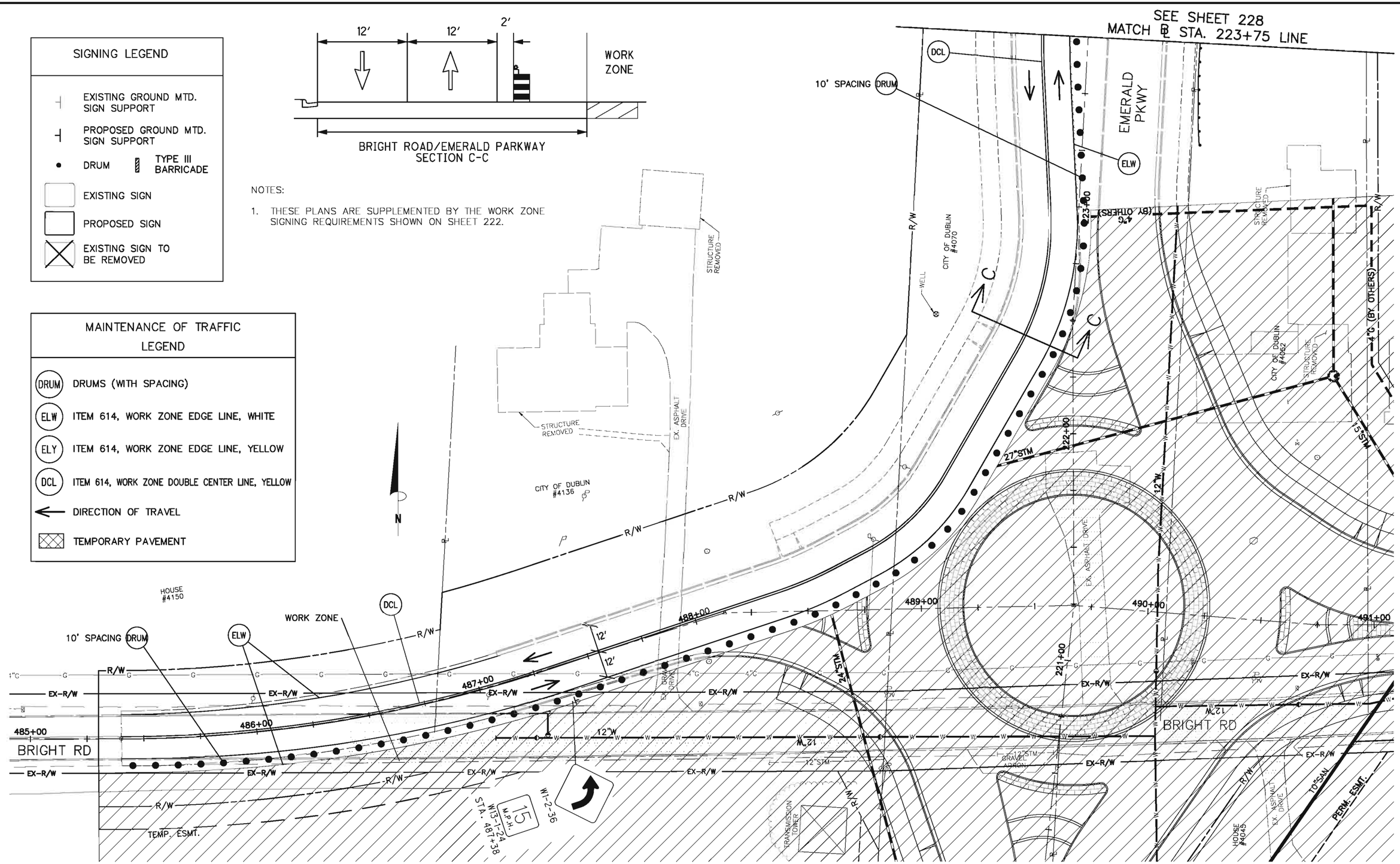
- (DRUM) DRUMS (WITH SPACING)
- (ELW) ITEM 614, WORK ZONE EDGE LINE, WHITE
- (ELY) ITEM 614, WORK ZONE EDGE LINE, YELLOW
- (DCL) ITEM 614, WORK ZONE DOUBLE CENTER LINE, YELLOW
- DIRECTION OF TRAVEL
- TEMPORARY PAVEMENT




BRIGHT ROAD/EMERALD PARKWAY
SECTION C-C

NOTES:

1. THESE PLANS ARE SUPPLEMENTED BY THE WORK ZONE SIGNING REQUIREMENTS SHOWN ON SHEET 222.




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

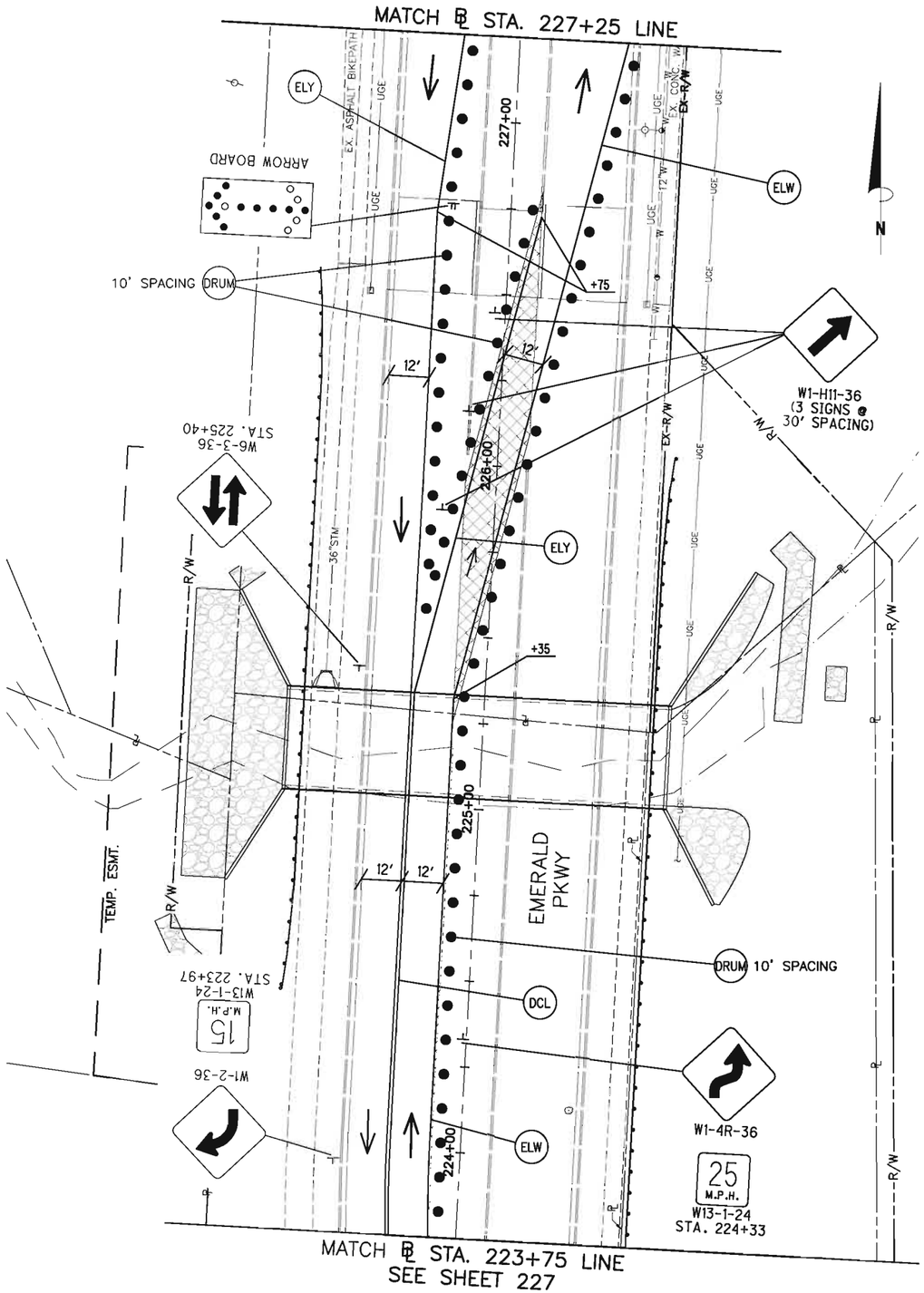
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | WHW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**MOT PHASE 3 DETAILS**

SCALE: 1" = 20'

SHEET NO. 227 OF 275

P:\PR44959\cadd\MOT Phase 3 – Bright.dwg 10/30/2013 8:57:55 AM Ward, Will

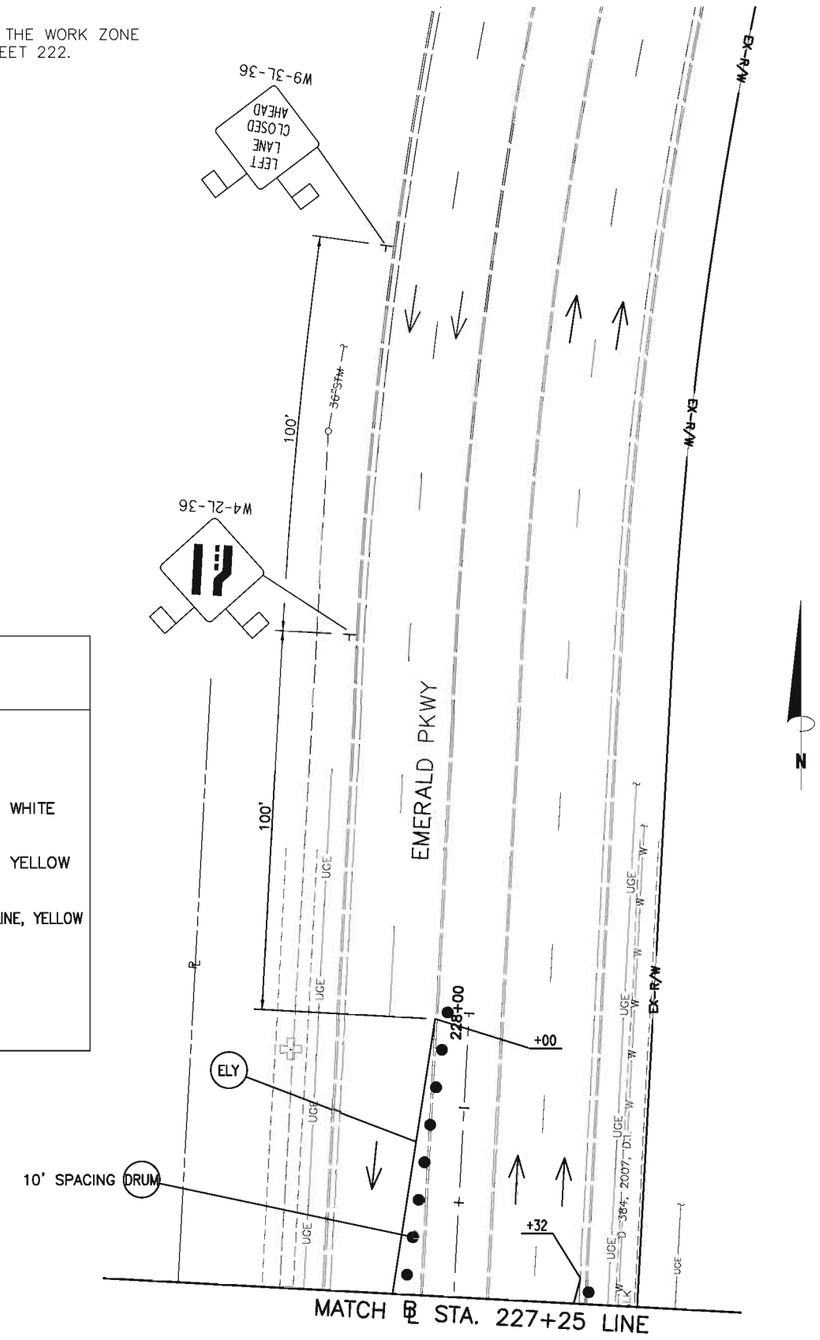



NOTES:

1. THESE PLANS ARE SUPPLEMENTED BY THE WORK ZONE SIGNING REQUIREMENTS SHOWN ON SHEET 222.

| SIGNING LEGEND | |
|---|---|
| | EXISTING GROUND MTD. SIGN SUPPORT |
| | PROPOSED GROUND MTD. SIGN SUPPORT |
| | DRUM / TYPE III BARRICADE |
| | EXISTING SIGN |
| | PROPOSED SIGN |
| | EXISTING SIGN TO BE REMOVED |

| MAINTENANCE OF TRAFFIC LEGEND | |
|---|---|
| DRUM | DRUMS (WITH SPACING) |
| ELW | ITEM 614, WORK ZONE EDGE LINE, WHITE |
| ELY | ITEM 614, WORK ZONE EDGE LINE, YELLOW |
| DCL | ITEM 614, WORK ZONE DOUBLE CENTER LINE, YELLOW |
| ← | DIRECTION OF TRAVEL |
| | TEMPORARY PAVEMENT |




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | EMW |
| DRAWN BY: | WHW |
| CHECKED BY: | SLT |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

MOT PHASE 3 DETAILS

SCALE: 1" = 20'

SHEET NO. 228 OF 275

PLOTTED: 10/30/2013 9:23:03 AM
P:\PR44959\cadd\MOT Phase 3 – Bright.dwg 10/30/2013 8:57:55 AM Ward, Will

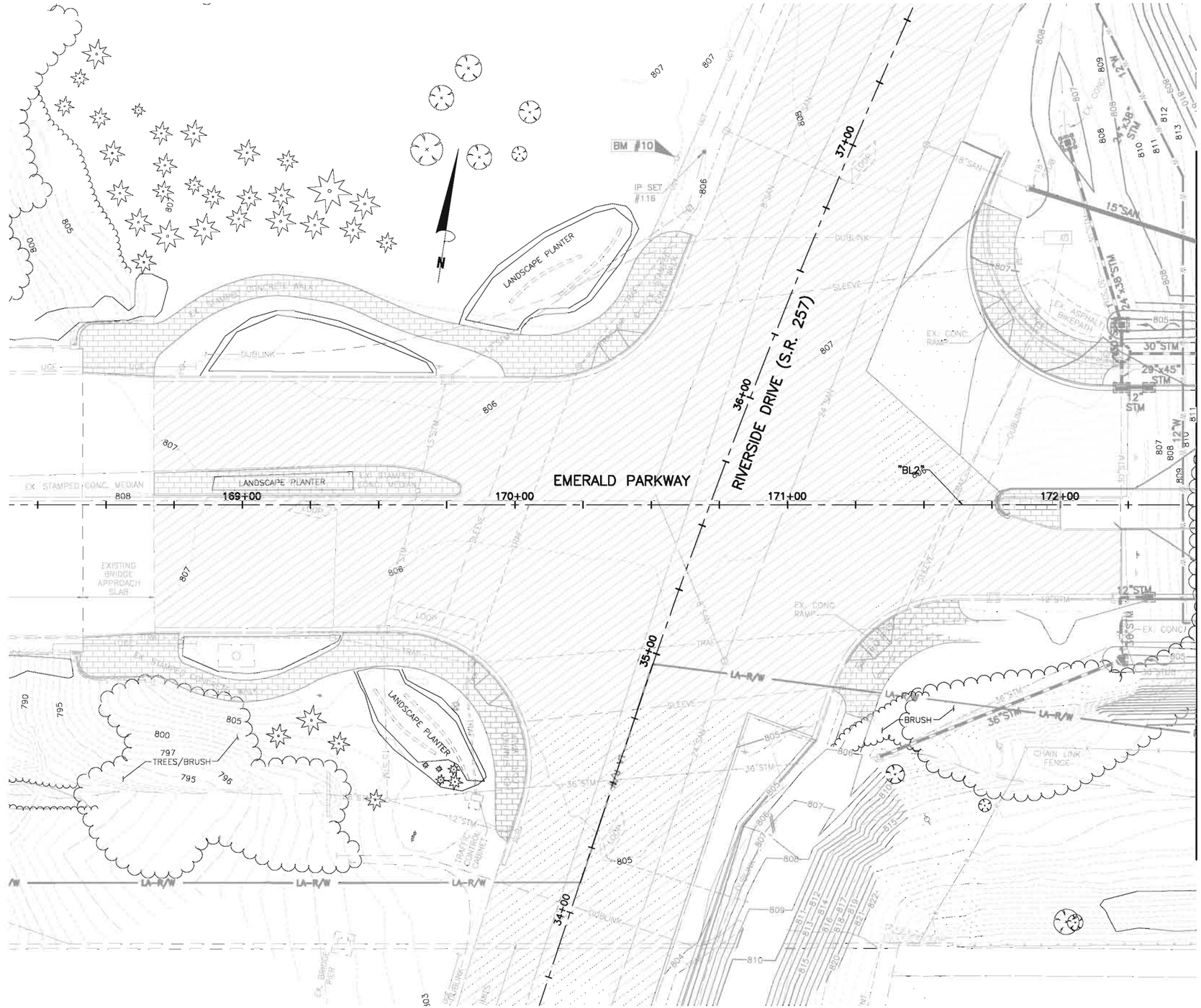
PLOTTED: 10/28/2013 11:43:30 AM

## LEGEND

| | |
|---|---|
| | DECIDUOUS, EVERGREEN (SYMBOL INDICATES APPROX. DRIP LINE – 6" AND ABOVE) |
| | TREE TO BE REMOVED |
| T1 | TREE I.D. |
| —TF— | TREE PROTECTION FENCE |

## TREE PRESERVATION NOTES

1. A PROTECTED TREE SHALL BE DEFINED AS ANY TREE HAVING A TRUNK DIAMETER OF 6-INCHES OR GREATER, AS MEASURED 4.5 FEET ABOVE THE GROUND AT CHEST HEIGHT.
2. ALL TREES NOT SPECIFICALLY DESIGNATED FOR REMOVAL SHALL BE PRESERVED, WHETHER SHOWN OR NOT SHOWN ON THE APPROVED CONSTRUCTION DRAWINGS. WHERE SHOWN ON THE DRAWINGS, HIGH VISIBILITY TREE PROTECTION FENCING SHALL BE PLACED BEYOND THE CRITICAL ROOT ZONE OR 15 FEET FROM THE TRUNK, WHICHEVER IS GREATER, OR AS DIRECTED BY THE CITY LANDSCAPE INSPECTOR.
3. THE CONTRACTOR SHALL LIMIT WORK TO AREAS WITHIN PUBLIC RIGHTS-OF-WAY, EASEMENTS, OR OTHER SPECIFICALLY DESIGNATED WORK AREAS.
4. NO ATTACHMENTS SHALL BE MADE TO ANY PROTECTED TREE. (I.E. NO ROPES, NAILS, WIRES, ETC.) UNLESS APPROVED BY THE CITY LANDSCAPE INSPECTOR.
5. THE CONTRACTOR MAY INSTALL PROTECTION FENCING IN PHASES TO MATCH CONSTRUCTION SEQUENCING TO ALLOW REUSE OF FENCING. HOWEVER, PROTECTION FENCING SHALL REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION FOR ANY PARTICULAR WORK LOCATION. ANY CHANGES TO PROTECTIVE FENCING MUST BE APPROVED BY THE CITY OF DUBLIN.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE CONSTRUCTION, ERECTION, AND MAINTENANCE OF PROTECTION FENCING. TREE PROTECTION FENCING IS SHOWN ON THE PLANS FOR BIDDING PURPOSES AND MAY BE ADJUSTED FOR FIELD CONDITIONS IN ACCORDANCE WITH THE ABOVE REQUIREMENTS.
7. CONTACT THE DIVISION OF ENGINEERING FOR INSPECTION OF PROTECTION FENCING AND INSTALLATION OF PROTECTION ZONE SIGNS PRIOR TO THE START OF CONSTRUCTION.
8. TREES WITH TRUNK DIAMETERS LESS THAN 12 INCHES SHALL BE CONSIDERED BRUSH AND THEIR REMOVAL PAID UNDER ITEM 201, CLEARING AND GRUBBING, WHERE SPECIFICALLY MARKED FOR REMOVAL.
9. THE CITY OF DUBLIN RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES AND/OR STUMPS WITHIN THE LIMITS OF CONSTRUCTION.
10. QUESTIONS CONCERNING TREE PRESERVATION AND SPECIAL PROTECTIVE MEASURES (I.E. HAND PRUNING OF SHOOTS, ETC.) SHOULD BE DIRECTED TO KEN RICHARDSON, P.E., ENGINEERING MANAGER AT 614-410-4631.




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | MKK |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**TREE PRESERVATION PLAN**
**EMERALD PARKWAY**
**℄ STA. 166+50 TO ℄ STA. 172+50**

SCALE: 1" = 20'

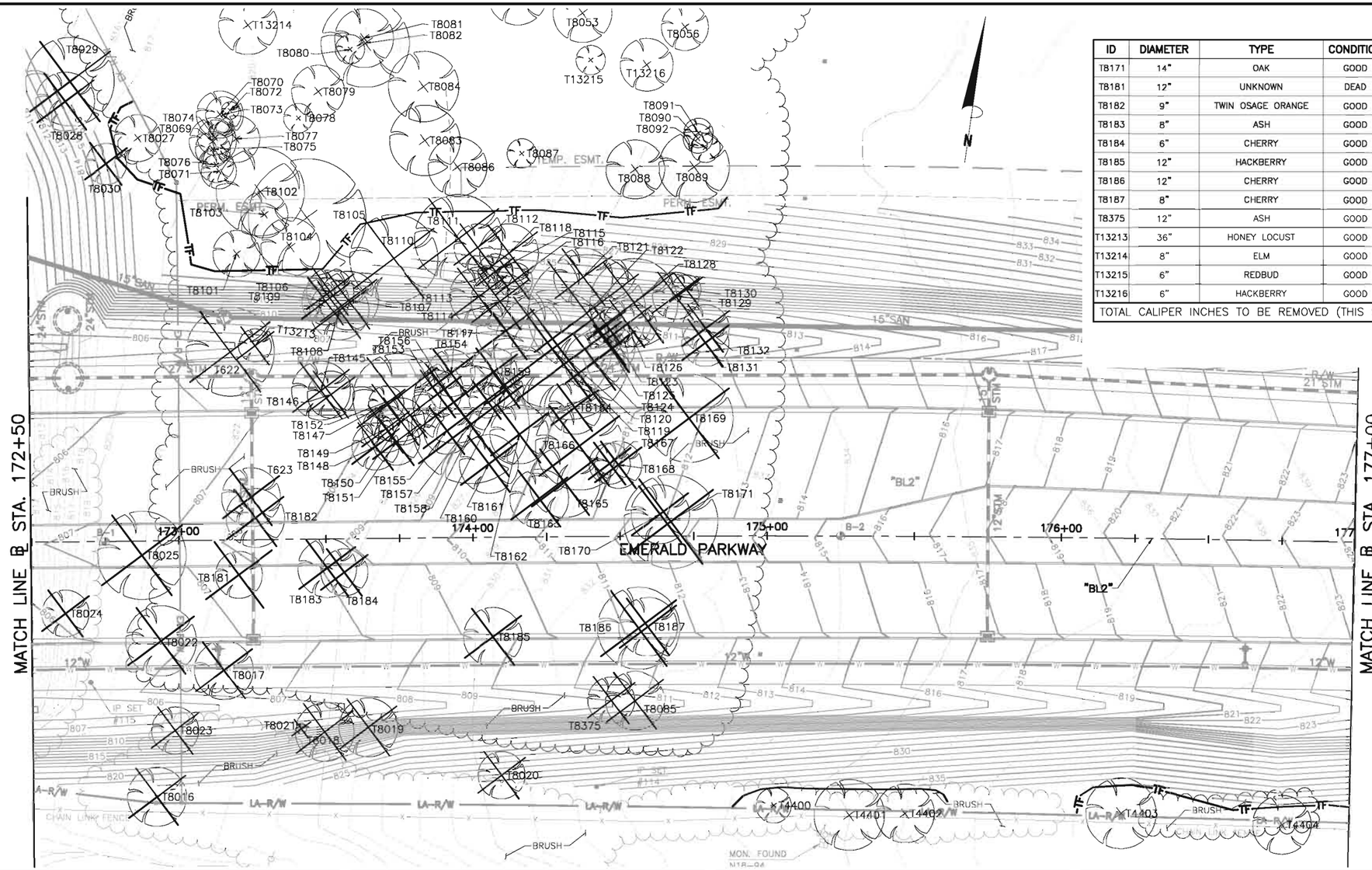
SHEET NO. 229 OF 275

P:\PR44959\cadd\TREEPLAN1-EMERALD.DWG 10/25/2013 5:55:15 PM Ward, Will

PLOTTED: 10/28/2013 11:40:25 AM

## TREE INFORMATION

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T622 | 16" | TWIN HONEY LOCUST | GOOD | REMOVE |
| T623 | 10" | OAK | GOOD | REMOVE |
| T4400 | 8" | OAK | GOOD | – |
| T4401 | 8" | TWIN OAK | GOOD | – |
| T4402 | 10" | CHERRY | GOOD | – |
| T4403 | 16" | OAK | GOOD | – |
| T4404 | 16" | OAK | GOOD | – |
| T8016 | 8" | HAWTHORN | GOOD | REMOVE |
| T8017 | 6" | OSAGE ORANGE | GOOD | REMOVE |
| T8018 | 8" | OSAGE ORANGE | GOOD | REMOVE |
| T8019 | 6" | OSAGE ORANGE | GOOD | REMOVE |
| T8020 | 8" | HACKBERRY | GOOD | REMOVE |
| T8021 | 8" | ELM | DEAD | REMOVE |
| T8022 | 12" | OAK | GOOD | REMOVE |
| T8023 | 6" | LOCUST | GOOD | REMOVE |
| T8024 | 6" | LOCUST | GOOD | REMOVE |
| T8025 | 8" | HONEY LOCUST | GOOD | REMOVE |
| T8027 | 12" | TWIN UNKNOWN | GOOD | – |
| T8028 | 14" | UNKNOWN | GOOD | REMOVE |
| T8029 | 12" | OAK CLUSTER | GOOD | REMOVE |
| T8030 | 16" | TWIN OAK | GOOD | REMOVE |
| T8053 | 10" | HACKBERRY | GOOD | – |
| T8056 | 10" | UNKNOWN | GOOD | – |
| T8069 | 10" | UNKNOWN | GOOD | – |
| T8070 | 10" | OAK | GOOD | – |
| T8071 | 8" | OAK | GOOD | – |
| T8072 | 6" | OAK | GOOD | – |
| T8073 | 12" | OAK | GOOD | – |
| T8074 | 8" | OAK | GOOD | – |
| T8075 | 10" | OAK | GOOD | – |
| T8076 | 12" | OAK | GOOD | – |
| T8077 | 12" | UNKNOWN | GOOD | – |
| T8078 | 6" | HACKBERRY | GOOD | – |
| T8079 | 8" | HACKBERRY | GOOD | – |
| T8080 | 7" | OAK | GOOD | – |
| T8081 | 6" | OAK | GOOD | – |
| T8082 | 22" | CHERRY | GOOD | – |
| T8083 | 18" | TWIN LOCUST | GOOD | – |
| T8084 | 14" | MAPLE | GOOD | – |
| T8085 | 14" | CHERRY | GOOD | REMOVE |
| T8086 | 10" | ELM | GOOD | – |
| T8087 | 6" | CHERRY | GOOD | – |
| T8088 | 8" | MAPLE | GOOD | – |
| T8089 | 10" | ASH | GOOD | – |
| T8090 | 8" | UNKNOWN | GOOD | – |
| T8091 | 12" | HACKBERRY | GOOD | – |
| T8092 | 10" | CHERRY | GOOD | – |
| T8101 | 10" | TWIN UNKNOWN | DEAD | – |
| T8102 | 18" | TWIN LOCUST | GOOD | – |
| T8103 | 12" | LOCUST | DEAD | – |
| T8104 | 10" | ASH | GOOD | – |
| T8105 | 15" | OAK | GOOD | – |




| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T8171 | 14" | OAK | GOOD | REMOVE |
| T8181 | 12" | UNKNOWN | DEAD | REMOVE |
| T8182 | 9" | TWIN OSAGE ORANGE | GOOD | REMOVE |
| T8183 | 8" | ASH | GOOD | REMOVE |
| T8184 | 6" | CHERRY | GOOD | REMOVE |
| T8185 | 12" | HACKBERRY | GOOD | REMOVE |
| T8186 | 12" | CHERRY | GOOD | REMOVE |
| T8187 | 8" | CHERRY | GOOD | REMOVE |
| T8375 | 12" | ASH | GOOD | REMOVE |
| T13213 | 36" | HONEY LOCUST | GOOD | REMOVE |
| T13214 | 8" | ELM | GOOD | – |
| T13215 | 6" | REDBUD | GOOD | – |
| T13216 | 6" | HACKBERRY | GOOD | – |
| TOTAL CALIPER INCHES TO BE REMOVED (THIS SHEET) 908 | | | | |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T8106 | 8" | HACKBERRY | GOOD | REMOVE |
| T8107 | 12" | HACKBERRY | GOOD | REMOVE |
| T8108 | 14" | LOCUST | GOOD | REMOVE |
| T8109 | 11" | OAK | GOOD | REMOVE |
| T8110 | 16" | OAK | GOOD | REMOVE |
| T8111 | 24" | UNKNOWN | DEAD | REMOVE |
| T8112 | 8" | HACKBERRY | GOOD | REMOVE |
| T8113 | 7" | MAPLE | GOOD | REMOVE |
| T8114 | 9" | HACKBERRY | GOOD | REMOVE |
| T8115 | 11" | OAK | GOOD | REMOVE |
| T8116 | 6" | OAK | GOOD | REMOVE |
| T8117 | 14" | LOCUST | GOOD | REMOVE |
| T8118 | 12" | LOCUST | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T8119 | 16" | TWIN HACKBERRY | GOOD | REMOVE |
| T8120 | 18" | LOCUST | GOOD | REMOVE |
| T8121 | 12" | TWIN OAK | GOOD | REMOVE |
| T8122 | 28" | LOCUST | GOOD | REMOVE |
| T8123 | 6" | HACKBERRY | GOOD | REMOVE |
| T8124 | 11" | LOCUST | GOOD | REMOVE |
| T8125 | 7" | HACKBERRY | GOOD | REMOVE |
| T8126 | 8" | HACKBERRY | GOOD | REMOVE |
| T8128 | 14" | HACKBERRY | GOOD | REMOVE |
| T8129 | 6" | OAK | GOOD | REMOVE |
| T8130 | 6" | UNKNOWN | DEAD | REMOVE |
| T8131 | 8" | OAK | GOOD | REMOVE |
| T8132 | 10" | UNKNOWN | DEAD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T8145 | 12" | ELM | GOOD | REMOVE |
| T8146 | 10" | UNKNOWN | DEAD | REMOVE |
| T8147 | 8" | HACKBERRY | GOOD | REMOVE |
| T8148 | 10" | HACKBERRY | GOOD | REMOVE |
| T8149 | 6" | HACKBERRY | GOOD | REMOVE |
| T8150 | 7" | HACKBERRY | GOOD | REMOVE |
| T8151 | 10" | UNKNOWN | DEAD | REMOVE |
| T8152 | 16" | TWIN HACKBERRY | GOOD | REMOVE |
| T8153 | 6" | HACKBERRY | GOOD | REMOVE |
| T8154 | 9" | HACKBERRY | GOOD | REMOVE |
| T8155 | 10" | HACKBERRY | GOOD | REMOVE |
| T8156 | 24" | CHERRY | GOOD | REMOVE |
| T8157 | 24" | HACKBERRY | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T8158 | 6" | HACKBERRY | GOOD | REMOVE |
| T8159 | 6" | HACKBERRY | GOOD | REMOVE |
| T8160 | 6" | HACKBERRY | GOOD | REMOVE |
| T8161 | 10" | HACKBERRY | GOOD | REMOVE |
| T8162 | 8" | HACKBERRY | GOOD | REMOVE |
| T8163 | 15" | OSAGE ORANGE | GOOD | REMOVE |
| T8164 | 11" | HACKBERRY | GOOD | REMOVE |
| T8165 | 11" | HACKBERRY | GOOD | REMOVE |
| T8166 | 14" | HACKBERRY | GOOD | REMOVE |
| T8167 | 8" | HACKBERRY | GOOD | REMOVE |
| T8168 | 8" | OAK | GOOD | REMOVE |
| T8169 | 10" | TWIN HONEY LOCUST | GOOD | REMOVE |
| T8170 | 12" | OSAGE ORANGE | GOOD | REMOVE |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

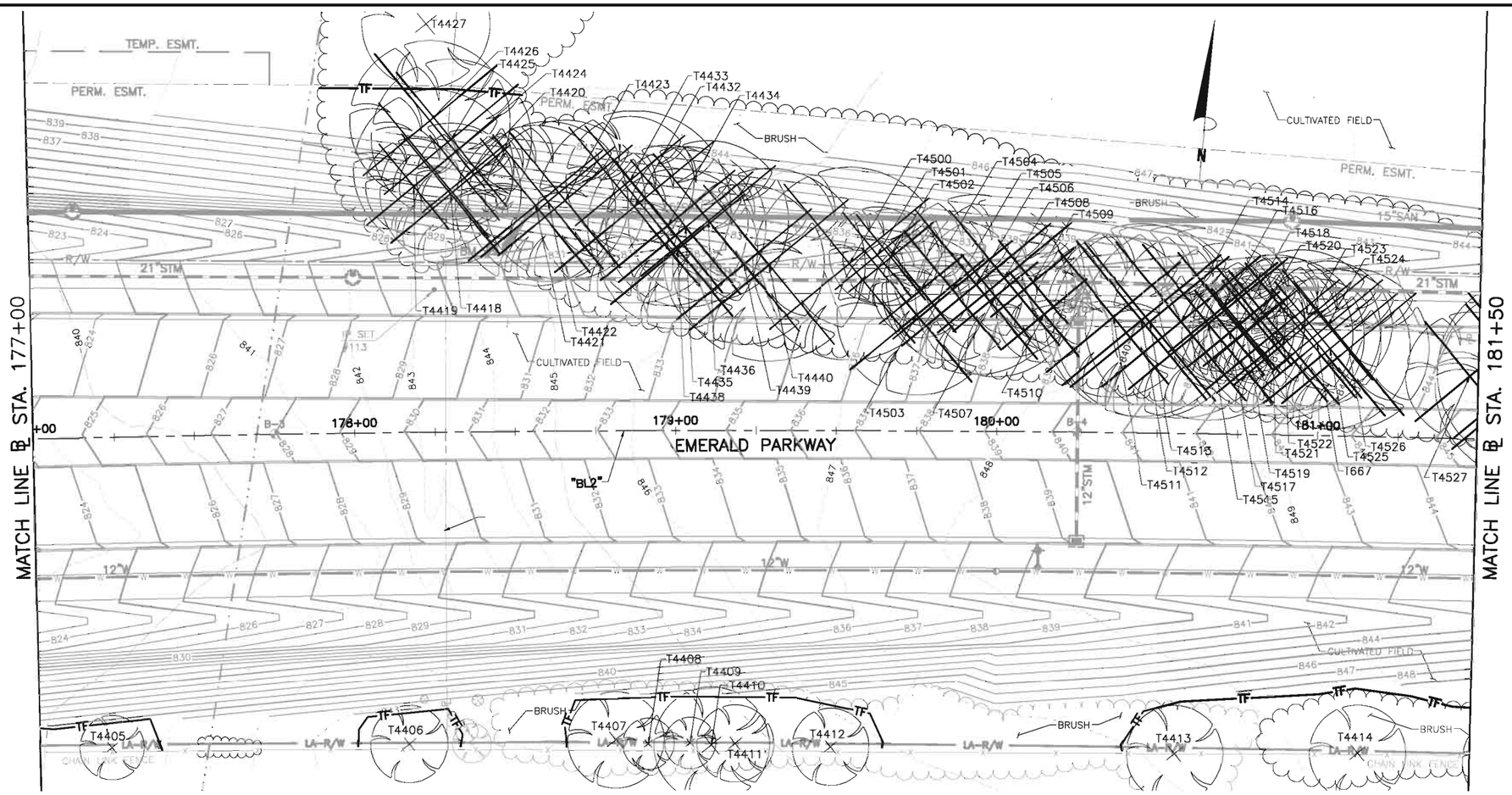
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | MKK |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**TREE PRESERVATION PLAN**
**EMERALD PARKWAY**
**℄ STA. 172+50 TO ℄ STA. 177+00**

SCALE: 1" = 20'

SHEET NO. 230 OF 275

P:\PR44959\cadd\TREEPLAN2-EMERALD.dwg 10/25/2013 5:55:24 PM Ward, Will




## TREE INFORMATION

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T667 | 22" | HACKBERRY | GOOD | REMOVE |
| T4405 | 14" | OAK | GOOD | – |
| T4406 | 10" | HACKBERRY | GOOD | – |
| T4407 | 12" | CHERRY | GOOD | – |
| T4408 | 12" | UNKNOWN | DEAD | – |
| T4409 | 10" | UNKNOWN | DEAD | – |
| T4410 | 18" | CHERRY | GOOD | – |
| T4411 | 12" | OAK | GOOD | – |
| T4412 | 8" | HACKBERRY | GOOD | – |
| T4413 | 14" | TWIN OAK | GOOD | – |
| T4414 | 20" | CHERRY | GOOD | – |
| T4418 | 15" | TWIN HACKBERRY | GOOD | REMOVE |
| T4419 | 12" | HACKBERRY | GOOD | REMOVE |
| T4420 | 12" | HACKBERRY | GOOD | REMOVE |
| T4421 | 12" | HACKBERRY | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T4422 | 12" | HACKBERRY | GOOD | REMOVE |
| T4423 | 14" | TWIN HACKBERRY | GOOD | REMOVE |
| T4424 | 18" | HACKBERRY | GOOD | REMOVE |
| T4425 | 10" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4426 | 14" | TWIN HACKBERRY | GOOD | REMOVE |
| T4427 | 10" | HACKBERRY | GOOD | – |
| T4432 | 14" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4433 | 14" | OAK | GOOD | REMOVE |
| T4434 | 18" | HACKBERRY | GOOD | REMOVE |
| T4435 | 10" | HACKBERRY | GOOD | REMOVE |
| T4436 | 12" | HACKBERRY | GOOD | REMOVE |
| T4438 | 18" | CHERRY | GOOD | REMOVE |
| T4439 | 12" | TWIN HACKBERRY | GOOD | REMOVE |
| T4440 | 18" | HACKBERRY | GOOD | REMOVE |
| T4500 | 24" | TRIPLE OAK | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T4501 | 12" | CHERRY | GOOD | REMOVE |
| T4502 | 10" | CHERRY | GOOD | REMOVE |
| T4503 | 12" | TRIPLE HACKBERRY | GOOD | REMOVE |
| T4504 | 10" | HACKBERRY | GOOD | REMOVE |
| T4505 | 18" | OAK | GOOD | REMOVE |
| T4506 | 20" | OAK CLUSTER | GOOD | REMOVE |
| T4507 | 20" | OAK | GOOD | REMOVE |
| T4508 | 20" | OAK | GOOD | REMOVE |
| T4509 | 10" | CHERRY | GOOD | REMOVE |
| T4510 | 10" | HACKBERRY | GOOD | REMOVE |
| T4511 | 20" | TWIN HACKBERRY | GOOD | REMOVE |
| T4512 | 18" | HACKBERRY | GOOD | REMOVE |
| T4513 | 18" | HACKBERRY | GOOD | REMOVE |
| T4514 | 15" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4515 | 15" | HACKBERRY CLUSTER | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T4516 | 14" | HACKBERRY | GOOD | REMOVE |
| T4517 | 12" | HACKBERRY | GOOD | REMOVE |
| T4518 | 14" | HACKBERRY | GOOD | REMOVE |
| T4519 | 10" | TWIN HACKBERRY | GOOD | REMOVE |
| T4520 | 12" | HACKBERRY | GOOD | REMOVE |
| T4521 | 15" | HACKBERRY | GOOD | REMOVE |
| T4522 | 14" | HACKBERRY | GOOD | REMOVE |
| T4523 | 12" | TWIN HACKBERRY | GOOD | REMOVE |
| T4524 | 22" | HACKBERRY | GOOD | REMOVE |
| T4525 | 24" | TWIN HACKBERRY | GOOD | REMOVE |
| T4526 | 26" | HACKBERRY | GOOD | REMOVE |
| T4527 | 22" | TRIPLE OAK | GOOD | REMOVE |
| TOTAL CALIPER INCHES TO BE REMOVED (THIS SHEET) 706 | | | | |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | MKK |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**TREE PRESERVATION PLAN**
**EMERALD PARKWAY**
**℄ STA. 177+00 TO ℄ STA. 181+50**

