# CITY OF TAMPA
# TRANSPORTATION DIVISION

## CONTRACT PLANS

CITY OF TAMPA PROJECT NO. 0000005
CONTRACT NO: 12-D-00057
FINANCIAL PROJECT ID 437044-1-54-01
ARMENIA AVENUE AT BUSCH BOULEVARD

### COMPONENTS OF CONTRACT PLANS SET

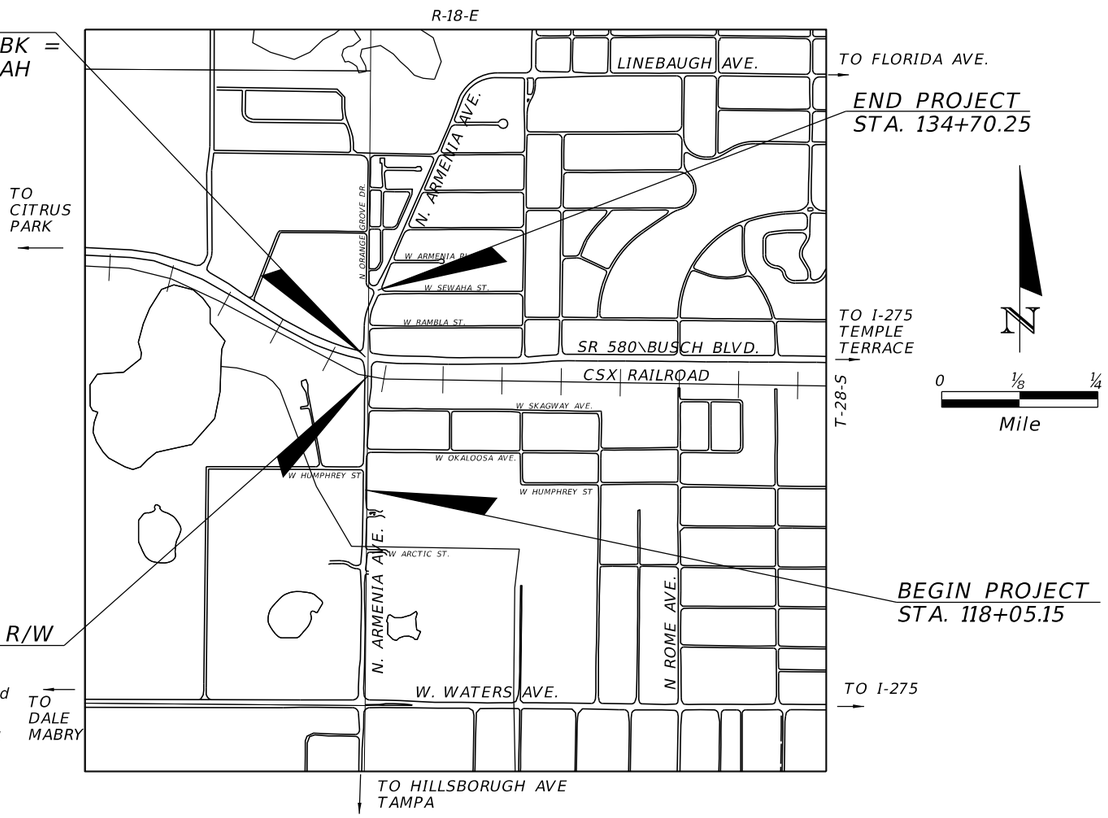
ROADWAY PLANS
SIGNING AND PAVEMENT MARKING PLANS
SIGNALIZATION PLANS

A DETAILED INDEX APPEARS ON THE KEY SHEET OF EACH COMPONENT

### INDEX OF ROADWAY PLANS


| SHEET NO. | SHEET DESCRIPTION |
|---|---|
| 1 | KEY SHEET |
| 2 | SIGNATURE SHEET |
| 3 - 4 | SUMMARY OF PAY ITEMS |
| 5 - 9 | DRAINAGE MAP |
| 10 - 12 | TYPICAL SECTION |
| 13 - 14 | TYPICAL SECTION DETAILS |
| 15 | SUMMARY OF DRAINAGE STRUCTURES |
| 16 - 17 | PROJECT LAYOUT |
| 18 | PROJECT CONTROL |
| 19 - 20 | GENERAL NOTES |
| 21 - 26 | ROADWAY PLAN-PROFILES |
| 27 | ALIGNMENT DETAIL |
| 28 | INTERSECTION DETAIL |
| 29 | DRAINAGE DETAILS |
| 30 - 38 | DRAINAGE STRUCTURES |
| 39 - 41 | POND CROSS SECTIONS |
| 42 | ROADWAY SOIL SURVEY |
| 43 | ROADWAY SOIL PROFILES |
| 44 - 66 | CROSS SECTIONS |
| 67 - 71 | DRIVEWAY HALF SECTIONS |
| 72 - 75 | STORM WATER POLLUTION PREVENTION PLAN |
| 76 - 83 | TEMPORARY TRAFFIC CONTROL PLAN |
| 84 - 90 | UTILITY ADJUSTMENTS |
| 91 - 110 | UTILITY RELOCATION SHEETS |
| SQ-1 - SQ-19 | SUMMARY OF QUANTITIES |


EQUATION
STA. 129+40.70 BK =
STA. 129+37.70 AH




ROADWAY SHOP DRAWINGS
TO BE SUBMITTED TO:
DEREK M. GIL, P.E.
ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE
TAMPA, FL 33605

PLANS PREPARED BY:

ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

### GOVERNING DESIGN STANDARDS:

Florida Department of Transportation, FY 2020/21 Standard Plans for Road and Bridge Construction and applicable Standard Plans Interim Revisions (SPIRs). Standard Plans for Road Constroution and SPIRs are available at the following website: http://www.fdot.gov/design/standardplans

And City of Tampa Stormwater Standards; which can be found at the following web site:
http://www.tampagov.net/sites/default/files/stormwater/files/SW_Standard_details.pdf

For the City of Tampa Wastewater Department Technical Standards Guideline for Construction of Wastewater Facilities Click on the "Technical Standards" link at the following web site:
https://www.tampagov.net/wastewater/info

For the City of Tampa Water Department Engineering Standard Details, Click on the "Engineering Standard Details" link at the following web site:
https://www.tampagov.net/water/programs/establishing-water-service

### GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, JULY 2020 Standard Specifications for Road and Bridge Construction at the following website:
http://www.fdot.gov/programmanagement/Implemented/SpecBooks

PROJECT LENGTH IS BASED ON THE ℄ SURVEY

| LENGTH OF PROJECT | | |
|---|---|---|
| | LINEAR FEET | MILES |
| ROADWAY | 1668.10 | 0.316 |
| BRIDGES | 0.00 | 0.000 |
| NET LENGTH OF PROJECT | 1668.10 | 0.316 |
| EXCEPTIONS | 0.00 | 0.000 |
| GROSS LENGTH OF PROJECT | 1668.10 | 0.316 |

CITY PROJECT MANAGER: NINA MABILLEAU, E.I.

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

ROADWAY PLANS
ENGINEER OF RECORD: DEREK M. GIL

P.E. NO.: 54798

| FISCAL YEAR | SHEET NO. |
|---|---|
| 21 | 1 |

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DEREK M. GIL
LICENSE
No 54798
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

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Derek M Gil
2020.09.22 15:51:21 -04'00'

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ELEMENT ENGINEERING GROUP
1713 E. 9TH AVENUE
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DEREK M. GIL P.E., NO. 54798

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ROADWAY PLANS

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| 91 - 97 | UTILITY RELOCATION SHEETS |
| SQ-1 - SQ-19 | SUMMARY OF QUANTITIES |

PETER JOHN MATTSON
License Number
6290
STATE OF
FLORIDA
Professional Surveyor and Mapper

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1713 E. 9TH AVENUE
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PETER JOHN MATTSON, PMS NO. 6290

THE ABOVE NAMED PROFESSIONAL SURVEYOR AND MAPPER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 5J-17.062, F.A.C.

ROADWAY PLANS

| SHEET NO. | SHEET DESCRIPTION |
|---|---|
| 2 | SIGNATURE SHEET |
| 18 | PROJECT CONTROL |

BULENT HATIPOGLU
No 89157
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

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Bulent Hatipoglu
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MC SQUARED, INC.
5808-A BRECKENRIDGE PARKWAY
TAMPA, FLORIDA 33610
BULENT HATIPOGLU, P.E., NO. 89157

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ROADWAY PLANS

| SHEET NO. | SHEET DESCRIPTION |
|---|---|
| 2 | SIGNATURE SHEET |
| 42 | ROADWAY SOIL SURVEY |
| 43 | ROADWAY SOIL PROFILE |

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

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EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# SIGNATURE SHEET

SHEET NO.
2

## PAY ITEMS

### SUMMARY OF ROADWAY

| PAY ITEM NO. | PAY ITEM DESCRIPTION | UNIT | QUANTITY |
|---|---|---|---|
| 0101 1 | MOBILIZATION | | 8% |
| 0102 1 | MAINTENANCE OF TRAFFIC | | 10% |
| | | | |
| 0102107 1 | TEMPORARY TRAFFIC DETECTION AND MAINTENANCE, INTERSECTION | ED | 250 |
| 0104 10 3 | SEDIMENT BARRIER | LF | 1325 |
| 0104 18 | INLET PROTECTION SYSTEM | EA | 13 |
| 0110 1 1 | CLEARING & GRUBBING (AC = 3.08) | LS | 1 |
| 0110 4 10 | REMOVAL OF EXISTING CONCRETE PAVEMENT | SY | 2992 |
| 0120 1 | REGULAR EXCAVATION | CY | 2411.9 |
| 0120 6 | EMBANKMENT | CY | 616.5 |
| 0160 4 | TYPE B STABILIZATION | SY | 5815 |
| 0285707 | OPTIONAL BASE, BASE GROUP 07 | SY | 4052 |
| 0285709 | OPTIONAL BASE, BASE GROUP 09 | SY | 583 |
| 0286 2 | TURNOUT CONSTRUCTION-ASPHALT | TN | 88.4 |
| 0327 70 4 | MILLING EXIST ASPH PAVT, 3" AVG DEPTH | SY | 4723 |
| 0327 70 6 | MILLING EXIST ASPH PAVT, 1.5" AVG DEPTH | SY | 2882 |
| 0334 1 53 | SUPERPAVE ASPHALTIC CONC (TRAFFIC C, PG 76-22) | TN | 802.7 |
| 0337 7 83 | ASPHALT CONCRETE FRICTION COURSE (TRAFFIC C, FC-12.5, PG 76-22) | TN | 1038.1 |
| 0339 1 | MISCELLANEOUS ASPHALT PAVEMENT | TN | 3.5 |
| 0400 1 2 | CONCRETE CLASS I, ENDWALLS | CY | 1.2 |
| 0425 1341 | INLETS, CURB, TYPE P-4, <10' | EA | 1 |
| 0425 1351 | INLETS, CURB, TYPE P-5, <10' | EA | 2 |
| 0425 1471 | INLETS, CURB, TYPE 7, <10' | EA | 1 |
| 0425 2 41 | MANHOLES, P-7, <10' | EA | 2 |
| 0425 2 43 | MANHOLES, P-7, PARTIAL | EA | 2 |
| 0425 2 71 | MANHOLES, J-7, <10' | EA | 1 |
| 0425 5 | MANHOLE, ADJUST | EA | 2 |
| 0425 5 1 | MANHOLE, ADJUST, UTILITIES | EA | 2 |
| 0425 6 | VALVE BOXES, ADJUST | EA | 26 |
| 0430175115 | PIPE CULVERT,OPTIONAL MATERIAL,ROUND, 15"S/CD | LF | 95 |
| 0430175118 | PIPE CULVERT,OPTIONAL MATERIAL,ROUND, 18"S/CD | LF | 1313 |
| 0430175215 | PIPE CULVERT,OPTIONAL MATERIAL,OTHER-ELIP/ARCH, 15"S/CD | LF | 36 |
| 0430175218 | PIPE CULVERT,OPTIONAL MATERIAL,OTHER-ELIP/ARCH, 18"S/CD | LF | 4 |
| 0430982125 | MITERED END SECTION, OPTIONAL ROUND, 18" CD | EA | 1 |
| 0430984125 | MITERED END SECTION, OPTIONAL ROUND, 18" SD | EA | 1 |
| 0515 1 1 | PEDESTRIAN / BICYCLE RAILING, STEEL, 42" | LF | 20 |
| 0520 1 7 | CONCRETE CURB & GUTTER, TYPE E | LF | 199 |
| 0520 1 10 | CONCRETE CURB & GUTTER, TYPE F | LF | 5304 |
| 0520 2 4 | CONCRETE CURB, TYPE D | LF | 132 |
| 0520 5 11 | TRAFFIC SEPARATOR CONCRETE-TYPE I, 4' WIDE | LF | 220 |
| 0520 6 | SHOULDER GUTTER - CONCRETE | LF | 54 |
| 0522 2 | CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK | SY | 3118 |
| 0522 4 | BUS SHELTER PAD- CONCRETE | SY | 36 |
| 0527 2 | DETECTABLE WARNINGS | SF | 408 |
| 0530 3 4 | RIPRAP, RUBBLE, F&I, DITCH LINING | TN | 2.1 |
| 0550 10220 | FENCING, TYPE B, 5.1-6.0', STANDARD | LF | 459 |
| 0550 60237 | FENCE GATE, TYPE B, SLIDING/CANTILEVER, GREATER THAN 30' OPENING | EA | 1 |
| 0570 1 1 | PERFORMANCE TURF | SY | 60 |
| 0570 1 2 | PERFORMANCE TURF, SOD | SY | 4693 |
| COT425 1 | COT STANDARD INLET TYPE BV-1 | EA | 3 |
| COT425 2 | COT STANDARD INLET TYPE BS-1 | EA | 4 |
| COT425 5 | COT STANDARD INLET TYPE T | EA | 2 |
| COT425 5m | COT STANDARD INLET TYPE T (MODIFIED) | EA | 1 |
| | | | |

## PAY ITEMS

### SUMMARY OF SIGNING AND PAVEMENT MARKINGS

| PAY ITEM NO. | PAY ITEM DESCRIPTION | UNIT | QUANTITY |
|---|---|---|---|
| 0700 1 11 | SINGLE POST SIGN, F&I GROUND MOUNT, UP TO 12 SF | AS | 43 |
| 0700 1 12 | SINGLE POST SIGN, F&I GROUND MOUNT, 12-20 SF | AS | 3 |
| 0700 1 50 | SINGLE POST SIGN, RELOCATE | AS | 15 |
| 0700 1 60 | SINGLE POST SIGN, REMOVE | AS | 24 |
| 0700 2 60 | MULTI-POST SIGN, REMOVE | AS | 1 |
| 0700 3 601 | SIGN PANEL, REMOVE, UP TO 12 SF | EA | 4 |
| 0700 13 15 | RETROREFLECTIVE SIGN STRIP - FURNISH AND INSTALL, 5' | EA | 2 |
| 0705 11 1 | DELINEATOR, FLEXIBLE TUBULAR | EA | 8 |
| 0710 11190 | PAINTED PAVEMENT MARKINGS, STANDARD, WHITE, ISLAND NOSE | SF | 7 |
| 0710 11290 | PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, ISLAND NOSE | SF | 94 |
| 0710 90 | PAINTED PAVEMENT MARKINGS - FINAL SURFACE | LS | 1 |
| 0711 11102 | THERMOPLASTIC, STANDARD, WHITE, SOLID, 8" FOR URBAN ISLAND | GM | 0.031 |
| 0711 11103 | THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR DROP LANE | GM | 0.087 |
| 0711 11123 | THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK | LF | 1185 |
| 0711 11125 | THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE | LF | 409 |
| 0711 11141 | THERMOPLASTIC, STANDARD, WHITE, (2/4) DOTTED GUIDE LINE/(6/10) GAP EXTENSION, 6" | GM | 0.228 |
| 0711 11160 | THERMOPLASTIC, STANDARD, WHITE, MESSAGE OR SYMBOL | EA | 13 |
| 0711 11170 | THERMOPLASTIC, STANDARD, WHITE, ARROWS | EA | 28 |
| 0711 11224 | THERMOPLASTIC, STANDARD, YELLOW, SOLID, 18" FOR DIAGONALS | LF | 141 |
| 0711 11241 | THERMOPLASTIC, STANDARD, YELLOW, (2/4) DOTTED GUIDE LINE, 6" | GM | 0.048 |
| 0711 14125 | THERMOPLASTIC, PREFORMED, WHITE, SOLID, 24" FOR CROSSWALK | LF | 1124 |
| 0711 16101 | THERMOPLASTIC, STD - OTHER SURFACES, WHITE, SOLID, 6" | GM | 0.901 |
| 0711 16131 | THERMOPLASTIC, STD - OTHER SURFACES, WHITE, (10/30) SKIP, 6" | GM | 0.107 |
| 0711 16133 | THERMOPLASTIC, STD - OTHER SURFACES, WHITE, (3/9) SKIP, 12" FOR DROP LANE | GM | 0.122 |
| 0711 16201 | THERMOPLASTIC, STD - OTHER SURFACES, YELLOW, SOLID, 6" | GM | 0.669 |
| 0711 17 1 | THERMOPLASTIC, REMOVE EXISTING THERMOPLASTIC PAVEMENT MARKINGS | SF | 85 |
| | | | |
| | | | |

## PAY ITEMS

### SUMMARY OF LIGHTING

| PAY ITEM NO. | PAY ITEM DESCRIPTION | UNIT | QUANTITY |
|---|---|---|---|
| 0715 1 60 | LIGHTING CONDUCTORS, REMOVE & DISPOSE, CONTRACTOR OWNS | LF | 1110 |
| 0715 4 70 | LIGHT POLE COMPLETE, REMOVE POLE AND FOUNDATION | EA | 1 |
| 0715 21 1 | LIGHTING REPAIRS- ELECTRICAL WORK | LS | 1 |
| | | | |

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REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
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| | | | |

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EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF PAY ITEMS

SHEET NO. 3

## PAY ITEMS

### SUMMARY OF SIGNALIZATION

| PAY ITEM NO. | PAY ITEM DESCRIPTION | UNIT | QUANTITY |
|---|---|---|---|
| 0630 2 11 | CONDUIT, FURNISH & INSTALL, OPEN TRENCH | LF | 336 |
| 0630 2 12 | CONDUIT, FURNISH & INSTALL, DIRECTIONAL BORE | LF | 335 |
| 0630 2 14 | CONDUIT, FURNISH & INSTALL, ABOVEGROUND | LF | 20 |
| 0632 7 1 | SIGNAL CABLE- NEW OR RECONSTRUCTED INTERSECTION, FURNISH & INSTALL | PI | 1 |
| 0632 7 6 | SIGNAL CABLE, REMOVE- INTERSECTION | PI | 1 |
| 0633 8 1 | MULTI-CONDUCTOR COMMUNICATION CABLE, FURNISH & INSTALL | LF | 199 |
| 0634 4153 | SPAN WIRE ASSEMBLY, F&I, TWO POINT, BOX OR DROP BOX | PI | 1 |
| 0634 5 1 | FIBERGLASS INSULATOR, FURNISH & INSTALL | LF | 48 |
| 0635 2 11 | PULL & SPLICE BOX, F&I, 13" x 24" COVER SIZE | EA | 12 |
| 0635 2 12 | PULL & SPLICE BOX, F&I, 24" X 36" COVER SIZE | EA | 2 |
| 0639 1122 | ELECTRICAL POWER SERVICE, F&I, UNDERGROUND, METER PURCHASED BY CONTRACTOR | AS | 1 |
| 0639 2 1 | ELECTRICAL SERVICE WIRE, FURNISH & INSTALL | LF | 35 |
| 0639 3 11 | ELECTRICAL SERVICE DISCONNECT, F&I, POLE MOUNT | EA | 1 |
| 0641 2 11 | PRESTRESSED CONCRETE POLE, F&I, TYPE P-II PEDESTAL | EA | 1 |
| 0641 2 17 | PRESTRESSED CONCRETE POLE, F&I, TYPE P-VII | EA | 4 |
| 0641 2 70 | PRESTRESSED CONCRETE POLE, SHALLOW POLE REMOVAL- POLE 30' AND GREATER | EA | 2 |
| 0646 1 11 | ALUMINUM SIGNALS POLE, PEDESTAL | EA | 8 |
| 0646 1 60 | ALUMINUM SIGNALS POLE, REMOVE | EA | 8 |
| 0650 1 14 | VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 3 SECTION, 1 WAY | AS | 10 |
| 0650 1 16 | VEHICULAR TRAFFIC SIGNAL, FURNISH & INSTALL ALUMINUM, 4 SECTION, 1 WAY | AS | 2 |
| 0653 1 11 | PEDESTRIAN SIGNAL, FURNISH & INSTALL LED COUNTDOWN, 1 WAY | AS | 8 |
| 0660 3 11 | VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL CABINET EQUIPMENT | EA | 4 |
| 0660 3 12 | VEHICLE DETECTION SYSTEM- MICROWAVE, FURNISH & INSTALL, ABOVE GROUND EQUIPMENT | EA | 4 |
| 0665 1 11 | PEDESTRIAN DETECTOR, FURNISH & INSTALL, STANDARD | EA | 8 |
| 0670 5112 | TRAFFIC CONTROLLER ASSEMBLY, F&I, NEMA, 2 PREEMPTION | AS | 1 |
| 0670 5600 | TRAFFIC CONTROLLER ASSEMBLY, REMOVE CONTROLLER WITH CABINET | AS | 1 |
| 0685 1 13 | UNINTERRUPTIBLE POWER SUPPLY, FURNISH AND INSTALL, LINE INTERACTIVE WITH CABINET | EA | 1 |
| 0700 5 50 | INTERNALLY ILLUMINATED SIGN, RELOCATE | EA | 4 |
| 0700 11391 | ELECTRONIC DISPLAY SIGN, FURNISH & INSTALL OVERHEAD MOUNT- AC POWERED, BLANK OUT SIGN, UP TO 12 SF | AS | 1 |
| | | | |

## PAY ITEMS

### SUMMARY OF UTILITIES

| PAY ITEM NO. | PAY ITEM DESCRIPTION | UNIT | QUANTITY |
|---|---|---|---|
| 704.06 | FURNISH & INSTALL 4"DIA. C900 PVC PIPE, CL-150, GREEN, 0'-6' CUT | LF | 80 |
| 2102.00 | FURNISH & INSTALL 6" DUCTILE IRON PIPE | LF | 46 |
| 2104.00 | FURNISH & INSTALL 8" DUCTILE IRON PIPE | LF | 685 |
| 2106.00 | FURNISH & INSTALL 12" DUCTILE IRON PIPE | LF | 52 |
| 2400.40 | FURNISH & INSTALL 4" DIA. C900 PVC OR DIP, BENDS, SLEEVES, REDUCERS, CAPS OR PLUGS | EA | 18 |
| 2500.00 | REMOVE 1" - 3" DIA. ABANDONED PIPE | LF | 844 |
| 2501.00 | REMOVE 4" - 12" DIA. ABANDONED PIPE | LF | 1804 |
| 2600.00 | CUT & PLUG 3" AND SMALLER | EA | 1 |
| 2601.00 | CUT & PLUG 4", 6" AND 8" PIPE | EA | 4 |
| 3042.00 | FURNISH & INSTALL 8" BELL OR MECHANICAL JOINT RESTRAINTS ON EXISTING PIPE | EA | 4 |
| 3043.00 | FURNISH & INSTALL 12" BELL OR MECHANICAL JOINT RESTRAINTS ON EXISTING PIPE | EA | 1 |
| 3072.00 | FURNISH 8" PUSH-ON JOINT RESTRAINT GASKETS | EA | 30 |
| 3073.00 | FURNISH 12" PUSH-ON JOINT RESTRAINT GASKETS | EA | 4 |
| 3304.10 | FURNISH & INSTALL 4" DIA. BELL RESTRAINT | EA | 2 |
| 3304.20 | FURNISH & INSTALL4" DIA. THRUST RESTRAINT | EA | 16 |
| 4005.00 | FURNISH & INSTALL 6" DUCTILE IRON MJ BEND, SLEEVE | EA | 2 |
| 4009.00 | FURNISH & INSTALL 8" DUCTILE IRON MJ BEND, SLEEVE | EA | 5 |
| 4010.00 | FURNISH & INSTALL 8"X6" DUCTILE IRON MJ TEE | EA | 1 |
| 4013.00 | FURNISH & INSTALL 12" DUCTILE IRON MJ BEND, SLEEVE OR REDUCER | EA | 2 |
| 5000.00 | FURNISH & INSTALL FULL STD. FIRE HYDRANT ASSEMBLY ON NEW OR EXISTING MAINS | EA | 1 |
| 5200.00 | REMOVE & SALVAGE HYDRANT | EA | 1 |
| 6001.00 | FURNISH & INSTALL 6" GATE OR TAPPING VALVE AND BOX ON DIP | EA | 2 |
| 6002.00 | FURNISH & INSTALL 8" GATE OR TAPPING VALVE AND BOX ON DIP | EA | 6 |
| 6003.00 | FURNISH & INSTALL 12" GATE OR TAPPING VALVE AND BOX ON DIP | EA | 1 |
| 6107.00 | FURNISH & INSTALL 8" LINE STOP ON EXISTING WATER MAIN | EA | 2 |
| 6108.00 | FURNISH & INSTALL 12" LINE STOP ON EXISTING WATER MAIN | EA | 1 |
| 7500.00 | FURNISH & INSTALL 4" AIR RELEASE VALVE | EA | 2 |
| 8107.00 | FURNISH, TAP & INSTALL 1" METER SERVICE (+15' - 80') | EA | 2 |
| 8128.00 | FURNISH, TAP & INSTALL 2" METER SERVICE (+15' - 80') | EA | 3 |
| | | | |

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REVISIONS

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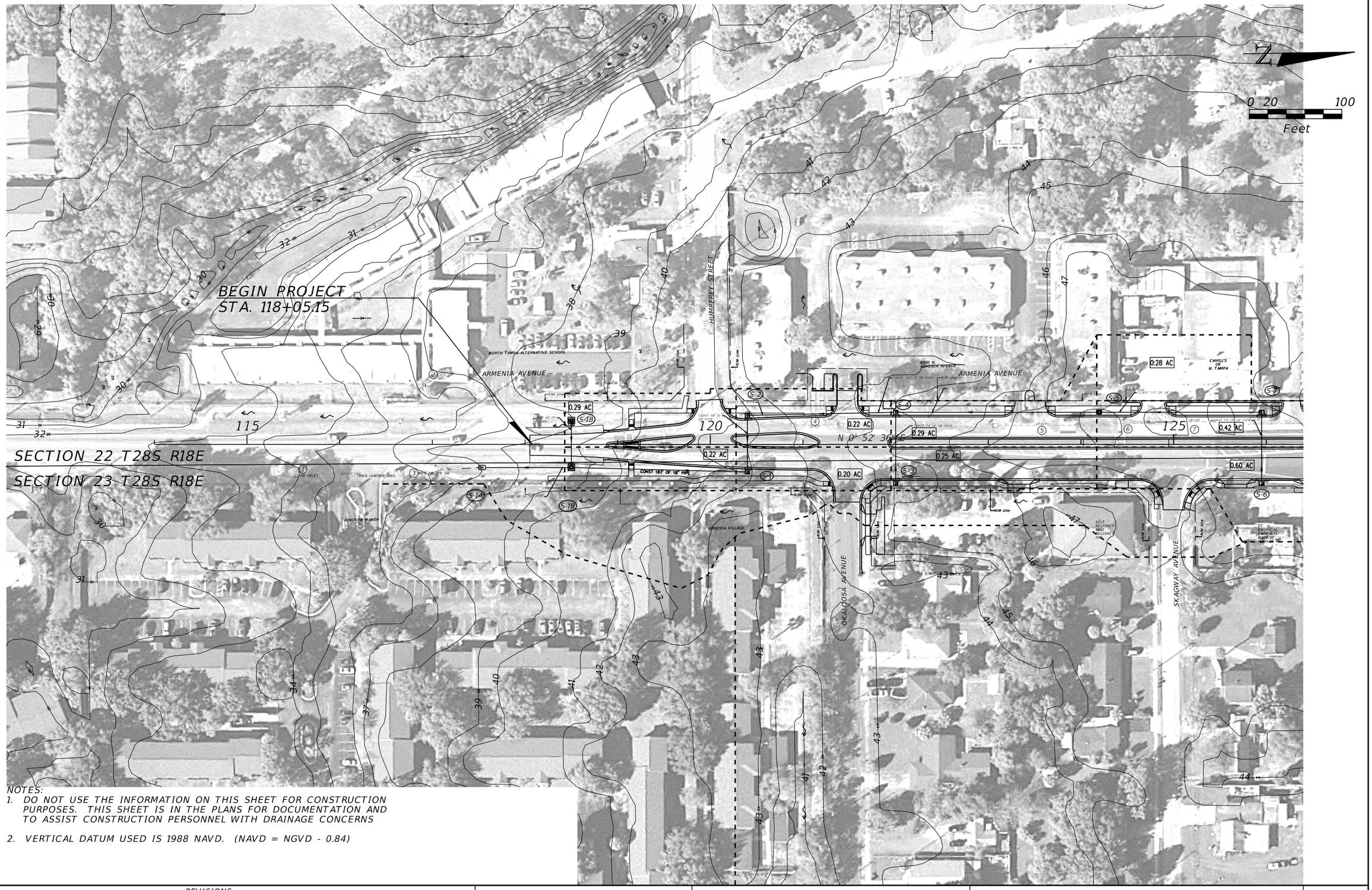
CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF PAY ITEMS

SHEET NO.
4




NOTES:

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1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

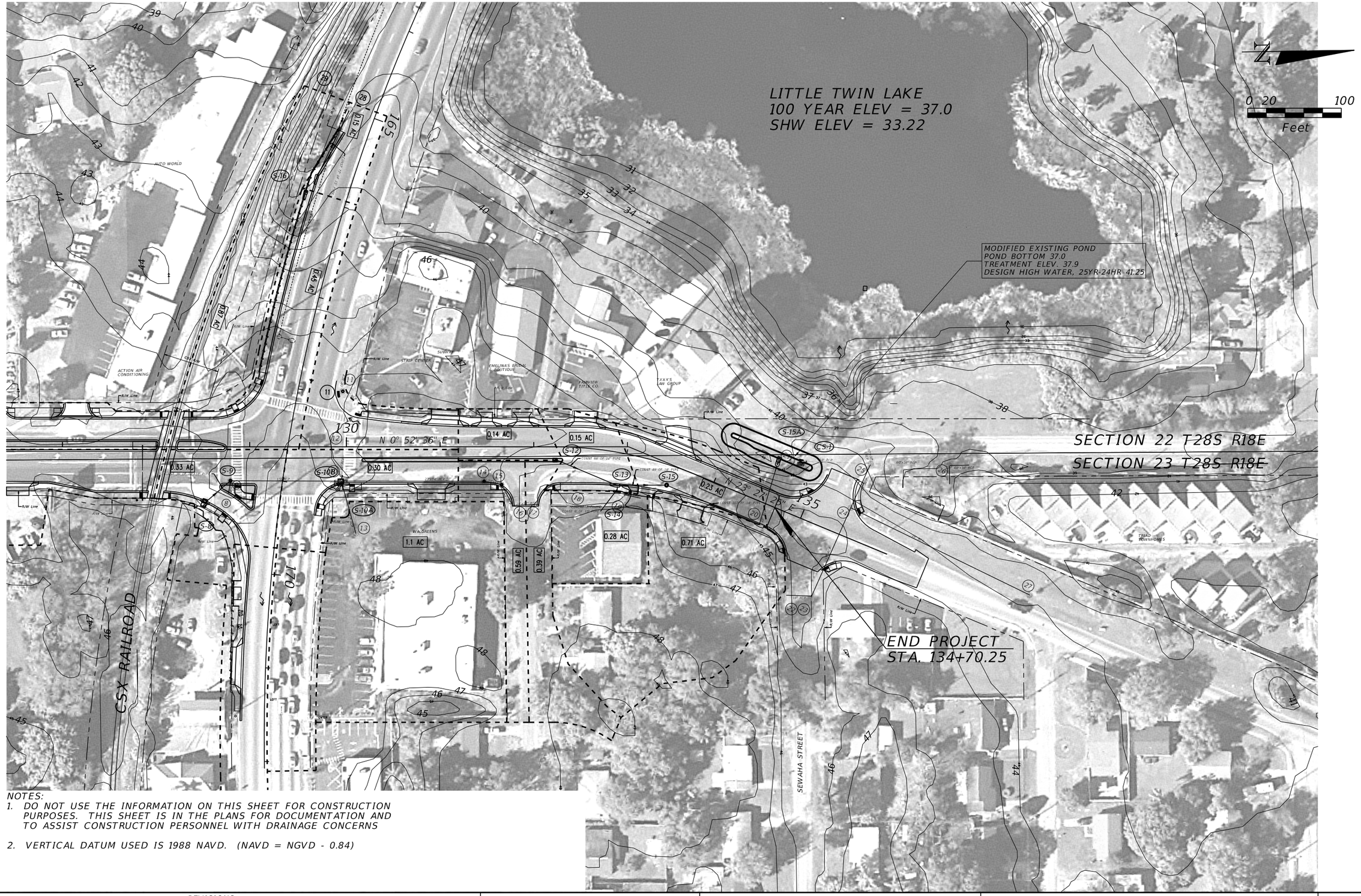
CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRAINAGE MAP

SHEET NO. 5




NOTES:

1. DO NOT USE THE INFORMATION ON THIS SHEET FOR CONSTRUCTION PURPOSES. THIS SHEET IS IN THE PLANS FOR DOCUMENTATION AND TO ASSIST CONSTRUCTION PERSONNEL WITH DRAINAGE CONCERNS
2. VERTICAL DATUM USED IS 1988 NAVD. (NAVD = NGVD - 0.84)

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
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CITY OF TAMPA
TRANSPORTATION DIVISION

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ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRAINAGE MAP

SHEET NO. 6

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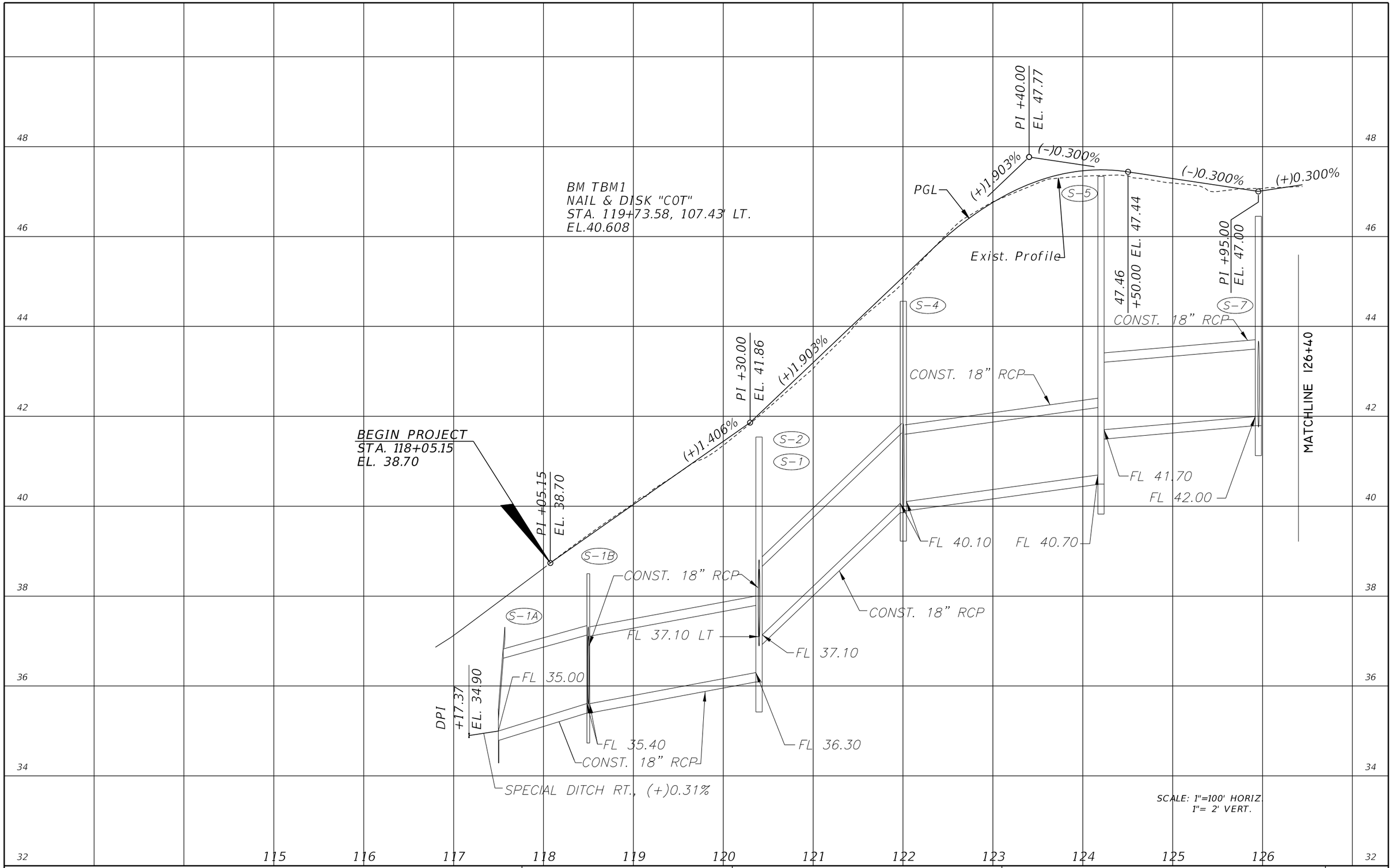
mcannon 9/21/2020 8:13:46 AM P:\C0T1301\CADD\drainage\DRMPRD04.dgn

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ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRAINAGE MAP

SHEET NO.
7

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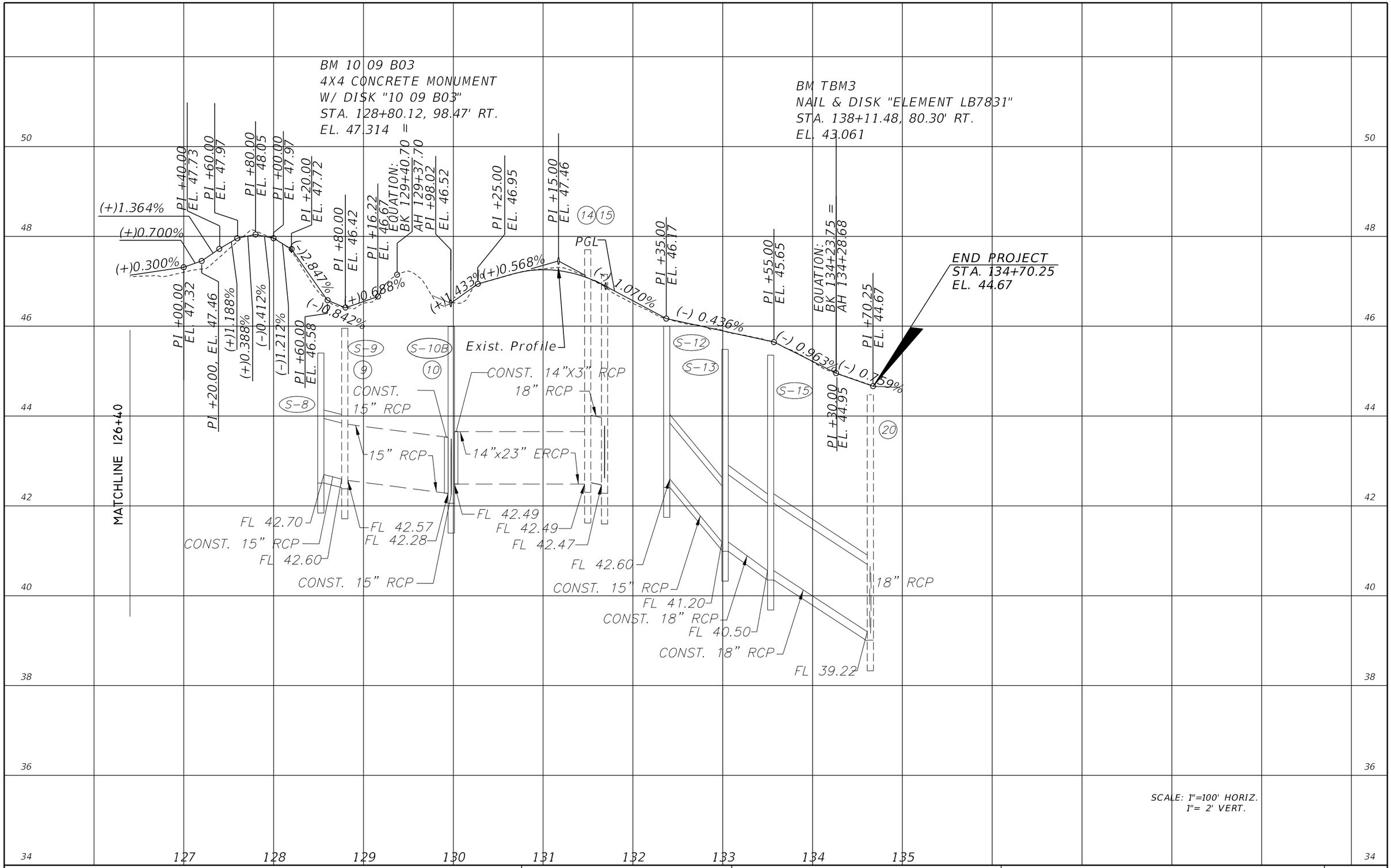


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|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

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ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRAINAGE MAP

SHEET NO.
8

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DRY RETENTION POND NOTES:

1. THE POND IS PROPOSED TO FUNCTION AS A DRY RETENTION POND, WHERE RECOVERY IS DEPENDENT UPON INFILTRATION INTO THE SOIL.

2. AVOIDED DRY RETENTION AREAS FOR USE AS TEMPORARY SEDIMENT BASINS. IF THE PROPOSED DRY RETENTION AREA IS NEEDED FOR A SEDIMENT BASIN AREA DURING CONSTRUCTION, THE FOLLOWING SHALL APPLY:

   A. THE POND SHALL BE PARTIALLY CONSTRUCTED. EXCAVATED PONDS SHALL BE EXCAVATED TO A DEPTH OF SIX INCHES ABOVE THE PROPOSED POND BOTTOM ELEVATION. EMBANKMENT PONDS SHALL BE OVERFILLED TO SIX INCHES ABOVE THE PROPOSED POND BOTTOM ELEVATION.
   B. AFTER CONSTRUCTION IS COMPLETE, THE FINAL SIX INCHES OF SOIL AND ADDITIONAL ACCUMULATED SEDIMENTS AND FINES ARE TO BE REMOVED AND DISPOSED OF OFFSITE.
   C. IF POSSIBLE, THE SEDIMENT BASIN AREA SHALL BE LIMITED TO ONLY THE AREA NEEDED DURING CONSTRUCTION. CONSTRUCT A TEMPORARY BERM TO SEPARATE THE SEDIMENT BASIN AREA FROM THE REMAINDER OF THE DRY RETENTION AREA.

3. CONSIDER THE UTILIZATION OF A BLADDER TO FILTER FINES FOR DISCHARGE OF WATER INTO ANY DRY RETENTION AREA (EXISTING OR PROPOSED) DURING CONSTRUCTION.

4. PROPOSED DRY RETENTION AREAS TO BE CONSTRUCTED BY MEANS OF EXCAVATION SHALL NOT BE OVER-EXCAVATED AND BACK FILLED WITH IMPORTED SOILS UNLESS NOTED ON THE PLANS OR APPROVED BY THE ENGINEER.

5. PROPOSED DRY RETENTION AREAS REQUIRING EMBANKMENT TO ACHIEVE THEIR PROPOSED BOTTOM CONFIGURATION SHALL BE CONSTRUCTED OF A-3 SOILS. EMBANKMENT SOILS SHALL NOT BE COMPACTED.

6. CARE SHALL BE TAKEN DURING CONSTRUCTION TO MINIMIZE THE USE OF HEAVY EQUIPMENT ON THE BOTTOM OF THE PROPOSED DRY RETENTION AREAS TO AVOID COMPACTION OF THE SOILS.

7. ONCE FINAL GRADING OF THE PROPOSED DRY RETENTION AREA IS COMPLETE, SCARIFY THE BOTTOM TO LOOSEN THE SURFACE SOILS.

8. TO VERIFY THAT THE INFILTRATION CAPACITY OF THE SOILS HAVE NOT BEEN COMPROMISED BY CONSTRUCTION ACTIVITIES A DOUBLE RING INFILTRATION TEST SHALL BE PERFORMED AT THE BOTTOM OF EACH DRY RETENTION AREA ONCE CONSTRUCTION IS COMPLETE. IT IS TO BE CONDUCTED BY AN APPROVED GEOTECHNICAL FIRM AT A LOCATION APPROVED BY THE ENGINEER. THE INFILTRATION CAPACITY SHALL BE NO LESS THAN 80% OF THE FOLLOWING DESIGN VALUE:

   11 INCHES PER DAY AVERAGE INFILTRATION

   SHOULD THE TEST RESULTS INDICATE THAT THE INFILTRATION RATES DO NOT MEET THE SPECIFIED CRITERIA, THE EOR SHALL BE CONSULTED TO DETERMINE WHETHER THE INFILTRATION RATES WILL BE SUFFICIENT OR IF REMEDIATION WILL BE NECESSARY. IF REMEDIATION IS REQUIRED, PREPARE AN ACTION PLAN FOR APPROVAL BY THE EOR, PRIOR TO COMPLETING THE REMEDIATION.

EXISTING DRAINAGE STRUCTURES

1 CURB INLET, 22"X13" CMP
STA. 115+60.48, 34.26' RT.
S. INV. EL. 31.50
MES STA. 116+74.99, 34.17' RT.
N. INV. EL. 33.07

2 STA. 116+92.38, 61.87' LT.
4" PVC
W. INV. EL. 37.08
E. INV. EL. 38.19

3 MES, 18" HDPE, MES
STA. 116+96.73, 34.65' RT.
S. INV. EL. 33.83
STA. 117+17.37, 26.97' RT.
N. INV. EL. 34.90

4 MES, 18" RCP, MES
STA. 120+87.28, 20.80' LT.
S. INV. EL. 40.97
STA. 121+43.82, 20.68' LT.
N. INV. EL. 41.80

5 MES, 18" RCP, MES
STA. 123+05.71, 20.42' LT.
S. INV. EL. 44.72
STA. 124+02.41, 20.72' LT.
N. INV. EL. 45.33

6 MES, 22"X13" CMP
STA. 124+31.51, 22.75' LT.
S. INV. EL. 44.15
STA. 124+76.16, 22.65' LT.
N. INV. EL. 44.95

7 DBI, 18" CMP
STA. 125+43.91, 24.74' LT.
GRATE TOP EL. 46.35
N. INV. EL. 44.70
STA. 125+00.63, 24.18' LT.
S. INV. EL. 44.64

8 CURB INLET, 18"X12" ERCP
STA. 128+77.12, 49.96' RT.
W. INV. EL. 43.49, TO 9

9 MH, 15" RCP
STA. 128+79.31, 36.26' RT.
MH RIM EL. 46.04
E. INV. EL. 43.14, FROM 8
N. INV. EL. 42.57, TO 10

10 MH, 15" RCP
STA. 129+94.65, 36.69' RT.
MH RIM EL. 46.55
S. INV. EL. 42.28, FROM 9
E. INV. EL. 42.42, FROM 13
N. INV. EL. 42.49, FROM 14
W. INV. EL. 42.25, TO 12

11 MH, 18 RCP
STA. 129+96.22, 59.10' LT.
MH RIM EL. 46.07
W. INV. EL. 41.44, 18" RCP, FROM UNKNOWN
E. INV. EL. 41.37, TO 12

12 UNKNOWN
LOCATED AROUND STA 130+00
BURIED UNDER PAVEMENT

13 MH, 12" RCP
STA. 130+10.12, 92.37' RT.
MH RIM EL. 50.26
W. INV. EL. 46.07, TO 10

14 MH, 23" X 14" ERCP
STA. 131+47.02, 36.88' RT.
MH RIM EL. 47.79
N. INV. EL. 42.52, FROM 15
S. INV. EL. 42.49, TO 10

15 MH, 23" X 14" ERCP
STA. 131+65.81, 40.41' RT.
MH RIM EL. 47.16
E. INV. EL. 42.62, FROM 16
S. INV. EL. 42.47, TO 14

16 CURB INLET, 23" X 14" ERCP
STA. 131+77.54, 62.63' RT.
W. INV. EL. 42.55, TO 15
N. INV. EL. 42.36, FROM 17

17 CURB INLET, 19" X12" ERCP
STA. 132+05.02, 61.61' RT.
S. INV. EL. 42.33, TO 16

18 CONCRETE FLUME
STA. 132+41.42, 51.44' RT.
W. INV. EL. 43.93

19 MES, 12" CMP
STA. 132+91.05, 50.07' RT.
S. INV. EL. 45.11
N. INV. ELV. AND LOCATION UNKNOWN

20 CURB INELT, 18" RCP, MES
STA. 134+61.88, 23.53' RT.
W. INV. EL. 39.21
MES STA. 134+55.03, 44.75' LT.
MES INV. EL. 39.06

21 DBI, 18" RCP
STA. 134+69.53, 52.84' LT.
GRATE EL. 41.08
NOTCH EL. 40.38 (S. FACE)
N. INV. EL. 36.20, TO 25

22 CURB INLET, 18" RCP
STA. 135+17.36, 81.74' RT.
N. INV. EL. 38.87, TO 23

23 CURB INLET, 18" RCP
STA. 135+42.85, 72.20' RT.
S. INV. EL. 38.64, FROM 22
NW INV. EL. 37.66, TO 25

24 MH, 24" RCP
STA. 135+45.21, 30.85' LT.
MH RIM EL. 43.69
E. EL. 37.37, FROM 23
N. EL. 38.18, FROM 27
W. EL. 37.24, TO 24

25 MH, 60" X 38" ERCP, EW
STA. 135+46.85, 82.49' LT.
MH RIM EL. 41.08
E. INV. EL. 36.91, FROM 24
N. INV. EL. 34.00, FROM 26
S. INV. EL. 35.91, FROM 21
W. INV. EL. 33.97, TO EW
STA. 135+09.39, 129.34' LT.
EW INV. EL. 33.11

26 MH, 60" X 38" ERCP
STA. 136+24.79, 112.91' LT.
MH RIM EL. 39.65
E. INV. EL. 37.05, 12" DIP, FROM UNKNOWN
N. INV. EL. 34.31, 60" X 38" ERCP, FROM UNKNOWN
S. INV. EL. 34.36, TO 25

27 MH, 18" RCP
STA. 137+62.68, 18.28' LT.
MH RIM EL. 42.47
S. INV. EL. 38.60, TO 24

28 CURB INLET, 15" RCP
STA. 165+00.00, RT.
MH RIM EL. 39.98
N. INV. EL. 35.87
S. INV. EL. 35.88

29 ENDWALL
STA. 165+00.00, RT.
INV. EL. 35.91

30 GRATE INLET, 15" RCP
STA. 122+23.22, 94.52' RT.
GRATE EL. 45.11
E. INV EL 43.23
W. INV EL.42.19

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EOR | DEREK M. GIL, PE 54798

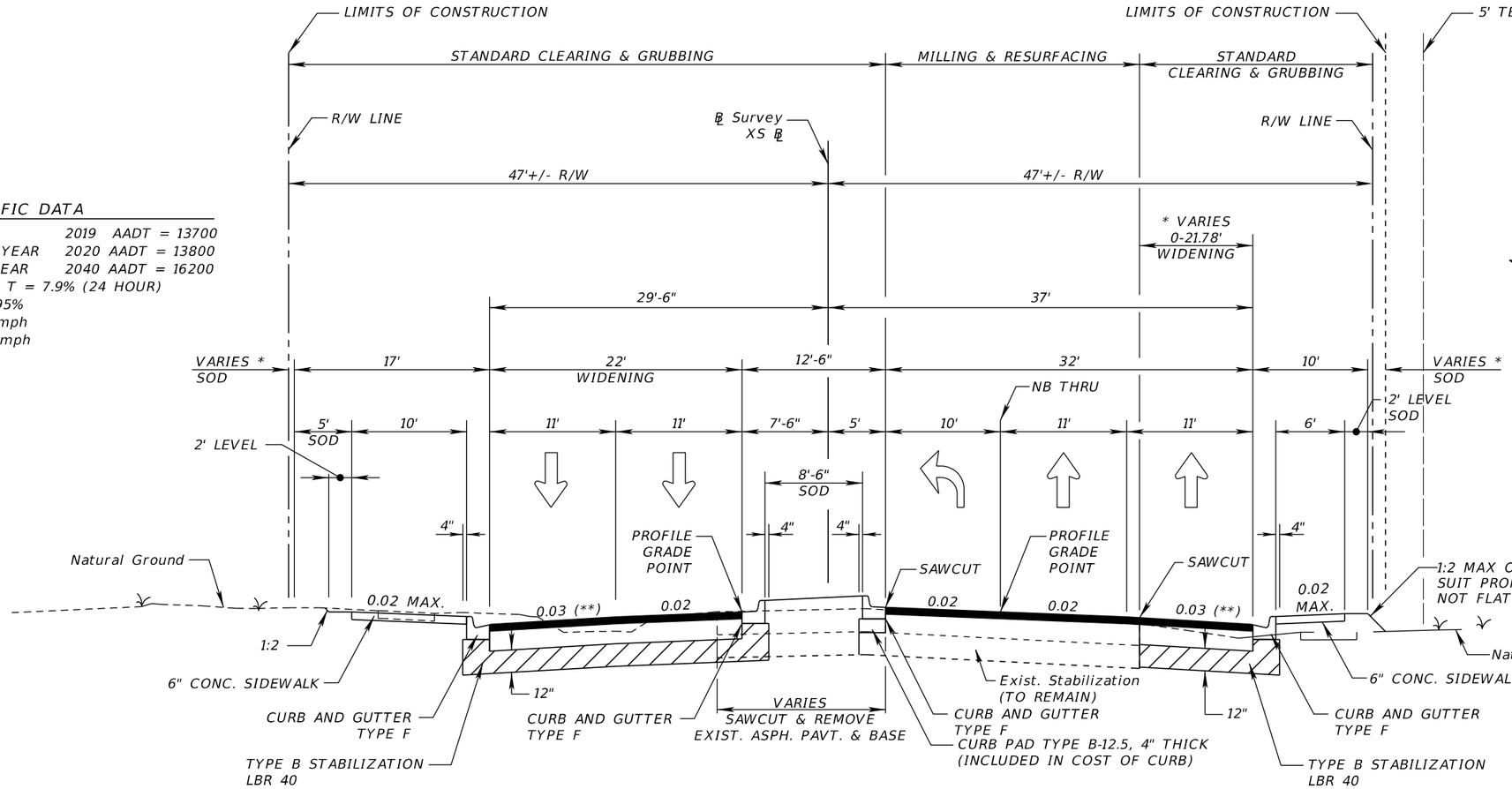
CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

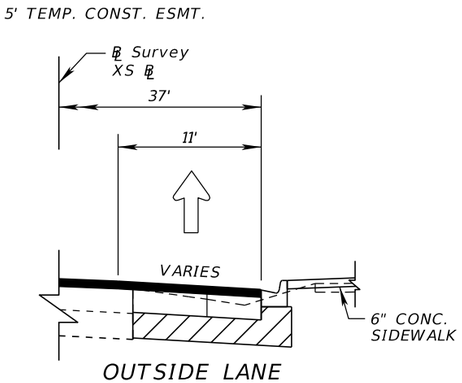
# DRAINAGE MAP

SHEET NO.
9




## TRAFFIC DATA

CURRENT YEAR 2019 AADT = 13700
ESTIMATED OPENING YEAR 2020 AADT = 13800
ESTIMATED DESIGN YEAR 2040 AADT = 16200
K = 9.0% D = 60% T = 7.9% (24 HOUR)
DESIGN HOUR T = 3.95%
DESIGN SPEED = 40 mph
POSTED SPEED = 35 mph




## OUTSIDE LANE CROSS SLOPE TRANSITION DETAIL

| STA. | SIDE | SLOPE (**) |
|---|---|---|
| 125+00.00 | LT. | 0.030 |
| 125+12.00 | LT. | 0.035 |
| 126+08.00 | LT. | 0.035 |
| 126+20.00 | LT. | 0.030 |
| 125+78.00 | RT. | 0.030 |
| 125+95.00 | RT. | 0.032 |
| 126+18.00 | RT. | 0.032 |
| 126+30.00 | RT. | 0.030 |

# TYPICAL SECTION
# ARMENIA AVENUE
## STA. 118+05.15 TO STA. 129+76.06

### ASPHALT DRIVEWAY TURNOUTS
OPTIONAL BASE GROUP 2, (B-12.5 ONLY)
AND FRICTION COURSE FC-12.5 (1½") (PG 76-22)

### SIDE STREET CONNECTION MILLING & RESURFACING
MILL 1 ½" (AVG. DEPTH)
AND FRICTION COURSE (TRAFFIC C) (1 ½") (PG 76-22)

### STA. 118+05.15 TO STA. 129+16.22 MILLING & RESURFACING
MILL (VARIABLE DEPTH)
TYPE SP STRUCTURAL COURSE (TRAFFIC C) (1 ½")
AND FRICTION COURSE FC-12.5 (1 ½") (PG 76-22)

### STA. 118+05.15 TO STA. 129+16.22 WIDENING
TYPE B STABILIZATION (LBR 40) (12")
OPTIONAL BASE GROUP 7
TYPE SP STRUCTURAL COURSE (TRAFFIC C) (1 ½")
AND FRICTION COURSE FC-12.5 (1 ½") (PG 76-22)

### STA. 129+16.22 TO STA. 129+76.06
SEE SR 580/BUSCH BLVD.
MILLING & RESURFACING DESCRIPTION

### PAVEMENT REPLACEMENT AT RAILROAD
BALLAST 10" * (INSTALLED BY CSX)
OPTIONAL BASE GROUP 7 (B-12.5 ONLY) WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC C) (1 ½") (PG 76-22)
AND FRICTION COURSE FC-12.5 (1 ½") (PG 76-22)

### TYPICAL SECTION AND PAVING NOTES

1. SEE THE PLAN SHEETS FOR THE LIMITS OF SIDE STREET MILLING AND RESURFACING.
2. THE TYPICAL SECTION MAY NOT BE REPRESENTATIVE OF THE ACTUAL CONDITIONS AT ALL LOCATIONS ON THE PROJECT. ADJUST VARIABLE CONDITIONS AS DIRECTED BY THE ENGINEER.

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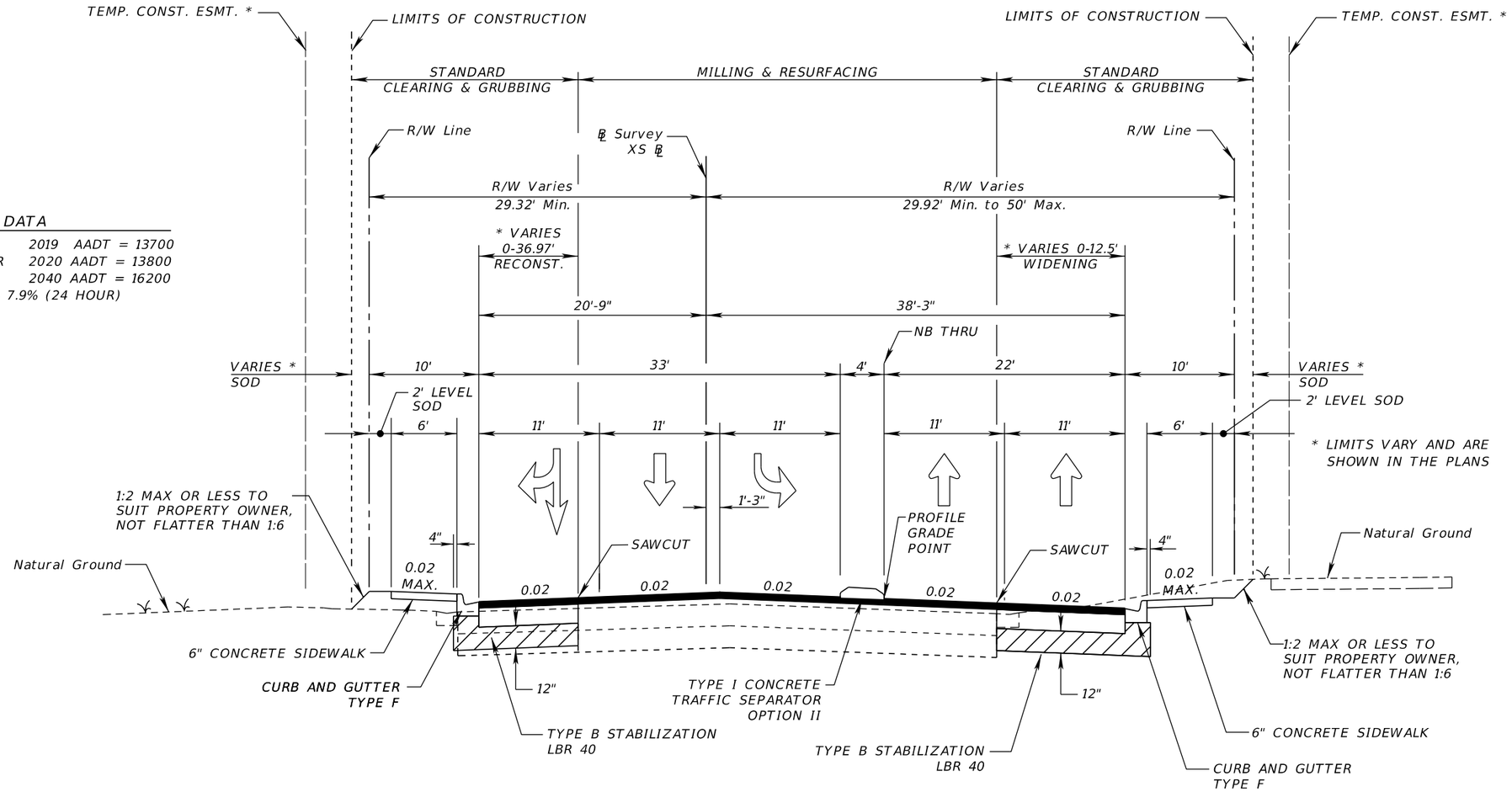
TRANSPORTATION DIVISION
CONTRACT NO: 12-D-00057
ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

TYPICAL SECTION

SHEET NO. 10




## TRAFFIC DATA

CURRENT YEAR 2019 AADT = 13700
ESTIMATED OPENING YEAR 2020 AADT = 13800
ESTIMATED DESIGN YEAR 2040 AADT = 16200
K = 9.0% D = 60% T = 7.9% (24 HOUR)
DESIGN HOUR T = 3.95%
DESIGN SPEED = 40 mph
POSTED SPEED = 35 mph

# TYPICAL SECTION
# ARMENIA AVENUE

## STA. 134+70.25 TO STA. 136+42.79

**MILLING & RESURFACING**
MILL (VARIABLE DEPTH)
AND FRICTION COURSE FC-12.5 (1 ½") (PG 76-22)

## STA. 129+76.06 TO STA. 134+70.25

**MILLING & RESURFACING**
MILL (VARIABLE DEPTH)
TYPE SP STRUCTURAL COURSE (TRAFFIC C) (1 ½")
AND FRICTION COURSE FC-12.5 (1 ½") (PG 76-22)

**WIDENING & RECONSTRUCTION**
TYPE B STABILIZATION (LBR 40) (12")
OPTIONAL BASE GROUP 7
TYPE SP STRUCTURAL COURSE (TRAFFIC C) (1 ½")
AND FRICTION COURSE FC-12.5 (1 ½") (PG 76-22)

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ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

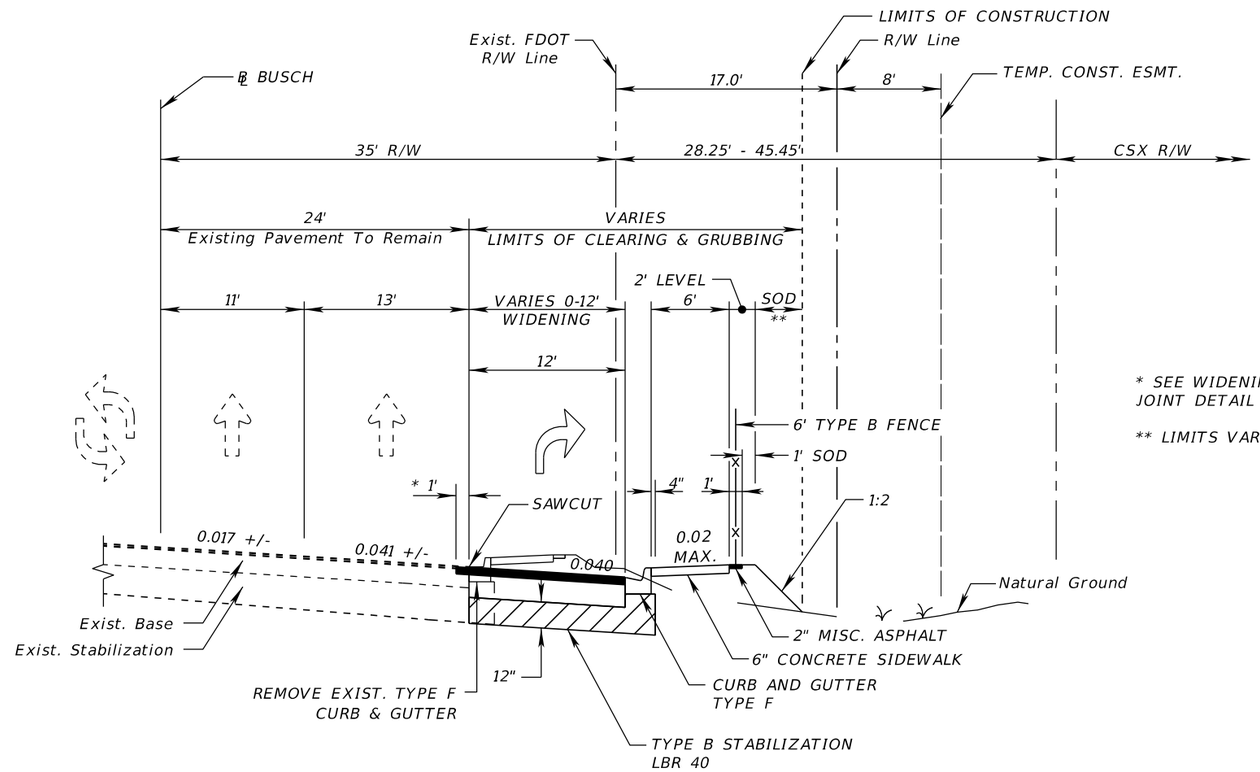
TYPICAL SECTION

SHEET NO. 11

## TRAFFIC DATA

| | |
|---|---|
| CURRENT YEAR | 2019 AADT = 50300 |
| ESTIMATED OPENING YEAR | 2020 AADT = 20800 |
| ESTIMATED DESIGN YEAR | 2040 AADT = 59700 |

K = 9.0% D = 59.6% T = 2.9% (24 HOUR)
DESIGN HOUR T = 1.45%
DESIGN SPEED = 45 mph
POSTED SPEED = 45 mph




* SEE WIDENING/RECONSTRUCTION PAVEMENT JOINT DETAIL BELOW.

** LIMITS VARY AND ARE SHOWN IN THE PLANS

## WIDENING DETAIL

## SR 580/BUSCH BLVD.

## STA. 165+25.00 TO STA. 171+56.65

### WIDENING

TYPE B STABILIZATION (LBR 40) (12")
OPTIONAL BASE GROUP 9 (TYPE B 12.5 ONLY)
TYPE SP STRUCTURAL COURSE (TRAFFIC C) (1 ½") (PG 76-22)
AND FRICTION COURSE FC-12.5 (1 ½") (PG 76-22)

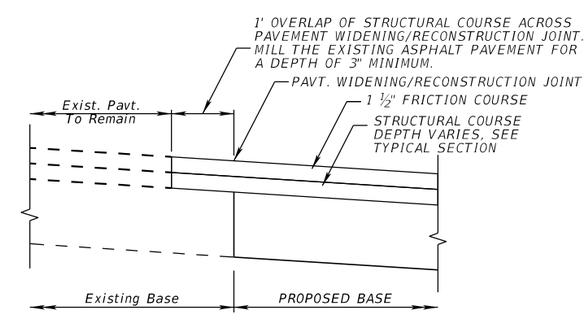
## SR 580/BUSCH BLVD.

## STA. 165+25.00 TO STA. 167+83.26

## STA. 168+32.32 TO STA. 171+56.65

### MILLING & RESURFACING

MILL 1 ½" (AVG. DEPTH)
FRICTION COURSE FC-12.5 (1 ½") (PG 76-22)




### WIDENING/RECONSTRUCTION PAVEMENT JOINT DETAIL

NTS

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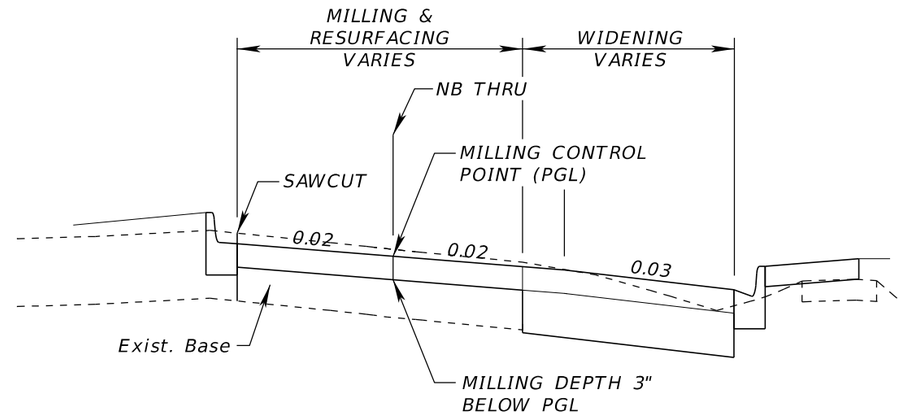
ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# TYPICAL SECTION

SHEET NO. 12

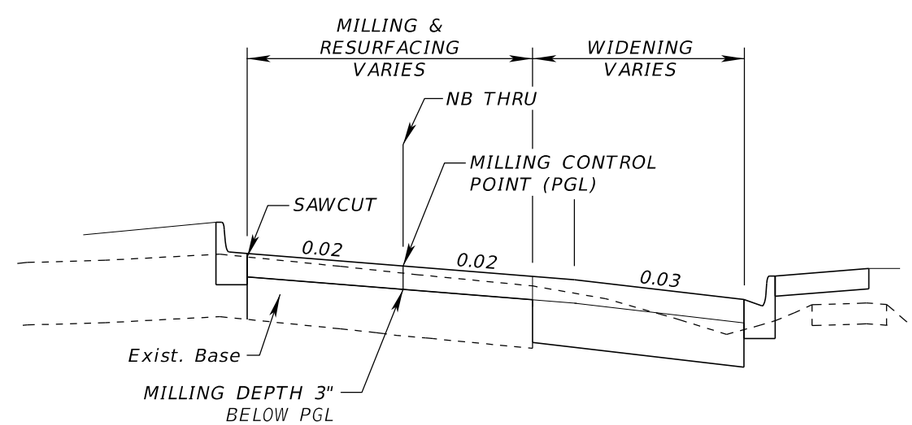



DETAIL OF MILLING FOR CROSS SLOPE CORRECTION 1

NTS

NOTES

1. SEE PROFILE AND CROSS SECTIONS FOR PGL ELEVATION.
2. ALL CROSS SLOPES SHOWN ARE PROPOSED TYPICAL CROSS SLOPES. SUPERELEVATION LOCATION(S) ARE SHOWN IN THE PROFILE.




DETAIL OF MILLING FOR CROSS SLOPE CORRECTION 2

NTS

MILLING DETAILS - ARMENIA AVENUE

| REVISIONS | | | |
|---|---|---|---|
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CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

TYPICAL SECTION DETAILS

SHEET NO. 13



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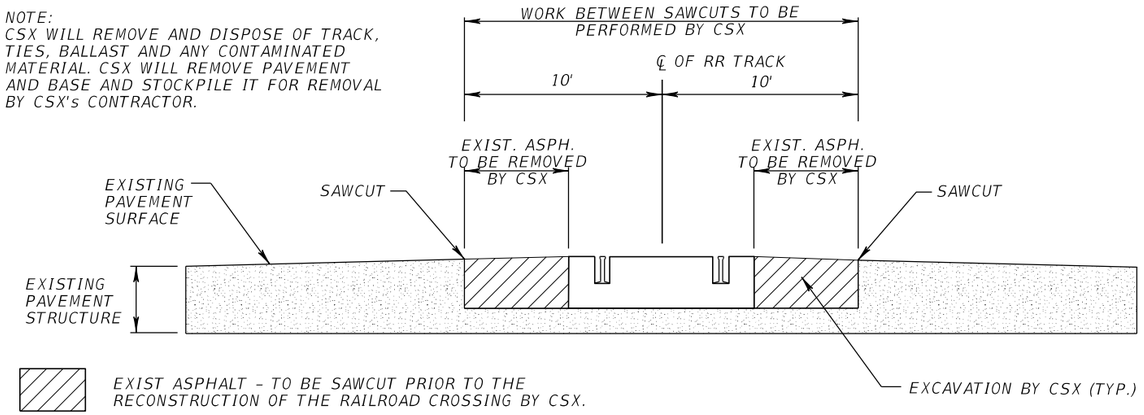
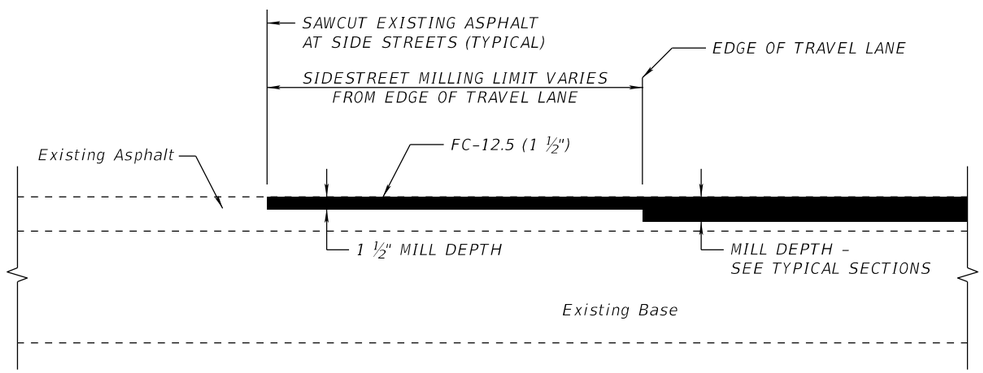
NOTE:
CSX WILL REMOVE AND DISPOSE OF TRACK, TIES, BALLAST AND ANY CONTAMINATED MATERIAL. CSX WILL REMOVE PAVEMENT AND BASE AND STOCKPILE IT FOR REMOVAL BY CSX's CONTRACTOR.



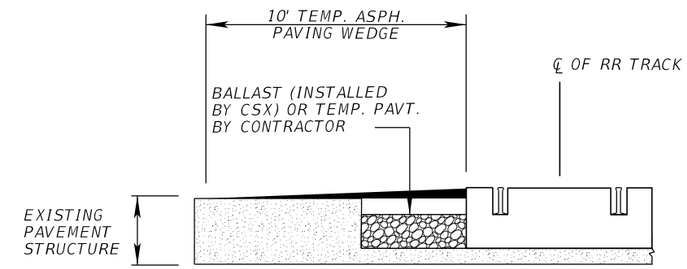

## PAVEMENT REMOVAL AT RAILROAD CROSSING DETAIL

NTS




## MATCH EXISTING SIDE STREET PAVEMENT DETAIL

NTS

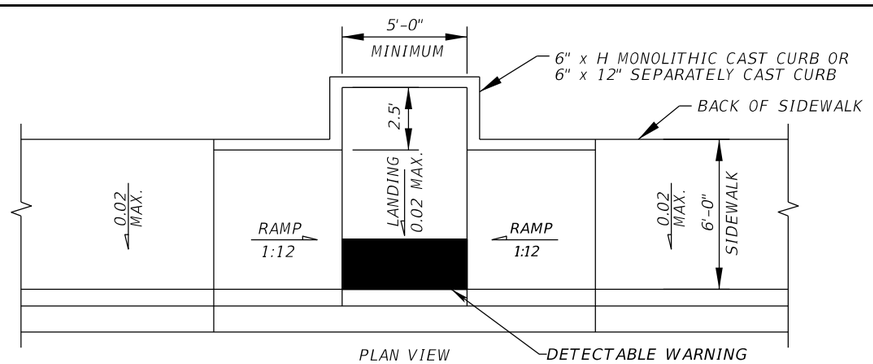



## TEMPORARY PAVING WEDGE DETAIL

NTS

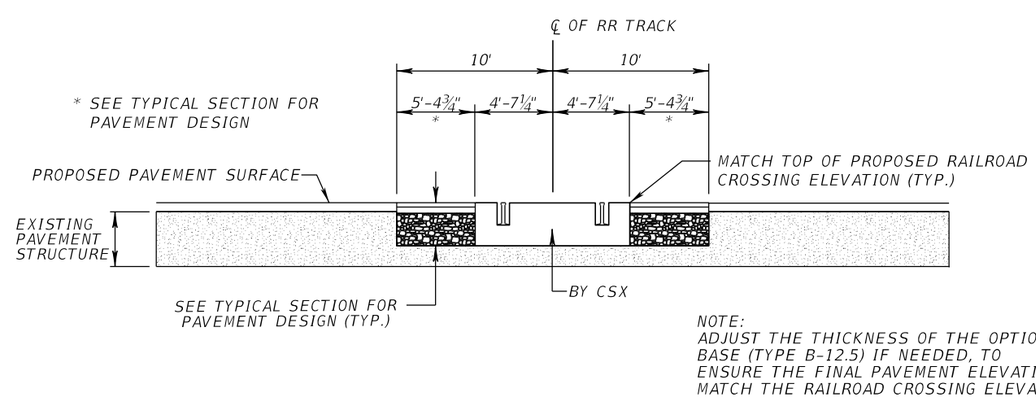
NOTES:

1. A TEMPORARY ASPHALT PAVING WEDGE SHALL BE PLACED TO PROTECT THE CROSSING UNTIL THE FINAL PAVEMENT IS CONSTRUCTED.
2. TEMPORARY PAVEMENT IS TO BE PAID FOR UNDER PAY ITEM 102-1, MAINTENANCE OF TRAFFIC, LS.




## MODIFIED CR-C SIDEWALK RAMP DETAIL USED AT THE SR580/BUSCH BLVD. INTERSECTION

NTS




NOTE:
ADJUST THE THICKNESS OF THE OPTIONAL BASE (TYPE B-12.5) IF NEEDED, TO ENSURE THE FINAL PAVEMENT ELEVATIONS MATCH THE RAILROAD CROSSING ELEVATIONS.

## PAVEMENT REPLACEMENT RAILROAD CROSSING DETAIL

NTS

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |


ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798


CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT AT SR 580/BUSCH BLVD.

