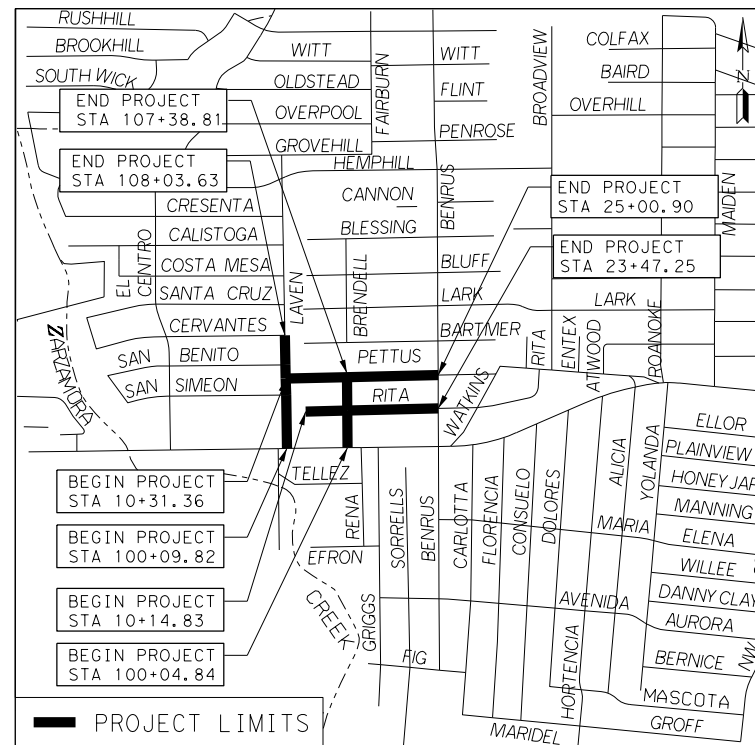


CITY OF SAN ANTONIO

PUBLIC WORKS DEPARTMENT

CULEBRA PARK AREA STREETS BRENDALL ST, RITA ST, LAVEN DR, PETTUS ST

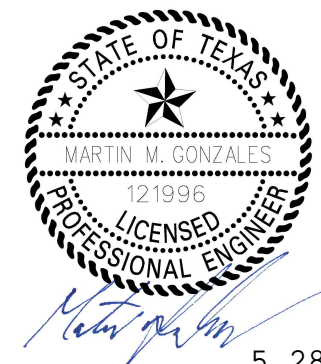
PROJECT NO. 23-03873



CLASSIFICATION: LOCAL A STREET
DESIGN SPEED: 30 MPH
AREA OF DISTURBED SOIL: 4.97 AC

TDLR # TABS2025008252

100% SUBMITTAL



5.28.25



SUBMITTAL PREPARED BY:



4800 FREDERICKSBURG RD SUITE 200SL
SAN ANTONIO, TX 78229
P:210-208-9400 F:210-208-9401
TBPE #F-21809
TBPLS #10194622

THROUGH INNOVATION AND DEDICATION WE BUILD AND MAINTAIN SAN ANTONIO'S INFRASTRUCTURE

5/28/2025 11:40:08 AM R:\ESC 23004 Culebra Part Area Street (CoSA)\07_Sheets\01_General\FRONT END SHEETS\CULEBRA INDEX OF SHEETS.dgn

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| 4 | SURVEY CONTROL |
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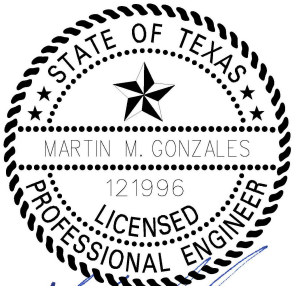
| SHEET NO. | DRAINAGE STANDARDS |
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| SHEET NO. | ENVIRONMENTAL STANDARDS |
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| 170 | TEMPORARY EROSION, SEDIMENT & WATER POLLUTION CONTROL MEASURES STANDARDS 1 |
| 171 | TEMPORARY EROSION, SEDIMENT & WATER POLLUTION CONTROL MEASURES STANDARDS 2 |

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| 185 | GENERAL NOTES AND QUANTITIES |
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| 187-198 | WATER PLAN & PROFILE |
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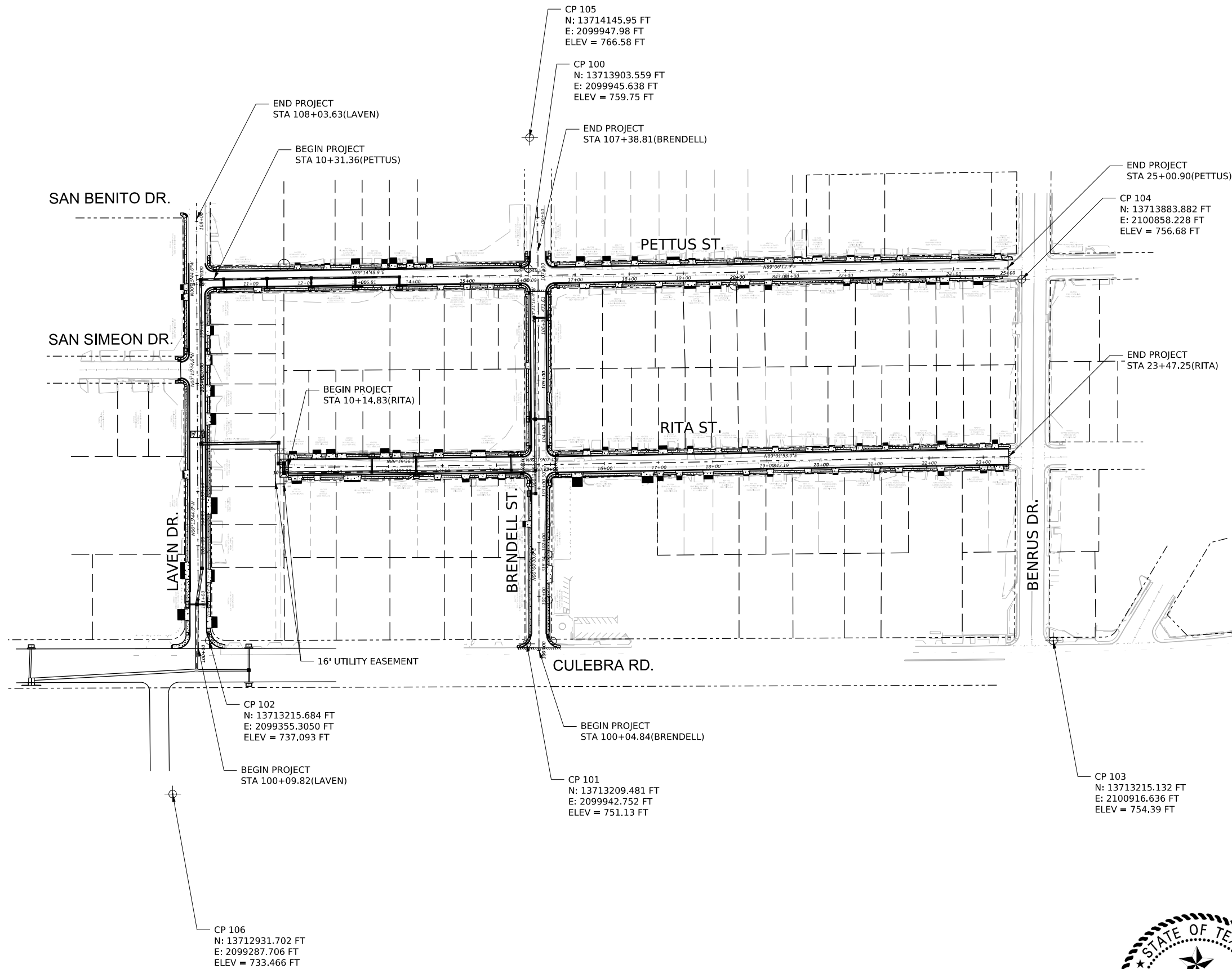
| SHEET NO. | CPS ENERGY GAS PLANS |
|-----------|--|
| 201 | CPS GAS TITLE SHEET |
| 202 | GENERAL NOTES, ESTIMATED QUANTITIES & LEGEND |
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5.28.25

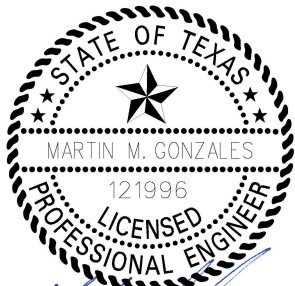
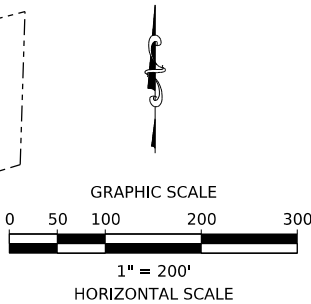
* CITY OF SAN ANTONIO (COSA) STANDARD
** TXDOT STANDARD

| <div>3</div> | | | |
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| <div>2</div> | | | |
| <div>1</div> | | | |
| NO. | REVISION | BY | DATE |
| <div><div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div><div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS INDEX OF SHEETS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 2 |



- LEGEND
- EXISTING ROW
 - PROPERTY LINE
 - EASEMENT LINE
 - ⊕ CONTROL POINT

- NOTES
1. REFER TO SURVEY CONTROL SHEETS FOR ADDITIONAL INFORMATION
 2. SEE PLAN AND PROFILE SHEETS FOR PROPERTY INFORMATION



Martin M. Gonzales

5.28.25

| | | | |
|--|----------------------|------------------|-------------|
| ③ | | | |
| ② | | | |
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| NO. | REVISION | BY | DATE |
| <div><div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div><div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS PROJECT LAYOUT | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 3 |

5/28/2025 11:41:41 AM R: \\ESC 23004 Culebra Part Area Street (CoSA)\\07_Sheets\\FRONT END SHEETS\\CULEBRA_CONTROL.dgn

LEGEND

-  1/2" IRON ROD SET WITH "AG3" CAP
-  MAGNAIL SET

N



GRAPHIC SCALE
1" = 250'

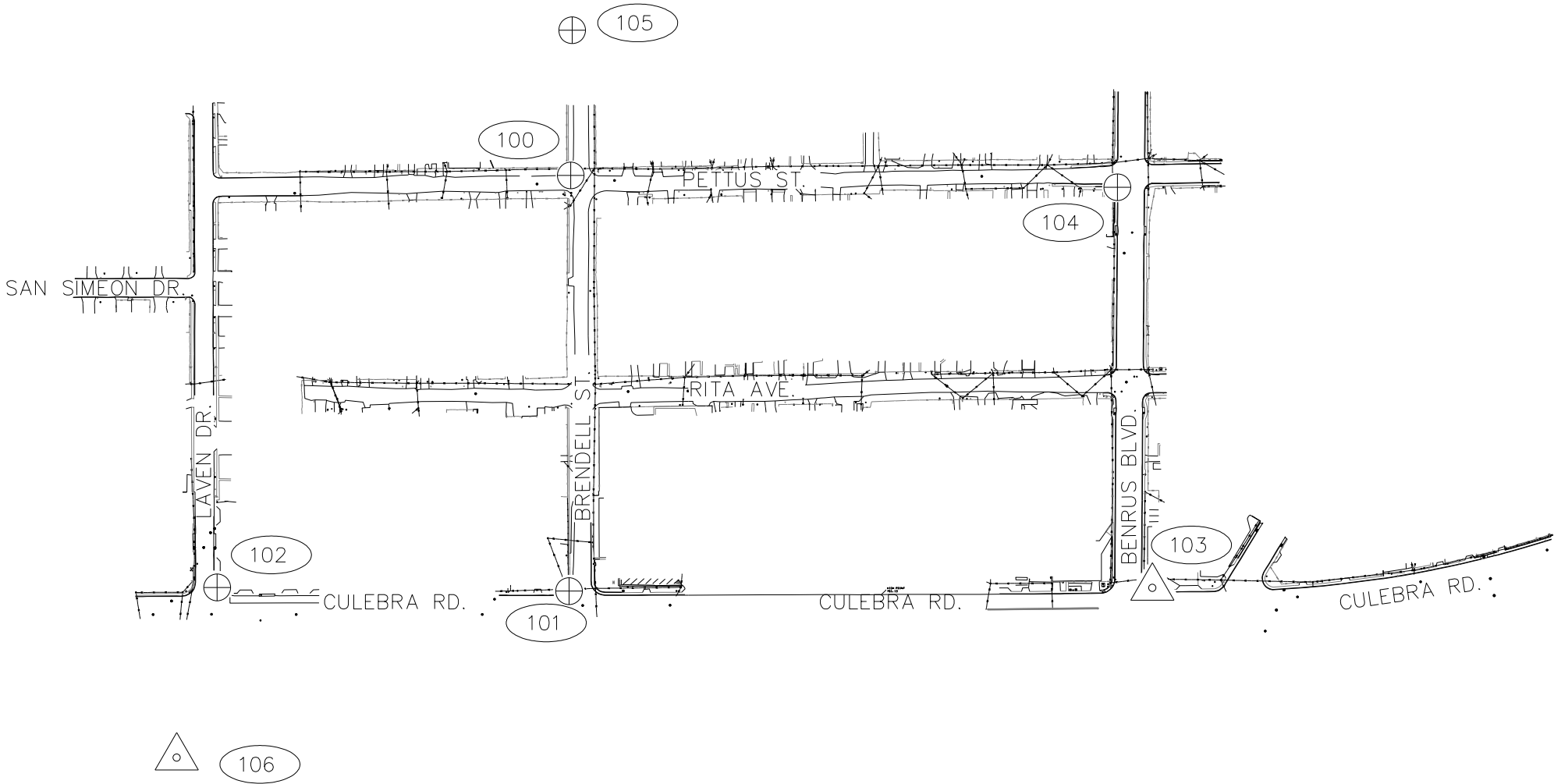


NOTES

1. ALL BEARINGS SHOWN ARE BASED ON THE TEXAS STATE PLANE COORDINATE SYSTEM, TEXAS SOUTH CENTRAL ZONE 4204, NAD 83/2011(EPOCH 2011.00). ALL COORDINATES SHOWN HERE ON ARE SURFACE AND MAY BE CONVERTED TO GRID BY DIVIDING BY THE COMBINED ADJUSTMNT FACTOR OF 1.00017. UNITS: U.S. SURVEY FEET.
2. HORIZONTAL VALUES WERE ESTABLISHED FROM TXDOT REAL TIME NETWORK, VERTICAL VALUES WERE ESTABLISHED FROM HOLDING A GPS ELEVATION BASED ON GEOID 12B, NAVD88 DATUM.
3. PLANIMETRICS WERE COLLECTED IN JULY 2023.

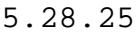
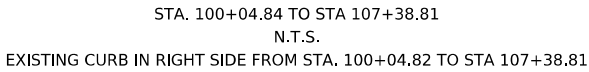
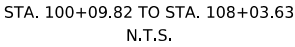



DAN H. CLARK, R.P.L.S. #6011



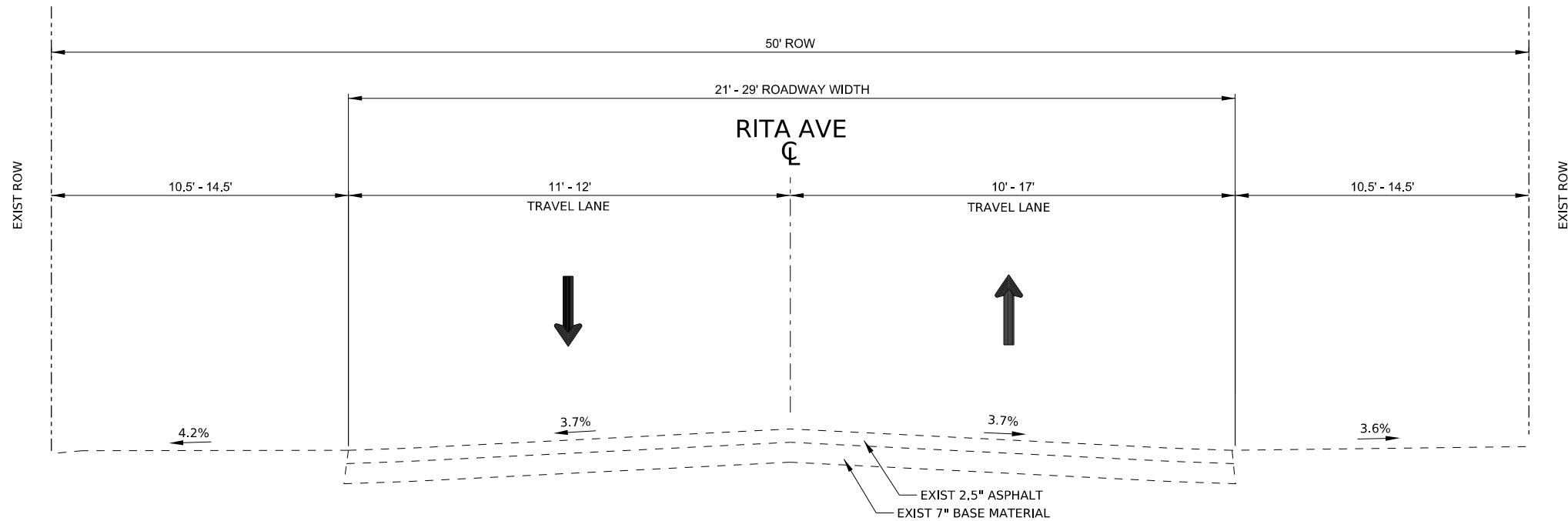
| PRIMARY CONTROL POINT SURFACE COORDINATES | | | | |
|---|---------------|--------------|-----------|----------------------------------|
| POINT | NORTHING | EASTING | ELEVATION | DESCRIPTION |
| 100 | 13,713,903.56 | 2,099,945.64 | 759.76 | MAGNAIL SET |
| 101 | 13,713,209.48 | 2,099,942.75 | 751.13 | MAGNAIL SET |
| 102 | 13,713,215.68 | 2,099,355.31 | 737.09 | MAGNAIL SET |
| 104 | 13,713,883.88 | 2,100,858.23 | 756.68 | MAGNAIL SET |
| 105 | 13,714,145.95 | 2,099,947.98 | 766.58 | MAGNAIL SET |
| 103 | 13,713,215.13 | 2,100,916.64 | 754.40 | 1/2" IRON ROD SET WITH "AG3" CAP |
| 106 | 13,712,931.70 | 2,099,287.71 | 733.47 | 1/2" IRON ROD SET WITH "AG3" CAP |

| | | | |
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| NO. | REVISION | BY | DATE |
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| <div>CITY OF SAN ANTONIO</div> <div>PUBLIC WORKS DEPARTMENT</div> | | | |
| <div>CULEBRA AREA STREETS</div> <div>SURVEY CONTROL</div> | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: DC | DSGN. BY: DC | CHKD. BY: DC | SHEET NO: 4 |



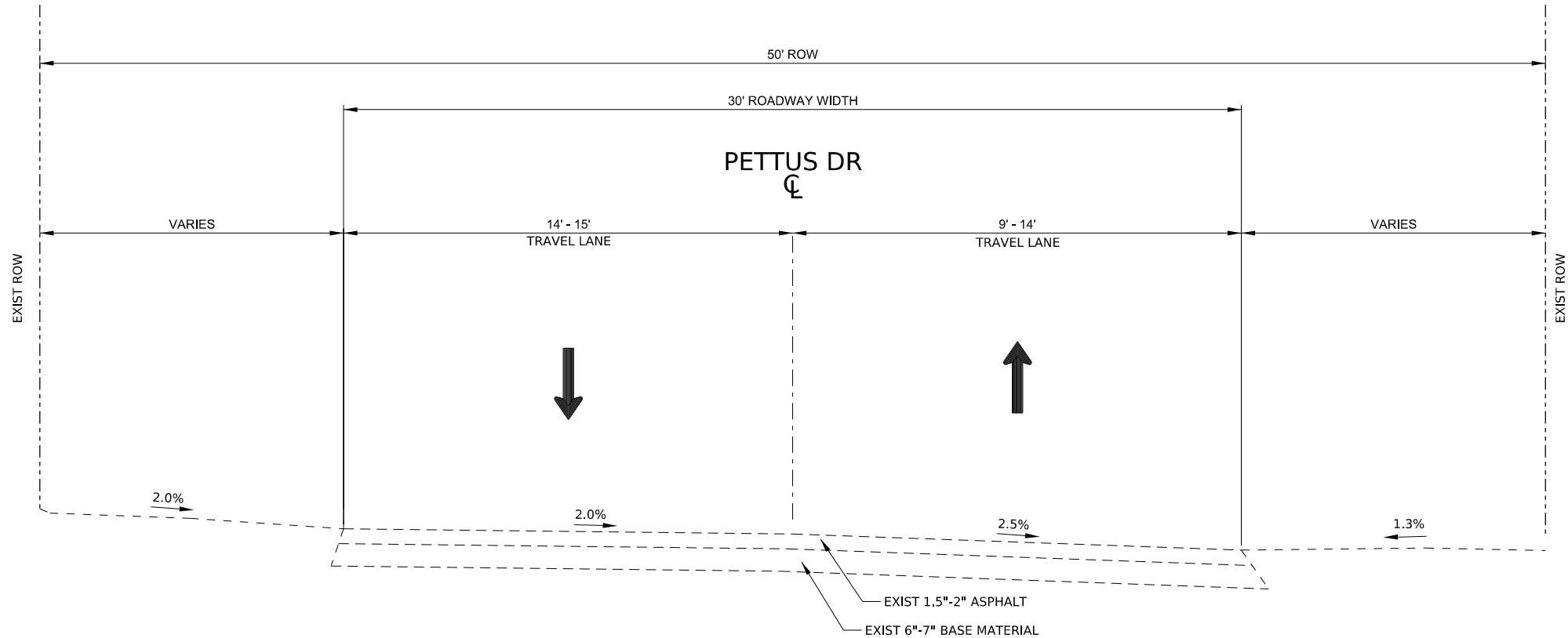
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| NO. | REVISION | BY | DATE |
|  <div style="float: right; text-align: right;"> 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 </div> <div style="clear: both;"></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS EXISTING TYPICAL SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 5 |

5/22/2025 11:08:12 AM R:\ESC 23004 Culebra Part Area Street (CoSA)\07_Sheets\01_General\FRONT END SHEETS\COSA_CULEBRA_TYPICAL_SECTIONS_04_EXISTING.dgn



EXISTING RITA AVE

STA. 10+14.83 TO STA. 23+47.25
N.T.S.



EXISTING PETTUS DR

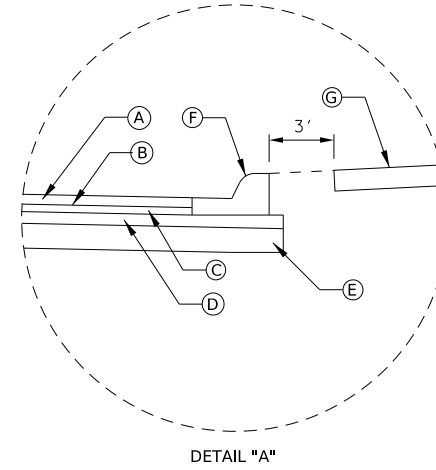
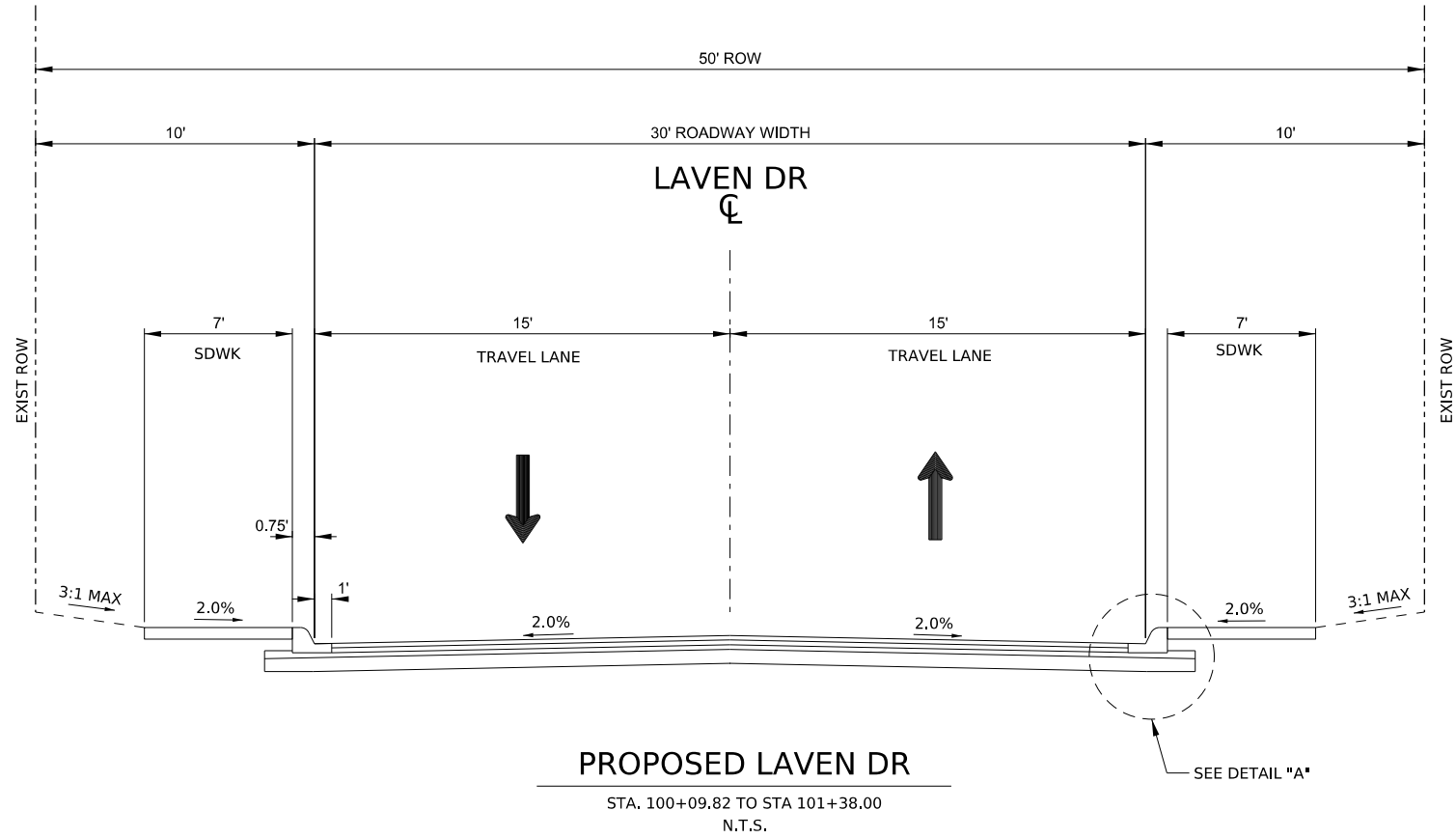
STA. 10+31.36 TO STA 25+00.90
N.T.S.
EXISTING CURB ON RIGHT SIDE FROM STA. 10+31.25 TO STA 25+00.00
EXISTING CURB ON LEFT SIDE FROM STA. 10+31.25 TO STA 25+00.00



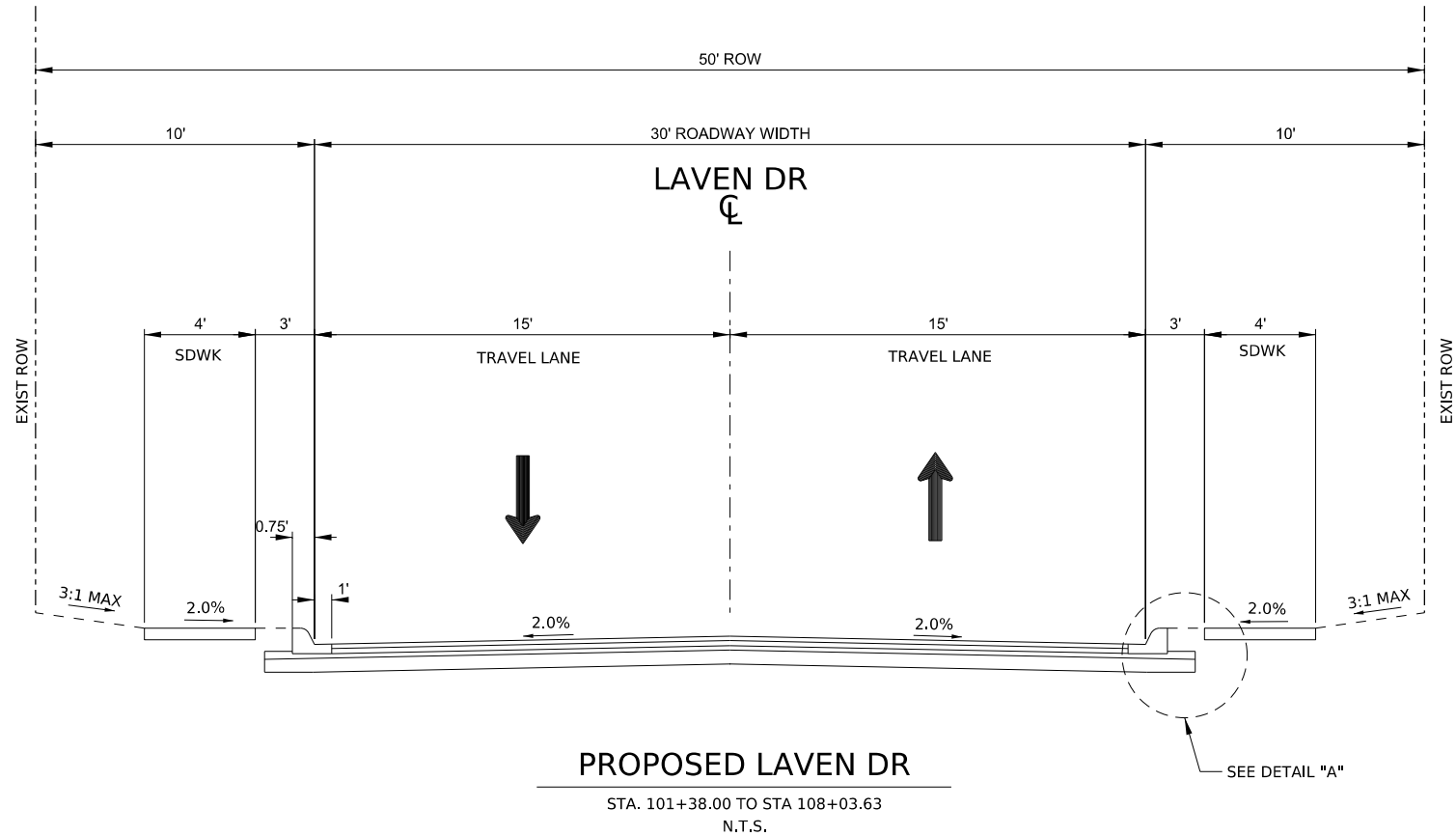
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| NO. | REVISION | BY | DATE |
| <div><div> AG3 Group, LLC ENGINEERING • SURVEY • CONSTRUCTION</div><div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS EXISTING TYPICAL SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 6 |

5/22/2025 11:10:14 AM R: \\ESC 23004 Culebra Part Area Street (CoSA)\\07_Sheets\\01_General\\FRONT END SHEETS\\COSA_CULEBRA_TYPICAL_SECTIONS_01.dgn

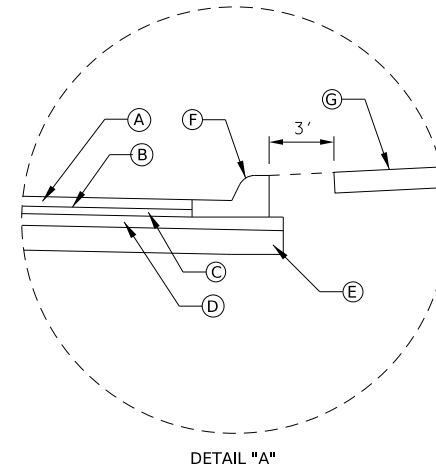
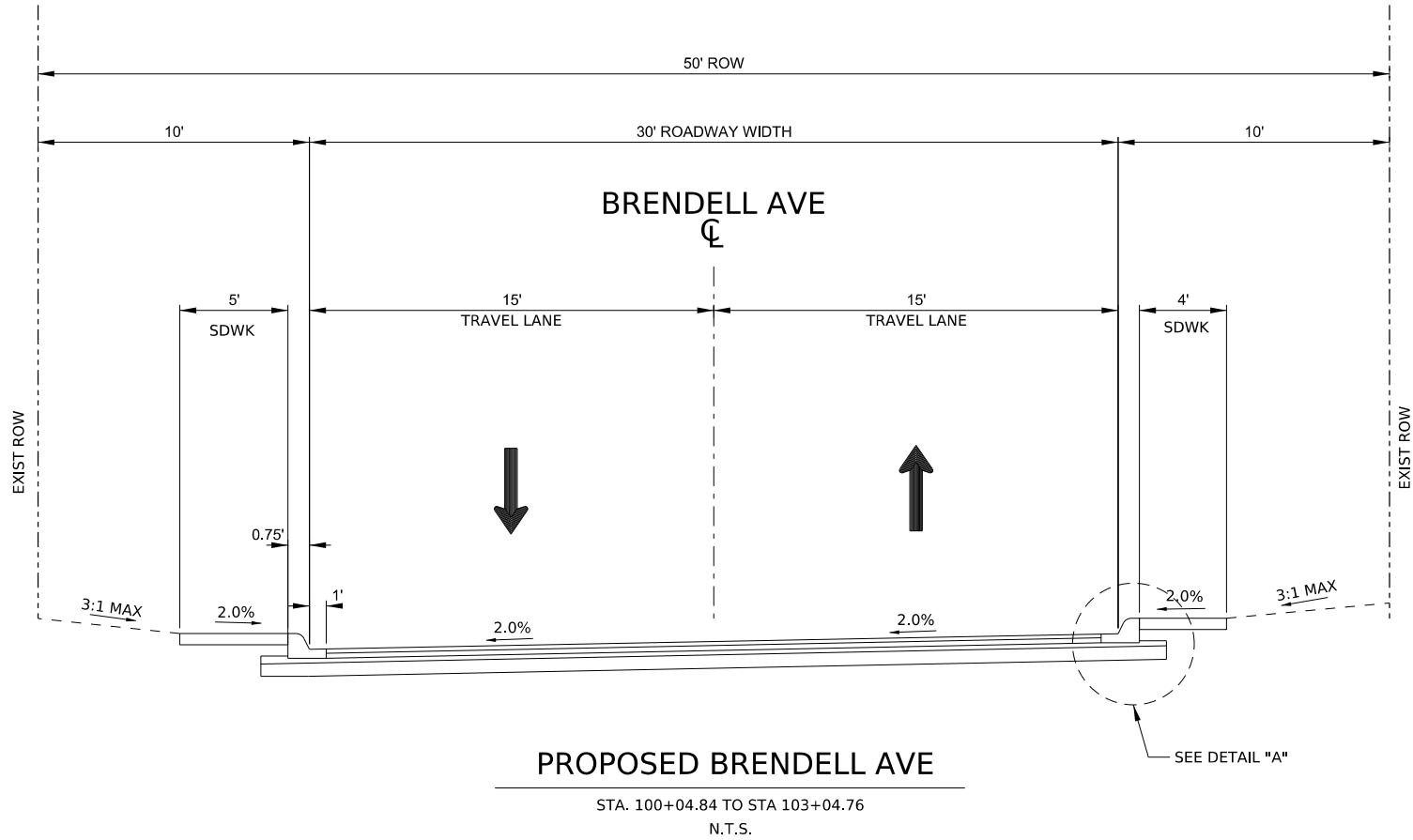


- (A) WARM MIX ASPHALT CONCRETE TYPE D (2.0" COMP DEPTH)
- (B) TACK COAT
- (C) WARM MIX ASPHALT CONCRETE TYPE B (5" COMP DEPTH)
INSTALL 1 LIFT (3.5" TOP)
- (D) WARM MIX ASPHALT CONCRETE TYPE B (5" COMP DEPTH)
INSTALL 1 LIFT (1.5" BOTTOM)
- (E) 6" MOISTURE CONDITIONED SUBGRADE
- (F) 7" CURB AND GUTTER
- (G) 4' CONC SIDEWALK

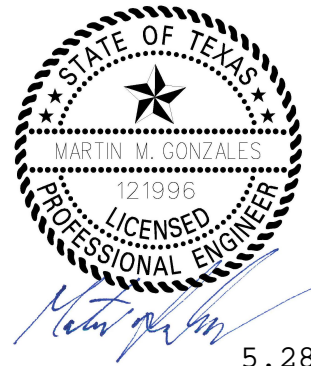
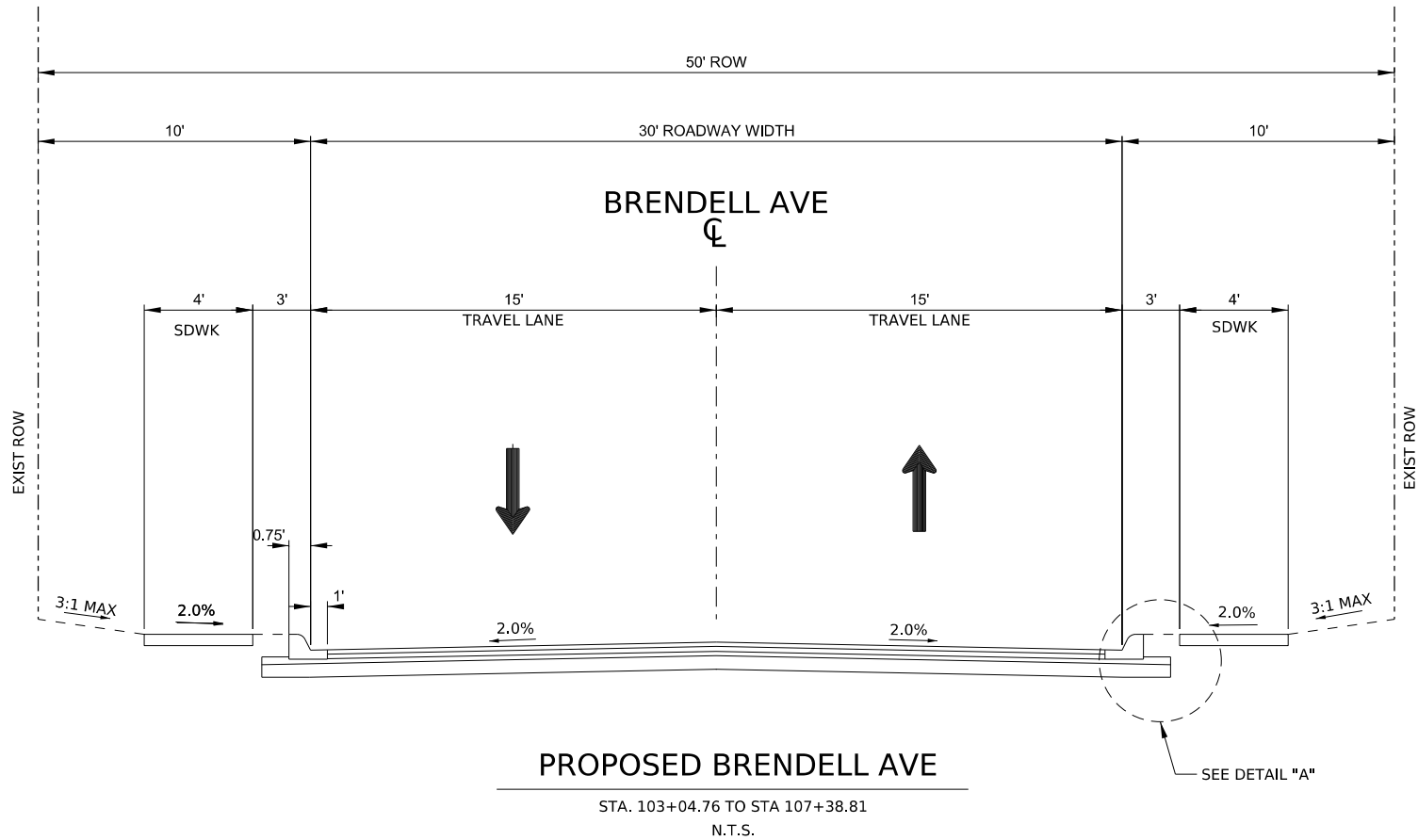


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| <div><div>AG3</div><div>AG3 Group, LLC ENGINEERING • SURVEY • CONSTRUCTION</div></div> <div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS PROPOSED TYPICAL SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 7 |

5/22/2025 11:13:22 AM R:\ESC 23004 Culebra Part Area Street (CoSA)\07_Sheets\01_General\FRONT END SHEETS\COSA_CULEBRA_TYPICAL_SECTIONS_02.dgn

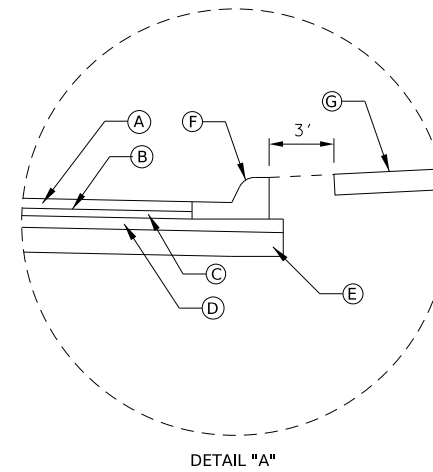
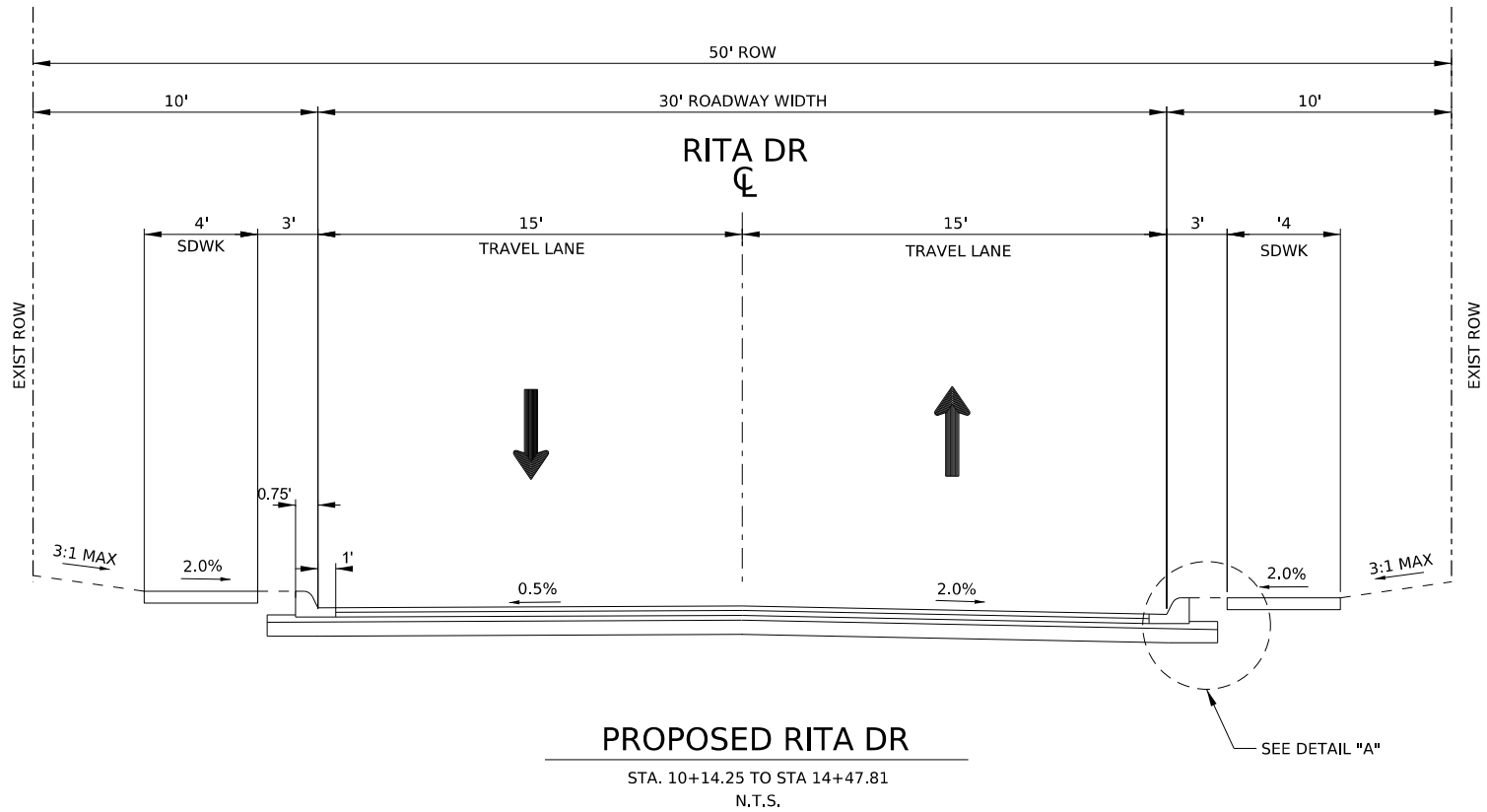


- (A) WARM MIX ASPHALT CONCRETE TYPE D (2.0" COMP DEPTH)
- (B) TACK COAT
- (C) WARM MIX ASPHALT CONCRETE TYPE B (5" COMP DEPTH) INSTALL 1 LIFT (3.5" TOP)
- (D) WARM MIX ASPHALT CONCRETE TYPE B (5" COMP DEPTH) INSTALL 1 LIFT (1.5" BOTTOM)
- (E) 6" MOISTURE CONDITIONED SUBGRADE
- (F) 7" CURB AND GUTTER
- (G) 4' CONC SIDEWALK

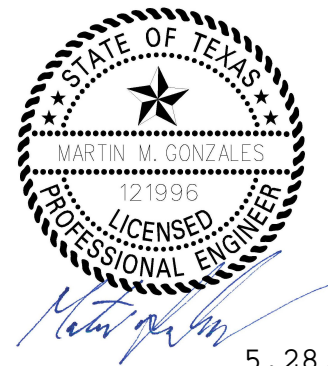
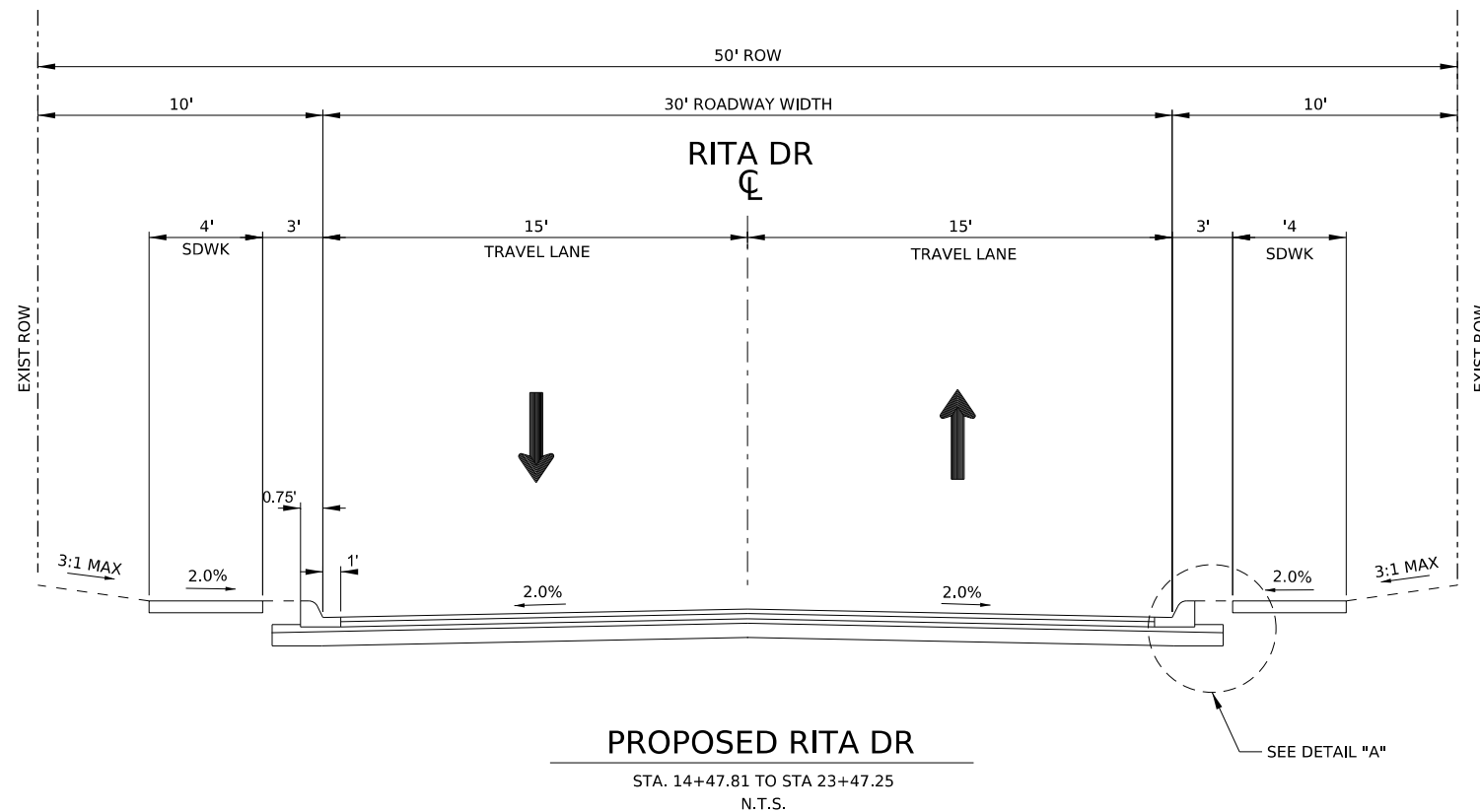


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| 3 | | | |
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| NO. | REVISION | BY | DATE |
| <div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div> <div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS PROPOSED TYPICAL SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 8 |

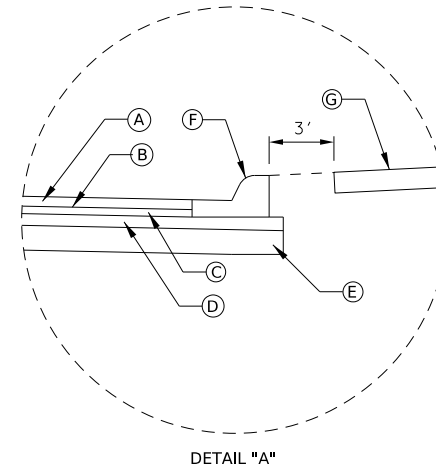
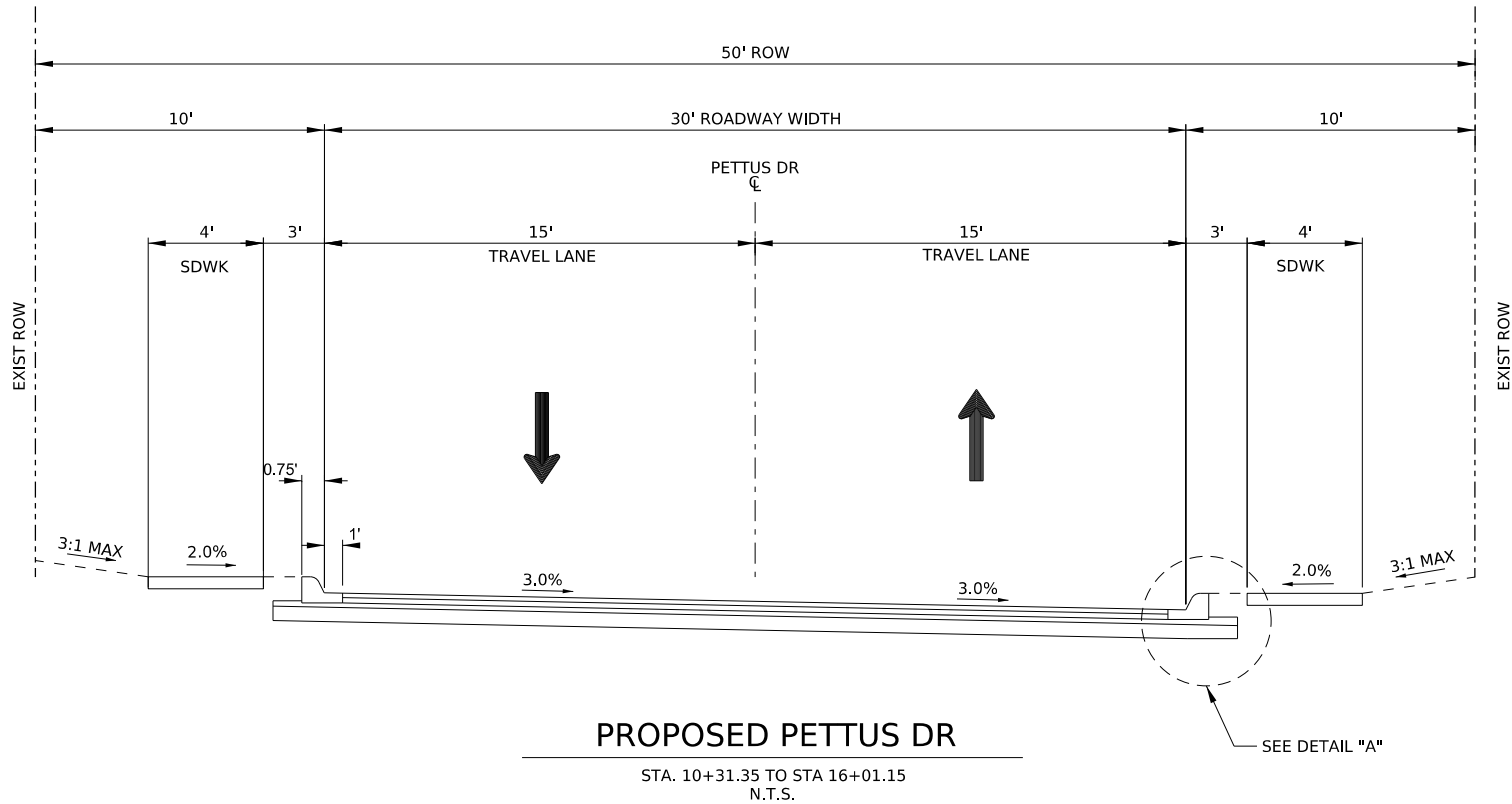
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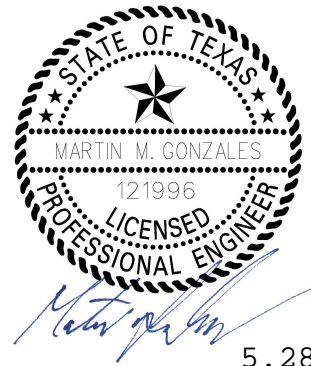
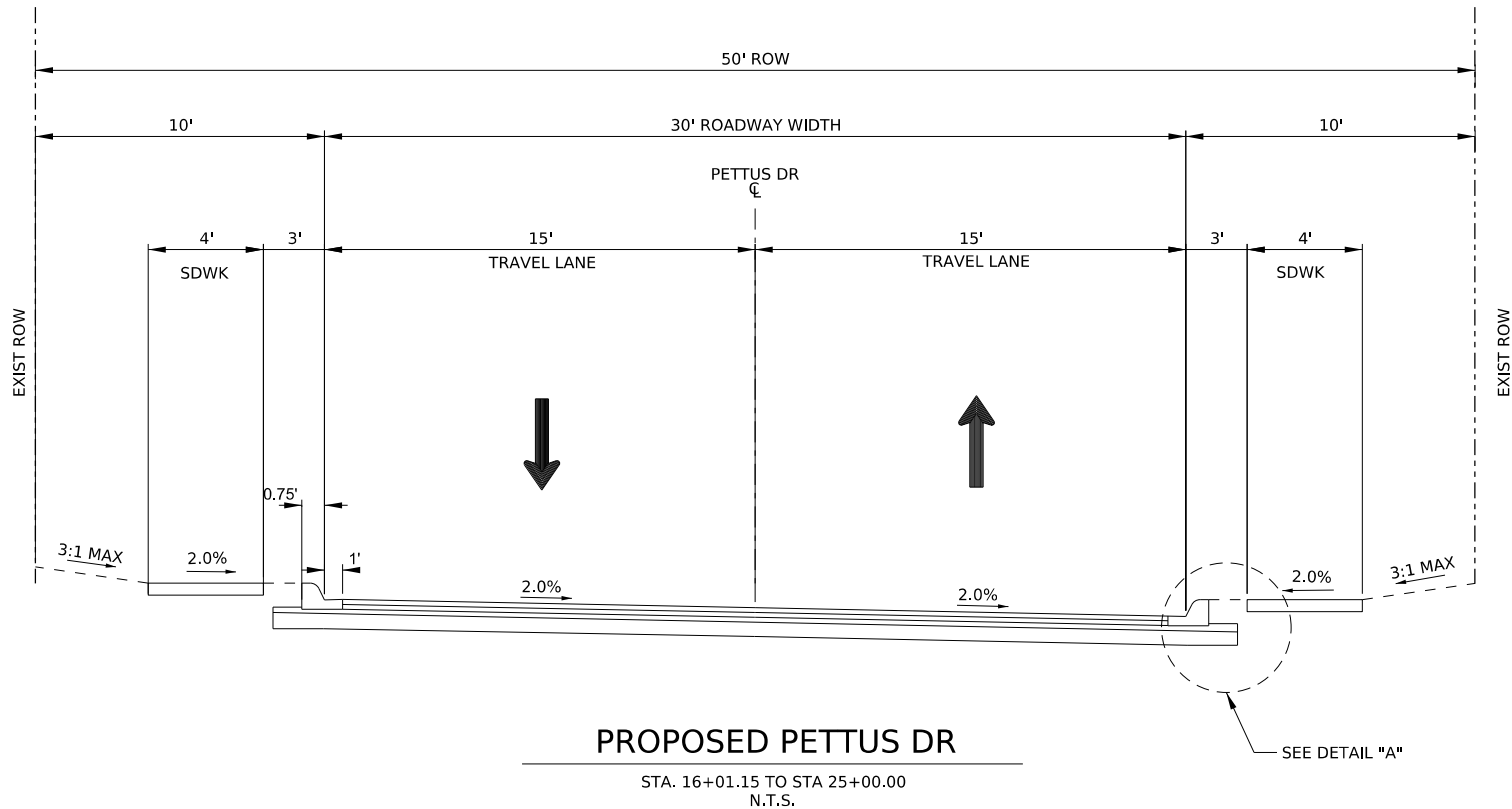
- (A) WARM MIX ASPHALT CONCRETE TYPE D (2.0" COMP DEPTH)
- (B) TACK COAT
- (C) WARM MIX ASPHALT CONCRETE TYPE B (5" COMP DEPTH)
INSTALL 1 LIFT (3.5" TOP)
- (D) WARM MIX ASPHALT CONCRETE TYPE B (5" COMP DEPTH)
INSTALL 1 LIFT (1.5" BOTTOM)
- (E) 6" MOISTURE CONDITIONED SUBGRADE
- (F) 7" CURB AND GUTTER
- (G) 4' CONC SIDEWALK



| | | | |
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| 3 | | | |
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| NO. | REVISION | BY | DATE |
| <div><div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div><div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS PROPOSED TYPICAL SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 9 |



- (A) WARM MIX ASPHALT CONCRETE TYPE D (2.0" COMP DEPTH)
- (B) TACK COAT
- (C) WARM MIX ASPHALT CONCRETE TYPE B (5" COMP DEPTH)
INSTALL 1 LIFT (3.5" TOP)
- (D) WARM MIX ASPHALT CONCRETE TYPE B (5" COMP DEPTH)
INSTALL 1 LIFT (1.5" BOTTOM)
- (E) 6" MOISTURE CONDITIONED SUBGRADE
- (F) 7" CURB AND GUTTER
- (G) 4' CONC SIDEWALK



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| NO. | REVISION | BY | DATE |
| <div><div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div><div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS PROPOSED TYPICAL SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 10 |

DRIVEWAY SUMMARY:

BRENDELL ST. :

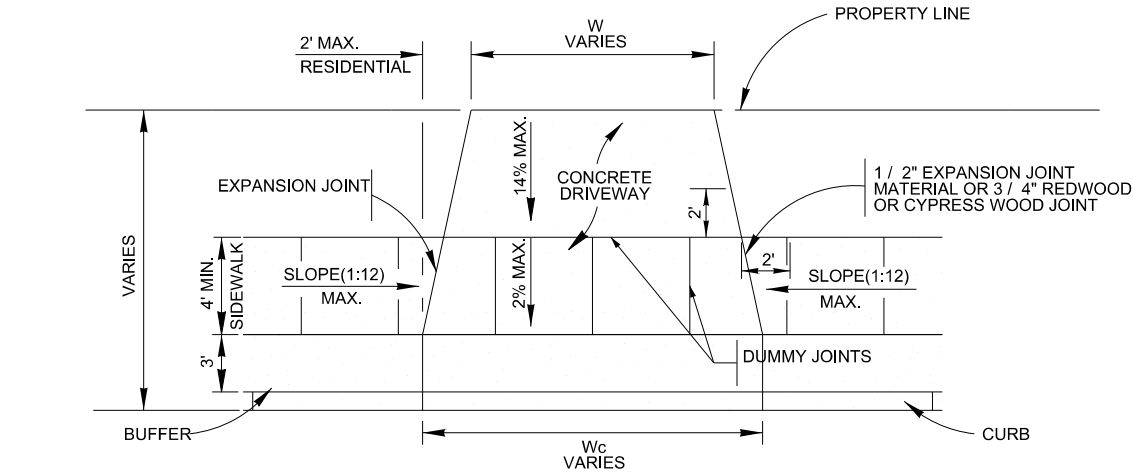
| DRIVEWAY SUMMARY | | | | | | | | | | | | |
|------------------|-----------------|--------------|-----------------|-------|---------------------|------------------------------------|-----------------------|----------------------|------------------------------|--------------------|-----------------------------|---------------------------------|
| PLAN SHEET NO. | DRIVEWAY NUMBER | BASLINE NAME | BASLINE STATION | SIDE | DRIVEWAY TYPE | ITEM 530 6004 DRIVEWAY (CONC) (SY) | SIDEWALK WIDTH S (FT) | DRIVWAY WIDTH W (FT) | DRIVEWAY APRON LENGTH L (FT) | DRIVEWAY SLOPE (%) | DRIVEWAY PENETRATION P (FT) | EXISTING DRIVEWAY MATERIAL TYPE |
| 62 | 1 | BRENDELL ST. | 101+41.17 | RIGHT | Typical Commercial | 34 | 5 | 30 | 5.42 | 14.00 | 0.00 | Commercial Concrete |
| 62 | 2 | BRENDELL ST. | 102+33.39 | LEFT | Typical Residential | 13 | 5 | 10 | 5.42 | 14.00 | 4.77 | Asphalt |
| 63 | 3 | BRENDELL ST. | 105+26.58 | LEFT | Typical Residential | 13 | 5 | 10 | 5.23 | 14.00 | 0.00 | Asphalt |

LAVEN ST. :

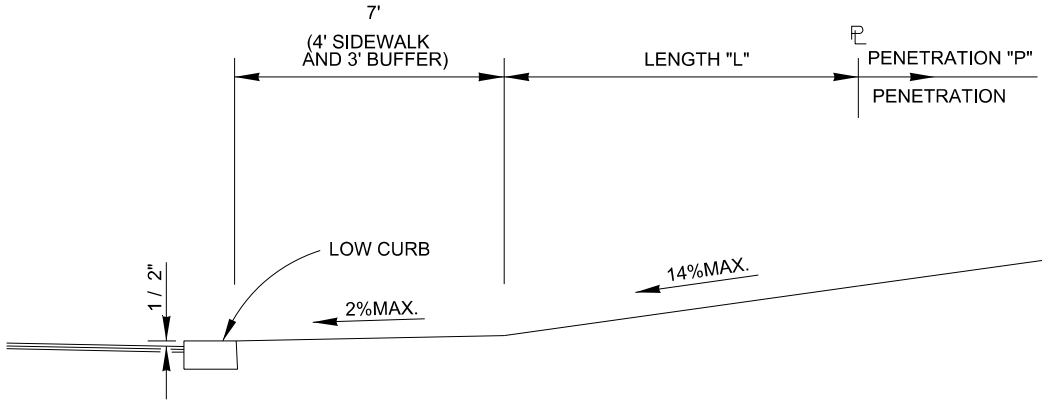
| DRIVEWAY SUMMARY | | | | | | | | | | | | |
|------------------|-----------------|--------------|-----------------|-------|---------------------|------------------------------------|-----------------------|----------------------|------------------------------|--------------------|-----------------------------|---------------------------------|
| PLAN SHEET NO. | DRIVEWAY NUMBER | BASLINE NAME | BASLINE STATION | SIDE | DRIVEWAY TYPE | ITEM 530 6004 DRIVEWAY (CONC) (SY) | SIDEWALK WIDTH S (FT) | DRIVWAY WIDTH W (FT) | DRIVEWAY APRON LENGTH L (FT) | DRIVEWAY SLOPE (%) | DRIVEWAY PENETRATION P (FT) | EXISTING DRIVEWAY MATERIAL TYPE |
| 56 | 4 | LAVEN DR. | 100+58.48 | RIGHT | Typical Commercial | 24 | 5 | 20 | 5.42 | 14.00 | 9.87 | Commercial Concrete |
| 56 | 5 | LAVEN DR. | 100+72.37 | LEFT | Typical Commercial | 24 | 5 | 20 | 5.42 | 14.00 | 13.09 | Commercial Concrete |
| 56 | 6 | LAVEN DR. | 101+44.28 | RIGHT | Typical Commercial | 26 | 5 | 22 | 5.42 | 14.00 | 3.14 | Commercial Concrete |
| 56 | 7 | LAVEN DR. | 101+54.98 | LEFT | Typical Commercial | 34 | 5 | 30 | 5.42 | 14.00 | 7.16 | Commercial Concrete |
| 56 | 8 | LAVEN DR. | 102+74.16 | RIGHT | Typical Commercial | 34 | 5 | 30 | 5.42 | 14.00 | 10.96 | Commercial Concrete |
| 56 | 9 | LAVEN DR. | 103+31.73 | LEFT | Typical Residential | 17 | 5 | 14 | 5.42 | 12.00 | 2.74 | Flex Base |
| 57 | 10 | LAVEN DR. | 104+34.40 | RIGHT | Typical Residential | 24 | 5 | 20 | 5.42 | 13.22 | 9.35 | Concrete |
| 57 | 11 | LAVEN DR. | 104+86.49 | RIGHT | Typical Residential | 24 | 5 | 20 | 5.42 | 14.00 | 6.49 | Concrete |
| 57 | 12 | LAVEN DR. | 105+43.88 | RIGHT | Typical Residential | 21 | 5 | 18 | 5.42 | 12.35 | 2.93 | Concrete |
| 57 | 13 | LAVEN DR. | 105+98.21 | RIGHT | Typical Residential | 20 | 5 | 17 | 5.42 | 14.00 | 5.86 | Concrete |
| 57 | 14 | LAVEN DR. | 106+59.85 | LEFT | Typical Residential | 12 | 5 | 10 | 4.65 | 12.00 | 3.93 | Concrete |
| 57 | 15 | LAVEN DR. | 106+78.17 | LEFT | Typical Residential | 15 | 5 | 12 | 5.42 | 12.00 | 5.08 | Concrete |

PETTUS ST. :

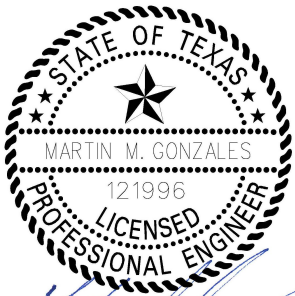
| DRIVEWAY SUMMARY | | | | | | | | | | | | |
|------------------|-----------------|--------------|-----------------|-------|---------------------|------------------------------------|-----------------------|----------------------|------------------------------|--------------------|-----------------------------|---------------------------------|
| PLAN SHEET NO. | DRIVEWAY NUMBER | BASLINE NAME | BASLINE STATION | SIDE | DRIVEWAY TYPE | ITEM 530 6004 DRIVEWAY (CONC) (SY) | SIDEWALK WIDTH S (FT) | DRIVWAY WIDTH W (FT) | DRIVEWAY APRON LENGTH L (FT) | DRIVEWAY SLOPE (%) | DRIVEWAY PENETRATION P (FT) | EXISTING DRIVEWAY MATERIAL TYPE |
| 58 | 16 | PETTUS ST. | 11+12.69 | RIGHT | Typical Residential | 15 | 5 | 12 | 5.42 | 14 | 1.16 | Concrete |
| 58 | 17 | PETTUS ST. | 11+86.55 | LEFT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 3.75 | Flex Base |
| 58 | 18 | PETTUS ST. | 12+41.59 | LEFT | Typical Residential | 18 | 5 | 15 | 5.42 | 14 | 1.9 | Flex Base |
| 58 | 19 | PETTUS ST. | 12+93.58 | LEFT | Typical Residential | 15 | 5 | 12 | 5.42 | 14 | 10.02 | Flex Base |
| 58 | 20 | PETTUS ST. | 13+47.42 | LEFT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 7.93 | Concrete |
| 58 | 21 | PETTUS ST. | 13+49.77 | RIGHT | Typical Residential | 16 | 5 | 13 | 5.42 | 14 | 0 | Concrete |
| 58 | 22 | PETTUS ST. | 13+63.84 | LEFT | Typical Residential | 14 | 5 | 11 | 5.42 | 14 | 10.49 | Concrete |
| 58 | 23 | PETTUS ST. | 13+94.80 | LEFT | Typical Residential | 15 | 5 | 12 | 5.42 | 14 | 6.5 | Flex Base |
| 59 | 24 | PETTUS ST. | 14+30.53 | LEFT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 8.45 | Flex Base |
| 59 | 25 | PETTUS ST. | 14+51.06 | RIGHT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 0 | Flex Base |
| 59 | 26 | PETTUS ST. | 14+99.80 | RIGHT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 0 | Flex Base |
| 59 | 27 | PETTUS ST. | 15+43.79 | RIGHT | Typical Residential | 18 | 5 | 15 | 5.42 | 14 | 0 | Asphalt |
| 59 | 28 | PETTUS ST. | 17+09.64 | LEFT | Typical Residential | 20 | 5 | 17 | 5.42 | 14 | 8.67 | Concrete |
| 59 | 29 | PETTUS ST. | 17+17.57 | RIGHT | Typical Residential | 17 | 5 | 14 | 5.42 | 14 | 0.75 | Concrete |
| 59 | 30 | PETTUS ST. | 17+58.00 | LEFT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 8.65 | Asphalt |
| 59 | 31 | PETTUS ST. | 17_80.72 | RIGHT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 0.35 | Concrete |
| 60 | 32 | PETTUS ST. | 18+10.17 | LEFT | Typical Residential | 14 | 5 | 11 | 5.42 | 12.64 | 6.57 | Asphalt |
| 60 | 33 | PETTUS ST. | 18+54.78 | RIGHT | Typical Residential | 27 | 5 | 23 | 5.42 | 14 | 1.86 | Concrete |
| 60 | 34 | PETTUS ST. | 18+81.42 | LEFT | Typical Residential | 25 | 5 | 21 | 5.42 | 14 | 4.91 | Concrete |
| 60 | 35 | PETTUS ST. | 19+12.46 | RIGHT | Typical Residential | 15 | 5 | 12 | 5.42 | 14 | 4.03 | Flex Base |
| 60 | 36 | PETTUS ST. | 19+16.12 | LEFT | Typical Residential | 24 | 5 | 20 | 5.42 | 14 | 1.62 | Concrete |
| 60 | 37 | PETTUS ST. | 19+59.64 | RIGHT | Typical Residential | 15 | 5 | 12 | 5.42 | 14 | 5.33 | Flex Base |
| 60 | 38 | PETTUS ST. | 20+01.79 | LEFT | Typical Residential | 25 | 5 | 21 | 5.42 | 14 | 1 | Flex Base |
| 60 | 39 | PETTUS ST. | 20+11.21 | RIGHT | Typical Residential | 15 | 5 | 12 | 5.42 | 14 | 5.13 | Asphalt |
| 60 | 40 | PETTUS ST. | 20+59.10 | LEFT | Typical Residential | 19 | 5 | 16 | 5.42 | 14 | 0.74 | Flex Base |
| 60 | 41 | PETTUS ST. | 20+58.09 | RIGHT | Typical Residential | 16 | 5 | 13 | 5.42 | 14 | 8.7 | Flex Base |
| 60 | 41A | PETTUS ST. | 21+13.07 | LEFT | Typical Residential | 16 | 5 | 13 | 5.42 | 14 | 1.41 | Flex Base |
| 60 | 42 | PETTUS ST. | 21+48.22 | LEFT | Typical Residential | 20 | 5 | 17 | 5.42 | 14 | 2.56 | Flex Base |
| 61 | 43 | PETTUS ST. | 22+02.32 | RIGHT | Typical Residential | 14 | 5 | 11 | 5.42 | 14 | 4.06 | Asphalt |
| 61 | 44 | PETTUS ST. | 22+09.45 | LEFT | Typical Residential | 17 | 5 | 14 | 5.42 | 14 | 2.53 | Flex Base |
| 61 | 45 | PETTUS ST. | 22+62.45 | RIGHT | Typical Residential | 15 | 5 | 12 | 5.42 | 14 | 3.70 | Flex Base |
| 61 | 46 | PETTUS ST. | 22+58.53 | LEFT | Typical Residential | 15 | 5 | 12 | 5.42 | 14 | 2.65 | Flex Base |
| 61 | 47 | PETTUS ST. | 23+59.04 | RIGHT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 4 | Concrete |
| 61 | 48 | PETTUS ST. | 23+00.96 | LEFT | Typical Residential | 20 | 5 | 17 | 5.42 | 14 | 1.44 | Concrete |
| 61 | 49 | PETTUS ST. | 23+84.09 | RIGHT | Typical Residential | 19 | 5 | 16 | 5.42 | 14 | 4.73 | Flex Base |
| 61 | 50 | PETTUS ST. | 24+02.99 | LEFT | Typical Residential | 16 | 5 | 13 | 5.42 | 14 | 1.14 | Flex Base |
| 61 | 51 | PETTUS ST. | 24+45.54 | RIGHT | Typical Residential | 20 | 5 | 17 | 5.42 | 14 | 5.91 | Concrete |
| 61 | 52 | PETTUS ST. | 24+82.49 | LEFT | Typical Residential | 14 | 5 | 11 | 5.42 | 12.84 | 1.73 | Concrete |



TYPICAL DRIVEWAY PLAN VIEW
WITH SIDEWALK ABUTTING CURB
N.T.S.



TYPICAL DRIVEWAY SECTION
WITH SIDEWALK ABUTTING CURB
N.T.S.



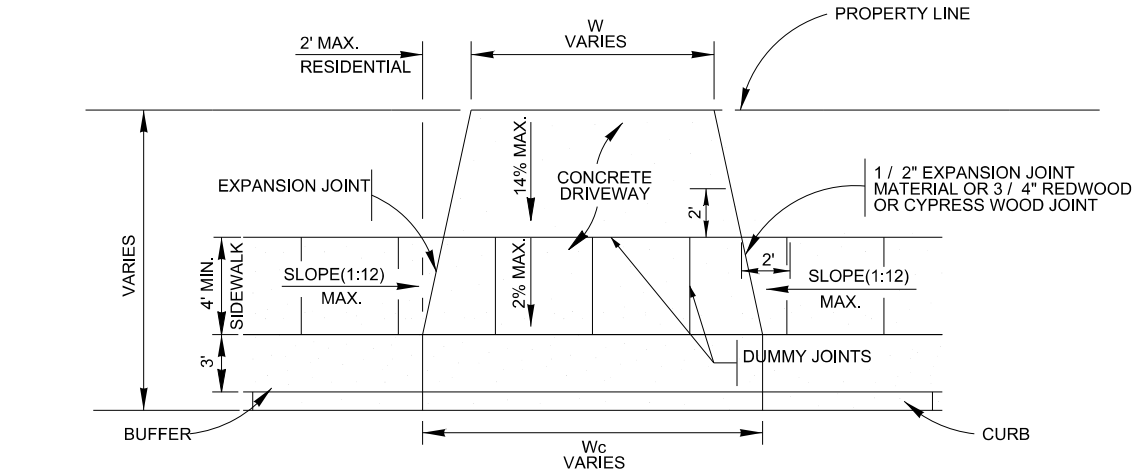
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| NO. | REVISION | BY | DATE |
| <div><div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div><div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS DRIVEWAY SUMMARY | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 11 |

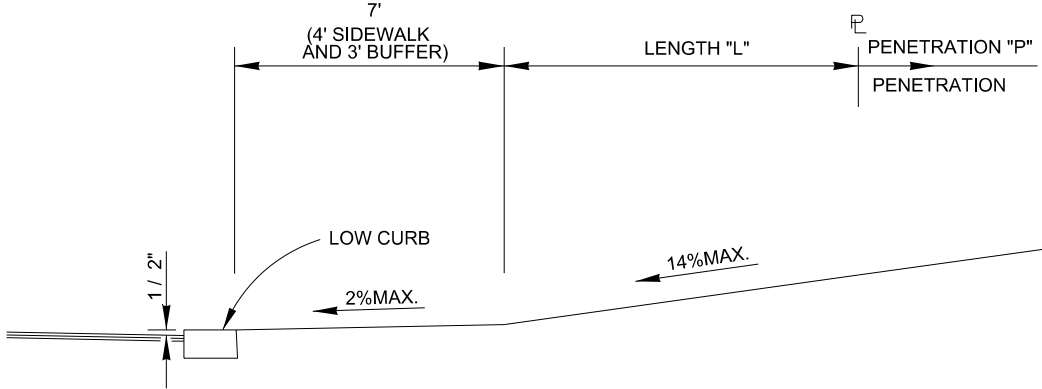
DRIVEWAY SUMMARY:

RITA AVE :

| DRIVEWAY SUMMARY | | | | | | | | | | | | |
|------------------|-----------------|---------------|------------------|-------|---------------------|------------------------------------|----------------------|-----------------------|------------------------------|--------------------|-----------------------------|---------------------------------|
| PLAN SHEET NO. | DRIVEWAY NUMBER | BASELINE NAME | BASELINE STATION | SIDE | DRIVEWAY TYPE | ITEM 530 6004 DRIVEWAY (CONC) (SY) | SIDEWALK WIDTHS (FT) | DRIVEWAY WIDTH W (FT) | DRIVEWAY APRON LENGTH L (FT) | DRIVEWAY SLOPE (%) | DRIVEWAY PENETRATION P (FT) | EXISTING DRIVEWAY MATERIAL TYPE |
| 64 | 52 A | RITA ST. | 10+23.14 | LEFT | Typical Residential | 17 | 5 | 14 | 5.42 | 14 | 4.90 | Concrete |
| 64 | 53 | RITA ST. | 10+30.14 | RIGHT | Typical Residential | 21 | 5 | 18 | 5.42 | 12 | 4.79 | Concrete |
| 64 | 54 | RITA ST. | 10+67.57 | LEFT | Typical Residential | 18 | 5 | 15 | 5.42 | 14 | 7.04 | Concrete |
| 64 | 55 | RITA ST. | 10+68.42 | RIGHT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 0 | Flex base |
| 64 | 56 | RITA ST. | 10+93.46 | LEFT | Typical Residential | 19 | 5 | 16 | 5.42 | 12 | 7.94 | Concrete |
| 64 | 57 | RITA ST. | 11+14.10 | LEFT | Typical Residential | 18 | 5 | 15 | 5.42 | 12 | 0.50 | Concrete |
| 64 | 58 | RITA ST. | 11+33.10 | RIGHT | Typical Residential | 34 | 5 | 30 | 5.42 | 12 | 2.76 | Concrete |
| 64 | 59 | RITA ST. | 11+93.28 | LEFT | Typical Residential | 19 | 5 | 16 | 5.42 | 14 | 8.26 | Concrete |
| 64 | 60 | RITA ST. | 12+14.93 | LEFT | Typical Residential | 17 | 5 | 14 | 5.42 | 14 | 4.63 | Concrete |
| 64 | 61 | RITA ST. | 12+91.10 | RIGHT | Typical Residential | 14 | 5 | 11 | 5.42 | 12 | 1.85 | Flex base |
| 64 | 62 | RITA ST. | 12+92.38 | LEFT | Typical Residential | 19 | 5 | 16 | 5.42 | 2 | 5.25 | Asphalt |
| 64 | 63 | RITA ST. | 13+42.83 | RIGHT | Typical Residential | 30 | 5 | 26 | 5.42 | 14 | 5.85 | Asphalt |
| 64 | 64 | RITA ST. | 13+66.17 | LEFT | Typical Residential | 16 | 5 | 15 | 5.42 | 14 | 3.32 | Asphalt |
| 64 | 64 A | RITA ST. | 13+73.51 | RIGHT | Typical Residential | 16 | 5 | 15 | 5.42 | 12 | 2.74 | Asphalt |
| 65 | 65 | RITA ST. | 14+08.97 | RIGHT | Typical Residential | 16 | 5 | 13 | 5.42 | 12 | 2.32 | Asphalt |
| 65 | 66 | RITA ST. | 15+66.57 | LEFT | Typical Commercial | 22 | 5 | 19 | 5.42 | 12 | 2.58 | Asphalt |
| 65 | 67 | RITA ST. | 15+49.06 | RIGHT | Typical Residential | 15 | 5 | 12 | 5.42 | 14 | 16.58 | Flex base |
| 65 | 68 | RITA ST. | 16+01.60 | LEFT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 5.70 | Asphalt |
| 65 | 69 | RITA ST. | 16+55.49 | LEFT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 4.40 | Flex base |
| 65 | 70 | RITA ST. | 16+79.17 | RIGHT | Typical Commercial | 25 | 5 | 21 | 5.42 | 14 | 11.89 | Asphalt |
| 65 | 71 | RITA ST. | 17+07.86 | LEFT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 6.17 | Asphalt |
| 65 | 72 | RITA ST. | 17+02.93 | RIGHT | Typical Residential | 18 | 5 | 15 | 5.42 | 14 | 8.61 | Asphalt |
| 65 | 73 | RITA ST. | 17+58.46 | LEFT | Typical Residential | 13 | 5 | 10 | 5.42 | 12 | 4.52 | Flex base |
| 65 | 74 | RITA ST. | 17+37.85 | RIGHT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 7.50 | Asphalt |
| 65 | 75 | RITA ST. | 18+10.44 | LEFT | Typical Residential | 20 | 5 | 17 | 5.42 | 12 | 3.33 | Flex base |
| 66 | 76 | RITA ST. | 17+91.74 | RIGHT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 6.87 | Flex base |
| 66 | 77 | RITA ST. | 18+58.98 | LEFT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 2.33 | Flex base |
| 66 | 78 | RITA ST. | 18+61.75 | RIGHT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 2.34 | Flex base |
| 66 | 79 | RITA ST. | 19+15.74 | LEFT | Typical Residential | 13 | 5 | 29 | 5.42 | 14 | 1.81 | Flex base |
| 66 | 80 | RITA ST. | 19+06.04 | RIGHT | Typical Residential | 13 | 5 | 14 | 5.42 | 14 | 4.00 | Flex base |
| 66 | 81 | RITA ST. | 19+78.05 | LEFT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 0 | Flex base |
| 66 | 82 | RITA ST. | 19+75.95 | RIGHT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 0.81 | Flex base |
| 66 | 83 | RITA ST. | 20+20.72 | LEFT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 1.17 | Flex base |
| 66 | 84 | RITA ST. | 20+26.73 | RIGHT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 2.60 | Flex base |
| 66 | 85 | RITA ST. | 20+71.43 | LEFT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 4.47 | Flex base |
| 66 | 86 | RITA ST. | 21+03.05 | RIGHT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 2.31 | Asphalt |
| 66 | 87 | RITA ST. | 21+19.31 | LEFT | Typical Residential | 13 | 5 | 10 | 5.42 | 14 | 4.54 | Asphalt |
| 66 | 88 | RITA ST. | 21+44.18 | RIGHT | Typical Residential | 15 | 5 | 12 | 5.42 | 14 | 2.60 | Concrete |
| 66 | 89 | RITA ST. | 21+76.38 | LEFT | Typical Residential | 14 | 5 | 11 | 5.42 | 14 | 3.28 | Flex base |
| 67 | 90 | RITA ST. | 22+21.77 | RIGHT | Typical Residential | 12 | 5 | 12 | 3.71 | 14 | 7.88 | Flex base |
| 67 | 91 | RITA ST. | 22+23.71 | LEFT | Typical Residential | 19 | 5 | 16 | 5.42 | 14 | 6.29 | Flex base |
| 67 | 92 | RITA ST. | 23+01.02 | RIGHT | Typical Residential | 13 | 5 | 14 | 5.42 | 12 | 4.58 | Flex base |
| 67 | 93 | RITA ST. | 22+98.84 | LEFT | Typical Residential | 15 | 5 | 16 | 5.42 | 12 | 1.34 | Flex base |
| 67 | 94 | RITA ST. | 23+29.90 | RIGHT | Typical Residential | 17 | 5 | 14 | 5.42 | 12 | 2.60 | Flex base |
| 67 | 95 | RITA ST. | 23+22.29 | LEFT | Typical Residential | 13 | 5 | 10 | 5.42 | 12 | 6.52 | Flex base |



TYPICAL DRIVEWAY PLAN VIEW
WITH SIDEWALK ABUTTING CURB
N.T.S.



TYPICAL DRIVEWAY SECTION
WITH SIDEWALK ABUTTING CURB
N.T.S.



5.28.25

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| NO. | REVISION | BY | DATE |
| <div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div> <div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS DRIVEWAY SUMMARY | | | |
| 100% SUBMITTAL DRWN. BY: SS | PROJECT NO: 23-03873 DSGN. BY: SS | DATE: 05/28/2025 CHKD. BY: MG | SHEET NO: 12 |

5/22/2025 11:52:18 AM R:\ESC 23004 Culebra Part Area Street (CoSA)\07_Sheets\01_General\FRONT END SHEETS\CULEBRA GENERAL NOTES.dgn

GENERAL NOTES

1. ALL CONSTRUCTION SHALL CONFORM TO THE CITY OF SAN ANTONIO STANDARD SPECIFICATIONS FOR CONSTRUCTION JUNE 2008, OR LATEST.

2. NO EXTRA PAYMENT SHALL BE ALLOWED FOR WORK CALLED FOR ON THE PLANS, BUT NOT INCLUDED IN THE BID PROPOSAL. THIS INCIDENTAL WORK WILL BE REQUIRED AND SHALL BE INCLUDED IN THE PAY ITEM TO WHICH IT RELATES.

3. THE CONTRACTOR SHALL PROVIDE ACCESS FOR THE DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE.

4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING TO ITS ORIGINAL OR BETTER CONDITION ANY DAMAGE DONE TO EXISTING FENCES, CONCRETE ISLANDS, STREET PAVING, CURBS, SHRUBS, BUSHES OR DRIVEWAYS. (NO SEPARATE PAY ITEM).

5. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SEE THAT ALL SIGNS AND BARRICADES ARE PROPERLY INSTALLED AND MAINTAINED. ALL LOCATIONS AND DISTANCES WILL BE DECIDED UPON IN THE FIELD BY THE CONTRACTOR, USING THE "TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". THE CITY'S CONSTRUCTION INSPECTOR AND TRAFFIC ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT BARRICADES AND SIGNS. IF, IN THE OPINION OF THE TRAFFIC ENGINEERING REPRESENTATIVE AND THE CONSTRUCTION INSPECTOR, THE BARRICADES AND SIGNS DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE CONSTRUCTION INSPECTOR SHALL HAVE THE OPTION TO STOP OPERATIONS UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED.

6. IF THE NEED ARISES, ADDITIONAL BARRICADES AND DIRECTIONAL DEVICES MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.

7. DUE TO FEDERAL REGULATIONS TITLE 49, PART 192.171 C.P.S. MUST MAINTAIN ACCESS TO GAS VALVES AT ALL TIMES. THE CONTRACTOR MUST PROTECT AND WORK AROUND ANY GAS VALVES THAT ARE IN THE PROJECT AREA.

8. CONTRACTOR SHALL NOTIFY THE CITY INSPECTOR TWENTY FOUR (24) HOURS PRIOR TO BACKFILL OF ANY UTILITY TRENCHES TO SCHEDULE FOR DENSITY TEST AS REQUIRED.

9. CONTRACTOR SHALL PRESERVE ALL CONSTRUCTION STAKES, MARKS, ETC. IF ANY ARE DESTROYED OR REMOVED BY THE CONTRACTOR OR HIS EMPLOYEES, THEY SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

10. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION TO DETERMINE THE LOCATION OF EXISTING UTILITIES. CONTRACTOR SHALL NOTIFY THE FOLLOWING AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO EXCAVATION OPERATION:

SAN ANTONIO WATER SYSTEM (SAWS)WWW.SAWS.ORG/SERVICE/LOCATES-SERVICE/
TEXAS 811 ONE CALL SYSTEM811 OR HTTPS://TEXAS811.ORG
- CPS ENERGY
- COSA DRAINAGE
- COSA SIGNAL OPERATIONS
- TELECOMMUNICATIONS(I.E., SPECTRUM(CHARTER), AT&T, GOOGLE FIBER,ETC.)

11. THE EXISTENCE AND LOCATION OF UNDERGROUND UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM AVAILABLE RECORDS AND ARE NOT GUARANTEED, BUT SHALL BE INVESTIGATED AND VERIFIED BY THE CONTRACTOR BEFORE STARTING WORK. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY DAMAGE TO AND FOR THE MAINTENANCE AND PROTECTION OF THE EXISTING UTILITIES EVEN IF THEY ARE NOT SHOWN ON THE PLANS. LOCATION AND DEPTH OF EXISTING UTILITIES SHOWN HERE ARE APPROXIMATE ONLY. ACTUAL LOCATIONS AND DEPTHS MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION AND HE SHALL BE RESPONSIBLE FOR PROTECTION OF SAME DURING CONSTRUCTION.

12. ALL WASTE MATERIAL SHALL BECOME PROPERTY OF THE CONTRACTOR AND SHALL BE HIS SOLE RESPONSIBILITY TO DISPOSE OF THIS MATERIAL OFF THE LIMITS OF THE PROJECT. NO WASTE MATERIAL SHALL BE PLACED IN EXISTING LOWS THAT WILL BLOCK OR ALTER FLOW LIMITS OF EXISTING ARTIFICIAL OR NATURAL DRAINAGE.

13. THE CONTRACTOR SHALL NOT PLACE ANY WASTE MATERIAL IN THE 100-YEAR FLOOD PLAIN WITHOUT FIRST OBTAINING AN APPROVED FLOOD PLAIN DEVELOPMENT PERMIT.