SCALE: 1" = 20'

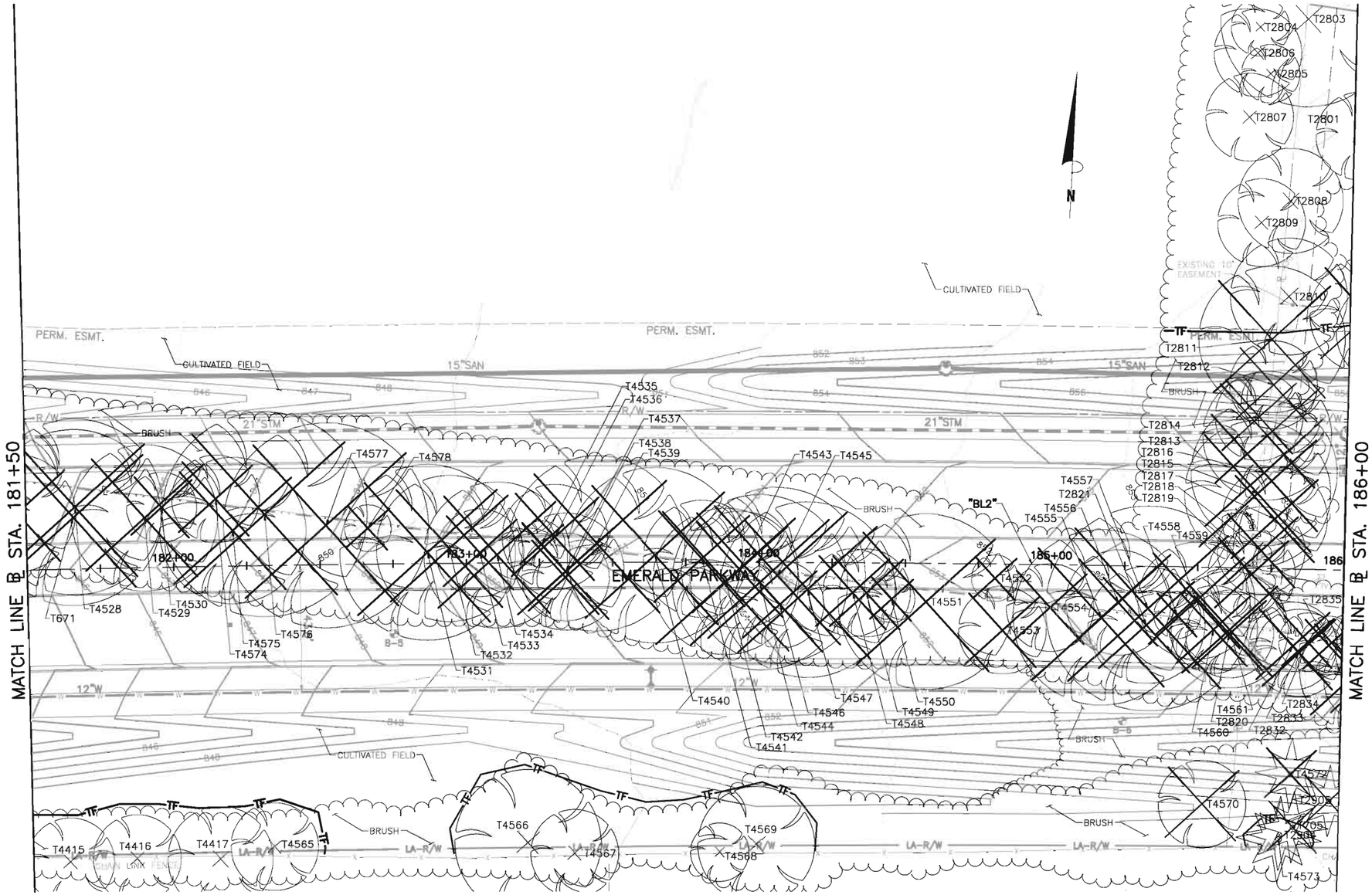
SHEET NO. 231 OF 275

PLOTTED: 10/28/2013 11:47:44 AM
P:\PR44959\cadd\TREEPLAN3-EMERALD.dwg 10/25/2013 5:55:32 PM Ward, Will

PLOTTED: 10/29/2013 11:50:24 AM

## TREE INFORMATION

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T671 | 24" | CHERRY | GOOD | REMOVE |
| T705 | 10" | PINE | GOOD | REMOVE |
| T2801 | 10" | BLADDERNUT CLUSTER | GOOD | – |
| T2803 | 16" | HACKBERRY CLUSTER | GOOD | – |
| T2804 | 10" | HACKBERRY | GOOD | – |
| T2805 | 10" | CHERRY | GOOD | – |
| T2806 | 12" | OAK | GOOD | – |
| T2807 | 10" | CHERRY | GOOD | – |
| T2808 | 34" | OSAGE ORANGE | GOOD | – |
| T2809 | 12" | OAK | GOOD | – |
| T2810 | 18" | CHERRY | GOOD | – |
| T2811 | 18" | TRIPLE OSAGE ORANGE | GOOD | REMOVE |
| T2812 | 10" | TRIPLE HACKBERRY | GOOD | REMOVE |
| T2813 | 14" | HACKBERRY | GOOD | REMOVE |
| T2814 | 12" | ASH | GOOD | REMOVE |
| T2815 | 20" | ASH | GOOD | REMOVE |
| T2816 | 27" | CHERRY | GOOD | REMOVE |
| T2817 | 10" | TWIN HACKBERRY | GOOD | REMOVE |
| T2818 | 12" | HACKBERRY | GOOD | REMOVE |
| T2819 | 12" | HACKBERRY | GOOD | REMOVE |
| T2820 | 14" | HACKBERRY | GOOD | REMOVE |
| T2821 | 18" | ASH | GOOD | REMOVE |
| T2832 | 14" | ASH | GOOD | REMOVE |
| T2833 | 10" | HACKBERRY | GOOD | REMOVE |
| T2834 | 14" | UNKNOWN | DEAD | REMOVE |
| T2835 | 14" | UNKNOWN | DEAD | REMOVE |
| T2904 | 10" | PINE | GOOD | – |
| T2905 | 10" | PINE | GOOD | REMOVE |
| T4415 | 14" | OAK | GOOD | – |
| T4416 | 18" | OAK | GOOD | – |
| T4417 | 15" | OAK | GOOD | – |
| T4528 | 24" | CHERRY | GOOD | REMOVE |
| T4529 | 20" | HACKBERRY | GOOD | REMOVE |
| T4530 | 12" | CHERRY | GOOD | REMOVE |
| T4531 | 20" | CHERRY | GOOD | REMOVE |
| T4532 | 14" | TWIN HACKBERRY | GOOD | REMOVE |
| T4533 | 15" | HACKBERRY | GOOD | REMOVE |
| T4534 | 16" | TWIN OAK | GOOD | REMOVE |
| T4535 | 12" | UNKNOWN | DEAD | REMOVE |
| T4536 | 15" | ASH | GOOD | REMOVE |
| T4537 | 15" | CHERRY | GOOD | REMOVE |
| T4538 | 10" | HACKBERRY | GOOD | REMOVE |
| T4539 | 20" | WALNUT | GOOD | REMOVE |
| T4540 | 26" | HACKBERRY | GOOD | REMOVE |
| T4541 | 20" | CHERRY | GOOD | REMOVE |
| T4542 | 14" | HACKBERRY | GOOD | REMOVE |
| T4543 | 18" | HACKBERRY | GOOD | REMOVE |
| T4544 | 26" | HACKBERRY | GOOD | REMOVE |
| T4545 | 22" | WALNUT | GOOD | REMOVE |
| T4546 | 10" | CHERRY | GOOD | REMOVE |




| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T4547 | 28" | OAK | GOOD | REMOVE |
| T4548 | 12" | CHERRY | GOOD | REMOVE |
| T4549 | 10" | ASH | GOOD | REMOVE |
| T4550 | 12" | UNKNOWN | DEAD | REMOVE |
| T4551 | 24" | HACKBERRY | GOOD | REMOVE |
| T4552 | 12" | UNKNOWN | DEAD | REMOVE |
| T4553 | 10" | HACKBERRY | GOOD | REMOVE |
| T4554 | 16" | TWIN CHERRY | GOOD | REMOVE |
| T4555 | 20" | WALNUT | GOOD | REMOVE |
| T4556 | 18" | HACKBERRY | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T4557 | 22" | WALNUT | GOOD | REMOVE |
| T4558 | 12" | UNKNOWN | DEAD | REMOVE |
| T4559 | 14" | OAK | GOOD | REMOVE |
| T4560 | 10" | HACKBERRY | GOOD | REMOVE |
| T4561 | 14" | HACKBERRY | GOOD | REMOVE |
| T4565 | 10" | OAK CLUSTER | GOOD | – |
| T4566 | 22" | OAK | GOOD | – |
| T4567 | 16" | OAK | GOOD | – |
| T4568 | 18" | UNKNOWN | DEAD | – |
| T4569 | 15" | OAK | GOOD | – |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T4570 | 8" | SWEETGUM | GOOD | REMOVE |
| T4572 | 10" | PINE | GOOD | REMOVE |
| T4573 | 10" | PINE | GOOD | – |
| T4574 | 10" | HACKBERRY | GOOD | REMOVE |
| T4575 | 12" | ASH | GOOD | REMOVE |
| T4576 | 20" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4577 | 20" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4578 | 10" | TWIN UNKNOWN | DEAD | REMOVE |
| TOTAL CALIPER INCHES TO BE REMOVED (THIS SHEET) 916 | | | | |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

**Burgess & Niple, Inc.** COLUMBUS,OH

**BURGESS & NIPLE**

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | MKK |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**TREE PRESERVATION PLAN**
**EMERALD PARKWAY**
**℄ STA. 181+50 TO ℄ STA. 186+00**

SCALE: 1" = 20'

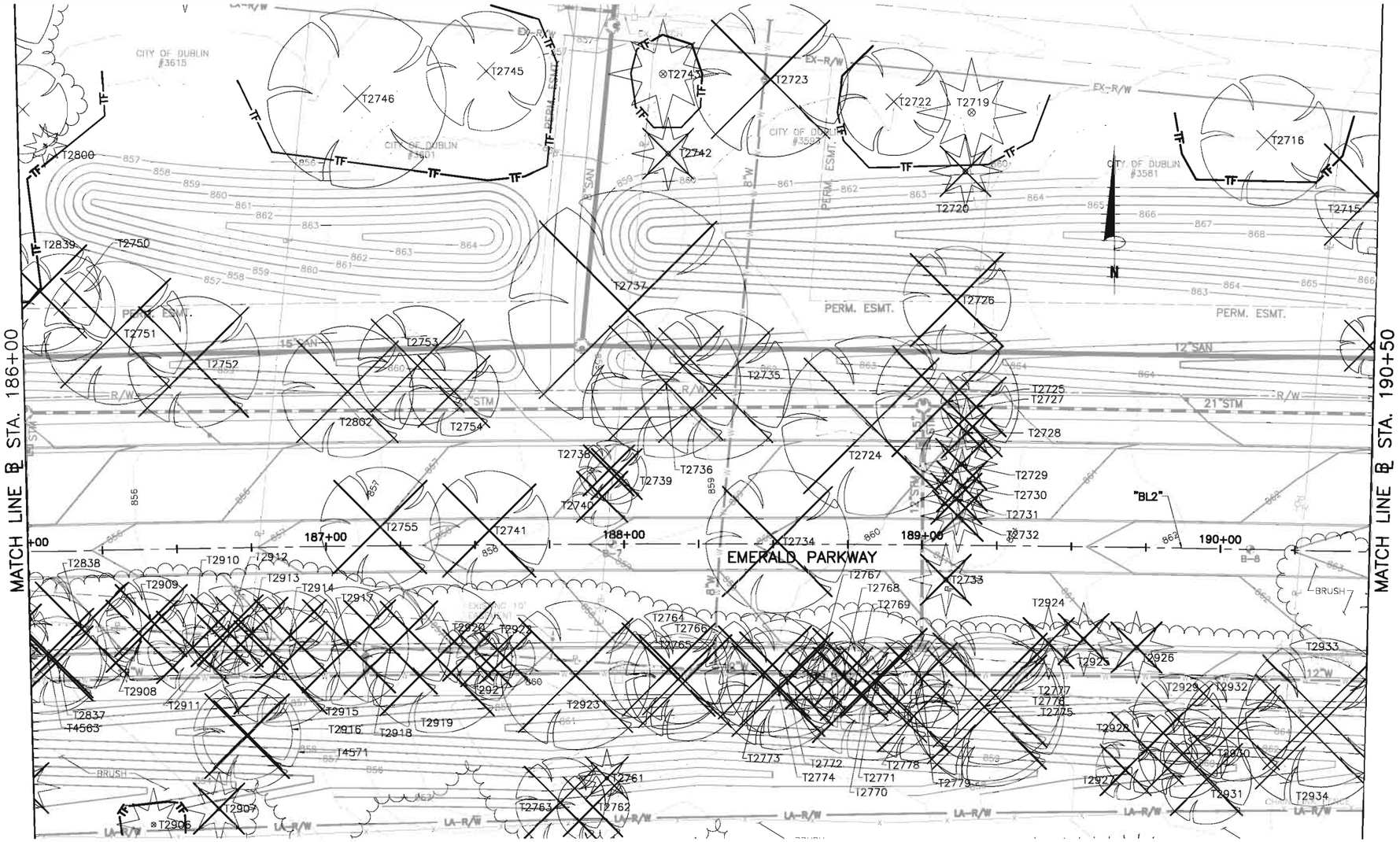
SHEET NO. 232 OF 275

P:\PR44959\cadd\TREEPLAN4-EMERALD.dwg 10/28/2013 5:46:38 PM Ward, Will

PLOTTED: 10/29/2013 11:15:45 AM

## TREE INFORMATION

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T2715 | 21" | MAPLE | GOOD | REMOVE |
| T2716 | 17" | TWIN MAPLE | GOOD | – |
| T2719 | 12" | PINE | GOOD | – |
| T2720 | 10" | PINE | GOOD | REMOVE |
| T2722 | 15" | TRIPLE MAPLE | GOOD | – |
| T2723 | 36" | MAPLE | GOOD | REMOVE |
| T2724 | 52" | MAPLE | GOOD | REMOVE |
| T2725 | 30" | MAPLE | GOOD | REMOVE |
| T2726 | 34" | MAPLE | GOOD | REMOVE |
| T2727 | 6" | OAK | GOOD | REMOVE |
| T2728 | 7" | PINE | GOOD | REMOVE |
| T2729 | 6" | PINE | GOOD | REMOVE |
| T2730 | 7" | PINE | GOOD | REMOVE |
| T2731 | 7" | PINE | GOOD | REMOVE |
| T2732 | 7" | PINE | GOOD | REMOVE |
| T2733 | 8" | PINE | GOOD | REMOVE |
| T2734 | 34" | MAPLE | GOOD | REMOVE |
| T2735 | 36" | MAPLE | GOOD | REMOVE |
| T2736 | 22" | MAPLE | GOOD | REMOVE |
| T2737 | 24" | TWIN MAPLE | GOOD | REMOVE |
| T2738 | 6" | HACKBERRY | GOOD | REMOVE |
| T2739 | 6" | HACKBERRY | GOOD | REMOVE |
| T2740 | 6" | TWIN ASH | GOOD | REMOVE |
| T2741 | 24" | MAPLE | GOOD | REMOVE |
| T2742 | 14" | SPRUCE | GOOD | REMOVE |
| T2743 | 18" | PINE | GOOD | – |
| T2745 | 21" | MAPLE | GOOD | – |
| T2746 | 50" | MAPLE | GOOD | – |
| T2750 | 24" | MAPLE | GOOD | – |
| T2751 | 18" | MAPLE | GOOD | REMOVE |
| T2752 | 28" | POPLAR | GOOD | REMOVE |
| T2753 | 12" | MAPLE | GOOD | REMOVE |
| T2754 | 8" | TWIN MAPLE | GOOD | REMOVE |
| T2755 | 18" | MAPLE | GOOD | REMOVE |
| T2761 | 10" | PINE | GOOD | REMOVE |
| T2762 | 12" | OAK | GOOD | REMOVE |
| T2763 | 10" | TWIN OAK | GOOD | REMOVE |
| T2764 | 14" | HACKBERRY | GOOD | REMOVE |
| T2765 | 14" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T2766 | 20" | ASH | GOOD | REMOVE |
| T2767 | 10" | HACKBERRY | GOOD | REMOVE |
| T2768 | 10" | HACKBERRY | GOOD | REMOVE |
| T2769 | 15" | HACKBERRY | GOOD | REMOVE |
| T2770 | 16" | ASH | GOOD | REMOVE |
| T2771 | 14" | HACKBERRY | GOOD | REMOVE |
| T2772 | 10" | HACKBERRY | GOOD | REMOVE |
| T2773 | 16" | TWIN HACKBERRY | GOOD | REMOVE |
| T2774 | 14" | HACKBERRY | GOOD | REMOVE |
| T2775 | 14" | HACKBERRY | GOOD | REMOVE |
| T2776 | 10" | HACKBERRY | GOOD | REMOVE |
| T2777 | 24" | HACKBERRY | GOOD | REMOVE |
| T2778 | 12" | CHERRY | GOOD | REMOVE |
| T2779 | 14" | ASH | GOOD | REMOVE |
| T2800 | 10" | TWIN JUNIPER | GOOD | – |
| T2802 | 25" | OAK | GOOD | REMOVE |




| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T2837 | 10" | HACKBERRY | GOOD | REMOVE |
| T2838 | 12" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T2839 | 24" | ASH | GOOD | REMOVE |
| T2906 | 10" | PINE | GOOD | – |
| T2907 | 10" | PINE | GOOD | REMOVE |
| T2908 | 15" | ASH | GOOD | REMOVE |
| T2909 | 10" | HACKBERRY | GOOD | REMOVE |
| T2910 | 10" | HACKBERRY | GOOD | REMOVE |
| T2911 | 10" | HACKBERRY | GOOD | REMOVE |
| T2912 | 12" | HACKBERRY | GOOD | REMOVE |
| T2913 | 12" | HACKBERRY | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T2914 | 12" | HACKBERRY | GOOD | REMOVE |
| T2915 | 15" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T2916 | 10" | ASH | GOOD | REMOVE |
| T2917 | 18" | ASH | GOOD | REMOVE |
| T2918 | 16" | ASH | GOOD | REMOVE |
| T2919 | 20" | ASH | GOOD | REMOVE |
| T2920 | 10" | OAK | GOOD | REMOVE |
| T2921 | 10" | OAK | GOOD | REMOVE |
| T2922 | 10" | OAK | GOOD | REMOVE |
| T2923 | 18" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T2924 | 10" | SPRUCE | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T2925 | 10" | SPRUCE | GOOD | REMOVE |
| T2926 | 10" | SPRUCE | GOOD | REMOVE |
| T2927 | 18" | UNKNOWN | GOOD | REMOVE |
| T2928 | 12" | CHERRY | DEAD | REMOVE |
| T2929 | 10" | HACKBERRY | GOOD | REMOVE |
| T2930 | 12" | CHERRY | GOOD | REMOVE |
| T2931 | 14" | CHERRY | GOOD | REMOVE |
| T2932 | 15" | TWIN HACKBERRY | GOOD | REMOVE |
| T2933 | 24" | ASH | GOOD | REMOVE |
| T2934 | 24" | OAK | GOOD | REMOVE |
| T4563 | 12" | HACKBERRY | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T4571 | 12" | OAK | GOOD | REMOVE |
| TOTAL CALIPER INCHES TO BE REMOVED (THIS SHEET) 1218 | | | | |

P:\PR44959\cadd\TREEPLANS-EMERALD.dwg 10/28/2013 11:57:20 AM Ward, Will

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

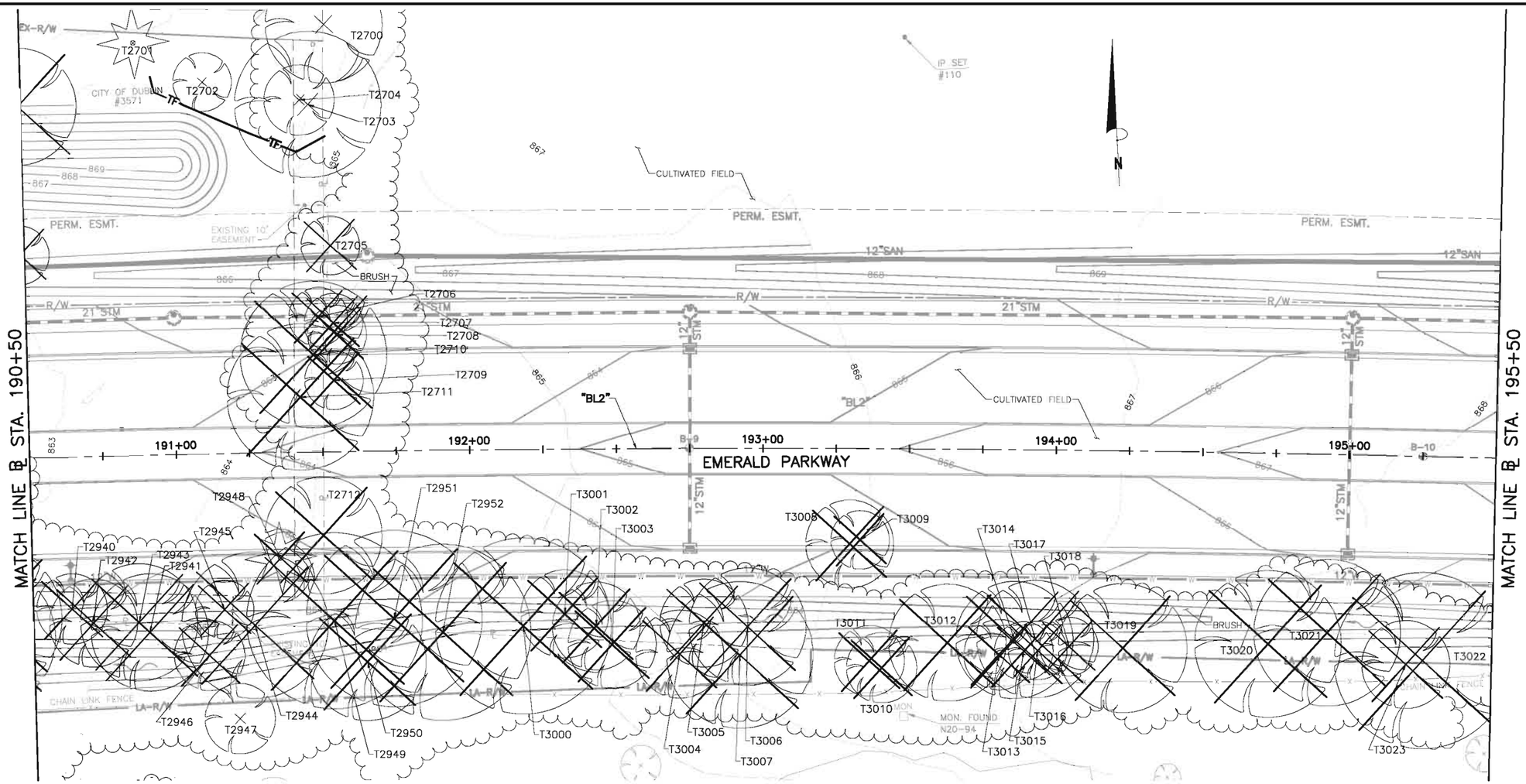
**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | MKK |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**TREE PRESERVATION PLAN**
**EMERALD PARKWAY**
**℄ STA. 186+00 TO ℄ STA. 190+50**

SCALE: 1" = 20'

SHEET NO. 233 OF 275




## TREE INFORMATION

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T2700 | 17" | HACKBERRY | GOOD | – |
| T2701 | 12" | SPRUCE | GOOD | – |
| T2702 | 10" | MAPLE | GOOD | – |
| T2703 | 12" | MAPLE CLUSTER | GOOD | – |
| T2704 | 10" | TWIN OAK | GOOD | – |
| T2705 | 8" | ASH | GOOD | REMOVE |
| T2706 | 6" | OAK | GOOD | REMOVE |
| T2707 | 6" | CHERRY | GOOD | REMOVE |
| T2708 | 10" | CHERRY | GOOD | REMOVE |
| T2709 | 8" | CHERRY | GOOD | REMOVE |
| T2710 | 18" | HACKBERRY | GOOD | REMOVE |
| T2711 | 26" | HACKBERRY | GOOD | REMOVE |
| T2712 | 18" | OAK | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T2940 | 10" | CHERRY | GOOD | REMOVE |
| T2941 | 20" | CHERRY | GOOD | REMOVE |
| T2942 | 16" | TWIN HACKBERRY | GOOD | REMOVE |
| T2943 | 21" | TWIN HACKBERRY | GOOD | REMOVE |
| T2944 | 30" | HACKBERRY | GOOD | REMOVE |
| T2945 | 18" | TRIPLE UNKNOWN | DEAD | REMOVE |
| T2946 | 16" | OAK | GOOD | REMOVE |
| T2947 | 14" | OAK | GOOD | – |
| T2948 | 10" | SPRUCE | GOOD | REMOVE |
| T2949 | 20" | WALNUT | GOOD | REMOVE |
| T2950 | 16" | ASH | GOOD | REMOVE |
| T2951 | 18" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T2952 | 18" | HACKBERRY CLUSTER | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T3000 | 24" | OAK CLUSTER | GOOD | REMOVE |
| T3001 | 12" | OAK | GOOD | REMOVE |
| T3002 | 10" | CHERRY | GOOD | REMOVE |
| T3003 | 18" | CHERRY | GOOD | REMOVE |
| T3004 | 10" | OAK | GOOD | REMOVE |
| T3005 | 12" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T3006 | 20" | HACKBERRY | GOOD | REMOVE |
| T3007 | 18" | CHERRY | GOOD | REMOVE |
| T3008 | 10" | OAK CLUSTER | GOOD | REMOVE |
| T3009 | 10" | CHERRY | GOOD | REMOVE |
| T3010 | 10" | OAK | GOOD | REMOVE |
| T3011 | 10" | OAK | GOOD | REMOVE |
| T3012 | 20" | OAK CLUSTER | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T3013 | 10" | TWIN OAK | GOOD | REMOVE |
| T3014 | 14" | TRIPLE HACKBERRY | GOOD | REMOVE |
| T3015 | 10" | HACKBERRY | GOOD | REMOVE |
| T3016 | 12" | HACKBERRY | GOOD | REMOVE |
| T3017 | 12" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T3018 | 10" | HACKBERRY | GOOD | REMOVE |
| T3019 | 18" | OAK CLUSTER | GOOD | REMOVE |
| T3020 | 14" | OAK CLUSTER | GOOD | REMOVE |
| T3021 | 20" | OAK CLUSTER | GOOD | REMOVE |
| T3022 | 24" | HACKBERRY | GOOD | REMOVE |
| T3023 | 14" | HACKBERRY | GOOD | REMOVE |
| TOTAL CALIPER INCHES TO BE REMOVED (THIS SHEET) 655 | | | | |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

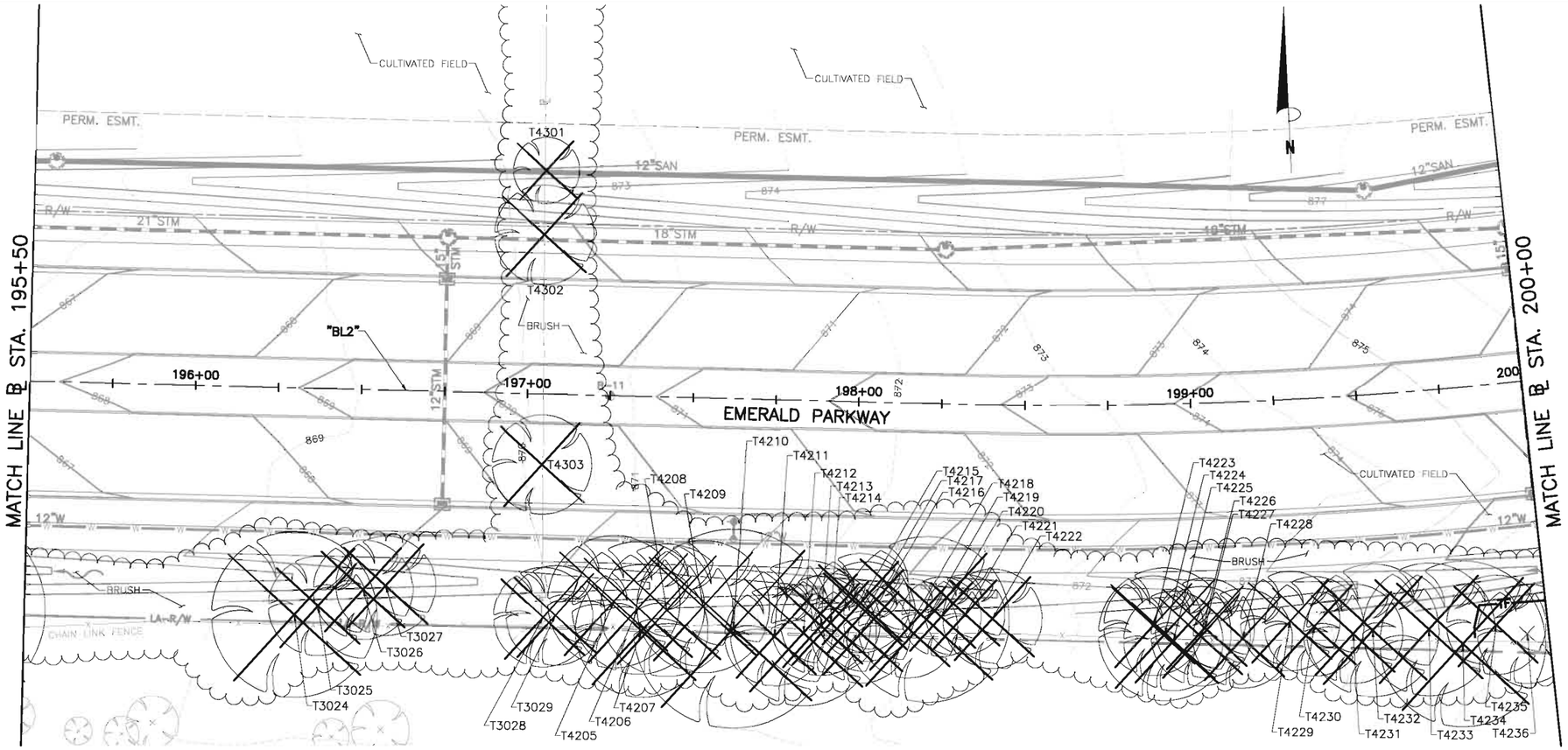
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | MKK |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**TREE PRESERVATION PLAN**
**EMERALD PARKWAY**
**℄ STA. 190+50 TO ℄ STA. 195+50**

SCALE: 1" = 20'

SHEET NO. 234 OF 275

PLOTTED: 10/29/2013 11:23:16 AM
P:\PR44959\cadd\TREEPLAN6-EMERALD.dwg 10/28/2013 12:00:42 PM Ward, Will




## TREE INFORMATION

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T3024 | 24" | OAK | GOOD | REMOVE |
| T3025 | 10" | TWIN OAK | GOOD | REMOVE |
| T3026 | 10" | TWIN HACKBERRY | GOOD | REMOVE |
| T3027 | 10" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T3028 | 20" | TWIN HACKBERRY | GOOD | REMOVE |
| T3029 | 10" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4205 | 10" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4206 | 15" | HACKBERRY | GOOD | REMOVE |
| T4207 | 18" | HACKBERRY | GOOD | REMOVE |
| T4208 | 10" | TRIPLE HACKBERRY | GOOD | REMOVE |
| T4209 | 10" | TWIN HACKBERRY | GOOD | REMOVE |
| T4210 | 30" | WALNUT | GOOD | REMOVE |
| T4211 | 10" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4212 | 18" | TWIN HACKBERRY | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T4213 | 18" | HACKBERRY | GOOD | REMOVE |
| T4214 | 12" | HACKBERRY | GOOD | REMOVE |
| T4215 | 10" | HACKBERRY | GOOD | REMOVE |
| T4216 | 10" | HACKBERRY | GOOD | REMOVE |
| T4217 | 14" | HACKBERRY | GOOD | REMOVE |
| T4218 | 12" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4219 | 24" | WALNUT | GOOD | REMOVE |
| T4220 | 10" | HACKBERRY | GOOD | REMOVE |
| T4221 | 10" | HACKBERRY | GOOD | REMOVE |
| T4222 | 18" | HACKBERRY | GOOD | REMOVE |
| T4223 | 12" | WALNUT | GOOD | REMOVE |
| T4224 | 18" | ASH | GOOD | REMOVE |
| T4225 | 18" | HACKBERRY | GOOD | REMOVE |
| T4226 | 12" | HACKBERRY | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T4227 | 18" | HACKBERRY | GOOD | REMOVE |
| T4228 | 18" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4229 | 10" | TWIN HACKBERRY | GOOD | REMOVE |
| T4230 | 10" | TRIPLE HACKBERRY | GOOD | REMOVE |
| T4231 | 10" | TRIPLE HACKBERRY | GOOD | REMOVE |
| T4232 | 18" | WALNUT | GOOD | REMOVE |
| T4233 | 16" | TWIN HACKBERRY | GOOD | REMOVE |
| T4234 | 22" | WALNUT | GOOD | REMOVE |
| T4235 | 12" | HACKBERRY | GOOD | REMOVE |
| T4236 | 16" | TWIN HACKBERRY | GOOD | – |
| T4301 | 8" | HACKBERRY | GOOD | REMOVE |
| T4302 | 8" | HACKBERRY | GOOD | REMOVE |
| T4303 | 10" | TWIN HACKBERRY | GOOD | REMOVE |
| TOTAL CALIPER INCHES TO BE REMOVED (THIS SHEET) 563 | | | | |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07–008–CIP

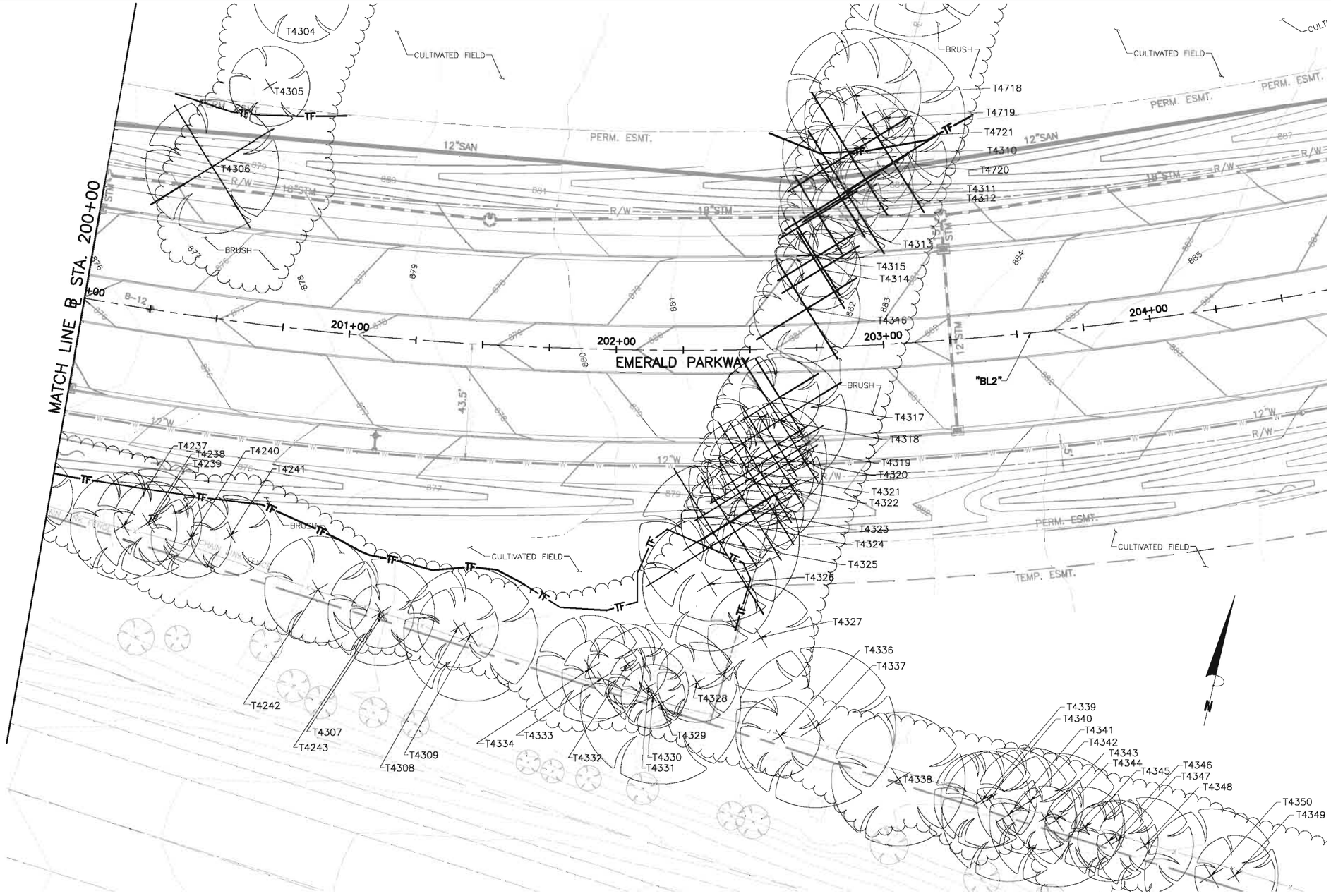
JOB NO. 44959
DESIGNED BY: JED
DRAWN BY: MKK
CHECKED BY: JED
APPROVED BY: DKM
DATE: OCTOBER 2013

TREE PRESERVATION PLAN
EMERALD PARKWAY
℄ STA. 195+50 TO ℄ STA. 200+00

SCALE: 1" = 20'

SHEET NO. 235 OF 275

PLOTTED: 10/29/2013 11:29:15 AM
P:\PR44959\cadd\TREEPLAN7-EMERALD.dwg 10/29/2013 11:09:40 AM Ward, Will




## TREE INFORMATION

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T4237 | 20" | HACKBERRY | GOOD | – |
| T4238 | 10" | TRIPLE HACKBERRY | GOOD | – |
| T4239 | 10" | HACKBERRY CLUSTER | GOOD | – |
| T4240 | 10" | HACKBERRY CLUSTER | GOOD | – |
| T4241 | 10" | HACKBERRY CLUSTER | GOOD | – |
| T4242 | 15" | HACKBERRY CLUSTER | GOOD | – |
| T4243 | 14" | HACKBERRY CLUSTER | GOOD | – |
| T4304 | 12" | HACKBERRY CLUSTER | GOOD | – |
| T4305 | 14" | HACKBERRY | GOOD | – |
| T4306 | 24" | OSAGE ORANGE CLUSTER | GOOD | REMOVE |
| T4307 | 10" | HACKBERRY | GOOD | – |
| T4308 | 14" | CHERRY | GOOD | – |
| T4309 | 24" | HACKBERRY | GOOD | – |
| T4310 | 12" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4311 | 10" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4312 | 10" | HACKBERRY | GOOD | REMOVE |
| T4313 | 10" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4314 | 14" | TWIN HACKBERRY | GOOD | REMOVE |
| T4315 | 10" | TWIN HACKBERRY | GOOD | REMOVE |
| T4316 | 16" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4317 | 12" | HACKBERRY | GOOD | REMOVE |
| T4318 | 18" | TWIN HACKBERRY | GOOD | REMOVE |
| T4319 | 12" | OAK | GOOD | REMOVE |
| T4320 | 18" | TWIN HACKBERRY | GOOD | REMOVE |
| T4321 | 15" | TWIN HACKBERRY | GOOD | REMOVE |
| T4322 | 20" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4323 | 18" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4324 | 12" | OAK | GOOD | REMOVE |
| T4325 | 24" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T4326 | 20" | HACKBERRY | GOOD | – |
| T4327 | 12" | TWIN HACKBERRY | GOOD | – |
| T4328 | 10" | TWIN HACKBERRY | GOOD | – |
| T4329 | 14" | TWIN HACKBERRY | GOOD | – |
| T4330 | 12" | HACKBERRY | GOOD | – |
| T4331 | 12" | TWIN HACKBERRY | GOOD | – |
| T4332 | 12" | HACKBERRY | GOOD | – |
| T4333 | 14" | HACKBERRY | GOOD | – |
| T4334 | 14" | HACKBERRY | GOOD | – |
| T4336 | 12" | HACKBERRY | GOOD | – |
| T4337 | 14" | TRIPLE HACKBERRY | GOOD | – |
| T4338 | 20" | TWIN OSAGE ORANGE | GOOD | – |
| T4339 | 14" | HACKBERRY | GOOD | – |
| T4340 | 14" | HACKBERRY | GOOD | – |
| T4341 | 24" | OSAGE ORANGE | GOOD | – |
| T4342 | 18" | CHERRY | GOOD | – |
| T4343 | 12" | CHERRY | GOOD | – |
| T4344 | 24" | OSAGE ORANGE | GOOD | – |
| T4345 | 20" | CHERRY | GOOD | – |
| T4346 | 10" | HACKBERRY | GOOD | – |
| T4347 | 10" | HACKBERRY | GOOD | – |
| T4348 | 15" | HACKBERRY | GOOD | – |
| T4349 | 12" | HACKBERRY | GOOD | – |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T4350 | 24" | OSAGE ORANGE | GOOD | – |
| T4718 | 14" | OAK | GOOD | – |
| T4719 | 20" | HACKBERRY CLUSTER | GOOD | – |
| T4720 | 14" | HACKBERRY | GOOD | REMOVE |
| T4721 | 12" | HACKBERRY | GOOD | – |
| TOTAL CALIPER INCHES TO BE REMOVED (THIS SHEET) 269 | | | | |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | MKK |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**TREE PRESERVATION PLAN**
**EMERALD PARKWAY**
**℄ STA. 200+00 TO ℄ STA. 204+50**