# TYPICAL SECTION DETAILS

SHEET NO. 14

| QUANTITY | STR. NO. | STATION | SIDE | DESCRIPTION | BARRELS | REINFORCED CONCRETE PIPE CULVERT - CLASS III | | | | | CURB INLETS | | | | | MANHOLES | | | | DITCH BOTTOM INLETS | | CROSS DRAIN MITERED END SECTION | SIDE DRAIN MITERED END SECTION | CLASS I CONCRETE | RIPRAP DITCH LINING | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | COT | | FDOT | | | FDOT | | | | COT | | FDOT | FDOT | | | |
| | | | | | | ROUND | | | OTHER | | BS-1 | BV-1 | P-4 | P-5 | 7 | P-7 | P-7 | J-7 | Adjust | T | T-MOD | | | | | |
| | | | | | | 12" | 15" | 18" | 12"x18" | 23"x14" | <10' | <10' | <10' | <10' | <10' | <10' | Partial | <10' | | <10' | <10' | 18" | 18" | CY | TN | |
| P | S-1A | 117+55.00 | RT. | MES | 1 | | | | | | | | | | | | | | | | | | 1 | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-1B | 118+50.00 | RT. | Inlet, Pipe | 1 | | | 90 | | | | | | | | | | | | 1 | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-1C | 118+50.00 | LT. | Inlet, Pipe | 1 | | | 49 | | | | | | | | | | | | 1 | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-1 | 120+40.00 | RT. | Inlet, Pipe | 1 | | | 187 | | | 1 | | | | | | | | | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-2 | 120+40.00 | LT. | Inlet, Pipe | 1 | | | 58 | | | 1 | | | | | | | | | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-3 | 122+00.00 | RT. | Inlet, Pipe | 1 | | | 74 | | | 1 | | | | | | | | | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-4 | 122+00.00 | LT. | Inlet, Pipe | 1 | | | 157 | | | 1 | | | | | | | | | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-5 | 124+20.00 | LT. | Manhole, Pipe | 1 | | | 217 | | | | | | | | 1 | | | | | | | | | | 2-Piece Cover |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-6 | 125+95.00 | RT. | Inlet, Pipe | 1 | | | 74 | | | | 1 | | | | | | | | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-7 | 125+95.00 | LT. | Inlet, Pipe | 1 | | | 171 | | | | 1 | | | | | | | | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-8 | 128+50.29 | RT. | Inlet, Pipe | 1 | | | | 36 | | | 1 | | | | | | | | | | | | | | Cast-In-Place |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-9 | 128+79.32 | RT. | Manhole, Adjust | | | | | | | | | | | | | | | 1 | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-10A | 129+90.79 | RT. | Inlet, Pipe | 1 | | | 5 | | | | | 1 | | | | | | | | | | | | | Cast-In-Place |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-10B | 129+94.65 | RT. | Pipe, Pipe, Pipe, MH, Pipe | 1 | 4 | 8 | | | 4 | | | | | | | | 1 | | | | | | | | 4' x 6' Bottom, 4 Ea. Conc. Jackets |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-11 | | | Not Used | | | | | | | | | | | | | | | | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-12 | 132+22.78 | RT. | Inlet, Pipe | 1 | | | 67 | | | | | | | 1 | | | | | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-13 | 132+96.27 | RT. | Inlet, Pipe | 1 | | | 49 | | | | | | 1 | | | | | | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-14 | 132+97.05 | RT. | Endwall, Pipe | 1 | | 6 | | | | | | | | | | | | | | | | | 1.23 | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-15 | 133+50.83 | RT. | Manhole, Pipe | 1 | | | 107 | | | | | | | | 1 | | | | | | | | | | Pipe to Existing Inlet @ STA 134+61.88 |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-15A | 134+55.08 | LT. | Pipe, MES | 1 | | | 4 | | | | | | | | | | | | | | 1 | | | 2.1 | 1:2, Conc. Jacket |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | S-16 | 165+78.16 | RT. | Inlet, Pipe | 1 | | 77 | | | | | | | 1 | | | | | | | | | | | | SR 580/Busch Blvd. |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | EX-14 | 131+47.02 | RT. | Manhole Top | | | | | | | | | | | | | 1 | | | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | EX-15 | 131+65.81 | RT. | Manhole Top | | | | | | | | | | | | | 1 | | | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | CS-1 | 134+77.16 | LT. | Inlet, Pipe | | | | 4 | | | | | | | | | | | | | 1 | | | | | Control Structure, see Drainage Details |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | EX-24 | 135+45.21 | LT. | MH | | | | | | | | | | | | | | | 1 | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| P | | | | | | | | | | | | | | | | | | | | | | | | | | |
| F | | | | | | | | | | | | | | | | | | | | | | | | | | |
| GRAND TOTALS - | | | | PLAN QUANTITY | | 4 | 91 | 1313 | 36 | 4 | 4 | 3 | 1 | 2 | 1 | 2 | 2 | 1 | 2 | 2 | 1 | 1 | 1 | 1.23 | 2.1 | |
| | | | | FINAL QUANTITY | | | | | | | | | | | | | | | | | | | | | | |

PAY ITEM NOTES:
430-175-115 — 12" PIPE TO BE PAID FOR AS 15" PIPE
CITY OF TAMPA TYPE T INLETS — CONCRETE INLET PAVEMENT IS INCIDENTAL TO COST OF STRUCTURE

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

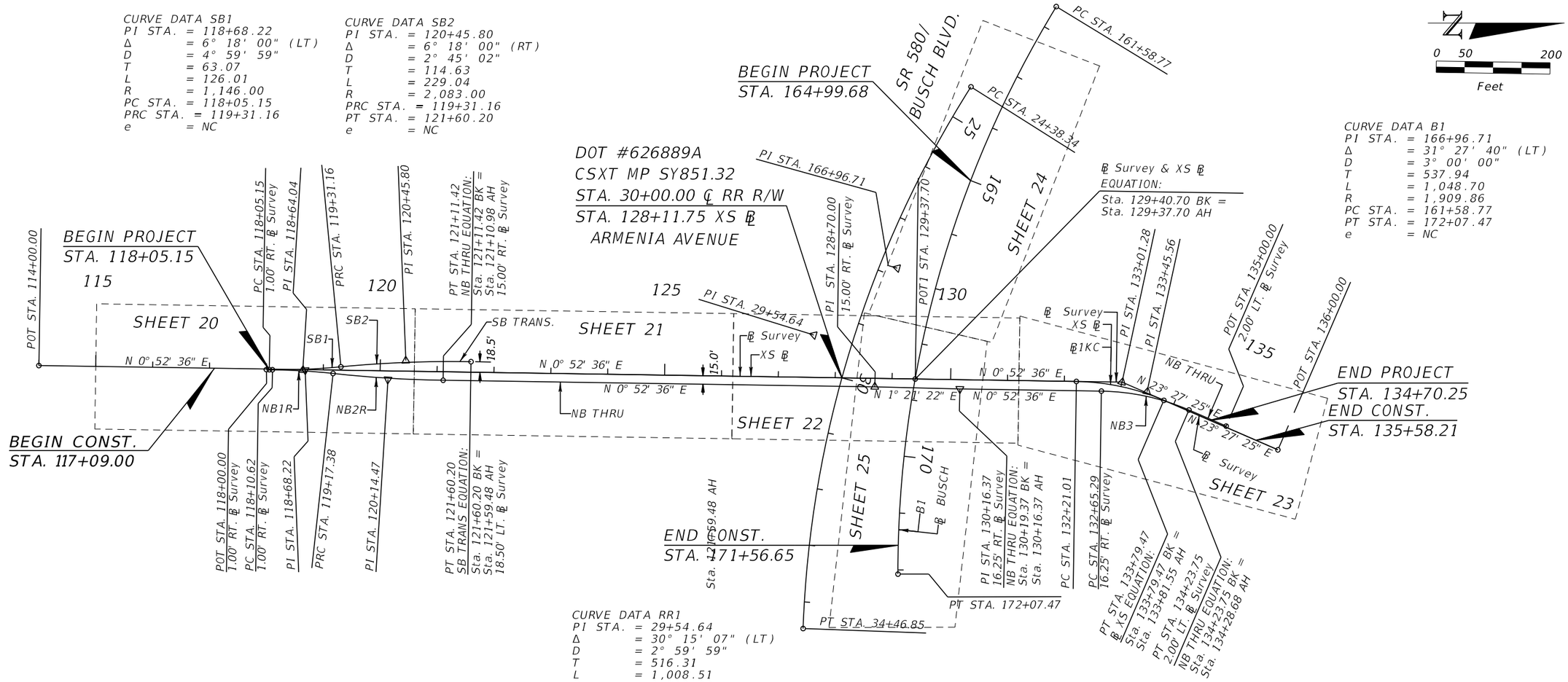
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# SUMMARY OF DRAINAGE STRUCTURES

SHEET NO. 15

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.




CURVE DATA SB1
PI STA. = 118+68.22
Δ = 6° 18' 00" (LT)
D = 4° 59' 59"
T = 63.07
L = 126.01
R = 1,146.00
PC STA. = 118+05.15
PRC STA. = 119+31.16
e = NC

CURVE DATA SB2
PI STA. = 120+45.80
Δ = 6° 18' 00" (RT)
D = 2° 45' 02"
T = 114.63
L = 229.04
R = 2,083.00
PRC STA. = 119+31.16
PT STA. = 121+60.20
e = NC

CURVE DATA B1
PI STA. = 166+96.71
Δ = 31° 27' 40" (LT)
D = 3° 00' 00"
T = 537.94
L = 1,048.70
R = 1,909.86
PC STA. = 161+58.77
PT STA. = 172+07.47
e = NC

CURVE DATA RR1
PI STA. = 29+54.64
Δ = 30° 15' 07" (LT)
D = 2° 59' 59"
T = 516.31
L = 1,008.51
R = 1,910.08
PC STA. = 24+38.34
PT STA. = 34+46.85

CURVE DATA NB1R
PI STA. = 118+64.04
Δ = 5° 20' 14" (RT)
D = 4° 59' 59"
T = 53.42
L = 106.75
R = 1,146.00
PC STA. = 118+10.62
PRC STA. = 119+17.38
e = NC

CURVE DATA NB2R
PI STA. = 120+14.47
Δ = 5° 20' 14" (LT)
D = 2° 45' 02"
T = 97.09
L = 194.04
R = 2,083.00
PRC STA. = 119+17.38
PT STA. = 121+11.42
e = NC

CURVE DATA BL1KC
PI STA. = 133+01.28
Δ = 22° 34' 49" (RT)
D = 14° 15' 00"
T = 80.27
L = 158.46
R = 402.08
PC STA. = 132+21.01
PT STA. = 133+79.47
e = 0.04

CURVE DATA NB3
PI STA. = 133+45.56
Δ = 22° 34' 49" (RT)
D = 14° 15' 00"
T = 80.27
L = 158.46
R = 402.08
PC STA. = 132+65.29
PT STA. = 134+23.75
e = RC

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| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION
CONTRACT NO: 12-D-00057
ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

PROJECT LAYOUT

SHEET NO.
16

mcannon 9/21/2020 8:14:50 AM P:\C0T1301\CADD\roadway\playrd01.dwg

# CURVE AND COORDINATE DATA TABLE

| CURVE /PI NO | ALIGNMENT | PC | | | PI | | | PT | | | Δ | D | T | L | R | BACK BEARING | AHEAD BEARING | e | DESIGN SPEED |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | STATION | NORTHING | EASTING | STATION | NORTHING | EASTING | STATION | NORTHING | EASTING | | | | | | | | | |
| | ℄ Survey | | | | | | | | | | | | | | | | | | |
| 1 | | | | | 119+00.00 | 1,344,125.5067 | 499,964.2527 | | | | | | | | | | N 0° 52' 36" E | | |
| 5 | | | | | 129+37.70 | 1,345,166.0849 | 499,980.1755 | | | | | | | | | N 0° 52' 36" E | N 0° 52' 36" E | | |
| 3 | | | | | 133+01.28 | 1,345,529.6223 | 499,985.7383 | | | | | | | | | N 0° 52' 36" E | N 23° 27' 25" E | | |
| 4 | | | | | 136+00.00 | 1,345,803.6559 | 500,104.6467 | | | | | | | | | N 23° 27' 25" E | | | |
| | | | | | | | | | | | | | | | | | | | |
| | XS ℄ | | | | | | | | | | | | | | | | | | |
| KC114 | | | | | 114+00.00 | 1,343,625.5652 | 499,956.6027 | | | | | | | | | | N 0° 52' 36" E | | 40 mph |
| CK105 | | | | | 129+37.70 | 1,345,166.0849 | 499,980.1755 | | | | | | | | | N 0° 52' 36" E | N 0° 52' 36" E | | |
| BL1KC | | 132+21.01 | 1,345,449.3610 | 499,984.5102 | 133+01.28 | 1,345,529.6223 | 499,985.7383 | 133+79.47 | 1,345,603.2594 | 500,017.6908 | 22° 34' 49" RT | 14° 15' 00" | 80.27' | 158.46' | 402.08' | N 0° 52' 36" E | N 23° 27' 25" E | 0.04 | 35 mph |
| KC106 | | | | | 133+81.55 | 1,345,603.2594 | 500,017.6908 | | | | | | | | | | N 23° 27' 25" E | | |
| CK104 | | | | | 136+00.00 | 1,345,803.6559 | 500,104.6467 | | | | | | | | | N 23° 27' 25" E | | | |
| | | | | | | | | | | | | | | | | | | | |
| | NB THRU | | | | | | | | | | | | | | | | | | |
| NB100 | | | | | 118+00.00 | 1,344,025.5031 | 499,963.7226 | | | | | | | | | | N 0° 52' 36" E | | 40 mph |
| NB1R | | 118+10.62 | 1,344,036.1239 | 499,963.8851 | 118+64.04 | 1,344,089.5336 | 499,964.7024 | 119+17.38 | 1,344,142.6357 | 499,970.4842 | 5° 20' 14" RT | 4° 59' 59" | 53.42' | 106.75' | 1,146.00' | N 0° 52' 36" E | N 6° 12' 50" E | NC | |
| NB2R | | 119+17.38 | 1,344,142.6357 | 499,970.4842 | 120+14.47 | 1,344,239.1555 | 499,980.9935 | 121+11.42 | 1,344,336.2344 | 499,982.4790 | 5° 20' 14" LT | 2° 45' 02" | 97.09' | 194.04' | 2,083.00' | N 6° 12' 50" E | N 0° 52' 36" E | NC | |
| PTNB200 | | | | | 121+10.98 | 1,344,336.2344 | 499,982.4790 | | | | | | | | | | N 0° 52' 36" E | | |
| NB101 | | | | | 128+70.00 | 1,345,095.1637 | 499,994.0920 | | | | | | | | | N 0° 52' 36" E | N 1° 21' 22" E | | 35 mph |
| NB102 | | | | | 130+16.37 | 1,345,244.4952 | 499,997.6272 | | | | | | | | | N 1° 21' 22" E | N 0° 52' 36" E | | |
| NB3 | | 132+65.29 | 1,345,493.3919 | 500,001.4358 | 133+45.56 | 1,345,573.6531 | 500,002.6640 | 134+23.75 | 1,345,647.2902 | 500,034.6165 | 22° 34' 49" RT | 14° 15' 00" | 80.27' | 158.46' | 402.08' | N 0° 52' 36" E | N 23° 27' 25" E | RC | |
| PTNB3 | | | | | 134+28.68 | 1,345,647.2902 | 500,034.6165 | | | | | | | | | | N 23° 27' 25" E | | |
| BB103 | | | | | 135+00.00 | 1,345,712.7161 | 500,063.0060 | | | | | | | | | N 23° 27' 25" E | | | |
| | | | | | | | | | | | | | | | | | | | |
| | SB TRANS. | | | | | | | | | | | | | | | | | | |
| SB1 | | 118+05.15 | 1,344,030.6529 | 499,963.8014 | 118+68.22 | 1,344,093.7136 | 499,964.7663 | 119+31.16 | 1,344,156.4994 | 499,958.8055 | 6° 18' 00" LT | 4° 59' 59" | 63.07' | 126.01' | 1,146.00' | N 0° 52' 36" E | N 5° 25' 24" W | NC | 40 mph |
| SB2 | | 119+31.16 | 1,344,156.4994 | 499,958.8055 | 120+45.80 | 1,344,270.6204 | 499,947.9710 | 121+60.20 | 1,344,385.2412 | 499,949.7250 | 6° 18' 00" RT | 2° 45' 02" | 114.63' | 229.04' | 2,083.00' | N 5° 25' 24" W | N 0° 52' 36" E | NC | |
| | | | | | | | | | | | | | | | | | | | |
| | ℄ BUSCH | | | | | | | | | | | | | | | | | | |
| B1 | | 161+58.77 | 1,345,413.9979 | 499,325.6443 | 166+96.71 | 1,345,134.3998 | 499,785.2100 | 172+07.47 | 1,345,135.7606 | 500,323.1449 | 31° 27' 40" LT | 3° 00' 00" | 537.94' | 1,048.70' | 1,909.86' | S 58° 41' 02" E | N 89° 51' 18" E | NC | 45 mph |
| | | | | | | | | | | | | | | | | | | | |
| | ℄ CSXT RR RW | | | | | | | | | | | | | | | | | | |
| RR1 | | 24+38.34 | 1,345,264.0788 | 499,466.6343 | 29+54.64 | 1,344,987.8441 | 499,902.8295 | 34+46.85 | 1,344,968.9830 | 500,418.7909 | 30° 15' 07" LT | 2° 59' 59" | 516.31' | 1,008.51' | 1,910.08' | S 57° 39' 17" E | S 87° 54' 23" E | ½" | 25 mph |

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

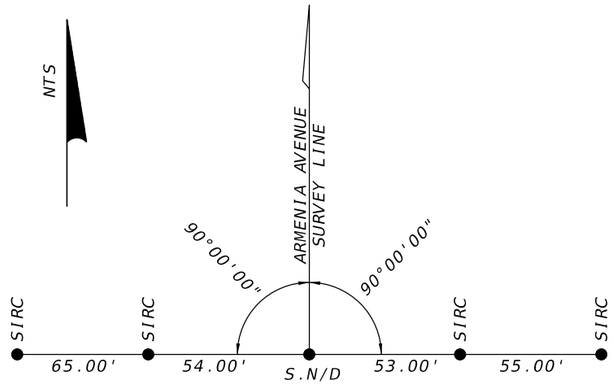
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

PROJECT LAYOUT

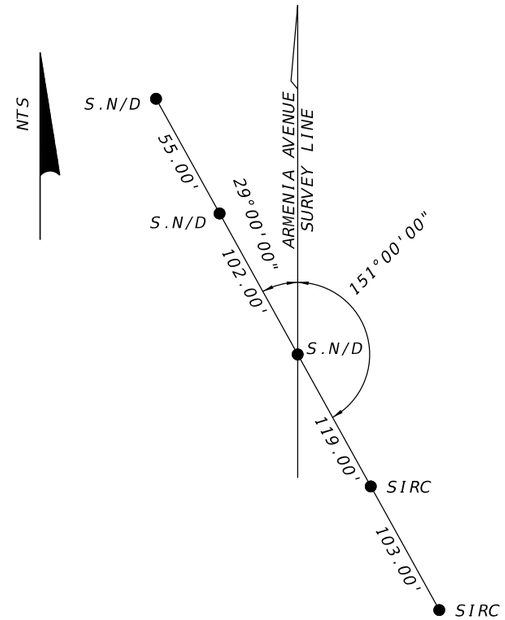
SHEET NO.
17

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

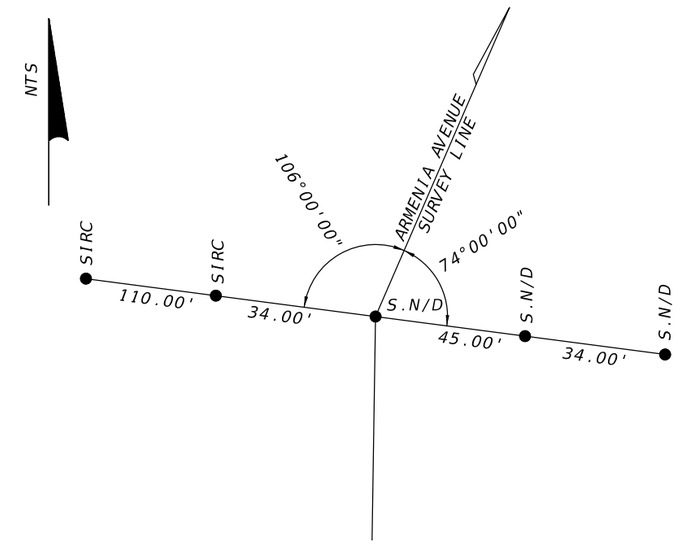



BEGIN SURVEY
STATION 119+00.00

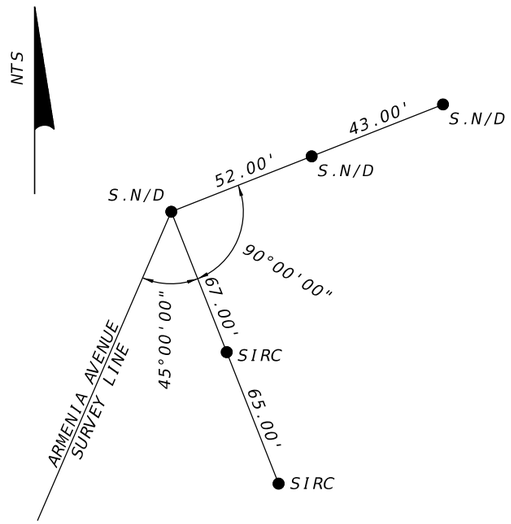
LEGEND
SIRC = SET 5/8" IRON ROD CAPPED "REF PT LB 7831"
S.N/D = SET NAIL & DISK "ELEMENT LB 7831"




EQUATION STATION
129+40.70 BACK
129+37.70 AHEAD




PI STATION 133+01.28




END SURVEY
STATION 136+00.00

| BENCHMARKS | | | | |
|---|---|---|---|---|
| Point ID | Station | Offset | Elev. (NAVD 1988) | Description |
| TBM1 | 119+73.58 | 107.43' LT | 40.61 | NAIL & DISK "COT" |
| 10 09 B03 | 128+80.12 | 98.47' RT | 47.31 | 4X4 CONCRETE MONUMENT W/ DISK "10 09 B03" |
| TBM3 | 138+11.48 | 80.30' RT | 43.06 | NAIL & DISK "ELEMENT LB7831" |
| | | | | |

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REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|---|---|---|---|
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
PSM | PETER JOHN MATTSON, PSM, 6290

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

PROJECT CONTROL

SHEET NO.
18

## PROJECT NOTES

1. THE PURPOSE OF THIS PROJECT IS TO IMPROVE THE FUNCTION OF THE INTERSECTION OF ARMENIA AVENUE AT SR 580/BUSCH BLVD. THE IMPROVEMENTS WILL INCLUDE THE WIDENING AND MILLING AND RESURFACING OF ARMENIA AVENUE FROM SOUTH OF HUMPHREY STREET TO ORANGE GROVE DRIVE\SEWAHA STREET AND THE ADDITION OF AN EASTBOUND RIGHT TURN LANE ON SR 580\BUSCH BLVD. A RAISED MEDIAN, STORM DRAIN SYSTEM, SIDEWALKS AND PEDESTRIAN RAMPS WILL BE CONSTRUCTED. SIGNALIZATION IMPROVEMENTS AND SIGNING AND PAVEMENT MARKING PLANS ARE ALSO INCLUDED.

   THERE IS A RAILROAD CROSSING WITHIN THE PROJECT LIMITS THAT CONSISTS OF 1 TRACK. THE RAILROAD CROSSING WILL BE RECONSTRUCTED BY CSX. PRECAST CONCRETE TUBS WILL BE USED. RAILROAD SIGNAL EQUIPEMENT AND GATES WILL ALSO BE REPLACED. CONTACT THE CSX REPRESENTATIVE TO ARRANGE SCHEDULING AND RECONSTRUCTION OF THE RAILROAD CROSSINGS OR ANY OTHER CONSTRUCTION WORK IN THE CSX RIGHT OF WAY.

2. BENCHMARK ELEVATIONS SHOWN ON THE PLANS DEPICT THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). THE HORIZONTAL DATUM IS NAD 83/2011.

3. ANY PUBLIC LAND CORNER WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE ENGINEER SHOULD NOTIFY THE CITY SURVEYOR, CLARENCE "LUCKY" WADE BY TELEPHONE AT (813) 635-3430, WITHOUT DELAY.

4. ALL CALL-OUTS TO RIGHT OF WAY ARE FROM THE BASELINE OF SURVEY.

5. ALL CURB RADII, PI, PC, AND PT REFER TO THE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.

6. THE VOLTAGE OF THE OVERHEAD ELECTRIC LINES IS SHOWN IN THE ROADWAY PLANS.

7. EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS ARE TO REMAIN UNLESS OTHERWISE NOTED IN THE PLANS. DESILT ALL EXISTING STRUCTURES AND PIPES THAT ARE TO REMAIN.

8. REPLACE EXISTING DRIVEWAYS FROM THE EDGE OF PAVEMENT TO THE RIGHT OF WAY LINE, WHEREVER AFFECTED BY CONSTRUCTION. USE MATERIALS SIMILAR TO THE EXISTING UNLESS NOTED OTHERWISE, OR IN THE CASE OF UNPAVED DRIVEWAYS, INSTALL A 6" THICK LAYER OF COMPACTED SHELL OR AS SHOWN ON THE PLANS.

9. CONTACT THE CITY CONSTRUCTION ENGINEER 1 WEEK PRIOR TO CLEARING AND GRUBBING EXISTING SPRINKLER SYSTEMS, SIGNS, LANDSCAPING OR OTHER ENCROACHMENTS TO BE REMOVED WITHIN THE PROJECT LIMITS.

10. REMOVE EXISTING SIDEWALK AND CURB, AS CALLED OUT IN THE PLANS, TO THE NEAREST JOINT OR TO THE EXTENT THAT NO REMAINING SECTION IS LESS THAN 5' LONG.

11. FIELD VERIFY LIMITS OF SIDEWALK, WITH CONCURRENCE FROM THE ENGINEER, PRIOR TO BEGINNING REMOVAL AND REPLACEMENT. LIMITS MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER.

12. IMPROVEMENTS FOR THE EXISTING HILLSBOROUGH AREA REGIONAL TRANSIT AUTHORITY (HART) SYSTEM ARE BEING INTEGRATED INTO THIS PROJECT. BUILD ALL BUS BAYS & SHELTER PADS TO HART SPECIFICATIONS. FOR MORE INFORMATION CONTACT DAN RODRIGUEZ AT 813-223-6831, EXTENSION 1712, OR VISIT GOHART.ORG AND SEARCH FOR HART BUS STOP & SHELTER DESIGNS FOR A SET OF DOWNLOADABLE PDFS.

13. THE COST OF SAW-CUTTING IS INCIDENTAL TO THE WORK BEING PERFORMED.

14. VERIFY THE LOCATION AND SIZE OF ALL EXISTING DRAINAGE STRUCTURES TO BE MODIFIED AND THE FLOW LINE OF ALL EXISTING PIPES PRIOR TO ANY CONSTRUCTION ACTIVITIES. FIELD VERIFY THE LIMITS OF INLET TOP REPAIRS, WITH CONCURRENCE FROM THE ENGINEER, PRIOR TO BEGINNING REMOVAL AND REPLACEMENT. LIMITS MAY BE ADJUSTED AT THE DISCRETION OF THE ENGINEER.

15. USE CLASS III REINFORCED CONCRETE PIPE, CONSTRUCTED WITHOUT LIFT-HOLES, FOR ALL PROPOSED DRAINAGE PIPES, UNLESS NOTED OTHERWISE IN THE PLANS.

16. MANHOLE AND VALVE BOX ADJUSTMENTS ARE TO BE PERFORMED WITH MATERIALS FURNISHED BY THE APPROPRIATE UTILITY. ARRANGE FOR DELIVERY AND RECEIPT OF MATERIALS. WORK TO BE INCLUDED UNDER PAY ITEMS 425-5-1 AND 425-6.

    SHOULD CONCRETE COLLARS BE ENCOUNTERED AT THE MANHOLE AND VALVE BOX ADJUSTMENT LOCATIONS, REMOVE THE COLLAR. FILL THE VOID WITH SP ASPHALTIC CONCRETE, TAMP AND PLATE COMPACT PRIOR TO PLACING THE SP PAVEMENT COURSE.

17. SOD GRASSED AREAS DISTURBED BY CONSTRUCTION.

## TREE NOTES

1. ALL TREES LOCATED WITHIN THE LIMITS OF CONSTRUCTION ARE TO REMAIN UNLESS OTHERWISE INDICATED IN THE TREE REMOVAL LOCATION TABLE. TRIM REMAINING TREES TO CONFORM TO SECTION 110. COST TO BE INCLUDED IN CLEARING AND GRUBBING.

2. ALL TREES PROPOSED TO BE TRIMMED, ROOT PRUNED, OR REMOVED, SHALL BE COORDINATED WITH THE CITY URBAN FORESTRY CITY NATURAL RESOURCES DEPARTMENT IS REQUIRED FOR THE REMOVAL OF ALL TREES FIVE INCHES OR MORE IN DIAMETER OR THE TRIMMING OR ROOT TREE REMOVAL SHALL COMPLY WITH THE CITY OF TAMPA TREE ORDINANCE. THE CITY OF TAMPA MOBILITY DEPARTMENT WILL PAY THE TREE MITIGATION FEE ASSOCIATED WITH EACH TREE PERMIT.

3. ROOT PRUNIN TO 18" DEPTH SHALL BE REQUIRED WHEN SUBSURFACE CONSTRUCTION IS PROPOSED WITHIN 10' OF EXISTING PROTECTED TREE SPECIES, 15' OF SPECIMEN TREES, AND 20' FROM A GRAND TREE. EXISTING PALM TREES ARE REQUIRED TO BE PROVIDED A 6' PROTECTIVE RADIUS OR 3' OFF THE TRUNK OF THE PALM TREE. ALL ROOT PRUNING MUST BE PERFORMED BY AN ISA CERTIFIED ARBORIST AND WITH ADEQUATE TREE PROTECTION SHALL BE PROVIDED PER THE TECHNICAL MANUAL A.2. TREE BARRICADES SHALL BE CHAIN LINK. YOU MAY ERECT BARRICADES AROUND CLUSTERS OF TREES.

   THE REQUIRED PROTECTIVE RADIUS IS TO BE MEASURED FROM THE CLOSEST EDGE OF ANY PROPOSED IMPROVEMENT INCLUDING PROPOSED UNDERGROUND UTILITIES TO THE EDGE OF THE TREE TRUNK OF THE TREE AND PROVIDE THE FOLLOWING MINIMUM REQUIRED PROTECTIVE RADIUS FOR EACH TREE TYPE: 20' FOR GRAND TREES (32" OR GREATER), 15' FOR SPECIMEN TREES (24" - 31"), 10' FOR PROTECTED TREES (5" - 23" OR ANY MITIGATION TREE). THE PROPOSED IMPROVEMENTS ON THE EAST SECTION OF THE CONSTRUCTION AREA (9636 ARMENIA AVENUE) AND AT (9710 N. ARMENIA AND 2119 BARCLAY ROAD) APPEAR TO IMPACT TREES. PROVIDE REASONABLE RECONFIGURATION IN ACCORDANCE WITH 27-284.2.4 FOOTNOTE 3 AND 27-284.2.5 FOOTNOTE 5. SHOW ROOT PRUNING AT CONSTRUCTION INTERFACE. ALL UNDERGROUND UTILITIES THAT ARE BEING DEMOLISHED, MUST BE ABANDONED IN PLACE AND PLUGGED WITHIN THE PROTECTIVE RADIUS OF ANY TREE TO REMAIN.

   PROVIDE REQUIREMENTS FOR EQUIPMENT WITH RESPECT HEIGHT REQUIREMENTS THAT WILL IMPACT TREE CANOPY. AGAIN, ALL PRUNING MUST MEET ANSI A300 PRUNING STANDARDS PER SECTION 27-284.2.3

4. TREES WITHIN THE LIMITS OF THIS PROJECT THAT ARE TO REMAIN SHALL BE TRIMMED PER SECTION 27-284.2.3 AND MUST BE PRUNED IN A MANNER CONSISTENT WITH THE "AMERICAN NATIONAL STANDARDS FOR TREE CARE OPERATIONS, ANSI, A300, CURRENT EDITION." COORDINATOR MARY DANIELEWICZ-BRYSON, 813-274-7511. A TREE REMOVAL PERMIT, ISSUED BY THE PRUNING OF GRAND TREES.

### TREE REMOVAL LOCATION

| STA. | OFFSET | SIDE | STA. | OFFSET | SIDE |
|---|---|---|---|---|---|
| 120+90.21 | 37.98 | LT | 123+93.27 | 38.87 | RT |
| 121+28.51 | 66.61 | LT | 124+05.25 | 38.41 | RT |
| 121+77.83 | 60.10 | RT | 124+11.40 | 35.53 | RT |
| 121+87.62 | 121.73 | RT | 124+19.50 | 31.86 | LT |
| 121+91.63 | 119.26 | RT | 124+25.64 | 38.03 | RT |
| 121+94.02 | 55.47 | RT | 124+31.34 | 38.51 | RT |
| 122+16.76 | 37.59 | LT | 124+78.48 | 31.57 | LT |
| 122+22.22 | 40.34 | LT | 124+92.15 | 28.39 | LT |
| 122+70.60 | 35.03 | RT | 165+45.17 | 46.12 | RT |
| 122+77.81 | 46.39 | RT | 165+48.45 | 41.90 | RT |
| 122+79.23 | 37.67 | RT | 165+48.87 | 55.41 | RT |
| 122+89.80 | 44.63 | RT | 165+55.10 | 51.32 | RT |
| 123+08.52 | 45.36 | RT | 165+72.67 | 59.63 | RT |
| 123+15.96 | 44.66 | RT | 165+74.10 | 51.14 | RT |
| 123+64.46 | 43.48 | RT | 166+46.98 | 51.61 | RT |
| 123+69.67 | 45.59 | RT | 166+49.89 | 44.93 | RT |
| 123+77.58 | 41.80 | RT | 166+61.83 | 59.60 | RT |
| 123+78.73 | 39.63 | LT | | | |
| 123+89.82 | 41.02 | LT | | | |

### TREE REMOVAL/REPLACEMENT TABLE

| TREES RETAINED DIAMETER (INCHES) | # OF TREES | MULTIPLIER FOR | TOTAL CREDITS |
|---|---|---|---|
| 5" TO 7" | 3 | 0 | 0 |
| 8" TO 12" | 14 | 1 | 14 |
| 13" TO 19" | 0 | 2 | 0 |
| 20" TO 29" | 3 | 4 | 12 |
| 30" OR MORE | 1 | 10 | 10 |
| ALL PALMS | 1 | 1 | 1 |
| TOTAL | 22 | | 37 |

| TREES REMOVED DIAMETER (INCHES) | # OF TREES | MULTIPLIER FOR | TOTAL DEBITS |
|---|---|---|---|
| 5" TO 7" | 6 | 0 | 0 |
| 8" TO 12" | 9 | 1 | 9 |
| 13" TO 19" | 0 | 2 | 0 |
| 20" TO 29" | 1 | 4 | 4 |
| 30" OR MORE | 0 | INCH FOR INCH | 0 |
| ALL PALMS | 20 | 1 | 20 |
| TOTAL | 36 | | 33 |
| % REMOVED | N/A | | |

SEPARATE REQUIREMENTS. DON'T SUBTRACT ABOVE CREDITS. CREDIT TREES CAN ONLY BE USED TO OFFSET PLANTING REQUIREMENTS IF THEY MEET PLANTING STANDARD.

| VUA TREE REQUIREMENTS | LF/SF | TREES REQ'D | VUA TREES |
|---|---|---|---|
| LINEAR FT. VUA ADJ. STREET FRONTAGE | 0 | 1 PER 40 LF | 0 |
| TOTAL SQUARE FOOTAGE OF VUA | 0 | 1 PER 1500 SF | 0 |
| VEHICLE USE AREA GREENSPACE | 0 | 20% OF VUA | 0 |
| USE TREE REQUIREMENTS | | | |
| INSERT PROPOSED USE HERE NONE MUST PLACE "0" IF NO USED TREES REQ'D | 0 | 1 PER 1500 SF | 0 |
| TOTAL 2" TREES REQUIRED | | | 33 |

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ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# GENERAL NOTES

SHEET NO.
19

RAIL GENERAL NOTES

1. SUBMIT RAILROAD INSURANCE TO CSX AT insurancedocuments@csx.com FOR CSX REVIEW AND APPROVAL. ONCE APPROVED BY CSX, SUBMIT A COPY OF THE CSX-APPROVED RAILROAD INSURANCE AND APPROVAL LETTER, AS SPECIFIED IN THE SPECIAL PROVISIONS, TO THE CITY OF TAMPA MOBILITY DEPARTMENT. WORK WILL NOT BE ALLOWED WITHIN THE CSX RIGHT- OF- WAY WITHOUT THE INSURANCE APPROVAL FROM CSX AND FLAGMAN CANNOT BE SCHEDULED. NOTE: APPROVAL OF INSURANCE CAN TAKE UP TO 30 TO 45 DAYS.

2. FLAGGING REQUIREMENTS - CONTACT CSX TO REQUEST NEEDED FLAGMAN OR ACCESS TO CSX RIGHT-OF-WAY AND INCLUDE THE CITY OF TAMPA, PROJECT CONSTRUCTION ENGINEER, ON ALL REQUEST UNLESS INSTRUCTED OTHERWISE AT THE PRE- CONSTRUCTION CONFERENCE.

   NO WORK WILL BE PERFORMED WITHIN RAILROAD RIGHT OF WAY WITHOUT A RAILROAD FLAGMAN OR AUTHORIZED REPRESENTATIVE BEING PRESENT. ANTICIPATE AN 8 HOUR WORK WINDOW. TO OBTAIN A FLAGMAN, PROVIDE AN ESTIMATE OF START DATE, WORK DAYS, HOURS AND DURATION FOR WHICH A CSX FLAGGER WILL BE NEEDED ON ACTIVITIES WITHIN THE CSX RIGHT-OF-WAY.

   PROJECTS WITH RAILROAD INVOLVEMENT OF 20 CONSECUTIVE DAYS OR MORE REQUIRE LONG TERM RAILROAD FLAGGING SERVICES (MAY TAKE THREE (3) TO SIX (6) MONTHS TO OBTAIN).

   PLAN TO ONLY HAVE ONE FLAGGER PER PROJECT. ALL ROADWAY WORK WITHIN THE RAILROAD RIGHT OF WAY MUST BE COMPLETED, DURING DAY TIME HOURS, WITHIN XX CONTRACT DAYS. THE WORK TO BE COMPLETED WILL INCLUDE ALL NECESSARY ITEMS NEEDED TO RELIEVE THE FLAGMAN FROM PROVIDING PROTECTIVE SERVICES. ALL COSTS FOR ANY ADDITIONAL DAYS OF FLAGGING DUE TO A CONTRACTOR CAUSED DELAY SHALL BE BORNE SOLELY BY THE CONTRACTOR.

   PROVIDE THE CITY WITH A MINIMUM 45 DAY ADVANCE NOTICE OF BEGINNING WORK WITHIN THE ROAD RIGHT OF WAY TO ALLOW FOR THE SCHEDULING OF THE RAILROAD FLAGMAN. FAILURE TO MEET THE REQUIREMENTS OF THIS NOTE CONSTITUTES A FULL, COMPLETE, ABSOLUTE AND IRREVOCABLE WAIVER BY THE CONTRACTOR OF ANY RIGHT TO CLAIM FOR ADDITIONAL COMPENSATION OR A TIME EXTENSION RELATED TO WORK WITHIN THE RAILROAD RIGHT OF WAY.

3. RAILROAD CROSSING WORK - THE EXISTING CROSSING WILL BE RECONSTRUCTED BY THE RAILROAD OR THEIR SUB CONTRACTOR DURING THIS PROJECT. A TRAFFIC CONTROL OFFICER MUST BE PRESENT ON EACH SIDE OF THE RAILROAD WORK ZONE, 24 HOURS A DAY, FOR THE DURATION OF ANY WORK PERFORMED BY CSX OR CSX CONTRACTORS.

4. PROVIDE A DUMP TRUCK, EQUIPMENT AND LABOR TO DISPOSE OF ALL ROADWAY DEBRIS EXCAVATED BY CSX OR CSX CONTRACTOR.

5. DURING AND AFTER COMPLETION OF CONSTRUCTION WITHIN RAILROAD RIGHT OF WAY, CLEAR CSX'S DRAINAGE DITCHES AND SURROUNDING PROPERTIES OF ALL DEBRIS TO THE SATISFACTION OF CSX'S CONSTRUCTION ENGINEER AND INSPECTION REPRESENTATIVE.

6. DO NOT STORE MATERIAL OR EQUIPMENT ON RAILROAD'S PROPERTY.

7. COMPLY WITH CSX CONSTRUCTION SUBMISSION CRITERIA, WHICH CAN BE LOCATED AT https://www.csx.com/index.cfm/library/files/about-us/property/public-project-manual/, UNDER PUBLIC PROJECTS MANUAL.

8. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY "DELAY OF TRAIN" PENALTIES IMPOSED BY THE RAILROAD. INVOICES FOR SUCH PENALTIES RECEIVED BY THE DEPARTMENT WILL BE FORWARDED TO THE CONTRACTOR FOR PAYMENT. IF THE CONTRACTOR FAILS TO PAY SUCH PENALTIES, THE DEPARTMENT MAY DEDUCT SAID AMOUNT FROM PAYMENTS MADE TO THE CONTRACTOR.

9. ALL WORK ON, OVER, UNDER, OR ADJACENT TO CSXT RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE CSXT SPECIAL PROVISIONS FOUND IN THE CSXT PUBLIC PROJECT MANUAL https://www.csx.com/index.cfm/library/files/about-us/property/public-project-manual/.

10. "ONE CALL" SERVICES DO NOT LOCATE BURIED RAILROAD SIGNAL AND COMMUNICATIONS LINES. CONTACT THE RAILROAD'S REPRESENTATIVE TWO (2) DAYS IN ADVANCE OF THOSE PLACES WHERE EXCAVATION, PILE DRIVING, OR HEAVY LOADS MAY DAMAGE RAILROAD UNDERGROUND LINES ON RAILROAD PROPERTY. UPON REQUEST FROM THE CONTRACTOR OR AGENCY, RAILROAD SIGNAL FORCES WILL LOCATE AND PAINT MARK OR FLAG RAILROAD UNDERGROUND SIGNAL, COMMUNICATION, AND POWER LINES IN THE AREA TO BE DISTURBED. AVOID EXCAVATION OR OTHER DISTURBANCE OF THESE LINES WHICH ARE CRITICAL TO THE SAFETY OF THE RAILROAD AND THE PUBLIC. IF DISTURBANCE OR EXCAVATION IS REQUIRED NEAR A BURIED RAILROAD SIGNAL, COMMUNICATION, OR POWER LINE, HAND EXCAVATE THE LINE AND PROTECT THE LINE DURING THE COURSE OF THE DISTURBANCE UNDER THE SUPERVISION AND DIRECTION OF A RAILROAD SIGNAL REPRESENTATIVE.

ABBREVIATIONS:
El. = Existing Elevation
ELEV. = PROPOSED ELEVATION

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ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

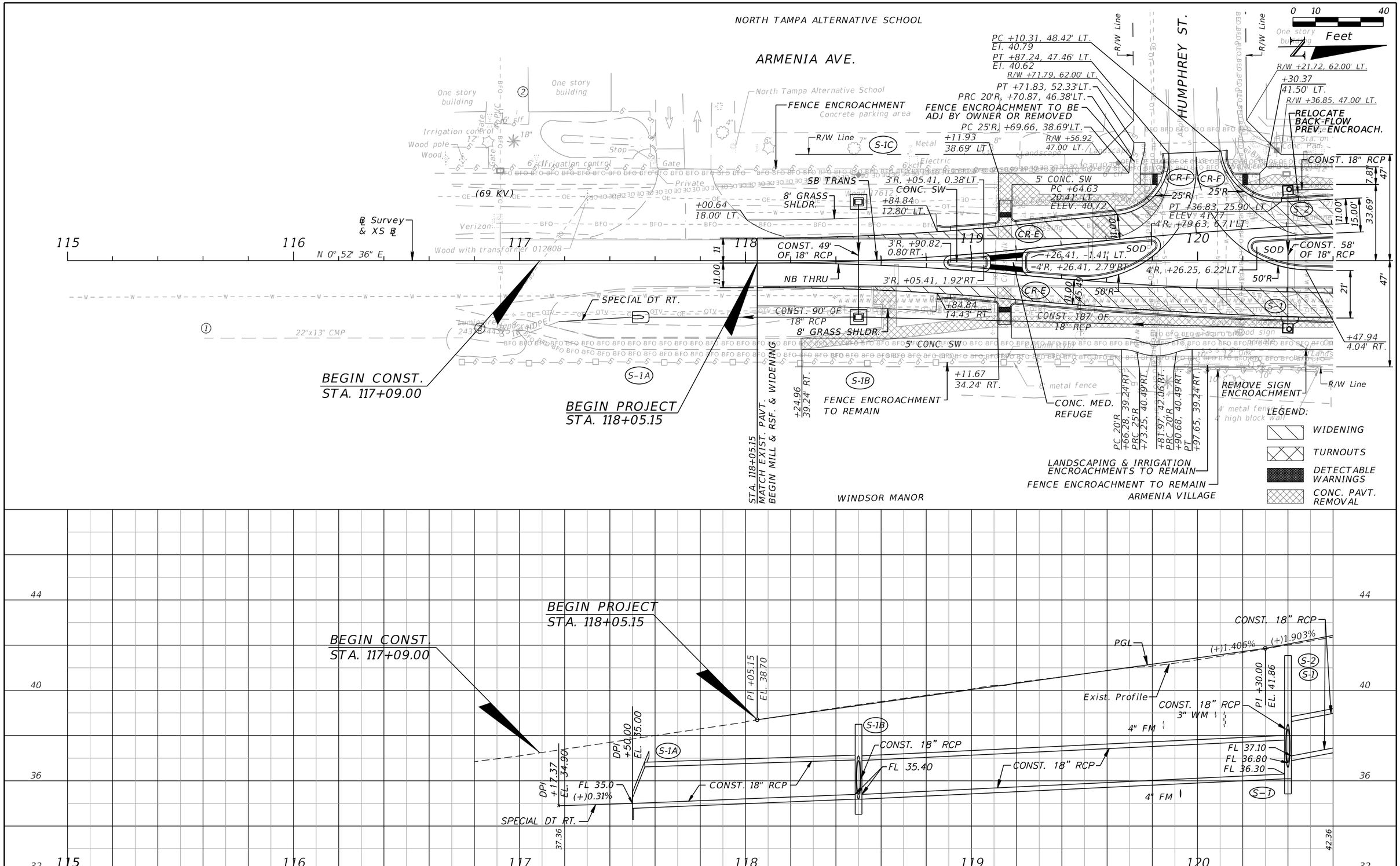
CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

GENERAL NOTES

SHEET NO.
20

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TRANSPORTATION DIVISION

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ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# ROADWAY PLAN-PROFILES

SHEET NO.
21

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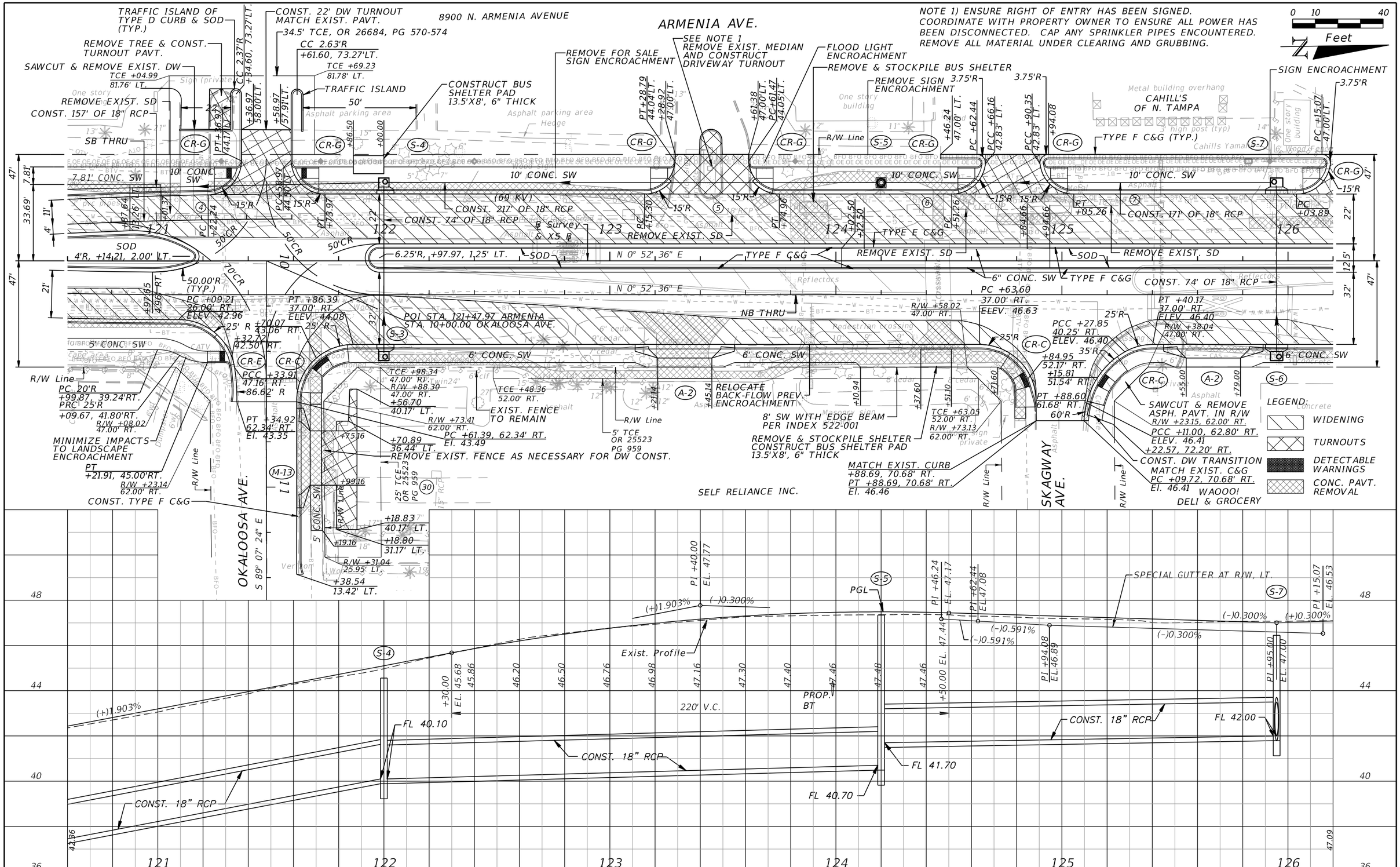


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ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# ROADWAY PLAN-PROFILES

SHEET NO.
22

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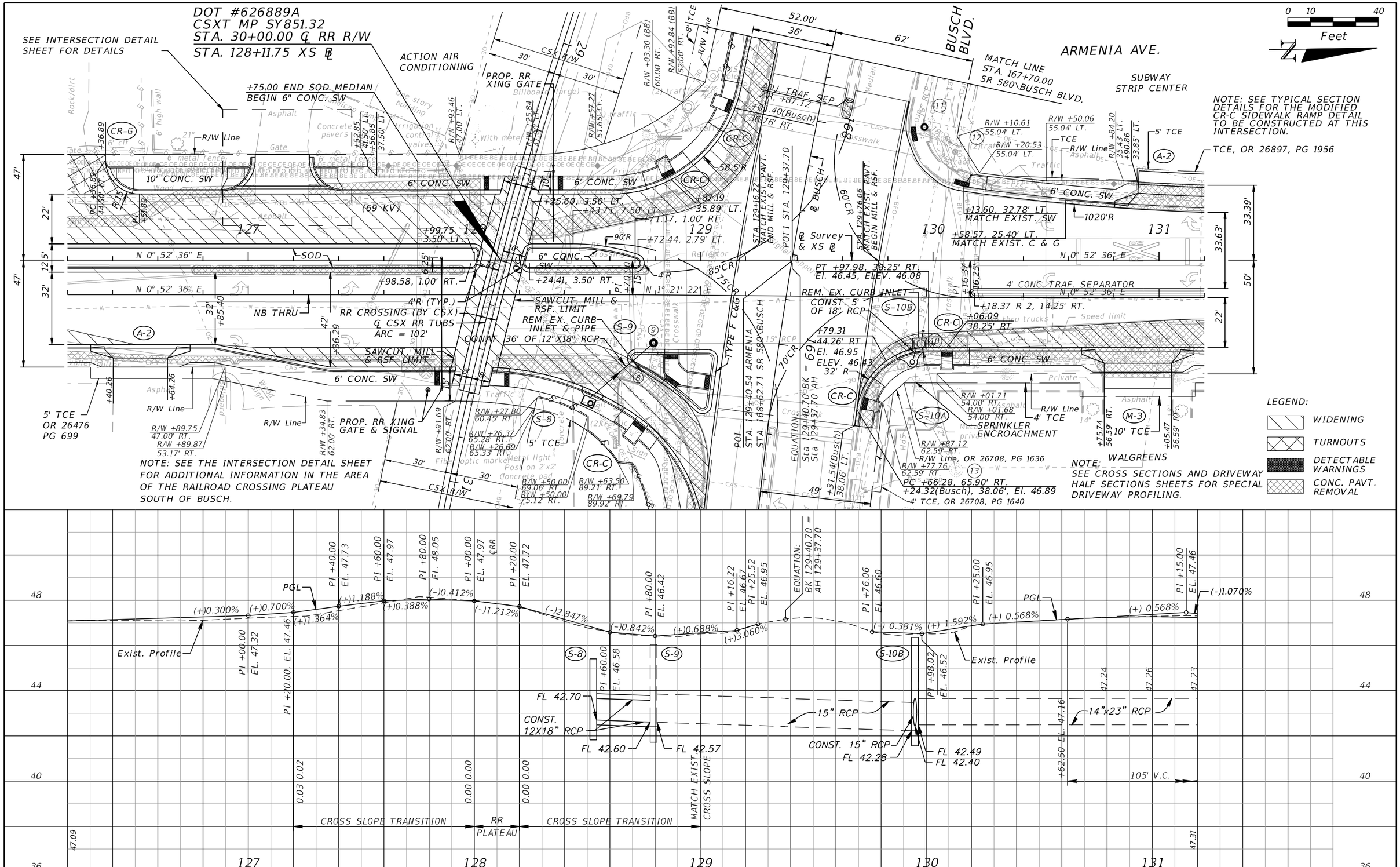


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AT SR 580/BUSCH BLVD.

# ROADWAY PLAN-PROFILES

SHEET NO.
23

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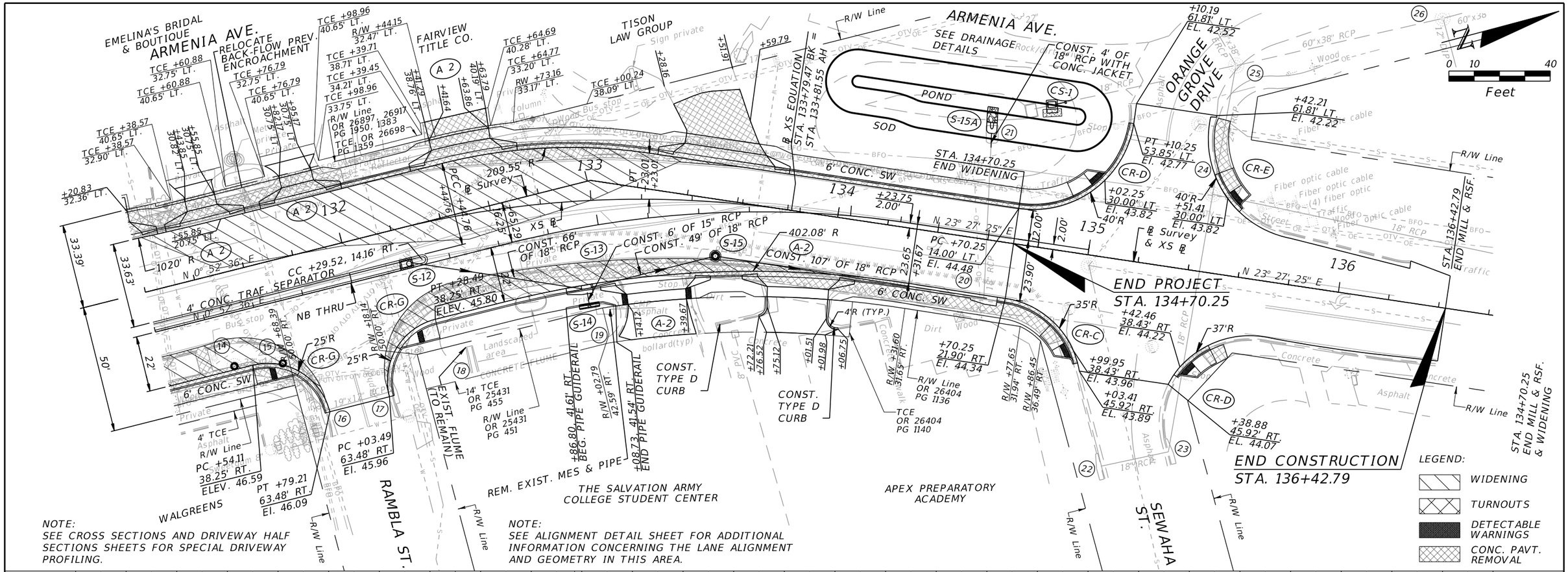
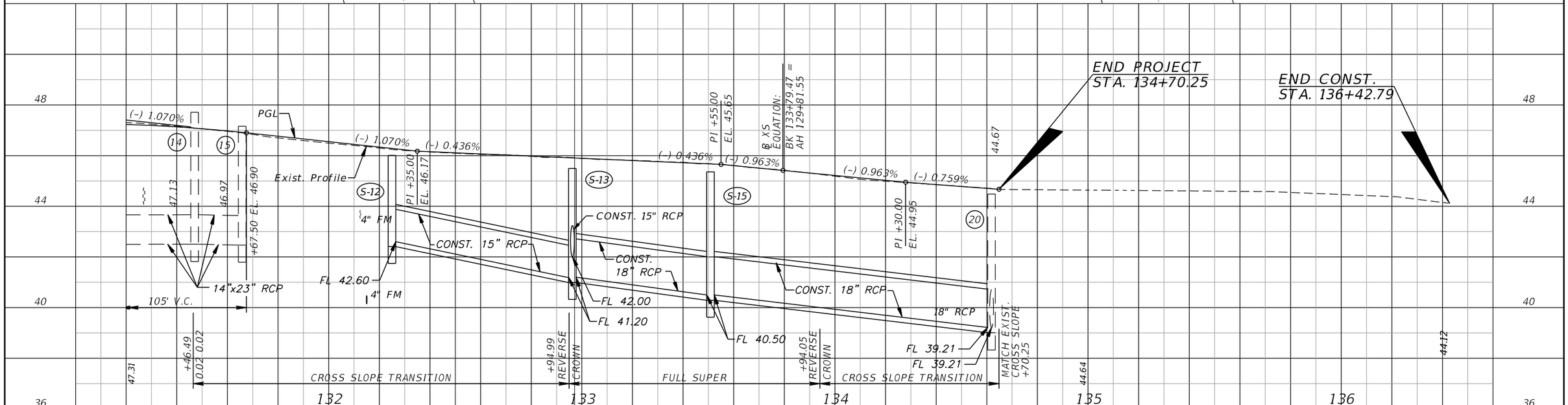



NOTE:
SEE CROSS SECTIONS AND DRIVEWAY HALF SECTIONS SHEETS FOR SPECIAL DRIVEWAY PROFILING.

NOTE:
SEE ALIGNMENT DETAIL SHEET FOR ADDITIONAL INFORMATION CONCERNING THE LANE ALIGNMENT AND GEOMETRY IN THIS AREA.

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ARMENIA AVENUE INTERSECTION PROJECT AT SR 580/BUSCH BLVD.

# ROADWAY PLAN-PROFILES

SHEET NO. 24

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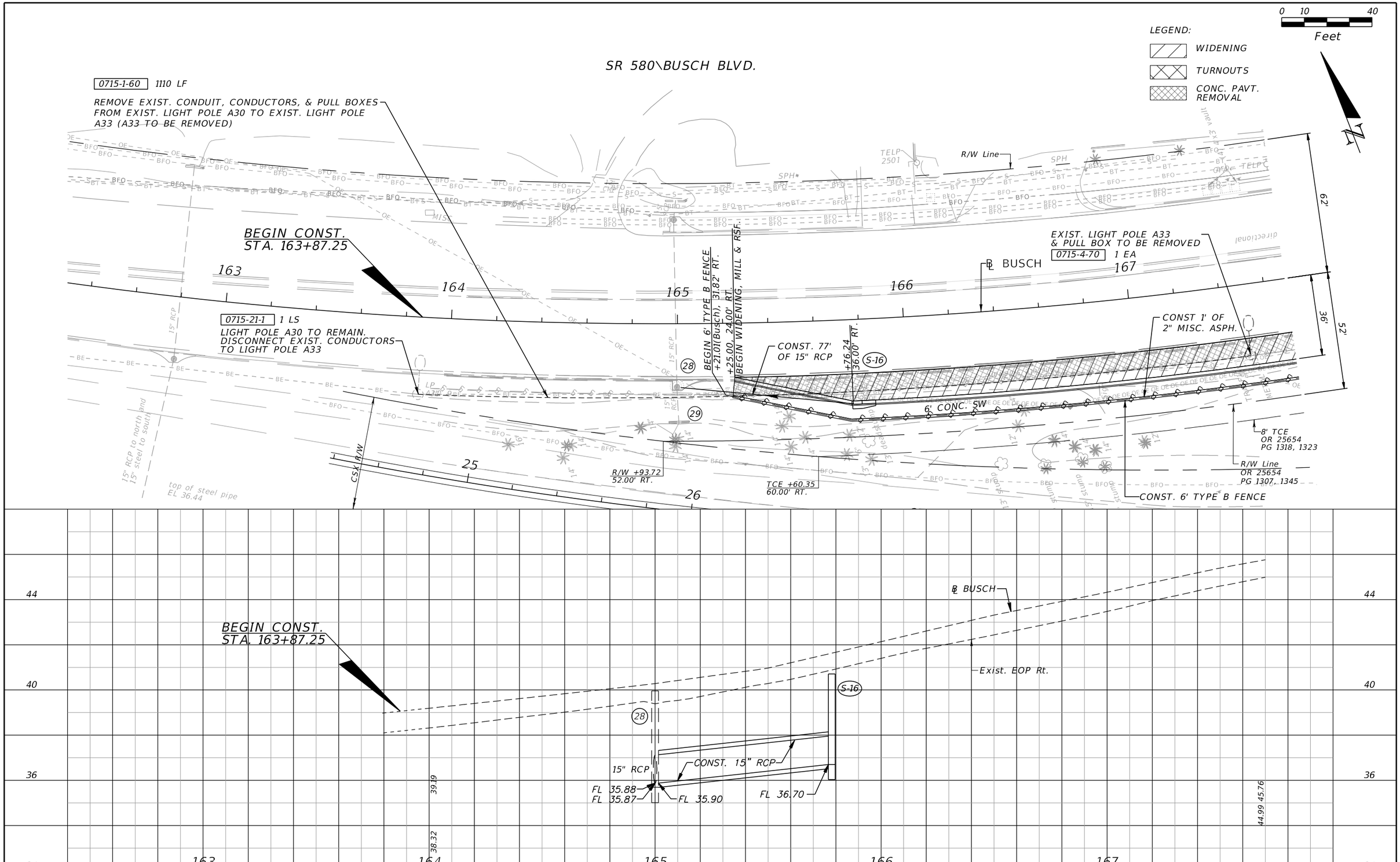


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TRANSPORTATION DIVISION

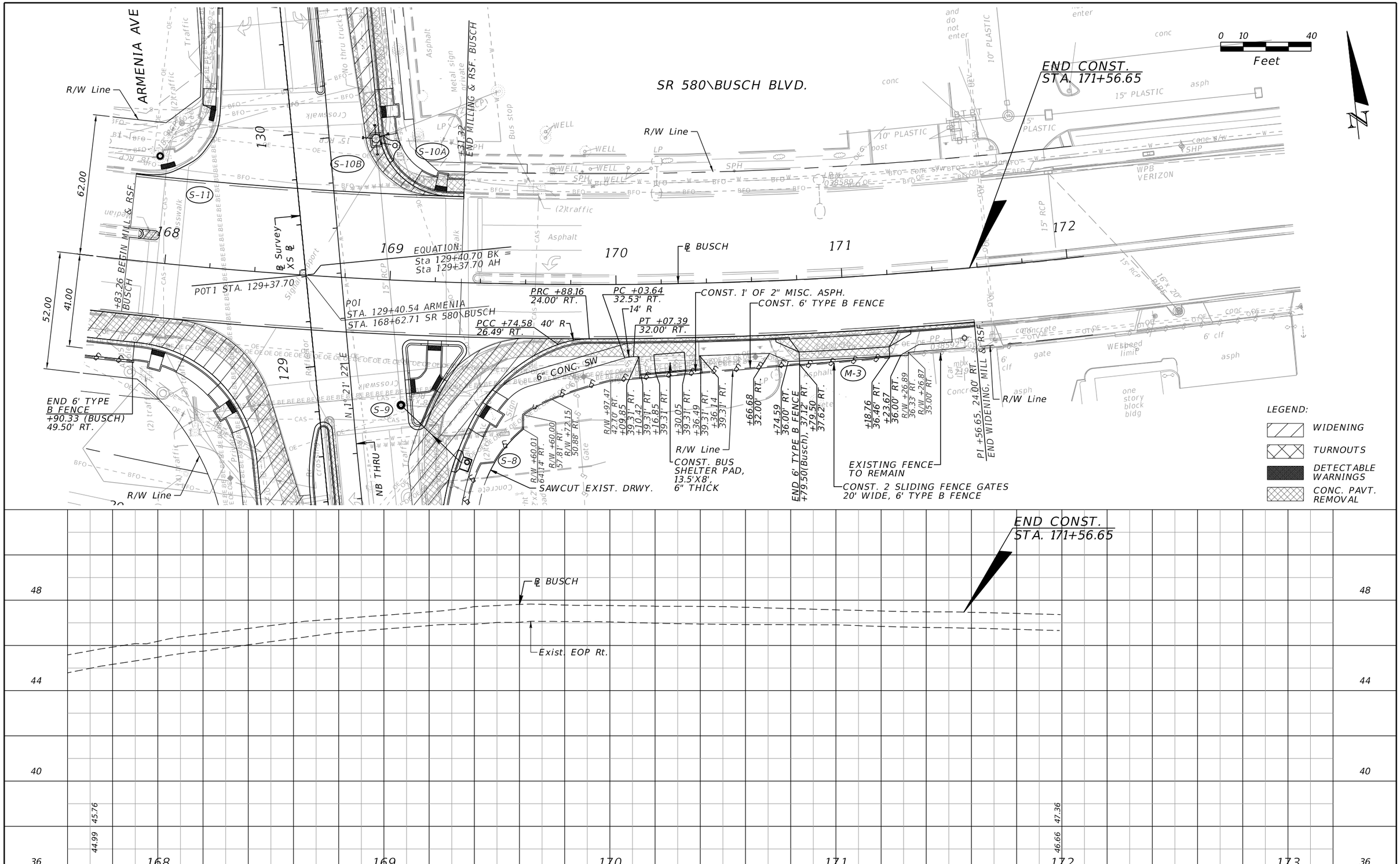
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# ROADWAY PLAN-PROFILES

SHEET NO.
25

mcannon 9/21/2020 8:15:25 AM P:\COT1301\CADD\roadway\plprrd05.dwg




| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# ROADWAY PLAN-PROFILES

SHEET NO.
26

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# ARMENIA AVENUE

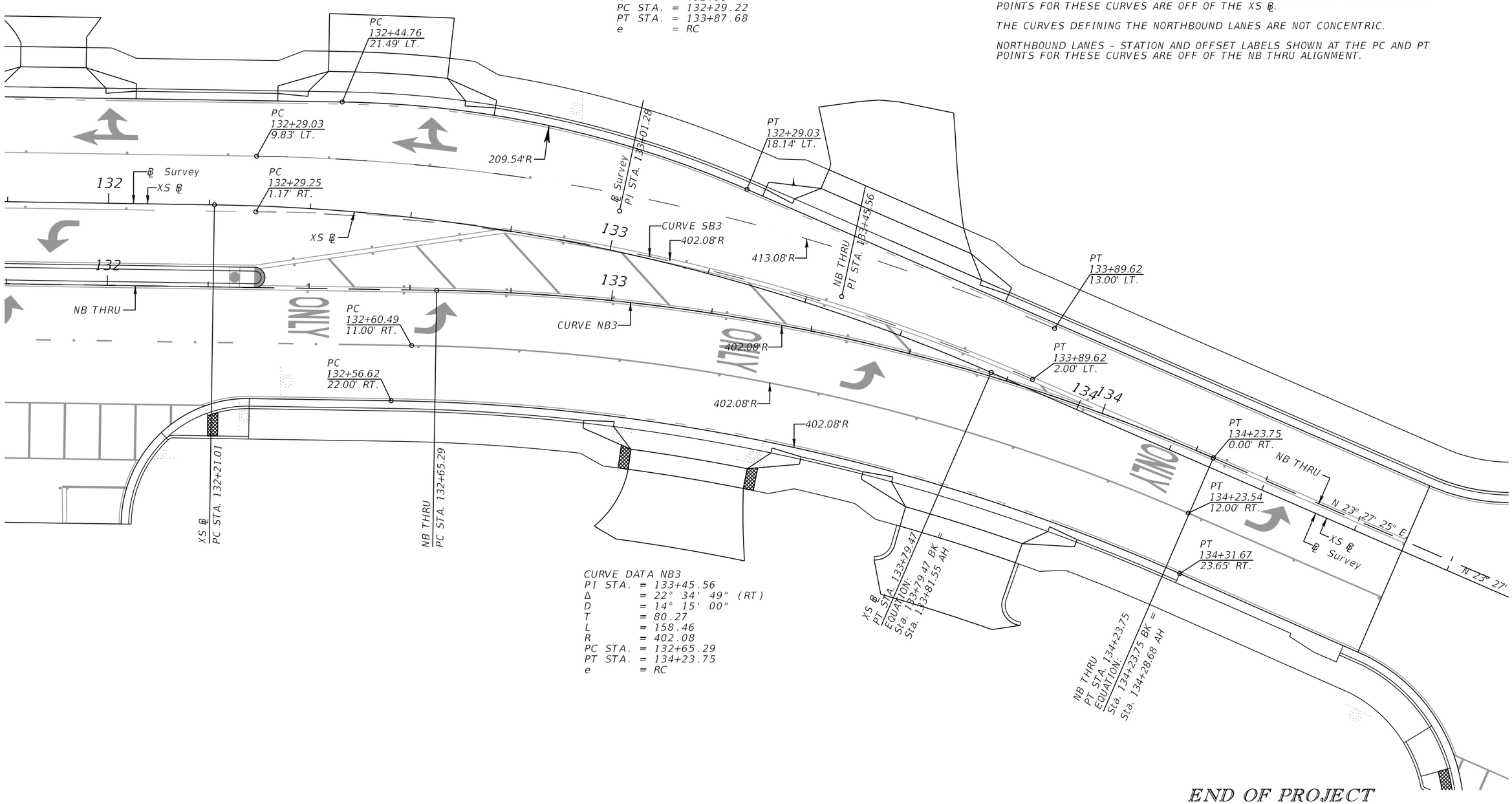
CURVE DATA SB3
PI STA. = 133+09.49
Δ = 22° 34' 49" (RT)
D = 14° 15' 00"
T = 80.27
L = 158.46
R = 402.08
PC STA. = 132+29.22
PT STA. = 133+87.68
e = RC

NOTE:

SOUTHBOUND LANES - STATION AND OFFSET LABELS SHOWN AT THE PC AND PT POINTS FOR THESE CURVES ARE OFF OF THE XS ℄.

THE CURVES DEFINING THE NORTHBOUND LANES ARE NOT CONCENTRIC.

NORTHBOUND LANES - STATION AND OFFSET LABELS SHOWN AT THE PC AND PT POINTS FOR THESE CURVES ARE OFF OF THE NB THRU ALIGNMENT.




CURVE DATA NB3
PI STA. = 133+45.56
Δ = 22° 34' 49" (RT)
D = 14° 15' 00"
T = 80.27
L = 158.46
R = 402.08
PC STA. = 132+65.29
PT STA. = 134+23.75
e = RC

END OF PROJECT

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

## ALIGNMENT DETAIL

SHEET NO.
27

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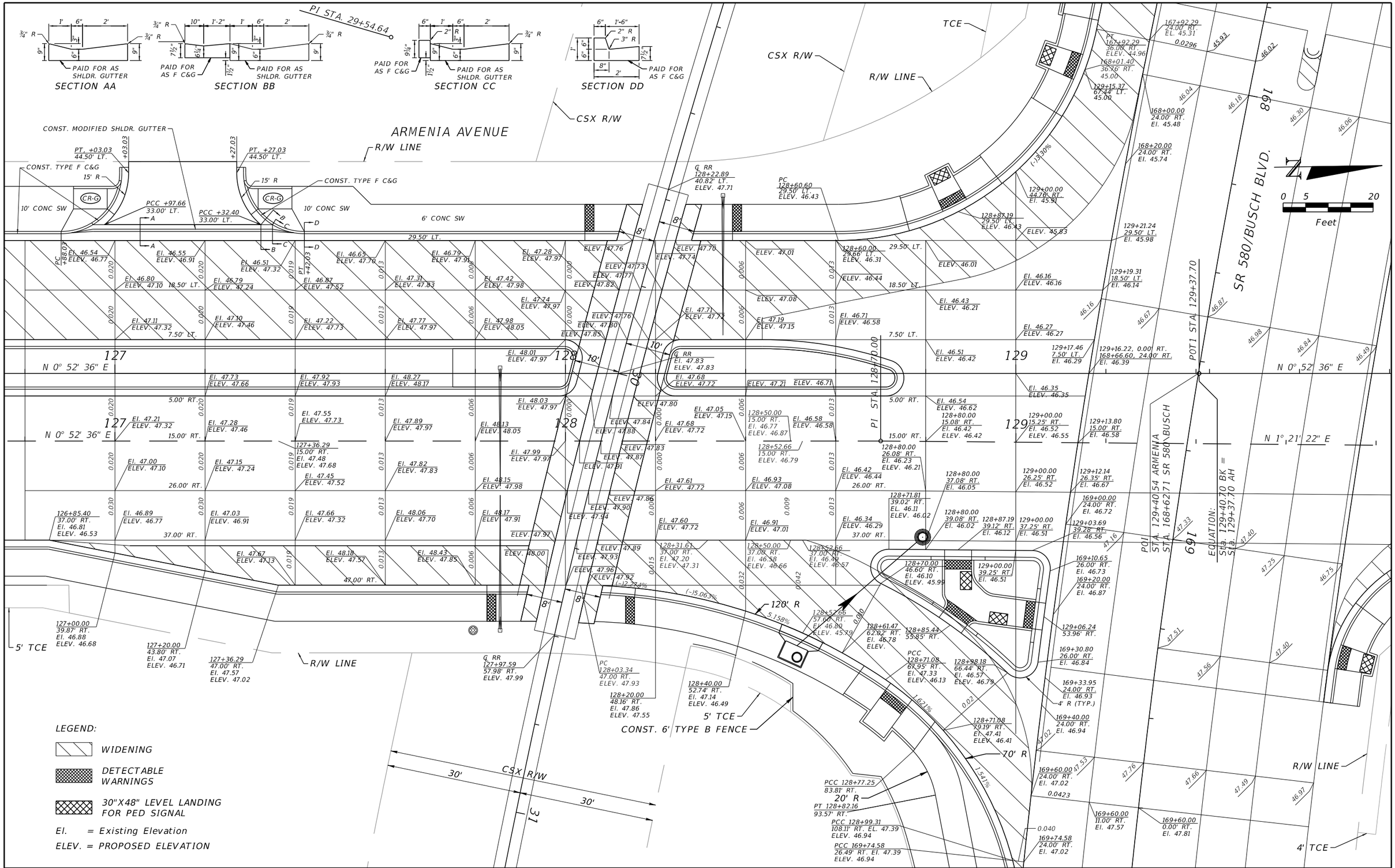



THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

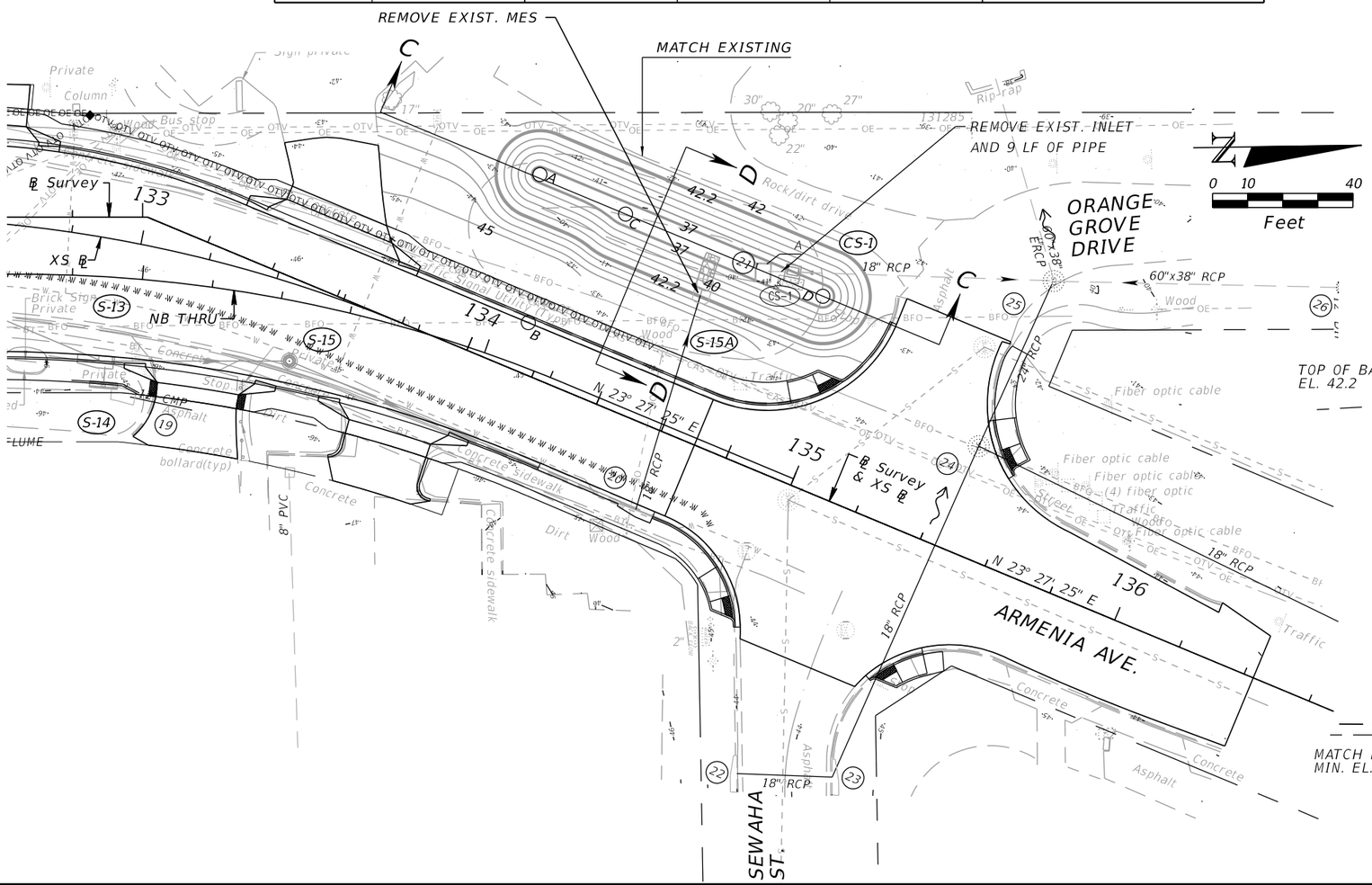
# INTERSECTION DETAIL

SHEET NO. 28

mcannon 9/21/2020 8:15:36 AM P:\C0T1301\CADD\roadway\intdrd01.dwg

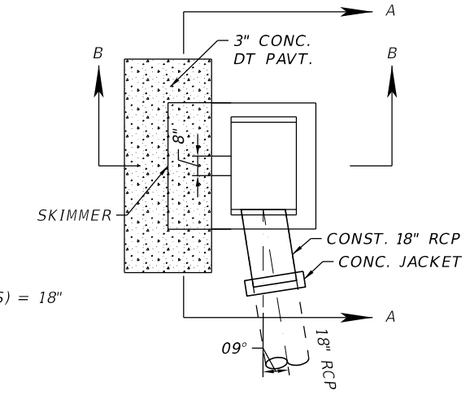
## POND - CENTER POINT OF CURVES

| POINT | STATION | OFFSET | RADIUS | ELEVATION | REMARKS |
|---|---|---|---|---|---|
| A | 134+00.00 | 54.2 | 12.6 | 42.2 | TOP OF BANK |
| | | | 2.2 | 37.0 | POND BOTTOM |
| B | 134+13.15 | 14.0 | 27.6 | 42.2 | TOP OF BANK |
| | | | 38.0 | 37.0 | POND BOTTOM |
| C | 134+26.86 | 53.2 | 20.4 | 42.2 | TOP OF BANK |
| | | | 10.0 | 37.0 | POND BOTTOM |
| D | 134+87.77 | 53.2 | 13.6 | 42.2 | TOP OF BANK |
| | | | 3.2 | 37.0 | POND BOTTOM |

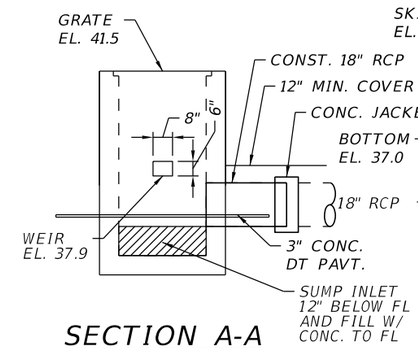



(CS-1)

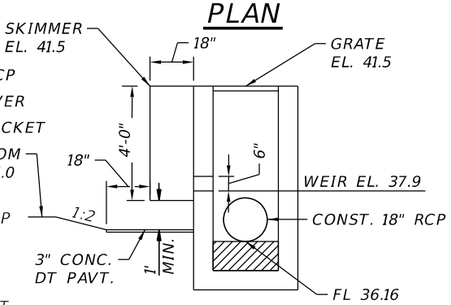
STA. 134+77.16, 56.49' LT.
CONST. MODIFIED TYPE "T" DBI
WITH SKIMMER, INDEX 425-070
MOUNTING BOLT SPACING (DESIGNATED S) = 18"
CONNECT TO EXISTING 18" PIPE



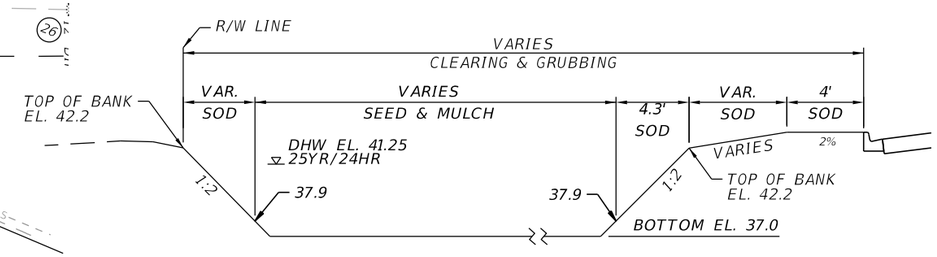

PLAN



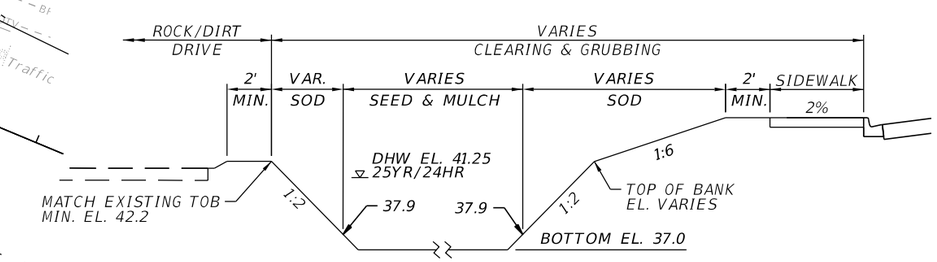

SECTION A-A
NTS




SECTION B-B
NTS




POND SECTION C-C
NTS




POND SECTION D-D
NTS

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| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
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ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

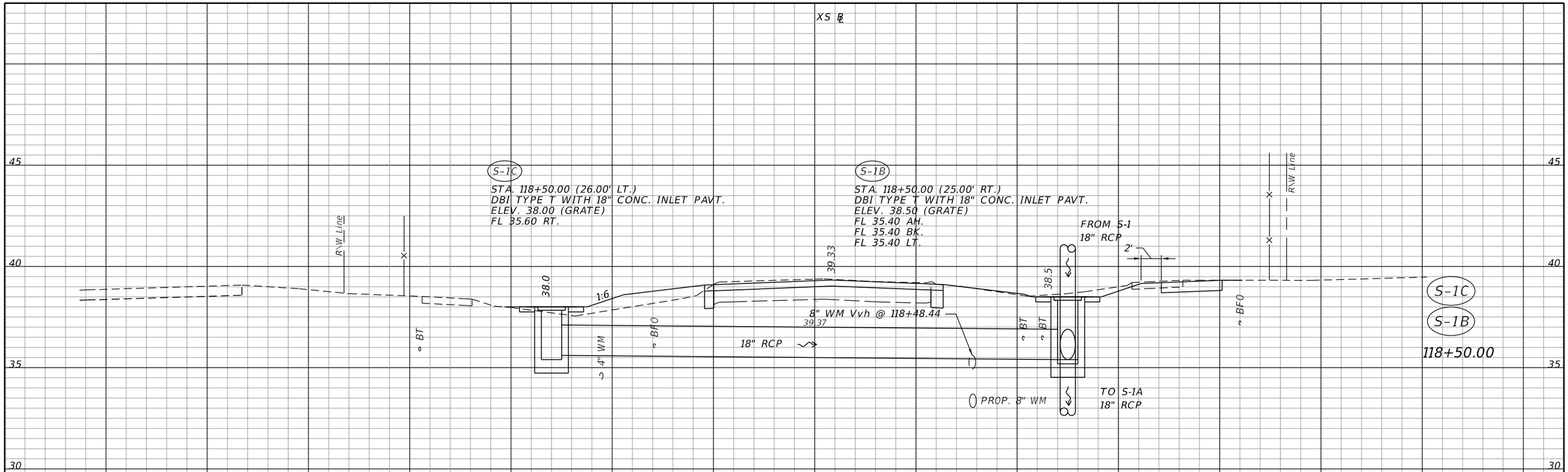

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRAINAGE DETAILS

SHEET NO. 29




DRAINAGE STRUCTURE NOTES:

1. SPECIAL ATTENTION IS DIRECTED TO THE FACT THAT PORTIONS OF SOME DRAINAGE STRUCTURES EXTEND INTO THE STABILIZED PORTION OF THE ROADBED AND EXTREME CAUTION WILL BE NECESSARY IN STABILIZATION OPERATIONS AT THESE LOCATIONS.