14. THE CONTRACTOR SHALL MAINTAIN ALL ADJOINING STREETS AND TRAVELED ROUTES FREE FROM SPILLED AND /OR TRACKED CONSTRUCTION MATERIALS AND /OR DEBRIS.

15. IF THE CONTRACTOR ENCOUNTERS ANY ARCHAEOLOGICAL DEPOSITS DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR MUST STOP EXCAVATION IMMEDIATELY, CONTACT THE CITY INSPECTOR, AND CALL THE CITY HISTORIC PRESERVATION OFFICE AT 207-5421 FOR AN ARCHAEOLOGICAL INVESTIGATION. THE CONTRACTOR CANNOT BEGIN EXCAVATION AGAIN WITHOUT WRITTEN PERMISSION FROM THE CITY.

IF MORE THAN THREE (3) DAYS ARE REQUIRED FOR INVESTIGATION (NOT INCLUDING HOLIDAY AND WEEKENDS) AND IF THE CONTRACTOR IS UNABLE TO WORK IN OTHER AREAS, THEN THE CONTRACTOR WILL BE ALLOWED TO NEGOTIATE FOR ADDITIONAL CONSTRUCTION TIME UPON WRITTEN REQUEST WITHIN TEN (10) DAYS AFTER THE FIRST NOTICE TO THE CITY OF ARCHAEOLOGICAL INVESTIGATION FOR EACH EVENT.

IF THE TIME REQUIRED FOR INVESTIGATION IS LESS THAN OR EQUAL TO THREE (3) DAYS FOR EACH EVENT, CONTRACT DURATION WILL NOT BE EXTENDED.

16. IF SUSPECTED CONTAMINATION IS ENCOUNTERED DURING CONSTRUCTION OPERATIONS, C.O.S.A. SHALL BE NOTIFIED IMMEDIATELY WHEN CONTAMINATED SOILS AND /OR GROUNDWATER ARE ENCOUNTERED AT LOCATIONS NOT IDENTIFIED IN THE PLANS. THE NOTIFICATION SHOULD INCLUDE THE STATION NUMBER, TYPE OF CONTAMINATED MEDIA, EVIDENCE OF CONTAMINATION AND MEASURES TAKEN TO CONTAIN THE CONTAMINATED MEDIA AND PREVENT PUBLIC ACCESS. THE CONTAMINATED SOIL AND /OR GROUNDWATER SHALL NOT BE REMOVED FROM THE LOCATION WITHOUT PRIOR C.O.S.A. APPROVAL.

THE CONTRACTOR MUST STOP THE EXCAVATION IMMEDIATELY AND CONTACT THE C.O.S.A. INSPECTOR. THE CONTRACTOR CANNOT BEGIN EXCAVATION ACTIVITIES WITHOUT WRITTEN PERMISSION FROM THE CITY.

17. CONTRACTOR IS TO INCLUDE A MAILBOX POST BLOCKOUT FOR VACANT LOTS AND ALL RESIDENCES WHICH DO NOT HAVE MAILBOXES AT THE CURB. BLOCKOUTS ARE PROVIDED FOR FUTURE USE BY THE POST OFFICE.

18. CONTRACTOR SHALL NOT REMOVE OR ADJUST ANY VIA FACILITIES. THE CONTRACTOR MUST CONTACT VIA FOURTEEN DAYS PRIOR, FOR THE REMOVAL OF BENCHES, STOP POLES OR ANY OTHER VIA FACILITIES THAT MAY BE PRESENT. PLEASE PROVIDE THIRTY DAYS PRIOR NOTICE FOR SHELTER REMOVAL (TELEPHONE NOS: (210) 362-2155 OR (210) 362-2096). THE CONTRACTOR WILL BE LIABLE FOR ANY DAMAGES TO VIA FACILITIES NOT REMOVED BY VIA. THE CONTRACTOR IS REQUIRED TO REPLACE ALL FLATWORK REMOVED OR DAMAGED IN THE COURSE OF EXECUTING THE CONTRACT UNLESS OTHERWISE NOTED BY VIA. THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING VIA FACILITIES IF ADJACENT TO WORK AREA.

TREE PROTECTION AND PRESERVATION GENERAL NOTES

1. NO UTILITY OR STREET EXCAVATION WORK SHALL BEGIN IN AREAS WHERE TREE PRESERVATION AND TREATMENT MEASURES HAVE NOT BEEN COMPLETED AND APPROVED.

2. TREE PROTECTION FENCING SHALL BE REQUIRED. TREE PROTECTION FENCING SHALL BE INSTALLED, MAINTAINED AND REPAIRED BY THE CONTRACTOR DURING SITE CONSTRUCTION. DURING CONSTRUCTION ACTIVITY, AT LEAST A SIX-INCH LAYER OF COARSE MULCH SHALL BE PLACED AND MAINTAINED OVER THE ROOT PROTECTION ZONE (NO SEPARATE PAY ITEM).

3. THE CONTRACTOR SHALL AVOID CUTTING ROOTS LARGER THAN ONE INCH IN DIAMETER WHEN EXCAVATING NEAR EXISTING TREES. EXCAVATION IN THE VICINITY OF TREES SHALL PROCEED WITH CAUTION. THE CONTRACTOR SHALL CONTACT THE CITY INSPECTOR FOR GUIDANCE.

4. ROOTS WILL BE CUT WITH A ROCK SAW OR BY HAND, NOT BY AN EXCAVATOR OR OTHER ROAD CONSTRUCTION EQUIPMENT.

5. ALL CURB AND SIDEWALK WORK SHALL USE ALTERNATIVE CONSTRUCTION METHODS TO MINIMIZE EXTENSIVE ROOT DAMAGE TO TREES (REFER TO DETAILS).

6. EXPOSED ROOTS SHALL BE COVERED AT THE END OF THE DAY USING TECHNIQUES SUCH AS COVERING WITH SOIL, MULCH, OR WET BURLAP.

7. NO EQUIPMENT, VEHICLES OR MATERIALS SHALL OPERATE OR BE STORED WITHIN THE ROOT PROTECTION ZONE OF ANY TREE NEAR THE PROJECT. ROOT PROTECTION ZONE IS 1 FOOT OF RADIUS PER INCH OF TREE'S DIAMETER. A 10-INCH DIAMETER TREE WOULD HAVE A 10 FOOT RADIUS ROOT PROTECTION ZONE AROUND THE TREE. ROOTS OR BRANCHES IN CONFLICT WITH THE CONSTRUCTION SHALL BE CUT CLEANLY ACCORDING TO PROPER PRUNING METHODS. OAK WOUNDS SHALL BE PAINTED OVER WITHIN 30 MINUTES TO PREVENT OAK WILT.

8. SAPLINGS, SHRUBS OR BUSHES TO BE CLEARED FROM THE PROTECTED ROOT ZONE AREA OF A LARGE TREE SHALL BE REMOVED BY HAND AS DESIGNATED BY THE INSPECTOR.

9. NO WIRES, NAILS OR OTHER MATERIAL MAY BE ATTACHED TO PROTECTED TREES.

10. TREES, TREE LIMBS, BUSHES AND SHRUBS LOCATED IN THE CITY STREET OR ALLEY RIGHT-OF-WAY OR PERMANENT EASEMENTS WHICH INTERFERE WITH PROPOSED CONSTRUCTION ACTIVITIES SHALL BE PROPERLY PRUNED FOLLOWING THE ANSI A-300 STANDARDS FOR PRUNING. ALL TREE PRUNING SHALL BE COMPLETED BY A CITY OF SAN ANTONIO TREE MAINTENANCE LICENSED CONTRACTOR (ARTICLE 21-171, CITY CODE) ONLY AFTER APPROVAL FROM THE CAPITAL PROJECTS MANAGEMENT THROUGH THE INSPECTOR.

11. NO EXCESSIVE TREE TRIMMING WILL BE PERMITTED.

12. ALL DEBRIS GENERATED BY THE PRUNING AND TRIMMING OF THE TREES AND/OR BUSHES SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF PROPERLY (NO SEPARATE PAY ITEM).

13. TREES MUST BE MAINTAINED IN GOOD HEAL TH THROUGHOUT THE CONSTRUCTION PROCESS. MAINTENANCE MAY INCLUDE, BUT NOT LIMITED TO: WATERING THE ROOT PROTECTION ZONE, WASHING FOLIAGE, FERTILIZATION, PRUNING, ADDITIONAL MULCH APPLICATIONS AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT.

14. ANY TREE REMOVAL SHALL BE APPROVED BY THE CITY ARBORIST. (207-0278)

15. TREES WHICH ARE DAMAGED OR LOST DUE TO THE CONTRACTOR'S NEGLIGENCE DURING CONSTRUCTION SHALL BE MITIGATED TO THE CITY'S SATISFACTION.

16. TREE PLANTING FOR MITIGATION OR ENHANCEMENT: ALL PLANTED TREES SHALL BE MAINTAINED IN A HEALTHY CONDITION AT ALL TIMES. THIS INCLUDES IRRIGATION, FERTILIZING, PRUNING AND OTHER MAINTENANCE AS NEEDED ON THE PROJECT. TREES THAT DIE WITHIN TWELVE (12) MONTHS SHALL BE REPLACED WITH A TREE OF EQUAL SIZE AND SPECIES.

ACCESSIBILITY REQUIREMENTS

1. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN VEHICULAR AND PEDESTRIAN ACCESS AT ALL TIMES TO LOCAL RESIDENCES AND BUSINESSES.

2. WHEN THE WORK REQUIRES THE EXCAVATION OF THE STREET AND THE REMOVAL OF THE EXISTING DRIVEWAY APPROACHES AND SIDEWALKS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY ALL-WEATHER ACCESS TO THE BUSINESSES AND RESIDENCES. THE TEMPORARY DRIVEWAY APPROACHES SHALL BE CONSTRUCTED WITH FLEXIBLE BASE OR GRAVEL MATERIAL AT NO SEPARATE COST TO THE CITY.

3. PRIOR TO INITIATING THE CONSTRUCTION OF NEW DRIVEWAY APPROACHES, THE CONTRACTOR SHALL GIVE ADVANCE WARNING IN PERSON, OR IN WRITING, OF AT LEAST 48 HOURS TO EACH RESIDENCE THAT WILL BE IMMEDIATELY AFFECTED, SO THAT ALTERNATE PLANS MAY BE MADE BY THE RESIDENTS.COORDINATED WITH PROPERTY OWNERS WHEN ACCESSING PROPERTY OUTSIDE OF ROW FOR DRIVEWAY PENETRATION.

4. FOR BUSINESSES WITH MORE THAN ONE DRIVEWAY, AT LEAST ONE DRIVEWAY SHALL REMAIN OPEN WHILE THE OTHER NEW DRIVEWAY APPROACHES ARE CONSTRUCTED. FOR BUSINESSES WITH ONLY ONE DRIVEWAY, THE NEW DRIVEWAY APPROACH SHALL BE CONSTRUCTED IN HALF WIDTHS, UNLESS A TEMPORARY ASPHALT DRIVEWAY IS FIRST INSTALLED AT NO SEPARATE COST TO THE CITY.

| | | | |
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| <div>3</div> | | | |
| <div>2</div> | | | |
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| NO. | REVISION | BY | DATE |
| <div><div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div></div></div><div><div>4800 FREDERICKSBURG RD SUITE 200SL</div><div>SAN ANTONIO, TX 78229</div><div>P:210-208-9400 F:210-208-9401</div><div>TBPE #F-21809</div><div>TBPLS #10194622</div></div></div></div> | | | |
| <div>CITY OF SAN ANTONIO</div> <div>PUBLIC WORKS DEPARTMENT</div> | | | |
| <div>CULEBRA AREA STREETS</div> <div>GENERAL NOTES</div> | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 13 |

STORM WATER NOTES:

1. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN ALL REQUIRED STORM WATER PERMITS, FEES, AND APPROVALS. NO CONSTRUCTION OR FABRICATION SHALL BEGIN UNTIL THE CONTRACTOR HAS RECEIVED AND THOROUGHLY REVIEWED ALL PERMITS REQUIRED FOR CONSTRUCTION IN DRAINAGE EASEMENTS, RIGHT-OF-WAYS, AND FLOODPLAINS.
2. THE CONTRACTOR SHALL NOTIFY STORM WATER ENGINEERING AT LEAST 24 HOURS PRIOR TO THE INSTALLATION OF AN DRAINAGE FACILITY WITHIN A DRAINAGE EASEMENT OR STREET RIGHT-OF-WAY NOT INDICATED ON THE CONSTRUCTION PLANS.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING EXISTING DRAINAGE FACILITIES FROM DAMAGE. ANY DAMAGE TO EXISTING DRAINAGE SYSTEMS, WHETHER OR NOT SHOWN ON THE PLANS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AT HIS EXPENSE. THE CONTRACTOR SHALL NOTIFY STORM WATER ENGINEERING AT 210-206-8433 AS SOON AS CONFLICTS WITH UTILITIES ARE ENCOUNTERED OR ANY DRAINAGE SYSTEM IS DAMAGED DURING CONSTRUCTION.
4. CONSTRUCTION SPOILS WILL NOT BE ALLOWED TO BE DEPOSITED ANYWHERE WITHIN A DRAINAGE EASEMENT, RIGHT-OF-WAY, OR FLOODPLAIN WITHIN THE LIMITS OF THE PROJECT AND SHALL BE DISPOSED OFFSITE IN COMPLIANCE WITH CURRENT APPLICABLE REGULATIONS.
5. NO STRUCTURE, FENCES, WALLS, LANDSCAPING, OR OTHER OBSTRUCTION THAT IMPEDE DRAINAGE SHALL BE PLACED WITHIN THE LIMITS OF THE DRAINAGE EASEMENTS SHOWN ON THE CONSTRUCTION DOCUMENTS.
6. UPON COMPLETION OF TRENCHING, THE AREA WILL BE BACKFILLED AND COMPACTED TO ITS ORIGINAL CONDITION. TRENCHES/BORE PITS TO BE OPEN AND UNATTENDED LONGER THAN 24 HOURS SHALL BE PROTECTED TO WITHSTAND ALL HYDRODYNAMIC AND HYDROSTATIC FORCES AND PREVENT DOWNSTREAM IMPACTS. TRENCHES/BORE PITS TO BE OPEN LONGER THAN 30 DAYS AFTER STARTING EXCAVATION SHALL BE BACKFILLED WITH A SEMI-PERMANENT REPAIR BACKFILL.


ENGINEERS NOTES:

1. IDENTIFY IN ADVANCE NEED FOR POLE BRACING. EXCAVATION WITHIN 5' EXISTING CPS POLE MORE 2' DEEP.
2. CONTACT CPS ENERGY UTILITY COORDINATION TO REQUEST POLE BRACING: JOHN OFFER JEOFFER@CPSENERGY.COM OR CLAUDIA VALLES-TOVAR CVALLES-TOVA@CPSENERGY.COM
3. UTILITY COORDINATION GROUP WILL SET UP MEETING WITH CONTRACTOR AND CPS OVERHEAD ENGINEERING TO EVALUATE SITE.
4. *CPS OVERHEAD ENGINEERING WILL BEGIN DESIGN OF POLE BRACING.
5. ** CPS OVERHEAD ENGINEERING WILL PROVIDE ESTIMATED COST FOR POLE BRACING.
6. CONTRACTOR SUBMITS PAYMENT TO CPS FOR POLE BRACING.
7. ONCE PAYMENT IS RECIEVED BY CPS, CPS OVERHEAD ENGINEERING WILL FINALIZE DESIGN.
8. CPS OVERHEAD ENGINEERING WILL RELEASE DESIGN TO CPS CONSTRUCTION.
9. CPS CONSTRUCTION WILL SCHEDULE APPROPRIATE CREWS TO COMPLETE JOB.
10. CPS CONSTRUCTION COMPLETES JOB.

*CPS OVERHEAD ENGINEERING WILL ALSO DETERMINE THE NEED FOR TEMPORARY CONSTRUCTION EASEMENTS TO PROPERLY INSTALL POLE BRACING. IF TEMPORARY CONSTRUCTION EASEMENTS ARE REQUIRED, FURTHER COORDINATION WITH CPS ROW WILL BE COMPLETED TO ACQUIRE THE TEMPORARY CONSTRUCTION EASEMENTS.
**IF TEMPORARY CONSTRUCTION EASEMENTS ARE REQUIRED, THE COST ASSOCIATED TO ATTAIN THE EASEMENTS (IF ANY) WILL BE INCLUDED IN ESTIMATED COST FOR POLE BRACING PAID FOR BY THE CONTRACTOR.

- THIS ESTIMATED DURATION FOR THE PROCESS DESCRIBED ABOVE IS 6-8 WEEKS, UNLESS TEMPORARY CONSTRUCTION EASEMENTS ARE REQUIRED.
- DURATION DESCRIBED ABOVE MAY BE INCREASED IF TEMPORARY CONSTRUCTION EASEMENTS ARE REQUIRED.

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SAN ANTONIO, TX 78229
P:210-208-9400 F:210-208-9401
TBPE #F-21809
TBPLS #10194622

CITY OF SAN ANTONIO

PUBLIC WORKS DEPARTMENT

CULEBRA AREA STREETS

GENERAL NOTES

| | | |
|----------------|----------------------|------------------|
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG |
| | | SHEET NO: 14 |

5/27/2025 10:48:00 PM R:\ESC 23004 Culebra Part Area Street (CoSA)\07_Sheets\01_General\FRONT END SHEETS\COSA_CULEBRA_ESTIMATE & QUANTITIES.dgn

REMOVAL QUANTITIES

| | ITEM NO. | 103.1 | 103.3 | 507.1 | 523.1 |
|----------|-------------|--------------------------------|---|---------------------------------|---|
| | DESCRIPTION | REMOVE CONCRETE CURB (<700 LF) | REMOVE CONCRETE SIDEWALKS & DRIVEWAYS (<1,000 SF) | CHAIN LINK WIRE FENCE (4' HIGH) | ADJUSTING CHAIN LINK VEHICULAR GATE (<50 UNITS) |
| | UNIT | LF | SF | LF | EA |
| STREET | SHEET NO. | | | | |
| LAVEN | 58 | 814 | 2587 | 0 | 0 |
| | 59 | 628 | 10852 | 196 | 1 |
| PETTUS | 60 | 0 | 11 | 497 | 5 |
| | 61 | 0 | 223 | 450 | 3 |
| | 62 | 0 | 510 | 236 | 5 |
| | 63 | 73 | 542 | 256 | 4 |
| BRENDELL | 64 | 219 | 1596 | 30 | 1 |
| | 65 | 0 | 0 | 260 | 2 |
| RITA | 66 | 0 | 0 | 69 | 2 |
| | 67 | 0 | 0 | 232 | 4 |
| | 68 | 0 | 0 | 367 | 3 |
| | 69 | 0 | 0 | 13 | 1 |
| | | | | | |
| | TOTAL | 1734 | 16321 | 2606 | 31 |

ROADWAY QUANTITIES

| | ITEM NO. | 104.1 | 203.1 | 208.1 | 240.2 | 240.2 | 240.4 | 307.1 | 500.1 | 500.4 | 502.1 | 503.1 | 503.1 | 513.1 |
|----------|-------------|--|-----------|--|--|--|--|--------------------------------------|---------------------------|--------------------------------------|---|---|--|---|
| | DESCRIPTION | STREET EXCAVATION (1,000 CY < X < 10,000 CY) | TACK COAT | SALVAGE, HAULING, AND STOCKPILING RAC (2.5 INCHES DEPTH) | WARM MIX ASPHALTIC CONCRETE TYPE B (3.5" COMP DEPTH TOP) | WARM MIX ASPHALTIC CONCRETE TYPE B (1.5" COMP DEPTH TOP) | WARM MIX ASPHALTIC CONCRETE TYPE D (2.0" COMP DEPTH) | CONCRETE STRUCTURE (RETAINING WALLS) | CONCRETE CURB (<1,000 LF) | CONCRETE CURB AND GUTTER (<1,000 LF) | CONCRETE SIDEWALKS (1,000 SY < X < 10,000 SY) | PORTLAND CEMENT CONCRETE DRIVEWAYS (100 SY < X < 10,000 SY) | PORTLAND CEMENT CONCRETE DRIVEWAYS (PENETRATION) | REMOVING AND RELOCATING MAIL BOXES (< 50 UNITS) |
| | UNIT | CY | GAL | SY | SY | SY | SY | CY | LF | LF | SY | SY | SY | EA |
| STREET | SHEET NO. | | | | | | | | | | | | | |
| LAVEN | 58 | 354 | 269 | 0 | 1343 | 1500 | 1343 | 0 | 243 | 571 | 374 | 155 | 127 | 6 |
| | 59 | 300 | 227 | 276 | 1136 | 1269 | 1412 | 0 | 0 | 628 | 278 | 224 | 62 | 4 |
| PETTUS | 60 | 303 | 229 | 0 | 1147 | 1281 | 1423 | 0 | 0 | 739 | 275 | 228 | 57 | 4 |
| | 61 | 373 | 283 | 0 | 1415 | 1580 | 1691 | 0 | 0 | 811 | 308 | 239 | 40 | 9 |
| | 62 | 328 | 249 | 0 | 1244 | 1389 | 1520 | 0 | 0 | 800 | 268 | 412 | 77 | 9 |
| | 63 | 248 | 188 | 0 | 941 | 1051 | 1217 | 0 | 26 | 551 | 214 | 268 | 45 | 9 |
| BRENDELL | 64 | 348 | 263 | 0 | 1317 | 1471 | 1593 | 36 | 76 | 723 | 327 | 54 | 6 | 0 |
| | 65 | 217 | 164 | 0 | 821 | 917 | 1097 | 0 | 0 | 528 | 235 | 12 | 0 | 0 |
| RITA | 66 | 316 | 240 | 0 | 1198 | 1338 | 1474 | 0 | 30 | 771 | 231 | 483 | 108 | 5 |
| | 67 | 279 | 211 | 0 | 1057 | 1180 | 1333 | 24 | 0 | 680 | 348 | 297 | 127 | 5 |
| | 68 | 328 | 249 | 0 | 1244 | 1389 | 1520 | 0 | 0 | 800 | 287 | 333 | 34 | 13 |
| | 69 | 121 | 92 | 0 | 458 | 511 | 734 | 0 | 0 | 295 | 106 | 148 | 40 | 3 |
| | | | | | | | | | | | | | | |
| | TOTAL | 3515 | 2664 | 276 | 13321 | 14875 | 16362 | 60 | 375 | 7897 | 3251 | 2853 | 723 | 67 |

* ITEM 210 "ROLLING" IS SUBSIDIARY TO 205.2

NO.

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BY

DATE

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4800 FREDERICKSBURG RD SUITE 200SL

SAN ANTONIO, TX 78229

P:210-208-9400 F:210-208-9401

TBPE #F-21809

TBPLS #10194622

CITY OF SAN ANTONIO

PUBLIC WORKS DEPARTMENT

CULEBRA AREA STREETS

SUMMARY OF QUANTITIES

100% SUBMITTAL

PROJECT NO: 23-03873

DATE: 05/28/2025

DRWN. BY: SS

DSGN. BY: SS

CHKD. BY: MG

SHEET NO: 15

SGN & PVMT MRK QUANTITIES


| | ITEM NO. | 531.3 | 531.52 | 531.57 | 531.59 | 531.59 | 531.59 | 531.59 | 535.5 | 535.7 |
|----------|-------------|--|--|---|--|--|--|---|----------------------------|--|
| | DESCRIPTION | R1-1 STOP (30")(HIGH INTENSITY) | W13-1 ADVISORY SPEED (18"X18")(HIGH INTENSITY) | 9 INCH STREET NAME, BLOCK NUMBER (VARIES X 9")(HIGH INTENSITY) | SPECIAL SIGN (HIGH INTENSITY) (W17- 1SAa SPEED BUMP AHEAD) | SPECIAL SIGN (HIGH INTENSITY) (W17- 1SAb SPEED BUMP AHEAD) | SPECIAL SIGN (HIGH INTENSITY) (COP ON PATROL) | SPECIAL SIGN (HIGH INTENSITY) (NO DUMPING) | 12 INCH WIDE WHITE LINE | 24 INCH WIDE WHITE LINE (<1,500 LF) |
| | UNIT | EA | EA | EA | EA | EA | EA | EA | LF | LF |
| STREET | SHEET NO. | | | | | | | | | |
| LAVEN | 124 | 3 | 1 | 3 | 2 | 1 | 1 | 0 | 38 | 42 |
| PETTUS | 125 | 3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 42 |
| | 126 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 14 |
| BRENDELL | 127 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 14 |
| RITA | 128 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 28 |
| | 129 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| | | | | | | | | | | |
| | TOTAL | 11 | 1 | 7 | 2 | 1 | 1 | 1 | 38 | 154 |

DRAINAGE QUANTITIES

| | ITEM NO. | 309.1 | 309.1 | 309.1 | 309.1 | 401.1 | 401.1 | 401.1 | 401.1 | 403.12 | 403.14 | 403.2 | 403.3 | 403.7 | 407.4 | 413.2 | 550.1 |
|----------|-------------|---|---|---|---|---|---|---|---|-------------------------------------|---------------------|--|--|--------------------------------------|---------------------|-------------------------------------|--|
| | DESCRIPTION | REINFORCED CONCRETE BOX CULVERTS (3'X2') | REINFORCED CONCRETE BOX CULVERTS (3'X4') | REINFORCED CONCRETE BOX CULVERTS (4'X3') | REINFORCED CONCRETE BOX CULVERTS (4'X4') | REINFORCED CONCRETE PIPE (CLASS III) (24" DIA) | REINFORCED CONCRETE PIPE (CLASS III) (30" DIA) | REINFORCED CONCRETE PIPE (CLASS III) (36" DIA) | REINFORCED CONCRETE PIPE (CLASS III) (54" DIA) | SPECIAL INLET (COMPLETE) PAZD | INLET EXTENSIONS | JUNCTION BOX (COMPLETE) 5'X5'X5' | JUNCTION BOX (COMPLETE) 6'X6'X6' | INLET TYPE 1 (COMPLETE) (10FT) | CONCRETE COLLARS | FLOWABLE FILL (HIGH STRENGTH) | TRENCH EXCAVATION SAFTEY PROTECTION |
| | UNIT | LF | LF | LF | LF | LF | LF | LF | LF | EA | EA | EA | EA | EA | CY | CY | LF |
| STREET | SHEET NO. | | | | | | | | | | | | | | | | |
| LAVEN | 137 | 8.32 | 0 | 224.6 | 61.3 | 0 | 0 | 0 | 116.5 | 0 | 2 | 0 | 3 | 2 | 0.9 | 174 | 433 |
| LAVEN_02 | 138 | 298 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.11 | 234 | 295 |
| PETTUS | 139 | 0 | 0 | 0 | 0 | 0 | 65.3 | 342.9 | 0 | 0 | 5 | 6 | 0 | 5 | 0.7 | 240 | 405 |
| BRENDELL | 140 | 0 | 0 | 0 | 0 | 92.5 | 0 | 272 | 0 | 0 | 4 | 4 | 0 | 4 | 0.4 | 201 | 322 |
| RITA | 141 | | 17.5 | 168 | 0 | 23 | 0 | 29 | 0 | 2 | 1 | 2 | 2 | 1 | 1.5 | 270 | 270 |
| RITA_02 | 142 | 0 | 0 | 0 | 0 | 18 | 0 | 266 | 0 | 0 | 3 | 2 | 0 | 3 | 0.67 | 164 | 292 |
| | | | | | | | | | | | | | | | | | |
| | TOTAL | 306.32 | 17.5 | 392.6 | 61.3 | 133.5 | 65.3 | 206 | 116.5 | 2 | 15 | 14 | 5 | 15 | 4.28 | 1283 | 2017 |

SW3P QUANTITIES

| | ITEM NO. | 515.1 | 516.1 | 0506 6040 |
|----------|-------------|-------------------------|--------------------------------------|---|
| | DESCRIPTION | TOPSOIL (<500 C.Y.) | BERMUDA SODDING (<2,000 S.Y.) | BIODEG EROSN CONT LOGS (INSTL) (8") |
| | UNIT | CY | SY | LF |
| STREET | SHEET NO. | | | |
| LAVEN | 160 | 64 | 577 | 205 |
| PETTUS | 161 | 67 | 599 | 150 |
| | 162 | 52 | 470 | 30 |
| BRENDELL | 163 | 67 | 601 | 295 |
| RITA | 164 | 56 | 505 | 60 |
| | 165 | 45 | 401 | 30 |
| | | | | |
| | TOTAL | 351 | 3153 | 770 |

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|---|--|------------------|--------------|
|  | 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS SUMMARY OF QUANTITIES | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 16 |

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05/28/25
#Fox
pw:/dannenbaum-pw.bentley.com/dannenbaum-pw-01/Documents/Transportation/5448-01-ORD/05 Design/03 PS&E/01 Plans/01 General/07 Summaries/COSA CULEBRA_TCP_SUMMARY.dgn

| TCP SUMMARY | | | | |
|-------------|----------------------------------|--------------------------------------|-------------------------------------|----------------------------------|
| SHEET | LOCATION | | | TXDOT BID ITEMS |
| | | 530.1 | 550.1 | 6001 6002 |
| | | BARRICADES, SIGNS & TRAFFIC HANDLING | TRENCH EXCAVATION SAFETY PROTECTION | PORTABLE CHANGEABLE MESSAGE SIGN |
| | | LS | LF | EA |
| 1 OF 5 | TRAFFIC CONTROL PLAN - PHASE I | | 1085 | 2 |
| 2 OF 5 | TRAFFIC CONTROL PLAN - PHASE II | | *1085 | * 2 |
| 3 OF 5 | TRAFFIC CONTROL PLAN - PHASE III | | | * 2 |
| 4 OF 5 | TRAFFIC CONTROL PLAN - PHASE IV | | | * 2 |
| 5 OF 5 | TRAFFIC CONTROL PLAN - PHASE V | | | |
| | PROJECT TOTALS | 1 | 1085 | 2 |

* RELOCATE PER PHASE



| | | | |
|---|----------------------|----------------|--------------|
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| NO. | REVISION | BY | DATE |
| <div><div><div>DE CORP 16414 SAN PEDRO AVE, SUITE 550 SAN ANTONIO, TEXAS 78232 (210)249-2280 www.dec corp.com T.B.P.E. FIRM REGISTRATION #392</div></div><div><div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div></div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS | | | |
| SUMMARY OF QUANTITY TRAFFIC CONTROL | | | |
| SHEET 1 OF 1 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/25 | |
| DRWN. BY: TLF | DSGN. BY: JR | CHKD. BY: FR | SHEET NO: 17 |

TRAFFIC CONTROL NOTES

1. HANDLE TRAFFIC APPROPRIATELY THROUGHOUT THE PROJECT DURING CONSTRUCTION. PROVIDE FOR THE SAFETY OF THE TRAVELING PUBLIC AT ALL TIMES. ROADWAY CLOSURES ARE NOT ALLOWED UNLESS OTHERWISE SPECIFIED IN THE PLANS AND/OR AS APPROVED BY THE ENGINEER. PROVIDE ACCESS TO PROPERTIES AND BUSINESSES ADJACENT TO THE RIGHT-OF-WAY AT ALL TIMES DURING THE DURATION OF THE PROJECT. THE ADEQUACY OF THE PROPERTY ACCESS WILL BE DETERMINED BY THE CITY AND ENGINEER DO NOT LEAVE EQUIPMENT IN A POSITION THAT WILL ENDANGER THE TRAVELING PUBLIC. MAINTAIN ADEQUATE SAFETY PROVISIONS THROUGHOUT THE PROJECT BY INCLUSION OF SIGNING, MARKINGS, SIGNALS, BARRIERS, AND BARRICADES. CONFORM TO THE LATEST EDITION OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) WHEN USING THESE PROVISIONS.

2. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO SEE THAT ALL TRAFFIC CONTROL DEVICES ARE PROPERLY INSTALLED AND MAINTAINED AT THE JOB SITE IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND RELATED INDUSTRY STANDARDS AND REGULATIONS. THESE NOTES, DO NOT, IN OF THEMSELVES, CONSTITUTE A TRAFFIC CONTROL PLAN. IN THE EVENT THAT THESE PLANS DO NOT INCLUDE TRAFFIC CONTROL, OR THAT THE CONTRACTOR WISHES TO VARY FROM TRAFFIC CONTROL INCLUDED WITH THESE PLANS, CONTRACTOR SHALL SUBMIT FOR REVIEW A TRAFFIC CONTROL PLAN SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF TEXAS, INCLUDING A SIGN AND BARRICADE PLAN CONFORMING TO THE REQUIREMENTS OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. THE CITY'S CONSTRUCTION OBSERVER /INSPECTOR (COI) AND THE TRAFFIC ENGINEERING REPRESENTATIVE WILL ONLY BE RESPONSIBLE TO INSPECT THE TRAFFIC CONTROL DEVICES BEING DEPLOYED. IF, IN THE OPINION OF THE TRAFFIC ENGINEERING REPRESENTATIVE AND THE COI, THE TRAFFIC CONTROL DEVICES DO NOT CONFORM TO ESTABLISHED STANDARDS OR ARE INCORRECTLY PLACED OR ARE INSUFFICIENT IN QUANTITY TO PROTECT THE GENERAL PUBLIC, THE COI SHALL HAVE THE OPTION TO STOP CONSTRUCTION OPERATIONS AT NO EXPENSE TO THE CITY UNTIL SUCH TIME AS THE CONDITIONS ARE CORRECTED BY THE CONTRACTOR.

3. THE USE OF THE RIGHT-OF-WAY IS NOT EXCLUSIVE. THE CONTRACTOR MUST COOPERATE WITH THE CITY, UTILITY COMPANIES, AND OTHER CONTRACTORS AS NECESSARY TO ACCOMMODATE UTILITY ADJUSTMENTS MADE BY OTHERS. IF THESE UTILITY ADJUSTMENTS CAUSE DELAYS TO THE CONTRACTOR'S WORK, AN EXTENSION OF THE PROJECT TIMELINE MAY BE GRANTED, PROVIDED THE ENGINEER DEEMS IT JUSTIFIED.

4. ALL DETOURS, TRAFFIC MOVEMENTS, ETC., ARE DIRECTLY RELATED TO THE SEQUENCE OF WORK; THEREFORE, PROCEED WITH CONSTRUCTION OPERATIONS IN CONFORMITY WITH THE DETAILS SHOWN ON THE PLANS AND AS REQUIRED BY THIS NARRATIVE.

5. PROPOSE AND/OR RECOMMEND ANY MODIFICATIONS TO THE SEQUENCE OF WORK FOR CONSIDERATION TO THE ENGINEER IN WRITING. INCLUDE ANY CHANGES TO THE VARIOUS PAY ITEMS, IMPACT TO TRAFFIC, AND THE EFFECT OF THE OVERALL PROJECT IN TIME AND COST, ETC. WITH ANY MAJOR RECOMMENDED MODIFICATIONS. WRITTEN APPROVAL FROM THE ENGINEER IS REQUIRED PRIOR TO PROCEEDING WITH ANY CONSTRUCTION OPERATION BASED ON A REVISED PHASE/SEQUENCE OF WORK.

6. THE CITY ENGINEER MAY DIRECT THE CONTRACTOR TO VARY THE NUMBER AND LOCATIONS OF SIGNS THROUGHOUT THE PROJECT LIMITS.

7. COOPERATE FULLY WITH THE VARIOUS UTILITY COMPANIES.

8. CONSTRUCTION IS APPROVED BETWEEN THE HOURS 7:00 AM AND 8:00 PM MONDAYS THROUGH FRIDAYS. ADDITIONAL HOURS ARE PERMITTED WITH APPROVAL FROM CITY.

9. WEEKEND HOURS ARE DEFINED AS THE HOURS BETWEEN 8:00 AM TO 8:00 PM SATURDAY AND 9:00 AM TO 5:00 PM SUNDAY.

10. OFF PEAK HOURS ARE DEFINED AS A TIME FRAME BETWEEN 9:00 AM TO 3:00 AM MONDAY THRU FRIDAY.

11. CONTRACTOR MUST MAINTAIN A MINIMUM VEHICULAR TRAVEL WAY OF 11' UNLESS SPECIFIED OTHERWISE. MAINTAIN POSITIVE DRAINAGE DURING CONSTRUCTION, INCLUDING OFFSITE DRAINAGE FROM ADJACENT PROPERTIES AND AVOID IMPEDING FLOW FROM PRIVATE PROPERTY.

12. PLACE CONSTRUCTION EXITS AS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.

13. DAILY LANE CLOSURES WILL BE USED IN ACCORDANCE WITH TXDOT TCP STANDARDS.

14. DROP OFF CONDITIONS GREATER THAN 2 IN. MUST HAVE A 3:1 SLOPE AT THE END OF EACH DAY THROUGHOUT THE PROJECT WHERE ACCESS TO ADJACENT PROPERTIES IS ALLOWED INCLUDING DRIVEWAYS AND SIDE STREETS.

15. PLANING, SURFACE TREATMENTS AND OVERLAYS SHALL BE PERFORMED IN THE DIRECTION OF TRAFFIC.

16. CONTRACTOR SHALL PROPERLY DISPOSE ALL RECYCLEABLE MATERIALS AS PRACTICAL TO PROPER RECYCLING CENTERS SUBSIDIARY TO COSA BID ITEM 101.1 PREP RIGHT OF WAY.

17. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE CITY OF SAN ANTONIO TRAFFIC OPERATIONS SECTION AT (210) 207-6000 FOR A TRAFFIC SIGN AND TRAFFIC SIGNAL INVENTORY. PRIOR TO COMPLETION OF THE CONTRACT AND REMOVAL OF THE BARRICADES, THE CONTRACTOR SHALL AGAIN CONTACT THE TRAFFIC OPERATIONS SECTION. THE BARRICADES SHALL NOT BE REMOVED UNTIL ALL APPLICABLE PERMANENT TRAFFIC SIGNS AND SIGNALS ARE IN PLACE.

18. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN AND MAINTAIN TEMPORARY STOP SIGNS AND ALL OTHER TRAFFIC CONTROL DEVICES REQUIRED TO PROTECT THE GENERAL PUBLIC. IF THE CITY OF SAN ANTONIO HAS REMOVED PERMANENT STOP SIGNS, THE CONTRACTOR SHALL REQUEST THAT THE SIGNS BE RETURNED TO THE CONSTRUCTION SITE TO BE REINSTALLED BY THE CONTRACTOR. ALL PERMANENT SIGNS OR TRAFFIC CONTROL DEVICES MISSING OR DAMAGED UPON COMPLETION OF CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

19. THE CONTRACTOR MUST CONTACT THE CITY'S COI 48 HOURS IN ADVANCE (INCLUDING WEEKENDS) OF ANY MINOR STREET CLOSURE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADVISE THE COI 10 DAYS IN ADVANCE OF ANY ARTERIAL TOTAL STREET CLOSURE. THIS MUCH TIME IS NECESSARY TO INSTALL ADVISORY SIGNS AND GIVE THE MOTORIST A MINIMUM OF 7 DAYS NOTICE OF THE STREET CLOSURE. THE COI AFTER BEING NOTIFIED WILL CONTACT THE TRAFFIC ENGINEER OFFICE AND PERTAINING SCHOOL DISTRICT (FOR SCHOOL BUS ROUTE) TO MAKE THE NECESSARY ARRANGEMENTS.

20. AS WORK PROGRESSES, LOCATION OF TEMPORARY TRAFFIC CONTROL DEVICES WILL BE ADJUSTED AND MODIFIED, AS NECESSARY BY THE CONTRACTOR AT CONTRACTOR'S EXPENSE.

21. IF THE NEED ARISES, ADDITIONAL TEMPORARY TRAFFIC CONTROL DEVICES, SPECIAL DIRECTIONAL DEVICES, AND/OR BUSINESS NAME SIGNS MAY BE ORDERED BY THE TRAFFIC ENGINEERING REPRESENTATIVE AT THE CONTRACTOR'S EXPENSE.

22. TEMPORARY TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE CITY'S "TYPICAL SIGN AND BARRICADE STANDARDS" SHEETS AND TO THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

23. THE CONTRACTOR MUST MAINTAIN ALL STREETS AND BUS STOPS WITHIN PROJECT LIMITS OPEN TO THROUGH TRAFFIC BY REPAIRING TRENCHES, POTHOLES, LEVELING UP WITH ASPHALT, ETC. AT NO DIRECT PAYMENT, WITH THE COST TO BE INCLUDED IN OTHER ITEMS.

24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING SUITABLE ACCESS ACCOMMODATIONS FOR SCHOOL CHILDREN, PEDESTRIANS, & BUS STOPS.

25. THE CONTRACTOR SHALL PROVIDE ACCESS FOR DELIVERY OF MAIL BY THE U.S. POSTAL SERVICE AT ALL TIMES, IN CASE OF NEW AND/OR TEMPORARY MAILBOX BE NEEDED, THESE ITEMS SHALL BE SUBSIDIARY TO THE VARIOUS TCP BID ITEMS.

26. THE CONTRACTOR SHALL PROVIDE FOR ACCESS TO RESIDENCES AND ALL BUSINESSES AT ALL TIMES WITHIN ALL THE PHASES OF THE WORK.

27. WHEN CONSTRUCTION WORK NECESSITATES THE UTILIZATION OF VEHICLE PATHS OTHER THAN THE LANES NORMALLY USED, TRAFFIC CONTROL MARKINGS NO LONGER APPLICABLE SHALL BE REMOVED AND APPROVED TEMPORARY PAVEMENT MARKINGS AND SIGNS INSTALLED IN ACCORDANCE WITH PART VI-D OF THE TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES. AFTER CONSTRUCTION IS COMPLETED AND TRAFFIC IS REROUTED BACK TO THE ORIGINAL LANES, THE TRAFFIC CONTROL MARKINGS AND/OR RAISED BUTTONS THAT WERE ORIGINALLY REMOVED FROM THE EXISTING PAVEMENT MUST BE REPLACED.

28. PERMANENT PAVEMENT MARKINGS SHALL BE APPLIED PRIOR TO THE OPENING OF THE COMPLETED STREET TO TRAFFIC. TEMPORARY ADDITIONAL SHORT-TERM EXPENDABLE PAVEMENT MARKINGS MAY BE PROVIDED PRIOR TO THE APPLICATION OF PERMANENT MARKINGS IN MINIMUM LENGTHS OF 36" OR RAISED PAVEMENT MARKINGS TO DELINEATE CONTINUITY UNTIL SUCH TIME AS STANDARD PAVEMENT MARKINGS IN NORMAL LENGTHS CAN BE PLACED AT NO DIRECT PAYMENT.

29. ALL TEMPORARY TRAFFIC CONTROL DEVICES, ETC. SHALL BE PROVIDED BY THE CONTRACTOR WITHOUT DIRECT PAYMENT, UNLESS OTHERWISE NOTED OR STATED.

30. THE CONSTRUCTION OBSERVER/INSPECTOR WILL MONITOR THE CONTRACTOR'S TRAFFIC CONTROL DEVICES AND WILL BE RESPONSIBLE TO FURNISH ALL RESIDENTS AND BUSINESSES WITH AN INFORMATION FLYER ON ALL JOBS DURING CONSTRUCTION.

31. ANY DAMAGE TO PERMANENT TRAFFIC SIGNALS, THE CONTROLLER BOX, LOOPS OR CONDUITS DURING OR UPON COMPLETION OF THE PROJECT SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE. THE DECISION TO REPAIR, AS OPOSED TO REPLACE, THE DAMAGED EQUIPMENT SHALL BE MADE BY THE CITY'S TRAFFIC ENGINEER.

32. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ALL STREETS OUTSIDE OF THE PROJECT LIMITS WHICH ARE DAMAGED DUE TO CONSTRUCTION ACTIVITIES. THE REPLACED SECTION MUST BE APPROVED BY THE CITY'S STREET ENGINEER. THERE WILL BE NO DIRECT PAYMENT FOR THIS WORK. THE COST IS TO BE INCLUDED IN OTHER ITEMS.

33. OFF-DUTY POLICE OFFICERS WILL BE REQUIRED AS DIRECTED BY THE TRAFFIC ENGINEER AT NO DIRECT PAYMENT, COST TO BE INCLUDED IN OTHER BID ITEMS. THIS WILL BE A REQUIREMENT WHERE TWO-WAY TRAFFIC IS TO BE MAINTAINED.

34. THE CONTRACTOR SHALL PROVIDE THE CITY AN EMERGENCY TELEPHONE NUMBER FOR EVENINGS, WEEKENDS, AND HOLIDAYS BY THE FIRST WORKING DAY OF THE PROJECT. THIS TELEPHONE NUMBER MUST BE A COMMERCIAL ANSWERING SERVICE. THE ANSWERING SERVICE MUST BE ABLE TO CONTACT THE CONTRACTOR AND HAVE THE CONTRACTOR RESPOND TO THE CITY STAFF WITHIN TWO HOURS OF THE INITIAL CONTACT.

35. THE CONTRACTOR SHALL MAINTAIN CONTINUOUS ACCESS TO ALL INTERSECTING STREETS UNLESS OTHERWISE SHOWN ON THESE PLANS. WHEN CONTINUOUS ACCESS IS SCHEDULED TO BE BLOCKED, THE CONTRACTOR SHALL CONTACT THE DISPATCHERS FOR THE FIRE DEPARTMENT AND EMS AT (210) 207-7744, THE POLICE DEPARTMENT AT (210) 207-7273, AND NISD CULEBRA SCHOOL BUS STATION AT (210) 397-0275, TO APPRISE THEM OF THE PENDING STREET CLOSURE AT LEAST FORTY- EIGHT HOURS IN ADVANCE. IF THE CLOSURE AFFECTS A VIA BUS ROUTE, THE CONTRACTOR SHALL ALSO CONTACT VIA AT (210) 362-2020.

36. THE CONTRACTOR SHALL MAINTAIN EITHER THE EXISTING OR TEMPORARY STREET NAME SIGNS AT EACH INTERSECTION ONSITE THROUGHOUT CONSTRUCTION. IF THE EXISTING STREET NAME SIGNS ARE USED, THEY MUST BE MAINTAINED IN THE CONDITION ENCOUNTERED PRIOR TO THE BEGINNING OF CONSTRUCTION, AND THEN BE TURNED IN TO THE CITY INSPECTOR AT THE END OF THE PROJECT. IF TEMPORARY SIGNS ARE USED DURING CONSTRUCTION, THEY SHALL HAVE A MINIMUM OF 4-INCH LETTERS, AND MAY BE FABRICATED WITH CONSTRUCTION ZONE MATERIAL (BLACK LEGEND ON ORANGE BACKGROUND, USING PLYWOOD SUBSTRATE, TC.)

37. REMOVAL OF PAVEMENT MARKINGS ARE CONSIDERED SUBSIDIARY TO THE VARIOUS BID ITEMS.

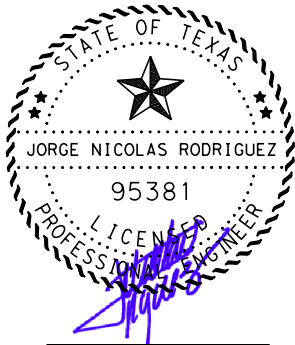
38. AT NO TIME CAN CONTRACTOR HAVE MORE THAN 500 FEET OF UNBACKFILLED TRENCH BEHIND HIM AND NO MORE THAN 1,500 FEET SHALL BE WITHOUT REPLACEMENT OF PAVEMENT AS PER ITEM 340 (NO DIRECT PAYMENT).






39. CONTRACTOR SHALL MAINTAIN PROPER SHORING/TRENCH PROTECTIONS AT ALL TIMES.

40. ALL TRENCHED AND/OR PIT AREAS SHALL BE FENCED IN USING CONSTRUCTION FENCE SUBSIDIARY TO COSA BID ITEM 550.1.

41. ALL OPEN TRENCHES AND PITS SHALL BE BACKFILLED AND PLATED BEFORE THE CONTRACTOR CAN LEAVE AN AREA. NO TRENCHES AND/OR PITS SHALL BE LEFT OPEN AND UNPLATED OVERNIGHT AND/OR DURING NON-WORK HOURS.

42. ANY QUESTIONS REGARDING PHASING OR STAGING WILL BE STRICTLY HANDLED BY CITY OF SAN ANTONIO WHICH HAS COMPLETE AUTHORITY TO MAKE FINAL DECISIONS ON ANY CHANGES OR MODIFICATIONS. THE CONTRACTOR MUST CONTACT THE CITY'S CONSTRUCTION INSPECTOR 72 HOURS IN ADVANCE (NOT INCLUDING WEEKENDS) OF ANY MINOR STREET CLOSURE. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ADVISE CONSTRUCTION INSPECTIONS 10 DAYS IN ADVANCE OF ANY ARTERIAL TOTAL STREET CLOSURE. THIS MUCH TIME IS NECESSARY TO INSTALL ADVISORY SIGNS AND GIVE THE MOTORIST A MINIMUM OF 7 DAYS NOTICE OF STREET CLOSURE. CONTACT THE TRAFFIC ENGINEERING OFFICE IMMEDIATELY TO MAKE THE NECESSARY ARRANGEMENTS. THE TEMPORARY BARRICADES AND WARNING SIGNS SHALL BE LOCATED SO AS TO AFFORD THE MAXIMUM PROTECTION TO THE PUBLIC AS WELL AS CONSTRUCTION PERSONNEL AND EQUIPMENT AND TO FACILITATE AN EXPEDITIOUS FLOW OF TRAFFIC AT ALL TIMES DURING CONSTRUCTION.



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|  | | DE CORP 16414 SAN PEDRO AVE, SUITE 550 SAN ANTONIO, TEXAS 78232 (210)249-2280 www.decorp.com T.B.P.E. FIRM REGISTRATION #392 | |
|  AG3 Group, LLC ENGINEERING • SURVEY • CONSTRUCTION | | 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS | | | |
| TRAFFIC CONTROL PLAN GENERAL NOTES | | | |
| 100% SUBMITTAL | | SHEET 1 OF 1 | |
| PROJECT NO: 23-03873 | | DATE: 05/28/25 | |
| DRWN. BY: TLF | DSGN. BY: JR | CHKD. BY: FR | SHEET NO: 18 |

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SEQUENCE OF WORK

THE SEQUENCE OF WORK WILL BE AS FOLLOWS UNLESS OTHERWISE DIRECTED/APPROVED BY THE ENGINEER. CULEBRA PARK AREA STREETS WILL BE CONSTRUCTED IN FIVE (5) PHASES. EACH PHASE IS TO BE CONSTRUCTED UNDER FULL LANE CLOSURES, OPEN TO ONE-WAY LOCAL TRAFFIC ONLY. AT END OF WORKDAY, CONTRACTOR SHALL PLACE A 3:1 SLOPE BETWEEN CONSTRUCTION EXCAVATED AREA AND TRAFFIC. CONTRACTOR SHALL SHORE ALL OPEN TRENCHES PER OSHA STANDARDS AND STEEL PLATE OPEN TRENCHES AS NEEDED. THE CONTRACTOR SHALL PROVIDE VEHICULAR AND PEDESTRIAN ACCESS TO DRIVEWAYS, MAILBOXES, AND ADJACENT PROPERTIES AT ALL TIMES INCLUDING SIDEWALKS FOR PEDESTRIANS. WHEN THE PROCESS OF THE WORK IS NOT COMPLETED IN ONE DAY, PROVIDE A TEMPORARY RAMP BETWEEN THE NEW SURFACE AND EXISTING ROADWAY SURFACE AT A SLOPE NOT TO EXCEED 8:1 TO ALLOW SAFE PASSAGE OF TRAFFIC AND PEDESTRIANS DURING NON-WORK PERIODS, PRIOR TO COMPLETION OF DAY'S CONSTRUCTION. INSTALL TRAFFIC CONTROL DEVICES PER THE "BARRICADE AND CONSTRUCTION STANDARDS", AND SW3P MEASURES AS SHOWN ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER. APPROVAL BY THE ENGINEER MUST BE OBTAINED PRIOR TO THE BEGINNING OF CONSTRUCTION. CONTRACTOR TO CONSIDER PROPOSED FINISHED GRADE WHEN BACKFILLING TRENCH/UTILITY WORK. PREPARING ROW, REMOVAL OF EXISTING ITEMS, AND ITEMS SUBSIDIARY TO COSA ITEM 101.1 TO BE DONE ONLY IN AREAS WHERE WORK IS OCCURRING, AS PER THE PHASES NOTED BELOW. PLEASE REFER TO THE SCHEDULE OF TRAFFIC CONTROL SHEETS FOR ADDITIONAL TRAFFIC DETOUR INFORMATION. A BRIEF DESCRIPTION OF THESE PHASES ARE AS FOLLOWS:

PHASE I - CULEBARA RD, LAVEN DR/PETTUS ST. & LAVEN DR/RITA AVE CONSTRUCTION STEPS

NOTE: DURING PHASE I, CULEBRA RD WILL REQUIRE TEMPORARY ROAD CLOSURE OF TWO LANES FOR STEP A & B ONLY, FOLLOWING THE TXDOT TCP (2-4)-18 STANDARD TO TIE-IN THE PROPOSED STORM DRAIN TO EXISTING. REFER TO CULEBRA TCP TYPICALS FOR ADDITIONAL INFORMATION. ONCE COMPLETED, SECTION OF LAVEN DR, STA 100+10.00 TO STA 107+18.00, AND PETTUS ST, STA 10+00.00 TO STA 16+01.50, WILL BE CLOSED TO TRAFFIC, WITH ONE-WAY LOCAL TRAFFIC ACCESS ONLY. PEDESTRIAN SIDEWALK ACCESS WILL BE LIMITED DURING PHASE 1 STEP C (SIDEWALK EAST OF LAVEN DR. WILL BE CLOSED) AND PHASE 1 STEP D (SIDEWALK WEST OF LAVEN DR IS CLOSED) AS SHOWN ON TCP PHASE 1 TYPICAL SECTIONS. REFER TO SCHEDULE OF TRAFFIC CONTROL PHASE 1 SHEET FOR PEDESTRIAN DETOUR INFORMATION. AT STA 103+88 ON LAVEN DR, A PROPOSED 36" RCP TRUNK LINE WILL BE INSTALLED TO RUN PERPENDICULAR FROM LAVEN DR, TO APPROX 150 LF EAST TOWARDS RITA AVE WITHIN THE EXISTING EASEMENT. A SIDEWALK EXTENSION WILL OCCUR IN THIS PHASE STEP E WEST OF LAVEN DR CENTERLINE FROM STA 107+18 TO STA 108+16 (REFER TO RDWY PLANS). PHASE 1 STEP F CONCLUDES THIS PHASE BY TRENCHING, TYING IN THE PROPOSED SAWS WATERLINE, THEN BACKFILL FROM STA 107+18 TO STA 108+04. REFER TO TCP SCHEDULE OF TRAFFIC CONTROL PH 1 AND TXDOT BC STANDARDS FOR ADDITIONAL INFORM ATION.

- STEP 1. INSTALL TRAFFIC CONTROL DEVICES, SWPPP, AND PREP ROW
- STEP 2. TEMPORARY LANE CLOSURES ON CULEBRA RD TO TIE-IN PROPOSED TO EXISTING STORM DRAIN. REFER TO TXDOT TCP (2-4)-18 STANDARD AND CULEBRA RD TCP FOR ADDITIONAL INFORMATION
- STEP 3. UPON COMPLETION OF CONSTRUCTION ON CULEBRA RD STORM SEWER TIE-IN, PROVIDE ONE-WAY LOCAL TRAFFIC CONTROL. REFER TO TCP TYPICALS FOR ADDITIONAL INFORMATION. THE WORK AREA CAN BE NO LONGER THAN ONE STREET BLOCK IN LENGTH

PHASE I - STEP A - CULEBRA RD (FB LANES CLOSED) CONSTRUCTION STEPS (STORM DRAIN INSTALLATION)

- STEP 1. TRENCH WITHIN PROPOSED 54" RCP STORM DRAIN AND EXISTING JUNCTION BOX TIE-IN
- STEP 2. REMOVE STORM RCP (AS SHOWN ON STORM PLANS), ALONG CULEBRA RD AS NEEDED TO OCCUR IN THIS STEP. EXPOSE EXISTING JUNCTION BOX STORM SYSTEM
- STEP 3. INSTALL PROPOSED 54" RCP STORM DRAIN SECTION AT EXIST JUNCTION BOX TO TIE-IN
- STEP 4. BACKFILL TRENCHED AREAS

PHASE I - STEP B - CULEBRA RD (WB LANES CLOSED) CONSTRUCTION STEPS (STORM DRAIN INSTALLATION)

- STEP 1. TRENCH WITHIN PROPOSED 54" RCP STORM DRAIN
- STEP 2. REMOVE STORM RCP (AS SHOWN ON STORM PLANS), ALONG CULEBRA RD AS NEEDED TO OCCUR IN THIS STEP
- STEP 3. INSTALL PROPOSED 54" RCP STORM DRAIN SECTION
- STEP 4. BACKFILL TRENCHED AREAS AND COMPLETE CULEBRA RD CONSTRUCTION

PHASE I - STEP C - LAVEN DR (NB LEFT LANE) CONSTRUCTION STEPS (UTILITY, STORM DRAIN, & JUNCTION BOX INSTALLATION)

- STEP 1. REMOVE/INSTALL PROPOSED UTILITIES (8" SAWS WATER MAIN (AS SHOWN ON SAWS PLANS), VALVES, METERS, LATERALS, AND STORM SEWER INCLUDING 54" RCP AND a 6'x6' JUNCTION BOX ALONG LAVEN DR AS NEEDED TO OCCUR IN THIS STEP. (TRENCHING THEN BACK FILL TO OCCUR THIS STEP TO COMPLETE UTILITY AND STORM SEWER SERVICES)
- STEP 2. TRENCH WITHIN PROPOSED SAWS 8" WATER MAIN, PROPOSED 54" RCP STORM DRAIN AND 6'x6' JUNCTION BOX
- STEP 3. INSTALL PROPOSED 8" SAWS WATER MAIN
- STEP 4. INSTALL PROPOSED 54" RCP STORM DRAIN SECTION
- STEP 5. INSTALL PROPOSED 6'x6' JUNCTION BOX
- STEP 6. BACKFILL TRENCHED AREAS

PHASE I - STEP D - LAVEN DR/PETTUS ST. (NB RIGHT LANE) & LAVEN DR/RITA AVE (EASEMENT) CONSTRUCTION STEPS (UTILITIES, STORM DRAIN, & ROADWAY)

- STEP 1. REMOVE/INSTALL PROPOSED UTILITIES (8" SAWS WATER MAIN; 24" STEEL SAWS SEWER ENCASING (AS SHOWN ON SAWS PLANS)) & 2" CPS GAS LINE (AS SHOWN ON CPS PLANS), VALVES, METERS, LATERALS, AND STORM SEWER INCLUDING INLETS, 4'X4' BOX CULVERTS, 4'X3' BOX CULVERTS, 3'X2' BOX CULVERTS, 36" RCP, 36" AND 24" LATERALS AND JUNCTION BOXES ALONG LAVEN DR UPSTREAM TO PETTUS ST, AND A 5'X3' BOX CULVERT W/ JUNCTION BOXES FROM LAVEN DR TO RITA AVE INSIDE EASEMENT AREA. REMOVAL OF MAILBOXES, FENCING, GATES, ETC. AS NEEDED TO OCCUR IN THIS STEP (TRENCHING THEN BACKFILL TO OCCUR THIS STEP TO COMPLETE UTILITY AND STORM SEWER SERVICES).
- STEP 2. OBLITERATE AND REMOVE EXISTING PAVEMENT
- STEP 3. INSTALL 6" MOISTURE CONDITIONED SUBGRADE (PER PROPOSED PAVEMENT DESIGN)
- STEP 4. INSTALL WARM MIX ASPHALT IN TWO LAYERS (1.5" BOT, 3.5" TOP) (5"WMAC TY-B). INSTALL CURB AND GUTTER AFTER FIRST LIFT
- STEP 5. INSTALL SIDEWALK AND RECONSTRUCT DRIVEWAYS PER THE PLANS
- STEP 6. REINSTALL MAILBOXES, FENCING AND GATES TO NEW LOCATION AS NEEDED

PHASE I - STEP E - LAVEN DR/PETTUS ST (NB LEFT LANE) CONSTRUCTION STEPS (UTILITIES, STORM DRAIN, & ROADWAY)

- STEP 1. REMOVE/INSTALL PROPOSED UTILITIES (8" SAWS WATER MAIN (AS SHOWN ON SAWS PLANS) & 2" CPS GAS LINE (AS SHOWN ON CPS PLANS), VALVES, METERS, LATERALS, AND STORM SEWER INCLUDING INLETS 36" RCP LATERAL ALONG LAVEN DR UPSTREAM TO PETTUS ST. REMOVAL OF MAILBOXES, FENCING, GATES, ETC. AS NEEDED TO OCCUR IN THIS STEP (TRENCHING THEN BACK FILL TO OCCUR THIS STEP TO COMPLETE UTILITY AND STORM SEWER SERVICES)
- STEP 2. OBLITERATE AND REMOVE EXISTING PAVEMENT
- STEP 3. INSTALL 6" MOISTURE CONDITIONED SUBGRADE
- STEP 4. INSTALL WARM MIX ASPHALT IN TWO LAYERS (1.5" BOT, 3.5" TOP) (5"WMAC TY-B). INSTALL CURB AND GUTTER AFTER FIRST LIFT
- STEP 5. INSTALL SIDEWALK AND RECONSTRUCT DRIVEWAYS PER THE PLANS
- STEP 6. EXTEND SIDEWALK ON LAVEN DR FROM STA 107+18 TO STA 108+16 (REFER TO RDWY PLANS)
- STEP 7. REINSTALL MAILBOXES, FENCING AND GATES TO NEW LOCATION AS NEEDED

PHASE I - STEP F - LAVEN DR (NB LEFT LANE) CONSTRUCTION STEPS (SAWS WATER UTILITY ONLY)

- STEP 1. REMOVE/INSTALL PROPOSED UTILITIES (8" SAWS WATER MAIN (AS SHOWN ON SAWS PLANS), VALVES, METERS, LATERALS ALONG LAVEN DR AS NEEDED TO OCCUR IN THIS STEP. TIE-IN PROPOSED SAWS WATERLINE (TRENCHING THEN BACK FILL TO OCCUR THIS STEP TO COMPLETE UTILITY SERVICES)
- STEP 2. TRENCH WITHIN PROPOSED SAWS 8" WATER MAIN
- STEP 3. INSTALL PROPOSED 8" SAWS WATER MAIN
- STEP 4. BACKFILL TRENCHED AREAS

PHASE II - RITA AVE/BRENDELL ST CONSTRUCTION STEPS






NOTE: DURING PHASE 2, SECTION OF RITA AVE, STA 10+14.00 TO STA 15+08.50, AND BRENDELL ST, STA 100+05.00 TO STA 107+40.00, WILL BE CLOSED TO TRAFFIC, WITH ONE-WAY LOCAL TRAFFIC ACCESS ONLY. PEDESTRIANS CROSSING BRENDELL ST AT CULEBRA RD INTERSECTION WILL BE TEMPORARY DETOURED. REFER TO SCHEDULE OF TRAFFIC CONTROL PHASE 2 SHEET FOR PEDESTRIAN DETOUR INFORMATION

- STEP 1. INSTALL TRAFFIC CONTROL DEVICES, SWPPP, AND PREP ROW
- STEP 2. PROVIDE ONE-WAY LOCAL TRAFFIC CONTROL. REFER TO TCP TYPICALS FOR ADDITIONAL INFORMATION. THE WORK AREA CAN BE LONGER THAN ONE STREET BLOCK IN LENGTH

PHASE II - STEP A - RITA AVE (FB RIGHT LANE) /BRENDELL ST (NB LEFT LANE) CONSTRUCTION STEPS (UTILITIES, STORM DRAIN, & ROADWAY)

- STEP 1. REMOVE/INSTALL PROPOSED UTILITIES (8" SAWS WATER MAIN & LATERALS; 24" STEEL SAWS SEWER ENCASING (AS SHOWN ON SAWS PLANS)) & 2" CPS GAS LINE (AS SHOWN ON CPS PLANS), VALVES, METERS, LATERALS, AND STORM SEWER INCLUDING INLETS,5'X3' BOX CULVERTS, 48",42",36" RCP, & 24" RCP LATERALS AND JUNCTION BOXES ALONG RITA AVE EAST TO BRENDELL ST. REMOVAL OF MAILBOXES, FENCING, GATES, ETC. AS NEEDED TO OCCUR IN THIS STEP (TRENCHING THEN BACK FILL TO OCCUR THIS STEP TO COMPLETE UTILITY AND STORM SEWER SERVICES)
- STEP 2. OBLITERATE AND REMOVE EXISTING PAVEMENT
- STEP 3. INSTALL 6" MOISTURE CONDITIONED SUBGRADE
- STEP 4. INSTALL WARM MIX ASPHALT IN TWO LAYERS (1.5" BOT, 3.5" TOP) (5"WMAC TY-B). INSTALL CURB AND GUTTER AFTER FIRST LIFT
- STEP 5. INSTALL SIDEWALK AND RECONSTRUCT DRIVEWAYS PER THE PLANS
- STEP 6. REINSTALL MAILBOXES, FENCING AND GATES TO NEW LOCATION AS NEEDED



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| NO. | REVISION | BY | DATE |
|  | | DE CORP 16414 SAN PEDRO AVE, SUITE 550 SAN ANTONIO, TEXAS 78232 (210)249-2280 www.decorp.com T.B.P.E. FIRM REGISTRATION #392 | |
|  AG3 Group, LLC ENGINEERING • SURVEY • CONSTRUCTION | | 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS TRAFFIC CONTROL PLAN SEQUENCE OF WORK | | | |
| SHEET 1 OF 2 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/25 |
| DRWN. BY: TLF | DSGN. BY: JR | CHKD. BY: FR | SHEET NO: 19 |

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PHASE II - STEP B - RITA AVE (EB LEFT LANE)/BRENDLELL ST (NB RIGHT LANE)
CONSTRUCTION STEPS (UTILITIES, STORM DRAIN, & PAVEMENT)

- STEP 1. REMOVE/INSTALL PROPOSED UTILITIES (8" SAWS WATER MAIN & LATERALS; 24" STEEL SAWS SEWER ENCASING (AS SHOWN ON SAWS PLANS)) & 2" CPS GAS LINE (AS SHOWN ON CPS PLANS), VALVES, METERS, LATERALS, AND STORM SEWER INCLUDING INLETS, 24" LATERALS AND JUNCTION BOXES ALONG RITA AVE EAST TO BRENDLELL ST. REMOVAL OF MAILBOXES, FENCING, GATES, ETC. AS NEEDED TO OCCUR IN THIS STEP (TRENCHING THEN BACK FILL TO OCCUR THIS STEP TO COMPLETE UTILITY AND STORM SEWER SERVICES)
- STEP 2. OBLITERATE AND REMOVE EXISTING PAVEMENT
- STEP 3. INSTALL 6" MOISTURE CONDITIONED SUBGRADE
- STEP 4. INSTALL WARM MIX ASPHALT IN TWO LAYERS (1.5" BOT, 3.5" TOP) (5"WMAC TY-B). INSTALL CURB AND GUTTER AFTER FIRST LIFT
- STEP 5. INSTALL SIDEWALK AND RECONSTRUCT DRIVEWAYS PER THE PLANS
- STEP 6. REINSTALL MAILBOXES, FENCING AND GATES TO NEW LOCATION AS NEEDED

PHASE III - PETTUS ST CONSTRUCTION STEPS

NOTE: DURING PHASE III, SECTION OF PETTUS ST, STA 16+61.50 TO STA 25+27.00, WILL BE CLOSED TO TRAFFIC, WITH ONE-WAY LOCAL TRAFFIC ACCESS ONLY

- STEP 1. INSTALL TRAFFIC CONTROL DEVICES, SWPPP, AND PREP ROW
- STEP 2. PROVIDE ONE-WAY LOCAL TRAFFIC CONTROL. REFER TO TCP TYPICALS FOR ADDITIONAL INFORMATION. THE WORK AREA CAN BE NO LONGER THAN BLOCK IN LENGTH

PHASE III - STEP A - PETTUS ST (EB RIGHT LANE) CONSTRUCTION STEPS (UTILITIES & ROADWAY)

- STEP 1. REMOVE/INSTALL PROPOSED UTILITIES (8" SAWS WATER MAIN (AS SHOWN ON SAWS PLANS)) VALVES, METERS, & LATERALS ALONG PETTUS ST EAST TO BENRUD BLVD. REMOVAL OF MAILBOXES, FENCING, GATES, ETC. AS NEEDED TO OCCUR IN THIS STEP (TRENCHING THEN BACK FILL TO OCCUR THIS STEP TO COMPLETE UTILITY SERVICES)
- STEP 2. OBLITERATE AND REMOVE EXISTING PAVEMENT
- STEP 3. INSTALL 6" MOISTURE CONDITIONED SUBGRADE (PER PROPOSED PAVEMENT DESIGN)
- STEP 4. INSTALL WARM MIX ASPHALT IN TWO LAYERS (1.5" BOT, 3.5" TOP) (5"WMAC TY-B). . INSTALL CURB AND GUTTER AFTER FIRST LIFT
- STEP 5. INSTALL SIDEWALK AND RECONSTRUCT DRIVEWAYS PER THE PLANS
- STEP 6. REINSTALL MAILBOXES, FENCING AND GATES TO NEW LOCATION AS NEEDED

PHASE III - STEP B - PETTUS ST (EB LEFT LANE) CONSTRUCTION STEPS (UTILITIES & ROADWAY)

- STEP 1. REMOVE/INSTALL PROPOSED UTILITIES (1" SAWS WATER LATERALS (AS SHOWN ON SAWS PLANS); 2" CPS GAS LINE (AS SHOWN ON CPS PLANS)) VALVES, METERS, & LATERALS ALONG PETTUS ST EAST TO BENRUS BLVD. REMOVAL OF MAILBOXES, FENCING, GATES, ETC. AS NEEDED TO OCCUR IN THIS STEP (TRENCHING THEN BACK FILL TO OCCUR THIS STEP TO COMPLETE UTILITY SERVICES)
- STEP 2. OBLITERATE AND REMOVE EXISTING PAVEMENT
- STEP 3. INSTALL 6" MOISTURE CONDITIONED SUBGRADE
- STEP 4. INSTALL WARM MIX ASPHALT IN TWO LAYERS (1.5" BOT, 3.5" TOP) (5"WMAC TY-B). INSTALL CURB AND GUTTER AFTER FIRST LIFT
- STEP 5. INSTALL SIDEWALK AND RECONSTRUCT DRIVEWAYS PER PLANS

- STEP 6. REINSTALL MAILBOXES, FENCING AND GATES TO NEW LOCATION AS NEEDED

PHASE IV - RITA AVE CONSTRUCTION STEPS

NOTE: DURING PHASE IV-A SECTION OF RITA AVE, STA 15+08.50 TO STA 23+67.00 WILL BE CLOSED TO TRAFFIC, WITH ONE-WAY LOCAL TRAFFIC ACCESS ONLY.

- STEP 1. INSTALL TRAFFIC CONTROL DEVICES, SWPPP, AND PREP ROW
- STEP 2. PROVIDE ONE-WAY LOCAL TRAFFIC CONTROL. REFER TO TCP TYPICALS FOR ADDITIONAL INFORMATION. THE WORK AREA CAN BE NO LONGER THAN ONE STREET BLOCK IN LENGTH

PHASE IV - STEP A- RITA AVE (EB RIGHT LANE) CONSTRUCTION STEPS (UTILITIES & ROADWAY)

- STEP 1. REMOVE/INSTALL PROPOSED UTILITIES (8" SAWS WATER MAIN (AS SHOWN ON SAWS PLANS)) VALVES, METERS, & LATERALS ALONG RITA AVE EAST TO BERNUS BLVD. REMOVAL OF MAILBOXES, FENCING, GATES, ETC. AS NEEDED TO OCCUR IN THIS STEP (TRENCHING THEN BACK FILL TO OCCUR THIS STEP TO COMPLETE UTILITY SERVICES)
- STEP 2. OBLITERATE AND REMOVE EXISTING PAVEMENT
- STEP 3. INSTALL 6" MOISTURE CONDITIONED SUBGRADE
- STEP 4. INSTALL WARM MIX ASPHALT IN TWO LAYERS (1.5" BOT, 3.5" TOP) (5"WMAC TY-B). INSTALL CURB AND GUTTER AFTER FIRST LIFT
- STEP 5. INSTALL SIDEWALK AND RECONSTRUCT DRIVEWAYS PER THE PLANS
- STEP 6. REINSTALL MAILBOXES, FENCING AND GATES TO NEW LOCATION AS NEEDED

PHASE IV - STEP B -RITA AVE (EB LEFT LANE) CONSTRUCTION STEPS (UTILITIES & ROADWAY)

- STEP 1. REMOVE/INSTALL PROPOSED UTILITIES (1" SAWS WATER LATERALS (AS SHOWN ON SAWS PLANS); 2" CPS GAS LINE (AS SHOWN ON CPS PLANS)) VALVES, METERS, & LATERALS ALONG RITA AVE EAST TO BERNUS BLVD. REMOVAL OF MAILBOXES, FENCING, GATES, ETC. AS NEEDED TO OCCUR IN THIS STEP (TRENCHING THEN BACK FILL TO OCCUR THIS STEP)
- STEP 2. OBLITERATE AND REMOVE EXISTING PAVEMENT
- STEP 3. INSTALL 6" MOISTURE CONDITIONED SUBGRADE
- STEP 4. INSTALL WARM MIX ASPHALT IN TWO LAYERS (1.5" BOT, 3.5" TOP) (5"WMAC TY-B).
- STEP 5. INSTALL CURB AND GUTTER AFTER FIRST LIFT. INSTALL SIDEWALK, AND RECONSTRUCT DRIVEWAYS PER THE PLANS
- STEP 6. REINSTALL MAILBOXES, FENCING AND GATES TO NEW LOCATION AS NEEDED

PHASE V - FINAL 2.0" WARM MIX ASPHALT TY-D LIFT ON LAVEN DR. PETTUS ST, BRENDLELL ST, & RITA AVE - (ROADWAY)

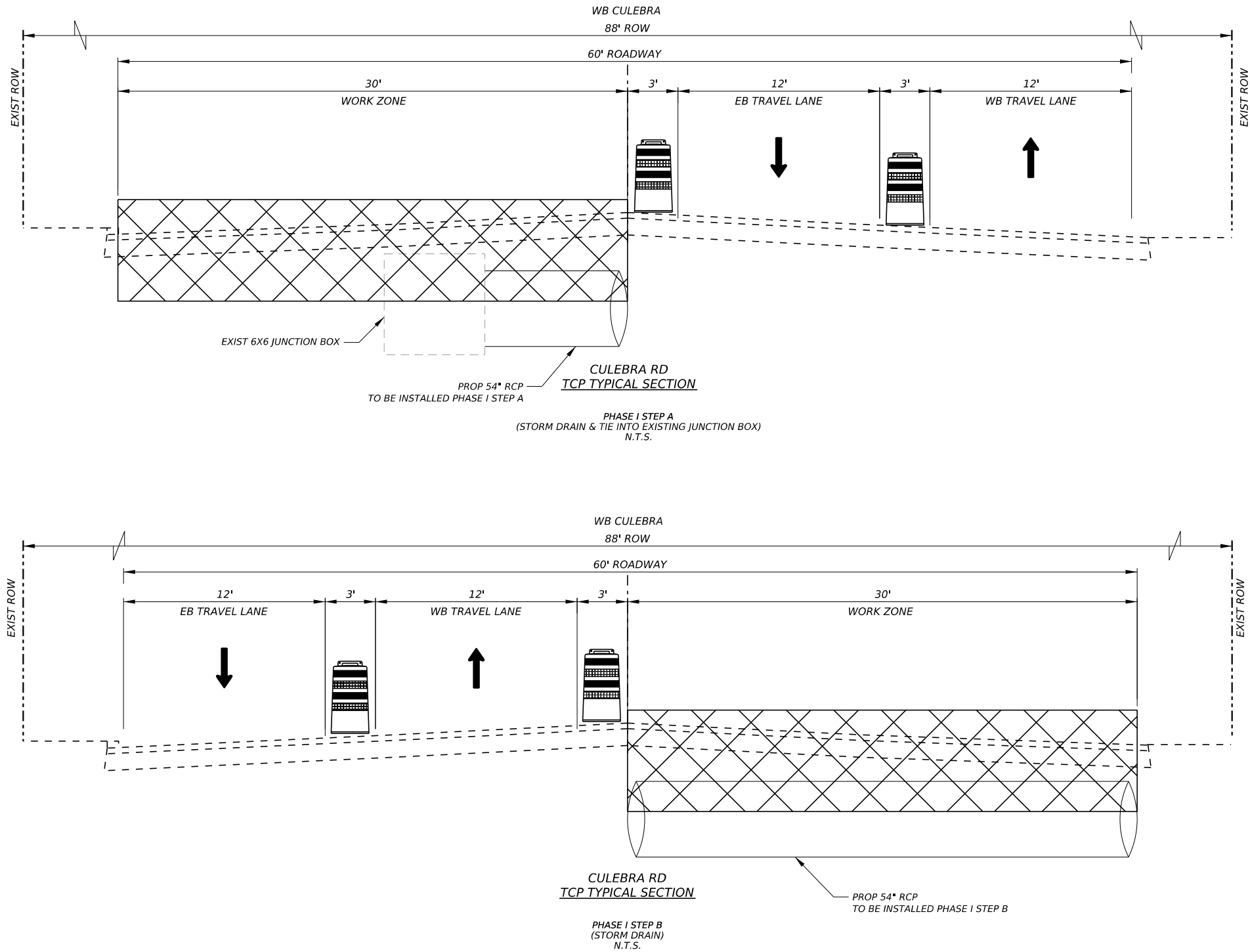
NOTE: DURING THIS FINAL PHASE, THE FINAL 2" WMAC TY-D LAYER IS TO BE PLACED UNDER TWO WAY TRAFFIC. REFER TO TXDOT TCP STANDARD (1-2)-18 FOR ADDITIONAL INFORMATION.

- STEP 1. MILL & OVERLAY FROM CURB TO CURB ON LAVEN DR FROM STA 107+18 TO 108+04
- STEP 2. INSTALL TACK COAT
- STEP 3. INSTALL FINAL LIFT OF WARM MIX ASPHALT (2" WARM MIX ASPHALT TY-D)
- STEP 4. INSTALL SPEED BUMP ON LAVEN DR AS SHOWN ON ROADWAY PLANS
- STEP 5. SUBSTANTIAL COMPLETION/PUNCH LIST
- STEP 6. FINAL PROJECT CLEAN-UP AND DEMOBILIZATION



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| <div><div><div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div><div><div>4800 FREDERICKSBURG RD SUITE 200SL</div><div>SAN ANTONIO, TX 78229</div><div>P:210-208-9400 F:210-208-9401</div><div>TBPE #F-21809</div><div>TBPLS #10194622</div></div></div></div> | | | |
| <div><div>CITY OF SAN ANTONIO</div><div>PUBLIC WORKS DEPARTMENT</div><div>CULEBRA AREA STREETS</div><div>TRAFFIC CONTROL PLAN</div><div>SEQUENCE OF WORK</div></div> | | | |
| SHEET 2 OF 2 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/25 | |
| DRWN. BY: TLF | DSGN. BY: JR | CHKD. BY: FR | SHEET NO: 20 |

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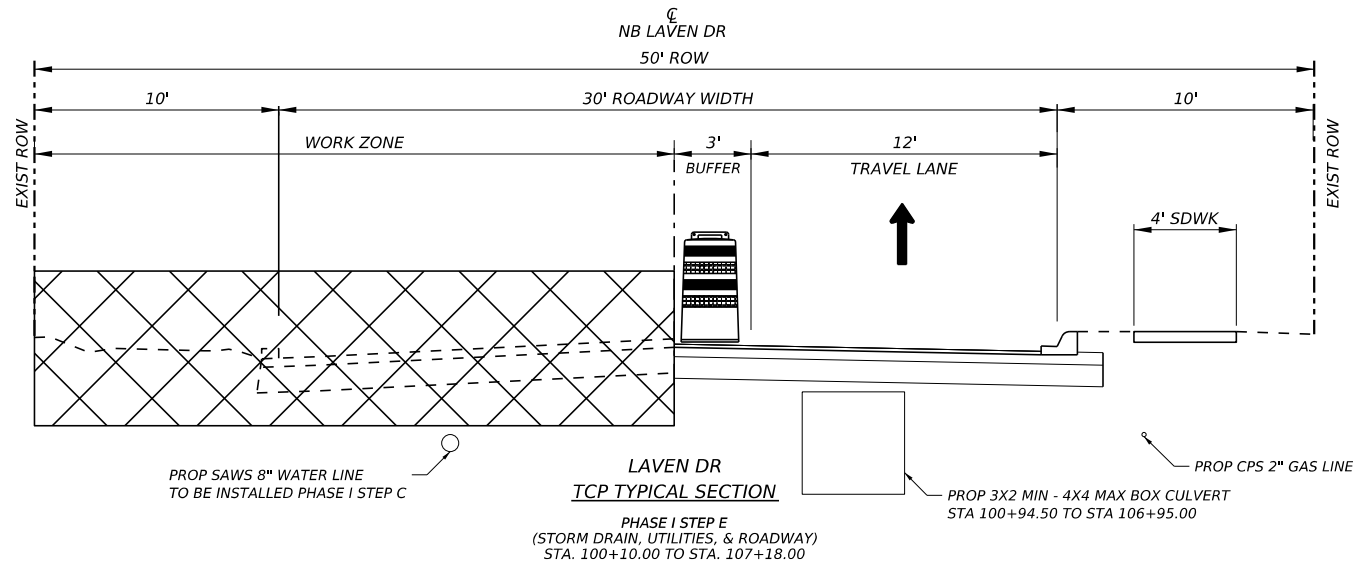
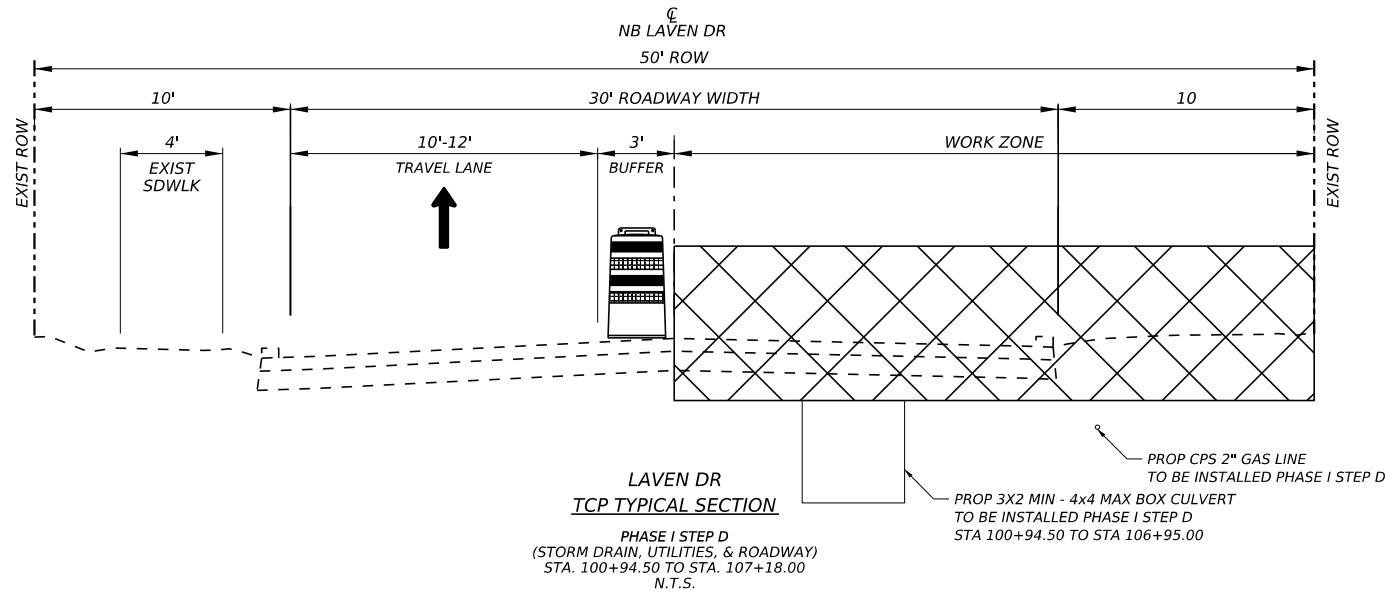
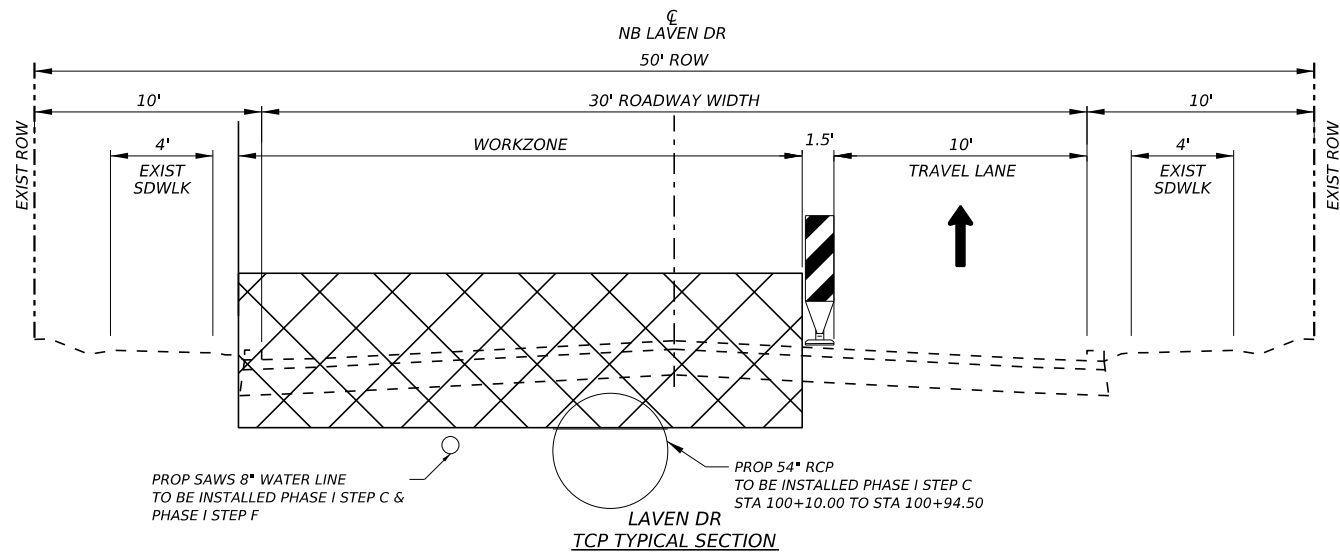
NOTE: CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. REFER TO UCM AND PROPOSED STORM DRAIN/UTILITY LAYOUTS FOR ADDITIONAL INFORMATION.

FOR CULEBRA RD LANE CLOSURES REFER TO TCP STANDARD (2-4)-18 FOR TRAFFIC CONTROL PLAN



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| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS | | | |
| TRAFFIC CONTROL PLAN TYPICAL SECTIONS | | | |
| SHEET 1 OF 5 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/25 | |
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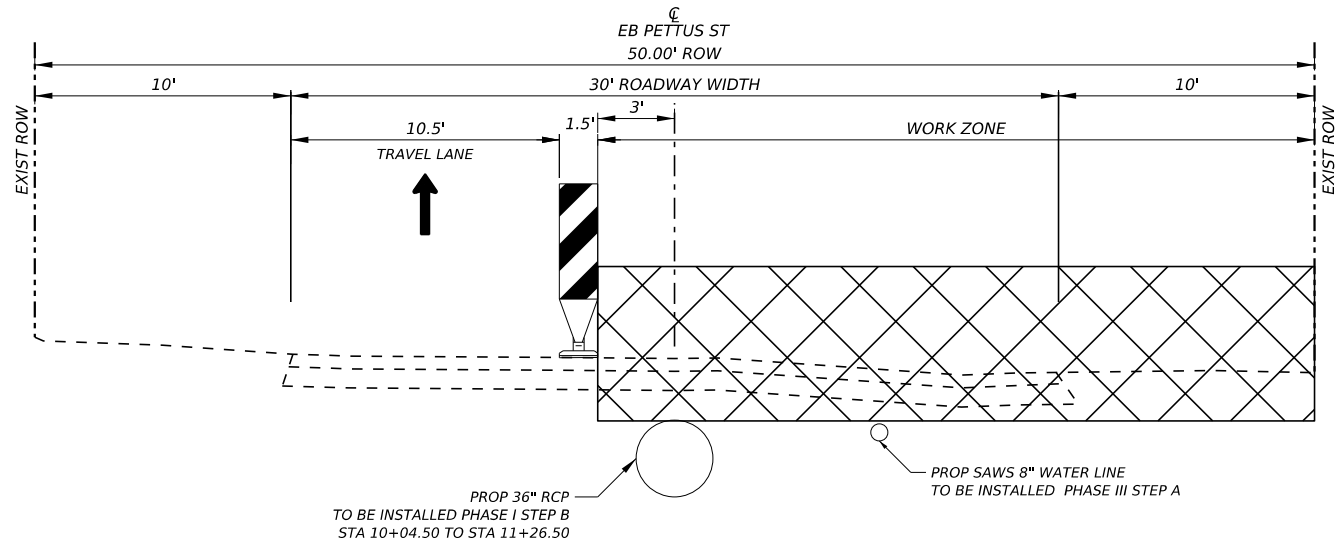


NOTE: CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. REFER TO UCM AND PROPOSED STORM DRAIN/UTILITY LAYOUTS FOR ADDITIONAL INFORMATION.