SCALE: 1" = 20'

SHEET NO. 236 OF 275

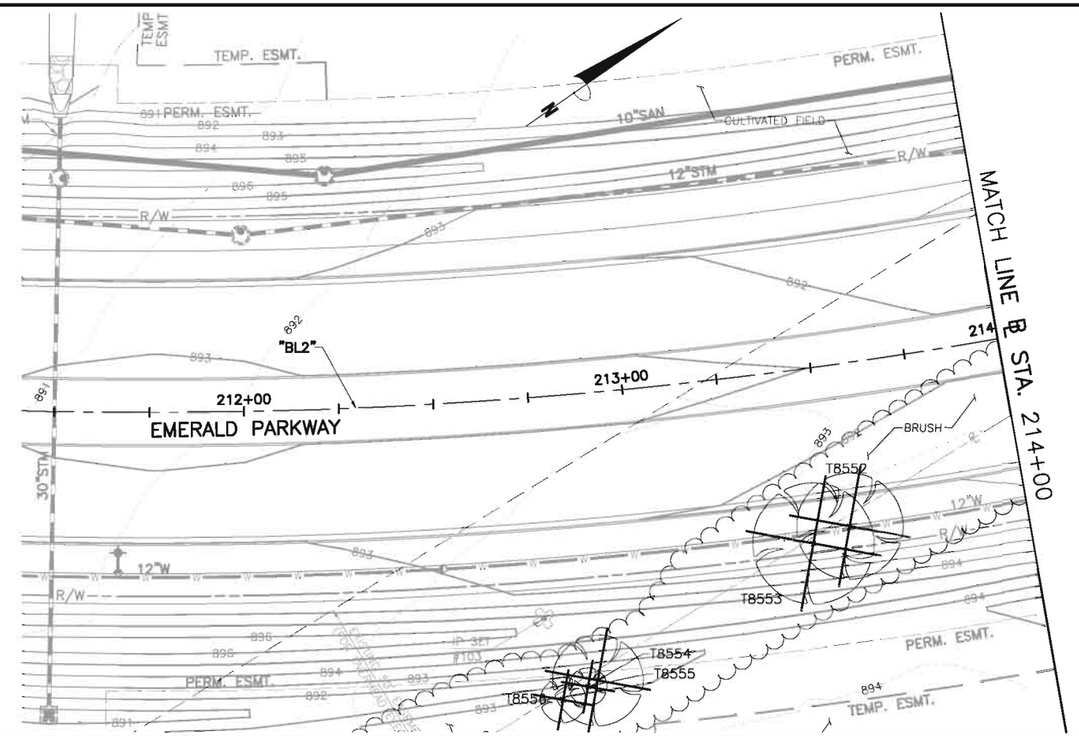
PLOTTED: 10/29/2013 11:36:51 AM
P:\PR44959\cadd\TREEPLAN8-EMERALD.dwg 10/29/2013 11:01:04 AM Ward, Will

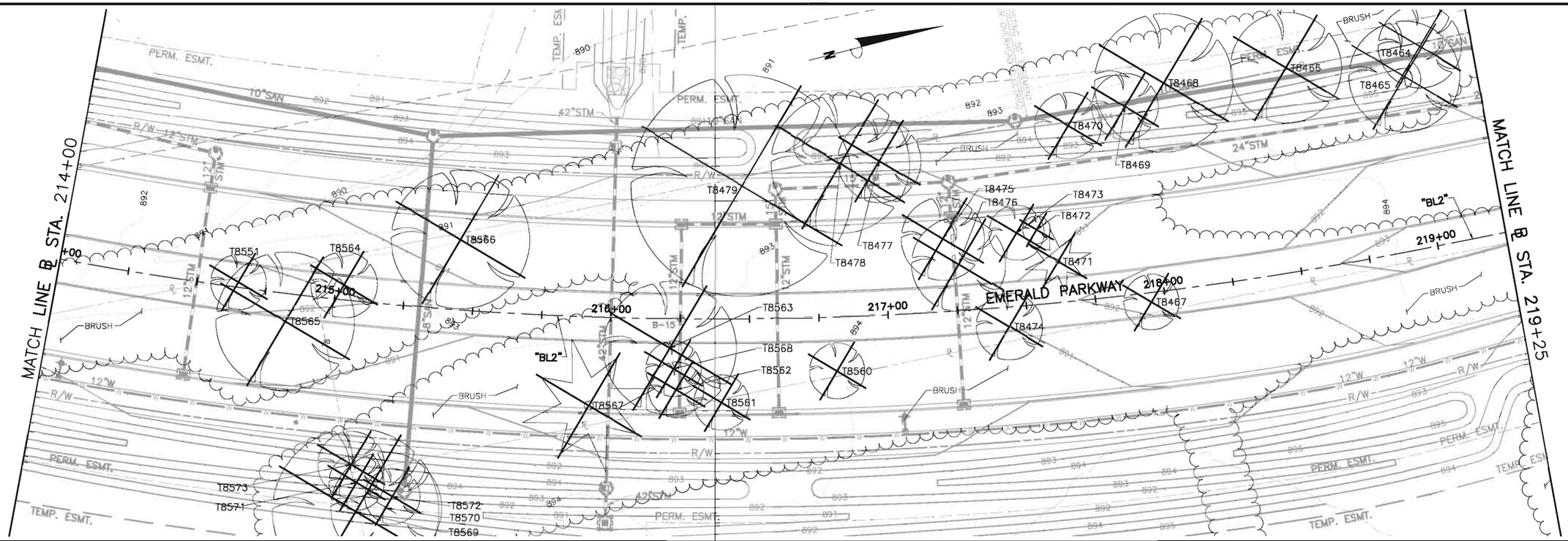
PLOTTED: 10/29/2013 11:44:20 AM

## TREE INFORMATION

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T8464 | 22" | MAPLE | GOOD | REMOVE |
| T8465 | 22" | MAPLE | GOOD | REMOVE |
| T8466 | 26" | HACKBERRY | GOOD | REMOVE |
| T8467 | 14" | UNKNOWN | DEAD | REMOVE |
| T8468 | 14" | HACKBERRY CLUSTER | GOOD | REMOVE |
| T8469 | 14" | ASH | GOOD | REMOVE |
| T8470 | 16" | ASH | GOOD | REMOVE |
| T8471 | 18" | SPRUCE | GOOD | REMOVE |
| T8472 | 8" | UNKNOWN | DEAD | REMOVE |
| T8473 | 14" | UNKNOWN | DEAD | REMOVE |
| T8474 | 10" | BIRCH | GOOD | REMOVE |
| T8475 | 24" | UNKNOWN | DEAD | REMOVE |
| T8476 | 28" | OAK | GOOD | REMOVE |
| T8477 | 13" | ASH | GOOD | REMOVE |
| T8478 | 18" | WALNUT | GOOD | REMOVE |
| T8479 | 50" | OAK | GOOD | REMOVE |
| T8551 | 8" | CHERRY | GOOD | REMOVE |
| T8552 | 12" | TWIN HACKBERRY | GOOD | REMOVE |
| T8553 | 24" | OAK | GOOD | REMOVE |
| T8554 | 9" | MULTI HACKBERRY | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T8555 | 6" | HACKBERRY | GOOD | REMOVE |
| T8556 | 6" | MULTI HACKBERRY | GOOD | REMOVE |
| T8560 | 21" | UNKNOWN | DEAD | REMOVE |
| T8561 | 11" | TWIN OAK | GOOD | REMOVE |
| T8562 | 12" | OAK CLUSTER | GOOD | REMOVE |
| T8563 | 24" | OAK | GOOD | REMOVE |
| T8564 | 6" | MULTI OSAGE ORANGE | GOOD | REMOVE |
| T8565 | 40" | OSAGE ORANGE | GOOD | REMOVE |
| T8566 | 16" | OAK CLUSTER | GOOD | REMOVE |
| T8567 | 24" | SPRUCE | GOOD | REMOVE |
| T8568 | 8" | OSAGE ORANGE | GOOD | REMOVE |
| T8569 | 34" | OAK | GOOD | REMOVE |
| T8570 | 23" | HACKBERRY | GOOD | REMOVE |
| T8571 | 12" | HACKBERRY | GOOD | REMOVE |
| T8572 | 12" | HACKBERRY | GOOD | REMOVE |
| T8573 | 10" | HACKBERRY | GOOD | REMOVE |
| TOTAL CALIPER INCHES TO BE REMOVED (THIS SHEET) 629 | | | | |




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | MKK |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**TREE PRESERVATION PLAN**
**EMERALD PARKWAY**
**℄ STA. 211+50 TO ℄ STA. 219+25**

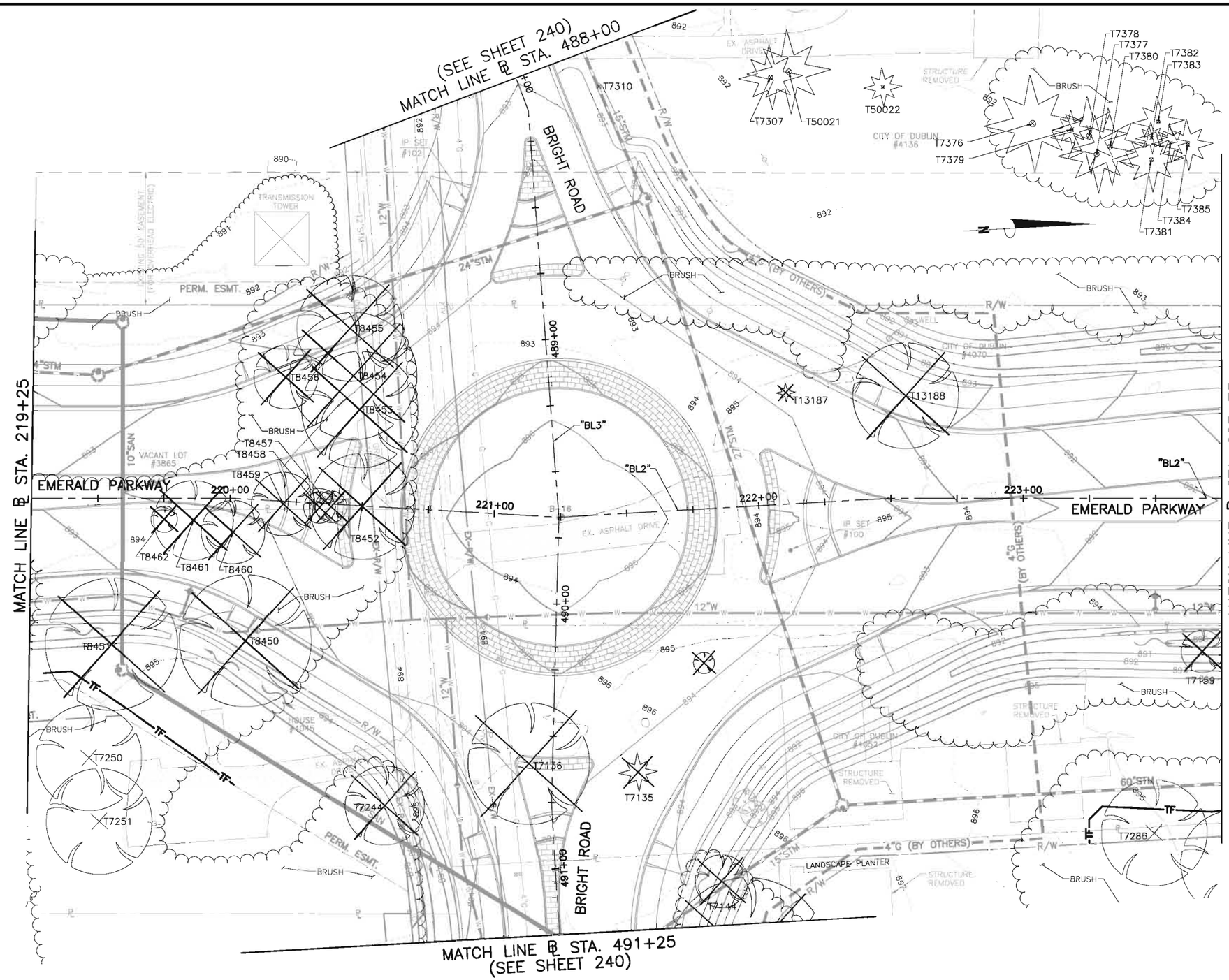
SCALE: 1" = 20'

SHEET NO. 237 OF 275

P:\PR44959\cadd\TREEPLAN9-EMERALD.dwg 10/29/2013 10:46:53 AM Ward, Will

## TREE INFORMATION

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T7135 | 8" | WHITE PINE | GOOD | REMOVE |
| T7136 | 30" | SUGAR MAPLE | GOOD | REMOVE |
| T7144 | 10" | HOLLY | GOOD | REMOVE |
| T7159 | 12" | GREEN ASH | GOOD | REMOVE |
| T7244 | 20" | MAPLE | GOOD | REMOVE |
| T7250 | 12" | MAPLE | GOOD | – |
| T7251 | 12" | MAPLE | GOOD | – |
| T7286 | 14" | HICKORY | GOOD | – |
| T7307 | 14" | CEDAR | GOOD | – |
| T7310 | 22" | UNKNOWN | GOOD | – |
| T7376 | 24" | SPRUCE | GOOD | – |
| T7377 | 16" | SPRUCE | GOOD | – |
| T7378 | 16" | SPRUCE | GOOD | – |
| T7379 | 10" | CEDAR | GOOD | – |
| T7380 | 14" | SPRUCE | GOOD | – |
| T7381 | 10" | CEDAR | GOOD | – |
| T7382 | 6" | CEDAR | GOOD | – |
| T7383 | 8" | CEDAR | GOOD | – |
| T7384 | 8" | CEDAR | GOOD | – |
| T7385 | 12" | CEDAR | GOOD | – |
| T8450 | 53" | MAPLE | GOOD | REMOVE |
| T8451 | 16" | MAPLE CLUSTER | GOOD | REMOVE |
| T8452 | 24" | TWIN HACKBERRY | GOOD | REMOVE |
| T8453 | 26" | ASH | GOOD | REMOVE |
| T8454 | 22" | ASH | GOOD | REMOVE |
| T8455 | 24" | HACKBERRY | GOOD | REMOVE |
| T8456 | 10" | OAK | GOOD | REMOVE |
| T8457 | 7" | OAK | GOOD | REMOVE |
| T8458 | 10" | HACKBERRY | GOOD | REMOVE |
| T8459 | 14" | ASH | GOOD | REMOVE |
| T8460 | 6" | UNKNOWN CLUSTER | DEAD | REMOVE |
| T8461 | 12" | OAK CLUSTER | GOOD | REMOVE |
| T8462 | 8" | UNKNOWN | GOOD | REMOVE |
| T13187 | 10" | ARBORVITAE | GOOD | REMOVE |
| T13188 | 22" | MAPLE | GOOD | REMOVE |
| T50021 | 14" | CEDAR | GOOD | – |
| T50022 | 15" | CEDAR | GOOD | – |
| TOTAL CALIPER INCHES TO BE REMOVED (THIS SHEET) 344 | | | | |




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

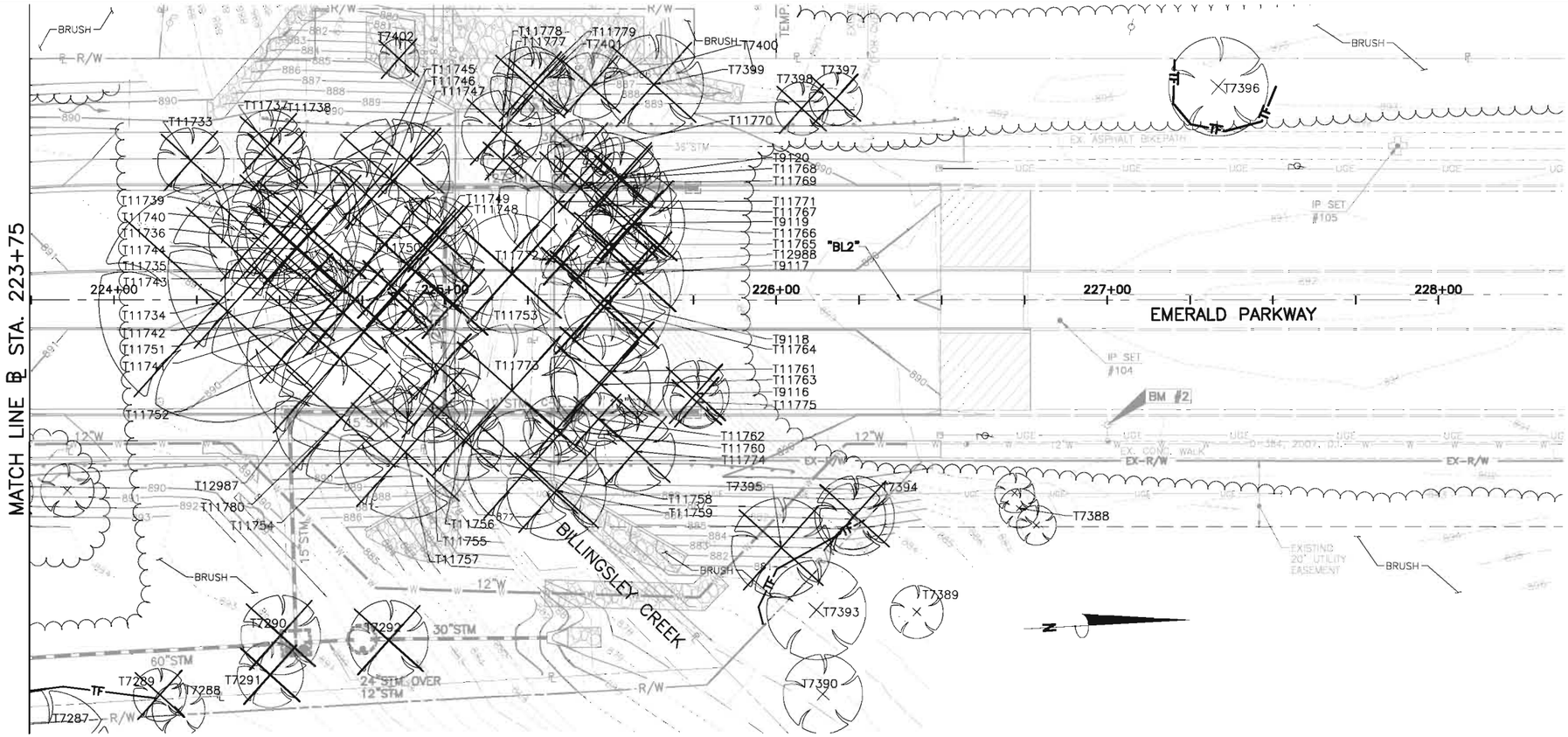
| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | MKK |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**TREE PRESERVATION PLAN**
**ROUNDABOUT**
**STA. 219+25 "BL2" TO STA. 223+75 "BL2"**
**STA. 488+00 "BL3" TO STA. 491+25 "BL3"**

SCALE: 1" = 20'

SHEET NO. 238 OF 275

PLOTTED: 10/28/2013 12:11:18 PM
P:\PR44959\cadd\TREEPLAN10-ROUNDABOUT.dwg 10/28/2013 1:03:38 PM Ward, Will




## TREE INFORMATION

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T7287 | 14" | MULLBERRY | GOOD | – |
| T7288 | 10" | HICKORY | GOOD | – |
| T7289 | 11" | HICKORY | GOOD | REMOVE |
| T7290 | 12" | MULLBERRY | GOOD | REMOVE |
| T7291 | 6" | MULLBERRY | GOOD | REMOVE |
| T7292 | 14" | HICKORY | GOOD | REMOVE |
| T7388 | 8" | ELM | GOOD | – |
| T7389 | 12" | ASH | GOOD | – |
| T7390 | 12" | ASH | GOOD | – |
| T7393 | 16" | ASH | GOOD | – |
| T7394 | 8" | ELM | GOOD | REMOVE |
| T7395 | 20" | ASH | GOOD | REMOVE |
| T7396 | 10" | SYCAMORE | GOOD | – |
| T7397 | 14" | HICKORY | GOOD | REMOVE |
| T7398 | 14" | HICKORY | GOOD | REMOVE |
| T7399 | 14" | WALNUT | GOOD | REMOVE |
| T7400 | 10" | WILLOW | GOOD | REMOVE |
| T7401 | 10" | WILLOW | GOOD | REMOVE |
| T7402 | 8" | BOXELDER | GOOD | – |
| T9116 | 8" | BLACK WALNUT | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T9117 | 8" | BLACK WALNUT | GOOD | REMOVE |
| T9118 | 16" | BLACK WALNUT | GOOD | REMOVE |
| T9119 | 12" | BLACK WALNUT | GOOD | REMOVE |
| T9120 | 10" | HACKBERRY | GOOD | REMOVE |
| T11733 | 12" | ASH | GOOD | REMOVE |
| T11734 | 30" | ASH | GOOD | REMOVE |
| T11735 | 42" | SYCAMORE | GOOD | REMOVE |
| T11736 | 12" | HACKBERRY | GOOD | REMOVE |
| T11737 | 22" | MAPLE | GOOD | REMOVE |
| T11738 | 12" | BEECH | GOOD | REMOVE |
| T11739 | 15" | HACKBERRY | GOOD | REMOVE |
| T11740 | 15" | HACKBERRY | GOOD | REMOVE |
| T11741 | 8" | HACKBERRY | GOOD | REMOVE |
| T11742 | 36" | ASH | GOOD | REMOVE |
| T11743 | 8" | HACKBERRY | GOOD | REMOVE |
| T11744 | 15" | HACKBERRY | GOOD | REMOVE |
| T11745 | 6" | ASH | GOOD | REMOVE |
| T11746 | 12" | HACKBERRY | GOOD | REMOVE |
| T11747 | 12" | WALNUT | GOOD | REMOVE |
| T11748 | 10" | WALNUT | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T11749 | 14" | MAPLE | GOOD | REMOVE |
| T11750 | 22" | ASH | GOOD | REMOVE |
| T11751 | 12" | BEECH | GOOD | REMOVE |
| T11752 | 6" | MAPLE | GOOD | REMOVE |
| T11753 | 12" | MAPLE | GOOD | REMOVE |
| T11754 | 12" | MAPLE | GOOD | REMOVE |
| T11755 | 18" | ASH | GOOD | REMOVE |
| T11756 | 14" | MAPLE | GOOD | REMOVE |
| T11757 | 14" | MAPLE | GOOD | REMOVE |
| T11758 | 18" | ASH | GOOD | REMOVE |
| T11759 | 18" | WALNUT | GOOD | REMOVE |
| T11760 | 12" | WALNUT | GOOD | REMOVE |
| T11761 | 16" | WALNUT | GOOD | REMOVE |
| T11762 | 8" | WALNUT | GOOD | REMOVE |
| T11763 | 14" | WALNUT | GOOD | REMOVE |
| T11764 | 14" | WALNUT | GOOD | REMOVE |
| T11765 | 8" | MAPLE | GOOD | REMOVE |
| T11766 | 10" | WALNUT | GOOD | REMOVE |
| T11767 | 26" | HACKBERRY | GOOD | REMOVE |
| T11768 | 8" | WALNUT | GOOD | REMOVE |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T11769 | 12" | HACKBERRY | GOOD | REMOVE |
| T11770 | 10" | WALNUT | GOOD | REMOVE |
| T11771 | 18" | ASH | GOOD | REMOVE |
| T11772 | 18" | WALNUT | GOOD | REMOVE |
| T11773 | 22" | TWIN ASH | GOOD | REMOVE |
| T11774 | 12" | WALNUT | GOOD | REMOVE |
| T11775 | 8" | ASH | GOOD | REMOVE |
| T11777 | 12" | UNKNOWN | GOOD | REMOVE |
| T11778 | 8" | UNKNOWN | GOOD | REMOVE |
| T11779 | 8" | MAPLE | GOOD | REMOVE |
| T11780 | 20" | TWIN ASH | GOOD | REMOVE |
| T12987 | 24" | MAPLE | GOOD | REMOVE |
| T12988 | 8" | WALNUT | GOOD | REMOVE |
| TOTAL CALIPER INCHES TO BE REMOVED (THIS SHEET) 920 | | | | |

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | MKK |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**TREE PRESERVATION PLAN**
**EMERALD PARKWAY**
**℄ STA. 223+75 TO ℄ STA. 228+00**

SCALE: 1" = 20'

SHEET NO. 239 OF 275

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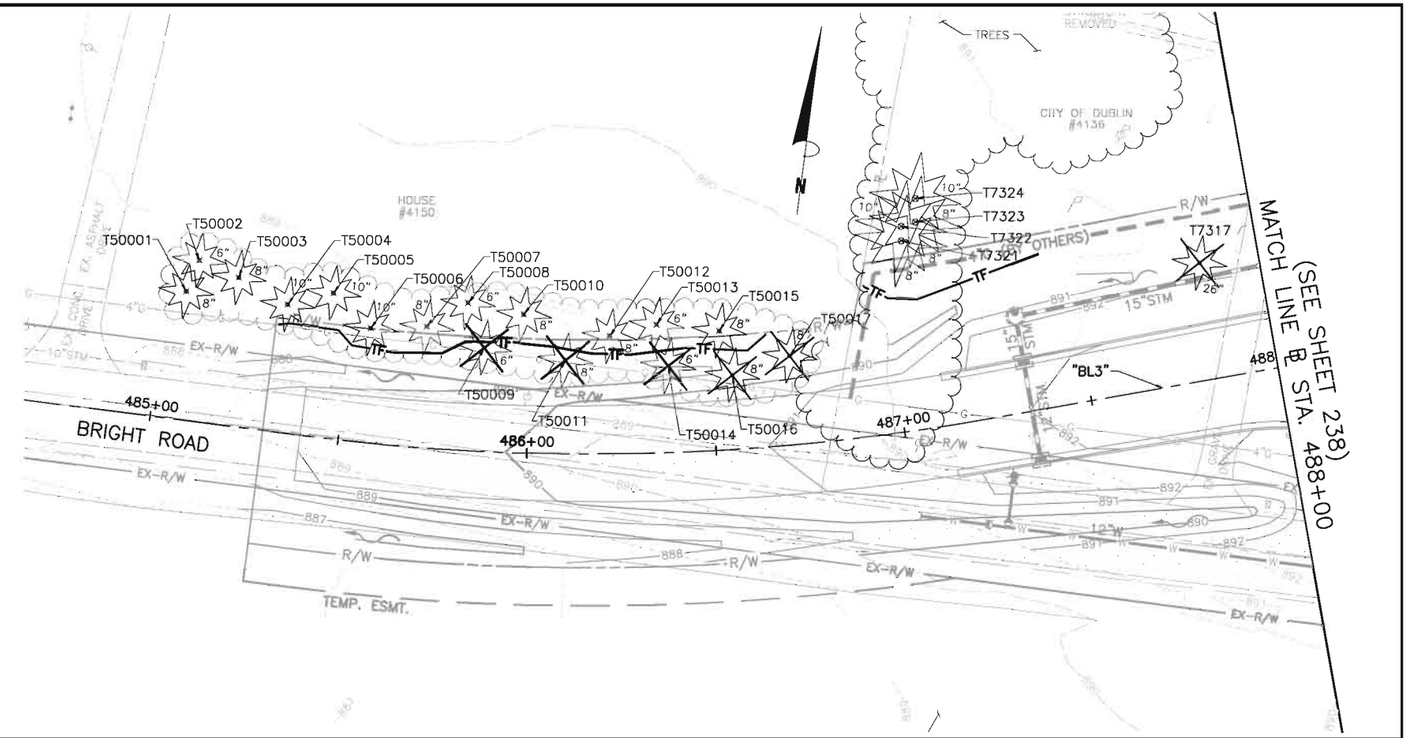
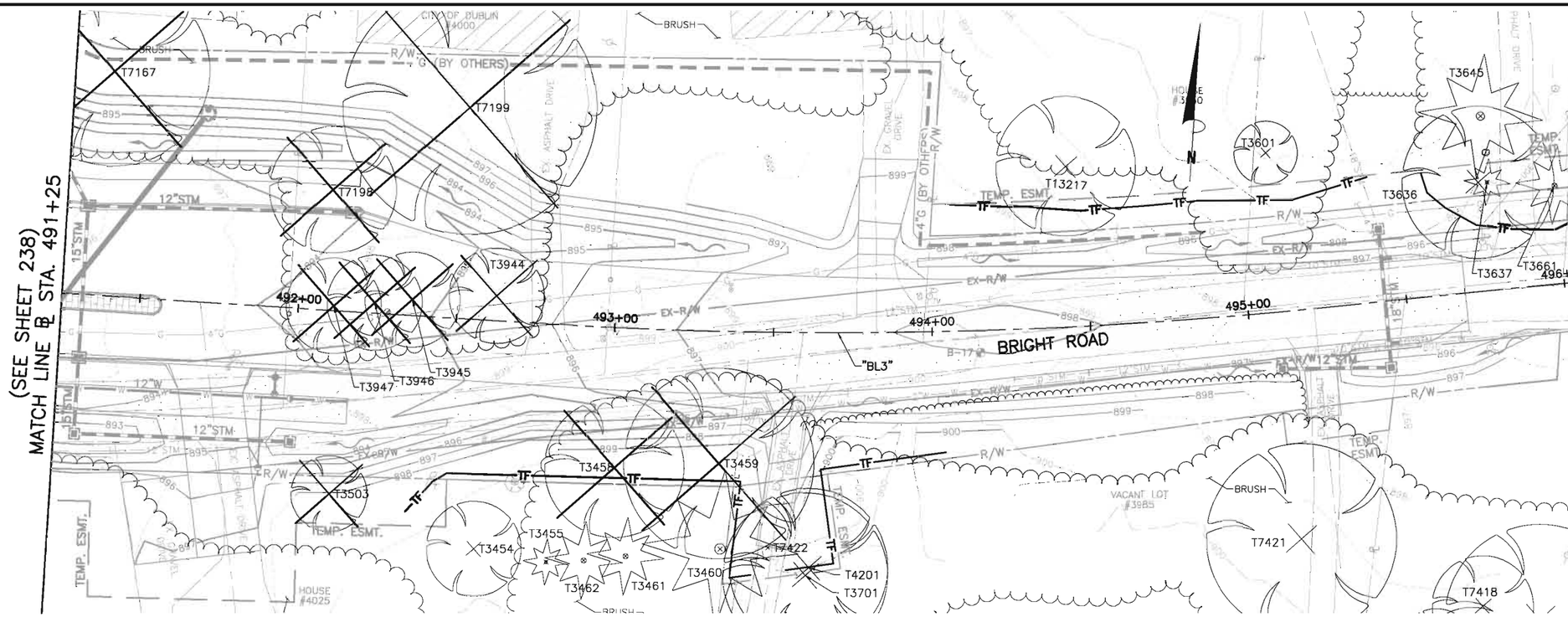
## TREE INFORMATION

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T3454 | 48" | WILLOW | GOOD | – |
| T3455 | 6" | SPRUCE | GOOD | – |
| T3458 | 14" | OAK | GOOD | REMOVE |
| T3459 | 46" | MAPLE | GOOD | REMOVE |
| T3460 | 16" | PINE | GOOD | – |
| T3461 | 10" | PINE | GOOD | – |
| T3462 | 10" | PINE | GOOD | – |
| T3503 | 6" | TRIPLE BIRCH | GOOD | REMOVE |
| T3601 | 20" | GINKO | GOOD | – |
| T3636 | 12" | TWIN OAK | GOOD | – |
| T3637 | 12" | JUNIPER | GOOD | – |
| T3645 | 20" | PINE | GOOD | – |
| T3661 | 8" | TWIN JUNIPER | GOOD | – |
| T3701 | 24" | MAPLE CLUSTER | GOOD | – |
| T3944 | 12" | HACKBERRY | GOOD | REMOVE |
| T3945 | 10" | CRABAPPLE | GOOD | REMOVE |
| T3946 | 10" | CRABAPPLE | GOOD | REMOVE |
| T3947 | 10" | CRABAPPLE | GOOD | REMOVE |
| T4201 | 58" | MAPLE | GOOD | – |
| T7167 | 36" | MAPLE | GOOD | REMOVE |
| T7198 | 22" | MAPLE | GOOD | REMOVE |
| T7199 | 60" | ELM | GOOD | REMOVE |
| T7317 | 26" | SPRUCE | GOOD | REMOVE |
| T7321 | 8" | CEDAR | GOOD | – |
| T7322 | 10" | CEDAR | GOOD | – |
| T7323 | 8" | CEDAR | GOOD | – |
| T7324 | 10" | CEDAR | GOOD | – |
| T7417 | 28" | MAPLE | GOOD | – |
| T7418 | 14" | CEDAR | GOOD | – |
| T7419 | 14" | CEDAR | GOOD | – |
| T7421 | 36" | MAPLE | GOOD | – |
| T7422 | 24" | UNKNOWN | GOOD | – |
| T13217 | 28" | UNKNOWN | GOOD | – |
| T50001 | 8" | SPRUCE | GOOD | – |
| T50002 | 6" | SPRUCE | GOOD | – |
| T50003 | 8" | SPRUCE | GOOD | – |
| T50004 | 10" | SPRUCE | GOOD | – |
| T50005 | 10" | SPRUCE | GOOD | – |
| T50006 | 10" | SPRUCE | GOOD | – |
| T50007 | 8" | SPRUCE | GOOD | – |
| T50008 | 6" | SPRUCE | GOOD | – |
| T50009 | 6" | SPRUCE | GOOD | REMOVE |
| T50010 | 8" | SPRUCE | GOOD | – |
| T50011 | 8" | SPRUCE | GOOD | REMOVE |
| T50012 | 8" | SPRUCE | GOOD | – |

| ID | DIAMETER | TYPE | CONDITION | NOTES |
|---|---|---|---|---|
| T50013 | 6" | SPRUCE | GOOD | – |
| T50014 | 6" | SPRUCE | GOOD | REMOVE |
| T50015 | 8" | SPRUCE | GOOD | – |
| T50016 | 8" | SPRUCE | GOOD | REMOVE |
| T50017 | 8" | SPRUCE | GOOD | REMOVE |
| TOTAL CALIPER INCHES TO BE REMOVED (THIS SHEET) 288 | | | | |




| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JED |
| DRAWN BY: | MKK |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**TREE PRESERVATION PLAN**
**BRIGHT ROAD**
**℄ STA. 484+75 TO ℄ STA. 488+00**
**℄ STA. 491+25 TO ℄ STA. 496+00**

SCALE: 1" = 20'

SHEET NO. 240 OF 275

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## 1.0 INTRODUCTION

THIS STORM WATER POLLUTION PREVENTION PLAN (SWP3) HAS BEEN PREPARED TO COMPLY WITH THE OHIO EPA CONSTRUCTION GENERAL STORM WATER PERMIT NO. OHC000004 (GENERAL PERMIT). A COPY OF THE GENERAL PERMIT AND NOTICE OF INTENT (NOI) FORMS ARE INCLUDED IN SECTION A OF THE SWP3 ADDENDUM (SEE BID BOOK). A COPY OF THE NOTICE OF TERMINATION (NOT) FORM IS ALSO INCLUDED IN SECTION A OF THE ADDENDUM. THE NOT MUST BE SUBMITTED TO THE OHIO EPA WITHIN 45 DAYS OF COMPLETING ALL LAND DISTURBANCE ACTIVITIES. THE PURPOSE OF THIS SWP3 IS TO IDENTIFY THE POTENTIAL SOURCES OF STORM WATER POLLUTION FROM THE PROJECT AND TO ESTABLISH MEASURES AND PROCEDURES FOR PREVENTING STORM WATER POLLUTION.

ACTIVITIES DURING THE PROJECT WILL INCLUDE CLEARING, GRADING, EXCAVATING, GRUBBING, AND/OR FILLING ACTIVITIES WHICH WILL RESULT IN THE DISTURBANCE OF MORE THAN ONE ACRE OF LAND AREA. ALL REQUIRED PREVENTATIVE MEASURES TO PROVIDE EROSION AND SEDIMENT CONTROL AND STORM WATER MANAGEMENT WILL BE UTILIZED THROUGHOUT THE PROJECT.

SECTION B OF THE SWP3 ADDENDUM CONTAINS THE CERTIFICATION STATEMENT FOR THE SWP3 AND THE ACKNOWLEDGMENT FORM FOR RECORDING THE SIGNATURES OF ALL CONTRACTORS AND SUBCONTRACTORS, ACKNOWLEDGING THAT THEY HAVE REVIEWED AND UNDERSTAND THE CONDITIONS AND RESPONSIBILITIES OF THE SWP3.

## 2.0 PLAN REVISION AND AMENDMENT

### 2.1 PLAN REVISION

THE SWP3 WILL BE AMENDED BY THE CONTRACTOR WITHIN 10 DAYS AFTER NOTIFICATION FROM THE OHIO EPA THAT THE SWP3 DOES NOT MEET ONE OR MORE OF THE MINIMUM REQUIREMENTS OF THE GENERAL PERMIT. IF REQUESTED, THE REVISED SWP3 OR A WRITTEN CERTIFICATION THAT THE REQUESTED CHANGES HAVE BEEN MADE WILL BE SUBMITTED TO THE OHIO EPA.

### 2.2 PLAN AMENDMENT

THE SWP3 WILL BE AMENDED BY THE CONTRACTOR WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION OR MAINTENANCE, WHICH HAS A SIGNIFICANT EFFECT ON THE POTENTIAL FOR THE DISCHARGE OF POLLUTANTS TO SURFACE WATERS OF THE STATE OR IF THE SWP3 PROVES TO BE INEFFECTIVE IN ACHIEVING THE GENERAL OBJECTIVES OF CONTROLLING POLLUTANTS IN STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY. A PLAN AMENDMENT LOG IS PROVIDED IN SECTION G OF THE SWP3 ADDENDUM.

## 3.0 SITE DESCRIPTION

### 3.1 SITE DESCRIPTION/CONSTRUCTION ACTIVITY

THE PROJECT IS LOCATED ON BETWEEN RIVERSIDE DRIVE AND SAWMILL ROAD IN DUBLIN, OHIO. THE PROJECT WILL CONSTRUCT THE FINAL PHASE OF EMERALD PARKWAY, CONSTRUCT A ROUNDABOUT. CONSTRUCT CURB AND GUTTERS, AND INSTALL NEW WATERLINE AND STORM AND SANITARY SEWERS.

THE AREAS WHERE SOIL WILL BE DISTURBED ARE CURRENTLY CULTIVATED FIELDS AND SOME SCRUB VEGETATION. THE SOIL DISTURBING ACTIVITIES WILL INCLUDE EXCAVATION AND GRADING FOR THE CONSTRUCTION OF THE ROAD. STOCKPILES AND STAGING AREAS WILL ALSO BE NECESSARY. DISTURBED SURFACE AREAS WILL BE STABILIZED AT THE COMPLETION OF THE PROJECT. A "GRADING AND STABILIZATION LOG" WILL BE MAINTAINED TO DOCUMENT THE GRADING AND STABILIZATION ACTIVITIES WHICH OCCUR AFTER CONSTRUCTION ACTIVITIES COMMENT. A BLANK LOG IS PROVIDED IN THE ADDENDUM SECTION

### 3.2 SOIL DATA

THE PRINCIPAL SOIL TYPE MAPPED IN THE PROJECT AREA IS MIAMIAN SILT LOAM, 2 TO 6 PERCENT SLOPES (MKB), CELINA SILT LOAM, 2 TO 6 PERCENT SLOPES (CEB), AND KOKOMO SILTY CLAY LOAM (KO). SOIL SURVEY INFORMATION IS PROVIDED IN THE SWP3 ADDENDUM SECTION D.