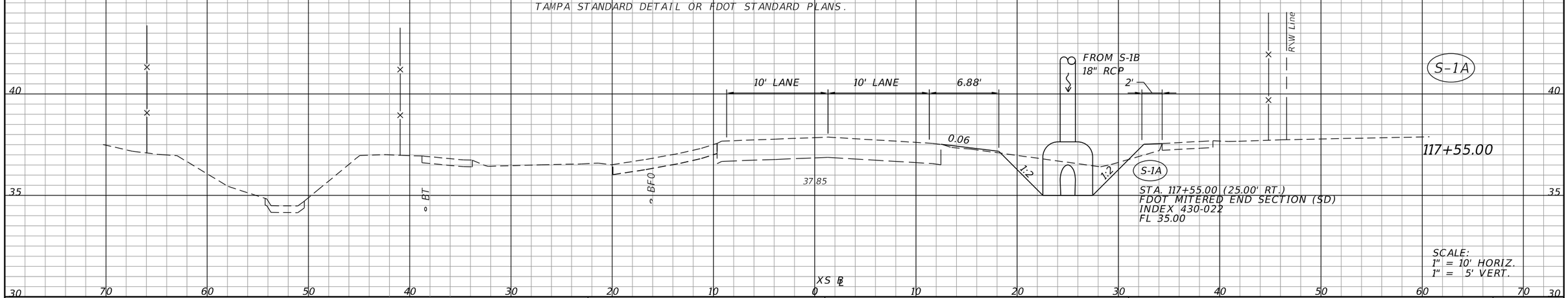
2. PROVIDE SHOP DRAWINGS FOR ALL THE DRAINAGE STRUCTURES.

3. FIELD VERIFY AND/OR DETERMINE THE EXACT LOCATIONS, DIMENSIONS AND ELEVATION OF ALL EXISTING UTILITIES THAT ARE SHOWN TO BE IN CLOSE PROXIMITY TO PROPOSED DRAINAGE STRUCTURES AND UTILITES TO BE ACCOMMODATED BY A PROPOSED CONFLICT STRUCTURE. USE THIS INFORMATION TO CAST AND PLACE THE DRAINAGE STRUCTURES.

4. FIELD VERIFY THE LOCATIONS AND ELEVATIONS OF ALL EXISTING DRAINAGE STRUCTURES AND PIPES TO REMAIN IN THE PERMANENT DRAINAGE SYSTEM PRIOR TO ORDERING, CASTING OR PLACING PROPOSED DRAINAGE STRUCTURES AND PIPES.

5. SOME OF THE DRAINAGE STRUCTURES, STORM DRAINS AND CROSS DRAINS ARE TO BE CONSTRUCTED IN PHASES. REFER TO THE TRAFFIC CONTROL PLANS FOR THE DETAILS OF THE INDIVIDUAL PHASES AND FOR PROPOSED AND TEMPORARY DRAINAGE ELEMENTS.

6. ALL PRECAST DRAINAGE STRUCTURES WILL INCLUDE A SEPARATE INLET OR MANHOLE TOP SEGMENT AND STRUCTURE BOTTOM WITH WALL JOINTS PER THE APPLICABLE CITY OF TAMPA STANDARD DETAIL OR FDOT STANDARD PLANS.




| REVISIONS | | | |
|---|---|---|---|
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ENGINEERING GROUP
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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRAINAGE STRUCTURES

SHEET NO.
30


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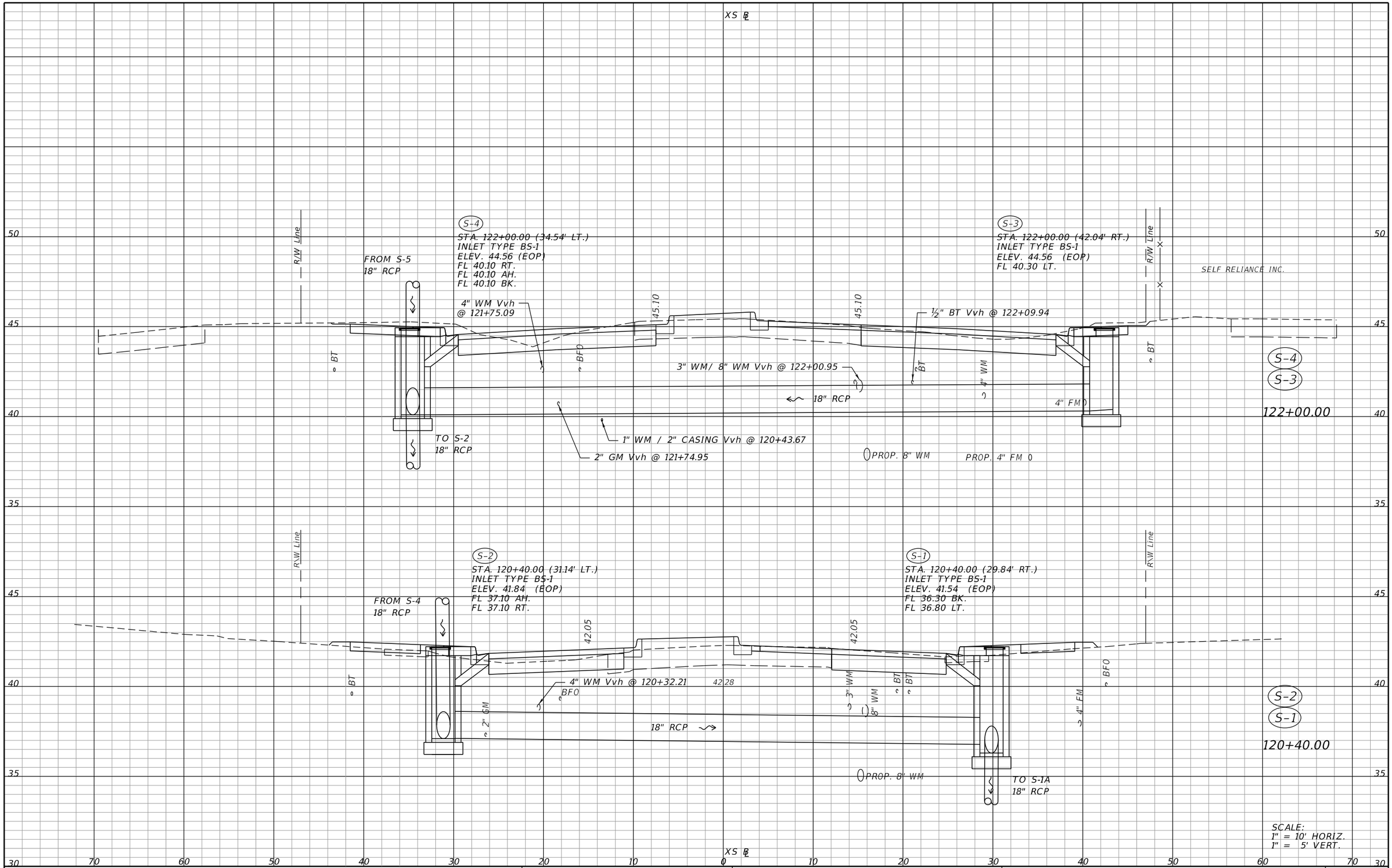


| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

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ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
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TRANSPORTATION DIVISION

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ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRAINAGE STRUCTURES

SHEET NO.
31

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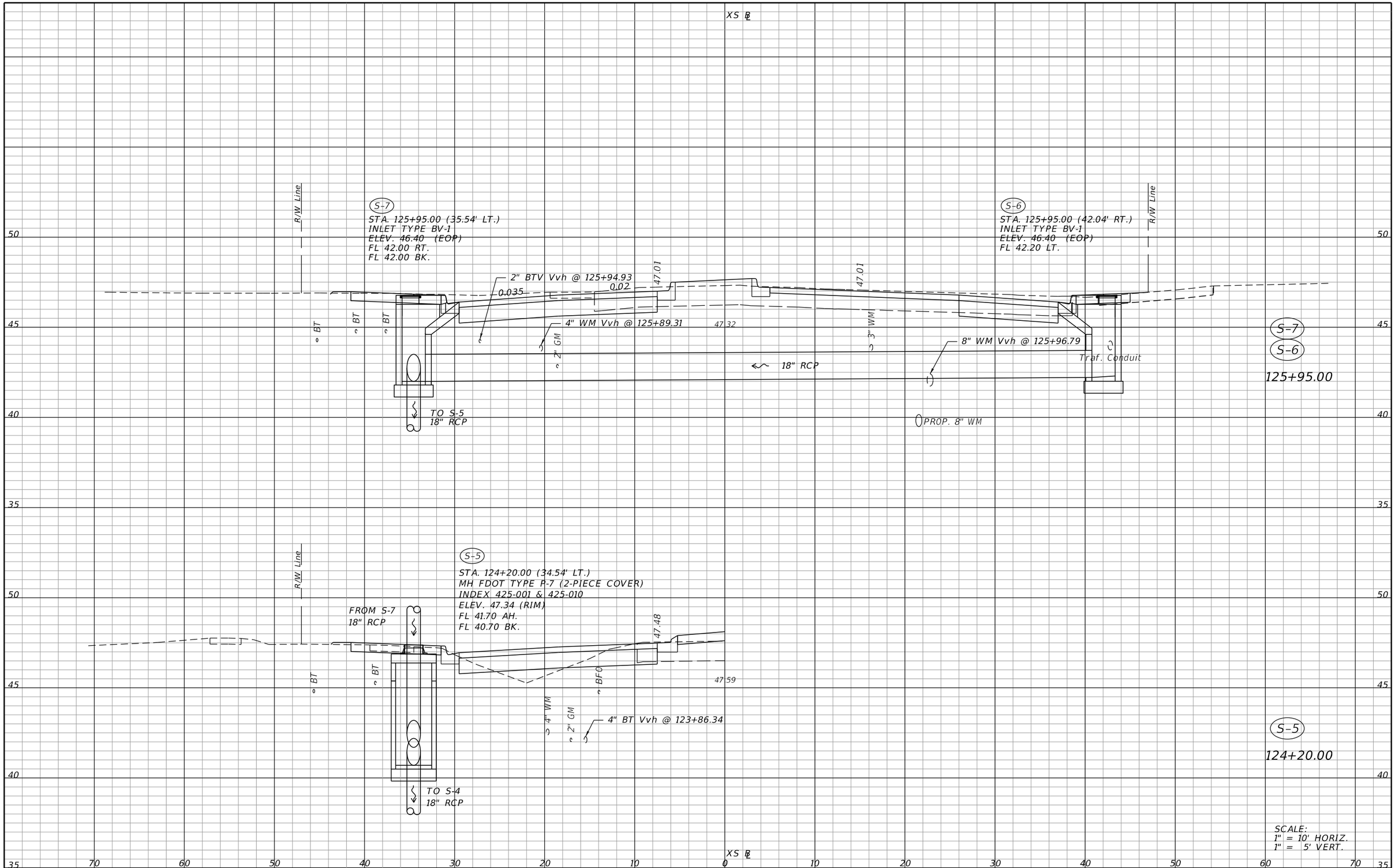


| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
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ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRAINAGE STRUCTURES

SHEET NO.
32

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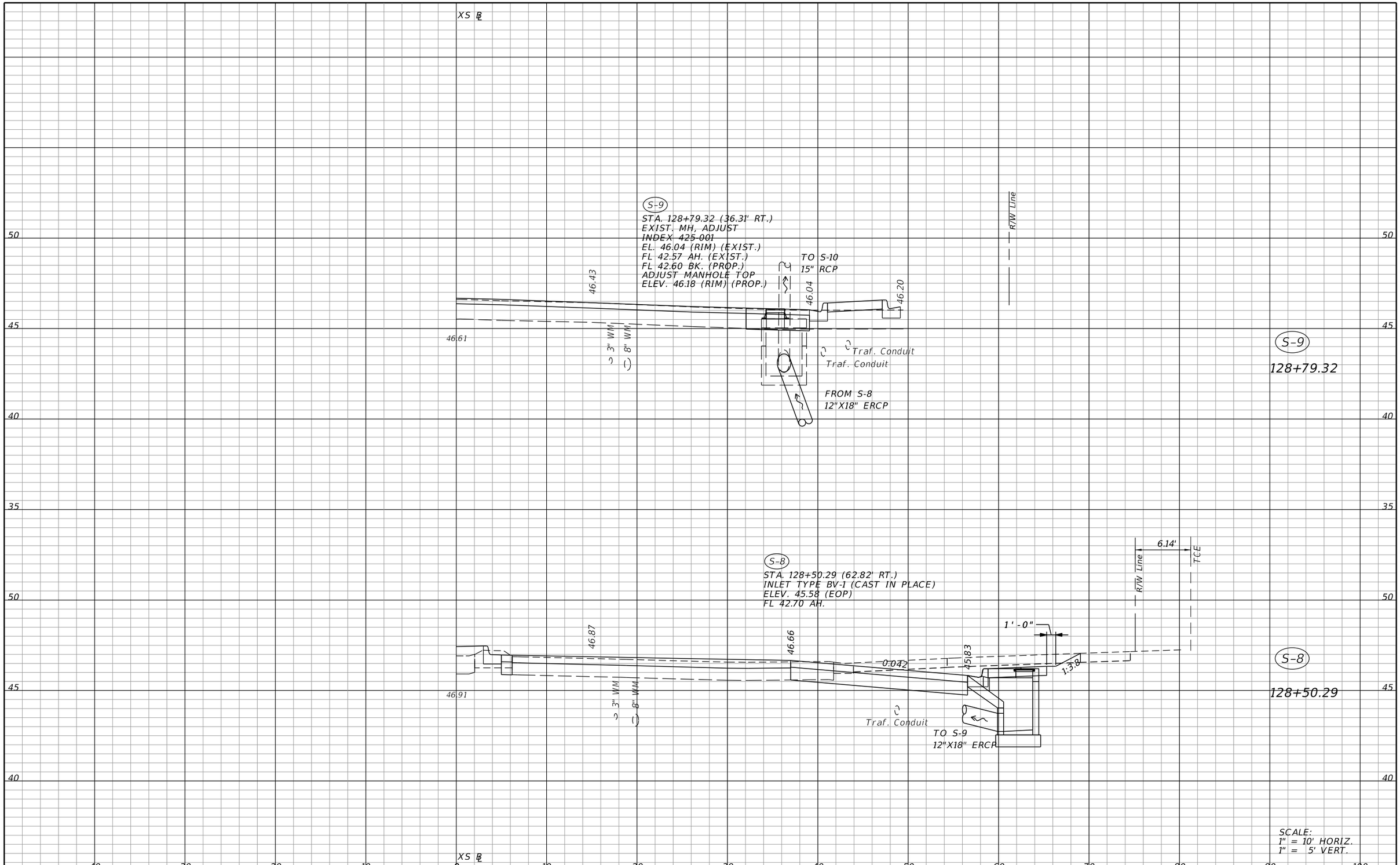
mcannon 9/21/2020 8:17:37 AM P:\C0T1301\CADD\drainage\DRXSRD33.dgn




| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRAINAGE STRUCTURES

SHEET NO.
33

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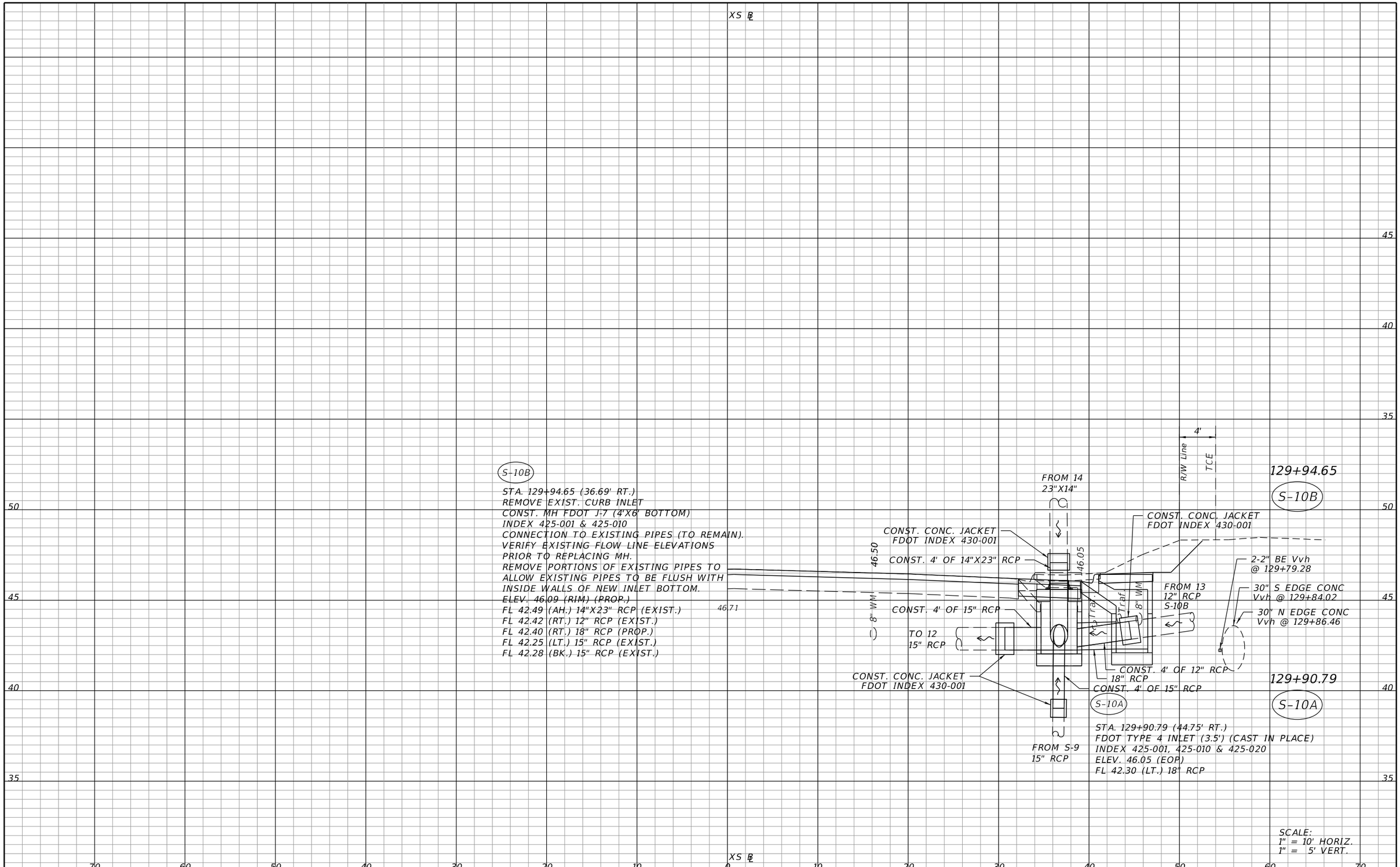
mcannon 9/21/2020 8:17:39 AM P:\C0T1301\CADD\drainage\DRXSRD33.dgn

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| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
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1713 E. 9th AVENUE | TAMPA, FL 33605
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TRANSPORTATION DIVISION

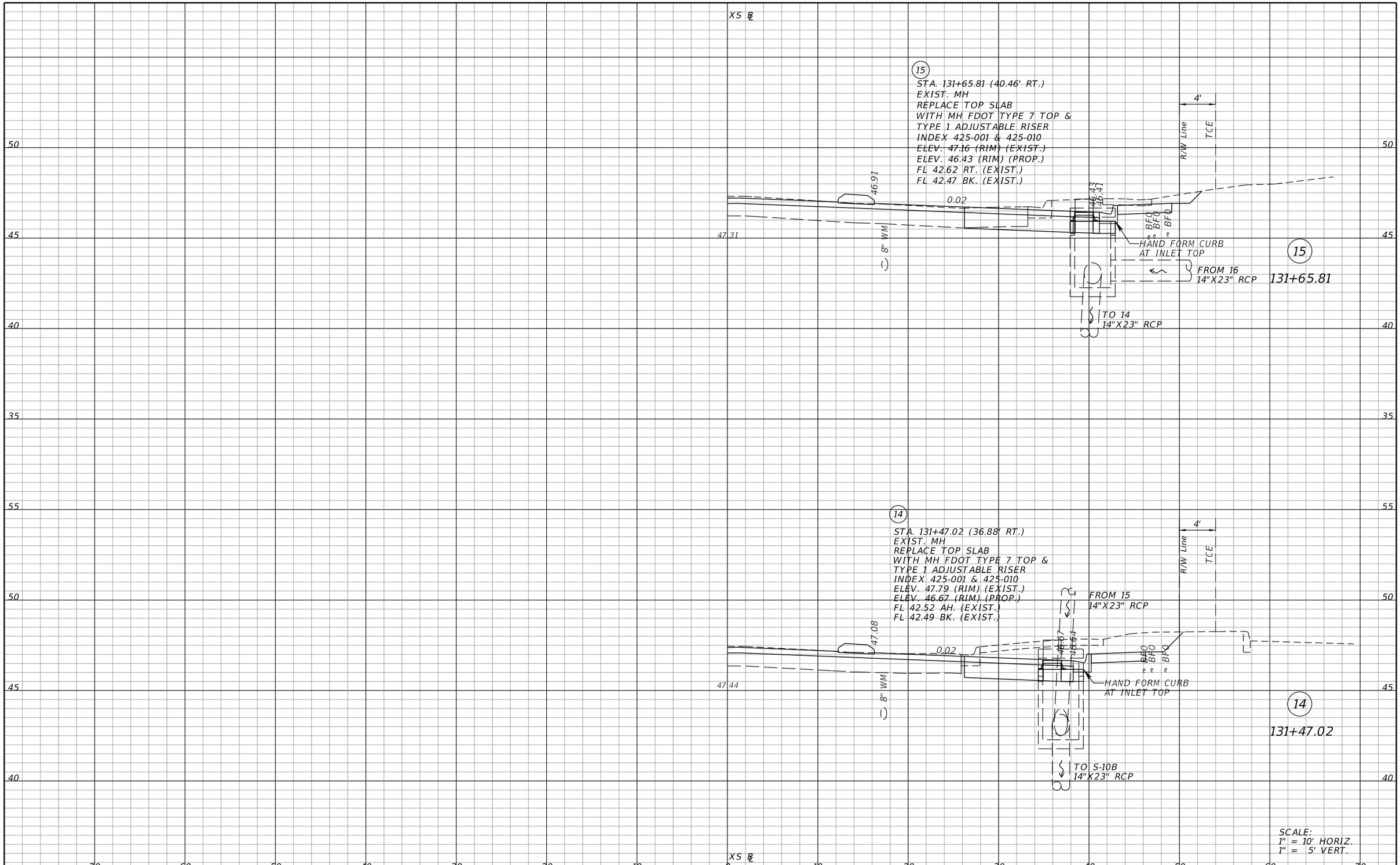
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

DRAINAGE STRUCTURES

SHEET NO.
34

mcannon 9/21/2020 8:17:41 AM P:\C0T1301\CADD\drainage\DRXSRD33.dgn




| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |


ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
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CITY OF TAMPA
TRANSPORTATION DIVISION

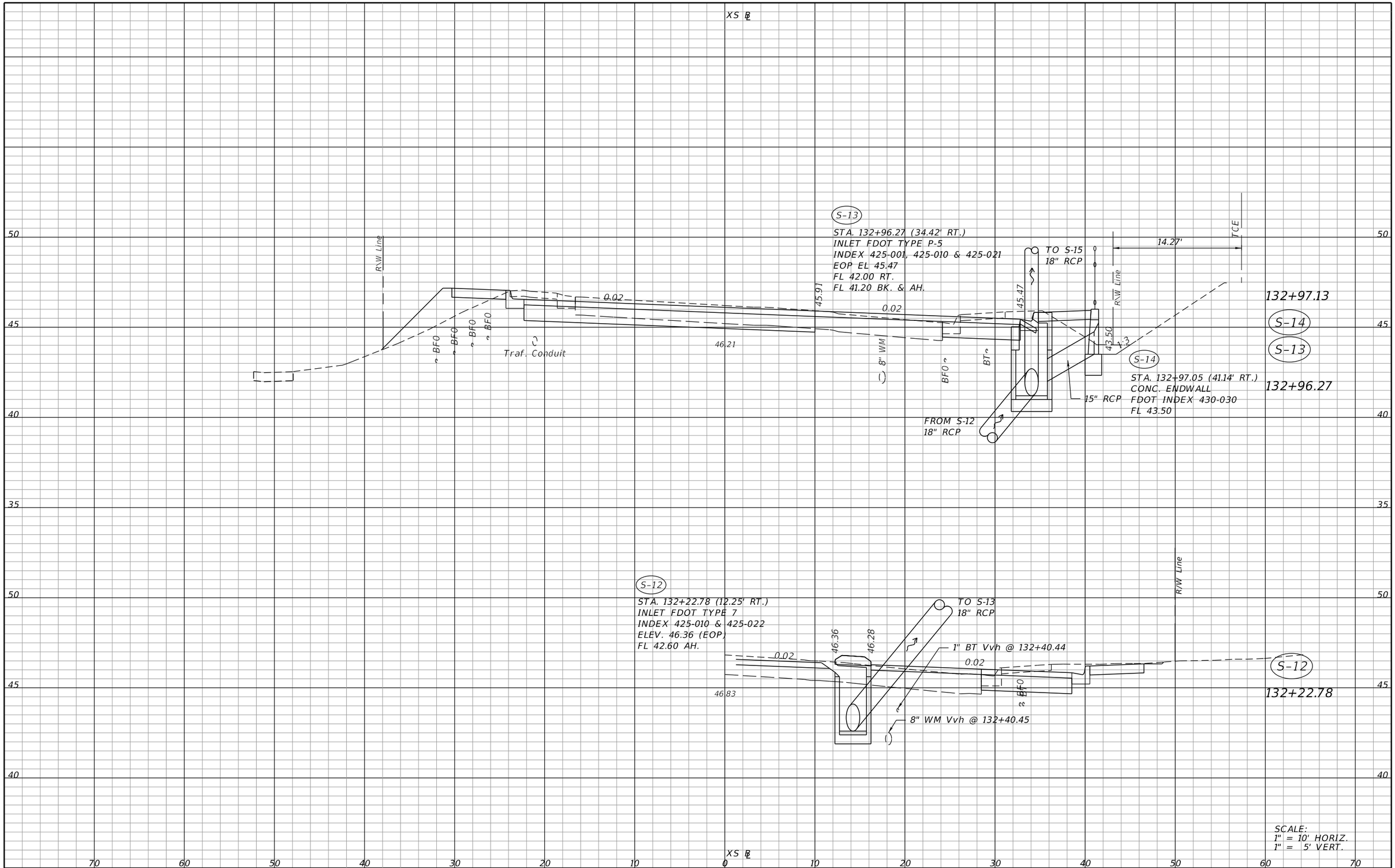
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRAINAGE STRUCTURES

SHEET NO.
35


THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.




| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

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ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRAINAGE STRUCTURES

SHEET NO.
36

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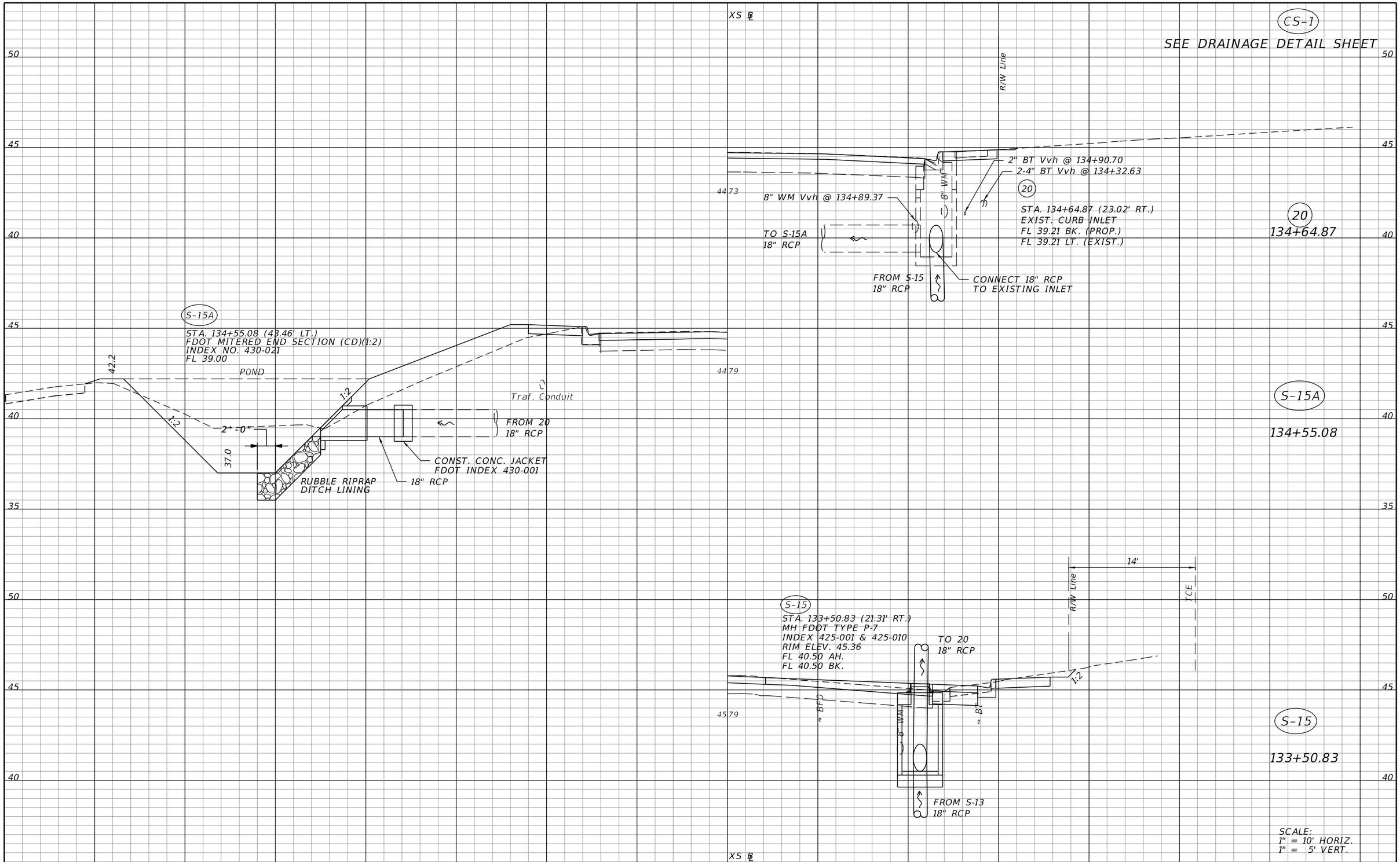
mcannon 9/21/2020 8:17:45 AM P:\C0T1301\CADD\drainage\DRXSRD33.dgn

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| REVISIONS | | | |
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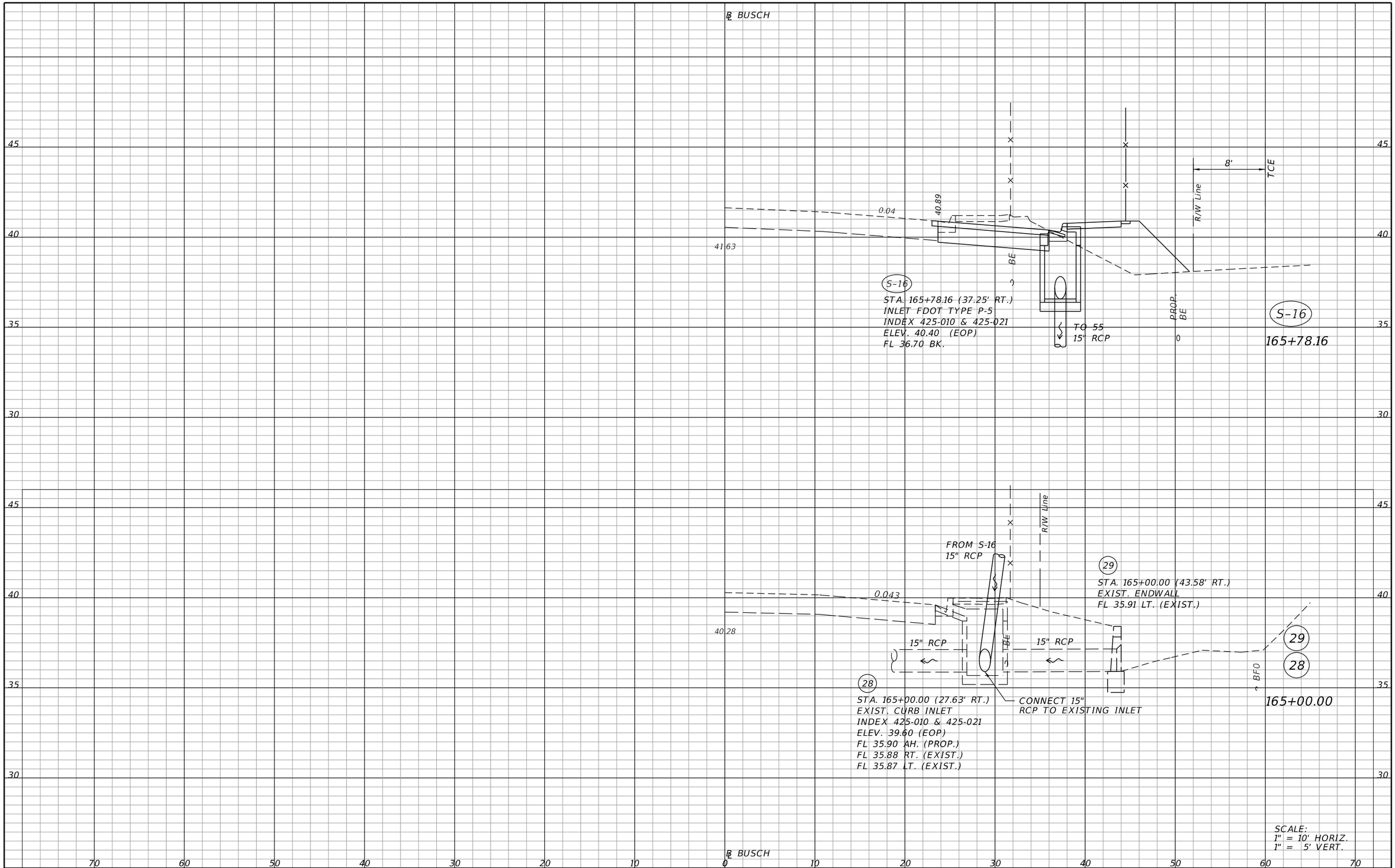
ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRAINAGE STRUCTURES

SHEET NO.
37

mcannon 9/21/2020 8:17:46 AM P:\COT1301\CADD\drainage\DRXSRD33.dgn




| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
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ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRAINAGE STRUCTURES

SHEET NO.
38

mcannon 9/21/2020 8:17:48 AM P:\C0T1301\CADD\drainage\DRXSRD33.dgn

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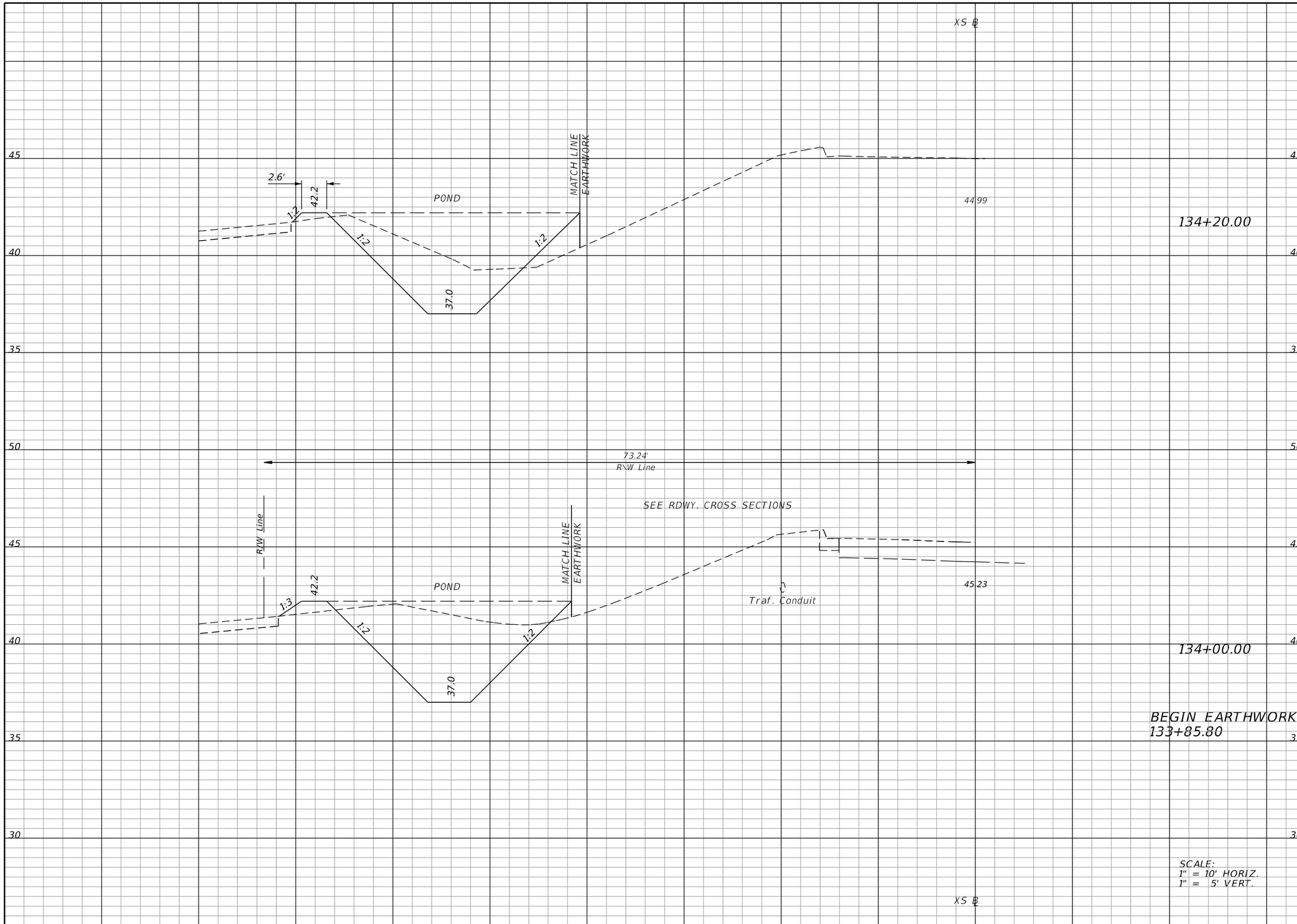


| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 38.10 | 36.6 | 6.90 | 3.8 |
| 60.63 | 0.0 | 3.32 | 0.0 |

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REVISIONS

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TRANSPORTATION DIVISION

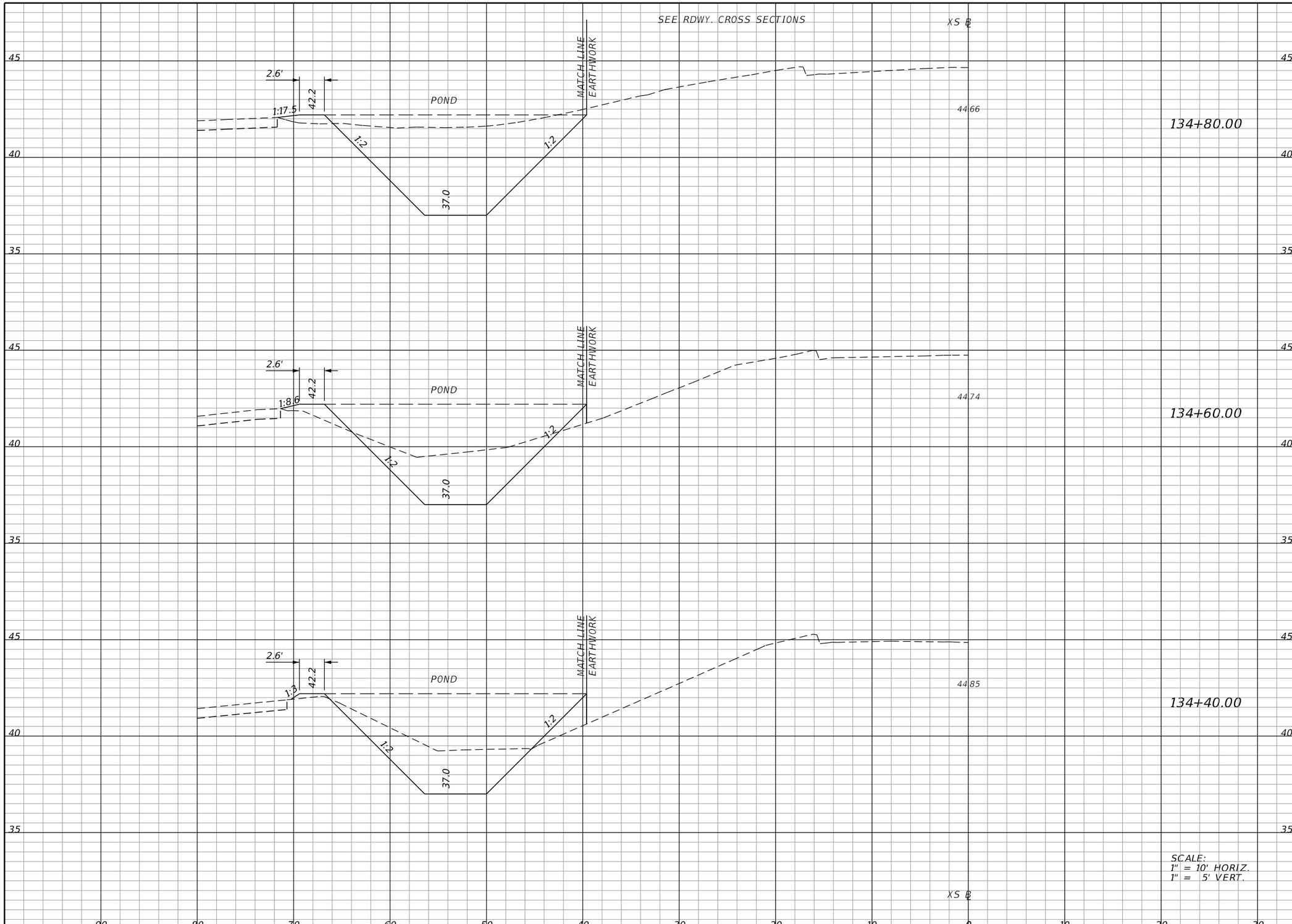
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# POND CROSS SECTIONS

SHEET NO.
39

mcannon 9/21/2020 8:18:12 AM P:\C0T1301\CADD\roadway\PDXSRD01.DGN




| | Regular Exc. | | Embankment | |
|---|---|---|---|---|
| | A | V | A | V |
| 134+80.00 | 75.65 | 41.3 | 1.86 | 2.3 |
| 134+60.00 | 35.95 | 25.5 | 4.42 | 3.5 |
| 134+40.00 | 32.91 | 26.3 | 5.04 | 4.4 |

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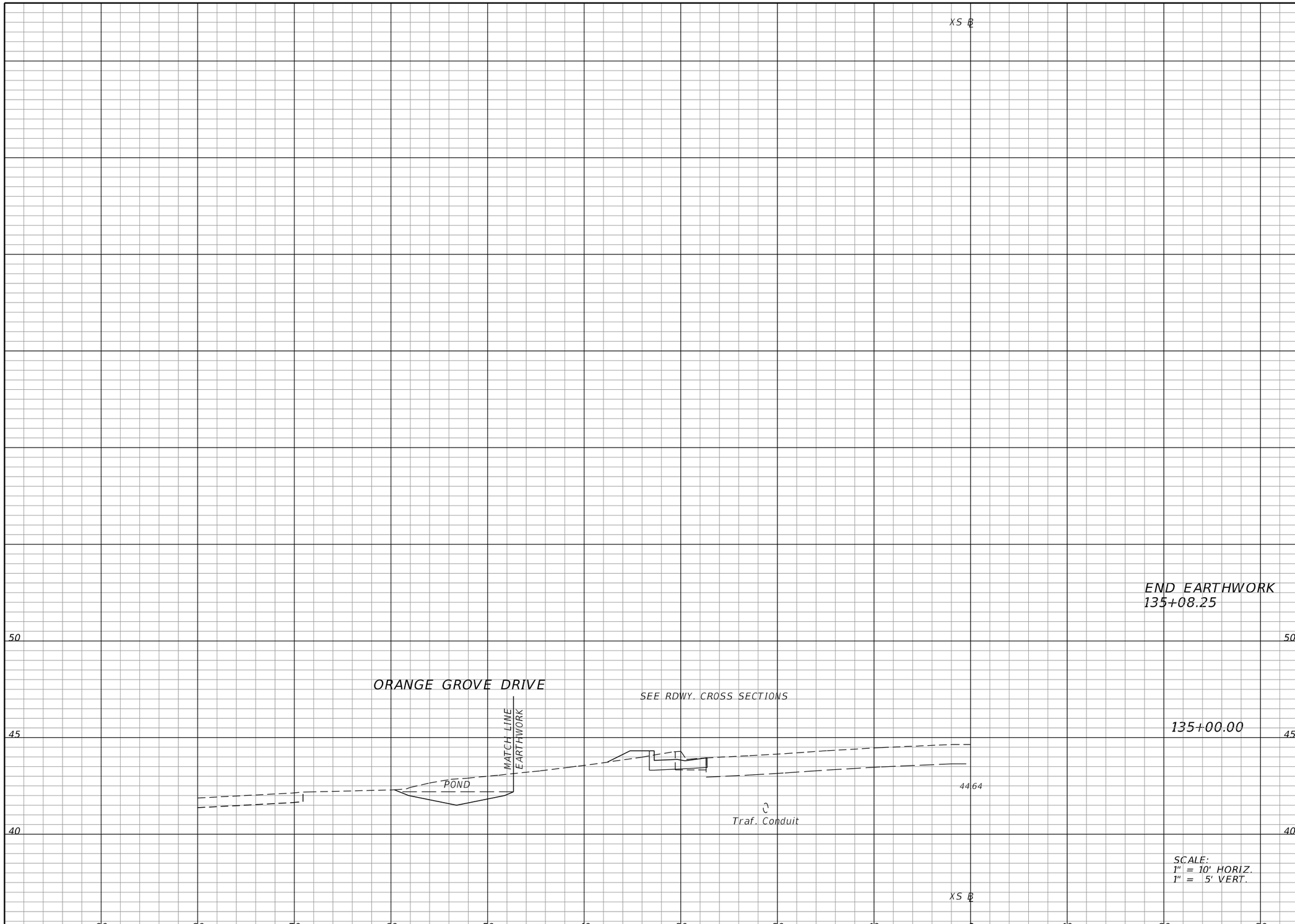
ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# POND CROSS SECTIONS

SHEET NO.
40

mcannon 9/21/2020 8:18:13 AM P:\C0T1301\CADD\roadway\PDXSRD01.DGN




| | Regular Exc. | | Embankment | |
|---|---|---|---|---|
| | A | V | A | V |
| END EARTHWORK 135+08.25 | 0.00 | 1.8 | 0.00 | 0.0 |
| 135+00.00 | 11.78 | 32.4 | 0.00 | 0.7 |

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# POND CROSS SECTIONS

SHEET NO. 41

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

DATE OF SURVEY: JULY 2014

SURVEY MADE BY: MC SQUARED

SUBMITTED BY: JOSEPH H. DISTEFANO

# CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADS

BUSCH BLVD AND ARMENIA AVE

**LOCATION: BUSCH BLVD AND ARMENIA AVE.**

**COUNTY: HILLSBOROUGH**

| | | ORGANIC CONTENT | | MOISTURE CONTENT | | SIEVE ANALYSIS RESULTS % PASS | | | | | | ATTERBERG LIMITS (%) | | | | | CORROSION TEST RESULTS | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| STRATUM No. | LBR VALUE (%) | No. OF TESTS | % ORGANIC | No. OF TESTS | MOISTURE CONTENT | No. OF TESTS | 10 MESH | 40 MESH | 60 MESH | 100 MESH | 200 MESH | No. OF TESTS | LIQUID LIMIT | PLASTIC INDEX | AASHTO GROUP | MATERIAL DESCRIPTION | No. OF TESTS | RESISTIVITY ohm-cm | CHLORIDES ppm | SULFATES ppm | pH |
| 1 | – | 2 | 1-2 | 18 | 3-19 | 4 | 99-100 | 99-100 | 95-96 | 53-71 | 3-7 | – | -- | – | A-3 | BROWN, PALE BROWN, OR GRAY FINE SAND, SLIGHTLY SILTY FINE SAND, SLIGHTLY CLAYEY FINE SAND. | -- | – | -- | – | – |

200 WASH % PASS

| No. OF TESTS | 200 MESH |
|---|---|
| 18 | 1-5 |

SUBGRADE MATERIAL

STRATA BOUNDARIES ARE APPROXIMATE AND REPRESENT SOIL STRATA AT EACH TEST HOLE LOCATION

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

BULENT HATIPOGLU, P.E.
P.E. LICENSE NUMBER 89157
MC SQUARED, INC.
5808 A BRECKENRIDGE PKWY
TAMPA, FLORIDA 33610

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

ROADWAY SOIL SURVEY

SHEET NO.

42

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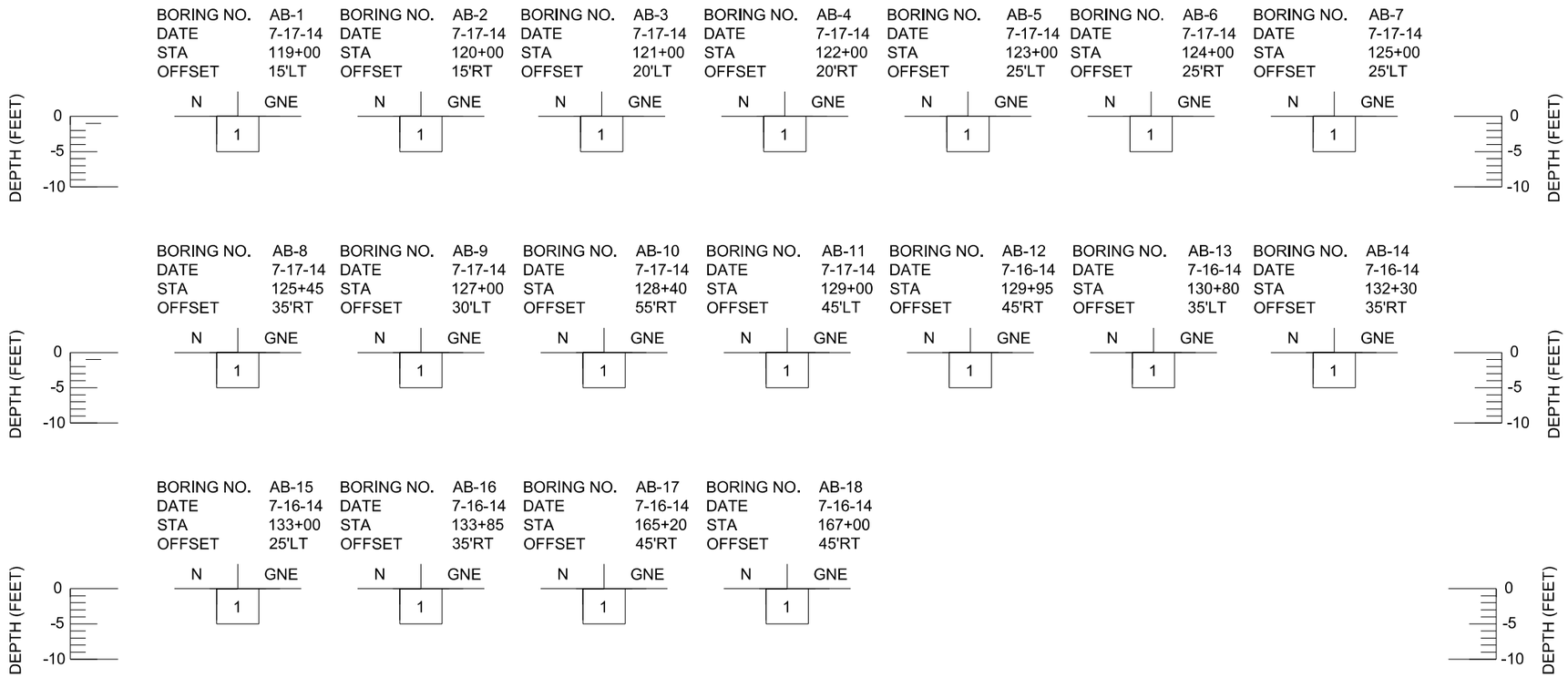


## LEGEND

(1) (A-3) BROWN, PALE BROWN, OR GRAY, FINE SAND, SLIGHTLY SILTY FINE SAND, SLIGHTLY CLAYEY FINE SAND.

NOTES:

GNE GROUNDWATER NOT ENCOUNTERED

NMC NATURAL MOISTURE CONTENT (%)

WATER TABLE

-200 FINES PASSING A NO. 200 SIEVE (%)

LL LIQUID LIMIT (%)

PI PLASTIC INDEX (%)

NP NON PLASTIC SOILS

ORG ORGANIC CONTENT (%)

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

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TAMPA, FLORIDA 33610

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TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

ROADWAY SOIL PROFILES

SHEET NO.
43

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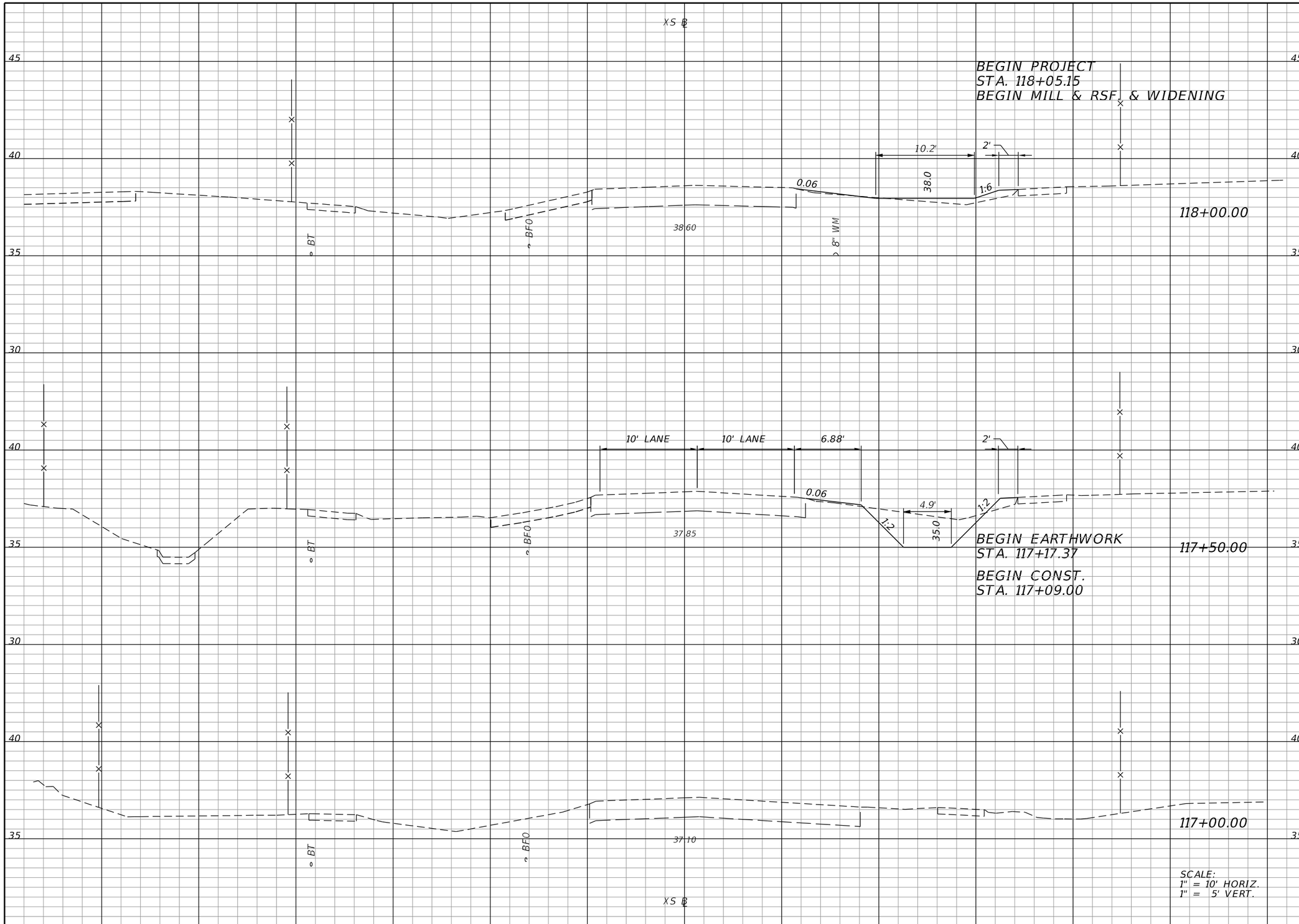


| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 0.06 | 13.3 | 3.25 | 4.4 |
| 14.26 | 8.5 | 1.49 | 0.9 |
| 0.00 | | 0.00 | |

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REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
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ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

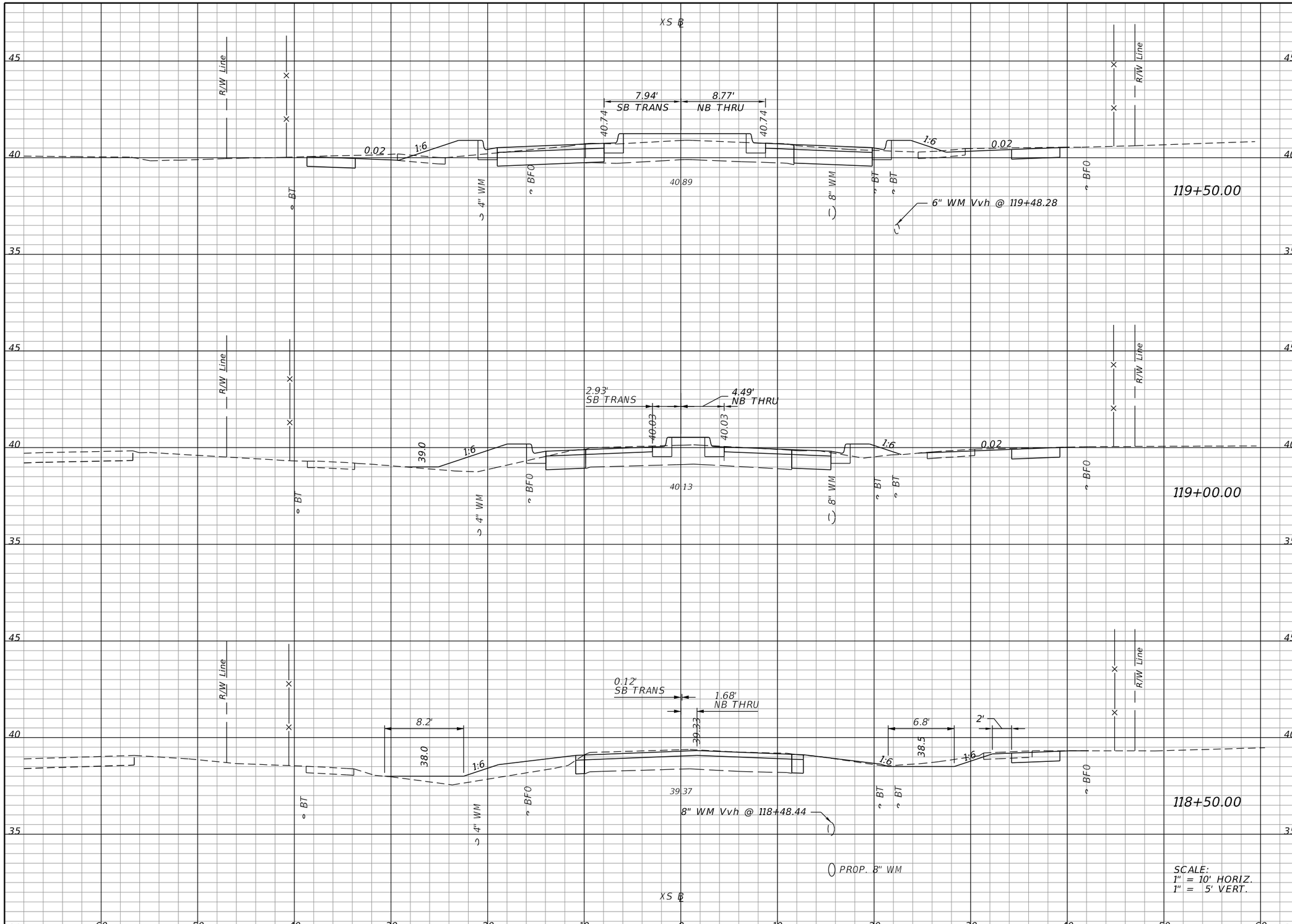
CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO.
44




| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 27.04 | 37.9 | 13.84 | 24.6 |
| 13.85 | 18.3 | 12.71 | 20.3 |
| 5.96 | 5.6 | 9.24 | 11.6 |

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| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
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CITY OF TAMPA
TRANSPORTATION DIVISION

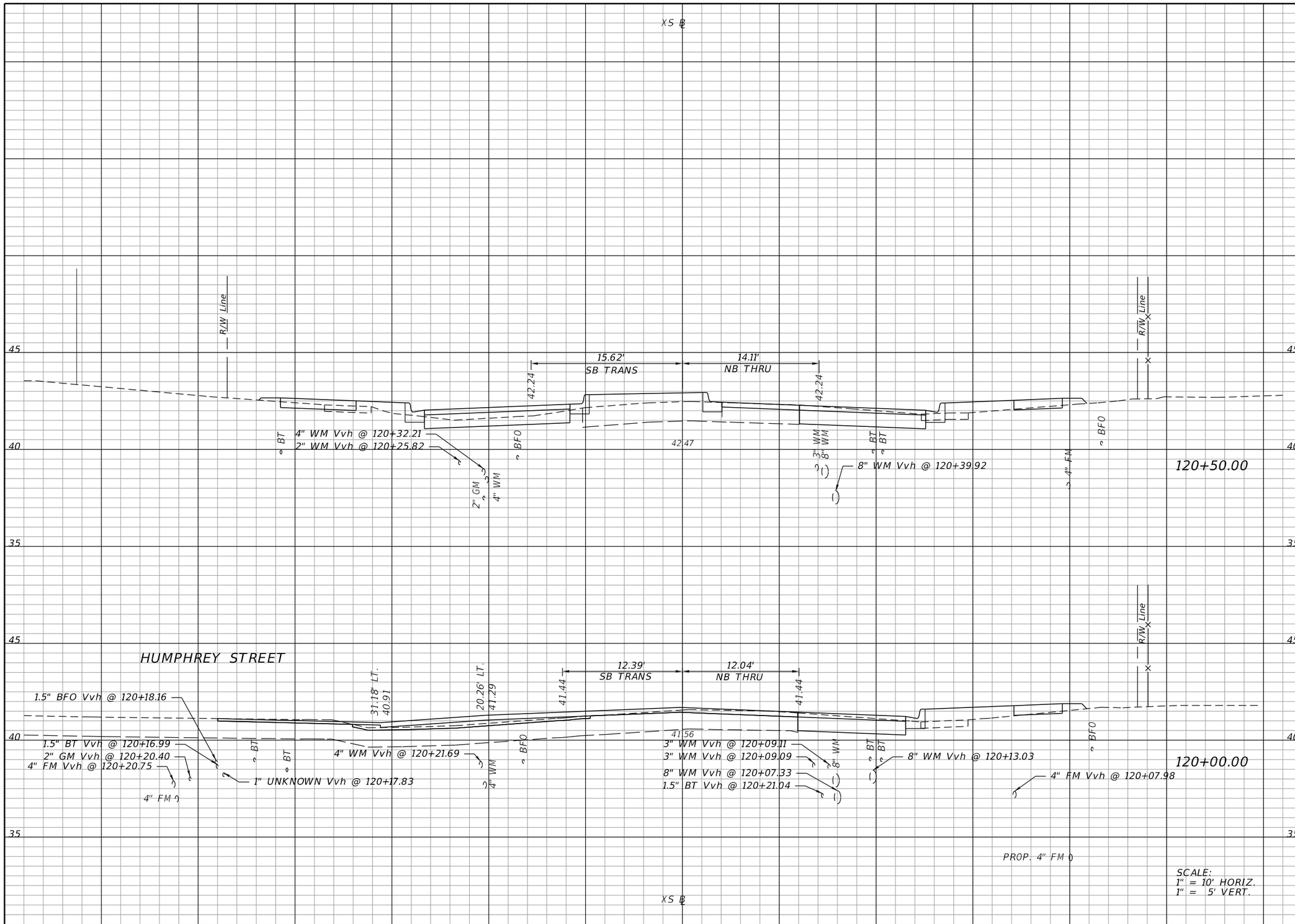
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO.
45

mcannon 9/21/2020 8:19:07 AM P:\C0T1301\CADD\roadway\rdxsrd01.dgn




| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 22.04 | 29.7 | 14.67 | 20.9 |
| 10.05 | 34.3 | 7.87 | 20.1 |

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ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
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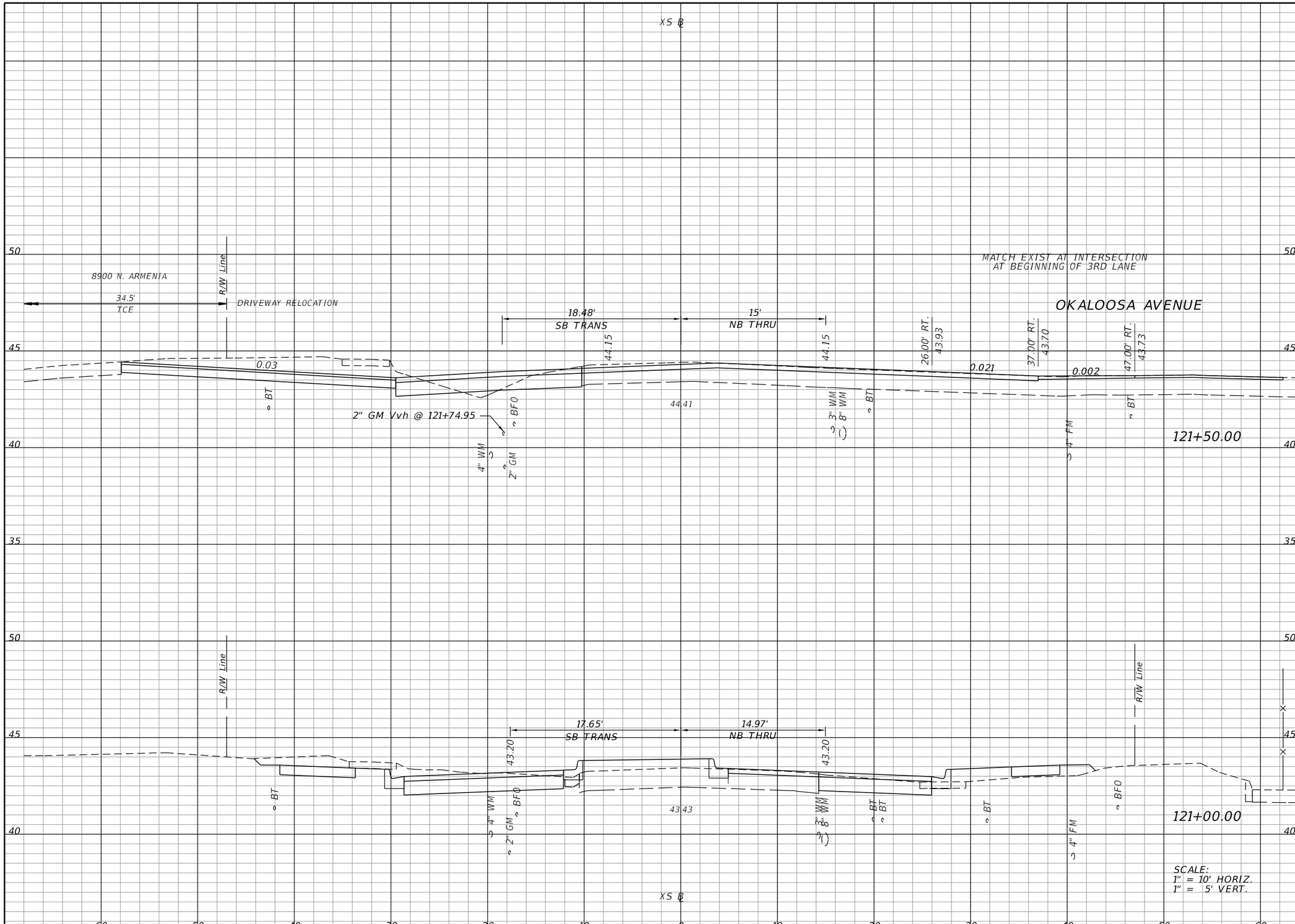
CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO.
46




| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 40.23 | 70.7 | 0.64 | 13.2 |
| 36.17 | 53.9 | 13.65 | 26.2 |

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REVISIONS

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ELEMENT
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CITY OF TAMPA
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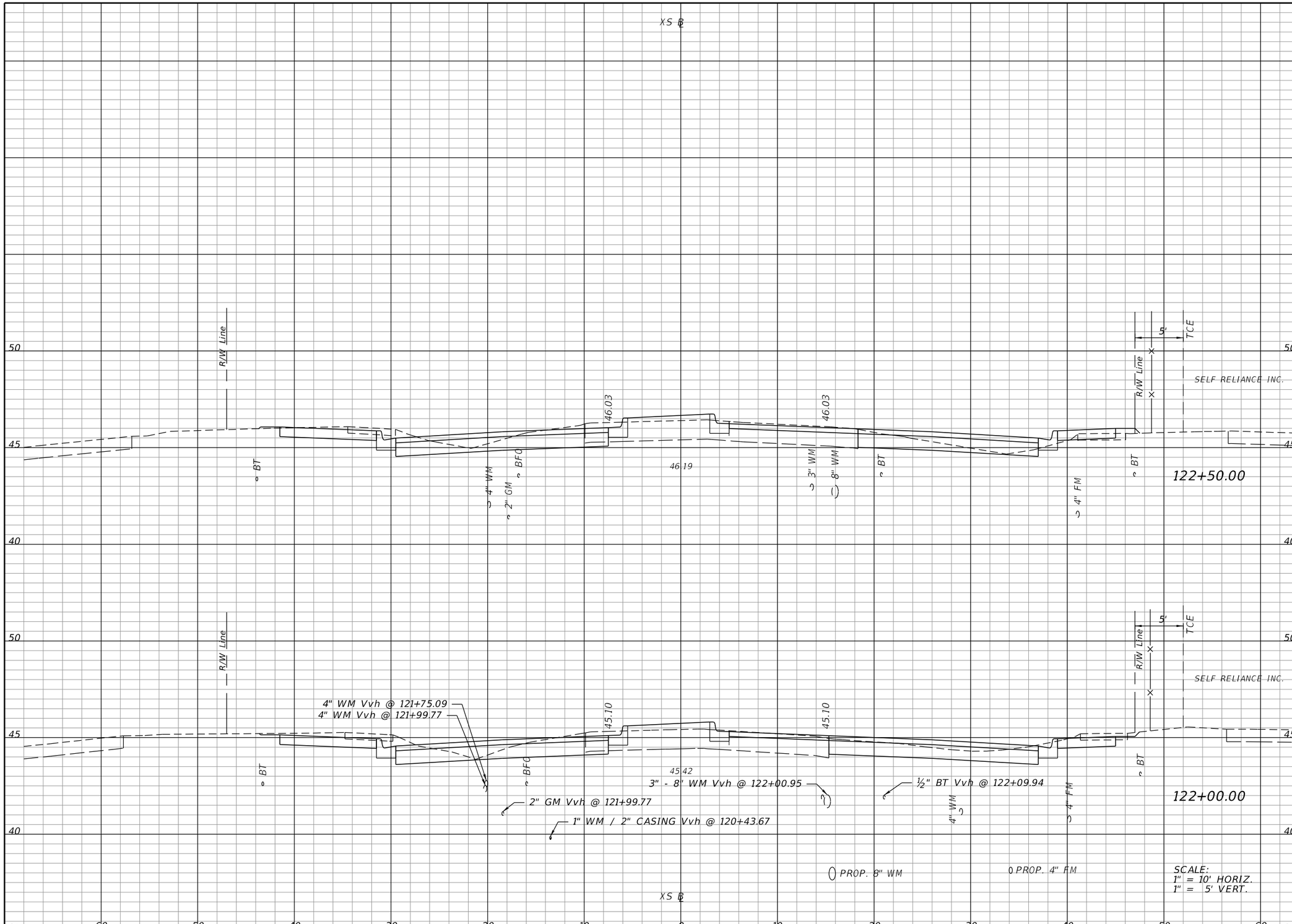
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO.
47

mcannon 9/21/2020 8:19:14 AM P:\C0T1301\CADD\roadway\rdxsrd01.dgn




| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 34.97 | 74.6 | 3.56 | 5.9 |
| 45.59 | 79.5 | 2.80 | 3.2 |

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ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
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TRANSPORTATION DIVISION

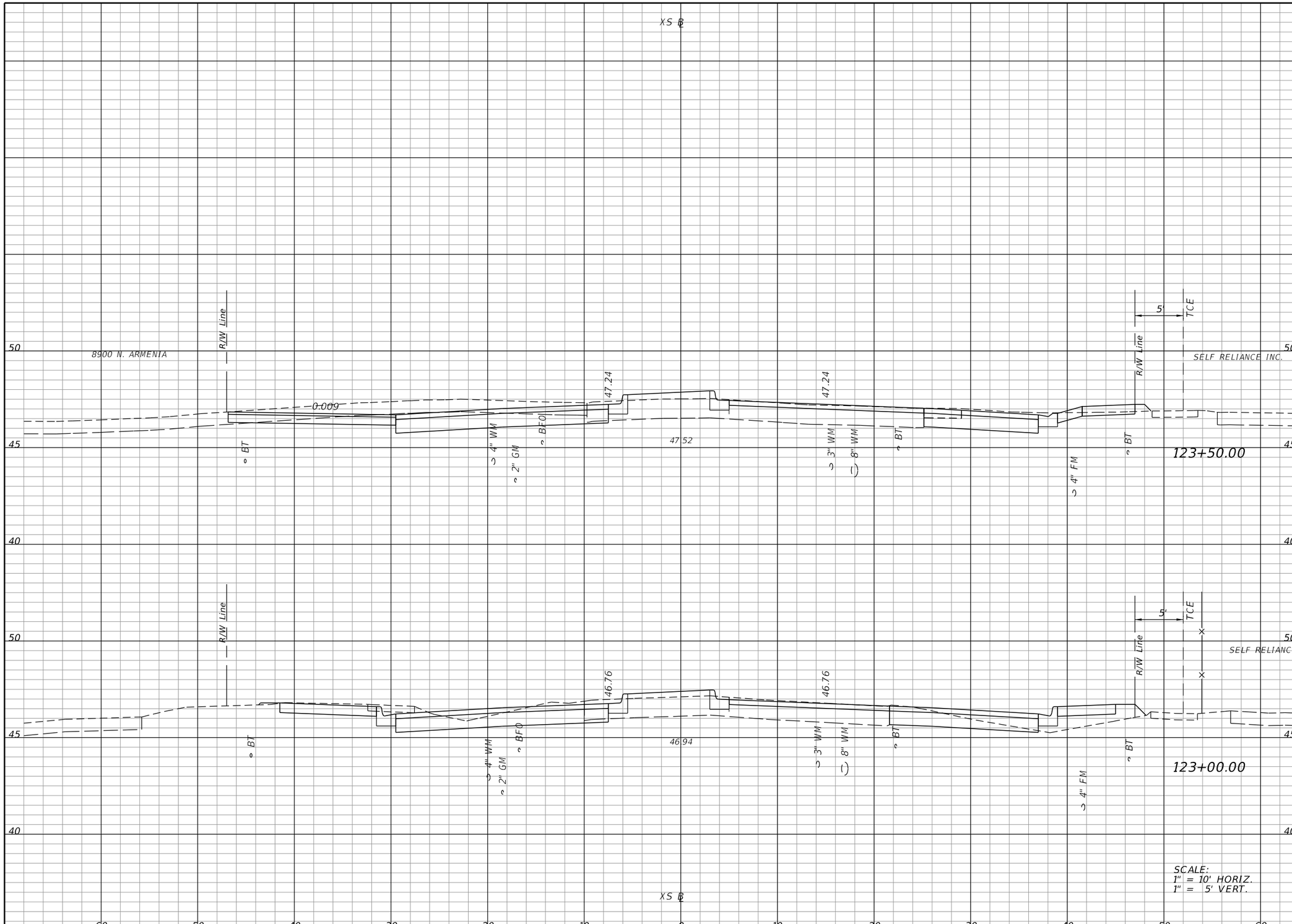
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO. 48

mcannon 9/21/2020 8:19:18 AM P:\C0T1301\CADD\roadway\rdxsrd01.dgn




| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 61.97 | 92.0 | 3.32 | 10.8 |
| 37.42 | 67.0 | 8.39 | 11.1 |