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| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS TRAFFIC CONTROL PLAN TYPICAL SECTIONS | | | |
| SHEET 2 OF 5 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/25 | |
| DRWN. BY: TLF | DSGN. BY: JR | CHKD. BY: FR | SHEET NO: 22 |

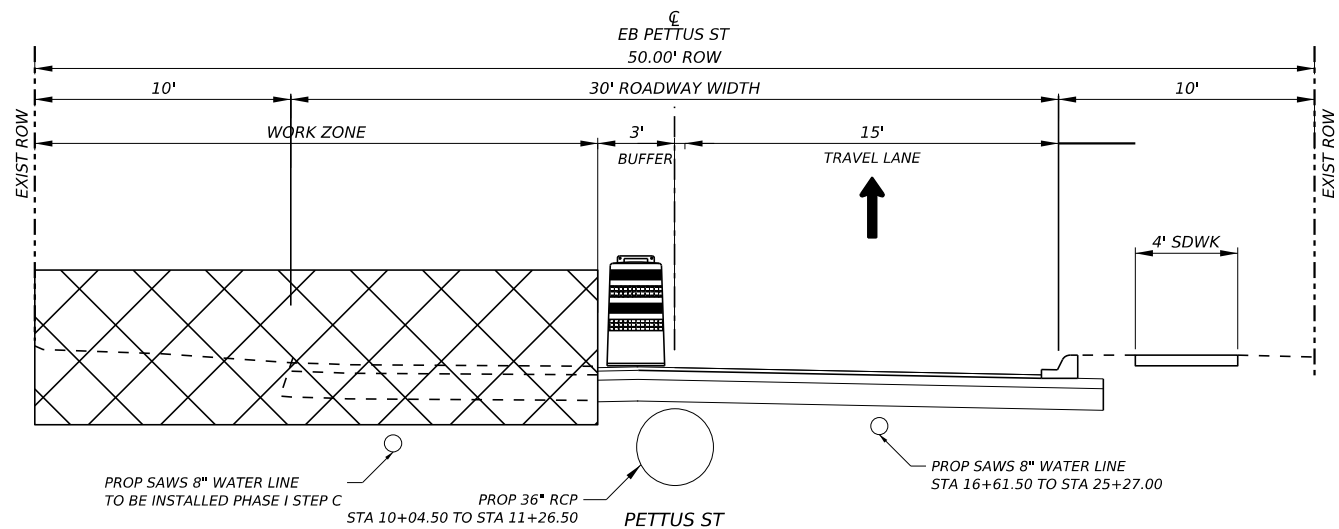
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PETTUS ST
TCP TYPICAL SECTION

PHASE I STEP D
(STORM DRAIN, UTILITIES, & ROADWAY)
STA. 10+00.00 TO STA. 16+01.50
N.T.S.

PHASE III STEP A
(UTILITIES & ROADWAY)
STA. 16+61.50 TO STA. 25+27.00
N.T.S.

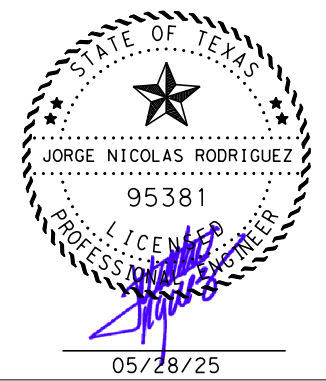


PETTUS ST
TCP TYPICAL SECTION

PHASE I STEP E
(STORM DRAIN, UTILITIES, & ROADWAY)
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N.T.S.

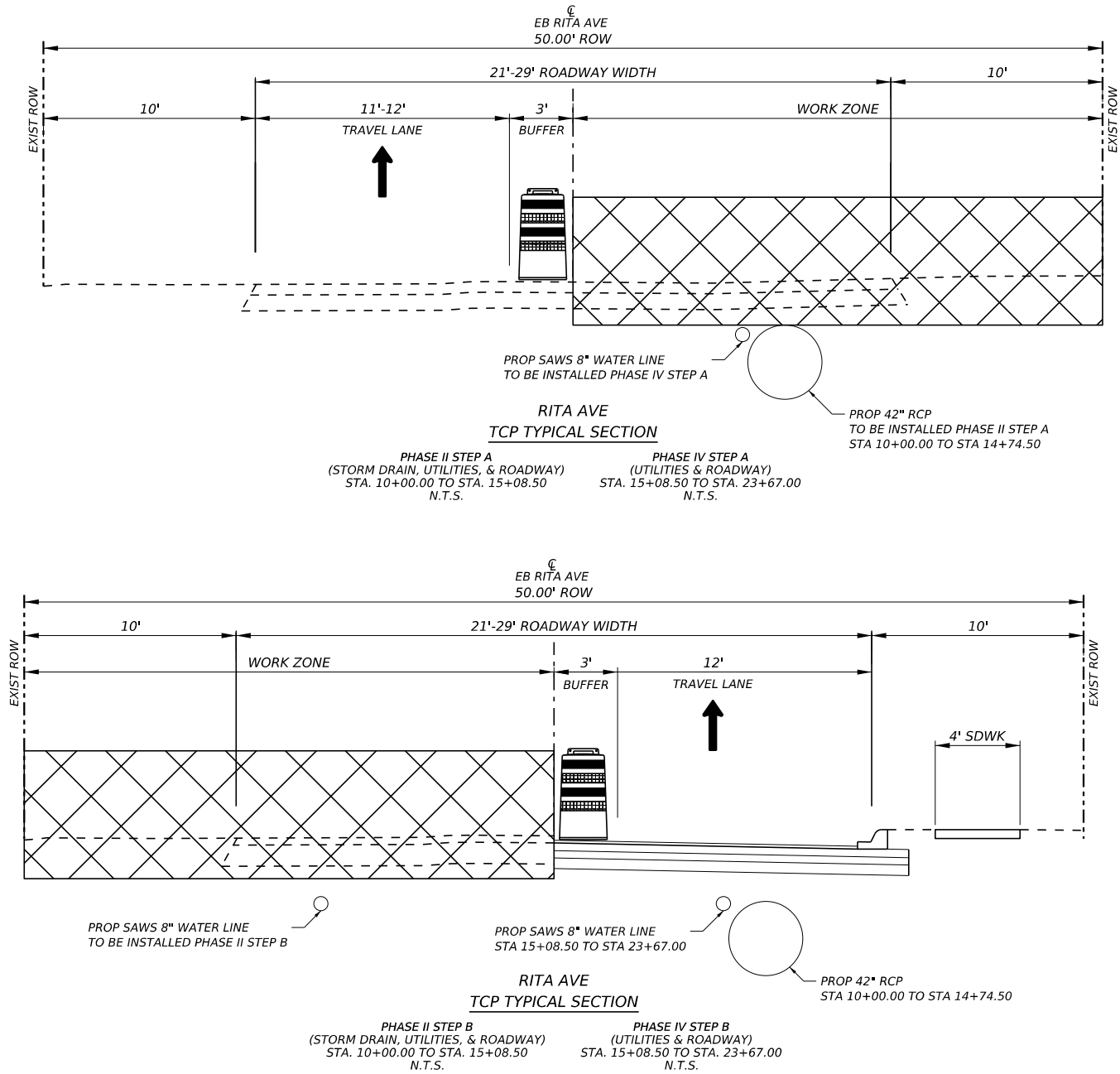
PHASE III STEP B
(UTILITIES & ROADWAY)
STA. 16+61.50 TO STA. 25+27.00
N.T.S.

NOTE: CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. REFER TO UCM AND PROPOSED STORM DRAIN/UTILITY LAYOUTS FOR ADDITIONAL INFORMATION.



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| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS | | | |
| TRAFFIC CONTROL PLAN TYPICAL SECTIONS | | | |
| SHEET 3 OF 5 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/25 | |
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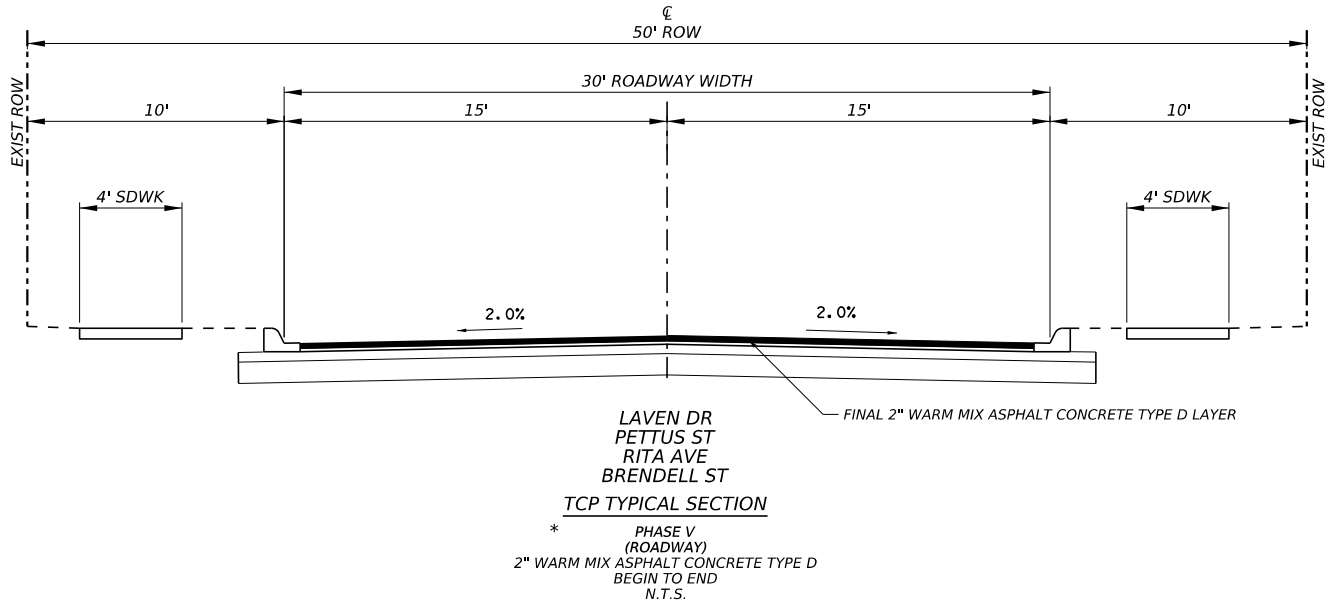
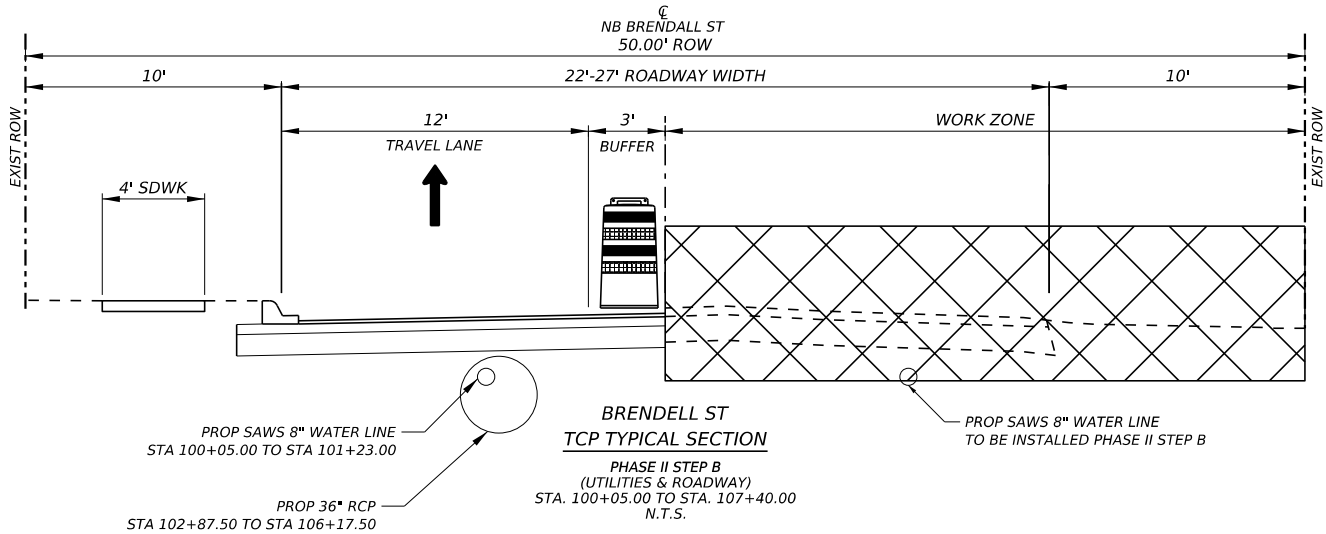
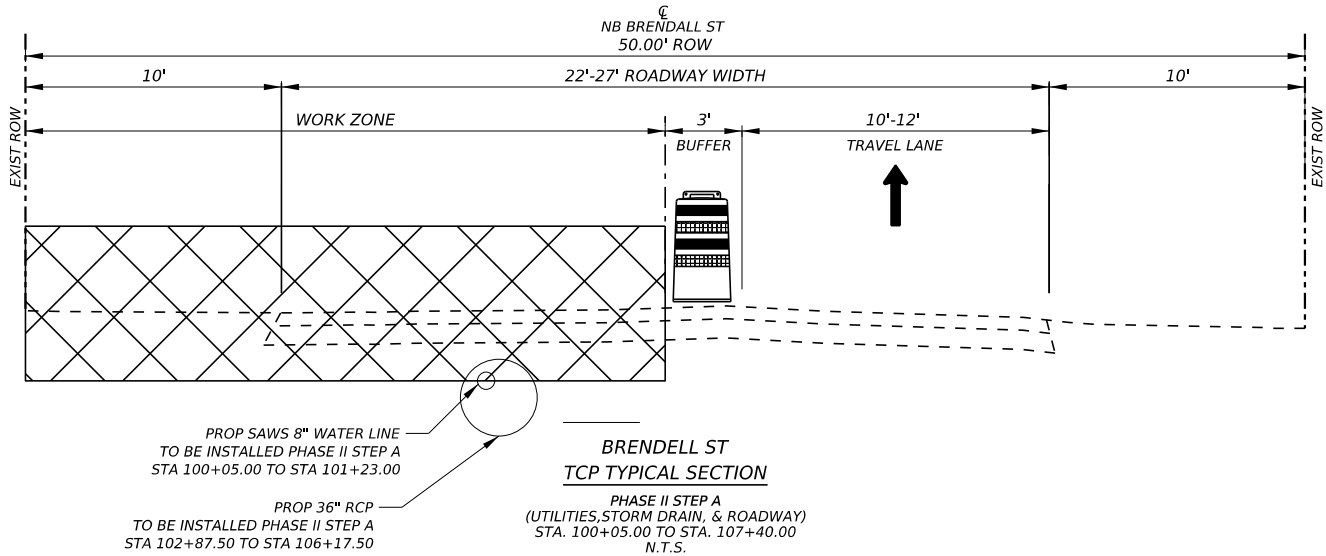


NOTE: CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. REFER TO UCM AND PROPOSED STORM DRAIN/UTILITY LAYOUTS FOR ADDITIONAL INFORMATION.



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| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS | | | |
| TRAFFIC CONTROL PLAN TYPICAL SECTIONS | | | |
| SHEET 4 OF 5 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/25 | |
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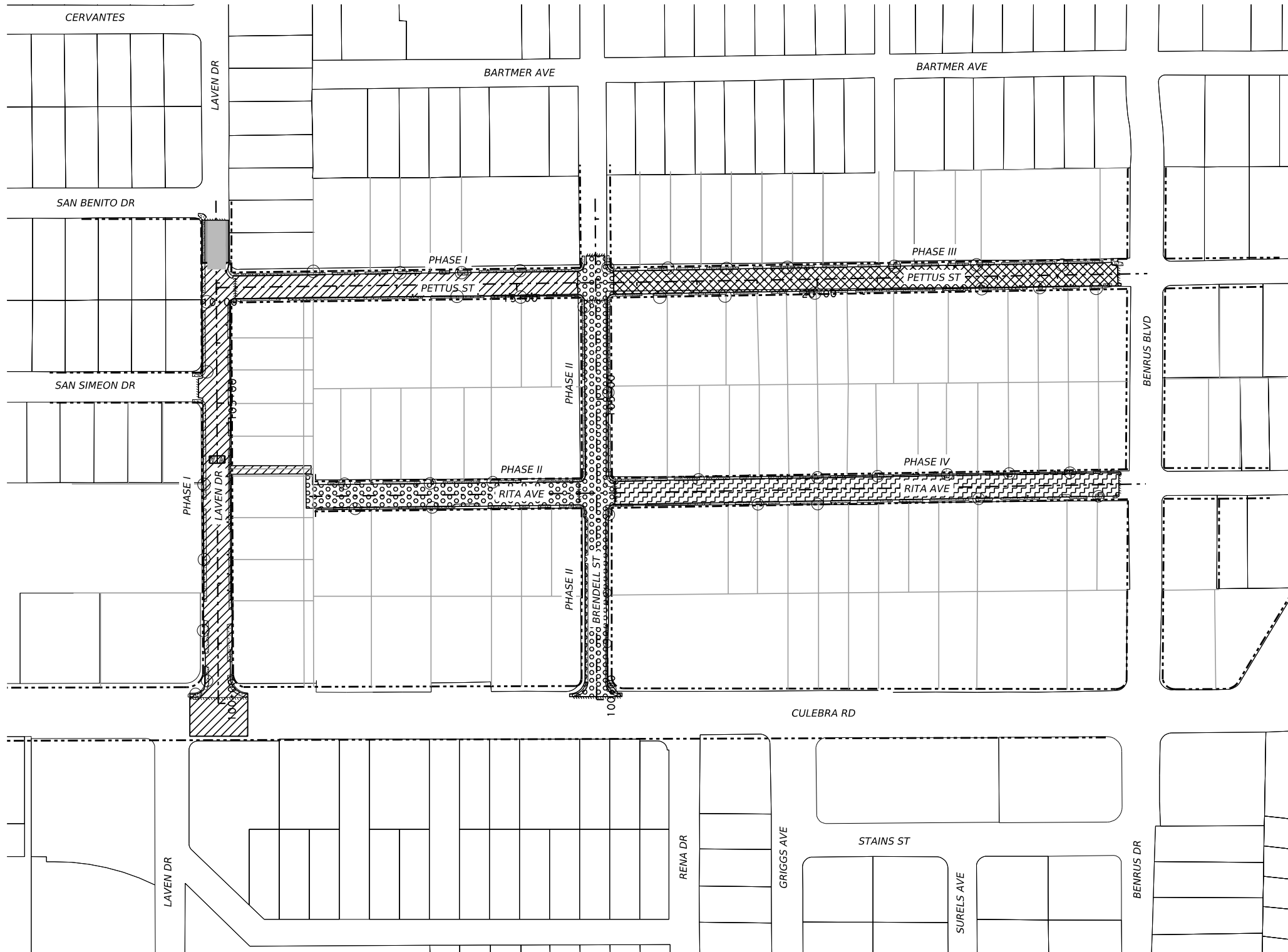


NOTE: CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION. REFER TO UCM AND PROPOSED STORM DRAIN/UTILITY LAYOUTS FOR ADDITIONAL INFORMATION.



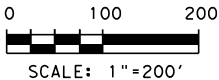
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| CULEBRA AREA STREETS | | | |
| TRAFFIC CONTROL PLAN TYPICAL SECTIONS | | | |
| SHEET 5 OF 5 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/25 | |
| DRWN. BY: TLF | DSGN. BY: JR | CHKD. BY: FR | SHEET NO: 25 |

*FOR ADDITIONAL TRAFFIC CONTROL DETAILS, REFER TO TXDOT TCP STD (1-2)-18 FOR CONSTRUCTION OF FINAL 2" HOT MIX ASPHALT CONCRETE TYPE D LIFT



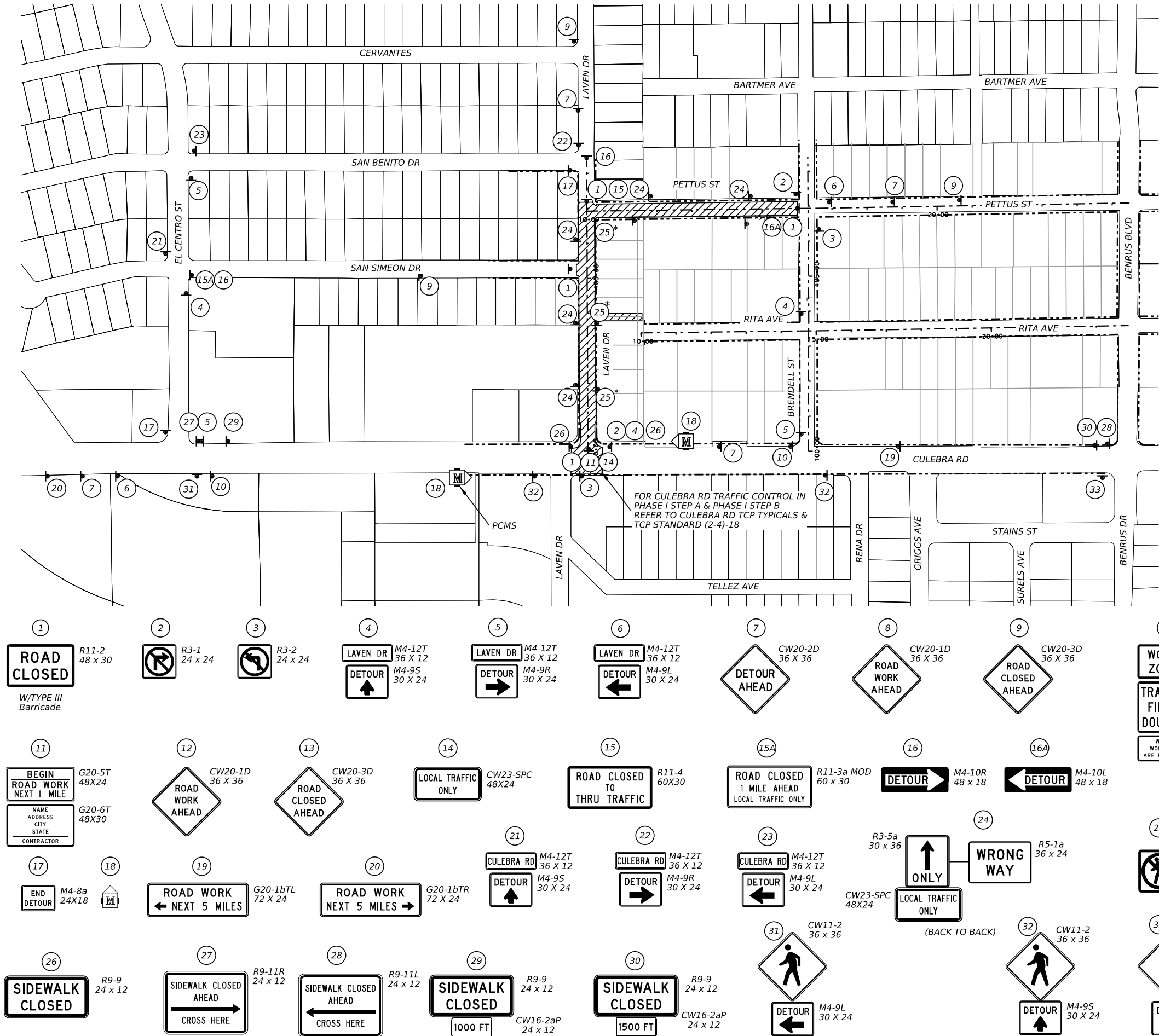
LEGEND

- PARCEL LIMIT
- EXISTING R.O.W.
- PHASE I
- PHASE 2
- PHASE 3
- PHASE 4
- PHASE 5



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| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS SCHEDULE OF TRAFFIC CONTROL OVERALL PHASING | | | |
| SHEET 1 OF 1 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/25 | |
| DRWN. BY: TLF | DSGN. BY: JR | CHKD. BY: FR | SHEET NO: 26 |

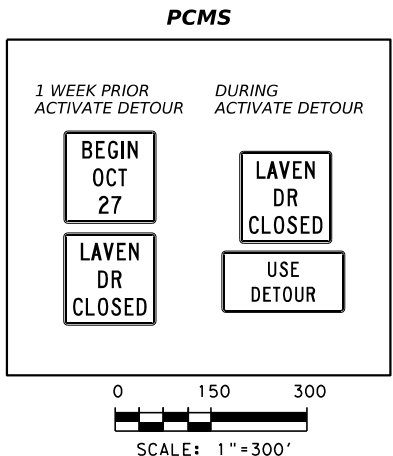
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LEGEND

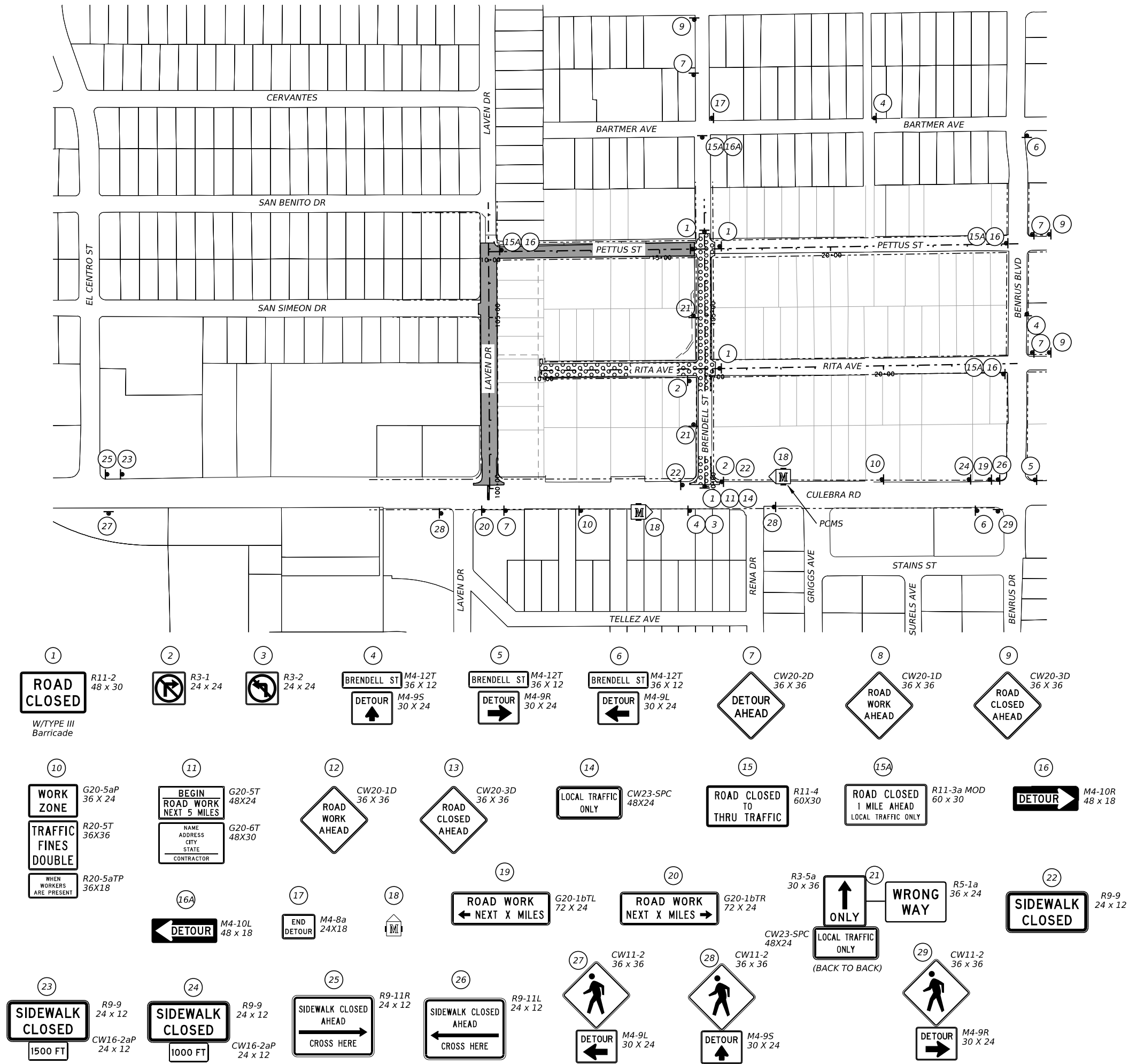
- PARCEL LIMIT
- EXISTING R.O.W.
- CONSTRUCTION PREVIOUS PHASE
- CONSTRUCTION -PHASE 1
- SIGN

*SIGN PLACEMENT IS FOR PH 1 STEP D ONLY.
SWITCH SIGN PLACEMENT TO OPPOSITE SIDE OF LAVEN DR
DURING PH 1 STEP E.



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| <div>CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT</div> | | | |
| <div>CULEBRA AREA STREETS</div> | | | |
| <div>SCHEDULE OF TRAFFIC CONTROL PHASE I</div> | | | |
| SHEET 1 OF 5 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/25 |
| DRWN. BY: TLF | DSGN. BY: JR | CHKD. BY: FR | SHEET NO: 27 |

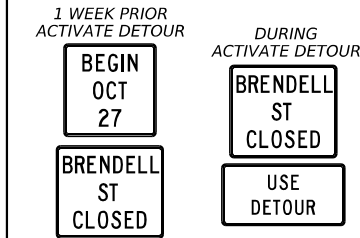
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LEGEND

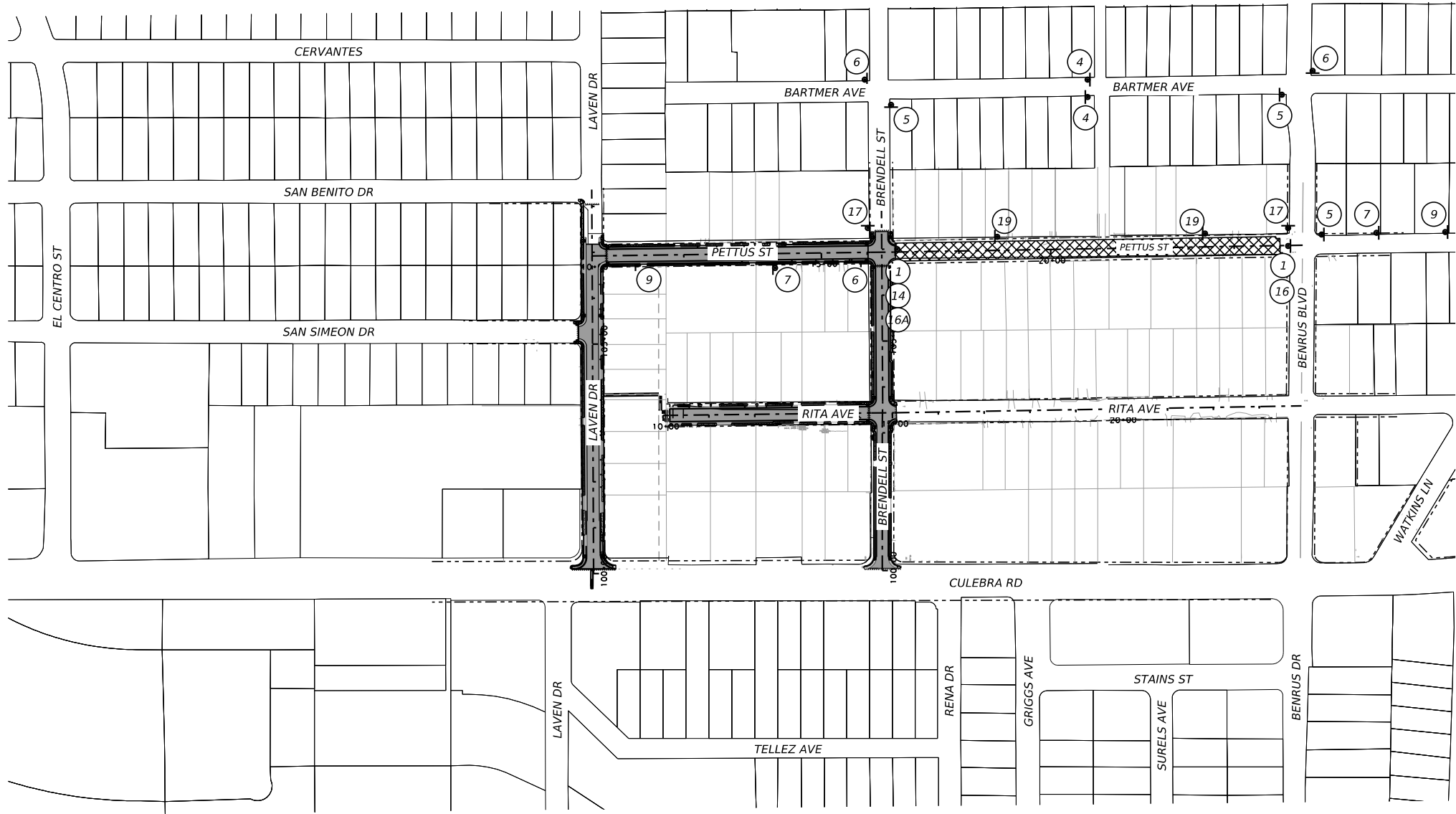
- PARCEL LIMIT
- EXISTING R.O.W.
- CONSTRUCTION PREVIOUS PHASE
- CONSTRUCTION -PHASE 2
- SIGN

PCMS



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| <div><div><div>DE CORP 16414 SAN PEDRO AVE, SUITE 550 SAN ANTONIO, TEXAS 78232 (210)249-2280 www.dec corp.com T.B.P.E. FIRM REGISTRATION #392</div></div></div> | | | |
| <div><div><div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div></div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS | | | |
| SCHEDULE OF TRAFFIC CONTROL PHASE II | | | |
| SHEET 2 OF 5 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/25 |
| DRWN. BY: TLF | DSGN. BY: JR | CHKD. BY: FR | SHEET NO: 28 |

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LEGEND


- PARCEL LIMIT
- EXISTING R.O.W.
- CONSTRUCTION PREVIOUS PHASE
- CONSTRUCTION -PHASE 3
- SIGN




05/28/25

STATE OF TEXAS
JORGE NICOLAS RODRIGUEZ
95381
LICENSED PROFESSIONAL ENGINEER

1 **ROAD CLOSED**
R11-2
48 x 30
W/TYPE III Barricade

2 
R3-1
24 x 24

3 
R3-2
24 x 24

4 **PETTUS ST**
DETOUR
M4-12T
36 X 12
M4-9S
30 X 24

5 **PETTUS ST**
DETOUR
M4-12T
36 X 12
M4-9R
30 X 24

6 **PETTUS ST**
DETOUR
M4-12T
36 X 12
M4-9L
30 X 24

7 **DETOUR AHEAD**
CW20-2D
36 X 36

8 **ROAD WORK AHEAD**
CW20-1D
36 X 36

9 **ROAD CLOSED AHEAD**
CW20-3D
36 X 36

10 **WORK ZONE**
G20-5aP
36 X 24
TRAFFIC FINES DOUBLE
R20-5T
36X36
WHEN WORKERS ARE PRESENT
R20-5aTP
36X18

11 **BEGIN ROAD WORK NEXT 5 MILES**
G20-5T
48X24
NAME ADDRESS CITY STATE CONTRACTOR
G20-6T
48X30

12 **ROAD WORK AHEAD**
CW20-1D
36 X 36

13 **ROAD CLOSED AHEAD**
CW20-3D
36 X 36


14 **LOCAL TRAFFIC ONLY**
CW23-SPC
48X24

15 **ROAD CLOSED TO THRU TRAFFIC**
R11-4
60X30

16 **DETOUR**
M4-10R
48 x 18

16A **DETOUR**
M4-10L
48 x 18

17 **END DETOUR**
M4-8a
24X18

18 

19 **WRONG WAY**
R5-1a
36 x 24
ONLY
LOCAL TRAFFIC ONLY
(BACK TO BACK)

| | | | |
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| NO. | REVISION | BY | DATE |
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DEC
ENGINEERING EXCELLENCE

DE CORP
16414 SAN PEDRO AVE, SUITE 550
SAN ANTONIO, TEXAS 78232
(210)249-2280 www.dec corp.com
T.B.P.E. FIRM REGISTRATION #392

AG3
AG3 Group, LLC
ENGINEERING • SURVEY • CONSTRUCTION

4800 FREDERICKSBURG RD SUITE 200SL
SAN ANTONIO, TX 78229
P:210-208-9400 F:210-208-9401
TBPE #F-21809
TBPLS #10194622

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

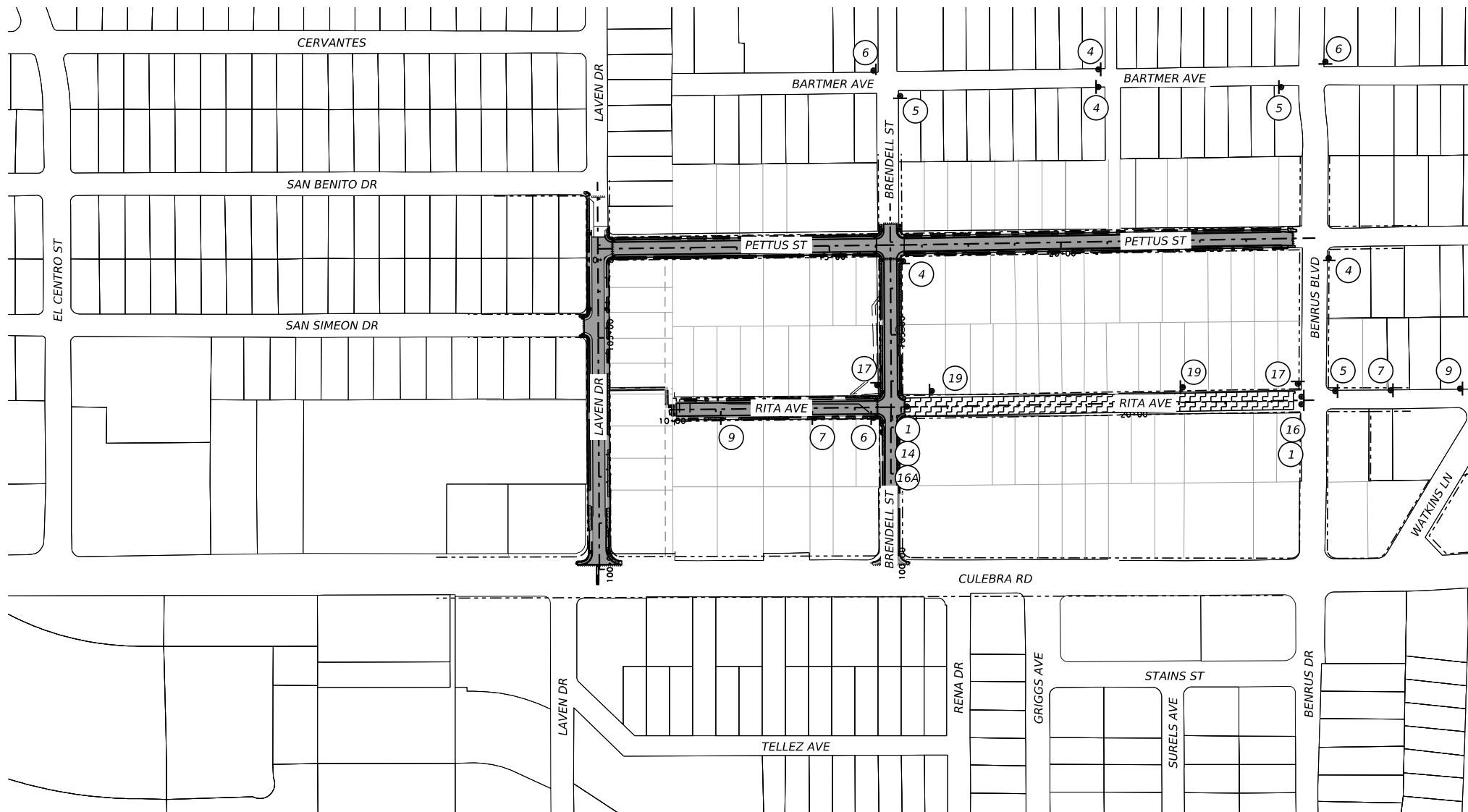
CULEBRA AREA STREETS

SCHEDULE OF TRAFFIC CONTROL
PHASE III

100% SUBMITTAL PROJECT NO: 23-03873 DATE: 05/28/25
DRWN. BY: TLF DSGN. BY: JR CHKD. BY: FR SHEET NO: 29

SHEET 3 OF 5

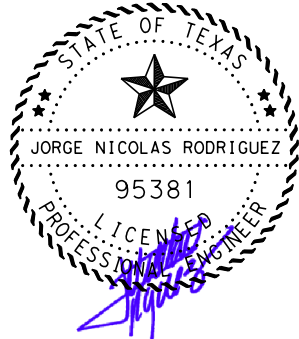
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- LEGEND
- PARCEL LIMIT
 - EXISTING R.O.W.
 - CONSTRUCTION PREVIOUS PHASE
 - CONSTRUCTION -PHASE 4
 - SIGN



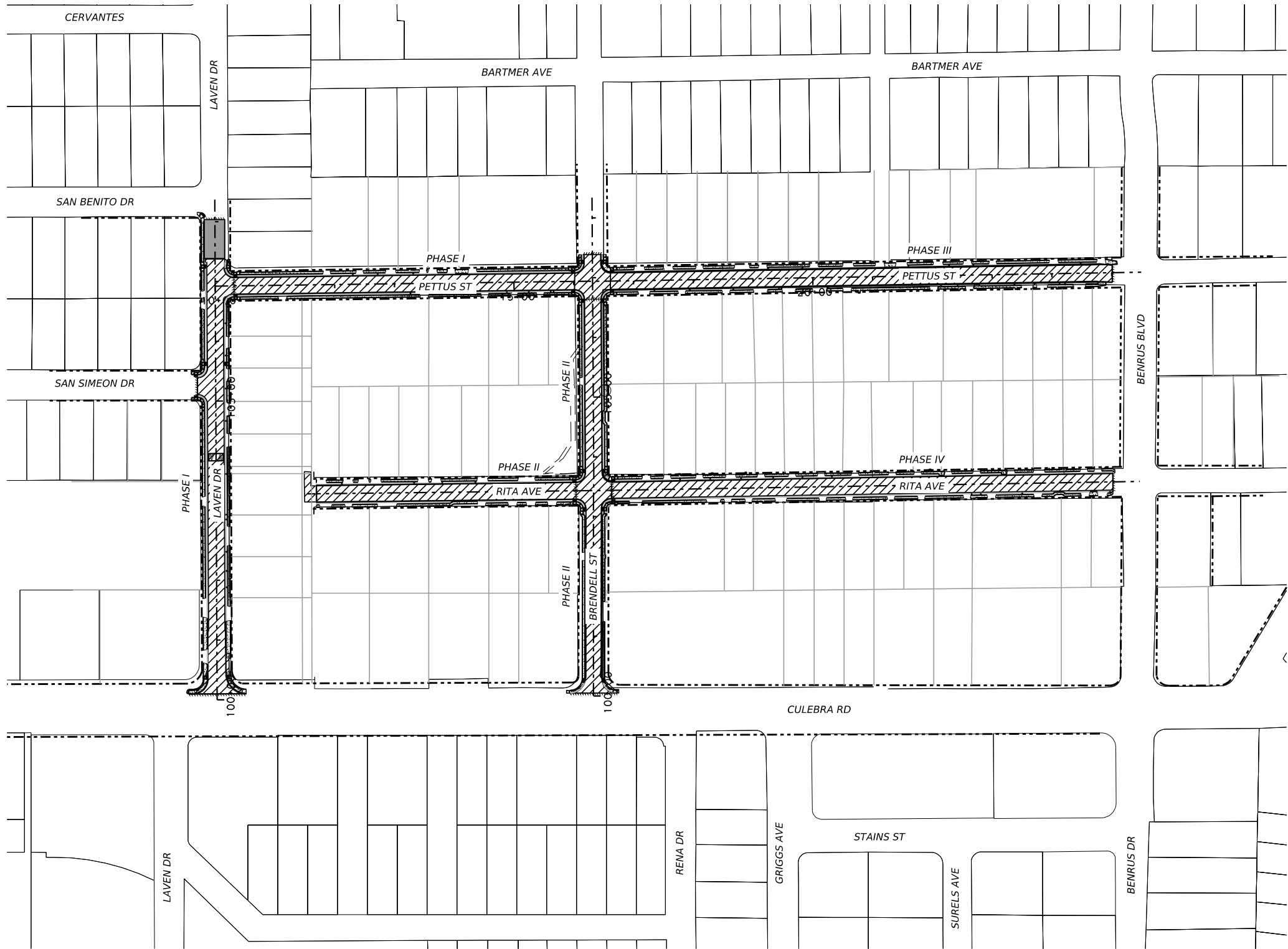
SCALE: 1"=300'



- 1 ROAD CLOSED
R11-2 48 x 30
W/TYPE III Barricade
- 2 R3-1 24 x 24
- 3 R3-2 24 x 24
- 4 RITA AVE
M4-12T 36 X 12
M4-9S 30 X 24
DETOUR
- 5 RITA AVE
M4-12T 36 X 12
M4-9R 30 X 24
DETOUR
- 6 RITA AVE
M4-12T 36 X 12
M4-9L 30 X 24
DETOUR
- 7 CW20-2D 36 X 36
DETOUR AHEAD
- 8 CW20-1D 36 X 36
ROAD WORK AHEAD
- 9 CW20-3D 36 X 36
ROAD CLOSED AHEAD
- 10 WORK ZONE
G20-5aP 36 X 24
TRAFFIC FINES DOUBLE
R20-5T 36X36
WHEN WORKERS ARE PRESENT
R20-5aTP 36X18
- 11 BEGIN ROAD WORK NEXT 5 MILES
NAME ADDRESS CITY STATE CONTRACTOR
G20-5T 48X24
G20-6T 48X30
- 12 CW20-1D 36 X 36
ROAD WORK AHEAD
- 13 CW20-3D 36 X 36
ROAD CLOSED AHEAD
- 14 CW23-SPC 48X24
LOCAL TRAFFIC ONLY
- 15 R11-4 60X30
ROAD CLOSED TO THRU TRAFFIC
- 16 M4-10R 48 x 18
DETOUR
- 16A M4-10L 48 x 18
DETOUR
- 17 M4-8a 24X18
END DETOUR
- 18
- 19 R3-5a 30 x 36
CW23-SPC 48X24
LOCAL TRAFFIC ONLY
WRONG WAY
R5-1a 36 x 24
(BACK TO BACK)

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| NO. | REVISION | BY | DATE |
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| <div><div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div><div><div>4800 FREDERICKSBURG RD SUITE 200SL</div><div>SAN ANTONIO, TX 78229</div><div>P:210-208-9400 F:210-208-9401</div><div>TBPE #F-21809</div><div>TBPLS #10194622</div></div></div> | | | |
| <div><div>CITY OF SAN ANTONIO</div><div>PUBLIC WORKS DEPARTMENT</div><div>CULEBRA AREA STREETS</div><div>SCHEDULE OF TRAFFIC CONTROL</div><div>PHASE IV</div></div> | | | |
| SHEET 4 OF 5 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/25 | |
| DRWN. BY: TLF | DSGN. BY: JR | CHKD. BY: FR | SHEET NO: 30 |

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LEGEND

- PARCEL LIMIT
- EXISTING R.O.W.
- PHASE 5 - OVERLAY
- PHASE 5 - MILL & OVERLAY*

NOTE: FOR ADDITIONAL TRAFFIC CONTROL DETAILS, REFER TO TxDOT TCP STD (1-2)-18 FOR CONSTRUCTION OF FINAL 2" HOT MIX ASPHALT CONCRETE TYPE D LIFT

* FOR PHASE 5, MILL AND OVERLAY ON LAVEN DR FROM LAVEN DR @ STA 107+18 TO STA 108+04. LAY FINAL OVERLAY FOR REMAINDER OF THE PROJECT. REFER TO TCP NARRATIVE AND TCP PHASE V FOR ADDITIONAL INFORMATION.



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| <div><div><div>AG3</div><div>AG3 Group, LLC ENGINEERING • SURVEY • CONSTRUCTION</div></div><div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS SCHEDULE OF TRAFFIC CONTROL PHASE V | | | |
| SHEET 5 OF 5 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/25 | |
| DRWN. BY: TLF | DSGN. BY: JR | CHKD. BY: FR | SHEET NO: 31 |

TRAFFIC NOTES

TRENCHING / EXCAVATING

- The following notes shall apply to excavations of trenches or pits that are located in the pavement or are within six (6) feet of the edge of roadway:
- 1.) Trench walls shall not be closer than three (3) feet from the edge of the traveled way at any stage of construction.
 - 2.) Traffic control devices shall be in place before starting any excavation.
 - 3.) Trenches or pits will not be permitted to be bridged by steel plates and open to traffic unless they are temporarily backfilled to finished street grade.
 - 4.) For pits or trenches along or in a roadway that are going to be left open over night that are zero to fifty (0 – 50) feet in length, the following applies. GUARD RAIL OR CONCRETE BARRIER SHALL BE USED.
 - 5.) For pits or trenches along or in roadway that are going to be left open over night and are longer than 50 feet in length. CONCRETE BARRIERS MUST BE USED.
 - 6.) Plastic construction fencing shall be required for any trench or pit left open over night.
 - 7.) When using any guardrail or concrete barrier, protected end must be used as per the TEXAS-M.U.T.C.D.
 - 8.) For vertical drop-offs greater than two (2) feet along roadway, low profile concrete with appropriate end protection must be installed.
 - 9.) All concrete barriers placed on City R.O.W shall be low profile. No high profile barriers will be allowed.

REFLECTIVE SHEETING

The reflectorized white and reflectorized orange stripes for channelizing devices such as barricade drums and vertical panels shall be constructed of reflective sheeting meeting the color and retro-reflectivity requirements of high intensity, unless otherwise specified in the plans.

MAINTENANCE

- 1.) All traffic signs shall be kept in proper position, clean and legible at all times. Damaged barricades, signs, and other traffic control devices shall be replaced without undue delay.
- 2.) To ensure adequate maintenance, a suitable schedule for inspection, cleaning, and replacement of barricades, lights, and signs shall be established.
- 3.) Special attention and necessary action shall be taken to see that weeds, trees, shrubbery and construction materials do not obscure the face of any sign or barricades.

TRAINING

Each person whose actions affect maintenance and construction zone safety, from the upper-level management personnel through construction and maintenance field personnel, should receive training appropriate to the job decision each individual is required to make. Only those individuals who are qualified by means of adequate training in safe traffic control practices and have a basic understanding of the principles established by applicable standards and regulations, including those of the TEXAS M.U.T.C.D. should supervise the selection, placement, and maintenance of traffic control devices in maintenance and construction areas.

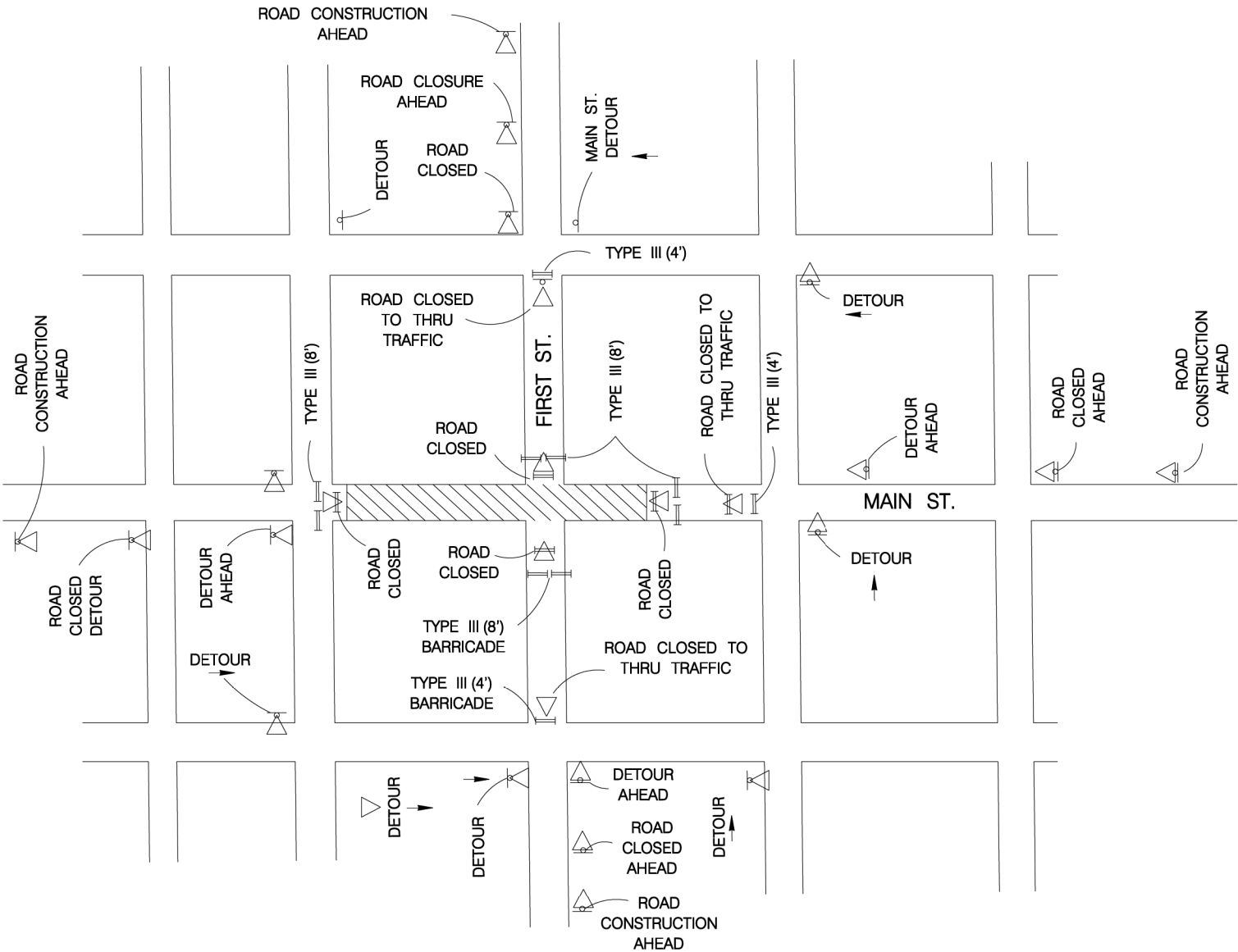
SPECIAL EVENTS BARRICADING

All Type I, (8') barricades used for special events (Dome, Runs, Walks, Parades etc.) shall be a minimum of 42" high and 96" wide. Any necessary signs will require proper sign stands.

USE OF CITY R.O.W.

The City of San Antonio reserves the right to allow contracting and barricading sub-contractors to use the City's R.O.W. The City also reserves the right to advise contractors and barricading sub-contractors to remove stored or unused traffic control devices from the City of San Antonio R.O.W. It is the barricading sub-contractor's responsibility to remove any traffic control device from City's R.O.W. when instructed to do so by a City representative.

CLOSURE DIAGRAMS

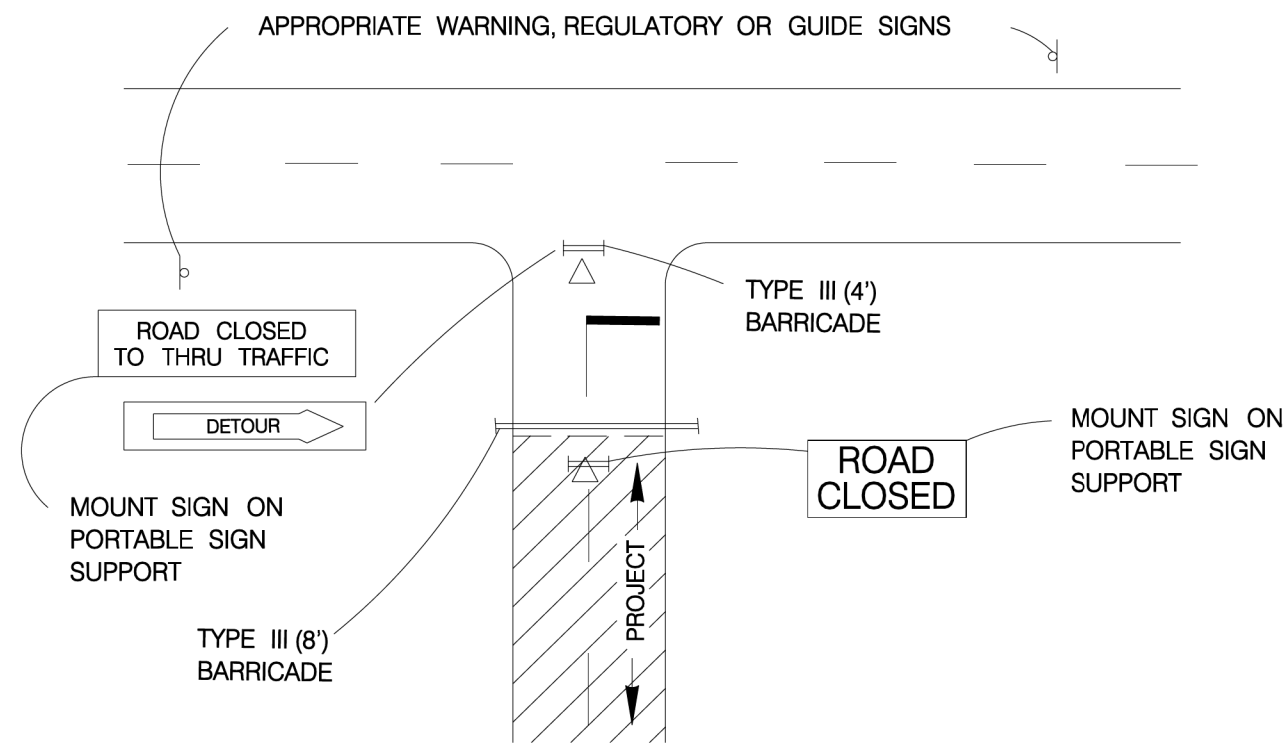


TYPICAL INTERSECTING STREET CLOSURE
FOR TWO LANE STREETS

NOTE:
ALL SIGNS WILL BE
MOUNTED ON SIGN
SUPPORTS ONLY

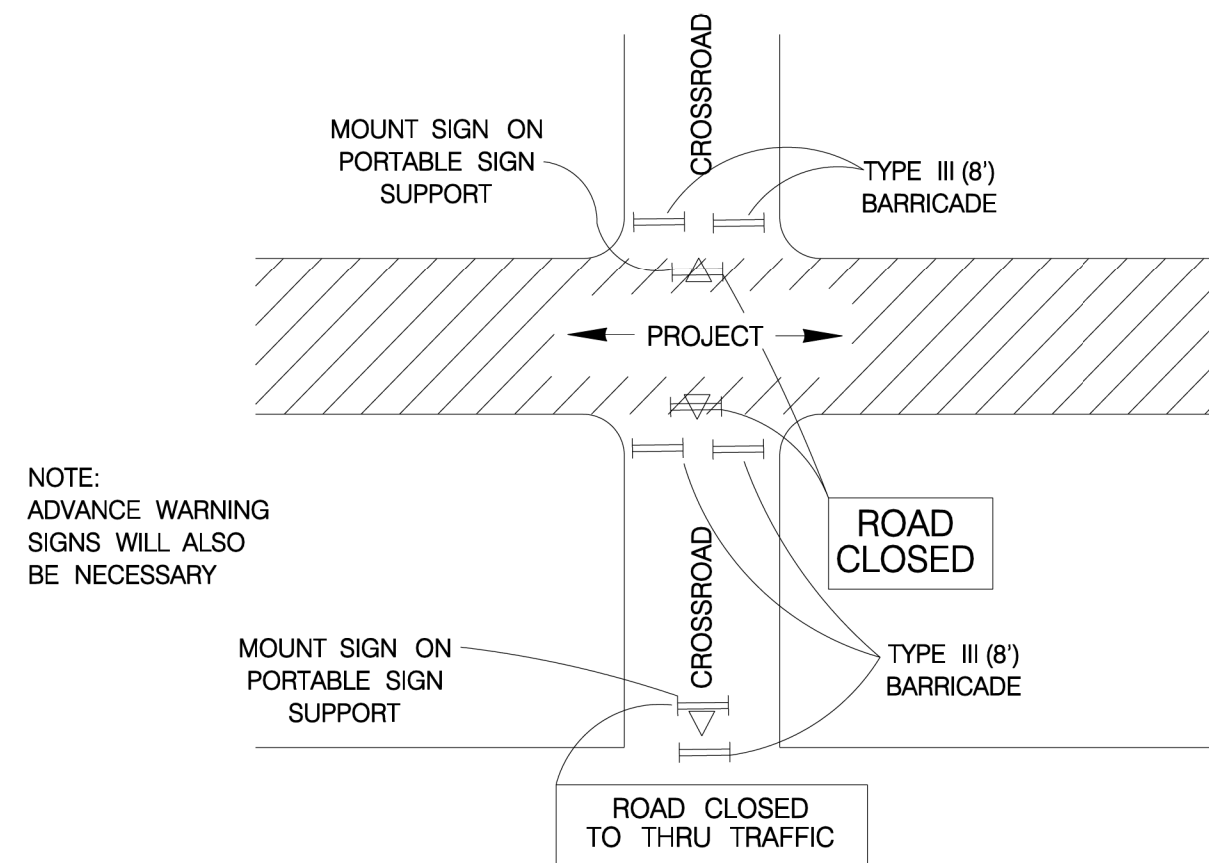
THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY JOHN D. FRIEBELE, #46394 ON 06-20-05 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

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| JUNE 2005 | | | |
| CITY OF SAN ANTONIO | | | |
| DEPARTMENT OF PUBLIC WORKS | | | |
| TRAFFIC STANDARDS | | | |
| BARRICADE AND CONSTRUCTION | | | |
| STANDARDS | | | |
| SHEET 1 OF 4 | | | |
| 100% SUBMITTAL | PROJECT NO.: 23-03873 | DATE: 05/28/25 | |
| DRWN. BY: A.F.G. | DSGN. BY: E.N.M. | CHKD. BY: J.D.F./E.N.M. | SHEET NO.: 32 |

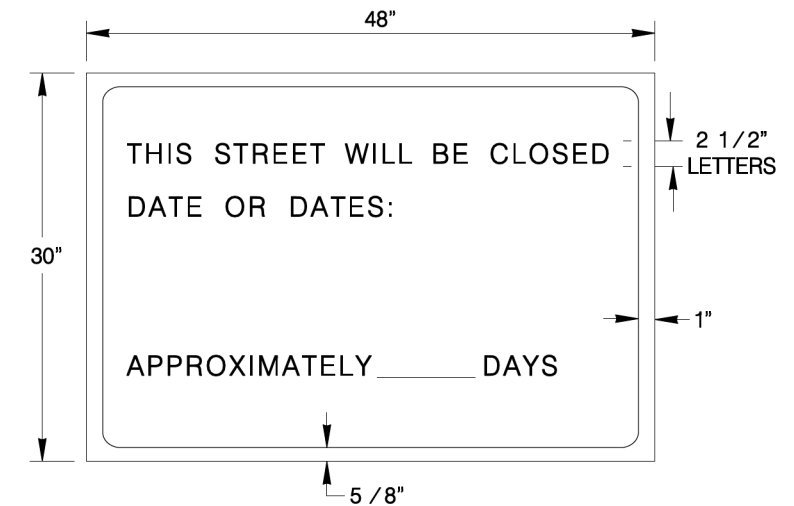


PROJECT LIMITS FOR CLOSED ROADWAY

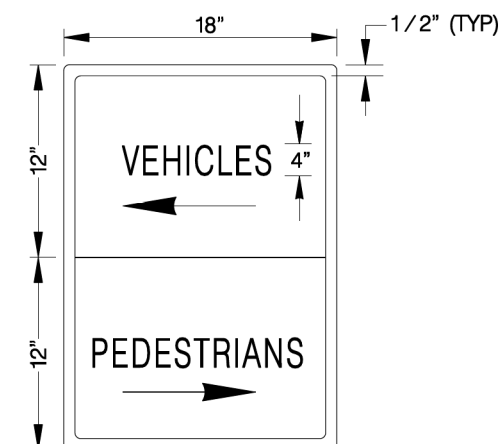
BARRICADES SHALL BE ERECTED COMPLETELY ACROSS ROADWAY. CHANNELIZING DEVICES MAY BE DRUMS, VERTICAL PANELS OR CONES AS SPECIFIED IN THE PLANS



CROSS STREET SIGNING AND BARRICADING TOTALLY CLOSED

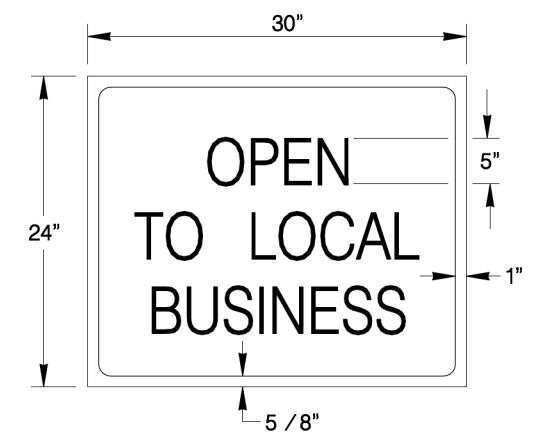


LETTERS- BLACK
BORDER- BLACK
BACKGROUND- ORANGE



LETTERS- BLACK
BORDER- BLACK
BACKGROUND- ORANGE
SPACING-3 SIGNS PER BLOCK

DIRECTION OF ARROWS
ARE REVERSIBLE



LETTERS- WHITE
BORDER- WHITE
BACKGROUND- BLUE REFLECTIVE

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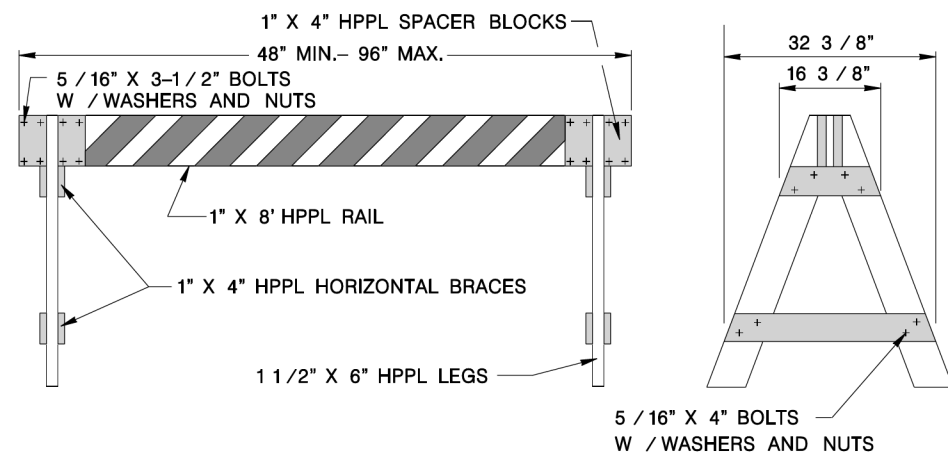
JUNE 2005

CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

TRAFFIC STANDARDS
BARRICADE AND CONSTRUCTION
STANDARDS
SHEET 2 OF 4

| | | |
|------------------|-----------------------|-------------------------|
| 100% SUBMITTAL | PROJECT NO.: 23-03873 | DATE: 05/28/25 |
| DRWN. BY: A.F.G. | DSGN. BY: E.N.M. | CHKD. BY: J.D.F./E.N.M. |
| | | SHEET NO.: 33 |

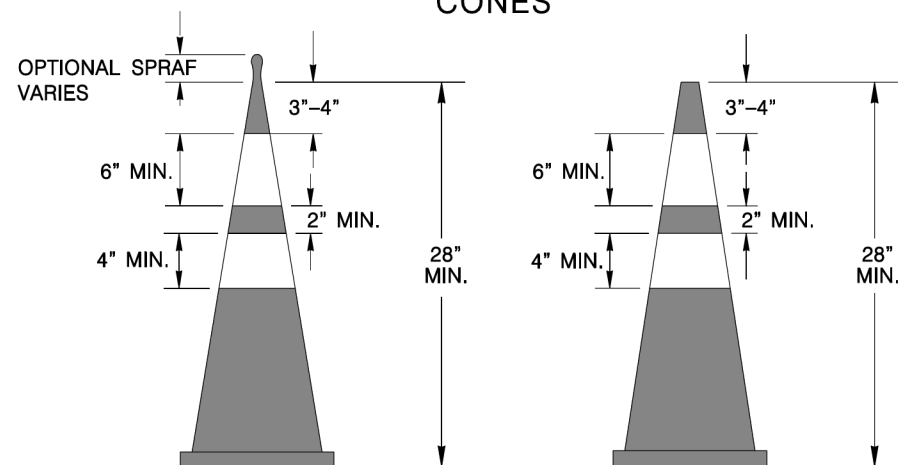
TYPE I BARRICADE



- Only the following Type I barricade shall be used in the City of San Antonio Right-Of-Way:
 - 1" x 8" plastic rail with 2" x 6" wooden legs.
 - 1" x 8" wooden rail with plastic legs.
 - 1" x 8" wooden rail with 2" x 6" wood legs.
 - No screws allowed for assembly of A-legs or rail.
 - Warning lights will be used as directed by the Traffic Engineer.
 - All Type I (4') barricades will be a minimum of 36" high and 60" wide. (For Construction Use Only)
 - All Type I (8') barricades with wooden legs shall be 2" X 6" wood only.
 - All Type I (4') barricades with wooden legs shall be 1" X 8" wood only.
- Type I Barricades shall not be used for partial and total street closures in construction work zones. Only Type III barricades shall be used for this purpose.
- Warning lights shall not be mounted on Type I barricades.

(See TxDOT BC-03 Sheets for specific construction information)

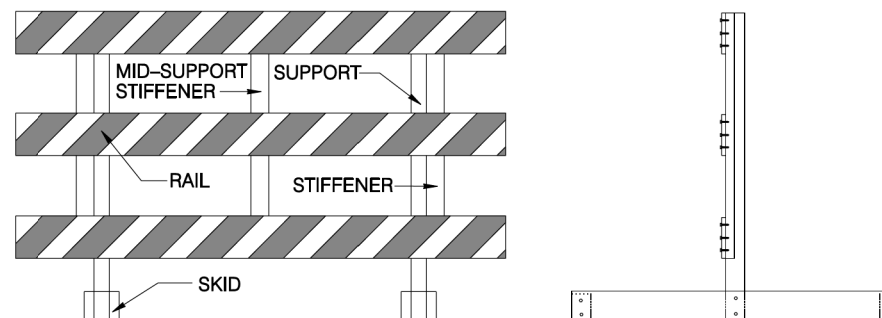
CONES



- Base for 28" high cones must weigh at least 9.5 lbs.
- Night time cones must have reflective collars.

(See TxDOT BC-03 Sheets for specific construction information)

Type III BARRICADE



- Only the following Type III barricade shall be used in the City of San Antonio Right-Of-Way.
 - Hollow polyvinyl or fiberglass tubing post with 1" X 8" wooden rails.
 - Hollow polyvinyl or fiberglass tubing post with plastic rails.
 - Skids must be wood or solid plastic only.
 - Warning lights shall not be mounted on Type III barricades.

(See TxDOT BC-03 Sheets for specific construction information)

TEMPORARY MARKINGS

- Solid double yellow painted lines shall be installed for temporary division of traffic or construction duration longer than five (5) days, with repainting to occur once monthly or at the discretion of the Traffic Engineer. (All cost of upkeep will be at the contractor's expense.)
- Solid double yellow tabs, or V/P panels shall be installed for temporary division of traffic for construction duration less than five (5) days, with re-tabbing to occur at the discretion of the Traffic Engineer.
NAILS SHALL NOT BE USED TO FIX TABS TO CEMENT OR BASE
(All cost of upkeep will be at the contractor's expense.)

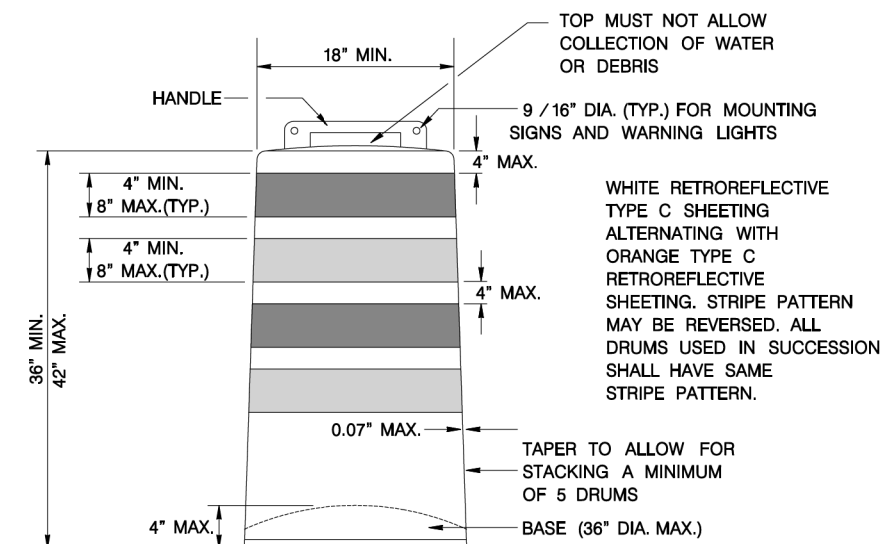
(See TxDOT BC-03 Sheets for specific construction information.)

TEMPORARY CONCRETE BARRIER

- All concrete barriers placed on City R.O.W. shall be low profile.
- No high profile barriers will be allowed.
- Reflectors will be required on each concrete barrier.

(See TxDOT BC-03 Sheets for specific construction information)

PLASTIC DRUMS



- Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
- Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
- The Engineer/Inspector shall provide written notice to the Contractor regarding the replacement of drums or other traffic control devices. The Contractor shall have a maximum of 24 hours to replace any plastic drums or other traffic control devices identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.
- Each drum must have a 40 lb. rubber or plastic snap on.
- No signs larger than 18" X 24" will be allowed to be mounted on plastic drums.
- No warning lights will be allowed to be mounted on plastic barrels.
- In lieu of a warning light, a yellow reflector will be acceptable.

(See TxDOT BC-03 Sheets for specific construction information)

JUNE 2005

CITY OF SAN ANTONIO
DEPARTMENT OF PUBLIC WORKS

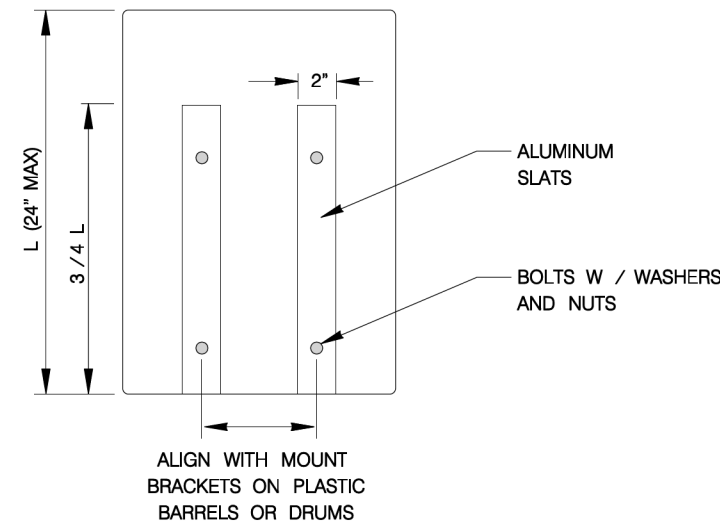
TRAFFIC STANDARDS
BARRICADE AND CONSTRUCTION
STANDARDS
SHEET 3 OF 4

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| 100% SUBMITTAL | PROJECT NO.: 23-03873 | DATE: 05/28/25 |
| DRWN. BY: A.F.G. | DSGN. BY: E.N.M. | CHKD. BY: J.D.F./E.N.M. |
| | | SHEET NO.: 34 |

THE ORIGINAL OF THIS DRAWING WAS SIGNED AND SEALED BY JOHN D. FRIEBELE, #46394 ON 06-20-05 AND IS ON FILE WITH THE TRAFFIC ENGINEERING DIVISION OF THE PUBLIC WORKS DEPARTMENT, CITY OF SAN ANTONIO.

SIGNS

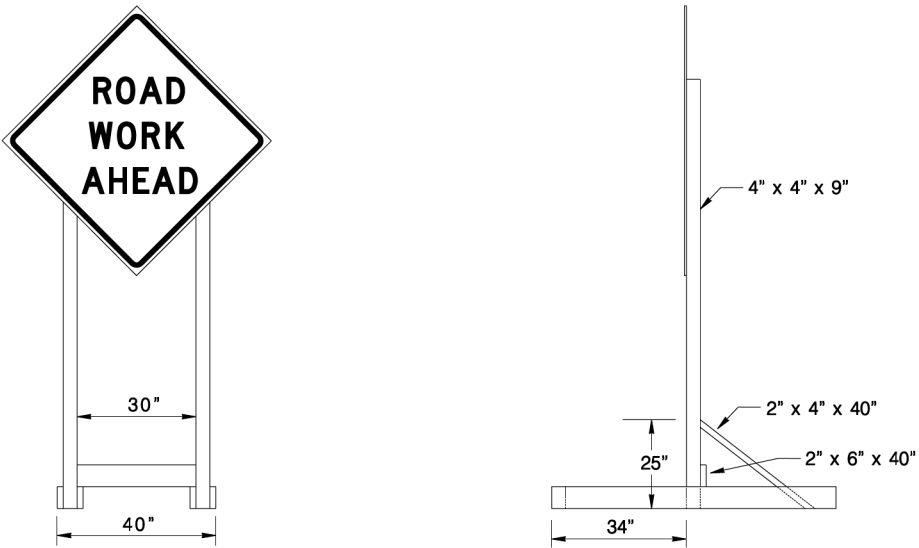
- 1.) A maximum of two signs can be mounted on any one Long / Intermediate Term Stationary Portable Sign Support.
- 2.) 48" X 48" signs shall be mounted separately on the Long / Intermediate Term Stationary Portable Sign Support.
- 3.) For Short Term Stationary Portable Sign Support the distance from the bottom of the vinyl sign to the exiting ground must be one (1) foot.
- 4.) Long / Intermediate Term Stationary Portable Signs must be made of wood or plastic only.
- 5.) No signs shall be mounted to any Type I, Type III, or folding barricades.
- 6.) Signs shall be mounted only on TxDOT approved sign supports.
- 7.) Detour signs will be mounted on single "D" legs w / 7' clearance from the bottom of the sign.
- 8.) WORK DURATION TERMINOLOGY
 - Long Term Stationary = occupies a location 3 or more days.
 - Intermediate-Term Stationary = occupies a location for overnight to 3 days.
 - Short Term Stationary = daylight work that occupies a location from 1 to 12 hours.
 - Short Duration = occupies a location up to 1 hour.
- 9.) Signs shall adhere to the following requirements:
 - Signs placed on plastic barrels or drums shall be made of ABS plastic or plywood.
 - Signs placed on skids shall be made of plywood or aluminum.
 - Aluminum signs shall have a minimum thickness of 0.08".
 - Plywood signs shall have a minimum thickness of 1 / 2".
 - ABS Plastic signs shall have a minimum thickness of 0.13".
 - Plastic signs cannot exceed 18" by 24" in size and shall be reinforced with 2" wide, 0.08" thick aluminum slats, as depicted below:



- No other material shall be accepted without the express written approval of the Traffic Engineer.

(See TxDOT BC-03 Sheets for specific construction information.)

LONG TERM / INTERMEDIATE TERM SIGN SUPPORT



- 1.) 48" X48" signs must be mounted independently.
- 2.) A maximum of two signs can be mounted on any one long term / intermediate sign support.
- 3.) Sand bag all sign supports.
- 4.) Distance from the bottom of the sign to the existing ground shall be 7'.
- 5.) Distance from the header barricade rail to the face of the sign panel shall be 2' min. and 10' max.
- 6.) Steel tripods shall not be allowed.

(See TxDOT BC-03 Sheets for specific construction information)

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|----------------------------|-----------------------|-------------------------|---------------|
| JUNE 2005 | | | |
| CITY OF SAN ANTONIO | | | |
| DEPARTMENT OF PUBLIC WORKS | | | |
| TRAFFIC STANDARDS | | | |
| BARRICADE AND CONSTRUCTION | | | |
| STANDARDS | | | |
| SHEET 4 OF 4 | | | |
| 100% SUBMITTAL | PROJECT NO.: 23-03873 | DATE: 05/28/25 | |
| DRWN. BY: A.F.G. | DSGN. BY: E.N.M. | CHKD. BY: J.D.F./E.N.M. | SHEET NO.: 35 |

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BARRICADE AND CONSTRUCTION (BC) STANDARD SHEETS GENERAL NOTES:

1. The Barricade and Construction Standard Sheets (BC sheets) are intended to show typical examples for placement of temporary traffic control devices, construction pavement markings, and typical work zone signs. The information contained in these sheets meet or exceed the requirements shown in the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
2. The development and design of the Traffic Control Plan (TCP) is the responsibility of the Engineer.
3. The Contractor may propose changes to the TCP that are signed and sealed by a licensed professional engineer for approval. The Engineer may develop, sign and seal Contractor proposed changes.
4. The Contractor is responsible for installing and maintaining the traffic control devices as shown in the plans. The Contractor may not move or change the approximate location of any device without the approval of the Engineer.
5. Geometric design of lane shifts and detours should, when possible, meet the applicable design criteria contained in manuals such as the American Association of State Highway and Transportation Officials (AASHTO), "A Policy on Geometric Design of Highways and Streets," the TxDOT "Roadway Design Manual" or engineering judgment.
6. When projects abut, the Engineer(s) may omit the END ROAD WORK, TRAFFIC FINES DOUBLE, and other advance warning signs if the signing would be redundant and the work areas appear continuous to the motorists. If the adjacent project is completed first, the Contractor shall erect the necessary warning signs as shown on these sheets, the TCP sheets or as directed by the Engineer. The BEGIN ROAD WORK NEXT X MILES sign shall be revised to show appropriate work zone distance.
7. The Engineer may require duplicate warning signs on the median side of divided highways where median width will permit and traffic volumes justify the signing.
8. All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.
9. The temporary traffic control devices shown in the illustrations of the BC sheets are examples. As necessary, the Engineer will determine the most appropriate traffic control devices to be used.
10. Where highway construction or maintenance work is being undertaken, other than mobile operations as defined by the Texas Manual on Uniform Traffic Control Devices, CSJ limit signs are required. CSJ limit signs are shown on BC(2). The OBEY WARNING SIGNS STATE LAW sign, STAY ALERT TALK OR TEXT LATER and the WORK ZONE TRAFFIC FINES DOUBLE sign with plaque shall be erected in advance of the CSJ limits. The BEGIN ROAD WORK NEXT X MILES, CONTRACTOR and END ROAD WORK signs shall be erected at or near the CSJ limits. For mobile operations, CSJ limit signs are not required.
11. Traffic control devices should be in place only while work is actually in progress or a definite need exists.
12. The Engineer has the final decision on the location of all traffic control devices.
13. Inactive equipment and work vehicles, including workers' private vehicles must be parked away from travel lanes. They should be as close to the right-of-way line as possible, or located behind a barrier or guardrail, or as approved by the Engineer.


WORKER SAFETY NOTES:

1. Workers on foot who are exposed to traffic or to construction equipment within the right-of-way shall wear high-visibility safety apparel meeting the requirements of ISEA "American National Standard for High-Visibility Apparel," or equivalent revisions, and labeled as ANSI 107-2004 standard performance for Class 2 or 3 risk exposure. Class 3 garments should be considered for high traffic volume work areas or night time work.
2. Except in emergency situations, flagger stations shall be illuminated when flagging is used at night.

COMPLIANT WORKZONE TRAFFIC CONTROL DEVICES

1. Only pre-qualified products shall be used. The "Compliant Work Zone Traffic Control Devices List" (CWZTCD) describes pre-qualified products and their sources.
2. Work zone traffic control devices shall be compliant with the Manual for Assessing safety Hardware (MASH).

| |
|--|
| THE DOCUMENTS BELOW CAN BE FOUND ON-LINE AT http://www.txdot.gov |
| COMPLIANT WORK ZONE TRAFFIC CONTROL DEVICES LIST (CWZTCD) |
| DEPARTMENTAL MATERIAL SPECIFICATIONS (DMS) |
| MATERIAL PRODUCER LIST (MPL) |
| ROADWAY DESIGN MANUAL - SEE "MANUALS (ONLINE MANUALS)" |
| STANDARD HIGHWAY SIGN DESIGNS FOR TEXAS (SHSD) |
| TEXAS MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (TMUTCD) |
| TRAFFIC ENGINEERING STANDARD SHEETS |



Texas Department of Transportation

Traffic Safety Division Standard

BARRICADE AND CONSTRUCTION
GENERAL NOTES
AND REQUIREMENTS

BC (1) - 21

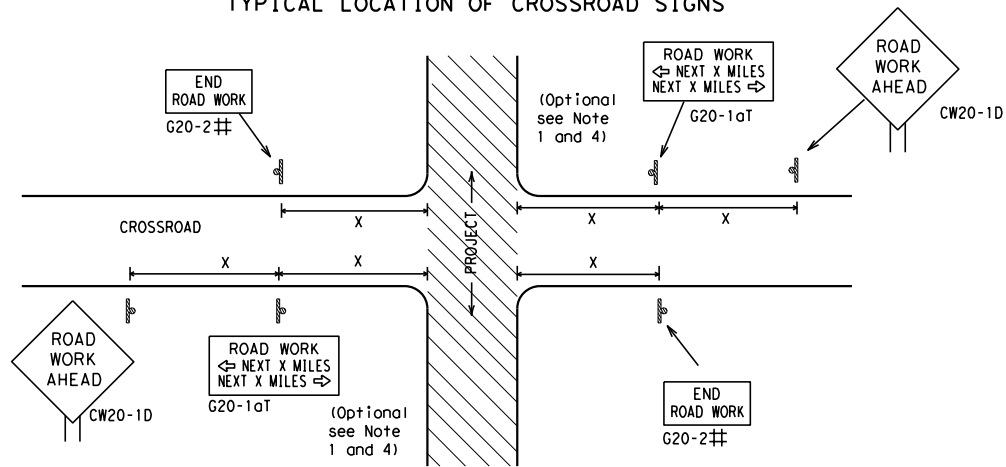
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| © TxDOT | November 2002 | CONT | SECT | JOB | | HIGHWAY | | | |
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| 5-10 | 5-21 | | | | | 36 | | | |

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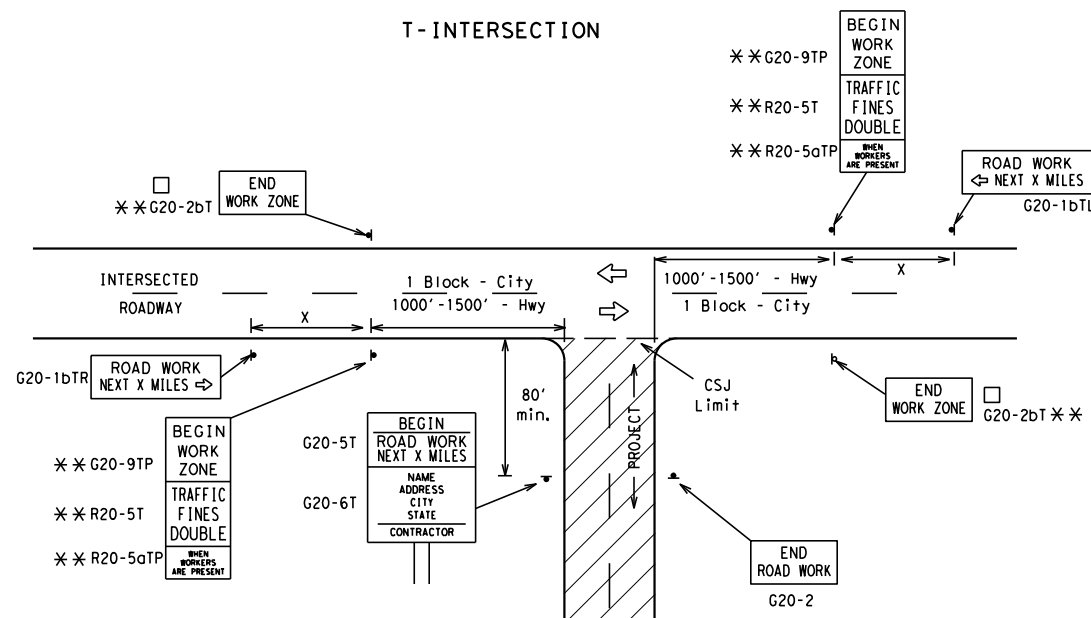
TYPICAL LOCATION OF CROSSROAD SIGNS



May be mounted on back of "ROAD WORK AHEAD" (CW20-1D) sign with approval of Engineer. (See note 2 below)

1. The typical minimum signing on a crossroad approach should be a "ROAD WORK AHEAD" (CW20-1D) sign and a (G20-2) "END ROAD WORK" sign, unless noted otherwise in plans.
2. The Engineer may use the reduced size 36" x 36" ROAD WORK AHEAD (CW20-1D) sign mounted back to back with the reduced size 36" x 18" "END ROAD WORK" (G20-2) sign on low volume crossroads (see Note 4 under "Typical Construction Warning Sign Size and Spacing"). See the "Standard Highway Sign Designs for Texas" manual for sign details. The Engineer may omit the advance warning signs on low volume crossroads. The Engineer will determine whether a road is low volume as per TMUTCD Part 5. This information shall be shown in the plans.
3. Based on existing field conditions, the Engineer/Inspector may require additional signs such as FLAGGER AHEAD, LOOSE GRAVEL, or other appropriate signs. When additional signs are required, these signs will be considered part of the minimum requirements. The Engineer/Inspector will determine the proper location and spacing of any sign not shown on the BC sheets, Traffic Control Plan sheets or the Work Zone Standard Sheets.
4. The "ROAD WORK NEXT X MILES" (G20-1aT) sign shall be required at high volume crossroads to advise motorists of the length of construction in either direction from the intersection. The Engineer will determine whether a roadway is considered high volume.
5. Additional traffic control devices may be shown elsewhere in the plans for higher volume crossroads.
6. When work occurs in the intersection area, appropriate traffic control devices, as shown elsewhere in the plans or as determined by the Engineer/Inspector, shall be in place.

T-INTERSECTION



CSJ LIMITS AT T-INTERSECTION

1. The Engineer will determine the types and location of any additional traffic control devices, such as a flagger and accompanying signs, or other signs, that should be used when work is being performed at or near an intersection.
2. If construction closes the road at a T-intersection, the Contractor shall place the "CONTRACTOR NAME" (G20-6T) sign behind the Type 3 Barricades for the road closure (see BC(10) also). The "ROAD WORK NEXT X MILES" left arrow (G20-1bTL) and "ROAD WORK NEXT X MILES" right arrow (G20-1bTR) signs shall be replaced by the detour signing called for in the plans.