### 3.3 PRIOR LAND USES

THE AREAS THAT WILL BE DISTURBED ARE CURRENTLY CULTIVATED FIELDS AND SOME SCRUB VEGETATION. THE AREA TO BE DISTURBED IS WITHIN THE RIGHT-OF-WAY FOR OWNED BY DUBLIN. PRIOR LAND USES INCLUDE RESIDENTIAL AND AGRICULTURAL.

### 3.4 IMPLEMENTATION SCHEDULE

EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED PRIOR TO SOIL DISTURBING ACTIVITIES. THE CONSTRUCTION MANAGER WILL MONITOR REGIONAL WEATHER FORECASTS AND DIRECT INSTALLATION OF COVERINGS OR OTHER STABILIZATION METHODS WHEN A 24-HOUR RAINFALL EVENT IS EXPECTED TO EXCEED 1/2 INCH. THE TENTATIVE SCHEDULE FOR THE EROSION AND SEDIMENT CONTROL ACTIVITIES IS ATTACHED IN THE ADDENDUM SECTION E. CONTRACTOR SHALL UPDATE AND REVISE THIS SCHEDULE TO REFLECT THE ACTUAL SCHEDULE.

## 4.0 CONTROL MEASURES

1. THE DESIGN OF EROSION CONTROL SYSTEMS SHALL FOLLOW THE REQUIREMENTS OF OHIO EPA, ITEM 207 OF OHIO DEPARTMENT OF TRANSPORTATION (ODOT) STANDARD SPECIFICATIONS AND THE CITY ENGINEER. THE CONTRACTOR SHALL BE CONSIDERED THE DEVELOPER OF THE STORMWATER DISCHARGE.

2. THE CONTRACTOR SHALL PROVIDE SEDIMENT CONTROL AT ALL POINTS WHERE WATER LEAVES THE PROJECT, INCLUDING WATERWAYS, OVERLAND SHEET FLOW, AND STORM SEWERS, WHETHER SPECIFICALLY SHOWN ON THE PLANS OR NOT.

3. ACCEPTED METHODS OF PROVIDING EROSION/SEDIMENT CONTROL INCLUDE BUT ARE NOT LIMITED TO: SEDIMENT FILTERS, SILT FILTER FENCE, ROCK CHECK DAMS, AND TEMPORARY GROUND COVER. THE USE OF STRAW BALES IS PROHIBITED.

4. THE CONTRACTOR SHALL PROVIDE ADEQUATE DRAINAGE OF THE WORK AREA AT ALL TIMES CONSISTENT WITH EROSION CONTROL PRACTICES.

5. DISTURBED AREAS THAT WILL REMAIN UNWORKED FOR 14 DAYS OR MORE SHALL BE SEEDED WITHIN 7 CALENDAR DAYS OF THE DISTURBANCE. OTHER SEDIMENT CONTROLS THAT ARE INSTALLED SHALL BE MAINTAINED UNTIL VEGETATIVE GROWTH HAS BEEN ESTABLISHED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY SEDIMENT DEVICES AT THE CONCLUSION OF CONSTRUCTION BUT NOT BEFORE GROWTH OF PERMANENT GROUND COVER.

6. ALL DENUDED AREAS, INCLUDING STOCKPILED TOPSOIL AND EXCAVATED MATERIAL, ARE TO BE PROTECTED THROUGH THE USE OF TEMPORARY SEEDING, OR COVERED WITH ANCHORED STRAW MULCH.

7. FINAL GRADING WILL BE CONSISTENT WITH PRECONSTRUCTION TOPOGRAPHY TO MAINTAIN DRAINAGE AND AESTHETICS.

8. REMOVE ONLY THE TREES, SHRUBS, AND GRASSES THAT MUST BE REMOVED TO PERMIT ACTUAL CONSTRUCTION. PROTECT THE REMAINING TO PRESERVE THEIR AESTHETIC AND EROSION CONTROL VALUE.

9. BACKFILL TRENCHES IMMEDIATELY AFTER USE. SEED AND MULCH TRENCH AREA WITHIN 7 DAYS AFTER AREA OR SECTION HAS BEEN OPENED.

10. SETTLING FACILITIES, SEDIMENT FILTERS, PERIMETER CONTROLS, AND OTHER PRACTICES INTENDED TO TRAP SEDIMENT SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING OR CONSTRUCTION AND WITHIN 7 DAYS FROM THE START OF GRUBBING. THEY SHALL CONTINUE TO FUNCTION UNTIL THE UPSLOPE DEVELOPMENT AREA IS RESTABILIZED.

11. STORM SEWER INLET PROTECTION – ALL STORM SEWER INLETS WHICH ACCEPT WATER RUNOFF FROM THE PROJECT AREA SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER WILL NOT ENTER THE STORM SEWER SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT, UNLESS THE STORM SEWER SYSTEM DRAINS TO A SETTLING FACILITY. THESE CONTROLS SHALL BE SELECTED AND LOCATED AS INDICATED IN THE PLANS AND AS DIRECTED BY THE CITY ENGINEER.

12. WORKING IN OR CROSSING STREAMS – STREAMS INCLUDING BED AND BANKS SHALL BE RESTABILIZED IMMEDIATELY AFTER IN-CHANNEL WORK IS COMPLETED, INTERRUPTED, OR STOPPED. TO THE EXTENT PRACTICABLE, CONSTRUCTION VEHICLES SHALL BE KEPT OUT OF STREAMS. WHERE IN-CHANNEL WORK IS NECESSARY, PRECAUTIONS SHALL BE TAKEN TO STABILIZE THE WORK AREA DURING CONSTRUCTION TO MINIMIZE EROSION. WHERE A STREAM MUST BE CROSSED BY CONSTRUCTION VEHICLES REGULARLY DURING CONSTRUCTION, A TEMPORARY CULVERT SHALL BE PROVIDED.

13. CONSTRUCTION ACCESS ROUTES – MEASURES SHALL BE TAKEN TO PREVENT SOIL TRANSPORT ONTO SURFACES WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, OR ONTO PUBLIC ROADS. THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT OFF-SITE TRACKING OF SEDIMENTS BY VEHICLES AND EQUIPMENT IS ELIMINATED. SEE STABILIZED CONSTRUCTION ENTRANCE DETAIL, THIS SHEET.

14. SLOUGHING AND DUMPING – NO SOIL, ROCK, DEBRIS, OR ANY OTHER MATERIAL SHALL BE DUMPED OR PLACED INTO A WATER RESOURCE OR INTO SUCH PROXIMITY THAT IT MAY READILY SLOUGH, SLIP, OR ERODE INTO A WATER RESOURCE UNLESS SUCH DUMPING OR PLACING IS AUTHORIZED BY THE CITY ENGINEER. UNSTABLE SOILS PRONE TO SLIPPING OR LANDSLIDING SHALL NOT BE GRADED, EXCAVATED, FILLED, OR HAVE LOADS IMPOSED UPON THEM UNLESS THE WORK IS DONE IN ACCORDANCE WITH A QUALIFIED PROFESSIONAL ENGINEER'S RECOMMENDATIONS TO CORRECT, ELIMINATE, OR ADEQUATELY ADDRESS THE PROBLEMS.

15. MAINTENANCE AND INSPECTION – ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE DESIGNED AND CONSTRUCTED TO MINIMIZE MAINTENANCE REQUIREMENTS. THEY SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ENSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION. MAINTENANCE AND INSPECTION OF ALL EROSION/SEDIMENT CONTROL DEVICES REQUIRED BY THE CITY ENGINEER SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. INSPECTIONS SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF THE CITY ENGINEER, ONCE EVERY 7 CALENDAR DAYS AND/OR WITHIN 24 HOURS AFTER A RAIN EVENT OF GREATER THAN 0.5 INCHES IN A 24-HOUR PERIOD. THESE INSPECTIONS SHALL IDENTIFY AREAS CONTRIBUTING TO STORMWATER DISCHARGES ASSOCIATED WITH THE PROJECT; EVALUATE THE ADEQUACY, IMPLEMENTATION, AND MAINTENANCE OF EXISTING AND PROPOSED EROSION/SEDIMENTATION MEASURES; AND DETERMINE WHETHER ADDITIONAL MEASURES ARE REQUIRED. ACCEPTABLE INSPECTION REPORTS SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE CITY ENGINEER WITHIN 48 HOURS OF INSPECTION COMPLETION. THE REPORT SHALL CONTAIN THE RESULTS OF THE INSPECTION, NAME(S) AND QUALIFICATIONS OF PERSONNEL MAKING THE INSPECTION, MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN, A CERTIFICATION THAT THE FACILITY IS IN COMPLIANCE WITH THE PLAN, AND IDENTIFYING ANY INCIDENTS OF NONCOMPLIANCE.

16. OUTFLOWS FROM DEWATERING OPERATIONS – ALL WATER PRODUCED FROM CLEANING AND DEWATERING OPERATIONS, WHETHER SPECIFICALLY FROM TRENCH DEWATERING OPERATIONS OR FROM MORE EXTENSIVE DEWATERING OPERATIONS, SHALL BE DISCHARGED IN SUCH A MANNER AS TO ELIMINATE EROSION FROM SUCH DISCHARGE.

17. ADDITIONAL CONTROLS – THE CONTRACTOR SHALL ENSURE THAT NO SEDIMENTS ARE TRACKED OFF-SITE BY CONSTRUCTION EQUIPMENT, VEHICLES, AND WORKERS. THE CONTRACTOR SHALL ALSO ENSURE THAT NO SOLID OR LIQUID WASTE IS DISCHARGED INTO ANY STORMWATER FLOW.

18. TEMPORARY EROSION AND SEDIMENT CONTROL PLAN AVAILABILITY AND UPDATES – THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO ENSURE THE IMMEDIATE AVAILABILITY OF THE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN AND SWP3 ON-SITE. THE CONTRACTOR SHALL ALSO BE SOLELY RESPONSIBLE TO PERFORM ALL UPDATES AND ADJUSTMENTS TO THE TEMPORARY EROSION AND SEDIMENT CONTROL PLAN AND SWP3.

19. SWP3 AVAILABILITY AND UPDATES – THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE TO ENSURE THE IMMEDIATE AVAILABILITY OF THE SWP3 ON-SITE. THE CONTRACTOR SHALL ALSO BE SOLELY RESPONSIBLE TO PERFORM ALL UPDATES AND ADJUSTMENTS TO THE SWP3.

20. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL GROUND COVER IS ACHIEVED WHICH, IN THE OPINION OF THE APPROVING AGENCY, PROVIDES ADEQUATE COVER AND IS MATURE ENOUGH TO CONTROL SOIL EROSION SATISFACTORILY & TO SURVIVE ADVERSE WEATHER CONDITIONS.

21. INSTALL ROCK WATER BARS ON GRADED ROADWAY AS SHOWN ON PLANS FOLLOWING ROUGH GRADING AND REMOVE PRIOR TO SUBBASE STABILIZATION.

22. CONCRETE WASHOUT – IF CONCRETE IS NEEDED AT THE SITE, A DESIGNATED TEMPORARY ABOVE-GRADE CONCRETE WASHOUT AREA SHALL BE CONSTRUCTED. SIGNS SHALL BE POSTED MARKING THE LOCATION OF THE WASHOUT AREA TO ENSURE THAT CONCRETE EQUIPMENT OPERATORS USE THE PROPER FACILITY. CONCRETE POURS WILL NOT BE CONDUCTED DURING OR BEFORE AN ANTICIPATED STORM EVENT. CONCRETE MIXER TRUCKS AND CHUTES WILL BE WASHED IN THE DESIGNATED AREA OR CONCRETE WASTES WILL BE PROPERLY DISPOSED OF OFF-SITE. WHEN THE TEMPORARY WASHOUT AREA IS NO LONGER NEEDED FOR THE CONSTRUCTION PROJECT, THE HARDENED CONCRETE AND MATERIALS USED TO CONSTRUCT THE AREA WILL BE REMOVED AND DISPOSED OF OFF-SITE.

23. RECORD KEEPING – THE FOLLOWING IS A LIST OF RECORDS THAT WILL NEED TO BE KEPT AT THE PROJECT SITE AND MADE AVAILABLE FOR INSPECTORS TO REVIEW:

- DATES OF GRADING, CONSTRUCTION ACTIVITY, AND STABILIZATION
- CORRECTIVE ACTION AND SWP3 AMENDMENT LOGS
- A COPY OF THE CONSTRUCTION GENERAL PERMIT
- THE SIGNED AND CERTIFIED NOI FORM
- A COPY OF THE LETTER FROM OHIO EPA NOTIFYING OF THEIR RECEIPT OF THE COMPLETE NOI/APPLICATION
- INSPECTION REPORTS

## 5.0 PROHIBITED CONSTRUCTION ACTIVITIES

THE CONTRACTOR SHALL NOT USE CONSTRUCTION PROCEDURES, ACTIVITIES, OR OPERATIONS THAT MAY UNNECESSARILY IMPACT THE NATURAL ENVIRONMENTAL OR THE PUBLIC HEALTH AND SAFETY. PROHIBITED CONSTRUCTION PROCEDURES, ACTIVITIES, OR OPERATIONS INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

1. DISPOSING OF EXCESS OR UNSUITABLE EXCAVATED MATERIAL IN WETLANDS OR FLOOD PLAINS, EVEN WITH THE PERMISSION OF THE PROPERTY OWNER.

2. INDISCRIMINATE, ARBITRARY, OR CAPRICIOUS OPERATION OF EQUIPMENT IN ANY STREAM CORRIDORS, ANY WETLANDS, ANY SURFACE WATERS, OR OUTSIDE THE EASEMENT LIMITS.

3. PUMPING OF SEDIMENT LADEN WATER FROM TRENCHES OR OTHER EXCAVATIONS INTO ANY SURFACE WATERS, ANY STREAM CORRIDORS, ANY WETLANDS, OR STORM DRAINS.

4. DISCHARGING POLLUTANTS SUCH AS CHEMICALS, FUELS, LUBRICANTS, BITUMINOUS MATERIALS, RAW SEWAGE, AND/OR ANY OTHER HARMFUL WASTE, INTO OR ALONGSIDE OF RIVERS, STREAMS, IMPOUNDMENTS, OR INTO NATURAL OR MAN-MADE CHANNELS LEADING THERETO.

5. PERMANENT OR UNSPECIFIED ALTERATION OF THE FLOWLINE OF A STREAM.

6. DAMAGING VEGETATION OUTSIDE OF THE CONSTRUCTION AREA.

7. DISPOSAL OF TREES, BRUSH, AND OTHER DEBRIS IN ANY STREAM CORRIDORS, WETLANDS, OR SURFACE WATERS.

8. OPEN BURNING OF PROJECT DEBRIS WITHOUT A PERMIT.

9. STORING CONSTRUCTION EQUIPMENT AND VEHICLES AND/OR STOCKPILING CONSTRUCTION MATERIALS ON PROPERTY (PUBLIC OR PRIVATE) NOT PREVIOUSLY SPECIFIED BY THE CITY ENGINEER FOR SAID PURPOSES.

## 6.0 POST-CONSTRUCTION STORM WATER CONTROL

POST-CONSTRUCTION STORM WATER TREATMENT (QUALITY) FOR THE PROJECT AREA DIRECTLY TRIBUTARY TO THE SCIOTO RIVER WILL BE PROVIDED BY A WATER DIVERSION CHAMBER AND AN ODOT TYPE 2 WATER QUALITY UNIT AT THE LOCATION SHOWN ON THE PLANS. DESIGN OF THE DIVERSION CHAMBER AND WATER QUALITY UNIT SHALL BE PROVIDED BY THE CONTRACTOR.

POST-CONSTRUCTION STORM WATER TREATMENT FOR THE PROJECT AREA TRIBUTARY TO BILLINGSLEY CREEK (QUALITY AND QUANTITY) WILL BE PROVIDED BY A TWO CHAMBERED DETENTION CONTROL STRUCTURE (MANHOLE 78) AND IN-PIPE STORAGE.

LONG-TERM MAINTENANCE OF THE WATER QUALITY UNIT AND DIVERSION CHAMBER (SCIOTO WATERSHED) AND THE DETENTION CONTROL STRUCTURE (BILLINGSLEY WATERSHED) WILL BE THE RESPONSIBILITY OF THE CITY OF DUBLIN.

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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JRC |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

STORMWATER POLLUTION PREVENTION PLAN (SWP3) NOTES

SCALE: NONE

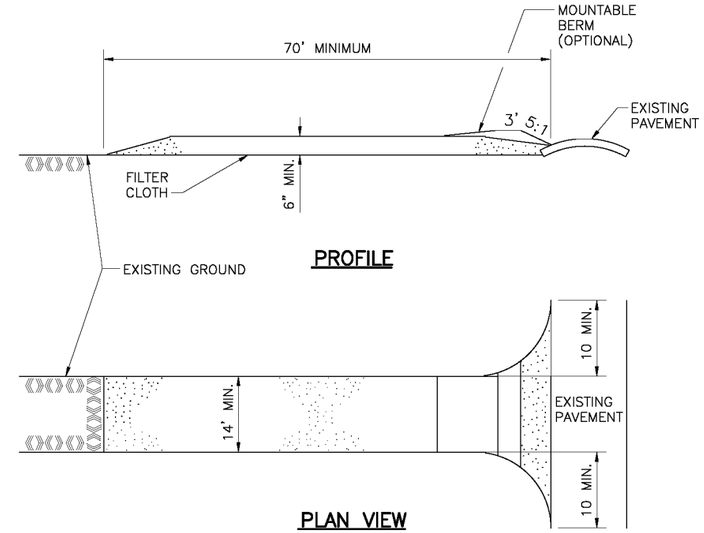
SHEET NO. 241 OF 275

## STORMWATER POLLUTION PREVENTION PLAN (SWP3)
## (SEE ALSO ADDENDUM TO SWP3)

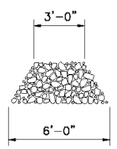
| DESCRIPTION | IMPROVEMENT OF EMERALD PARKWAY BETWEEN RVERSIDE DRIVE AND BRIGHT ROAD (NEW ROADWAY, ROUNDABOUT, CURB AND GUTTER, STORM SEWER, SANITARY SEWER, AND WATER MAIN) |
|---|---|
| TOTAL AREA OF PROJECT | 25.5 ACRES |
| PROJECT EARTH DISTURBED AREA | 25.5 ACRES |
| RUNOFF COEFFICIENT | ---------- |
| PRE-CONSTRUCTION | 0.41 |
| POST-CONSTRUCTION | 0.63 |
| IMPERVIOUS AREA | ---------- |
| PRE-CONSTRUCTION | 0.50 ACRES |
| POST-CONSTRUCTION | 11.74 ACRES |
| LATITUDE | N 40° 06' 35" |
| LONGITUDE | W 83° 06' 40" |
| USGS 7.5 MINUTE QUAD | |
| IMMEDIATE RECEIVING WATERS | CITY OF DUBLIN MS4 |
| SUBSEQUENT RECEIVING WATERS | SCIOTO RIVER |
| ESTIMATED CONSTRUCTION START DATE | |
| ESTIMATED CONSTRUCTION COMPLETION DATE | |
| CONSTRUCTION SITE CONTACT | |
| CONTACT INFORMATION | |
| PERSON RESPONSIBLE FOR SWP3 AUTHORIZATION AND AMENDMENT | |
| CONTACT INFORMATION | |
| CONSTRUCTION SITE OPERATORS | |
| CONTACT INFORMATION | |

### STABILIZED CONSTRUCTION ENTRANCE NOTES

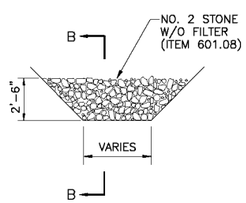
1. STONE SIZE – USE 2 INCH STONE.
2. LENGTH – AS REQUIRED (MINIMUM OF 70 FEET).
3. THICKNESS – NOT LESS THAN 6 INCHES.
4. WIDTH – 14 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER FABRIC – WILL BE PLACED OVER THE ENTIRE SUBGRADE PRIOR TO PLACING OF STONE.
6. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE.
7. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING – WHEELS SHALL BE CLEANED TO REMOVE MUD PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS–OF–WAY. WHEN WASHING IS NEEDED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN ON–SITE CONTAINMENT AREA, OR OTHER APPROPRIATE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT.
9. PERIODIC INSPECTION AND REQUIRED MAINTENANCE SHALL BE PERFORMED AFTER EACH RAIN.
10. THE STABILIZED CONSTRUCTION ENTRANCE DESCRIBED IS A MINIMUM STANDARD FOR INGRESS AND EGRESS FROM THE CONSTRUCTION SITE ONTO PUBLIC RIGHT–OF–WAY. THE CONTRACTOR MAY VARY THE CONSTRUCTION AS NEEDED FOR SPECIFIC SITE CONDITIONS PROVIDED THAT ITS FUNCTION SATISFIES THE INTENT DESCRIBED HEREIN AS DETERMINED BY THE CITY ENGINEER. THE COST FOR THIS WORK SHALL BE PAID AT THE UNIT PRICE BID PER CUBIC YARD.




## STABILIZED CONSTRUCTION ENTRANCE




SECTION B–B




## TEMPORARY ROCK CHECK DAM DETAIL

### TEMPORARY ROCK CHECK DAM NOTES

TEMPORARY ROCK CHECK DAMS SHALL CONSIST OF NO. 2 STONE WITH GEOTEXTILE FABRIC, PER ITEM 601.08, AND PLACED TO THE DIMENSIONS SHOWN ON THE DETAIL AND IN ACCORDANCE WITH SCD ODOT SUPPLEMENTAL SPECIFICATION 832.

### MAINTENANCE

THE ROCK CHECK DAM SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED. SEDIMENT SHALL BE REMOVED AND THE DAM RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE–HALF THE DAM DESIGN HEIGHT. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA NOT SUBJECT TO EROSION.

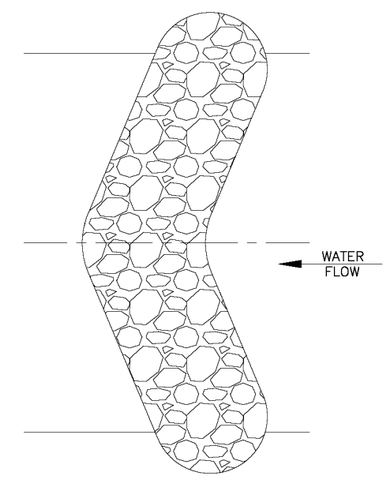
DAMS SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

PAYMENT WILL BE MADE AT THE UNIT PRICE BID FOR ITEM SPECIAL–TEMPORARY ROCK CHECK DAM; INCLUDING MATERIAL, PLACEMENT, MAINTENANCE, AND REMOVAL.

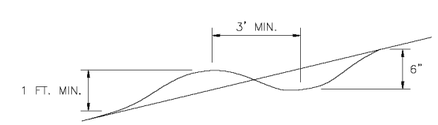
### ROCK WATER BAR NOTES

1. MINIMUM WATER BAR DIMENSION SHALL BE:

   TOP WIDTH OF BERM/DIKE – 2 FEET MINIMUM
   SIDE SLOPES – SUFFICIENTLY FLAT TO ACCOMMODATE EXPECTED TRAFFIC.
2. THE FIELD LOCATION SHALL BE ADJUSTED AS NEEDED TO PROVIDE VELOCITY DISSIPATION.
3. INSTALL GEOTEXTILE FABRIC UNDER STONE.




PLAN VIEW




SECTION

## ROCK WATER BAR DETAIL

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07–008–CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | JRC |
| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

**STORMWATER POLLUTION PREVENTION PLAN (SWP3) NOTES AND DETAILS**

SCALE: NONE

SHEET NO. 242 OF 275

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## FILTER FABRIC FENCE

THIS SEDIMENT BARRIER UTILIZES STANDARD STRENGTH OR EXTRA STRENGTH SYNTHETIC FILTER FABRICS. IT IS DESIGNED FOR SITUATIONS IN WHICH ONLY SHEET OR OVERLAND FLOWS ARE EXPECTED.

1. THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES (HIGHER FENCES MAY IMPOUND VOLUMES OF WATER SUFFICIENT TO CAUSE FAILURE OF THE STRUCTURE).
2. THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6 INCH OVERLAP, AND SECURELY SEALED.
3. POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND (MINIMUM OF 12 INCHES). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET.
4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 6 INCHES DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
5. WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH LONG, TIE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES AND SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
6. THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.
7. WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS OF ITEM NO. 6 APPLYING.
8. THE TRENCH SHALL BE BACKFILLED AND SOIL COMPACTED OVER THE FILTER FABRIC.
9. SILT FENCES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED.

### MAINTENANCE

SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY.

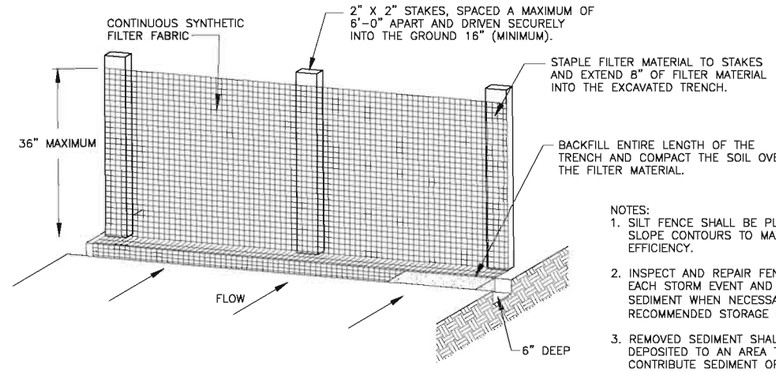
SEDIMENT DEPOSITS SHOULD BE REMOVED AFTER EACH STORM EVENT. THEY MUST BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.

ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE, PREPARED, AND SEEDED.

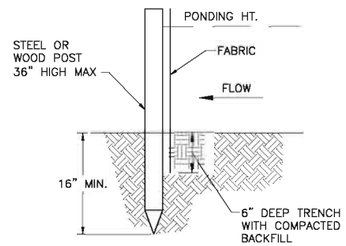
THIS WORK SHALL BE PAID AT THE UNIT PRICE BID PER LINEAL FOOT FOR ITEM 207 – "FILTER FABRIC FENCE".

### INLET SEDIMENT FILTER

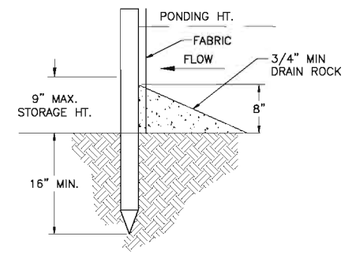
INSTALLATION AND MAINTENANCE OF INLET SEDIMENT FILTERS SHALL BE IN ACCORDANCE WITH THE DETAILS AND THE MANUFACTURER'S RECOMMENDATIONS. PAYMENT WILL BE PER EACH FOR ITEM 207 – INLET PROTECTION, A.P.P.




NOTES:
1. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. (9" MAX. RECOMMENDED STORAGE HEIGHT).
3. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

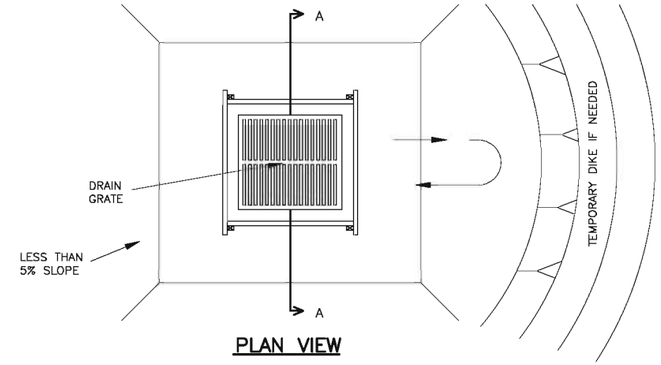



TRENCH DETAIL

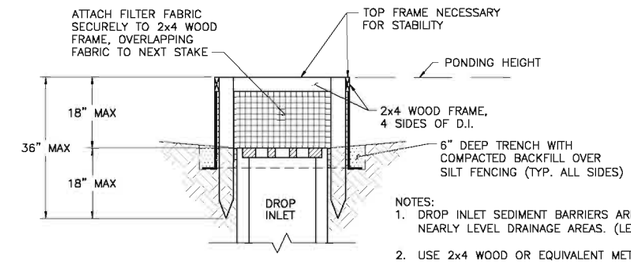



INSTALLATION WITHOUT TRENCHING

## FILTER FABRIC FENCE



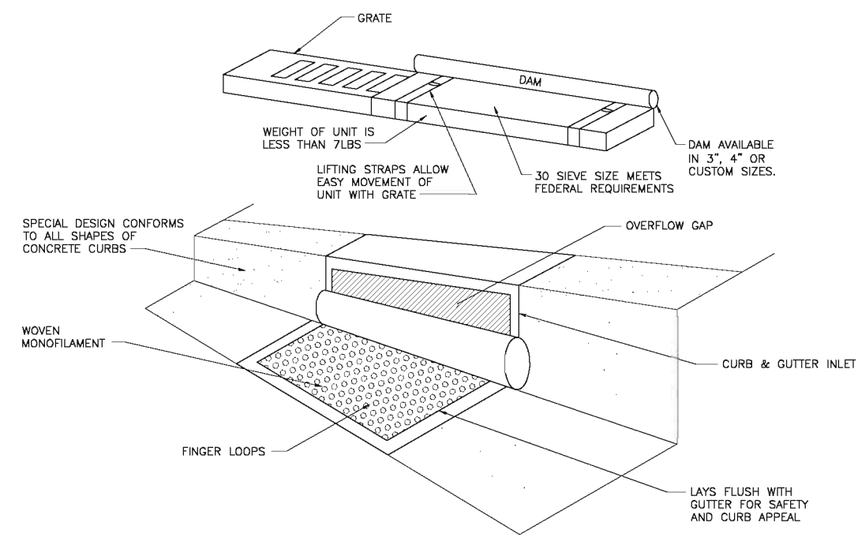

PLAN VIEW




SECTION A–A

NOTES:
1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%).
2. USE 2x4 WOOD OR EQUIVALENT METAL STAKES, (3FT. MIN. LENGTH).
3. INSTALL 2x4 WOOD TOP FRAME TO INSURE STABILITY.
4. THE TOP OF THE FRAME (PONDING HEIGHT) MUST BE WELL BELOW GROUND ELEVATION DOWNSLOPE TO PREVENT RUNOFF FROM BY-PASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

## SILT FENCE DROP INLET SEDIMENT BARRIER




TO INSPECT CATCH BASIN:
REMOVE UNIT WITH GRATE INSIDE, INSPECT CATCH BASIN AND REPLACE UNIT. NO NEED TO REINSTALL.

MAINTENANCE: REMOVE DRIED SEDIMENT FROM SURFACE OF UNIT AS NEEDED WITH STIFF BROOM OR SQUARE POINT SHOVEL. REMOVE FINE MATERIAL FROM INSIDE ENVELOPE AS NEEDED.

## CURB INLET SEDIMENT BARRIER/FILTER

| NO. | REVISIONS | DATE | BY | CHK. |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
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| DRAWN BY: | WHW |
| CHECKED BY: | JED |
| APPROVED BY: | DKM |
| DATE: | OCTOBER 2013 |

STORMWATER POLLUTION PREVENTION PLAN (SWP3)
NOTES AND DETAILS

SCALE: NONE



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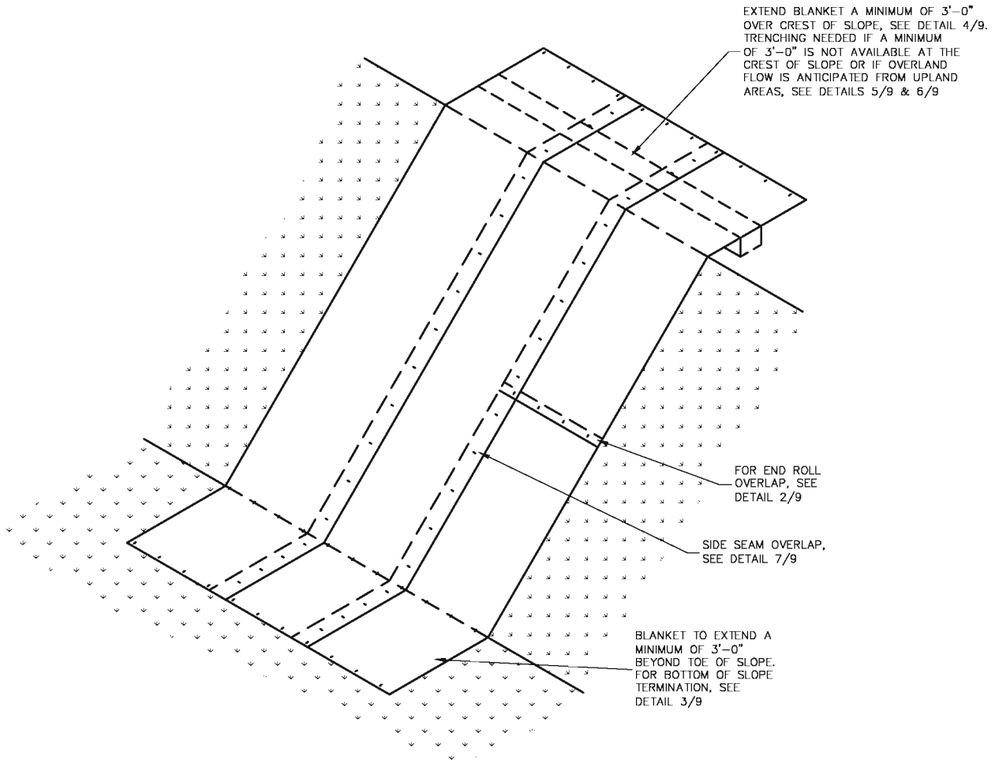
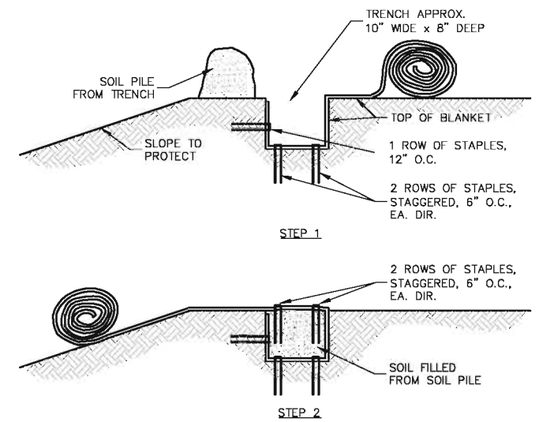


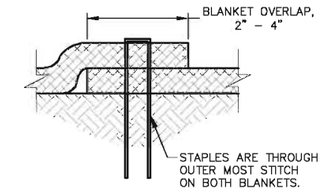

SLOPE DETAIL (1/9)
NO SCALE

SLOPE CREST ANCHOR METHOD "A" (NO TRENCH) (4/9)
NO SCALE

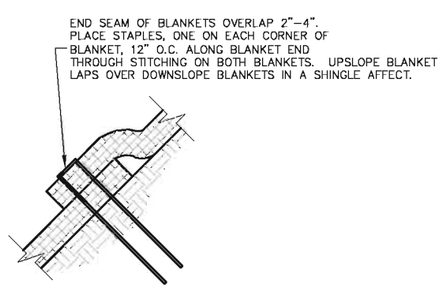
DO NOT NEED TO TRENCH BLANKET IN IF IT CAN BE EXTENDED A MINIMUM OF 3'-0" OVER THE CREST OF THE SLOPE.



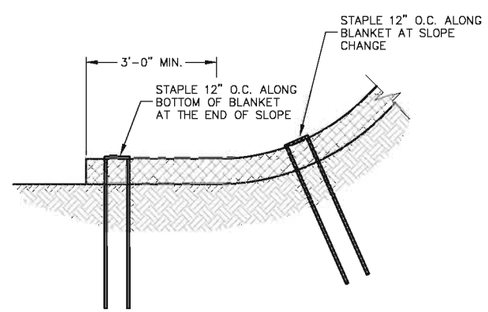

SLOPE TRENCHING METHOD "B" (5/9)
NO SCALE



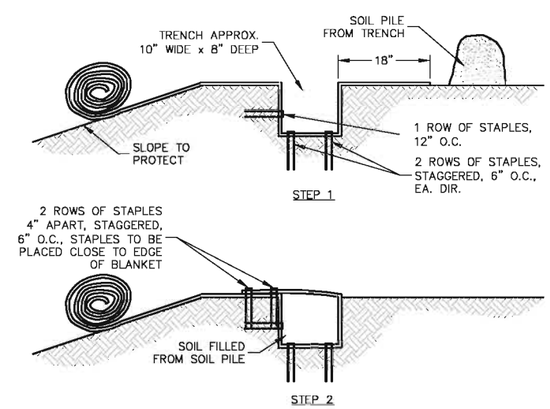

SIDE SEAM OVERLAP STAPLE DETAIL (7/9)
NO SCALE




END ROLL OVERLAP (2/9)
NO SCALE




BOTTOM OF SLOPE TERMINATION (3/9)
NO SCALE




SLOPE TRENCHING METHOD "C" (6/9)
NO SCALE

NOTES:

1. STAPLE PATTERNS ARE DEPENDENT ON SITE CONDITIONS. SEE CURLEX® NETFREE™ STAPLE PATTERN GUIDE FOR DETAILS.
2. E-STAPLE® MAY BE USED IN PLACE OF WIRE STAPLES.
3. COLOR USED SHALL BE ASPEN GREEN.