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO.
49

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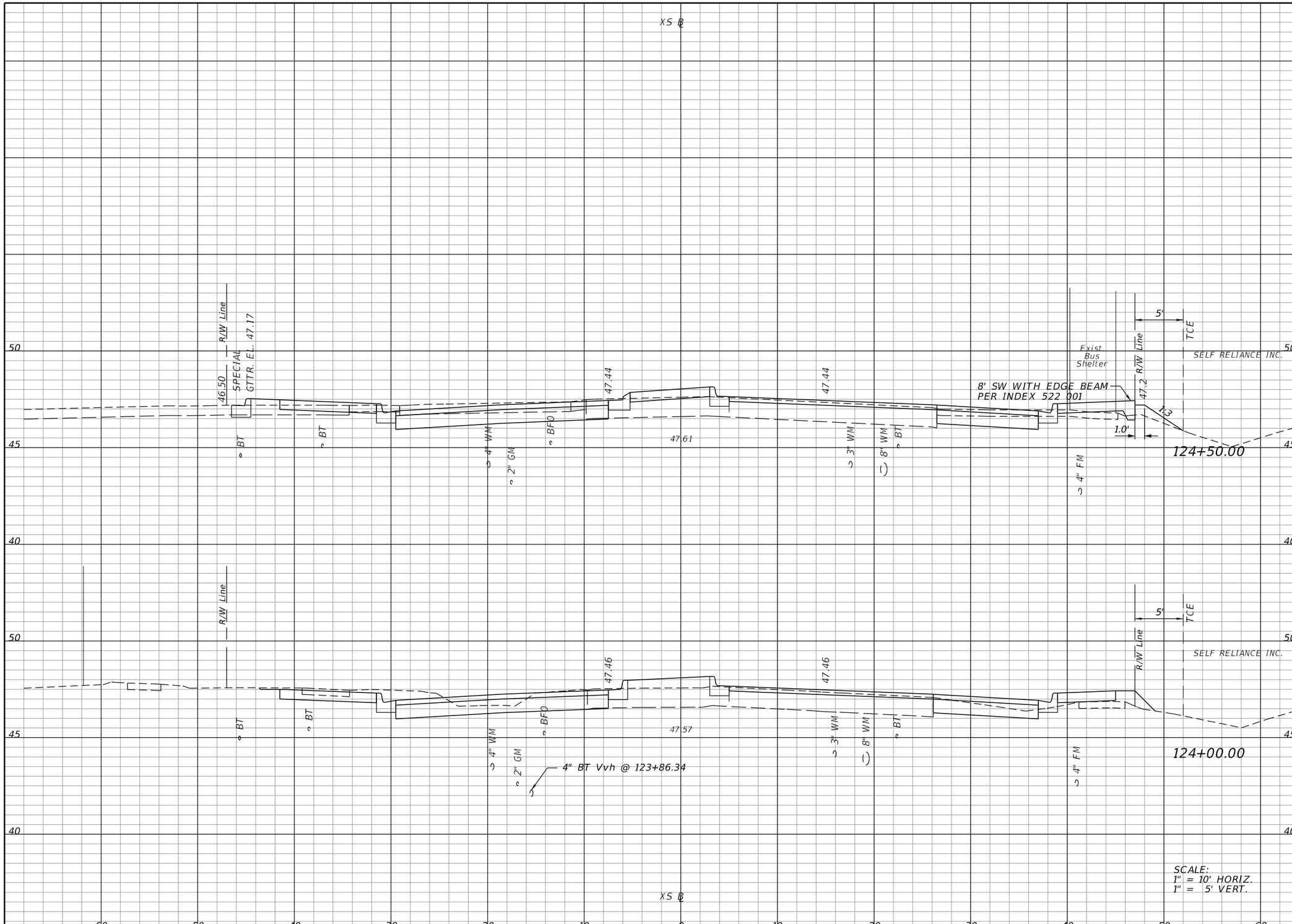


| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 38.32 | 67.5 | 4.56 | 11.9 |
| 34.62 | 89.4 | 8.26 | 10.7 |

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REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|---|---|---|---|
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ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

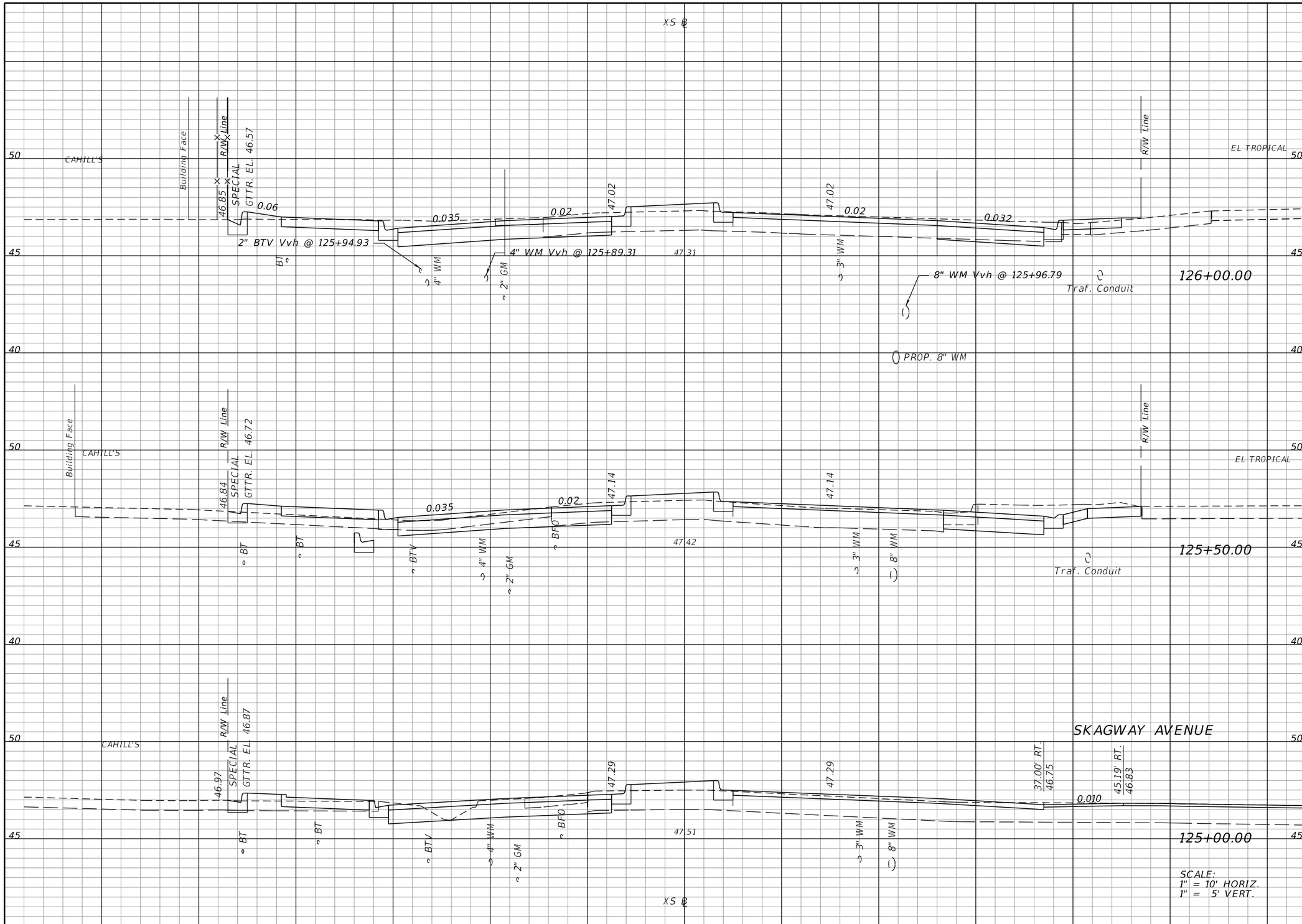
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO. 50

mcannon 9/21/2020 8:19:25 AM P:\C0T1301\CADD\roadway\rdxsrd01.dgn




| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 48.01 | 84.6 | 4.55 | 8.3 |
| 43.38 | 65.5 | 4.46 | 8.4 |
| 27.36 | 60.8 | 4.66 | 8.5 |

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REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|---|---|---|---|
| | | | |

ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

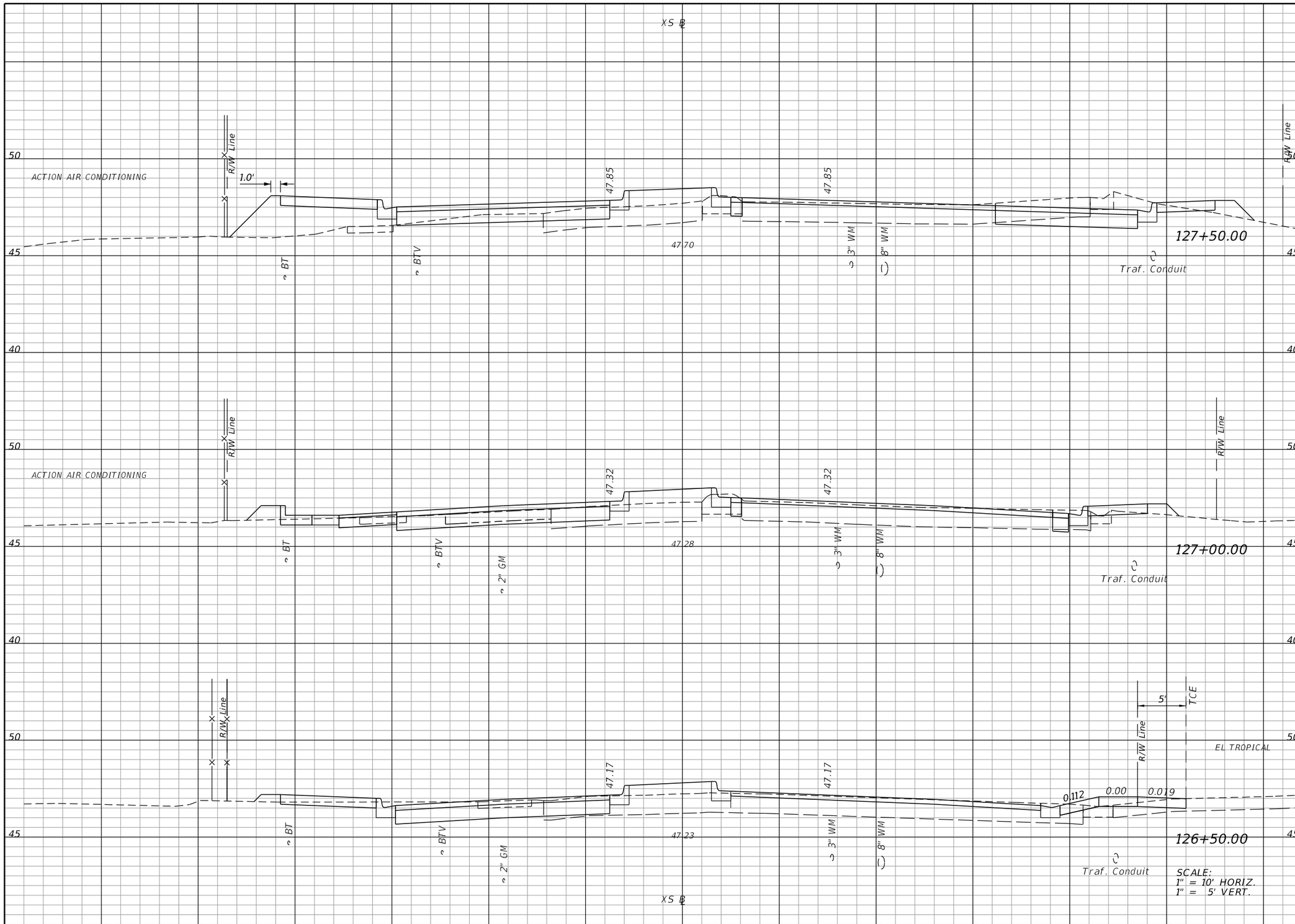
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO. 51

mcannon 9/21/2020 8:19:28 AM P:\C0T1301\CADD\roadway\rdxsrd01.dgn




| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 31.55 | 45.1 | 31.38 | 39.6 |
| 17.21 | 42.6 | 11.43 | 17.3 |
| 28.81 | 71.1 | 7.22 | 1.9 |

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REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|---|---|---|---|
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ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
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CITY OF TAMPA
TRANSPORTATION DIVISION

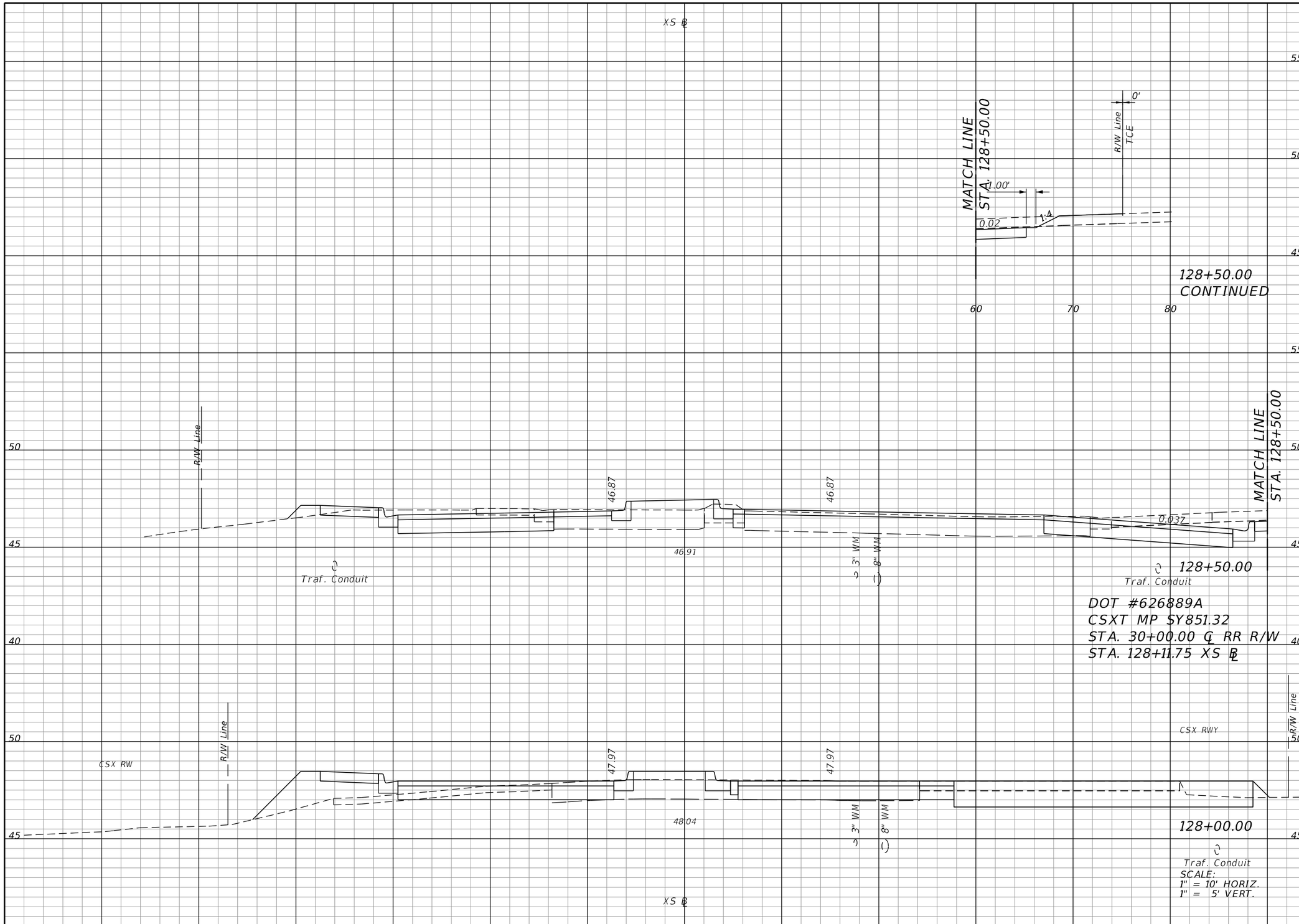
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO.
52

mcannon 9/21/2020 8:19:32 AM P:\COT1301\CADD\roadway\rdxsrd01.dgn




| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 44.30 | | 10.57 | |
| | 62.3 | | 14.9 |
| 44.30 | | 10.57 | |
| 33.12 | | 18.63 | |
| | 3.7 | | 2.1 |
| 33.12 | | 18.63 | |
| | 59.9 | | 46.3 |

END EARTHWORK EXCEPTION
STA. 128+12.00

BEGIN EARTHWORK EXCEPTION
STA. 128+03.00

REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|---|---|---|---|
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
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TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO.
53

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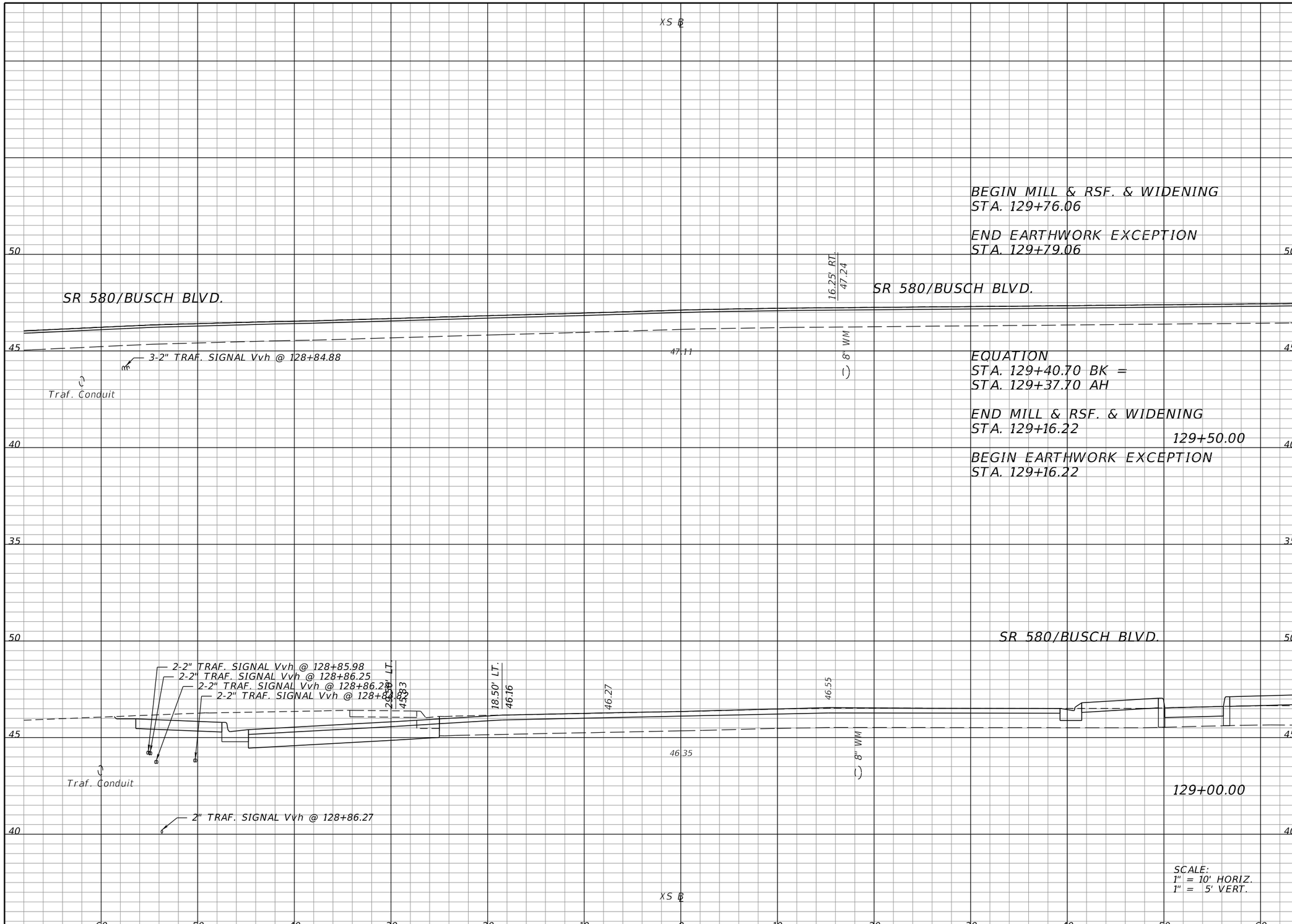


| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 15.47 | | 0.00 | |
| 54.64 | | 0.23 | |
| | 32.8 | | 0.1 |
| 54.64 | | 0.23 | |
| | 91.6 | | 10.0 |

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| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

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TRANSPORTATION DIVISION

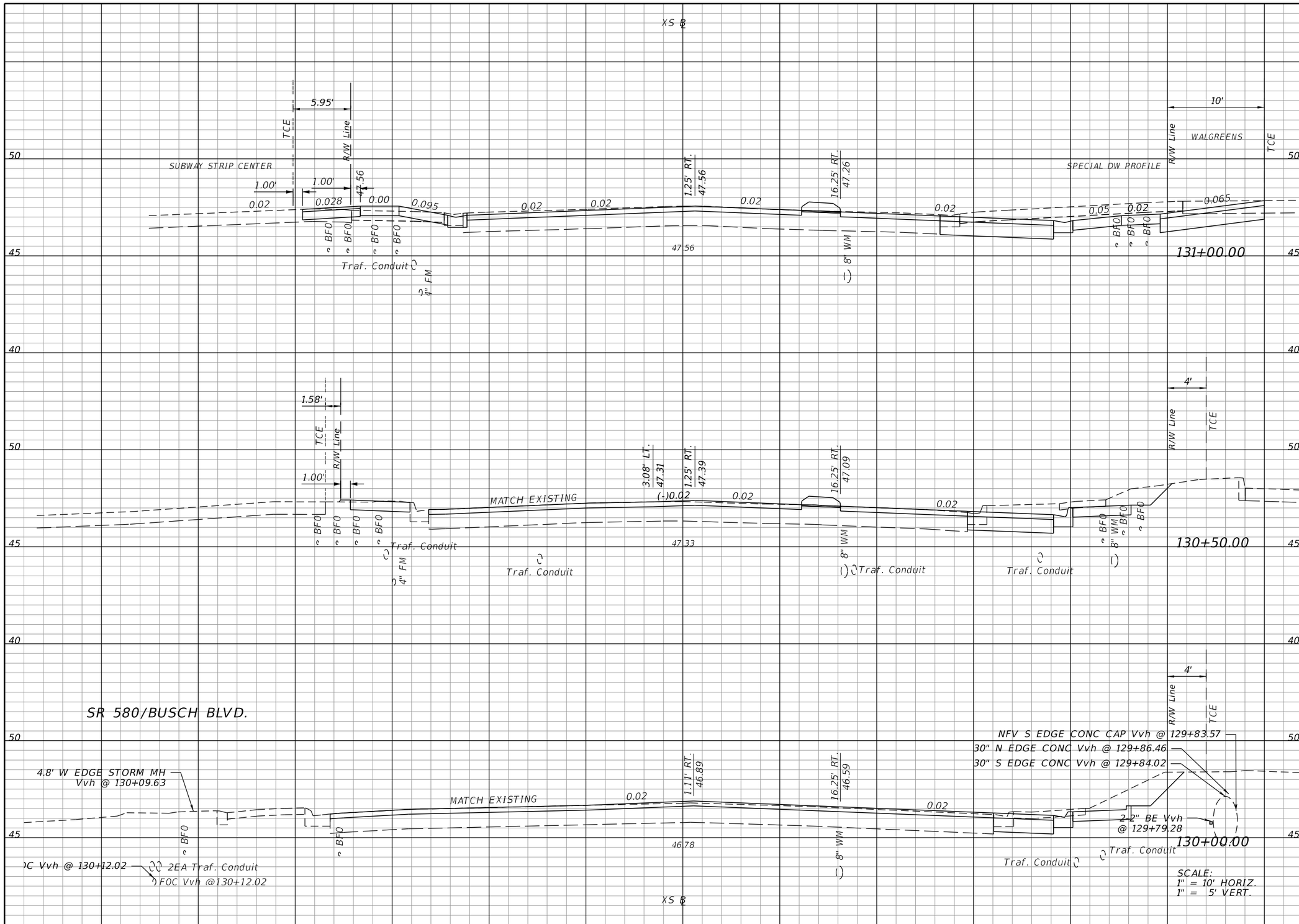
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO. 54

mcannon 9/21/2020 8:19:39 AM P:\C0T1301\CADD\roadway\rdxsrd01.dgn




| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 33.87 | 52.4 | 1.62 | 1.6 |
| 22.76 | 35.4 | 0.11 | 0.1 |
| 15.47 | 12.0 | 0.00 | 0.0 |

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TRANSPORTATION DIVISION

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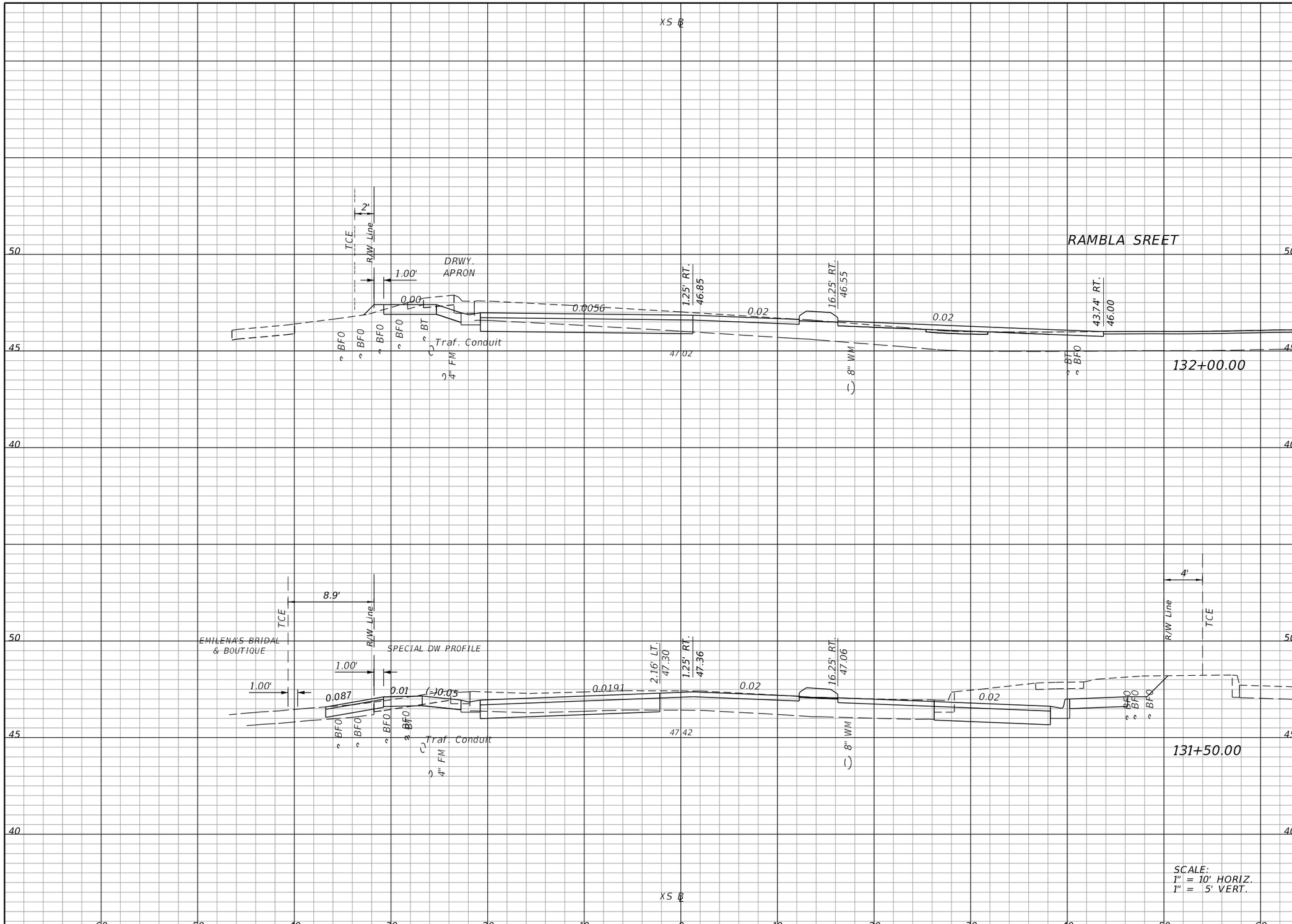
ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO. 55

mcannon 9/21/2020 8:19:43 AM P:\C0T1301\CADD\roadway\rdxsrd01.dgn




| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 35.79 | 91.1 | 0.57 | 0.9 |
| 62.64 | 89.4 | 0.45 | 1.9 |

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TRANSPORTATION DIVISION

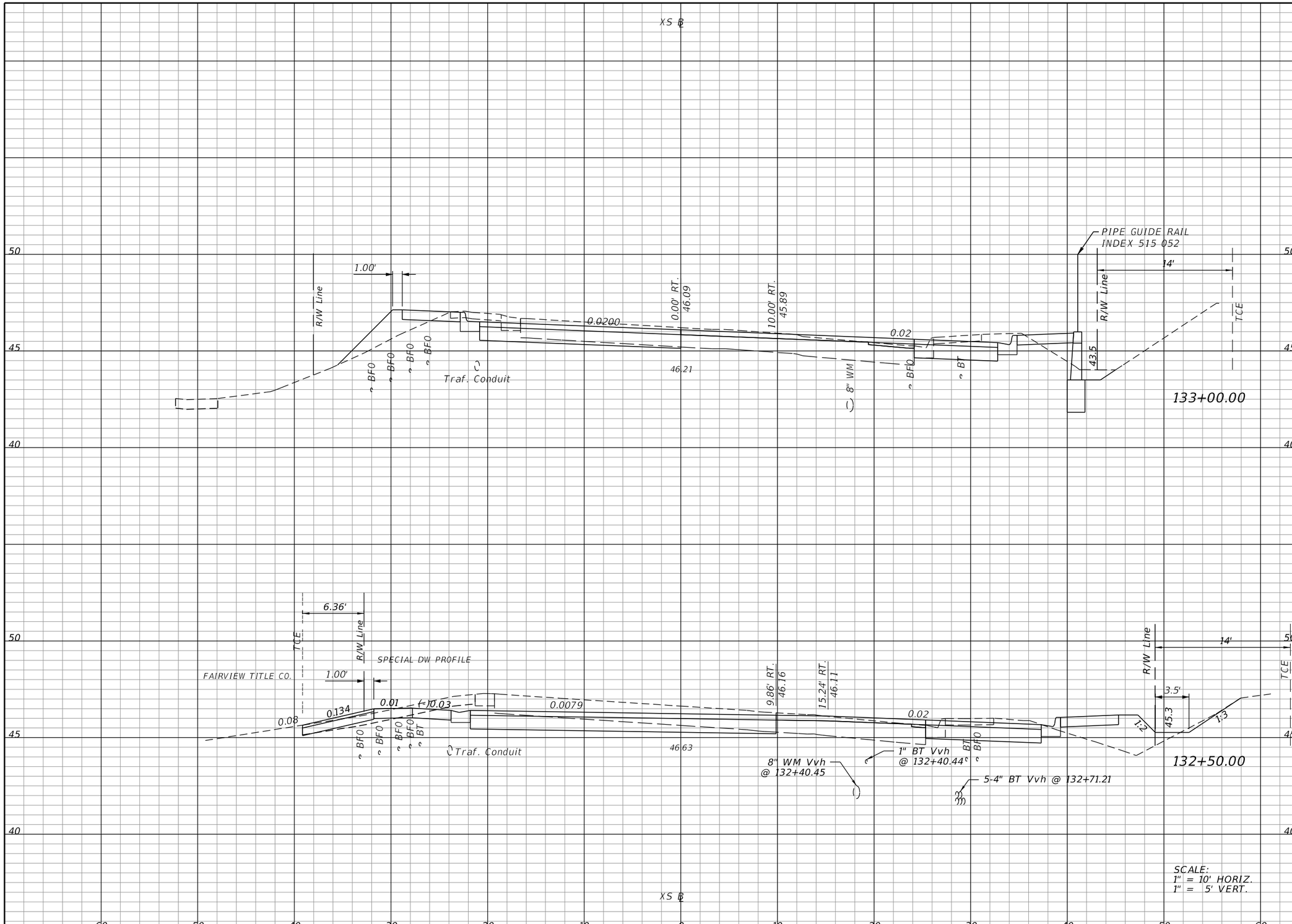
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO.
56

mcannon 9/21/2020 8:19:46 AM P:\C0T1301\CADD\roadway\rdxsrd01.dgn




| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 40.59 | 80.1 | 8.65 | 19.7 |
| 45.87 | 75.6 | 12.61 | 12.2 |

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1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO.
57

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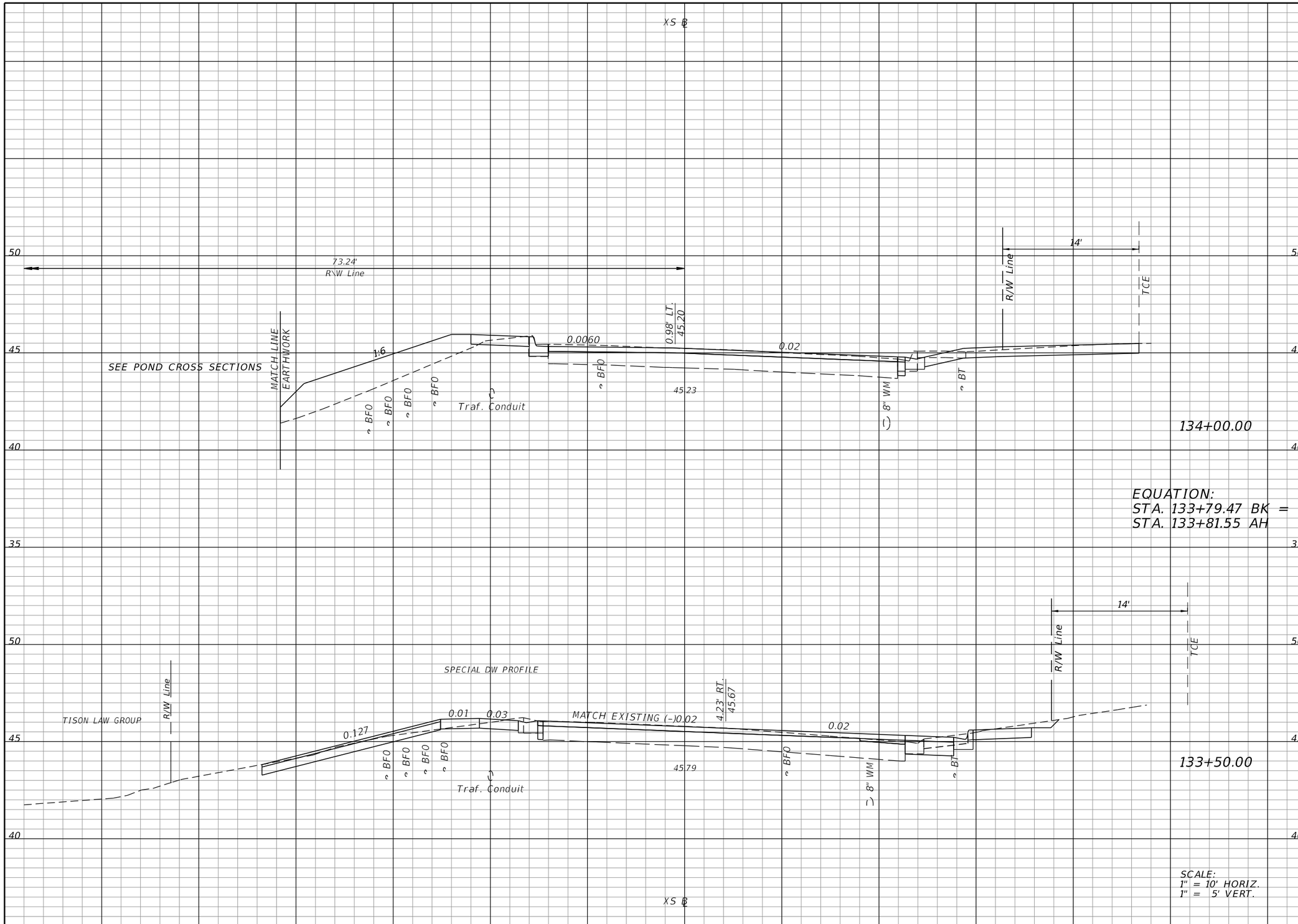


| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 11.55 | | 26.67 | |
| | 25.3 | | 27.5 |
| 15.77 | | 3.03 | |
| | 52.2 | | 10.8 |

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|---|---|---|---|
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ELEMENT ENGINEERING GROUP
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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO. 58

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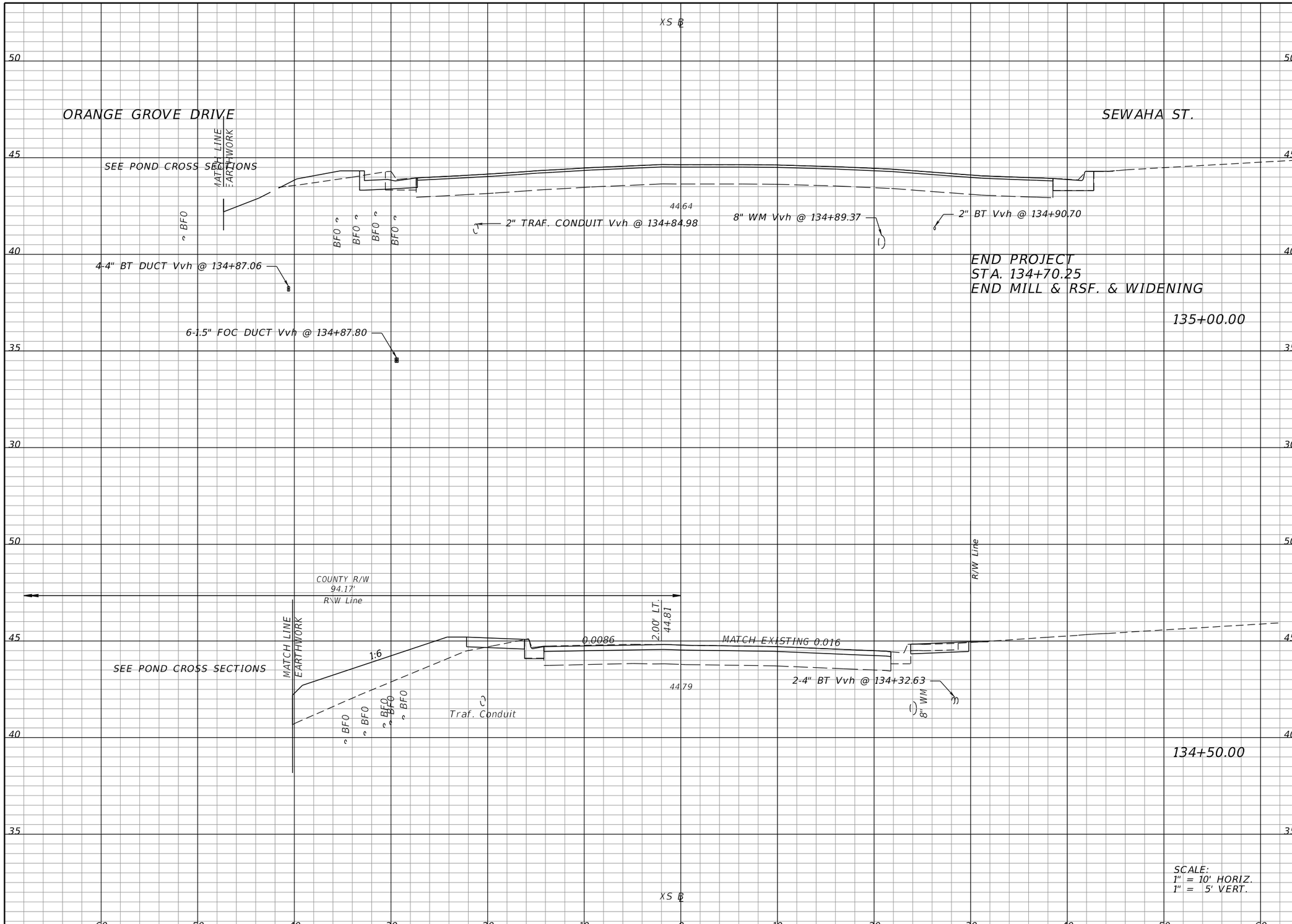


| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 5.23 | 6.9 | 2.91 | 26.1 |
| 2.25 | 12.8 | 25.28 | 48.1 |

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
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TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO. 59

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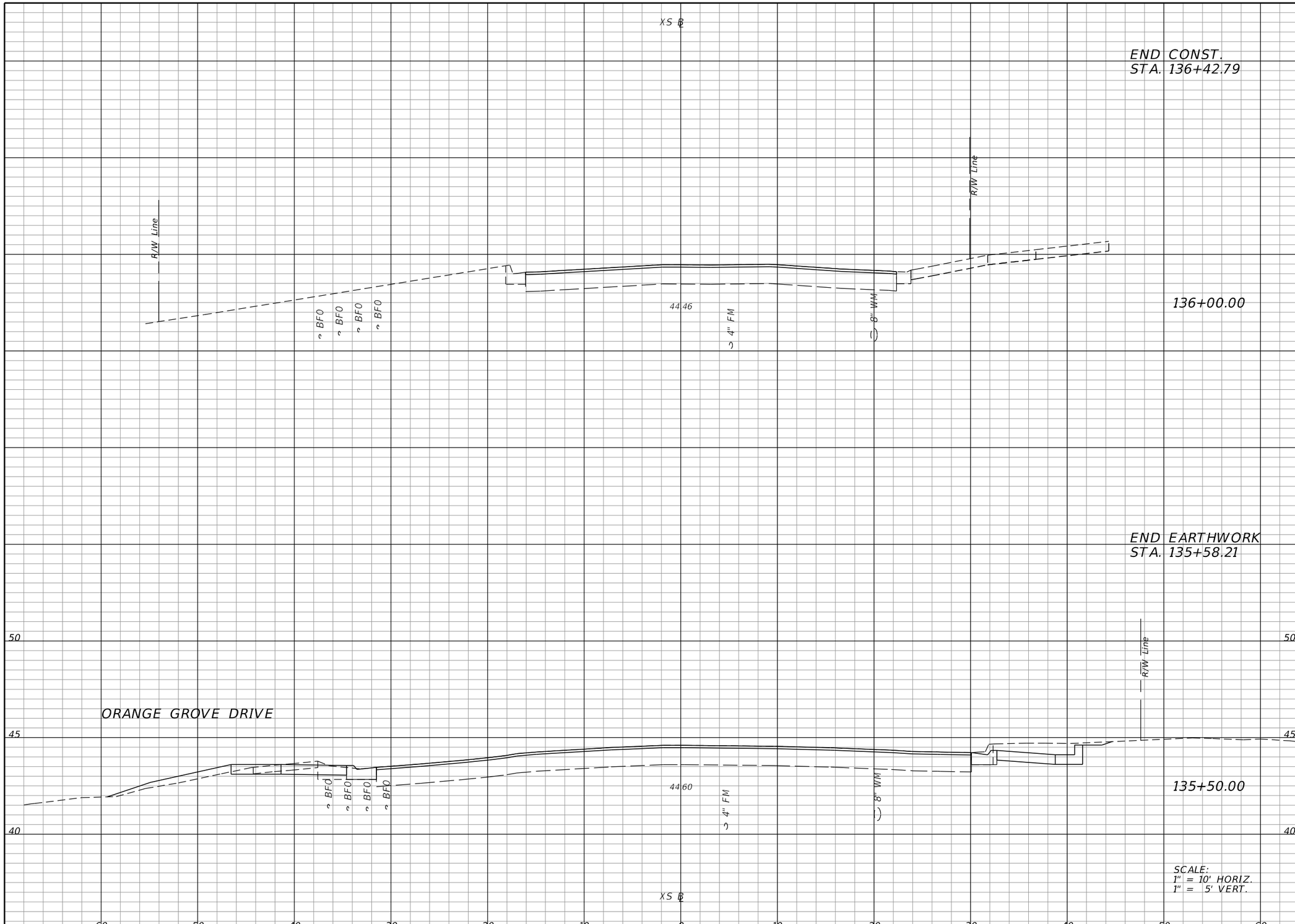


| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 11.6 | 3.5 | 4.27 | 1.3 |
| 11.6 | 15.6 | 4.27 | 6.6 |

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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO.
60

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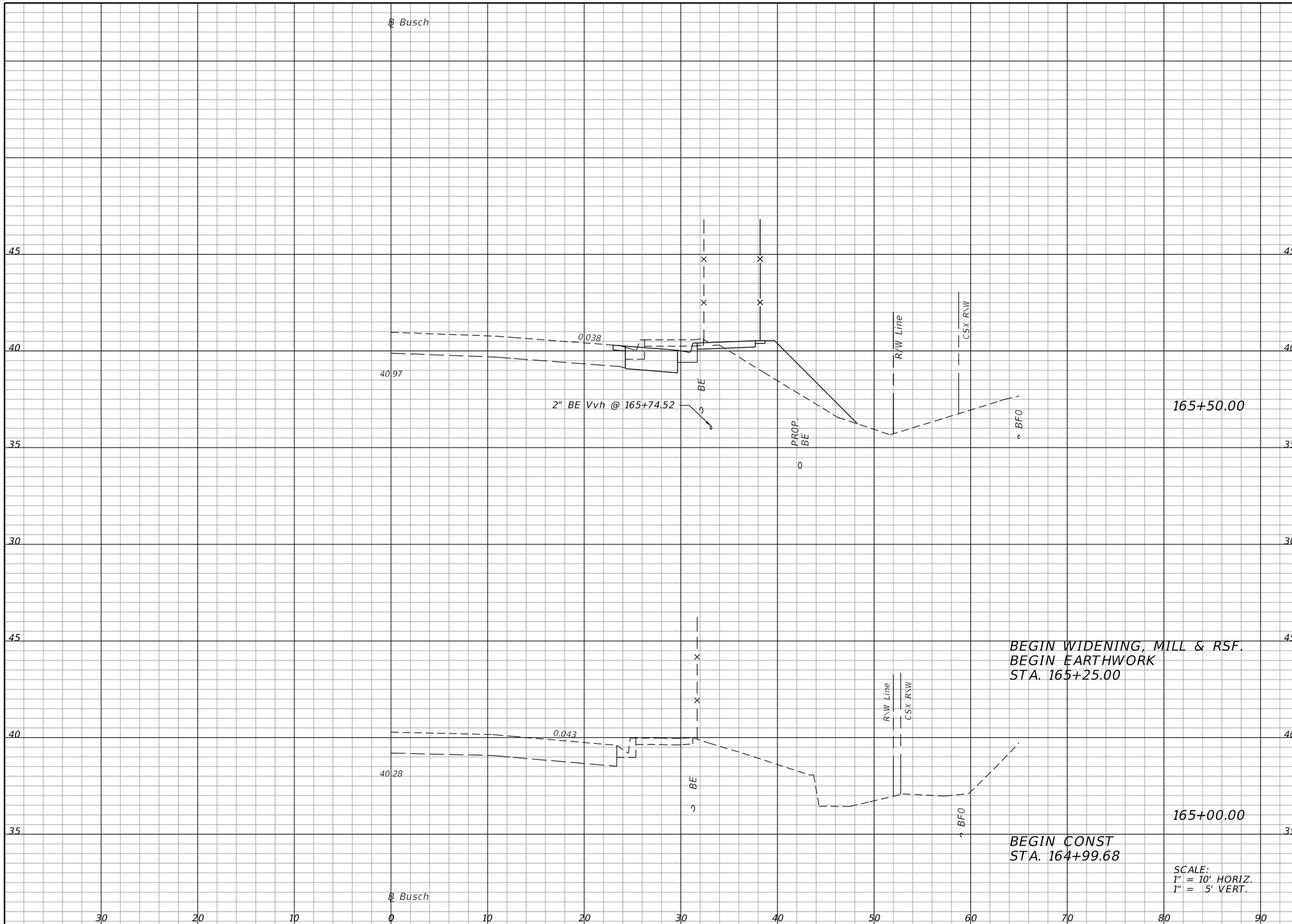


| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 7.84 | 7.3 | 14.30 | 13.2 |
| 7.84 | | 14.30 | |

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| DATE | DESCRIPTION | DATE | DESCRIPTION |
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ELEMENT ENGINEERING GROUP
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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO.
61

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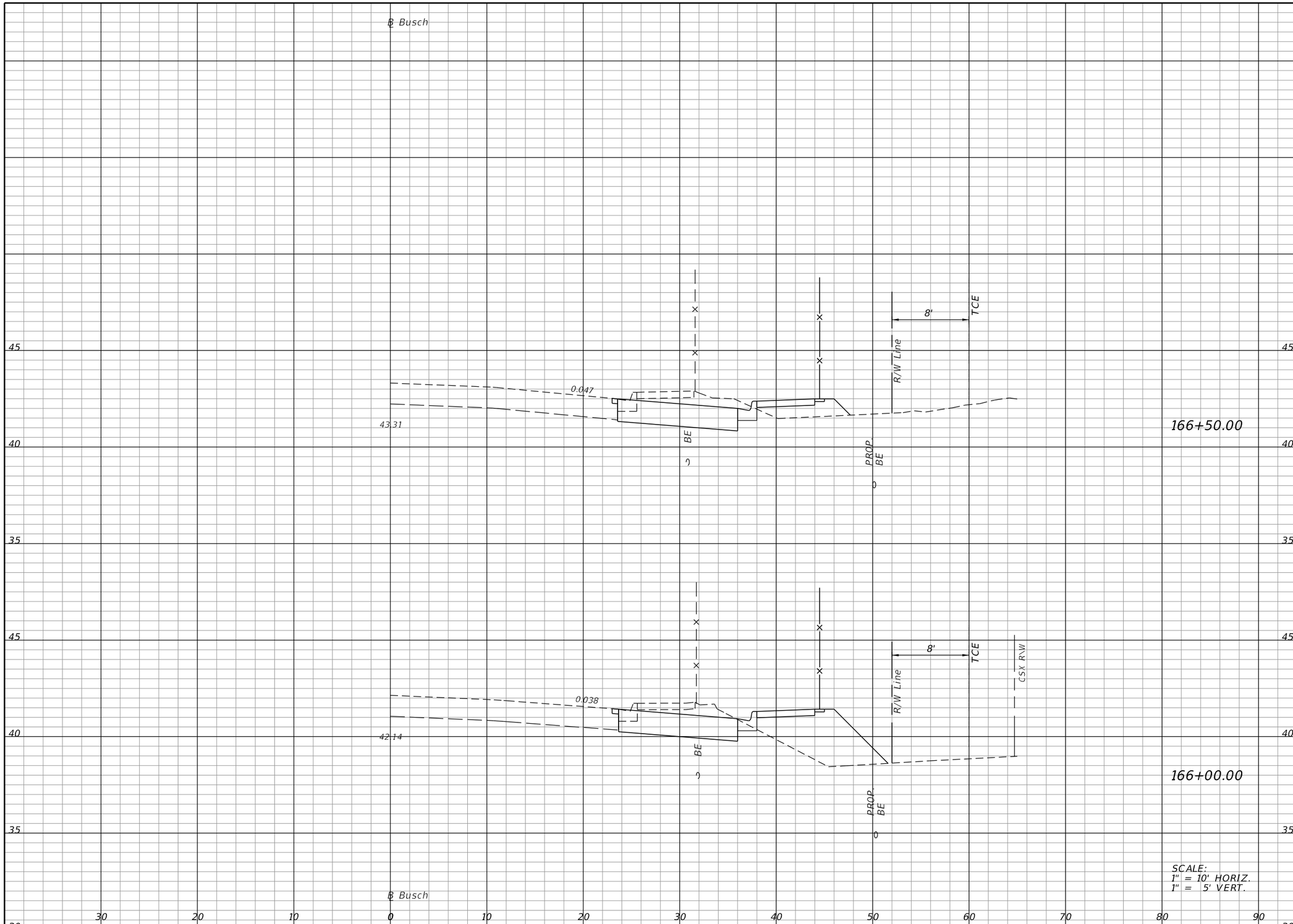


| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 18.70 | 32.9 | 5.50 | 26.0 |
| 16.80 | 22.8 | 22.60 | 34.2 |

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| DATE | DESCRIPTION | DATE | DESCRIPTION |
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ELEMENT ENGINEERING GROUP
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CITY OF TAMPA
TRANSPORTATION DIVISION

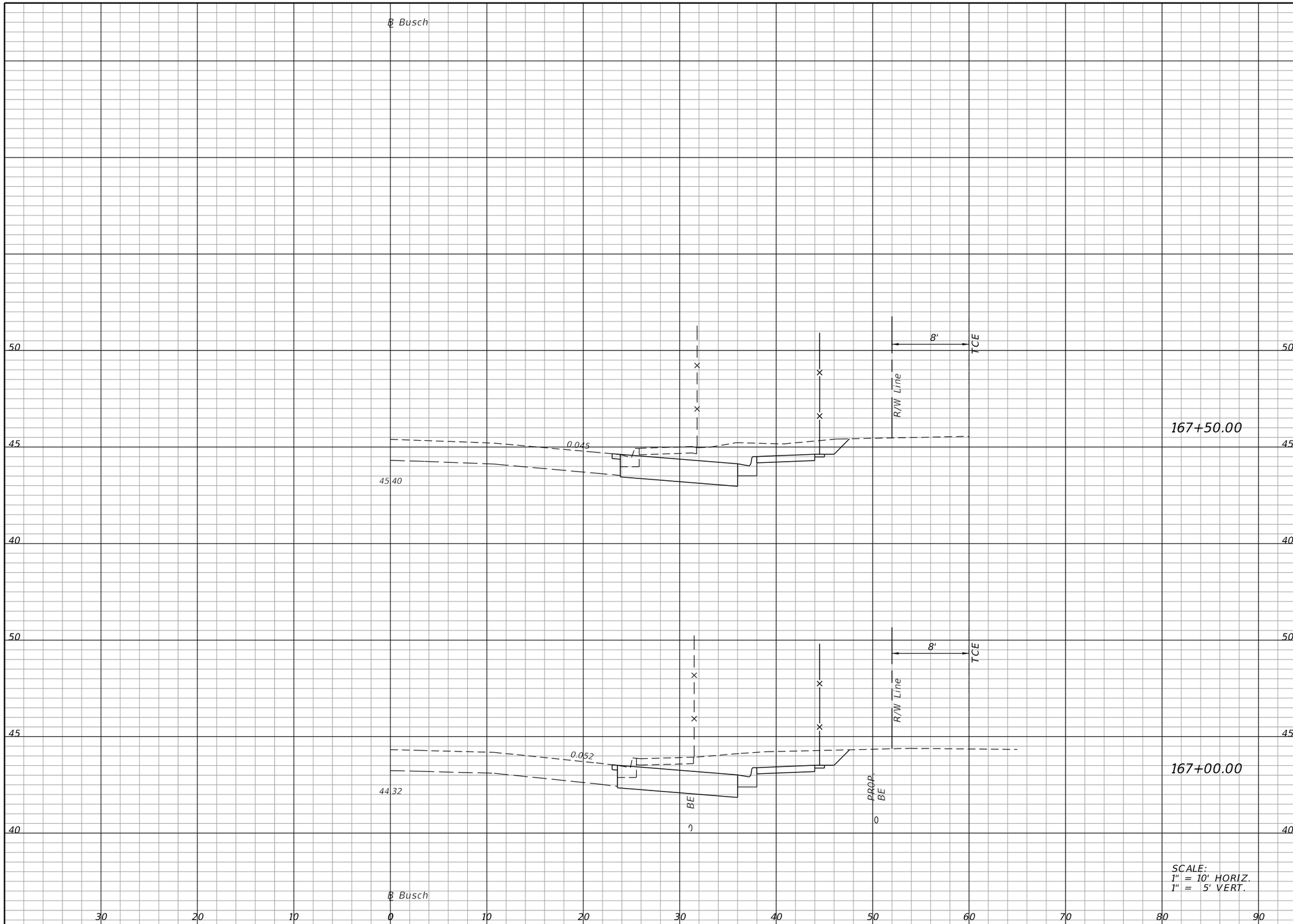
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO. 62

mcannon 9/21/2020 8:20:04 AM P:\C0T1301\CADD\roadway\rdxsrd02.dgn




| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 29.50 | 56.5 | 0.00 | 0.0 |
| 31.50 | 46.5 | 0.00 | 5.1 |

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO.
63

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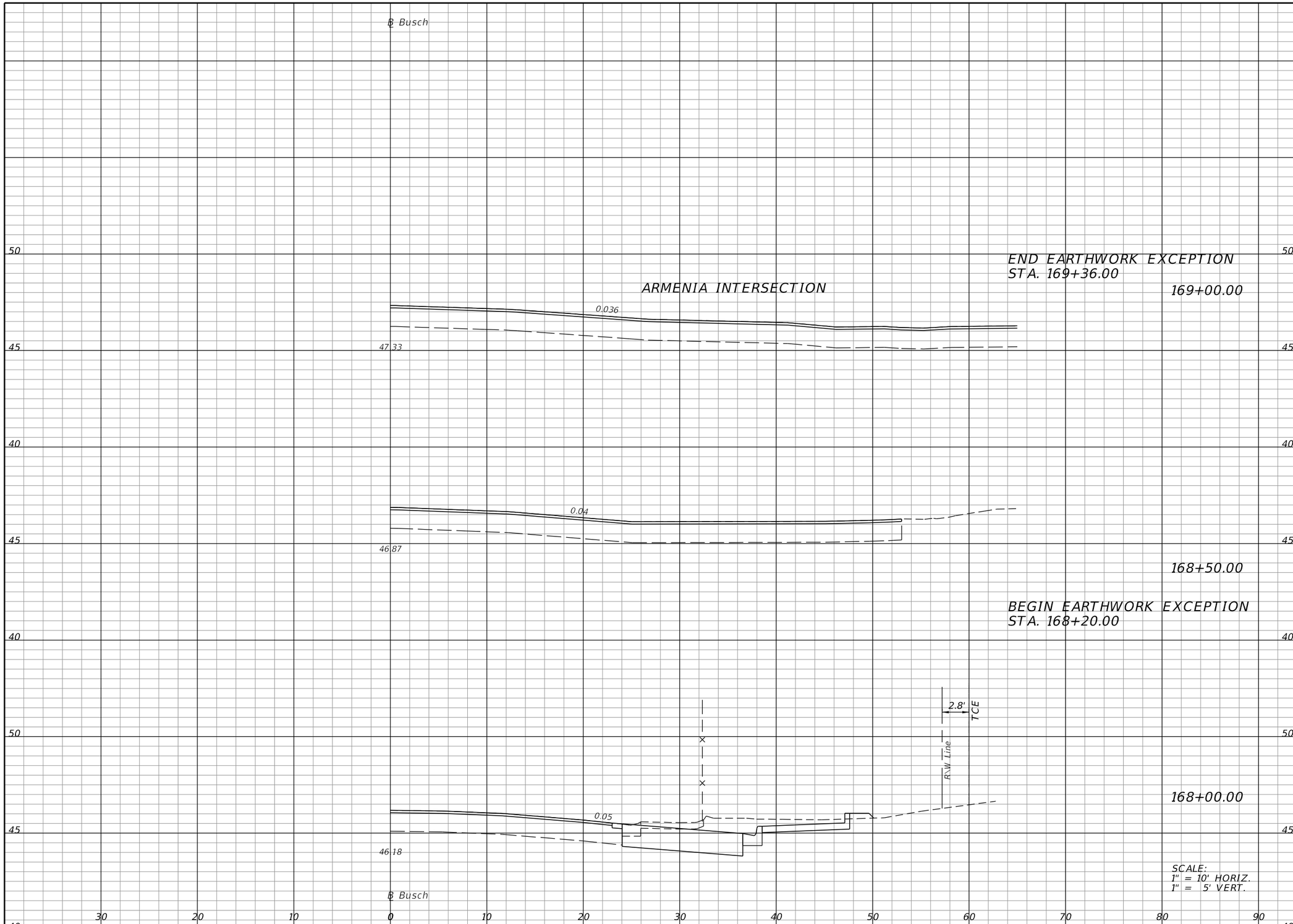


| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 50.90 | | 0.30 | |
| 24.20 | 17.9 | 060 | 0.4 |
| 24.20 | 49.7 | 0.60 | 0.6 |

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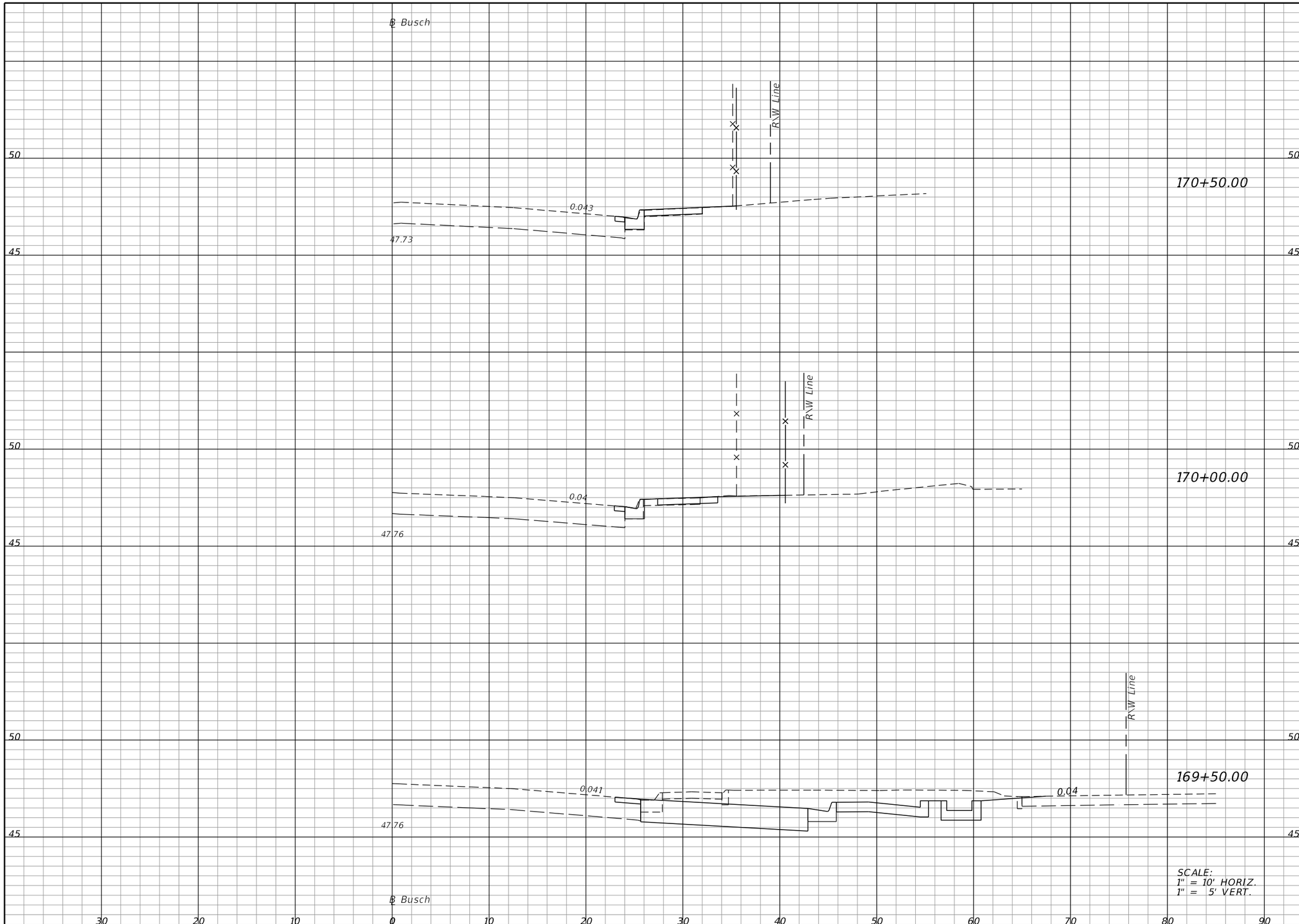
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO.
64




| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 0.00 | 0.6 | 0.00 | 0.4 |
| 0.70 | 47.8 | 0.40 | 0.6 |
| 50.90 | 26.4 | 0.30 | 0.2 |

| REVISIONS | | | |
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| DATE | DESCRIPTION | DATE | DESCRIPTION |
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ENGINEERING GROUP
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CITY OF TAMPA
TRANSPORTATION DIVISION

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ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO.
65

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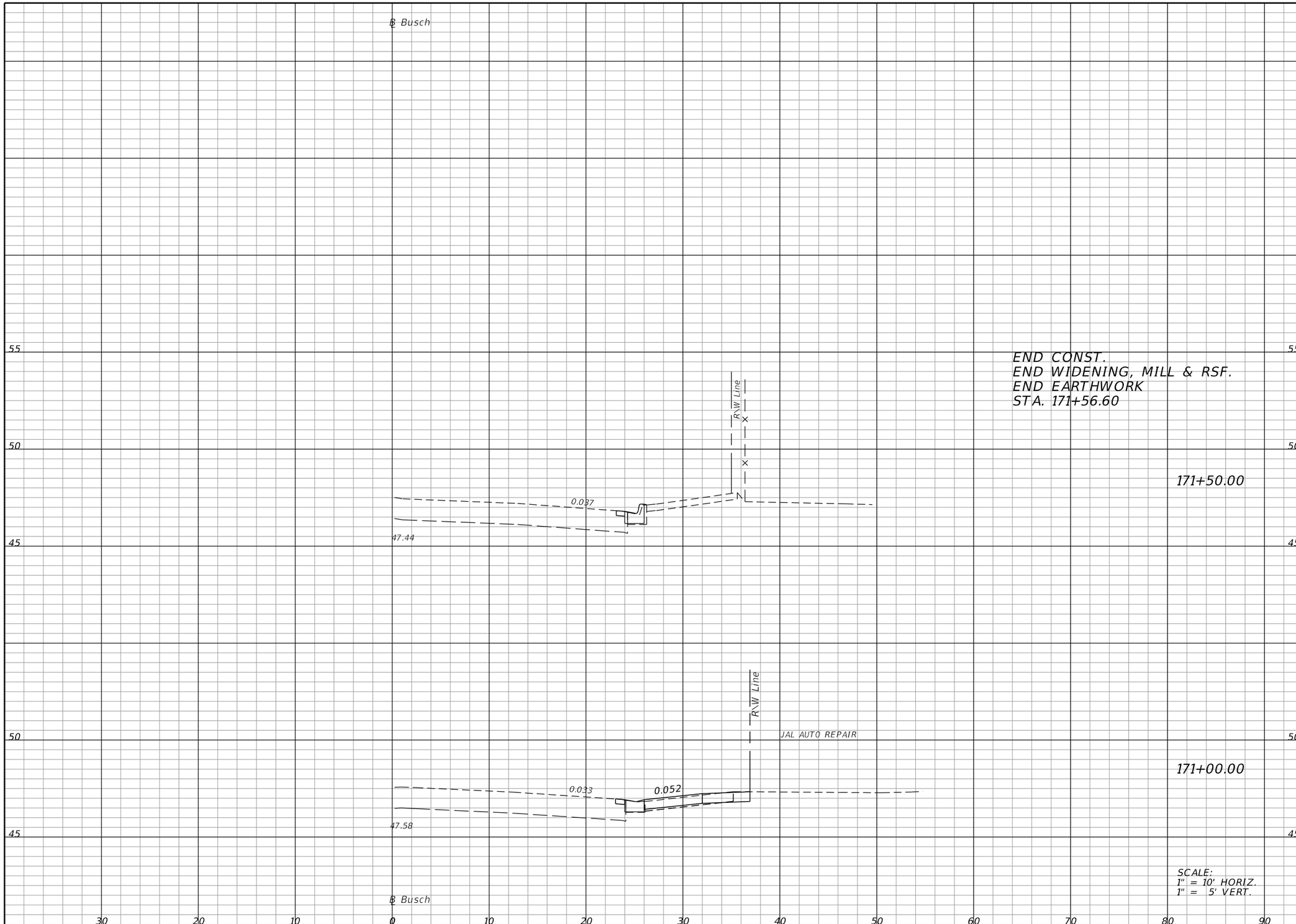


| Regular Exc. | | Embankment | |
|---|---|---|---|
| A | V | A | V |
| 0.20 | 0.0 | 0.00 | 0.0 |
| 0.20 | 4.8 | 0.00 | 0.6 |
| 5.00 | 4.6 | 0.70 | 0.6 |

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REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
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ENGINEERING GROUP
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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# CROSS SECTIONS

SHEET NO.
66

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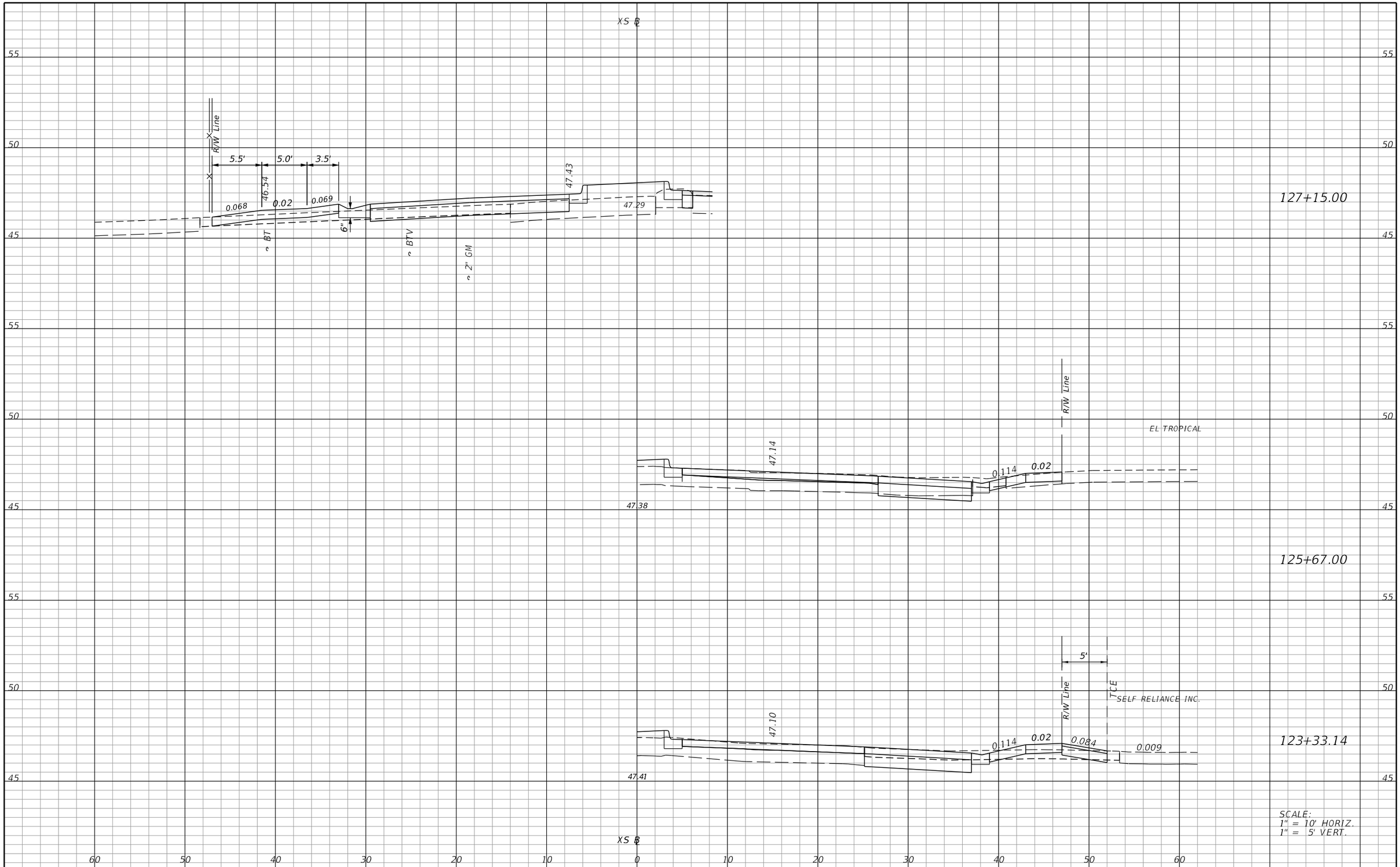


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| REVISIONS | | | |
|---|---|---|---|
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CITY OF TAMPA
TRANSPORTATION DIVISION

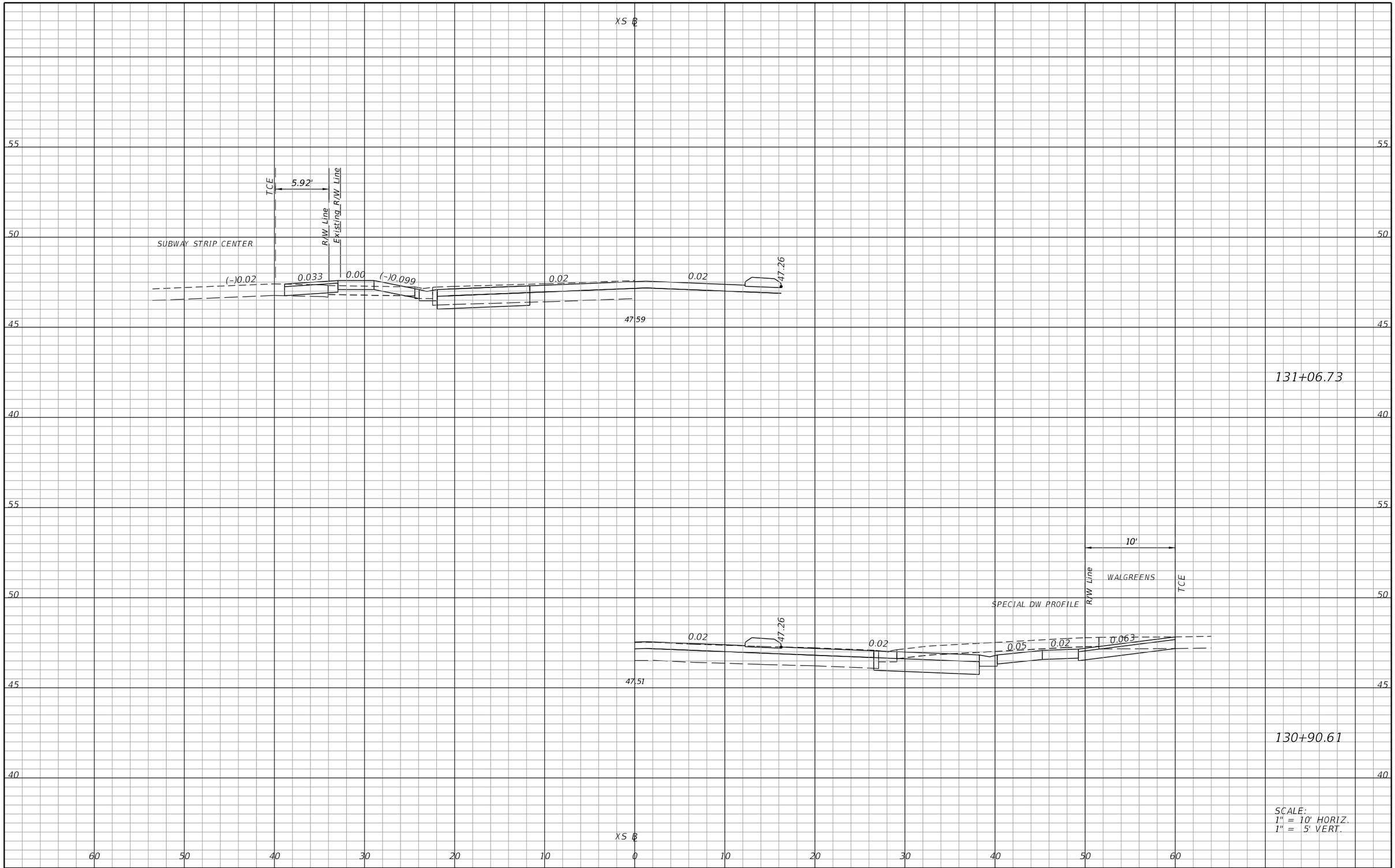
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRIVEWAY HALF SECTIONS

SHEET NO.
67

mcannon 9/21/2020 8:20:52 AM P:\COT1301\CADD\roadway\rdxsrd04.dgn

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| DATE | DESCRIPTION | DATE | DESCRIPTION |
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ELEMENT
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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRIVEWAY HALF SECTIONS

SHEET NO.
68

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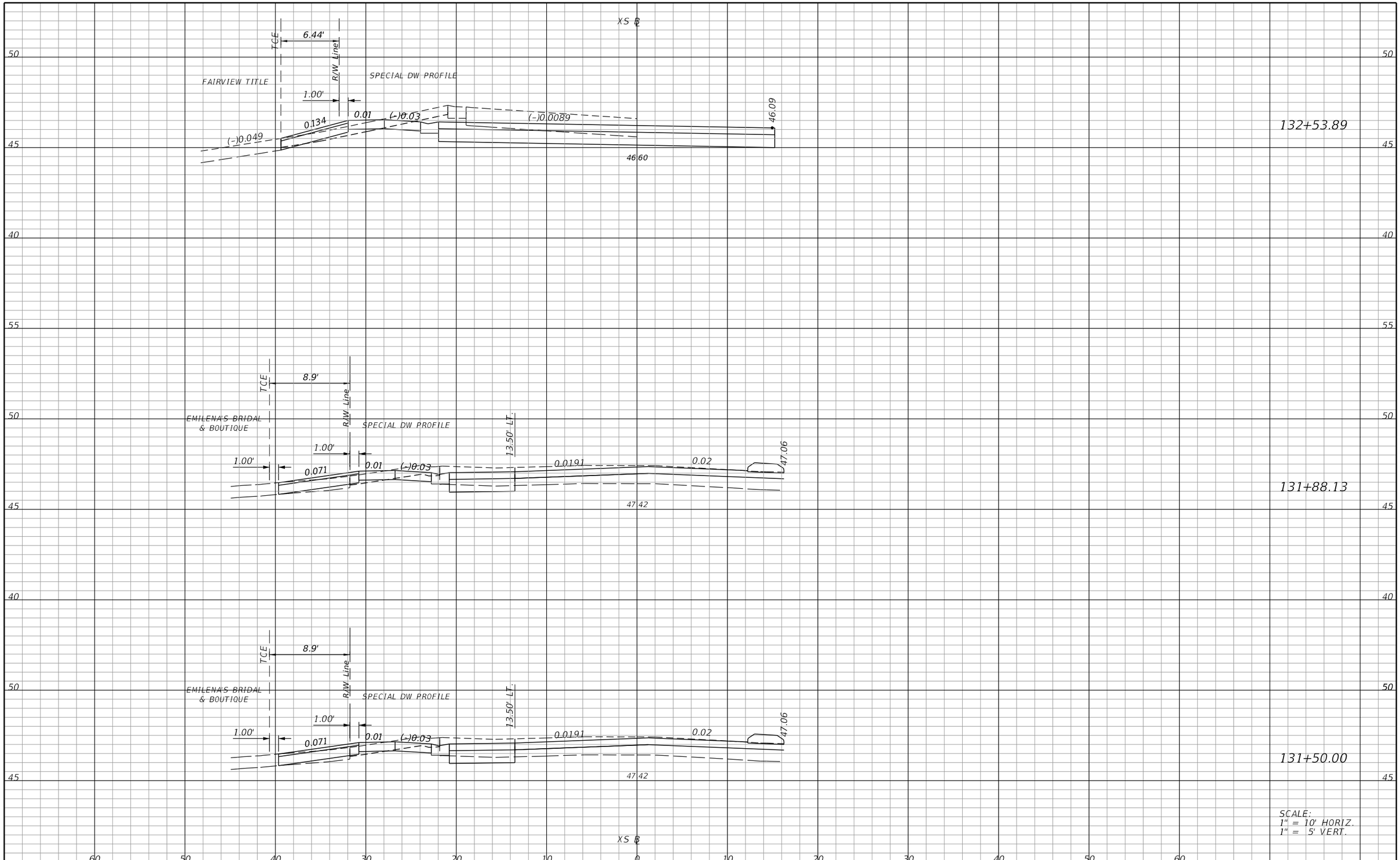


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|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
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ELEMENT
ENGINEERING GROUP
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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRIVEWAY HALF SECTIONS

SHEET NO.
69

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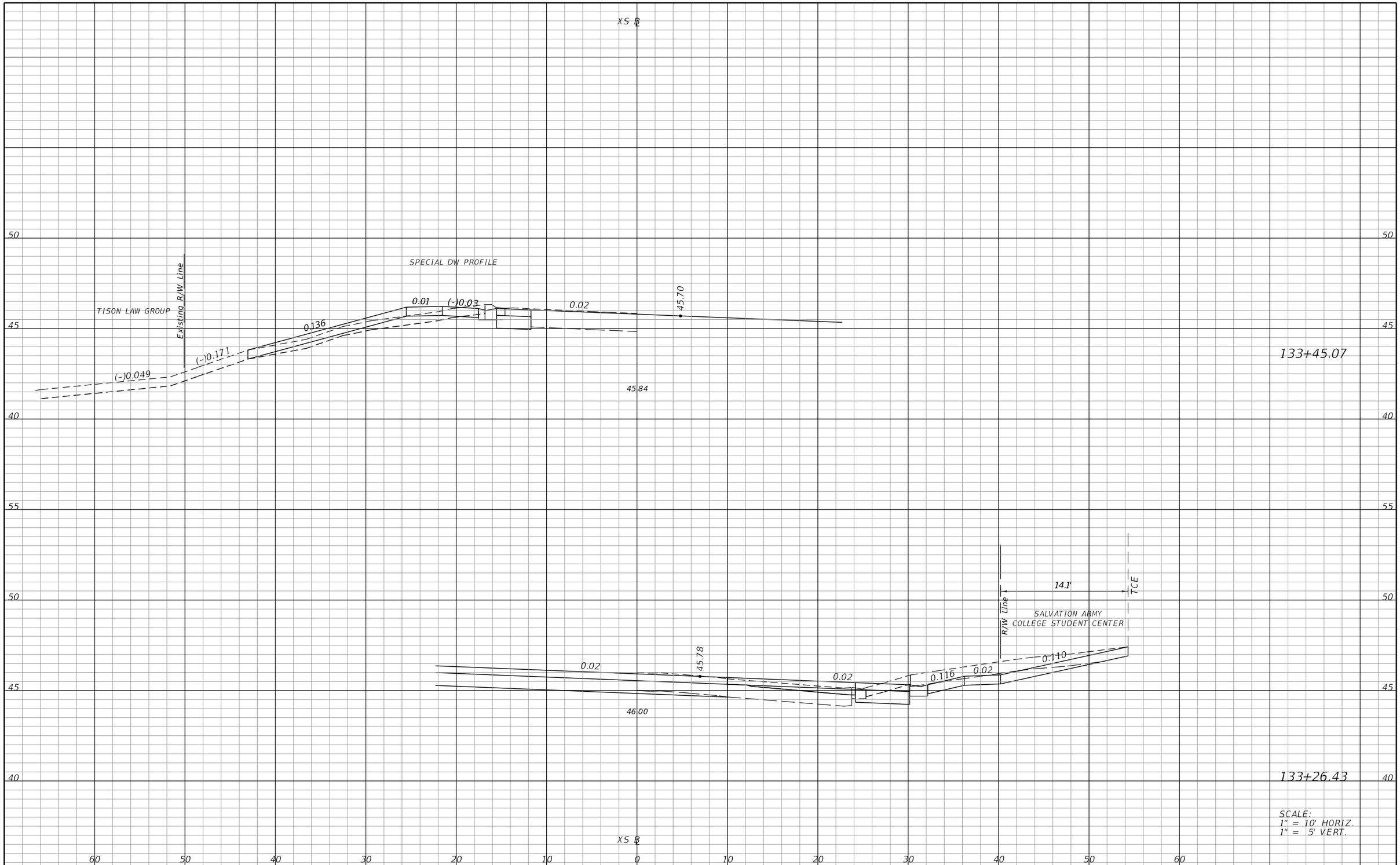


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| DATE | DESCRIPTION | DATE | DESCRIPTION |
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ELEMENT
ENGINEERING GROUP
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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRIVEWAY HALF SECTIONS

SHEET NO.
70

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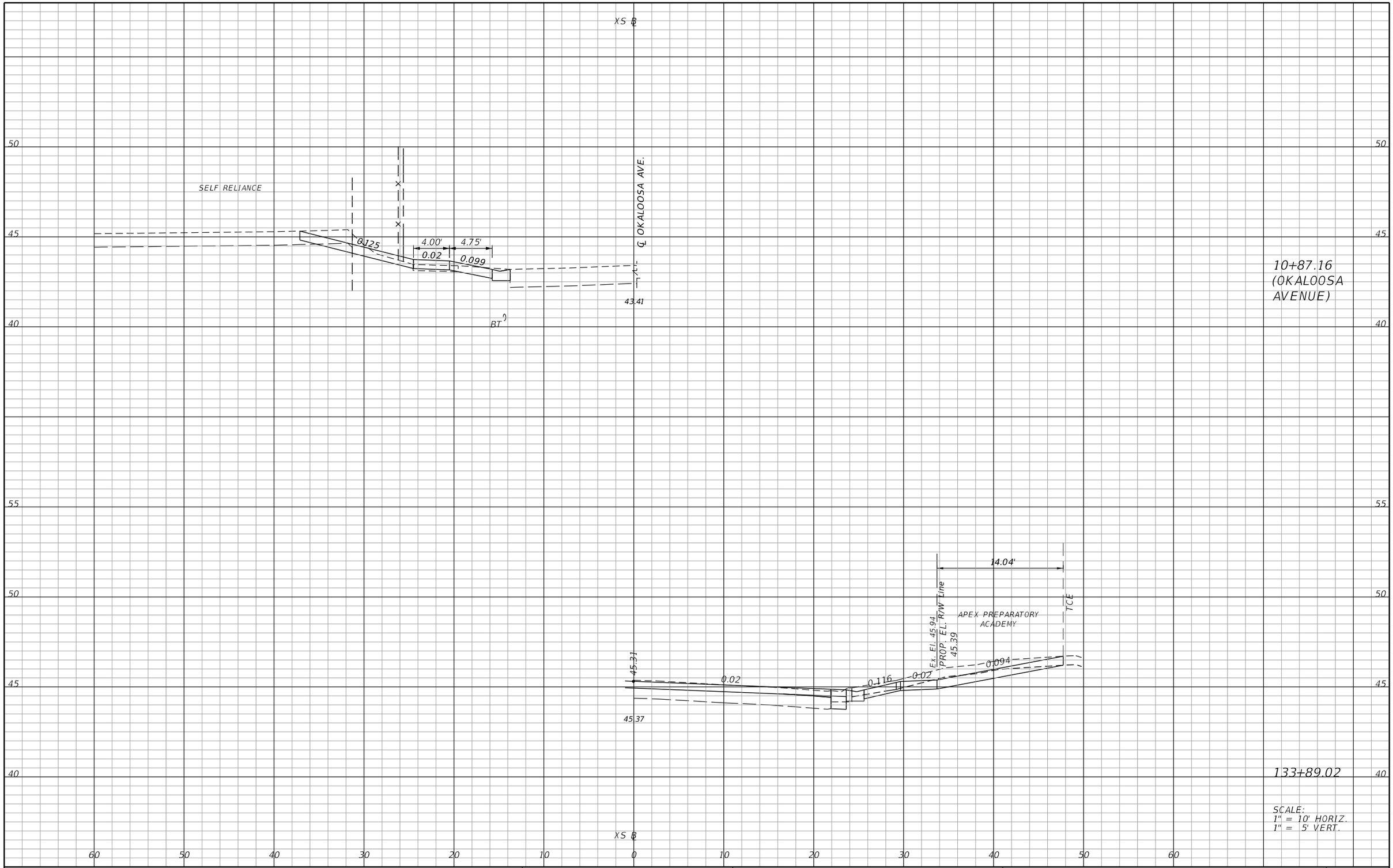


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TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# DRIVEWAY HALF SECTIONS

SHEET NO.
71

mcannon 9/21/2020 8:20:57 AM P:\C0T1301\CADD\roadway\rdxsrd04.dgn

STORMWATER POLLUTION PREVENTION PLAN
ARMENIA AVENUE AT SR 580/BUSCH BOULEVARD
FROM JUST SOUTH OF HUMPHREY STREET TO INTERSECTION OF SEWAHA STREET
CITY OF TAMPA PROJECT NO.: 0000005 CONTRACT NO.: 12-D-00057

I. SITE DESCRIPTION:

1. NATURE OF CONSTRUCTION ACTIVITY:
THE PROJECT INCLUDES THE WIDENING, MILLING, AND RESURFACING OF ARMENIA AVENUE, FROM SOUTH OF W. HUMPHREY STREET (STATION 118+05.15) TO W. OF SEWAHA STREET (STATION 134+70.25), A DISTANCE OF 0.316 MILES (1668.10 FEET), TO IMPROVE THE TRAFFIC OPERATIONS OF THE INTERSECTION OF ARMENIA AVENUE AT BUSCH BOULEVARD (STATE ROAD 580). WORK ALSO INCLUDES THE PROVISION OF SIDEWALKS WITH WIDTHS VARYING FROM FIVE TO EIGHT FEET ALONG BOTH SIDES OF ARMENIA. WORK ALSO INCLUDES CONSTRUCTION OF AN EASTBOUND BUSCH BLVD. TO SOUTHBOUND ARMENIA AVENUE RIGHT TURN LANE, SIGNALIZATION MODIFICATIONS, SIGNING AND PAVEMENT MARKINGS AND LIGHTING OF THE PEDESTRIAN CROSSINGS AT INTERSECTIONS, CONSTRUCTION OF STORM DRAINS, AND MODIFICATION OF AN EXISTING DRY RETENTION STORMWATER POND.

2. SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES:
THE CONTRACTOR IS REQUIRED TO PREPARE A SITE SPECIFIC EROSION AND SEDIMENT CONTROL PLAN ALONG WITH A DETAILED CONSTRUCTION SCHEDULE TO INDICATE DATES OF MAJOR GRADING ACTIVITIES AND DETERMINE SEQUENCES OF TEMPORARY AND PERMANENT SOIL DISTURBING ACTIVITIES ON ALL PORTIONS OF THE PROJECT.

THE CONTRACTOR WILL BE REQUIRED TO MODIFY THE PLAN OR MATERIALS TO ADAPT TO SEASONAL VARIATIONS, CONSTRUCTION ACTIVITY VARIATIONS, OR AS DIRECTED BY THE ENGINEER.

APPLICABLE EROSION CONTROL DEVICES AND IMPLEMENTATION PROCEDURES ARE SUPPLIED IN THE FDOT STANDARD PLANS 570-001 & 570-010.

THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING IF ANY MODIFICATIONS OR ADDITIONAL CONTROLS ARE REQUIRED AND TO OBTAIN DEPLOYMENT SCHEDULES FOR THE IMPLEMENTATION OF ALL ADDITIONAL EROSION CONTROL DEVICES FOLLOWING THE SEQUENCE OF MAJOR ACTIVITIES DESCRIBED BELOW, UNLESS THE CONTRACTOR PROPOSES A DIFFERENT SEQUENCE THAT IS EQUAL OR BETTER AT CONTROLLING EROSION AND TRAPPING SEDIMENT AND IS APPROVED BY THE ENGINEER.

3. GENERAL NOTES:
(a) ALL EROSION AND SEDIMENT CONTROL DEVICES FOR EACH PHASE OF WORK ARE TO BE INSTALLED PRIOR TO BEGINNING WORK ON THAT PHASE.

(b) INSTALL EROSION AND SEDIMENT CONTROL DEVICES WHERE LISTED IN THE CONTRACTOR'S APPROVED EROSION AND SEDIMENT CONTROL PLAN FOR PERIMETER CONTROLS BEFORE THE LAND IS DISTURBED.

( c) PROVIDE SEDIMENT BARRIERS WHERE LISTED IN THE CONTRACTOR'S APPROVED EROSION AND SEDIMENT CONTROL PLAN FOR DITCH BLOCKS DURING CONSTRUCTION.

(d) PROVIDE INLET PROTECTION SYSTEMS AT INLET OPENINGS.

(e) COVER OR STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE.

(f) DO NOT DISTURB AN AREA UNTIL IT IS NECESSARY FOR CONSTRUCTION TO PROCEED.

(g) TIME CONSTRUCTION ACTIVITIES TO LIMIT IMPACT FROM SEASONAL CLIMATE CHANGES OR WEATHER EVENTS.

(h) DO NOT REMOVE PERIMETER CONTROLS UNTIL AFTER ALL UPSTREAM AREAS ARE FULLY STABILIZED AND PERMANENT VEGETATION IS ESTABLISHED.

(i) THE CONTRACTOR WILL PROVIDE POLLUTION CONTROL BY IMPLEMENTING DUST CONTROL DURING ALL PHASES OF CONSTRUCTION. THIS WILL BE ACCOMPLISHED BY USING STREET OR VACUUM SWEEPERS.
(j) OFF -SITE RUNOFF SHOULD BE DIVERTED AWAY OR THROUGH THE CONSTRUCTION AREA, IF POSSIBLE. THIS ADDITIONAL FLOW, IF NOT DIVERTED, CAN ADD VOLUME AND SIZE TO STRUCTURAL PRACTICES, REQUIRING MORE FREQUENT MAINTENANCE AND LIMITING EFFECTIVENESS OF EROSION AND SEDIMENT CONTROLS.

(k) THE CONTRACTOR SHALL PREVENT UNAUTHORIZED MATERIALS FROM ENTERING WETLANDS, WATERWAYS, OTHER SURFACE WATERS OR WATERS OF THE US. WETLAND IMPACTS ARE LIMITED TO THE AREAS DESCRIBED IN THE APPROVED PERMITS FOR THE PROJECT.

4. AREA ESTIMATES:
TOTAL PROJECT AREA: APPROXIMATELY 4.60 ACRES.
TOTAL AREA TO BE DISTURBED DURING CONSTRUCTION ACTIVITIES: APPROXIMATELY 4.60 ACRES.
TOTAL AREA DRAINED BY PROJECT: APPROXIMATELY 5.87 ACRES

5. RUNOFF COEFFICIENTS BEFORE, DURING AND AFTER CONSTRUCTION:
BEFORE: C = 0.50
DURING: C = 0.63
AFTER: C = 0.76

6. SOILS DATA:
THE PREDOMINANT SOIL TYPES WITHIN THE PROJECT LIMITS ARE:
CANDLER-URBAN LAND - HYDROLOGIC SOIL GROUP A; DEPTH TO SHWT >6'
TAVARES MILLHOPPER - HYDROLOGIC SOIL GROUP A; DEPTH TO SHWT 3.5' TO 6'

7. RECEIVING WATERS:

THIS FACILITY DOES NOT DISCHARGE TO WATERS LISTED ON THE EPA APPROVED 303(D) LIST (FOR LIST, GO TO: HTTP://FRWEBGATE.ACCESS.GPO.GOV/CGI-BIN/GETDOC.CGI?DBNAME=2000_REGISTER&DOCID=00-10518-FILED.PDF) FOR IMPAIRMENT DUE TO TOTAL SUSPENDED SOLIDS.

THE PROJECT DOES NOT DISCHARGE DIRECTLY TO THE RECEIVING WATERS BUT INSTEAD DISCHARGES TO EXISTING DRAINAGE STRUCTURES, WHICH DRAIN TO ROADSIDE DITCHES, WHICH DRAIN TO THE RECEIVING WATERS.

THE RECEIVING WATER FOR THE NORTH ARMENIA PORTION OF THE PROJECT IS LITTLE TWIN LAKE AT LOCATION:

LATITUDE: 29 DEGREES 02 MINUTES 6.62 SECONDS NORTH; LONGITUDE 82 DEGREES 29 MINUTES 6.83 SECONDS WEST

THE RECEIVING WATER FOR THE BUSCH BOULEVARD PORTION OF THE PROJECT IS LITTLE TWIN LAKE AT LOCATION:
LATITUDE: 29 DEGREES 02 MINUTES 6.62 SECONDS NORTH; LONGITUDE 82 DEGREES 29 MINUTES 6.83 SECONDS WEST

THE RECEIVING WATER FOR THE SOUTH ARMENIA PORTION OF THE PROJECT IS KIRBY CREEK AT LOCATION:

LATITUDE: 28 DEGREES 01 MINUTES 40.93 SECONDS NORTH; LONGITUDE 82 DEGREES 29 MINUTES 3.06 SECONDS WEST

8. OUTFALL INFORMATION (TEMPORARY AND PERMANENT): THERE ARE 3 OUTFALLS:
DESCRIPTION

LATITUDE
LONGITUDE

18" PIPE/38" X 60" PIPE JUNCTION @ EXISTING MANHOLE - LATITUDE: 28 DEGREES 2 MINUTES 6.47 SECONDS NORTH; LONGITUDE: 82 DEGREES 29 MINUTES 2.84 SECONDS WEST

15" PIPE @ EXISTING CURB INLET - LATITUDE 28 DEGREES 2 MINUTES 1.23 SECONDS NORTH; LONGITUDE: 82 DEGREES 29 MINUTES 6.96 SECONDS WEST

18" PIPE/EXISTING MITERED END SECTION - LATITUDE: 28 DEGREES 1 MINUTE 49.10 SECONDS NORTH; LONGITUDE: 82 DEGREES 29 MINUTES 2.64 SECONDS WEST

9. DESCRIPTION OF STORMWATER MANAGEMENT: (EXISTING/PROPOSED)

THE CONSTRUCTION PLANS ARE BEING USED AS THE SITE MAP. THE LOCATION OF THE REQUIRED INFORMATION IS DESCRIBED BELOW ON THE FOLLOWING SHEET. THE SHEET NUMBERS FOR THE PLAN SHEETS REFERENCES ARE IDENTIFIED ON THE KEY SHEET OF THESE CONSTRUCTION PLANS.

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(a) EXISTING DRAINAGE PATTERNS: EXISTING DRAINAGE PATTERNS WILL NOT BE ALTERED IN THE PROPOSED CONDITIONS.

(b) APPROXIMATE SLOPES: THE SLOPES OF THE SITE ARE SHOWN ON THE CROSS SECTION SHEETS, THE PLAN-PROFILE SHEETS, AND THE POND DETAIL SHEETS.

(c) AREAS OF SOIL DISTURBANCE: THE AREAS TO BE DISTURBED ARE INDICATED ON THE PLAN-PROFILE SHEETS, THE CROSS SECTION SHEETS AND THE POND DETAIL SHEETS. ANY AREAS WHERE PERMANENT FEATURES ARE SHOWN TO BE CONSTRUCTED ABOVE OR BELOW GROUND WILL BE DISTURBED.

(d) LOCATIONS OF TEMPORARY CONTROLS: THESE WILL BE BASED ON THE CONTRACTOR'S ACTIVITIES AND SHALL BE PLACED IN A MANNER TO PROTECT RECEIVING WATERS.

(e) LOCATION OF PERMANENT CONTROLS: THE CONVEYANCE SWALES, STORM DRAIN SYSTEMS, AND STORMWATER PONDS ARE THE PRIMARY PERMANENT STORMWATER MANAGEMENT CONTROLS. THESE ARE SHOWN ON THE ROADWAY PLANS AND POND DETAIL SHEETS.

(f) AREAS TO BE STABILIZED: TEMPORARY STABILIZATION PRACTICES ARE SHOWN IN THE SAME LOCATION AS THE TEMPORARY CONTROLS MENTIONED ABOVE. PERMANENT STABILIZATION IS SHOWN ON THE TYPICAL SECTION SHEETS, THE PLAN-PROFILE SHEETS, AND THE POND DETAIL SHEETS.

(g) SURFACE WATERS: UNNAMED OFFSITE WETLANDS TO LITTLE TWIN LAKE (NOT IMPACTED BY PROJECT CONSTRUCTION)

(h) DISCHARGE POINTS: SEE OUTFALL INFORMATION.

II. CONTROLS:

1. EROSION AND SEDIMENT CONTROLS

* WATER QUALITY MONITORING SHALL BE CONDUCTED BY THE CONTRACTOR UPON THE OBSERVATION THAT THE WATER QUALITY STANDARDS MAY BE VIOLATED BY THE CONTRACTOR'S ACTIVITIES. MONITORING LOCATIONS SHALL BE DESIGNATED BY THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR MONITORING ANY ACTIVITIES FOR VIOLATION OF WATER QUALITY STANDARDS AS THEY RELATE TO TURBIDITY (29 NTU'S ABOVE BACKGROUND). MONITORING OF WATER QUALITY SHALL BE CONDUCTED A MINIMUM OF TWICE DAILY FOR ANY EARTHWORK ACTIVITIES WITHIN THE STRUCTURE IMPROVEMENT AREA. MONITORING WILL BE ACCOMPLISHED BY RECORDING TURBIDITY READINGS FROM THE CENTER OF THE STREAM, ONE UPSTREAM OF THE ACTIVITY AND ONE DOWNSTREAM OF THE EROSION CONTROL DEVICES, BUT WITHIN THE PROJECT RIGHT OF WAY. IF WATER QUALITY STANDARDS ARE VIOLATED, CONSTRUCTION SHOULD BE STOPPED IMMEDIATELY AND EROSION CONTROL DEVICES REEVALUATED BY THE CITY OF TAMPA REPRESENTATIVE PRIOR TO ANY CONTINUATION OF ACTIVITY. MONITORING ACTIVITIES AND TURBIDITY READINGS SHALL BE RECORDED ON THE CONSTRUCTION INSPECTION REPORT AND CONTINUED UNTIL TURBIDITY READINGS FALL BELOW AN ACCEPTABLE LEVEL (29 NTU'S ABOVE BACKGROUND). WATER QUALITY MONITORING MAY BE CONDUCTED DURING ANY PHASE OF CONSTRUCTION AS DIRECTED BY THE CONTRACTOR.

2. STABILIZATION PRACTICES:
(a) STABILIZATION MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO MAINTAINING, ESTABLISHING AND USING VEGETATION, APPLYING MULCHES, SODDING, SEEDING, BMP'S AND THE USE OF ROLLED EROSION CONTROLLED PRODUCTS. WHEN CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, SIDE SLOPES SHALL BE STABILIZED WITH PERFORMANCE SODDING OR SEEDING OR OTHER APPROVED METHOD OF STABILIZATION INCLUDED IN THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEW MANUAL (E&SC MANUAL). SOD SHALL BE IN ACCORDANCE TO SPECIFICATION SECTION 981.

(b) STABILIZATION SHALL TAKE PLACE AS SOON AS PRACTICAL IN PORTIONS OF THE PROJECT WHERE CONSTRUCTION ACTIVITIES HAVE CEASED, BUT NO LATER THAN SEVEN (7) DAYS AFTER ANY CONSTRUCTION ACTIVITY CEASES EITHER TEMPORARILY OR PERMANENTLY

(c) ALL EROSION CONTROL DEVICES SHALL BE INSTALLED ACCORDING TO THE CONTRACT DOCUMENTS, AND THE CONTRACTOR'S APPROVED EROSION CONTROL PLAN.

(d) ANY TEMPORARY MATERIAL USED FOR POLLUTION OR EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT AND FINAL STABILIZATION OF THE PROJECT HAS BEEN ACHIEVED.

(e) SEDIMENT BARRIERS: SILT FENCE OR SYNTHETIC BALES SHOULD BE USED ALONG THE LENGTH OF THE PROJECT ONLY WHERE THE GROUND SLOPES AWAY FROM THE RIGHT OF WAY OR WHERE THERE IS POTENTIAL FOR SEDIMENT TO BE DIRECTED OFF-SITE. PARTICULAR CARE SHOULD BE USED WHEN THERE ARE WETLANDS OR WATERS OF THE U.S.

(f) SEDIMENT BARRIERS SHOULD BE USED AROUND THE PERIMETER OF STOCKPILE AREAS.

(g) SPACING OF SEDIMENT BARRIERS USED AS DITCH OR SWALE CHECKS/DAMS SHOULD BE BASED UPON THE HEIGHT OF THE BARRIER AND THE SLOPE OF THE DITCH OR SWALE.

(h) THE CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFYING SOIL TRACKING PREVENTION SYSTEMS OR PROCEDURES AS NEEDED.

3. STRUCTURAL PRACTICES FOR EROSION AND SEDIMENT CONTROL:
THESE ITEMS ARE COMMONLY USED IN AREAS WHERE CONTINUOUS CONSTRUCTION ACTIVITIES CHANGE THE NATURAL CONTOURS AND DRAINAGE RUNOFF PATTERNS.

(a) ROLLED EROSION CONTROL PRODUCTS (ARTIFICIAL COVERINGS)

PURPOSE: TO PROTECT DISTURBED SLOPE SURFACES AGAINST EROSION DUE TO RAINFALL OR FLOWING WATER.

(1) USED FOR PAUSES IN CONSTRUCTION DUE TO INCLEMENT WEATHER OR OTHER CIRCUMSTANCES. COULD INCLUDE NATURAL OR SYNTHETIC FIBER MATS, PLASTIC SHEETING OR NETS.

(2) USED FOR EROSION CONTROL THAT FACILITATES PLANT GROWTH WHILE PERMANENT GRASS IS ESTABLISHED; COULD INCLUDE BIODEGRADABLE EROSION CONTROL BLANKETS INSTALLED ON A SEEDED AREA, ON FILL SLOPES OR IN DITCHES.

(3) USED TO STABILIZE DRAINAGE CHANNELS. CONSULT E&SC MANUAL TO DETERMINE CORRECT PRODUCT TYPE FOR CHANNEL STABILIZATION.

(b) RUNOFF CONTROL STRUCTURE /TEMPORARY SLOPE DRAIN:

PURPOSE: TO PROTECT HILLSIDE SURFACES AGAINST EROSION DUE TO CONCENTRATED FLOW OF RUNOFF WATER.

(1) USED ON FILL SLOPES AND CUT SLOPES TO REDUCE SEDIMENT TRANSPORT AND COULD INCLUDE TEMPORARY SLOPE DRAINS, GRASS-LINED CHANNELS, ROCK-LINED CHANNELS AND CHECK DAMS.

(2) RUNOFF CONTROL STRUCTURES TYPICALLY DISCHARGE TO A SEDIMENT BASIN.

(c ) SEDIMENT BASINS (TEMPORARY CONTAINMENT SYSTEMS):

PURPOSE: A CONTAINMENT SYSTEM IS DESIGNED TO DETAIN AN ADEQUATE VOLUME OF RUNOFF, REDUCE THE VELOCITY OF FLOW THROUGH THE SYSTEM, ALLOW FOR SETTLEMENT OF SUSPENDED SOLIDS AND REGULATE THE DISCHARGE RATE FROM THE SEDIMENT BASIN.

(1) SEDIMENT BASINS MUST BE PLACED IN STRATEGIC LOCATIONS WITHIN THE ACTIVE AREAS OF CONSTRUCTION. CONTRIBUTING AREA AND SIZE OF TARGET SOIL PARTICLE WILL DICTATE WHETHER THE SEDIMENT BASIN WILL BE TYPE 1, TYPE 2 OR TYPE 3 SYSTEM.

(2) THE USE OF SMALLER PRE-SEDIMENTATION BASINS USED IN CONJUNCTION WITH LARGER PERMANENT RETENTION/DETENTION PONDS ARE EFFECTIVE IN CAPTURING LARGER VOLUMES OF SEDIMENTS. THIS TECHNIQUE REQUIRES PERIODICALLY SCHEDULED REMOVAL OF THE ACCUMULATED SEDIMENTS.

(d) SEDIMENT BARRIERS (TEMPORARY CONSTRUCTION SITE BMP'S)

PURPOSE: SEDIMENT BARRIERS EITHER OBSTRUCT FLOW OR PREVENT THE PASSAGE OF WATER WHILE CONSTRUCTION ACTIVITIES OCCUR. SMALLER SEDIMENT BARRIERS MAY FUNCTION AS A SMALL SEDIMENT CONTAINMENT SYSTEM OR AS A METHOD TO REDUCE FLOW VELOCITY.

(1) THESE CONSTRUCTION BMP'S CAN INCLUDE SYNTHETIC BALES, STAKED SILT FENCE, TURBIDITY BARRIER, STORM SEWER INLET BARRIERS, ROCK BARRIERS, GEOSYNTHETIC BARRIERS, ETC. IN ACCORDANCE WITH DESIGN STANDARD 104.

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(2) APPROPRIATE LOCATIONS INCLUDE SITE PERIMETER, BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION, BELOW THE TOE OF EXPOSED AND ERODIBLE SLOPES, ALONG THE TOE OF STREAM AND CHANNEL BANKS, AROUND DRAINS AND INLETS LOCATED IN LOW POINTS OR THE DOWNSTREAM EDGE OF AREAS UNDERGOING VERTICAL OR BOX CULVERT CONSTRUCTION ACTIVITIES.

(3) INAPPROPRIATE LOCATIONS FOR THESE SAME MEASURES INCLUDE PARALLEL TO A HILLSIDE CONTOUR, IN CHANNELS WITH CONCENTRATED FLOW /UNLESS PROPERLY REINFORCED!, UPSTREAM OR DOWNSTREAM OF CULVERTS WITH CONCENTRATED FLOW, IN FRONT OF OR AROUND INLETS ON A GRADE WITH CONCENTRATED FLOW OR IN FLOWING STREAMS.

(e) FLOATING TURBIDITY BARRIER

PURPOSE: USED IN PERMANENT BODIES OF WATER TO RETAIN SEDIMENT AND FLOATING DEBRIS FROM A CONSTRUCTION AREA SO THAT REMOVAL OR CONTAINMENT OF THE MATERIAL IS POSSIBLE. THEY ARE ALSO USED TO CONTROL MIGRATION OF SUSPENDED SEDIMENTS.

(1) TYPE I, LIGHT DUTY, IS USED WHERE THERE IS LITTLE OR NO CURRENT, NO WIND AND NO WAVE ACTION.

(2) TYPE II, MODERATE DUTY, IS USED WITH SOME CURRENT (1<3.5 FT. PER SECOND) AND SOME EXPOSURE TO WIND.

(3) TYPE III, HEAVY DUTY, IS USED WITH GREATER CURRENT (3.5-5.0 FT. PER SECOND), MODERATE WIND AND WAVE ACTION.

(4) BARRIER MUST BE ATTACHED AT BOTH ENDS AND WEIGHTED ON THE BOTTOM.

(5) MULTIPLE LINES OF BARRIER MAY BE USED IN SOME CIRCUMSTANCES FOR ADDITIONAL PROTECTION.
(6) STANDARD PANELS FOR WATER DEPTHS ARE 5.0'. ADDITIONAL PANELS CAN BE USED FOR WATER DEPTHS > 5.0'.

(f) STAKED TURBIDITY BARRIER

PURPOSE: THIS ITEM IS COMMONLY USED IN AREAS WHERE CONTINUOUS CONSTRUCTION ACTIVITIES CHANGE THE NATURAL CONTOURS AND DRAINAGE RUNOFF PATTERNS.

(1) COMMONLY USED IN LAKES AND STREAMS AS A SEDIMENT CONTAINMENT SYSTEM; SHOULD NOT BE USED WHERE WATER CURRENTS MOVE THE CURTAIN AND DISLODGE COLLECTED SEDIMENTS.

(2) MAXIMUM DEPTH OF PANEL IS 3'-8".

(3) POST MUST BE A MINIMUM LENGTH OF 5.0' AND A MINIMUM OF 10" OF FABRIC MUST BE IMBEDDED IN THE GROUND.

(g) INLET PROTECTION SYSTEM

PURPOSE: ANY OF A NUMBER OF SEDIMENT BARRIERS THAT EITHER PREVENT SEDIMENT FROM ENTERING AN INLET OR TRAP THE SEDIMENTS ONCE THEY ENTER THE INLET.

(1) TYPICAL APPLICATIONS INCLUDE ROCK BARRIERS, FRAME AND FILTER BARRIERS, CURB INLET "SUMP" BARRIER, CURB INLET DIVERSION BERM, CURB AND GUTTER SEDIMENT CONTAINMENT SYSTEM OR CURB INLET INSET.

(2) SHOULD BE INSTALLED ONLY WHEN CONSTRUCTION ACTIVITIES ARE ON-GOING AND ONLY WHERE SUMP CONDITIONS EXIST.

(3) SHOULD NOT BE USED WHEN CONSTRUCTION IS COMPLETE AND SHOULD NOT BE USED IN AREAS WHERE FLOODING COULD ENCROACH INTO THE TRAVEL LANES.

(h) SOIL TRACKING PREVENTION DEVICE

PURPOSE: TEMPORARY STRUCTURES TO ASSIST WITH THE REMOVAL OF SOIL MATERIAL CAPTURED ON VEHICLE TIERS BEFORE THE VEHICLES ENTER THE ROADWAY.

(1) A SOIL TRACKING PREVENTION DEVICE WILL BE USED WHEREVER VEHICLES ENTER THE ROADWAY FROM STAGING AREAS.

(2) INGRESS/EGRESS SHALL BE MONITORED AT ALL TIMES DURING CONSTRUCTION AT NON-STAGING AREAS FOR SOIL TRACKING. WHEN SOIL TRACKING OCCURS, ROADWAY SHALL BE SWEPT USING A BROOM TRUCK.

4. CHEMICAL TREATMENTS FOR EROSION AND SEDIMENT CONTROL:

(a) CHEMICAL TREATMENT - POLYACRYLAMIDES (PAM AND PAM BLENDS)

PURPOSE: REDUCE SOIL EROSION THROUGH SOIL BINDING, USED AS A WATER TREATMENT ADDITIVE TO REMOVE SUSPENDED SOLIDS FROM RUNOFF, PROVIDES APPROPRIATE MEDIUM FOR GROWTH OF VEGETATION FOR STABILIZATION AND INCREASES INFILTRATION BY INCREASING THE SIZE OF SOIL PARTICLE.

(1) CAN BE USED ON DISTURBED SOILS, CAN BE USED IN CONJUNCTION WITH OTHER BMP'S TO ENHANCE PERFORMANCE, CAN BE APPLIED IN DISSOLVED FORM WITH WATER, CAN BE USED AS A DRY POWDER, CAN BE USED IN GRANULAR FORM OR MAY BE USED IN THE FORM OF FLOC LOGS.

(2) HIGHER CONCENTRATIONS OF PAM'S DON'T INCREASE THE EFFECTIVENESS OF THE PRODUCT.

(3) ACTIVELY WORKED AREAS WILL REQUIRE REAPPLICATION TO REMAIN EFFECTIVE.

(4) PAM SHOULD NOT BE USED WHERE THERE IS A POTENTIAL FOR EQUIPMENT CLOGGING OR TOXICITY IS A CONCERN.

NOTE: THIS PAY ITEM IS CONSIDERED A CONTRACTOR'S OPTION FOR SEDIMENT CONTROL ISSUES THAT ARE PROJECT/SITE SPECIFIC. USE FDOT PAY ITEM 104-19 (OR APPLICABLE COT PAY ITEM) CHEMICAL TREATMENT FOR SOIL BINDERS AND POLYACRYLAMIDES (PAM AND PAM BLENDS).

(b) TEMPORARY SOIL STABILIZATION - AS AN ADDITIONAL EROSION CONTROL MEASURE, CHEMICAL ADHESIVE STABILIZER (POLYACRYLAMIDE) CAN BE USED WHERE SOIL RUNOFF WILL DRAIN TO WETLANDS OR SURFACE WATERS. SUCH USAGE SHALL BE LIMITED TO AREAS WHERE VEHICLE TRAFFIC AND OTHER DISTURBANCES WILL NOT OCCUR FOR MORE THAN 7 DAYS. POLYACRYLAMIDE CAN BE APPLIED TO EXPOSED SOILS PRIOR TO PLACEMENT OF ARTIFICIAL COVERINGS AND ROLLED EROSION CONTROL PRODUCTS. POLYACRYLAMIDE SHALL BE USED TO STABILIZE SOIL STOCKPILES WHEN THE STOCKPILE WILL REMAIN UNDISTURBED FOR MORE THAN 7 DAYS. POLYACRYLAMIDE SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

5. DEWATERING OPERATIONS (OPTIONAL - BASED ON PROJECT APPLICABILITY):

DESCRIPTION: DEWATERING OPERATIONS ARE PRACTICES THAT MANAGE THE DISCHARGE OF TURBID WATER WHEN WATERS OTHER THAN STORMWATER AND ACCUMULATED SURFACE WATERS MUST BE REMOVED FROM A LOCATION SO THAT CONSTRUCTION WORK MAY BE ACCOMPLISHED. THE WATERS CAN INCLUDE GROUNDWATER, WATER FROM COFFERDAMS, WATER DIVERSIONS, AND WATERS USED DURING CONSTRUCTION THAT MUST BE REMOVED FROM A WORK AREA.

THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED STATE AND LOCAL PERMITS FOR THE INSTALLATION AND OPERATION OF DEWATERING AND/OR GROUNDWATER CONTROL SYSTEMS. THIS COULD INCLUDE, BUT IS NOT LIMITED TO, THE ACQUISITION OF A WATER USE PERMIT FROM THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT AND/OR A GENERIC PERMIT TO DISCHARGE PRODUCED GROUND WATER FROM ANY NON-CONTAMINATED CONSTRUCTION SITE.

(a) ENVIRONMENTAL AGENCIES ARE ESPECIALLY CONCERNED WITH THE PROTECTION OF WETLANDS FROM DRAWDOWN EFFECTS AND PROTECTING RECEIVING WATER BODIES FROM SEDIMENTATION AND POSSIBLE CAPACITY LIMITATIONS.

(b) THREE PRIMARY METHODS OF DEWATERING COMMONLY USED IN FLORIDA ARE RIM DITCHING, SOCK/PIPE/HORIZONTAL WELLS AND WELL-POINT SYSTEMS.

( c ) METHODS FOR CONTAINING SEDIMENTATION CAN INCLUDE A COMBINATION OF BMP'S AND SEDIMENT TRAPS, SEDIMENT BASINS, GRAVITY BAG FILTERS, WEIR TANKS, DEWATERING TANKS, SAND MEDIA/PRESSURIZED BAGS AND CHEMICAL TREATMENTS.

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| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# STORMWATER POLLUTION PREVENTION PLAN

SHEET NO.
74

6. PERMANENT CONTROLS FOR EROSION AND SEDIMENT CONTROL:
*STORMWATER PONDS
*SOD

III. OTHER CONTROLS:

1. WASTE DISPOSAL:
THE CONTRACTOR SHALL DESCRIBE THE PROPOSED PROCEDURES TO COMPLY WITH APPLICABLE STATE AND LOCAL REGULATIONS FOR WASTE DISPOSAL (FERTILIZERS, PESTICIDES, AND TOXIC SUBSTANCES), SANITARY SEWER, OR SEPTIC SYSTEMS IN THE EROSION CONTROL PLAN. THE CONTRACTOR SHALL ADDRESS THE GENERATION, APPLICATION, MIGRATION, STORAGE, AND DISPOSAL OF THESE SUBSTANCES. THE PROPOSED PROCEDURES SHALL COMPLY WITH APPLICABLE SUBSECTIONS OF EITHER SECTION 981 OR 982 OF THE SPECIFICATIONS.

* THE CONTRACTOR WILL PROVIDE LITTER CONTROL AND COLLECTION WITHIN THE PROJECT BOUNDARIES DURING CONSTRUCTION ACTIVITIES.

*ALL FERTILIZER AND CHEMICAL CONTAINERS SHALL BE DISPOSED OF BY THE CONTRACTOR ACCORDING TO EPA'S STANDARD PRACTICES AS DETAILED BY THE MANUFACTURER.

* NO SOLID MATERIALS INCLUDING BUILDING AND CONSTRUCTION MATERIALS SHALL BE DISCHARGED TO WETLANDS OR BURIED ON SITE.

*ALL SANITARY WASTE WILL BE COLLECTED FROM PORTABLE UNITS BY A LICENSED SANITARY WASTE COMPANY.

2. OFF-SITE VEHICLE TRACKING WILL BE CONTROLLED BY THE FOLLOWING METHODS:

(a) LOADED HAUL TRUCKS ARE TO BE COVERED BY A TARPAULIN AT ALL TIMES.
(b) EXCESS DIRT ON ROAD SHALL BE REMOVED DAILY.
(c) STABILIZING CONSTRUCTION ENTRANCES.
(d) USE ROADWAY SWEEPERS DURING DUST GENERATING ACTIVITIES SUCH AS EXCAVATION AND MILLING OPERATIONS.

3. STATE AND LOCAL REGULATIONS: PERMITS WILL BE REQUIRED FROM THE FOLLOWING AGENCIES:
*SWFWMD-PENDING;.
*USACOE-PENDING;
*NPDES-PENDING,
*HCEPC-PENDING
*FDOT-PENDING

4. NON-STORMWATER (INCLUDING SPILL REPORTING):
THE CONTRACTOR WILL PROVIDE THE CITY OF TAMPA WITH AN EROSION CONTROL PLAN THAT WILL INCLUDE SPILL CONTAINMENT, REPORTING, AND RESPONSES. THE PLAN SHALL SPECIFY WHAT MANAGEMENT PRACTICES AND CONTAINMENT METHODS WILL BE USED TO PREVENT POTENTIAL POLLUTANTS (FUEL, LUBRICANTS, HERBICIDES, ETC) FROM SPILLING INTO THE SOIL OR INTO THE SURFACE WATERS. IF A SPILL DOES OCCUR, OR IF CONTAMINATED SOIL OR GROUNDWATER IS ENCOUNTERED, CONTACT THE ENGINEER IMMEDIATELY.

IV. MAINTENANCE:

THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE AND REPAIRS OF ALL EROSION AND SEDIMENT CONTROL DEVICES AND REMOVAL OF EROSION AND SEDIMENT CONTROL DEVICES WHEN NOTICE OF TERMINATION IS MAILED. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL AND PROPER DISPOSAL OF SEDIMENT BUILDUP THROUGH THE LIFE OF THE INSTALLED EROSION AND SEDIMENT CONTROL DEVICES.

* ALL CONTROL MEASURES SHALL BE MAINTAINED DAILY BY THE CONTRACTOR AND ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF NOTICE.

* SODDING SHALL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.

* SYNTHETIC BALES SHALL BE MAINTAINED TO ENSURE THEIR USEFULNESS AND NOT BLOCK OR IMPEDE STORMWATER FLOW OR DRAINAGE. REMOVE SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE BALES OR WHEN WATER PONDS IN UNACCEPTABLE AMOUNTS OR AREAS.

* STAKED SILT FENCES SHALL NOT BLOCK OR IMPEDE STORMWATER OR DRAINAGE AND BE REPLACED EVERY TWELVE (12) MONTHS OR WHEN THEY HAVE SERVED THEIR USEFULNESS. REMOVE SEDIMENT WHEN IT REACHES 1/3 THE HEIGHT OF THE FENCE OR WHEN WATER PONDS IN UNACCEPTABLE AMOUNTS OR AREAS.

* STABILIZED CONSTRUCTION ENTRANCES SHALL BE MAINTAINED TO PREVENT CLOGGING OR ROCK BEDDING WHICH MAY IMPEDE THE USEFULNESS OF THE STRUCTURE.

*SEDIMENT BASINS SHALL BE UTILIZED UNTIL THE AREAS THAT DRAIN TO PERMANENT STORMWATER MANAGEMENT FACILITIES ARE STABILIZED. REMOVE SEDIMENT FROM THE SEDIMENT BASIN WHEN IT BECOMES MORE THAN 1.5 FT IN DEPTH AT ANY TIME.

V. INSPECTION:
QUALIFIED PERSONNEL SHALL INSPECT THE FOLLOWING ITEMS AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT PRODUCES 0.50 INCHES OR GREATER OF RAINFALL.

(a) POINTS OF DISCHARGE TO WATERS OF THE U.S
(b) POINTS OF DISCHARGE TO MUNICIPAL SEPARATE STORM DRAIN SYSTEMS
(c) DISTURBED AREAS OF THE SITE THAT HAVE NOT BEEN FINALLY STABILIZED
(d) AREAS USED FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION
(e) STRUCTURAL CONTROLS
(f) STORMWATER MANAGEMENT SYSTEMS
(g) LOCATIONS WHERE VEHICLES ENTER OR EXIT THE SITE

* THE CONTRACTOR SHALL INSTALL AND MAINTAIN RAIN GAUGES ON THE PROJECT SITE AND RECORD WEEKLY RAINFALL IN ACCORDANCE WITH THE NPDES PERMIT. ALL CONTROL MEASURES WILL BE MAINTAINED DAILY BY THE CONTRACTOR.

* ALL EROSION AND WATER POLLUTION ABATEMENT AND CONTROL MEASURES WILL BE INSPECTED DAILY BY THE CONTRACTOR'S PERSONNEL WHO ARE FDEP CERTIFIED STORMWATER MANAGEMENT INSPECTORS.

* THE CONTRACTOR SHALL COMPLETE ALL SWPPP INSPECTION REPORT FORMS REQUIRED BY THE NPDES PERMIT.

*WHERE SITES HAVE BEEN PERMANENTLY STABILIZED INSPECTIONS SHALL BE CONDUCTED AT LEAST ONCE EVERY MONTH.

VI. TRACKING AND REPORTING:

(1) THE CONTRACTOR SHALL SUBMIT A WEEKLY REPORT TO THE CITY OF TAMPA DOCUMENTING THE DAILY INSPECTIONS AND MAINTENANCE OR REPAIRS TO THE SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL MAINTAIN ALL REQUIRED REPORTS AND COMPLETE ALL SWPPP INSPECTION FORMS.

(2) PREPARATION OF ALL THE CONTRACTOR'S REPORTS OF INSPECTION, MAINTENANCE AND REPAIRS REQUIRED FOR THE CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION, SHALL BE INCLUDED IN THE INDIVIDUAL COSTS OF THE EROSION AND SEDIMENT CONTROL DEVICES OF THE PROJECT.

(3) THE CONTRACTOR SHALL USE THE MOST RECENT CONSTRUCTION INSPECTION REPORT (#650-040-03), FOR DAILY INSPECTIONS.

VII. NON-STORMWATER DISCHARGES

THE CONTRACTOR SHALL IDENTIFY ALL ANTICIPATED NON-STORMWATER DISCHARGES (EXCEPT FLOWS FROM FIRE FIGHTING ACTIVITIES). THE CONTRACTOR SHALL DESCRIBE THE PROPOSED MEASURES TO PREVENT POLLUTION OF THESE NON-STORMWATER DISCHARGES. IF THE CONTRACTOR ENCOUNTERS CONTAMINATED SOIL OR GROUNDWATER, CONTACT THE ENGINEER IMMEDIATELY.

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TEMPORARY TRAFFIC CONTROL GENERAL NOTES

1. NOTICE OF SPECIAL CIRCUMSTANCES WITH THIS PROJECT:
CSX RAILROAD WILL GIVE THE CITY APPROXIMATELY TWO WEEKS NOTICE PRIOR TO COMMENCING THEIR WORK. THIS NOTIFICATION PERIOD IS APPROXIMATE AND MAY VARY. COMPLETE ALL PRELIMINARY WORK AS REQUIRED BY CSX AND THE PLANS PRIOR TO CSX'S WORK. THIS WORK INCLUDES, BUT IS NOT LIMITED TO, SAW-CUTTING AND REMOVING PAVEMENT AND CONCRETE ABUTTING THE RAILROAD CROSSING AND SETTING UP AND IMPLEMENTING THE TCP.

SEE THE CSX SPECIAL PROVISIONS FOR FLAGGING REQUIREMENTS PRIOR TO WORKING ON CSX R/W.

2. UNPROTECTED TRAFFIC LANES ARE PROHIBITED FROM CONVEYING TRAFFIC ACROSS THE CSXT CROSSING DURING THE PHASED CONSTRUCTION OF THE ROADWAY. COORDINATE WITH CSX TO PROVIDE FOR RR CROSSING ARM PROTECTION AT ALL TIMES.

3. THE EXISTING POSTED SPEED (35 MPH FOR ARMENIA AVE., 45 MPH FOR BUSCH BLVD.) WILL BE MAINTAINED DURING CONSTRUCTION.

4. TRAFFIC WILL BE CONTROLLED IN ACCORDANCE WITH THE 102-600 SERIES OF THE STANDARD PLANS FOR ROAD CONSTRUCTION INDICES AS APPLICABLE. MAINTAIN AT LEAST ONE NORTH-SOUTH PEDESTRIAN WALKWAY THROUGH THE WORK ZONE AT ALL TIMES.

5. COORDINATE THE TTCP WITH FDOT AND ADJACENT PROJECTS.

6. SEVEN (7) DAYS PRIOR TO START OF CONSTRUCTION, PLACE PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) AT THE FOLLOWING LOCATIONS:

EASTBOUND BUSCH BOULEVARD (SR 580) EAST OF HIMES AVENUE
WESTBOUND BUSCH BOULEVARD (SR 580) WEST OF NORTH BOULEVARD
NORTHBOUND ARMENIA AVENUE NORTH OF WATERS AVENUE
SOUTHBOUND ARMENIA AVENUE SOUTH OF LINEBAUGH AVENUE

MESSAGES ARE AS FOLLOWS (OR AS DIRECTED BY THE ENGINEER):

| MESSAGE 1: | MESSAGE 2: | |
|---|---|---|
| ARMENIA_ | XXXXXXXX | (DAY OF WEEK) e.g. TUESDAY |
| CONST___ | XXX_XX__ | (DATE) e.g. APR 17 |
| BEGINS__ | _____ | |

ONCE CONSTRUCTION BEGINS, MESSAGES ARE AS FOLLOWS (OR AS DIRECTED BY THE ENGINEER):

| MESSAGE 1: | MESSAGE 2: |
|---|---|
| ARMENIA_ | EXPECT__ |
| AT_BUSCH | DELAYS__ |
| CONST___ | _____ |

7. FOR THE DURATION OF THE DETOUR, PLACE ONE PCMS AT A VISIBLE LOCATION APPROXIMATELY AT EACH LOCATION INDICATED IN THE DETOUR PLANS TO DIRECT MOTORISTS TO FOLLOW THE SIGNED DETOUR.

MESSAGE PROVIDED SHALL BE (OR AS DIRECTED BY THE ENGINEER):

| MESSAGE 1: | MESSAGE 2: |
|---|---|
| ARMENIA_ | FOLLOW__ |
| AT_BUSCH | DETOUR__ |
| CLOSED__ | _____ |

8. AS AN INTEGRAL PART OF ANY LANE CLOSURE, PLACE A PCMS APPROXIMATELY 800 FEET IN ADVANCE OF THE LANE CLOSURE.

DISPLAY PROVIDED ON BUSCH BOULEVARD SHALL BE (OR AS DIRECTED BY THE ENGINEER):

| MESSAGE 1: | MESSAGE 2: | |
|---|---|---|
| LANES___ | MERGE___ | |
| CLOSED__ | LEFT____ | (OR RIGHT AS APPROPRIATE) |
| AHEAD___ | _____ | |

DISPLAY PROVIDED ON ARMENIA AVENUE SHALL BE (OR AS DIRECTED BY THE ENGINEER):

| MESSAGE 1: | MESSAGE 2: |
|---|---|
| LANES___ | PREPARE_ |
| CLOSED__ | TO_____ |
| AHEAD___ | STOP____ |

9. NOTIFY:

THE ENGINEER A MINIMUM OF 7 DAYS PRIOR TO A LANE CLOSURE.

MR. MIKE WILLIAMS, COUNTY ENGINEER, AT (813)307-1767, 14 DAYS PRIOR TO A LANE CLOSURE.

SADE TOLBERT (SCHOOL BOARD OF HILLSBOROUGH COUNTY-TRANSPORTATION/BUS GARAGE) AT (813) 982-5524, ONE WEEK PRIOR TO A LANE CLOSURE.

GREGORY BRACKIN OR RALPH LAVADO (HART LINE) AT (813) 623-5835, ONE WEEK PRIOR TO A LANE CLOSURE.

THE CITY, FDOT AND LOCAL EMERGENCY AGENCIES (POLICE AND FIRE), 24 HOURS PRIOR TO A LANE CLOSURES.

VIK BHIDE, CITY OF TAMPA TRAFFIC DESIGN ENGINEER, AT (813) 274-8066, A MINIMUM OF 7 DAYS IN ADVANCE OF A LANE CLOSURE TO COORDINATE TRAFFIC SIGNAL TIMING ADJUSTMENTS.

10. SINGLE LANE CLOSURE RESTRICTIONS:

ARMENIA AVENUE: LANE CLOSURES WILL NOT BE ALLOWED BETWEEN THE HOURS OF 7:00 AM AND 9:00 PM
SR 580\BUSCH BLVD.: LANE CLOSURES WILL NOT BE ALLOWED BETWEEN THE HOURS OF 6:00 AM AND 10:30 PM

11. ALL LANES ON SR 580\BUSCH BLVD. AND ARMENIA AVENUE MUST BE OPEN TO TRAFFIC DURING AN EVACUATION NOTICE OF A HURRICANE OR OTHER CATASTROPHIC EVENT, AND SHALL REMAIN OPEN FOR THE DURATION OF THE EVACUATION OR EVENT AS DIRECTED BY THE ENGINEER.

12. DO NOT EXCAVATE ANY AREAS THAT CANNOT BE SAFELY REOPENED TO TRAFFIC WITHIN THE SAME WORK PERIOD.

13. ESTABLISH A WORK SCHEDULE SO THAT ANY LOCATION UNDER CONSTRUCTION WILL NOT BE LEFT IN A HAZARDOUS CONDITION AT COMPLETION OF ANY WORK PERIOD.

PROVIDE ALL MATERIALS AND EQUIPMENT NEEDED TO MEET THE DROP-OFF REQUIREMENT OF FDOT INDEX 102-600. PAYMENT FOR ALL MATERIALS AND EQUIPMENT SHALL BE INCLUDED WITH MAINTENANCE OF TRAFFIC. IN THE EVENT THAT THE CONTRACTOR'S OPERATIONS ARE STOPPED DUE TO WEATHER OR OTHER CONDITIONS, PROTECT DROP-OFFS IN ACCORDANCE WITH INDEX 102-600.

14. MAINTAIN AND KEEP STREET NAME IDENTIFICATION VISIBLE DURING CONSTRUCTION OPERATIONS TO FACILITATE EMERGENCY VEHICLE TRAFFIC.

15. PROVIDE TEMPORARY PAVEMENT MARKINGS INDICATING LANE LINES, STOP BARS, AND PAVEMENT MESSAGES TO COMPLETELY DEFINE TRAFFIC FLOW DURING THE CURING PERIOD FOR THE NEW PAVEMENT. PLACE TEMPORARY PAVEMENT MARKINGS IN ACCORDANCE WITH THE LOCATIONS SHOWN ON THE SIGNING AND PAVEMENT MARKING PLAN SHEETS.

16. TEMPORARY THROUGH TRAVEL LANES SHALL BE A MINIMUM OF 11 FEET IN WIDTH. AUXILIARY LANES SHALL BE A MINIMUM OF 10 FEET IN WIDTH.

17. MAINTAIN SIGNAL CONTROL AND PAVEMENT MARKINGS DURING CONSTRUCTION. ALL SIGNAL HEADS SHALL BE SHIFTED TO MATCH THE PROPOSED LANE CONFIGURATIONS OF EACH PHASE.

18. COORDINATE SIGNALIZATION AND TEMPORARY CONTROLS WITH THE CITY OF TAMPA, MR. WILLIAM HALL, TRAFFIC SIGNAL SUPERVISOR, 3802 E. 26TH AVENUE, TAMPA, FLORIDA 33605, PHONE: (813) 622-1966, EMAIL: bill.hall@tampagov.net.

19. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO DETAIL THE PHASING OF THE PROJECT TO BEST FIT THE MEANS AND METHODS NECESSARY TO CONSTRUCT THE PROJECT IN AN EFFICIENT MANOR WHILE MAINTAINING THE SAFETY OF THE PUBLIC. GENERAL CONSTRUCTION PHASING IS PROVIDED ON THE NEXT SHEET.

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

TRAFFIC CONTROL GENERAL PHASING NOTES

UTILIIZING STANDARD PLANS INDEX 102- SERIES, AND OTHER INDICES THAT MAY BE APPLICABLE IN ACCORDANCE WITH THE CONTRACTOR'S OPERATIONS:

PHASE I (STORM DRAIN CROSSINGS AND RAILROAD CROSSING)

COORDINATE WITH CSX FOR THEIR INSTALLATION OF SIGNAL GATES AND OTHER CROSSING SAFETY EQUIPMENT FOR PHASE I AND INCORPORATE THIS WORK INTO THE CONSTRUCTION SEQUENCING.

INSTALL PCMS'S PER PLANS AND TTCP GENERAL NOTES.

INSTALL ADVANCE WARNING CONSTRUCTION SIGNS, BARRICADES AND TEMPORARY EROSION CONTROL DEVICES AS NEEDED OR INDICATED ON THE PLANS.

CONSTRUCT THE STORM DRAIN CROSSINGS UTILIZING LANE CLOSURES. CONSTRUCT S-1, S-1A, S-1B AND S-1C.

REMOVE THE EXISTING TRAFFIC SEPARATOR FROM STA. 126+74.96 TO STA. 128+77.38. PATCH ASPHALT TO CREATE A RIDEABLE SURFACE.

PLACE SIGNS AND PCMS'S FOR DETOUR. SHIFT TRAFFIC USING LANE CLOSURES AS NECESSARY IN ACCORDANCE WITH STANDARD PLANS INDICES AND DETOUR PLAN AS SHOWN IN THESE PLANS.

ACTIVATE DETOUR. CLOSE THE RAILROAD CROSSING. CSX TO CONSTRUCT RAILROAD CROSSING IMPROVEMENTS.

COMPLETE THE ROAD WORK REQUIRED BY CSX RAILROAD AS DESCRIBED IN THE TEMPORARY TRAFFIC CONTROL GENERAL NOTES.

CONSTRUCT TEMPORARY PAVING WEDGE AT THE CROSSING.

RE-OPEN RAILROAD CROSSING AND REMOVE DETOUR.

PHASE II (WEST SIDE WIDENING) -

COORDINATE WITH CSX FOR THEIR INSTALLATION OF SIGNAL GATES AND OTHER CROSSING SAFETY EQUIPMENT FOR PHASE II AND INCORPORATE THIS WORK INTO THE CONSTRUCTION SEQUENCING.

INSTALL TEMPORARY SIGNING AND PAVEMENT MARKINGS FOR PHASE II.

INSTALL BARRICADES AND TEMPORARY EROSION CONTROL DEVICES AS NEEDED FOR PHASE II.

SHIFT SOUTHBOUND LANE 4 FEET TO THE EAST, ADJACENT TO NORTHBOUND LANES.

SAWCUT EXISTING PAVEMENT ALONG THE WEST SIDE OF THE LOCATION OF THE PROPOSED MEDIAN SEPARATOR. CONSTRUCT THE POND, STORM SEWER TRUNK LINE, CURB AND GUTTER AND PAVEMENT WIDENING, GRADING, SIDEWALK AND OTHER ITEMS BEHIND THE CURB ALONG THE WEST SIDE OF ARMENIA.

CONSTRUCT EASTBOUND RIGHT TURN LANE, CURB AND GUTTER, AND SIDEWALK ALONG BUSCH BOULEVARD WEST OF ARMENIA AVENUE AND ADJUST THE LENGTH OF THE TRAFFIC SEPARATOR.

CONSTRUCT TEMPORARY PAVEMENT IN THE PROPOSED ISLAND AREA FROM STA. 120+35 TO 121+10 LEFT.

INSTALL SOD AND PERMANENT EROSION CONTROL FEATURES.

PHASE III (EAST SIDE WIDENING) -

COORDINATE WITH CSX FOR THEIR INSTALLATION OF SIGNAL GATES AND OTHER CROSSING SAFETY EQUIPMENT FOR PHASE III AND INCORPORATE THIS WORK INTO THE CONSTRUCTION SEQUENCING.

INSTALL TEMPORARY SIGNING AND PAVEMENT MARKINGS FOR PHASE III.

INSTALL BARRICADES AND TEMPORARY EROSION CONTROL DEVICES AS NEEDED FOR PHASE III.

ADJUST SIGNAL HEADS AND SHIFT SOUTHBOUND LANE TO THE WEST ONTO NEWLY CONSTRUCTED PAVEMENT.

CONSTRUCT THE STORM SEWER, CURB AND GUTTER AND PAVEMENT WIDENING, GRADING, SIDEWALK AND OTHER ITEMS BEHIND THE CURB ALONG THE EAST SIDE OF ARMENIA.

CONSTRUCT PAVEMENT, CURB AND GUTTER, AND SIDEWALK ALONG EASTBOUND BUSCH BOULEVARD EAST OF ARMENIA AVENUE.

INSTALL SOD AND PERMANENT EROSION CONTROL FEATURES.

PHASE IV (RESRUFACING AND MEDIAN CONSTRUCTION) -

COORDINATE WITH CSX FOR THEIR INSTALLATION OF SIGNAL GATES AND OTHER CROSSING SAFETY EQUIPMENT FOR PHASE IV AND INCORPORATE THIS WORK INTO THE CONSTRUCTION SEQUENCING.

INSTALL TEMPORARY SIGNING AND PAVEMENT MARKINGS FOR PHASE IV.

SHIFT SOUTHBOUND AND NORTHBOUND TRAFFIC TO THE OUTSIDE.

UNDER LANE CLOSURES MILL AND RESURFACE THE REMAINING PAVEMENT. INSTALL TEMPORARY PAVEMENT MARKINGS AFTER EACH DAY'S WORK.

CONSTRUCT THE MEDIAN SOUTH OF BUSCH BOULEVARD AND THE TRAFFIC SEPARATOR NORTH OF BUSCH BOULEVARD.

CONSTRUCT THE ISLAND IN THE SOUTHEAST QUADRANT OF THE INTERSECTION.

PHASE V (FRICTION COURSE AND PAVEMENT MARKING) -

APPLY FRICTION COURSE AND FINAL PAVEMENT MARKINGS UTILIZING TRAFFIC SHIFTS.

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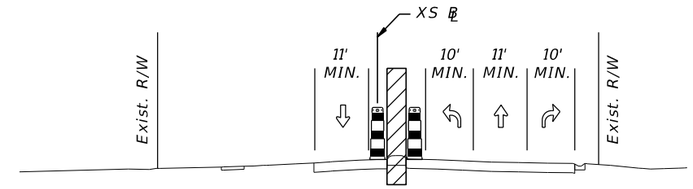
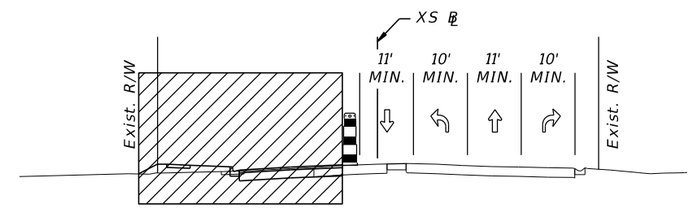
LEGEND
======

WORK AREA

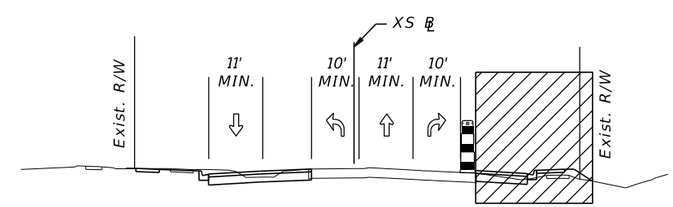
TYPE I OR TYPE II BARRICADE OR VERTICAL PANEL OR DRUM (WITH STEADY BURN LIGHT AT NIGHT ONLY)



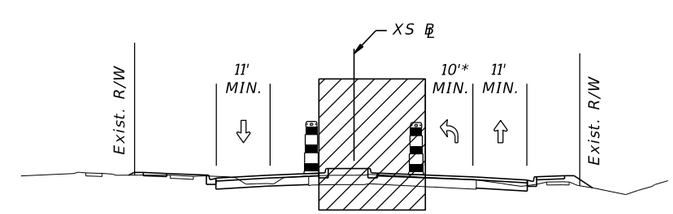

PHASE I




PHASE II




PHASE III




PHASE IV

* NOTE: THE CONTRACTOR SHALL MAINTAIN A 10' MIN. LEFT TURN LANE WITHIN THE WORK ZONE AT ALL TIMES EXCEPT DURING LANE CLOSURE.

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| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

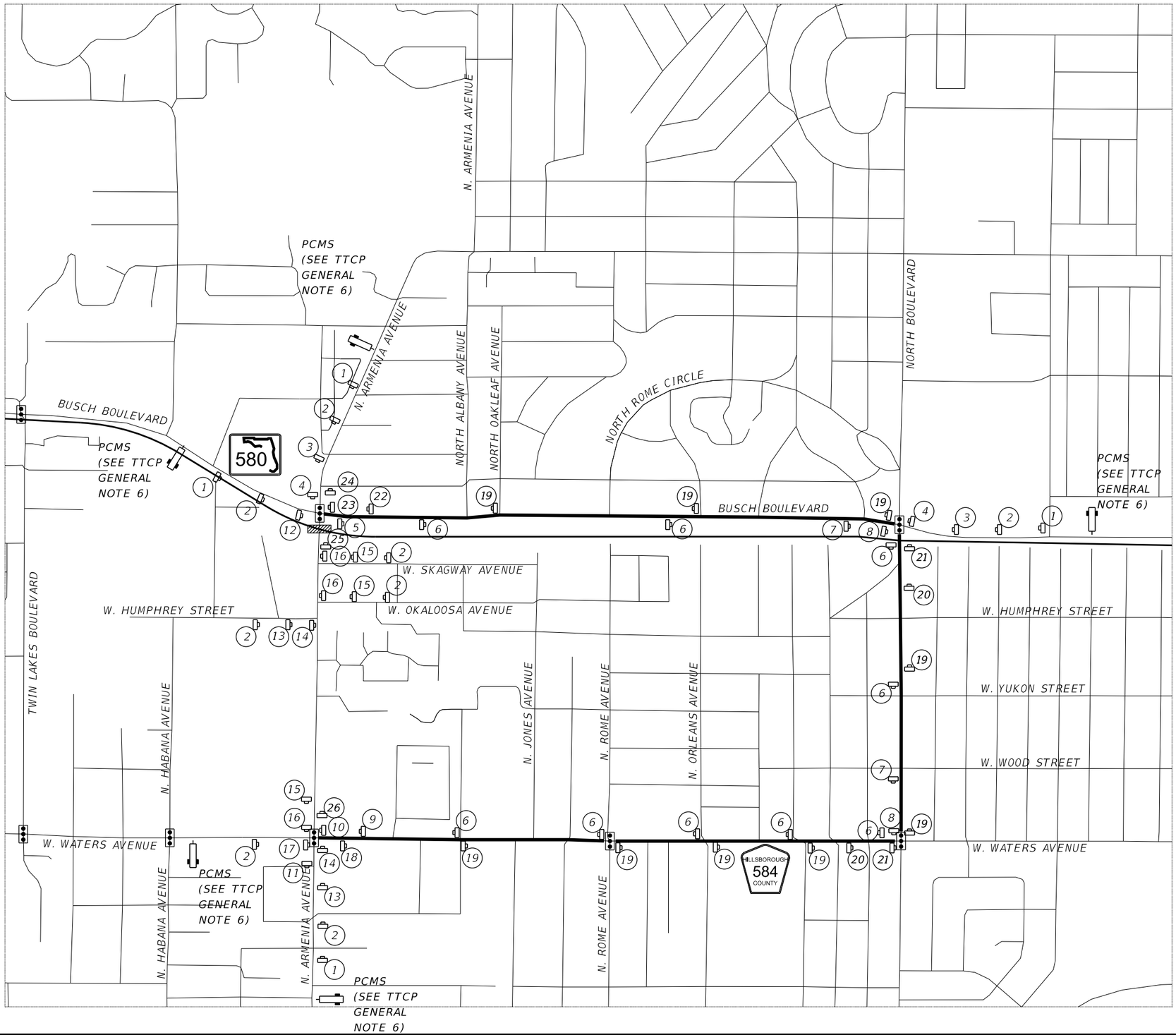
CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# TEMPORARY TRAFFIC CONTROL PLAN

SHEET NO.
78



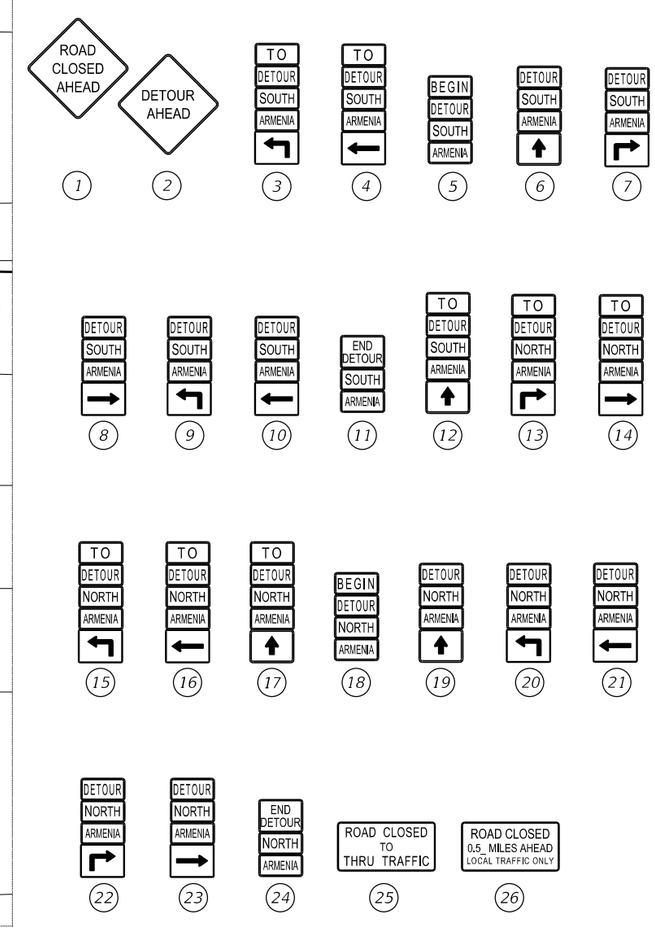

N

0 200 1000

Feet

## LEGEND

- Work Area
- Traffic Signal
- Work Zone Sign Distance Between Signs 200'
- Portable Changeable (Variable) Message Sign




# FULL CLOSURE DETOUR

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| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

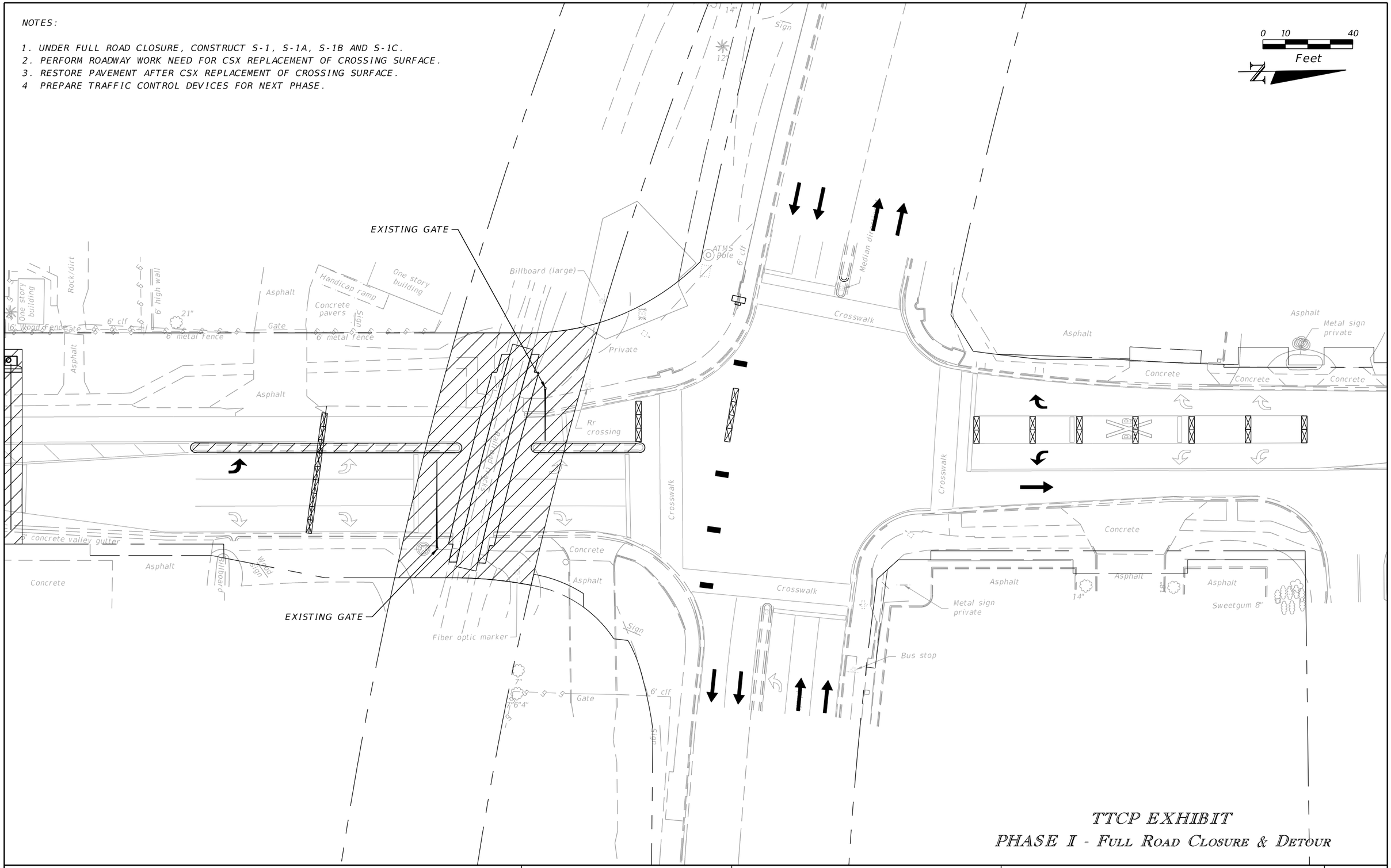
TEMPORARY TRAFFIC CONTROL PLAN

SHEET NO. 79

mcannon 9/21/2020 8:21:49 AM P:\C0T1301\CADD\roadway\TCPLRD01.dwg

NOTES:

1. UNDER FULL ROAD CLOSURE, CONSTRUCT S-1, S-1A, S-1B AND S-1C.
2. PERFORM ROADWAY WORK NEED FOR CSX REPLACEMENT OF CROSSING SURFACE.
3. RESTORE PAVEMENT AFTER CSX REPLACEMENT OF CROSSING SURFACE.
4 PREPARE TRAFFIC CONTROL DEVICES FOR NEXT PHASE.




| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

TEMPORARY TRAFFIC
CONTROL PLAN

SHEET NO.
80

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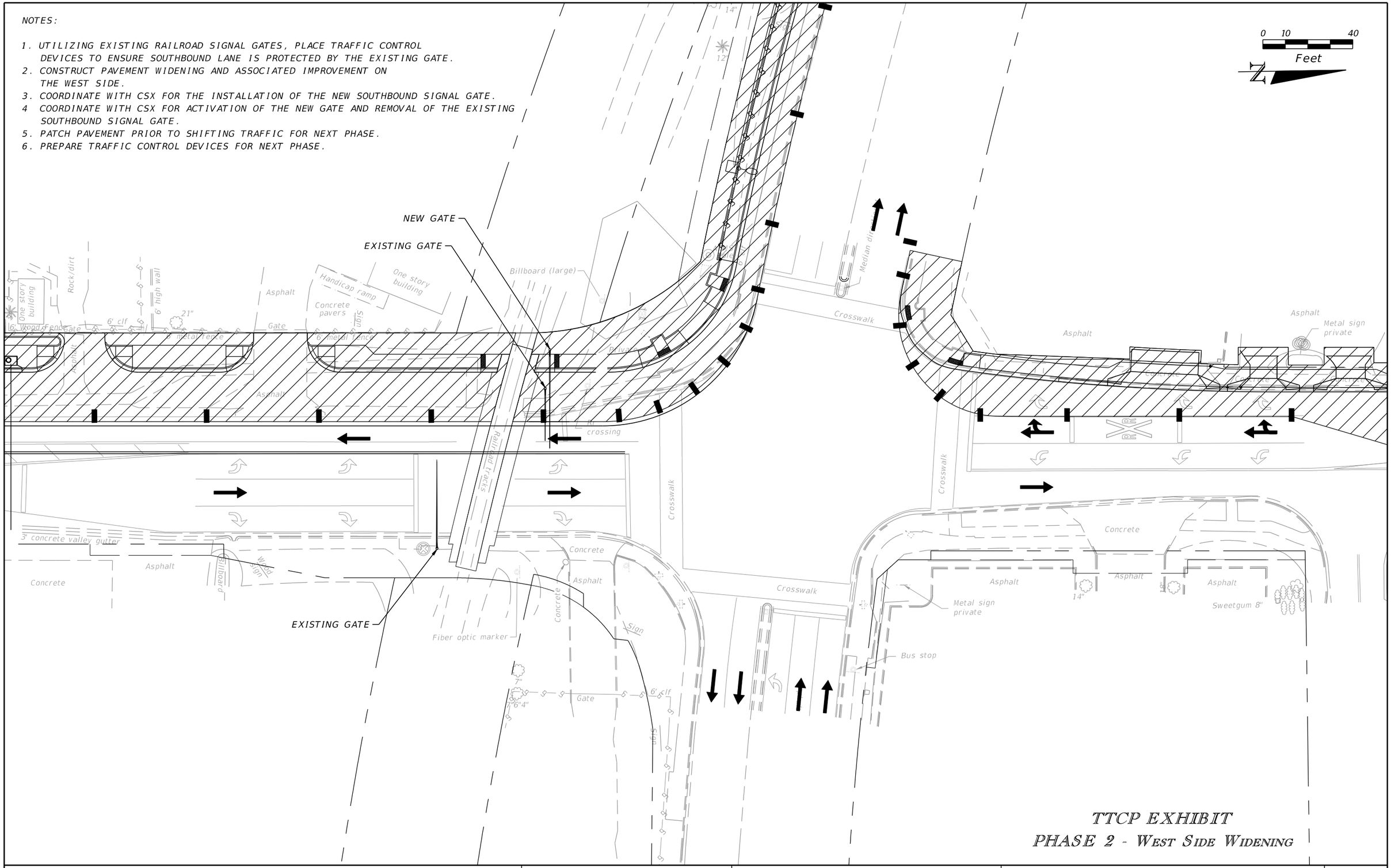
mcannon 9/21/2020 8:21:52 AM P:\C0T1301\CADD\roadway\TCPLRDPhase1.dwg

NOTES:

1. UTILIZING EXISTING RAILROAD SIGNAL GATES, PLACE TRAFFIC CONTROL DEVICES TO ENSURE SOUTHBOUND LANE IS PROTECTED BY THE EXISTING GATE.
2. CONSTRUCT PAVEMENT WIDENING AND ASSOCIATED IMPROVEMENT ON THE WEST SIDE.
3. COORDINATE WITH CSX FOR THE INSTALLATION OF THE NEW SOUTHBOUND SIGNAL GATE.
4 COORDINATE WITH CSX FOR ACTIVATION OF THE NEW GATE AND REMOVAL OF THE EXISTING SOUTHBOUND SIGNAL GATE.
5. PATCH PAVEMENT PRIOR TO SHIFTING TRAFFIC FOR NEXT PHASE.
6. PREPARE TRAFFIC CONTROL DEVICES FOR NEXT PHASE.