TYPICAL CONSTRUCTION WARNING SIGN SIZE AND SPACING^{1,5,6}

| Sign Number or Series | SIZE | | SPACING | |
|---------------------------------------|-------------------|---------------------|------------------|---|
| | Conventional Road | Expressway/ Freeway | Posted Speed MPH | Sign Δ Spacing "x" Feet (Apprx.) |
| CW20 ⁴ | 48" x 48" | 48" x 48" | 30 | 120 |
| CW21 | | | 35 | 160 |
| CW22 | | | 40 | 240 |
| CW23 | | | 45 | 320 |
| CW25 | | | 50 | 400 |
| CW1, CW2, CW7, CW8, CW9, CW11, CW14 | 36" x 36" | 48" x 48" | 55 | 500 ² |
| CW3, CW4, CW5, CW6, CW8-3, CW10, CW12 | 48" x 48" | 48" x 48" | 60 | 600 ² |
| | | | 65 | 700 ² |
| | | | 70 | 800 ² |
| | | | 75 | 900 ² |
| * | | | 80 | 1000 ² |
| | | | * | * |

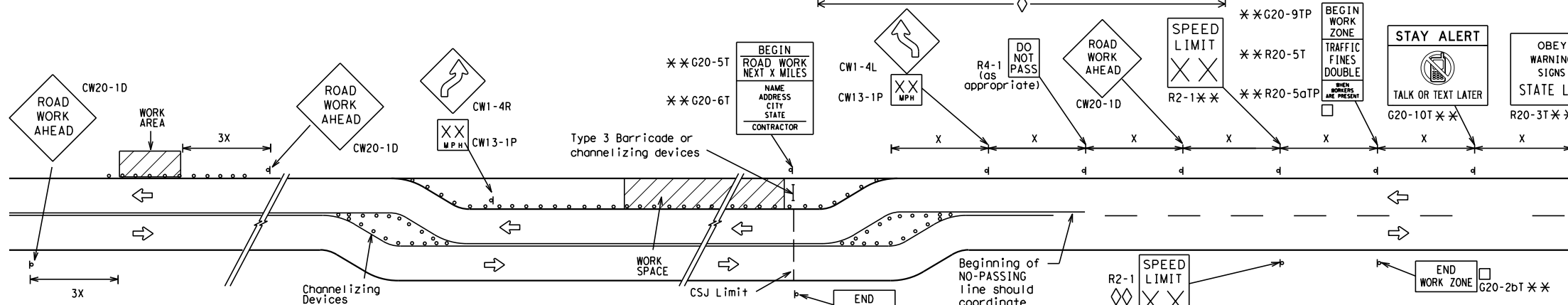
* For typical sign spacings on divided highways, expressways and freeways, see Part 6 of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) typical application diagrams or TCP Standard Sheets.

Δ Minimum distance from work area to first Advance Warning sign nearest the work area and/or distance between each additional sign.

GENERAL NOTES

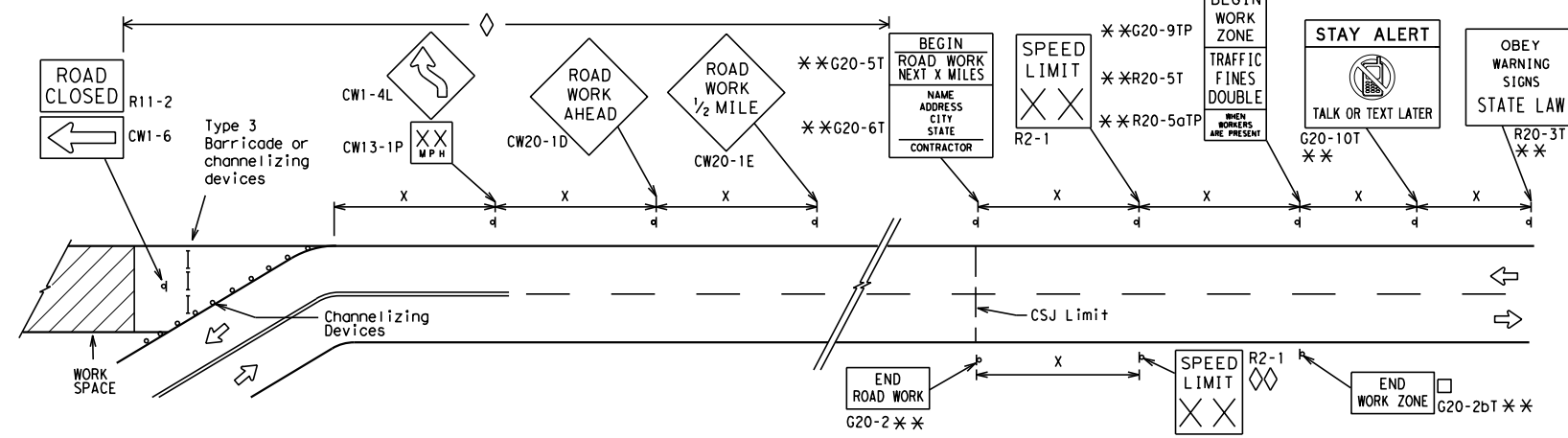
1. Special or larger size signs may be used as necessary.
2. Distance between signs should be increased as required to have 1500 feet advance warning.
3. Distance between signs should be increased as required to have 1/2 mile or more advance warning.
4. 36" x 36" "ROAD WORK AHEAD" (CW20-1D) signs may be used on low volume crossroads at the discretion of the Engineer as per TMUTCD Part 5. See Note 2 under "Typical Location of Crossroad Signs".
5. Only diamond shaped warning sign sizes are indicated.
6. See sign size listing in "TMUTCD", Sign Appendix or the "Standard Highway Sign Designs for Texas" manual for complete list of available sign design sizes.

WORK AREAS IN MULTIPLE LOCATIONS WITHIN CSJ LIMITS



When extended distances occur between minimal work spaces, the Engineer/Inspector should ensure additional "ROAD WORK AHEAD" (CW20-1D) signs are placed in advance of these work areas to remind drivers they are still within the project limits. See the applicable TCP sheets for exact location and spacing of signs and channelizing devices.

SAMPLE LAYOUT OF SIGNING FOR WORK BEGINNING DOWNSTREAM OF THE CSJ LIMITS



NOTES

The Contractor shall determine the appropriate distance to be placed on the G20-1 series signs and "BEGIN ROAD WORK NEXT X MILES" (G20-5T) sign for each specific project. This distance shall replace the "X" and shall be rounded to the nearest whole mile with the approval of the Engineer. No decimals shall be used.

- The "BEGIN WORK ZONE" (G20-9TP) and "END WORK ZONE" (G20-2bT) shall be used as shown on the sample layout when advance signs are required outside the CSJ Limits. They inform the motorist of entering or leaving a part of the work zone lying outside the CSJ Limits where traffic fines may double if workers are present.

** CSJ limit signing is required for highway construction and maintenance work, with the exception of mobile operations.

◇ Area for placement of "ROAD WORK AHEAD" (CW20-1D) sign and other signs or devices as called for on the Traffic Control Plan.

◇◇ Contractor will install a regulatory speed limit sign at the end of the work zone.

LEGEND

| | |
|-------|---|
| — | Type 3 Barricade |
| ○ ○ ○ | Channelizing Devices |
| — | Sign |
| X | See Typical Construction Warning Sign Size and Spacing chart or the TMUTCD for sign spacing requirements. |

SHEET 2 OF 12



BARRICADE AND CONSTRUCTION PROJECT LIMIT

BC (2) - 21

| | | | | |
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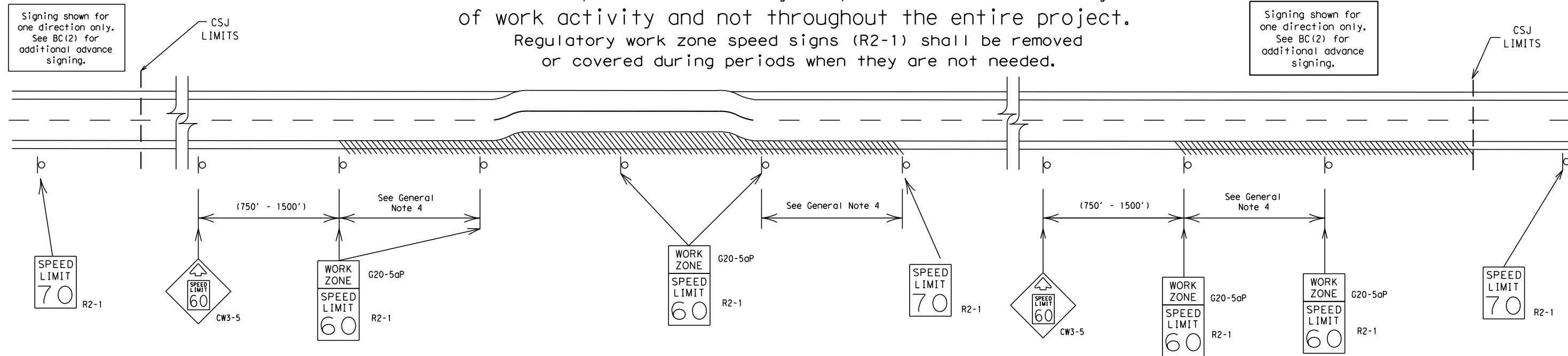
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TYPICAL APPLICATION OF WORK ZONE SPEED LIMIT SIGNS

Work zone speed limits shall be regulatory, established in accordance with the "Procedures for Establishing Speed Zones," and approved by the Texas Transportation Commission, or by City Ordinance when within Incorporated City Limits.

Reduced speeds should only be posted in the vicinity of work activity and not throughout the entire project. Regulatory work zone speed signs (R2-1) shall be removed or covered during periods when they are not needed.



GUIDANCE FOR USE:

LONG/INTERMEDIATE TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit should be included on the design of the traffic control plans when restricted geometrics with a lower design speed are present in the work zone and modification of the geometrics to a higher design speed is not feasible.

Long/Intermediate Term Work Zone Speed Limit signs, when approved as described above, should be posted and visible to the motorist when work activity is present. Work activity may also be defined as a change in the roadway that requires a reduced speed for motorists to safely negotiate the work area, including:

- rough road or damaged pavement surface
- substantial alteration of roadway geometrics (diversions)
- construction detours
- grade
- width
- other conditions readily apparent to the driver

As long as any of these conditions exist, the work zone speed limit signs should remain in place.

SHORT TERM WORK ZONE SPEED LIMITS

This type of work zone speed limit may be included on the design of the traffic control plans when workers or equipment are not behind concrete barrier, when work activity is within 10 feet of the traveled way or actually in the traveled way.

Short Term Work Zone Speed Limit signs should be posted and visible to the motorists only when work activity is present. When work activity is not present, signs shall be removed or covered. (See Removing or Covering on BC(4)).

GENERAL NOTES

- Regulatory work zone speed limits should be used only for sections of construction projects where speed control is of major importance.
- Regulatory work zone speed limit signs shall be placed on supports at a 7 foot minimum mounting height.
- Speed zone signs are illustrated for one direction of travel and are normally posted for each direction of travel.
- Frequency of work zone speed limit signs should be:

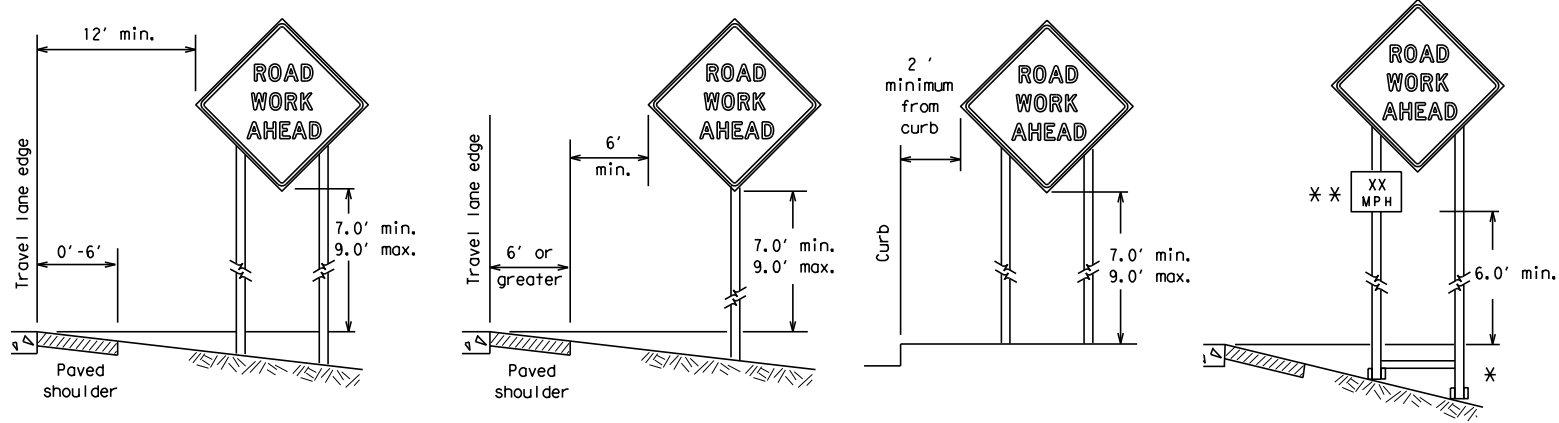
| | |
|--------------------|----------------|
| 40 mph and greater | 0.2 to 2 miles |
| 35 mph and less | 0.2 to 1 mile |
- Regulatory speed limit signs shall have black legend and border on a white reflective background (See "Reflective Sheeting" on BC(4)).
- Fabrication, erection and maintenance of the "ADVANCE SPEED LIMIT" (CW3-5) sign, "WORK ZONE" (G20-5aP) plaque and the "SPEED LIMIT" (R2-1) signs shall not be paid for directly, but shall be considered subsidiary to Item 502.
- Turning signs from view, laying signs over or down will not be allowed, unless as otherwise noted under "REMOVING OR COVERING" on BC(4).
- Techniques that may help reduce traffic speeds include but are not limited to:
 - Law enforcement.
 - Flagger stationed next to sign.
 - Portable changeable message sign (PCMS).
 - Low-power (drone) radar transmitter.
 - Speed monitor trailers or signs.
- Speeds shown on details above are for illustration only. Work Zone Speed Limits should only be posted as approved for each project.
- For more specific guidance concerning the type of work, work zone conditions and factors impacting allowable regulatory construction speed zone reduction see TxDOT form #1204 in the TxDOT e-form system.

SHEET 3 OF 12

| | | | |
|---|-----------|---|-----------|
| | | Traffic Safety Division Standard | |
| BARRICADE AND CONSTRUCTION WORK ZONE SPEED LIMIT | | | |
| BC (3) - 21 | | | |
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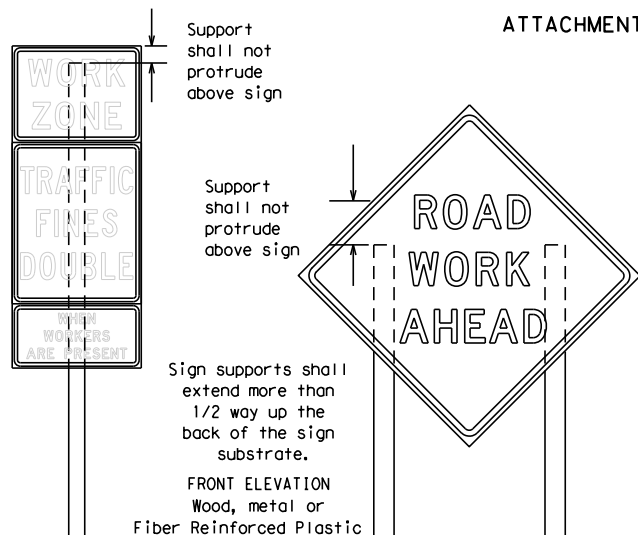
TYPICAL MINIMUM CLEARANCES FOR LONG TERM AND INTERMEDIATE TERM SIGNS



* When placing skid supports on unlevel ground, the leg post lengths must be adjusted so the sign appears straight and plumb. Objects shall NOT be placed under skids as a means of leveling.

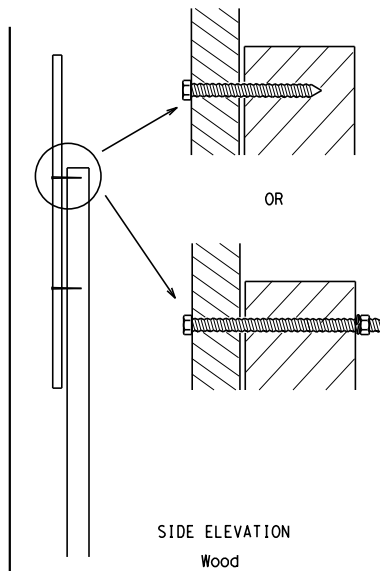
** When plaques are placed on dual-leg supports, they should be attached to the upright nearest the travel lane. Supplemental plaques (advisory or distance) should not cover the surface of the parent sign.

ATTACHMENT FOR SIGN SUPPORTS



Splicing embedded perforated square metal tubing in order to extend post height will only be allowed when the splice is made using four bolts, two above and two below the splice point. Splice must be located entirely behind the sign substrate, not near the base of the support. Splice insert lengths should be at least 5 times nominal post size, centered on the splice and of at least the same gauge material.

Attachment to wooden supports will be by bolts and nuts or screws. Use TxDOT's or manufacturer's recommended procedures for attaching sign substrates to other types of sign supports



Nails shall NOT be allowed. Each sign shall be attached directly to the sign support. Multiple signs shall not be joined or spliced by any means. Wood supports shall not be extended or repaired by splicing or other means.

GENERAL NOTES FOR WORK ZONE SIGNS

- Contractor shall install and maintain signs in a straight and plumb condition and/or as directed by the Engineer.
- Wooden sign posts shall be painted white.
- Barricades shall NOT be used as sign supports.
- All signs shall be installed in accordance with the plans or as directed by the Engineer. Signs shall be used to regulate, warn, and guide the traveling public safely through the work zone.
- The Contractor may furnish either the sign design shown in the plans or in the "Standard Highway Sign Designs for Texas" (SHSD). The Engineer/Inspector may require the Contractor to furnish other work zone signs that are shown in the TMUTCD but may have been omitted from the plans. Any variation in the plans shall be documented by written agreement between the Engineer and the Contractor's Responsible Person. All changes must be documented in writing before being implemented. This can include documenting the changes in the Inspector's TxDOT diary and having both the Inspector and Contractor initial and date the agreed upon changes.
- The Contractor shall furnish sign supports listed in the "Compliant Work Zone Traffic Control Device List" (CWZTCD) for small roadside signs. Supports for temporary large roadside signs shall meet the requirements detailed on the Temporary Large Roadside Signs (TLRS) standard sheets. The Contractor shall install the sign support in accordance with the manufacturer's recommendations. If there is a question regarding installation procedures, the Contractor shall furnish the Engineer a copy of the manufacturer's installation recommendations so the Engineer can verify the correct procedures are being followed.
- The Contractor is responsible for installing signs on approved supports and replacing signs with damaged or cracked substrates and/or damaged or marred reflective sheeting as directed by the Engineer/Inspector.
- Identification markings may be shown only on the back of the sign substrate. The maximum height of letters and/or company logos used for identification shall be 1 inch.
- The Contractor shall replace damaged wood posts. New or damaged wood sign posts shall not be spliced.

DURATION OF WORK (as defined by the "Texas Manual on Uniform Traffic Control Devices" Part 6)

- The types of sign supports, sign mounting height, the size of signs, and the type of sign substrates can vary based on the type of work being performed. The Engineer is responsible for selecting the appropriate size sign for the type of work being performed. The Contractor is responsible for ensuring the sign support, sign mounting height and substrate meets manufacturer's recommendations in regard to crashworthiness and duration of work requirements.
 - Long-term stationary - work that occupies a location more than 3 days.
 - Intermediate-term stationary - work that occupies a location more than one daylight period up to 3 days, or nighttime work lasting more than one hour.
 - Short-term stationary - daytime work that occupies a location for more than 1 hour in a single daylight period.
 - Short, duration - work that occupies a location up to 1 hour.
 - Mobile - work that moves continuously or intermittently (stopping for up to approximately 15 minutes.)

SIGN MOUNTING HEIGHT

- The bottom of Long-term/Intermediate-term signs shall be at least 7 feet, but not more than 9 feet, above the paved surface, except as shown for supplemental plaques mounted below other signs.
- The bottom of Short-term/Short Duration signs shall be a minimum of 1 foot above the pavement surface but no more than 2 feet above the ground.
- Long-term/Intermediate-term Signs may be used in lieu of Short-term/Short Duration signing.
- Short-term/Short Duration signs shall be used only during daylight and shall be removed at the end of the workday or raised to appropriate Long-term/Intermediate sign height.
- Regulatory signs shall be mounted at least 7 feet, but not more than 9 feet, above the paved surface regardless of work duration.

SIZE OF SIGNS

- The Contractor shall furnish the sign sizes shown on BC (2) unless otherwise shown in the plans or as directed by the Engineer.

SIGN SUBSTRATES

- The Contractor shall ensure the sign substrate is installed in accordance with the manufacturer's recommendations for the type of sign support that is being used. The CWZTCD lists each substrate that can be used on the different types and models of sign supports.
- "Mesh" type materials are NOT an approved sign substrate, regardless of the tightness of the weave.
- All wooden individual sign panels fabricated from 2 or more pieces shall have one or more plywood cleat, 1/2" thick by 6" wide, fastened to the back of the sign and extending fully across the sign. The cleat shall be attached to the back of the sign using wood screws that do not penetrate the face of the sign panel. The screws shall be placed on both sides of the splice and spaced at 6" centers. The Engineer may approve other methods of splicing the sign face.

REFLECTIVE SHEETING

- All signs shall be retroreflective and constructed of sheeting meeting the color and retro-reflectivity requirements of DMS-8300 for rigid signs or DMS-8310 for roll-up signs. The web address for DMS specifications is shown on BC(1).
- White sheeting, meeting the requirements of DMS-8300 Type A, shall be used for signs with a white background.
- Orange sheeting, meeting the requirements of DMS-8300 Type B_{FL} or Type C_{FL}, shall be used for rigid signs with orange backgrounds.

SIGN LETTERS

- All sign letters and numbers shall be clear, and open rounded type uppercase alphabet letters as approved by the Federal Highway Administration (FHWA) and as published in the "Standard Highway Sign Design for Texas" manual. Signs, letters and numbers shall be of first class workmanship in accordance with Department Standards and Specifications.

REMOVING OR COVERING

- When sign messages may be confusing or do not apply, the signs shall be removed or completely covered.
- Long-term stationary or intermediate stationary signs installed on square metal tubing may be turned away from traffic 90 degrees when the sign message is not applicable. This technique may not be used for signs installed in the median of divided highways or near any intersections where the sign may be seen from approaching traffic.
- Signs installed on wooden skids shall not be turned at 90 degree angles to the roadway. These signs should be removed or completely covered when not required.
- When signs are covered, the material used shall be opaque, such as heavy mil black plastic, or other materials which will cover the entire sign face and maintain their opaque properties under automobile headlights at night, without damaging the sign sheeting.
- Burlap shall NOT be used to cover signs.
- Duct tape or other adhesive material shall NOT be affixed to a sign face.
- Signs and anchor stubs shall be removed and holes backfilled upon completion of work.

SIGN SUPPORT WEIGHTS

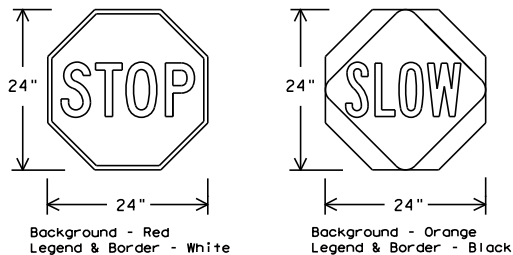
- Where sign supports require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand should be used.
- The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight.
- Rock, concrete, iron, steel or other solid objects shall not be permitted for use as sign support weights.
- Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs.
- Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall NOT be used.
- Rubber ballasts designed for channelizing devices should not be used for ballast on portable sign supports. Sign supports designed and manufactured with rubber bases may be used when shown on the CWZTCD list.
- Sandbags shall only be placed along or laid over the base supports of the traffic control device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners. Sandbags shall be placed along the length of the skids to weigh down the sign support.
- Sandbags shall NOT be placed under the skid and shall not be used to level sign supports placed on slopes.

FLAGS ON SIGNS

- Flags may be used to draw attention to warning signs. When used, the flag shall be 16 inches square or larger and shall be orange or fluorescent red-orange in color. Flags shall not be allowed to cover any portion of the sign face.

STOP/SLOW PADDLES

- STOP/SLOW paddles are the primary method to control traffic by flaggers. The STOP/SLOW paddle size should be 24" x 24".
- STOP/SLOW paddles shall be retroreflectorized when used at night.
- STOP/SLOW paddles may be attached to a staff with a minimum length of 6' to the bottom of the sign.
- Any lights incorporated into the STOP or SLOW paddle faces shall only be as specifically described in Section 6E.03 Hand Signaling Devices in the TMUTCD.



| SHEETING REQUIREMENTS (WHEN USED AT NIGHT) | | |
|--|--------|--|
| USAGE | COLOR | SIGN FACE MATERIAL |
| BACKGROUND | RED | TYPE B OR C SHEETING |
| BACKGROUND | ORANGE | TYPE B _{FL} OR C _{FL} SHEETING |
| LEGEND & BORDER | WHITE | TYPE B OR C SHEETING |
| LEGEND & BORDER | BLACK | ACRYLIC NON-REFLECTIVE FILM |

CONTRACTOR REQUIREMENTS FOR MAINTAINING PERMANENT SIGNS WITHIN THE PROJECT LIMITS

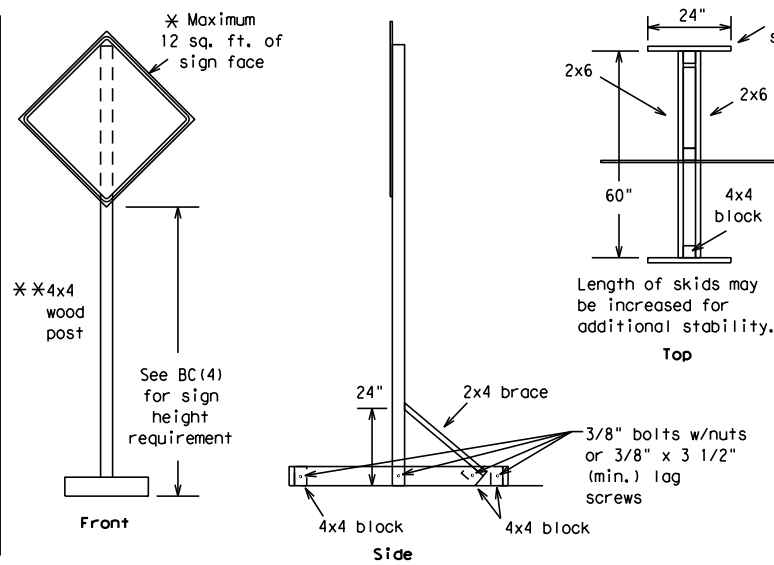
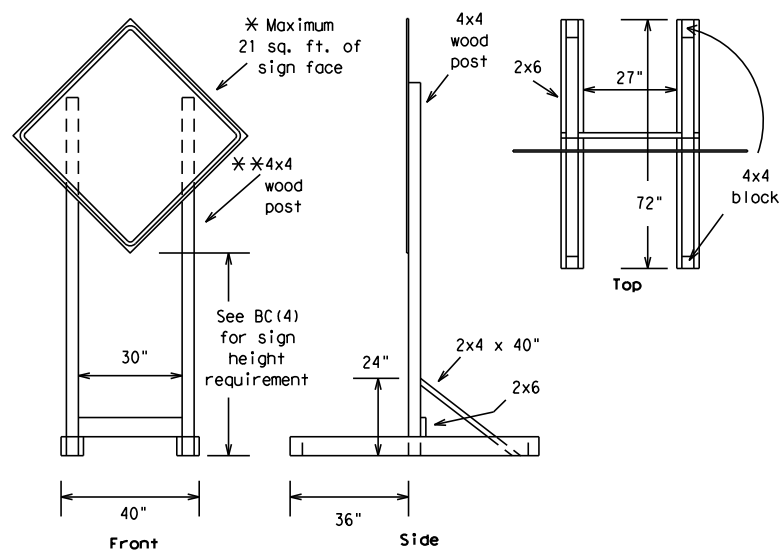
- Permanent signs are used to give notice of traffic laws or regulations, call attention to conditions that are potentially hazardous to traffic operations, show route designations, destinations, directions, distances, services, points of interest, and other geographical, recreational, specific service (LOGO), or cultural information. Drivers proceeding through a work zone need the same, if not better route guidance as normally installed on a roadway without construction.
- When permanent regulatory or warning signs conflict with work zone conditions, remove or cover the permanent signs until the permanent sign message matches the roadway condition. For details for covering large guide signs see the TS-CD standard.
- When existing permanent signs are moved and relocated due to construction purposes, they shall be visible to motorists at all times.
- If existing signs are to be relocated on their original supports, they shall be installed on crashworthy bases as shown on the SMD Standard sheets. The signs shall meet the required mounting heights shown on the BC Sheets or the SMD Standards. This work should be paid for under the appropriate pay item for relocating existing signs.
- If permanent signs are to be removed and relocated using temporary supports, the Contractor shall use crashworthy supports as shown on the BC standard sheets, TLRS standard sheets or the CWZTCD list. The signs shall meet the required mounting heights shown on the BC, or the SMD standard sheets during construction. This work should be paid for under the appropriate pay item for relocating existing signs.
- Any sign or traffic control device that is struck or damaged by the Contractor or his/her construction equipment shall be replaced as soon as possible by the Contractor to ensure proper guidance for the motorists. This will be subsidiary to Item 502.

SHEET 4 OF 12

| | | | |
|--|-----------|---|-----------|
| | | Traffic Safety Division Standard | |
| BARRICADE AND CONSTRUCTION TEMPORARY SIGN NOTES | | | |
| BC (4) - 21 | | | |
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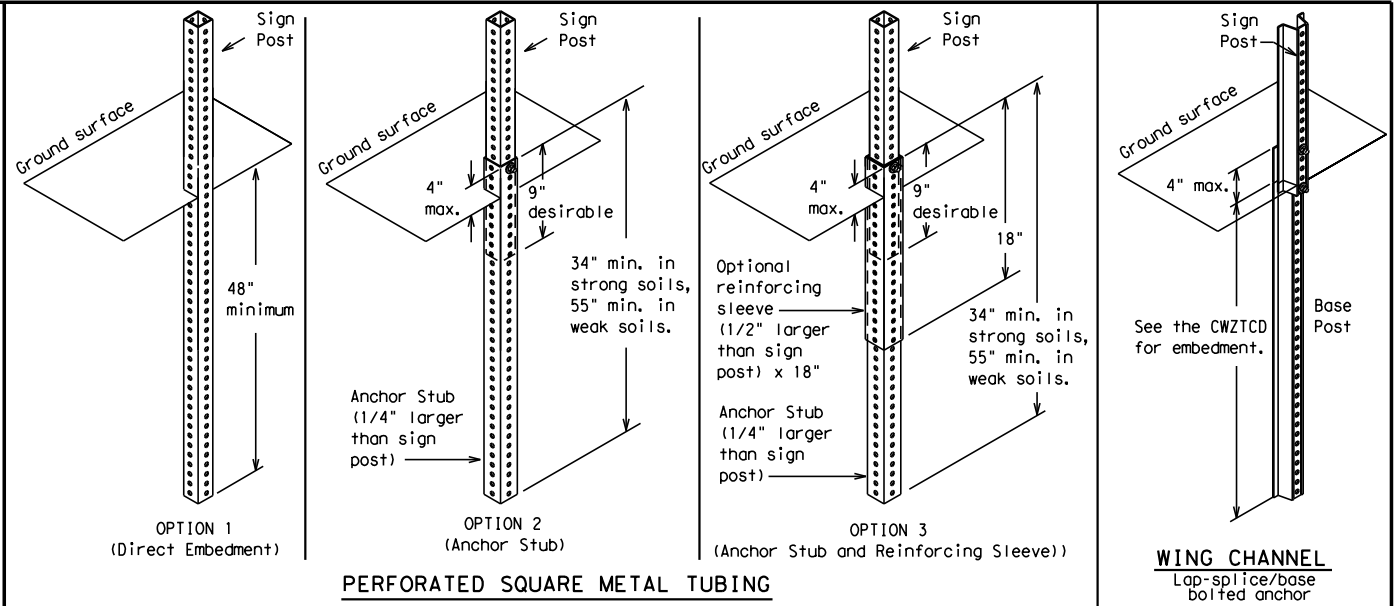
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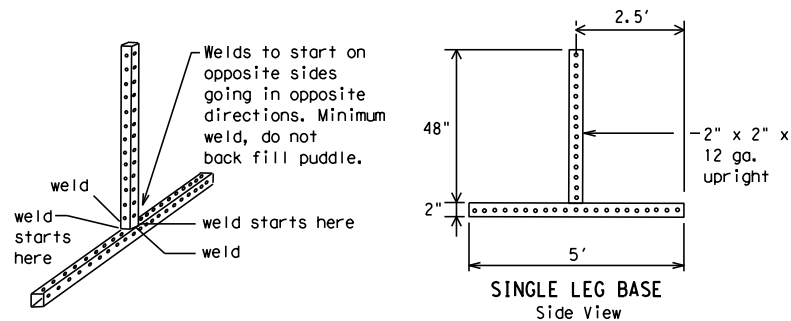
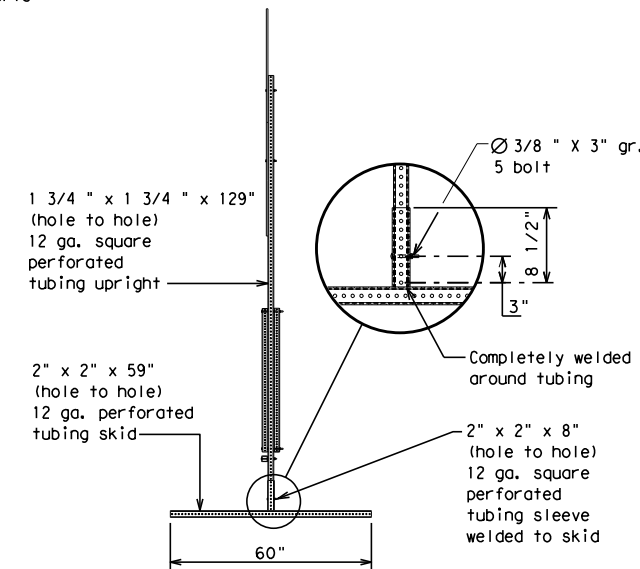
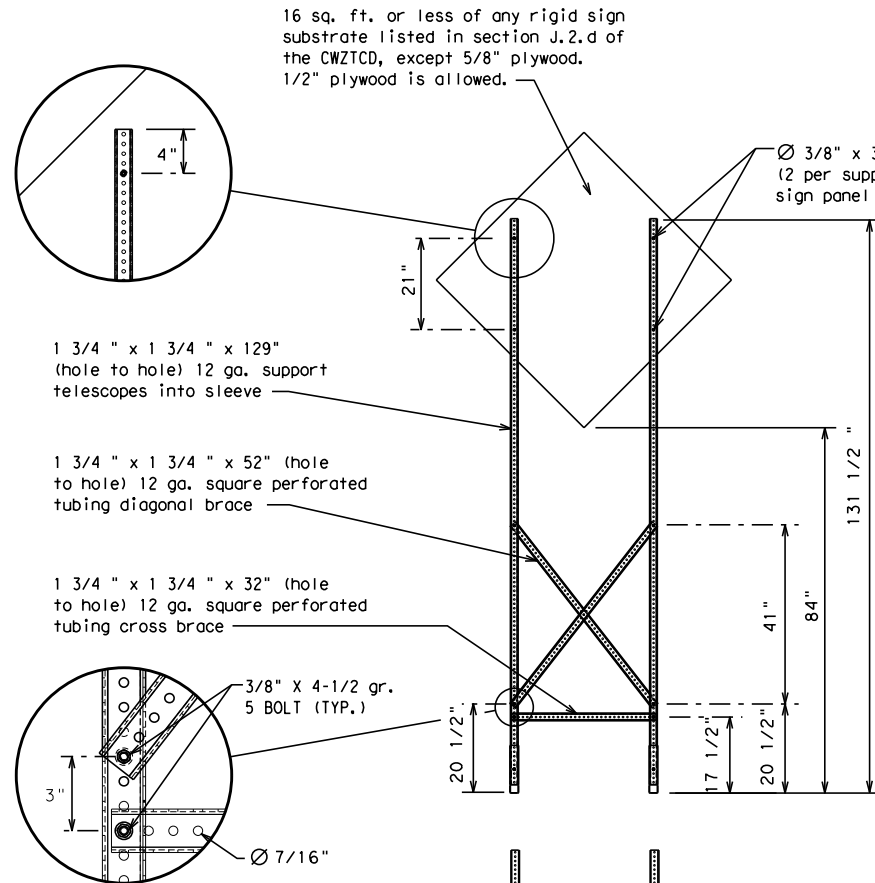
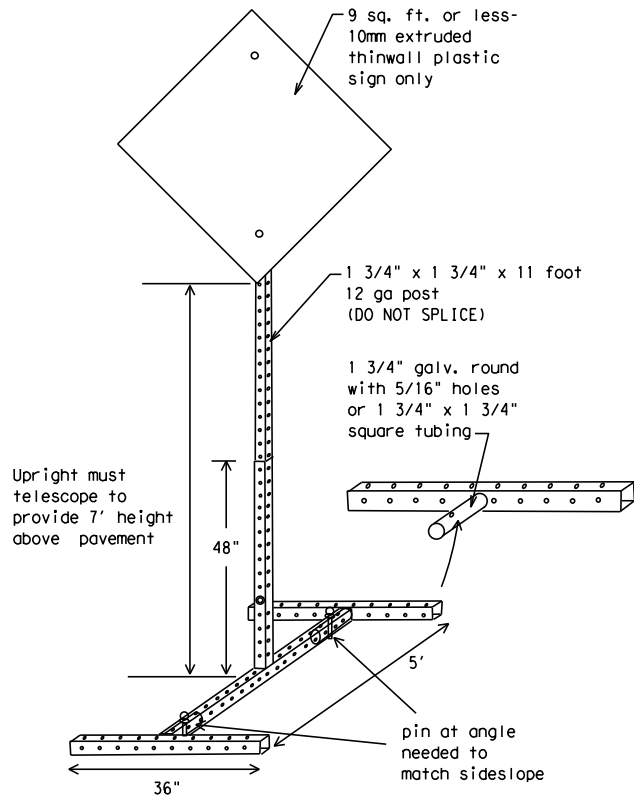
SKID MOUNTED WOOD SIGN SUPPORTS

* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS



GROUND MOUNTED SIGN SUPPORTS

Refer to the CWZTCD and the manufacturer's installation procedure for each type sign support.
The maximum sign square footage shall adhere to the manufacturer's recommendation.
Two post installations can be used for larger signs.



SKID MOUNTED PERFORATED SQUARE STEEL TUBING SIGN SUPPORTS

* LONG/INTERMEDIATE TERM STATIONARY - PORTABLE SKID MOUNTED SIGN SUPPORTS

WEDGE ANCHORS

Both steel and plastic Wedge Anchor Systems as shown on the SMD Standard Sheets may be used as temporary sign supports for signs up to 10 square feet of sign face. They may be set in concrete or in sturdy soils if approved by the Engineer. (See web address for "Traffic Engineering Standard Sheets" on BC(1)).

OTHER DESIGNS

MORE DETAILS OF APPROVED LONG/INTERMEDIATE AND SHORT TERM SUPPORTS CAN BE FOUND ON THE CWZTCD LIST. SEE BC(1) FOR WEBSITE LOCATION.

GENERAL NOTES

1. Nails may be used in the assembly of wooden sign supports, but 3/8" bolts with nuts or 3/8" x 3 1/2" lag screws must be used on every joint for final connection.
2. No more than 2 sign posts shall be placed within a 7 ft. circle, except for specific materials noted on the CWZTCD List.
3. When project is completed, all sign supports and foundations shall be removed from the project site. This will be considered subsidiary to Item 502.

- * See BC(4) for definition of "Work Duration."
- ** Wood sign posts MUST be one piece. Splicing will NOT be allowed. Posts shall be painted white.
- See the CWZTCD for the type of sign substrate that can be used for each approved sign support.

SHEET 5 OF 12



BARRICADE AND CONSTRUCTION TYPICAL SIGN SUPPORT

BC(5) - 21

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WHEN NOT IN USE, REMOVE THE PCMS FROM THE RIGHT-OF-WAY OR PLACE THE PCMS BEHIND BARRIER OR GUARDRAIL WITH SIGN PANEL TURNED PARALLEL TO TRAFFIC

PORTABLE CHANGEABLE MESSAGE SIGNS

1. The Engineer/Inspector shall approve all messages used on portable changeable message signs (PCMS).
2. Messages on PCMS should contain no more than 8 words (about four to eight characters per word), not including simple words such as "TO," "FOR," "AT," etc.
3. Messages should consist of a single phase, or two phases that alternate. Three-phase messages are not allowed. Each phase of the message should convey a single thought, and must be understood by itself.
4. Use the word "EXIT" to refer to an exit ramp on a freeway; i.e., "EXIT CLOSED." Do not use the term "RAMP."
5. Always use the route or interstate designation (IH, US, SH, FM) along with the number when referring to a roadway.
6. When in use, the bottom of a stationary PCMS message panel should be a minimum 7 feet above the roadway, where possible.
7. The message term "WEEKEND" should be used only if the work is to start on Saturday morning and end by Sunday evening at midnight. Actual days and hours of work should be displayed on the PCMS if work is to begin on Friday evening and/or continue into Monday morning.
8. The Engineer/Inspector may select one of two options which are available for displaying a two-phase message on a PCMS. Each phase may be displayed for either four seconds each or for three seconds each.
9. Do not "flash" messages or words included in a message. The message should be steady burn or continuous while displayed.
10. Do not present redundant information on a two-phase message; i.e., keeping two lines of the message the same and changing the third line.
11. Do not use the word "Danger" in message.
12. Do not display the message "LANES SHIFT LEFT" or "LANES SHIFT RIGHT" on a PCMS. Drivers do not understand the message.
13. Do not display messages that scroll horizontally or vertically across the face of the sign.
14. The following table lists abbreviated words and two-word phrases that are acceptable for use on a PCMS. Both words in a phrase must be displayed together. Words or phrases not on this list should not be abbreviated, unless shown in the TMUTCD.
15. PCMS character height should be at least 18 inches for trailer mounted units. They should be visible from at least 1/2 (.5) mile and the text should be legible from at least 600 feet at night and 800 feet in daylight. Truck mounted units must have a character height of 10 inches and must be legible from at least 400 feet.
16. Each line of text should be centered on the message board rather than left or right justified.
17. If disabled, the PCMS should default to an illegible display that will not alarm motorists and will only be used to alert workers that the PCMS has malfunctioned. A pattern such as a series of horizontal solid bars is appropriate.

| WORD OR PHRASE | ABBREVIATION |
|--------------------|--------------|
| Access Road | ACCS RD |
| Alternate | ALT |
| Avenue | AVE |
| Best Route | BEST RTE |
| Boulevard | BLVD |
| Bridge | BRDG |
| Cannot | CANT |
| Center | CTR |
| Construction Ahead | CONST AHD |
| CROSSING | XING |
| Detour Route | DETOUR RTE |
| Do Not | DONT |
| East | E |
| Eastbound | (route) E |
| Emergency | EMER |
| Emergency Vehicle | EMER VEH |
| Entrance, Enter | ENT |
| Express Lane | EXP LN |
| Expressway | EXPWY |
| XXXX Feet | XXXX FT |
| Fog Ahead | FOG AHD |
| Freeway | FRWY, FWY |
| Freeway Blocked | FWY BLKD |
| Friday | FRI |
| Hazardous Driving | HAZ DRIVING |
| Hazardous Material | HAZMAT |
| High-Occupancy | HOV |
| Vehicle | |
| Highway | HWY |
| Hour(s) | HR, HRS |
| Information | INFO |
| It Is | ITS |
| Junction | JCT |
| Left | LFT |
| Left Lane | LFT LN |
| Lane Closed | LN CLOSED |
| Lower Level | LWR LEVEL |
| Maintenance | MAINT |

Roadway designation # IH-number, US-number, SH-number, FM-number

| WORD OR PHRASE | ABBREVIATION |
|----------------|--------------|
| Major | MAJ |
| Miles | MI |
| Miles Per Hour | MPH |
| Minor | MNR |
| Monday | MON |
| Normal | NORM |
| North | N |
| Northbound | (route) N |
| Parking | PKING |
| Road | RD |
| Right Lane | RT LN |
| Saturday | SAT |
| Service Road | SERV RD |
| Shoulder | SHLDR |
| Slippery | SLIP |
| South | S |
| Southbound | (route) S |
| Speed | SPD |
| Street | ST |
| Sunday | SUN |
| Telephone | PHONE |
| Temporary | TEMP |
| Thursday | THURS |
| To Downtown | TO DWNTN |
| Traffic | TRAF |
| Travelers | TRVLRS |
| Tuesday | TUES |
| Time Minutes | TIME MIN |
| Upper Level | UPR LEVEL |
| Vehicles (s) | VEH, VEHS |
| Warning | WARN |
| Wednesday | WED |
| Weight Limit | WT LIMIT |
| West | W |
| Westbound | (route) W |
| Wet Pavement | WET PVMT |
| Will Not | WONT |

RECOMMENDED PHASES AND FORMATS FOR PCMS MESSAGES DURING ROADWORK ACTIVITIES

(The Engineer may approve other messages not specifically covered here.)

Phase 1: Condition Lists

Road/Lane/Ramp Closure List

FREEWAY
CLOSED
X MILE

ROAD
CLOSED
AT SH XXX

ROAD
CLSD AT
FM XXXX

RIGHT X
LANES
CLOSED

CENTER
LANE
CLOSED

NIGHT
LANE
CLOSURES

VARIOUS
LANES
CLOSED

EXIT
CLOSED

MALL
DRIVEWAY
CLOSED

XXXXXXXX
BLVD
CLOSED

FRONTAGE
ROAD
CLOSED

SHOULDER
CLOSED
XXX FT

RIGHT LN
CLOSED
XXX FT

RIGHT X
LANES
OPEN

DAYTIME
LANE
CLOSURES

I-XX SOUTH
EXIT
CLOSED

EXIT XXX
CLOSED
X MILE

RIGHT LN
TO BE
CLOSED

X LANES
CLOSED
TUE - FRI

Other Condition List

ROADWORK
XXX FT

FLAGGER
XXXX FT

RIGHT LN
NARROWS
XXXX FT

MERGING
TRAFFIC
XXXX FT

LOOSE
GRAVEL
XXXX FT

DETOUR
X MILE

ROADWORK
PAST
SH XXXX

BUMP
XXXX FT

TRAFFIC
SIGNAL
XXXX FT

ROAD
REPAIRS
XXXX FT

LANE
NARROWS
XXXX FT

TWO-WAY
TRAFFIC
XX MILE

CONST
TRAFFIC
XXX FT

UNEVEN
LANES
XXXX FT

ROUGH
ROAD
XXXX FT

ROADWORK
NEXT
FRI-SUN

US XXX
EXIT
X MILES

LANES
SHIFT

* LANES SHIFT in Phase 1 must be used with STAY IN LANE in Phase 2.

APPLICATION GUIDELINES

1. Only 1 or 2 phases are to be used on a PCMS.
2. The 1st phase (or both) should be selected from the "Road/Lane/Ramp Closure List" and the "Other Condition List".
3. A 2nd phase can be selected from the "Action to Take/Effect on Travel, Location, General Warning, or Advance Notice Phase Lists".
4. A Location Phase is necessary only if a distance or location is not included in the first phase selected.
5. If two PCMS are used in sequence, they must be separated by a minimum of 1000 ft. Each PCMS shall be limited to two phases, and should be understandable by themselves.
6. For advance notice, when the current date is within seven days of the actual work date, calendar days should be replaced with days of the week. Advance notification should typically be for no more than one week prior to the work.

PCMS SIGNS WITHIN THE R.O.W. SHALL BE BEHIND GUARDRAIL OR CONCRETE BARRIER OR SHALL HAVE A MINIMUM OF FOUR (4) PLASTIC DRUMS PLACED PERPENDICULAR TO TRAFFIC ON THE UPSTREAM SIDE OF THE PCMS, WHEN EXPOSED TO ONE DIRECTION OF TRAFFIC. WHEN EXPOSED TO TWO WAY TRAFFIC, THE FOUR DRUMS SHOULD BE PLACED WITH ONE DRUM AT EACH OF THE FOUR CORNERS OF THE UNIT.

FULL MATRIX PCMS SIGNS

1. When Full Matrix PCMS signs are used, the character height and legibility/visibility requirements shall be maintained as listed in Note 15 under "PORTABLE CHANGEABLE MESSAGE SIGNS" above.
2. When symbol signs, such as the "Flagger Symbol" (CW20-7) are represented graphically on the Full Matrix PCMS sign and, with the approval of the Engineer, it shall maintain the legibility/visibility requirement listed above.
3. When symbol signs are represented graphically on the Full Matrix PCMS, they shall only supplement the use of the static sign represented, and shall not substitute for, or replace that sign.
4. A full matrix PCMS may be used to simulate a flashing arrow board provided it meets the visibility, flash rate and dimming requirements on BC(7), for the same size arrow.

Phase 2: Possible Component Lists

Action to Take/Effect on Travel List

MERGE
RIGHT

DETOUR
NEXT
X EXITS

USE
EXIT XXX

STAY ON
US XXX
SOUTH

TRUCKS
USE
US XXX N

WATCH
FOR
TRUCKS

EXPECT
DELAYS

REDUCE
SPEED
XXX FT

USE
OTHER
ROUTES

STAY
IN
LANE

FORM
X LINES
RIGHT

USE
XXXXX
RD EXIT

USE EXIT
I-XX
NORTH

USE
I-XX E
TO I-XX N

WATCH
FOR
TRUCKS

EXPECT
DELAYS

PREPARE
TO
STOP

END
SHOULDER
USE

WATCH
FOR
WORKERS

*

Location List

AT
FM XXXX

BEFORE
RAILROAD
CROSSING

NEXT
X
MILES

PAST
US XXX
EXIT

XXXXXXXX
TO
XXXXXXXX

US XXX
TO
FM XXXX

Warning List

SPEED
LIMIT
XX MPH

MAXIMUM
SPEED
XX MPH

MINIMUM
SPEED
XX MPH

ADVISORY
SPEED
XX MPH

RIGHT
LANE
EXIT

USE
CAUTION

DRIVE
SAFELY

DRIVE
WITH
CARE

** Advance Notice List

TUE-FRI
XX AM-
X PM

APR XX-
XX
X PM-X AM

BEGINS
MONDAY

BEGINS
MAY XX

MAY X-X
XX PM -
XX AM

NEXT
FRI-SUN


XX AM
TO
XX PM

NEXT
TUE
AUG XX

TONIGHT
XX PM-
XX AM

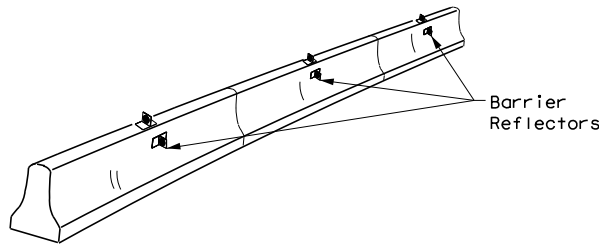
** See Application Guidelines Note 6.

SHEET 6 OF 12

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|  Texas Department of Transportation | | | | Traffic Safety Division Standard | |
| BARRICADE AND CONSTRUCTION PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) | | | | | |
| BC (6) - 21 | | | | | |
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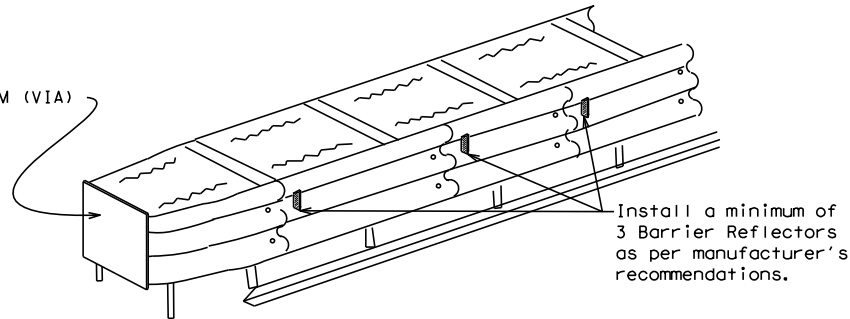
- Barrier Reflectors shall be pre-qualified, and conform to the color and reflectivity requirements of DMS-8600. A list of prequalified Barrier Reflectors can be found at the Material Producer List web address shown on BC(1).
- Color of Barrier Reflectors shall be as specified in the TMUTCD. The cost of the reflectors shall be considered subsidiary to Item 512.



CONCRETE TRAFFIC BARRIER (CTB)

- Where traffic is on one side of the CTB, two (2) Barrier Reflectors shall be mounted in approximately the midsection of each section of CTB. An alternate mounting location is uniformly spaced at one end of each CTB. This will allow for attachment of a barrier grapple without damaging the reflector. The Barrier Reflector mounted on the side of the CTB shall be located directly below the reflector mounted on top of the barrier, as shown in the detail above.
- Where CTB separates two-way traffic, three barrier reflectors shall be mounted on each section of CTB. The reflector unit on top shall have two yellow reflective faces (Bi-Directional) while the reflectors on each side of the barrier shall have one yellow reflective face, as shown in the detail above.
- When CTB separates traffic traveling in the same direction, no barrier reflectors will be required on top of the CTB.
- Barrier Reflector units shall be yellow or white in color to match the edgeline being supplemented.
- Maximum spacing of Barrier Reflectors is forty (40) feet.
- Pavement markers or temporary flexible-reflective roadway marker tabs shall NOT be used as CTB delineation.
- Attachment of Barrier Reflectors to CTB shall be per manufacturer's recommendations.
- Missing or damaged Barrier Reflectors shall be replaced as directed by the Engineer.
- Single slope barriers shall be delineated as shown on the above detail.

See D & OM (VIA)



LOW PROFILE CONCRETE BARRIER (LPCB)

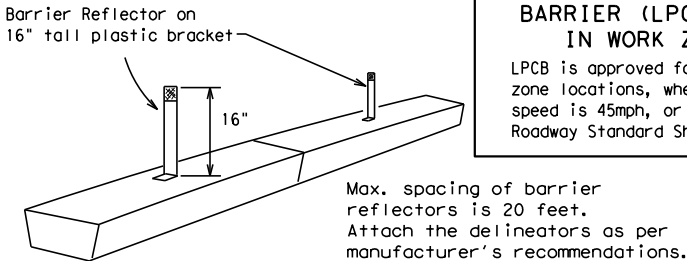
DELINEATION OF END TREATMENTS

END TREATMENTS FOR CTB'S USED IN WORK ZONES

End treatments used on CTB's in work zones shall meet the appropriate crashworthy standards as defined in the Manual for Assessing Safety Hardware (MASH). Refer to the CWZTCD List for approved end treatments and manufacturers.

LOW PROFILE CONCRETE BARRIER (LPCB) USED IN WORK ZONES

LPCB is approved for use in work zone locations, where the posted speed is 45mph, or less. See Roadway Standard Sheet LPCB.



Max. spacing of barrier reflectors is 20 feet. Attach the delineators as per manufacturer's recommendations.

BARRIER REFLECTORS FOR CONCRETE TRAFFIC BARRIER AND ATTENUATORS

WARNING LIGHTS

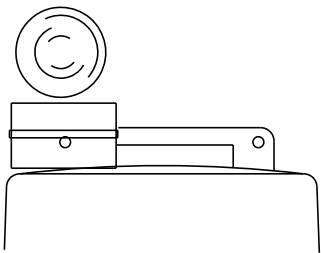
- Warning lights shall meet the requirements of the TMUTCD.
- Warning lights shall NOT be installed on barricades.
- Type A-Low Intensity Flashing Warning Lights are commonly used with drums. They are intended to warn of or mark a potentially hazardous area. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "FL". The Type A Warning Lights shall not be used with signs manufactured with Type B_{FL} or C_{FL} Sheeting meeting the requirements of Departmental Material Specification DMS-8300.
- Type-C and Type D 360 degree Steady Burn Lights are intended to be used in a series for delineation to supplement other traffic control devices. Their use shall be as indicated on this sheet and/or other sheets of the plans by the designation "SB".
- The Engineer/Inspector or the plans shall specify the location and type of warning lights to be installed on the traffic control devices.
- When required by the Engineer, the Contractor shall furnish a copy of the warning lights certification. The warning light manufacturer will certify the warning lights meet the requirements of the latest ITE Purchase Specifications for Flashing and Steady-Burn Warning Lights.
- When used to delineate curves, Type-C and Type D Steady Burn Lights should only be placed on the outside of the curve, not the inside.
- The location of warning lights and warning reflectors on drums shall be as shown elsewhere in the plans.

WARNING LIGHTS MOUNTED ON PLASTIC DRUMS

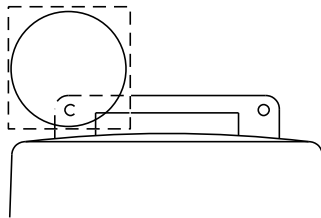
- Type A flashing warning lights are intended to warn drivers that they are approaching or are in a potentially hazardous area.
- Type A random flashing warning lights are not intended for delineation and shall not be used in a series.
- A series of sequential flashing warning lights placed on channelizing devices to form a merging taper may be used for delineation. If used, the successive flashing of the sequential warning lights should occur from the beginning of the taper to the end of the merging taper in order to identify the desired vehicle path. The rate of flashing for each light shall be 65 flashes per minute, plus or minus 10 flashes.
- Type C and D steady-burn warning lights are intended to be used in a series to delineate the edge of the travel lane on detours, on lane changes, on lane closures, and on other similar conditions.
- Type A, Type C and Type D warning lights shall be installed at locations as detailed on other sheets in the plans.
- Warning lights shall not be installed on a drum that has a sign, chevron or vertical panel.
- The maximum spacing for warning lights on drums should be identical to the channelizing device spacing.

WARNING REFLECTORS MOUNTED ON PLASTIC DRUMS AS A SUBSTITUTE FOR TYPE C (STEADY BURN) WARNING LIGHTS

- A warning reflector or approved substitute may be mounted on a plastic drum as a substitute for a Type C, steady burn warning light at the discretion of the Contractor unless otherwise noted in the plans.
- The warning reflector shall be yellow in color and shall be manufactured using a sign substrate approved for use with plastic drums listed on the CWZTCD.
- The warning reflector shall have a minimum retroreflective surface area (one-side) of 30 square inches.
- Round reflectors shall be fully reflectorized, including the area where attached to the drum.
- Square substrates must have a minimum of 30 square inches of reflectorized sheeting. They do not have to be reflectorized where it attaches to the drum.
- The side of the warning reflector facing approaching traffic shall have sheeting meeting the color and retroreflectivity requirements for DMS 8300-Type B or Type C.
- When used near two-way traffic, both sides of the warning reflector shall be reflectorized.
- The warning reflector should be mounted on the side of the handle nearest approaching traffic.
- The maximum spacing for warning reflectors should be identical to the channelizing device spacing requirements.



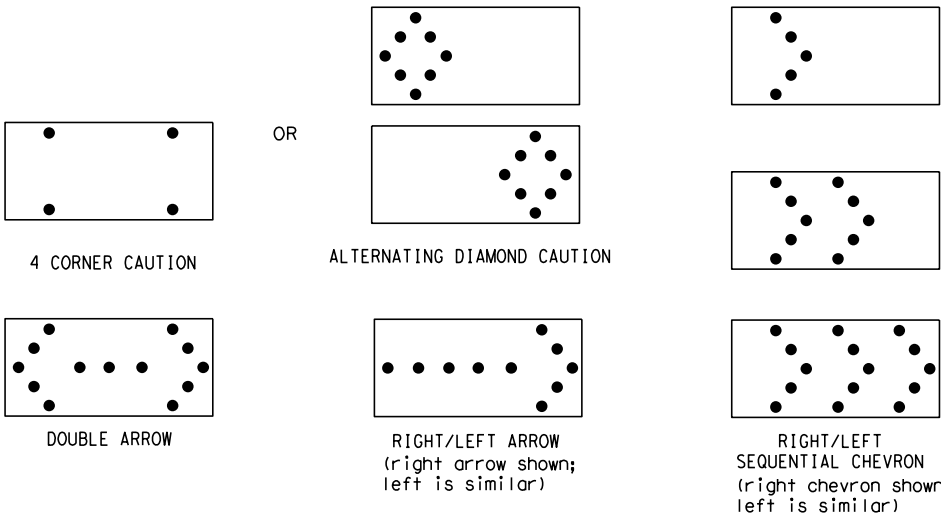
Type C Warning Light or approved substitute mounted on a drum adjacent to the travel way.



Warning reflector may be round or square. Must have a yellow reflective surface area of at least 30 square inches

Arrow Boards may be located behind channelizing devices in place for a shoulder taper or merging taper, otherwise they shall be delineated with four (4) channelizing devices placed perpendicular to traffic on the upstream side of traffic.

- The Flashing Arrow Board should be used for all lane closures on multi-lane roadways, or slow moving maintenance or construction activities on the travel lanes.
- Flashing Arrow Boards should not be used on two-lane, two-way roadways, detours, diversions or work on shoulders unless the "CAUTION" display (see detail below) is used.
- The Engineer/Inspector shall choose all appropriate signs, barricades and/or other traffic control devices that should be used in conjunction with the Flashing Arrow Board.
- The Flashing Arrow Board should be able to display the following symbols:



- The "CAUTION" display consists of four corner lamps flashing simultaneously, or the Alternating Diamond Caution mode as shown.
- The straight line caution display is NOT ALLOWED.
- The Flashing Arrow Board shall be capable of minimum 50 percent dimming from rated lamp voltage. The flashing rate of the lamps shall not be less than 25 nor more than 40 flashes per minute.
- Minimum lamp "on time" shall be approximately 50 percent for the flashing arrow and equal intervals of 25 percent for each sequential phase of the flashing chevron.
- The sequential arrow display is NOT ALLOWED.
- The flashing arrow display is the TxDOT standard; however, the sequential chevron display may be used during daylight operations.
- The Flashing Arrow Board shall be mounted on a vehicle, trailer or other suitable support.
- A Flashing Arrow Board SHALL NOT BE USED to laterally shift traffic.
- A full matrix PCMS may be used to simulate a Flashing Arrow Board provided it meets visibility, flash rate and dimming requirements on this sheet for the same size arrow.
- Minimum mounting height of trailer mounted Arrow Boards should be 7 feet from roadway to bottom of panel.

| REQUIREMENTS | | | |
|--------------|--------------|-------------------------------|-----------------------------|
| TYPE | MINIMUM SIZE | MINIMUM NUMBER OF PANEL LAMPS | MINIMUM VISIBILITY DISTANCE |
| B | 30 x 60 | 13 | 3/4 mile |
| C | 48 x 96 | 15 | 1 mile |

| ATTENTION |
|---|
| Flashing Arrow Boards shall be equipped with automatic dimming devices. |

WHEN NOT IN USE, REMOVE THE ARROW BOARD FROM THE RIGHT-OF-WAY OR PLACE THE ARROW BOARD BEHIND CONCRETE TRAFFIC BARRIER OR GUARDRAIL.

FLASHING ARROW BOARDS

SHEET 7 OF 12

TRUCK-MOUNTED ATTENUATORS

- Truck-mounted attenuators (TMA) used on TxDOT facilities must meet the requirements outlined in the Manual for Assessing Safety Hardware (MASH).
- Refer to the CWZTCD for the requirements of Level 2 or Level 3 TMAs.
- Refer to the CWZTCD for a list of approved TMAs.
- TMAs are required on freeways unless otherwise noted in the plans.
- A TMA should be used anytime that it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the work performance.
- The only reason a TMA should not be required is when a work area is spread down the roadway and the work crew is an extended distance from the TMA.



BARRICADE AND CONSTRUCTION ARROW PANEL, REFLECTORS, WARNING LIGHTS & ATTENUATOR

BC (7) - 21

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DISCLAIMER:

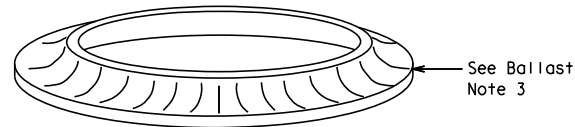
1. For long term stationary work zones on freeways, drums shall be used as the primary channelizing device.
2. For intermediate term stationary work zones on freeways, drums should be used as the primary channelizing device but may be replaced in tangent sections by vertical panels, or 42" two-piece cones. In tangent sections, one-piece cones may be used with the approval of the Engineer but only if personnel are present on the project at all times to maintain the cones in proper position and location.
3. For short term stationary work zones on freeways, drums are the preferred channelizing device but may be replaced in tapers, transitions and tangent sections by vertical panels, two-piece cones or one-piece cones as approved by the Engineer.
4. Drums and all related items shall comply with the requirements of the current version of the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD) and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
5. Drums, bases, and related materials shall exhibit good workmanship and shall be free from objectionable marks or defects that would adversely affect their appearance or serviceability.
6. The Contractor shall have a maximum of 24 hours to replace any plastic drums identified for replacement by the Engineer/Inspector. The replacement device must be an approved device.

Pre-qualified plastic drums shall meet the following requirements:

- ## RETROREFLECTIVE SHEETING

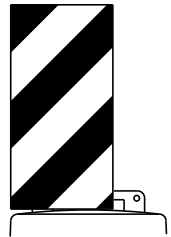
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18" x 24" Sign
(Maximum Sign Dimension)
Chevron CW1-8, Opposing Traffic Lane
Divider, Driveway sign D70a, Keep Right
R4 series or other signs as approved
by Engineer



12" x 24"
Vertical Panel
mount with diagonals
sloping down towards
travel way

SIGNS, CHEVRONS, AND VERTICAL PANELS MOUNTED
ON PLASTIC DRUMS

- SHEET 8 OF 12



Texas Department of Transportation

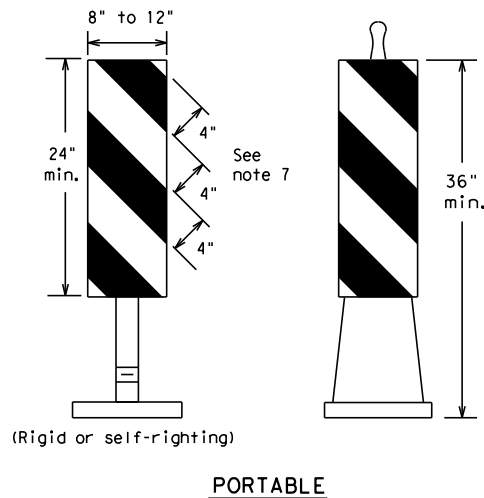
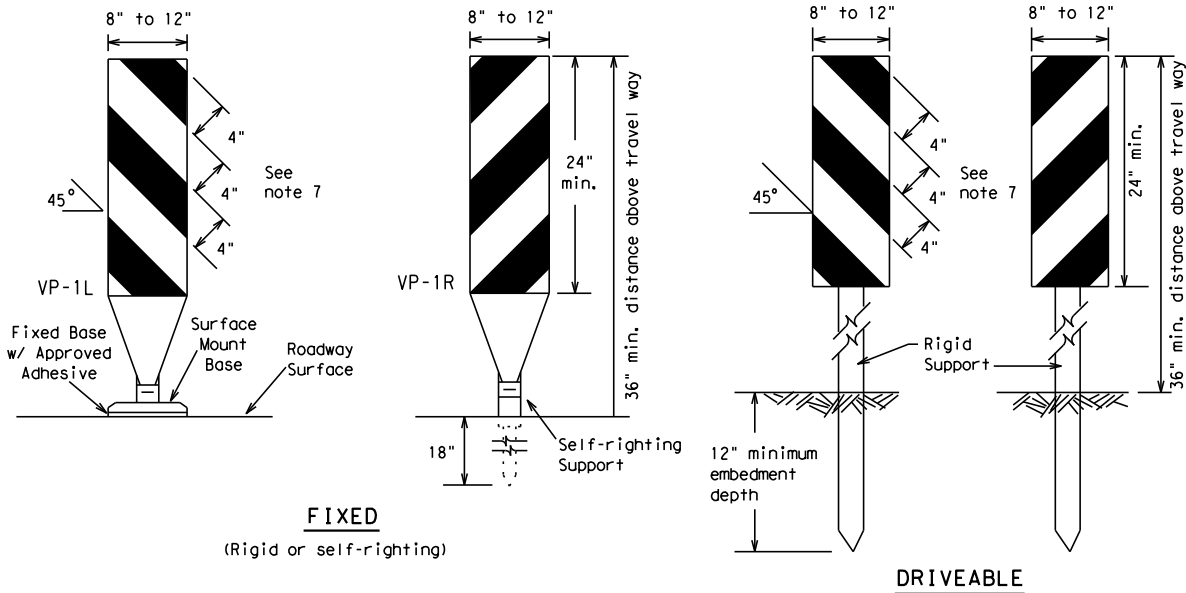
**Traffic
Safety
Division
Standard**

BC (8) - 21

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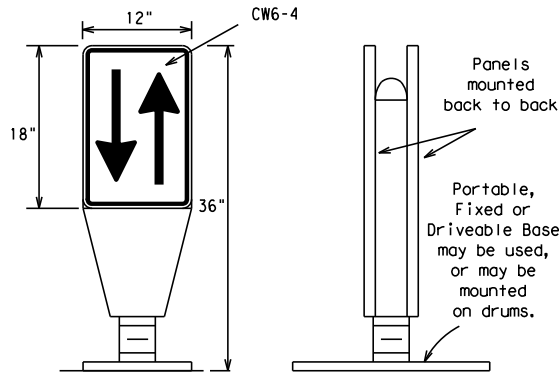
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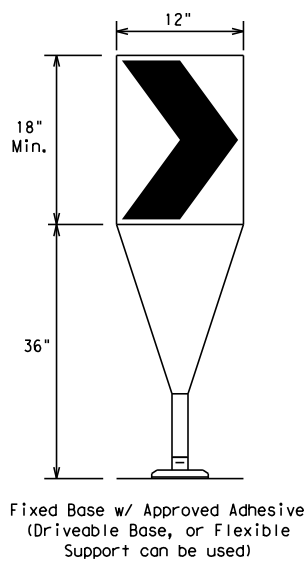
VERTICAL PANELS (VPs)

- Vertical Panels (VP's) are normally used to channelize traffic or divide opposing lanes of traffic.
- VP's may be used in daytime or nighttime situations. They may be used at the edge of shoulder drop-offs and other areas such as lane transitions where positive daytime and nighttime delineation is required. The Engineer/Inspector shall refer to the Roadway Design Manual for additional requirements on the use VP's for drop-offs.
- VP's should be mounted back to back if used at the edge of cuts adjacent to two-way two lane roadways. Stripes are to be reflective orange and reflective white and should always slope downward toward the travel lane.
- VP's used on expressways and freeways or other high speed roadways, may have more than 270 square inches of retroreflective area facing traffic.
- Self-righting supports are available with portable base. See "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
- Sheeting for the VP's shall be retroreflective Type A or Type B conforming to Departmental Material Specification DMS-8300, unless noted otherwise.
- Where the height of reflective material on the vertical panel is 36 inches or greater, a panel stripe of 6 inches shall be used.



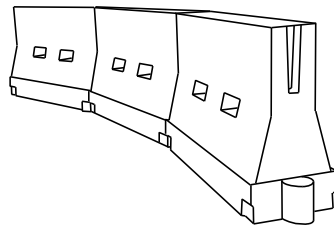
OPPOSING TRAFFIC LANE DIVIDERS (OTLD)

- Opposing Traffic Lane Dividers (OTLD) are delineation devices designed to convert a normal one-way roadway section to two-way operation. OTLD's are used on temporary centerlines. The upward and downward arrows on the sign's face indicate the direction of traffic on either side of the divider. The base is secured to the pavement with an adhesive or rubber weight to minimize movement caused by a vehicle impact or wind gust.
- The OTLD may be used in combination with 42" cones or VPs.
- Spacing between the OTLD shall not exceed 500 feet. 42" cones or VPs placed between the OTLD's should not exceed 100 foot spacing.
- The OTLD shall be orange with a black non-reflective legend. Sheeting for the OTLD shall be retroreflective Type B_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.



- The chevron shall be a vertical rectangle with a minimum size of 12 by 18 inches.
- Chevrons are intended to give notice of a sharp change of alignment with the direction of travel and provide additional emphasis and guidance for vehicle operators with regard to changes in horizontal alignment of the roadway.
- Chevrons, when used, shall be erected on the outside of a sharp curve or turn, or on the far side of an intersection. They shall be in line with and at right angles to approaching traffic. Spacing should be such that the motorist always has three in view, until the change in alignment eliminates its need.
- To be effective, the chevron should be visible for at least 500 feet.
- Chevrons shall be orange with a black nonreflective legend. Sheeting for the chevron shall be retroreflective Type B_{FL} or Type C_{FL} conforming to Departmental Material Specification DMS-8300, unless noted otherwise. The legend shall meet the requirements of DMS-8300.
- For Long Term Stationary use on tapers or transitions on freeways and divided highways, self-righting chevrons may be used to supplement plastic drums but not to replace plastic drums.

CHEVRONS



LONGITUDINAL CHANNELIZING DEVICES (LCD)

- LCDs are crashworthy, lightweight, deformable devices that are highly visible, have good target value and can be connected together. They are not designed to contain or redirect a vehicle on impact.
- LCDs may be used instead of a line of cones or drums.
- LCDs shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
- LCDs should not be used to provide positive protection for obstacles, pedestrians or workers.
- LCDs shall be supplemented with retroreflective delineation as required for temporary barriers on BC(7) when placed roughly parallel to the travel lanes.
- LCDs used as barricades placed perpendicular to traffic should have at least one row of reflective sheeting meeting the requirements for barricade rails as shown on BC(10). Place reflective sheeting near the top of the LCD along the full length of the device.

WATER BALLASTED SYSTEMS USED AS BARRIERS

- Water ballasted systems used as barriers shall not be used solely to channelize road users, but also to protect the work space per the appropriate Manual for Assessing Safety Hardware (MASH) crashworthiness requirements based on roadway speed and barrier application.
- Water ballasted systems used to channelize vehicular traffic shall be supplemented with retroreflective delineation or channelizing devices to improve daytime/nighttime visibility. They may also be supplemented with pavement markings.
- Water ballasted systems used as barriers shall be placed in accordance to application and installation requirements specific to the device, and used only when shown on the CWZTCD list.
- Water ballasted systems used as barriers should not be used for a merging taper except in low speed (less than 45 MPH) urban areas. When used on a taper in a low speed urban area, the taper shall be delineated and the taper length should be designed to optimize road user operations considering the available geometric conditions.
- When water ballasted systems used as barriers have blunt ends exposed to traffic, they should be attenuated as per manufacturer recommendations or flared to a point outside the clear zone.

If used to channelize pedestrians, longitudinal channelizing devices or water ballasted systems must have a continuous detectable bottom for users of long canes and the top of the unit shall not be less than 32 inches in height.

HOLLOW OR WATER BALLASTED SYSTEMS USED AS LONGITUDINAL CHANNELIZING DEVICES OR BARRIERS

GENERAL NOTES

- Work Zone channelizing devices illustrated on this sheet may be installed in close proximity to traffic and are suitable for use on high or low speed roadways. The Engineer/Inspector shall ensure that spacing and placement is uniform and in accordance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
- Channelizing devices shown on this sheet may have a driveable, fixed or portable base. The requirement for self-righting channelizing devices must be specified in the General Notes or other plan sheets.
- Channelizing devices on self-righting supports should be used in work zone areas where channelizing devices are frequently impacted by errant vehicles or vehicle related wind gusts making alignment of the channelizing devices difficult to maintain. Locations of these devices shall be detailed elsewhere in the plans. These devices shall conform to the TMUTCD and the "Compliant Work Zone Traffic Control Devices List" (CWZTCD).
- The Contractor shall maintain devices in a clean condition and replace damaged, nonreflective, faded, or broken devices and bases as required by the Engineer/Inspector. The Contractor shall be required to maintain proper device spacing and alignment.
- Portable bases shall be fabricated from virgin and/or recycled rubber. The portable bases shall weigh a minimum of 30 lbs.
- Pavement surfaces shall be prepared in a manner that ensures proper bonding between the adhesives, the fixed mount bases and the pavement surface. Adhesives shall be prepared and applied according to the manufacturer's recommendations.
- The installation and removal of channelizing devices shall not cause detrimental effects to the final pavement surfaces, including pavement surface discoloration or surface integrity. Driveable bases shall not be permitted on final pavement surfaces. The Engineer/Inspector shall approve all application and removal procedures of fixed bases.

| Posted Speed | Formula | Minimum Desirable Taper Lengths * * | | | Suggested Maximum Spacing of Channelizing Devices | |
|--------------|-----------------------|--|------------|------------|---|--------------|
| | | 10' Offset | 11' Offset | 12' Offset | On a Taper | On a Tangent |
| 30 | $L = \frac{WS^2}{60}$ | 150' | 165' | 180' | 30' | 60' |
| 35 | | 205' | 225' | 245' | 35' | 70' |
| 40 | | 265' | 295' | 320' | 40' | 80' |
| 45 | L = WS | 450' | 495' | 540' | 45' | 90' |
| 50 | | 500' | 550' | 600' | 50' | 100' |
| 55 | | 550' | 605' | 660' | 55' | 110' |
| 60 | | 600' | 660' | 720' | 60' | 120' |
| 65 | | 650' | 715' | 780' | 65' | 130' |
| 70 | | 700' | 770' | 840' | 70' | 140' |
| 75 | | 750' | 825' | 900' | 75' | 150' |
| 80 | | 800' | 880' | 960' | 80' | 160' |

* **Taper lengths have been rounded off.
L=Length of Taper (FT.) W=Width of Offset (FT.)
S=Posted Speed (MPH)

SUGGESTED MAXIMUM SPACING OF CHANNELIZING DEVICES AND MINIMUM DESIRABLE TAPER LENGTHS

SHEET 9 OF 12



BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC (9) - 21

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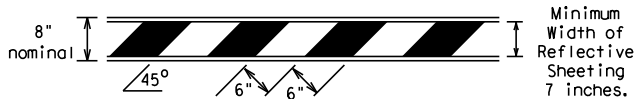
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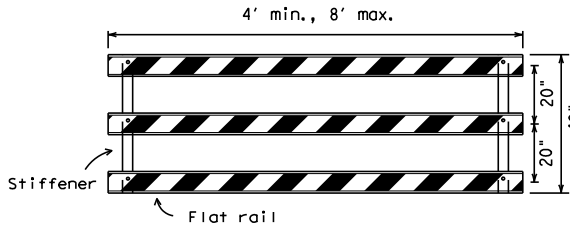
TYPE 3 BARRICADES

1. Refer to the Compliant Work Zone Traffic Control Devices List (CWZTCD) for details of the Type 3 Barricades and a list of all materials used in the construction of Type 3 Barricades.
2. Type 3 Barricades shall be used at each end of construction projects closed to all traffic.
3. Barricades extending across a roadway should have stripes that slope downward in the direction toward which traffic must turn in detouring. When both right and left turns are provided, the chevron striping may slope downward in both directions from the center of the barricade. Where no turns are provided at a closed road, striping should slope downward in both directions toward the center of roadway.
4. Striping of rails, for the right side of the roadway, should slope downward to the left. For the left side of the roadway, striping should slope downward to the right.
5. Identification markings may be shown only on the back of the barricade rails. The maximum height of letters and/or company logos used for identification shall be 1".
6. Barricades shall not be placed parallel to traffic unless an adequate clear zone is provided.
7. Warning lights shall NOT be installed on barricades.
8. Where barricades require the use of weights to keep from turning over, the use of sandbags with dry, cohesionless sand is recommended. The sandbags will be tied shut to keep the sand from spilling and to maintain a constant weight. Sand bags shall not be stacked in a manner that covers any portion of a barricade rails reflective sheeting. Rock, concrete, iron, steel or other solid objects will NOT be permitted. Sandbags should weigh a minimum of 35 lbs and a maximum of 50 lbs. Sandbags shall be made of a durable material that tears upon vehicular impact. Rubber (such as tire inner tubes) shall not be used for sandbags. Sandbags shall only be placed along or upon the base supports of the device and shall not be suspended above ground level or hung with rope, wire, chains or other fasteners.
9. Sheeting for barricades shall be retroreflective Type A or Type B conforming to Departmental Material Specification DMS-8300 unless otherwise noted.

Barricades shall NOT be used as a sign support.



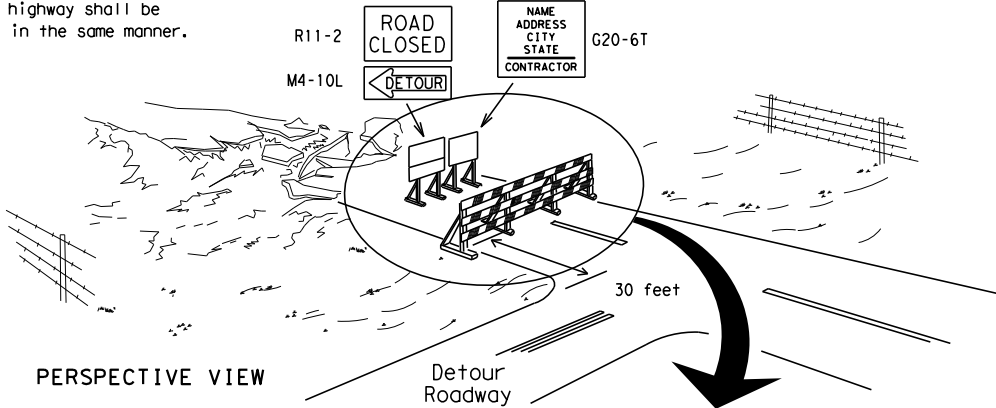
TYPICAL STRIPING DETAIL FOR BARRICADE RAIL



Stiffener may be inside or outside of support, but no more than 2 stiffeners shall be allowed on one barricade.

TYPICAL PANEL DETAIL FOR SKID OR POST TYPE BARRICADES

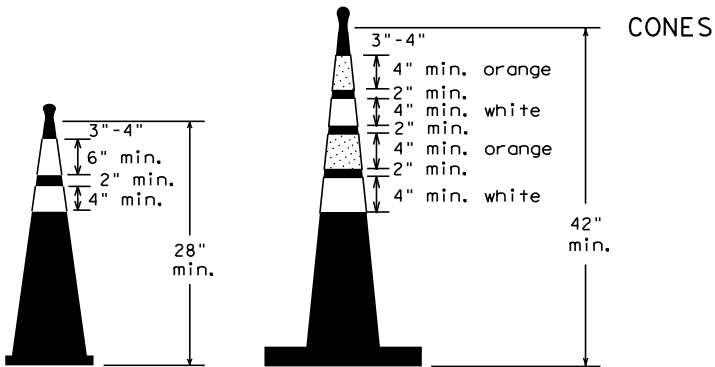
Each roadway of a divided highway shall be barricaded in the same manner.



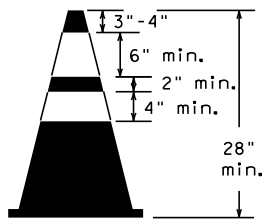
The three rails on Type 3 barricades shall be reflectorized orange and reflective white stripes on one side facing one-way traffic and both sides for two-way traffic. Barricade striping should slant downward in the direction of detour.

1. Signs should be mounted on independent supports at a 7 foot mounting height in center of roadway. The signs should be a minimum of 10 feet behind Type 3 Barricades.
2. Advance signing shall be as specified elsewhere in the plans.

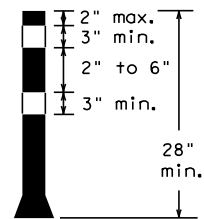
TYPE 3 BARRICADE (POST AND SKID) TYPICAL APPLICATION



Two-Piece cones



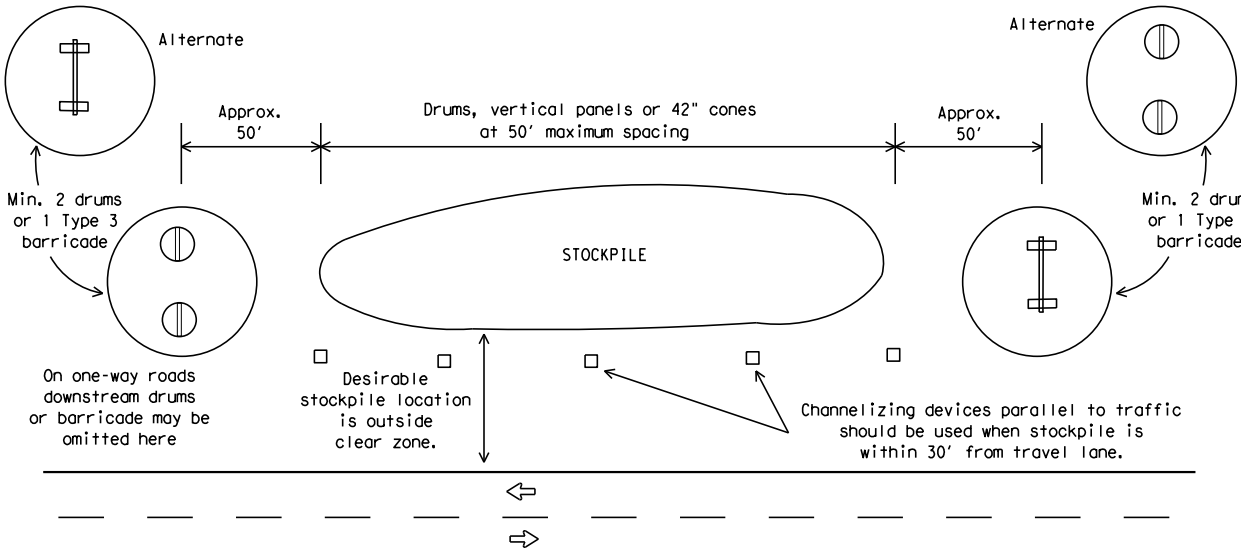
One-Piece cones



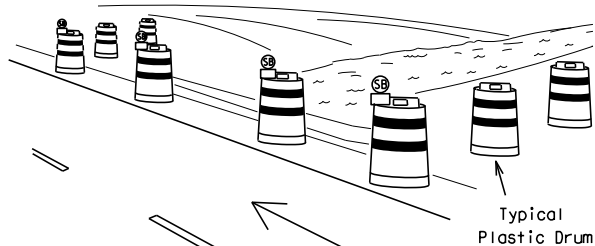
Tubular Marker

28" Cones shall have a minimum weight of 9 1/2 lbs.
42" 2-piece cones shall have a minimum weight of 30 lbs. including base.

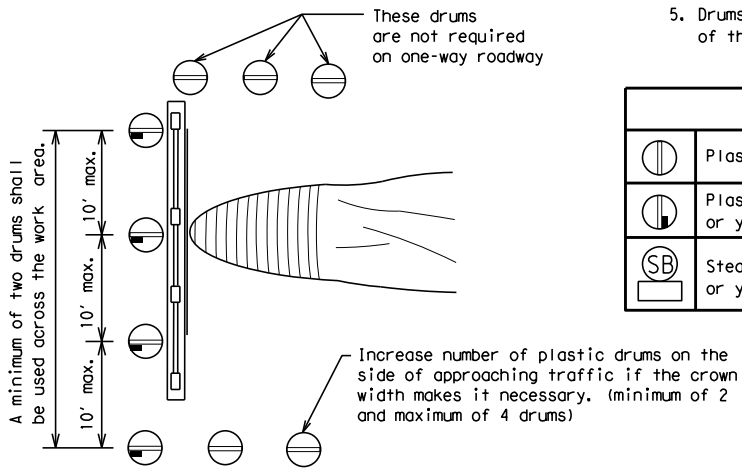
1. Traffic cones and tubular markers shall be predominantly orange, and meet the height and weight requirements shown above.
2. One-piece cones have the body and base of the cone molded in one consolidated unit. Two-piece cones have a cone shaped body and a separate rubber base, or ballast, that is added to keep the device upright and in place.
3. Two-piece cones may have a handle or loop extending up to 8" above the minimum height shown, in order to aid in retrieving the device.
4. Cones or tubular markers shall have white or white and orange reflective bands as shown above. The reflective bands shall have a smooth, sealed outer surface and meet the requirements of Departmental Material Specification DMS-8300 Type A or Type B.
5. 28" cones and tubular markers are generally suitable for short duration and short-term stationary work as defined on BC(4). These should not be used for intermediate-term or long-term stationary work unless personnel is on-site to maintain them in their proper upright position.
6. 42" two-piece cones, vertical panels or drums are suitable for all work zone durations.
7. Cones or tubular markers used on each project should be of the same size and shape.



TRAFFIC CONTROL FOR MATERIAL STOCKPILES



PERSPECTIVE VIEW



PLAN VIEW

CULVERT WIDENING OR OTHER ISOLATED WORK WITHIN THE PROJECT LIMITS

1. Where positive redirection capability is provided, drums may be omitted.
2. Plastic construction fencing may be used with drums for safety as required in the plans.
3. Vertical Panels on flexible support may be substituted for drums when the shoulder width is less than 4 feet.
4. When the shoulder width is greater than 12 feet, steady-burn lights may be omitted if drums are used.
5. Drums must extend the length of the culvert widening.

LEGEND

| | |
|--|---|
| | Plastic drum |
| | Plastic drum with steady burn light or yellow warning reflector |
| | Steady burn warning light or yellow warning reflector |

SHEET 10 OF 12



BARRICADE AND CONSTRUCTION CHANNELIZING DEVICES

BC (10) - 21

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WORK ZONE PAVEMENT MARKINGS

GENERAL

1. The Contractor shall be responsible for maintaining work zone and existing pavement markings, in accordance with the standard specifications and special provisions, on all roadways open to traffic within the CSJ limits unless otherwise stated in the plans.
2. Color, patterns and dimensions shall be in conformance with the "Texas Manual on Uniform Traffic Control Devices" (TMUTCD).
3. Additional supplemental pavement marking details may be found in the plans or specifications.
4. Pavement markings shall be installed in accordance with the TMUTCD and as shown on the plans.
5. When short term markings are required on the plans, short term markings shall conform with the TMUTCD, the plans and details as shown on the Standard Plan Sheet WZ(STPM).
6. When standard pavement markings are not in place and the roadway is opened to traffic, DO NOT PASS signs shall be erected to mark the beginning of the sections where passing is prohibited and PASS WITH CARE signs at the beginning of sections where passing is permitted.
7. All work zone pavement markings shall be installed in accordance with Item 662, "Work Zone Pavement Markings."

RAISED PAVEMENT MARKERS

1. Raised pavement markers are to be placed according to the patterns on BC(12).
2. All raised pavement markers used for work zone markings shall meet the requirements of Item 672, "RAISED PAVEMENT MARKERS" and Departmental Material Specification DMS-4200 or DMS-4300.

PREFABRICATED PAVEMENT MARKINGS

1. Removable prefabricated pavement markings shall meet the requirements of DMS-8241.
2. Non-removable prefabricated pavement markings (foil back) shall meet the requirements of DMS-8240.