American Excelsior Company®
Earth Science Division

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BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

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| DATE: | OCTOBER 2013 |

STORMWATER POLLUTION PREVENTION PLAN (SWP3)
EROSION CONTROL MATTING NOTES AND DETAILS

SCALE: NONE

SHEET NO. 244 OF 275

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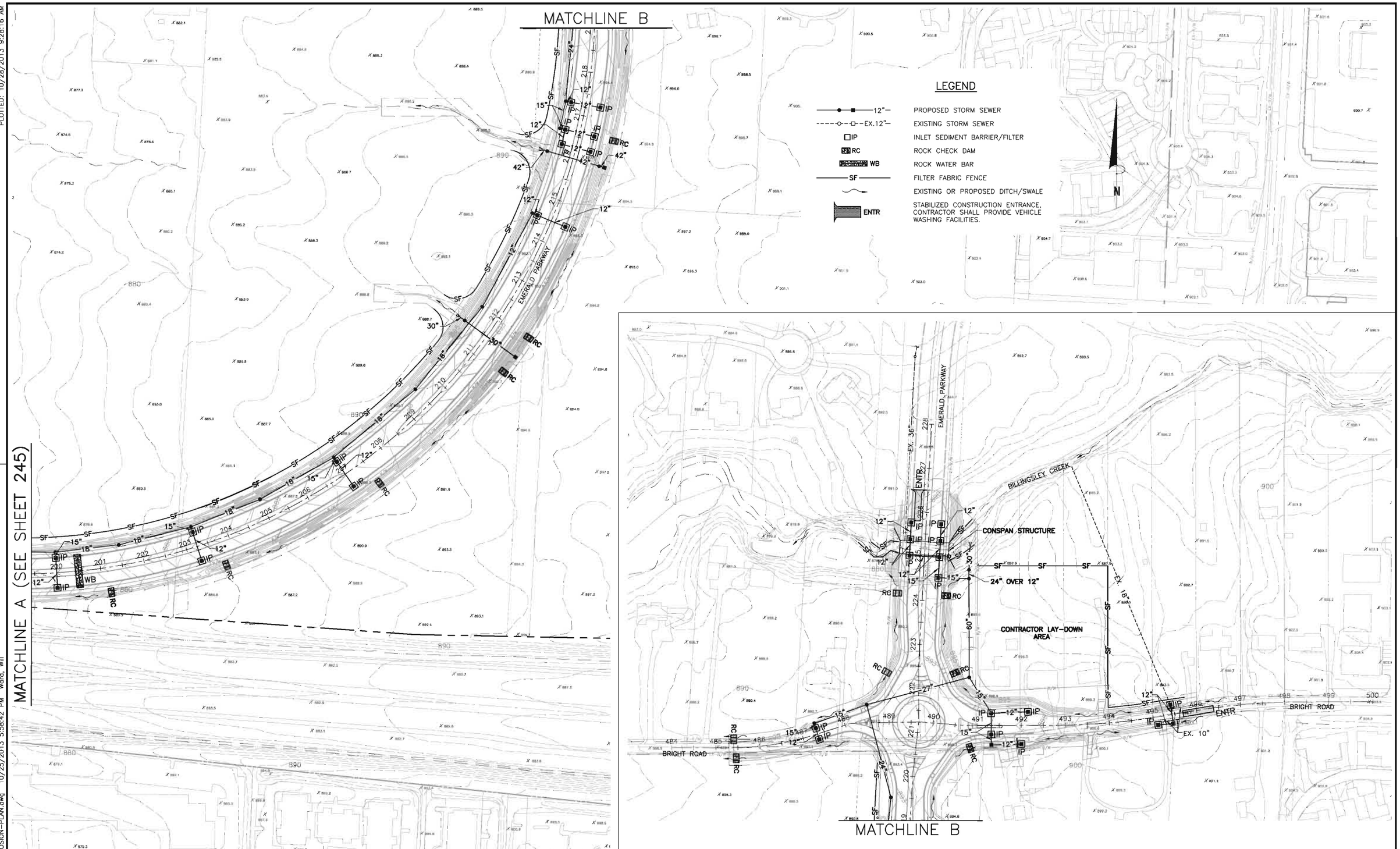
| DATE: | OCTOBER 2013 |

STORMWATER POLLUTION PREVENTION CONTROL PLAN (SWP3)
GENERAL PLAN (SHEET 1 OF 2)

SCALE: 1" = 100'

SHEET NO. 245 OF 275

PLOTTED: 10/28/2013 9:28:16 AM

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STORMWATER POLLUTION PREVENTION CONTROL PLAN (SWP3)
GENERAL PLAN (SHEET 2 OF 2)

SCALE: 1" = 100'

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CITY OF DUBLIN, OHIO
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STORMWATER POLLUTION PREVENTION PLAN (SWP3)
EROSION CONTROL MAT (SHEET 1 OF 2)

SCALE: 1" = 100'

SHEET NO. 247 OF 275

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**CITY OF DUBLIN, OHIO**
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**STORMWATER POLLUTION PREVENTION CONTROL PLAN (SWP3)**
**EROSION CONTROL MAT (SHEET 2 OF 2)**

SCALE: 1" = 100'

SHEET NO. 248 OF 275

# RIGHT OF WAY
# LEGEND SHEET
# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO

CITY OF DUBLIN

TWP 2 N, RG 19 W, U.S.M.L., QTR TWP 2, LOTS NUMBERED 11, 12, 13, 16, 17

NOTES: THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

## INDEX OF SHEETS:


| | |
|---|---|
| LEGEND SHEET | 1 |
| CENTERLINE PLAT | 2 & 3 |
| PROPERTY MAP | 4 & 5 |
| SUMMARY OF ADDITIONAL R/W | 6 & 8 |
| RIGHT-OF-WAY DETAIL PLANS | 9 THRU 25 |


## PROJECT CONTROL

STATE PLANE GRID

PROJECT ADJUSTMENT FACTOR

## PROJECT DESCRIPTION

## PLANS PREPARED BY:

FIRM NAME: BURGESS AND NIPLE, LTD

PLANS PREPARED BY: EARL GRANT

FIELD REVIEW BY: WILLIAM C. LeROY

DATE COMPLETED: FEBRUARY 24, 2010

OWNERSHIP VERIFIED BY: WILLIAM C. LeROY

DATE COMPLETED: DECEMBER 18, 2009

DATE COMPLETED: MARCH 04, 2010

## STRUCTURE KEY

- RESIDENTIAL
- COMMERCIAL
- OUT-BUILDING

## LEGEND:

WD = WARRANTY DEED

T = TEMPORARY EASEMENT

U = UTILITY EASEMENT

## CONVENTIONAL SYMBOLS

County Line

Township Line

Section Line

Corporation Line or

Fence Line (Ex) (Pr)

Center Line

Right of Way (Ex) Ex R/W

Right of Way (Pr) R/W

Standard Highway Ease.(Ex) Ex SH

Temporary Right of Way TMP

Channel Ease. (Pr) CH

Utility Ease. (Ex) Ex U

Railroad or

Guardrail (Ex) (Pr)

Construction Limits

Edge of Pavement (Ex)

Edge of Pavement (Pr)

Edge of Shoulder (Ex)

Edge of Shoulder ( Pr)

Ditch / Creek (Ex)

Ditch / Creek (Pr)

Tree Line (Ex)

Ownership Hook Symbol , Example

Property Line Symbol , Example

Break Line Symbol , Example

Tree (Pr) , Tree (Ex) , Shrub (Ex)

Tree (Remove) , Shrub (Remove)

Evergreen (Ex) , Stump

Evergreen (Remove) , Stump (Remove)

Wetland (Pr) , Grass (Pr) , Aerial Target

Post (Ex) , Mailbox (Ex) , Mailbox (Pr)

Light (Ex) , Telephone Marker (Ex)+TEL

Fire Hydrant (Ex) , Water Meter (Ex)

Water Valve (Ex) , Utility Valve Unknown (Ex.)

Telephone Pole (Ex) , Power Pole (Ex)

Light Pole (Ex)

I, William C. LeRoy, P. S. have conducted a survey of the existing conditions for The City of Dublin on December, 2009. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinates system NAD 83, South Zone using the 1986 adjustment, by ties to Franklin County Engineer Monuments: FCGS 7772 and FCGS 7773 with a bearing of North 02° 34' 49" East. Distances shown herein are Grid Distances. The Combined Factor for this project is 0.99998070. I have reestablished the locations of the existing property lines and the existing centerline of Right of Way for property takes contained herein. Under my direct supervision the proposed property lines, area for the Gross Takes, present roadway occupied (PRO), Net Takes and Net Residues areas have been calculated; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein.

As a part of this work I will set the monuments at the proposed Property corners and other points as shown herein. All monuments called out as set that require a cap will have placed a 2 ½" Aluminum Cap marked "LEROY 7664 Burgess & Niple". All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "A Minimum Standards for Boundary Surveys in the State of Ohio" unless noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

William C. LeRoy, Professional Land Surveyor 7664 Date: 3-4-2010

STATE OF OHIO — SURVEYOR'S SEAL — WILLIAM C. LEROY 7664 — REGISTERED PROFESSIONAL SURVEYOR — SIGNED — DATE

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 10/09/09 |

RIGHT OF WAY
LEGEND SHEET

SCALE: 1" = 1'



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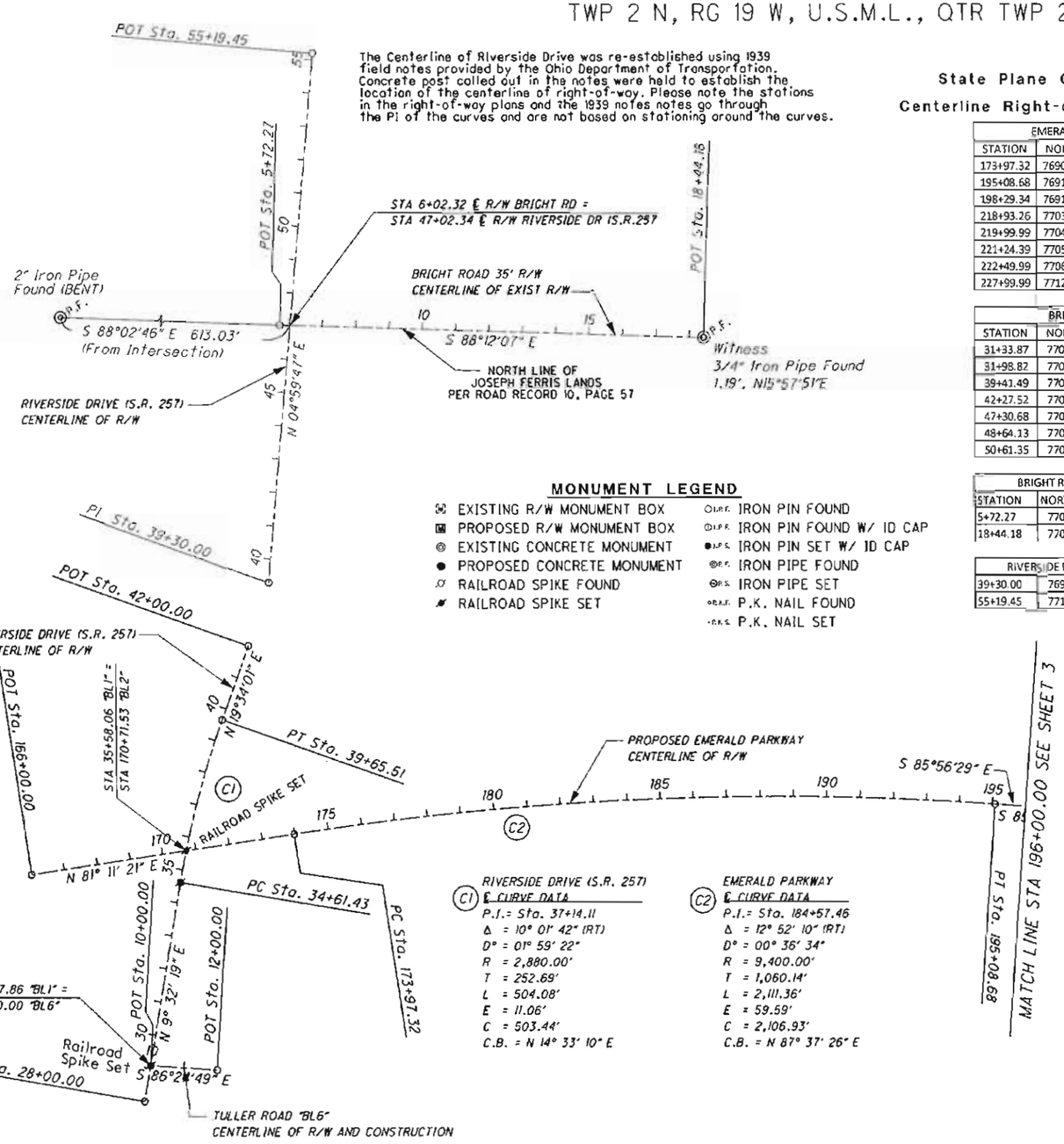
# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO

CITY OF DUBLIN

TWP 2 N, RG 19 W, U.S.M.L., QTR TWP 2, LOT NO. 11, 12, 13, 16, 17




The Centerline of Riverside Drive was re-established using 1939 field notes provided by the Ohio Department of Transportation. Concrete post called out in the notes were held to establish the location of the centerline of right-of-way. Please note the stations in the right-of-way plans and the 1939 notes notes go through the PI of the curves and are not based on stationing around the curves.

## MONUMENT LEGEND

- EXISTING R/W MONUMENT BOX
- PROPOSED R/W MONUMENT BOX
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.P.F. IRON PIN FOUND
- I.P.F. IRON PIN FOUND W/ ID CAP
- I.P.S. IRON PIN SET W/ ID CAP
- P.F. IRON PIPE FOUND
- P.S. IRON PIPE SET
- P.K. NAIL FOUND
- P.K. NAIL SET

(C1) RIVERSIDE DRIVE (S.R. 257)
℄ CURVE DATA

P.I.= Sta. 37+14.11
Δ = 10° 01' 42" (RT)
D° = 01° 59' 22"
R = 2,880.00'
T = 252.69'
L = 504.08'
E = 11.06'
C = 503.44'
C.B. = N 14° 33' 10" E

(C2) EMERALD PARKWAY
℄ CURVE DATA

P.I.= Sta. 184+57.46
Δ = 12° 52' 10" (RT)
D° = 00° 36' 34"
R = 9,400.00'
T = 1,060.14'
L = 2,111.36'
E = 59.59'
C = 2,106.93'
C.B. = N 87° 37' 26" E

### State Plane Coordinate Values for Centerline Right-of-Way Control Points

| EMERALD PARKWAY | | |
|---|---|---|
| STATION | NORTHING | EASTING |
| 173+97.32 | 769042.1720 | 1797906.4148 |
| 195+08.68 | 769129.5208 | 1800011.5298 |
| 198+29.34 | 769106.8255 | 1800331.3816 |
| 218+93.26 | 770333.3925 | 1801721.4947 |
| 219+99.99 | 770439.9704 | 1801727.2559 |
| 221+24.39 | 770563.5805 | 1801741.1556 |
| 222+49.99 | 770689.1902 | 1801740.7277 |
| 227+99.99 | 771238.3862 | 1801770.4150 |

| BRIGHT ROAD | | |
|---|---|---|
| STATION | NORTHING | EASTING |
| 31+33.87 | 770509.2494 | 1800850.4030 |
| 31+98.82 | 770506.0253 | 1800915.2770 |
| 39+41.49 | 770508.1333 | 1801657.9377 |
| 42+27.52 | 770519.1181 | 1801943.7550 |
| 47+30.68 | 770603.6165 | 1802439.7775 |
| 48+64.13 | 770608.9115 | 1802573.1167 |
| 50+61.35 | 770609.1470 | 1802770.3353 |

| BRIGHT ROAD CUL-DE-SAC | | |
|---|---|---|
| STATION | NORTHING | EASTING |
| 5+72.27 | 770564.3725 | 1797870.1266 |
| 18+44.18 | 770524.4616 | 1799141.4109 |

| RIVERSIDE DR @ BRIGHT ROAD | | |
|---|---|---|
| 39+30.00 | 769794.0220 | 1797832.8921 |
| 55+19.45 | 771377.4322 | 1797971.3239 |

*For termination of public access from Bright Road to Riverside Drive see City of Dublin Resolution No._____ and Franklin County Commissioners Journal Entry Book _____, Page_____ .*

### BASIS FOR BEARINGS:

The basis of bearings in the above described parcel are based on Grid North as obtained by RTK/GPS observations taken from Franklin County Engineer Monuments: Station FCGS 7772 and FCGS 7773, with a bearing of North 02°34'49" East, based on datum: Ohio State Plane South, NAD83(86 adjustment) and are for the determination of angles only.

### APPROVAL FOR ALTERING COUNTY ROAD #166 (BRIGHT ROAD)

Franklin County Engineer — Date

Franklin County Chief Deputy Engineer — Date

Franklin County Commissioner — Date

Franklin County Commissioner — Date

Franklin County Commissioner — Date

*I, William C. LeRoy, P. S. have conducted a survey of the existing conditions for The City of Dublin on December, 2009. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinates system NAD 83, South Zone using the 1986 adjustment, by ties to Franklin County Engineer Monuments: FCGS 7772 and FCGS 7773 with a bearing of North 02° 34' 49" East. Distances shown herein are Grid Distances. The Combined Factor for this project is 0.99998070. I have reestablished the locations of the existing property lines and the existing centerline of Right of Way for property takes contained herein. Under my direct supervision the proposed property lines, area for the Gross Takes, present roadway occupied (PRO), Net Takes and Net Residues areas have been calculated; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein.*

*As a part of this work I will set the monuments at the proposed Property corners and other points as shown herein. All monuments called out as set that require a cap will have placed a 2 ½" Aluminum Cap marked "LEROY 7664 Burgess & Niple". All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "A Minimum Standards for Boundary Surveys in the State of Ohio" unless noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.*

*William C. LeRoy, Professional Land Surveyor 7664*

*Date: 3-4-2010*

SURVEYOR'S SEAL
STATE OF OHIO
WILLIAM C. LEROY 7664
REGISTERED PROFESSIONAL SURVEYOR

RECEIVED _____, 20__
RECORDED _____, 20__
BOOK _____ PAGE _____
COUNTY RECORDER

STONE:
DATE:

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 10/09/09 |

CENTERLINE PLAT

SCALE: SHOWN

SHEET NO. 250 OF 275



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# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO
CITY OF DUBLIN
TWP 2 N, RG 19 W, U.S.M.L., QTR TWP 2, LOT NUMBERS 11, 12, 13, 16, 17

THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE CENTERLINE OF RIGHT OF WAY.

THE PLACING OF MONUMENTS SHALL BE UNDER THE DIRECTION OF A SURVEYOR REGISTERED IN THE STATE OF OHIO.

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN ON THIS PLAT, REQUIRES PRIOR APPROVAL OF THE CITY OF DUBLIN, ENGINEERING DEPARTMENT. A REVISED CENTERLINE PLAT WITH THE NEW LOCATIONS SHALL BE RECORDED IN THE APPLICABLE COUNTY RECORDS.

**State Plane Coordinate Values for Centerline Right-of-Way Control Points**

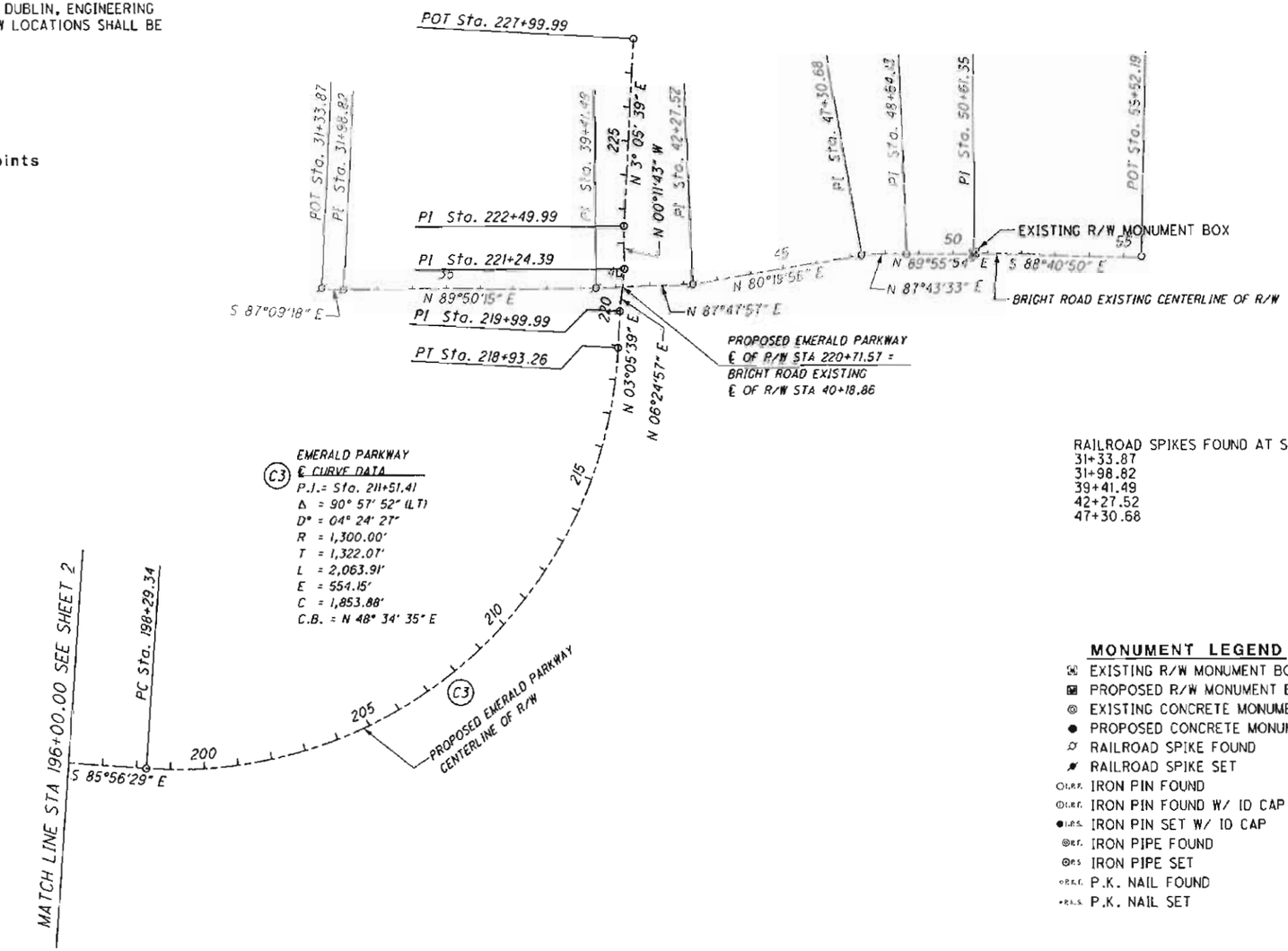
| EMERALD PARKWAY | | |
|---|---|---|
| STATION | NORTHING | EASTING |
| 173+97.32 | 769042.1720 | 1797906.4148 |
| 195+08.68 | 769129.5208 | 1800011.5298 |
| 198+29.34 | 769106.8255 | 1800331.3816 |
| 218+93.26 | 770333.3925 | 1801721.4947 |
| 219+99.99 | 770439.9704 | 1801727.2559 |
| 221+24.39 | 770563.5805 | 1801741.1556 |
| 222+49.99 | 770689.1902 | 1801740.7277 |
| 227+99.99 | 771238.3862 | 1801770.4150 |

| BRIGHT ROAD | | |
|---|---|---|
| STATION | NORTHING | EASTING |
| 31+33.87 | 770509.2494 | 1800850.4030 |
| 31+98.82 | 770506.0253 | 1800915.2770 |
| 39+41.49 | 770508.1333 | 1801657.9377 |
| 42+27.52 | 770519.1181 | 1801943.7550 |
| 47+30.68 | 770603.6165 | 1802439.7775 |
| 48+64.13 | 770608.9115 | 1802573.1167 |
| 50+61.35 | 770609.1470 | 1802770.3353 |

| BRIGHT ROAD CUL-DE-SAC | | |
|---|---|---|
| STATION | NORTHING | EASTING |
| 5+72.27 | 770564.3725 | 1797870.1266 |
| 18+44.18 | 770524.4616 | 1799141.4109 |

| RIVERSIDE DR @ BRIGHT ROAD | | |
|---|---|---|
| 39+30.00 | 769794.0220 | 1797832.8921 |
| 55+19.45 | 771377.4322 | 1797971.3239 |

**BASIS FOR BEARINGS:**




RAILROAD SPIKES FOUND AT STATIONS:
31+33.87
31+98.82
39+41.49
42+27.52
47+30.68

**MONUMENT LEGEND**

- EXISTING R/W MONUMENT BOX
- PROPOSED R/W MONUMENT BOX
- EXISTING CONCRETE MONUMENT
- PROPOSED CONCRETE MONUMENT
- RAILROAD SPIKE FOUND
- RAILROAD SPIKE SET
- I.R.F. IRON PIN FOUND
- I.R.F. IRON PIN FOUND W/ ID CAP
- I.R.S. IRON PIN SET W/ ID CAP
- R.F. IRON PIPE FOUND
- R.S. IRON PIPE SET
- P.K.F. P.K. NAIL FOUND
- P.K.S. P.K. NAIL SET

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 10/09/09 |

CENTERLINE PLAT

3 / 25

SCALE: SHOWN

SHEET NO. 251 OF 275

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# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO
CITY OF DUBLIN
TWP 2 N, RG 19 W, U.S.M.L., QTR TWP 2, LOT NO. 11, 12, 13, 16, 17

**OWNERSHIP NAME AND NUMBER**

3 CITY OF DUBLIN
4 THE THOMAS FAMILY LIMITED PARTNERSHIP
5 O. JOSEPHINE HOLDER, LLC
6 CITY OF DUBLIN
7 THE BOARD OF EDUCATION OF THE DUBLIN LOCAL SCHOOL DISTRICT
8 JOHN W. McKITRICK
9 BORROR REALTY COMPANY
10 McKITRICK PROPERTIES, INC.
11 MARY M. SEAY AND CHARLES J. PETHTEL
12 ADOLPH W. MAIER AND RUTH MAIER
13 IACOVETTA PROPERTIES, LTD.
14 VILLAGE AT INVERNESS CONDOMINIUM
15 THOMAS A. McDOWELL AND DIANE A. HORNUNG
16 HARRIETT S. CLARK
17 ROBERT C. BODE AND JOETTA L. BODE
18 THE ASMAN LAND CO., LTD.
19 MICHAEL E. HARBER AND HEATHER S. HARBER
20 CITY OF DUBLIN
21 NORTHERN DREAMBUILDERS CORPORATION, A FLORIDA CORPORATION
22 HERBERT E. JONES AND JANET F. JONES
23 JUBILEE LTD. PARTNERSHIP
24 WILLIAM C. PUSECKER AND JULIA M. PUSECKER
25 CANDICE R. BARNHARDT AND STEVEN C. BARNHARDT
26 JOHN WREATHALL AND ROSEMARY WREATHALL
27 GAP - OWNERSHIP UNKNOWN

| REV. BY | DATE | DESCRIPTION |
|---|---|---|
| | | |

DATE COMPLETED

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/18/09 |

PROPERTY MAP

SCALE: SHOWN

SHEET NO. 252 OF 275

4 / 25

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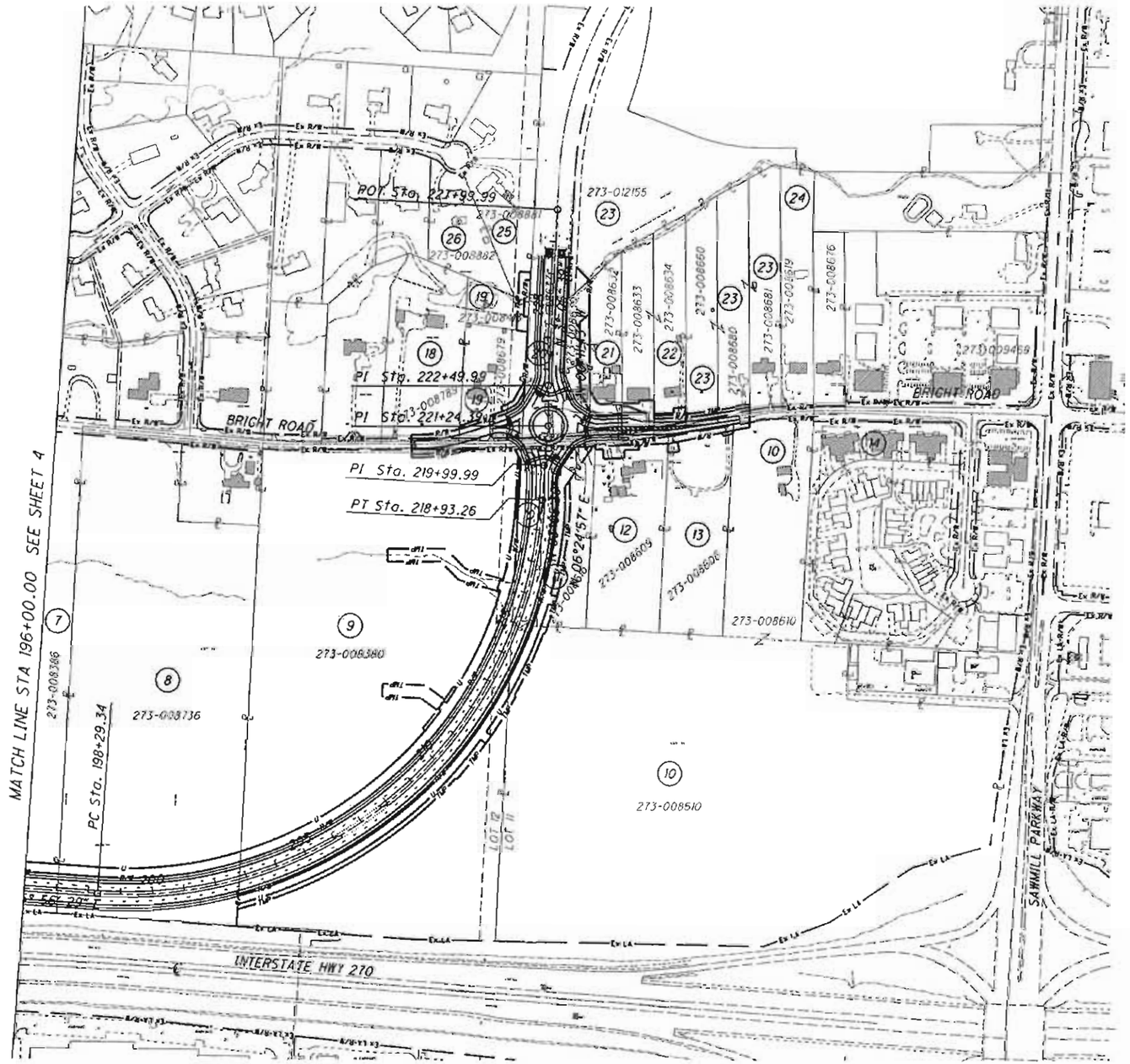
# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO

CITY OF DUBLIN

TWP 2 N, RG 19 W, U.S.M.L., QTR TWP 2, LOT NO. 11, 12, 13, 16, 17




OWNERSHIP NAME AND NUMBER

3 CITY OF DUBLIN
4 THE THOMAS FAMILY LIMITED PARTNERSHIP
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25 CANDICE R. BARNHARDT AND STEVEN C. BARNHARDT
26 JOHN WREATHALL AND ROSEMARY WREATHALL
27 GAP - OWNERSHIP UNKNOWN

| REV. BY | DATE | DESCRIPTION |
|---|---|---|
| | | |

DATE COMPLETED

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/18/09 |

PROPERTY MAP

5 / 25

SCALE: SHOWN

SHEET NO. 253 OF 275

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**TOTAL NUMBER OF :**

20 OWNERSHIPS 2 TOTAL TAKES

55 PARCELS 0 OWNERSHIPS W/ STRUCTURES INVOLVED

GROSS TAKE - PRO IN TAKE = NET TAKE

(c) = CALCULATED AREA

**ALL AREAS IN ACRES**

**GRANTEE:**

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF CITY OF DUBLIN UNLESS OTHERWISE SHOWN.

| PARCEL NO. | OWNER | SHEET NO. | OWNERS RECORD BOOK | OWNERS RECORD PAGE | AUDITOR'S PARCEL | RECORD AREA | TOTAL P.R.O. | GROSS TAKE | P.R.O. IN TAKE | NET TAKE | STRUCTURE | NET RESIDUE LEFT | NET RESIDUE RIGHT | REMARKS | AS ACQUIRED BOOK | AS ACQUIRED PAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 & 2 | NOT USED | | | | | | | | | | | | | | | |
| 3 | CITY OF DUBLIN | 9 | Inst# 200009270196246 | | | 6.683 | 0.000 | 0.000 | 0.000 | 0.000 | NO | | | NO R/W REQUIRED | | |
| 4-WD | THE THOMAS FAMILY LIMITED PARTNERSHIP | 9, 10 | O.R. 17716 H02 | | 273-009067 | 6.724 | 0.000 | 1.836 | 0.000 | 1.836 | NO | | | | | |
| | O.R. 17716 G19, O.R. 17716 G16, O.R. 17716 G13, | | See Add'l O.R. at Left | | | | | | | | | | | | | |
| | O.R. 17716 G10, O.R. 17716 G07 & O.R. 17716 G04 | | | | | | | | | | | | | | | |
| 4-U | | 9, 10 | | | | | 0.000 | 0.673 | 0.000 | 0.673 | | | | | | |
| | TOTAL (WD & U) | | | | | 6.724 | 0.000 | 2.509 | 0.000 | 2.509 | | 4.215 | | | | |
| 4-T | | 9, 10 | | | | | | 0.088 | 0.000 | 0.088 | | | | TO CONSTRUCT GRADING | | |
| 5-WD | O. JOSEPHINE HOLDER, LLC | | O.R. 34266 B09 | | 273-008414 | 19.410 | 0.255 | 0.498 | 0.000 | 0.498 | NO | | | | | |
| | | 10, 11, 12 | | | 273-008256 | 2.079 | 0.000 | 2.022 | 0.000 | 2.022 | | | | | | |
| | TOTAL (WD) | | | | | 21.489 | 0.000 | 2.520 | 0.000 | 2.520 | | | | | | |
| 5-U | | 10, 11, 12 | O.R. 34266 B09 | | 273-008414 | 19.410 | 0.000 | 0.550 | 0.000 | 0.550 | | | | | | |
| | | | | | 273-008256 | 2.079 | 0.000 | 0.062 | 0.000 | 0.062 | | | | | | |
| | TOTAL (U) | | | | | 21.489 | 0.000 | 0.612 | 0.000 | 0.612 | | | | | | |
| | TOTAL (WD & U) | | | | | 21.489 | 0.000 | 3.132 | 0.000 | 3.132 | | 18.357 | | | | |
| 6-WD | CITY OF DUBLIN | 12, 13 | O.R. 33592 F08 | | 273-008741 | 0.559 ( c ) | 0.000 | 0.308 | 0.000 | 0.308 | NO | | | | | |
| | | | O.R. 33614 F03 | | 273-008742 | 0.550 ( c ) | 0.000 | 0.274 | 0.000 | 0.274 | | | | | | |
| | | | O.R. 33776 E19 | | 273-008743 | 0.543 ( c ) | 0.000 | 0.254 | 0.000 | 0.254 | | | | | | |
| | | | O.R. 33570 G12 | | 273-008744 | 0.557 (c ) | 0.000 | 0.231 | 0.000 | 0.231 | | | | | | |
| | | | O.R. 33785 I20 | | 273-008745 | 0.543 ( c ) | 0.000 | 0.191 | 0.000 | 0.191 | | | | | | |
| | | | | | 273-008255 | 0.707 ( c ) | 0.000 | 0.706 | 0.000 | 0.706 | | | | | | |
| | TOTAL (WD) | | | | | 3.459 | | 1.964 | 0.000 | 1.964 | | | | | | |
| 6-U | | 12, 13 | O.R. 33592 F08 | | 273-008741 | 0.559 ( c ) | 0.000 | 0.083 | 0.000 | 0.083 | NO | | | | | |
| | | | O.R. 33614 F03 | | 273-008742 | 0.550 ( c ) | 0.000 | 0.080 | 0.000 | 0.080 | | | | | | |
| | | | O.R. 33776 E19 | | 273-008743 | 0.543 ( c ) | 0.000 | 0.195 | 0.000 | 0.195 | | | | | | |
| | | | O.R. 33570 G12 | | 273-008744 | 0.557 (c ) | 0.000 | 0.141 | 0.000 | 0.141 | | | | | | |
| | | | O.R. 33785 I20 | | 273-008745 | 0.543 ( c ) | 0.000 | 0.077 | 0.000 | 0.077 | | | | | | |
| | TOTAL (U) | | | | | 0.707 ( c ) | 0.000 | 0.576 | 0.000 | 0.576 | | | | | | |
| | TOTAL (WD & U) | | | | | 3.459 | 0.000 | 2.540 | 0.000 | 2.540 | | 0.919 | | | | |
| 7-WD | THE BOARD OF EDUCATION OF THE DUBLIN LOCAL | 13, 14 | O.R. 12384 J12 | | 273-008386 | 19.620 | 0.350 | 1.527 | 0.000 | 1.527 | NO | | | | | |
| | SCHOOL DISTRICT | | | | | | | | 0.000 | | | | | | | |
| 7-U | | 13, 14 | O.R. 12384 J12 | | 273-008386 | 19.620 | 0.000 | 0.382 | 0.000 | 0.382 | NO | | | | | |
| | TOTAL (WD & U) | | | | | 19.620 | 0.350 | 1.909 | 0.000 | 1.909 | | 17.361 | | | | |
| 8-WD | JOHN W. McKITRICK | 14, 15 | O.R. 12018 I13 | | 273-008736 | 18.029 | 0.327 | 1.845 | 0.000 | 1.845 | NO | | | | | |
| 8-U | | 14, 15 | | | | | 0.000 | 0.395 | 0.000 | 0.395 | NO | | | | | |
| | TOTAL (WD & U) | | | | | 18.029 | 0.327 | 2.240 | 0.000 | 2.240 | | 15.462 | | | | |
| 9-WD1 | BORROR REALTY COMPANY and | 18 thru 18 | O.R. 8775 F01 | | 273-008380 | 28.105 | 0.000 | 2.729 | 0.000 | 2.729 | NO | | | INCLUDES 0.318 AC. WITHIN 50' C&S ELEC. Co. UTILITY ESM'T | | |
| | CATHOLIC DIOCESE OF COLUMBUS | | D.B. 2961 PG. 661 | | | | | | | | | | | | | |
| 9-WD2 | | 19, 20, 22 | O.R.26466 A15 (AFD) | | | | 0.325 | 0.181 | 0.139 | 0.042 | NO | | | INCLUDES 0.008 AC. WITHIN 50' C&S ELEC. Co. UTILTY ESM'T | | |
| | TOTAL (WD) | | | | | | 0.325 | 2.910 | 0.139 | 2.771 | | | | | | |
| 9-U1 | BORROR REALTY COMPANY | 15 thru 19 | O.R. 8775 F01 | | 273-008380 | 28.105 | 0.000 | 1.002 | 0.000 | 1.002 | NO | | | INCLUDES 0.212 AC. WITHIN 50' C&S ELEC. Co. UTILTY ESM'T | | |
| | CATHOLIC DIOCESE OF COLUMBUS | | D.B. 2961 PG. 661 | | | | | | | | | | | | | |
| 9-U2 | | 15, 16, 17 | O.R.26466 A15 (AFD) | | | | 0.000 | 0.647 | 0.000 | 0.647 | NO | | | INCLUDES 0.062 AC. WITHIN 50' C&S ELEC. Co. UTILTY ESM'T | | |
| | TOTAL (U) | | | | | | | 1.649 | 0.000 | 1.649 | | | | | | |
| | TOTAL (WD & U) | | | | | 28.105 | 0.325 | 4.559 | 0.139 | 4.420 | | 17.353 | 6.007 | | | |

NOTE: ALL TEMPORARY PARCELS TO BE OF 18 MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.



| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN
EMERALD PARKWAY - PHASE 8

JOB NO.
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
DATE:

SUMMARY OF ADDITIONAL RIGHT OF WAY

SCALE: N.T.S

SHEET NO. 254 OF 275

p:\pr41958\cadd\gurin\row\sheets\41959rs001.dgn

**TOTAL NUMBER OF :**

20 OWNERSHIPS 2 TOTAL TAKES

55 PARCELS 0 OWNERSHIPS W/ STRUCTURES INVOLVED

GROSS TAKE - PRO IN TAKE = NET TAKE

(c) = CALCULATED AREA

ALL AREAS IN ACRES

**GRANTEE:**

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF CITY OF DUBLIN UNLESS OTHERWISE SHOWN.