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| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

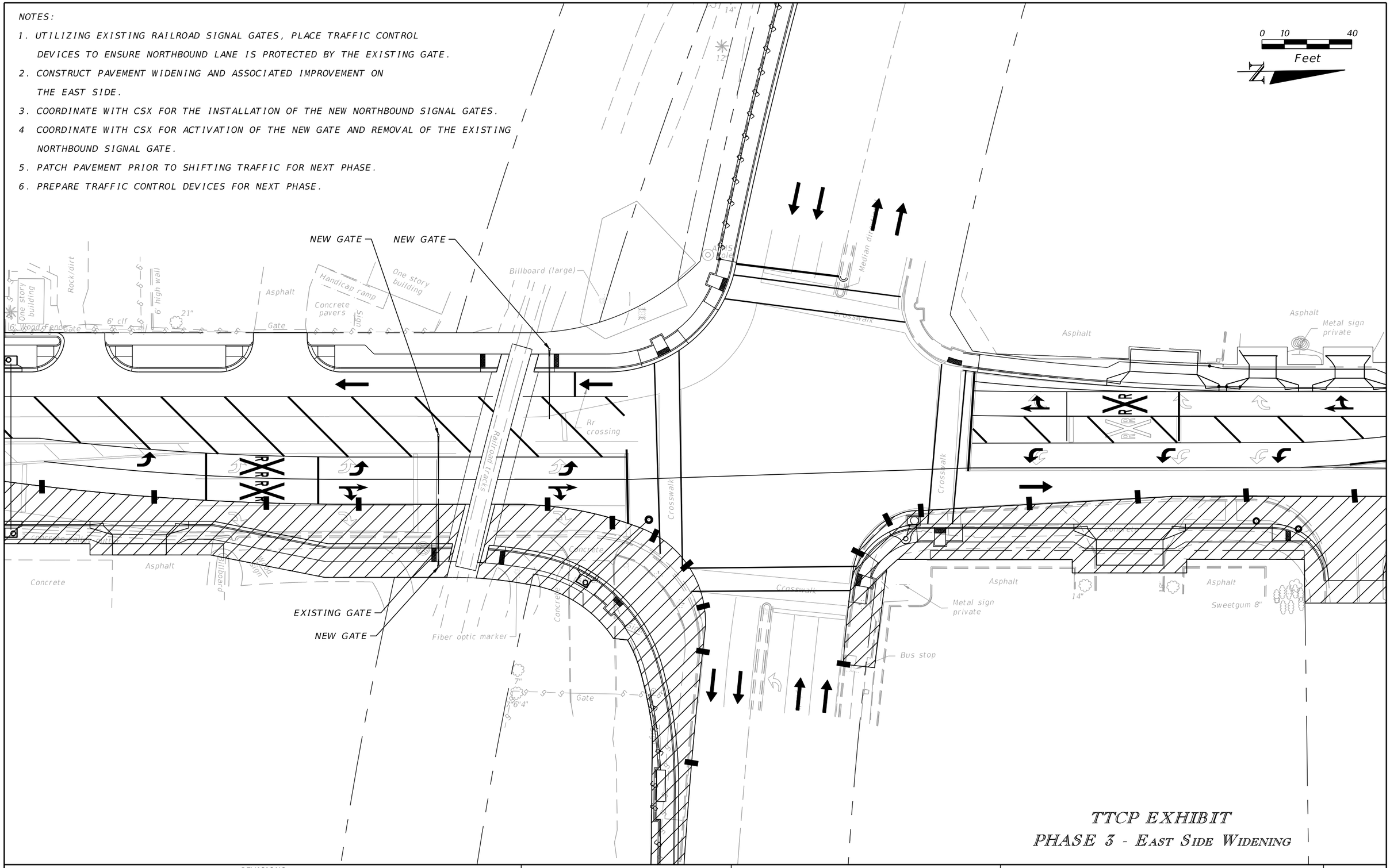
TEMPORARY TRAFFIC
CONTROL PLAN

SHEET NO.
81

mcannon 9/21/2020 8:21:54 AM P:\C0T1301\CADD\roadway\TCPLRDPhase2.dwg

NOTES:

1. UTILIZING EXISTING RAILROAD SIGNAL GATES, PLACE TRAFFIC CONTROL DEVICES TO ENSURE NORTHBOUND LANE IS PROTECTED BY THE EXISTING GATE.
2. CONSTRUCT PAVEMENT WIDENING AND ASSOCIATED IMPROVEMENT ON THE EAST SIDE.
3. COORDINATE WITH CSX FOR THE INSTALLATION OF THE NEW NORTHBOUND SIGNAL GATES.
4 COORDINATE WITH CSX FOR ACTIVATION OF THE NEW GATE AND REMOVAL OF THE EXISTING NORTHBOUND SIGNAL GATE.
5. PATCH PAVEMENT PRIOR TO SHIFTING TRAFFIC FOR NEXT PHASE.
6. PREPARE TRAFFIC CONTROL DEVICES FOR NEXT PHASE.




| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

TEMPORARY TRAFFIC CONTROL PLAN

SHEET NO.
82

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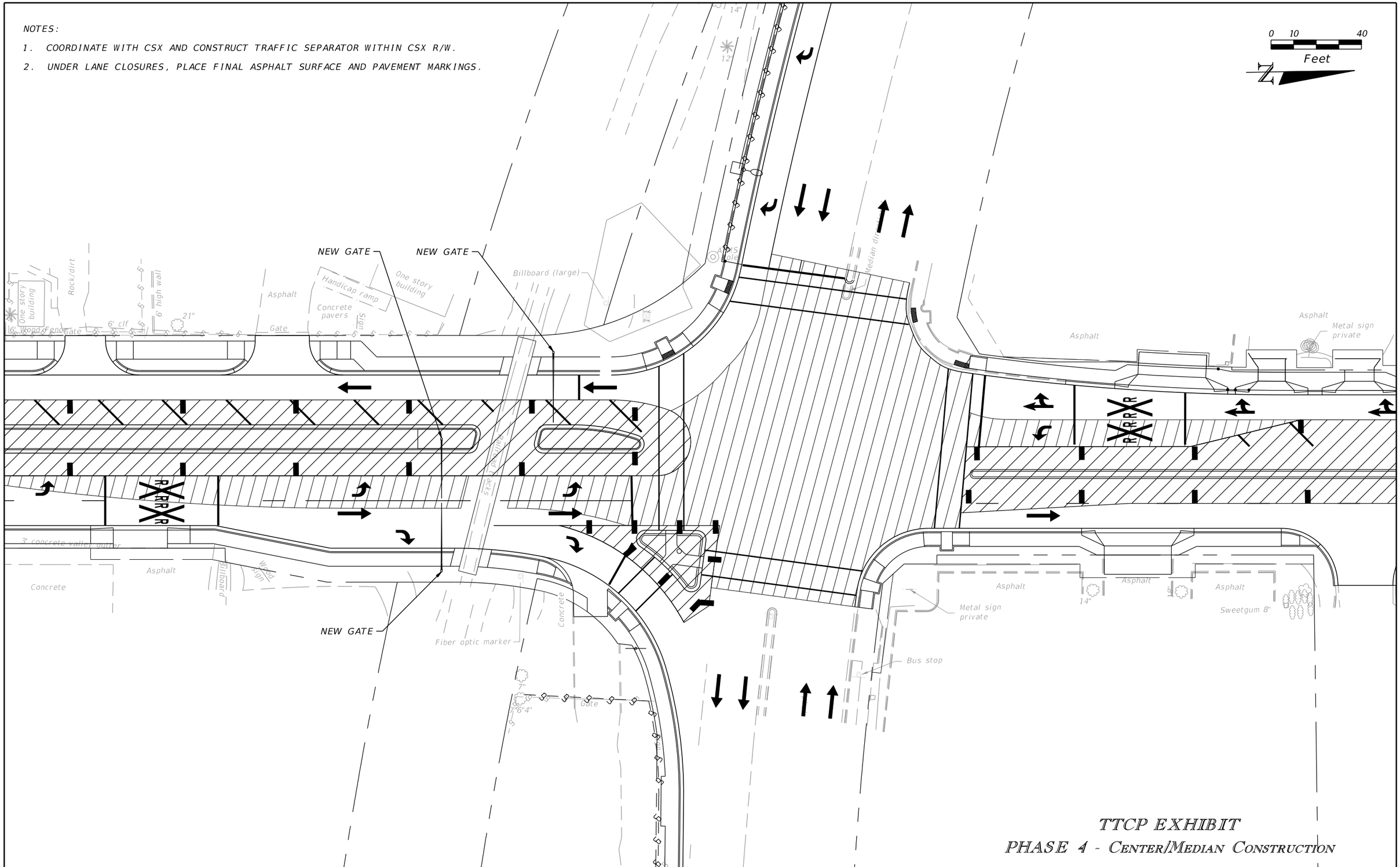
mcannon 9/21/2020 8:21:57 AM P:\C0T1301\CADD\roadway\TCPLRDPhase3.dwg

NOTES:

1. COORDINATE WITH CSX AND CONSTRUCT TRAFFIC SEPARATOR WITHIN CSX R/W.
2. UNDER LANE CLOSURES, PLACE FINAL ASPHALT SURFACE AND PAVEMENT MARKINGS.




| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

TEMPORARY TRAFFIC
CONTROL PLAN

SHEET NO.
83

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# SUMMARY OF VERIFIED UTILITIES

| Vvh # | UTILITY DESCRIPTION (Owner, type) | | SIZE | MATERIALS | ℄ Survey | | | EXISTING GROUND ELEVATION | TOP ELEVATION | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | STATION | OFFSET | LT. /RT. | | | |
| TH1 | FRONTIER | TEL | 1½" | DB CABLE | 120+16.99 | -48.04 | LT | 41.16 | 38.75 | |
| TH2 | FRONTIER | FOC | 1½" | PE | 120+18.16 | -48.15 | LT | 41.33 | 38.97 | |
| TH3 | FRONTIER | UNK | 1" | DB CABLE | 120+17.83 | -47.36 | LT | 41.29 | 38.32 | |
| TH4 | TECO PEOPLES GAS | GAS | 2" | STEEL | 120+20.40 | -50.84 | LT | 41.61 | 38.11 | |
| TH5 | CITY OF TAMPA | FORCE MAIN | 4" | STEEL | 120+20.75 | -52.54 | LT | 41.58 | 37.89 | |
| TH6 | CITY OF TAMPA | WATER | 8" | DIP | 120+07.33 | 16.02 | RT | 41.33 | 37.39 | |
| TH7 | CITY OF TAMPA | WATER | 3" | STEEL | 120+09.11 | 15.14 | RT | 41.24 | 38.76 | |
| TH8 | CITY OF TAMPA | WATER | 3" | STEEL | 120+09.09 | 13.56 | RT | 41.12 | 38.82 | |
| TH9 | CITY OF TAMPA | WATER | 8" | DIP | 120+13.03 | 19.68 | RT | 41.40 | 38.45 | |
| TH10 | CITY OF TAMPA | FORCE MAIN | 4" | STEEL | 120+07.98 | 34.30 | RT | 41.71 | 37.36 | |
| TH11 | CITY OF TAMPA | WATER | 4" | STEEL | 120+32.21 | -20.53 | LT | 41.29 | 39.01 | |
| TH12 | TECO PEOPLES GAS | GAS | 2" | STEEL | 121+74.95 | -18.33 | LT | 43.93 | 40.83 | |
| TH13 | CITY OF TAMPA | WATER | 4" | STEEL | 121+75.09 | -20.14 | LT | 43.84 | 42.78 | |
| TH14 | FRONTIER | TEL | ½" | LEAD DB CABLE | 122+09.94 | 21.05 | RT | 44.99 | 42.02 | |
| TH15 | CITY OF TAMPA | WATER | 1" / 2" | PE / STEEL CASING | 120+43.67 | -13.49 | LT | 41.95 | 39.90 | |
| TH16 | HILLSBOROUGH COUNTY | TRAFFIC SIGNAL | 2" | PVC | 134+84.98 | -21.22 | LT | 44.62 | 41.57 | |
| TH17 | FBL, ATT, LVL3, MCI | FOC DUCT-SYSTEM | 6-1½" | PE | 134+87.80 | -29.41 | LT | 44.20 | 34.65 | |
| TH18 | FRONTIER | TEL DUCT-SYSTEM | 4-4" | PVC | 134+87.06 | -40.60 | LT | 43.20 | 38.34 | |
| TH19 | CITY OF TAMPA | WATER | 8" | STEEL | 134+89.37 | 20.78 | RT | 44.42 | 40.97 | |
| TH20 | FRONTIER | TEL | 2" | STEEL | 134+90.70 | 26.27 | RT | 44.21 | 41.43 | |
| TH21 | CITY OF TAMPA | WATER | 4" | STEEL | 120+21.69 | -20.82 | LT | 41.15 | 38.90 | |
| TH22 | CITY OF TAMPA | WATER | 2" | STEEL | 120+25.82 | -23.01 | LT | 41.20 | 39.41 | |
| TH23 | CITY OF TAMPA | WATER | 4" | STEEL | 125+89.31 | -20.41 | LT | 46.85 | 44.01 | |
| TH24 | CITY OF TAMPA | WATER | 8" | CIP | 118+48.44 | 15.56 | RT | 39.01 | 35.61 | |
| TH25 | CITY OF TAMPA | WATER | 6" | DIP | 119+48.28 | 22.36 | RT | 40.59 | 36.56 | |
| TH26 | FRONTIER | TEL | 1½" | DB CABLE | 120+21.04 | 14.45 | RT | 41.43 | 37.25 | |
| TH27 | CITY OF TAMPA | WATER | 8" | STEEL | 120+39.92 | 15.83 | RT | 41.72 | 37.86 | |
| TH28 | CITY OF TAMPA | WATER | 3" - 8" | STEEL - CIP | 122+00.95 | 15.16 | RT | 45.04 | 42.04 | |
| TH29 | BRIGHTHOUSE | CATV | 2" | PVC | 125+94.93 | -27.18 | LT | 47.24 | 44.34 | |
| TH30 | TECO PEOPLES GAS | GAS | 2" | STEEL | 121+99.77 | -18.42 | LT | 44.59 | 41.17 | |
| TH31 | CITY OF TAMPA | WATER | 4" | STEEL | 121+99.77 | -20.24 | LT | 44.37 | 42.53 | |
| TH32 | HILLSBOROUGH COUNTY | ELECTRIC | 2" | PVC | 129+73.95 | -290.01 | LT | 39.31 | 36.11 | |
| TH33 | FRONTIER | TEL | 4"x2 | PVC | 134+32.63 | 28.37 | RT | 44.98 | 42.08 | |
| TH34 | FRONTIER | TEL | 4" | STEEL CASING | 123+86.34 | -15.46 | LT | 47.51 | 42.29 | |
| TH35 | SOUTH LIMITS | EXPLORATORY | NUF | NUF | 128+61.42 | 84.81 | RT | 47.18 | N/A | |
| TH36 | WEST LIMITS | EXPLORATORY | NUF | NUF | 128+66.48 | 79.51 | RT | 47.61 | N/A | |
| TH37 | NORTH LIMITS | EXPLORATORY | NUF | NUF | 128+71.28 | 84.87 | RT | 47.55 | N/A | |
| TH38 | EAST LIMITS | EXPLORATORY | NUF | NUF | 128+66.46 | 89.98 | RT | 47.72 | N/A | |
| TH39 | CENTER | EXPLORATORY | NUF | NUF | 128+66.28 | 84.77 | RT | 47.69 | N/A | |
| TH40 | HILLSBOROUGH COUNTY | TRAFFIC SIGNAL | 2"x3 | PVC | 128+84.88 | -57.45 | LT | 46.81 | 44.22 | |
| TH41 | SOUTH LIMITS | EXPLORATORY | NUF | NUF | 130+07.80 | -54.43 | LT | 46.93 | N/A | |
| TH42 | EAST LIMITS | EXPLORATORY | NUF | NUF | 130+09.49 | -51.42 | LT | 47.17 | N/A | |
| TH43 | NORTH LIMITS | EXPLORATORY | NUF | NUF | 130+12.40 | -53.30 | LT | 46.88 | N/A | |
| TH44 | WEST LIMITS | EXPLORATORY | NUF | NUF | 130+10.42 | -56.23 | LT | 46.88 | N/A | |
| TH45 | CENTER | EXPLORATORY | NUF | NUF | 130+10.00 | -53.80 | LT | 46.96 | N/A | |
| TH46 | FRONTIER | FOC | 4" | PVC | 130+12.02 | -54.54 | LT | 46.87 | 42.89 | |
| TH47 | UNKNOWN | W EDGE STORM MH | 4.8' | STRUCTURE | 130+09.63 | -50.50 | LT | 47.11 | 46.36 | |
| TH48 | SOUTH LIMITS | ELECTRIC | 2"x2 | NFV | 129+79.01 | 55.04 | RT | 47.85 | N/A | |
| TH49 | EAST LIMITS | EXPLORATORY | NUF | NUF | 129+80.40 | 58.73 | RT | 48.24 | N/A | |
| TH50 | NORTH LIMITS | S EDGE CONC CAP | NFV | CONC | 129+83.57 | 57.09 | RT | 48.33 | 46.38 | |
| TH51 | WEST LIMITS | EXPLORATORY | NUF | NUF | 129+82.57 | 54.17 | RT | 48.36 | N/A | |
| TH52 | CENTER | EXPLORATORY | NUF | NUF | 129+81.55 | 56.13 | RT | 48.40 | N/A | |
| TH53 | HILLSBOROUGH COUNTY | ELECTRIC | 2"x2 | PVC | 129+79.28 | 54.49 | RT | 47.75 | 45.85 | |
| TH54 | UNKNOWN | S EDGE CONC | 30" | CONC | 129+84.02 | 55.97 | RT | 48.51 | 47.13 | |
| TH55 | UNKNOWN | N EDGE CONC | 30" | CONC | 129+86.46 | 56.33 | RT | 48.63 | 47.25 | |
| TH56 | CITY OF TAMPA | WATER | 8" | CIP | 125+96.79 | 22.79 | RT | 46.96 | 42.41 | |
| TH57 | FRONTIER | TEL | 1" | LEAD DB CABLE | 132+40.44 | 19.20 | RT | 45.98 | 43.86 | |
| TH58 | CITY OF TAMPA | WATER | 8" | CIP | 132+40.45 | 18.18 | RT | 46.00 | 42.51 | |
| TH59 | FRONTIER | TEL | 4"x5 | PVC/DB CABLE | 132+71.21 | 28.92 | RT | 45.85 | 42.21 | |
| TH60 | HILLSBOROUGH COUNTY | TRAFFIC SIGNAL | 2"x2 | PVC | 128+84.82 | -50.26 | LT | 46.64 | 43.90 | |
| TH61 | HILLSBOROUGH COUNTY | TRAFFIC SIGNAL | 2" | PVC | 128+86.27 | -53.71 | LT | 46.74 | 40.22 | |
| TH62 | HILLSBOROUGH COUNTY | TRAFFIC SIGNAL | 2"x2 | PVC | 128+86.24 | -54.29 | LT | 46.75 | 43.82 | |
| TH63 | HILLSBOROUGH COUNTY | TRAFFIC SIGNAL | 2"x2 | PVC | 128+86.25 | -54.91 | LT | 46.74 | 44.27 | |
| TH64 | HILLSBOROUGH COUNTY | TRAFFIC SIGNAL | 2"x2 | PVC | 128+85.98 | -55.11 | LT | 46.82 | 44.30 | |

NUF = NO UTILITY FOUND
NFV = NOT FIELD VERIFIED

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ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

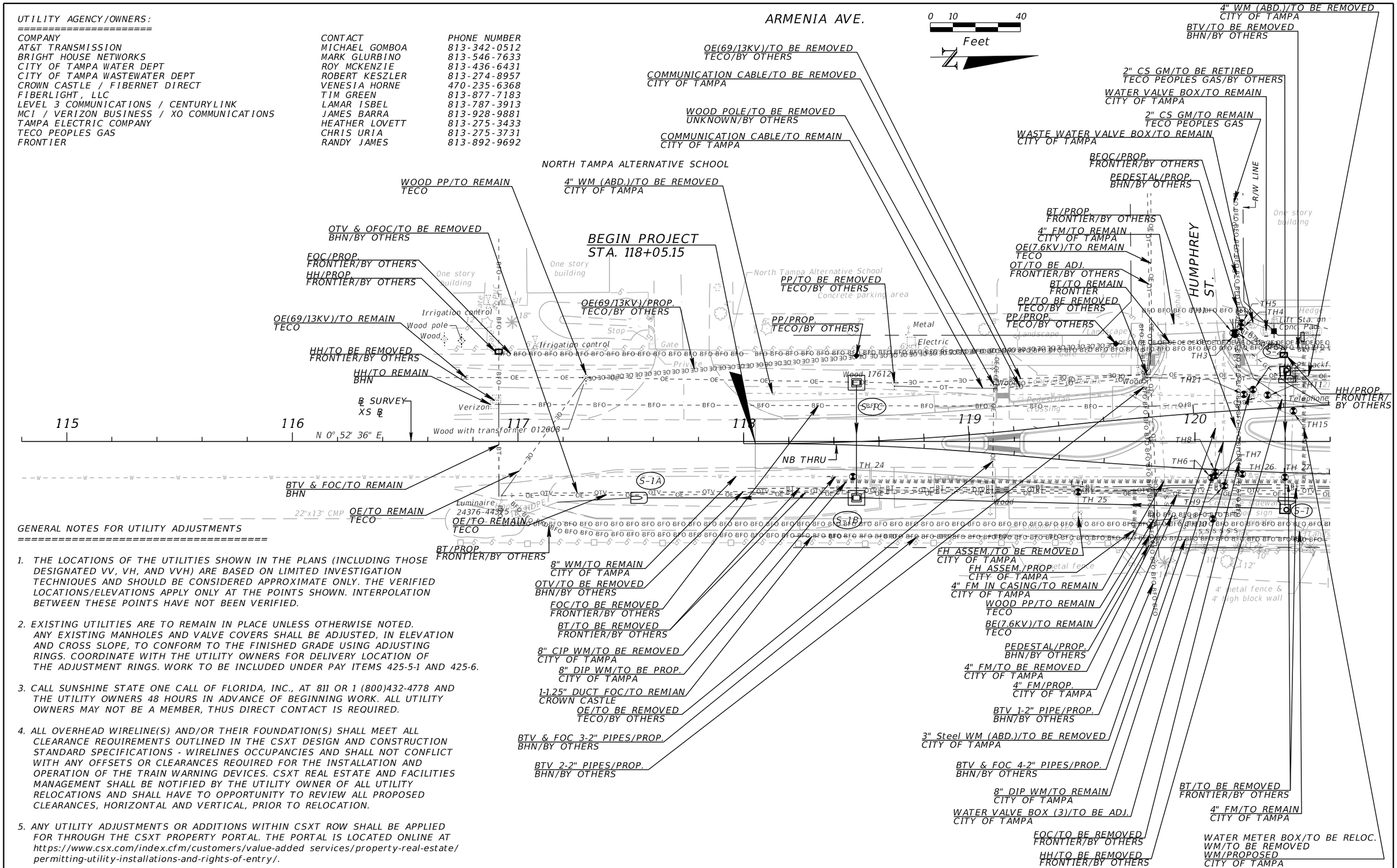
ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

UTILITY ADJUSTMENTS

SHEET NO.
84

UTILITY AGENCY/OWNERS:

| COMPANY | CONTACT | PHONE NUMBER |
|---|---|---|
| AT&T TRANSMISSION | MICHAEL GOMBOA | 813-342-0512 |
| BRIGHT HOUSE NETWORKS | MARK GLURBINO | 813-546-7633 |
| CITY OF TAMPA WATER DEPT | ROY MCKENZIE | 813-436-6431 |
| CITY OF TAMPA WASTEWATER DEPT | ROBERT KESZLER | 813-274-8957 |
| CROWN CASTLE / FIBERNET DIRECT | VENESIA HORNE | 470-235-6368 |
| FIBERLIGHT, LLC | TIM GREEN | 813-877-7183 |
| LEVEL 3 COMMUNICATIONS / CENTURYLINK | LAMAR ISBEL | 813-787-3913 |
| MCI / VERIZON BUSINESS / XO COMMUNICATIONS | JAMES BARRA | 813-928-9881 |
| TAMPA ELECTRIC COMPANY | HEATHER LOVETT | 813-275-3433 |
| TECO PEOPLES GAS | CHRIS URIA | 813-275-3731 |
| FRONTIER | RANDY JAMES | 813-892-9692 |




GENERAL NOTES FOR UTILITY ADJUSTMENTS

1. THE LOCATIONS OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE DESIGNATED VV, VH, AND VVH) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATIONS/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATION BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED.

2. EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED. ANY EXISTING MANHOLES AND VALVE COVERS SHALL BE ADJUSTED, IN ELEVATION AND CROSS SLOPE, TO CONFORM TO THE FINISHED GRADE USING ADJUSTING RINGS. COORDINATE WITH THE UTILITY OWNERS FOR DELIVERY LOCATION OF THE ADJUSTMENT RINGS. WORK TO BE INCLUDED UNDER PAY ITEMS 425-5-1 AND 425-6.

3. CALL SUNSHINE STATE ONE CALL OF FLORIDA, INC., AT 811 OR 1 (800)432-4778 AND THE UTILITY OWNERS 48 HOURS IN ADVANCE OF BEGINNING WORK. ALL UTILITY OWNERS MAY NOT BE A MEMBER, THUS DIRECT CONTACT IS REQUIRED.

4. ALL OVERHEAD WIRELINE(S) AND/OR THEIR FOUNDATION(S) SHALL MEET ALL CLEARANCE REQUIREMENTS OUTLINED IN THE CSXT DESIGN AND CONSTRUCTION STANDARD SPECIFICATIONS - WIRELINES OCCUPANCIES AND SHALL NOT CONFLICT WITH ANY OFFSETS OR CLEARANCES REQUIRED FOR THE INSTALLATION AND OPERATION OF THE TRAIN WARNING DEVICES. CSXT REAL ESTATE AND FACILITIES MANAGEMENT SHALL BE NOTIFIED BY THE UTILITY OWNER OF ALL UTILITY RELOCATIONS AND SHALL HAVE TO OPPORTUNITY TO REVIEW ALL PROPOSED CLEARANCES, HORIZONTAL AND VERTICAL, PRIOR TO RELOCATION.

5. ANY UTILITY ADJUSTMENTS OR ADDITIONS WITHIN CSXT ROW SHALL BE APPLIED FOR THROUGH THE CSXT PROPERTY PORTAL. THE PORTAL IS LOCATED ONLINE AT https://www.csx.com/index.cfm/customers/value-added services/property-real-estate/permitting-utility-installations-and-rights-of-entry/.

REVISIONS

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1713 E. 9th AVENUE | TAMPA, FL 33605
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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# UTILITY ADJUSTMENTS

SHEET NO.
85

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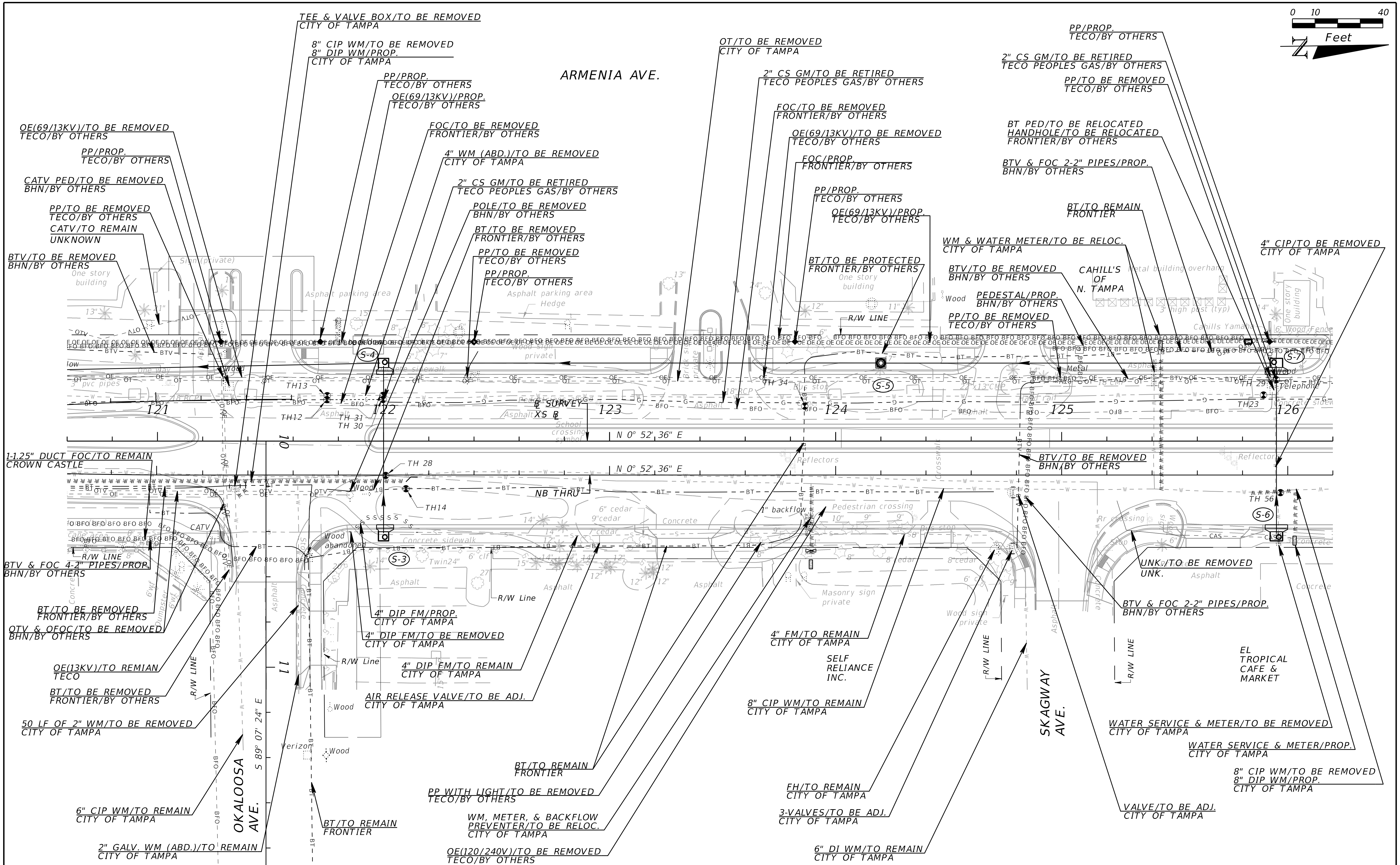


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TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# UTILITY ADJUSTMENTS

SHEET NO.
86

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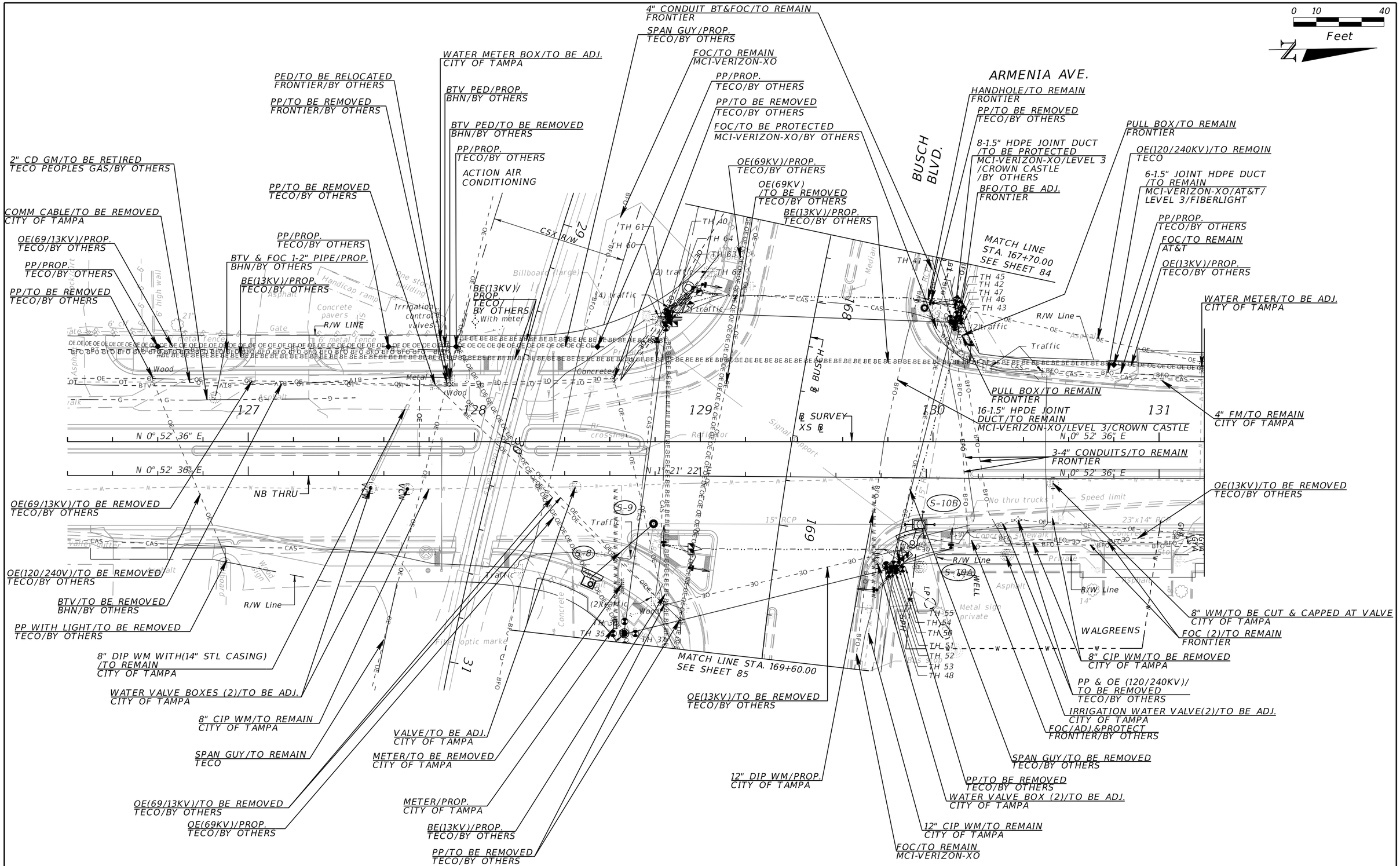


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ARMENIA AVENUE INTERSECTION PROJECT AT SR 580/BUSCH BLVD.

# UTILITY ADJUSTMENTS

SHEET NO. 87

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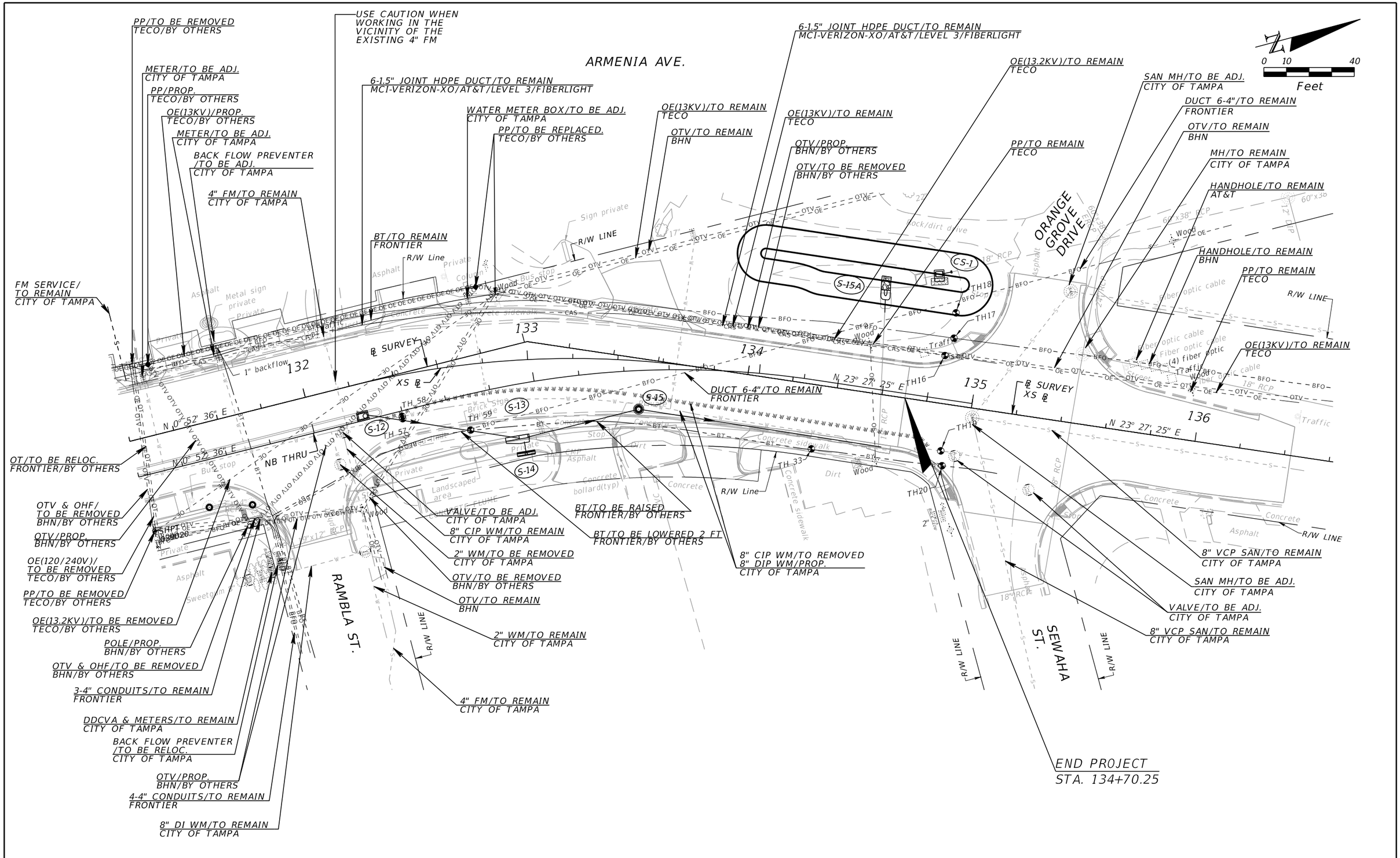


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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# UTILITY ADJUSTMENTS

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88

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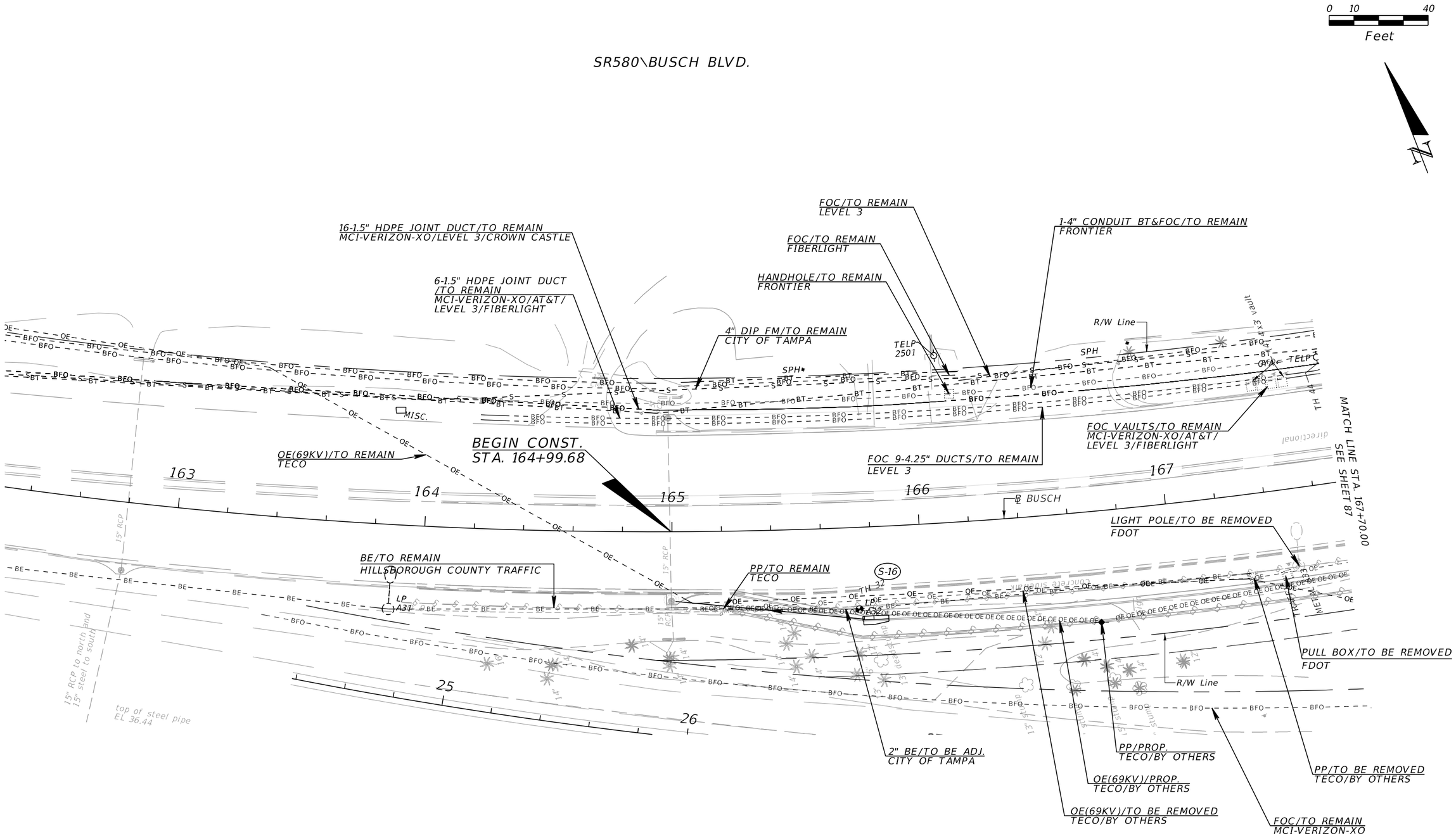


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ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# UTILITY ADJUSTMENTS

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89

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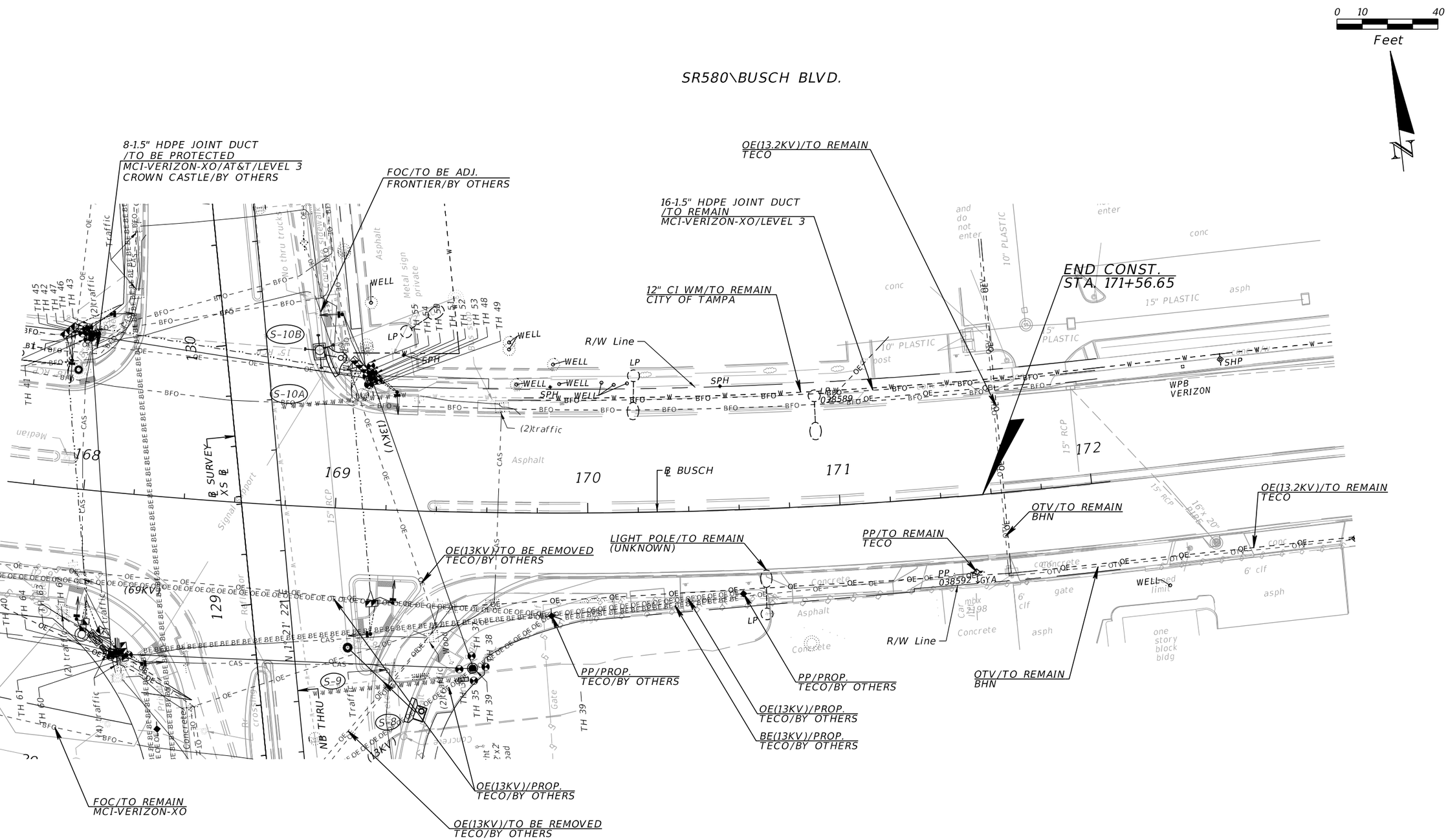


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ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# UTILITY ADJUSTMENTS

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90

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## WASTEWATER GENERAL NOTES

1. AT LEAST THREE (3) WEEKS PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR'S REPRESENTATIVE SHALL CONTACT THE WASTEWATER DEPARTMENT PLANNING SECTION'S FIELD INSPECTOR, ALEX GONZALEZ, 2545 GUY N VERGER BOULEVARD, TAMPA, FLORIDA 33605 (PHONE 813-274-1293), AND SUPPLY HIM WITH FURTHER CONSTRUCTION INFORMATION. THIS INFORMATION SHOULD INCLUDE ALL REQUIRED SHOP DRAWINGS, THE CONTRACTOR'S NAME, STARTING DATE, PROJECTED SCHEDULE, AND OTHER INFORMATION REQUIRED BY THE PLANNING SECTIONS. THE PLANNING SECTION OFFICE MUST ALSO BE CONTACTED BY TELEPHONE FIVE (5) DAYS PRIOR TO THE ACTUAL START OF FIELD OPERATIONS IN ORDER TO ENSURE AVAILABILITY OF INSPECTION PERSONNEL. IT IS IMPERATIVE THAT ANY SUB-CONTRACTOR BE FULLY INFORMED OF THE NOTIFICATION AND SUBMITTAL REQUIREMENTS. FAILURE TO COMPLY WITH THESE REQUIREMENTS WILL DELAY THE APPROVAL AND ACCEPTANCE OF THE CONSTRUCTED FACILITIES AND THE RELEASE OF THE CERTIFICATE OF OCCUPANCY FOR THE PROJECT.

2. THE CONTRACTOR SHALL PERFORM AN INFILTRATION/EXFILTRATION TEST ON ALL GRAVITY SEWERS AND A PRESSURE TEST ON ALL FORCE MAINS (AS APPLICABLE) IN ACCORDANCE WITH CITY OF TAMPA REGULATIONS. SAID TESTS ARE TO BE CERTIFIED BY THE ENGINEER OF RECORD AND SUBMITTED TO THE CITY OF TAMPA WASTEWATER DEPARTMENT FOR APPROVAL.

3. ONE OR MORE OF THE FOLLOWING CERTIFICATES/SHOP DRAWINGS, DEPENDING ON THE TYPE OF CONNECTIONS, WILL BE REQUIRED:
   A. DUCTILE IRON PIPE (DIP) OR POLY-VINYYL CHLORIDE (PVC) CERTIFICATE OF MANUFACTURE
   B. MANHOLE SHOP DRAWINGS AND CONCRETE STRENGTH REPORT
   C. FRAME AND COVER SHOP DRAWINGS
   D. FLEXIBLE COUPLING SHOP DRAWINGS
   E. CASING PIPE CERTIFICATE
   F. JACKING PIT DETAIL
   G. CRUSHED STONE SUBMITTAL
   H. VALVE SHOP DRAWINGS
   I. MANHOLE DROP CONNECTION DETAIL

   THESE ITEMS MUST BE SUBMITTED, REVIEWED, AND APPROVED PRIOR TO STARTING CONSTRUCTION.

4. THE CERTIFICATE OF OCCUPANCY WILL NOT BE ISSUED UNTIL THE FOLLOWING HAS BEEN COMPLETED:
   A. FINAL INSPECTION IN CONJUNCTION WITH DEPARTMENT PERSONNEL
   B. AS-BUILTS HAVE BEEN SUBMITTED AND ACCEPTED
   C. ALL NECESSARY TESTING COMPLETED AND CERTIFIED
   D. PAYMENT OF ALL CAPACITY FEES
   E. ISSUANCE OF THE FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) CERTIFICATION OF COMPLETION APPROVAL (IF APPLICABLE)

5. ALL FORCE MAINS LOCATED IN THE RIGHT OF WAY SHALL BE CONSTRUCTED OF C-900, DR 18, GREEN PVC FOR FORCE MAINS LESS THAN 14-INCHES IN DIAMETER. FOR FORCE MAINS WITH DIAMETERS 14-INCHES OR GREATER, THE FORCE MAIN SHALL BE CONSTRUCTED OF C-905, DR 18, GREEN PVC.

6. THE FORCE MAIN SHALL BE INSTALLED WITH A METALLIC LOCATING WIRE IN ACCORDANCE WITH THE CITY'S PVC PIPE LOCATING WIRE DETAIL.

7. ALL FORCE MAIN BENDS, FITTINGS, AND VALVES SHALL HAVE RESTRAINED MECHANICAL JOINTS AS MANUFACTURED BY "MEGA-LUG", OR APPROVED EQUAL. ADDITIONAL PIPE JOINTS UPSTREAM AND DOWNSTREAM OF EACH FITTING, BEND, OR VALVE SHALL ALSO BE RESTRAINED IN ACCORDANCE WITH THE CITY'S STANDARD PIPE JOINT RESTRAINT TABLE INCLUDED IN THE PLAN SET.

8. THE FORCE MAIN SHALL BE CONSTRUCTED IN A STRAIGHT ALIGNMENT BETWEEN THE SPECIFIED POINTS OF HORIZONTAL OR VERTICAL DEFLECTION. THERE SHALL BE NO INTERMEDIATE HIGH OR LOW POINTS BETWEEN THE VERTICAL POINTS OF DEFLECTION. AIR RELEASE VALVES SHALL BE INSTALLED AT ALL HIGH POINTS SPECIFIED ON THE PLANS. FINAL LOCATION OF THE AIR RELEASE VALVE SHALL BE ADJUSTED SO THAT IT IS LOCATED AT THE ACTUAL HIGH POINT OF THE COMPLETED INSTALLATION.

9. THE FORCE MAIN SHALL BE INSTALLED USING "CLASS C" BEDDING UNLESS OTHERWISE SPECIFIED.

10. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAINTAIN SERVICE TO THE PROPERTY OWNERS DURING CONSTRUCTION. THE CONTRACTOR MAY BE REQUIRED TO PERFORM THE WORK DURING LOW-FLOW PERIODS AT NIGHT AND/OR COORDINATE SHUT DOWNS WITH THE PRIVATE PUMP STATION OWNERS.

11. ALL PROPOSED FORCE MAIN CONSTRUCTION TO BE INSTALLED BY OPEN TRENCH METHODS.

LEGEND:

| | |
|---|---|
| R.J. | RESTRAIN ALL JOINTS AND FITTINGS |
| HB | HORIZONTAL BEND |
| VB | VERTICAL BEND |
| —‖——‖— | PROPOSED VERTICAL BENDS |

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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

UTILITY RELOCATION SHEETS
NOTES

SHEET NO.
91

## WATER LINE CONSTRUCTION NOTES

1. WATER VALVE BOXES TO REMAIN SHALL BE ADJUSTED TO FINISH ELEVATION ADJACENT TO THE BOX.

2. WATER METER BOXES SHALL BE RELOCATED TO THE ROW LINE. REPLACEMENT WATER METERS SERVICE LINES SHALL BE INSTALLED FROM THE WATER MAIN TO THE RELOCATED METER - EXISTING SERVICE LINES SHALL NOT BE REUSED.

3. CONTRACTOR SHALL CONTACT CITY OF TAMPA WATER DEPARTMENT CONSTRUCTION ENGINEER A MIN. OF 10 WORKING DAYS PRIOR TO START OF CONSTRUCTION TO SCHEDULE A PRE-CONSTRUCTION MEETING FOR REVIEW OF INSTALLATION METHODS AND COORDINATION REQUIRED WITH THE CITY OF TAMPA WATER DEPARTMENT.

4. ALL WORKMANSHIP AND MATERIALS USED IN THE CONSTRUCTION OF WATER PUBLIC FACILITIES FOR THIS PROJECT SHALL CONFORM TO WATER DEPARTMENT SPECIFICATIONS AS PROVIDED IN CONTRACT 12-D-57 BID DOCUMENTS, ANY ASPECT OF SAID CONSTRUCTION REQUIRED BUT NOT ADDRESSED IN THE BID DOCUMENTS SHALL BE IN ACCORDANCE WITH CURRENT WATER DEPARTMENT SPECIFICATIONS.

5. THE CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES AT LEAST 48 HOURS BEFORE BEGINNING CONSTRUCTION. CALL "SUNSHINE ONE CALL" AT 1-800-432-4770.

6. ALL PIPE LENGTHS ARE PLUS OR MINUS AND MAY BE ADJUSTED IN THE FIELD AS REQUIRED. PIPE MEASUREMENTS ARE TO CENTER OF STRUCTURES OR FITTINGS.

7. ALL WORK PERFORMED SHALL COMPLY WITH THE REGULATIONS, PERMIT REQUIREMENTS, AND ORDINANCES OF THE VARIOUS GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.

8. THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED BY CONSTRUCTION TO THEIR ORIGINAL OR BETTER CONDITION.

9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH IN THE FIELD RIGHT-OF-WAY LINES, BASE LINES, BENCH MARKS (ELEV.), CENTER LINES, AND STATIONING AS REQUIRED TO PERFORM HIS WORK.

10. CONNECTIONS TO EXISTING WATER MAINS SHALL BE DONE IN A TIMELY MANNER. AT NO TIME SHALL THE FLOW OF WATER RUNNING THE LENGTH OF THE PROJECT BE STOPPED EXCEPT TO TIE-IN WATER MAINS THAT HAVE BEEN TESTED AND CLEARED FOR POTABLE WATER USE.

11. CONNECTIONS TO EXISTING SYSTEMS: THE CITY WATER DEPARTMENT REQUIRES THAT ITS CUSTOMERS BE KEPT IN SERVICE AT ALL TIMES. THE CONTRACTOR MUST PROVIDE TEMPORARY SERVICE TO CUSTOMERS WHOSE SERVICE WILL BE AFFECTED BY A SHUTDOWN.

12. WHEN A SHUTDOWN IS AUTHORIZED BY THE CITY WATER DEPARTMENT AND CUSTOMERS WILL HAVE THEIR WATER SHUT OFF, THE CONTRACTOR MUST HAVE PRE-ASSEMBLED ALL NEW PIPING EXCEPT AT THE POINT OF TIE-IN, INCLUDING SERVICE LINES BEING TRANSFERRED TO THE NEW MAIN. THE ENTIRE PRE-ASSEMBLY SHALL BE SUCCESSFULLY PRESSURE TESTED AND BACTERIOLOGICAL TESTED PRIOR TO THE SHUTDOWN FOR CONNECTION(S). SHUTDOWNS SHALL BE LIMITED TO NO MORE THAN 4-HOURS. THE CONTRACTOR SHALL HAVE SUFFICIENT CREWS ON SITE TO ACCOMPLISH ANY SHUTDOWN IN LESS THAN FOUR HOURS.

13. CONTRACTOR SHALL INSTALL LINESTOPS IF AND AS REQUIRED TO KEEP CUSTOMERS IN SERVICE DURING SHUTDOWNS, WITH THE CONCURRENCE OF THE CITY WATER DEPARTMENT. SEVERAL REQUIRED LINESTOPS HAVE BEEN SHOWN IN THE PLANS, BASED ON KNOWN EXISTING CONDITIONS. HOWEVER, OTHERS MAY BE REQUIRED.

14. THE CONTRACTOR'S SCHEDULE PROPOSED FOR WATER MAIN RELOCATION CONSTRUCTION AND REMOVALS SHALL BE SUBMITTED TO, AND MUST BE APPROVED BY, THE CITY WATER DEPARTMENT.

15. ALL ELEVATIONS ARE BASED ON NAVD 1988 DATUM UNLESS OTHERWISE NOTED. STATIONING OF THE WATER MAIN AND FITTINGS AS SHOWN HEREON REFERS TO BASELINE OF CONSTRUCTION UNLESS OTHERWISE INDICATED.

16. ALL WATER MAINS SHALL HAVE A MINIMUM COVER OF 36 INCHES UNLESS OTHERWISE NOTED.

17. ALL WATER MAINS SHALL BE CONSTRUCTED IN A MANNER SUCH AS TO MAINTAIN A MINIMUM OF THREE (3) FEET HORIZONTAL SEPARATION FROM OTHER UTILITIES, EXCEPT STORM, SANITARY AND GAS.

18. ALL WATER PIPE MATERIAL AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE CITY OF TAMPA SPECIFICATIONS. ALL DUCTILE IRON PIPE (DIP) SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA STANDARD C-151/A21.51. PIPE SHALL BE LINED WITH A STANDARD THICKNESS CEMENT-MORTAR LINING AND SEAL COATED IN ACCORDANCE WITH THE LATEST EDITION OF AWWA C104/A21.4 AND NSF 61. PIPE SHALL BE PRESSURE CLASS 350.

19. ALL DUCTILE IRON PIPE SHALL BE PUSH-ON JOINT AND SHALL CONFORM TO AWWA STANDARD C-111/A21.11.

20. ALL FITTINGS SHALL BE DUCTILE IRON AND MECHANICAL JOINT. FITTINGS SHALL BE CONNECTED TO PIPES WITH WEDGE ACTION RESTRAINT SUCH AS EBBA MEGA-LUG OR APPROVED EQUAL.

21. RESTRAINT OF DIP PIPE AND MECHANICAL JOINT PIPE FITTINGS SHALL BE WITH MECHANICAL RESTRAINTS IN ACCORDANCE WITH THE APPROPRIATE CITY OF TAMPA RESTRAINT TABLE AND AS INDICATED ON THE PLANS. CONCRETE BLOCKS SHALL NOT BE USED FOR THRUST RESTRAINT. MECHANICAL RESTRAINT OF PUSH-ON DIP, OTHER THAN FOR FITTINGS, SHALL BE WITH APPROVED PUSH-ON JOINT GASKET-TYPE (GRIPPER) RESTRAINTS SUCH AS AMERICAN "FAST-GRIP GASKET" OR US PIPE "FIELD-LOK GASKET".

22. BENDS SHALL BE INSTALLED ON DIP WATER MAIN, AS NECESSARY, TO MAINTAIN PROPER ALIGNMENT. DIP JOINT DEFLECTION SHALL BE IN ACCORDANCE WITH AWWA C-600, LATEST EDITION, EXCEPT DEFLECTION ALLOWED SHALL BE 80% OR LESS THAN THE DEFLECTION VALUES GIVEN IN THE AWWA DEFLECTION TABLES.

23. FIRE HYDRANT AND GATE VALVE ASSEMBLIES SHALL CONSIST OF ALL PIPE, VALVES, TEES, FITTINGS AND ANY AND ALL OTHER APPURTENANCES COMPRISING A COMPLETE, WORKING UNIT AS REQUIRED BY THE CITY OF TAMPA SPECIFICATIONS. FIRE HYDRANTS SHALL BE 5-1/4" DNS, WITH BOTTOM FLANGE ELEVATION LOCATED 3"-5" ABOVE FINISHED GRADE. (SEE COT STANDARD DETAILS 4.01 AND 4.02).

24. ALL FIRE HYDRANTS SHALL BE CONSTRUCTED IN A MANNER THAT MAINTAINS AT LEAST SIX (6) FEET OF CLEARANCE BETWEEN ROADWAY BACK OF CURB (OR EDGE OF PAVEMENT) AND THE HYDRANT.

25. DIP WATER MAIN AND APPURTENANCES SHALL BE INSTALLED IN A LOOSE POLYETHYLENE ENCASEMENT NOT LESS THAN 8 MILS THICK IN ACCORDANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE SPECIFICATION A21.5 AND CITY OF TAMPA STANDARD DETAIL 2.05.

26. ALL PROPOSED WATER LINE CONSTRUCTION TO BE INSTALLED BY OPEN TRENCH METHODS.

## WATER SYSTEM TESTING AND INSPECTION REQUIREMENT NOTES

1. ALL COMPONENTS OF THE WATER SYSTEM, INCLUDING FITTINGS, HYDRANTS, CONNECTIONS, AND VALVES SHALL REMAIN UNCOVERED UNTIL PROPERLY PRESSURE TESTED AND ACCEPTED BY THE OWNER'S ENGINEER. PRESSURE TESTS TO BE IN ACCORDANCE WITH WATER DEPARTMENT SPECIFICATIONS. CONTRACTOR TO NOTIFY OWNER'S ENGINEER AND CITY INSPECTORS 3 WORKING DAYS IN ADVANCE OF PERFORMING TESTS.

2. CONTRACTOR SHALL PRESSURE TEST WATER MAINS AT 150 PSI FOR A PERIOD OF 2 HOURS IN ACCORDANCE WITH AWWA C600-87 STANDARDS. CONTRACTOR SHALL NOTIFY ENGINEER AND THE CITY OF TAMPA AT LEAST 72 HOURS PRIOR TO START OF ANY TEST. THE CONTRACTOR SHALL MAKE ALL NECESSARY APPLICATIONS AND ARRANGEMENTS.

3. CONTRACTOR TO PERFORM CHLORINATION AND COORDINATE BACTERIOLOGICAL SAMPLING WITH THE CITY OF TAMPA CONSTRUCTION INSPECTION SECTION IN ACCORDANCE WITH TAMPA WATER DEPARTMENT TECHNICAL MANUAL AND AWWA SPECIFICATION C651. CONTRACTOR TO OBTAIN SAMPLE CLEARANCE ON DOMESTIC WATER SYSTEM.

4. ALL TEST POINTS AND CHLORINATION POINTS PIPING SHALL BE COMPLETELY REMOVED PRIOR TO FINAL ACCEPTANCE. THE CORPORATION STOP SHALL BE REMOVED AND THE MAIN PLUGGED AFTER OPERATION (SEE CITY OF TAMPA STANDARD DETAIL 2.18A).

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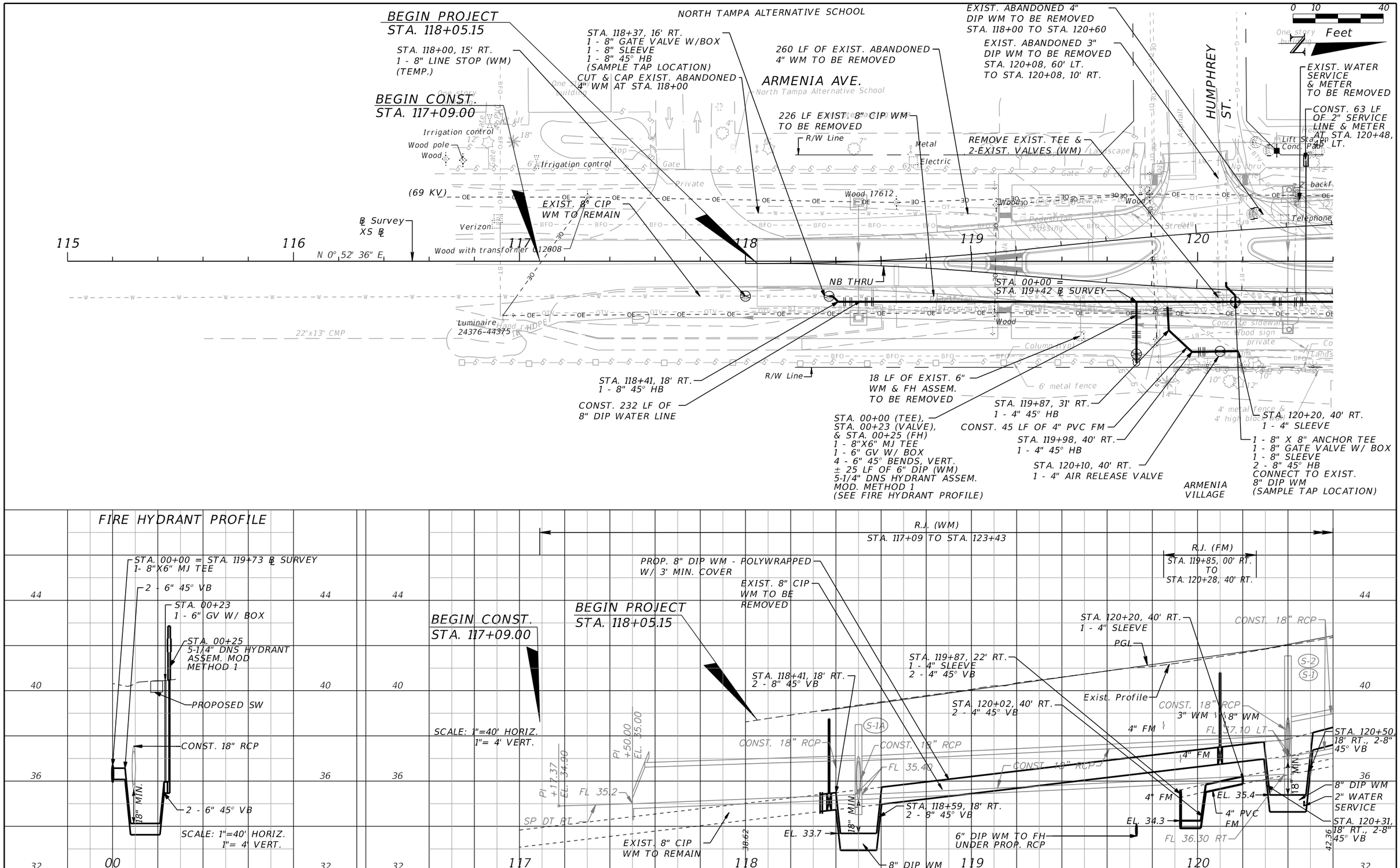


| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# UTILITY RELOCATION SHEETS
# SEWER & WATER

SHEET NO.
93

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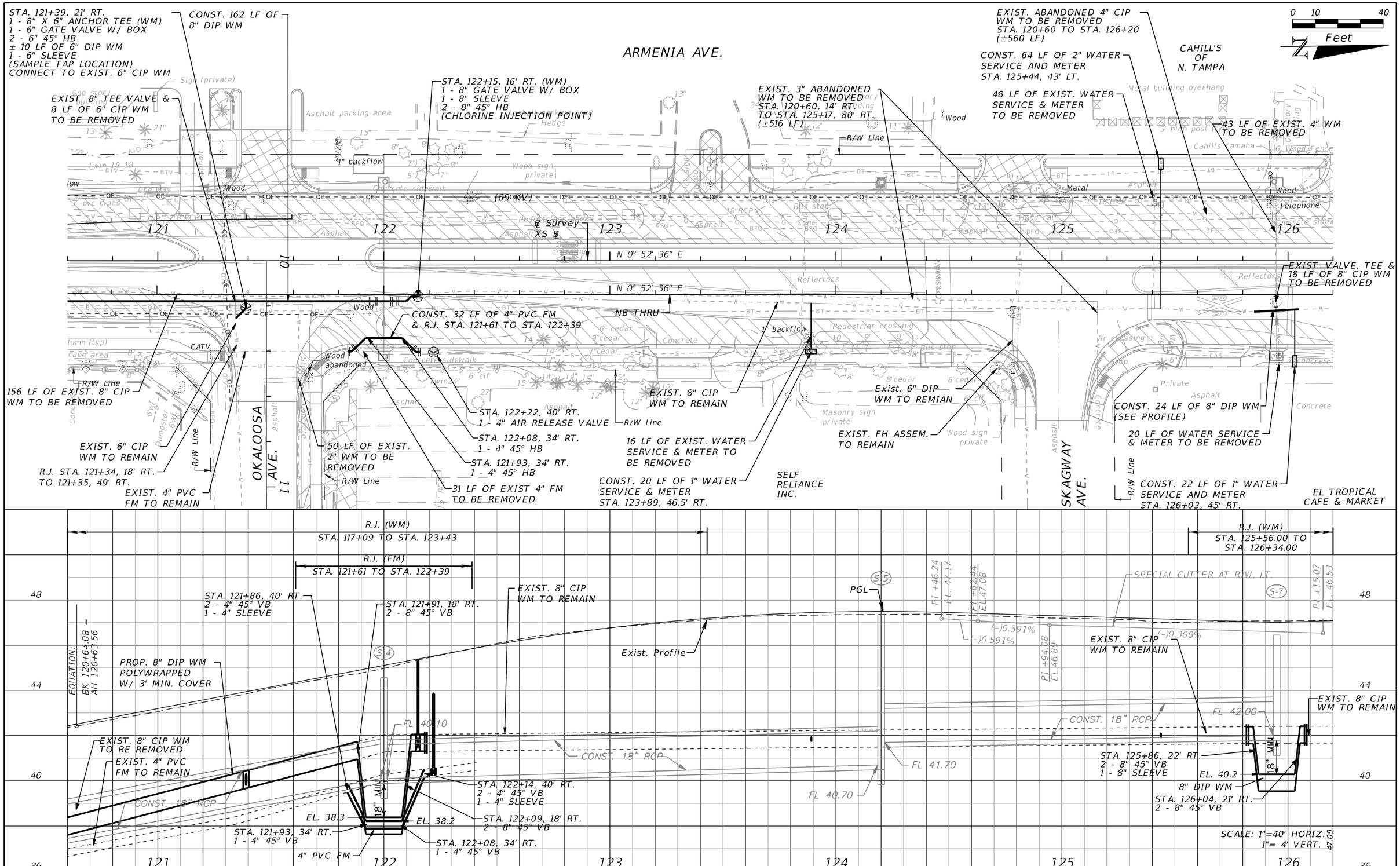


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| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
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CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# UTILITY RELOCATION SHEETS
# SEWER & WATER

SHEET NO.
94

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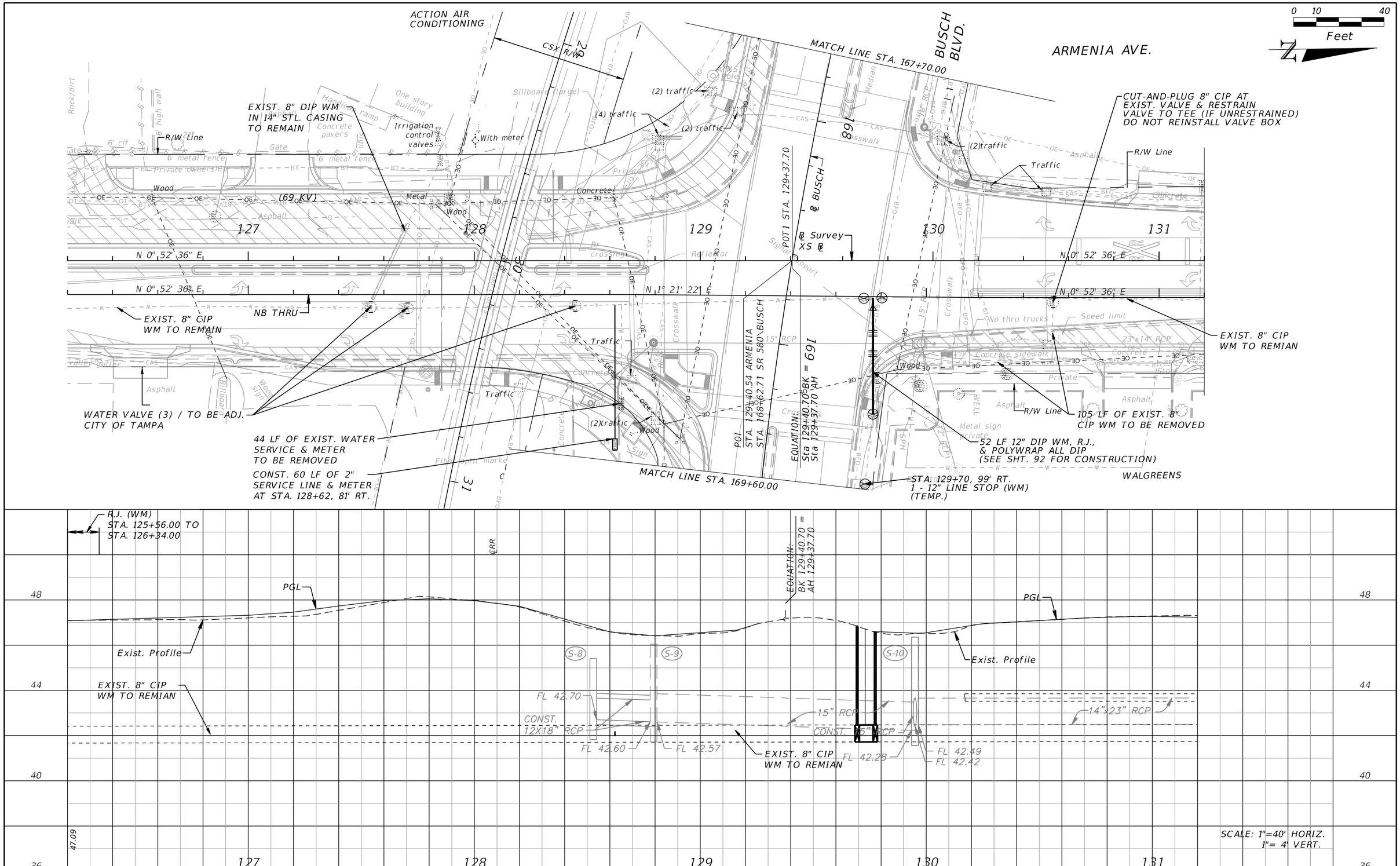


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| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT AT SR 580/BUSCH BLVD.

# UTILITY RELOCATION SHEETS SEWER & WATER

SHEET NO. 95

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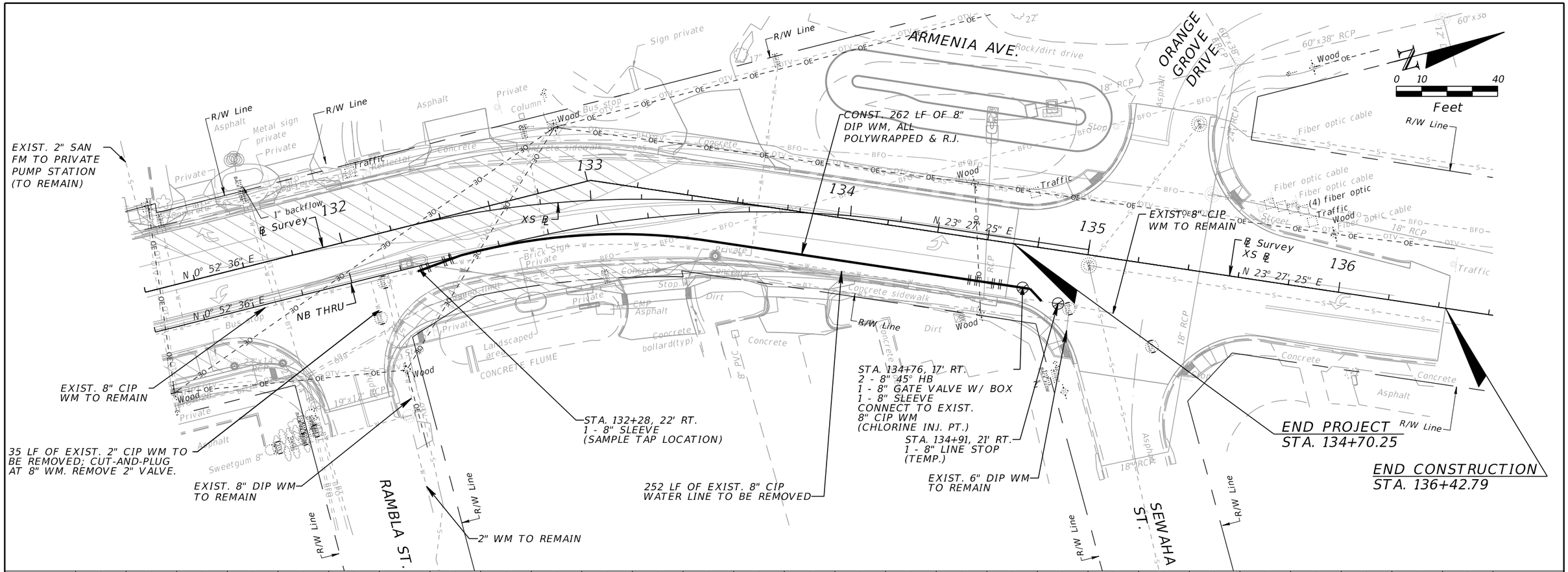


| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# UTILITY RELOCATION SHEETS
# SEWER & WATER

SHEET NO.
96

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STA. 168+73, 38' LT.
1 - 8"X8" MJ TEE (CUT-IN)
2 - 8" GATE VALVE W/ BOX
2 - 8" SLEEVE
1 - 12"X8" MJ REDUCER
(CHLORINE INJ POINT)

EXIST. 8" CIP WM
TO BE REMOVED
(± 105 LF)

52 LF 12" DIP WM, R.J.,
& POLYWRAP ALL DIP

STA. 169+25, 45' LT.
1 - 12" GATE VALVE W/ BOX
1 - 12" SLEEVE
(SAMPLE TAP LOCATION)

STA. 169+57, 46' LT.
1 - 12" LINE STOP (WM)
(TEMP.)

EXIST. 12" VALVE &
22 LF OF 12" CIP WM
TO BE REMOVED

END CONST.
STA. 171+56.65

SR 580\BUSCH BLVD.

EQUATION:
Sta 129+40.70 BK =
Sta 129+37.70 AH

POT1 STA. 129+37.70

POI
STA. 129+40.54 ARMENIA
STA. 168+62.71 SR 580\BUSCH

R/W Line

NB THRU

0 10 40
Feet

RESTRAIN ALL JOINTS (WM)
STA. 168+85.00 TO STA. 169+68.00

END CONST.
STA. 171+56.65

℄ BUSCH

PROP. 12" DIP WM
POLYWRAPPED
W/ 3' MIN. COVER

EXIST. 12" CIP
WATER LINE
TO REMAIN

EXIST. 15" RCP

8" DIP WM

STA. 168+73, 38' LT.
1 - 8"X8" MJ TEE

18" MIN.

1 - 12"X8" MJ REDUCER

STA. 168+85, 40' LT.
2 - 12" 45° VB

STA. 169+03, 42' LT.
2 - 12" 45° VB

EL. 40.5

12" DIP WM

SCALE: 1"=40' HORIZ.
1"= 4' VERT.

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
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TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

UTILITY RELOCATION SHEETS
SEWER & WATER

SHEET NO.
97

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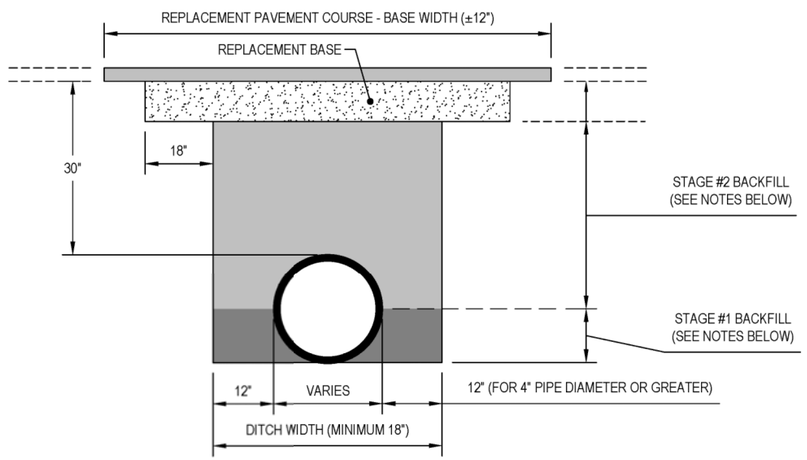
## DETAIL FOR RESTORATION WITHIN FDOT ROADWAY

(DETAILS MODIFIED FROM FDOT DESIGN STANDARDS INDEX 307, LATEST EDITION)




### FLEXIBLE PAVEMENT NOTES:

**PAVEMENT SHALL BE MECHANICALLY SAWED.**

PAVEMENT, BASE, AND BACKFILL MATERIAL SHALL BE PLACED IN ACCORDANCE WITH **CITY OF TAMPA PAVEMENT RESTORATION REQUIREMENTS, LATEST STANDARD SPECIFICATIONS.**

IN STAGE #1, CONSTRUCT COMPACTED FILL BENEATH THE HAUNCHES OF THE PIPE, USING MECHANICAL TAMPS SUITABLE FOR THIS PURPOSE. THIS COMPACTION APPLIES TO THE MATERIAL PLACED BENEATH THE HAUNCHES OF THE PIPE AND ABOVE ANY BEDDING.

IN STAGE #2, CONSTRUCT COMPACTED FILL ALONG SIDES OF THE PIPE AND UP TO THE BOTTOM OF THE BASE. COMPACT MATERIAL USING MECHANICAL TAMPS SUITABLE TO ACHIEVE DENSITY MEETING 98% OF AASHTO T-180, LIFTS NOT TO EXCEED 12" COMPACTED.

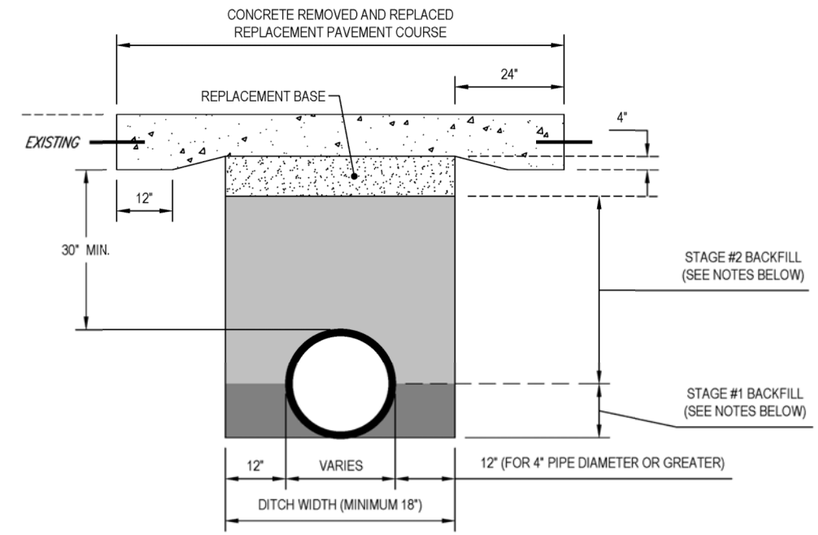
IF MECHANICAL COMPACTION IS DIFFICULT TO ACHIEVE, THEN FLOWABLE FILL MAY BE USED. IN STAGE #1, PLACE FLOWABLE FILL MIDWAY UP ON BOTH SIDES OF THE UTILITY. ALLOW TO HARDEN BEFORE PLACING STAGE #2. IF A METHOD IS PROVIDED TO PREVENT FLOATATION FROM OCCURRING, STAGE #1 AND #2 CAN BE COMBINED, IF APPROVED BY CITY ENGINEER.

NOTE: SPECIFICATION STANDARDS AND REQUIREMENTS NOT ILLUSTRATED SHALL MEET LATEST FDOT STANDARD SPECIFICATIONS.

| City of Tampa Florida Water Department | REVISION DATE | STANDARD DETAIL FOR RESTORATION WITHIN FDOT ROADWAY - FLEXIBLE PAVEMENT | 2.00A |
|---|---|---|---|
| | JUL 2018 | | |

## DETAIL FOR RESTORATION WITHIN FDOT ROADWAY

(DETAILS MODIFIED FROM FDOT DESIGN STANDARDS INDEX 307, LATEST EDITION)




### RIGID PAVEMENT NOTES:

PAVEMENT SHALL BE MECHANICALLY SAWED AND RESTORED TO CONFORM WITH EXISTING PAVEMENT JOINTS.