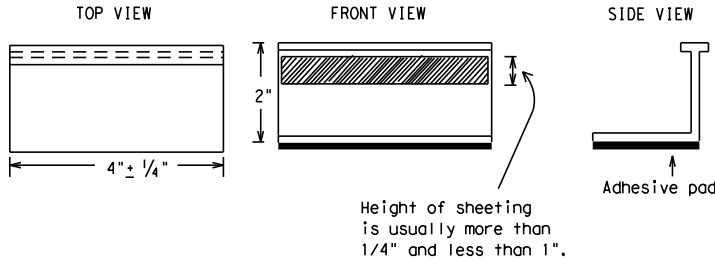
MAINTAINING WORK ZONE PAVEMENT MARKINGS

1. The Contractor will be responsible for maintaining work zone pavement markings within the work limits.
2. Work zone pavement markings shall be inspected in accordance with the frequency and reporting requirements of work zone traffic control device inspections as required by Form 599.
3. The markings should provide a visible reference for a minimum distance of 300 feet during normal daylight hours and 160 feet when illuminated by automobile low-beam headlights at night, unless sight distance is restricted by roadway geometrics.
4. Markings failing to meet this criteria within the first 30 days after placement shall be replaced at the expense of the Contractor as per Specification Item 662.

REMOVAL OF PAVEMENT MARKINGS

1. Pavement markings that are no longer applicable, could create confusion or direct a motorist toward or into the closed portion of the roadway shall be removed or obliterated before the roadway is opened to traffic.
2. The above shall not apply to detours in place for less than three days, where flaggers and/or sufficient channelizing devices are used in lieu of markings to outline the detour route.
3. Pavement markings shall be removed to the fullest extent possible, so as not to leave a discernable marking. This shall be by any method approved by TxDOT Specification Item 677 for "Eliminating Existing Pavement Markings and Markers".
4. The removal of pavement markings may require resurfacing or seal coating portions of the roadway as described in Item 677.
5. Subject to the approval of the Engineer, any method that proves to be successful on a particular type pavement may be used.
6. Blast cleaning may be used but will not be required unless specifically shown in the plans.
7. Over-painting of the markings SHALL NOT BE permitted.
8. Removal of raised pavement markers shall be as directed by the Engineer.
9. Removal of existing pavement markings and markers will be paid for directly in accordance with Item 677, "ELIMINATING EXISTING PAVEMENT MARKINGS AND MARKERS," unless otherwise stated in the plans.
10. Black-out marking tape may be used to cover conflicting existing markings for periods less than two weeks when approved by the Engineer.

Temporary Flexible-Reflective
Roadway Marker Tabs



STAPLES OR NAILS SHALL NOT BE USED TO SECURE
TEMPORARY FLEXIBLE-REFLECTIVE ROADWAY MARKER
TABS TO THE PAVEMENT SURFACE

1. Temporary flexible-reflective roadway marker tabs used as guidemarks shall meet the requirements of DMS-8242.
2. Tabs detailed on this sheet are to be inspected and accepted by the Engineer or designated representative. Sampling and testing is not normally required, however at the option of the Engineer, either "A" or "B" below may be imposed to assure quality before placement on the roadway.
 - A. Select five (5) or more tabs at random from each lot or shipment and submit to the Construction Division, Materials and Pavement Section to determine specification compliance.
 - B. Select five (5) tabs and perform the following test. Affix five (5) tabs at 24 inch intervals on an asphaltic pavement in a straight line. Using a medium size passenger vehicle or pickup, run over the markers with the front and rear tires at a speed of 35 to 40 miles per hour, four (4) times in each direction. No more than one (1) out of the five (5) reflective surfaces shall be lost or displaced as a result of this test.
3. Small design variances may be noted between tab manufacturers.
4. See Standard Sheet WZ(STPM) for tab placement on new pavements. See Standard Sheet TCP(7-1) for tab placement on seal coat work.

RAISED PAVEMENT MARKERS USED AS GUIDEMARKS

1. Raised pavement markers used as guidemarks shall be from the approved product list, and meet the requirements of DMS-4200.
2. All temporary construction raised pavement markers provided on a project shall be of the same manufacturer.
3. Adhesive for guidemarks shall be bituminous material hot applied or butyl rubber pad for all surfaces, or thermoplastic for concrete surfaces.

Guidemarks shall be designated as:
YELLOW - (two amber reflective surfaces with yellow body).
WHITE - (one silver reflective surface with white body).

| DEPARTMENTAL MATERIAL SPECIFICATIONS | |
|--|----------|
| PAVEMENT MARKERS (REFLECTORIZED) | DMS-4200 |
| TRAFFIC BUTTONS | DMS-4300 |
| EPOXY AND ADHESIVES | DMS-6100 |
| BITUMINOUS ADHESIVE FOR PAVEMENT MARKERS | DMS-6130 |
| PERMANENT PREFABRICATED PAVEMENT MARKINGS | DMS-8240 |
| TEMPORARY REMOVABLE, PREFABRICATED PAVEMENT MARKINGS | DMS-8241 |
| TEMPORARY FLEXIBLE, REFLECTIVE ROADWAY MARKER TABS | DMS-8242 |

A list of prequalified reflective raised pavement markers, non-reflective traffic buttons, roadway marker tabs and other pavement markings can be found at the Material Producer List web address shown on BC(1).

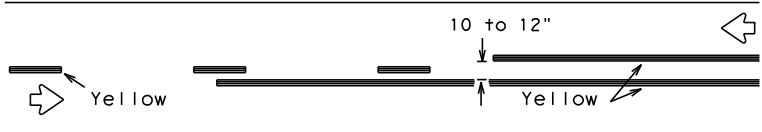
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| | | | | Traffic Safety Division Standard | |
| BARRICADE AND CONSTRUCTION PAVEMENT MARKINGS | | | | | |
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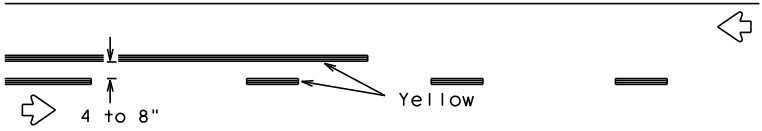
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PAVEMENT MARKING PATTERNS



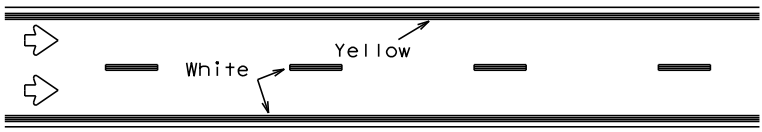
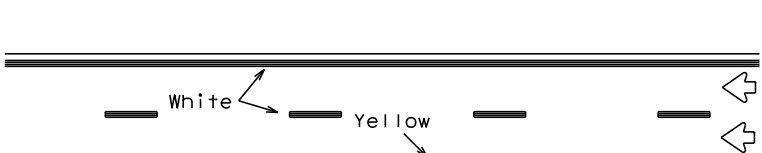
REFLECTORIZED PAVEMENT MARKINGS - PATTERN A



REFLECTORIZED PAVEMENT MARKINGS - PATTERN B

Pattern A is the TxDOT Standard, however Pattern B may be used if approved by the Engineer. Prefabricated markings may be substituted for reflectORIZED pavement markings.

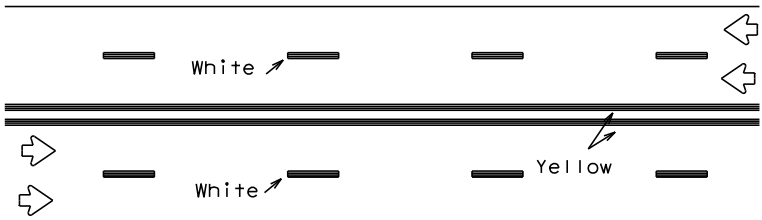
CENTER LINE & NO-PASSING ZONE BARRIER LINES FOR TWO-LANE, TWO-WAY HIGHWAYS



REFLECTORIZED PAVEMENT MARKINGS

Prefabricated markings may be substituted for reflectORIZED pavement markings.

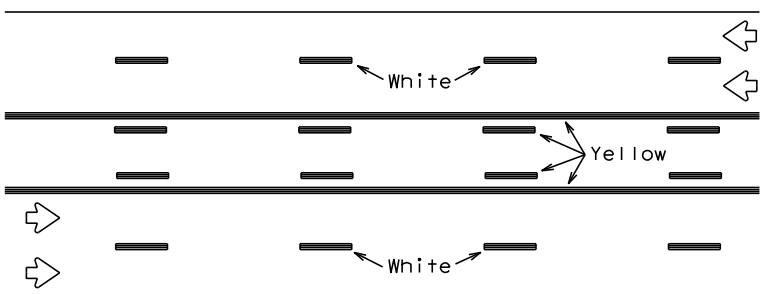
EDGE & LANE LINES FOR DIVIDED HIGHWAY



REFLECTORIZED PAVEMENT MARKINGS

Prefabricated markings may be substituted for reflectORIZED pavement markings.

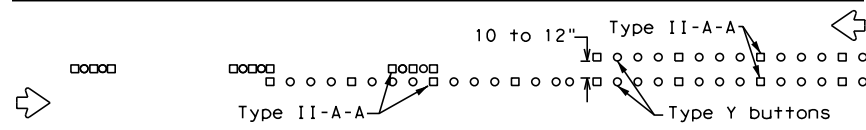
LANE & CENTER LINES FOR MULTILANE UNDIVIDED HIGHWAYS



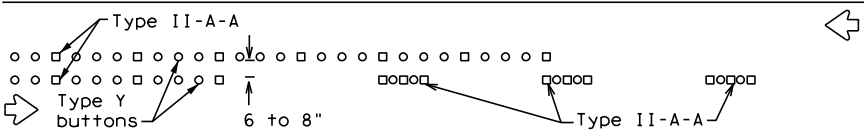
REFLECTORIZED PAVEMENT MARKINGS

Prefabricated markings may be substituted for reflectORIZED pavement markings.

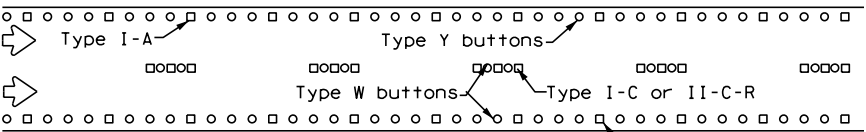
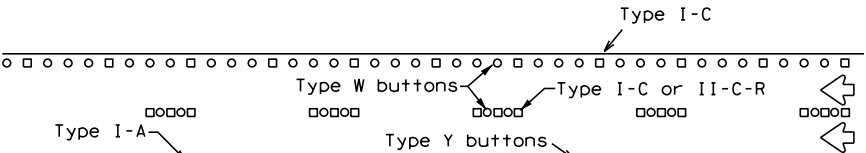
TWO-WAY LEFT TURN LANE



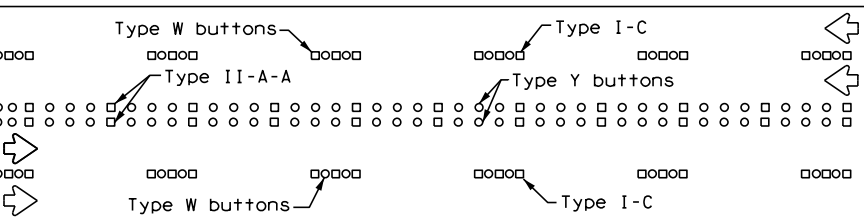
RAISED PAVEMENT MARKERS - PATTERN A



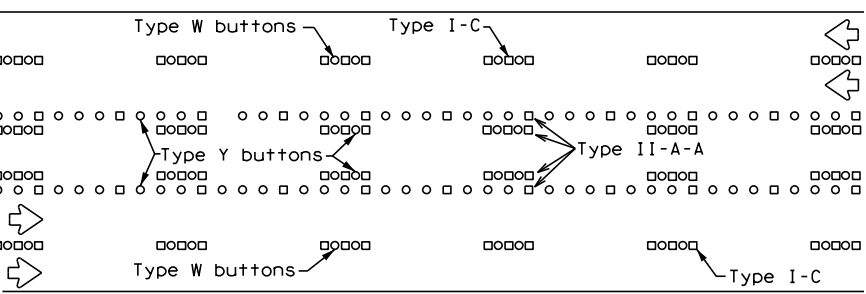
RAISED PAVEMENT MARKERS - PATTERN B



RAISED PAVEMENT MARKERS

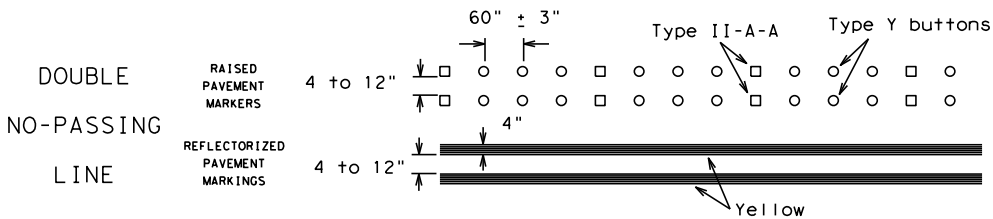


RAISED PAVEMENT MARKERS

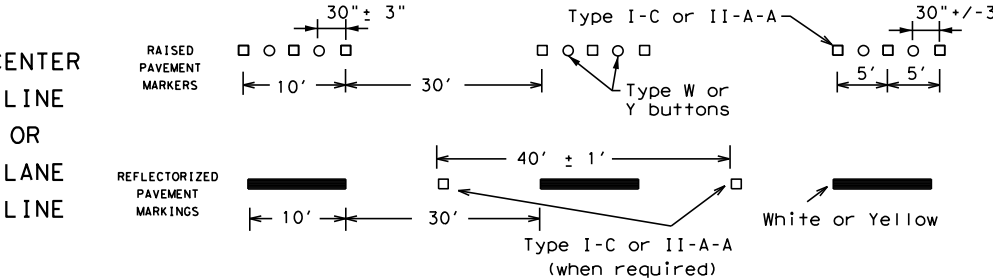
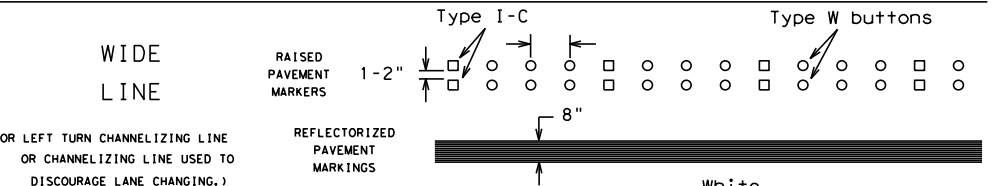
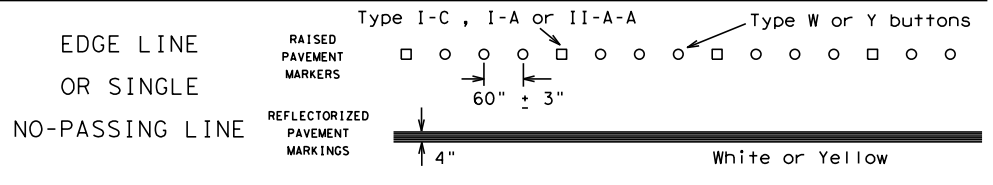


RAISED PAVEMENT MARKERS

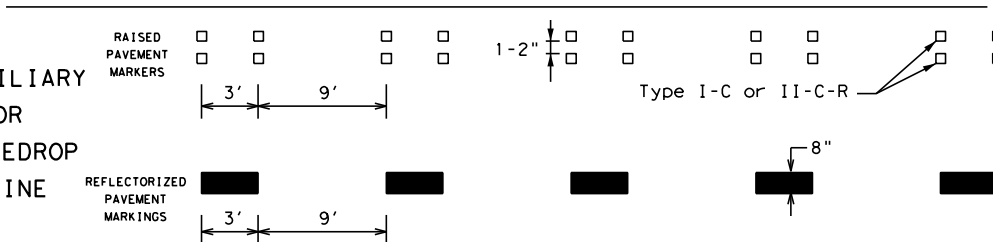
STANDARD WORK ZONE PAVEMENT MARKINGS DETAILS



SOLID LINES

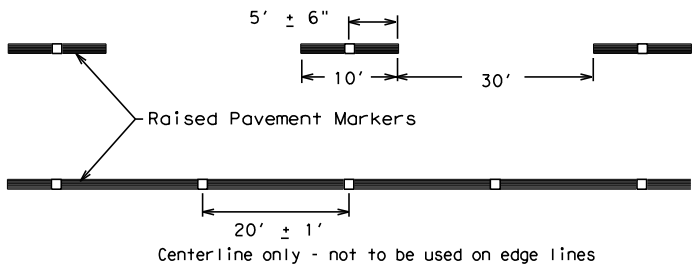


BROKEN LINES



REMOVABLE MARKINGS WITH RAISED PAVEMENT MARKERS

If raised pavement markers are used to supplement REMOVABLE markings, the markers shall be applied to the top of the tape at the approximate mid length of tape used for broken lines or at 20 foot spacing for solid lines. This allows an easier removal of raised pavement markers and tape.



SHEET 12 OF 12



BARRICADE AND CONSTRUCTION PAVEMENT MARKING PATTERNS

BC(12)-21

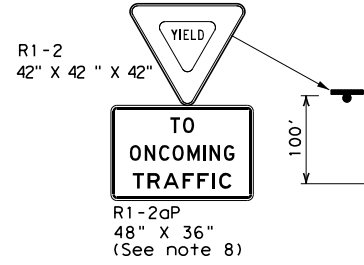
| | | | | |
|-----------------------|-----------|-----------|-----------|-----------|
| FILE: bc-21.dgn | DN: TxDOT | CK: TxDOT | DN: TxDOT | CK: TxDOT |
| © TxDOT February 1998 | CONT | SECT | JOB | HIGHWAY |
| REVISIONS | | | | |
| 1-97 9-07 5-21 | | | | |
| 2-98 7-13 | | | | |
| 11-02 8-14 | | | | |
| | DIST | COUNTY | | SHEET NO. |
| | | | | 47 |

Raised pavement markers used as standard pavement markings shall be from the approved products list and meet the requirements of Item 672 "RAISED PAVEMENT MARKERS."

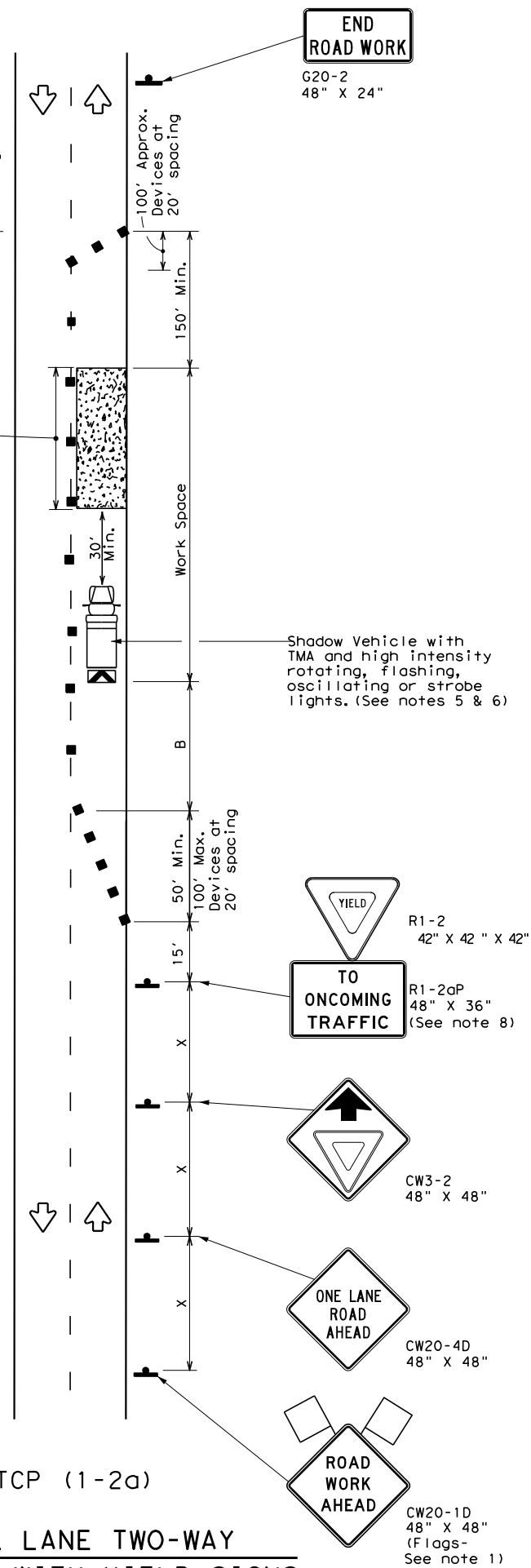
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DATE:
FILE:

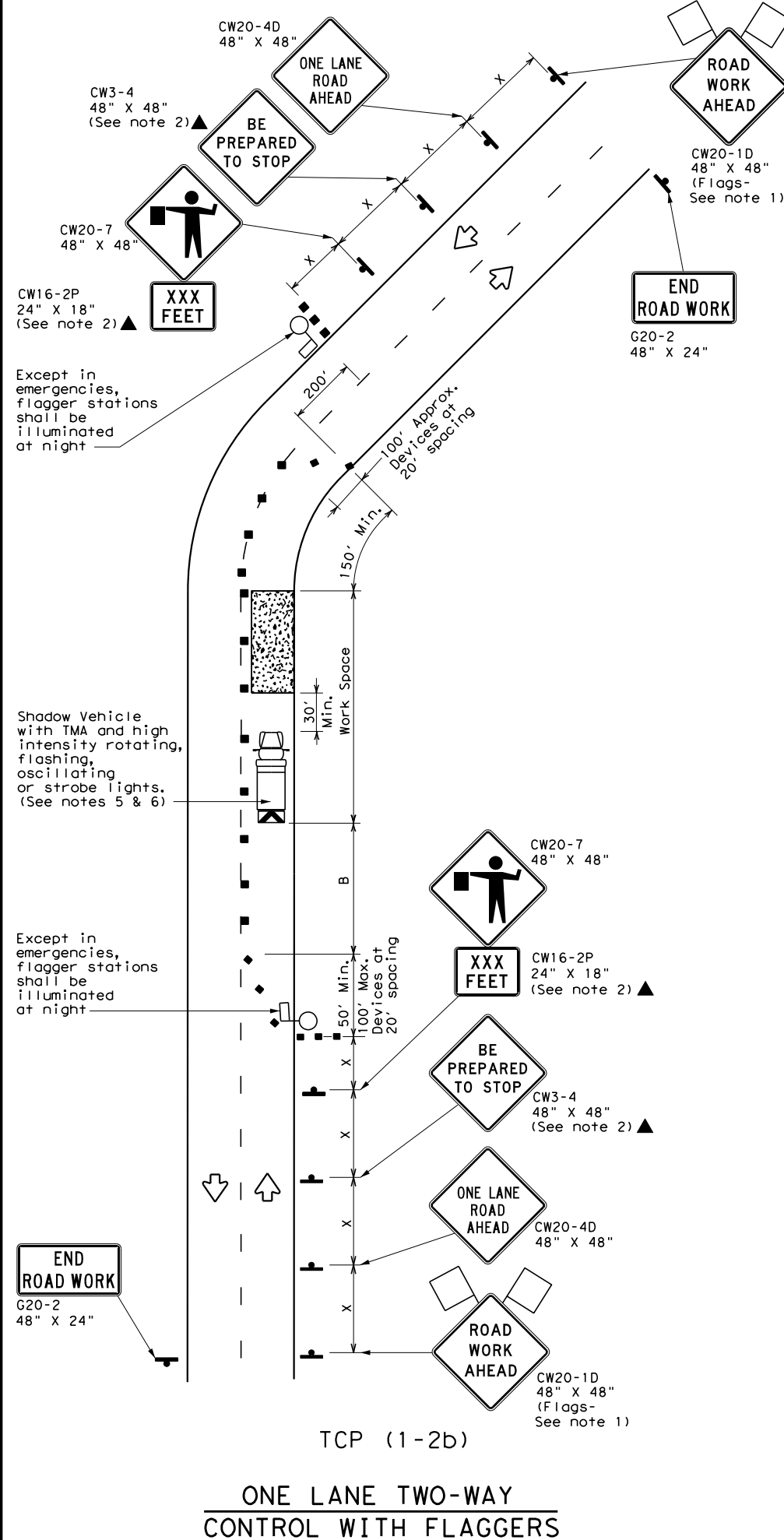
Warning Sign Sequence
in Opposite Direction
Same as Below



Channelizing devices
separate work space
from traveled way



ONE LANE TWO-WAY
CONTROL WITH YIELD SIGNS
(Less than 2000 ADT - See note 7)



| LEGEND | | | |
|--------|--------------------------------------|--|---|
| | Type 3 Barricade | | Channelizing Devices |
| | Heavy Work Vehicle | | Truck Mounted Attenuator (TMA) |
| | Trailer Mounted Flashing Arrow Board | | Portable Changeable Message Sign (PCMS) |
| | Sign | | Traffic Flow |
| | Flag | | Flagger |

| Posted Speed * | Formula | Minimum Desirable Taper Lengths ** | | | Suggested Maximum Spacing of Channelizing Devices | | Minimum Sign Spacing "X" Distance | Suggested Longitudinal Buffer Space "B" | Stopping Sight Distance |
|-------------------|-----------------------|---------------------------------------|---------------|---------------|---|--------------|---|--|-------------------------|
| | | 10' Offset | 11' Offset | 12' Offset | On a Taper | On a Tangent | | | |
| 30 | $L = \frac{WS^2}{60}$ | 150' | 165' | 180' | 30' | 60' | 120' | 90' | 200' |
| 35 | | 205' | 225' | 245' | 35' | 70' | 160' | 120' | 250' |
| 40 | | 265' | 295' | 320' | 40' | 80' | 240' | 155' | 305' |
| 45 | | 450' | 495' | 540' | 45' | 90' | 320' | 195' | 360' |
| 50 | L = WS | 500' | 550' | 600' | 50' | 100' | 400' | 240' | 425' |
| 55 | | 550' | 605' | 660' | 55' | 110' | 500' | 295' | 495' |
| 60 | | 600' | 660' | 720' | 60' | 120' | 600' | 350' | 570' |
| 65 | | 650' | 715' | 780' | 65' | 130' | 700' | 410' | 645' |
| 70 | | 700' | 770' | 840' | 70' | 140' | 800' | 475' | 730' |
| 75 | | 750' | 825' | 900' | 75' | 150' | 900' | 540' | 820' |

* Conventional Roads Only
** Taper lengths have been rounded off.
L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

| TYPICAL USAGE | | | | |
|---------------|----------------|-----------------------|------------------------------|----------------------|
| MOBILE | SHORT DURATION | SHORT TERM STATIONARY | INTERMEDIATE TERM STATIONARY | LONG TERM STATIONARY |
| | ✓ | ✓ | | |

GENERAL NOTES

- Flags attached to signs where shown are REQUIRED.
 - All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
 - The CW3-4 "BE PREPARED TO STOP" sign may be installed after the CW20-4D "ONE LANE ROAD AHEAD" sign, but proper sign spacing shall be maintained.
 - Sign spacing may be increased or an additional CW20-1D "ROAD WORK AHEAD" sign may be used if advance warning ahead of the flagger or R1-2 "YIELD" sign is less than 1500 feet.
 - A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
 - Additional Shadow Vehicles with TMAs may be positioned off the paved surface, next to those shown in order to protect wider work spaces.
- TCP (1-2a)**
- R1-2 "YIELD" sign traffic control may be used on projects with approaches that have adequate sight distance. For projects in urban areas, work spaces should be no longer than one half city block. In rural areas on roadways with less than 2000 ADT, work spaces should be no longer than 400 feet.
 - R1-2 "YIELD" sign with R1-2aP "TO ONCOMING TRAFFIC" plaque shall be placed on a support at a 7 foot minimum mounting height.

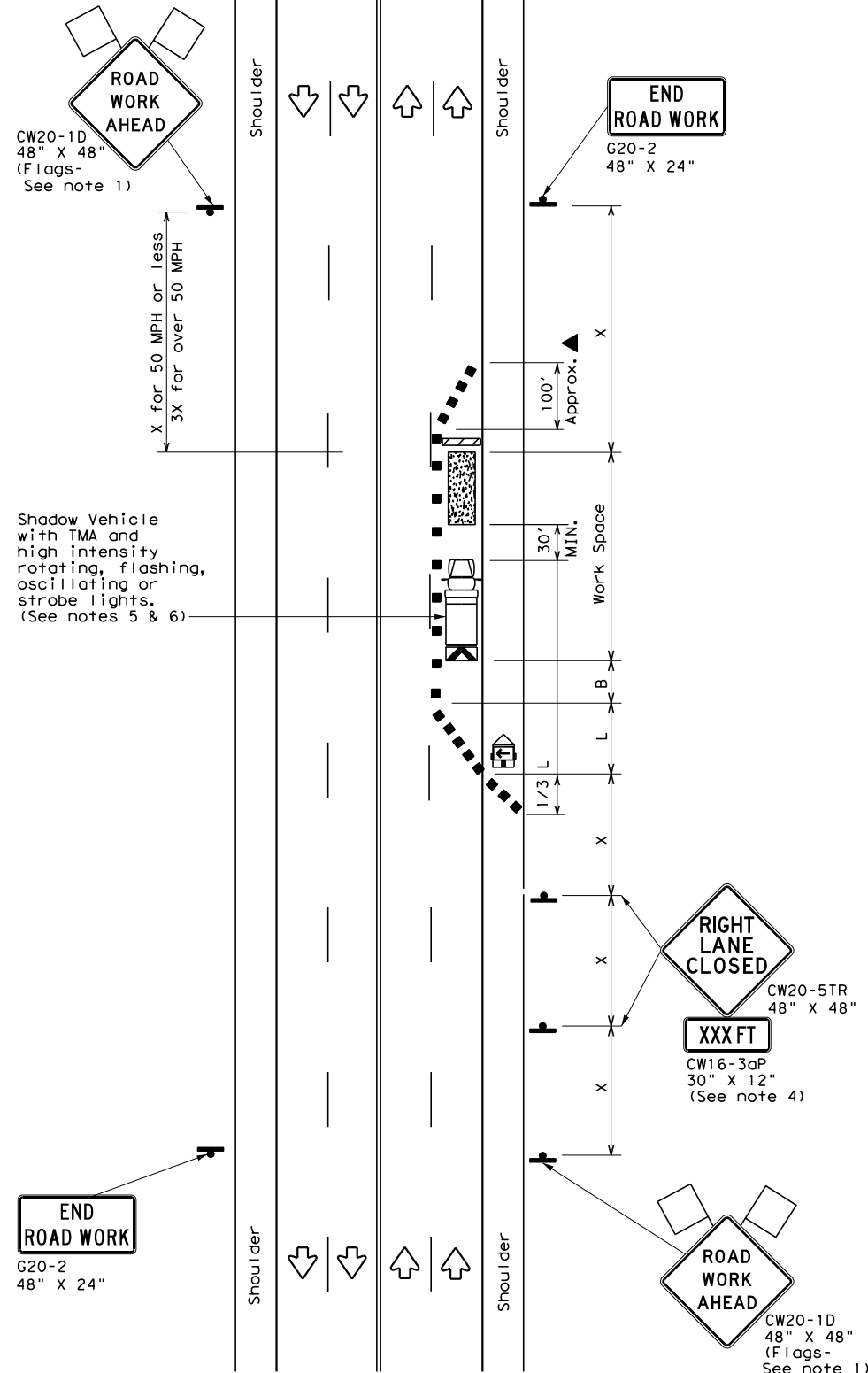
TCP (1-2b)

- Flaggers should use two-way radios or other methods of communication to control traffic.
- Length of work space should be based on the ability of flaggers to communicate.
- If the work space is located near a horizontal or vertical curve, the buffer distances should be increased in order to maintain adequate stopping sight distance to the flagger and a queue of stopped vehicles (see table above).
- Channelizing devices on the center-line may be omitted when a pilot car is leading traffic and approved by the Engineer.
- Flaggers should use 24" STOP/SLOW paddles to control traffic. Flags should be limited to emergency situations.

| | | | | | |
|---|------|--------------------------------------|-----------|--|--|
| | | Traffic Operations Division Standard | | | |
| TRAFFIC CONTROL PLAN ONE-LANE TWO-WAY TRAFFIC CONTROL | | | | | |
| TCP (1-2) - 18 | | | | | |
| FILE: tcp1-2-18.dgn | DN: | CK: | DW: | | |
| © TxDOT December 1985 | CONT | SECT | JOB | | |
| REVISIONS | | | HIGHWAY | | |
| 4-90 4-98 | | | | | |
| 2-94 2-12 | | | | | |
| 1-97 2-18 | | | | | |
| | DIST | COUNTY | SHEET NO. | | |
| | | | 48 | | |

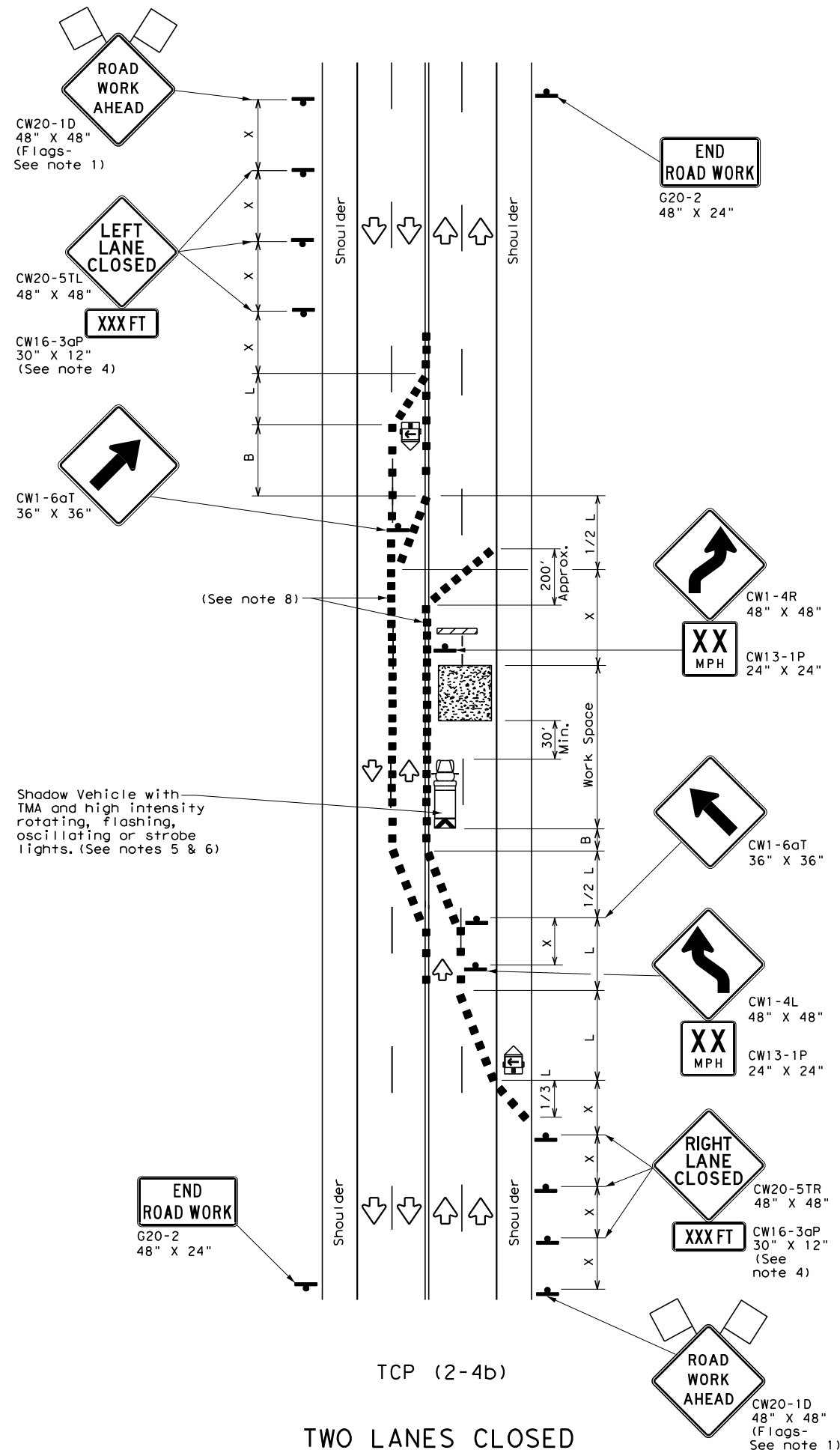
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TCP (2-4a)

ONE LANE CLOSED



TCP (2-4b)

TWO LANES CLOSED

| LEGEND | | | |
|--------|--------------------------------------|--|---|
| | Type 3 Barricade | | Channelizing Devices |
| | Heavy Work Vehicle | | Truck Mounted Attenuator (TMA) |
| | Trailer Mounted Flashing Arrow Board | | Portable Changeable Message Sign (PCMS) |
| | Sign | | Traffic Flow |
| | Flag | | Flagger |

| Posted Speed * | Formula | Minimum Desirable Taper Lengths ** | | | Suggested Maximum Spacing of Channelizing Devices | | Minimum Sign Spacing "X" Distance | Suggested Longitudinal Buffer Space "B" |
|----------------|-----------------------|------------------------------------|------------|------------|---|--------------|-----------------------------------|---|
| | | 10' Offset | 11' Offset | 12' Offset | On a Taper | On a Tangent | | |
| 30 | $L = \frac{WS^2}{60}$ | 150' | 165' | 180' | 30' | 60' | 120' | 90' |
| 35 | | 205' | 225' | 245' | 35' | 70' | 160' | 120' |
| 40 | | 265' | 295' | 320' | 40' | 80' | 240' | 155' |
| 45 | L = WS | 450' | 495' | 540' | 45' | 90' | 320' | 195' |
| 50 | | 500' | 550' | 600' | 50' | 100' | 400' | 240' |
| 55 | | 550' | 605' | 660' | 55' | 110' | 500' | 295' |
| 60 | | 600' | 660' | 720' | 60' | 120' | 600' | 350' |
| 65 | | 650' | 715' | 780' | 65' | 130' | 700' | 410' |
| 70 | | 700' | 770' | 840' | 70' | 140' | 800' | 475' |
| 75 | | 750' | 825' | 900' | 75' | 150' | 900' | 540' |

* Conventional Roads Only

** Taper lengths have been rounded off.

L=Length of Taper (FT) W=Width of Offset (FT) S=Posted Speed (MPH)

| TYPICAL USAGE | | | | |
|---------------|----------------|-----------------------|------------------------------|----------------------|
| MOBILE | SHORT DURATION | SHORT TERM STATIONARY | INTERMEDIATE TERM STATIONARY | LONG TERM STATIONARY |
| | | ✓ | ✓ | |

GENERAL NOTES

- Flags attached to signs where shown, are REQUIRED.
- All traffic control devices illustrated are REQUIRED, except those denoted with the triangle symbol may be omitted when stated elsewhere in the plans, or for routine maintenance work, when approved by the Engineer.
- The downstream taper is optional. When used, it should be 100 feet minimum length per lane.
- For short term applications, when post mounted signs are not used, the distance legend may be shown on the sign face rather than on a CW16-3aP supplemental plaque.
- A Shadow Vehicle with a TMA should be used anytime it can be positioned 30 to 100 feet in advance of the area of crew exposure without adversely affecting the performance or quality of the work. If workers are no longer present but road or work conditions require the traffic control to remain in place, Type 3 Barricades or other channelizing devices may be substituted for the Shadow Vehicle and TMA.
- Additional Shadow Vehicles with TMAs may be positioned in each closed lane, on the shoulder or off the paved surface, next to those shown in order to protect a wider work space.

TCP (2-4a)

- If this TCP is used for a left lane closure, CW20-5TL "LEFT LANE CLOSED" signs shall be used and channelizing devices shall be placed on the centerline to protect the work space from opposing traffic with the arrow board placed in the closed lane near the end of the merging taper.

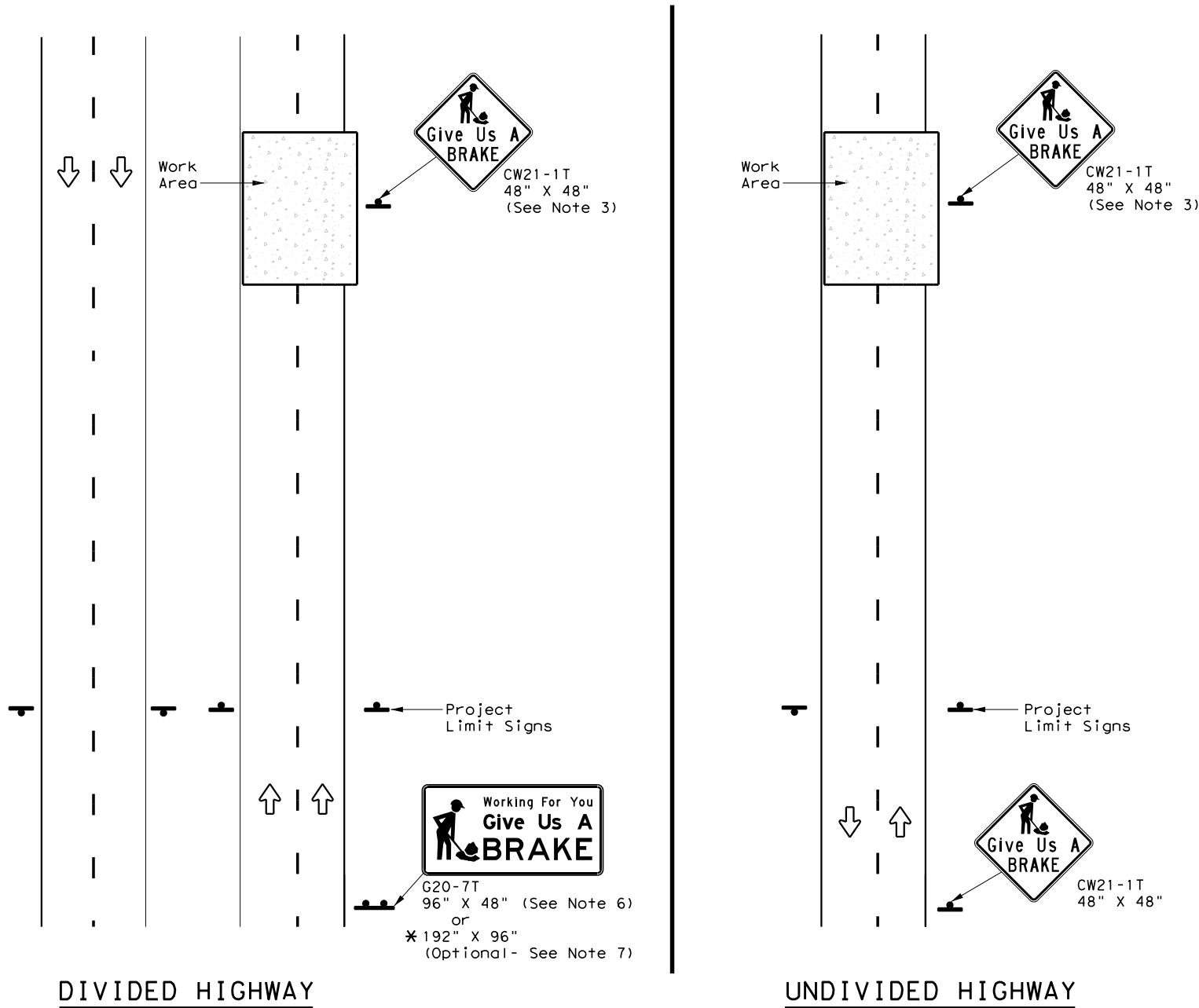
TCP (2-4b)

- For shorter durations where traffic is directed over a yellow centerline, channelizing devices which separate two-way traffic should be spaced on tapers at 20' or 15' if posted speeds are 35 mph or slower, and for tangent sections, at 1/2(S) where S is the speed in mph. This tighter devices spacing is intended for the area of conflicting markings, not the entire work zone.

| | | | | | | | |
|--|------|--------------------------------------|--------|-----------|--|--|--|
| | | Traffic Operations Division Standard | | | | | |
| TRAFFIC CONTROL PLAN LANE CLOSURES ON MULTILANE CONVENTIONAL ROADS | | | | | | | |
| TCP (2-4) - 18 | | | | | | | |
| FILE: tcp2-4-18.dgn | DN: | CK: | DW: | CK: | | | |
| © TxDOT December 1985 | CONT | SECT | JOB | HIGHWAY | | | |
| REVISIONS | | DIST | COUNTY | SHEET NO. | | | |
| 8-95 3-03 | | | | 49 | | | |
| 1-97 2-12 | | | | | | | |
| 4-98 2-18 | | | | | | | |

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DATE:
FILE:



SIGNS ARE SHOWN FOR ONE DIRECTION OF TRAVEL

* When the optional larger WORKING FOR YOU GIVE US A BRAKE (G20-7T) 192" x 96" sign is required, the locations shall be noted elsewhere in the plans.

SUMMARY OF LARGE SIGNS

| BACKGROUND COLOR | SIGN DESIGNATION | SIGN | SIGN DIMENSIONS | REFLECTIVE SHEETING | SQ FT | GALVANIZED STRUCTURAL STEEL | | DRILLED SHAFT |
|------------------|------------------|------|-----------------|---|-------|-----------------------------|-------|---------------|
| | | | | | | Size | (LF) | |
| Orange | G20-7T | | 96" X 48" | Type B _{FL} or C _{FL} | 32 | ▲ | ▲ | 24" DIA. (LF) |
| Orange | G20-7T | | 192" X 96" | Type B _{FL} or C _{FL} | 128 | W8x18 | 16 17 | 12 |

▲ See Note 6 Below

LEGEND

| | |
|--|--------------|
| | Sign |
| | Large Sign |
| | Traffic Flow |

DEPARTMENTAL MATERIAL SPECIFICATIONS

| | |
|----------------------|----------|
| PLYWOOD SIGN BLANKS | DMS-7100 |
| ALUMINUM SIGN BLANKS | DMS-7110 |
| SIGN FACE MATERIALS | DMS-8300 |

| COLOR | USAGE | SHEETING MATERIAL |
|--------|------------------|--|
| ORANGE | BACKGROUND | TYPE B _{FL} OR TYPE C _{FL} |
| BLACK | LEGEND & BORDERS | NON-REFLECTIVE ACRYLIC FILM |

GENERAL NOTES

- See BC and SMD sheets for additional sign support details.
- Sign locations shall be approved by the Engineer.
- For projects more than two miles in length, Give Us a BRAKE signs should be repeated halfway through the project. The Give Us a Brake (CW21-1T) may be used for this purpose.
- Work zone speed limits are sometimes used in conjunction with GIVE US A BRAKE signing. See BC(3) for location and spacing of construction speed zone signing when required.
- Give Us a Brake (CW21-1T) signs and supports shall be considered subsidiary to Item 502, "Barricades, Signs and Traffic Handling."
- The 96" X 48" Working For You Give Us A BRAKE (G20-7T) may use a 1/2" or 5/8" plywood substrate or 0.125" aluminum sheeting substrate and may be supported by two 4" x 6" wood posts with drilled holes for breakaway as per BC(5) and will be subsidiary to Item 502.
- The Working For You Give Us A BRAKE (G20-7T) 192" X 96" sign shall be paid for under the following specification items:
 - Item 636 - Aluminum Signs
 - Item 647 - Large Roadside Sign Supports and Assemblies.
 - Item 416 - Drilled Shaft Foundations
- All signs shall be constructed in accordance with the details found in the "Standard Highway Sign Designs for Texas," latest edition. Sign details not shown in this manual shall be shown in the plans or the Engineer shall provide a detail to the Contractor before the sign is manufactured.



Traffic
Operations
Division
Standard

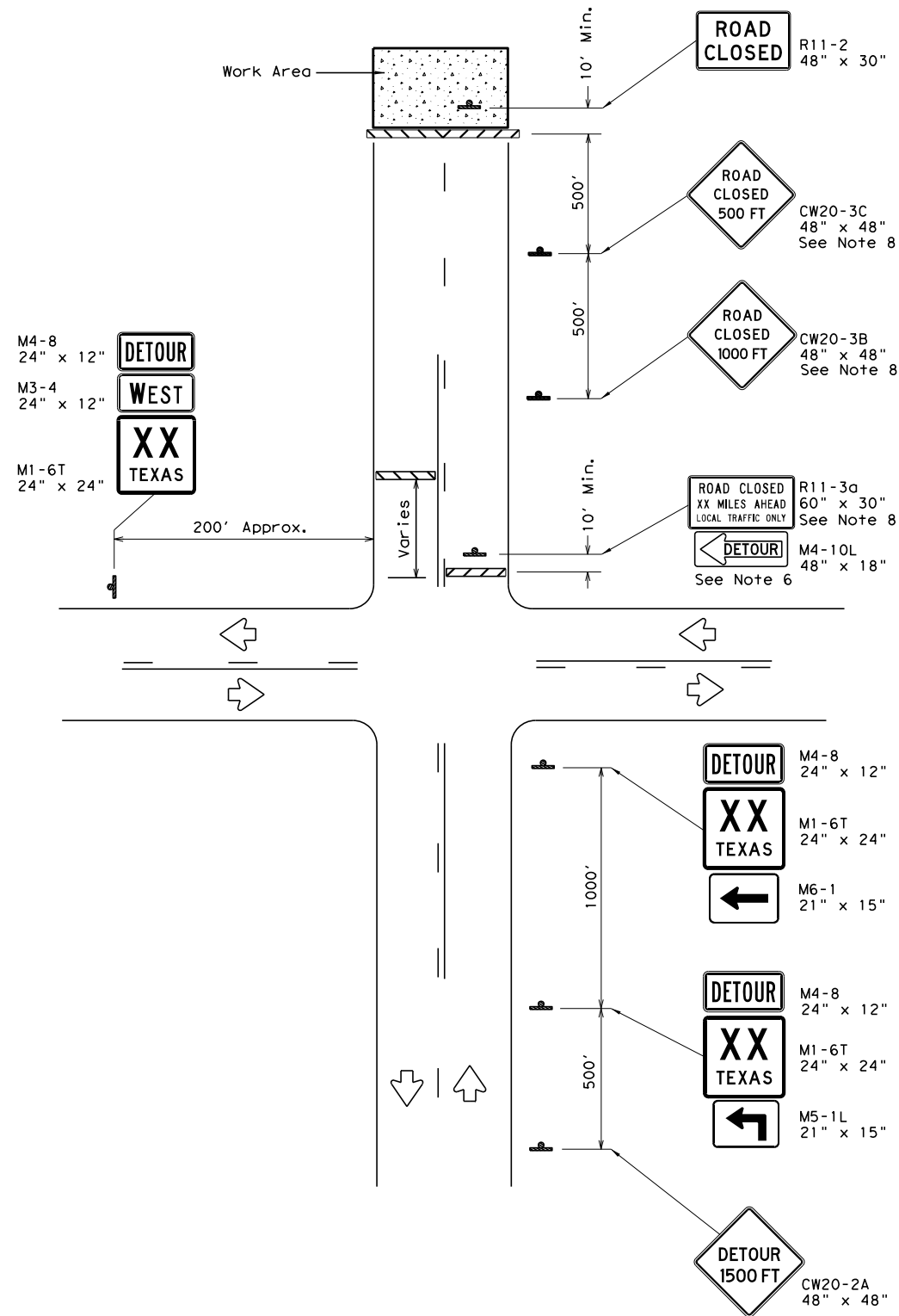
WORK ZONE "GIVE US A BRAKE" SIGNS

WZ (BRK) - 13

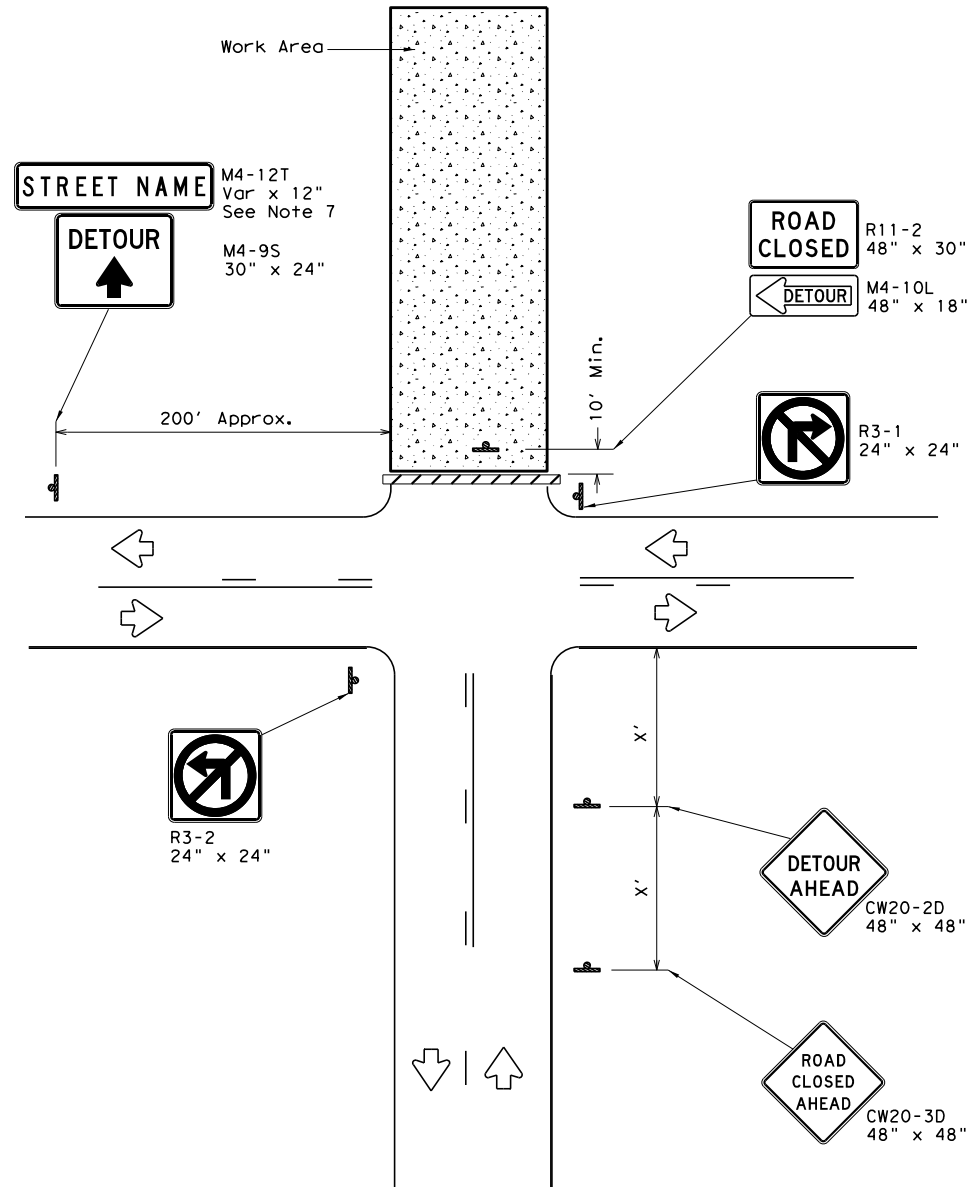
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| FILE: wzbrk-13.dgn | | DN: TxDOT | | CK: TxDOT | | DW: TxDOT | | CK: TxDOT | |
| © TxDOT August 1995 | | CONT | SECT | JOB | | | HIGHWAY | | |
| REVISIONS | | | | | | | | | |
| 6-96 5-98 7-13 | | DIST | | COUNTY | | | | SHEET NO. | |
| 8-96 3-03 | | | | | | | | 50 | |

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ROAD CLOSURE BEYOND THE INTERSECTION
Signing for a Numbered Route with an Off-Site Detour



ROAD CLOSURE AT THE INTERSECTION
Signing for an Un-numbered Route with an Off-Site Detour

| LEGEND | |
|--------|------------------|
| | Type 3 Barricade |
| | Sign |

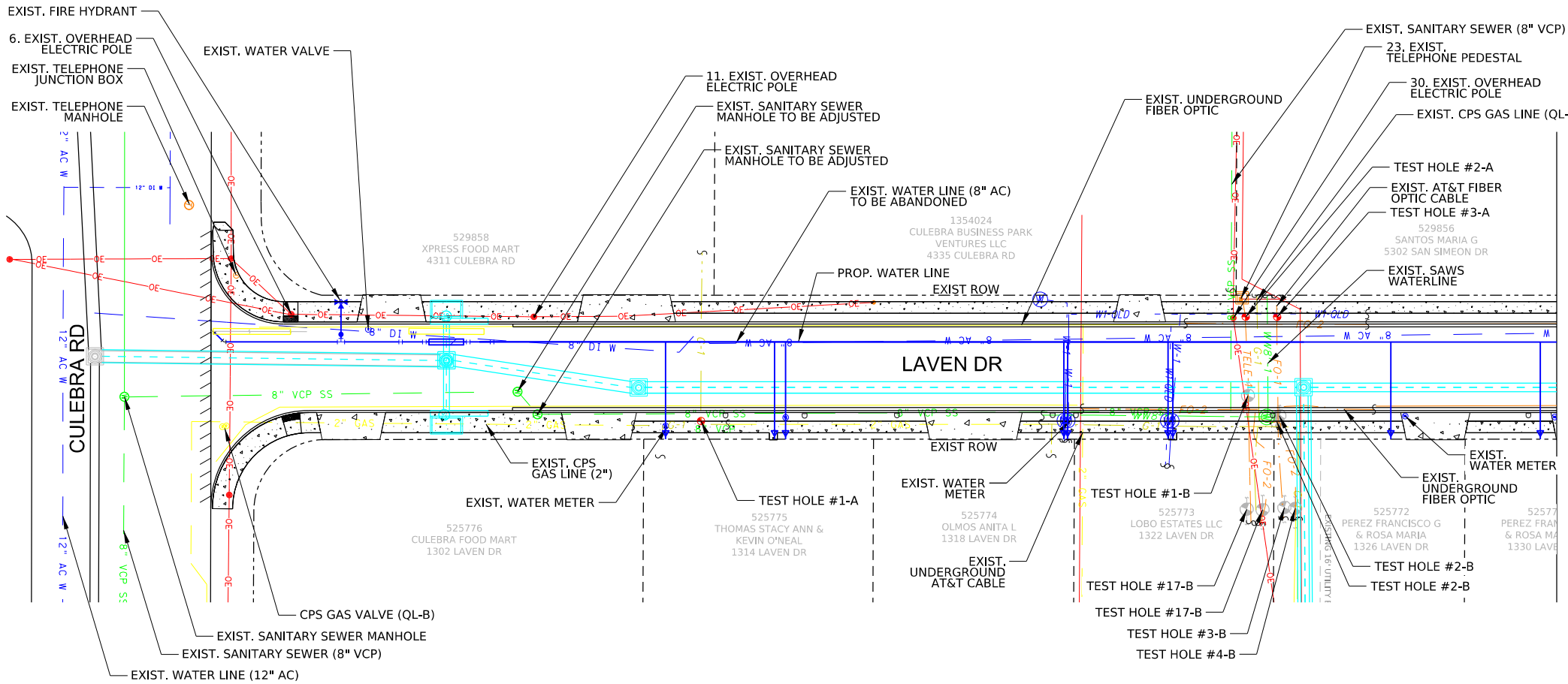
| Posted Speed * | Minimum Sign Spacing "x" Distance |
|----------------|-----------------------------------|
| 30 | 120' |
| 35 | 160' |
| 40 | 240' |
| 45 | 320' |
| 50 | 400' |
| 55 | 500' |
| 60 | 600' |
| 65 | 700' |
| 70 | 800' |
| 75 | 900' |

* Conventional Roads Only

GENERAL NOTES

- This sheet is intended to provide details for temporary work zone road closures. For permanent road closure details see the D&OM standards.
- Barricades used shall meet the requirements shown on Barricade and Construction Standard BC(10) and listed on the Compliant Work Zone Traffic Control Devices List (CWZTCD).
- Stockpiled materials shall not be placed on the traffic side of barricades.
- Barricades at the road closure should extend from pavement edge to pavement edge.
- Detour signing shown is intended to illustrate the type of signing that is appropriate for numbered routes or un-numbered routes as labeled. It does not indicate the full extent of detour signing required. Detour routes should be signed as shown elsewhere in the plans.
- If the road is open for a significant distance beyond the intersection or there are significant origin/destination points beyond the intersection, the signs and barricades at this location should be located at the edge of the traveled way.
- The Street Name (M4-12T) sign is to be placed above the DETOUR (M4-9S) sign.
- For urban areas where there is a shorter distance between the intersection and the actual closure location, the ROAD CLOSED XX MILES AHEAD (R11-3a) sign may be replaced with a ROAD CLOSED TO THRU TRAFFIC (R11-4) sign. If adequate space does not exist between the intersection and the closure a single ROAD CLOSED AHEAD (CW20-3D) sign spaced as per the table above may replace the ROAD CLOSED 1000 FT (CW20-3B) and ROAD CLOSED 500 FT (CW20-3C) signs.
- Signs and barricades shown shall be subsidiary to Item 502. Locations where these details will be required shall be as shown elsewhere in the plans.

| | | | |
|---------------------------------------|-----------|--------------------------------------|-----------|
| | | Traffic Operations Division Standard | |
| WORK ZONE ROAD CLOSURE DETAILS | | | |
| WZ (RCD) - 13 | | | |
| FILE: WZrcd-13.dgn | DN: TxDOT | CK: TxDOT | DW: TxDOT |
| © TxDOT August 1995 | CONT | SECT | JOB |
| REVISIONS | | HIGHWAY | |
| 1-97 4-98 7-13 | DIST | COUNTY | SHEET NO. |
| 2-98 3-03 | | | 51 |



MATCHLINE STA 104+76.45

LEGEND OF UTILITY TYPES

| | |
|-------------------------|-----------|
| EXIST COMMS | |
| EXIST FIBER OPTIC | F-0 |
| EXIST GAS 2" | 2" GAS |
| EXIST OVERHEAD ELECTRIC | OE |
| EXIST UNDERGROUND AT&T | UGE |
| EXIST SAN SEWER 8" AC | 8" AC SS |
| EXIST SAN SEWER 8" CP | 8" CP SS |
| EXIST SAN SEWER 8" RL | 8" RL SS |
| EXIST SAN SEWER 8" VCP | 8" VCP SS |
| EXIST WATER 6" AC | 6" AC W |
| EXIST WATER 8" AC | 8" AC W |
| EXIST WATER 8" DI | 8" DI W |
| EXIST WATER 8" PVC | 8" PVC W |
| EXIST WATER 12" AC | 12" AC W |
| PROP WATER LINE | |

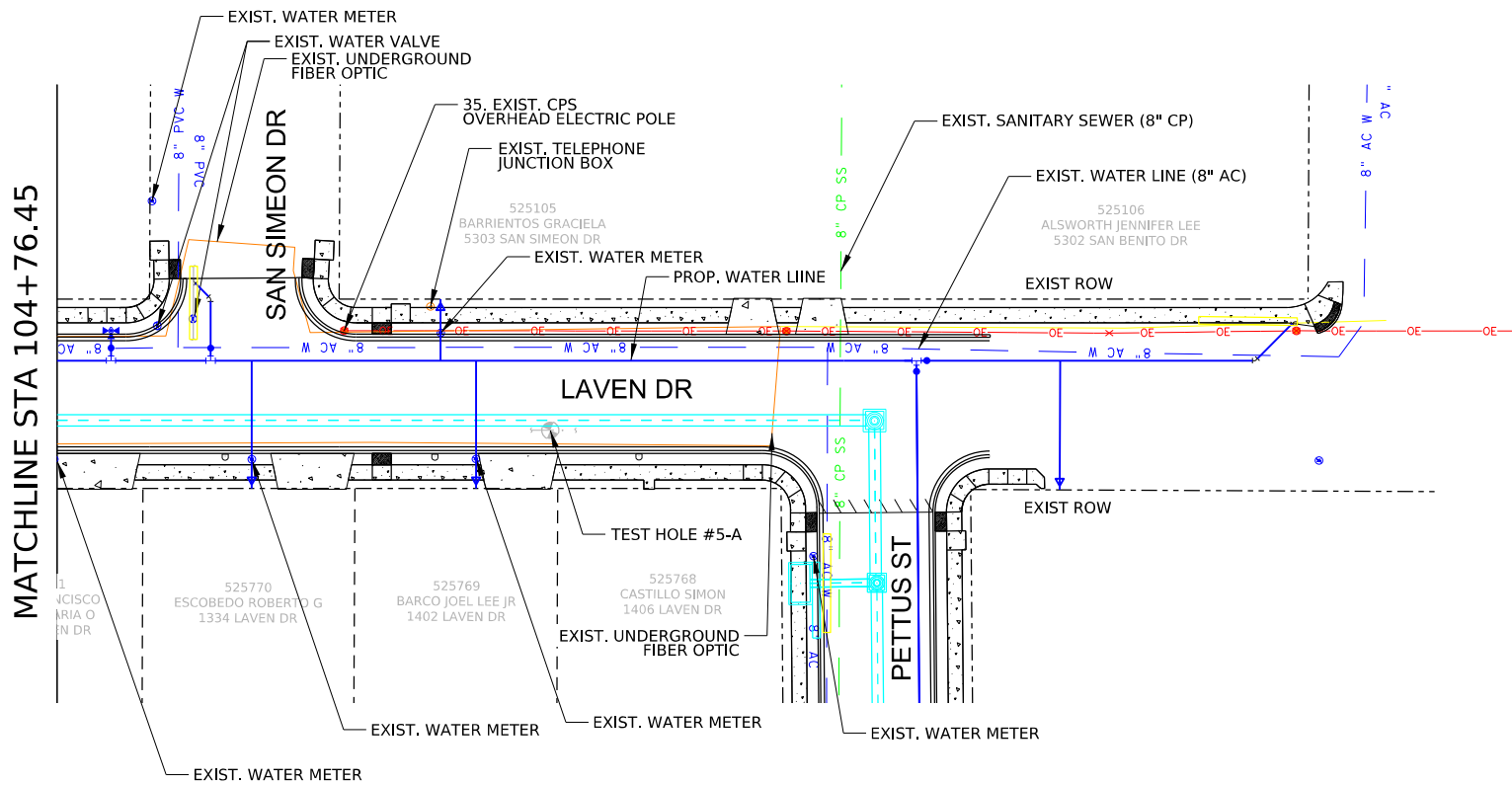
LEGEND OF UTILITY SYMBOLS

| | |
|------------------------------|--|
| EXIST TELE JUNCTION BOX | |
| EXIST TELE PEDESTAL | |
| EXIST TELE MANHOLE | |
| EXIST CABLE PEDESTAL | |
| EXIST ELEC POWER POLE | |
| EXIST SANITARY SEWER MANHOLE | |
| EXIST WATER VALVE | |
| EXIST WATER METER | |
| EXIST FIRE HYDRANT | |
| EXIST GAS VALVE | |

LEGEND OF ROADWAY SYMBOLS

| | |
|----------------------|--|
| EXIST. R.O.W. | |
| EXIST. PROPERTY LINE | |
| PROPOSED STORM SEWER | |

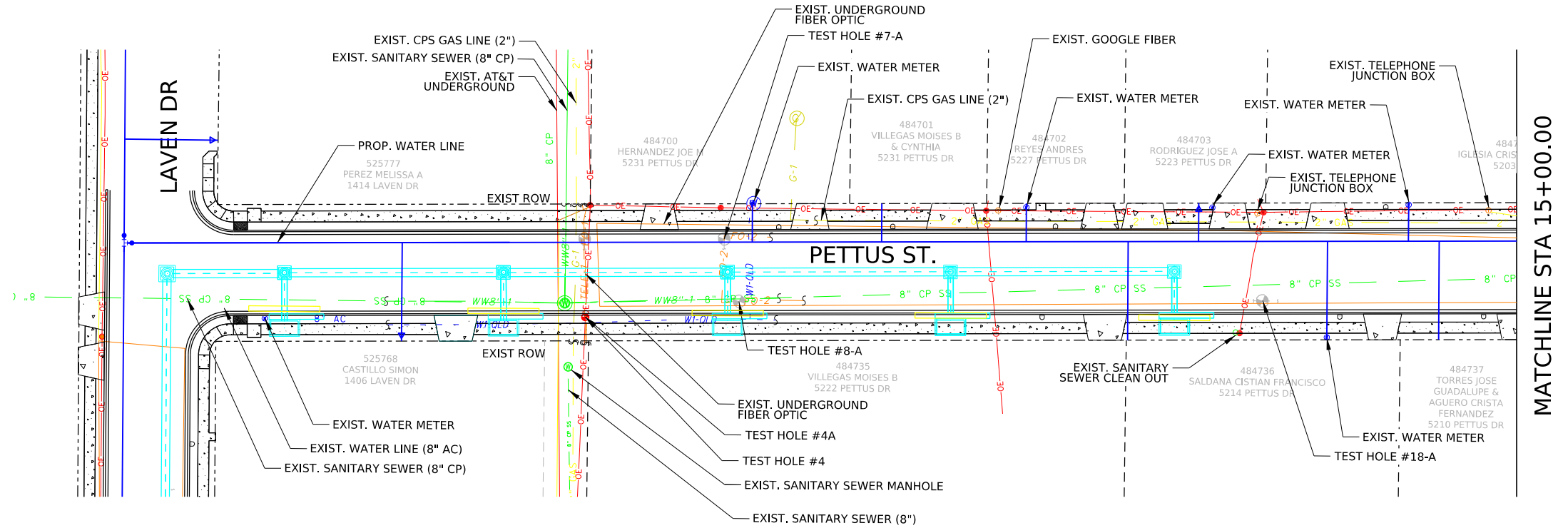
1" = 50'
HORIZONTAL SCALE



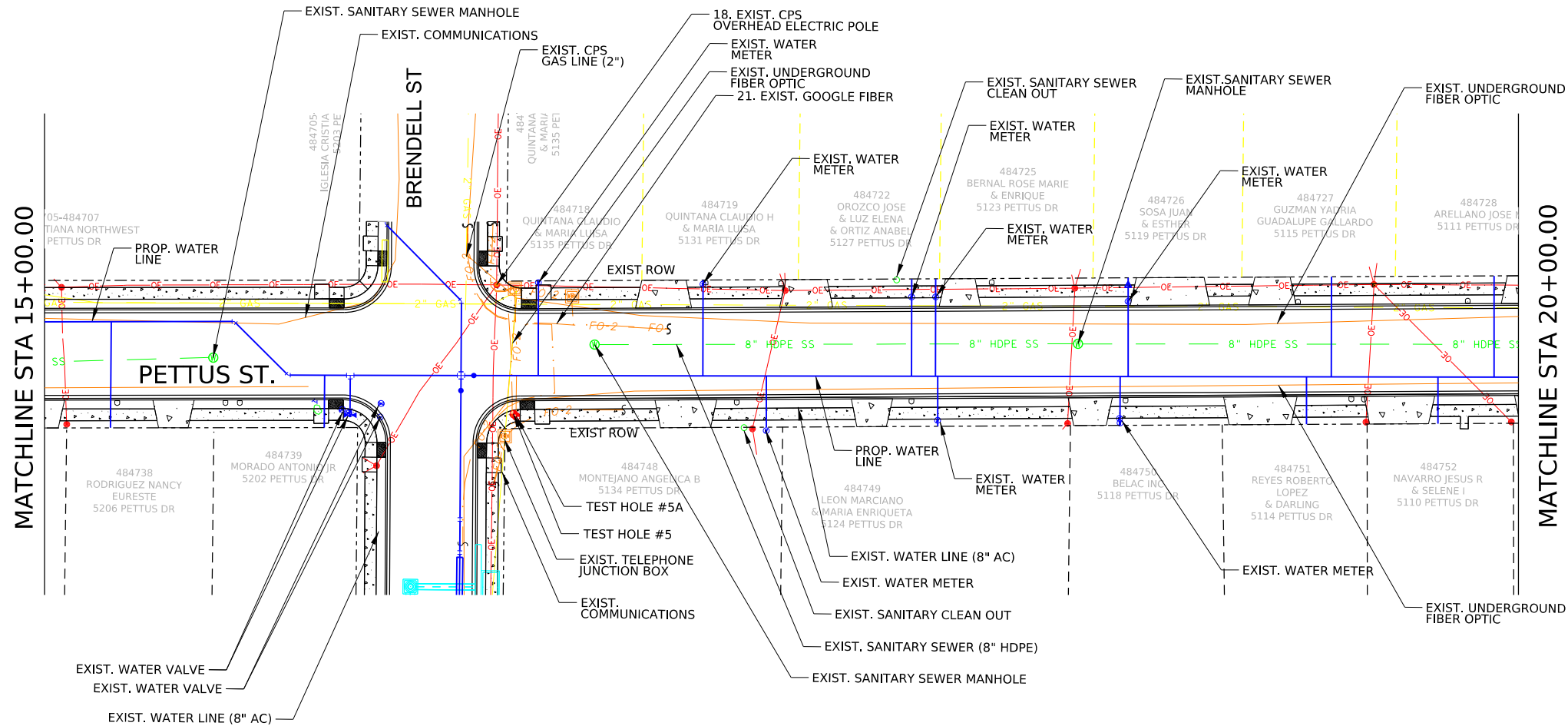
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| NO. | REVISION | BY | DATE |
| <div><div>AG3 AG3 Group, LLC ENGINEERING • SURVEY • CONSTRUCTION</div><div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS OVERALL UTILITY LAYOUTS LAVEN DR | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 52 |

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MATCHLINE STA 15+00.00



MATCHLINE STA 20+00.00

LEGEND OF UTILITY TYPES

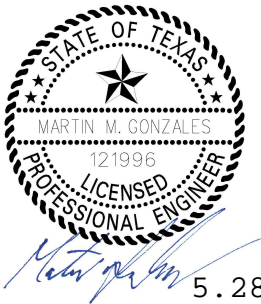
| | |
|-------------------------|-----------|
| EXIST COMMS | |
| EXIST FIBER OPTIC | F-O |
| EXIST GAS 2" | 2" GAS |
| EXIST OVERHEAD ELECTRIC | OE |
| EXIST UNDERGROUND AT&T | UGE |
| EXIST SAN SEWER 8" AC | 8" AC SS |
| EXIST SAN SEWER 8" CP | 8" CP SS |
| EXIST SAN SEWER 8" RL | 8" RL SS |
| EXIST SAN SEWER 8" VCP | 8" VCP SS |
| EXIST WATER 6" AC | 6" AC W |
| EXIST WATER 8" AC | 8" AC W |
| EXIST WATER 8" DI | 8" DI W |
| EXIST WATER 8" PVC | 8" PVC W |
| EXIST WATER 12" AC | 12" AC W |
| PROP WATER LINE | |

LEGEND OF UTILITY SYMBOLS

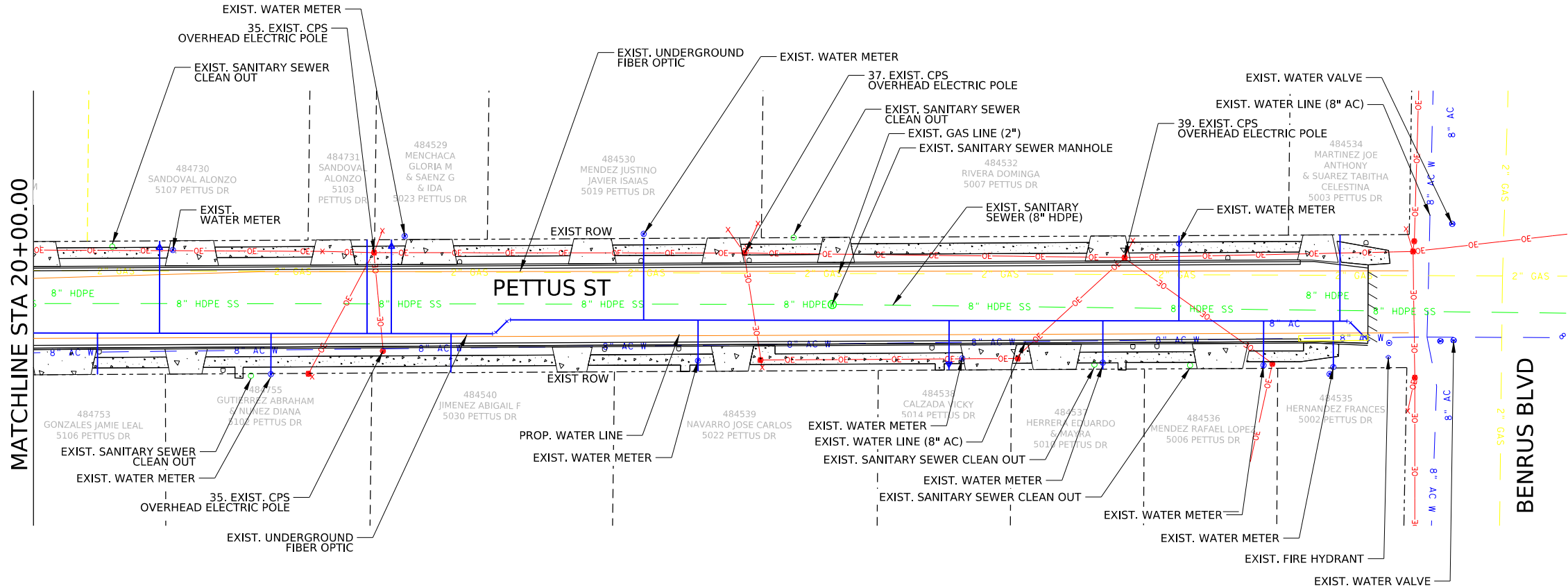
| | |
|------------------------------|--|
| EXIST TELE JUNCTION BOX | |
| EXIST TELE PEDESTAL | |
| EXIST TELE MANHOLE | |
| EXIST CABLE PEDESTAL | |
| EXIST ELEC POWER POLE | |
| EXIST SANITARY SEWER MANHOLE | |
| EXIST WATER VALVE | |
| EXIST WATER METER | |
| EXIST FIRE HYDRANT | |
| EXIST GAS VALVE | |

LEGEND OF ROADWAY SYMBOLS

| | |
|----------------------|--|
| EXIST. R.O.W. | |
| EXIST. PROPERTY LINE | |
| PROPOSED STORM SEWER | |
| 0 25 50 75 | |
| 1" = 50' | |
| HORIZONTAL SCALE | |



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| NO. | REVISION | BY | DATE |
| AG3 AG3 Group, LLC ENGINEERING - SURVEY - CONSTRUCTION | | | |
| 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS OVERALL UTILITY LAYOUTS PETTUS ST | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 53 |



LEGEND OF UTILITY TYPES

| | |
|-------------------------|-----------|
| EXIST COMMS | |
| EXIST FIBER OPTIC | F-0 |
| EXIST GAS 2" | 2" GAS |
| EXIST OVERHEAD ELECTRIC | OE |
| EXIST UNDERGROUND AT&T | UGE |
| EXIST SAN SEWER 8" AC | 8" AC SS |
| EXIST SAN SEWER 8" CP | 8" CP SS |
| EXIST SAN SEWER 8" RL | 8" RL SS |
| EXIST SAN SEWER 8" VCP | 8" VCP SS |
| EXIST WATER 6" AC | 6" AC W |
| EXIST WATER 8" AC | 8" AC W |
| EXIST WATER 8" DI | 8" DI W |
| EXIST WATER 8" PVC | 8" PVC W |
| EXIST WATER 12" AC | 12" AC W |
| PROP WATER LINE | |

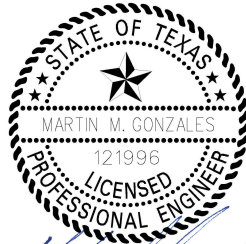
LEGEND OF UTILITY SYMBOLS

| | |
|------------------------------|---|
| EXIST TELE JUNCTION BOX | Ⓢ |
| EXIST TELE PEDESTAL | Ⓢ |
| EXIST TELE MANHOLE | Ⓢ |
| EXIST CABLE PEDESTAL | Ⓢ |
| EXIST ELEC POWER POLE | Ⓢ |
| EXIST SANITARY SEWER MANHOLE | Ⓢ |
| EXIST WATER VALVE | Ⓢ |
| EXIST WATER METER | Ⓢ |
| EXIST FIRE HYDRANT | Ⓢ |
| EXIST GAS VALVE | Ⓢ |

LEGEND OF ROADWAY SYMBOLS

| | |
|----------------------|-----|
| EXIST. R.O.W. | --- |
| EXIST. PROPERTY LINE | --- |
| PROPOSED STORM SEWER | --- |

1" = 50'
HORIZONTAL SCALE

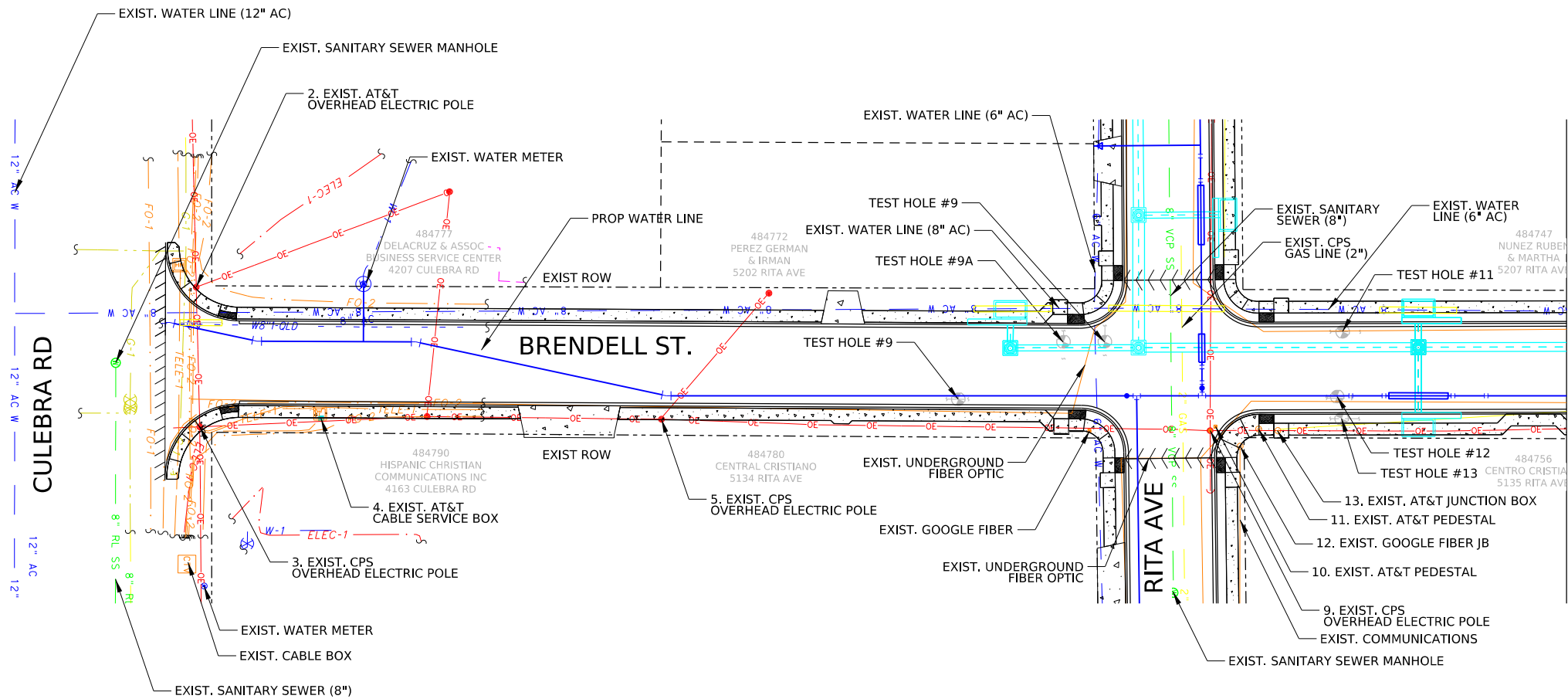


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| NO. | REVISION | BY | DATE |
| <div><div>AG3 AG3 Group, LLC ENGINEERING • SURVEY • CONSTRUCTION</div><div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS OVERALL UTILITY LAYOUTS PETTUS ST | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 54 |

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\$DATE\$
\$FILE\$



LEGEND OF UTILITY TYPES

| | |
|-------------------------|-----------|
| EXIST COMMS | |
| EXIST FIBER OPTIC | F-0 |
| EXIST GAS 2" | 2" GAS |
| EXIST OVERHEAD ELECTRIC | OE |
| EXIST UNDERGROUND AT&T | UGE |
| EXIST SAN SEWER 8" AC | 8" AC SS |
| EXIST SAN SEWER 8" CP | 8" CP SS |
| EXIST SAN SEWER 8" RL | 8" RL SS |
| EXIST SAN SEWER 8" VCP | 8" VCP SS |
| EXIST WATER 6" AC | 6" AC W |
| EXIST WATER 8" AC | 8" AC W |
| EXIST WATER 8" DI | 8" DI W |
| EXIST WATER 8" PVC | 8" PVC W |
| EXIST WATER 12" AC | 12" AC W |
| PROP WATER LINE | |

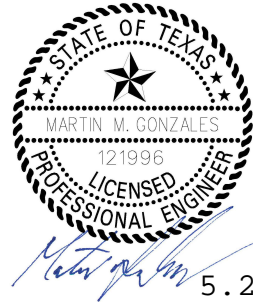
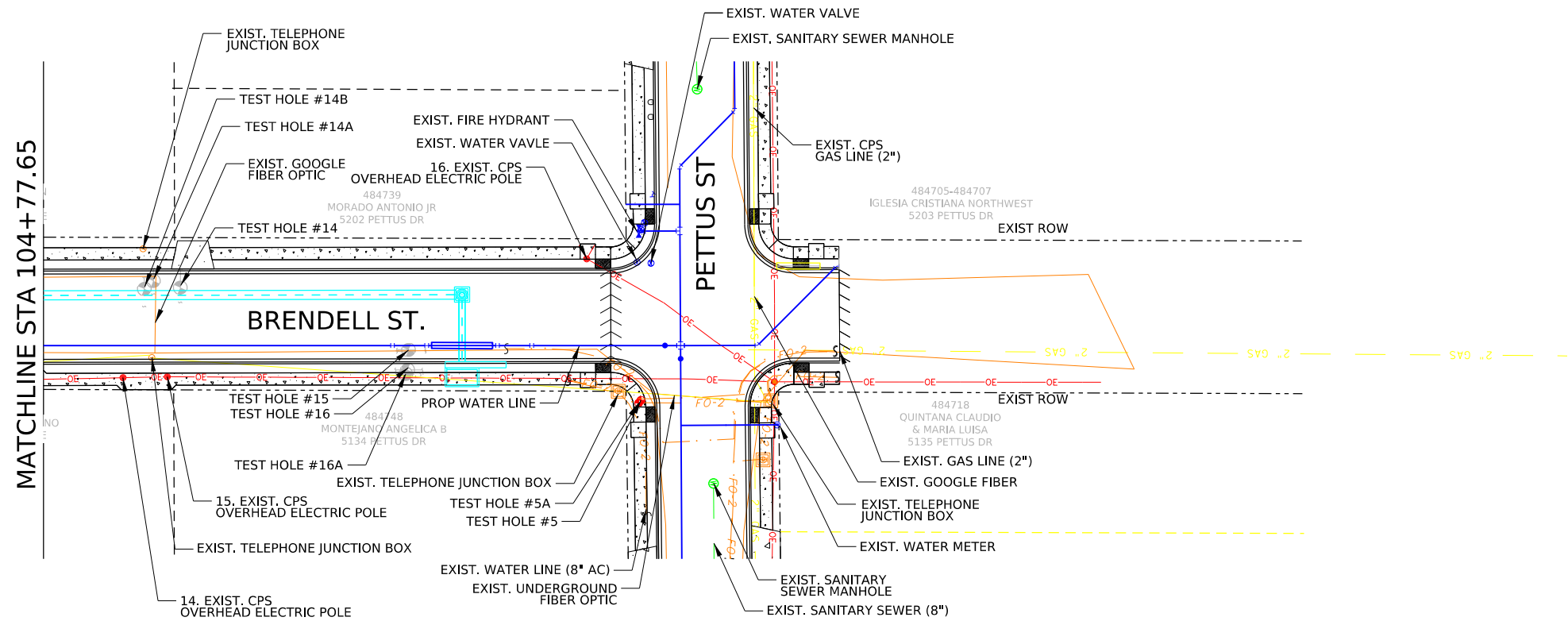
LEGEND OF UTILITY SYMBOLS

| | |
|------------------------------|--|
| EXIST TELE JUNCTION BOX | |
| EXIST TELE PEDESTAL | |
| EXIST TELE MANHOLE | |
| EXIST CABLE PEDESTAL | |
| EXIST ELEC POWER POLE | |
| EXIST SANITARY SEWER MANHOLE | |
| EXIST WATER VALVE | |
| EXIST WATER METER | |
| EXIST FIRE HYDRANT | |
| EXIST GAS VALVE | |

LEGEND OF ROADWAY SYMBOLS

| | |
|----------------------|--|
| EXIST. R.O.W. | |
| EXIST. PROPERTY LINE | |
| PROPOSED STORM SEWER | |

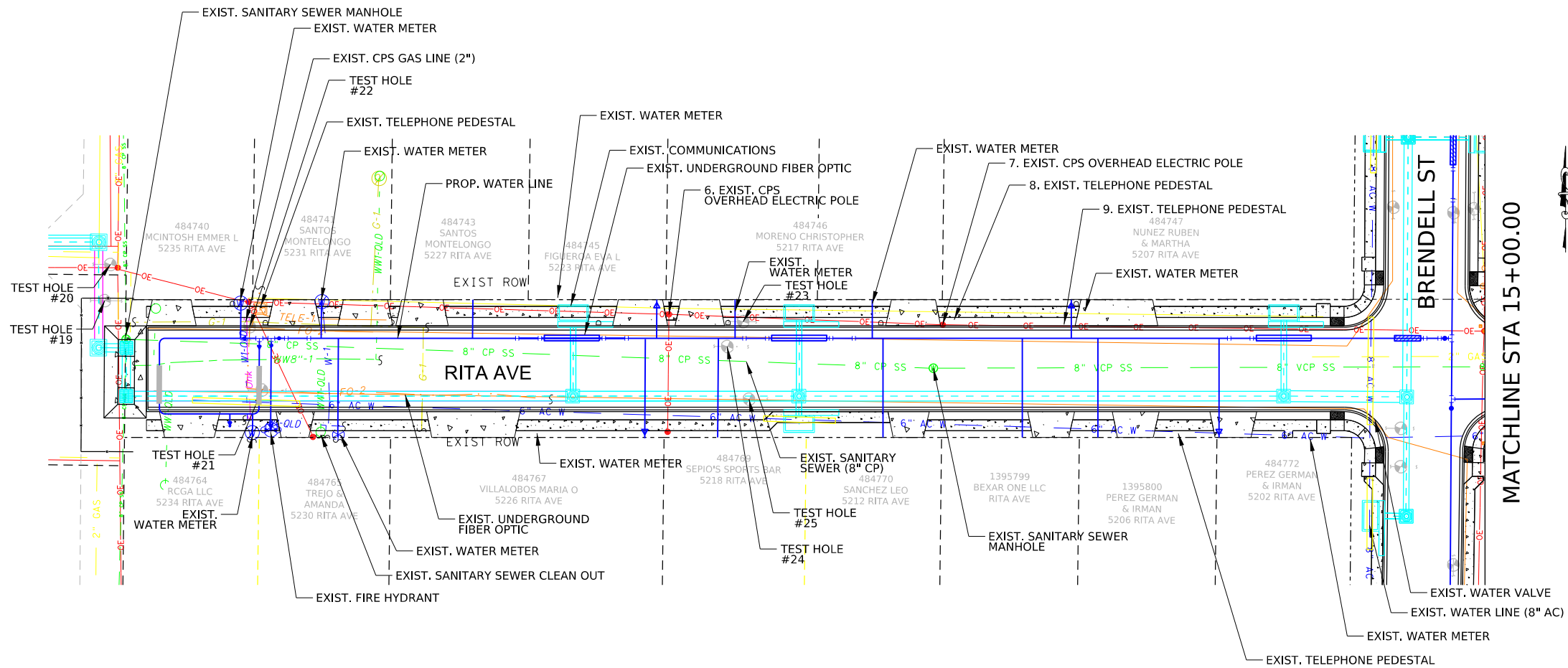
1" = 50'
HORIZONTAL SCALE



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|--|----------------------|------------------|--------------|
| 3 | | | |
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| 1 | | | |
| NO. | REVISION | BY | DATE |
| <div><div>AG3 AG3 Group, LLC ENGINEERING • SURVEY • CONSTRUCTION</div><div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS OVERALL UTILITY LAYOUTS BRENDPELL ST | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 55 |