| PARCEL NO. | OWNER | SHEET NO. | OWNERS RECORD BOOK | OWNERS RECORD PAGE | AUDITOR'S PARCEL | RECORD AREA | TOTAL P.R.O. | GROSS TAKE | P.R.O. IN TAKE | NET TAKE | STRUCTURE | NET RESIDUE LEFT | NET RESIDUE RIGHT | REMARKS | AS ACQUIRED BOOK | AS ACQUIRED PAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 9-T1 | BORROR REALTY COMPANY | 15, 16, 17 | O.R. 26466 A15 | | 273-008380 | 28.105 | 0.000 | 0.340 | 0.000 | 0.340 | NO | | | TO CONSTRUCT GRADING | | |
| | CATHOLIC DIOCESE OF COLUMBUS | | D.B. 2961 PG. 661 | | | | | | | | | | | | | |
| 9-T2 | | 17 | O.R.26466 A15 (AFD) | | | | 0.000 | 0.210 | 0.000 | 0.210 | NO | | | TO CONSTRUCT DITCH AND GRADING | | |
| 9-T3 | (Inc. 0.046 AC. within 50' Elec. Co. Utility Esm't) | 17 | | | | | 0.000 | 0.051 | 0.000 | 0.051 | NO | | | TO CONSTRUCT GRADING | | |
| 9-T4 | (Inc. 0.046 AC. within 50' Elec. Co. Utility Esm't) | 18 | | | | | 0.000 | 0.347 | 0.000 | 0.347 | NO | | | TO CONSTRUCT DITCH AND GRADING | | |
| 9-T5 | | 22 | | | | | 0.000 | 0.039 | 0.000 | 0.039 | NO | | | TO CONSTRUCT GRADING | | |
| | TOTAL (T) | | | | | | 0.000 | 0.987 | 0.000 | 0.987 | | | | | | |
| 10-WD1 | McKITRICK PROPERTIES, INC. | 17 thru 20 | O.R. 11349 F01 | | 273-008610 | 1.000 | 0.031 | 0.997 | 0.031 | 0.966 | NO | | | | | |
| | | | O.R. 12527 J16 | | 273-008610 | 29.178 | 0.000 | 0.129 | 0.000 | 0.129 | | | | | | |
| | | | | | | 30.178 | 0.031 | 1.126 | 0.031 | 1.095 | | | | | | |
| 10-WD2 | McKITRICK PROPERTIES, INC. | 23, 24 | O.R. 12527 J16 | | 273-008610 | 3.978 | 0.106 | 0.038 | 0.020 | 0.018 | NO | | | | | |
| | TOTAL (WD) | | | | | 34.156 | 0.137 | 1.164 | 0.051 | 1.113 | | | | | | |
| 10-U | | 17, 18 | O.R. 11349 F01 | | 273-008610 | | 0.000 | 0.008 | 0.000 | 0.008 | NO | | | | | |
| | | | O.R. 12527 J16 | | | | 0.000 | 0.121 | 0.000 | 0.121 | | | | | | |
| | TOTAL (U) | | | | | | | 0.129 | 0.000 | 0.129 | | | | | | |
| | TOTAL (WD & U) | | | | | 34.156 | 0.137 | 1.293 | 0.051 | 1.242 | | | 32.777 | | | |
| 10-T | | 17, 18 | O.R. 12527 J16 | | 273-008610 | | | 0.098 | | 0.098 | NO | | | TO CONSTRUCT GRADING | | |
| | | | | | | | | | | 0.000 | | | | | | |
| 11-WD | MARY M. SEAY AND CHARLES J. PETHTEL | 18, 19, 20 | Inst# 200307230227381 | | 273-008616 | 2.000 | 0.062 | 0.489 | 0.062 | 0.427 | NO | | | ASPHALT DRIVE TO BE REMOVED | | |
| 11-U | | 18, 19, 20 | | | | | 0.000 | 0.401 | 0.000 | 0.401 | NO | | | ASPHALT DRIVE TO BE REMOVED | | |
| | TOTAL (WD & U) | | | | | 2.000 | 0.062 | 0.890 | 0.062 | 0.828 | | | 1.110 | | | |
| 11-T1 | | 18 | | | | | 0.000 | 0.033 | 0.000 | 0.033 | NO | | | TO CONSTRUCT GRADING | | |
| 11-T2 | | 18, 19, 20 | | | | | 0.000 | 0.135 | 0.000 | 0.135 | NO | | | TO CONSTRUCT GRADING | | |
| 12-WD | ADOLPH W. MAIER AND RUTH MAIER | 19,20,23,24 | O.R. 04313 B01 | | 273-008609 | 3.300 | 0.092 | 0.136 | 0.092 | 0.044 | NO | | 3.164 | | | |
| 12-T | | 19,20,23,24 | | | | | 0.000 | 0.082 | 0.000 | 0.082 | NO | | | TO CONSTRUCT DRIVEWAY AND GRADING | | |
| | | | | | | | | | | 0.000 | | | | | | |
| 13-WD | IACOVETTA PROPERTIES, LTD | 23, 24 | Inst# 199802170034496 | | 273-008606 | 3.000 | 0.084 | 0.172 | 0.084 | 0.088 | NO | | 2.828 | | | |
| 13-T1 | | 23, 24 | | | | | 0.000 | 0.023 | 0.000 | 0.023 | NO | | | TO CONSTRUCT DRIVEWAY AND GRADING | | |
| 13-T2 | | 23, 24 | | | | | 0.000 | 0.008 | 0.000 | 0.008 | NO | | | TO CONSTRUCT DRIVEWAY AND GRADING | | |
| 14-WD | NOT USED | | | | | | | | | | | | | | | |
| 15-WD | THOMAS A. McDOWELL AND DIANE A. HORNUNG | 25 | O.R. 31142 H08 | | 273-008396 | 17.370 | 1.537 | 0.544 | 0.170 | 0.374 | NO | | 15.459 | | | |
| 15-T | | 25 | | | | | | 0.011 | 0.000 | 0.011 | NO | | | TO CONSTRUCT GRADING | | |
| 16-WD | HARRIETT S. CLARK | 25 | O.R. 22601 A02 | | 273-008762 | 1.357 | 0.279 | 0.149 | 0.120 | 0.029 | NO | 1.049 | | | | |
| 16-U | | 25 | Inst# 199910150261 42 | | | | 0.000 | 0.007 | 0.000 | 0.007 | NO | | | | | |
| 16-T | | 25 | | | | | 0.000 | 0.064 | 0.000 | 0.064 | NO | | | TO CONSTRUCT DRIVEWAY AND GRADING | | |
| 17 | ROBERT C. BODE AND JOETTA L. BODE | 25 | DB 3579 Pg. 311 | | 273-008737 | 1.703 | 0.000 | 0.000 | 0.000 | 0.000 | NO | | | NO R/W TAKE REQUIRED | | |
| 18-WD | THE ASMAN LAND CO., LTD | 22 | Inst# 199901130009358 | | 273-008789 | 3.070 | 0.098 | 0.113 | 0.060 | 0.053 | NO | 2.919 | | | | |
| 19-WD1 | MICHAEL E. HARBER AND HEATHER S. HARBER | 19, 20, 22 | Inst# 199805270128307 | | 273-008679 | 1.670 | 0.080 | 0.366 | 0.080 | 0.286 | NO | | | | | |
| 19-WD2 | | 21 | | | 273-008413 | 0.534 | 0.000 | 0.016 | 0.000 | 0.016 | NO | | | | | |
| 19-U | | 19, 20, 22 | | | 273-008679 | | 0.000 | 0.054 | 0.000 | 0.054 | NO | | | | | |
| | TOTAL (WD & U) | | | | | 2.204 | 0.080 | 0.436 | 0.080 | 0.356 | | 1.768 | | | | |
| 19-T1 | | 19, 20, 22 | | | 273-008679 | 1.670 | | 0.037 | | 0.037 | NO | | | TO CONSTRUCT GRADING | | |
| 19-T2 | | 21 | | | 273-008413 | 0.534 | | 0.061 | | 0.061 | NO | | | TO CONSTRUCT GRADING | | |
| | TOTAL (T) | | | | | 2.204 | | 0.098 | | 0.098 | | | | | | |

NOTE: ALL TEMPORARY PARCELS TO BE OF 18 MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.



| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN
EMERALD PARKWAY - PHASE 8

JOB NO.
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
DATE:

SUMMARY OF ADDITIONAL RIGHT OF WAY

SCALE: N.T.S

SHEET NO. 255 OF 275

p:\p\14959\cadd\surv\row\sheets\14959rs002.dgn

**TOTAL NUMBER OF :**

20 OWNERSHIPS 2 TOTAL TAKES

55 PARCELS 0 OWNERSHIPS W/ STRUCTURES INVOLVED

GROSS TAKE - PRO IN TAKE = NET TAKE

(c) = CALCULATED AREA

**ALL AREAS IN ACRES**

**GRANTEE:**

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF CITY OF DUBLIN UNLESS OTHERWISE SHOWN.

| PARCEL NO. | OWNER | SHEET NO. | OWNERS RECORD BOOK | OWNERS RECORD PAGE | AUDITOR'S PARCEL | RECORD AREA | TOTAL P.R.O. | GROSS TAKE | P.R.O. IN TAKE | NET TAKE | STRUCTURE | NET RESIDUE LEFT | NET RESIDUE RIGHT | REMARKS | AS ACQUIRED BOOK | AS ACQUIRED PAGE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20-WD | CITY OF DUBLIN | 19, 20, 21 | Inst# 200203190070647 | | 273-008637 | 1.248 | 0.049 | 1.248 | 0.049 | 1.199 | NO | | | TOTAL TAKE (City Owned Property) | | |
| 21-WD | NORTHERN DREAMBUILDERS CORPORATION | 19 thru 24 | Inst# 200506100112373 | | 273-008630 | 0.841 | 0.037 | 0.666 | 0.037 | 0.629 | YES | | | TOTAL TAKE | | |
| | | | | | 273-008632 | 1.244 | 0.041 | 0.188 | 0.041 | 0.147 | | | | | | |
| | TOTAL (WD) | | | | | 2.085 | 0.078 | 0.854 | 0.078 | 0.776 | | | | | | |
| 21-U | | 19 thru 24 | | | 273-008630 | | 0.000 | 0.182 | 0.000 | 0.182 | YES | | | BUILDING STRUCTURE | | |
| | | | | | 273-008632 | | 0.000 | 0.078 | 0.000 | 0.078 | | | | | | |
| | TOTAL (U) | | | | | | 0.000 | 0.260 | 0.000 | 0.260 | | | | | | |
| | TOTAL (WD & U) | | | | | 2.085 | 0.078 | 1.114 | 0.078 | 1.036 | | 0.971 | | | | |
| 22-WD | HERBERT E. JONES AND JANET F. JONES | 23, 24 | O.R. 11312 G10 | | 273-008633 | 1.385 | 0.041 | 0.158 | 0.041 | 0.117 | NO | | | | | |
| | | | D.B. 2361 PG. 634 | | 273-008634 | 1.480 | 0.041 | 0.088 | 0.041 | 0.047 | | | | | | |
| | TOTAL (WD) | | | | | 2.865 | 0.082 | 0.246 | 0.082 | 0.164 | | | | | | |
| 22-U1 | | 23, 24 | O.R. 11312 G10 | | 273-008633 | 1.385 | 0.000 | 0.021 | 0.000 | 0.021 | NO | | | | | |
| 22-U2 | | 23, 24 | D.B. 2361 PG. 634 | | 273-008634 | 1.480 | 0.000 | 0.023 | 0.000 | 0.023 | NO | | | | | |
| | TOTAL (U) | | | | | 2.865 | 0.000 | 0.044 | 0.000 | 0.044 | | | | | | |
| | TOTAL (WD & U) | | | | | 2.865 | 0.082 | 0.290 | 0.082 | 0.208 | | 2.575 | | | | |
| 22-T1 | | 23, 24 | O.R. 11312 G10 | | 273-008633 | 1.385 | 0.000 | 0.058 | 0.000 | 0.058 | NO | | | TO CONSTRUCT DRIVEWAY AND GRADING | | |
| 22-T2 | | 23, 24 | D.B. 2361 PG. 634 | | 273-008634 | 1.480 | 0.000 | 0.026 | 0.000 | 0.026 | NO | | | TO CONSTRUCT DRIVEWAY AND GRADING | | |
| | TOTAL (T) | | | | | 2.865 | 0.000 | 0.084 | 0.000 | 0.084 | | | | | | |
| 23-WD1 | JUBILEE LTD. PARTNERSHIP | 23, 24 | O.R. 30755 B08 | | 273-008660 | 1.574 | 0.041 | 0.070 | 0.041 | 0.029 | NO | | | | | |
| | | | O.R. 30755 B10 | | 273-008680 | 1.662 | 0.041 | 0.065 | 0.041 | 0.024 | | | | | | |
| | TOTAL (WD1) | | | | | 3.236 | 0.082 | 0.135 | 0.082 | 0.053 | | 3.101 | | | | |
| 23-WD2 | | 21 | O.R. 28002 E17 | | 273-012155 | 5.203 | 0.000 | 0.086 | 0.000 | 0.086 | NO | | 5.117 | | | |
| 23-T | | 23, 24 | O.R. 30755 B08 | | 273-008660 | 1.574 | 0.000 | 0.023 | 0.000 | 0.023 | NO | | | TO CONSTRUCT DRIVEWAY AND GRADING | | |
| | | | O.R. 30755 B10 | | 273-008680 | 1.662 | 0.000 | 0.023 | 0.000 | 0.023 | | | | | | |
| | TOTAL (T) | | | | | 3.236 | 0.000 | 0.046 | 0.000 | 0.046 | | | | | | |
| 24-WD | WILLIAM C. PUSECKER AND JULIA M. PUSECKER | 23, 24 | D.B. 2310 Pg. 88 | | 273-008619 | | | 0.000 | 0.000 | 0.000 | NO | | | NO R/W TAKE REQUIRED | | |
| | | | | | | | | | | 0.000 | | | | | | |
| 25-WD | CANDICE R. BARNHARDT AND STEVEN C. BARNHARDT | 21 | Inst# 199706040014790 | | 273-008881 | 1.455 ( c ) | 0.000 | 0.023 | 0.000 | 0.023 | NO | 1.432 | | | | |
| 25-T | | 21 | | | | | 0.000 | 0.048 | 0.000 | 0.048 | NO | | | TO CONSTRUCT GRADING | | |
| 26 | JOHN WREATHALL AND ROSEMARY WREATHALL | 21 | O.R. 07582 C06 | | 273-008882 | | | 0.000 | 0.000 | 0.000 | NO | | | NO R/W TAKE REQUIRED | | |
| 27 | GAP - OWNERSHIP UNKNOWN | 25 | | | | | | | | | | | | | | |

NOTE: ALL TEMPORARY PARCELS TO BE OF 18 MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.



| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN
EMERALD PARKWAY - PHASE 8

JOB NO.
DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
DATE:

SUMMARY OF ADDITIONAL RIGHT OF WAY

SCALE: N.T.S



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# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO
CITY OF DUBLIN
TWP 2 N, RG 19 W, U.S.M.L., QTR TWP 2, LOT NO. 17

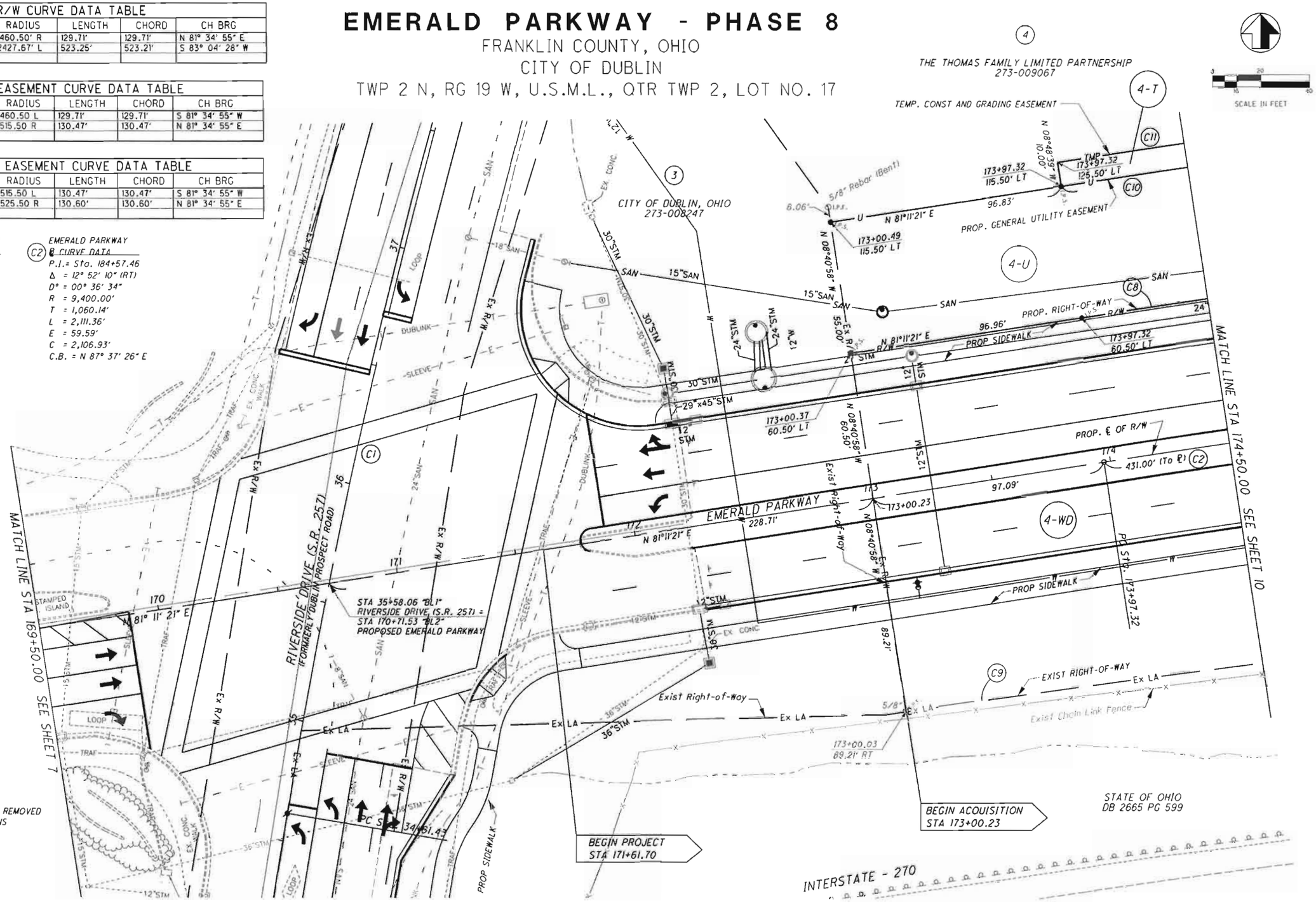
| R/W CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C8 | 00° 47' 08" | 9460.50' R | 129.71' | 129.71' | N 81° 34' 55" E |
| C9 | 02° 24' 45" | 12427.67' L | 523.25' | 523.21' | S 83° 04' 28" W |

| UTILITY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C8 | 00° 47' 08" | 9460.50 L | 129.71' | 129.71' | S 81° 34' 55" W |
| C10 | 00° 47' 08" | 9515.50 R | 130.47' | 130.47' | N 81° 34' 55" E |

| TEMPORARY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C10 | 00° 47' 08" | 9515.50 L | 130.47' | 130.47' | S 81° 34' 55" W |
| C11 | 00° 47' 08" | 9525.50 R | 130.60' | 130.60' | N 81° 34' 55" E |

(C1) RIVERSIDE DRIVE (S.R. 257)
℄ CURVE DATA
P.I.= Sta. 37+14.11
Δ = 10° 01' 42" (RT)
D° = 01° 59' 22"
R = 2,880.00'
T = 252.69'
L = 504.08'
E = 11.06'
C = 503.44'
C.B. = N 14° 33' 10" E

(C2) EMERALD PARKWAY
℄ CURVE DATA
P.I.= Sta. 184+57.46
Δ = 12° 52' 10" (RT)
D° = 00° 36' 34"
R = 9,400.00'
T = 1,060.14'
L = 2,111.36'
E = 59.59'
C = 2,106.93'
C.B. = N 87° 37' 26" E




NOTE:
FOR TREES TO SAVE OR TO BE REMOVED
SEE TREES PRESERVATION PLANS

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/16/09 |

RIGHT OF WAY PLAN
BEGIN PROJECT TO STA 174+50.00

9 / 25

SCALE: SHOWN

SHEET NO. 257 OF 275

P:\pr44959\cadd\survrow\sheets\rd001.dgn

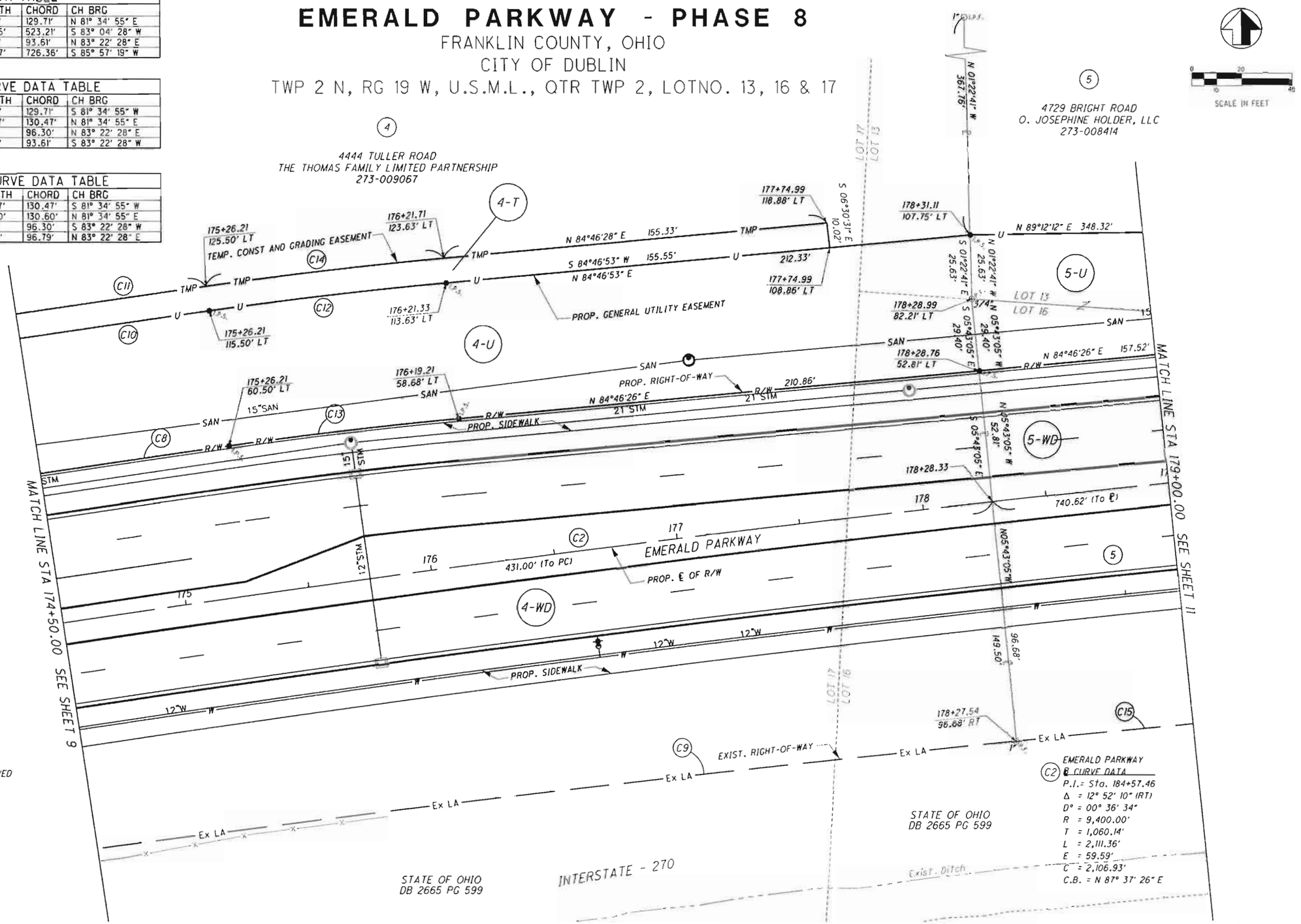
# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO
CITY OF DUBLIN
TWP 2 N, RG 19 W, U.S.M.L., QTR TWP 2, LOTNO. 13, 16 & 17

| R/W CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C8 | 00° 47' 08" | 9460.50' R | 129.71' | 129.71' | N 81° 34' 55" E |
| C9 | 02° 24' 45" | 12427.67' L | 523.25' | 523.21' | S 83° 04' 28" W |
| C13 | 02° 47' 56" | 1916.50' R | 93.62' | 93.61' | N 83° 22' 28" E |
| C15 | 03° 20' 57" | 12427.67' L | 726.47' | 726.36' | S 85° 57' 19" W |

| UTILITY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C8 | 00° 47' 08" | 9460.50' L | 129.71' | 129.71' | S 81° 34' 55" W |
| C10 | 00° 47' 08" | 9515.50' R | 130.47' | 130.47' | N 81° 34' 55" E |
| C12 | 02° 47' 56" | 1971.50' R | 96.31' | 96.30' | N 83° 22' 28" E |
| C13 | 02° 47' 56" | 1916.50' L | 93.62' | 93.61' | S 83° 22' 28" W |

| TEMPORARY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C10 | 00° 47' 08" | 9515.50' L | 130.47' | 130.47' | S 81° 34' 55" W |
| C11 | 00° 47' 08" | 9525.50' R | 130.60' | 130.60' | N 81° 34' 55" E |
| C12 | 02° 47' 56" | 1971.50' L | 96.31' | 96.30' | S 83° 22' 28" W |
| C14 | 02° 47' 56" | 1981.50' R | 96.80' | 96.79' | N 83° 22' 28" E |




NOTE:
FOR TREES TO SAVE OR TO BE REMOVED
SEE TREES PRESERVATION PLANS

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 10/09/09 |

RIGHT OF WAY PLAN
STA 174+50.00 TO STA 179+00.00

10 / 25

SCALE: SHOWN

SHEET NO. 258 OF 275

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# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO
CITY OF DUBLIN
TWP 2 N, RG 19 W, U.S.M.L., QTR TWP 2, LOT NO. 13 & 16

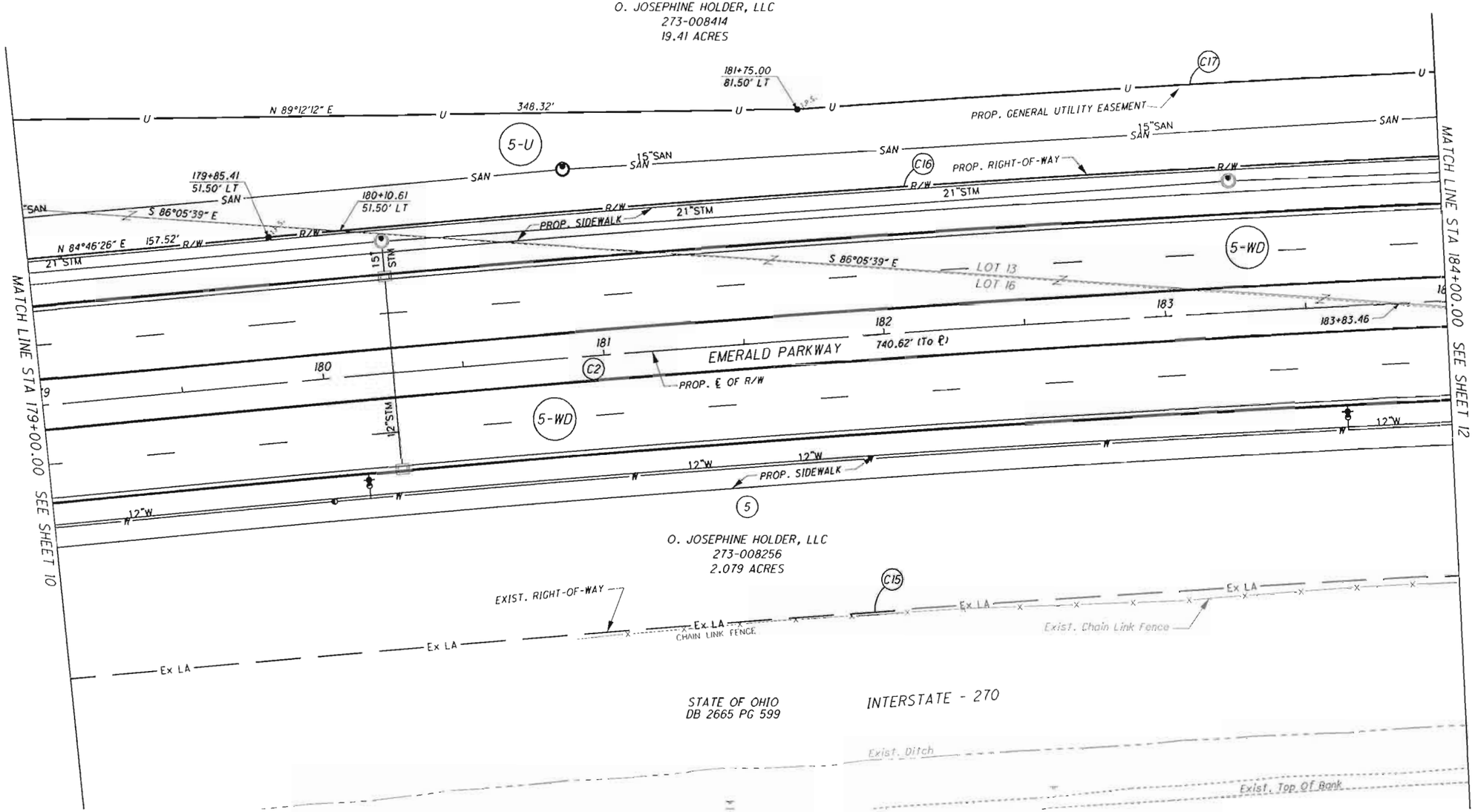
| R/W CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C15 | 03° 20' 57" | 12427.67' L | 726.47' | 726.36' | S 85° 57' 19" W |
| C16 | 03° 34' 50" | 9451.50' R | 590.67' | 590.57' | N 86° 33' 51" E |

| UTILITY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C16 | 03° 34' 50" | 9451.50' L | 590.67' | 590.57' | S 86° 33' 51" W |
| C17 | 02° 26' 20" | 9481.50' R | 403.58' | 403.55' | N 87° 08' 56" E |

NOTE:
FOR TREES TO SAVE OR TO BE REMOVED
SEE TREES PRESERVATION PLANS

(C2) EMERALD PARKWAY
℄ CURVE DATA
P.I.= Sta. 184+57.46
Δ = 12° 52' 10" (RT)
D° = 00° 36' 34"
R = 9,399.98'
T = 1,060.14'
L = 2,111.36'
E = 59.59'
C = 2,106.93'
C.B. = N 87° 37' 26" E

SCALE IN FEET
0 10 20 40




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/16/09 |

RIGHT OF WAY PLAN
STA 179+00.00 TO STA 184+00.00

11 / 25
SCALE: SHOWN
SHEET NO. 259 OF 275

p:\pr44959\cadd\surv\row\sheets\rd003.dgn

# EMERALD PARKWAY - PHASE 8

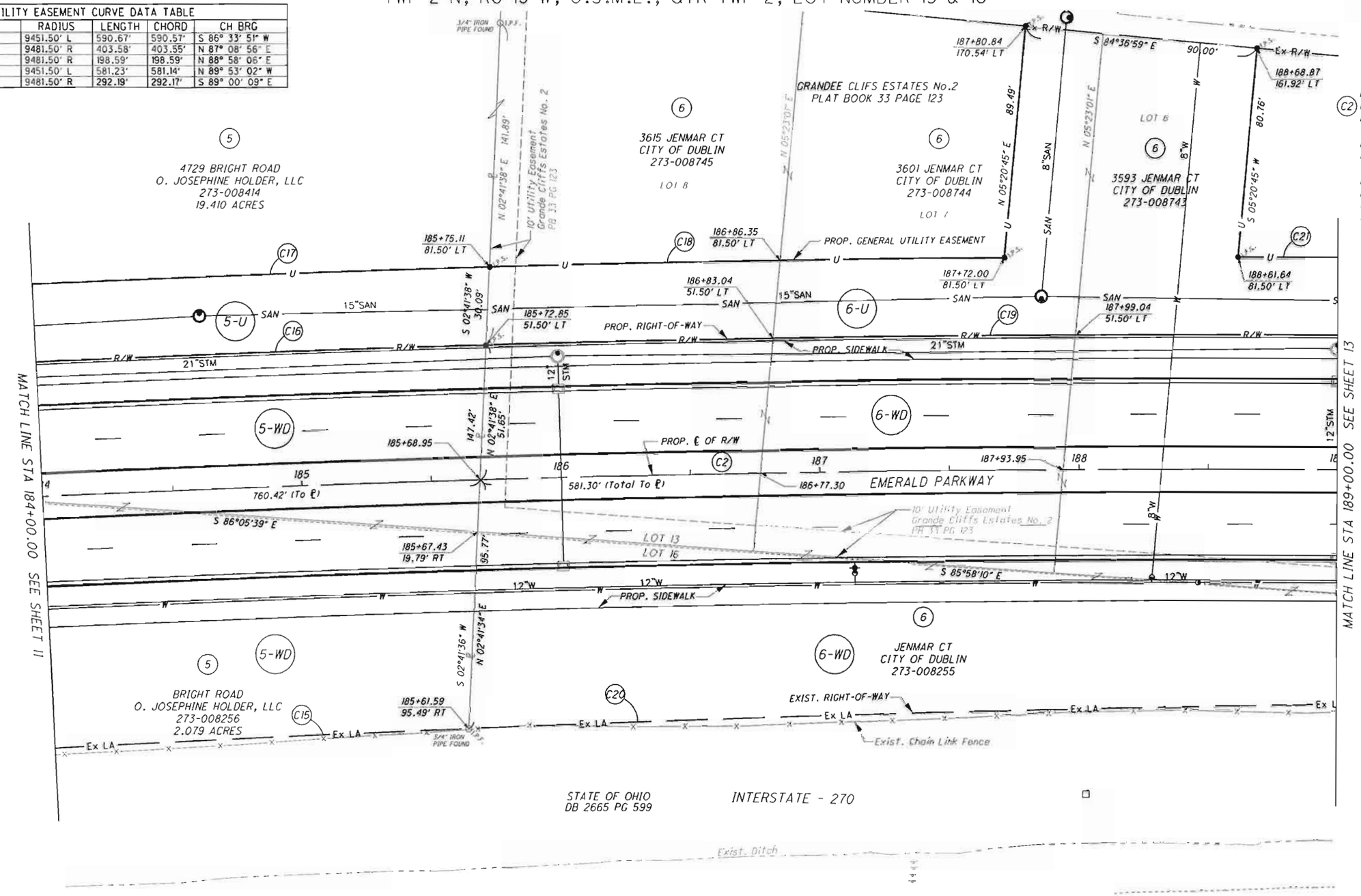
FRANKLIN COUNTY, OHIO
CITY OF DUBLIN
TWP 2 N, RG 19 W, U.S.M.L., QTR TWP 2, LOT NUMBER 13 & 16

| R/W CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C15 | 03° 20' 57" | 12427.67' L | 726.47' | 726.36' | S 85° 57' 19" W |
| C16 | 03° 34' 50" | 9451.50' R | 590.67' | 590.57' | N 86° 33' 51" E |
| C19 | 03° 31' 25" | 9451.50' R | 581.23' | 581.14' | S 89° 53' 02" E |
| C20 | 03° 26' 52" | 12427.67' L | 747.83' | 747.72' | S 89° 21' 14" W |

| UTILITY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C16 | 03° 34' 50" | 9451.50' L | 590.67' | 590.57' | S 86° 33' 51" W |
| C17 | 02° 26' 20" | 9481.50' R | 403.58' | 403.55' | N 87° 08' 56" E |
| C18 | 01° 12' 00" | 9481.50' R | 198.59' | 198.59' | N 88° 58' 06" E |
| C19 | 03° 31' 25" | 9451.50' L | 581.23' | 581.14' | N 89° 53' 02" W |
| C21 | 01° 45' 56" | 9481.50' R | 292.19' | 292.17' | S 89° 00' 09" E |

NOTE:
FOR TREES TO SAVE OR TO BE REMOVED
SEE TREES PRESERVATION PLANS

SCALE IN FEET




EMERALD PARKWAY
℄ CURVE DATA
P.I.= Sta. 184+57.46
Δ = 12° 52' 10" (RT)
D° = 00° 36' 34"
R = 9,399.98'
T = 1,060.14'
L = 2,111.36'
E = 59.59'
C = 2,106.93'
C.B. = N 87° 37' 26" E

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |
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Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/17/09 |

RIGHT OF WAY PLAN
STA 184+00.00 TO STA 189+00.00

12 / 25

SCALE: SHOWN

SHEET NO. 260 OF 275

# EMERALD PARKWAY - PHASE 8

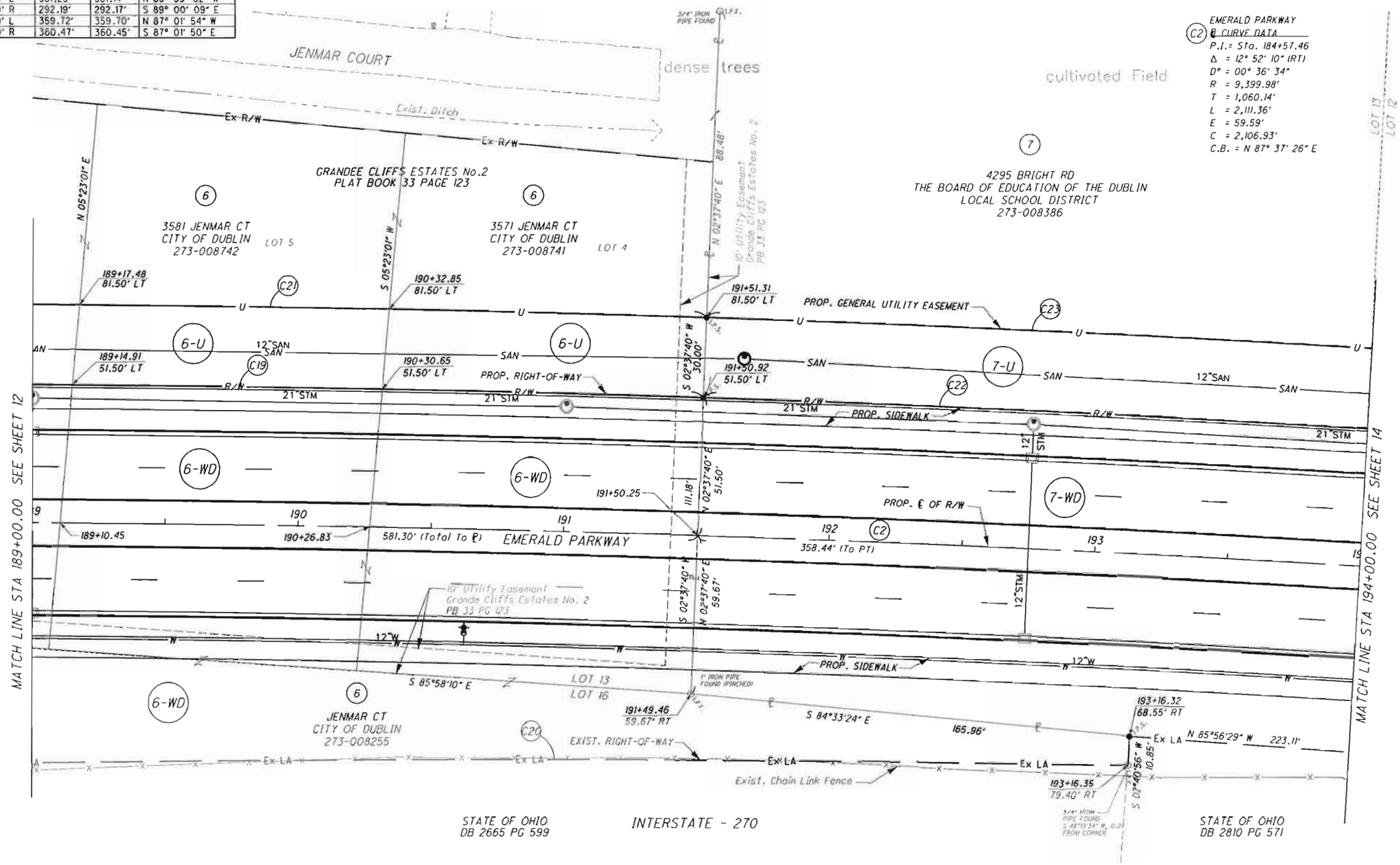
FRANKLIN COUNTY, OHIO
PERRY TOWNSHIP
CITY OF DUBLIN
TWP 2 N, RG 19 W U.S.M.L., QTR TWP 2, LOT NUMBER 13, 16

| R/W CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C19 | 03° 31' 25" | 9451.50' R | 581.23' | 581.14' | S 89° 53' 02" E |
| C20 | 03° 26' 52" | 12427.67' L | 747.83' | 747.72' | S 89° 21' 14" W |
| C22 | 02° 10' 50" | 9451.50' R | 359.72' | 359.70' | S 87° 01' 54" E |

| UTILITY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C19 | 03° 31' 25" | 9451.50' L | 581.23' | 581.14' | N 89° 53' 02" W |
| C21 | 01° 45' 56" | 9481.50' R | 292.19' | 292.17' | S 89° 00' 09" E |
| C22 | 02° 10' 50" | 9451.50' L | 359.72' | 359.70' | N 87° 01' 54" W |
| C23 | 02° 10' 42" | 9481.50' R | 360.47' | 360.45' | S 87° 01' 50" E |

NOTE:
FOR TREES TO SAVE OR TO BE REMOVED
SEE TREES PRESERVATION PLANS

SCALE IN FEET




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/17/09 |

RIGHT OF WAY PLAN
STA 189+00.00 TO STA 194+00.00

13 / 25

SCALE: SHOWN

SHEET NO. 261 OF 275

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# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO
PERRY TOWNSHIP
CITY OF DUBLIN
TWP 2 N, RG 19 W U.S.M.L., QTR TWP 2, LOT NO. 12