**HIGH EARLY STRENGTH CEMENT CONCRETE (3000 PSI) MEETING WITH REQUIREMENTS OF FDOT STANDARD SPECIFICATION 346, LATEST EDITION SHALL BE USED FOR RIGID PAVEMENT REPLACEMENT.**

PAVEMENT, BASE, AND BACKFILL MATERIAL SHALL BE PLACED IN ACCORDANCE WITH **CITY OF TAMPA PAVEMENT RESTORATION REQUIREMENTS, LATEST STANDARD SPECIFICATIONS.**

IN STAGE #1, CONSTRUCT COMPACTED FILL BENEATH THE HAUNCHES OF THE PIPE, USING MECHANICAL TAMPS SUITABLE FOR THIS PURPOSE. THIS COMPACTION APPLIES TO THE MATERIAL PLACED BENEATH THE HAUNCHES OF THE PIPE AND ABOVE ANY BEDDING.

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IF MECHANICAL COMPACTION IS DIFFICULT TO ACHIEVE, THEN FLOWABLE FILL MAY BE USED. IN STAGE #1, PLACE FLOWABLE FILL MIDWAY UP ON BOTH SIDES OF THE UTILITY. ALLOW TO HARDEN BEFORE PLACING STAGE #2. IF A METHOD IS PROVIDED TO PREVENT FLOATATION FROM OCCURRING, STAGE #1 AND #2 CAN BE COMBINED, IF APPROVED BY CITY ENGINEER.

NOTE: SPECIFICATION STANDARDS AND REQUIREMENTS NOT ILLUSTRATED SHALL MEET LATEST FDOT STANDARD SPECIFICATIONS.

| City of Tampa Florida Water Department | LAST REVISION | STANDARD DETAIL FOR RESTORATION WITHIN FDOT ROADWAY - RIGID PAVEMENT | 2.00B |
|---|---|---|---|
| | JUL 2018 | | |

| REVISIONS | | | |
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| DATE | DESCRIPTION | DATE | DESCRIPTION |
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ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

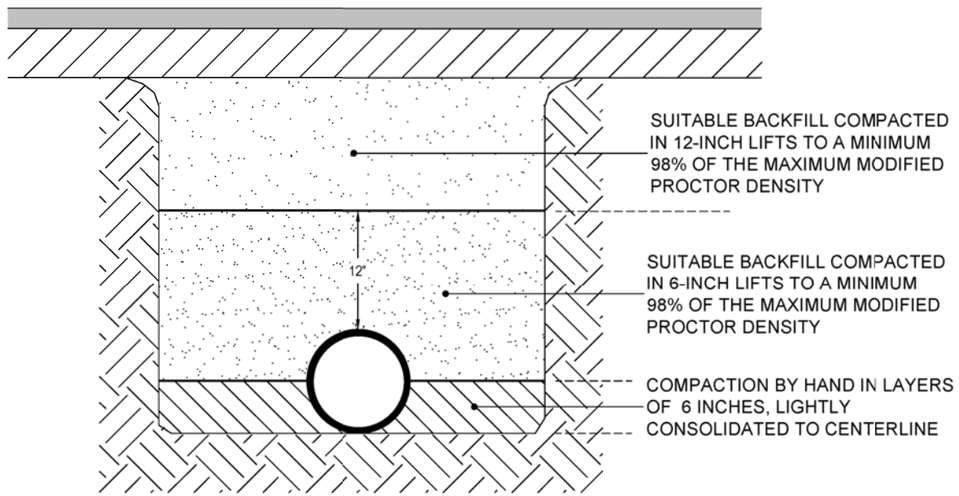

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

UTILITY RELOCATION SHEETS
DETAILS

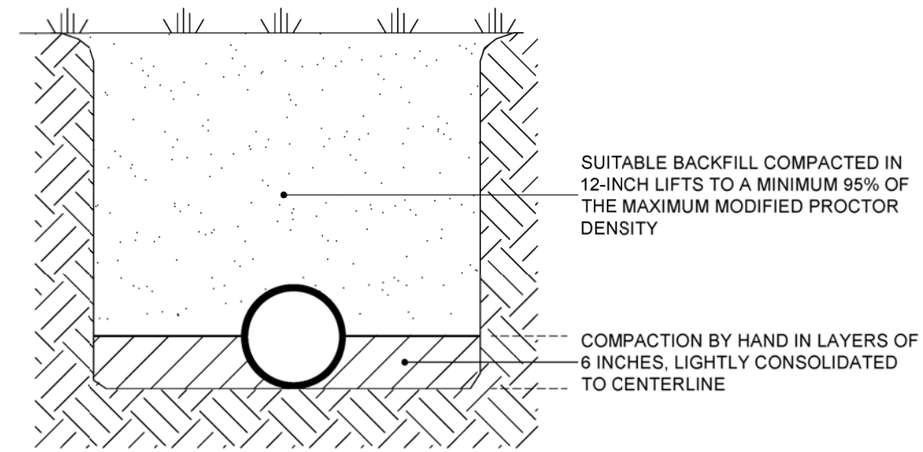
SHEET NO. 98




NOTES:

1. TYPE 2 TRENCH IS DEFINED AS A FLAT-BOTTOM TRENCH. LIGHTLY CONSOLIDATE BACKFILL TO CENTERLINE OF PIPE.
2. THIS STANDARD SHALL BE UTILIZED IN THE ABSENCE OF SPECIFIC STANDARDS. THE STANDARD OF THE AGENCY CONTROLLING THE RIGHT-OF-WAY SHALL GOVERN UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
3. SUITABLE BACKFILL SHALL BE DEFINED AS MATERIAL FREE FROM CINDERS, ASHES, REFUSE, CLAY, ORGANIC MATTER, BOULDERS, ROCKS OR STONES, OR OTHER MATERIAL THAT IN THE OPINION OF THE CITY ENGINEER IS UNSUITABLE.
4. NON-PERVIOUS AREAS SHALL MEAN ANY CONCRETE OR ASPHALT CURB, SIDEWALK, TRAIL, DRIVEWAY, OR ROADWAY.

| City of Tampa Florida Water Department | LAST REVISION | | |
|---|---|---|---|
| | JAN 2018 | TRENCHING, BEDDING AND BACKFILL DETAIL FOR NON-PERVIOUS (PAVED) AREAS | 2.01A |




NOTES:

1. TYPE 2 TRENCH IS DEFINED AS A FLAT-BOTTOM TRENCH. LIGHTLY CONSOLIDATE BACKFILL TO CENTERLINE OF PIPE.
2. THIS STANDARD SHALL BE UTILIZED IN THE ABSENCE OF SPECIFIC STANDARDS. THE STANDARD OF THE AGENCY CONTROLLING THE RIGHT-OF-WAY SHALL GOVERN UNLESS OTHERWISE DIRECTED BY CITY ENGINEER.
3. SUITABLE BACKFILL SHALL BE DEFINED AS MATERIAL FREE FROM CINDERS, ASHES, REFUSE, CLAY, ORGANIC MATTER, BOULDERS, ROCKS OR STONES, OR OTHER MATERIAL THAT IN THE OPINION OF THE CITY ENGINEER IS UNSUITABLE.
4. NON-PAVED AREA IS A PERVIOUS AREA. IF ANY PART OF THE TRENCH IS WITHIN A CONCRETE OR ASPHALT CURB, SIDEWALK, DRIVEWAY, OR ROADWAY, THEN STANDARD DETAIL 2.01 APPLIES.

| City of Tampa Florida Water Department | LAST REVISION | | |
|---|---|---|---|
| | JUL 2018 | TRENCHING, BEDDING, AND BACKFILL DETAIL FOR PERVIOUS (NON-PAVED) AREAS | 2.02 |

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

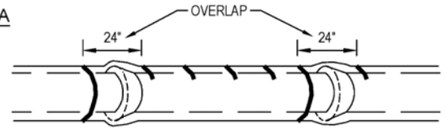
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

UTILITY RELOCATION SHEETS
DETAILS

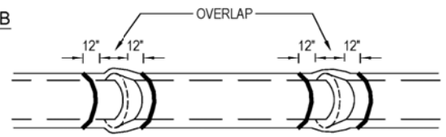
SHEET NO. 99

METHOD A



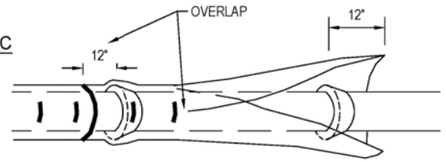

POLYETHYLENE TUBE IS CUT INTO LENGTHS APPROXIMATELY TWO FEET LONGER THAN THE PIPE SECTION AND PLACED AROUND IT. AFTER THE PIPE JOINT IS ASSEMBLED, THE POLYETHYLENE TUBE IS MADE TO OVERLAP THE JOINT AND THE OVERLAP SECURED IN PLACE. SINCE THE TUBE IS CONSIDERABLY LARGER THAN THE BARREL OF PIPE, IT IS MADE TO FIT SNUGLY BY FOLDING OVER AT THE TOP AND SECURING WITH TAPE EVERY 24" ALONG THE PIPE SECTION.

METHOD B




POLYETHYLENE TUBE IS CUT ONE FOOT SHORTER THAN THE LENGTH OF THE PIPE SECTION. AFTER PLACEMENT OF THE PIPE, IT IS FOLDED AND SECURED SNUGLY OVERALL. A THREE FOOT LENGTH OF POLYETHYLENE TUBE PLACED OVER THE END OF THE PRECEEDING SECTION IS THEN PULLED IN PLACE OVER THE JOINT AFTER ASSEMBLY AND SECURED.

METHOD C

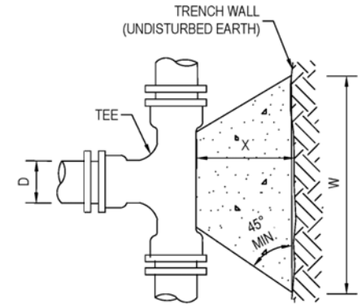



POLYETHYLENE SHEET IS CUT TO A LENGTH TWO FEET LONGER THAN THE PIPE SECTION. THE SHEET IS WRAPPED AROUND THE PIPE SO THAT IT OVERLAPS CIRCUMFERENTIALLY OVER THE TOP QUADRANT OF THE PIPE, THEN SECURED. AFTER JOINT ASSEMBLY, THE SURPLUS LENGTH OF POLYETHYLENE FILM IS SECURED AROUND THE JOINT, PROVIDING AN OVERLAP OF EACH JOINT. TAPE AT EACH JOINT AND AT 3' INTERVALS IN BETWEEN.

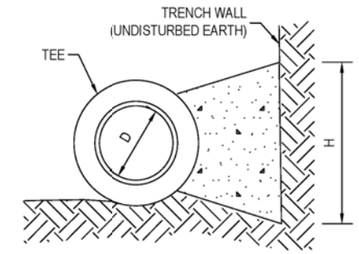
NOTES:

1. USE BLUE POLYETHYLENE FILM AND TAPE ONLY.
2. POLYETHYLENE FILM SHALL BE A MINIMUM OF 8 MIL. THICKNESS.
3. SPIRAL WRAP NOT REQUIRED WITH POLYWRAP.

| City of Tampa Florida Water Department | LAST REVISION JUL 2018 | POLYETHYLENE ENCASEMENT INSTALLATION DETAIL | 2.05 |
|---|---|---|---|




PLAN VIEW




SECTION

| DIMENSIONS OF THRUST BLOCKS FOR GOOD SOIL | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | SIZE (D) | 4" | 6" | 8" | 12" | 16" | 20" | 24" |
| | THRUST (LBS.) | 3,439 | 7,104 | 12,223 | 26,002 | 45,180 | 69,624 | 99,330 |
| | BEARING AREA (FT.$^2$) | 2.58 | 5.33 | 9.17 | 19.50 | 33.89 | 52.22 | 74.50 |
| TEES | CONCRETE (YDS.$^3$) | 0.042 | 0.126 | 0.285 | 0.891 | 1.811 | 3.005 | 4.594 |
| | H (FT.) | 1.3 | 1.9 | 2.5 | 3.6 | 4.8 | 5.9 | 7.0 |
| | W (FT.) | 2.0 | 2.8 | 3.7 | 5.4 | 7.1 | 8.9 | 10.6 |
| | X (FT.) | 1.0 MIN. | 1.4 MIN. | 1.9 MIN. | 2.7 MIN. | 3.0 MIN. | 3.0 MIN. | 3.0 MIN. |

NOTES:

1. SIZE (D), SHALL BE THE BRANCH SIZE OF TEES.
2. CONCRETE SHALL BE KEPT AT SUFFICIENT DISTANCE FROM JOINT FOR REMOVAL OF ALL JOINT ACCESSORIES INCLUDING BOLTS.
3. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.
4. THIS TABLE SHOWS THE MINIMUM SIZE THRUST BLOCKS FOR SOIL BEARING PRESSURE OF 2000 PSF AND AN INTERNAL PRESSURE OF 150 PSI.
5. TEES SHALL BE COMPLETELY POLYWRAPPED PRIOR TO POURING THRUST BLOCKS.

**WARNING** - COVER TO T.O.P. IS 3 FEET FOR 12" AND SMALLER MAINS; 4 FEET FOR 16" AND LARGER MAINS. POOR AND WET SOIL (SILTY SOILS, CLAY, MUCK AND PEAT) WILL REQUIRE LARGER THRUST BLOCKS.

| City of Tampa Florida Water Department | LAST REVISION JUL 2018 | THRUST BLOCKS FOR TEES | 2.09 |
|---|---|---|---|

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |


ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

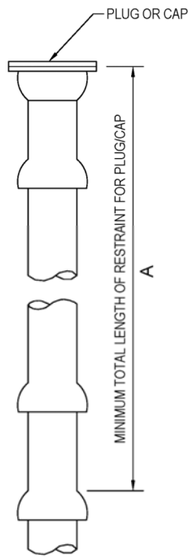

CITY OF TAMPA
TRANSPORTATION DIVISION

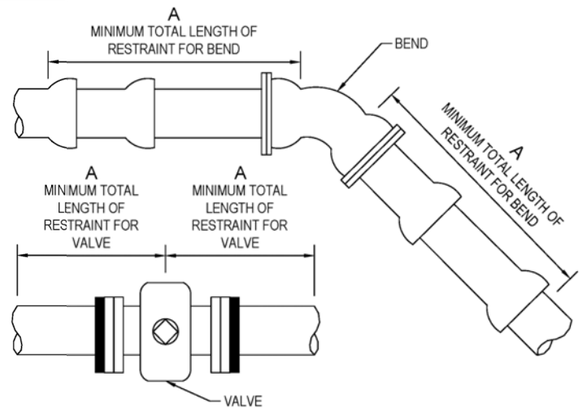
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

UTILITY RELOCATION SHEETS
DETAILS

SHEET NO. 100




| RESTRAIN "A" (LF) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| FITTING / PIPE | 4" | 6" | 8" | 12" | 16" | 20" | 24" | 30" | 36" |
| 11-1/4° | 4 | 5 | 8 | 10 | 11 | 13 | 15 | 19 | 21 |
| 22-1/2° | 8 | 11 | 15 | 20 | 21 | 26 | 31 | 38 | 44 |
| 45°/OFFSET | 16 | 23 | 30 | 43 | 45 | 55 | 65 | 78 | 91 |
| 90° | 39 | 55 | 73 | 103 | 109 | 133 | 156 | 189 | 220 |
| PLUG/CAP/VALVE* | 69 | 98 | 128 | 179 | 179 | 218 | 255 | 306 | 356 |
| A = MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED | | | | | | | | | |
| * = FOR IN-LINE VALVE, RESTRAINT LENGTH "A" REQUIRED BOTH WAYS FROM VALVE | | | | | | | | | |

NOTES:

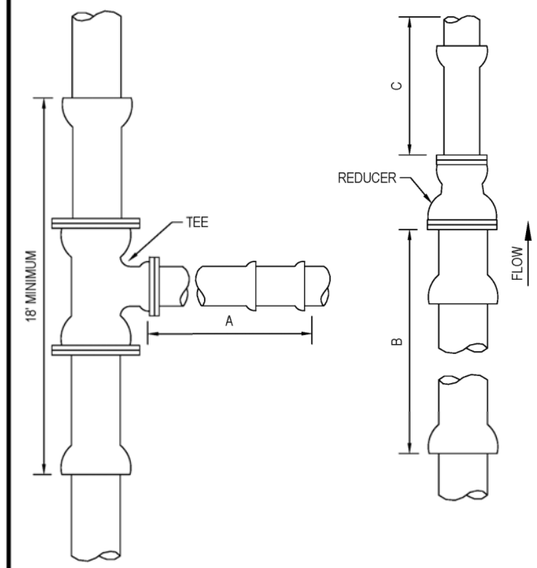
1. THIS TABLE IS BASED ON:
   a. MAXIMUM TEST PRESSURE OF 190 PSI
   b. LAYING CONDITION TYPE 2 (SEE DETAILS 2.01 AND 2.02)
   c. POOR SOIL CONDITIONS
   d. USING D.I.P.
   e. 3 FEET OF COVER FOR 12" AND SMALLER MAINS; 4 FEET OF COVER FOR 16" AND LARGER MAINS
   f. HORIZONTAL BENDS ONLY - ENGINEER TO SUBMIT CALCULATIONS FOR VERTICAL RESTRAINTS
2. "RESTRAINED" PIPE SHALL BE MANUFACTURED RESTRAINED JOINT PIPE, PUSH-ON JOINT PIPE RESTRAINED W/GASKET-TYPE "GRIPPER RESTRAINTS", OR MECHANICAL JOINT PIPE RESTRAINED BY MEGALUG (OR APPROVED EQUIVALENT).
3. ANY ADDITIONAL FITTINGS WITHIN THE RESTRAINED SECTION SHALL BE RESTRAINED ACCORDINGLY.

City of Tampa Florida — Water Department

LAST REVISION: JUL 2018

RESTRAINED JOINT STANDARD FOR BENDS, PLUGS, CAPS, AND VALVES

2.11




| FITTING SIZE | RESTRAIN (LF) | | UNRESTRAINED STRAIGHT RUN (LF) |
|---|---|---|---|
| | TEE "A" | REDUCER "B" | REDUCER "C" |
| 4x4 | 31 | * | * |
| 6x4 | 14 | 50 | 74 |
| 6x6 | 60 | * | * |
| 8x4 | A.T. | 91 | 178 |
| 8x6 | 48 | 54 | 70 |
| 8x8 | 90 | * | * |
| 12x4 | A.T. | 155 | 455 |
| 12x6 | 24 | 130 | 260 |
| 12x8 | 71 | 95 | 144 |
| 12x12 | 143 | * | * |
| 16x6 | A.T. | 151 | 401 |
| 16x8 | 34 | 130 | 265 |
| 16x12 | 96 | 76 | 103 |
| 16x16 | 148 | * | * |
| 20x6 | A.T. | 195 | 659 |
| 20x8 | 18 | 180 | 461 |
| 20x12 | 85 | 136 | 233 |
| 20x16 | 139 | 76 | 96 |
| 20x20 | 186 | * | * |
| 24x6 | A.T. | 236 | 971 |
| 24x8 | A.T. | 224 | 700 |
| 24x12 | 74 | 188 | 391 |
| 24x16 | 130 | 139 | 215 |
| 24x20 | 180 | 76 | 93 |
| 24x24 | 224 | * | * |
| 30x6 | A.T. | 293 | 1534 |
| 30x8 | A.T. | 283 | 1130 |
| 30x12 | 56 | 255 | 678 |
| 30x16 | 118 | 216 | 426 |
| 30x20 | 169 | 168 | 260 |
| 30x24 | 215 | 108 | 138 |
| 30x30 | 275 | * | * |
| 36x6 | A.T. | 345 | 2230 |
| 36x8 | A.T. | 336 | 1660 |
| 36x12 | 38 | 314 | 1030 |
| 36x16 | 104 | 283 | 689 |
| 36x20 | 159 | 244 | 466 |
| 36x24 | 206 | 195 | 306 |
| 36x30 | 269 | 108 | 133 |
| 36x36 | 326 | * | * |
| A.T. = RESTRAINT REQUIRED AT TEE ONLY. * = NOT APPLICABLE | | | |

NOTES:

1. THIS TABLE IS BASED ON:
   a. MAXIMUM TEST PRESSURE OF 190 PSI
   b. LAYING CONDITION TYPE 2 (SEE DETAILS 2.01 AND 2.02)
   c. POOR SOIL CONDITIONS
   d. USING D.I.P.
   e. 3 FEET OF COVER FOR 12" AND SMALLER MAINS; 4 FEET OF COVER FOR 16" AND LARGER MAINS
   f. HORIZONTAL BENDS ONLY - ENGINEER TO SUBMIT CALCULATIONS FOR VERTICAL RESTRAINTS
2. RESTRAINT FOR REDUCERS: IF "C" STRAIGHT RUN OF PIPE DOWNSTREAM OF REDUCER NOT AVAILABLE, THE RESTRAIN "B" UPSTREAM OF REDUCER.
3. "RESTRAINED" PIPE SHALL BE MANUFACTURED RESTRAINED JOINT PIPE, PUSH-ON JOINT PIPE RESTRAINED W/GASKET-TYPE "GRIPPER RESTRAINTS", OR MECHANICAL JOINT PIPE RESTRAINED BY MEGALUG (OR APPROVED EQUIVALENT).
4. ANY ADDITIONAL FITTINGS WITHIN THE RESTRAINED SECTION SHALL BE RESTRAINED ACCORDINGLY.

City of Tampa Florida — Water Department

LAST REVISION: JUL 2018

RESTRAINED JOINT STANDARD FOR TEES AND REDUCERS

2.12A

| REVISIONS | | | |
|---|---|---|---|
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ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

UTILITY RELOCATION SHEETS
DETAILS

SHEET NO. 101

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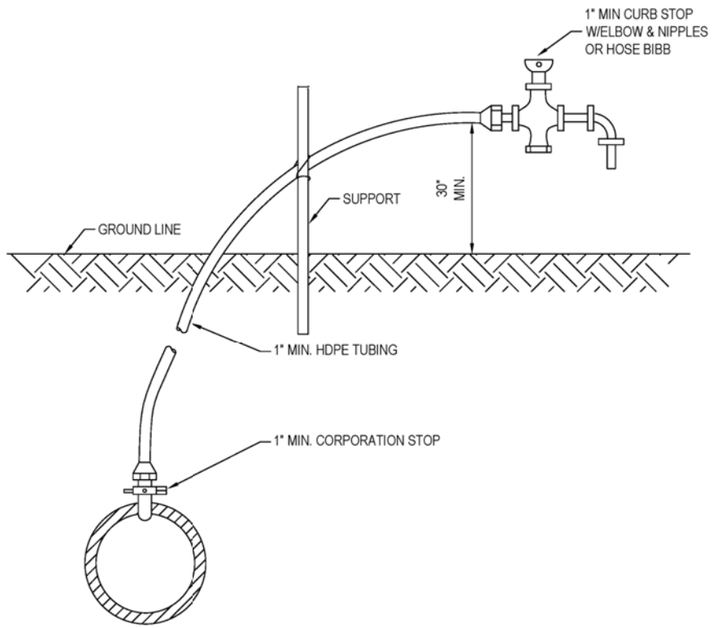
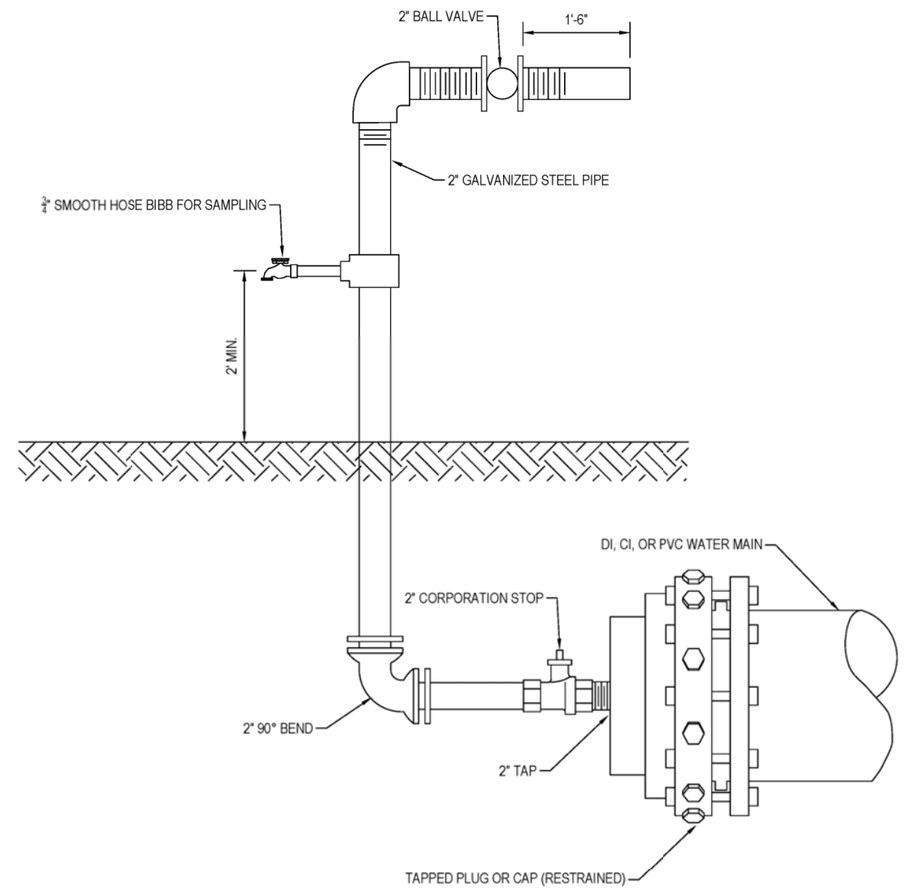



NOTES:

1. WATER OUTLET SHALL BE HELD UP OFF THE GROUND SO AS NOT TO INTERFERE WITH THE SAMPLING PROCESS.
2. CORPORATION STOP TO BE REMOVED AND BRASS PLUG INSTALLED IN TAPPED MAIN AFTER OPERATION.

| City of Tampa Florida Water Department | LAST REVISION JUL 2018 | TEMPORARY SAMPLE TAP INSTALLATION W/DI, CI, OR PVC PIPE | 2.18A |
|---|---|---|---|




NOTES:

1. FOR DEAD-END MAINS, SAMPLE TAP TO BE INSTALLED ON A 2" TAPPED CAP/PLUG.
2. FLUSHING/SAMPLING ARRANGEMENT TO BE REMOVED AFTER DISINFECTION OF MAIN LINE.
3. AFTER OPERATION COMPLETE, INSTALL BRASS PLUG AT CORPORATION STOP.

| City of Tampa Florida Water Department | LAST REVISION JUL 2018 | TEMPORARY SAMPLE TAP INSTALLATION FOR END OF LINE W/DI, CI, OR PVC PIPE | 2.19A |
|---|---|---|---|

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

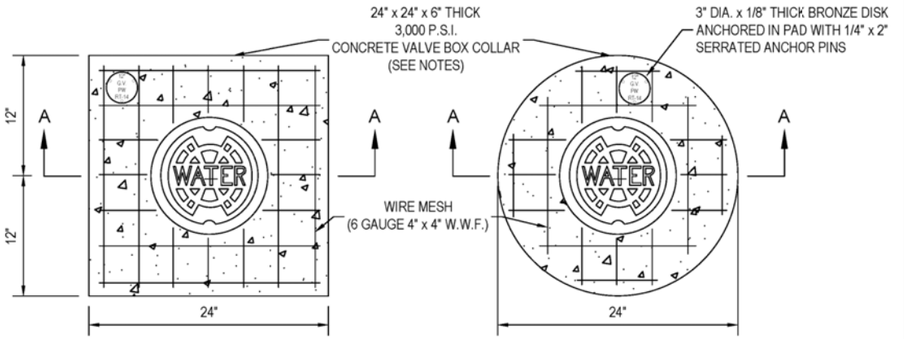
CITY OF TAMPA
TRANSPORTATION DIVISION

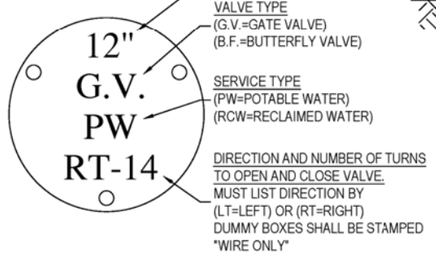
CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

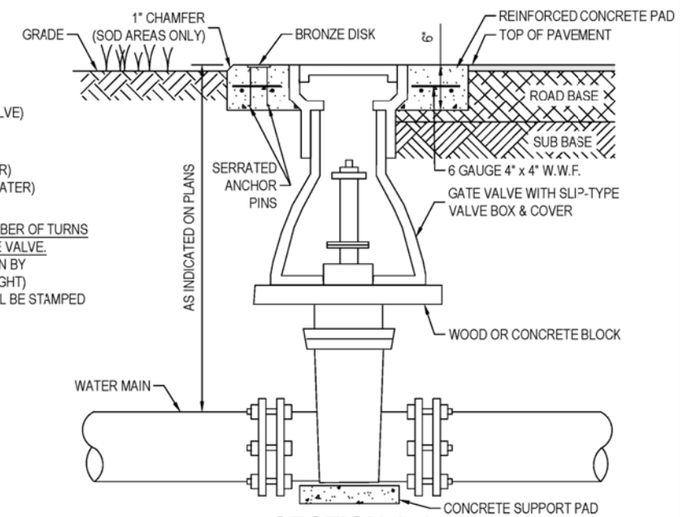
UTILITY RELOCATION SHEETS
DETAILS

SHEET NO. 102




**BRONZE DISK DETAIL**

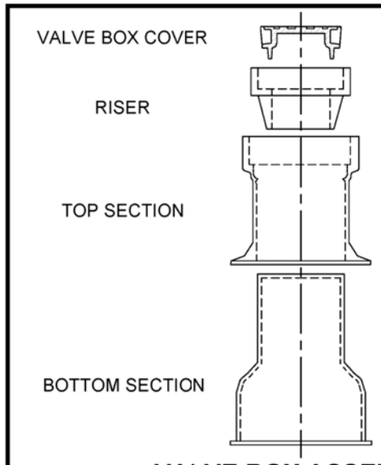



**SECTION A-A**

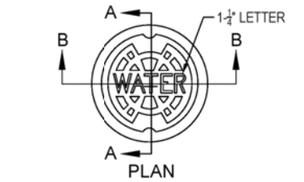
NOTES :

1. CIRCULAR OR SQUARE CONCRETE PAD REQUIRED FOR ALL VALVE BOX INSTALLATIONS.
2. CAST IRON VALVE BOXES SHALL BE FIRMLY SUPPORTED AND CENTERED AND PLUMB OVER THE OPERATING NUT OF THE VALVE. VALVE BOX COVER SHALL BE FLUSH WITH THE SURFACE OF THE FINISHED PAVEMENT, OR GRADE OR AT SUCH OTHER LEVEL AS MAY BE DIRECTED BY THE DEPARTMENT.
3. "BLUE" WATER VALVE LOCATE MARKERS REQUIRED FOR ALL VALVE INSTALLATIONS.
4. EMBED BRONZE VALVE INFO DISK INTO CONCRETE VALVE BOX COLLAR.
5. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST T.W.D. APPROVED MATERIAL SPECIFICATIONS.
6. IF VALVE IS LOCATED WITHIN A SIDEWALK CONCRETE COLLAR MAY BE ELIMINATED AND DISK SET FLUSH DIRECTLY IN SIDEWALK.
7. BRONZE DISK REQUIRED FOR ALL VALVES AND DUMMY BOXES.

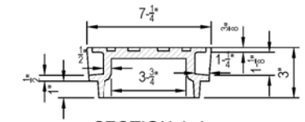
| City of Tampa Florida Water Department | LAST REVISION JUL 2018 | VALVE INSTALLATION W/VALVE BOX & PAD FOR DI OR CI PIPE | 3.01 |
|---|---|---|---|



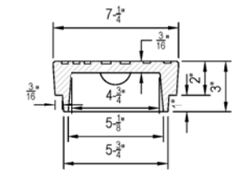

**VALVE BOX ASSEMBLY**




PLAN

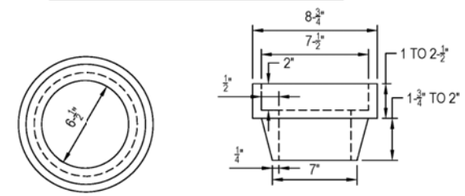


SECTION A-A



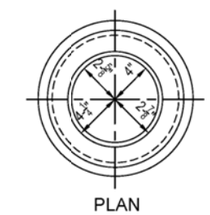
SECTION B-B

**VALVE BOX COVER**

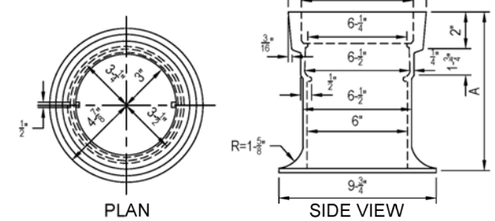


PLAN SIDE VIEW

**RISER**

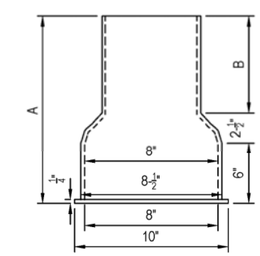


PLAN



PLAN SIDE VIEW

**TOP SECTION**



SIDE VIEW

**BOTTOM SECTION**

| TOP SECTION | SIZE | A |
|---|---|---|
| | 10" | 10" |
| | 16" | 16" |

| BOTTOM SECTION | SIZE | A | B |
|---|---|---|---|
| | 15" | 15" | 6-1/2" |
| | 24" | 24" | 15-1/2" |
| | 36" | 36" | 27-1/2" |

| City of Tampa Florida Water Department | LAST REVISION JUL 2018 | VALVE BOX, SLIP TYPE | 3.04 |
|---|---|---|---|

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION
CONTRACT NO: 12-D-00057
ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

UTILITY RELOCATION SHEETS
DETAILS

SHEET NO. 103

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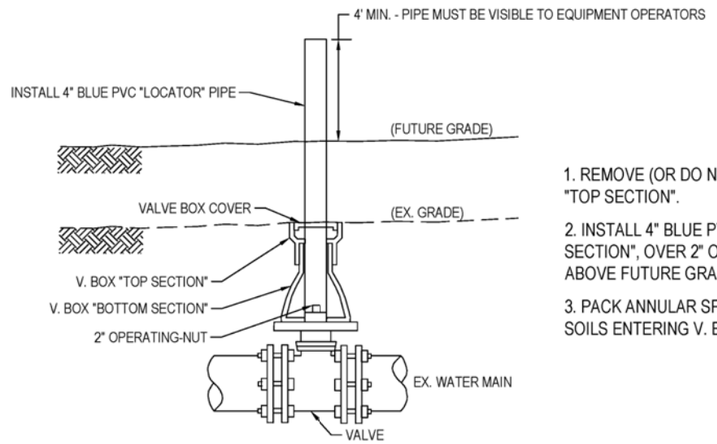
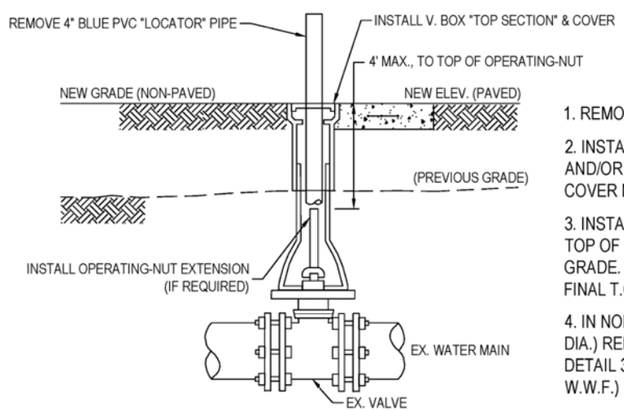
## TO PROTECT VALVE BOX LOCATION DURING CLEARING & GRUBBING




1. REMOVE (OR DO NOT INSTALL) V. BOX COVER & "TOP SECTION".
2. INSTALL 4" BLUE PVC PIPE INTO V. BOX "BOTTOM SECTION", OVER 2" OPERATING- NUT, & TO 4' MIN. ABOVE FUTURE GRADE.
3. PACK ANNULAR SPACE TO PREVENT BACKFILL SOILS ENTERING V. BOX "BOTTOM SECTION".

## TO ADJUST HEIGHT OF VALVE BOX FOR CHANGED GRADE

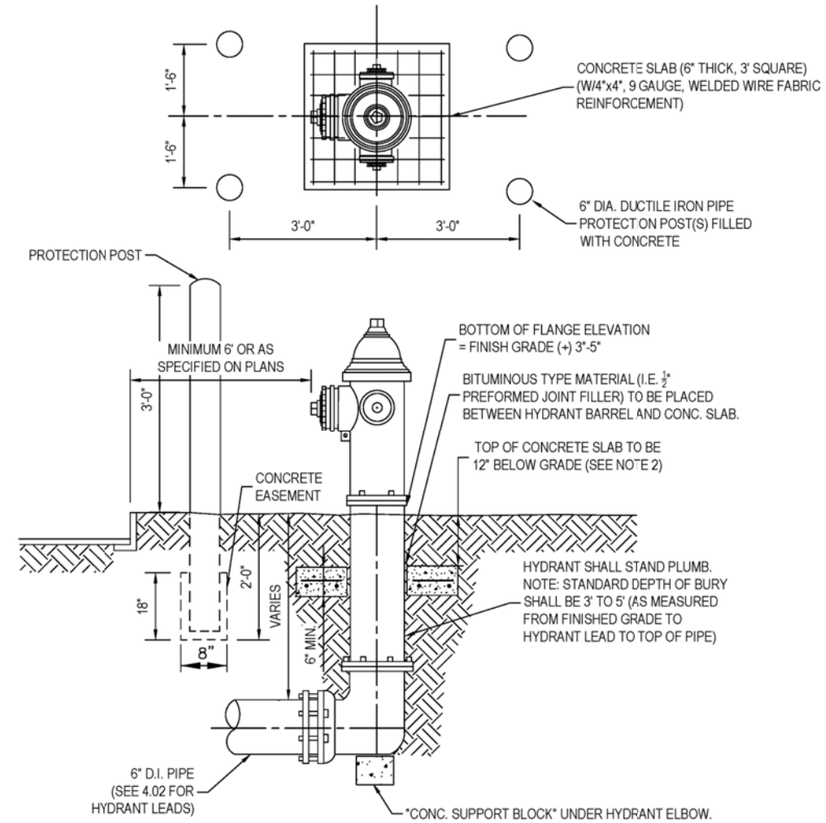



1. REMOVE PVC LOCATOR PIPE.
2. INSTALL APPROVED V. BOX "TOP SECTION" AND/OR RISER & COVER, SUCH THAT TOP OF COVER MATCHES NEW GRADE ELEVATION.
3. INSTALL STD CI OPERATING-NUT EXTENSION IF TOP OF OPERATING-NUT (T.O.N.) > 4' BELOW GRADE.
FINAL T.O.N. TO BE < 4' DEEP.
4. IN NON-PAVED AREAS, CONSTRUCT 2'X2' (OR 2' DIA.) REINFORCED CONCRETE PAD, PER STD. DETAIL 3.01 (3000 P.S.I. CONCRETE, 6-GAUGE 4"X4" W.W.F.)

NOTES:

1. MATERIALS FOR & INSTALLATION OF VALVE BOXES & PADS SHALL CONFORM TO TAMPA WATER DEPT. SPECIFICATIONS & STD. CONSTRUCTION DETAILS (DETAILS 3.01 & 3.03)

| City of Tampa Florida Water Department | LAST REVISION JAN 2018 | VALVE BOX (V. BOX) ADJUSTMENTS FOR GRADE CHANGE | 3.05 |
|---|---|---|---|




NOTES:

1. FIRE HYDRANT BARREL ABOVE THE GROUND LINE SHALL BE PAINTED WITH A HIGH-GRADE ENAMEL PAINT, FEDERAL SAFETY YELLOW (OSHA APPROVED), AND THE HYDRANT BONNET SHALL BE PAINTED OSHA GREEN.
2. CONCRETE SLAB MAY BE ELIMINATED IN AREAS WHERE HYDRANT IS SET IN SIDEWALK AND SIDEWALK HAS BEEN INSTALLED PRIOR TO FINAL ACCEPTANCE OF THE HYDRANT.
3. THRUST RESTRAINT FOR HYDRANT:
   a) HYDRANT SHALL BE FIRMLY SUPPORTED UNDER ELBOW IN ALL METHODS BY SUPPORT BLOCK
   b) ALL BACKFILL SHALL BE THOROUGHLY COMPACTED UNDER SUPPORT BLOCK AND UNDER THRUST COLLAR
   c) ALL HYDRANT LEADS SHALL BE RESTRAINED BY MEGALUGS OR EQUIVALENT MECHANICAL RESTRAINTS
4. PROTECTION POSTS ARE REQUIRED WHEN HYDRANT IS LESS THAN 6 FEET FROM EDGE OF PAVEMENT, OR AS DIRECTED BY THE ENGINEER.
5. FOR PVC MAINS, INSTALL CONCRETE SUPPORT BLOCK UNDER ALL HYDRANT TEES.

| City of Tampa Florida Water Department | LAST REVISION JUL 2018 | FIRE HYDRANT INSTALLATION | 4.01 |
|---|---|---|---|

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |


ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

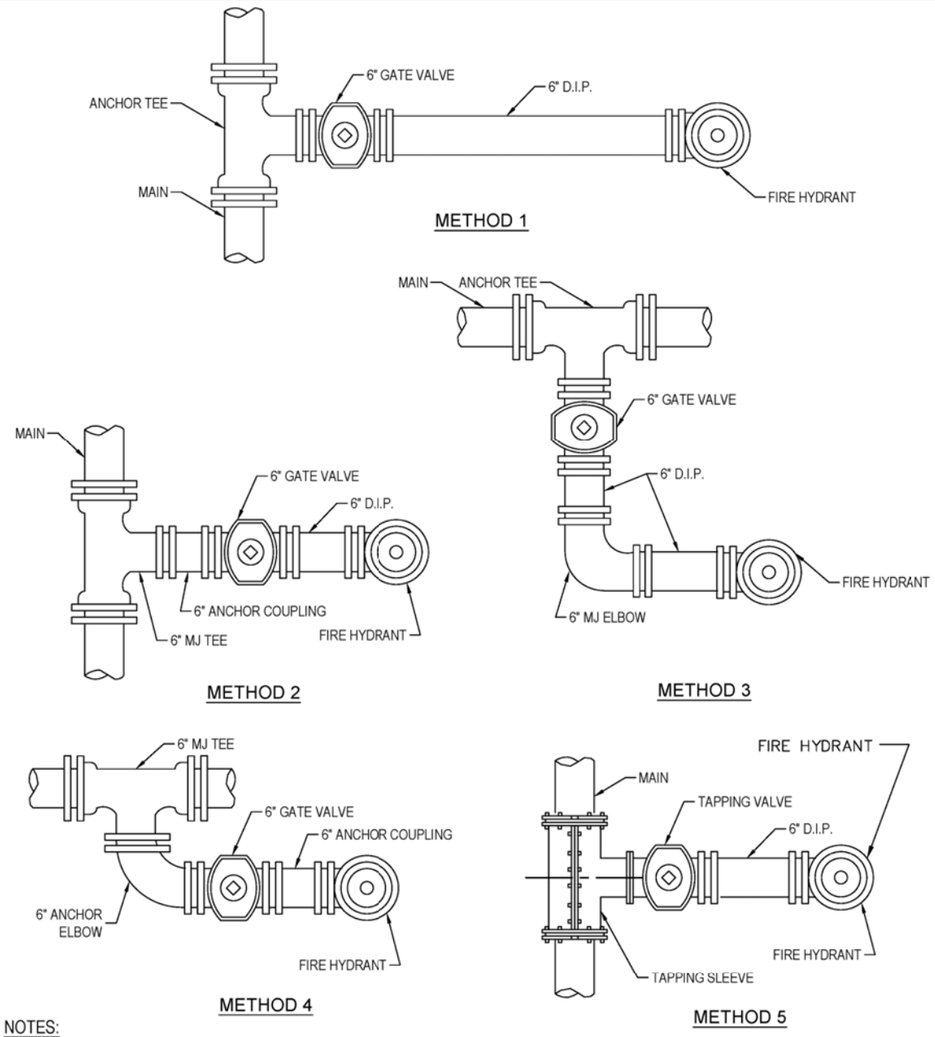

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT AT SR 580/BUSCH BLVD.

UTILITY RELOCATION SHEETS DETAILS

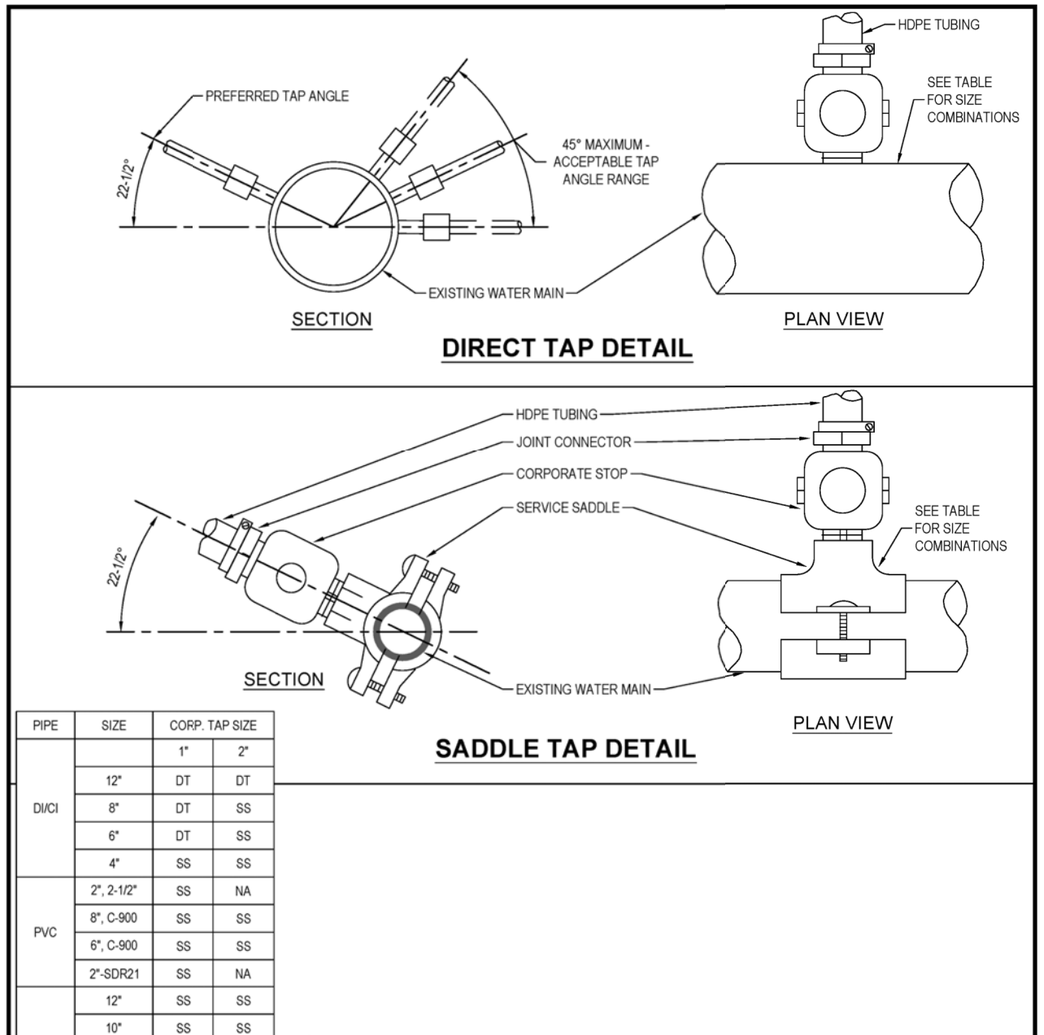
SHEET NO. 104




NOTES:

1. VALVE SHALL BE SET IN ACCORDANCE WITH DETAIL 3.01. FOR HYDRANT SET, SEE DETAIL 4.01.
2. ALL VALVES SHALL BE ANCHORED TO BRANCH OF TEE ON ALL HYDRANT INSTALLATIONS.
3. ALL HYDRANT LEADS SHALL BE RESTRAINED BY MEGALUGS OR EQUIVALENT.
4. FOR PVC MAINS, INSTALL CONCRETE SUPPORT BLOCK UNDER HYDRANT TEES.

| City of Tampa Florida Water Department | LAST REVISION JUL 2018 | FIRE HYDRANT METHODS OF INSTALLATION | 4.02 |
|---|---|---|---|




| PIPE | SIZE | CORP. TAP SIZE | |
|---|---|---|---|
| | | 1" | 2" |
| DI/CI | 12" | DT | DT |
| | 8" | DT | SS |
| | 6" | DT | SS |
| | 4" | SS | SS |
| PVC | 2", 2-1/2" | SS | NA |
| | 8", C-900 | SS | SS |
| | 6", C-900 | SS | SS |
| | 2"-SDR21 | SS | NA |
| OTHER* | 12" | SS | SS |
| | 10" | SS | SS |
| | 8" | SS | SS |
| | 6" | SS | SS |
| | 4" | SS | NA |
| | 3" | SS | NA |
| | 2", 2-1/2" | SS | NA |

LEGEND
DT- DIRECT TAP CAN BE ALLOWED SS- SERVICE SADDLE IS REQUIRED NA- NOT ALLOWED
*ASBESTOS CEMENT, STEEL, GALVANIZED IRON PIPE, NON STD PVC, ETC.

| City of Tampa Florida Water Department | LAST REVISION JUL 2018 | TAPPING DETAIL FOR 3/4", 1", 1-1/2" & 2" W/DI, CI, OR PVC PIPE | 5.01A |
|---|---|---|---|

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
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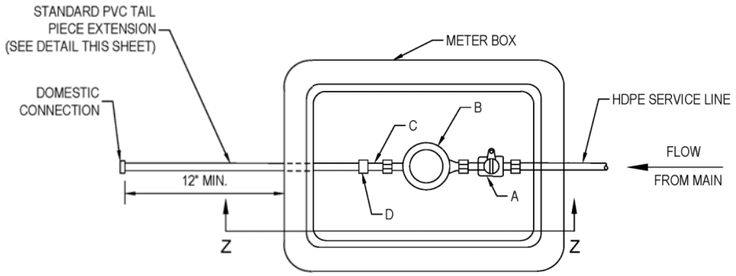
CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

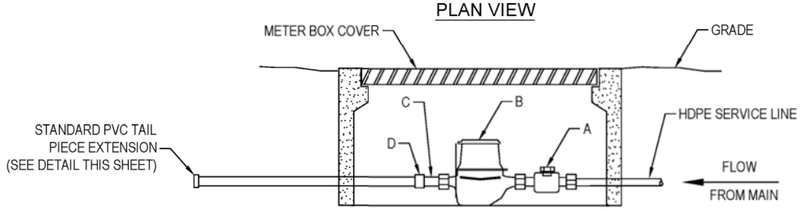
ARMENIA AVENUE INTERSECTION PROJECT AT SR 580/BUSCH BLVD.

UTILITY RELOCATION SHEETS
DETAILS

SHEET NO. 105

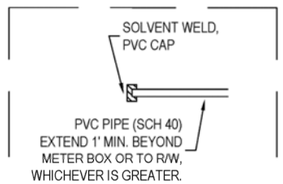



PLAN VIEW




SECTION Z-Z

| METER INSTALLATION PARTS LIST | |
|---|---|
| ITEM | DESCRIPTION |
| A | HDPE CJ X METER, SWIVEL NUT (CURB STOP) |
| B | METER |
| C | BRASS METER COUPLING |
| D | *PVC FIP X WELD COUPLING |

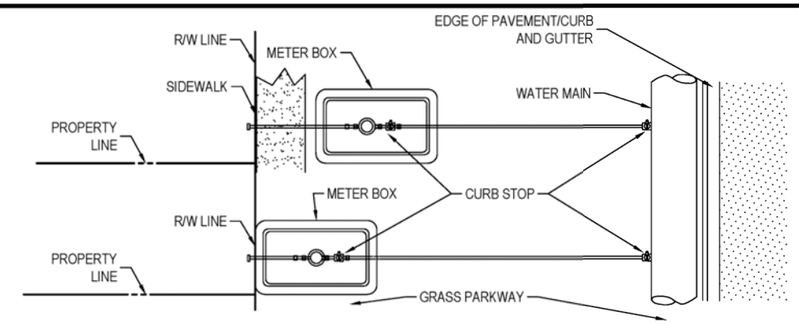



STD. TAIL PIECE EXTENSION

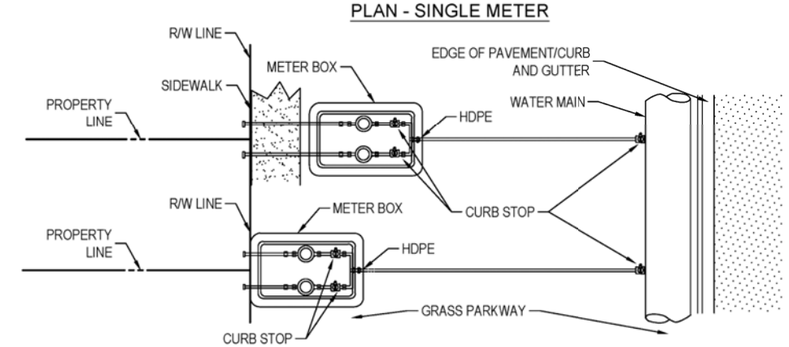
* ALL PVC PIPE AND FITTINGS SHALL BE SCH 80 EXCEPT FOR STANDARD TAIL PIECE SECTION WHICH WILL BE SCH 40.

NOTE: PARTS LIST IS FOR STANDARD INSTALLATION; ACTUAL PARTS REQUIRED MAY VARY AS DIRECTED BY THE ENGINEER.

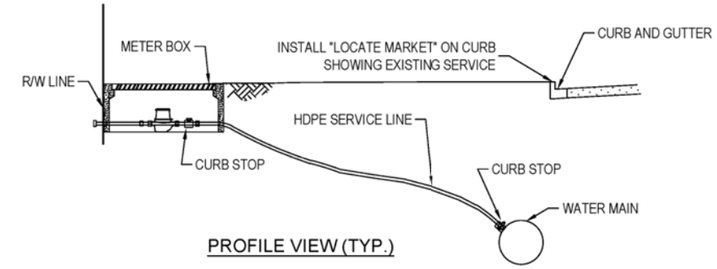
| City of Tampa Florida Water Department | LAST REVISION JUL 2018 | SINGLE METER SET DETAIL 3/4", 1", 1-1/2", 2" | 5.02 |
|---|---|---|---|




PLAN - SINGLE METER




PLAN VIEW - DUAL METER




PROFILE VIEW (TYP.)

DO NOT INSTALL METER WITHIN SIDEWALK. WHEN SIDEWALK EXISTS, INSTALL METER ON STREET SIDE OF SIDEWALK OR WHERE DIRECTED BY CITY ENGINEER.

* LINE SIZE APPLICABLE FOR DDCVA

| SINGLE METER SIZE (INCHES) | SERVICE LINE SIZE (INCHES) (0-15') | DUAL METER SIZE (INCHES) | SERVICE LINE SIZE (INCHES) (0-15') |
|---|---|---|---|
| 3/4 | 1 | 3/4 | 2 |
| 1 | 1 | 1 | 2 |
| 1 1/2 | 2 | 1 1/2 | N/A |
| 2* | 2 | 2* | N/A |

(FEET REFER TO DISTANCE FROM WATER MAIN TO METER)

| City of Tampa Florida Water Department | LAST REVISION JUL 2018 | SINGLE & DUAL METERED SERVICE - SHORT SIDE 3/4", 1", 1-1/2" & 2" | 5.04A |
|---|---|---|---|

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

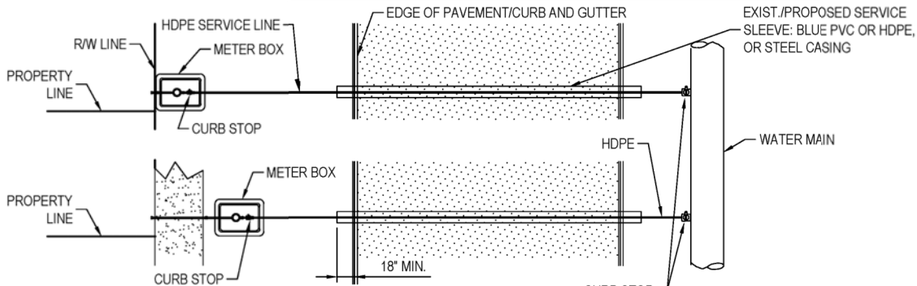
ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION
CONTRACT NO: 12-D-00057
ARMENIA AVENUE INTERSECTION PROJECT AT SR 580/BUSCH BLVD.

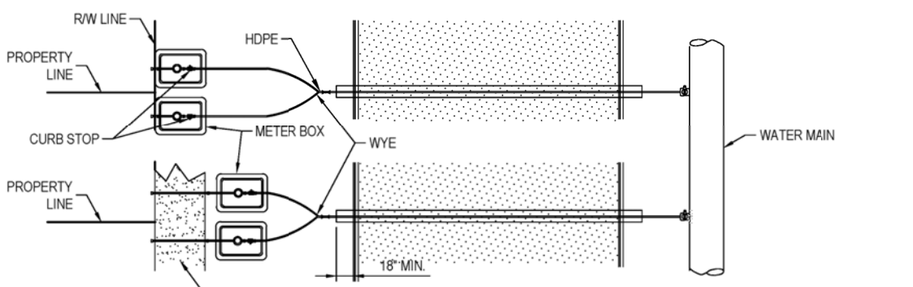
UTILITY RELOCATION SHEETS DETAILS

SHEET NO. 106

mcannon 9/21/2020 8:25:28 AM P:\COT1301\CADD\utils\SPDTUW01.dwg

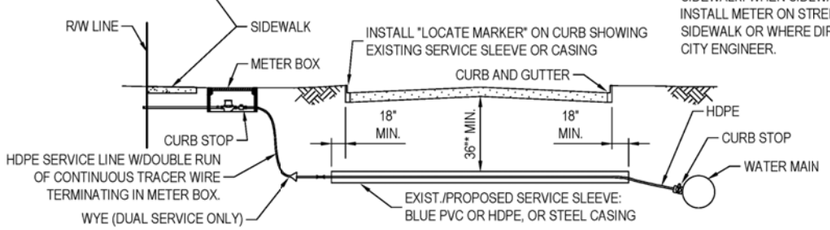



PLAN VIEW - SINGLE METER




PLAN VIEW - DUAL METER

DO NOT INSTALL METER WITHIN SIDEWALK. WHEN SIDEWALK EXISTS, INSTALL METER ON STREET SIDE OF SIDEWALK OR WHERE DIRECTED BY CITY ENGINEER.




PROFILE VIEW (TYP.)

CASING SPECIFICATION:
1. IF PUSHED-SCH 40 STEEL PIPE (MIN.)
2. IF LAYED IN OPEN TRENCH-SCH 40 STEEL PIPE OR SCH 80 PVC SOLVENT WELD PIPE.

| SINGLE METER SIZE (INCHES) | SERVICE LINE SIZE (INCHES) | | CASING SIZE (INCHES) |
|---|---|---|---|
| | (15'-80') | (80'-150') | |
| 3/4 | 1 | 2 | 2 / 4 |
| 1 | 1 | 2 | 4 |
| 1 1/2 | 2 | 2 | 4 |
| 2** | 4" D.I.P. | 4" D.I.P. | 12 |

(FEET REFER TO DISTANCE FROM WATER MAIN TO METER)

* OR GREATER, IF REQUIRED BY ROW CONTROLLING AGENCY
** LINE SIZES APPLICABLE FOR 2" DDCV

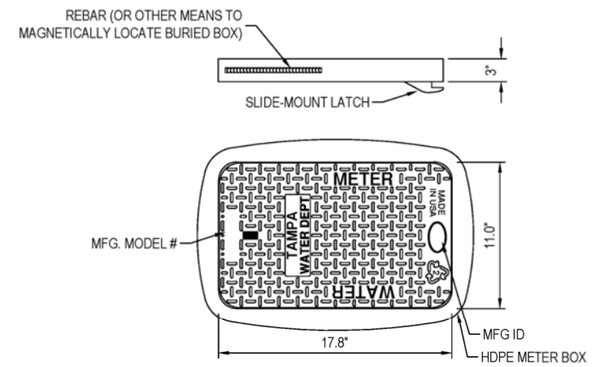
| DUAL METER SIZE (INCHES) | SERVICE LINE SIZE (INCHES) | | CASING SIZE (INCHES) |
|---|---|---|---|
| | (15'-80') | (80'-150') | |
| 3/4 | 2 | 2 | 4 |
| 1 | 2 | 4" D.I.P. | 4 / 12 |
| 1 1/2 | N/A | N/A | N/A |
| 2* | N/A | N/A | N/A |

City of Tampa Florida Water Department

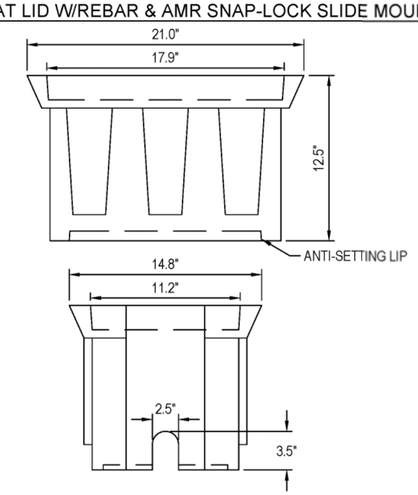
LAST REVISION JUL 2018

SINGLE & DUAL METERED SERVICE - LONG SIDE 3/4", 1", 1-1/2" & 2"

5.05A




ANTI-FLOAT LID W/REBAR & AMR SNAP-LOCK SLIDE MOUNT




HDPE METER BOX w/LIP

**#37 HDPE METER BOX W/COVER**

N.T.S.

City of Tampa Florida Water Department

LAST REVISION JUL 2018

3/4" OR 1" SINGLE SERVICE HDPE METER BOX

5.10

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT AT SR 580/BUSCH BLVD.

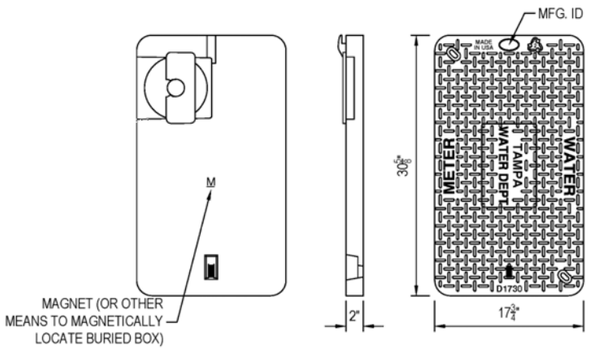
UTILITY RELOCATION SHEETS DETAILS

SHEET NO. 107

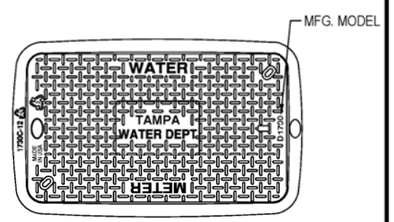
mcannon 9/21/2020 8:25:39 AM P:\C0T1301\CADD\utils\SPDTUW01.dwg

| BODY KEY | |
|---|---|
| H | HEAVY WALL, $\frac{1}{2}$" |

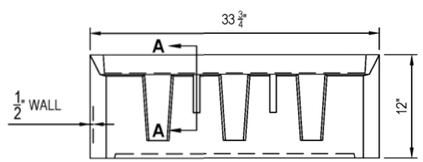
| LID KEY | |
|---|---|
| AF | ANTI-FLOAT MATERIAL |
| 1 | BLACK COLOR |
| M | MAGNET |
| A | AMR SLIDE MOUNT |
| TPA | TAMPA WATER |



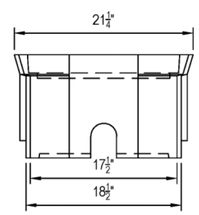

1730C-AF1MA TPA-LID



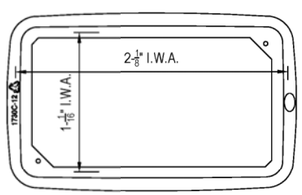

1730CH-12-AF1MA TPA



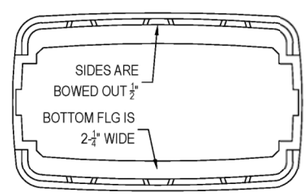

1730CH-12-BODY



**LIFT STRUCTURE**
SECTION A-A




1730CH-12-BODY




BOTTOM VIEW

NOTES
1) DIM'S ± 1/8" U.N.O.
2) LID MATERIAL: HDPE
3) BODY MATERIAL: LLDPE
4) WALL THICKNESS: 1/2" MINIMUM
5) I.W.A. = INSIDE WORK AREA.
6) SNAP LOCK POCKET WILL RECEIVE AMR/AMI DEVICE ENDPOINT. SNAP LOCK SLOT IS 1.80" ± .015" TO ALLOW FOR A FINGER FORCE INSTALL. POCKET HEIGHT IS 15/16" FOR MIN 1/8" AIR GAP.

N.T.S.

## #66 HDPE METER BOX W/COVER

| City of Tampa Florida Water Department | LAST REVISION JUL 2018 | 1-1/2" & 2" SINGLE SERVICE HDPE METER BOX | 5.12 |
|---|---|---|---|

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

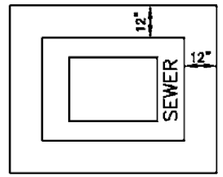
ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION
CONTRACT NO: 12-D-00057
ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

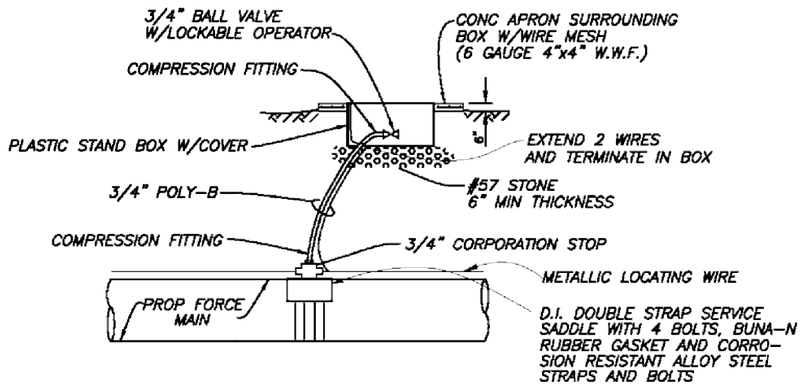
UTILITY RELOCATION SHEETS
DETAILS

SHEET NO. 108

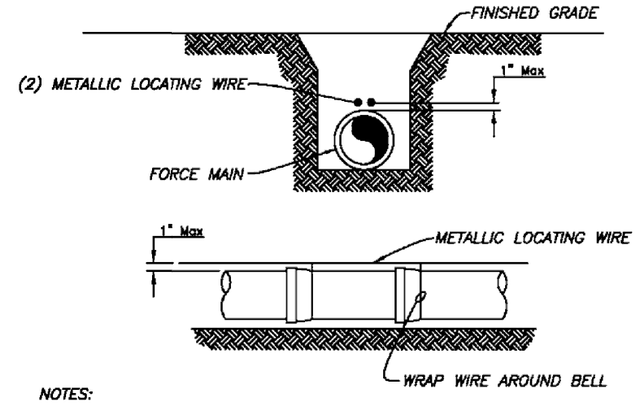
mcannon 9/21/2020 8:25:50 AM P:\C0T1301\CADD\utils\SPDTUW01.dwg




PLAN VIEW



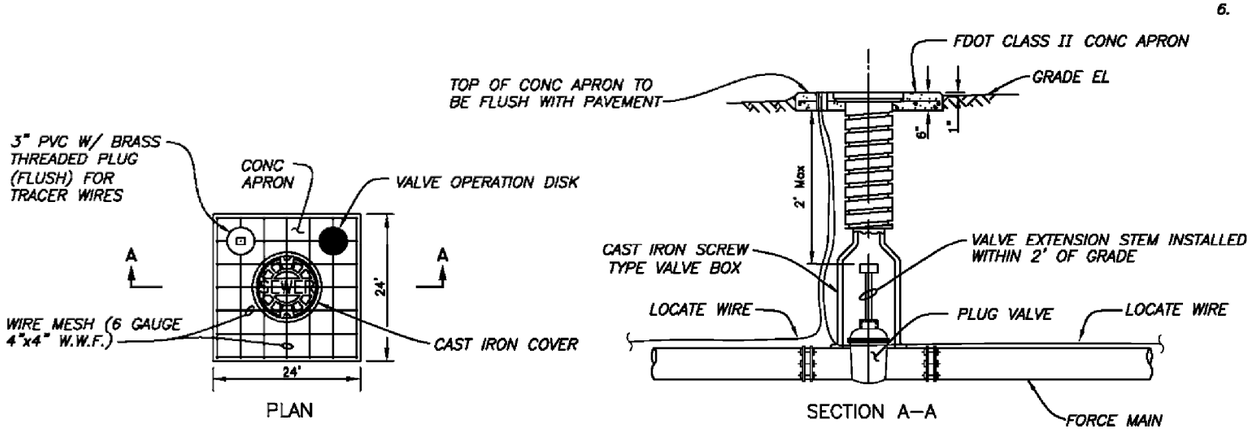

AIR RELEASE VALVE DETAIL
Not To Scale




NOTES:

1. Pipe shall require 2 green insulated metallic locating wires capable of detection by a cable locator and shall be buried directly above the centerline of the pipe. Use duct tape as necessary to hold wire directly on top of pipe.
2. Direct bury pipe shall have (2) 12 gauge insulated solid copper wires. Directional drilled pipe shall have (2) 8 gauge insulated solid copper wires or (2) 10 gauge insulated copper clad steel wires. For directional drilled HDPE pipe a 1" conduit may be pulled back with the locating wires to ease installation and to prevent the wires from breaking.
3. Wire insulation must be suitable for buried service. HDPE or HMWPE are acceptable insulation materials. Nylon insulation is not acceptable.
4. Wires must be spliced together with wire connectors suitable for buried service. Connectors shall be corrosion and moisture proof such as DBR Kit by 3M, Snakebite by Copperhead Industries or equal. Twisting the wires and sealing with electrical tape alone is not acceptable.
5. All tracer wires must pass a continuity test in the presence of a City inspector. No pipe will be accepted by the City until a continuity test passes.
6. Locating wire shall terminate at the top of each valve box and air release valve. Wire shall be capable of extending 24" above top of box in such a manner so as not to interfere with valve operation.

PIPE LOCATING WIRE DETAIL
Not To Scale

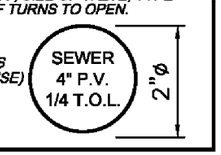



VALVE BOX DETAIL
Not To Scale

IMPORTANT - FOR EACH OPERABLE VALVE:

PROVIDE A BRASS IDENTIFICATION TAG ANCHORED TO THE CONCRETE APRON THAT IS A MINIMUM 2" IN DIAMETER AND 1/8-INCH THICK. THE TAG SHALL BE ENGRAVED WITH "SEWER", SIZE OF VALVE, TYPE OF VALVE, AND DIRECTION AND NUMBER OF TURNS TO OPEN.

FOR EXAMPLE, A 4-INCH PLUG VALVE ON A WASTEWATER FORCE MAIN THAT REQUIRES 1/4 TURNS TO THE LEFT(COUNTERCLOCKWISE) TO BE FULLY OPEN WOULD REQUIRE THE FOLLOWING ON AN IDENTIFICATION TAG:




VALVE OPERATION DISK
Not To Scale

| | No. | DATE | REVISIONS | | | | |
|---|---|---|---|---|---|---|---|
| JACINTO CARLOS FERRAS, P.E. #49454<br>DESIGN DIVISION HEAD<br>WASTEWATER DEPARTMENT | 3 | | | DES: DR<br>DRN: BL<br>CKD:<br>DATE: | CITY of TAMPA<br>WASTEWATER DEPARTMENT | STANDARD DETAILS<br>MISC. FM DETAILS 1 OF 2 | W.O. ----<br>SHEET 9 of 10 |
| | 2 | | | | | | |
| | 1 | | | | | | |

User: sse8 Drawing Name: P:\C0T1301\CADD\utils\STD_FM_Details.dwg
Layout: Misc. FM Details 01 Plotted: 8/21/2018 3:16:29 PM CTB: MONOCHROME.CTB Default LWt: 25mm

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

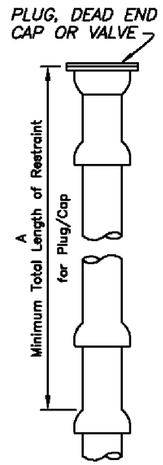
ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

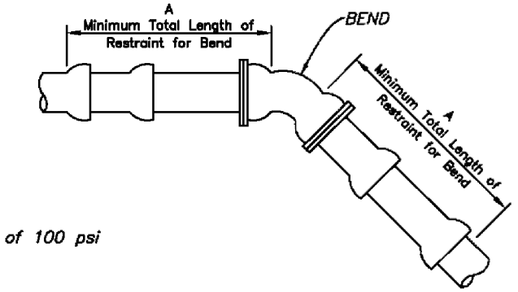
CITY OF TAMPA
TRANSPORTATION DIVISION
CONTRACT NO: 12-D-00057
ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

UTILITY RELOCATION SHEETS
DETAILS

SHEET NO.
109

mcannon 9/21/2020 8:25:56 AM P:\C0T1301\CADD\utils\SPDTUW01.dwg




NOTES:

1. These tables are based on:
   a. Maximum test pressure of 100 psi
   b. Class "C" pipe bedding
   c. Poor soil conditions
   d. PVC pipe
   e. For vertical offsets, shallower vertical fitting has a minimum cover of 3 feet.
2. Restraining devices for PVC pipe shall be by Megalug (Series 2000 PV) or equal, meeting ASTM F1674.
3. Any additional fittings within the restrained section shall be restrained accordingly.
4. One standard length of PVC pipe (20 feet) shall be laid on either side of the fitting where possible.

## HORIZONTAL OFFSET:

RESTRAIN "A" (LF)*

| FITTING TYPE | 4" | 6" | 8" | 10" | 12" | 16" | 18" | 20" | 24" |
|---|---|---|---|---|---|---|---|---|---|
| 11-1/4° | 1* | 2* | 2* | 2* | 3* | 3* | 3* | 4* | 4* |
| 22-1/2° | 2* | 3* | 3* | 4* | 5* | 6* | 6* | 7* | 8* |
| 45° | 4* | 5* | 7* | 8* | 9* | 11* | 13* | 14* | 16* |
| 90° | 9* | 12* | 15* | 18* | 21 | 27 | 29 | 32 | 37 |
| PLUG / CAP / ISOLATION VALVE | 26 | 36 | 47 | 56 | 66 | 85 | 94 | 102 | 119 |

A = MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED

* MINIMUM ONE PIPE JOINT UPSTREAM AND DOWNSTREAM OF EACH FITTING SHALL BE RESTRAINED

## VERTICAL OFFSET:

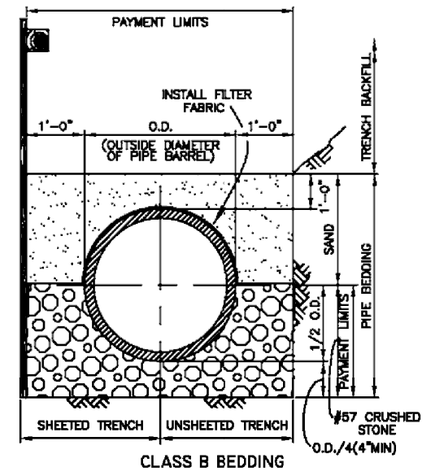
RESTRAIN "A" (LF)*

| FITTING TYPE | 4" | 6" | 8" | 10" | 12" | 16" | 18" | 20" | 24" |
|---|---|---|---|---|---|---|---|---|---|
| 11-1/4° | 3* | 4* | 5* | 6* | 7* | 9* | 10* | 11* | 12* |
| 22-1/2° | 5* | 8* | 10* | 12* | 14* | 17* | 19* | 21 | 24 |
| 45° | 11* | 15* | 20 | 23 | 28 | 35 | 39 | 43 | 50 |

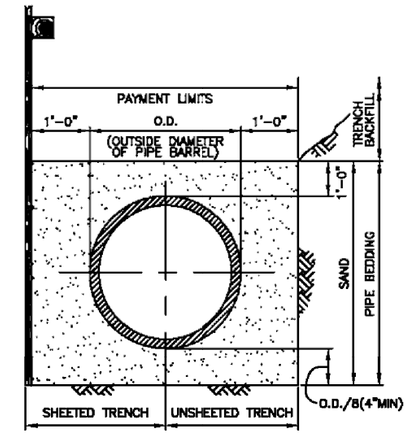
A = MINIMUM FOOTAGE OF PIPE TO BE RESTRAINED

* MINIMUM ONE PIPE JOINT UPSTREAM AND DOWNSTREAM OF EACH FITTING SHALL BE RESTRAINED

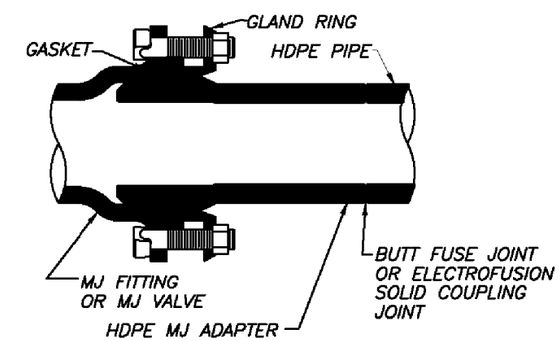
FITTING RESTRAINT DETAIL




CLASS B BEDDING
(ONLY ALLOWED WITH CITY INSPECTOR APPROVAL)




CLASS C BEDDING




NOTE:
Schematic shown for standard MJ fitting and plug valves.