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MATCHLINE STA 15+00.00

MATCHLINE STA 20+00.00

LEGEND OF UTILITY TYPES

| | |
|-------------------------|-----------|
| EXIST COMMS | |
| EXIST FIBER OPTIC | F-0 |
| EXIST GAS 2" | 2" GAS |
| EXIST OVERHEAD ELECTRIC | OE |
| EXIST UNDERGROUND AT&T | UGE |
| EXIST SAN SEWER 8" AC | 8" AC SS |
| EXIST SAN SEWER 8" CP | 8" CP SS |
| EXIST SAN SEWER 8" RL | 8" RL SS |
| EXIST SAN SEWER 8" VCP | 8" VCP SS |
| EXIST WATER 6" AC | 6" AC W |
| EXIST WATER 8" AC | 8" AC W |
| EXIST WATER 8" DI | 8" DI W |
| EXIST WATER 8" PVC | 8" PVC W |
| EXIST WATER 12" AC | 12" AC W |
| PROP WATER LINE | |

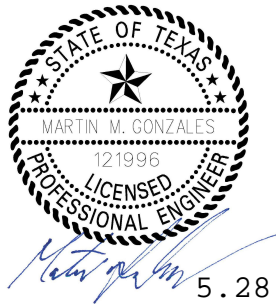
LEGEND OF UTILITY SYMBOLS

| | |
|------------------------------|---|
| EXIST TELE JUNCTION BOX | Ⓢ |
| EXIST TELE PEDESTAL | Ⓣ |
| EXIST TELE MANHOLE | Ⓣ |
| EXIST CABLE PEDESTAL | Ⓢ |
| EXIST ELEC POWER POLE | Ⓢ |
| EXIST SANITARY SEWER MANHOLE | Ⓢ |
| EXIST WATER VALVE | Ⓢ |
| EXIST WATER METER | Ⓢ |
| EXIST FIRE HYDRANT | Ⓢ |
| EXIST GAS VALVE | Ⓢ |

LEGEND OF ROADWAY SYMBOLS

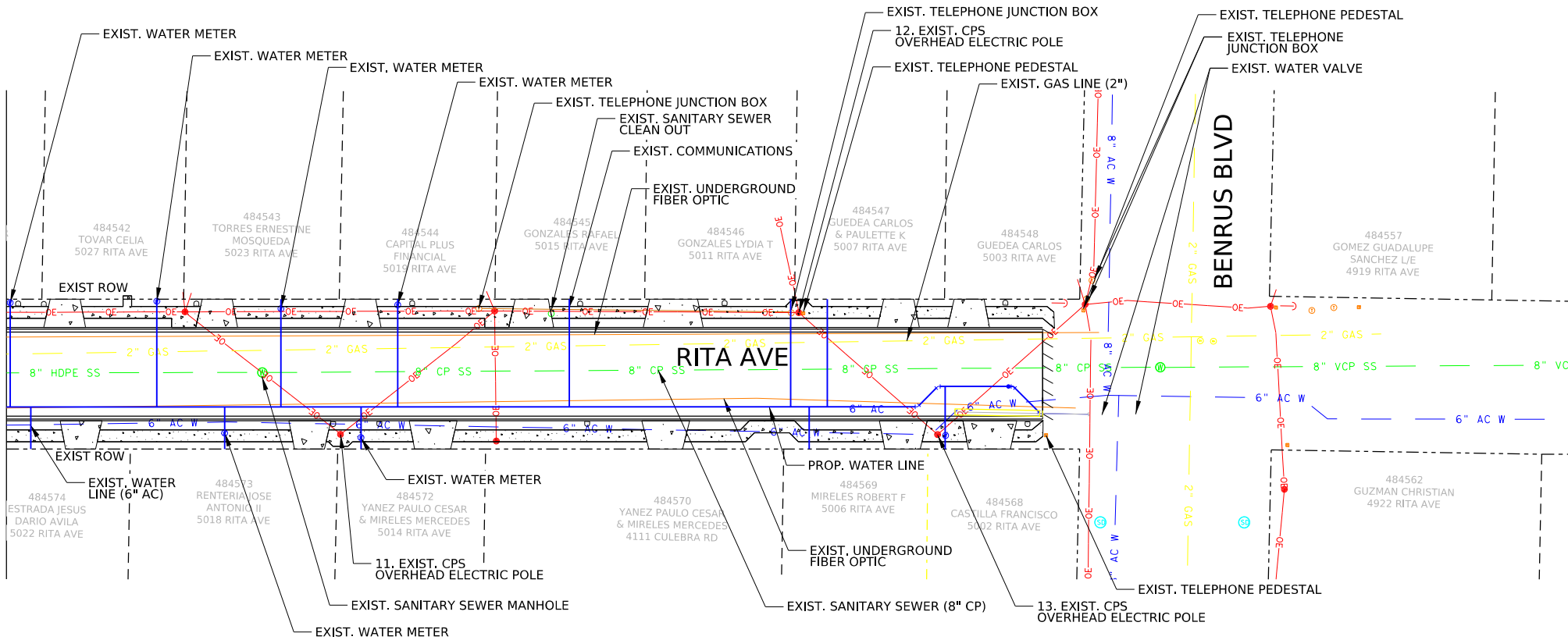
| | |
|----------------------|-----|
| EXIST. R.O.W. | --- |
| EXIST. PROPERTY LINE | --- |
| PROPOSED STORM SEWER | --- |

0 25 50 75
1" = 50'
HORIZONTAL SCALE



| | | | |
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| ③ | | | |
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| ① | | | |
| NO. | REVISION | BY | DATE |
| <div><div>AG3 AG3 Group, LLC ENGINEERING - SURVEY - CONSTRUCTION</div><div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS OVERALL UTILITY LAYOUTS RITA AVE | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 56 |

MATCHLINE STA 20+00.00



LEGEND OF UTILITY TYPES

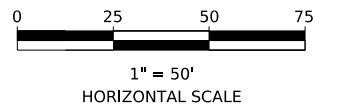
| | |
|-------------------------|-----------|
| EXIST COMMS | |
| EXIST FIBER OPTIC | F-O |
| EXIST GAS 2" | 2" GAS |
| EXIST OVERHEAD ELECTRIC | OE |
| EXIST UNDERGROUND AT&T | UGE |
| EXIST SAN SEWER 8" AC | 8" AC SS |
| EXIST SAN SEWER 8" CP | 8" CP SS |
| EXIST SAN SEWER 8" RL | 8" RL SS |
| EXIST SAN SEWER 8" VCP | 8" VCP SS |
| EXIST WATER 6" AC | 6" AC W |
| EXIST WATER 8" AC | 8" AC W |
| EXIST WATER 8" DI | 8" DI W |
| EXIST WATER 8" PVC | 8" PVC W |
| EXIST WATER 12" AC | 12" AC W |
| PROP WATER LINE | |

LEGEND OF UTILITY SYMBOLS

| | |
|------------------------------|--|
| EXIST TELE JUNCTION BOX | |
| EXIST TELE PEDESTAL | |
| EXIST TELE MANHOLE | |
| EXIST CABLE PEDESTAL | |
| EXIST ELEC POWER POLE | |
| EXIST SANITARY SEWER MANHOLE | |
| EXIST WATER VALVE | |
| EXIST WATER METER | |
| EXIST FIRE HYDRANT | |
| EXIST GAS VALVE | |

LEGEND OF ROADWAY SYMBOLS

| | |
|----------------------|--|
| EXIST. R.O.W. | |
| EXIST. PROPERTY LINE | |
| PROPOSED STORM SEWER | |

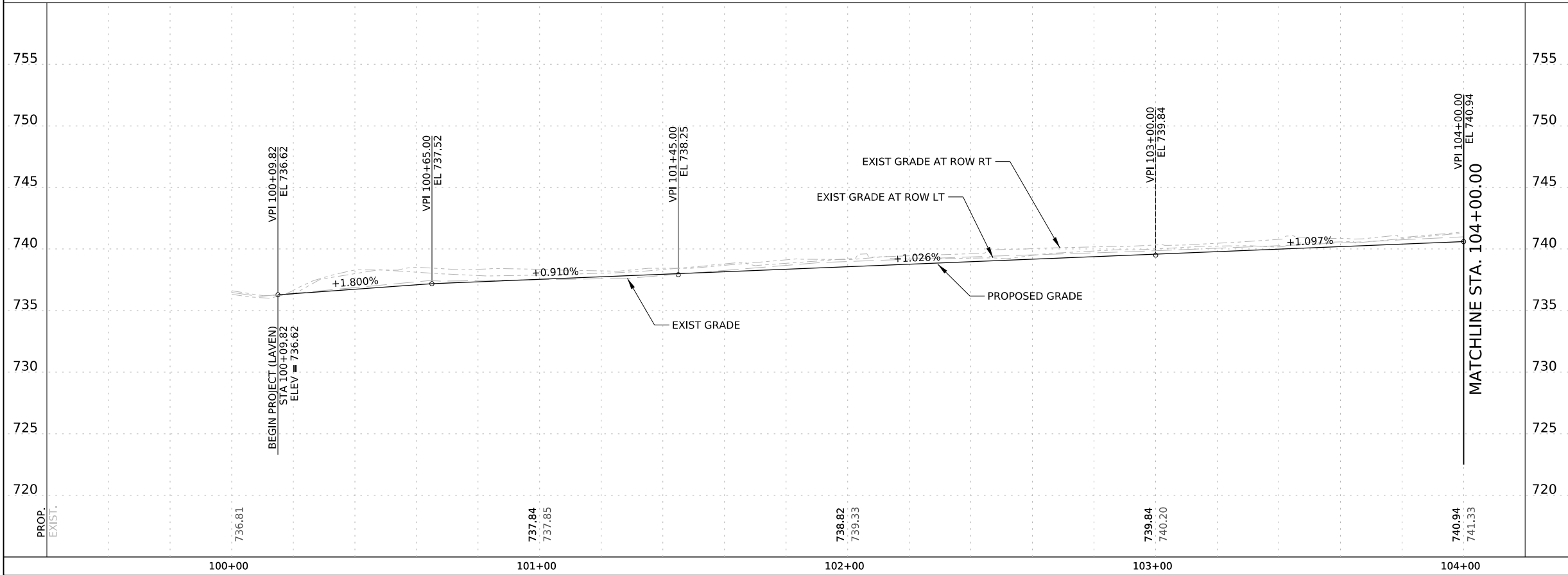


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| ① | | | |
| NO. | REVISION | BY | DATE |
| <div><div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div><div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS OVERALL UTILITY LAYOUTS RITA AVE | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 57 |

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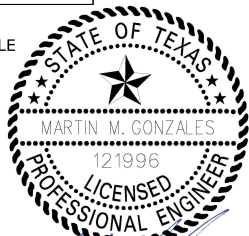
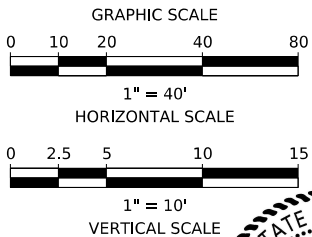
| ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
|----------|---|------|----------|
| 103.1 | REMOVE CONCRETE CURB (<700 LF) | LF | 814 |
| 103.3 | REMOVE CONCRETE SIDEWALKS & DRIVEWAYS (<1,000 SF) | SF | 2587 |
| 104.1 | STREET EXCAVATION (1,000 CY < X < 10,000 CY) | CY | 354 |
| 203.1 | TACK COAT | GAL | 269 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (3.5" COMP DEPTH TOP) | SY | 1343 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (1.5" COMP DEPTH TOP) | SY | 1500 |
| 240.4 | WARM MIX ASPHALTIC CONCRETE TYPE D (2.0" COMP DEPTH) | SY | 1343 |
| 500.1 | CONCRETE CURB (<1,000 LF) | LF | 243 |
| 500.4 | CONCRETE CURB AND GUTTER (<1,000 LF) | LF | 571 |
| 502.1 | CONCRETE SIDEWALKS (1,000 SY < X < 10,000 SY) | SY | 374 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (100 SY < X < 10,000 SY) | SY | 155 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (PENETRATION) | SY | 127 |
| 513.1 | REMOVING AND RELOCATING MAIL BOXES (< 50 UNITS) | EA | 6 |

| LEGEND | | PROFILE LEGEND | |
|------------------------|--|------------------|--|
| PROP DRWY PNTR | | PROPOSED PROFILE | |
| PROP CONC SDWK | | ROW LT | |
| MILL AND OVERLAY | | ROW RT | |
| CROSS SLOPE TRANSITION | | EXISTING GROUND | |
| PROPERTY LINE | | TRAFFIC FLOW | |
| EXIST ROW | | PROPOSED MAILBOX | |
| DRIVEWAY | | | |

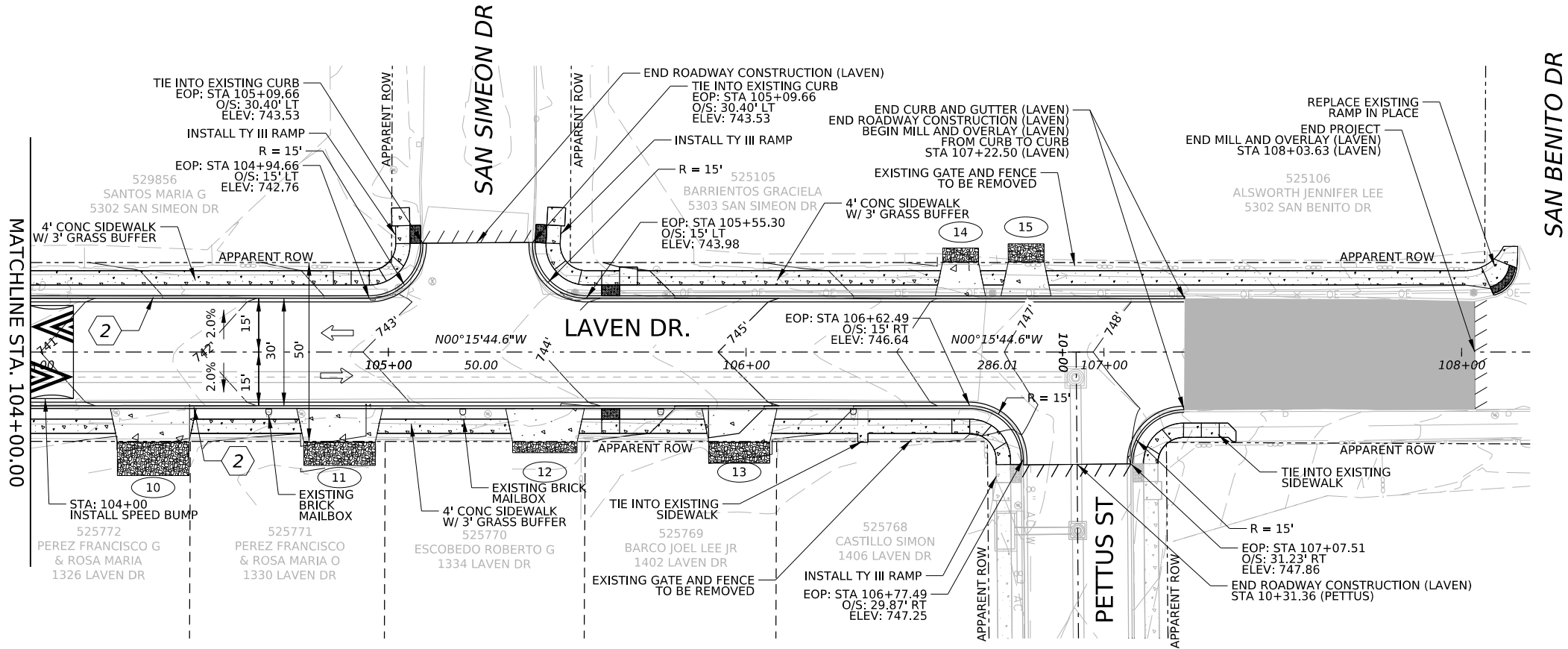
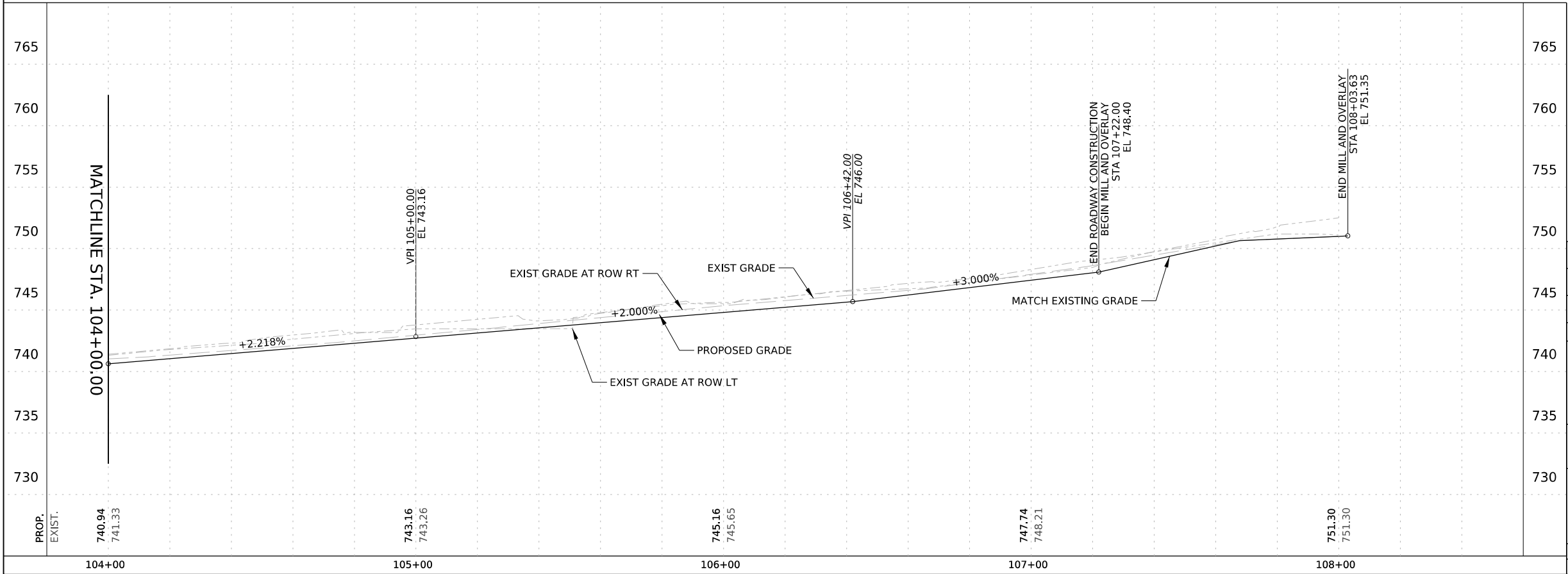
- NOTES
- ALL RADII ARE MEASURED TO THE FACE OF CURB.
 - REFER TO COSA STANDARD "CONCRETE DRIVEWAY STANDARD" FOR DRIVEWAY PENETRATION INFORMATION.
 - PROPOSED SIDEWALK, CURB, AND PEDESTRIAN RAMPS SHALL MATCH GRADES AND ELEVATIONS AT ALL TIE-IN LOCATIONS
 - TY IV RAMP WILL BE MODIFIED TO BE PLACED ON A RADIUS. RAMP SHALL HAVE A 2' DETECTABLE WARNING AREA ADJACENT TO A 5X5 LANDING PAD. SIDEWALK WILL RAMP UP AT A MAX SLOPE OF 8.33% IN BOTH DIRECTIONS FROM THE LANDING PAD. AN ADDITIONAL 5X5 LANDING PAD WILL BE PLACED AT THE TOPS OF EACH RAMP. LANDING PADS HAVE A MAX SLOPE OF 2% IN EACH DIRECTION.

KEY NOTES

- 7" CURB
- 7" CURB/GUTTER
- RETAINING WALL
- 7' SDWLK



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| NO. | REVISION | BY | DATE |
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| 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS LAVEN DR. PLAN AND PROFILE STA 100+00.00 TO STA 104+00.00 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 58 |



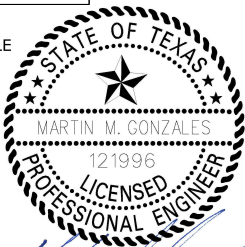
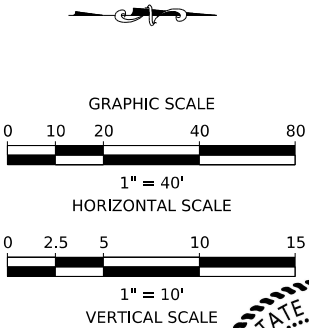
| ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
|----------|---|------|----------|
| 103.1 | REMOVE CONCRETE CURB (<700 LF) | LF | 628 |
| 103.3 | REMOVE CONCRETE SIDEWALKS & DRIVEWAYS (<1,000 SF) | SF | 10852 |
| 104.1 | STREET EXCAVATION (1,000 CY < X < 10,000 CY) | CY | 300 |
| 203.1 | TACK COAT | GAL | 227 |
| 208.1 | SALVAGE, HAULING, AND STOCKPIILING RAC (2.5 INCHES DEPTH) | SY | 276 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (3.5" COMP DEPTH TOP) | SY | 1136 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (1.5" COMP DEPTH TOP) | SY | 1269 |
| 240.4 | WARM MIX ASPHALTIC CONCRETE TYPE D (2.0" COMP DEPTH) | SY | 1412 |
| 500.4 | CONCRETE CURB AND GUTTER (<1,000 LF) | LF | 628 |
| 502.1 | CONCRETE SIDEWALKS (1,000 SY < X < 10,000 SY) | SY | 278 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (100 SY < X < 10,000 SY) | SY | 224 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (PENETRATION) | SY | 62 |
| 513.1 | REMOVING AND RELOCATING MAIL BOXES (< 50 UNITS) | EA | 4 |
| 507.1 | CHAIN LINK WIRE FENCE (4' HIGH) | LF | 0 |
| 523.1 | ADJUSTING CHAIN LINK VEHICULAR GATE (<50 UNITS) | EA | 1 |

| LEGEND | | PROFILE LEGEND | |
|------------------------|--|------------------|--|
| PROP DRWY PNTR | | PROPOSED PROFILE | |
| PROP CONC SDWK | | ROW LT | |
| MILL AND OVERLAY | | ROW RT | |
| CROSS SLOPE TRANSITION | | EXISTING GROUND | |
| PROPERTY LINE | | TRAFFIC FLOW | |
| EXIST ROW | | PROPOSED MAILBOX | |
| DRIVEWAY | | | |

- NOTES
- ALL RADII ARE MEASURED TO THE FACE OF CURB.
 - REFER TO COSA STANDARD "CONCRETE DRIVEWAY STANDARD" FOR DRIVEWAY PENETRATION INFORMATION.
 - PROPOSED SIDEWALK, CURB, AND PEDESTRIAN RAMPS SHALL MATCH GRADES AND ELEVATIONS AT ALL TIE-IN LOCATIONS
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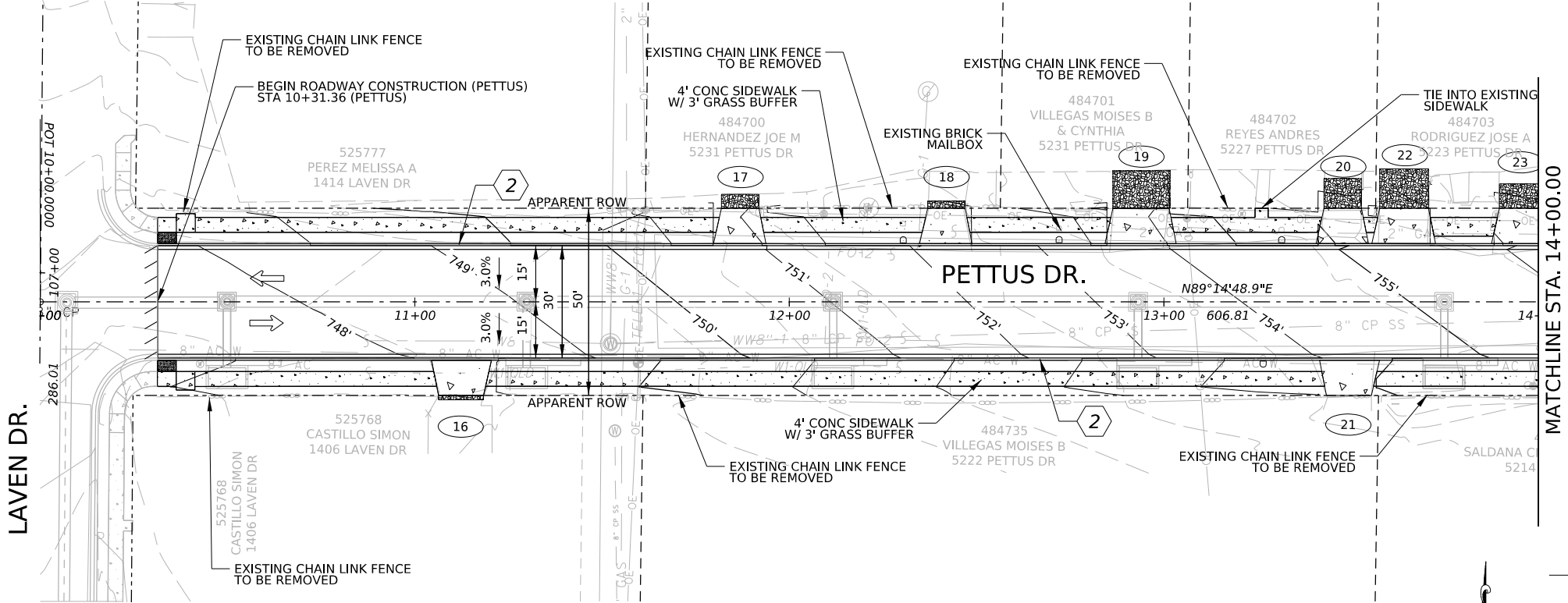
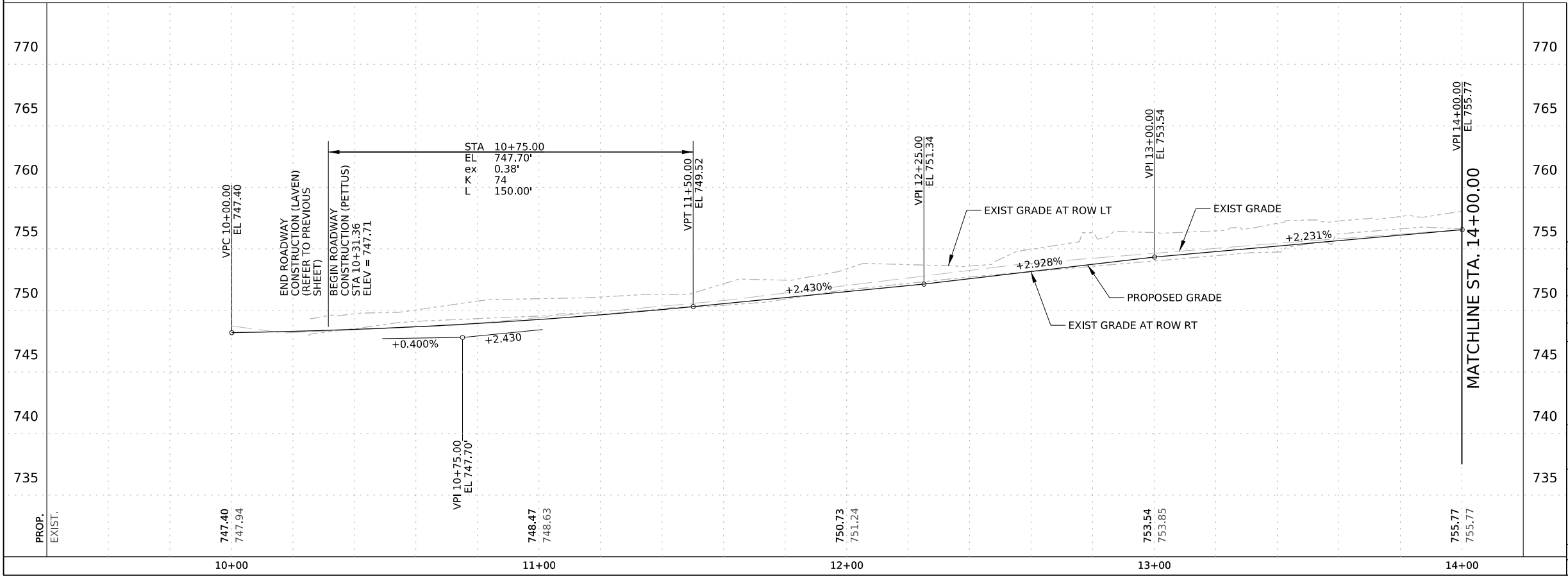
KEY NOTES

- 7" CURB
- 7" CURB/GUTTER
- RETAINING WALL
- 7' SDWLK



5.28.25

| | | | |
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| <div>3</div> | | | |
| <div>2</div> | | | |
| <div>1</div> | | | |
| NO. | REVISION | BY | DATE |
| <div><div><div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div></div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div><div><div>4800 FREDERICKSBURG RD SUITE 200SL</div><div>SAN ANTONIO, TX 78229</div><div>P:210-208-9400 F:210-208-9401</div><div>TBPE #F-21809</div><div>TBPLS #10194622</div></div></div> | | | |
| <div>CITY OF SAN ANTONIO</div> <div>PUBLIC WORKS DEPARTMENT</div> | | | |
| <div>CULEBRA AREA STREETS</div> <div>LAVEN DR. PLAN AND PROFILE</div> <div>STA 104+00.00 TO END</div> | | | |
| 100% SUBMITTAL | | PROJECT NO: 23-03873 | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 59 |



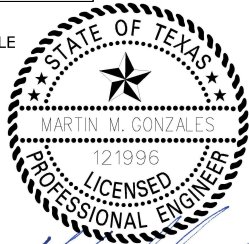
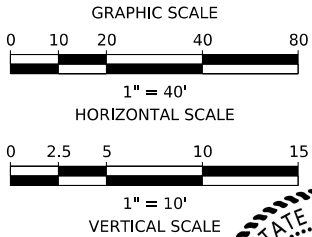
| ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
|----------|---|------|----------|
| 103.3 | REMOVE CONCRETE SIDEWALKS & DRIVEWAYS (<1,000 SF) | SF | 11 |
| 104.1 | STREET EXCAVATION (1,000 CY < X < 10,000 CY) | CY | 303 |
| 203.1 | TACK COAT | GAL | 229 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (3.5" COMP DEPTH TOP) | SY | 1147 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (1.5" COMP DEPTH TOP) | SY | 1281 |
| 240.4 | WARM MIX ASPHALTIC CONCRETE TYPE D (2.0" COMP DEPTH) | SY | 1423 |
| 500.4 | CONCRETE CURB AND GUTTER (<1,000 LF) | LF | 739 |
| 502.1 | CONCRETE SIDEWALKS (1,000 SY < X < 10,000 SY) | SY | 275 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (100 SY < X < 10,000 SY) | SY | 228 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (PENETRATION) | SY | 57 |
| 513.1 | REMOVING AND RELOCATING MAIL BOXES (<50 UNITS) | EA | 4 |
| 507.1 | CHAIN LINK WIRE FENCE (4' HIGH) | LF | 105 |
| 523.1 | ADJUSTING CHAIN LINK VEHICULAR GATE (<50 UNITS) | EA | 5 |

| LEGEND | | PROFILE LEGEND | |
|------------------------|--|------------------|--|
| PROP DRWY PNTR | | PROPOSED PROFILE | |
| PROP CONC SDWK | | ROW LT | |
| MILL AND OVERLAY | | ROW RT | |
| CROSS SLOPE TRANSITION | | EXISTING GROUND | |
| PROPERTY LINE | | TRAFFIC FLOW | |
| EXIST ROW | | PROPOSED MAILBOX | |
| DRIVEWAY | | | |

- NOTES
- ALL RADII ARE MEASURED TO THE FACE OF CURB.
 - REFER TO COSA STANDARD "CONCRETE DRIVEWAY STANDARD" FOR DRIVEWAY PENETRATION INFORMATION.
 - PROPOSED SIDEWALK, CURB, AND PEDESTRIAN RAMPS SHALL MATCH GRADES AND ELEVATIONS AT ALL TIE-IN LOCATIONS
 - TY IV RAMP WILL BE MODIFIED TO BE PLACED ON A RADIUS. RAMP SHALL HAVE A 2' DETECTABLE WARNING AREA ADJACENT TO A 5X5 LANDING PAD. SIDEWALK WILL RAMP UP AT A MAX SLOPE OF 8.33% IN BOTH DIRECTIONS FROM THE LANDING PAD. AN ADDITIONAL 5X5 LANDING PAD WILL BE PLACED AT THE TOPS OF EACH RAMP. LANDING PADS HAVE A MAX SLOPE OF 2% IN EACH DIRECTION.

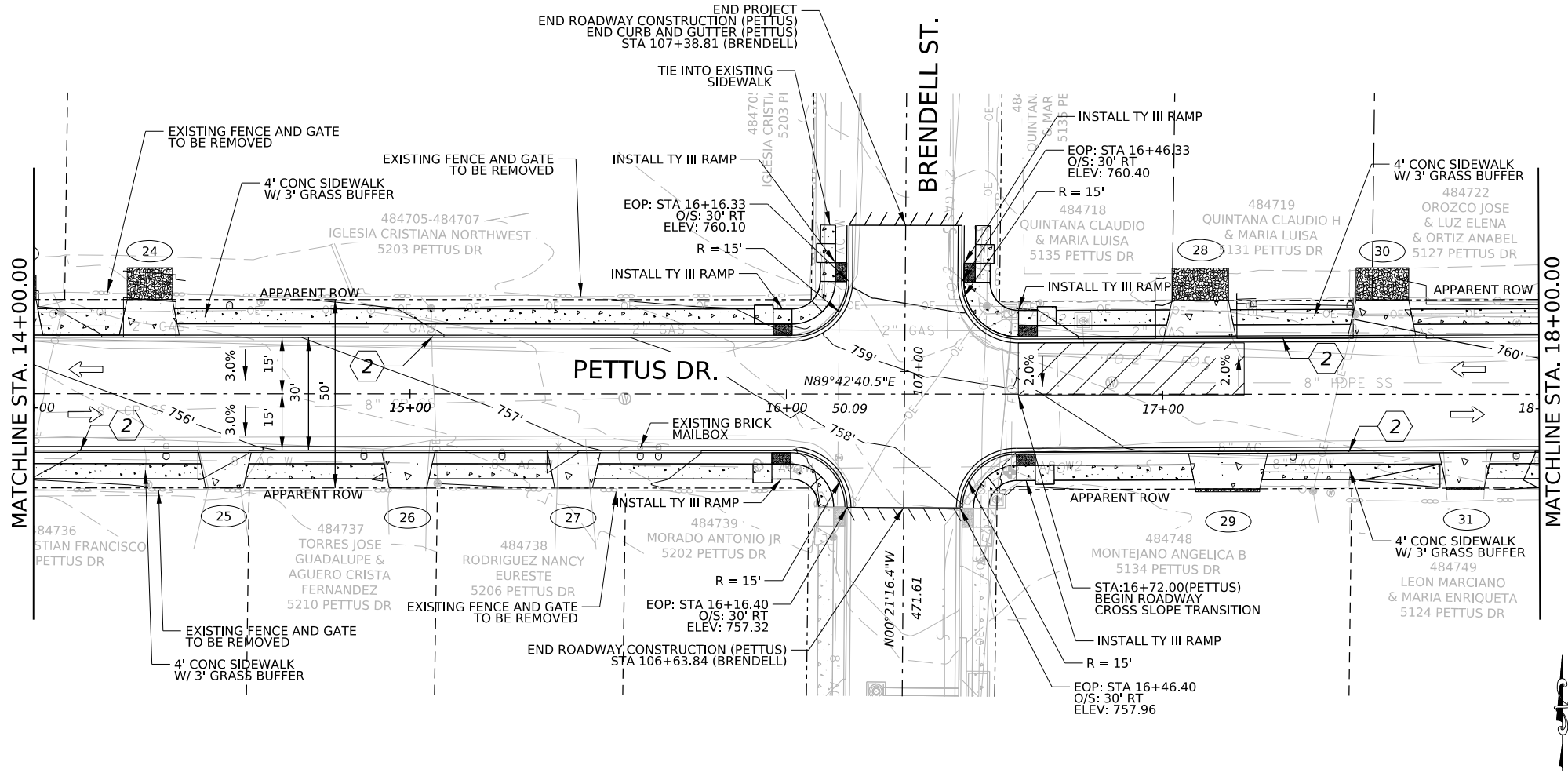
KEY NOTES

- 7" CURB
- 7" CURB/GUTTER
- RETAINING WALL
- 7' SDWLK



5.28.25

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| NO. | REVISION | BY | DATE |
| <div><div><div><div><div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div></div><div><div><div>4800 FREDERICKSBURG RD SUITE 200SL</div><div>SAN ANTONIO, TX 78229</div><div>P:210-208-9400 F:210-208-9401</div><div>TBPE #F-21809</div><div>TBPLS #10194622</div></div></div></div></div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS PETTUS ST. PLAN AND PROFILE STA 10+00.00 TO STA 14+00.00 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 60 |



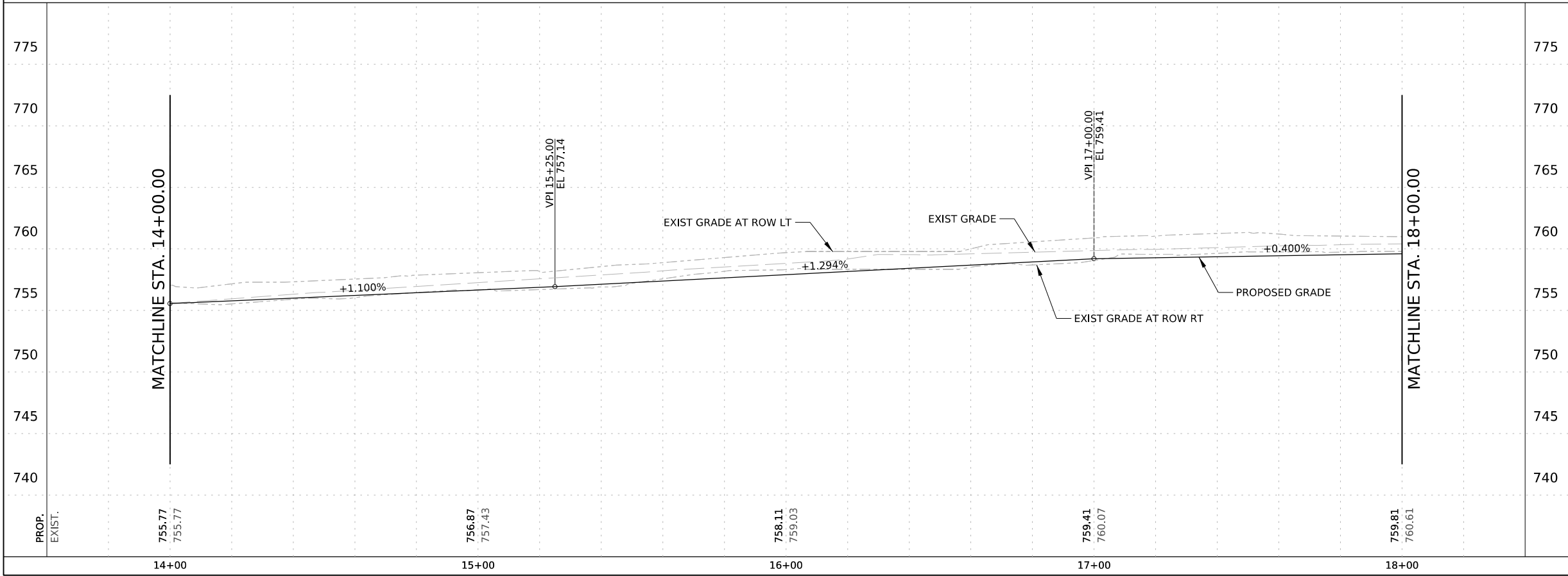
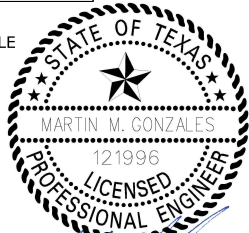
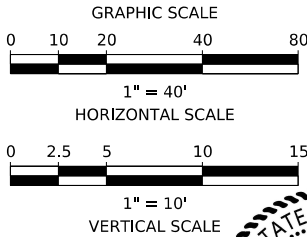
| ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
|----------|---|------|----------|
| 103.3 | REMOVE CONCRETE SIDEWALKS & DRIVEWAYS (<1,000 SF) | SF | 223 |
| 104.1 | STREET EXCAVATION (1,000 CY < X < 10,000 CY) | CY | 373 |
| 203.1 | TACK COAT | GAL | 283 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (3.5\" | SY | 1415 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (1.5\" | SY | 1580 |
| 240.4 | WARM MIX ASPHALTIC CONCRETE TYPE D (2.0\" | SY | 1691 |
| 500.4 | CONCRETE CURB AND GUTTER (<1,000 LF) | LF | 811 |
| 502.1 | CONCRETE SIDEWALKS (1,000 SY < X < 10,000 SY) | SY | 308 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (100 SY < X < 10,000 SY) | SY | 239 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (PENETRATION) | SY | 40 |
| 513.1 | REMOVING AND RELOCATING MAIL BOXES (<50 UNITS) | EA | 9 |
| 507.1 | CHAIN LINK WIRE FENCE (4' HIGH) | LF | 66 |
| 523.1 | ADJUSTING CHAIN LINK VEHICULAR GATE (<50 UNITS) | EA | 3 |

| LEGEND | | PROFILE LEGEND | |
|------------------------|--|------------------|--|
| PROP DRWY PNTR | | PROPOSED PROFILE | |
| PROP CONC SDWK | | ROW LT | |
| MILL AND OVERLAY | | ROW RT | |
| CROSS SLOPE TRANSITION | | EXISTING GROUND | |
| PROPERTY LINE | | TRAFFIC FLOW | |
| EXIST ROW | | PROPOSED MAILBOX | |
| DRIVEWAY | | | |

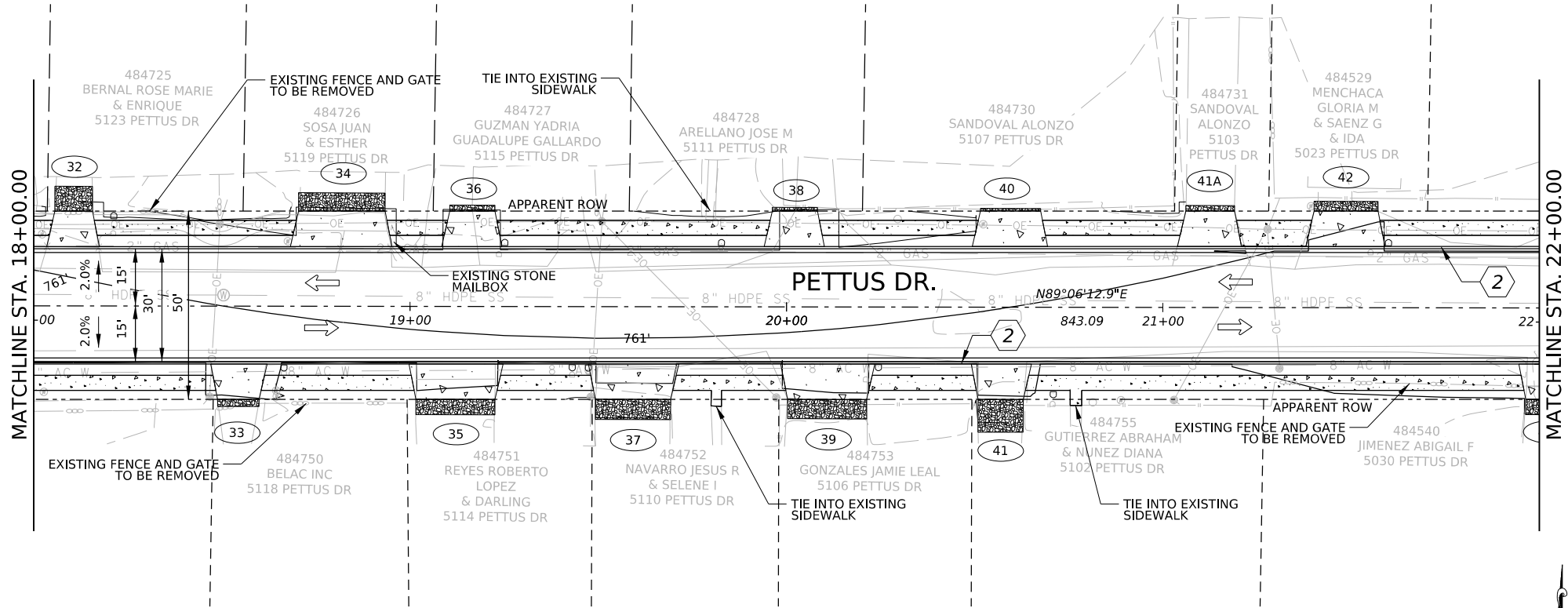
- NOTES
- ALL RADII ARE MEASURED TO THE FACE OF CURB.
 - REFER TO COSA STANDARD "CONCRETE DRIVEWAY STANDARD" FOR DRIVEWAY PENETRATION INFORMATION.
 - PROPOSED SIDEWALK, CURB, AND PEDESTRIAN RAMPS SHALL MATCH GRADES AND ELEVATIONS AT ALL TIE-IN LOCATIONS
 - TY IV RAMP WILL BE MODIFIED TO BE PLACED ON A RADIUS. RAMP SHALL HAVE A 2' DETECTABLE WARNING AREA ADJACENT TO A 5X5 LANDING PAD. SIDEWALK WILL RAMP UP AT A MAX SLOPE OF 8.33% IN BOTH DIRECTIONS FROM THE LANDING PAD. AN ADDITIONAL 5X5 LANDING PAD WILL BE PLACED AT THE TOPS OF EACH RAMP. LANDING PADS HAVE A MAX SLOPE OF 2% IN EACH DIRECTION.

KEY NOTES

- 7" CURB
- 7" CURB/GUTTER
- RETAINING WALL
- 7' SDWLK



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| NO. | REVISION | BY | DATE |
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| 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS PETTUS ST. PLAN AND PROFILE STA 14+00.00 TO STA 18+00.00 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 61 |



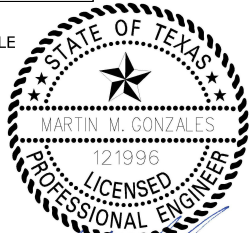
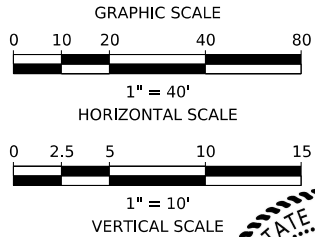
| ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
|----------|---|------|----------|
| 103.3 | REMOVE CONCRETE SIDEWALKS & DRIVEWAYS (<1,000 SF) | SF | 510 |
| 104.1 | STREET EXCAVATION (1,000 CY < X < 10,000 CY) | CY | 328 |
| 203.1 | TACK COAT | GAL | 249 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (3.5" COMP DEPTH TOP) | SY | 1244 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (1.5" COMP DEPTH TOP) | SY | 1389 |
| 240.4 | WARM MIX ASPHALTIC CONCRETE TYPE D (2.0" COMP DEPTH) | SY | 1520 |
| 500.4 | CONCRETE CURB AND GUTTER (<1,000 LF) | LF | 800 |
| 502.1 | CONCRETE SIDEWALKS (1,000 SY < X < 10,000 SY) | SY | 268 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (100 SY < X < 10,000 SY) | SY | 412 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (PENETRATION) | SY | 77 |
| 513.1 | REMOVING AND RELOCATING MAIL BOXES (< 50 UNITS) | EA | 9 |
| 507.1 | CHAIN LINK WIRE FENCE (4' HIGH) | LF | 156 |
| 523.1 | ADJUSTING CHAIN LINK VEHICULAR GATE (<50 UNITS) | EA | 5 |

| LEGEND | | PROFILE LEGEND | |
|------------------------|--|------------------|--|
| PROP DRWY PNTR | | PROPOSED PROFILE | |
| PROP CONC SDWK | | ROW LT | |
| MILL AND OVERLAY | | ROW RT | |
| CROSS SLOPE TRANSITION | | EXISTING GROUND | |
| PROPERTY LINE | | TRAFFIC FLOW | |
| EXIST ROW | | PROPOSED MAILBOX | |
| DRIVEWAY | | | |

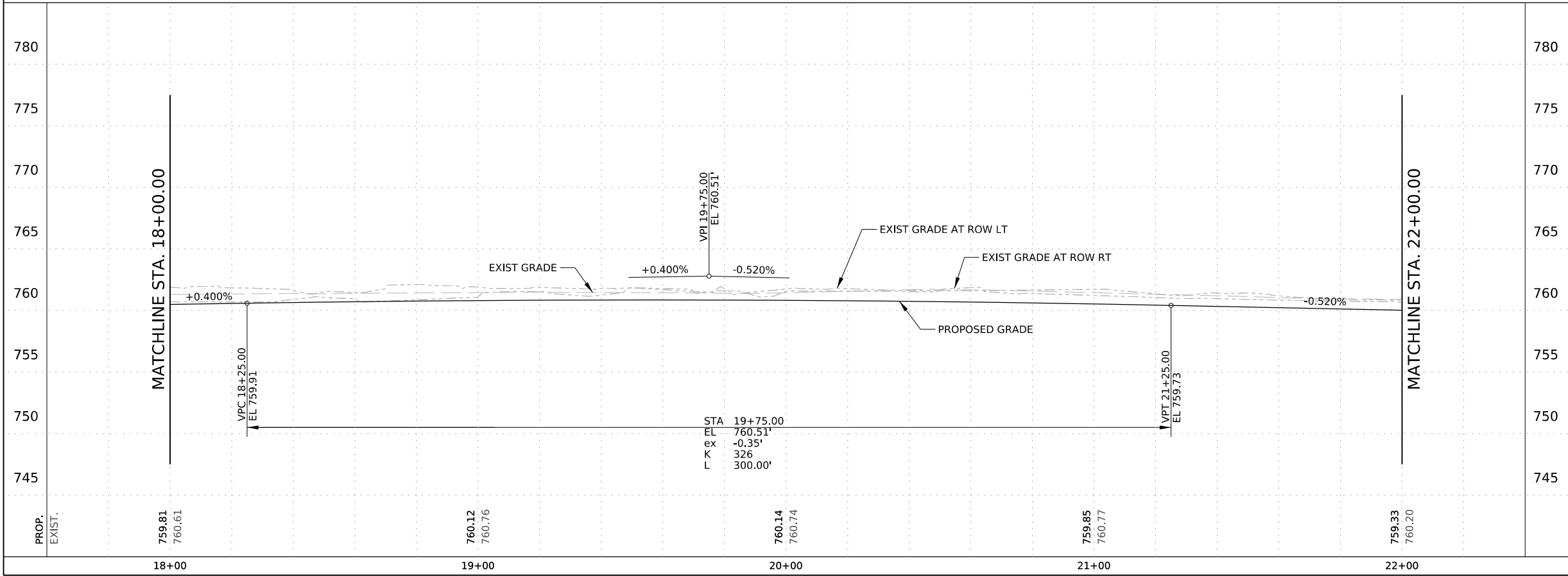
- NOTES
- ALL RADII ARE MEASURED TO THE FACE OF CURB.
 - REFER TO COSA STANDARD "CONCRETE DRIVEWAY STANDARD" FOR DRIVEWAY PENETRATION INFORMATION.
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KEY NOTES

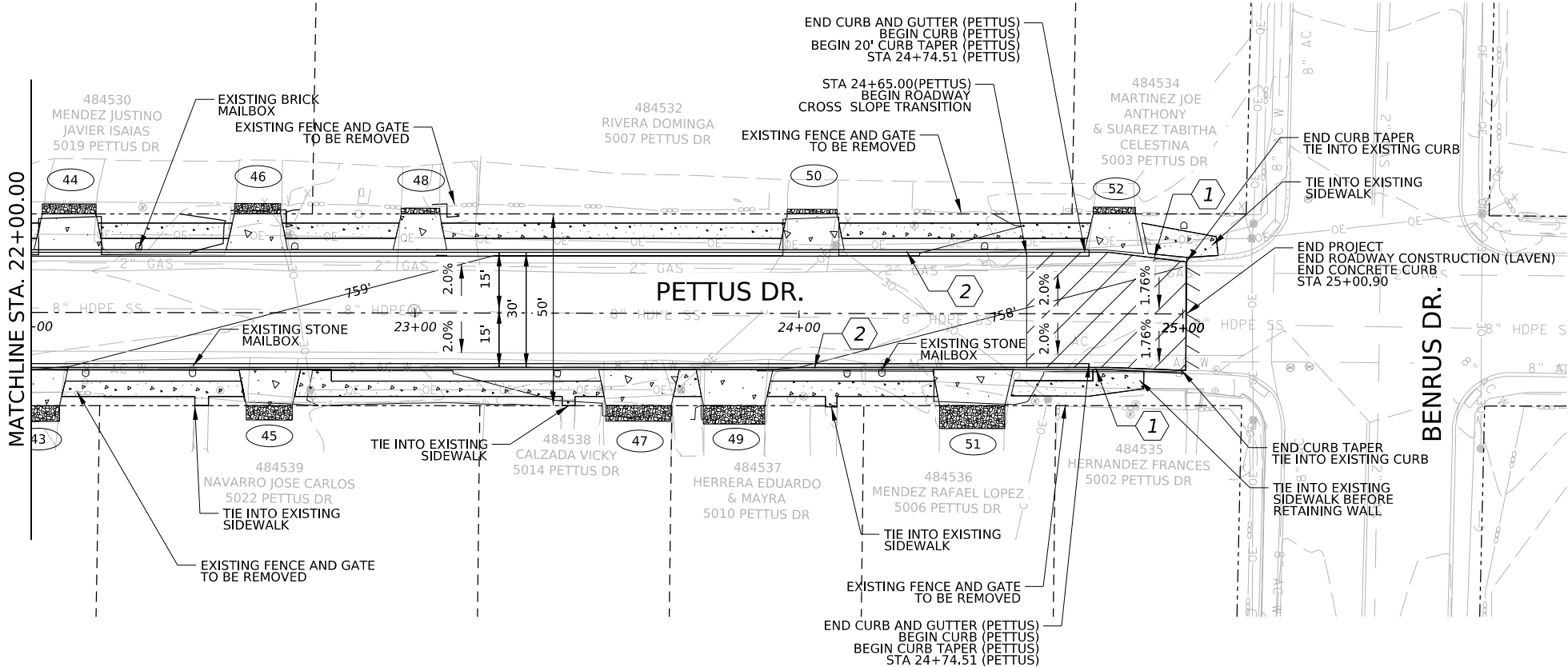
- 7" CURB
- 7" CURB/GUTTER
- RETAINING WALL
- 7' SDWLK



5.28.25



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| NO. | REVISION | BY | DATE |
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| 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 76229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS PETTUS ST. PLAN AND PROFILE STA 18+00.00 TO STA 22+00.00 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 62 |



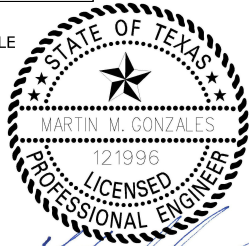
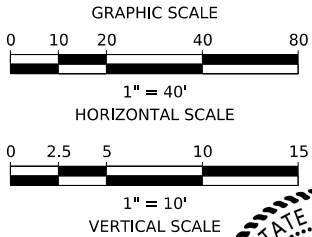
| ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
|----------|---|------|----------|
| 103.1 | REMOVE CONCRETE CURB (<700 LF) | LF | 73 |
| 103.3 | REMOVE CONCRETE SIDEWALKS & DRIVEWAYS (<1,000 SF) | SF | 542 |
| 104.1 | STREET EXCAVATION (1,000 CY < X < 10,000 CY) | CY | 248 |
| 203.1 | TACK COAT | GAL | 188 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (3.5" COMP DEPTH TOP) | SY | 941 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (1.5" COMP DEPTH TOP) | SY | 1051 |
| 240.4 | WARM MIX ASPHALTIC CONCRETE TYPE D (2.0" COMP DEPTH) | SY | 1217 |
| 500.1 | CONCRETE CURB (<1,000 LF) | LF | 26 |
| 500.4 | CONCRETE CURB AND GUTTER (<1,000 LF) | LF | 551 |
| 502.1 | CONCRETE SIDEWALKS (1,000 SY < X < 10,000 SY) | SY | 214 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (100 SY < X < 10,000 SY) | SY | 268 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (PENETRATION) | SY | 45 |
| 513.1 | REMOVING AND RELOCATING MAIL BOXES (<50 UNITS) | EA | 9 |
| 507.1 | CHAIN LINK WIRE FENCE (4' HIGH) | LF | 13 |
| 523.1 | ADJUSTING CHAIN LINK VEHICULAR GATE (<50 UNITS) | EA | 4 |

| LEGEND | | PROFILE LEGEND | |
|------------------------|--|------------------|--|
| PROP DRWY PNTR | | PROPOSED PROFILE | |
| PROP CONC SDWK | | ROW LT | |
| MILL AND OVERLAY | | ROW RT | |
| CROSS SLOPE TRANSITION | | EXISTING GROUND | |
| PROPERTY LINE | | TRAFFIC FLOW | |
| EXIST ROW | | PROPOSED MAILBOX | |
| DRIVEWAY | | | |

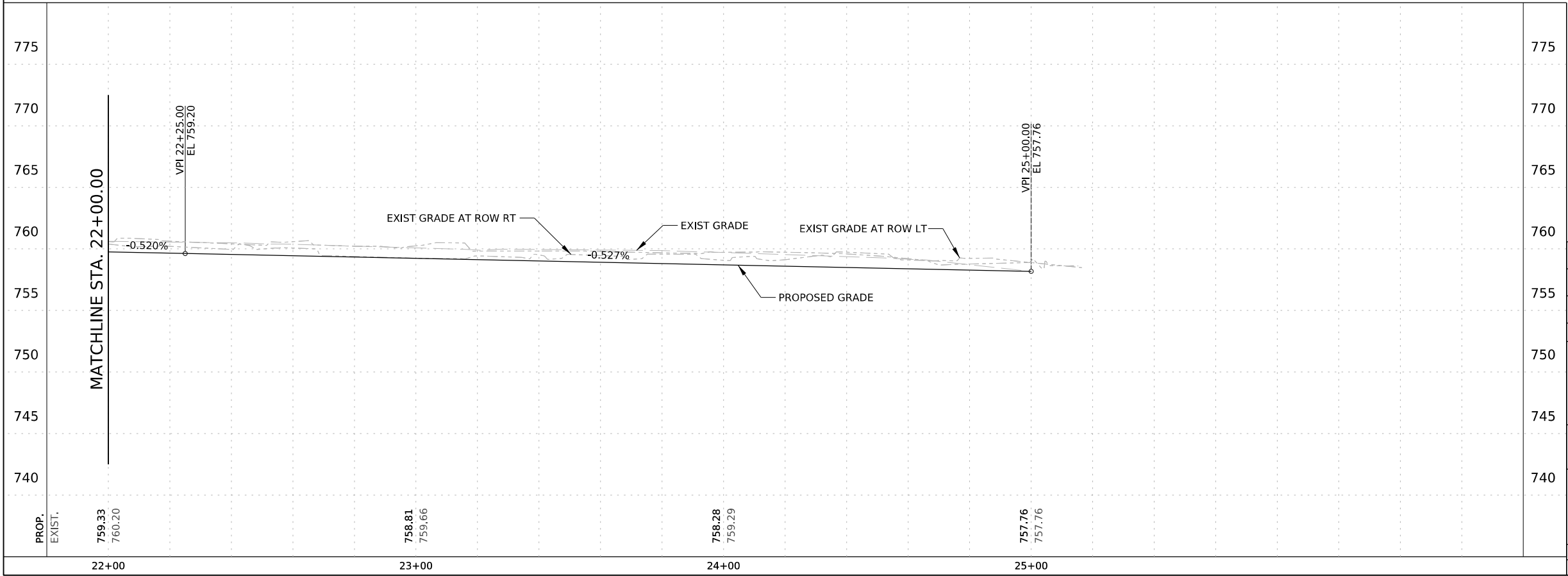
- NOTES
- ALL RADII ARE MEASURED TO THE FACE OF CURB.
 - REFER TO COSA STANDARD "CONCRETE DRIVEWAY STANDARD" FOR DRIVEWAY PENETRATION INFORMATION.
 - PROPOSED SIDEWALK, CURB, AND PEDESTRIAN RAMPS SHALL MATCH GRADES AND ELEVATIONS AT ALL TIE-IN LOCATIONS
 - TY IV RAMP WILL BE MODIFIED TO BE PLACED ON A RADIUS. RAMP SHALL HAVE A 2' DETECTABLE WARNING AREA ADJACENT TO A 5X5 LANDING PAD. SIDEWALK WILL RAMP UP AT A MAX SLOPE OF 8.33% IN BOTH DIRECTIONS FROM THE LANDING PAD. AN ADDITIONAL 5X5 LANDING PAD WILL BE PLACED AT THE TOPS OF EACH RAMP. LANDING PADS HAVE A MAX SLOPE OF 2% IN EACH DIRECTION.

KEY NOTES

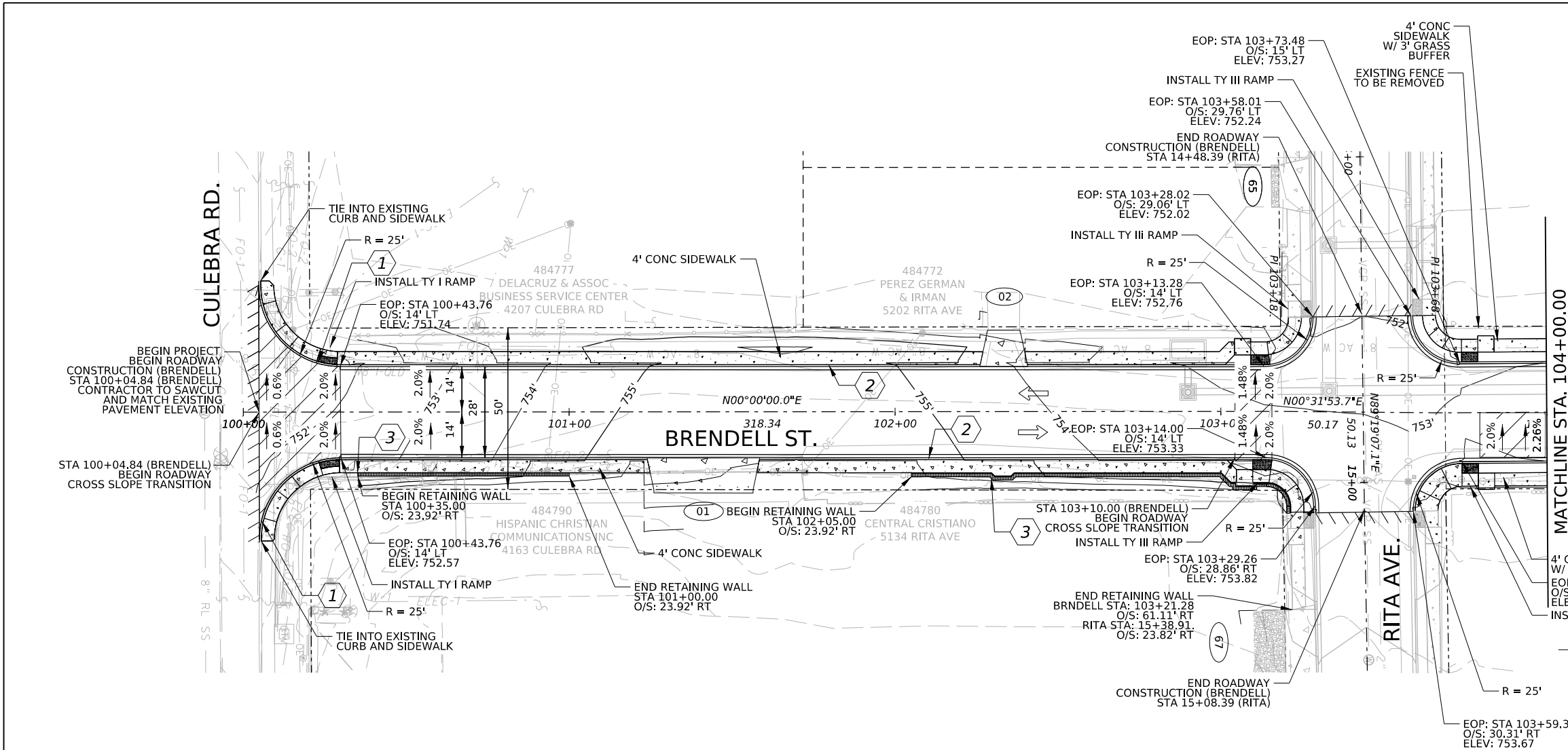
- 7" CURB
- 7" CURB/GUTTER
- RETAINING WALL
- 7' SDWLK



5.28.25



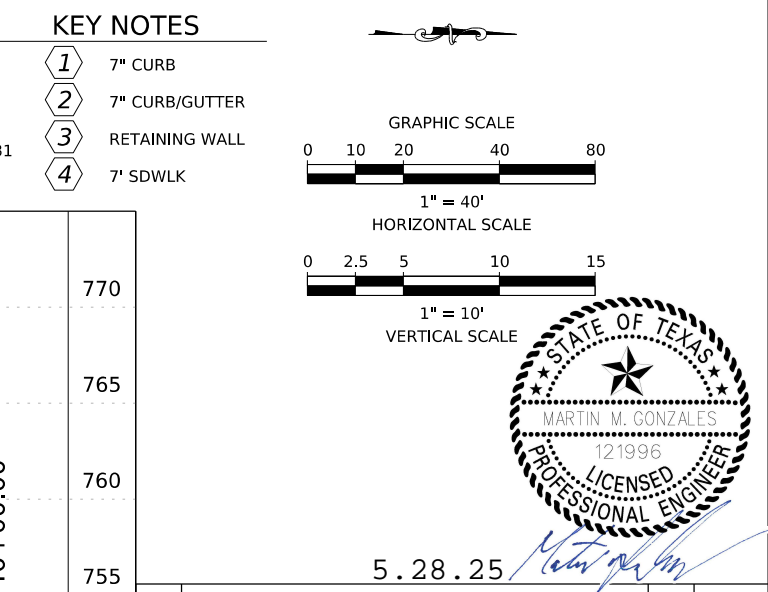
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| 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS PETTUS ST. PLAN AND PROFILE STA 22+00.00 TO END | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 63 |



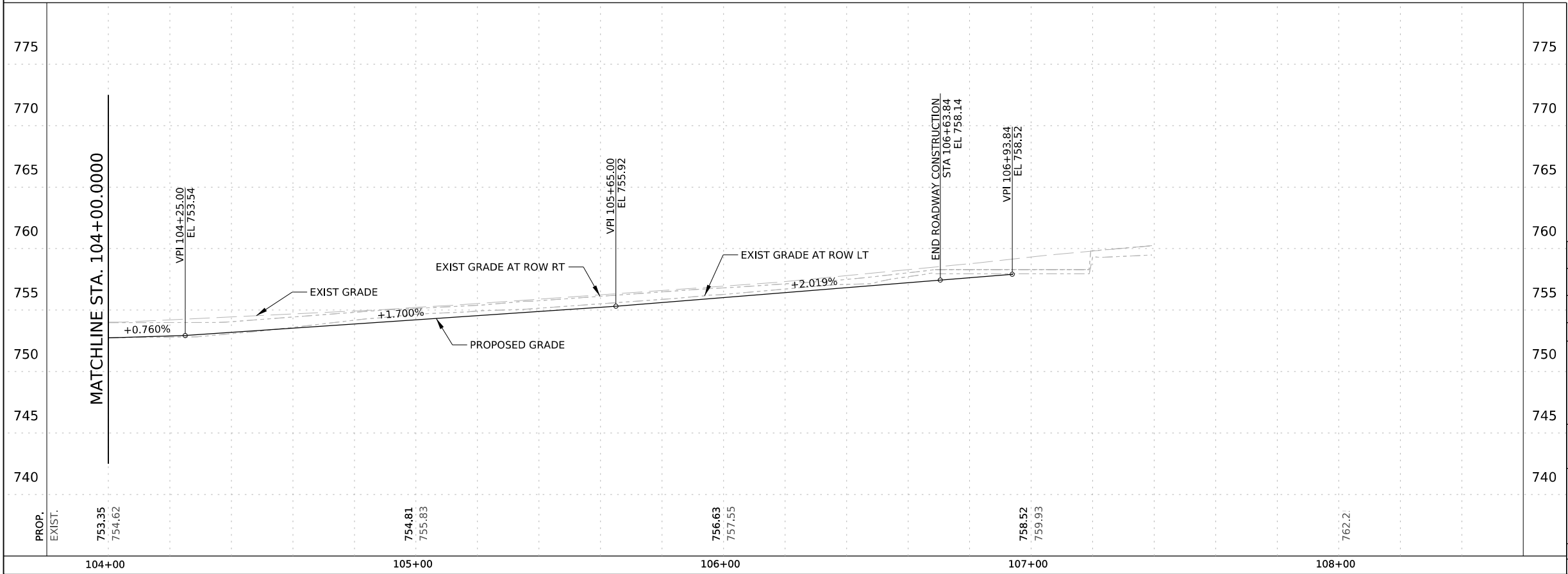
| ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
|----------|---|------|----------|
| 103.1 | REMOVE CONCRETE CURB (<700 LF) | LF | 219 |
| 103.3 | REMOVE CONCRETE SIDEWALKS & DRIVEWAYS (<1,000 SF) | SF | 1596 |
| 104.1 | STREET EXCAVATION (1,000 CY < X < 10,000 CY) | CY | 348 |
| 203.1 | TACK COAT | GAL | 263 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (3.5\" COMP DEPTH TOP) | SY | 1317 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (1.5\" COMP DEPTH TOP) | SY | 1471 |
| 240.4 | WARM MIX ASPHALTIC CONCRETE TYPE D (2.0\" COMP DEPTH) | SY | 1593 |
| 307.1 | CONCRETE STRUCTURE (RETAINING WALLS) | CY | 36 |
| 500.1 | CONCRETE CURB (<1,000 LF) | LF | 76 |
| 500.4 | CONCRETE CURB AND GUTTER (<1,000 LF) | LF | 723 |
| 502.1 | CONCRETE SIDEWALKS (1,000 SY < X < 10,000 SY) | SY | 327 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (100 SY < X < 10,000 SY) | SY | 54 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (PENETRATION) | SY | 6 |
| 507.1 | CHAIN LINK WIRE FENCE (4' HIGH) | LF | 104 |
| 523.1 | ADJUSTING CHAIN LINK VEHICULAR GATE (<50 UNITS) | EA | 1 |

| LEGEND | PROFILE LEGEND |
|------------------------|------------------|
| PROP DRWY PNTR | PROPOSED PROFILE |
| PROP CONC SDWK | ROW LT |
| MILL AND OVERLAY | ROW RT |
| CROSS SLOPE TRANSITION | EXISTING GROUND |
| PROPERTY LINE | TRAFFIC FLOW |
| EXIST ROW | PROPOSED MAILBOX |
| DRIVEWAY | |

- NOTES
- ALL RADII ARE MEASURED TO THE FACE OF CURB.
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| AG3 | | | |
| 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 76229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | | | |
| CITY OF SAN ANTONIO | | | |
| PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS | | | |
| BREDELL ST. PLAN & PROFILE | | | |
| STA 100+00.00 TO STA 104+00.00 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 64 |



| ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
|----------|---|------|----------|
| 104.1 | STREET EXCAVATION (1,000 CY < X < 10,000 CY) | CY | 217 |
| 203.1 | TACK COAT | GAL | 164 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (3.5" COMP DEPTH TOP) | SY | 821 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (1.5" COMP DEPTH TOP) | SY | 917 |
| 240.4 | WARM MIX ASPHALTIC CONCRETE TYPE D (2.0" COMP DEPTH) | SY | 1097 |
| 500.4 | CONCRETE CURB AND GUTTER (<1,000 LF) | LF | 528 |
| 502.1 | CONCRETE SIDEWALKS (1,000 SY < X < 10,000 SY) | SY | 235 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (100 SY < X < 10,000 SY) | SY | 12 |
| 507.1 | CHAIN LINK WIRE FENCE (4' HIGH) | LF | 0 |
| 523.1 | ADJUSTING CHAIN LINK VEHICULAR GATE (<50 UNITS) | EA | 2 |

LEGEND

PROP DRWY PNTR

PROP CONC SDWK

MILL AND OVERLAY

CROSS SLOPE TRANSITION

PROPERTY LINE

EXIST ROW

DRIVEWAY

PROFILE LEGEND

PROPOSED PROFILE

ROW LT

ROW RT

EXISTING GROUND

TRAFFIC FLOW

PROPOSED MAILBOX

- NOTES
1.

2.

3.

4.
- ALL RADII ARE MEASURED TO THE FACE OF CURB.

REFER TO COSA STANDARD "CONCRETE DRIVEWAY STANDARD" FOR DRIVEWAY PENETRATION INFORMATION.

PROPOSED SIDEWALK, CURB, AND PEDESTRIAN RAMPS SHALL MATCH GRADES AND ELEVATIONS AT ALL TIE-IN LOCATIONS

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KEY NOTES

- 1

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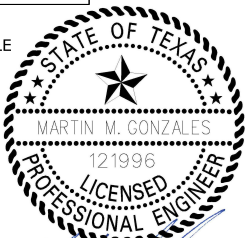
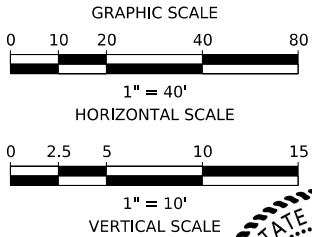
3

4
- 7" CURB

7" CURB/GUTTER

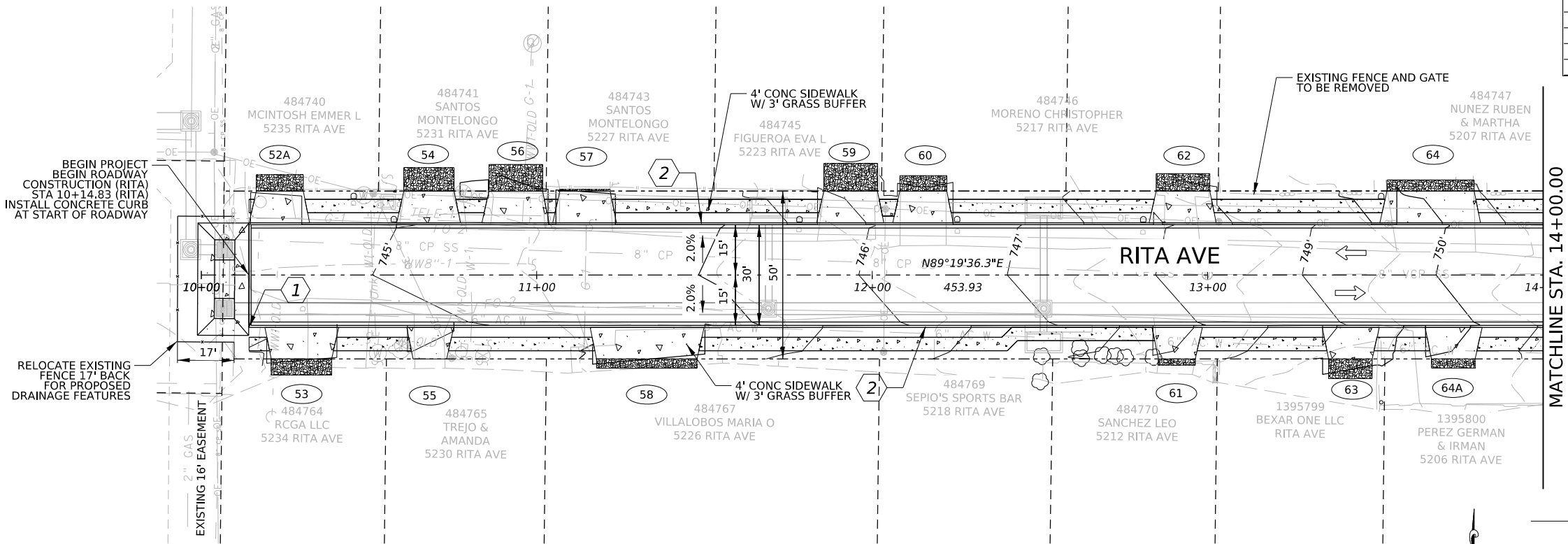
RETAINING WALL

7' SDWLK



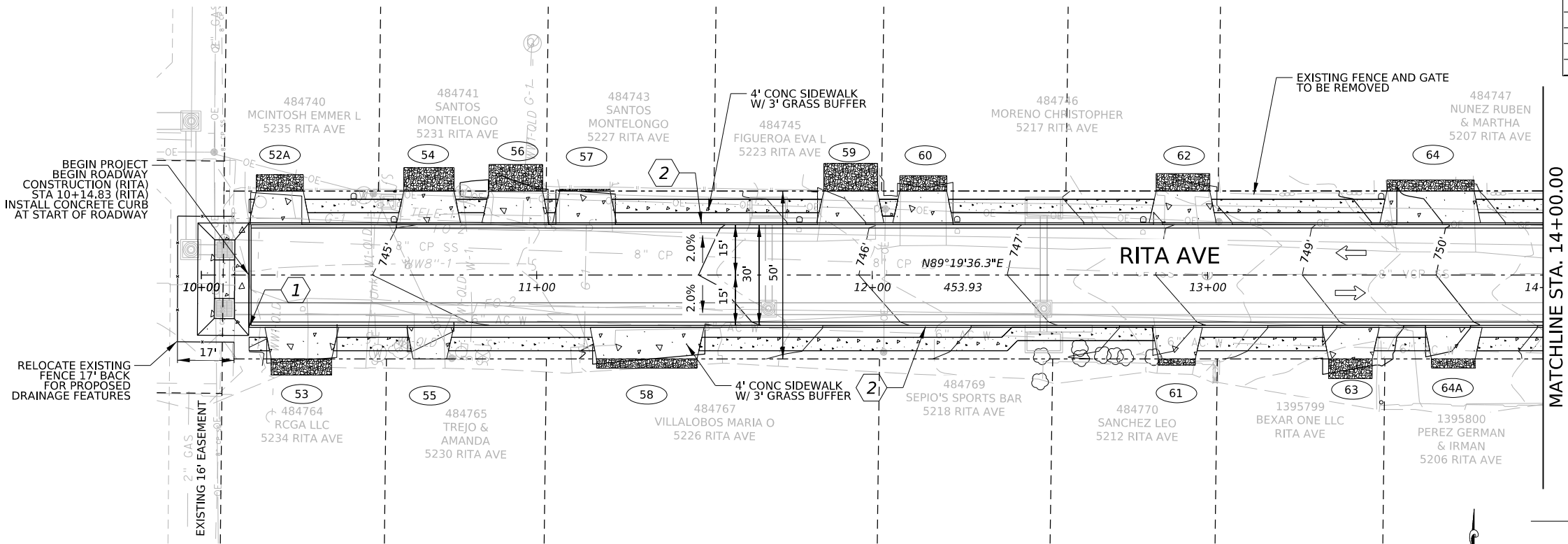
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| <div>1</div> | | | |
| NO. | REVISION | BY | DATE |
| <div><div><div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div></div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div><div><div>4800 FREDERICKSBURG RD SUITE 200SL</div><div>SAN ANTONIO, TX 78229</div><div>P:210-208-9400 F:210-208-9401</div><div>TBPE #F-21809</div><div>TBPLS #10194622</div></div></div> | | | |
| <div>CITY OF SAN ANTONIO</div> <div>PUBLIC WORKS DEPARTMENT</div> | | | |
| <div>CULEBRA AREA STREETS</div> <div>BRENDELL PLAN & PROFILE</div> <div>STA 104+00.00 TO END</div> | | | |
| 100% SUBMITTAL | | PROJECT NO: 23-03873 | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 65 |