NOTE:
FOR TREES TO SAVE OR TO BE REMOVED
SEE TREES PRESERVATION PLANS

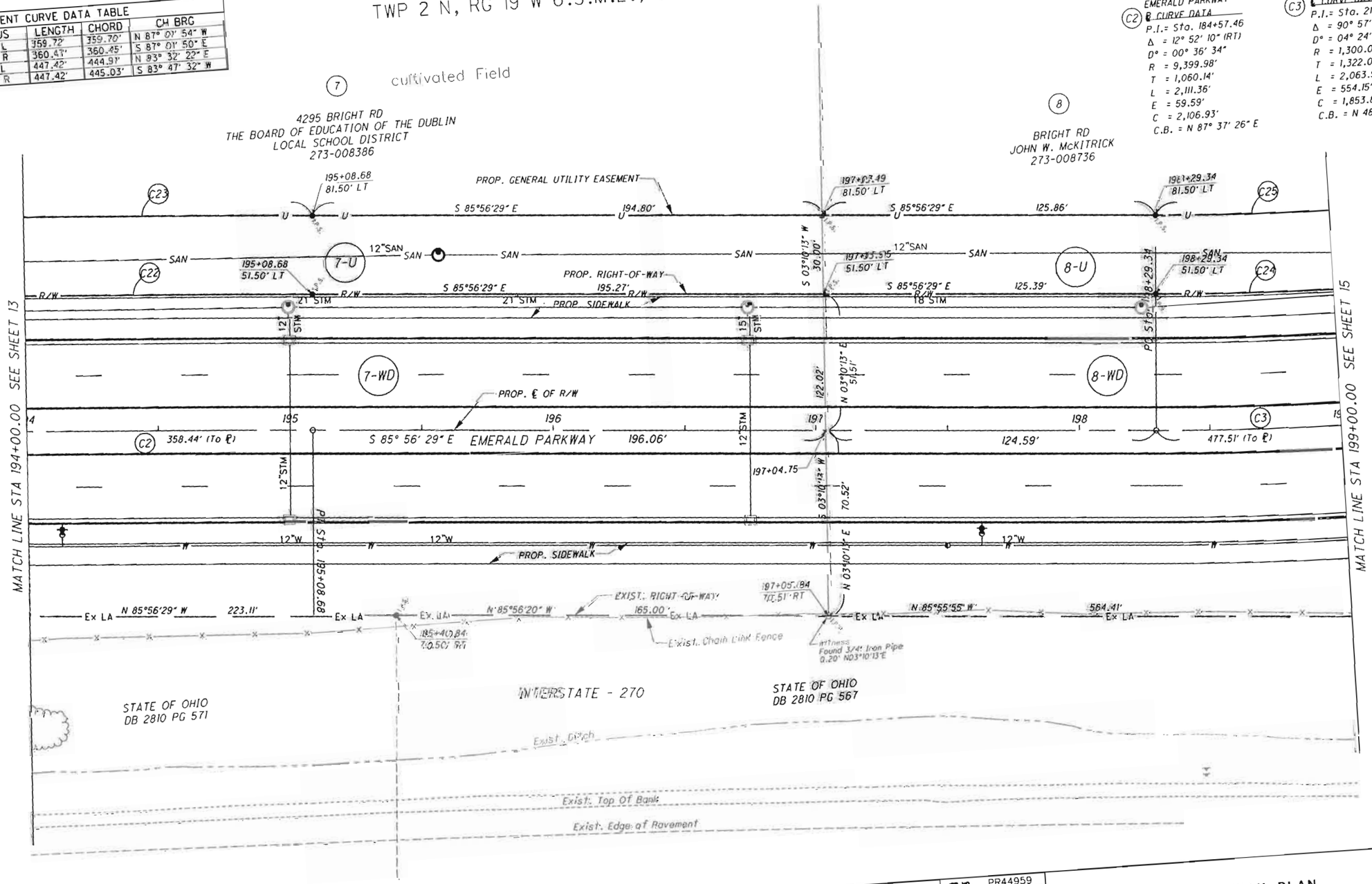
SCALE IN FEET

| R/W CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C22 | 02° 10' 50" | 9451.50' R | 359.72' | 359.70' | S 87° 01' 54" E |
| C24 | 20° 31' 59" | 1248.50' L | 447.42' | 445.03' | N 83° 47' 32" E |

| UTILITY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C22 | 02° 10' 50" | 9451.50' L | 359.72' | 359.70' | N 87° 01' 54" W |
| C23 | 02° 10' 42" | 9481.50' R | 360.43' | 360.45' | S 87° 01' 50" E |
| C24 | 21° 02' 18" | 1218.50' L | 447.42' | 444.91' | N 83° 32' 22" E |
| C25 | 20° 31' 59" | 1248.50' R | 447.42' | 445.03' | S 83° 47' 32" W |

EMERALD PARKWAY
(C2) ℄ CURVE DATA
P.I.= Sta. 184+57.46
Δ = 12° 52' 10" (RT)
D° = 00° 36' 34"
R = 9,399.98'
T = 1,060.14'
L = 2,111.36'
E = 59.59'
C = 2,106.93'
C.B. = N 87° 37' 26" E

EMERALD PARKWAY
(C3) ℄ CURVE DATA
P.I.= Sta. 211+51.41
Δ = 90° 57' 52" (LT)
D° = 04° 24' 27"
R = 1,300.00'
T = 1,322.07'
L = 2,063.91'
E = 554.15'
C = 1,853.88'
C.B. = N 48° 34' 35" E




| REVISIONS | | | |
|---|---|---|---|
| NO. | DATE | BY | CHK. |

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/17/09 |

RIGHT OF WAY PLAN
STA 194+00.00 TO STA 199+00.00

SCALE: SHOWN

SHEET NO. 262 OF 275

14 / 25

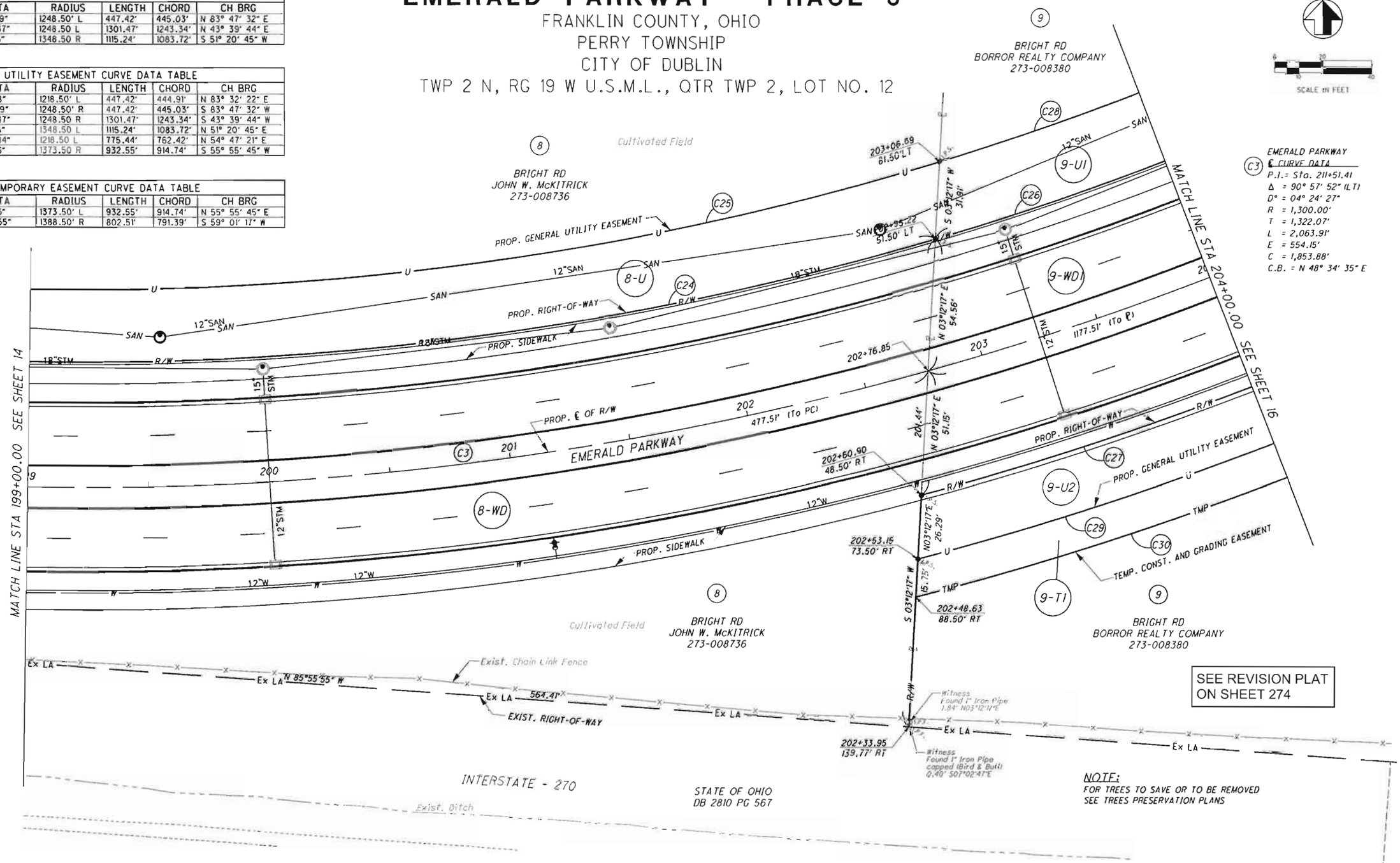
# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO
PERRY TOWNSHIP
CITY OF DUBLIN
TWP 2 N, RG 19 W U.S.M.L., QTR TWP 2, LOT NO. 12

| R/W CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C24 | 20° 31' 59" | 1248.50' L | 447.42' | 445.03' | N 83° 47' 32" E |
| C26 | 59° 43' 37" | 1248.50 L | 1301.47' | 1243.34' | N 43° 39' 44" E |
| C27 | 47° 23' 5" | 1348.50 R | 1115.24' | 1083.72' | S 51° 20' 45" W |

| UTILITY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C24 | 21° 02' 18" | 1218.50' L | 447.42' | 444.91' | N 83° 32' 22" E |
| C25 | 20° 31' 59" | 1248.50' R | 447.42' | 445.03' | S 83° 47' 32" W |
| C26 | 59° 43' 37" | 1248.50 R | 1301.47' | 1243.34' | S 43° 39' 44" W |
| C27 | 47° 23' 5" | 1348.50 L | 1115.24' | 1083.72' | N 51° 20' 45" E |
| C28 | 36° 27' 44" | 1218.50 L | 775.44' | 762.42' | N 54° 47' 21" E |
| C29 | 38° 54' 6" | 1373.50 R | 932.55' | 914.74' | S 55° 55' 45" W |

| TEMPORARY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C29 | 38° 54' 6" | 1373.50' L | 932.55' | 914.74' | N 55° 55' 45" E |
| C30 | 33° 06' 55" | 1388.50' R | 802.51' | 791.39' | S 59° 01' 17" W |




SEE REVISION PLAT ON SHEET 274

NOTE:
FOR TREES TO SAVE OR TO BE REMOVED SEE TREES PRESERVATION PLANS

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/17/09 |

RIGHT OF WAY PLAN
STA 199+00.00 TO STA 204+00.00

15 / 25

SCALE: SHOWN

SHEET NO. 263 OF 275

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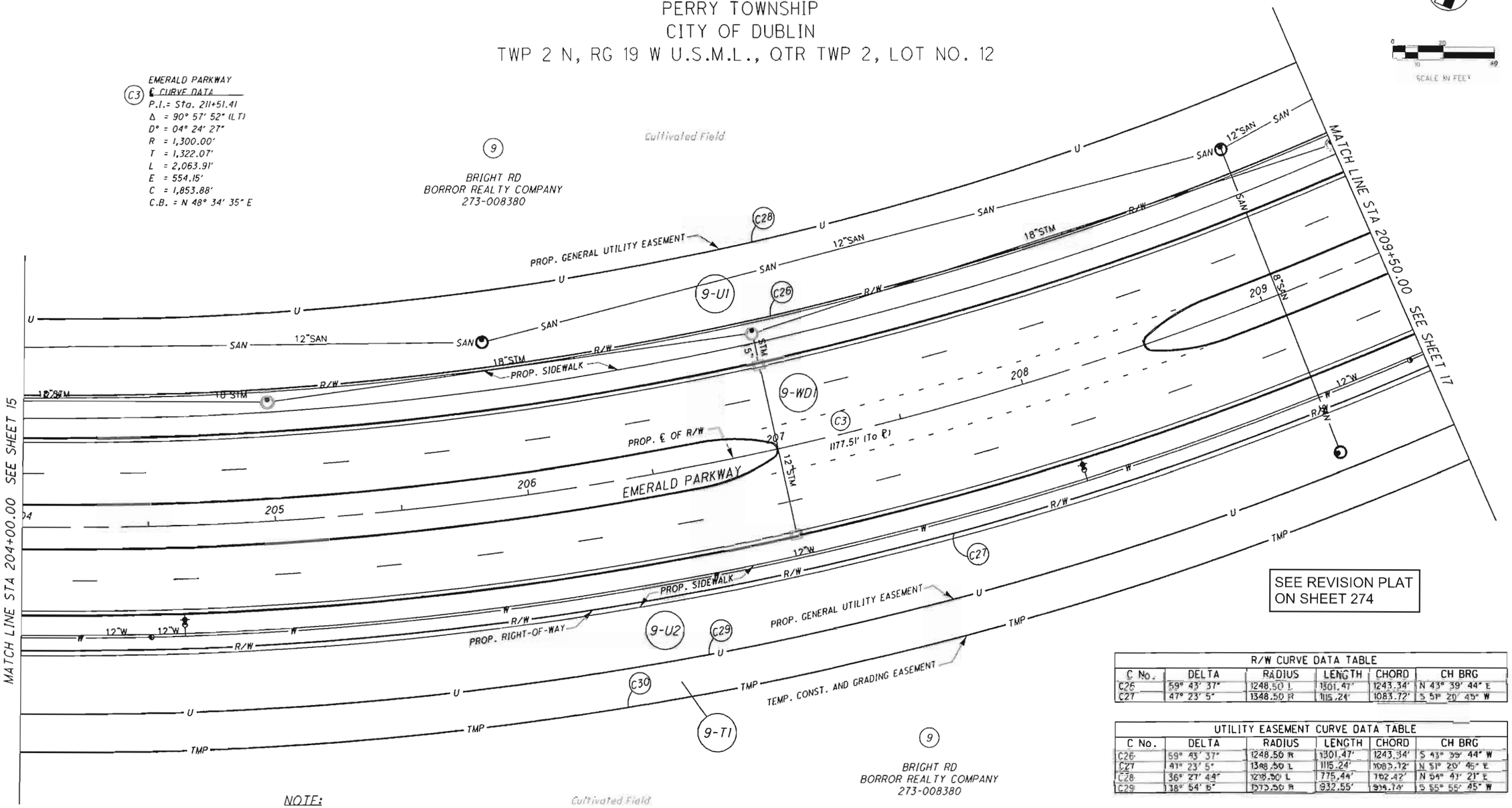
# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO
PERRY TOWNSHIP
CITY OF DUBLIN
TWP 2 N, RG 19 W U.S.M.L., QTR TWP 2, LOT NO. 12




NOTE:
FOR TREES TO SAVE OR TO BE REMOVED
SEE TREES PRESERVATION PLANS

| R/W CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C26 | 59° 43' 37" | 1248.50 L | 1301.47' | 1243.34' | N 43° 39' 44" E |
| C27 | 47° 23' 5" | 1348.50 R | 1115.24' | 1083.72' | S 51° 20' 45" W |

| UTILITY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C26 | 59° 43' 37" | 1248.50 R | 1301.47' | 1243.34' | S 43° 39' 44" W |
| C27 | 47° 23' 5" | 1348.50 L | 1115.24' | 1083.72' | N 51° 20' 45" E |
| C28 | 36° 27' 44" | 1218.50 L | 775.44' | 762.42' | N 54° 43' 21" E |
| C29 | 38° 54' 6" | 1373.50 R | 932.55' | 914.74' | S 55° 55' 45" W |

| TEMPORARY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C29 | 38° 54' 6" | 1373.50' L | 932.55' | 914.74' | N 55° 55' 45" E |
| C30 | 33° 06' 55" | 1388.50' R | 802.57' | 791.39' | S 59° 01' 17" W |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/17/09 |

RIGHT OF WAY PLAN
STA 204+00.00 TO STA 209+50.00

16 / 25

SCALE: SHOWN

SHEET NO. 264 OF 275

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# EMERALD PARKWAY- PHASE 8

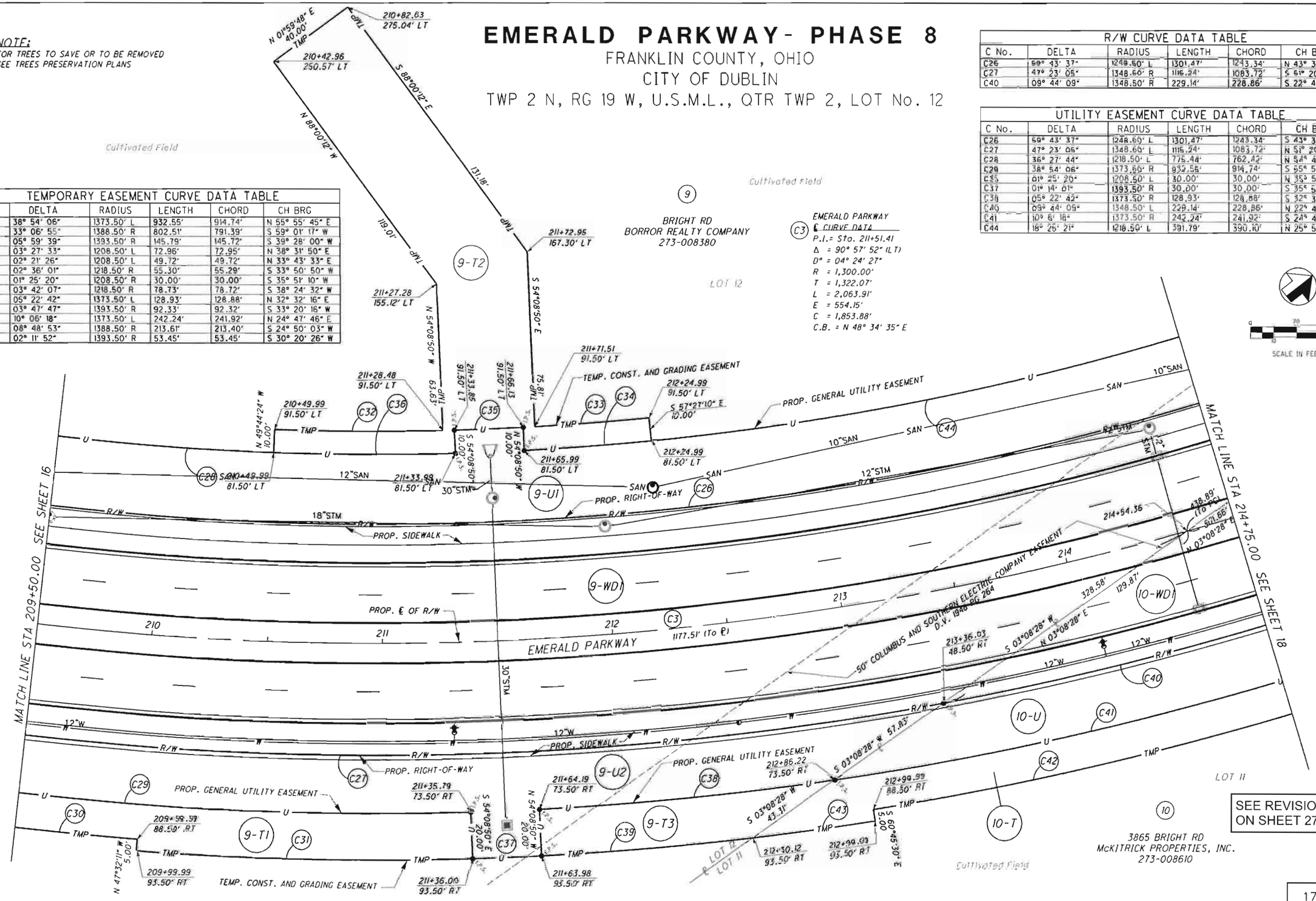
FRANKLIN COUNTY, OHIO
CITY OF DUBLIN
TWP 2 N, RG 19 W, U.S.M.L., QTR TWP 2, LOT No. 12

*NOTE:*
*FOR TREES TO SAVE OR TO BE REMOVED*
*SEE TREES PRESERVATION PLANS*

| TEMPORARY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C29 | 38° 54' 06" | 1373.50' L | 932.55' | 914.74' | N 55° 55' 45" E |
| C30 | 33° 06' 55" | 1388.50' R | 802.51' | 791.39' | S 59° 01' 17" W |
| C31 | 05° 59' 39" | 1393.50' R | 145.79' | 145.72' | S 39° 28' 00" W |
| C32 | 03° 27' 33" | 1208.50' L | 72.96' | 72.95' | N 38° 31' 50" E |
| C33 | 02° 21' 26" | 1208.50' L | 49.72' | 49.72' | N 33° 43' 33" E |
| C34 | 02° 36' 01" | 1218.50' R | 55.30' | 55.29' | S 33° 50' 50" W |
| C35 | 01° 25' 20" | 1208.50' R | 30.00' | 30.00' | S 35° 51' 10" W |
| C36 | 03° 42' 07" | 1218.50' R | 78.73' | 78.72' | S 38° 24' 32" W |
| C38 | 05° 22' 42" | 1373.50' L | 128.93' | 128.88' | N 32° 32' 16" E |
| C39 | 03° 47' 47" | 1393.50' R | 92.33' | 92.32' | S 33° 20' 16" W |
| C41 | 10° 06' 18" | 1373.50' L | 242.24' | 241.92' | N 24° 47' 46" E |
| C42 | 08° 48' 53" | 1388.50' R | 213.61' | 213.40' | S 24° 50' 03" W |
| C43 | 02° 11' 52" | 1393.50' R | 53.45' | 53.45' | S 30° 20' 26" W |

| R/W CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C26 | 59° 43' 37" | 1248.60' L | 1301.47' | 1243.34' | N 43° 39' 44" E |
| C27 | 47° 23' 05" | 1348.60' L | 1116.24' | 1083.72' | S 61° 20' 45" W |
| C40 | 09° 44' 09" | 1348.50' R | 229.14' | 228.86' | S 22° 47' 08" W |

| UTILITY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C26 | 59° 43' 37" | 1248.60' L | 1301.47' | 1243.34' | S 43° 39' 44" W |
| C27 | 47° 23' 05" | 1348.60' L | 1116.24' | 1083.72' | N 61° 20' 45" E |
| C28 | 36° 27' 44" | 1218.50' L | 775.44' | 762.42' | N 54° 47' 21" E |
| C29 | 38° 54' 06" | 1373.50' R | 932.55' | 914.74' | S 55° 55' 45" W |
| C35 | 01° 25' 20" | 1208.50' L | 30.00' | 30.00' | N 35° 51' 10" E |
| C37 | 01° 14' 01" | 1393.50' R | 30.00' | 30.00' | S 35° 51' 10" W |
| C38 | 05° 22' 42" | 1373.50' R | 128.93' | 128.88' | S 32° 32' 16" W |
| C40 | 09° 44' 09" | 1348.50' L | 229.14' | 228.86' | N 22° 47' 08" E |
| C41 | 10° 6' 18" | 1373.50' R | 242.24' | 241.92' | S 24° 47' 46" W |
| C44 | 18° 25' 21" | 1218.50' L | 391.79' | 390.10' | N 25° 56' 10" E |




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY, PHASE-8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/17/09 |

RIGHT OF WAY PLAN
STA 209+50.00 TO STA 214+75.00

17 / 25

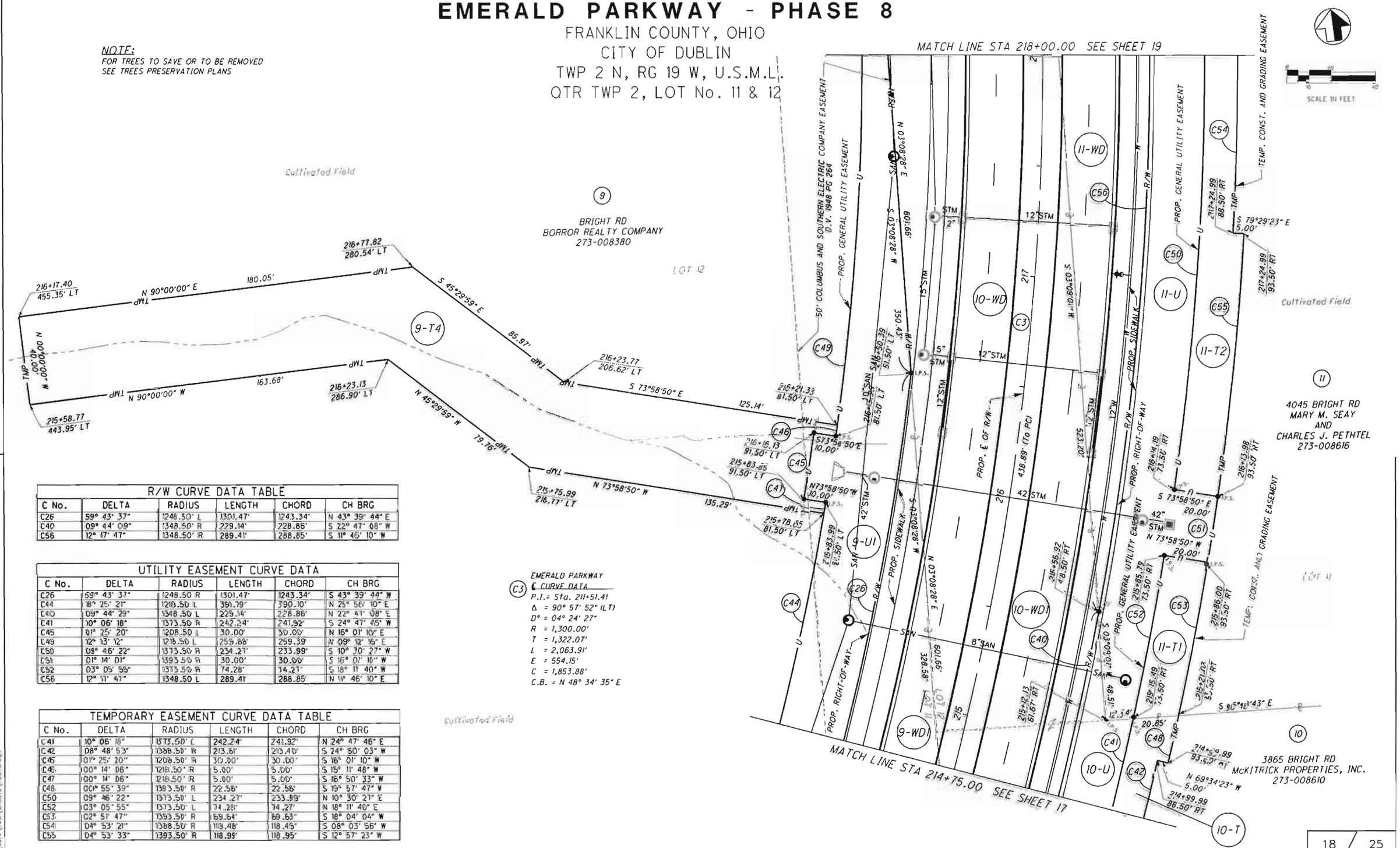
SCALE: SHOWN

SHEET NO. 265 OF 275

# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO
CITY OF DUBLIN
TWP 2 N, RG 19 W, U.S.M.L.
QTR TWP 2, LOT No. 11 & 12

NOTE:
FOR TREES TO SAVE OR TO BE REMOVED
SEE TREES PRESERVATION PLANS




EMERALD PARKWAY
℄ CURVE DATA
(C3)
P.I.= Sta. 211+51.41
Δ = 90° 57' 52" (LT)
D° = 04° 24' 27"
R = 1,300.00'
T = 1,322.07'
L = 2,063.91'
E = 554.15'
C = 1,853.88'
C.B. = N 48° 34' 35" E

| R/W CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C26 | 59° 43' 37" | 1248.50' L | 1301.47' | 1243.34' | N 43° 39' 44" E |
| C40 | 09° 44' 09" | 1348.50' R | 229.14' | 228.86' | S 22° 47' 08" W |
| C56 | 12° 17' 47" | 1348.50' R | 289.41' | 288.85' | S 11° 46' 10" W |

| UTILITY EASEMENT CURVE DATA | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C26 | 59° 43' 37" | 1248.50 R | 1301.47' | 1243.34' | S 43° 39' 44" W |
| C44 | 18° 25' 21" | 1218.50 L | 391.79' | 390.10' | N 25° 56' 10" E |
| C40 | 09° 44' 29" | 1348.50 L | 229.14' | 228.86' | N 22° 47' 08" E |
| C41 | 10° 06' 18" | 1373.50 R | 242.24' | 241.92' | S 24° 47' 46" W |
| C45 | 01° 25' 20" | 1208.50 L | 30.00' | 30.00' | N 16° 01' 10" E |
| C49 | 12° 13' 12" | 1218.50 L | 259.88' | 259.39' | N 09° 12' 16" E |
| C50 | 09° 46' 22" | 1373.50 R | 234.27' | 233.99' | S 10° 30' 27" W |
| C51 | 01° 14' 01" | 1393.50 R | 30.00' | 30.00' | S 16° 01' 10" W |
| C52 | 03° 05' 55" | 1373.50 R | 74.28' | 74.27' | S 18° 11' 40" W |
| C56 | 12° 17' 47" | 1348.50 L | 289.41' | 288.85' | N 11° 46' 10" E |

| TEMPORARY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C41 | 10° 06' 18" | 1373.50' L | 242.24' | 241.92' | N 24° 47' 46" E |
| C42 | 08° 48' 53" | 1388.50' R | 213.61' | 213.40' | S 24° 50' 03" W |
| C45 | 01° 25' 20" | 1208.50' R | 30.00' | 30.00' | S 16° 01' 10" W |
| C46 | 100° 14' 06" | 1218.50' R | 5.00' | 5.00' | S 15° 11' 48" W |
| C47 | 100° 14' 06" | 1218.50' R | 5.00' | 5.00' | S 86° 50' 33" W |
| C48 | 001° 55' 39" | 1393.50' R | 22.56' | 22.56' | S 19° 57' 47" W |
| C50 | 09° 46' 22" | 1373.50' L | 234.27' | 233.99' | N 10° 30' 27" E |
| C52 | 03° 05' 55" | 1373.50' L | 74.28' | 74.27' | N 18° 11' 40" E |
| C53 | 02° 51' 47" | 1393.50' R | 69.64' | 69.63' | S 18° 04' 04" W |
| C54 | 04° 53' 21" | 1388.50' R | 118.48' | 118.45' | S 08° 03' 56" W |
| C55 | 04° 53' 33" | 1393.50' R | 118.99' | 118.95' | S 12° 57' 23" W |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/11/09 |

RIGHT OF WAY PLAN
STA 214+75.00 TO STA 218+00.00

18 / 25

SCALE: SHOWN

SHEET NO. 266 OF 275

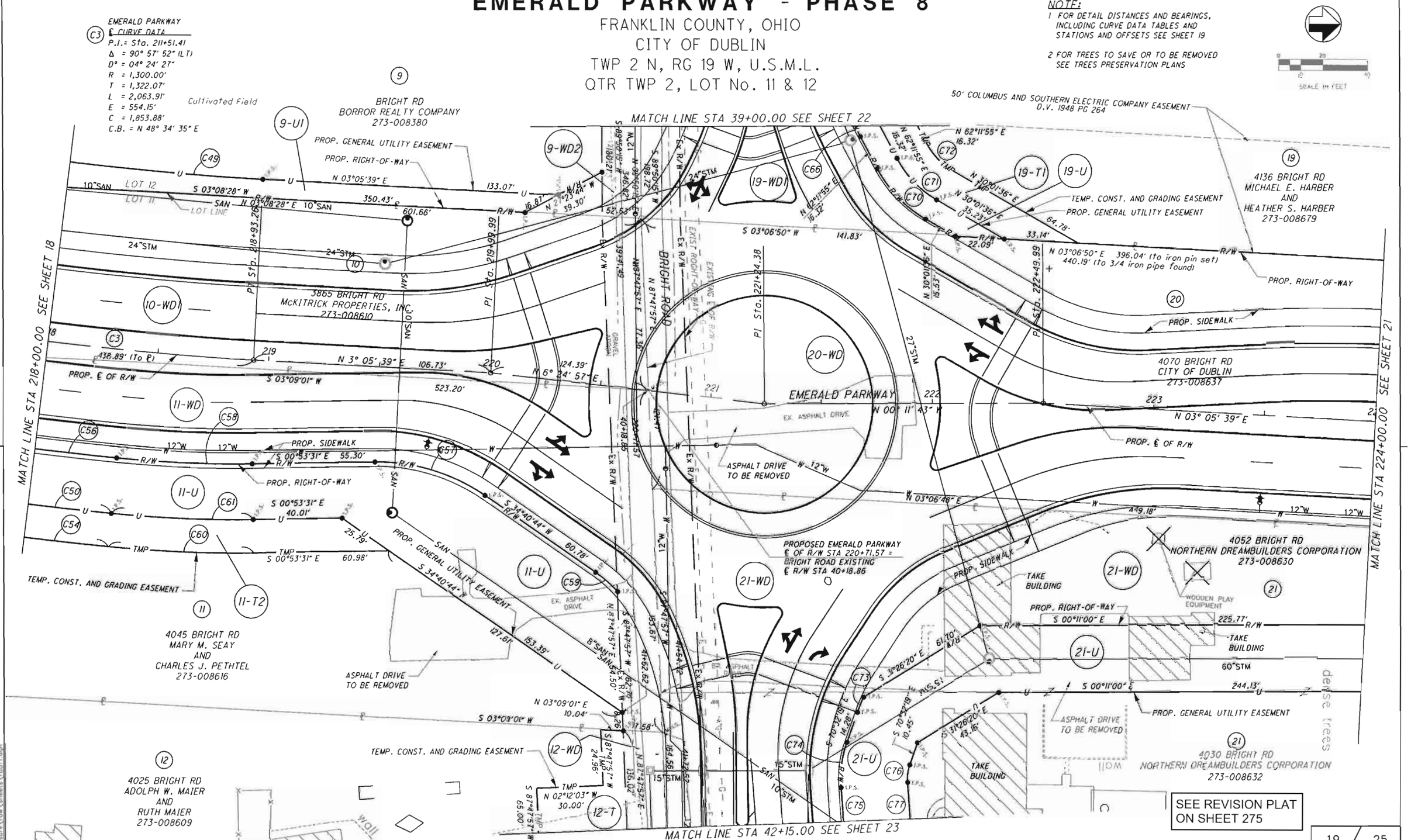
p:\pr44959\cadd\surv\row\sheets\rs010.dgn

# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO
CITY OF DUBLIN
TWP 2 N, RG 19 W, U.S.M.L.
QTR TWP 2, LOT No. 11 & 12

NOTE:
1 FOR DETAIL DISTANCES AND BEARINGS, INCLUDING CURVE DATA TABLES AND STATIONS AND OFFSETS SEE SHEET 19

2 FOR TREES TO SAVE OR TO BE REMOVED SEE TREES PRESERVATION PLANS




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/17/09 |

RIGHT OF WAY PLAN
STA 218+00.00 TO STA 224+00.00

19 / 25

SCALE: SHOWN

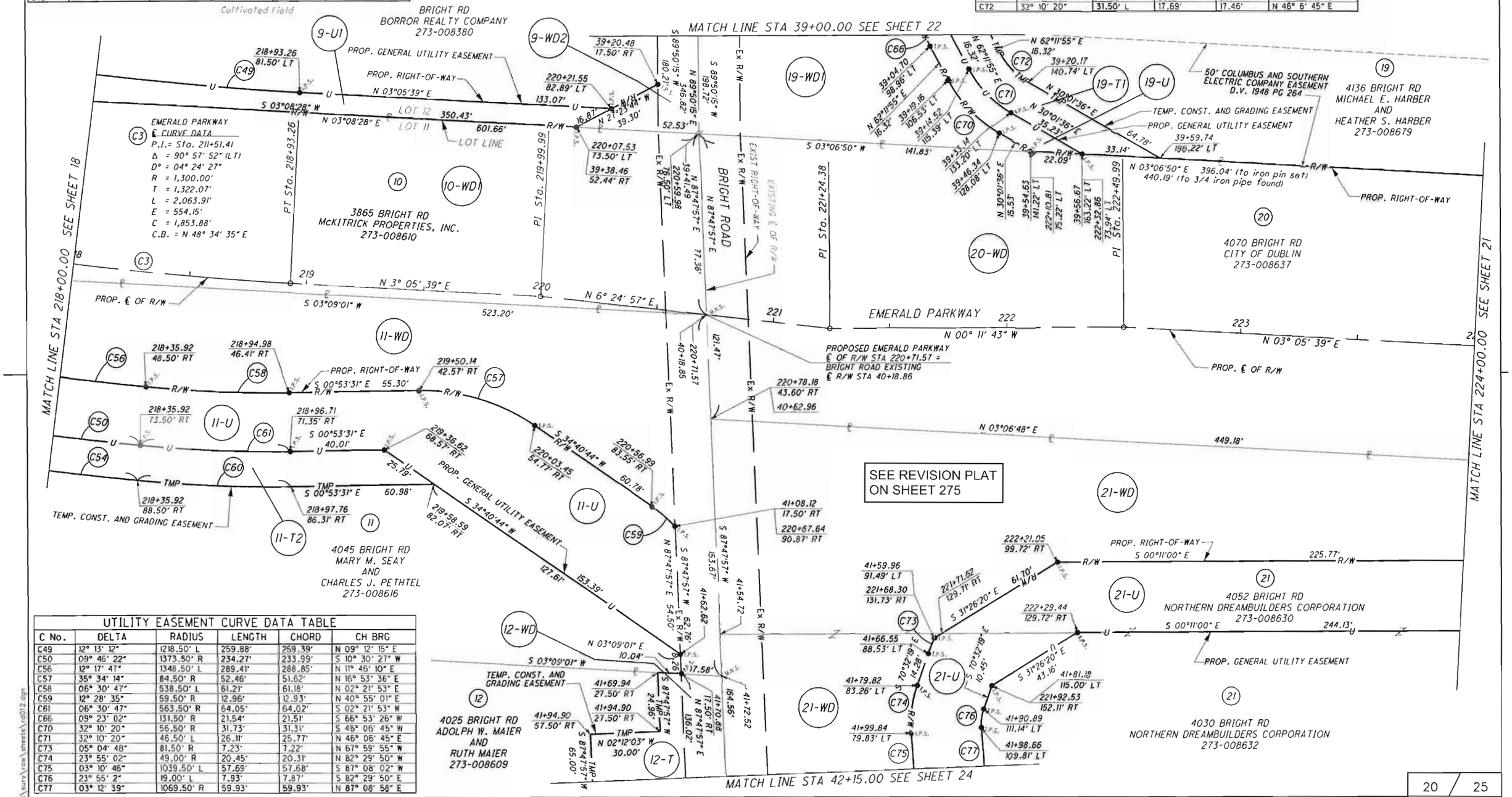
SHEET NO. 267 OF 275

# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO
CITY OF DUBLIN
TWP 2 N, RG 19 W, U.S.M.L.
QTR TWP 2, LOT No. 11 & 12

| R/W CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C56 | 12° 17' 47" | 1348.50' R | 289.41' | 288.85' | S 11° 46' 10" W |
| C57 | 35° 34' 14" | 84.50' L | 52.46' | 51.62' | S 16° 53' 36" W |
| C58 | 06° 30' 47" | 538.50' R | 61.21' | 61.18' | S 02° 21' 53" W |
| C59 | 12° 28' 35" | 59.50' L | 12.96' | 12.93' | S 40° 55' 01" W |
| C66 | 09° 23' 02" | 131.50' L | 21.54' | 21.51' | N 66° 53' 26" E |
| C70 | 32° 10' 20" | 56.50' L | 31.73' | 31.31' | N 46° 06' 45" E |
| C73 | 05° 04' 48" | 81.50' L | 7.23' | 7.22' | S 67° 59' 55" E |
| C74 | 23° 55' 02" | 49.00' L | 20.45' | 20.31' | S 82° 29' 50" E |
| C75 | 03° 10' 46" | 1039.50' R | 57.69' | 57.68' | N 87° 08' 02" E |

| TEMPORARY EASEMENT CRUVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C50 | 09° 46' 22" | 1373.50 L | 234.27' | 233.99' | N 10° 30' 27" E |
| C54 | 04° 53' 21" | 1388.50 R | 118.48' | 118.45' | S 08° 03' 56" W |
| C60 | 06° 30' 47" | 578.50 R | 65.76' | 65.72' | S 02° 21' 53" W |
| C61 | 06° 30' 47" | 563.50 L | 64.05' | 64.02' | N 02° 21' 53" E |
| C71 | 32° 10' 20" | 46.50' R | 26.11' | 25.77' | S 46° 6' 45" W |
| C72 | 32° 10' 20" | 31.50' L | 17.69' | 17.46' | N 46° 6' 45" E |




| UTILITY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C49 | 12° 13' 12" | 1218.50' L | 259.88' | 259.39' | N 09° 12' 15" E |
| C50 | 09° 46' 22" | 1373.50' R | 234.27' | 233.99' | S 10° 30' 27" W |
| C56 | 12° 17' 47" | 1348.50' L | 289.41' | 288.85' | N 11° 46' 10" E |
| C57 | 35° 34' 14" | 84.50' R | 52.46' | 51.62' | N 16° 53' 36" E |
| C58 | 06° 30' 47" | 538.50' L | 61.21' | 61.18' | N 02° 21' 53" E |
| C59 | 12° 28' 35" | 59.50' R | 12.96' | 12.93' | N 40° 55' 01" E |
| C61 | 06° 30' 47" | 563.50' R | 64.05' | 64.02' | S 02° 21' 53" W |
| C66 | 09° 23' 02" | 131.50' R | 21.54' | 21.51' | S 66° 53' 26" W |
| C70 | 32° 10' 20" | 56.50' R | 31.73' | 31.31' | S 46° 06' 45" W |
| C71 | 32° 10' 20" | 46.50' L | 26.11' | 25.77' | N 46° 06' 45" E |
| C73 | 05° 04' 48" | 81.50' R | 7.23' | 7.22' | N 67° 59' 55" W |
| C74 | 23° 55' 02" | 49.00' R | 20.45' | 20.31' | N 82° 29' 50" W |
| C75 | 03° 10' 46" | 1039.50' L | 57.69' | 57.68' | S 87° 08' 02" W |
| C76 | 23° 55' 2" | 19.00' L | 7.93' | 7.87' | S 82° 29' 50" E |
| C77 | 03° 12' 39" | 1069.50' R | 59.93' | 59.93' | N 87° 08' 58" E |