HDPE TRANSITION DETAIL
Not To Scale

| No. | DATE | REVISIONS |
|---|---|---|
| 3 | | |
| 2 | | |
| 1 | | |

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

DES: DR
DRN: BL
CKD:
DATE:

CITY of TAMPA
WASTEWATER DEPARTMENT

STANDARD DETAILS
MISC. FM DETAILS 2 OF 2

W.O. ----
SHEET 10 OF 10

User: sse8 Drawing Name: P:\C0T1301\CADD\utils\STD_FM_Details.dwg
Layout: Misc. FM Details 02 Plotted: 8/21/2018 3:17:32 PM CTB: MONOCHROME.CTB Default LW: 25mm

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION
CONTRACT NO: 12-D-00057
ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

UTILITY RELOCATION SHEETS
DETAILS

SHEET NO.
110

mcannon 9/21/2020 8:25:57 AM P:\C0T1301\CADD\utils\SPDTUW01.dwg

## SUMMARY OF LUMP SUM ITEMS

| PAY ITEM NO. | PAY ITEM DESCRIPTION | QUANTITY P | QUANTITY F | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|
| | | | | | |
| 0101 1 | MOBILIZATION | 1 | | | |
| | | | | | |
| 0102 1 | MAINTENANCE OF TRAFFIC | 1 | | | |
| | | | | | |

PAY ITEM NOTES

| | |
|---|---|
| 0101 1 | INCLUDES DESILTING OF EXISTING PIPES AND STRUCTURES TO REMAIN |
| 0102 1 | INCLUDES ALL DEVICES, SIGNS & PAVEMENT MARKINGS |
| 0110 1 1 | INCLUDES REMOVAL OF EXISTING LIGHTING CONDUIT AND PULL BOXES, AS NOTED ON PLAN SHEET 25. |
| 0570 1 2 | USE BAHIA SOD FOR ALL PERFORMANCE TURF |
| 0425 5 1 & 0425 6 | MANHOLE AND VALVE BOX ADJUSTMENTS ARE TO BE PERFORMED BY THE CONTRACTOR WITH MATERIALS TO BE FURNISHED BY THE APPROPRIATE UTILITY. ARRANGE FOR DELIVERY/RECEIPT OF MATERIALS. COST FOR OBTAINING MATERIALS AND THE ADJUSTMENT WORK SHALL BE INCLUDED IN THE PAY ITEM. |

## SUMMARY OF TEMPORARY TRAFFIC CONTROL PLAN ITEMS

| PAY ITEM NO. | PAY ITEM DESCRIPTION | UNIT | PHASE I DURATION DAYS | PHASE I QUANTITY P | PHASE I TOTAL P | PHASE II DURATION DAYS | PHASE II QUANTITY P | PHASE II TOTAL P | PHASE III DURATION DAYS | PHASE III QUANTITY P | PHASE III TOTAL P | TOTAL P | TOTAL F | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | |
| 0102107 1 | TEMPORARY TRAFFIC DETECTION AND MAINTENANCE OF INTERSECTION | ED | 20 | 1 | 20 | 100 | 1 | 100 | 80 | 1 | 80 | 200 | | |
| | | | | | | | | | | | | | | |

## SUMMARY OF TEMPORARY TRAFFIC CONTROL PLAN ITEMS

| PAY ITEM NO. | PAY ITEM DESCRIPTION | UNIT | PHASE IV DURATION DAYS | PHASE IV QUANTITY P | PHASE IV TOTAL P | PHASE V DURATION DAYS | PHASE V QUANTITY P | PHASE V TOTAL P | TOTAL P | TOTAL F | GRAND TOTAL P | GRAND TOTAL F | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | |
| 0102107 1 | TEMPORARY TRAFFIC DETECTION AND MAINTENANCE OF INTERSECTION | ED | 30 | 1 | 30 | 20 | 1 | 20 | 50 | | 250 | | |
| | | | | | | | | | | | | | |

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REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|---|---|---|---|
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF QUANTITIES

SHEET NO.
SQ-1

## SUMMARY OF EROSION AND SEDIMENT CONTROL DEVICES

| LOCATION | SIDE | AREA ID | SEDIMENT BARRIER | | INLET PROTECTION SYSTEM | | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|
| | | | 0104 10 3 | | 0104 18 | | |
| STA. TO STA. | | | LF | | EA | | |
| | | | P | F | P | F | |
| 117+16.62 TO 117+16.62 | RT. | | 22.0 | | | | |
| 117+98.61 TO 118+99.94 | LT. | | 119.5 | | | | |
| 121+64.23 TO 123+28.91 | LT. | | 171.6 | | | | |
| 123+61.99 TO 124+46.23 | LT. | | 84.2 | | | | |
| 123+76.05 TO 124+74.37 | RT. | | 111.7 | | | | |
| 126+36.89 TO 127+03.03 | LT. | | 66.1 | | | | |
| 126+91.53 TO 127+90.06 | RT. | | 99.4 | | | | |
| 127+27.03 TO 128+15.10 | LT. | | 88.1 | | | | |
| 128+05.62 TO 128+43.83 | RT. | | 39.3 | | | | |
| 128+32.12 TO 128+67.57 | LT. | | 36.7 | | | | |
| 131+25.09 TO 131+73.87 | LT. | | 48.8 | | | | |
| 131+89.89 TO 132+46.24 | LT. | | 59.3 | | | | |
| 132+64.92 TO 133+27.75 | LT. | | 69.7 | | | | |
| 133+56.64 TO 133+98.17 | LT. | | 46.3 | | | | |
| 134+84.13 TO 135+27.05 | LT. | | 47.2 | | | | |
| 164+92.95 TO 167+00.00 | RT. | | 215.5 | | | | |
| 117+18.00 | RT. | | | | 1 | | |
| 128+53.00 | RT. | | | | 1 | | |
| 165+00.00 | RT. | | | | 1 | | |
| 165+00.00 | LT. | | | | 1 | | |
| 168+94.19 | LT. | | | | 1 | | |
| 171+95.00 | RT. | | | | 1 | | |
| 171+95.00 | LT. | | | | 1 | | |
| 131+79.00 | RT. | | | | 1 | | |
| 132+03.00 | RT. | | | | 1 | | |
| 134+65.00 | RT. | | | | 1 | | |
| 134+69.00 | LT. | | | | 1 | | |
| 135+19.00 | RT. | | | | 1 | | |
| 135+41.00 | RT. | | | | 1 | | |
| | | | | | | | |
| SUB-TOTAL: | | | 1325.4 | | 13 | | |
| TOTAL: | | | 1325 | | 13 | | |

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| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF QUANTITIES

SHEET NO.
SQ-2

# SUMMARY OF REMOVAL ITEMS

| PAY ITEM NO. | PAY ITEM DESCRIPTION | LOCATION STA. TO STA. | SIDE | AREA ID | UNITS | SECONDARY UNITS (IF LUMP SUM) AREA (AC) | QUANTITY P | QUANTITY F | TOTAL P | TOTAL F | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0110 1 1 | CLEARING & GRUBBING | 118+05.13 TO 119+88.30 | LT. | 364492 | LS | 0.160 | | | 1 | | 3.08 AC, TOTAL | |
| | | 118+05.15 TO 121+34.92 | RT. | 364474 | | 0.266 | | | | | | |
| | | 118+90.59 TO 119+82.26 | LT. | 364377 | | 0.026 | | | | | | |
| | | 120+09.73 TO 121+98.07 | LT. | 364590 | | 0.191 | | | | | | |
| | | 121+22.62 TO 121+34.60 | LT. | 332416 | | 0.004 | | | | | | |
| | | 121+32.22 TO 121+36.97 | LT. | 124833 | | 0.002 | | | | | | |
| | | 121+58.97 TO 121+64.23 | LT. | 124838 | | 0.002 | | | | | | |
| | | 121+60.40 TO 124+89.60 | RT. | 364787 | | 0.240 | | | | | | |
| | | 121+97.97 TO 128+80.13 | LT. | 365593 | | 0.948 | | | | | | |
| | | 164+93.72 TO 168+53.65 | RT. | 365762 | | 0.300 | | | | | | |
| | | 167+78.29 TO 168+15.46 | LT. | 366015 | | 0.014 | | | | | | |
| | | 168+85.46 TO 169+60.00 | LT. | 365958 | | 0.021 | | | | | | |
| | | 169+06.74 TO 171+56.65 | RT. | 365849 | | 0.124 | | | | | | |
| | | 129+97.98 TO 131+80.03 | RT. | 365997 | | 0.111 | | | | | | |
| | | 130+00.26 TO 135+10.25 | LT. | 366249 | | 0.505 | | | | | | |
| | | 132+02.49 TO 135+02.24 | RT. | 366411 | | 0.153 | | | | | | |
| | | 135+39.42 TO 135+62.09 | RT. | 332373 | | 0.006 | | | | | | |
| | | 135+42.37 TO 135+65.03 | LT. | 332381 | | 0.010 | | | | | | |
| | | | | | | | | | | | | |
| 0110 4 10 | REMOVAL OF EXISTING CONCRETE PAVEMENT | | | | SY | | | | 2992 | | | |
| | | 118+56.61 TO 118+56.61 | RT. | 224939 | | | 15.7 | | | | | SW |
| | | 118+98.51 TO 121+29.17 | RT. | 224914 | | | 164.5 | | | | | SW |
| | | 119+11.38 TO 119+17.48 | RT. | 224932 | | | 8.6 | | | | | SW |
| | | 119+11.93 TO 119+17.89 | LT. | 319590 | | | 9.4 | | | | | SW |
| | | 119+11.93 TO 119+53.60 | LT. | 225907 | | | 36.9 | | | | | SW |
| | | 119+53.51 TO 119+76.85 | LT. | 319592 | | | 28.8 | | | | | SW |
| | | 119+71.74 TO 119+76.82 | LT. | 319588 | | | 5.3 | | | | | SW |
| | | 119+76.82 TO 119+85.60 | LT. | 319595 | | | 4.4 | | | | | SW |
| | | 120+16.43 TO 121+10.06 | LT. | 224899 | | | 50.6 | | | | | SW |
| | | 121+09.32 TO 121+10.14 | LT. | 225196 | | | 0.7 | | | | | CURB |
| | | 121+22.01 TO 123+26.52 | LT. | 224951 | | | 111.5 | | | | | SW |
| | | 121+22.45 TO 121+23.38 | LT. | 225202 | | | 0.7 | | | | | CURB |
| | | 121+61.64 TO 121+67.67 | RT. | 226182 | | | 32.2 | | | | | DWY |
| | | 121+67.15 TO 123+20.88 | RT. | 225029 | | | 104.8 | | | | | SW |
| | | 121+67.38 TO 121+72.81 | RT. | 319615 | | | 31.7 | | | | | SW |
| | | 121+72.43 TO 121+77.93 | RT. | 226185 | | | 18.2 | | | | | DWY |
| | | 121+72.77 TO 121+77.93 | RT. | 226230 | | | 0.4 | | | | | CURB |
| | | 121+76.61 TO 121+77.90 | RT. | 226203 | | | 1.6 | | | | | CURB |
| | | 121+77.63 TO 121+78.30 | RT. | 226213 | | | 0.2 | | | | | CURB |
| | | 121+77.70 TO 121+78.53 | RT. | 226198 | | | 0.8 | | | | | CURB |
| | | 121+77.72 TO 121+78.10 | RT. | 226225 | | | 0.2 | | | | | CURB |
| | | 121+77.90 TO 121+78.88 | RT. | 226208 | | | 0.9 | | | | | CURB |
| | | 121+78.28 TO 121+78.75 | RT. | 226220 | | | 0.2 | | | | | CURB |
| | | 123+09.08 TO 123+52.94 | RT. | 344784 | | | 85.4 | | | | | DRWY |
| | | 123+25.84 TO 123+29.07 | LT. | 225121 | | | 1.7 | | | | | CURB |
| | | 123+39.31 TO 123+50.01 | LT. | 225110 | | | 46.9 | | | | | CURB |
| | | 123+46.27 TO 124+84.74 | RT. | 319648 | | | 88.2 | | | | | SW |
| | | 123+61.27 TO 123+62.56 | LT. | 225129 | | | 1.5 | | | | | CURB |
| | | 123+62.74 TO 124+62.12 | LT. | 224965 | | | 69.5 | | | | | SW |
| | | 123+79.81 TO 123+96.93 | LT. | 225175 | | | 34.0 | | | | | BUS LANDING |

REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|---|---|---|---|
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF QUANTITIES

SHEET NO.
SQ-3

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# SUMMARY OF REMOVAL ITEMS

| PAY ITEM NO. | PAY ITEM DESCRIPTION | LOCATION | SIDE | AREA ID | UNITS | SECONDARY UNITS (IF LUMP SUM) | QUANTITY | | TOTAL | | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | STA. TO STA. | | | | AREA (AC) | P | F | P | F | | |
| 0110 4 10 | REMOVAL OF EXISTING CONCRETE PAVEMENT (CONT'D) | 124+31.87 TO 124+60.22 | RT. | 319630 | SY | | 24.9 | | | | | BUS LANDING |
| | | 124+71.39 TO 125+04.08 | LT. | 224941 | | | 16.5 | | | | | SW |
| | | 125+09.72 TO 125+55.27 | RT. | 225141 | | | 20.6 | | | | | CURB |
| | | 125+54.93 TO 126+84.90 | RT. | 225268 | | | 43.6 | | | | | CURB |
| | | 125+82.94 TO 127+03.14 | LT. | 225231 | | | 66.7 | | | | | SW |
| | | 126+74.96 TO 127+95.85 | RT. | 225221 | | | 54.9 | | | | | TRAF SEP |
| | | 126+83.00 TO 127+34.96 | LT. | 340104 | | | 122.1 | | | | | DWY |
| | | 126+84.62 TO 127+91.88 | RT. | 225284 | | | 26.9 | | | | | CURB |
| | | 127+26.80 TO 128+08.98 | LT. | 225249 | | | 52.9 | | | | | SW |
| | | 127+67.88 TO 127+91.85 | RT. | 225208 | | | 11.9 | | | | | SW |
| | | 128+07.37 TO 128+40.99 | RT. | 225815 | | | 20.8 | | | | | SW |
| | | 128+09.95 TO 128+73.53 | RT. | 320046 | | | 16.0 | | | | | CURB |
| | | 128+22.91 TO 128+79.38 | LT. | 226107 | | | 36.9 | | | | | SW |
| | | 128+23.64 TO 128+80.13 | LT. | 319677 | | | 12.8 | | | | | CURB |
| | | 128+26.64 TO 128+77.38 | RT. | 225705 | | | 22.9 | | | | | TRAF SEP |
| | | 128+35.51 TO 128+68.67 | RT. | 225841 | | | 28.0 | | | | | DWY |
| | | 128+40.26 TO 128+43.77 | RT. | 225826 | | | 0.4 | | | | | CURB |
| | | 128+63.39 TO 128+64.88 | RT. | 225834 | | | 0.3 | | | | | CURB |
| | | 128+64.39 TO 128+72.27 | RT. | 226038 | | | 3.1 | | | | | SW |
| | | 129+97.98 TO 130+70.72 | RT. | 226000 | | | 49.6 | | | | | SW |
| | | 130+15.10 TO 131+79.21 | RT. | 320408 | | | 40.3 | | | | | CURB |
| | | 130+21.83 TO 130+25.93 | LT. | 225381 | | | 1.1 | | | | | MISC |
| | | 130+48.01 TO 130+51.97 | LT. | 225382 | | | 1.0 | | | | | MISC |
| | | 130+58.57 TO 134+70.74 | LT. | 320182 | | | 92.4 | | | | | CURB |
| | | 130+59.65 TO 131+24.58 | RT. | 225618 | | | 111.8 | | | | | DWY |
| | | 130+80.61 TO 131+30.47 | LT. | 225588 | | | 42.4 | | | | | DWY |
| | | 131+12.28 TO 131+75.33 | RT. | 320439 | | | 34.4 | | | | | SW |
| | | 131+26.31 TO 131+37.31 | LT. | 225646 | | | 4.3 | | | | | SW |
| | | 131+33.18 TO 131+38.33 | RT. | 320467 | | | 4.7 | | | | | SW |
| | | 131+34.67 TO 131+59.47 | LT. | 225600 | | | 16.6 | | | | | DWY |
| | | 131+54.74 TO 131+78.71 | LT. | 225653 | | | 10.1 | | | | | SW |
| | | 131+73.89 TO 132+03.62 | LT. | 225609 | | | 18.8 | | | | | DWY |
| | | 131+98.26 TO 132+06.61 | LT. | 225659 | | | 3.1 | | | | | SW |
| | | 132+03.42 TO 132+36.26 | RT. | 225484 | | | 11.8 | | | | | CURB |
| | | 132+09.05 TO 133+16.90 | RT. | 345015 | | | 52.1 | | | | | SW |
| | | 132+36.15 TO 134+31.66 | RT. | 344929 | | | 40.4 | | | | | CURB |
| | | 132+39.48 TO 132+70.33 | LT. | 225635 | | | 54.1 | | | | | DWY |
| | | 132+68.66 TO 133+35.50 | LT. | 225666 | | | 42.6 | | | | | SW |
| | | 133+10.23 TO 133+41.40 | RT. | 225988 | | | 14.2 | | | | | DWY |
| | | 133+29.29 TO 133+72.61 | LT. | 225690 | | | 85.5 | | | | | DWY |
| | | 133+36.59 TO 133+54.92 | RT. | 345036 | | | 7.1 | | | | | SW |
| | | 133+48.59 TO 133+75.18 | RT. | 345048 | | | 11.5 | | | | | DRWY |
| | | 133+69.51 TO 134+70.25 | RT. | 344980 | | | 52.8 | | | | | SW |
| | | 134+67.08 TO 134+70.25 | RT. | 344921 | | | 0.7 | | | | | CURB |
| | | 134+70.25 TO 134+94.98 | RT. | 320535 | | | 14.1 | | | | | SW |
| | | 134+70.25 TO 135+02.07 | RT. | 320480 | | | 8.5 | | | | | CURB |
| | | 134+70.68 TO 135+10.26 | LT. | 320637 | | | 13.7 | | | | | CURB |
| | | 135+40.54 TO 135+53.22 | RT. | 320676 | | | 3.6 | | | | | CURB |
| | | 135+42.37 TO 135+56.38 | LT. | 320658 | | | 17.5 | | | | | SW |
| | | 135+44.96 TO 135+57.98 | LT. | 320647 | | | 4.0 | | | | | CURB |
| | | 135+50.21 TO 135+60.62 | RT. | 345006 | | | 5.5 | | | | | SW |

REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|---|---|---|---|
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF QUANTITIES

SHEET NO.
SQ-4

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## SUMMARY OF REMOVAL ITEMS

| PAY ITEM NO. | PAY ITEM DESCRIPTION | LOCATION | SIDE | AREA ID | UNITS | SECONDARY UNITS (IF LUMP SUM) | QUANTITY | | TOTAL | | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | STA. TO STA. | | | | AREA (AC) | P | F | P | F | | |
| 0110 4 10 | REMOVAL OF EXISTING CONCRETE PAVEMENT (CONT'D) | 165+24.18 TO 165+49.83 | RT. | 225938 | SY | | 17.1 | | | | | SW |
| | | 165+24.82 TO 165+50.20 | RT. | 225945 | | | 5.5 | | | | | CURB |
| | | 165+48.71 TO 167+92.75 | RT. | 225760 | | | 164.3 | | | | | SW |
| | | 165+49.83 TO 168+10.67 | RT. | 225715 | | | 57.7 | | | | | CURB |
| | | 167+87.12 TO 167+96.41 | LT. | 226137 | | | 4.0 | | | | | TRAF SEP |
| | | 167+92.62 TO 168+51.79 | RT. | 320123 | | | 52.5 | | | | | SW |
| | | 168+10.38 TO 168+53.65 | RT. | 319688 | | | 14.2 | | | | | CURB |
| | | 168+85.46 TO 169+31.54 | LT. | 320390 | | | 50.1 | | | | | SW |
| | | 169+17.67 TO 169+59.28 | RT. | 320701 | | | 13.7 | | | | | CURB |
| | | 169+19.41 TO 169+59.20 | RT. | 320714 | | | 38.7 | | | | | SW |
| | | 169+58.93 TO 170+36.10 | RT. | 344798 | | | 56.7 | | | | | SW |
| | | 169+59.20 TO 171+25.22 | RT. | 320323 | | | 37.1 | | | | | CURB |
| | | 170+66.79 TO 171+32.46 | RT. | 344808 | | | 64.6 | | | | | SW |
| | | 171+24.24 TO 171+56.64 | RT. | 344812 | | | 7.3 | | | | | CURB |
| | | | | | | | | | | | | |

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REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|---|---|---|---|
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF QUANTITIES

SHEET NO.
SQ-5

## SUMMARY OF EARTHWORK

| PAY ITEM NO. | PAY ITEM DESCRIPTION | CY P | CY F | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|
| 0120 1 | EXCAVATION | | | | |
| | ARMENIA AVE. | 1914.3 | | | |
| | BUSCH BLVD. | 317.8 | | | |
| | POND (SWMF) | 179.8 | | | |
| | TOTAL: | 2411.9 | | | |
| | | | | | |
| 0120 6 | EMBANKMENT | | | | |
| | ARMENIA AVE. | 519.0 | | | |
| | BUSCH BLVD. | 81.9 | | | |
| | POND (SWMF) | 15.6 | | | |
| | TOTAL: | 616.5 | | | |
| | | | | | |

## SUMMARY OF TURNOUTS

| LOCATION STA. TO STA. | SIDE | AREA ID | 0286 2 TN P | 0286 2 TN F | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|
| 121+22.20 TO 121+73.97 | LT | 351168 | 19.79 | | | |
| 121+22.62 TO 121+34.60 | LT | 256407 | 4.19 | | | |
| 121+72.39 TO 121+88.14 | RT | 331512 | 15.71 | | | |
| 123+15.30 TO 123+74.96 | LT | 351224 | 20.82 | | | |
| 124+51.26 TO 125+05.26 | LT | 351329 | 15.59 | | | |
| 126+03.89 TO 126+51.89 | LT | 351276 | 12.25 | | | |
| | | | | | | |
| SUB-TOTAL: | | | 88.35 | | | |
| TOTAL: | | | 88.4 | | | |

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REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|---|---|---|---|
| | | | |

ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# SUMMARY OF QUANTITIES

SHEET NO.
SQ-6

## SUMMARY OF PAVEMENT

| PAY ITEM NO. | PAY ITEM DESCRIPTION | LOCATION STA. TO STA. | SIDE | AREA ID | UNIT | QUANTITY P | QUANTITY F | TOTAL P | TOTAL F | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0160 4 | TYPE B STABILIZATION | 168+85.46 TO 169+22.30 | LT | 80946 | SY | 19.3 | | 5815 | | | |
| | | 168+91.66 TO 169+24.34 | LT | 79446 | | 11.4 | | | | | |
| | | 169+24.32 TO 169+31.54 | LT | 320948 | | 1.8 | | | | | |
| | | 118+10.62 TO 121+33.52 | RT | 80795 | | 277.8 | | | | | |
| | | 118+84.32 TO 118+84.32 | LT | 310651 | | 67.9 | | | | | |
| | | 118+84.84 TO 118+84.84 | RT | 80923 | | 70.7 | | | | | |
| | | 118+89.68 TO 119+29.64 | LT | 79365 | | 11.8 | | | | | |
| | | 118+90.83 TO 118+90.83 | RT | 80810 | | 1.8 | | | | | |
| | | 118+90.83 TO 119+87.54 | LT | 80903 | | 88.4 | | | | | |
| | | 118+90.83 TO 121+09.23 | RT | 80817 | | 56.7 | | | | | |
| | | 119+29.38 TO 119+64.63 | LT | 79371 | | 9.1 | | | | | |
| | | 119+64.41 TO 119+87.30 | LT | 79376 | | 9.9 | | | | | |
| | | 120+10.31 TO 120+36.83 | LT | 79391 | | 9.7 | | | | | |
| | | 120+11.27 TO 121+59.48 | LT | 80827 | | 245.0 | | | | | |
| | | 120+36.69 TO 121+22.24 | LT | 79384 | | 22.1 | | | | | |
| | | 121+09.21 TO 121+34.92 | RT | 79399 | | 12.8 | | | | | |
| | | 121+59.48 TO 126+20.00 | LT | 80849 | | 1114.8 | | | | | |
| | | 121+61.38 TO 121+86.39 | RT | 345301 | | 29.9 | | | | | |
| | | 121+61.38 TO 124+88.60 | RT | 79196 | | 507.4 | | | | | |
| | | 121+73.97 TO 123+15.30 | LT | 79252 | | 36.6 | | | | | |
| | | 121+86.39 TO 124+63.60 | RT | 79355 | | 71.8 | | | | | |
| | | 121+97.97 TO 128+03.38 | LT | 312001 | | 156.7 | | | | | |
| | | 123+74.96 TO 124+51.26 | LT | 79277 | | 19.8 | | | | | |
| | | 124+63.51 TO 124+88.65 | RT | 305088 | | 10.0 | | | | | |
| | | 125+05.26 TO 126+03.89 | LT | 79295 | | 25.5 | | | | | |
| | | 125+08.72 TO 126+85.40 | RT | 345189 | | 135.5 | | | | | |
| | | 125+09.72 TO 127+91.91 | RT | 345328 | | 77.8 | | | | | |
| | | 126+20.00 TO 128+09.33 | LT | 311986 | | 455.5 | | | | | |
| | | 126+51.89 TO 126+88.03 | LT | 79313 | | 9.4 | | | | | |
| | | 126+85.40 TO 127+91.92 | RT | 345213 | | 75.6 | | | | | |
| | | 126+88.03 TO 127+42.03 | LT | 345169 | | 22.4 | | | | | |
| | | 127+42.03 TO 128+12.05 | LT | 311995 | | 18.0 | | | | | |
| | | 127+89.86 TO 128+17.16 | LT/RT | 306171 | | 53.6 | | | | | |
| | | 128+02.92 TO 128+30.26 | LT/RT | 320870 | | 53.8 | | | | | |
| | | 128+07.78 TO 128+61.57 | RT | 320940 | | 14.3 | | | | | |
| | | 128+10.35 TO 128+73.55 | RT | 320883 | | 100.9 | | | | | |
| | | 128+23.98 TO 128+80.12 | LT | 308842 | | 95.2 | | | | | |
| | | 128+28.01 TO 128+75.80 | LT | 308865 | | 12.2 | | | | | |
| | | 165+24.43 TO 168+42.82 | RT | 308874 | | 87.5 | | | | | |
| | | 165+24.68 TO 168+53.65 | RT | 308852 | | 446.1 | | | | | |
| | | 167+87.12 TO 167+94.33 | LT | 306291 | | 3.3 | | | | | |
| | | 169+17.63 TO 169+88.16 | RT | 320898 | | 109.9 | | | | | |
| | | 169+34.18 TO 171+56.67 | RT | 320926 | | 63.5 | | | | | |
| | | 129+97.98 TO 131+54.11 | RT | 79456 | | 40.4 | | | | | |
| | | 129+97.98 TO 131+78.70 | RT | 80959 | | 193.4 | | | | | |
| | | 130+58.24 TO 131+23.78 | LT | 306095 | | 17.0 | | | | | |
| | | 131+23.71 TO 133+61.04 | LT | 306069 | | 63.1 | | | | | |
| | | 131+23.71 TO 133+61.04 | LT/RT | 339938 | | 493.7 | | | | | |
| | | 131+54.11 TO 131+79.21 | RT | 79483 | | 9.8 | | | | | |
| | | 132+03.42 TO 134+13.77 | RT | 79501 | | 151.9 | | | | | |

REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|---|---|---|---|
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF QUANTITIES

SHEET NO.
SQ-7

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

# SUMMARY OF PAVEMENT

| PAY ITEM NO. | PAY ITEM DESCRIPTION | LOCATION STA. TO STA. | SIDE | AREA ID | UNIT | QUANTITY P | QUANTITY F | TOTAL P | TOTAL F | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0160 4 | TYPE B STABILIZATION (CONT'D) | 132+03.49 TO 132+28.49 | RT | 79472 | SY | 9.8 | | | | | |
| | | 132+28.49 TO 132+56.62 | RT | 79478 | | 7.3 | | | | | |
| | | 132+56.62 TO 134+31.67 | RT | 183944 | | 41.6 | | | | | |
| | | 133+61.04 TO 135+10.25 | LT | 306103 | | 44.1 | | | | | |
| | | 134+67.07 TO 135+02.37 | RT | 305827 | | 11.0 | | | | | |
| | | 135+40.54 TO 135+53.55 | RT | 306278 | | 4.5 | | | | | |
| | | 135+44.96 TO 135+57.97 | LT | 306286 | | 4.4 | | | | | |
| 285707 | OPTIONAL BASE, BASE GROUP 07 | 118+05.15 TO 119+88.29 | LT | 93334 | SY | 93.9 | | 4052 | | | |
| | | 118+05.15 TO 121+34.42 | RT | 93314 | | 282.3 | | | | | |
| | | 120+10.30 TO 128+09.33 | LT | 346127 | | 1816.3 | | | | | |
| | | 121+60.39 TO 124+89.60 | RT | 93277 | | 508.6 | | | | | |
| | | 125+09.72 TO 126+50.00 | RT | 331534 | | 134.8 | | | | | |
| | | 126+85.40 TO 127+91.92 | RT | 331557 | | 75.6 | | | | | |
| | | 127+89.86 TO 128+17.16 | LT/RT | 346009 | | 52.1 | | | | RAILROAD (B-12.5 ONLY) | |
| | | 128+02.92 TO 128+30.26 | LT/RT | 346029 | | 52.3 | | | | RAILROAD (B-12.5 ONLY) | |
| | | 128+10.35 TO 128+72.44 | RT | 331574 | | 99.6 | | | | | |
| | | 128+23.98 TO 128+80.12 | LT | 331623 | | 95.2 | | | | | |
| | | 129+97.98 TO 131+80.03 | RT | 93560 | | 194.0 | | | | | |
| | | 131+23.71 TO 133+61.04 | LT/RT | 331562 | | 493.7 | | | | | |
| | | 132+02.49 TO 134+13.77 | RT | 93453 | | 153.4 | | | | | |
| 285709 | OPTIONAL BASE, BASE GROUP 09 | 165+25.00 TO 168+53.65 | RT | 346578 | SY | 446.1 | | 583 | | | |
| | | 167+87.13 TO 167+94.34 | LT | 346416 | | 3.3 | | | | | |
| | | 168+85.46 TO 169+31.54 | LT | 346421 | | 20.8 | | | | | |
| | | 169+19.18 TO 169+87.51 | RT | 346596 | | 112.3 | | | | | |
| 0327 70 4 | MILLING EXIST ASPH PAVT, 3" AVG DEPTH | 118+98.94 TO 119+62.62 | LT/RT | 357032 | SY | 276.3 | | 4723 | | | |
| | | 119+62.62 TO 128+00.13 | LT/RT | 357116 | | 2234.7 | | | | | |
| | | 128+12.78 TO 128+80.12 | LT/RT | 351813 | | 280.5 | | | | | |
| | | 165+25.21 TO 168+54.62 | RT | 357286 | | 39.1 | | | | | |
| | | 169+30.57 TO 169+87.51 | RT | 357225 | | 6.6 | | | | | |
| | | 129+97.98 TO 132+21.01 | LT/RT | 351595 | | 980.0 | | | | | |
| | | 131+47.84 TO 132+36.15 | RT | 351857 | | 99.4 | | | | | |
| | | 132+21.01 TO 134+70.25 | LT/RT | 357006 | | 805.9 | | | | | |
| 0327 70 6 | MILLING EXIST ASPH PAVT, 1 1/2" AVG DEPTH | 119+81.30 TO 120+22.11 | LT | 357536 | SY | 78.7 | | 2882 | | | |
| | | 121+31.70 TO 121+65.14 | RT | 357549 | | 79.0 | | | | | |
| | | 124+78.09 TO 125+19.84 | RT | 357561 | | 96.2 | | | | | |
| | | 167+83.26 TO 169+31.54 | LT | 357511 | | 204.0 | | | | | |
| | | 167+83.26 TO 169+31.54 | LT/RT | 357722 | | 1007.5 | | | | | |
| | | 168+15.97 TO 169+31.19 | RT | 357751 | | 264.7 | | | | | |
| | | 131+74.64 TO 132+07.57 | RT | 357497 | | 58.6 | | | | | |
| | | 134+70.25 TO 136+20.56 | LT/RT | 357578 | | 1093.5 | | | | | |
| 0334 1 53 | SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC C, PG 76-22 | 118+98.94 TO 118+98.94 | LT/RT | 343979 | TN | 17.86 | | 802.7 | | | |
| | | 118+98.94 TO 121+33.52 | RT | 344029 | | 22.90 | | | | WIDENING | |
| | | 119+00.00 TO 119+87.54 | LT | 343831 | | 7.29 | | | | WIDENING | |
| | | 119+00.00 TO 121+00.00 | LT/RT | 343993 | | 27.70 | | | | | |
| | | 120+10.30 TO 128+09.33 | LT | 343843 | | 149.85 | | | | WIDENING | |
| | | 121+00.00 TO 128+00.13 | LT/RT | 344042 | | 161.60 | | | | | |
| | | 121+61.38 TO 124+88.60 | RT | 343705 | | 41.86 | | | | WIDENING | |
| | | 125+08.72 TO 126+50.00 | RT | 343574 | | 11.18 | | | | WIDENING | |
| | | 126+85.40 TO 127+91.92 | RT | 343538 | | 6.24 | | | | WIDENING | |
| | | 127+89.86 TO 128+17.16 | LT/RT | 344162 | | 4.30 | | | | RAILROAD | |

REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|---|---|---|---|
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF QUANTITIES

SHEET NO.
SQ-8

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

# SUMMARY OF PAVEMENT

| PAY ITEM NO. | PAY ITEM DESCRIPTION | LOCATION STA. TO STA. | SIDE | AREA ID | UNIT | QUANTITY P | QUANTITY F | TOTAL P | TOTAL F | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0334 1 53 | SUPERPAVE ASPHALTIC CONCRETE, TRAFFIC C, PG 76-22 (CONT'D) | 128+02.92 TO 128+30.26 | LT/RT | 344181 | TN | 4.31 | | | | RAILROAD | |
| | | 128+10.35 TO 128+72.44 | RT | 343530 | | 8.22 | | | | WIDENING | |
| | | 128+12.78 TO 128+80.12 | LT/RT | 344202 | | 23.16 | | | | | |
| | | 128+23.98 TO 128+80.12 | LT | 343880 | | 7.86 | | | | WIDENING | |
| | | 165+25.00 TO 168+54.62 | RT | 344374 | | 40.03 | | | | | |
| | | 167+87.12 TO 167+94.33 | LT | 343974 | | 0.27 | | | | | |
| | | 168+85.46 TO 169+22.30 | LT | 343948 | | 1.59 | | | | | |
| | | 169+19.18 TO 169+87.51 | RT | 344308 | | 9.27 | | | | | |
| | | 129+97.98 TO 131+00.00 | RT | 343905 | | 8.28 | | | | WIDENING | |
| | | 129+97.98 TO 131+00.00 | LT/RT | 344219 | | 49.30 | | | | | |
| | | 131+00.00 TO 131+78.70 | RT | 343912 | | 7.68 | | | | WIDENING | |
| | | 131+00.00 TO 134+70.25 | LT/RT | 344236 | | 106.23 | | | | | |
| | | 131+23.71 TO 133+61.04 | LT/RT | 343932 | | 40.73 | | | | WIDENING | |
| | | 132+03.42 TO 134+13.77 | RT | 343920 | | 12.53 | | | | WIDENING | |
| | | 119+62.60 TO 120+44.80 | LT | NA | | 23.16 | | | | OVERBUILD | |
| | | 131+79.00 TO 133+75.00 | RT | NA | | 9.26 | | | | OVERBUILD | |
| 0337 7 83 | ASPHALT CONCRETE FRICTION COURSE, TRAFFIC C, FC-12.5, PG 76-22 | 119+62.62 TO 120+44.78 | LT | 329884 | TN | 6.96 | | 1038.1 | | | |
| | | 119+81.48 TO 120+21.93 | LT | 329896 | | 6.39 | | | | | |
| | | 121+22.24 TO 121+73.97 | LT | 329922 | | 6.62 | | | | | |
| | | 121+22.62 TO 121+34.60 | LT | 330638 | | 1.57 | | | | | |
| | | 121+27.79 TO 121+65.14 | RT | 329908 | | 9.50 | | | | | |
| | | 121+72.39 TO 121+88.14 | RT | 330644 | | 5.89 | | | | | |
| | | 123+15.30 TO 123+74.96 | LT | 329948 | | 6.87 | | | | | |
| | | 124+51.26 TO 125+05.26 | LT | 329967 | | 4.79 | | | | | |
| | | 124+78.09 TO 125+19.82 | RT | 329930 | | 7.94 | | | | | |
| | | 126+03.89 TO 126+51.89 | LT | 329976 | | 3.79 | | | | | |
| | | 128+10.35 TO 128+72.44 | RT | 330012 | | 8.22 | | | | | |
| | | 128+12.78 TO 128+80.12 | LT/RT | 330020 | | 23.14 | | | | | |
| | | 167+96.89 TO 169+40.82 | RT | 330042 | | 22.70 | | | | | |
| | | 169+19.18 TO 169+88.16 | RT | 330058 | | 9.32 | | | | | |
| | | 131+23.71 TO 133+59.67 | LT/RT | 330089 | | 40.73 | | | | | |
| | | 131+70.93 TO 132+11.36 | RT | 329993 | | 6.67 | | | | | |
| | | 132+21.01 TO 133+81.55 R3 | LT/RT | 330071 | | 37.36 | | | | | |
| | | 134+70.25 TO 136+42.79 | LT/RT | 330498 | | 90.21 | | | | | |
| | | 118+05.15 TO 121+59.48 | LT/RT | 316305 | | 48.95 | | | | | |
| | | 118+07.83 TO 119+87.54 | LT | 316335 | | 7.29 | | | | | |
| | | 118+07.83 TO 121+33.52 | RT | 316669 | | 22.90 | | | | | |
| | | 120+10.30 TO 128+09.33 | LT | 316619 | | 149.85 | | | | | |
| | | 120+92.24 TO 121+98.73 | RT | 316686 | | 9.91 | | | | | |
| | | 121+59.48 TO 121+98.73 | LT/RT | 316659 | | 7.33 | | | | | |
| | | 121+61.38 TO 124+88.60 | RT | 316385 | | 65.57 | | | | | |
| | | 123+65.30 TO 125+39.94 | RT | 316449 | | 34.22 | | | | | |
| | | 124+56.10 TO 125+38.44 | RT | 316488 | | 5.51 | | | | | |
| | | 125+08.72 TO 127+94.04 | RT | 316458 | | 31.02 | | | | | |
| | | 125+39.94 TO 126+64.14 | RT | 316502 | | 24.55 | | | | | |
| | | 126+64.14 TO 128+00.13 | RT | 316510 | | 29.53 | | | | | |
| | | 127+89.86 TO 128+17.16 | LT/RT | 316517 | | 4.42 | | | | | |
| | | 128+02.92 TO 128+30.26 | LT/RT | 316531 | | 4.45 | | | | | |
| | | 128+23.98 TO 128+80.12 | LT | 316542 | | 7.86 | | | | | |
| | | 129+97.98 TO 131+78.70 | RT | 316279 | | 15.96 | | | | | |

REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|---|---|---|---|
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF QUANTITIES

SHEET NO.
SQ-9

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

## SUMMARY OF PAVEMENT

| PAY ITEM NO. | PAY ITEM DESCRIPTION | LOCATION STA. TO STA. | SIDE | AREA ID | UNIT | QUANTITY P | QUANTITY F | TOTAL P | TOTAL F | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0337 7 83 | ASPHALT CONCRETE FRICTION COURSE, TRAFFIC C, FC-12.5, PG 76-22 (CONT'D) | 129+97.98 TO 132+21.01 | LT/RT | 316189 | TN | 80.85 | | | | | |
| | | 131+47.84 TO 132+37.19 | RT | 316271 | | 6.37 | | | | | |
| | | 132+03.42 TO 134+13.77 R3 | RT | 316258 | | 12.53 | | | | | |
| | | 133+79.47 TO 134+70.25 R3 | LT/RT | 316249 | | 29.13 | | | | | |
| | | 165+25.00 TO 168+53.65 | RT | 316939 | | 39.20 | | | | | |
| | | 167+83.26 TO 169+22.30 | LT | 316830 | | 16.75 | | | | | |
| | | 167+83.26 TO 169+31.54 | LT/RT | 316856 | | 83.73 | | | | | |
| | | 168+85.46 TO 169+22.30 | LT | 316291 | | 1.59 | | | | | |
| | | | | | | | | | | | |

## SUMMARY OF MISCELLANEOUS ASPHALT PAVEMENT

| LOCATION STA. TO STA. | SIDE | AREA ID | THICK (IN) | OTHER 0339 1 TN P | OTHER 0339 1 TN F | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|
| 165+23.95 TO 167+90.83 | RT. | 321416 | 2 | 3.05 | | | |
| 170+09.97 TO 170+37.10 | RT. | 321423 | 2 | 0.46 | | | |
| | | | | | | | |
| SUB-TOTAL: | | | | 3.51 | | | |
| TOTAL: | | | | 3.5 | | | |

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF QUANTITIES

SHEET NO.
SQ-10

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

## SUMMARY OF UTILITY ADJUSTMENTS

| PAY ITEM NO. | PAY ITEM DESCRIPTION | LOCATION STATION | SIDE | UNIT | QUANTITY P | QUANTITY F | TOTAL P | TOTAL F | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 0425 5 1 | MANHOLE, ADJUST, UTILITIES | 135+00.95 | LT. | EA | 1 | | 2 | | | |
| | | 135+35.87 | RT. | | 1 | | | | | |
| 0425 6 | VALVE BOXES, ADJUST | 120+24.25 | LT. | EA | 1 | | 26 | | | |
| | | 120+25.66 | LT. | | 1 | | | | | |
| | | 120+44.45 | LT. | | 1 | | | | | |
| | | 123+87.92 | RT. | | 1 | | | | | |
| | | 123+88.92 | RT. | | 1 | | | | | |
| | | 124+78.22 | RT. | | 1 | | | | | |
| | | 124+78.53 | RT. | | 1 | | | | | |
| | | 125+40.72 | LT. | | 1 | | | | | |
| | | 125+96.00 | RT. | | 1 | | | | | |
| | | 126+85.34 | LT. | | 1 | | | | | |
| | | 127+54.20 | RT. | | 1 | | | | | |
| | | 127+70.49 | RT. | | 1 | | | | | |
| | | 127+84.96 | LT. | | 1 | | | | | |
| | | 128+44.69 | RT. | | 1 | | | | | |
| | | 128+65.14 | RT. | | 1 | | | | | |
| | | 129+75.37 | RT. | | 1 | | | | | |
| | | 130+33.18 | RT. | | 1 | | | | | |
| | | 130+53.05 | RT. | | 1 | | | | | |
| | | 131+18.91 | LT. | | 1 | | | | | |
| | | 132+07.80 | RT. | | 1 | | | | | |
| | | 132+12.43 | RT. | | 1 | | | | | |
| | | 132+76.44 | LT. | | 1 | | | | | |
| | | 133+04.86 | RT. | | 1 | | | | | |
| | | 133+66.62 | LT. | | 1 | | | | | |
| | | 134+95.66 | RT. | | 1 | | | | | |
| | | 135+30.32 | RT. | | 1 | | | | | |
| | | | | | | | | | | |

## SUMMARY OF RAILING

| LOCATION STA. TO STA. | SIDE | PED/BICYCLE RAILING (STEEL ONLY) 0515 1 1 LF P | F | CONSTRUCTION REMARKS |
|---|---|---|---|---|
| 132+86.80 R2 to 133+03.05 R2 | RT | 14.7 | | |
| 133+03.05 R2 to 133+08.73 R2 | RT | 5.3 | | |
| | | | | |
| SUB-TOTAL: | | 20.0 | | |
| TOTAL: | | 20 | | |

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| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF QUANTITIES

SHEET NO.
SQ-11

# SUMMARY OF CURB & GUTTER AND/OR TRAFFIC SEPARATORS

| PAY ITEM NO. | PAY ITEM DESCRIPTION | LOCATION STA. TO STA. | SIDE | AREA ID | UNIT | QUANTITY GROSS LENGTH | QUANTITY NET LENGTH P | QUANTITY NET LENGTH F | TOTAL P | TOTAL F | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0520 1 7 | CONCRETE CURB & GUTTER, TYPE E | 169+08.21 TO 169+16.92 | RT. | | LF | 42.9 | 42.9 | | 199 | | | |
| | | 169+10.65 TO 169+30.80 | RT. | | | 20.4 | 20.4 | | | | | |
| | | 169+16.92 TO 169+32.77 | RT. | | | 40.6 | 40.6 | | | | | |
| | | 124+00.00 TO 124+94.66 | LT. | | | 94.7 | 94.7 | | | | | |
| 0520 1 10 | CONCRETE CURB & GUTTER, TYPE F | 118+84.69 TO 119+85.54 | LT. | | LF | 117.0 | 117.0 | | 5304 | | | |
| | | 118+84.69 TO 120+36.99 | RT. | | | 152.7 | 152.7 | | | | | |
| | | 118+90.70 TO 118+90.71 | LT./RT. | | | 4.5 | 4.5 | | | | | |
| | | 118+90.70 TO 119+06.91 | LT. | | | 17.1 | 17.1 | | | | | |
| | | 118+90.71 TO 119+06.91 | RT. | | | 17.1 | 17.1 | | | | | |
| | | 119+06.91 TO 119+06.91 | LT./RT. | | | 2.3 | 2.3 | | | | | |
| | | 119+23.91 TO 119+23.91 | LT./RT. | | | 4.2 | 4.2 | | | | | |
| | | 119+23.91 TO 119+81.27 | LT./RT. | | | 61.8 | 61.8 | | | | | |
| | | 119+23.91 TO 119+81.27 | LT. | | | 63.5 | 63.5 | | | | | |
| | | 120+12.78 TO 120+37.10 | LT. | | | 36.5 | 36.5 | | | | | |
| | | 120+24.99 TO 121+15.56 | LT./RT. | | | 97.2 | 97.2 | | | | | |
| | | 120+24.99 TO 121+15.56 | LT. | | | 97.4 | 97.4 | | | | | |
| | | 120+44.57 TO 121+33.34 | RT. | | | 112.9 | 112.9 | | | | | |
| | | 120+44.67 TO 121+36.91 | LT. | | | 98.2 | 98.2 | | | | | |
| | | 121+59.07 TO 121+96.89 | LT. | | | 43.4 | 43.4 | | | | | |
| | | 121+62.39 TO 121+62.89 | RT. | | | 44.0 | 44.0 | | | | | |
| | | 121+62.89 TO 121+63.89 | RT. | | | 29.5 | 29.5 | | | | | |
| | | 121+62.89 TO 121+96.89 | RT. | | | 50.6 | 50.6 | | | | | |
| | | 121+97.97 TO 121+97.97 | LT./RT. | | | 14.9 | 14.9 | | | | | |
| | | 121+97.97 TO 124+00.00 | LT. | | | 202.0 | 202.0 | | | | | |
| | | 121+97.97 TO 127+98.58 | RT. | | | 600.6 | 600.6 | | | | | |
| | | 122+04.47 TO 123+11.14 | RT. | | | 106.7 | 106.7 | | | | | |
| | | 122+04.47 TO 123+28.68 | LT. | | | 130.3 | 130.3 | | | | | |
| | | 123+11.14 TO 123+55.14 | RT. | | | 44.0 | 44.0 | | | | | |
| | | 123+55.14 TO 124+88.65 | RT. | | | 150.1 | 150.1 | | | | | |
| | | 123+61.58 TO 124+64.67 | LT. | | | 115.6 | 115.6 | | | | | |
| | | 124+46.24 TO 124+64.67 | LT. | | | 20.0 | 20.0 | | | | | |
| | | 124+91.84 TO 125+90.04 | LT. | | | 104.5 | 104.5 | | | | | |
| | | 124+91.84 TO 126+17.30 | LT. | | | 128.6 | 128.6 | | | | | |
| | | 124+94.66 TO 127+99.75 | LT. | | | 305.1 | 305.1 | | | | | |
| | | 125+11.07 TO 125+45.00 | RT. | | | 49.9 | 49.9 | | | | | |
| | | 125+45.00 TO 125+90.04 | RT. | | | 45.1 | 45.1 | | | | | |
| | | 125+99.96 TO 126+17.30 | LT. | | | 23.6 | 23.6 | | | | | |
| | | 125+99.96 TO 126+30.26 | RT. | | | 30.3 | 30.3 | | | | | |
| | | 126+30.26 TO 126+74.26 | RT. | | | 44.0 | 44.0 | | | | | |
| | | 126+36.99 TO 126+88.03 | LT. | | | 56.6 | 56.6 | | | | | |
| | | 126+74.26 TO 127+91.56 | RT. | | | 118.3 | 118.3 | | | | | |
| | | 126+98.67 TO 127+02.93 | LT. | | | 8.2 | 8.2 | | | | | |
| | | 127+27.13 TO 127+34.96 | LT. | | | 13.0 | 13.0 | | | | | |
| | | 127+42.03 TO 128+11.82 | LT. | | | 69.8 | 69.8 | | | | | |
| | | 128+07.97 TO 128+47.58 | RT. | | | 40.7 | 40.7 | | | | | |
| | | 128+24.41 TO 128+71.17 | RT. | | | 46.8 | 46.8 | | | | | |
| | | 128+25.60 TO 128+71.97 | LT. | | | 46.9 | 46.9 | | | | | |
| | | 128+28.43 TO 128+60.60 | LT. | | | 32.2 | 32.2 | | | | | |
| | | 128+56.43 TO 128+60.65 | RT. | | | 4.8 | 4.8 | | | | | |
| | | 128+60.60 TO 128+75.29 | LT. | | | 14.9 | 14.9 | | | | | |

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF QUANTITIES

SHEET NO.
SQ-12

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

# SUMMARY OF CURB & GUTTER AND/OR TRAFFIC SEPARATORS

| PAY ITEM NO. | PAY ITEM DESCRIPTION | LOCATION STA. TO STA. | SIDE | AREA ID | UNIT | QUANTITY GROSS LENGTH | QUANTITY NET LENGTH P | QUANTITY NET LENGTH F | TOTAL P | TOTAL F | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0520 1 10 | CONCRETE CURB & GUTTER, TYPE F (CONT'D) | 128+71.17 TO 128+71.97 | LT./RT. | | LF | 7.0 | 7.0 | | | | | |
| | | 165+24.84 TO 165+75.70 | RT. | | | 53.1 | 53.1 | | | | | |
| | | 165+86.00 TO 167+92.29 | RT. | | | 210.3 | 210.3 | | | | | |
| | | 170+69.63 TO 171+28.63 | RT. | | | 59.8 | 59.8 | | | | | |
| | | 129+97.98 R2 TO 130+65.74 R2 | RT. | | | 67.8 | 67.8 | | | | | |
| | | 130+65.74 R2 TO 131+15.47 R2 | RT. | | | 49.8 | 49.8 | | | | | |
| | | 130+80.41 R2 TO 132+05.17 R2 | LT. | | | 125.0 | 125.0 | | | | | |
| | | 131+15.47 R2 TO 131+77.71 R2 | RT. | | | 75.9 | 75.9 | | | | | |
| | | 132+04.99 R2 TO 132+87.58 R2 | RT. | | | 90.1 | 90.1 | | | | | |
| | | 132+05.17 R2 TO 132+32.59 R2 | LT. | | | 28.1 | 28.1 | | | | | |
| | | 132+32.59 R2 TO 132+73.45 R2 | LT. | | | 43.2 | 43.2 | | | | | |
| | | 132+73.45 R2 TO 133+26.40 R2 | LT. | | | 56.1 | 56.1 | | | | | |
| | | 132+73.45 R2 TO 133+26.40 R2 | LT. | | | 56.1 | 56.1 | | | | | |
| | | 132+99.02 R2 TO 133+49.36 R2 | RT. | | | 46.7 | 46.7 | | | | | |
| | | 133+26.40 R2 TO 133+76.63 R2 | LT. | | | 52.5 | 52.5 | | | | | |
| | | 133+49.36 R2 TO 133+62.83 R2 | RT. | | | 12.6 | 12.6 | | | | | |
| | | 133+62.83 R2 TO 134+10.36 R3 | RT. | | | 44.6 | 44.6 | | | | | |
| | | 133+76.60 R2 TO 135+08.75 R3 | LT. | | | 152.0 | 152.0 | | | | | |
| | | 134+10.36 R3 TO 134+56.61 R3 | RT. | | | 46.3 | 46.3 | | | | | |
| | | 134+67.09 R3 TO 135+00.86 R3 | RT. | | | 41.9 | 41.9 | | | | | |
| | | 135+41.89 R3 TO 135+53.07 R3 | RT. | | | 17.2 | 17.2 | | | | | |
| | | 135+46.26 R3 TO 135+57.49 R3 | LT. | | | 16.9 | 16.9 | | | | | |
| | | 167+92.29 TO 168+41.56 | RT. | | | 63.3 | 63.3 | | | | | |
| | | 168+93.20 TO 168+93.65 | LT. | | | 2.4 | 2.4 | | | | | |
| | | 168+98.65 TO 169+31.54 | LT. | | | 36.5 | 36.5 | | | | | |
| | | 169+35.44 TO 170+69.63 | RT. | | | 156.4 | 156.4 | | | | | |
| | | 171+28.63 TO 171+56.64 | RT. | | | 28.4 | 28.4 | | | | | |
| | | 127+98.58 TO 128+02.17 | LT./RT. | | | 12.5 | 12.5 | | | | | |
| | | 128+21.99 TO 128+25.60 | LT./RT. | | | 12.5 | 12.5 | | | | | |
| | | 130+58.72 R2 TO 130+80.41 R2 | LT. | | | 21.8 | 21.8 | | | | | |
| 0520 2 4 | CONCRETE CURB, TYPE D | 121+09.53 TO 121+36.97 | LT. | | LF | 76.6 | 76.6 | | 132 | | | |
| | | 121+58.97 TO 121+64.23 | LT. | | | 54.9 | 54.9 | | | | | |
| | | | | | | | | | | | | |
| 0520 5 11 | TRAFFIC SEPARATOR CONCRETE - TYPE I, 4' WIDE | 130+18.37 R2 TO 130+18.37 R2 | RT. | | LF | 3.1 | 3.1 | | 220 | | | |
| | | 130+18.37 R2 TO 132+29.48 R2 | RT. | | | 105.4 | 105.4 | | | | | |
| | | 130+18.37 R2 TO 132+29.57 R2 | RT. | | | 105.4 | 105.4 | | | | | |
| | | 132+29.48 R2 TO 132+29.57 R2 | RT. | | | 3.1 | 3.1 | | | | | |
| | | 167+87.12 TO 167+87.13 | LT. | | | 3.2 | 3.2 | | | | | |
| 0520 6 | SHOULDER GUTTER - CONCRETE | 126+88.03 TO 127+42.03 | LT. | | LF | 54.2 | 54.2 | | 54 | | MODIFIED, 6" THICK MIN. | |
| | | | | | | | | | | | | |

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

## SUMMARY OF SIDEWALK & DETECTABLE WARNINGS

| LOCATION | SIDE | AREA ID | CONC SIDEWALK 6" | | BUS SHELTER PAD - CONCRETE | | DETECTABLE WARNINGS | | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0522 2 | | 0522 4 | | 0527 2 | | | |
| | | | SY | | SY | | SF | | | |
| STA. TO STA. | | | P | F | P | F | P | F | | |
| 124+02.50 TO 124+94.66 | LT/RT | 339680 | 84.8 | | | | | | | |
| 118+24.96 TO 119+66.28 | RT | 327957 | 78.5 | | | | | | | |
| 119+05.41 TO 119+26.05 | LT/RT | 279003 | 16.9 | | | | | | | |
| 119+10.31 TO 119+19.30 | RT | 328083 | 10.4 | | | | | | | |
| 119+10.58 TO 119+19.57 | LT | 328073 | 14.3 | | | | | | | |
| 119+17.93 TO 119+74.66 | LT | 327992 | 31.5 | | | | | | | |
| 119+66.28 TO 119+97.65 | RT | 327965 | 17.8 | | | | | | | |
| 119+69.66 TO 119+76.74 | LT | 327999 | 7.7 | | | | | | | |
| 119+74.66 TO 119+84.64 | LT | 279021 | 4.9 | | | | | | | |
| 119+97.65 TO 120+60.00 | RT | 327974 | 34.6 | | | | | | | |
| 120+15.40 TO 120+27.56 | LT | 279029 | 5.5 | | | | | | | |
| 120+27.56 TO 121+01.29 | LT | 328006 | 63.5 | | | | | | | |
| 120+60.00 TO 120+99.87 | RT | 327979 | 22.2 | | | | | | | |
| 120+99.87 TO 121+21.91 | RT | 327984 | 12.8 | | | | | | | |
| 121+01.29 TO 121+22.20 | LT | 328056 | 24.5 | | | | | | | |
| 121+21.91 TO 121+31.70 | RT | 279616 | 4.8 | | | | | | | |
| 121+22.24 TO 121+34.70 | LT | 279051 | 10.6 | | | | | | | |
| 121+61.32 TO 121+73.97 | LT | 279055 | 10.5 | | | | | | | |
| 121+63.39 TO 121+72.39 | RT | 279601 | 29.6 | | | | | | DRWY. | |
| 121+63.84 TO 121+86.39 | RT | 279625 | 19.8 | | | | | | | |
| 121+67.39 TO 121+72.39 | RT | 328018 | 9.2 | | | | | | | |
| 121+67.39 TO 121+72.82 | RT | 328013 | 11.1 | | | | | | | |
| 121+73.97 TO 122+00.00 | LT | 331659 | 23.0 | | | | | | | |
| 121+86.39 TO 123+21.14 | RT | 328153 | 85.8 | | | | | | | |
| 122+00.00 TO 123+15.30 | LT | 331668 | 126.6 | | | | | | | |
| 123+11.14 TO 123+55.14 | RT | 324810 | 40.2 | | | | | | DRWY. | |
| 123+15.30 TO 123+28.19 | LT | 279119 | 10.5 | | | | | | | |
| 123+45.14 TO 124+08.94 | RT | 328144 | 41.4 | | | | | | | |
| 123+62.07 TO 123+74.96 | LT | 279124 | 10.5 | | | | | | | |
| 123+74.96 TO 124+17.75 | LT | 328130 | 47.5 | | | | | | | |
| 124+08.94 TO 124+37.60 | RT | 328048 | 25.3 | | | | | | | |
| 124+17.75 TO 124+51.26 | LT | 328137 | 35.0 | | | | | | | |
| 124+51.10 TO 124+63.60 | RT | 331652 | 11.1 | | | | | | | |
| 124+51.26 TO 124+64.18 | LT | 279111 | 10.5 | | | | | | | |
| 124+63.60 TO 124+88.04 | RT | 279573 | 25.7 | | | | | | | |
| 124+92.34 TO 125+05.26 | LT | 279105 | 10.5 | | | | | | | |
| 125+05.26 TO 126+03.89 | LT | 328108 | 106.0 | | | | | | | |
| 125+12.01 TO 125+45.00 | RT | 279556 | 30.3 | | | | | | | |
| 125+45.00 TO 125+55.00 | RT | 328168 | 5.6 | | | | | | | |
| 125+45.00 TO 125+89.00 | RT | 324809 | 26.9 | | | | | | DRWY. | |
| 125+79.00 TO 125+89.00 | RT | 328174 | 5.6 | | | | | | | |
| 125+89.00 TO 126+30.26 | RT | 328094 | 23.9 | | | | | | | |
| 126+03.89 TO 126+16.80 | LT | 279093 | 10.5 | | | | | | | |
| 126+30.26 TO 126+40.26 | RT | 328179 | 5.6 | | | | | | | |
| 126+30.26 TO 126+74.26 | RT | 324808 | 40.2 | | | | | | DRWY. | |
| 126+39.24 TO 126+51.89 | LT | 279099 | 10.5 | | | | | | | |
| 126+51.89 TO 126+88.03 | LT | 328062 | 40.2 | | | | | | | |
| | | SUB-TOTAL: | 1334.4 | | | | | | | |
| | | TOTAL: | 3118 | | 36 | | 408 | | | |

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# SUMMARY OF QUANTITIES

SHEET NO.
SQ-14

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

## SUMMARY OF SIDEWALK & DETECTABLE WARNINGS

| LOCATION | SIDE | AREA ID | CONC SIDEWALK 6" | | BUS SHELTER PAD - CONCRETE | | DETECTABLE WARNINGS | | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0522 2 | | 0522 4 | | 0527 2 | | | |
| | | | SY | | SY | | SF | | | |
| STA. TO STA. | | | P | F | P | F | P | F | | |
| 126+64.26 TO 126+74.26 | RT | 328185 | 5.6 | | | | | | | |
| 126+74.26 TO 127+36.10 | RT | 328191 | 41.7 | | | | | | | |
| 126+88.03 TO 127+00.68 | LT | 279135 | 10.5 | | | | | | | |
| 126+97.66 TO 127+32.40 | LT | 341001 | 45.2 | | | | | | DRWY. | |
| 127+29.38 TO 127+42.03 | LT | 279141 | 10.5 | | | | | | | |
| 127+35.51 TO 127+91.45 | RT | 328031 | 36.6 | | | | | | | |
| 127+42.03 TO 127+56.85 | LT | 328067 | 15.6 | | | | | | | |
| 127+56.85 TO 128+13.63 | LT | 328036 | 37.3 | | | | | | | |
| 127+75.00 TO 128+01.68 | LT/RT | 324700 | 24.6 | | | | | | | |
| 128+06.47 TO 128+60.35 | RT | 324861 | 35.8 | | | | | | | |
| 128+22.48 TO 128+71.81 | LT/RT | 324708 | 41.6 | | | | | | | |
| 128+28.57 TO 128+55.63 | LT | 328199 | 17.5 | | | | | | | |
| 128+55.63 TO 128+75.13 | LT | 308819 | 12.4 | | | | | | | |
| 165+24.16 TO 167+90.34 | RT | 368832 | 181.8 | | | | | | | |
| 167+90.34 TO 168+41.14 | RT | 308827 | 44.5 | | | | | | | |
| 168+93.71 TO 169+04.12 | LT | 279424 | 4.8 | | | | | | | |
| 168+99.07 TO 169+31.54 | LT | 324755 | 23.2 | | | | | | | |
| 169+08.94 TO 169+32.18 | RT | 324818 | 50.5 | | | | | | | |
| 169+35.87 TO 169+62.19 | RT | 324880 | 28.4 | | | | | | | |
| 169+60.46 TO 170+07.39 | RT | 368804 | 32.5 | | | | | | | |
| 170+07.39 TO 170+37.01 | RT | 368820 | 29.4 | | | | | | | |
| 170+16.85 TO 170+30.08 | RT | 368839 | 0.8 | | | | | | | |
| 170+36.63 TO 170+79.50 | RT | 368811 | 29.1 | | | | | | | |
| 170+69.63 TO 171+28.63 | RT | 324846 | 52.1 | | | | | | DRWY. | |
| 171+18.76 TO 171+46.38 | RT | 368821 | 18.8 | | | | | | | |
| 129+97.98 R2 TO 130+16.09 R2 | RT | 324768 | 13.4 | | | | | | | |
| 130+13.60 R2 TO 130+90.86 R2 | LT | 328209 | 49.5 | | | | | | | |
| 130+16.09 R2 TO 130+75.74 R2 | RT | 328253 | 38.9 | | | | | | | |
| 130+65.74 R2 TO 131+15.47 R2 | RT | 325572 | 60.6 | | | | | | | |
| 130+80.44 R2 TO 131+30.40 R2 | LT | 317750 | 56.4 | | | | | | | |
| 131+05.47 R2 TO 131+54.11 R2 | RT | 328263 | 31.6 | | | | | | | |
| 131+20.63 R2 TO 131+43.85 R2 | LT | 328219 | 15.5 | | | | | | | |
| 131+33.76 R2 TO 131+65.84 R2 | LT | 317776 | 24.8 | | | | | | | |
| 131+54.11 R2 TO 131+70.05 R2 | RT | 279384 | 7.1 | | | | | | | |
| 131+55.85 R2 TO 131+82.17 R2 | LT | 328230 | 17.8 | | | | | | | |
| 131+72.17 R2 TO 132+05.17 R2 | LT | 317790 | 27.5 | | | | | | | |
| 131+95.17 R2 TO 132+43.23 R2 | LT | 328239 | 29.8 | | | | | | | |
| 132+12.55 R2 TO 132+28.49 R2 | RT | 279379 | 7.1 | | | | | | | |
| 132+28.49 R2 TO 133+23.20 R2 | RT | 328296 | 49.5 | | | | | | | |
| 132+33.23 R2 TO 132+76.59 R2 | LT | 317803 | 46.9 | | | | | | | |
| 132+66.81 R2 TO 133+36.12 R2 | LT | 328272 | 49.2 | | | | | | | |
| 133+11.51 R2 TO 133+53.94 R2 | RT | 324784 | 66.8 | | | | | | | |
| 133+26.12 R2 TO 133+78.58 R2 | LT | 317815 | 87.0 | | | | | | | |
| 133+44.81 R2 TO 133+77.10 R2 | RT | 328307 | 19.3 | | | | | | | |
| 133+65.18 R2 TO 134+70.25 R2 | LT | 328287 | 67.3 | | | | | | | |
| 133+66.15 R2 TO 134+10.43 R2 | RT | 324795 | 66.3 | | | | | | | |
| 134+00.68 R2 TO 134+65.50 R2 | RT | 328320 | 41.0 | | | | | | | |
| 134+65.47 R2 TO 134+99.91 R2 | RT | 324735 | 23.7 | | | | | | | |
| | | SUB-TOTAL: | 1727.8 | | | | | | | |

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# SUMMARY OF QUANTITIES

SHEET NO.

SQ-15

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

## SUMMARY OF SIDEWALK & DETECTABLE WARNINGS

| LOCATION | SIDE | AREA ID | CONC SIDEWALK 6" | | BUS SHELTER PAD - CONCRETE | | DETECTABLE WARNINGS | | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 0522 2 | | 0522 4 | | 0527 2 | | | |
| | | | SY | | SY | | SF | | | |
| STA. TO STA. | | | P | F | P | F | P | F | | |
| 134+70.25 R2 TO 135+02.54 R2 | LT | 324718 | 21.8 | | | | | | | |
| 135+42.37 R2 TO 135+60.25 R2 | LT | 324725 | 22.2 | | | | | | | |
| 135+42.38 R2 TO 135+60.60 R2 | RT | 324746 | 11.9 | | | | | | | |
| 121+86.50 TO 122+00.00 | LT | 331676 | | | 12.0 | | | | | |
| 124+37.60 TO 124+51.10 | RT | 331680 | | | 12.0 | | | | | |
| 170+16.28 TO 170+30.05 | RT | 331682 | | | 12.0 | | | | | |
| 165+23.44 TO 165+23.44 | RT | 364029 | | | | | 28.9 | | | |
| 165+23.44 TO 165+23.44 | RT | 364035 | | | | | 28.9 | | | |
| 168+43.22 TO 168+49.14 | RT | 318158 | | | | | 12.0 | | | |
| 168+48.48 TO 168+54.30 | RT | 318157 | | | | | 12.0 | | | |
| 169+23.27 TO 169+26.63 | RT | 328686 | | | | | 9.0 | | | |
| 169+26.32 TO 169+29.64 | RT | 328685 | | | | | 9.0 | | | |
| 169+27.97 TO 169+33.66 | RT | 329090 | | | | | 12.1 | | | |
| 169+31.07 TO 169+36.83 | RT | 318155 | | | | | 12.0 | | | |
| 169+37.84 TO 169+41.02 | RT | 224123 | | | | | 9.0 | | | |
| 169+41.11 TO 169+44.25 | RT | 224036 | | | | | 9.0 | | | |
| 169+57.19 TO 169+58.85 | RT | 224035 | | | | | 10.0 | | | |
| 169+59.69 TO 169+64.70 | RT | 224093 | | | | | 11.6 | | | |
| 169+62.41 TO 169+67.59 | RT | 224098 | | | | | 12.6 | | | |
| 169+81.57 TO 169+86.58 | RT | 224103 | | | | | 15.6 | | | |
| 169+83.23 TO 169+86.53 | RT | 224037 | | | | | 9.0 | | | |
| 169+84.48 TO 169+86.11 | RT | 224034 | | | | | 10.0 | | | |
| 167+93.91 TO 168+00.59 | LT | 318162 | | | | | 12.4 | | | |
| 167+98.04 TO 168+03.89 | RT | 318160 | | | | | 11.4 | | | |
| 168+31.94 TO 168+36.83 | RT | 318159 | | | | | 11.8 | | | |
| 169+10.65 TO 169+13.33 | RT | 328702 | | | | | 12.0 | | | |
| 169+17.78 TO 169+23.69 | RT | 328701 | | | | | 12.0 | | | |
| 169+18.27 TO 169+23.74 | LT | 224067 | | | | | 10.3 | | | |
| 169+19.83 TO 169+24.73 | RT | 328709 | | | | | 13.1 | | | |
| 169+41.00 TO 169+45.70 | RT | 328697 | | | | | 12.0 | | | |
| 167+98.58 TO 168+05.22 | LT | 363891 | | | | | 11.6 | | | |
| 168+12.69 TO 168+22.05 | LT | 363885 | | | | | 11.7 | | | |
| 168+13.67 TO 168+16.29 | LT | 318161 | | | | | 12.4 | | | |
| 168+45.40 TO 168+51.18 | LT | 363869 | | | | | 8.6 | | | |
| 168+46.14 TO 168+51.80 | LT | 363874 | | | | | 8.6 | | | |
| 168+56.15 TO 168+61.94 | LT | 224082 | | | | | 8.7 | | | |
| 168+67.79 TO 168+73.00 | LT | 224087 | | | | | 8.7 | | | |
| 168+91.61 TO 169+00.03 | LT | 363897 | | | | | 11.0 | | | |
| 168+92.10 TO 168+94.92 | LT | 224066 | | | | | 10.0 | | | |
| 169+09.63 TO 169+16.36 | LT | 363879 | | | | | 11.2 | | | |
| | | | | | | | | | | |
| SUB-TOTAL: | | | 55.9 | | 36.0 | | 408.2 | | | |

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF QUANTITIES

SHEET NO.
SQ-16

## SUMMARY OF FENCING

| PAY ITEM NO. | DESCRIPTION | LOCATION STA. TO STA. | SIDE | UNIT | QUANTITY P | QUANTITY F | TOTAL P | TOTAL F | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 0550 10220 | FENCING, TYPE B, 5.1- 6.0' HEIGHT, STANDARD | 169+36.20 TO 170+79.51 | RT. | LF | 181.7 | | 459 | | | |
| | | 165+21.01 TO 165+75.24 | RT. | | 56.7 | | | | | |
| | | 165+75.24 TO 167+90.33 | RT. | | 220.1 | | | | | |
| 0550 60237 | FENCE GATE, TYPE B, SLIDING/CANTILEVER, GREATER THAN 30' OPENING | 170+79.50 TO 171+18.77 | RT. | EA | 1 | | 1 | | | |
| | | | | | | | | | | |

## SUMMARY OF PERFORMANCE TURF

| LOCATION STA. TO STA. | SIDE | AREA ID | PERFORMANCE TURF 0570 1 1 SY P | PERFORMANCE TURF 0570 1 1 SY F | PERFORMANCE TURF (SOD) 0570 1 2 SY P | PERFORMANCE TURF (SOD) 0570 1 2 SY F | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|
| 134+00.00 TO 134+87.77 | LT. | 333647 | 60.3 | | | | | |
| 118+00.64 TO 119+11.93 | LT. | 332788 | | | 253.8 | | | |
| 118+05.11 TO 119+11.67 | RT. | 146701 | | | 240.2 | | | |
| 118+05.15 TO 121+32.87 | RT. | 332806 | | | 291.3 | | | |
| 118+90.76 TO 119+06.41 | LT./RT. | 146657 | | | 5.7 | | | |
| 119+11.93 TO 119+71.83 | LT. | 332736 | | | 15.5 | | | |
| 119+17.67 TO 121+29.41 | RT. | 148275 | | | 219.1 | | | |
| 119+17.93 TO 119+82.16 | LT. | 148361 | | | 85.5 | | | |
| 119+24.41 TO 119+81.56 | LT./RT. | 146647 | | | 67.0 | | | |
| 119+74.66 TO 119+87.24 | LT. | 148381 | | | 14.9 | | | |
| 120+13.28 TO 121+36.31 | LT. | 333116 | | | 84.6 | | | |
| 120+20.06 TO 121+01.37 | LT. | 287505 | | | 38.0 | | | |
| 120+25.24 TO 121+15.29 | LT./RT. | 148307 | | | 114.1 | | | |
| | | SUB-TOTAL: | 60.3 | | 1429.7 | | | |
| | | TOTAL: | 60 | | 4693 | | | |

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| REVISIONS | | | |
|---|---|---|---|
| DATE | DESCRIPTION | DATE | DESCRIPTION |
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF QUANTITIES

SHEET NO.
SQ-17

## SUMMARY OF PERFORMANCE TURF

| LOCATION STA. TO STA. | SIDE | AREA ID | PERFORMANCE TURF 0570 1 1 SY P | PERFORMANCE TURF 0570 1 1 SY F | PERFORMANCE TURF (SOD) 0570 1 2 SY P | PERFORMANCE TURF (SOD) 0570 1 2 SY F | DESIGN NOTES | CONSTRUCTION REMARKS |
|---|---|---|---|---|---|---|---|---|
| 121+04.99 TO 121+36.31 | LT. | 333128 | | | 53.3 | | | |
| 121+59.64 TO 121+69.23 | LT. | 333141 | | | 18.9 | | | |
| 121+59.64 TO 121+86.50 | LT. | 333159 | | | 16.4 | | | |
| 121+61.39 TO 121+67.82 | RT. | 185869 | | | 17.3 | | | |
| 121+63.39 TO 121+67.40 | RT. | 332837 | | | 4.7 | | | |
| 121+72.39 TO 121+73.84 | RT. | 185861 | | | 2.6 | | | |
| 121+72.39 TO 123+16.14 | RT. | 332848 | | | 43.3 | | | |
| 121+86.50 TO 122+00.00 | LT. | 333154 | | | 3.0 | | | |
| 121+97.97 TO 124+02.50 | LT./RT. | 339687 | | | 196.3 | | | |
| 122+00.00 TO 123+28.92 | LT. | 333167 | | | 78.6 | | | |
| 122+48.36 TO 123+21.14 | RT. | 332862 | | | 40.4 | | | |
| 123+40.31 TO 123+49.58 | LT. | 333177 | | | 2.2 | | | |
| 123+45.14 TO 124+63.05 | RT. | 332867 | | | 64.1 | | | |
| 123+50.14 TO 124+10.94 | RT. | 146757 | | | 12.7 | | | |
| 123+61.38 TO 124+62.44 | LT. | 287520 | | | 58.5 | | | |
| 124+58.02 TO 124+79.15 | RT. | 146766 | | | 25.7 | | | |
| 124+84.00 TO 124+88.16 | RT. | 332872 | | | 2.8 | | | |
| 124+94.08 TO 126+15.07 | LT. | 287531 | | | 48.1 | | | |
| 124+94.66 TO 127+75.00 | LT./RT. | 339692 | | | 264.8 | | | |
| 125+17.79 TO 125+50.00 | RT. | 146801 | | | 18.4 | | | |
| 125+84.00 TO 126+35.26 | RT. | 146814 | | | 10.3 | | | |
| 126+36.89 TO 127+03.03 | LT. | 287536 | | | 40.1 | | | |
| 126+84.25 TO 127+93.55 | RT. | 332887 | | | 70.3 | | | |
| 127+27.03 TO 128+19.87 | LT. | 333188 | | | 84.1 | | | |
| 128+02.54 TO 128+56.66 | RT. | 332934 | | | 15.2 | | | |
| 128+26.73 TO 128+73.10 | LT. | 333201 | | | 59.4 | | | |
| 165+21.73 TO 167+92.29 | RT. | 333234 | | | 519.5 | | | |
| 167+92.29 TO 168+36.10 | RT. | 333215 | | | 85.4 | | | |
| 168+99.86 TO 169+31.54 | LT. | 333003 | | | 25.9 | | | |
| 169+40.92 TO 170+10.04 | RT. | 332947 | | | 79.6 | | | |
| 169+48.85 TO 170+07.39 | RT. | 332991 | | | 23.4 | | | |
| 170+09.97 TO 170+79.50 | RT. | 332978 | | | 33.0 | | | |
| 129+97.98 TO 130+75.03 | RT. | 333001 | | | 67.1 | | | |
| 130+17.27 TO 130+90.94 | LT. | 333242 | | | 20.3 | | | |
| 131+06.14 TO 131+77.21 | RT. | 333017 | | | 69.3 | | | |
| 131+20.83 TO 131+43.88 | LT. | 333250 | | | 7.9 | | | |
| 131+55.85 TO 131+82.17 | LT. | 333260 | | | 9.9 | | | |
| 131+95.17 TO 132+41.64 | LT. | 333268 | | | 25.1 | | | |
| 132+05.49 TO 133+13.32 | RT. | 333026 | | | 176.8 | | | |
| 132+63.79 TO 133+36.76 | LT. | 333296 | | | 79.8 | | | |
| 133+39.67 TO 133+74.38 | RT. | 333035 | | | 38.1 | | | |
| 133+51.62 TO 134+50.00 | LT. | 333675 | | | 436.7 | | | |
| 134+01.64 TO 134+11.23 | RT. | 333056 | | | 10.8 | | | |
| 134+10.77 TO 134+71.78 | RT. | 333066 | | | 13.6 | | | |
| 134+50.00 TO 135+10.25 | LT. | 333694 | | | 257.6 | | | |
| 134+71.78 TO 135+00.40 | RT. | 333074 | | | 8.6 | | | |
| 135+42.34 TO 135+60.62 | RT. | 333093 | | | 6.5 | | | |
| 135+43.21 TO 135+63.58 | LT. | 333105 | | | 16.4 | | | |
| | | SUB-TOTAL: | | | 3262.8 | | | |

REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|---|---|---|---|
| | | | |

ELEMENT
ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

SUMMARY OF QUANTITIES

SHEET NO.
SQ-18

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

## TABULATION OF LIGHTING QUANTITIES

| PAY ITEM NO. | DESCRIPTION | UNIT | SHEET NUMBERS 25 PLAN | 25 FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | PLAN | FINAL | TOTAL THIS SHEET PLAN | TOTAL THIS SHEET FINAL | GRAND TOTAL PLAN | GRAND TOTAL FINAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0715 1 60 | LIGHTING CONDUCTORS, REMOVE & DISPOSE, CONTRACTOR OWNS | LF | 1110 | | | | | | | | | | | | 1110 | | 1110 | |
| 0715 4 70 | LIGHT POLE COMPLETE, REMOVE POLE AND FOUNDATION | EA | 1 | | | | | | | | | | | | 1 | | 1 | |
| 0715 21 1 | LIGHTING REPAIRS- ELECTRICAL WORK | LS | 1 | | | | | | | | | | | | 1 | | 1 | |
| | | | | | | | | | | | | | | | | | | |

## TABULATION OF UTILITY RELOCATION QUANTITIES

| PAY ITEM NO. | DESCRIPTION | UNIT | SHEET NUMBERS 93 PLAN | 93 FINAL | 94 PLAN | 94 FINAL | 95 PLAN | 95 FINAL | 96 PLAN | 96 FINAL | 97 PLAN | 97 FINAL | TOTAL THIS SHEET PLAN | TOTAL THIS SHEET FINAL | GRAND TOTAL PLAN | GRAND TOTAL FINAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 704.06 | Furnish & Install 4"Dia. C900 PVC pipe, CL-150, Green, 0'-6' Cut | LF | 48 | | 32 | | | | | | | | 80 | | 80 | |
| 2102.00 | Furnish & Install 6" Ductile Iron Pipe | LF | 36 | | 10 | | | | | | | | 46 | | 46 | |
| 2104.00 | Furnish & Install 8" Ductile Iron Pipe | LF | 232 | | 186 | | | | 262 | | 5 | | 685 | | 685 | |
| 2106.00 | Furnish & Install 12" Ductile Iron Pipe | LF | | | | | | | | | 52 | | 52 | | 52 | |
| 2400.40 | Furnish & Install 4" Dia. C900 PVC or DIP, Bends, Sleeves, Reducers, Caps or Plugs | EA | 8 | | 10 | | | | | | | | 18 | | 18 | |
| 2500.00 | Remove 1" - 3" Dia. Abandoned Pipe | LF | 115 | | 650 | | 44 | | 35 | | | | 844 | | 844 | |
| 2501.00 | Remove 4" - 12" Dia. Abandoned Pipe | LF | 504 | | 816 | | 105 | | 252 | | 127 | | 1804 | | 1804 | |
| 2600.00 | Cut & Plug 3" and smaller | EA | | | | | | | 1 | | | | 1 | | 1 | |
| 2601.00 | Cut & Plug 4", 6" and 8" Pipe | EA | 1 | | | | 1 | | 2 | | | | 4 | | 4 | |
| 3042.00 | Furnish & Install 8" Bell or Mechanical Joint Restraints on Existing Pipe | EA | 1 | | 3 | | | | | | | | 4 | | 4 | |
| 3043.00 | Furnish & Install 12" Bell or Mechanical Joint Restraints on Existing Pipe | EA | | | | | | | | | 1 | | 1 | | 1 | |
| 3072.00 | Furnish 8" Push-On Joint Restraint Gaskets | EA | 10 | | 10 | | | | 10 | | | | 30 | | 30 | |
| 3073.00 | Furnish 12" Push-On Joint Restraint Gaskets | EA | | | | | | | | | 4 | | 4 | | 4 | |
| 3304.10 | Furnish & Install 4" Dia. Bell Restraint | EA | 1 | | 1 | | | | | | | | 2 | | 2 | |
| 3304.20 | Furnish & Install4" Dia. Thrust Restraint | EA | 10 | | 6 | | | | | | | | 16 | | 16 | |
| 4005.00 | Furnish & Install 6" Ductile Iron MJ Bend, Sleeve | EA | 1 | | 1 | | | | | | | | 2 | | 2 | |
| 4009.00 | Furnish & Install 8" Ductile Iron MJ Bend, Sleeve | EA | 2 | | 1 | | | | 2 | | | | 5 | | 5 | |
| 4010.00 | Furnish & Install 8"x6" Ductile Iron MJ Tee | EA | 1 | | | | | | | | | | 1 | | 1 | |
| 4013.00 | Furnish & Install 12" Ductile Iron MJ Bend, Sleeve or Reducer | EA | | | | | | | | | 2 | | 2 | | 2 | |
| 5000.00 | Furnish & Install Full Std. Fire Hydrant Assembly on New or Existing Mains | EA | 1 | | | | | | | | | | 1 | | 1 | |
| 5200.00 | Remove & Salvage Hydrant | EA | 1 | | | | | | | | | | 1 | | 1 | |
| 6001.00 | Furnish & Install 6" Gate or Tapping Valve and Box on DIP | EA | 1 | | 1 | | | | | | | | 2 | | 2 | |
| 6002.00 | Furnish & Install 8" Gate or Tapping Valve and Box on DIP | EA | 2 | | 1 | | | | 1 | | 2 | | 6 | | 6 | |
| 6003.00 | Furnish & Install 12" Gate or Tapping Valve and Box on DIP | EA | | | | | | | | | 1 | | 1 | | 1 | |
| 6107.00 | Furnish & Install 8" Line Stop on Existing Water Main | EA | 1 | | | | | | 1 | | | | 2 | | 2 | |
| 6108.00 | Furnish & Install 12" Line Stop on Existing Water Main | EA | | | | | | | | | 1 | | 1 | | 1 | |
| 7500.00 | Furnish & Install 4" Air Release Valve | EA | 1 | | 1 | | | | | | | | 2 | | 2 | |
| 8107.00 | Furnish, Tap & Install 1" Meter Service (+15' - 80') | EA | | | 2 | | | | | | | | 2 | | 2 | |
| 8128.00 | Furnish, Tap & Install 2" Meter Service (+15' - 80') | EA | 1 | | 1 | | 1 | | | | | | 3 | | 3 | |
| | | | | | | | | | | | | | | | | |

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REVISIONS

| DATE | DESCRIPTION | DATE | DESCRIPTION |
|---|---|---|---|
| | | | |

ELEMENT ENGINEERING GROUP
1713 E. 9th AVENUE | TAMPA, FL 33605
P 813.386.2101 | TF 888.603.1942 | F 813.386.2106
EOR | DEREK M. GIL, PE 54798

CITY OF TAMPA
TRANSPORTATION DIVISION

CONTRACT NO: 12-D-00057

ARMENIA AVENUE INTERSECTION PROJECT
AT SR 580/BUSCH BLVD.

# SUMMARY OF QUANTITIES

SHEET NO.

SQ-19