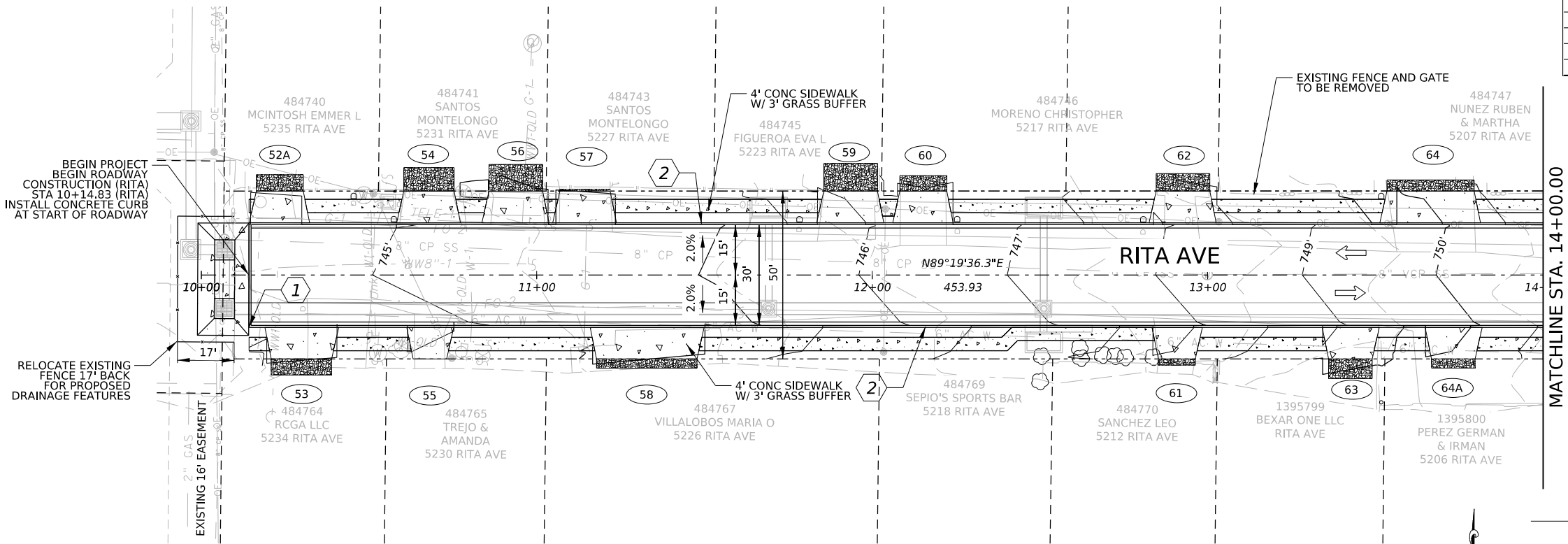
RELOCATE EXISTING FENCE 17' BACK FOR PROPOSED DRAINAGE FEATURES

BEGIN PROJECT
BEGIN ROADWAY
CONSTRUCTION (RITA)
STA 10+14.83 (RITA)
INSTALL CONCRETE CURB
AT START OF ROADWAY



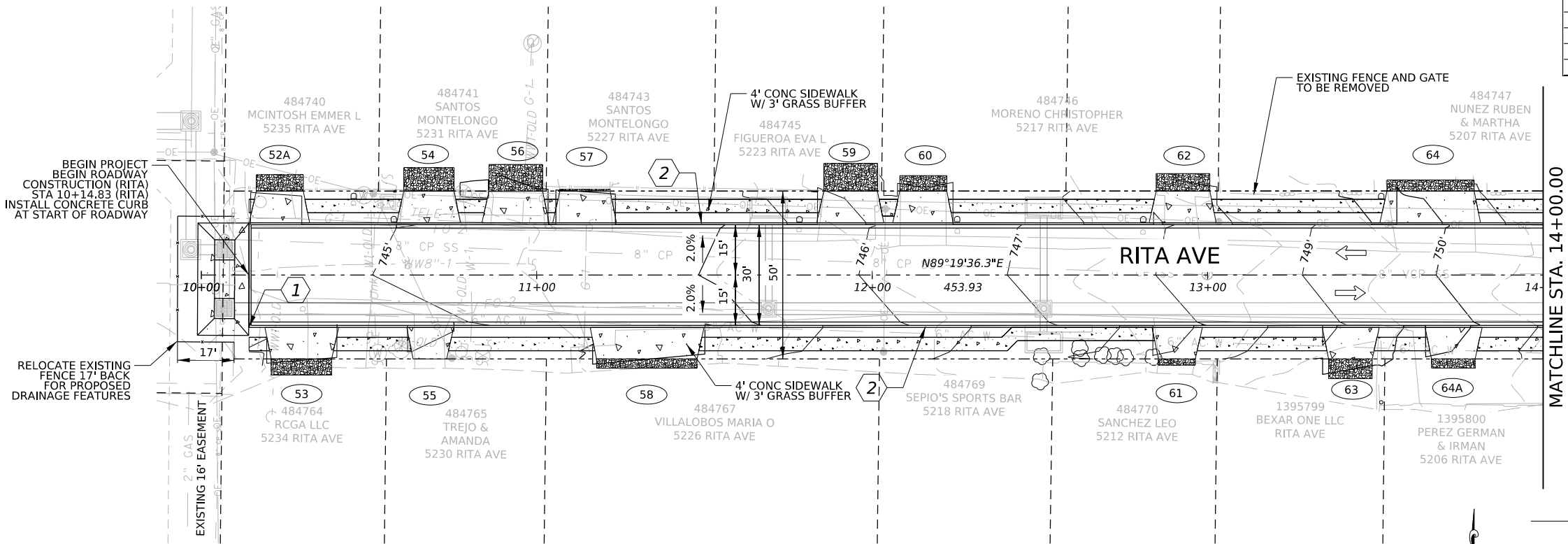
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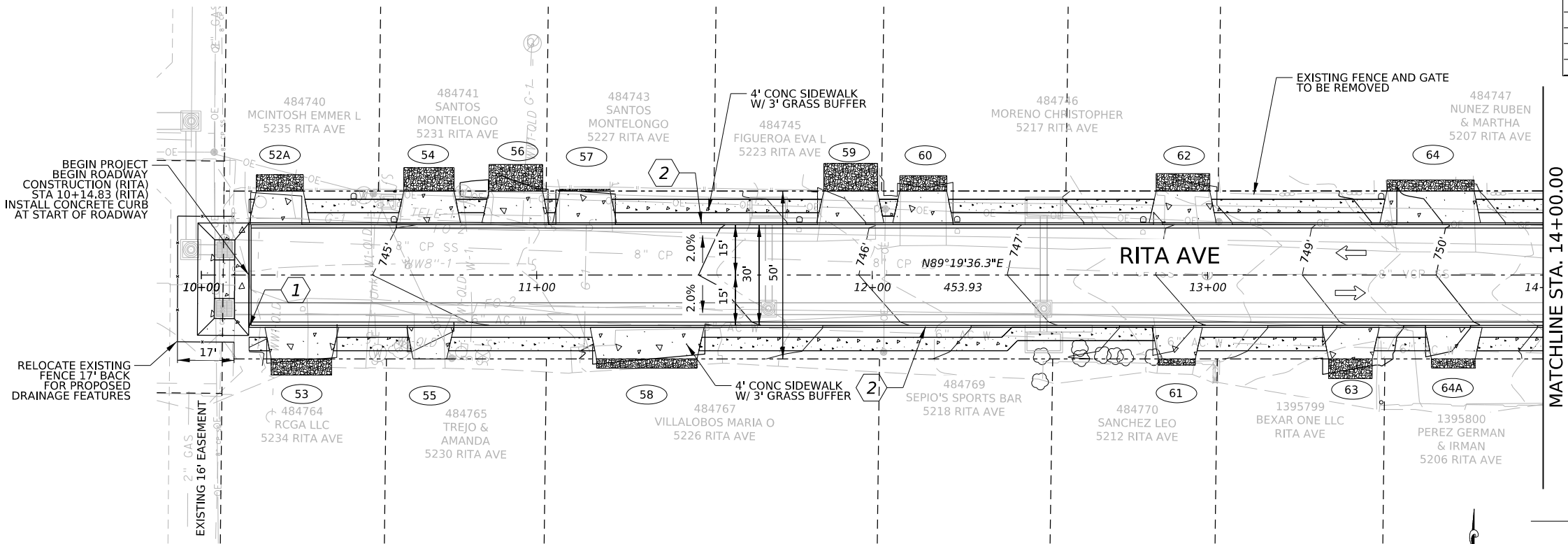
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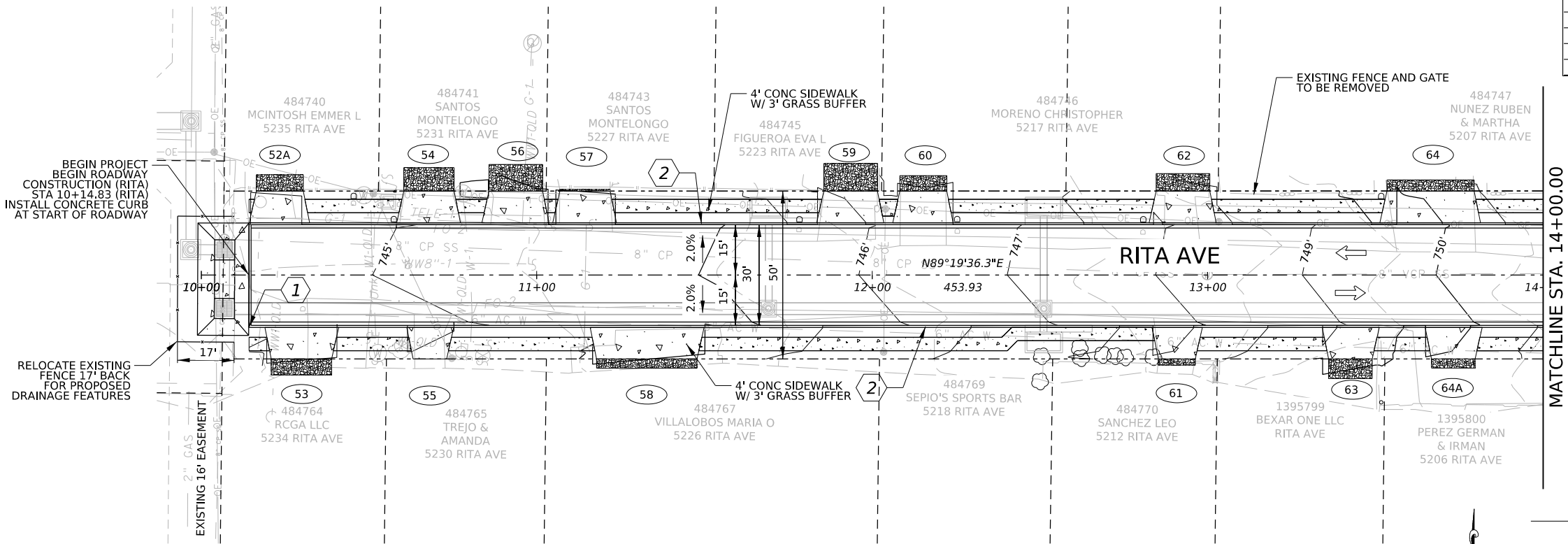
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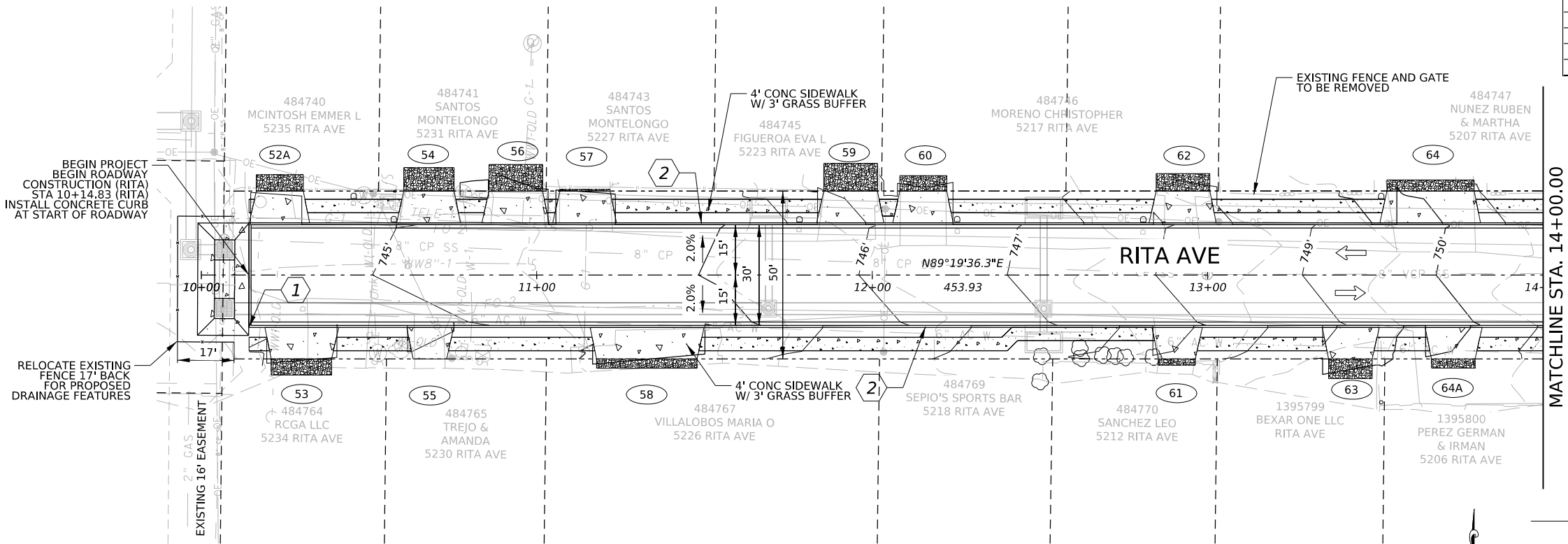
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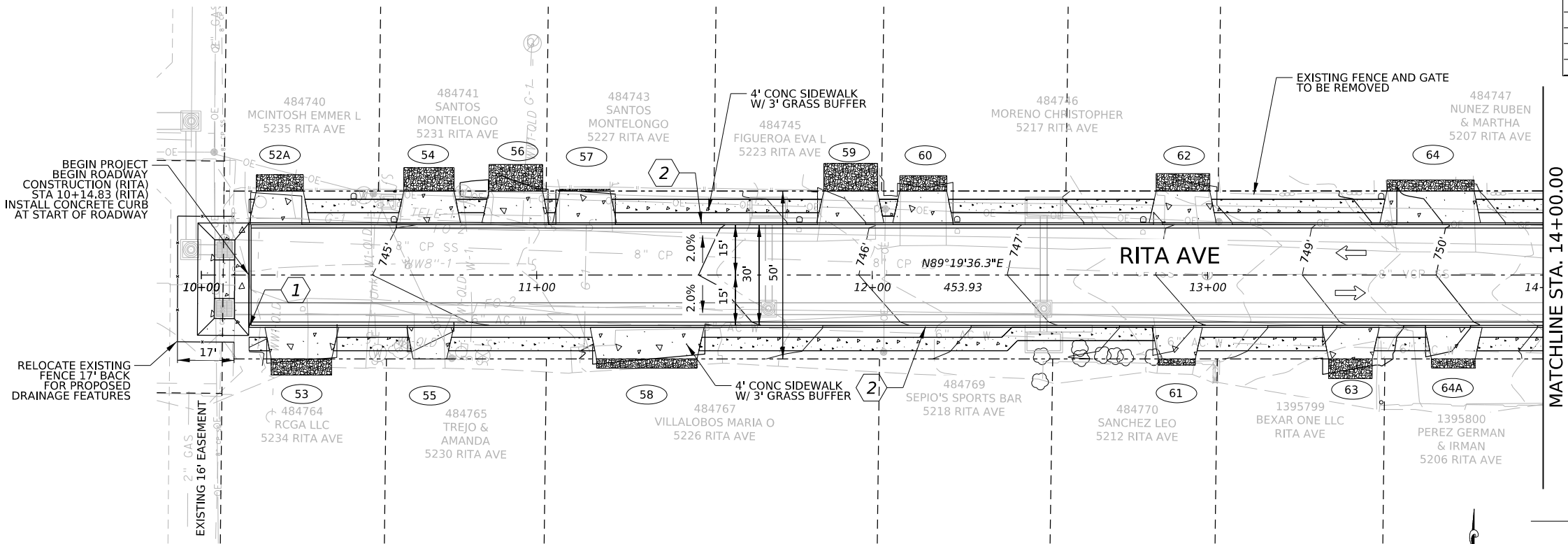
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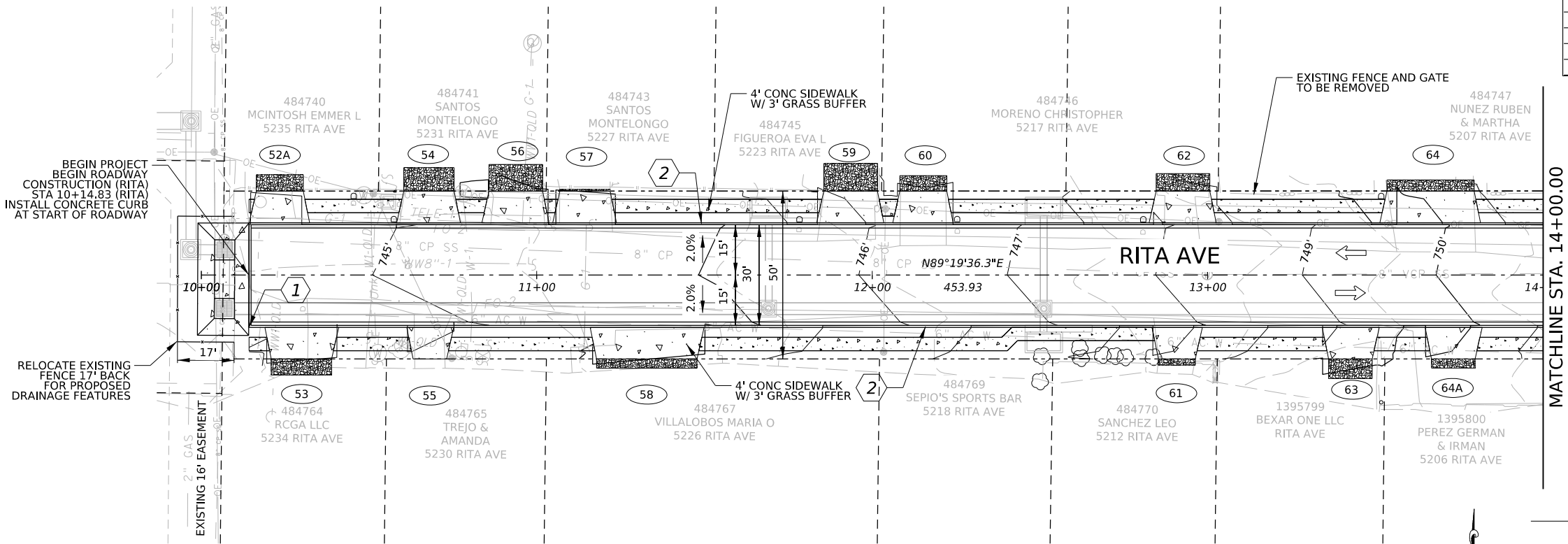
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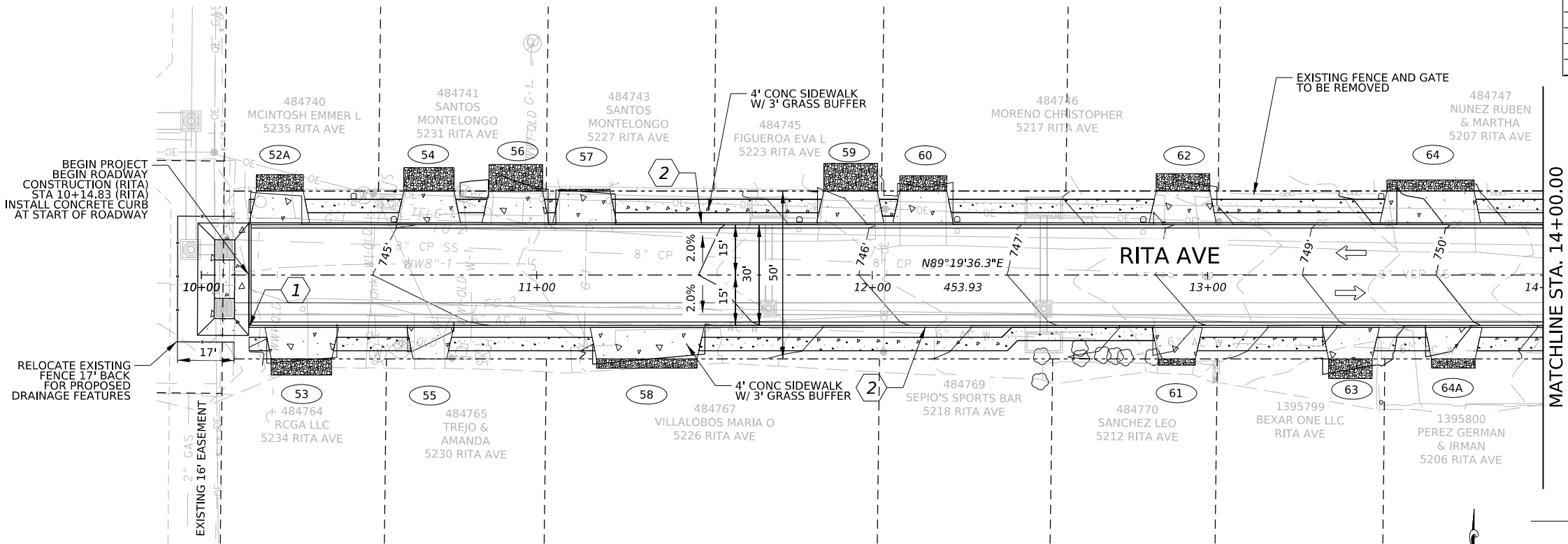
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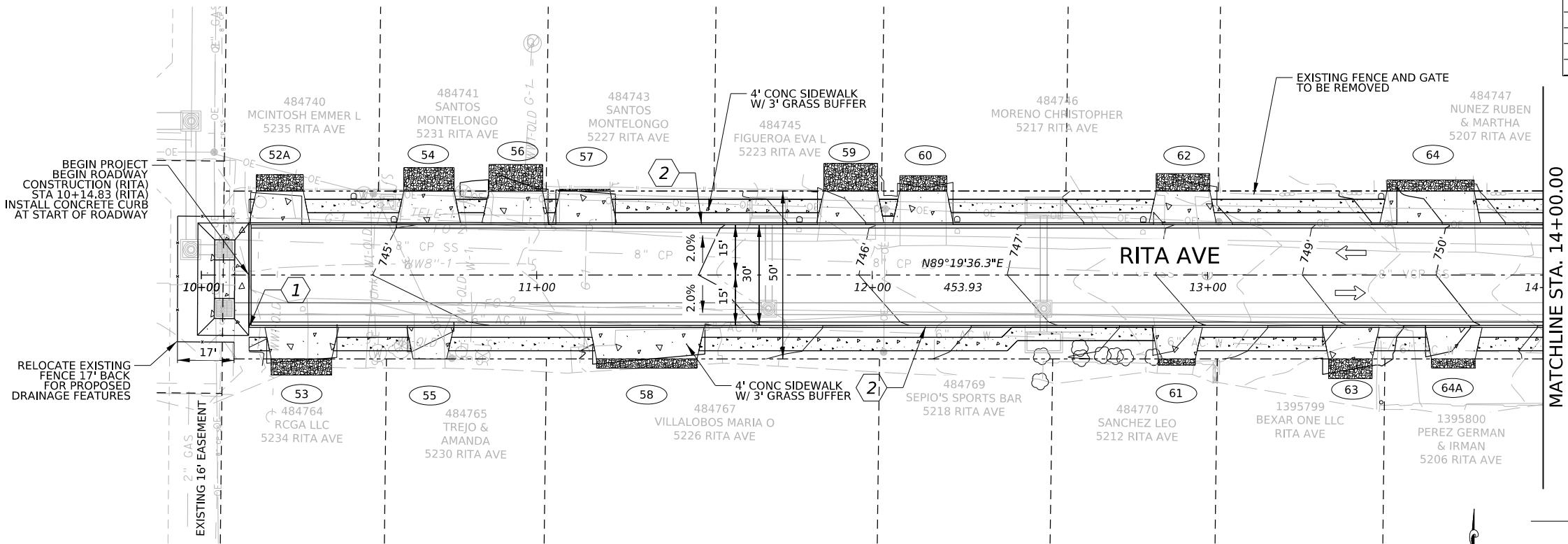
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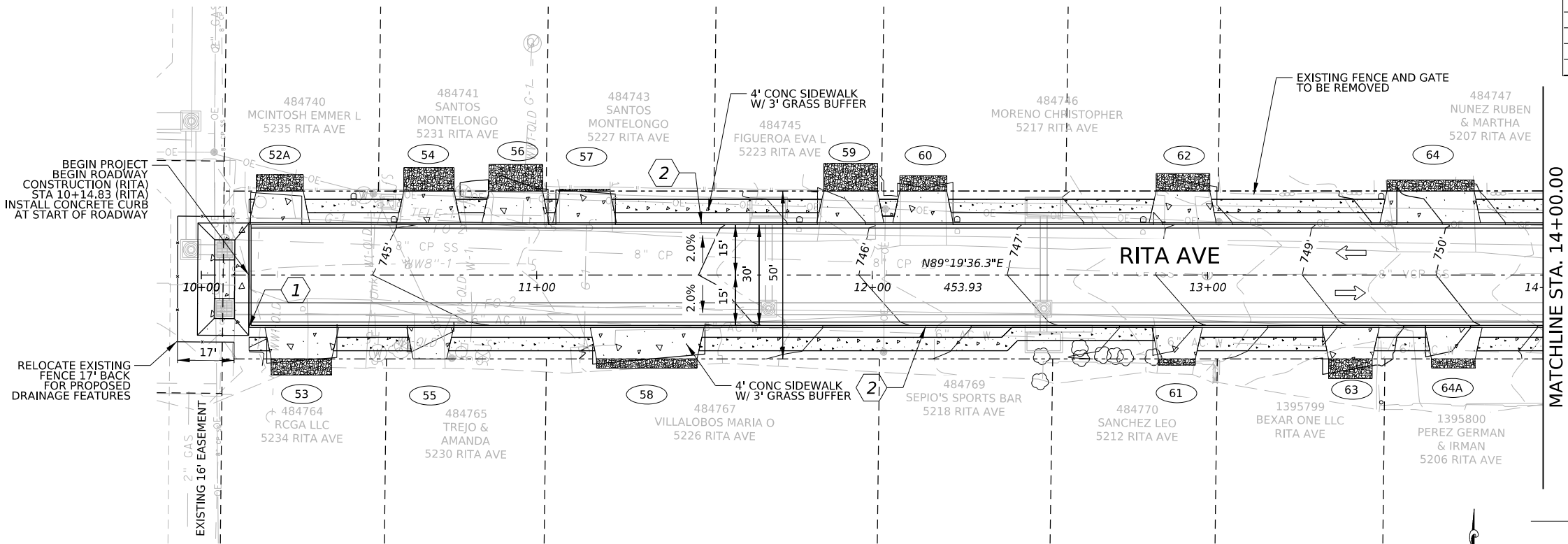
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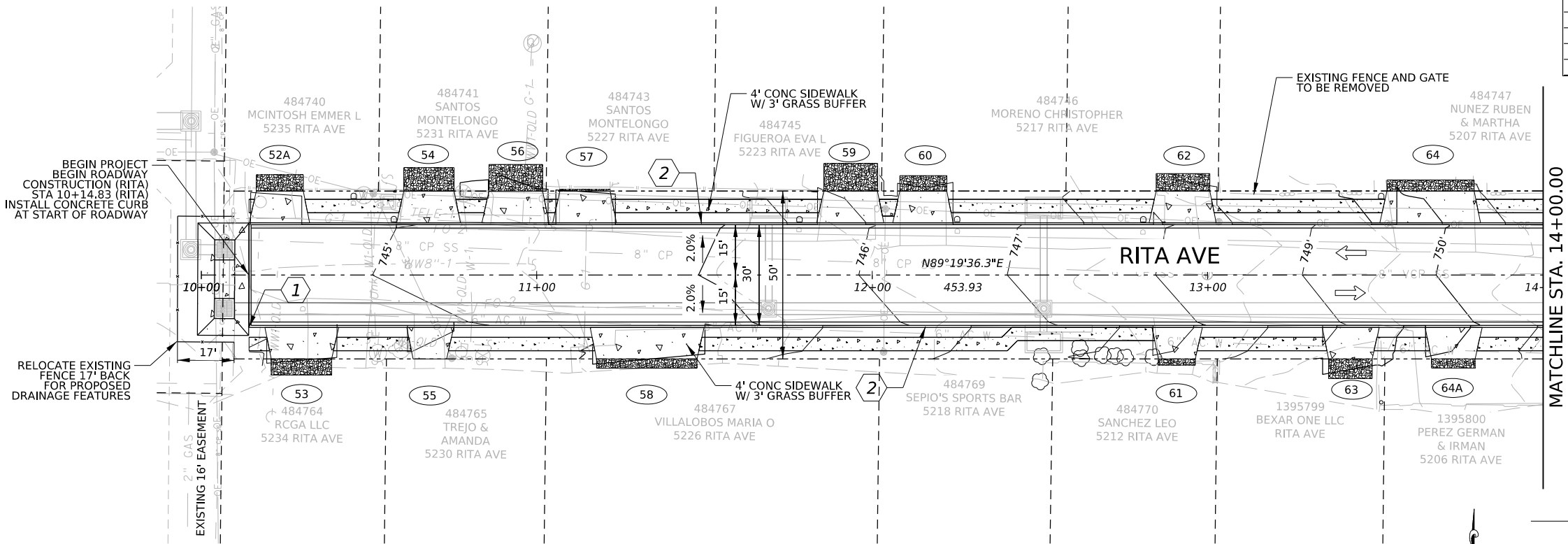
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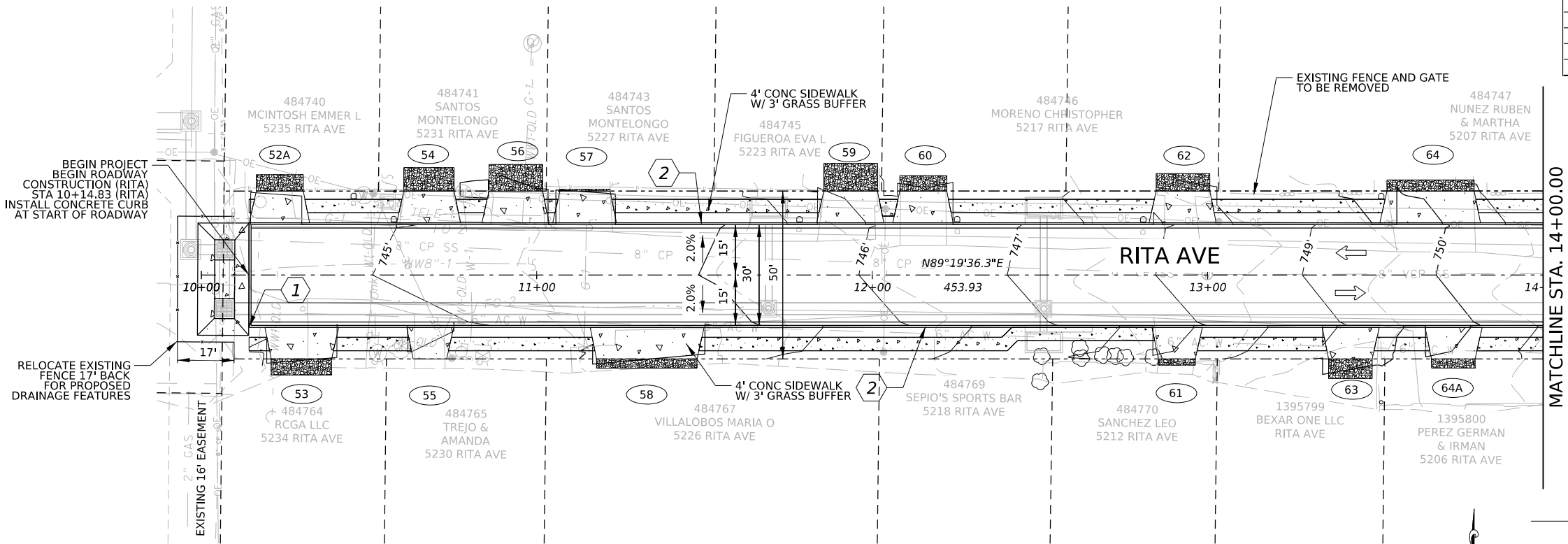
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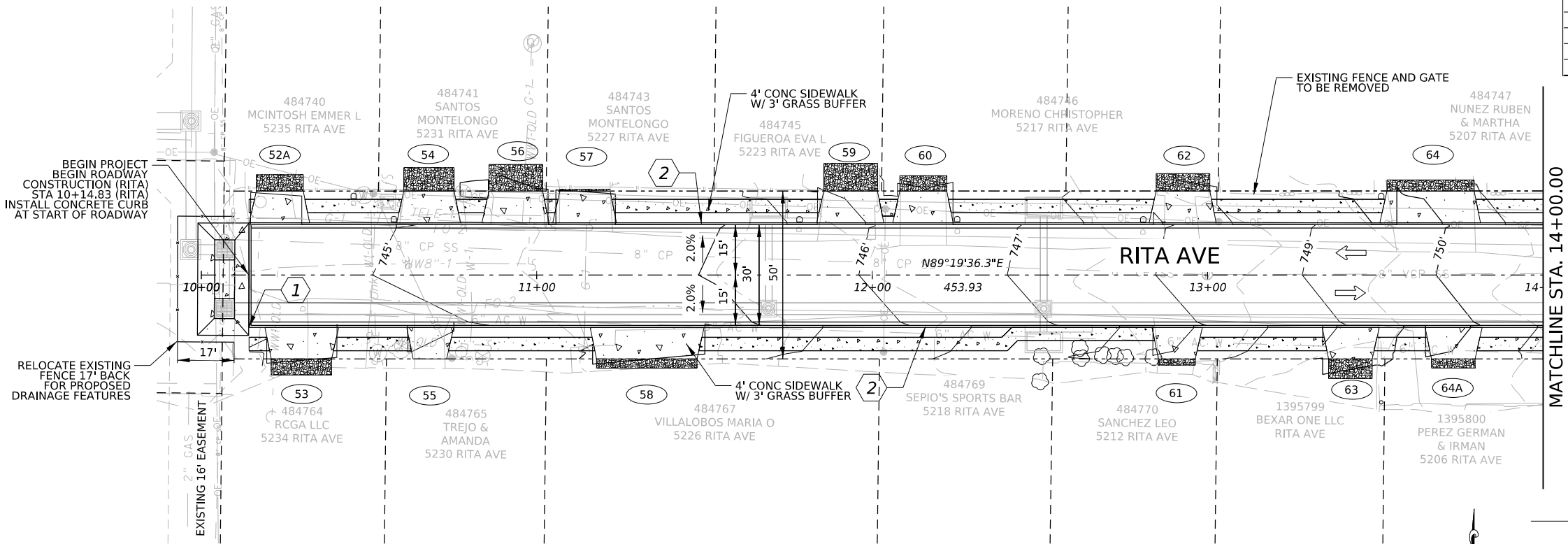
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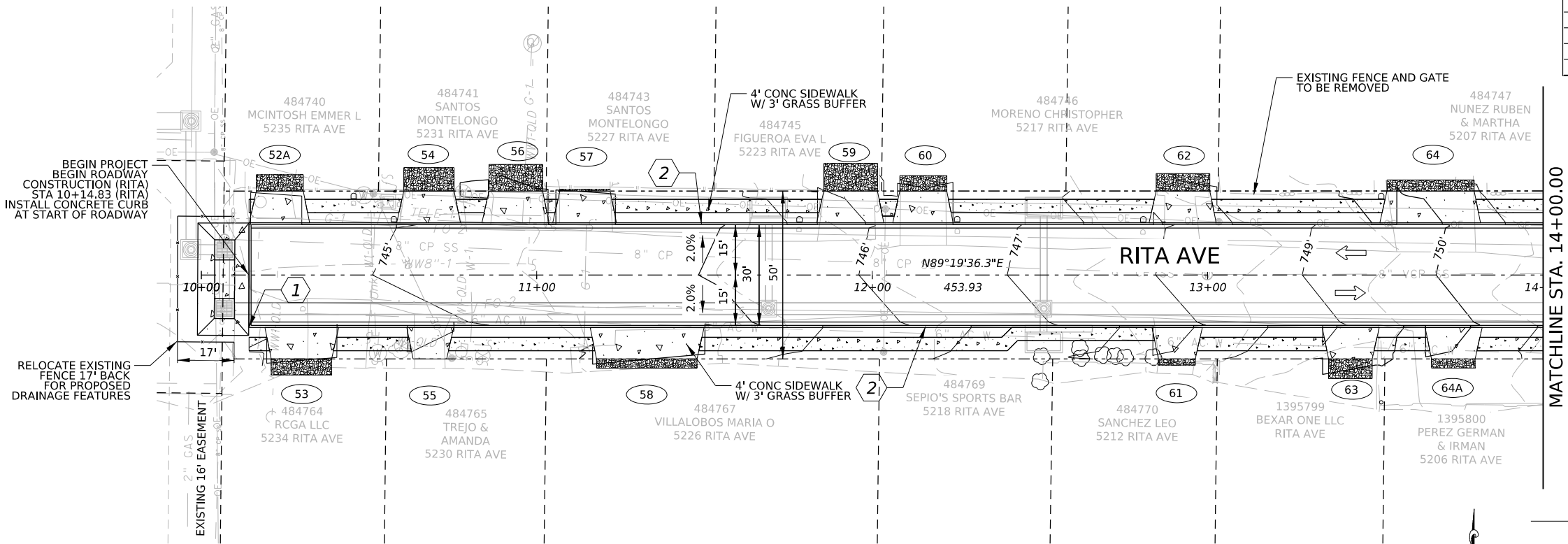
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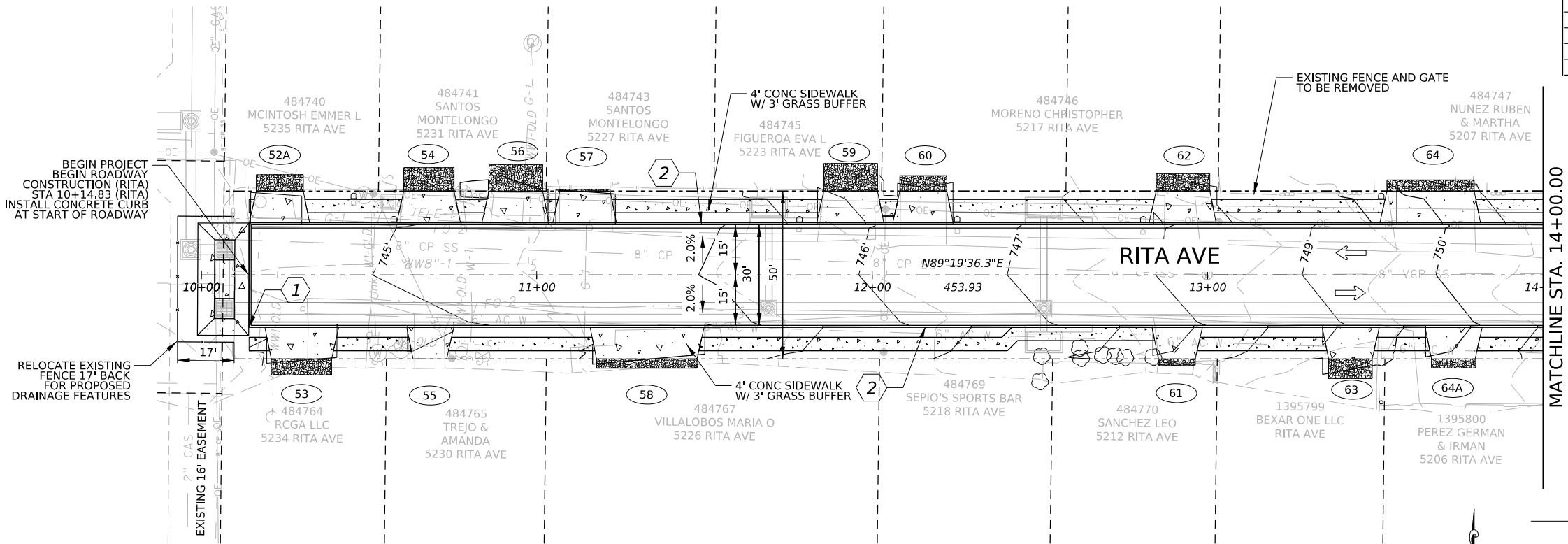
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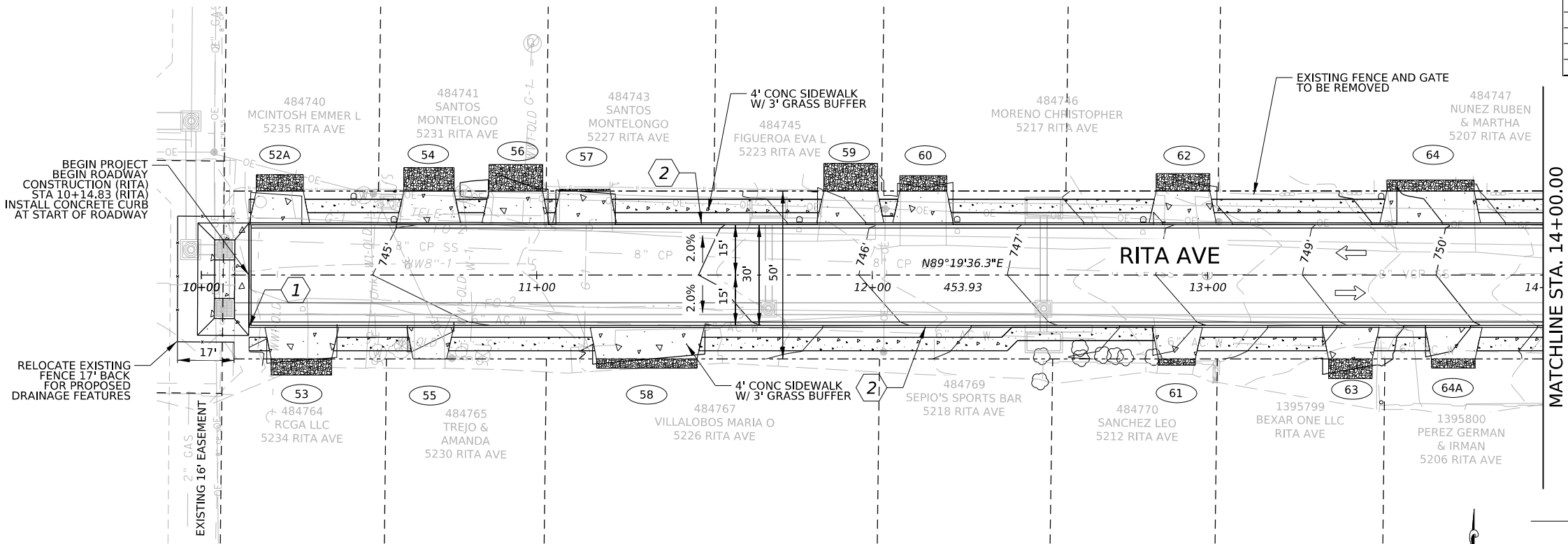
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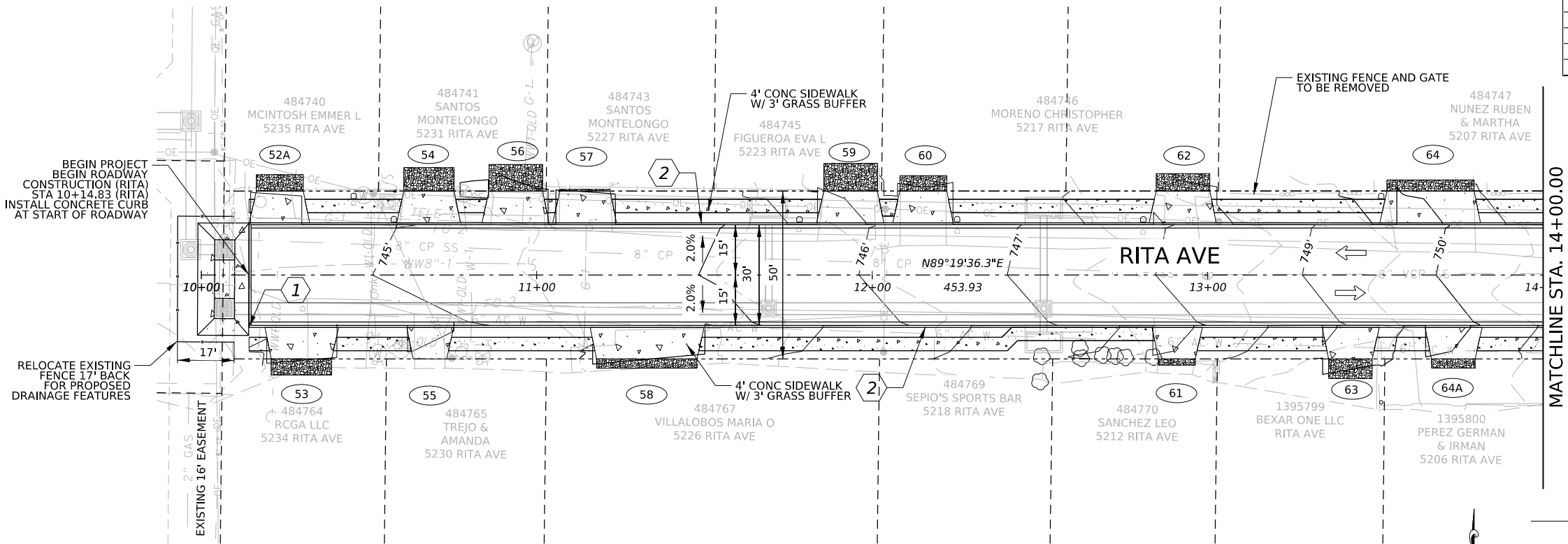
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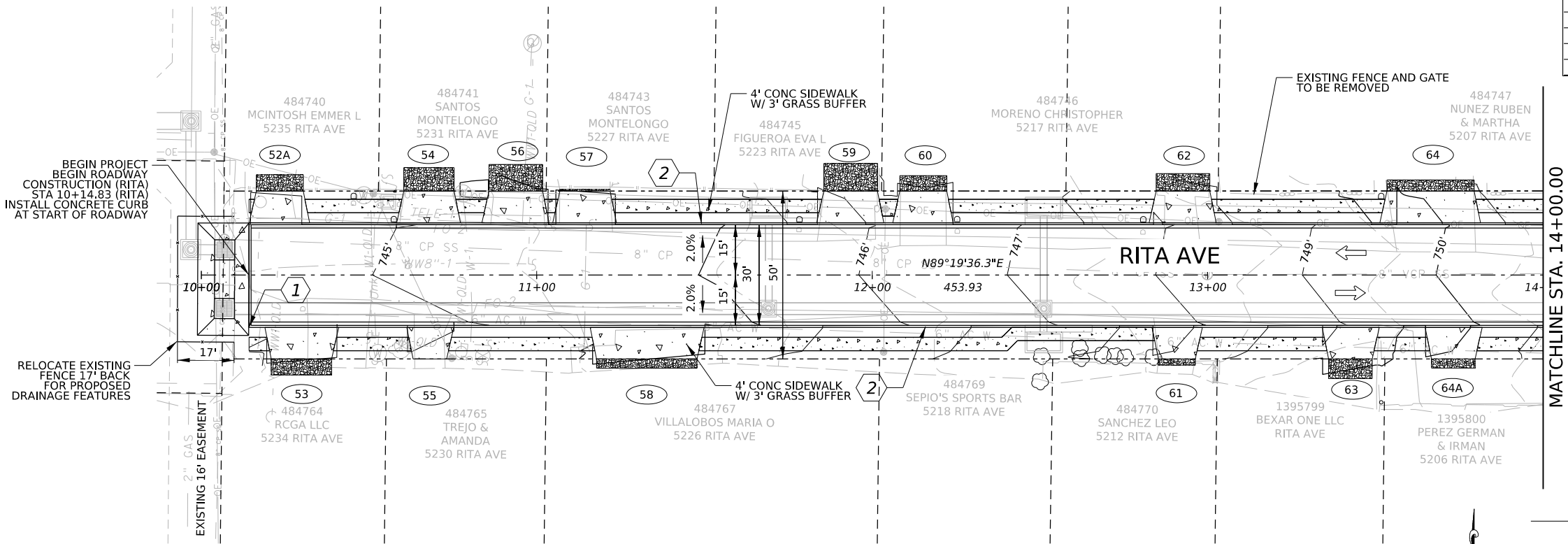
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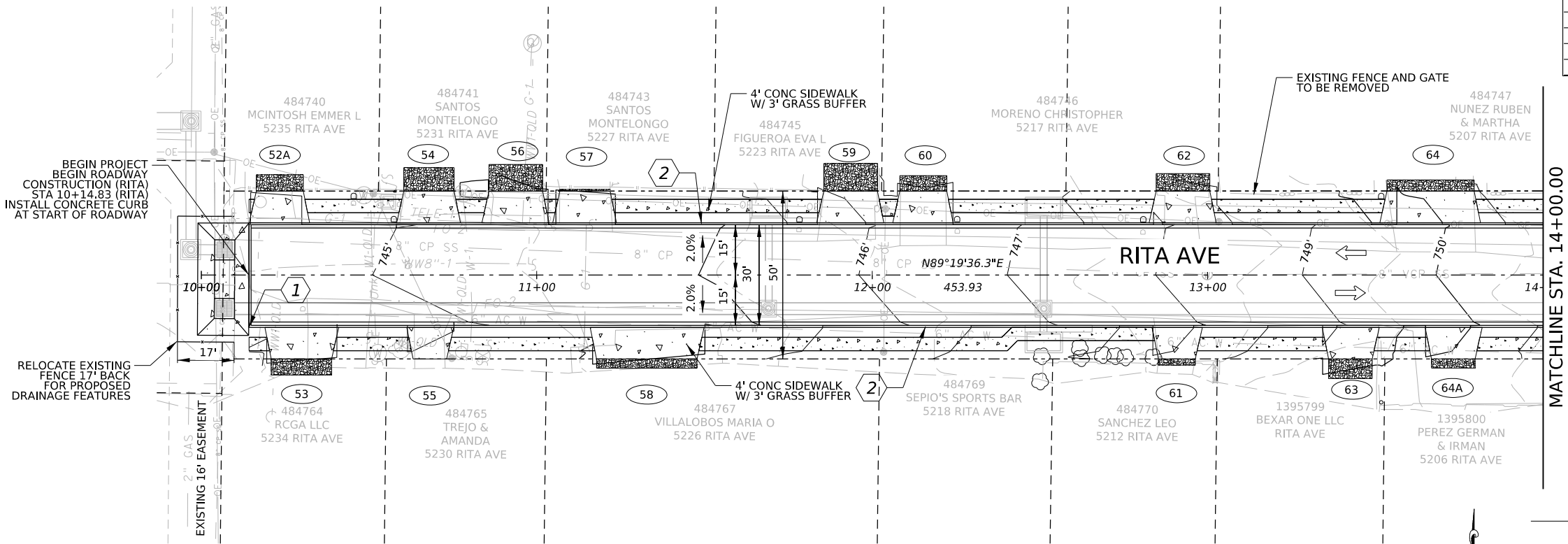
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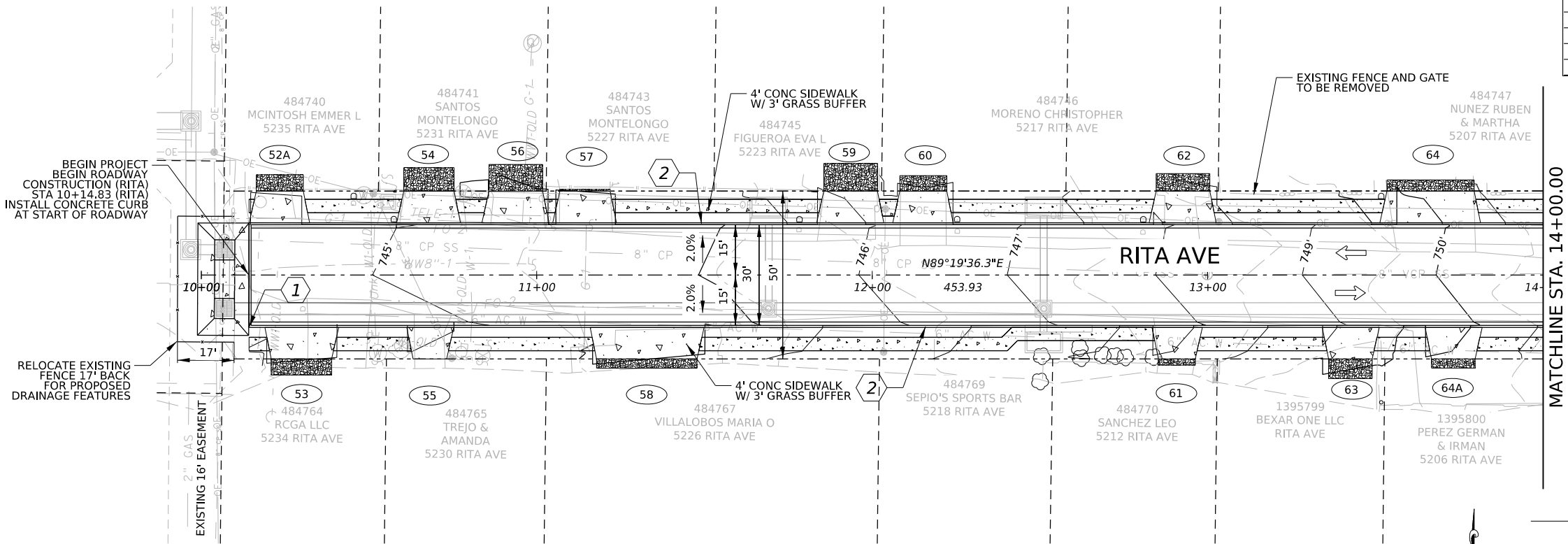
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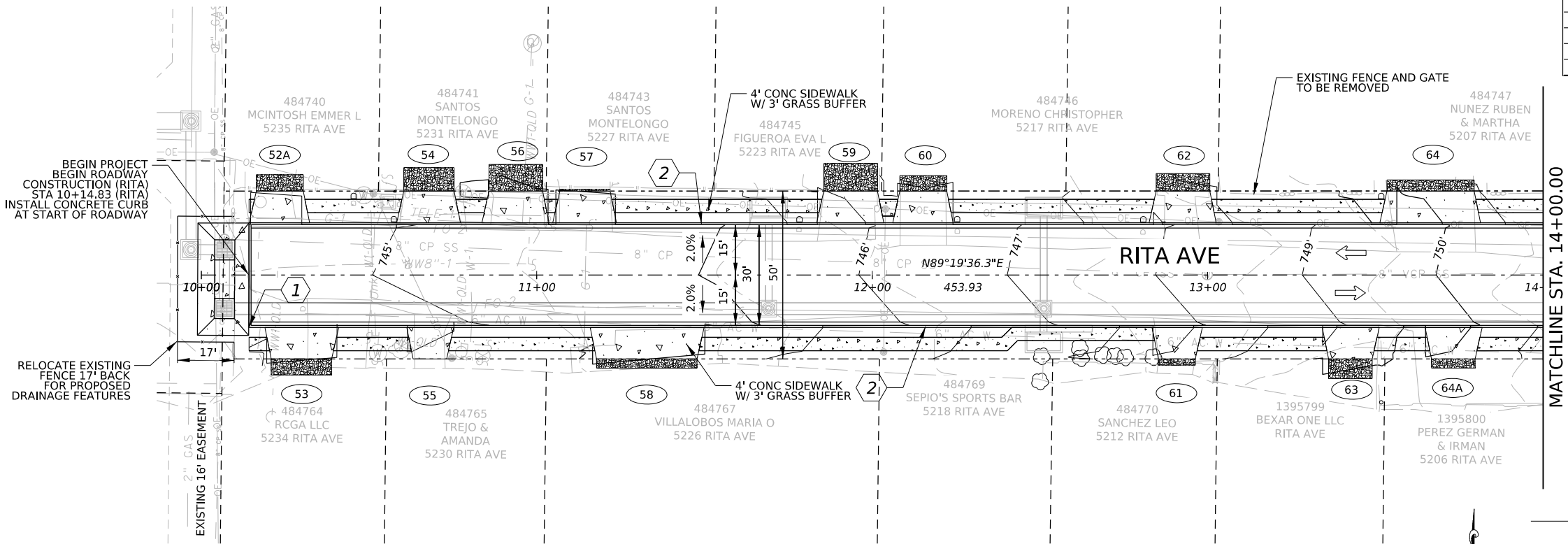
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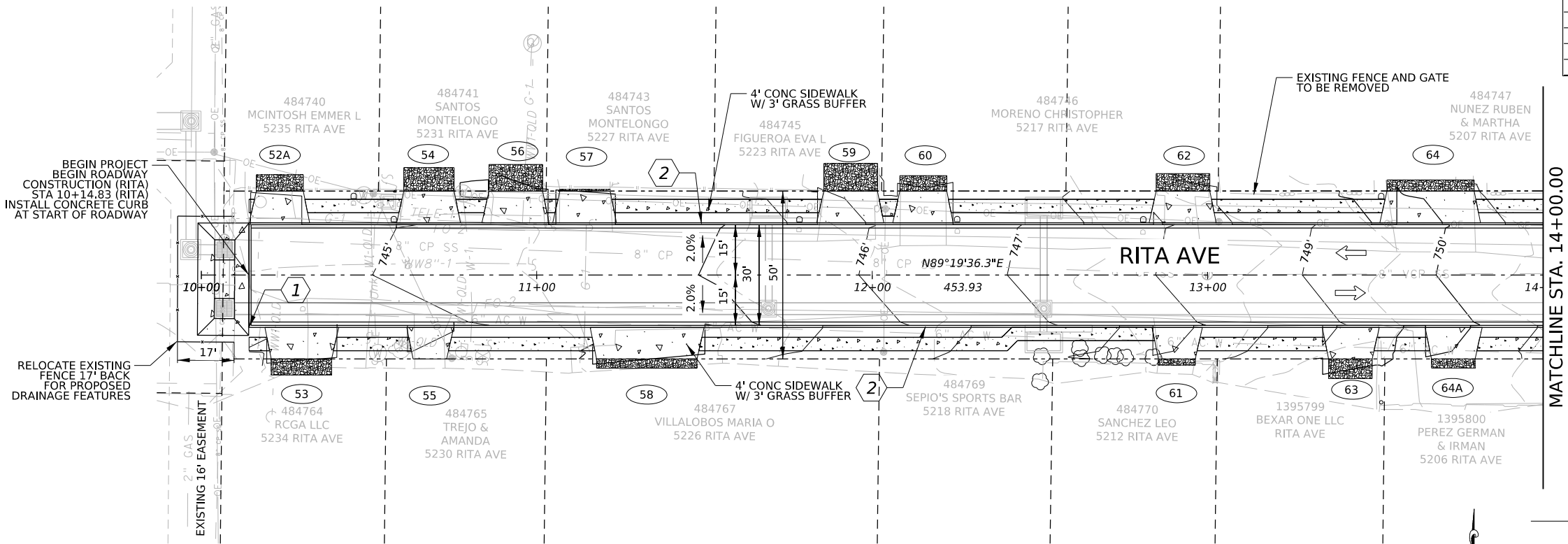
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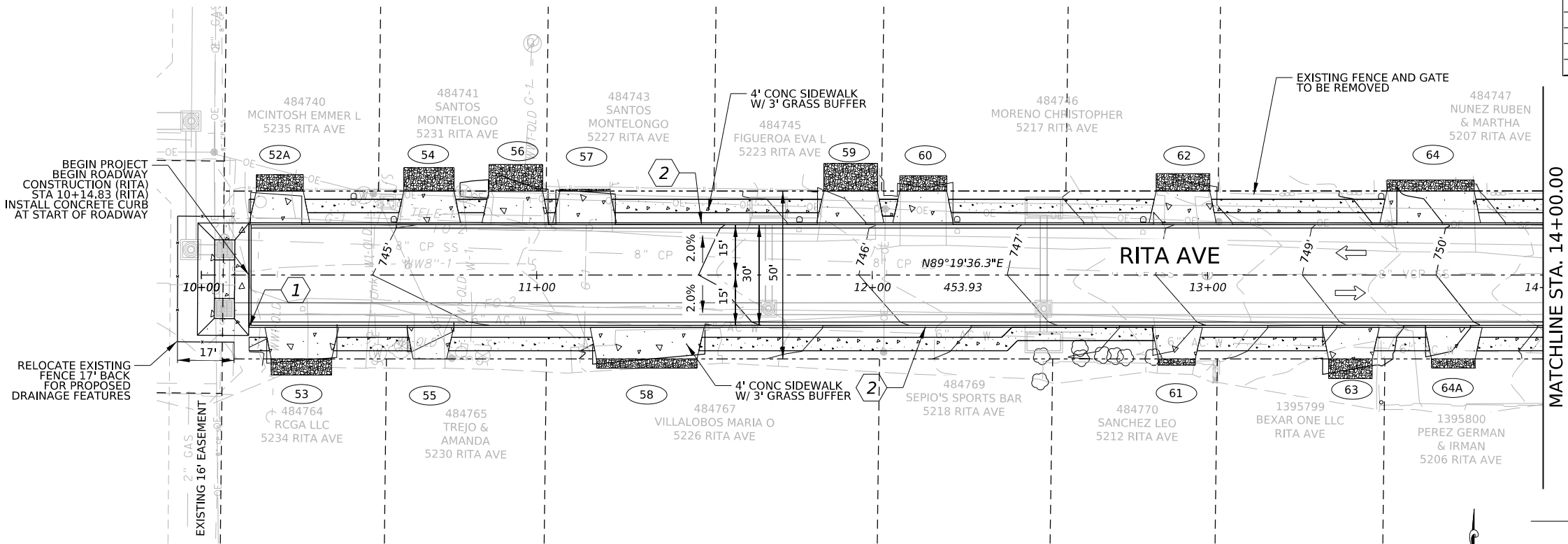
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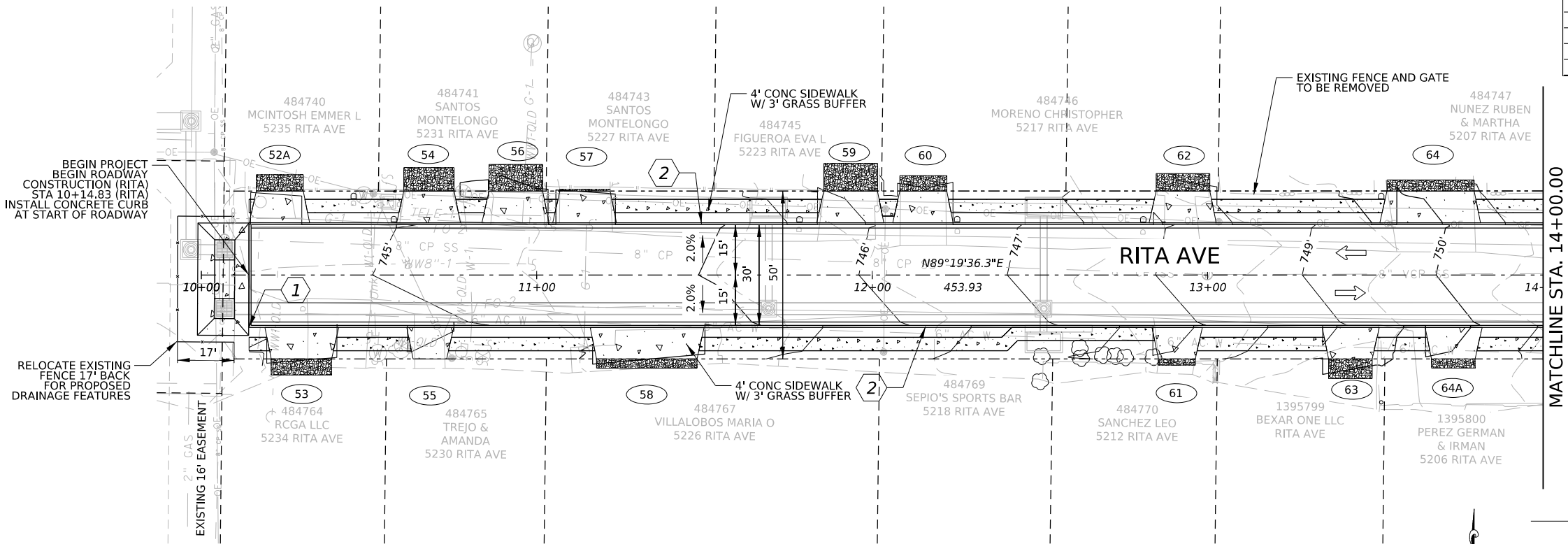
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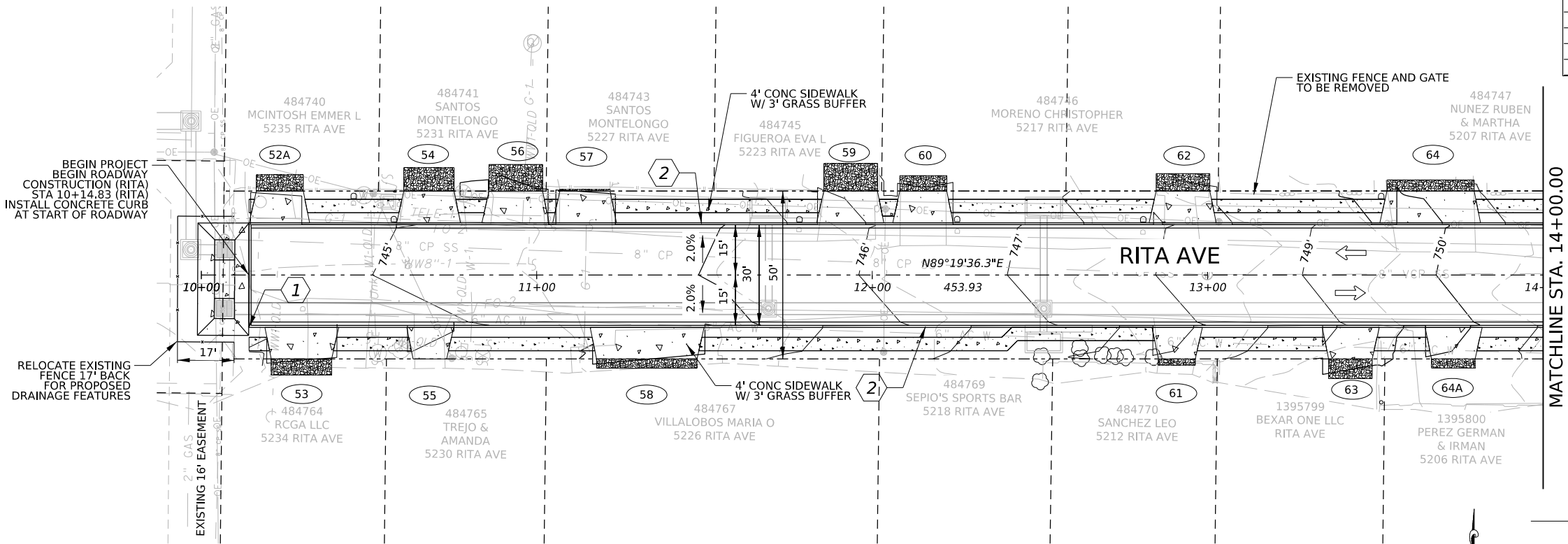
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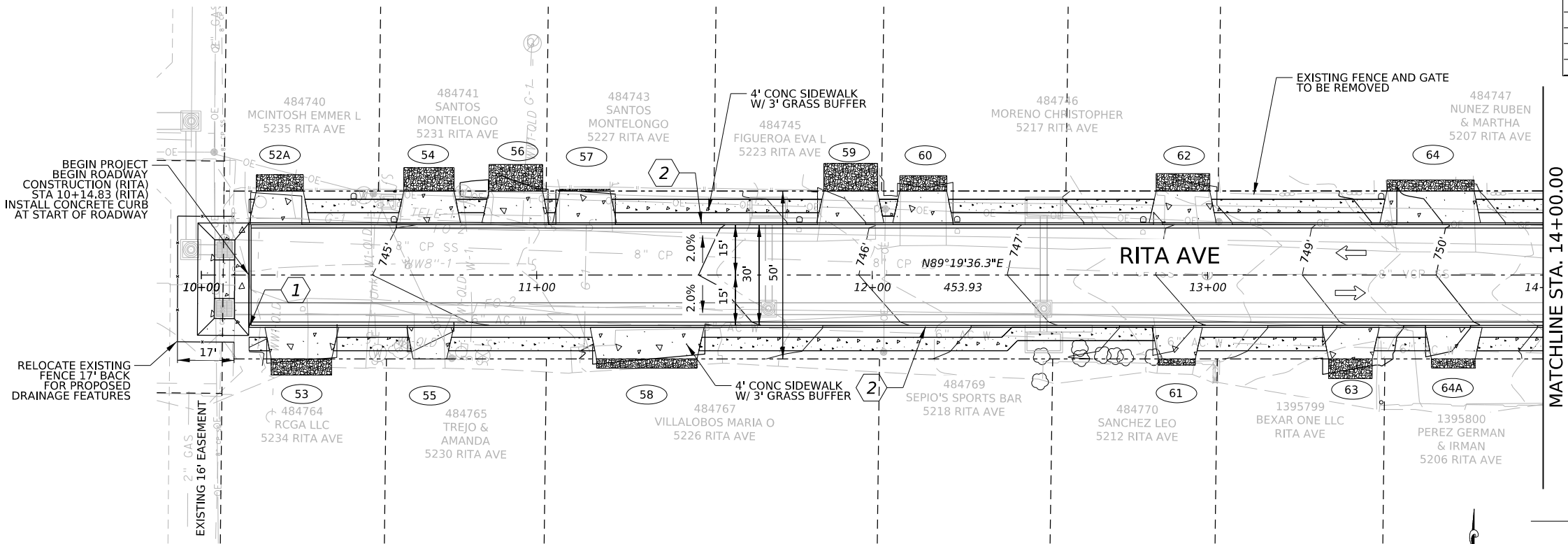
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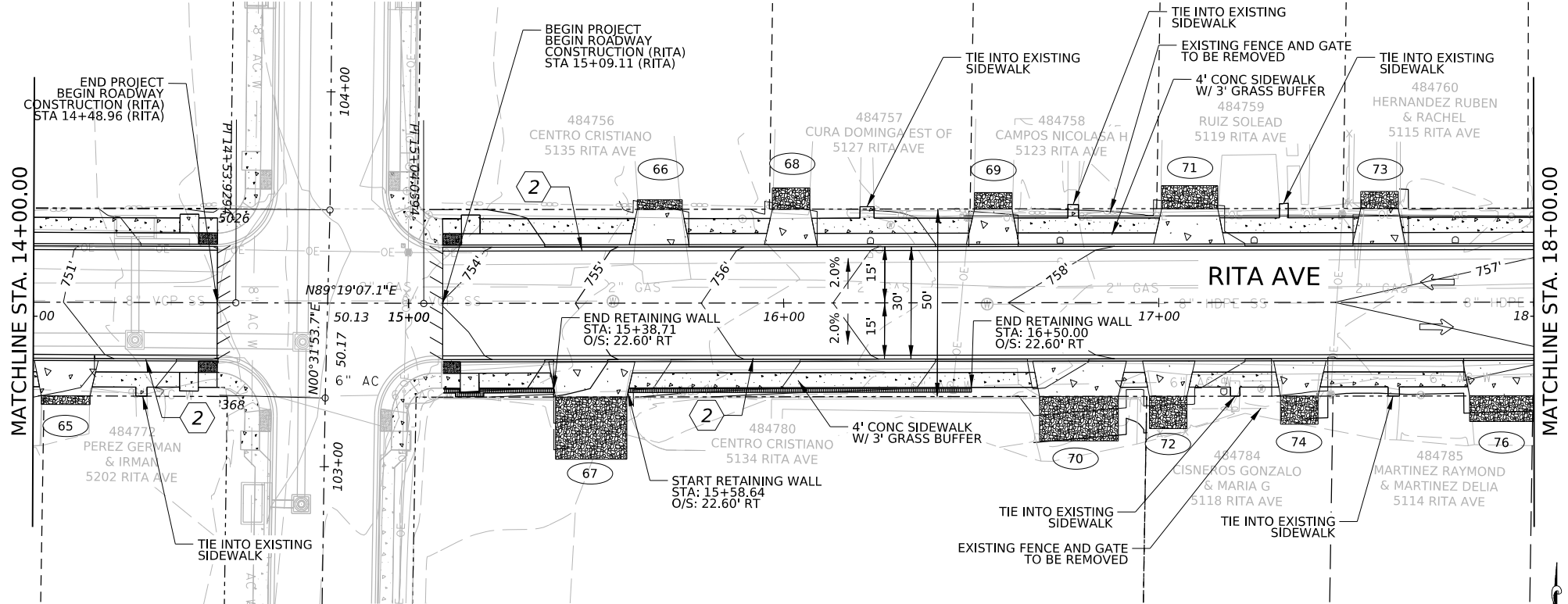
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CONSTRUCTION (RITA)
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INSTALL CONCRETE CURB
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RELOCATE EXISTING FENCE 17' BACK FOR PROPOSED DRAINAGE FEATURES

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INSTALL CONCRETE CURB
AT START OF ROADWAY





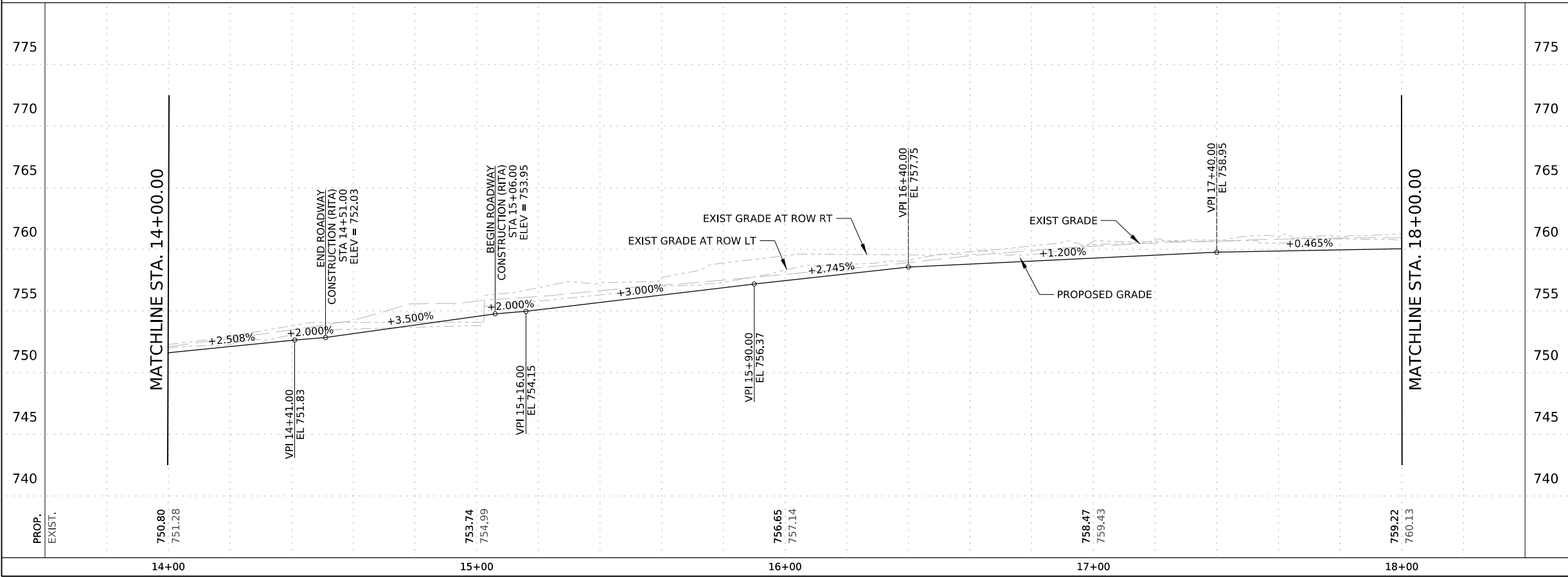
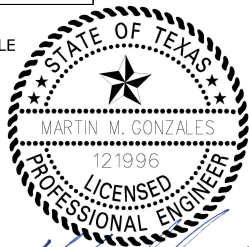
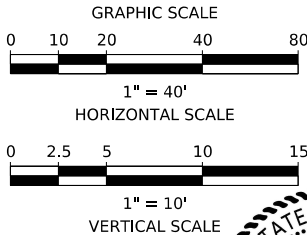
| ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
|----------|---|------|----------|
| 104.1 | STREET EXCAVATION (1,000 CY < X < 10,000 CY) | CY | 279 |
| 203.1 | TACK COAT | GAL | 211 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (3.5" COMP DEPTH TOP) | SY | 1057 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (1.5" COMP DEPTH TOP) | SY | 1180 |
| 240.4 | WARM MIX ASPHALTIC CONCRETE TYPE D (2.0" COMP DEPTH) | SY | 1333 |
| 307.1 | CONCRETE STRUCTURE (RETAINING WALLS) | CY | 24 |
| 500.4 | CONCRETE CURB AND GUTTER (<1,000 LF) | LF | 680 |
| 502.1 | CONCRETE SIDEWALKS (1,000 SY < X < 10,000 SY) | SY | 348 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (100 SY < X < 10,000 SY) | SY | 297 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (PENETRATION) | SY | 127 |
| 513.1 | REMOVING AND RELOCATING MAIL BOXES (<50 UNITS) | EA | 5 |
| 507.1 | CHAIN LINK WIRE FENCE (4' HIGH) | LF | 70 |
| 523.1 | ADJUSTING CHAIN LINK VEHICULAR GATE (<50 UNITS) | EA | 4 |

| LEGEND | | PROFILE LEGEND | |
|------------------------|--|------------------|--|
| PROP DRWY PNTR | | PROPOSED PROFILE | |
| PROP CONC SDWK | | ROW LT | |
| MILL AND OVERLAY | | ROW RT | |
| CROSS SLOPE TRANSITION | | EXISTING GROUND | |
| PROPERTY LINE | | TRAFFIC FLOW | |
| EXIST ROW | | PROPOSED MAILBOX | |
| DRIVEWAY | | | |

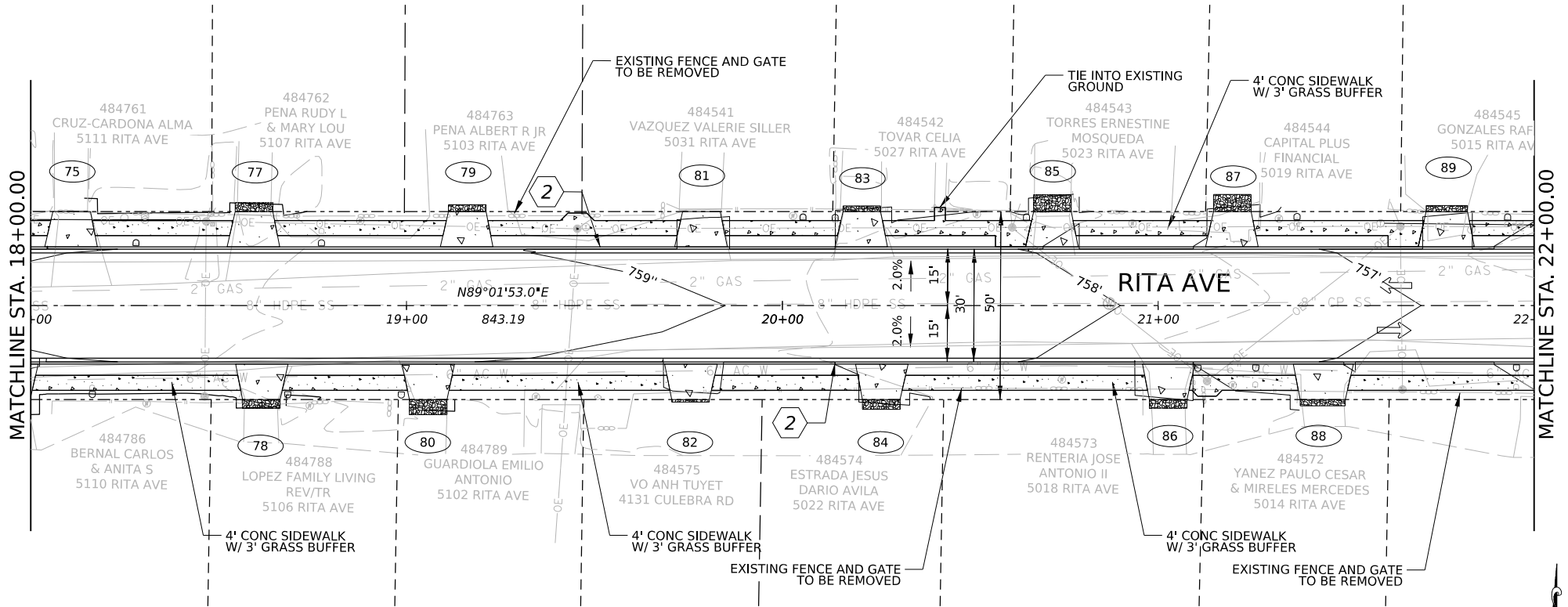
- NOTES
- ALL RADII ARE MEASURED TO THE FACE OF CURB.
 - REFER TO COSA STANDARD "CONCRETE DRIVEWAY STANDARD" FOR DRIVEWAY PENETRATION INFORMATION.
 - PROPOSED SIDEWALK, CURB, AND PEDESTRIAN RAMPS SHALL MATCH GRADES AND ELEVATIONS AT ALL TIE-IN LOCATIONS
 - TY IV RAMP WILL BE MODIFIED TO BE PLACED ON A RADIUS. RAMP SHALL HAVE A 2' DETECTABLE WARNING AREA ADJACENT TO A 5X5 LANDING PAD. SIDEWALK WILL RAMP UP AT A MAX SLOPE OF 8.33% IN BOTH DIRECTIONS FROM THE LANDING PAD. AN ADDITIONAL 5X5 LANDING PAD WILL BE PLACED AT THE TOPS OF EACH RAMP. LANDING PADS HAVE A MAX SLOPE OF 2% IN EACH DIRECTION.

KEY NOTES

- 7" CURB
- 7" CURB/GUTTER
- RETAINING WALL
- 7' SDWLK



| 3 | | | |
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| NO. | REVISION | BY | DATE |
| | | | |
| 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS RITA ST. PLAN AND PROFILE STA 14+00.00 TO STA 18+00.00 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 67 |



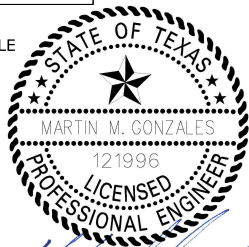
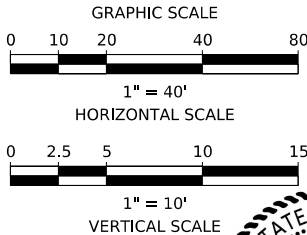
| ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
|----------|---|------|----------|
| 104.1 | STREET EXCAVATION (1,000 CY < X < 10,000 CY) | CY | 328 |
| 203.1 | TACK COAT | GAL | 249 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (3.5" COMP DEPTH TOP) | SY | 1244 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (1.5" COMP DEPTH TOP) | SY | 1389 |
| 240.4 | WARM MIX ASPHALTIC CONCRETE TYPE D (2.0" COMP DEPTH) | SY | 1520 |
| 500.4 | CONCRETE CURB AND GUTTER (<1,000 LF) | LF | 800 |
| 502.1 | CONCRETE SIDEWALKS (1,000 SY < X < 10,000 SY) | SY | 287 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (100 SY < X < 10,000 SY) | SY | 333 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (PENETRATION) | SY | 34 |
| 513.1 | REMOVING AND RELOCATING MAIL BOXES (< 50 UNITS) | EA | 13 |
| 507.1 | CHAIN LINK WIRE FENCE (4' HIGH) | LF | 172 |
| 523.1 | ADJUSTING CHAIN LINK VEHICULAR GATE (<50 UNITS) | EA | 3 |

| LEGEND | | PROFILE LEGEND | |
|------------------------|--|------------------|--|
| PROP DRWY PNTR | | PROPOSED PROFILE | |
| PROP CONC SDWK | | ROW LT | |
| MILL AND OVERLAY | | ROW RT | |
| CROSS SLOPE TRANSITION | | EXISTING GROUND | |
| PROPERTY LINE | | TRAFFIC FLOW | |
| EXIST ROW | | PROPOSED MAILBOX | |
| DRIVEWAY | | | |

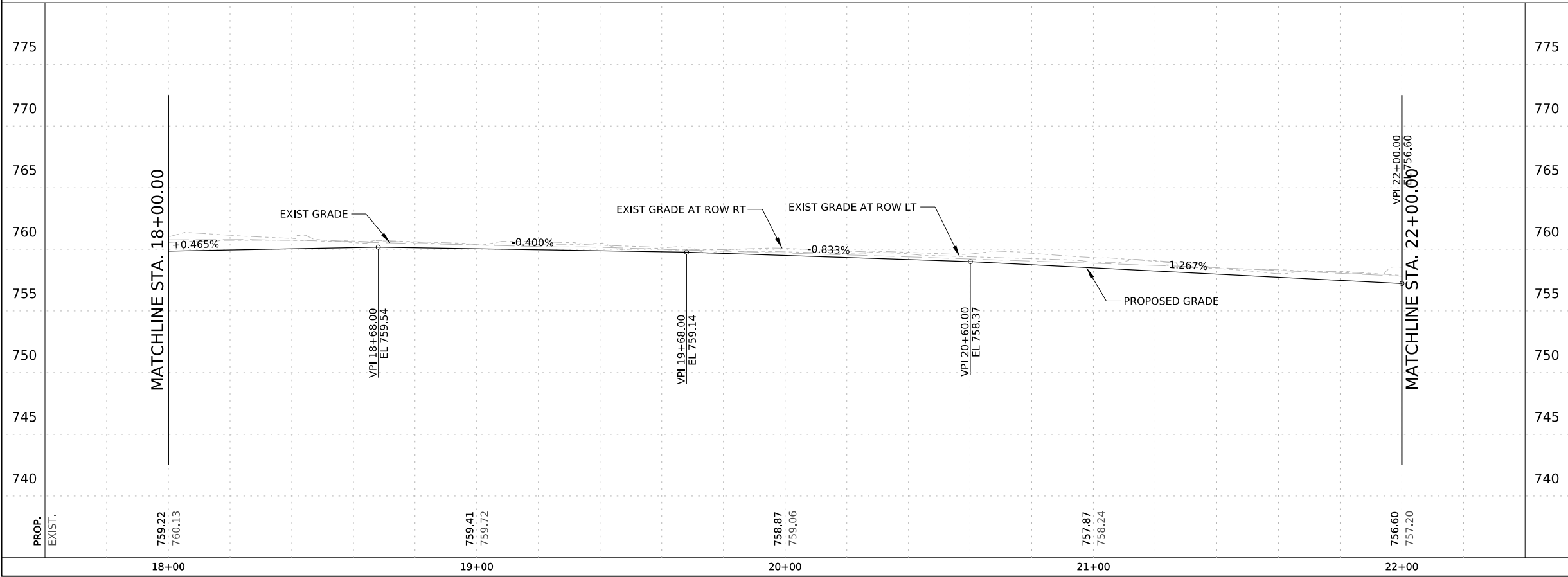
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KEY NOTES

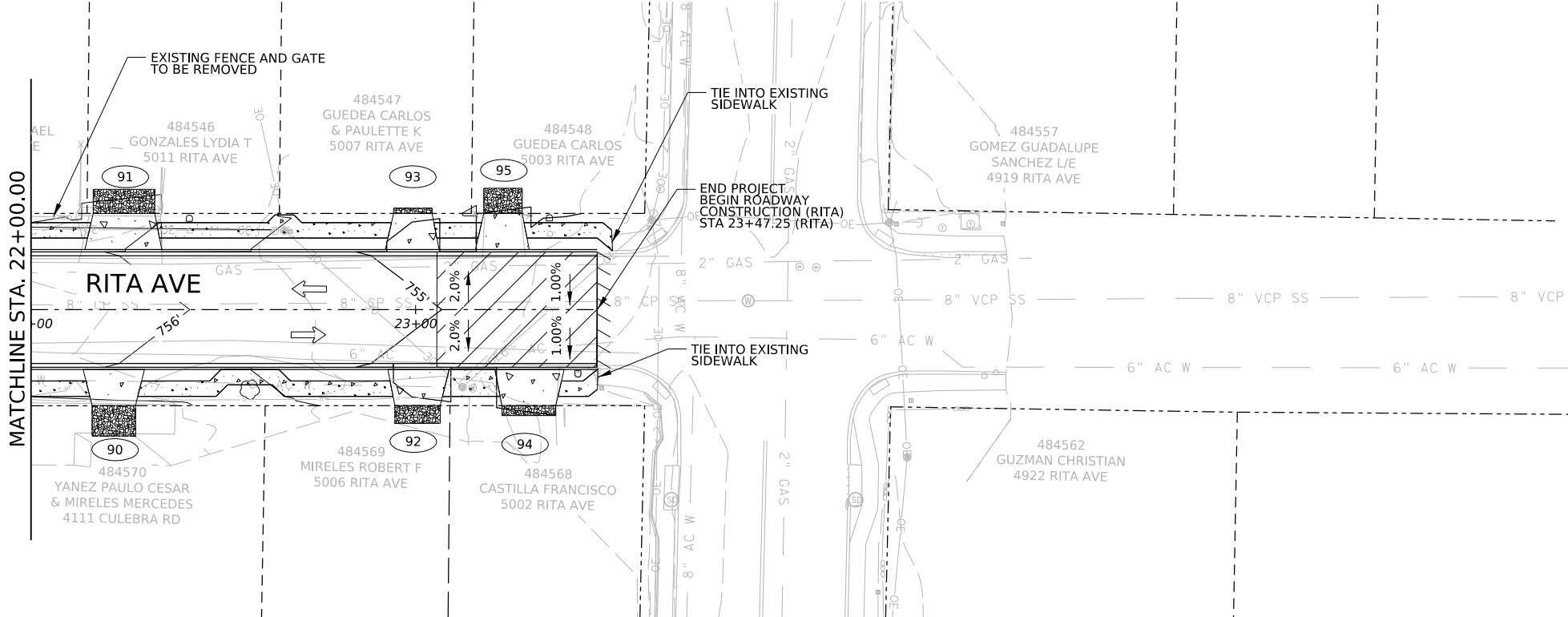
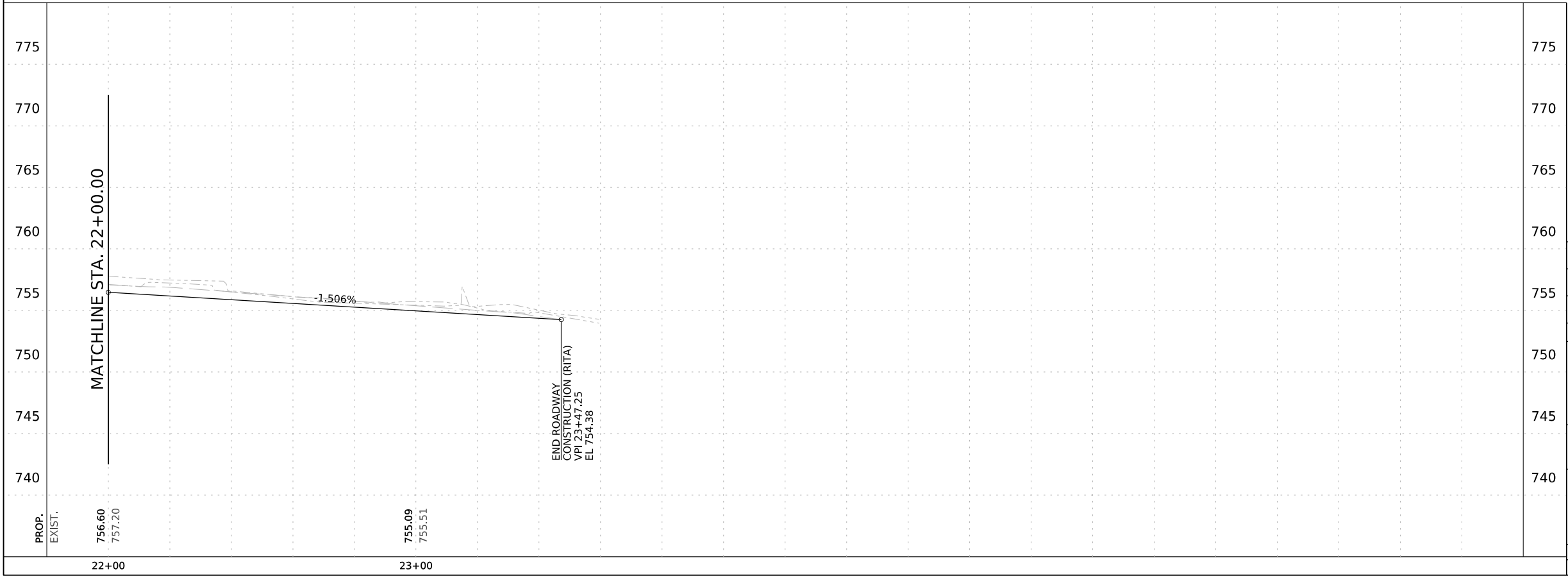
- 7" CURB
- 7" CURB/GUTTER
- RETAINING WALL
- 7' SDWLK



5.28.25



| | | | |
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| NO. | REVISION | BY | DATE |
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| 3 | | | |
| <div><div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div><div>4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 76229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622</div></div> | | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS RITA ST. PLAN AND PROFILE STA 18+00.00 TO STA 22+00.00 | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 | |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 68 |



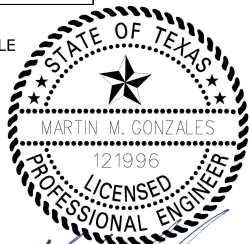
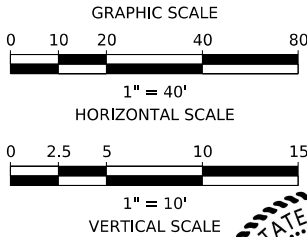
| ITEM NO. | DESCRIPTION | UNIT | QUANTITY |
|----------|---|------|----------|
| 104.1 | STREET EXCAVATION (1,000 CY < X < 10,000 CY) | CY | 121 |
| 203.1 | TACK COAT | GAL | 92 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (3.5" COMP DEPTH TOP) | SY | 458 |
| 240.2 | WARM MIX ASPHALTIC CONCRETE TYPE B (1.5" COMP DEPTH TOP) | SY | 511 |
| 240.4 | WARM MIX ASPHALTIC CONCRETE TYPE D (2.0" COMP DEPTH) | SY | 734 |
| 500.4 | CONCRETE CURB AND GUTTER (<1,000 LF) | LF | 295 |
| 502.1 | CONCRETE SIDEWALKS (1,000 SY < X < 10,000 SY) | SY | 106 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (100 SY < X < 10,000 SY) | SY | 148 |
| 503.1 | PORTLAND CEMENT CONCRETE DRIVEWAYS (PENETRATION) | SY | 40 |
| 513.1 | REMOVING AND RELOCATING MAIL BOXES (< 50 UNITS) | EA | 3 |
| 507.1 | CHAIN LINK WIRE FENCE (4' HIGH) | LF | 92 |
| 523.1 | ADJUSTING CHAIN LINK VEHICULAR GATE (<50 UNITS) | EA | 1 |

| LEGEND | | PROFILE LEGEND | |
|------------------------|--|------------------|--|
| PROP DRWY PNTR | | PROPOSED PROFILE | |
| PROP CONC SDWK | | ROW LT | |
| MILL AND OVERLAY | | ROW RT | |
| CROSS SLOPE TRANSITION | | EXISTING GROUND | |
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| EXIST ROW | | PROPOSED MAILBOX | |
| DRIVEWAY | | | |

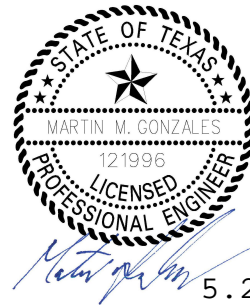
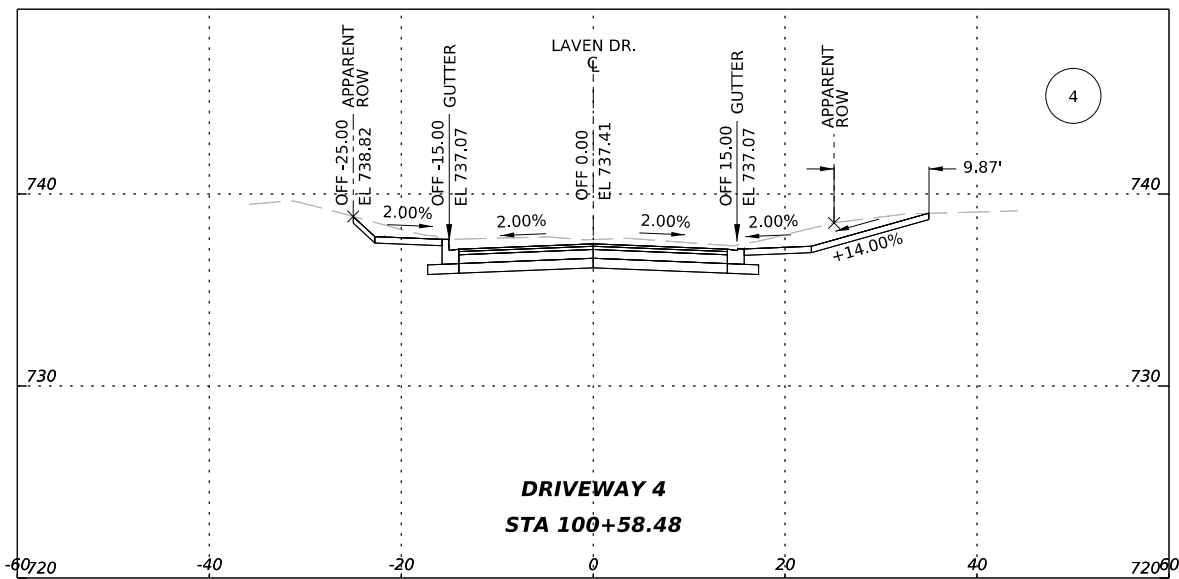
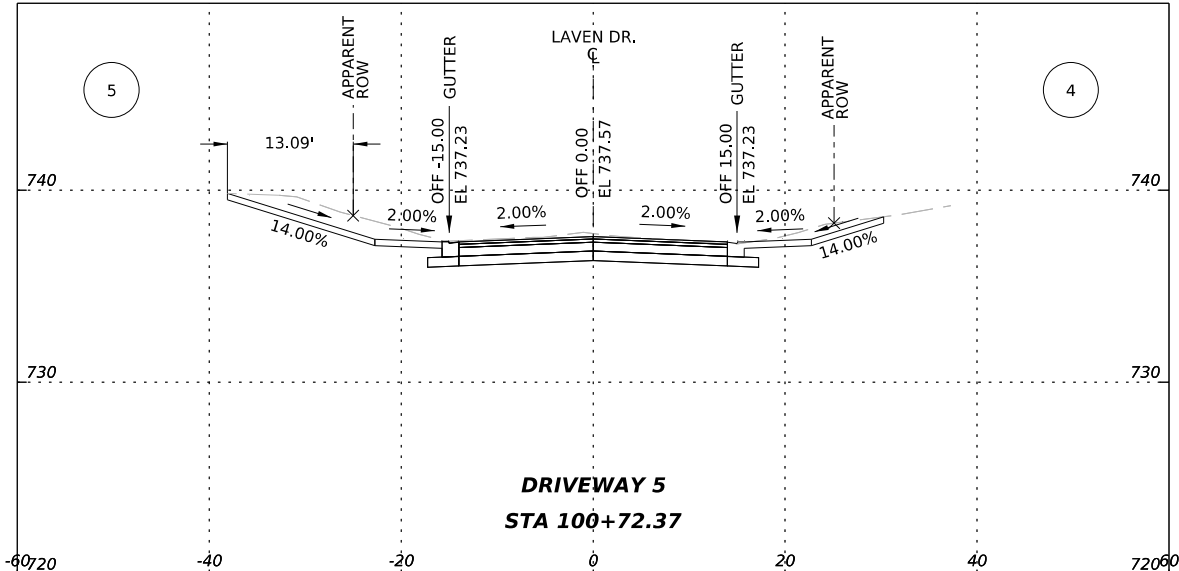
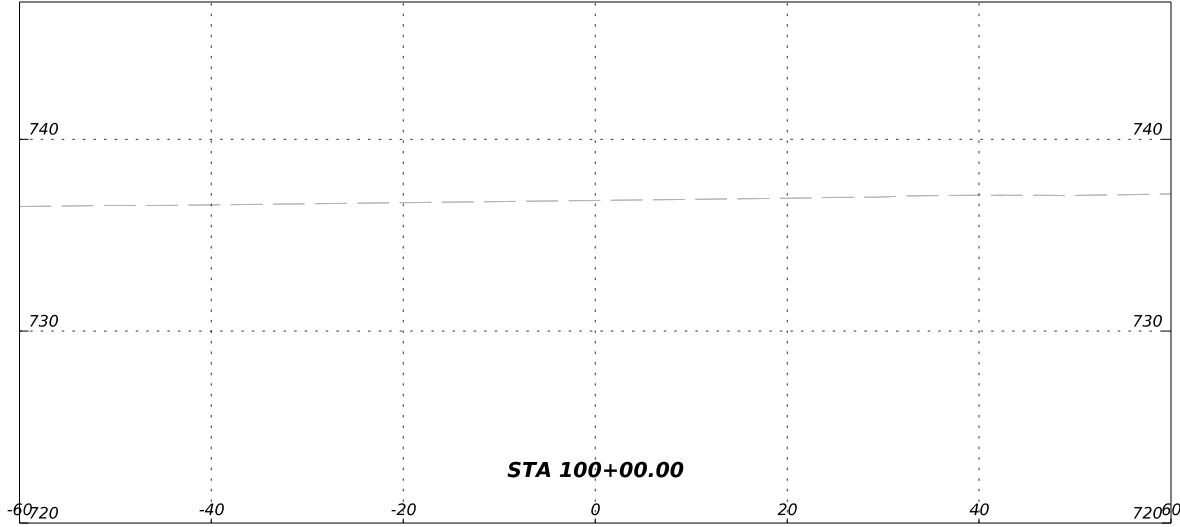
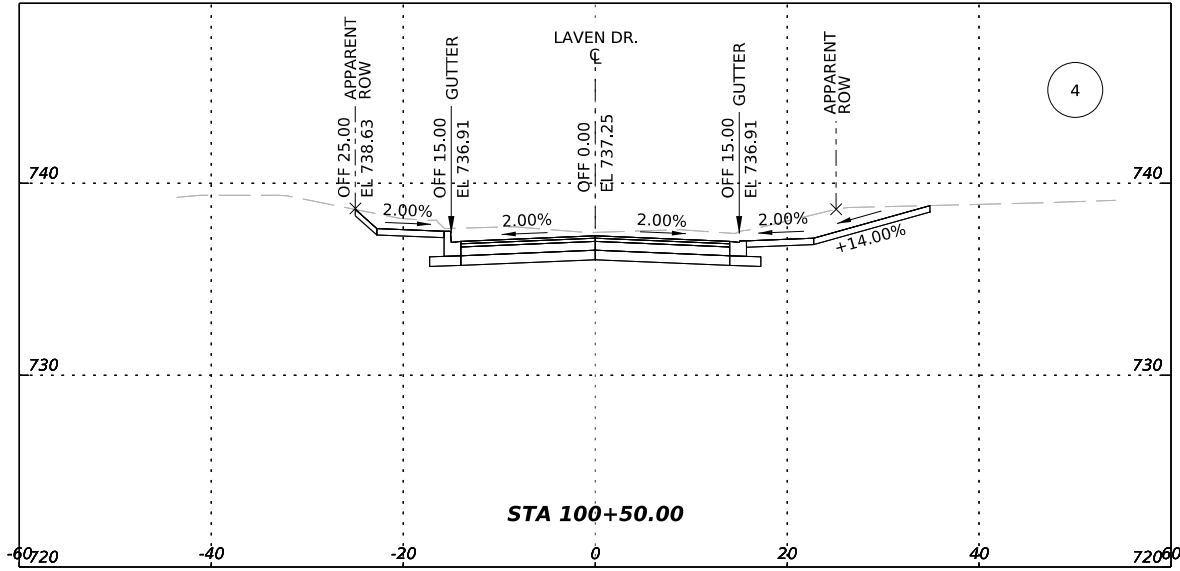
- NOTES
- ALL RADII ARE MEASURED TO THE FACE OF CURB.
 - REFER TO COSA STANDARD "CONCRETE DRIVEWAY STANDARD" FOR DRIVEWAY PENETRATION INFORMATION.
 - PROPOSED SIDEWALK, CURB, AND PEDESTRIAN RAMPS SHALL MATCH GRADES AND ELEVATIONS AT ALL TIE-IN LOCATIONS
 - TY IV RAMP WILL BE MODIFIED TO BE PLACED ON A RADIUS. RAMP SHALL HAVE A 2' DETECTABLE WARNING AREA ADJACENT TO A 5X5 LANDING PAD. SIDEWALK WILL RAMP UP AT A MAX SLOPE OF 8.33% IN BOTH DIRECTIONS FROM THE LANDING PAD. AN ADDITIONAL 5X5 LANDING PAD WILL BE PLACED AT THE TOPS OF EACH RAMP. LANDING PADS HAVE A MAX SLOPE OF 2% IN EACH DIRECTION.