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/17/09 |

RIGHT OF WAY PLAN
STA 218+00.00 TO STA 224+00.00

20 / 25

SCALE: SHOWN

SHEET NO. 268 OF 275

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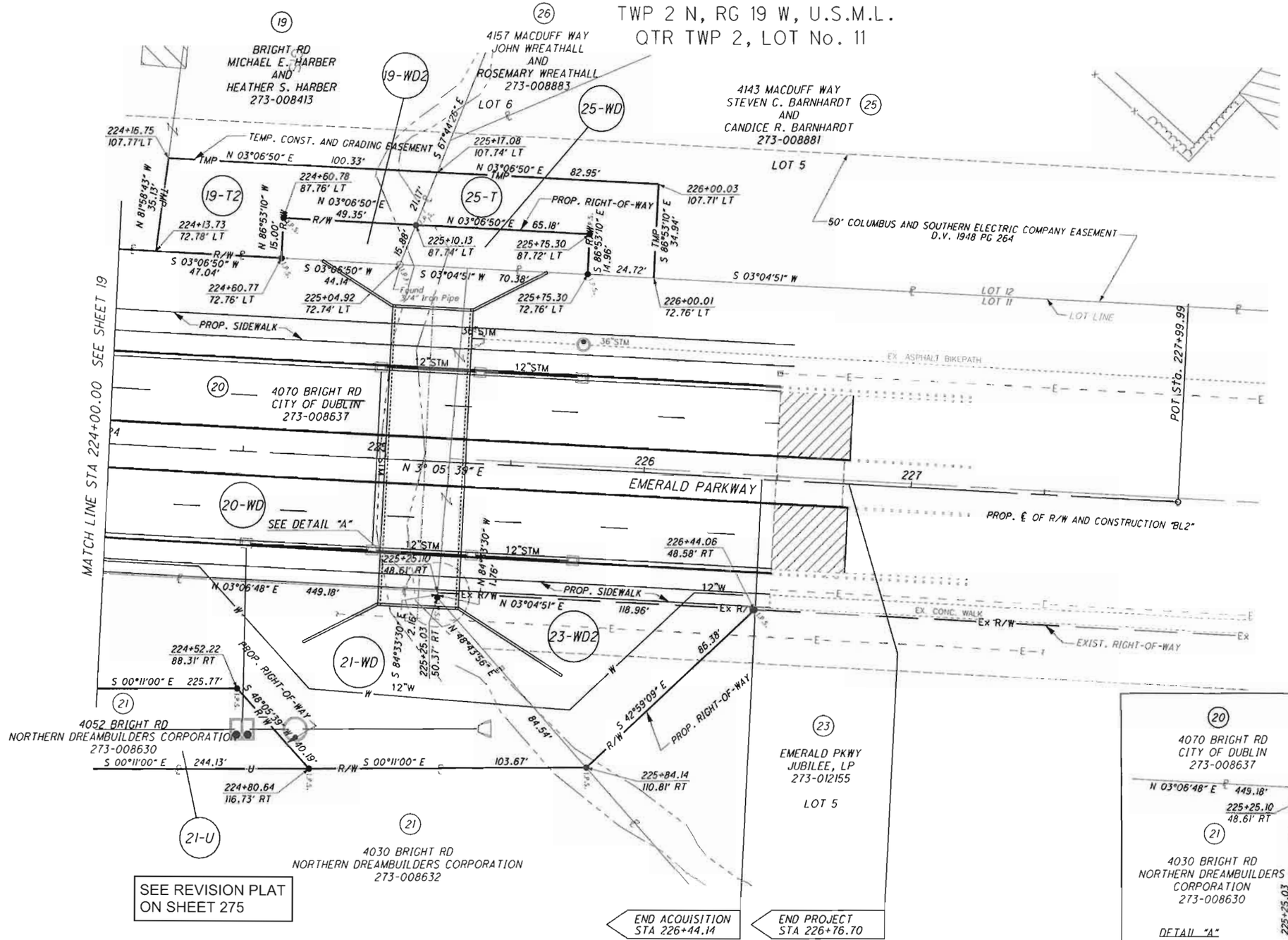
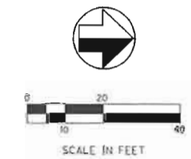
# EMERALD PARKWAY - PHASE 8

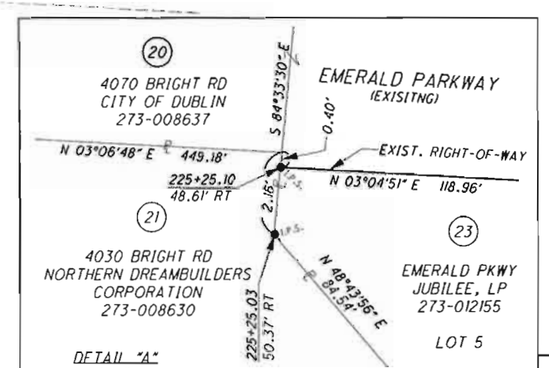
FRANKLIN COUNTY, OHIO
CITY OF DUBLIN
TWP 2 N, RG 19 W, U.S.M.L.
QTR TWP 2, LOT No. 11




SEE REVISION PLAT ON SHEET 275




NOTE:
FOR TREES TO SAVE OR TO BE REMOVED
SEE TREES PRESERVATION PLANS




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/19/09 |

RIGHT OF WAY PLAN
STA 224+00.00 TO END PROJECT

21 / 25

SCALE: SHOWN

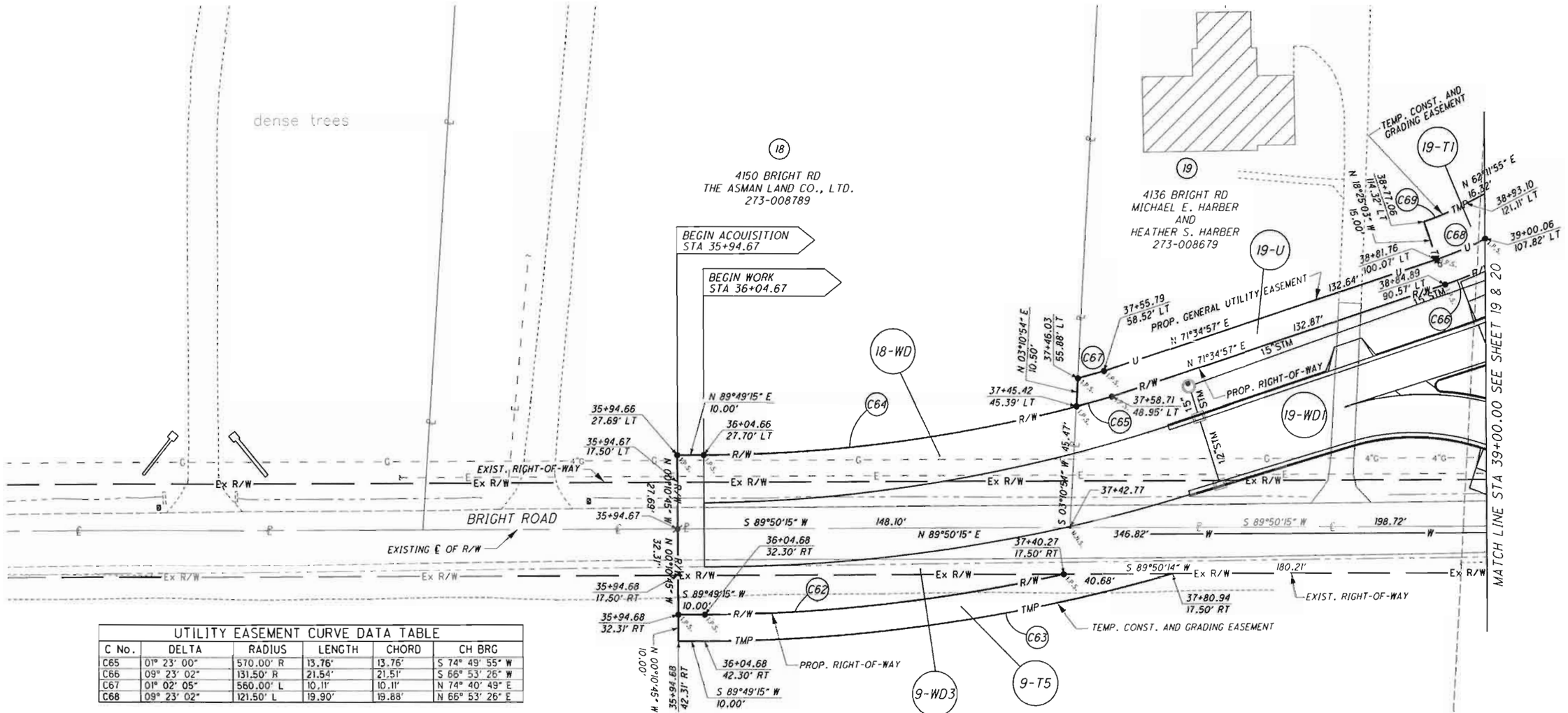
SHEET NO. 269 OF 275

P:\pr44959\cadd\surv\row\sheets\rd013.dgn

# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO
CITY OF DUBLIN
TWP 2 N, RG 19 W, U.S.M.L.
QTR TWP 2, LOT No. 12

| R/W CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C62 | 12° 25' 44" | 630.00' R | 136.66' | 136.39' | S 83° 36' 23" W |
| C64 | 14° 17' 50" | 570.00' L | 142.23' | 141.87' | N 82° 40' 20" E |
| C65 | 01° 23' 00" | 570.00' L | 13.76' | 13.76' | N 74° 49' 55" E |
| C66 | 09° 23' 02" | 131.50' L | 21.54' | 21.51' | N 66° 53' 26" E |




| UTILITY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C65 | 01° 23' 00" | 570.00' R | 13.76' | 13.76' | S 74° 49' 55" W |
| C66 | 09° 23' 02" | 131.50' R | 21.54' | 21.51' | S 66° 53' 26" W |
| C67 | 01° 02' 05" | 560.00' L | 10.11' | 10.11' | N 74° 40' 49" E |
| C68 | 09° 23' 02" | 121.50' L | 19.90' | 19.88' | N 66° 53' 26" E |

| TEMPORARY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C62 | 12° 25' 44" | 630.00' L | 136.66' | 136.39' | N 83° 36' 23" E |
| C63 | 15° 59' 13" | 640.00' R | 178.58' | 178.00' | S 81° 49' 38" W |
| C68 | 09° 23' 02" | 121.50' R | 19.90' | 19.88' | S 66° 53' 26" W |
| C69 | 09° 23' 02" | 106.50' L | 17.44' | 17.42' | N 66° 53' 26" E |

NOTE:
FOR TREES TO SAVE OR TO BE REMOVED
SEE TREES PRESERVATION PLANS

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/19/09 |

RIGHT OF WAY PLAN
BEGIN WORK TO STA 489+50.00

22 / 25

SCALE: SHOWN

SHEET NO. 270 OF 275

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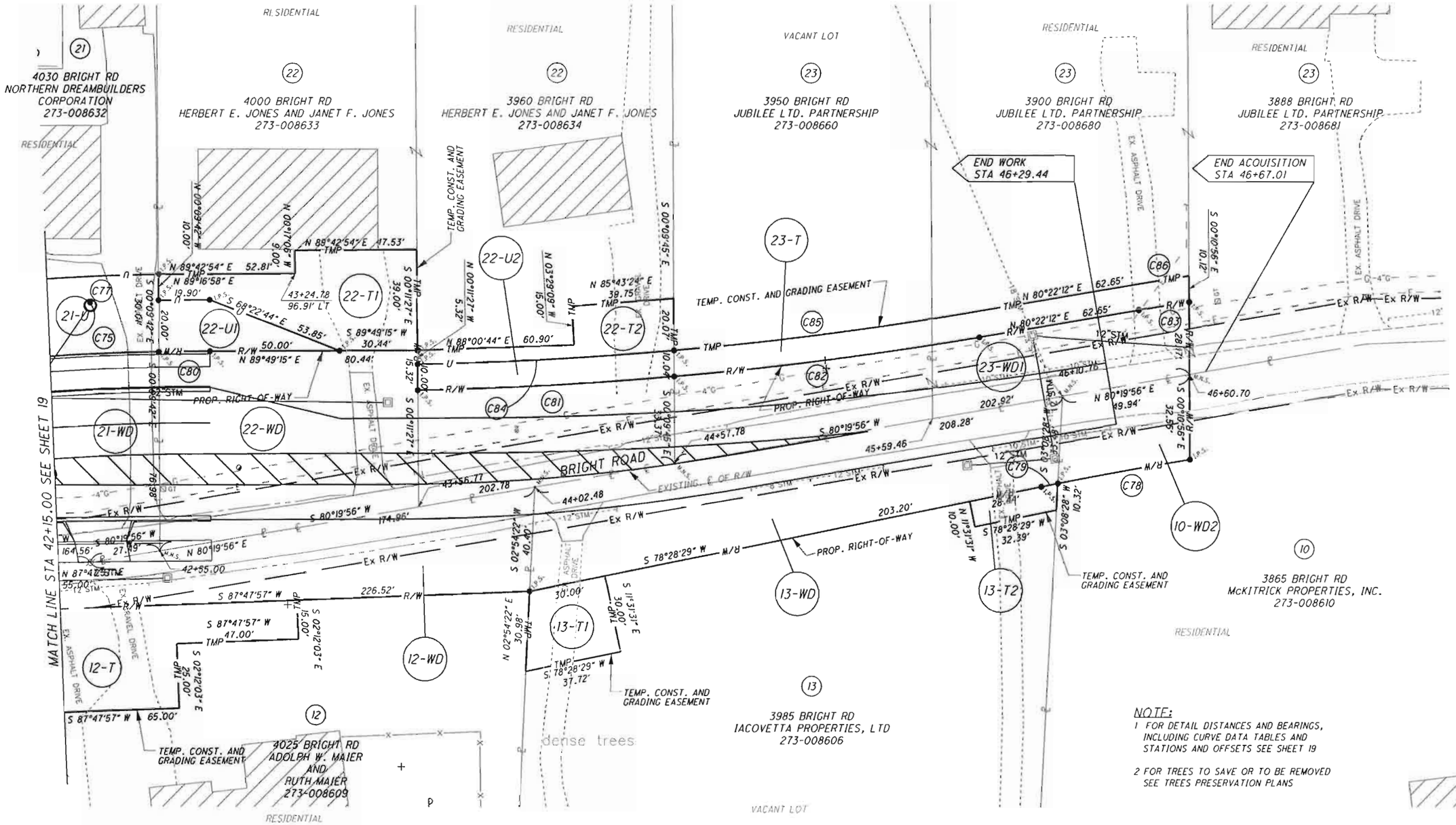
# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO
CITY OF DUBLIN
TWP 2 N, RG 19 W, U.S.M.L.
QTR TWP 2, LOT No. 11

SEE REVISION PLAT ON SHEET 275

SCALE IN FEET




NOTE:
1 FOR DETAIL DISTANCES AND BEARINGS, INCLUDING CURVE DATA TABLES AND STATIONS AND OFFSETS SEE SHEET 19

2 FOR TREES TO SAVE OR TO BE REMOVED SEE TREES PRESERVATION PLANS

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/19/09 |

RIGHT OF WAY PLAN
STA 42+15.00 TO STA 46+67.01

23 / 25

SCALE: SHOWN

SHEET NO. 271 OF 275

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# EMERALD PARKWAY - PHASE 8

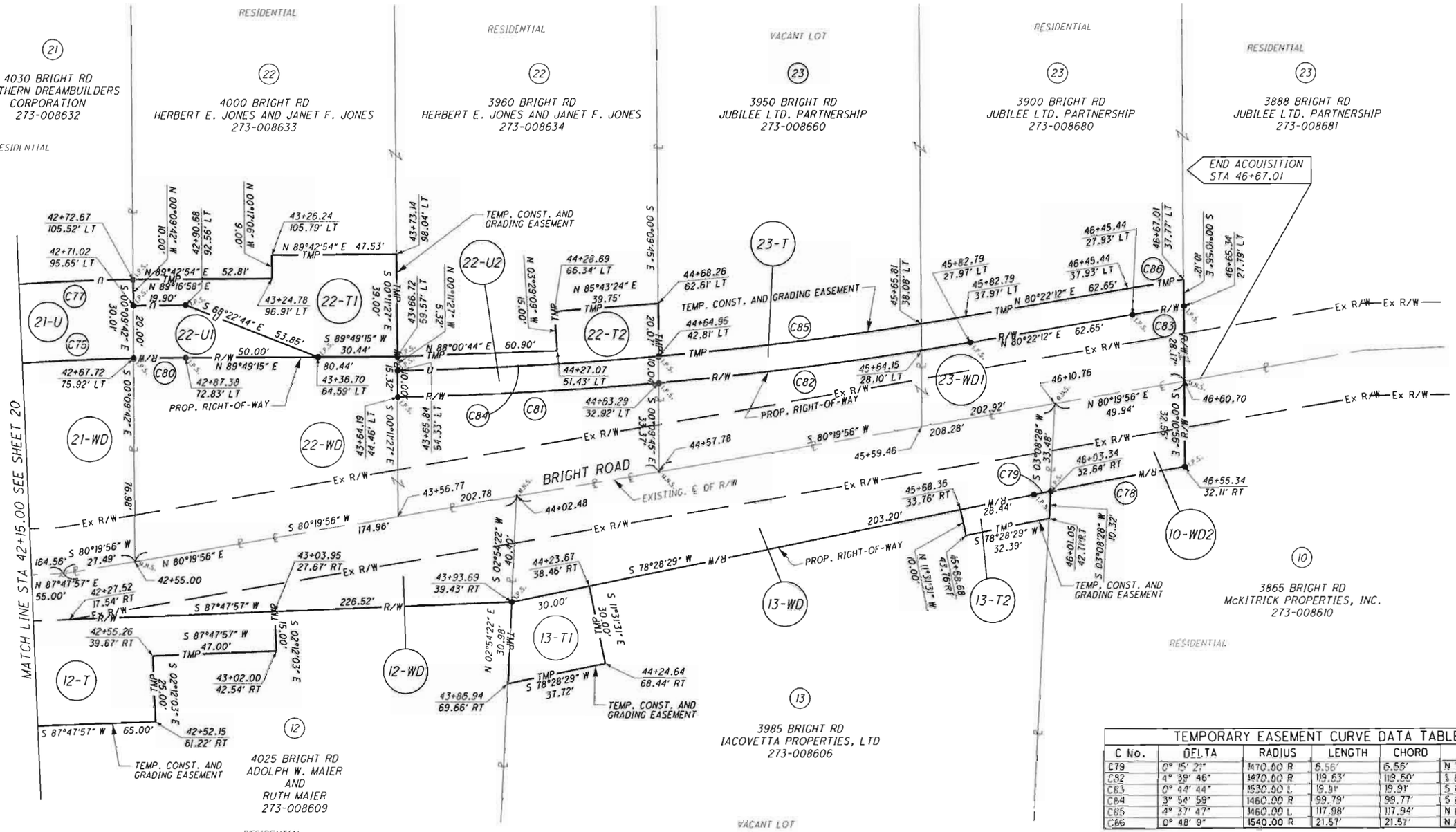
FRANKLIN COUNTY, OHIO
CITY OF DUBLIN
TWP 2 N, RG 19 W, U.S.M.L.
QTR TWP 2, LOT No. 11

SEE REVISION PLAT ON SHEET 275

SCALE IN FEET

| R/W CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C75 | 03° 10' 46" | 1039.50' R | 57.69' | 57.68' | N 87° 8' 02" E |
| C78 | 02° 01' 37" | 1470.00' L | 52.00' | 52.00' | S 79° 44' 39" W |
| C79 | 00° 15' 21" | 1470.00' L | 6.56' | 6.56' | S 78° 36' 10" W |
| C80 | 01° 05' 50" | 1039.50' R | 19.90' | 19.90' | N 89° 16' 20" E |
| C81 | 03° 53' 22" | 1470.00' L | 99.79' | 99.77' | N 86° 58' 39" E |
| C82 | 04° 39' 46" | 1470.00' L | 119.63' | 119.60' | N 82° 42' 05" E |
| C83 | 00° 44' 44" | 1530.00' R | 19.91' | 19.91' | N 80° 44' 34" E |

| UTILITY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C75 | 03° 10' 46" | 1039.50' L | 57.69' | 57.68' | S 87° 08' 02" W |
| C77 | 03° 12' 39" | 1069.50' R | 59.93' | 59.93' | N 87° 08' 58" E |
| C80 | 01° 05' 50" | 1039.50' L | 19.90' | 19.90' | S 89° 16' 20" W |
| C81 | 03° 53' 22" | 1470.00' R | 99.79' | 99.77' | S 86° 58' 39" W |
| C84 | 03° 54' 59" | 1460.00' L | 99.79' | 99.77' | N 86° 57' 29" E |




| TEMPORARY EASEMENT CURVE DATA TABLE | | | | | |
|---|---|---|---|---|---|
| C No. | DELTA | RADIUS | LENGTH | CHORD | CH BRG |
| C79 | 0° 15' 21" | 1470.00 R | 6.56' | 6.56' | N 78° 36' 10" E |
| C82 | 4° 39' 46" | 1470.00 R | 119.63' | 119.60' | S 82° 42' 5" W |
| C83 | 0° 44' 44" | 1530.00 L | 19.91' | 19.91' | S 80° 44' 34" W |
| C84 | 3° 54' 59" | 1460.00 R | 99.79' | 99.77' | S 86° 57' 29" W |
| C85 | 4° 37' 47" | 1460.00 L | 117.98' | 117.94' | N 82° 41' 6" E |
| C86 | 0° 48' 9" | 1540.00 R | 21.57' | 21.57' | N 80° 46' 17" E |



| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 11/19/09 |

RIGHT OF WAY PLAN
STA 42+15.00 TO STA 46+67.01

SCALE: SHOWN

SHEET NO. 272 OF 275

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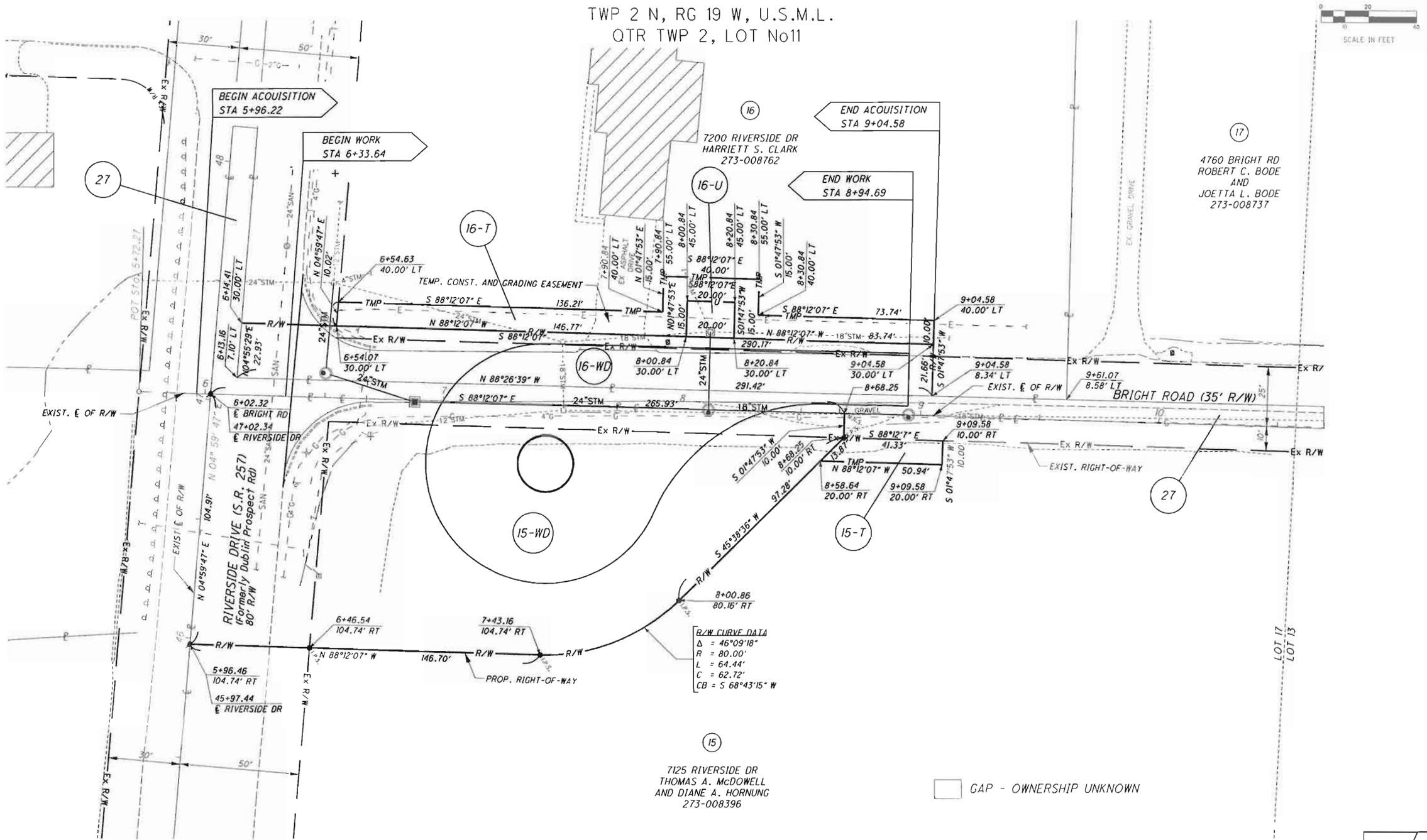
# EMERALD PARKWAY - PHASE 8

FRANKLIN COUNTY, OHIO
CITY OF DUBLIN
TWP 2 N, RG 19 W, U.S.M.L.
QTR TWP 2, LOT No11

NOTE:
FOR TREES TO SAVE OR TO BE REMOVED
SEE TREES PRESERVATION PLANS




| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS, OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY - PHASE 8

| | |
|---|---|
| JOB NO. | PR44959 |
| DESIGNED BY: | EJG |
| DRAWN BY: | EJG |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | 10/09/09 |

RIGHT OF WAY PLAN
BEGIN WORK TO STA 8+94.69

| 25 | 25 |
|---|---|
| SCALE: SHOWN | |
| SHEET NO. 273 | OF 275 |

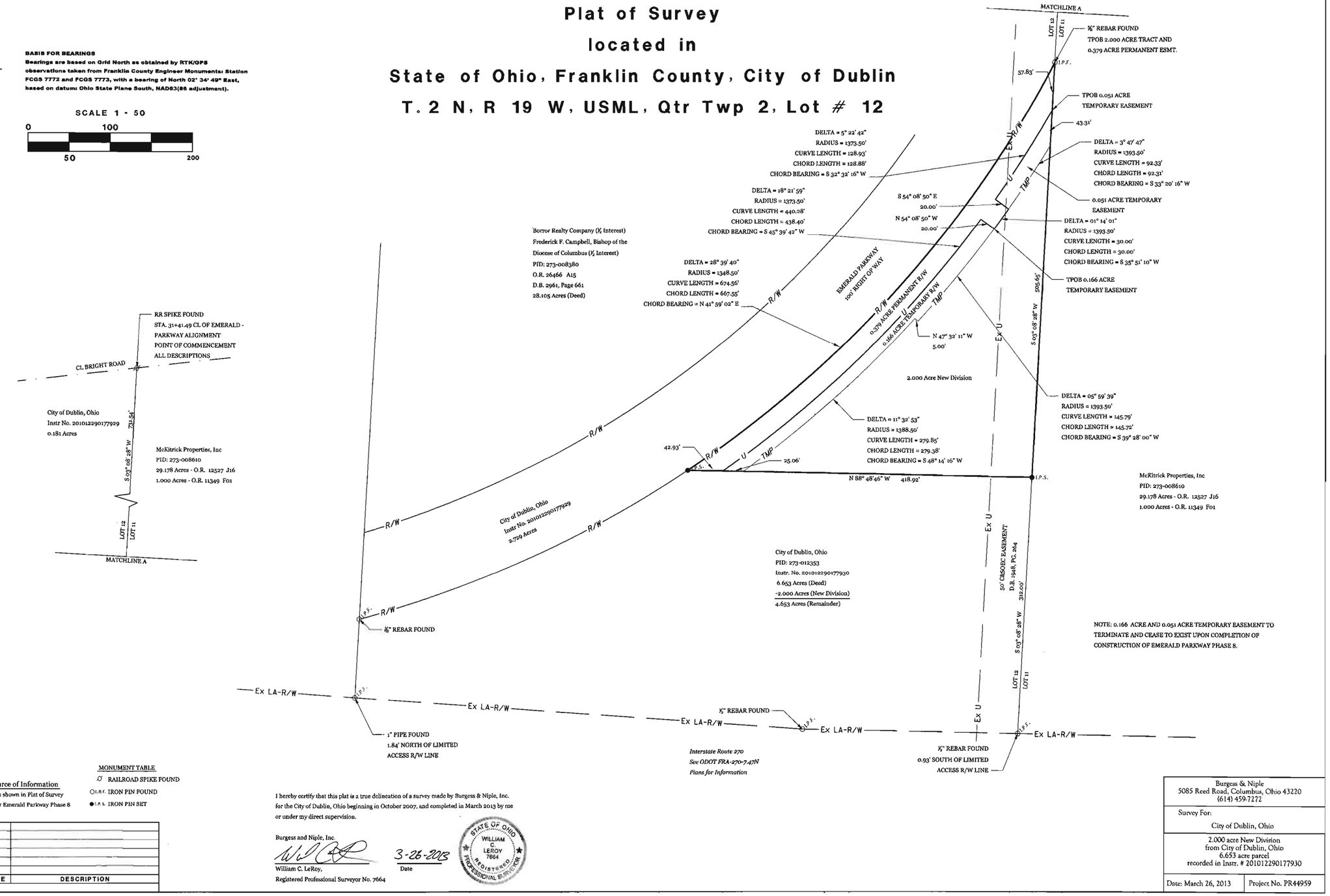
# Plat of Survey
# located in
# State of Ohio, Franklin County, City of Dublin
# T. 2 N, R 19 W, USML, Qtr Twp 2, Lot # 12

**BASIS FOR BEARINGS**
**Bearings are based on Grid North as obtained by RTK/GPS observations taken from Franklin County Engineer Monuments: Station FCGS 7772 and FCGS 7773, with a bearing of North 02° 34' 49" East, based on datum: Ohio State Plane South, NAD83(86 adjustment).**

SCALE 1 - 50

0 100

50 200




NOTE: 0.166 ACRE AND 0.051 ACRE TEMPORARY EASEMENT TO TERMINATE AND CEASE TO EXIST UPON COMPLETION OF CONSTRUCTION OF EMERALD PARKWAY PHASE 8.

**MONUMENT TABLE**

- RAILROAD SPIKE FOUND
- I.R.F. IRON PIN FOUND
- I.P.S. IRON PIN SET

**Pertinent Source of Information**

1) All documents shown in Plat of Survey
2) R/W plans for Emerald Parkway Phase 8

| REV. BY | DATE | DESCRIPTION |
|---|---|---|
| | | |

I hereby certify that this plat is a true delineation of a survey made by Burgess & Niple, Inc. for the City of Dublin, Ohio beginning in October 2007, and completed in March 2013 by me or under my direct supervision.

Burgess and Niple, Inc.

William C. LeRoy,
Registered Professional Surveyor No. 7664

3-26-2013
Date

STATE OF OHIO — WILLIAM C. LEROY 7664 — REGISTERED PROFESSIONAL SURVEYOR

Burgess & Niple
5085 Reed Road, Columbus, Ohio 43220
(614) 459-7272

Survey For:
City of Dublin, Ohio

2.000 acre New Division
from City of Dublin, Ohio
6.653 acre parcel
recorded in Instr. # 201012290177930

Date: March 26, 2013 | Project No. PR44959

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

**CITY OF DUBLIN, OHIO**
**EMERALD PARKWAY – PHASE 8**
**RIVERSIDE DRIVE TO BILLINGSLEY CREEK**
**07-008-CIP**

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | WCL |
| DRAWN BY: | WHW |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | OCTOBER 2013 |

**PLAT OF SURVEY**
**CITY OF DUBLIN TO MCKITRICK PROPERTIES, INC.**

SCALE: NONE

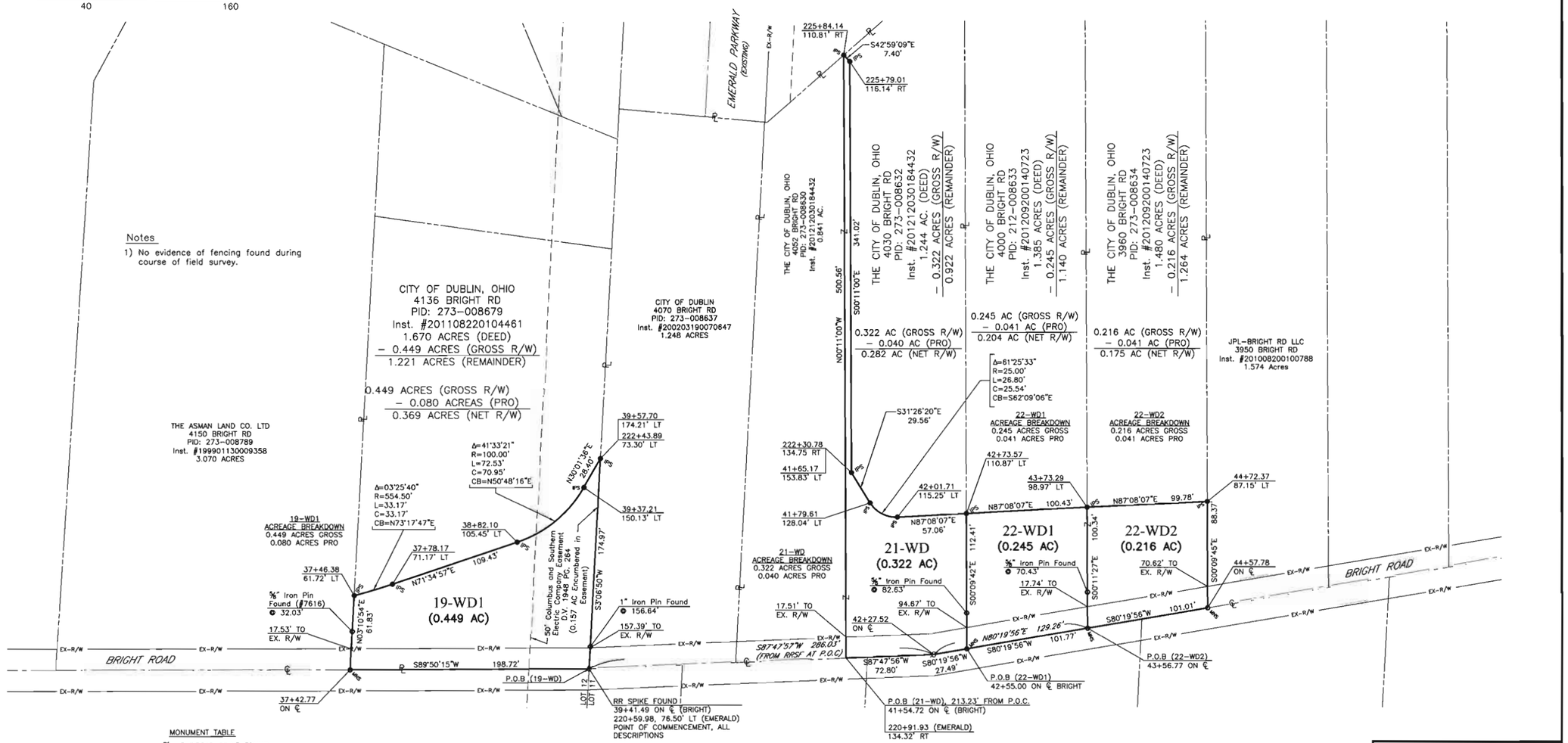
SHEET NO. 274 OF 275

PLOTTED: 10/28/2013 9:49:11 AM
P:\PR44959\cadd\RIGHT-OF-WAY PLANS PLACE HOLDER.dwg 10/27/2013 12:37:28 PM Ward, Will

# Plat of Survey
## located in
## State of Ohio, Franklin County, City of Dublin
## T. 2 N, R 19 W, USML, Qtr Twp 2, Lot #11 & 12

BASIS FOR BEARINGS
Bearings are based on Grid North as obtained by RTK/GPS observations taken from Franklin County Engineer Monuments: Station FCGS 7772 and FCGS 7773, with a bearing of North 02° 34' 49" East, based on datum: Ohio State Plane South, NAD83(86 adjustment).

SCALE 1" = 40'
0 80 40 160




Notes
1) No evidence of fencing found during course of field survey.

Pertinent Source of Information
1) All documents shown in Plat of Survey
2) R/W plans for Emerald Parkway Phase 8

MONUMENT TABLE

| | |
|---|---|
| ⌀ | RAILROAD SPIKE FOUND |
| ○IPF | IRON PIN FOUND |
| ●IPS | IRON PIN SET |
| ⊙MNS | MONUMENT SET |

| REV. BY | DATE | DESCRIPTION |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| DATE COMPLETED | | |

I hereby certify that this plat is a true delineation of a survey made by Burgess & Niple, Inc. for the City of Dublin, Ohio beginning in October 2007, and completed in March 2013 or under my direct supervision.

Burgess and Niple, Inc.

STATE OF OHIO WILLIAM C. LEROY 7164 REGISTERED PROFESSIONAL SURVEYOR

William C. LeRoy,
Registered Professional Surveyor No. 7164

10/10/2013
Date

Burgess & Niple
5085 Reed Road, Columbus, Ohio 43220
(614) 459-7272

Survey For:
City of Dublin, Ohio

Multi Parcels
19-WD1, 21-WD, 22-WD1, 22-WD2

Date: October 9, 2013 | Project No. PR44959

| NO. | REVISIONS | DATE | BY | CHK. |
|---|---|---|---|---|
| | | | | |
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| | | | | |
| | | | | |

Burgess & Niple, Inc. COLUMBUS,OH

BURGESS & NIPLE

CITY OF DUBLIN, OHIO
EMERALD PARKWAY – PHASE 8
RIVERSIDE DRIVE TO BILLINGSLEY CREEK
07-008-CIP

| | |
|---|---|
| JOB NO. | 44959 |
| DESIGNED BY: | WCL |
| DRAWN BY: | WHW |
| CHECKED BY: | WCL |
| APPROVED BY: | WCL |
| DATE: | OCTOBER 2013 |

PLAT OF SURVEY
BRIGHT ROAD AREA

SCALE: NONE

SHEET NO. 275 OF 275

PLOTTED: 10/28/2013 9:49:30 AM
PLOTTED: 10/10/2013 3:44:04 PM
P:\PR44959\cadd\RIGHT-OF-WAY PLANS PLACE HOLDER.dwg 10/27/2013 12:37:28 PM Ward, Will
P:\PR44959\cadd\surv\ROW\Exhibits\Plat for Multi Parcels - City of Dublin.dwg 10/7/2013 8:54:44 AM Ward, Will