KEY NOTES


- 7" CURB
- 7" CURB/GUTTER
- RETAINING WALL
- 7' SDWLK



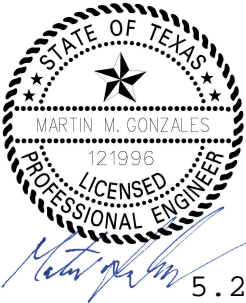
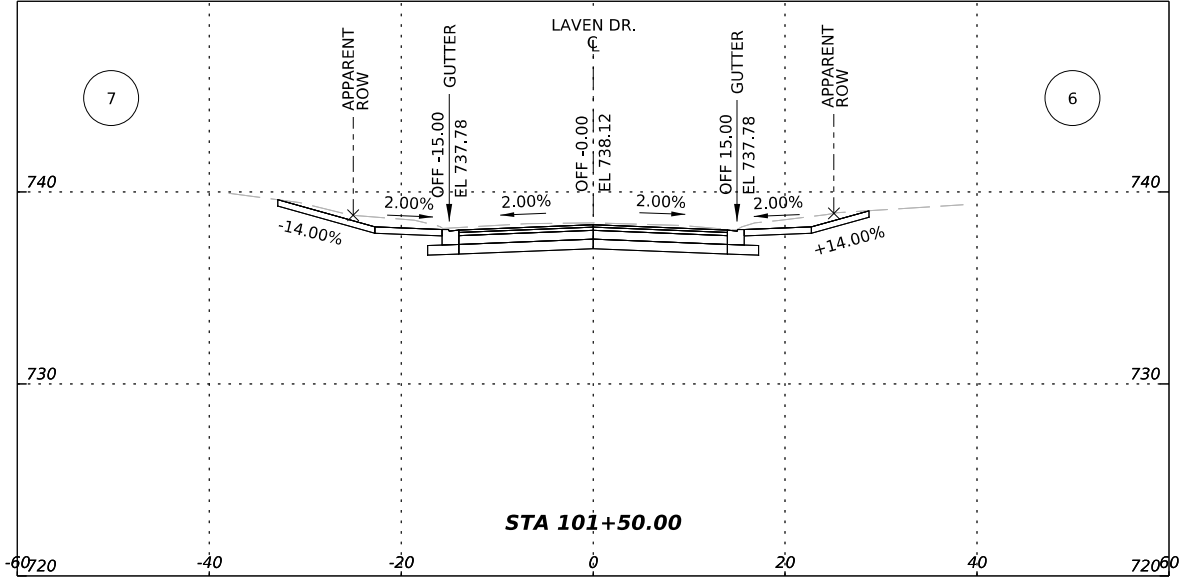
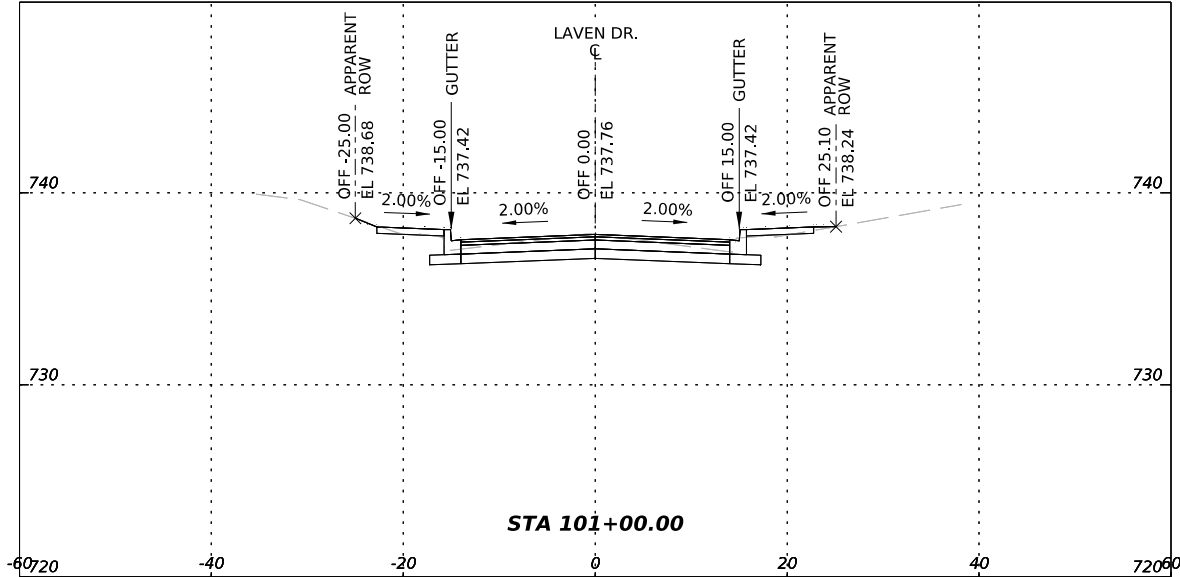
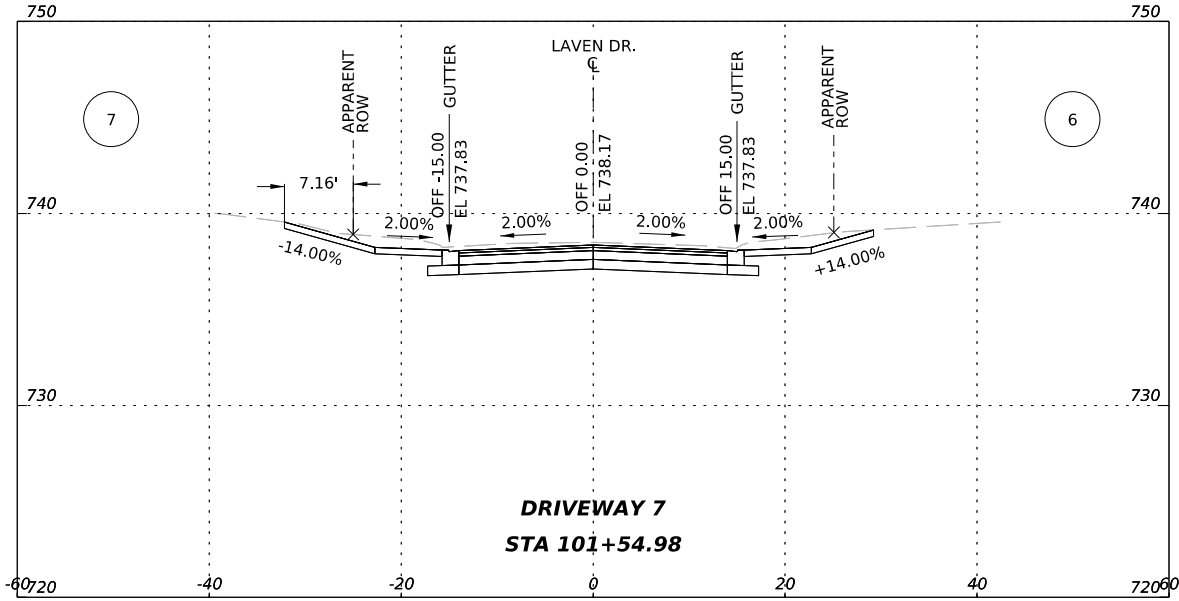
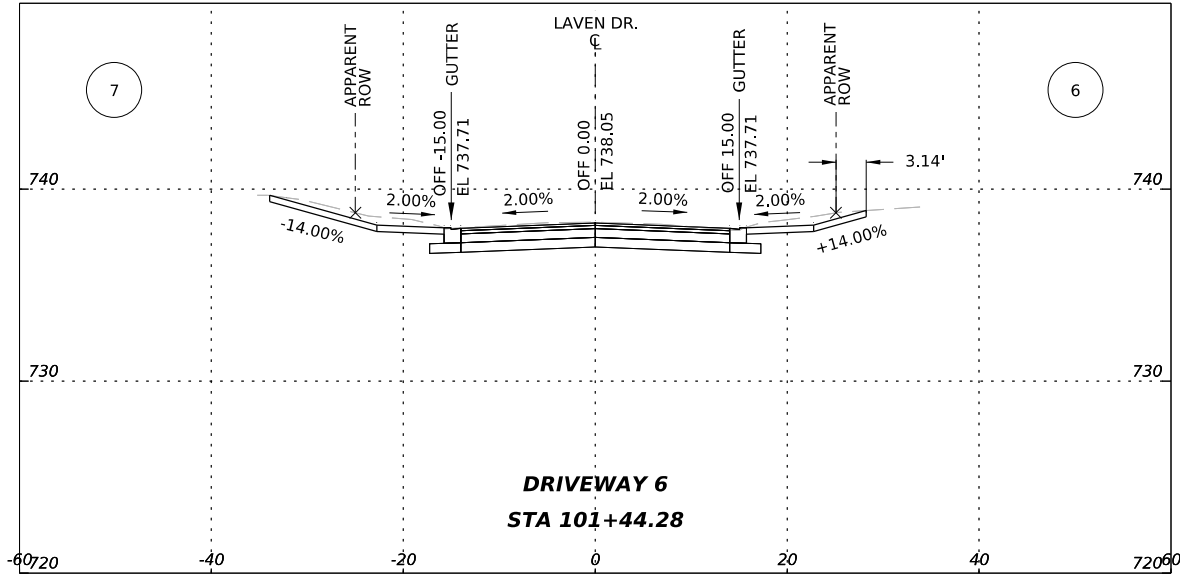
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| NO. | REVISION | BY | DATE |
| <div><div><div><div><div><div></div></div></div><div><div><div></div></div></div><div><div><div></div></div></div></div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div><div><div>4800 FREDERICKSBURG RD SUITE 200SL</div><div>SAN ANTONIO, TX 78229</div><div>P:210-208-9400 F:210-208-9401</div><div>TBPE #F-21809</div><div>TBPLS #10194622</div></div></div> | | | |
| <div><div>CITY OF SAN ANTONIO</div><div>PUBLIC WORKS DEPARTMENT</div><div>CULEBRA AREA STREETS</div><div>RITA ST. PLAN AND PROFILE</div><div>STA 22+00.00 TO END</div></div> | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 69 |




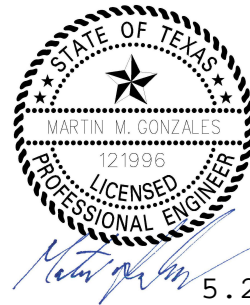
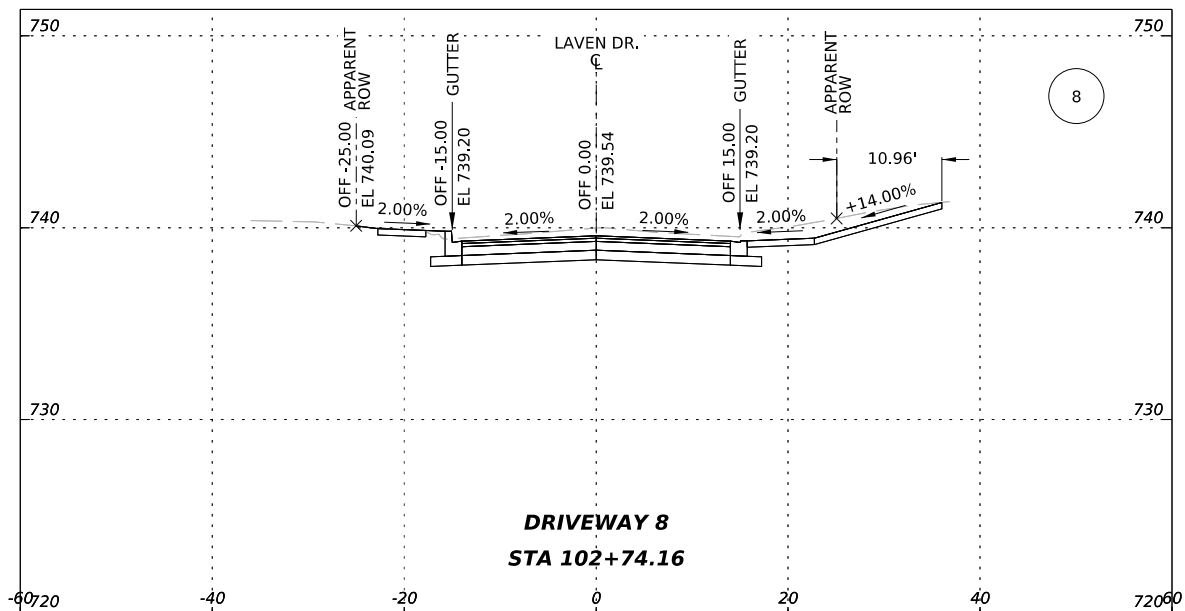
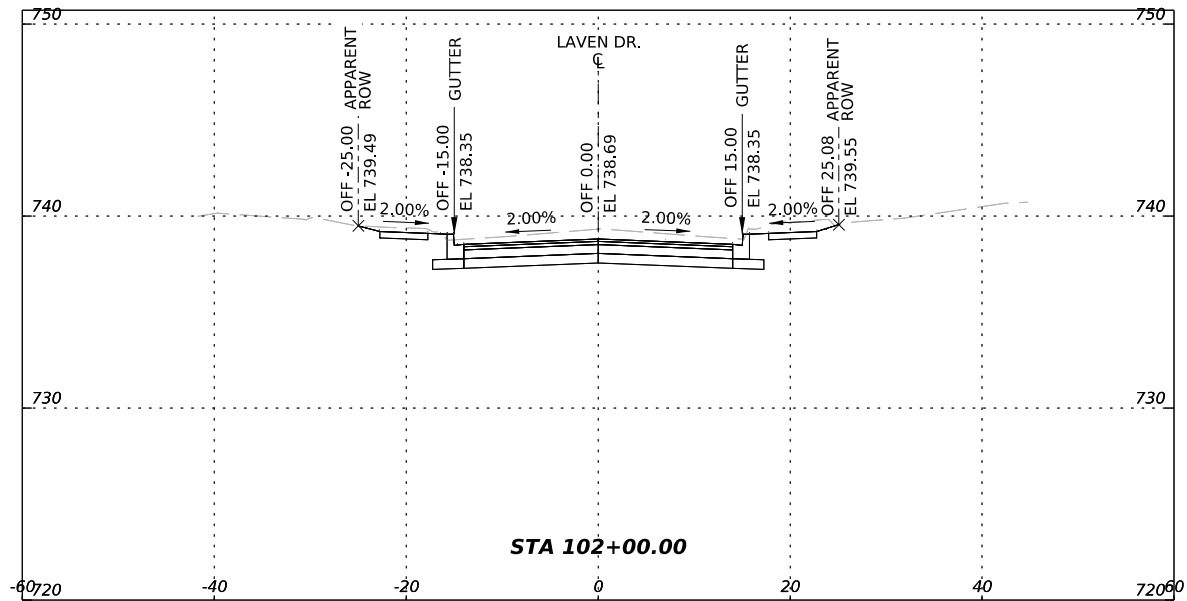
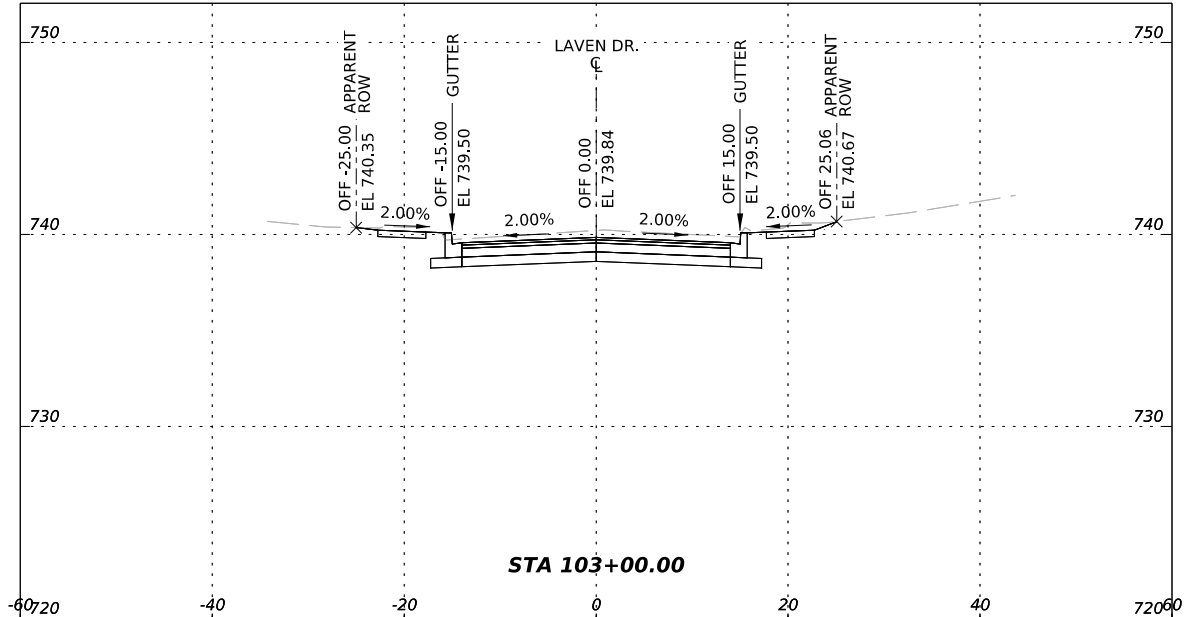
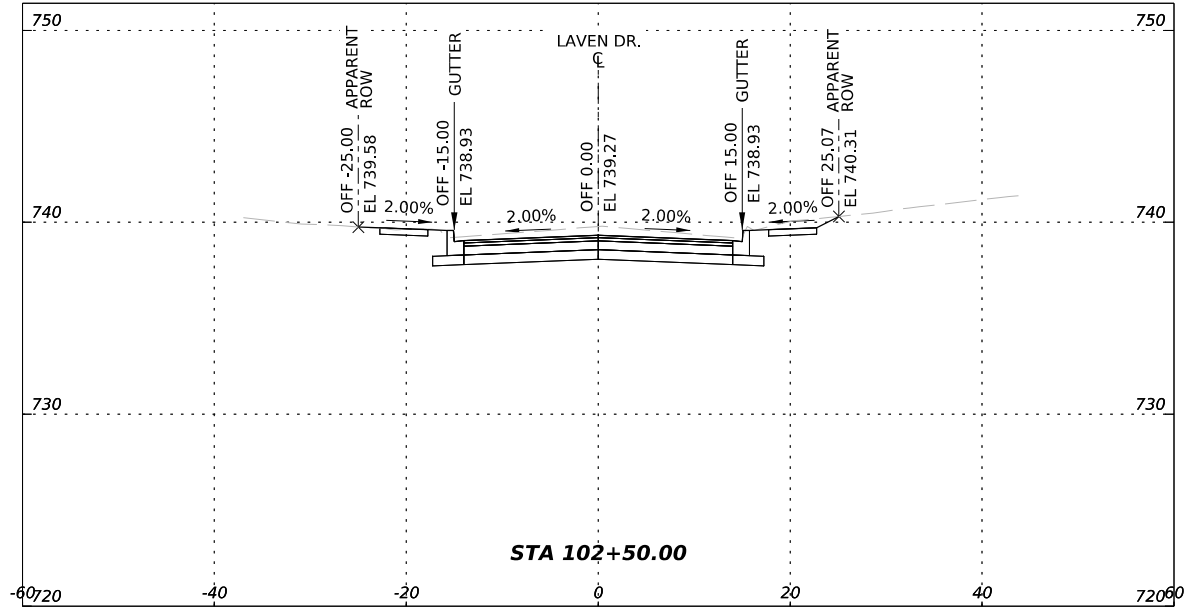
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| CULEBRA AREA STREETS LAVEN DR. CROSS SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 70 |

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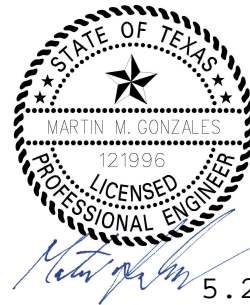
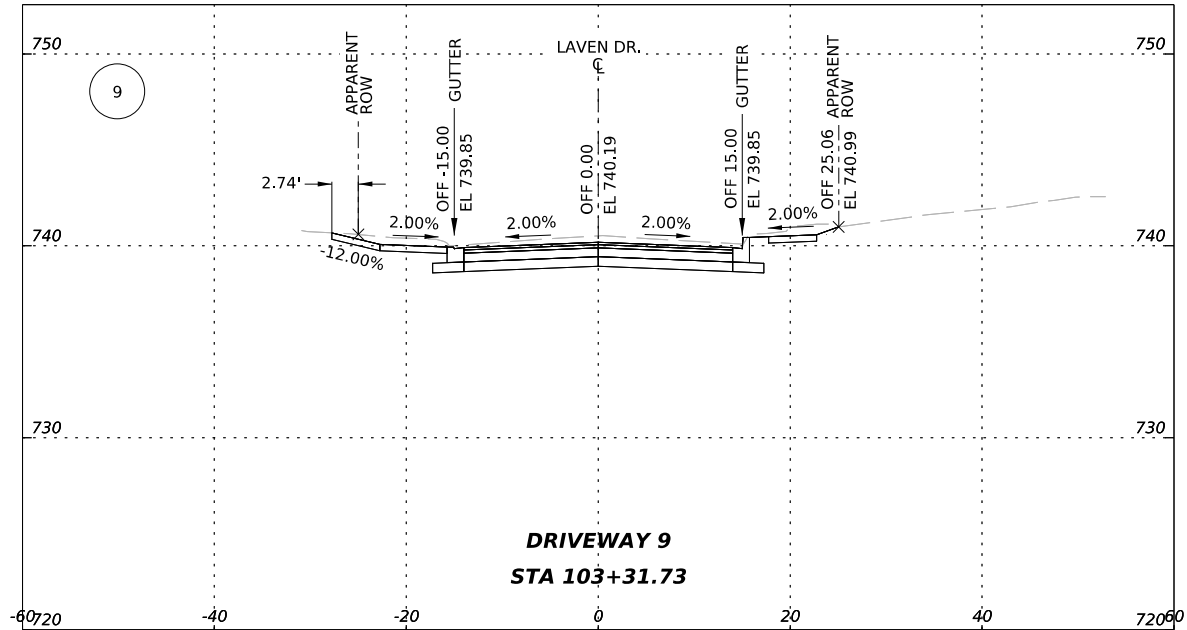
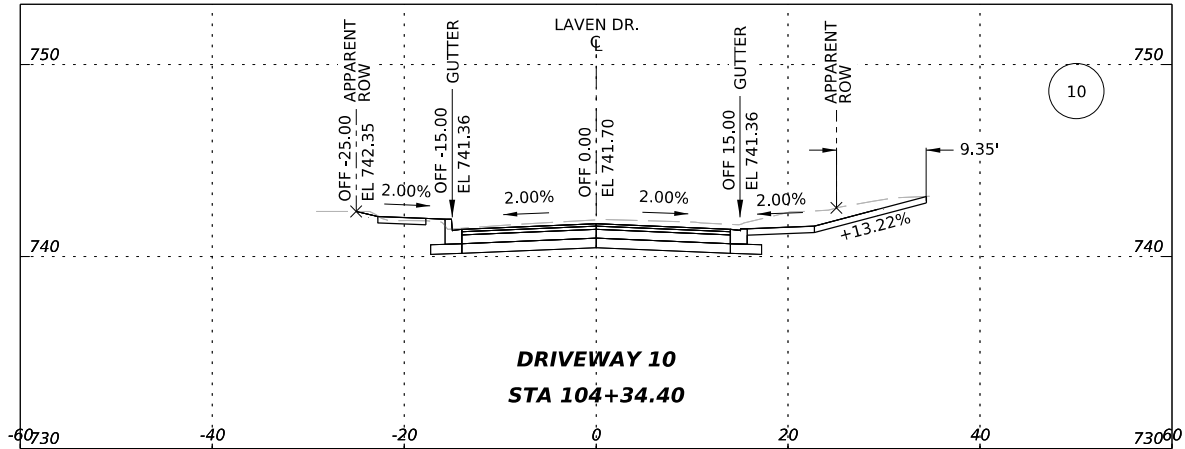
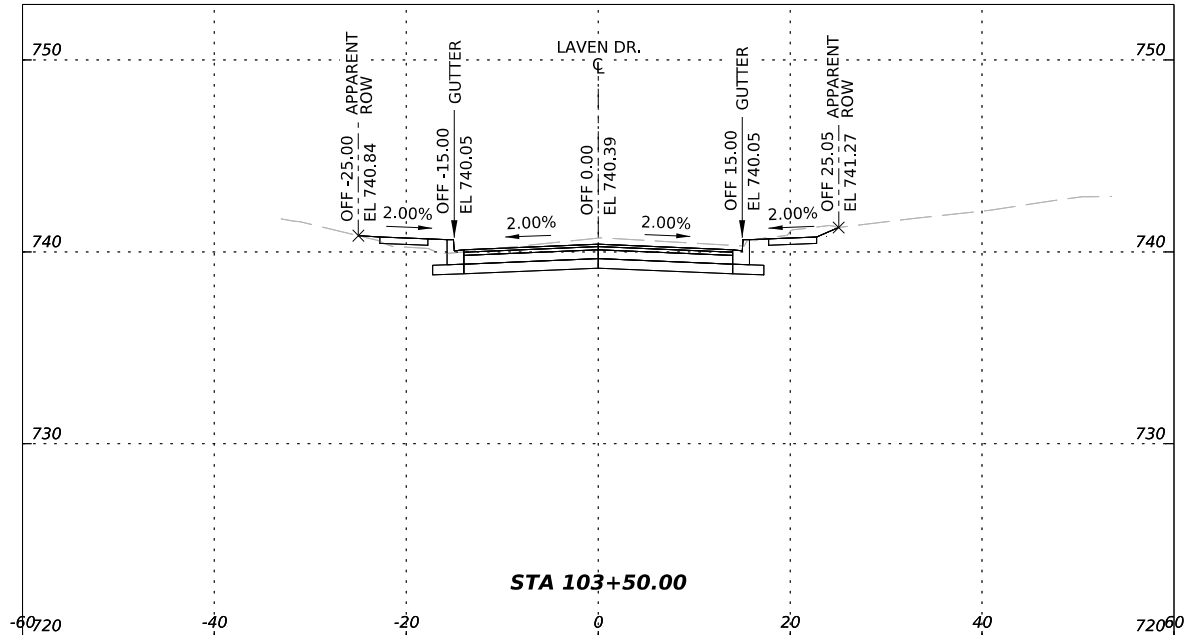
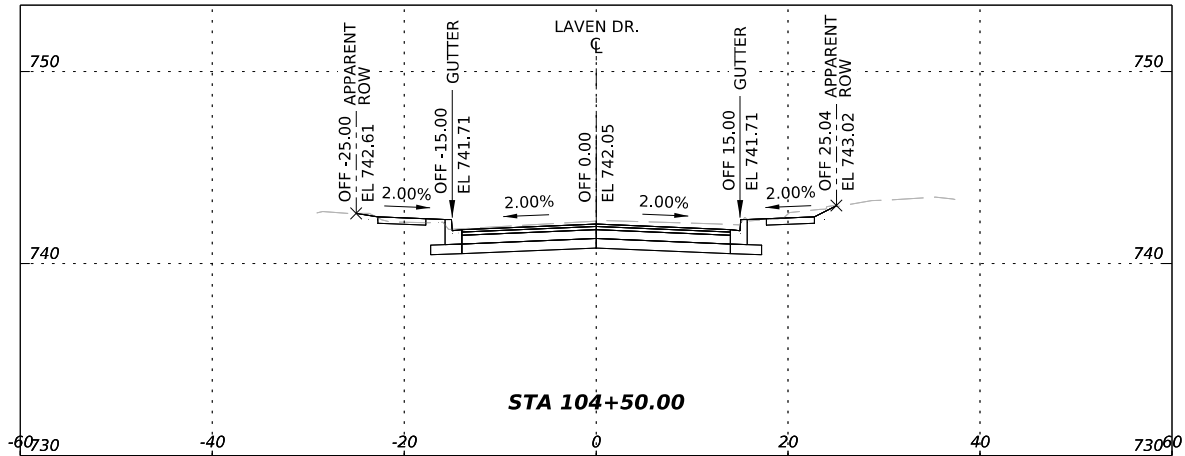
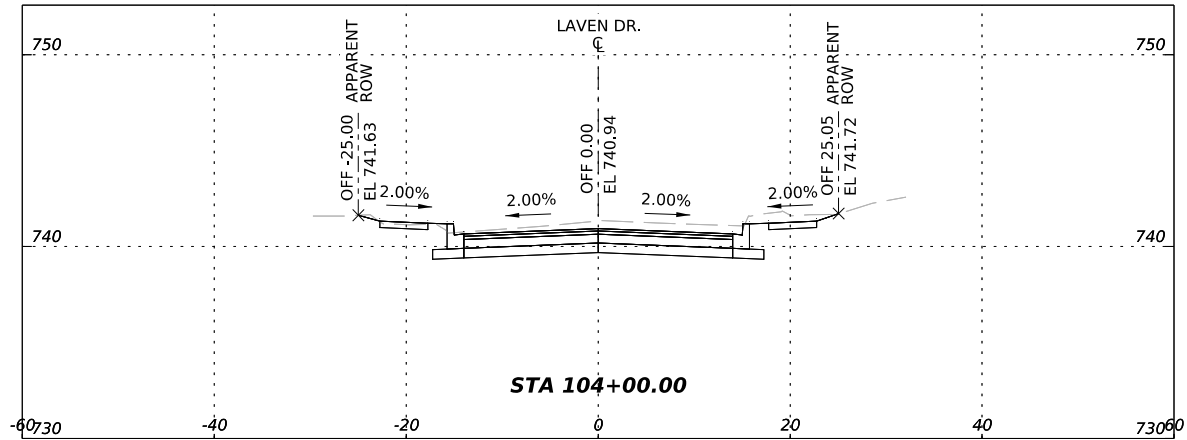
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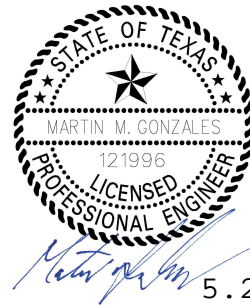
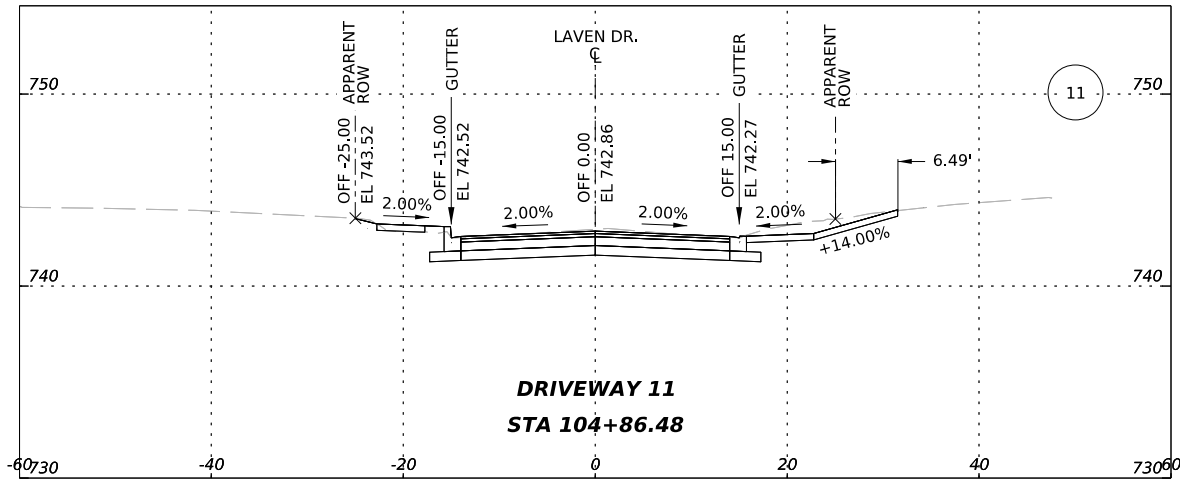
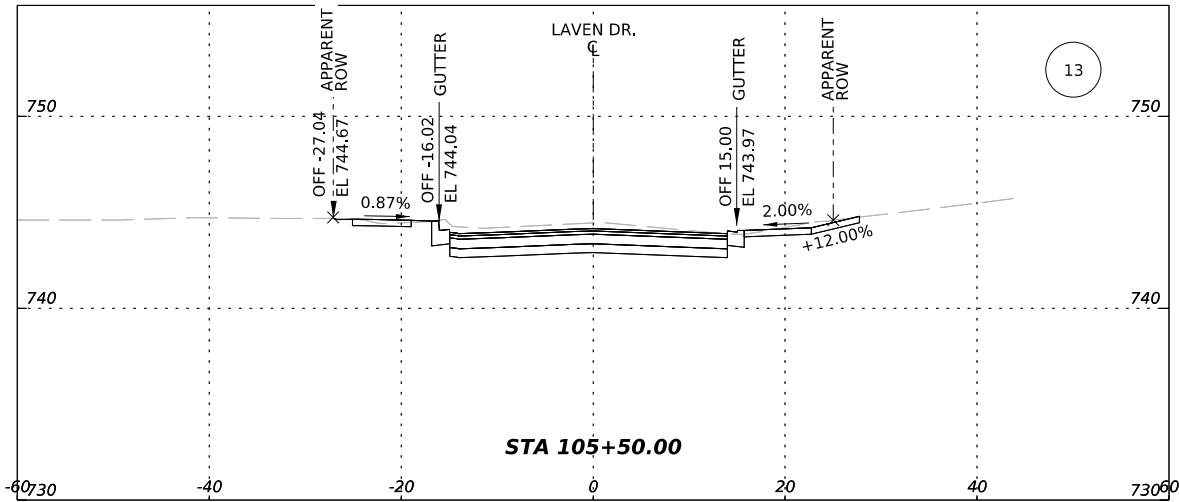
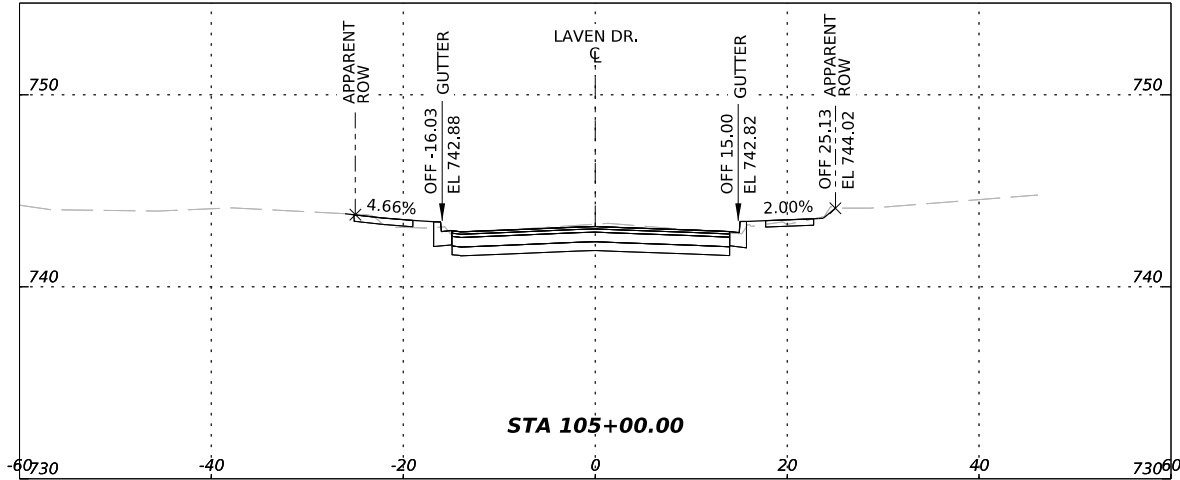
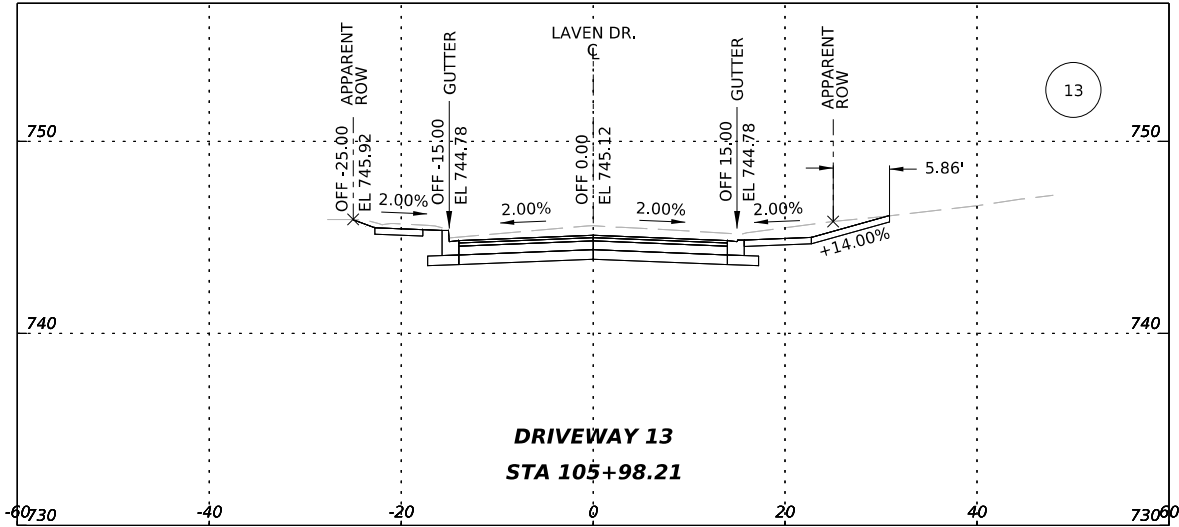
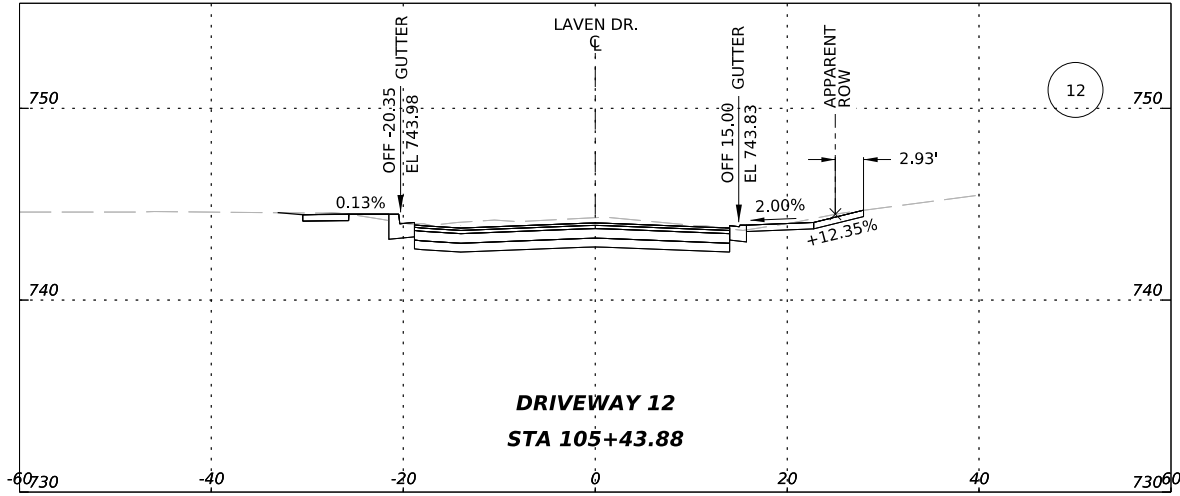
CULEBRA AREA STREETS
LAVEN DR. CROSS SECTIONS

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| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG |
| | | SHEET NO: 72 |




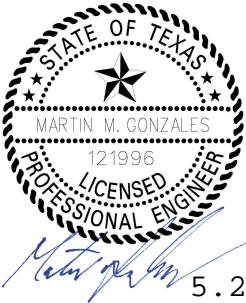
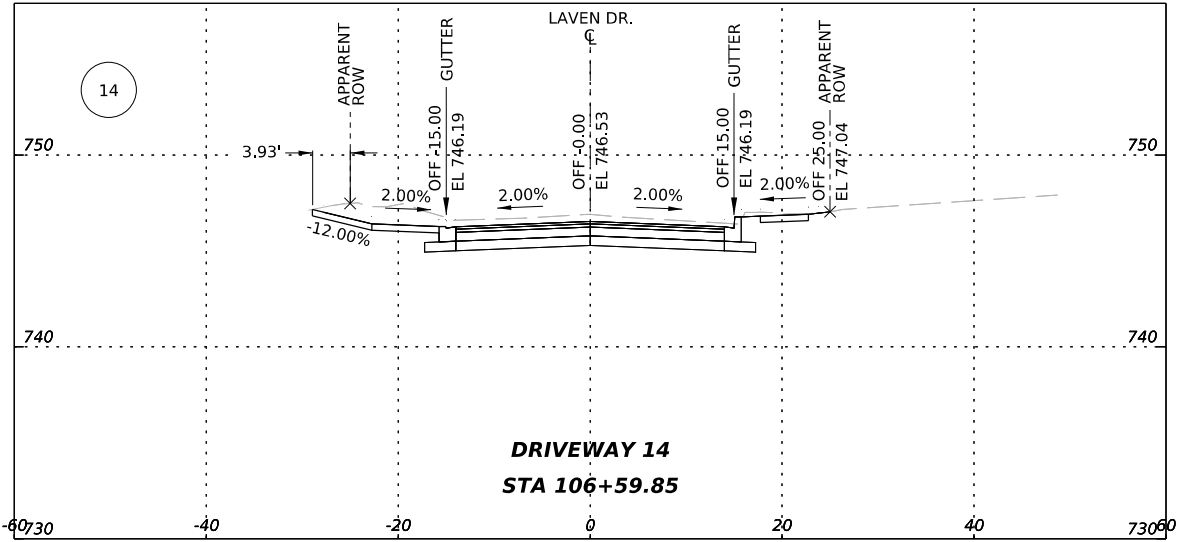
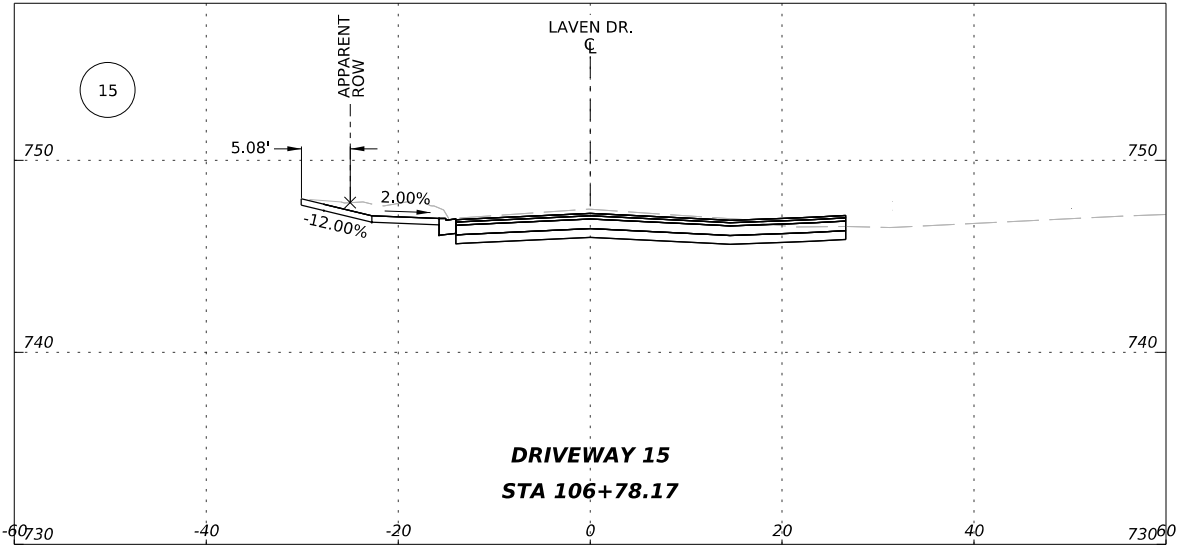
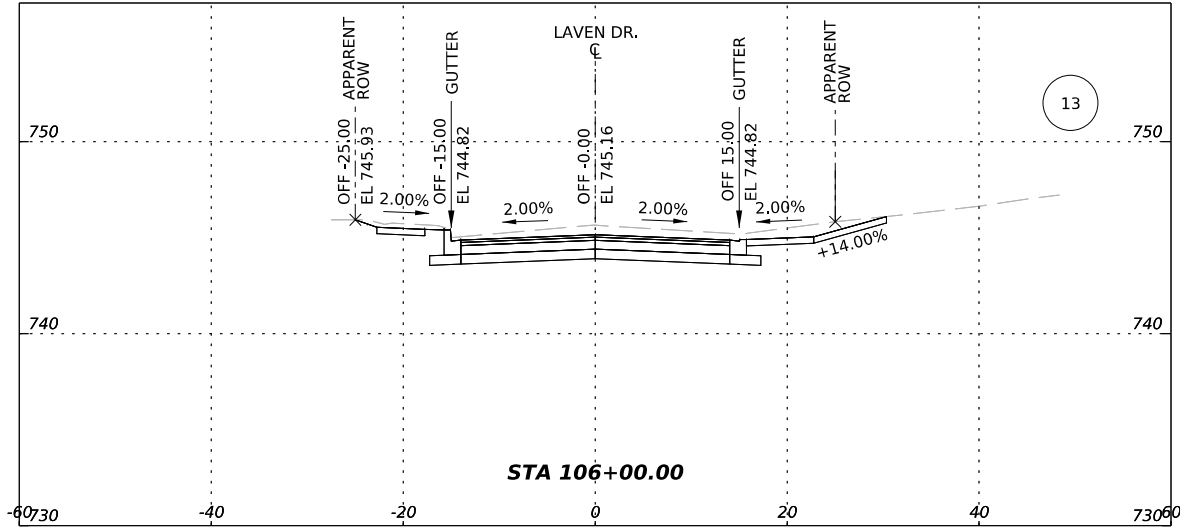
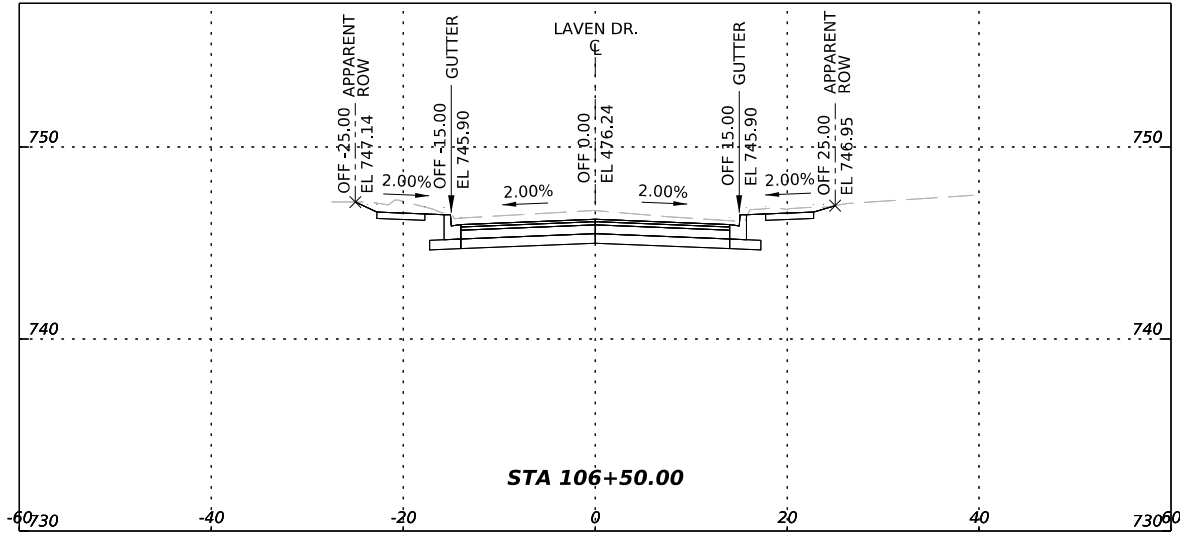
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| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS | | | |
| LAVEN DR. CROSS SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 73 |

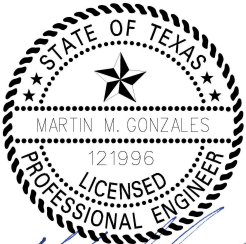
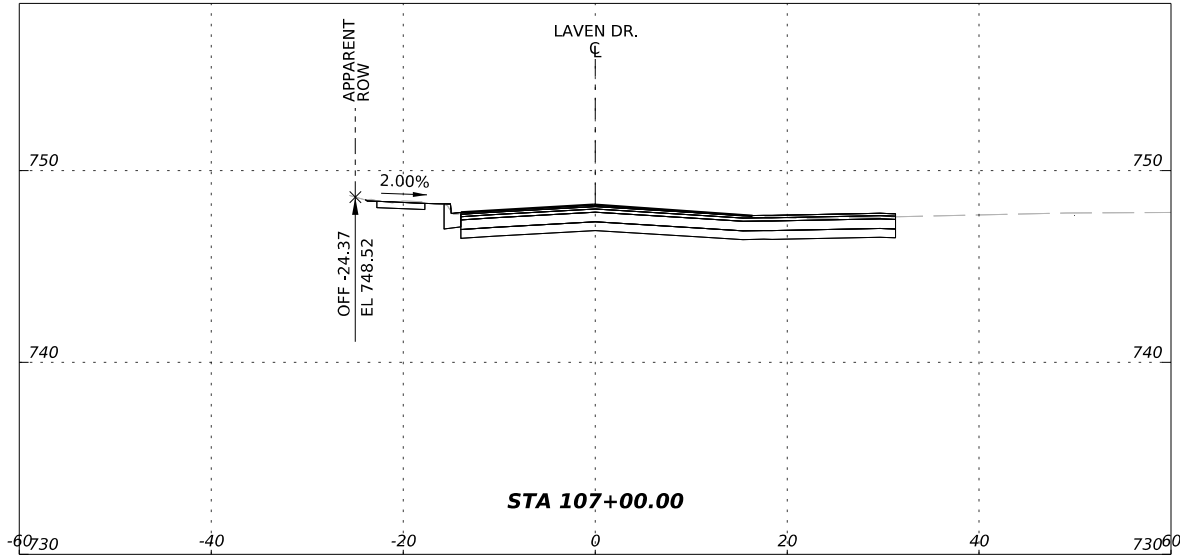
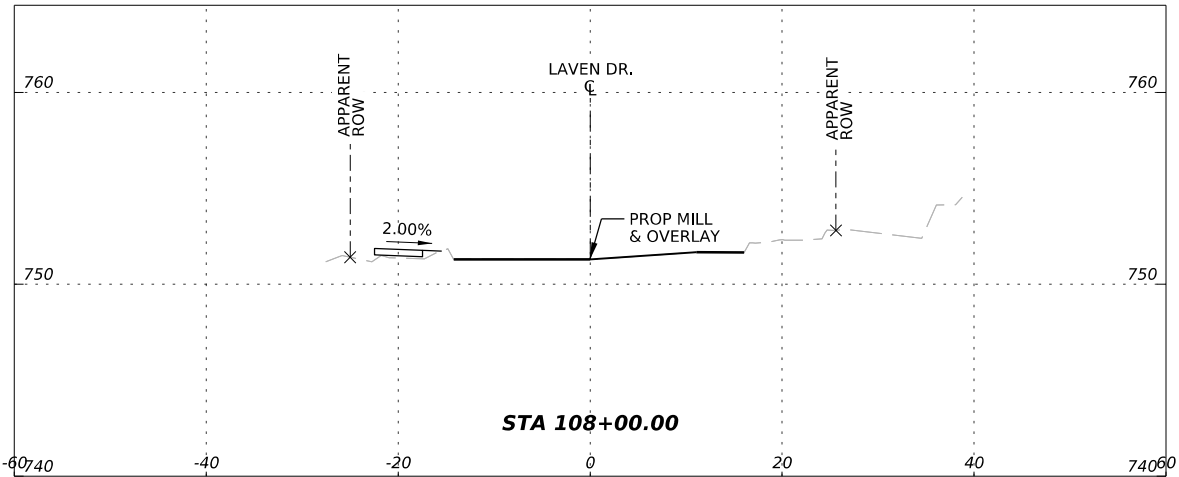
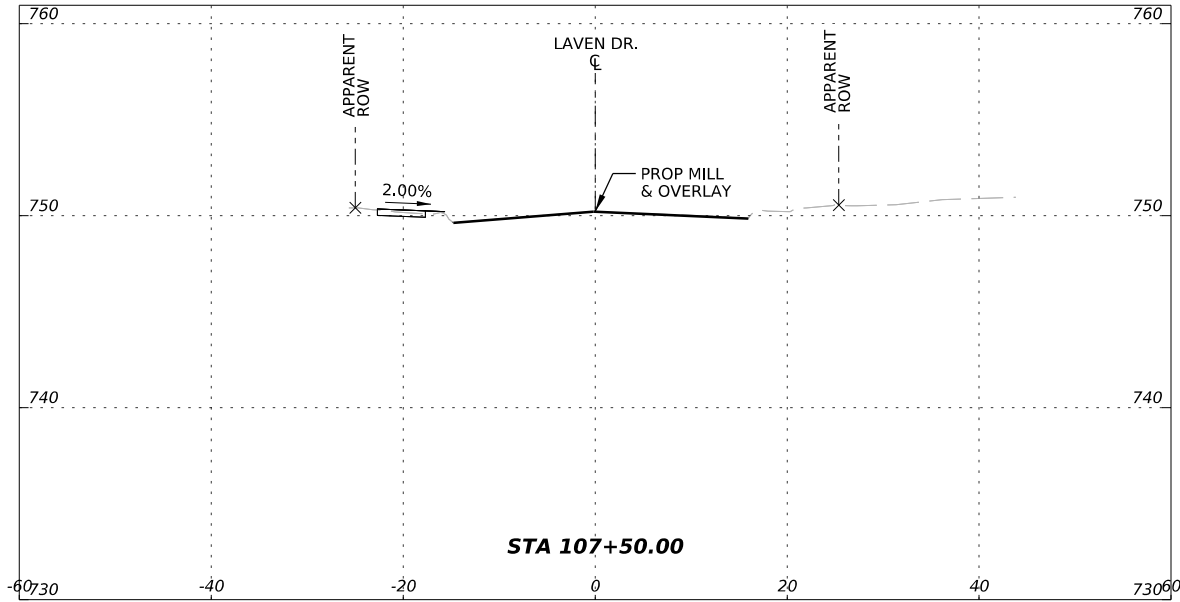


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| | CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| | CULEBRA AREA STREETS LAVEN DR. CROSS SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 | |
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| CULEBRA AREA STREETS LAVEN DR. CROSS SECTIONS | | | |
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| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 75 |



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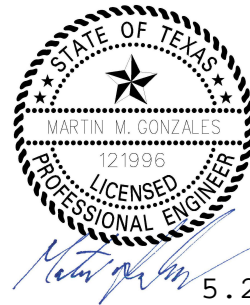
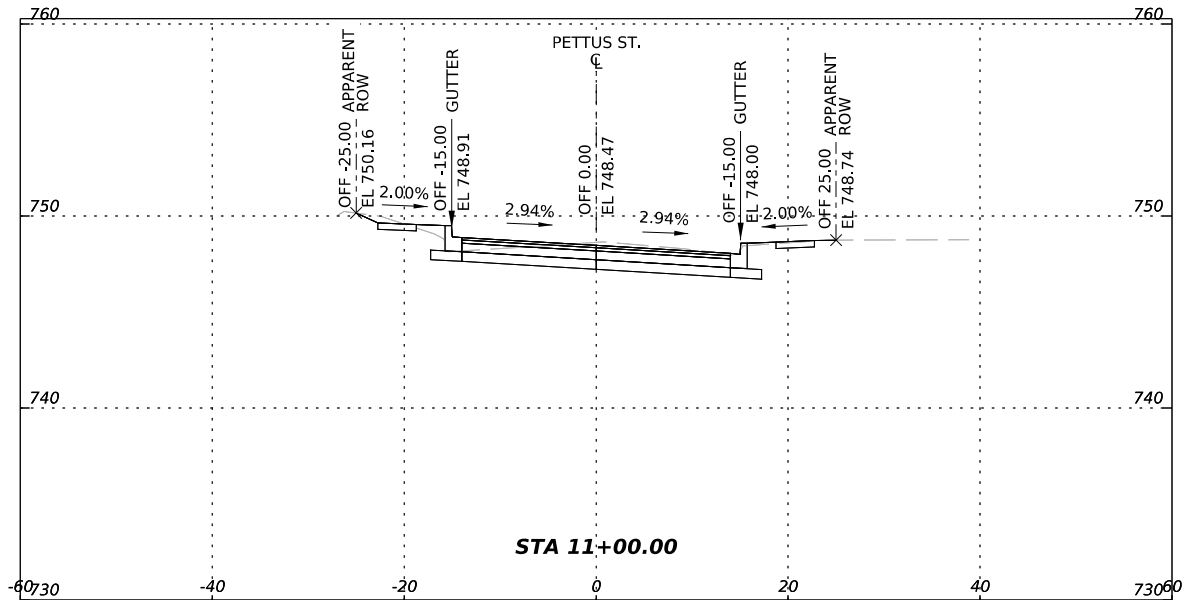
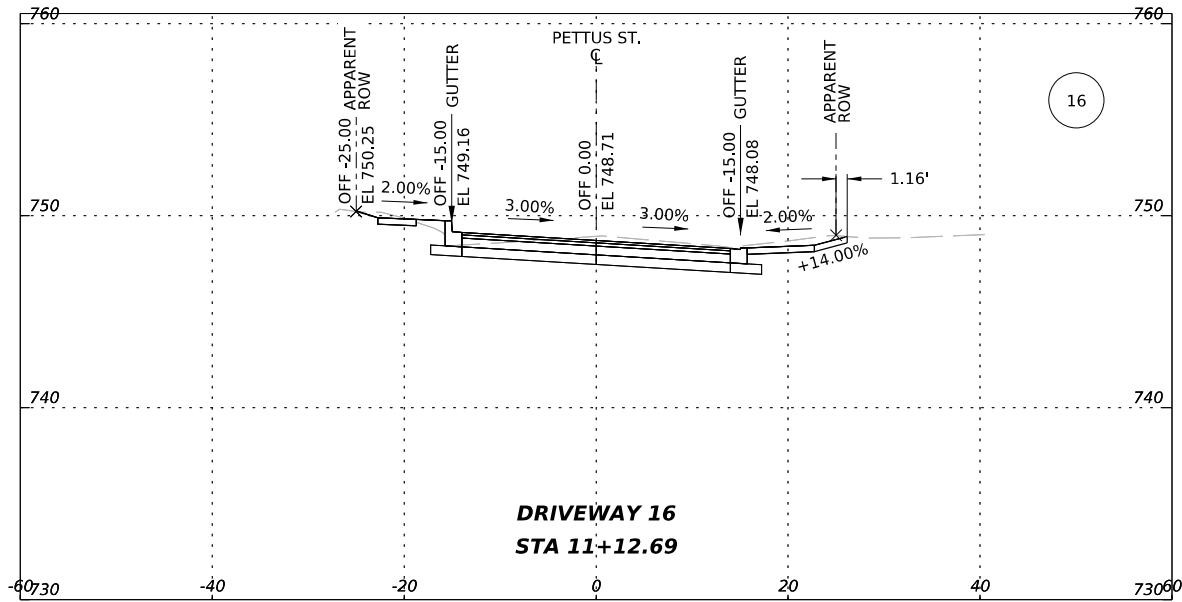
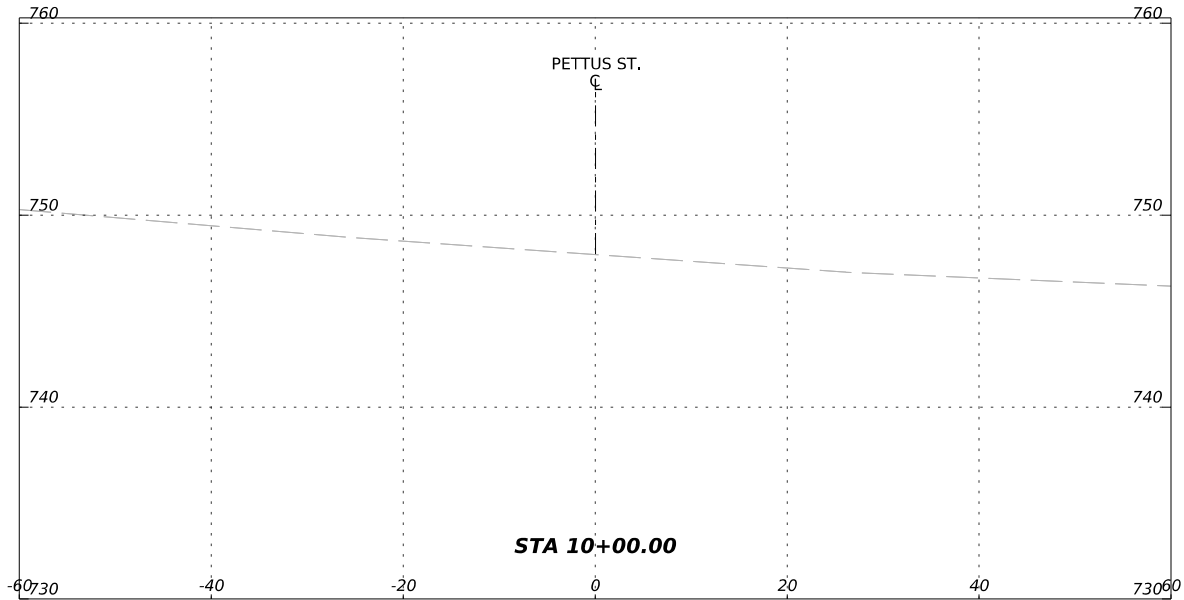
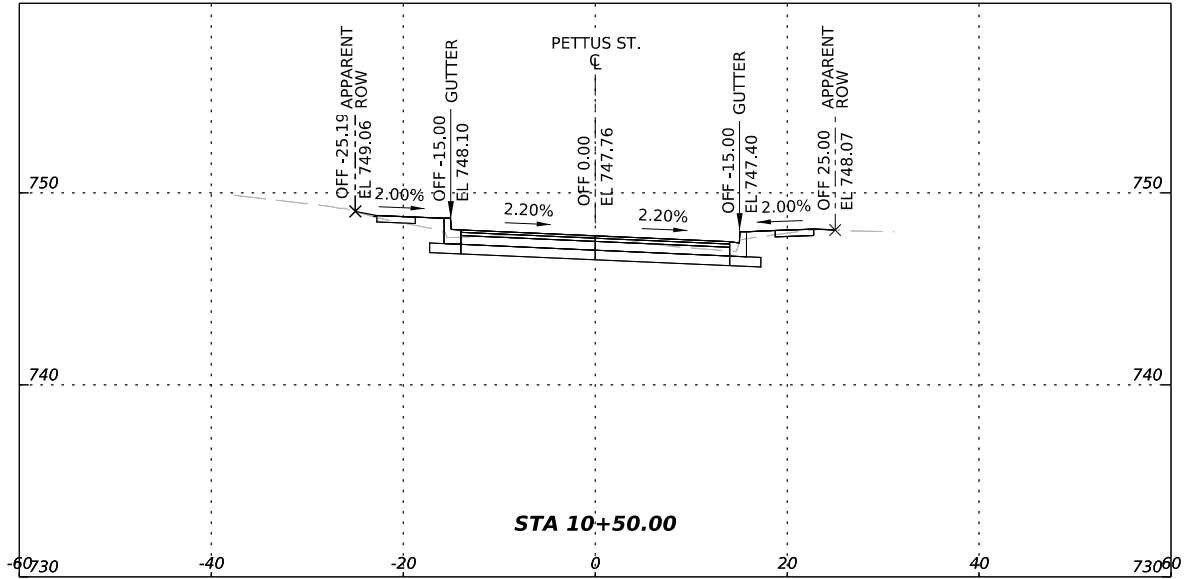


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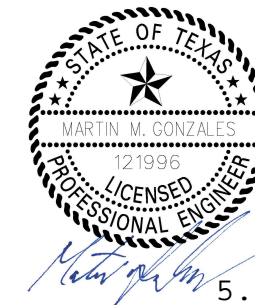
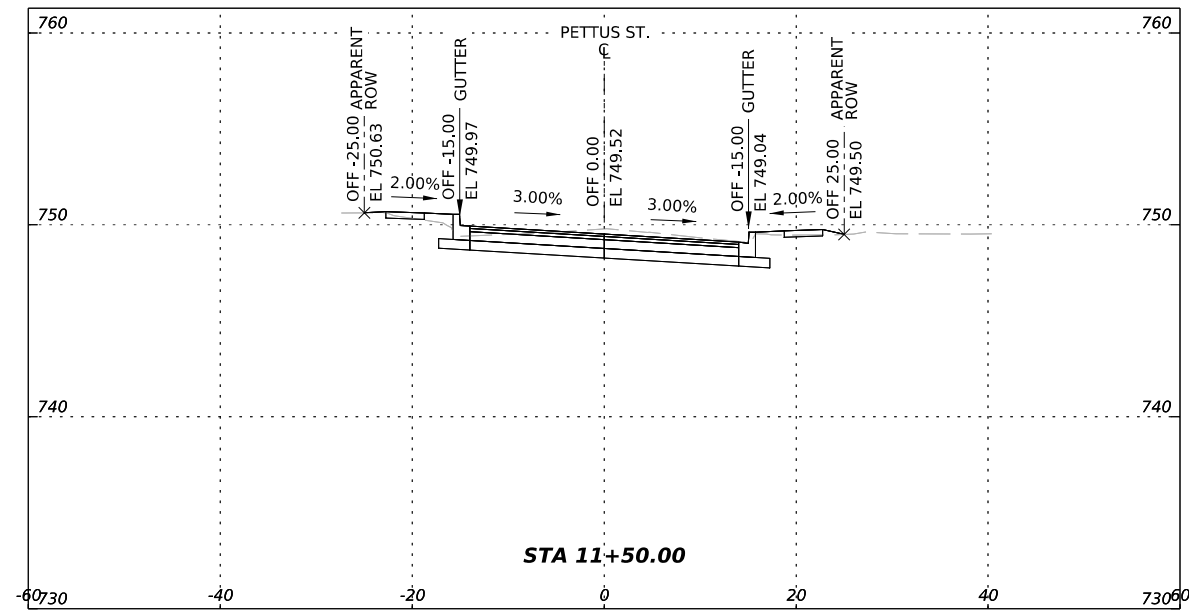
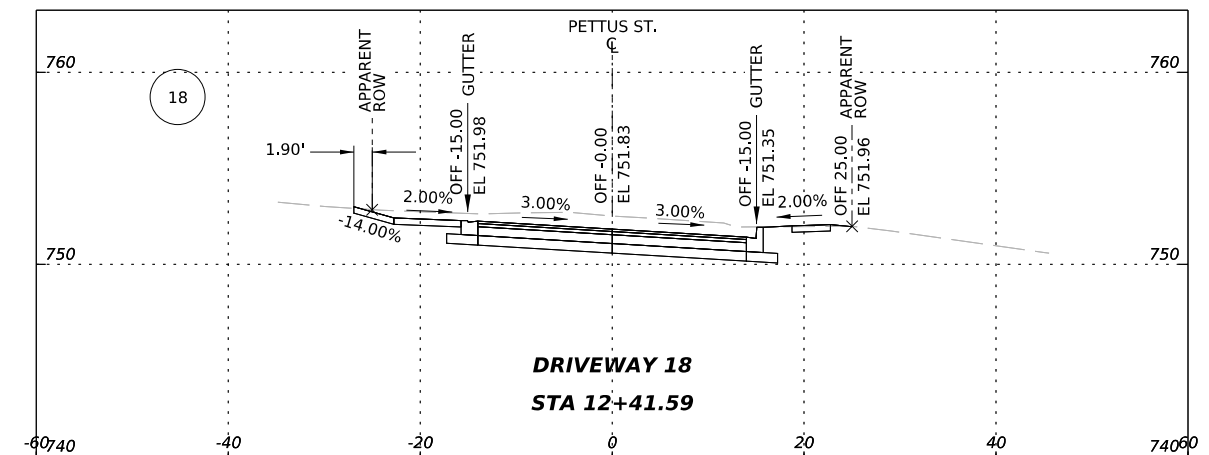
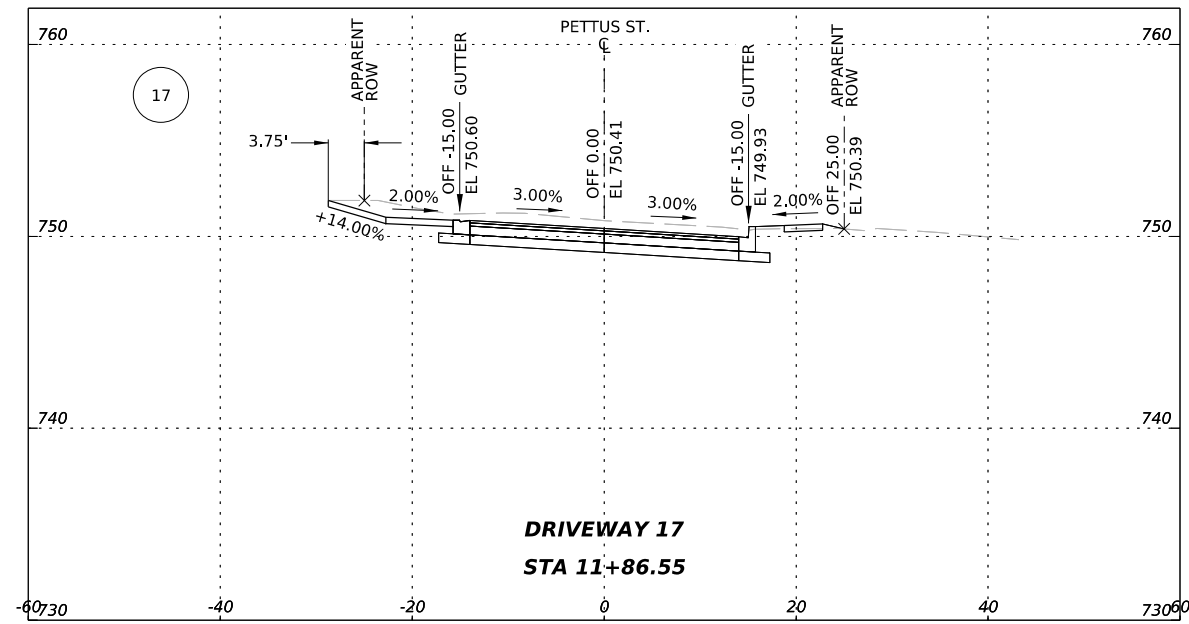
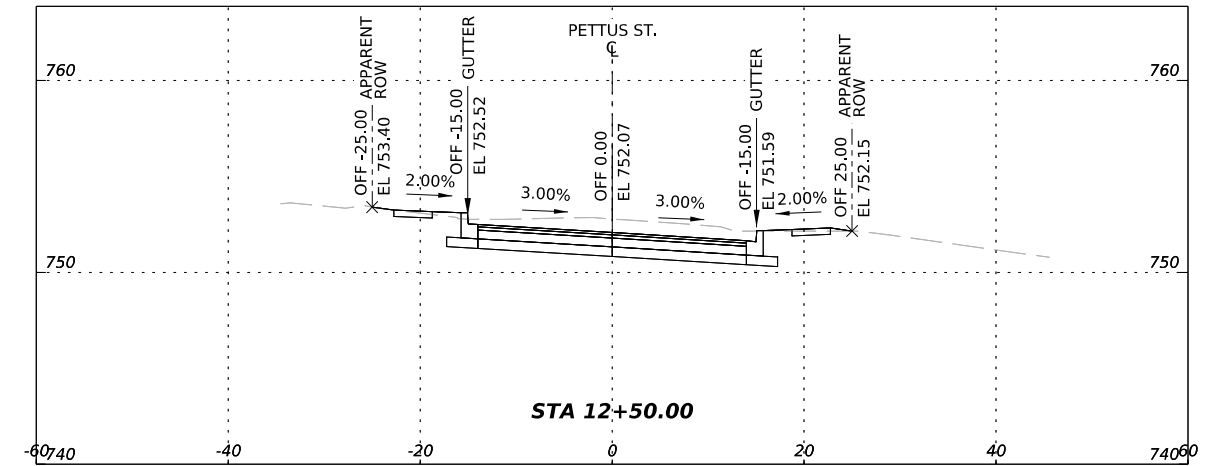
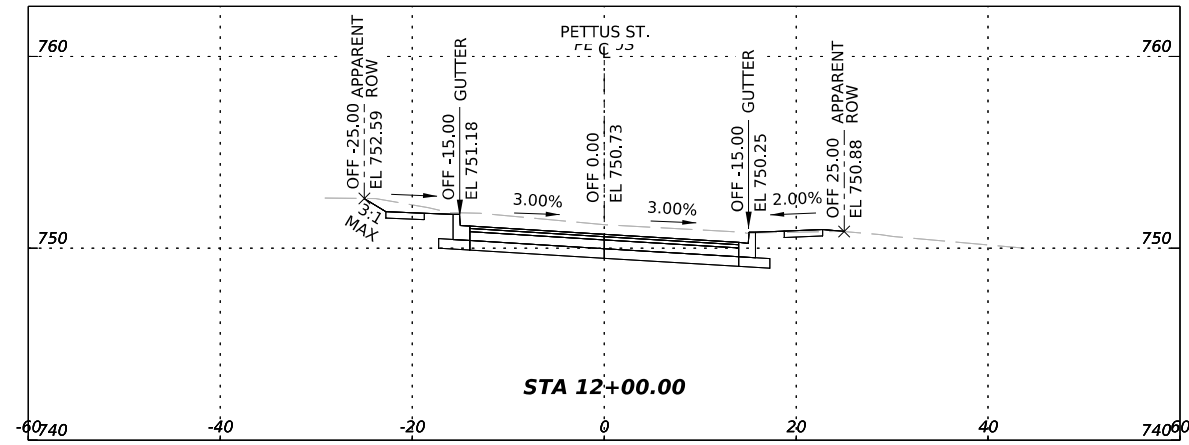
CULEBRA AREA STREETS
LAVEN DR. CROSS SECTIONS

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| CULEBRA AREA STREETS PETTUS ST. CROSS SECTIONS | | | |
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CITY OF SAN ANTONIO
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CULEBRA AREA STREETS

DATE: 05/28/2025

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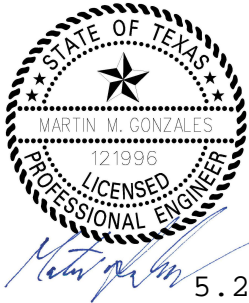
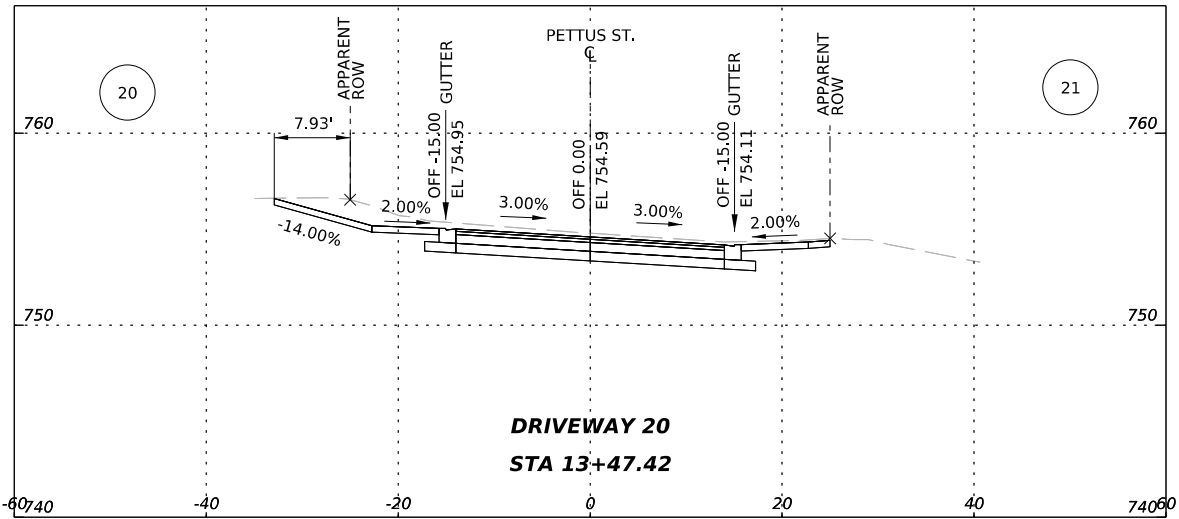
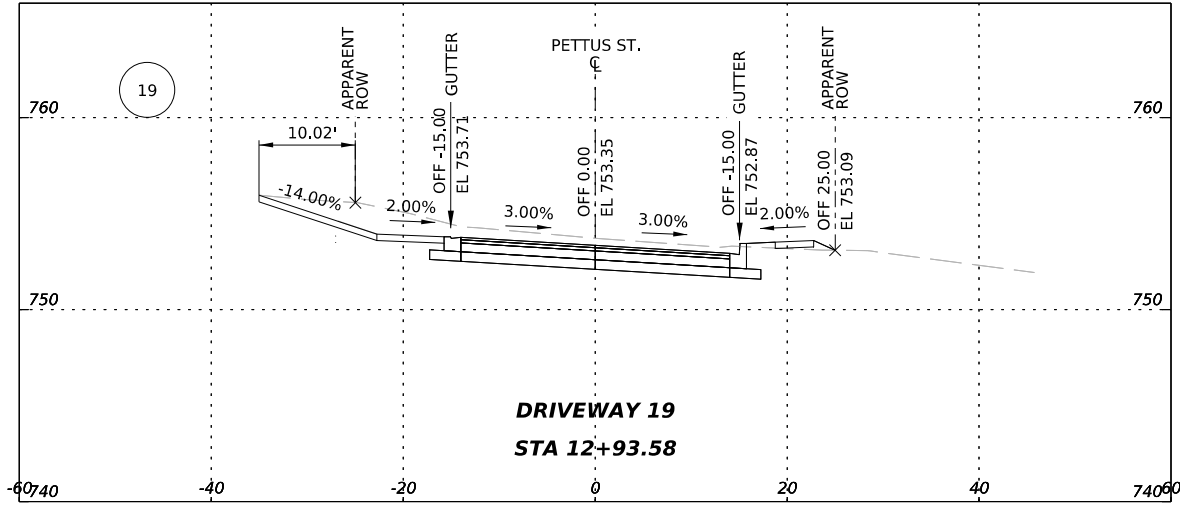
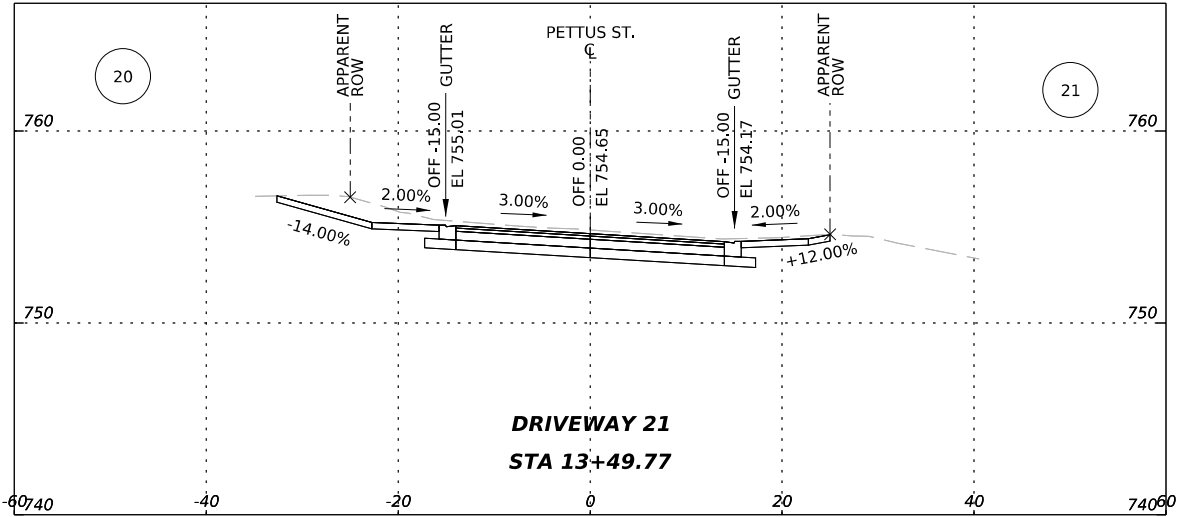
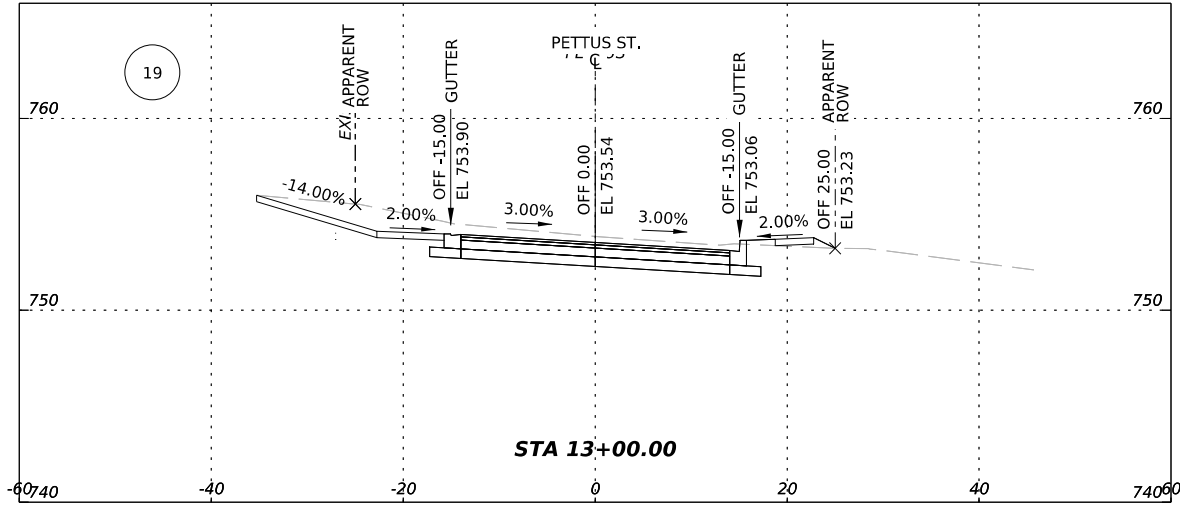
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PROJECT NO: 23-03873

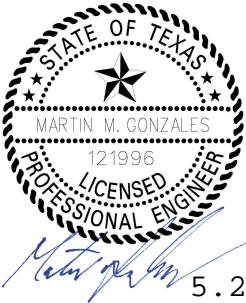
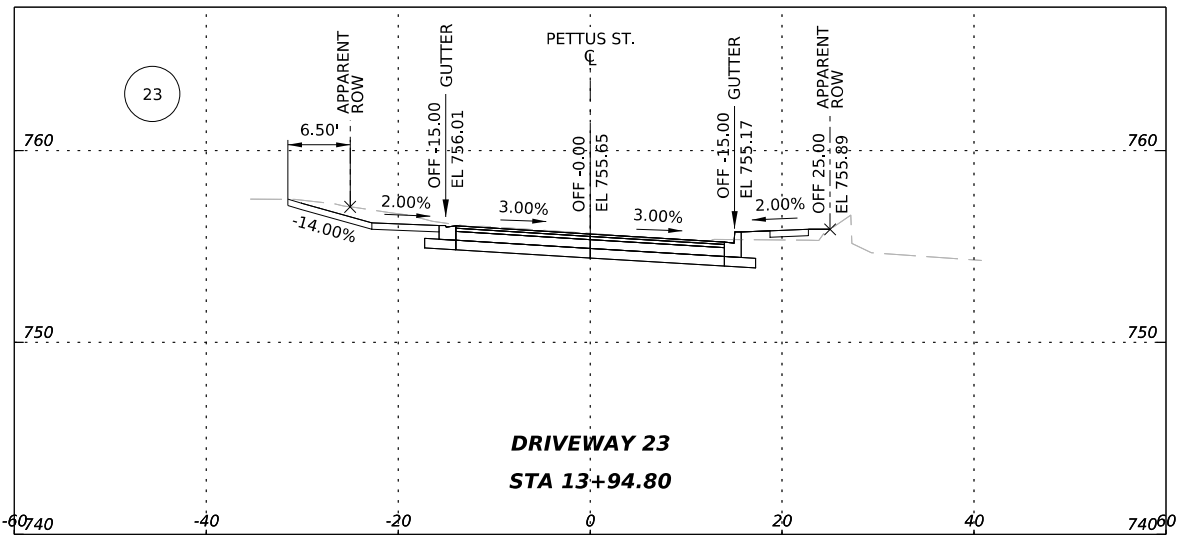
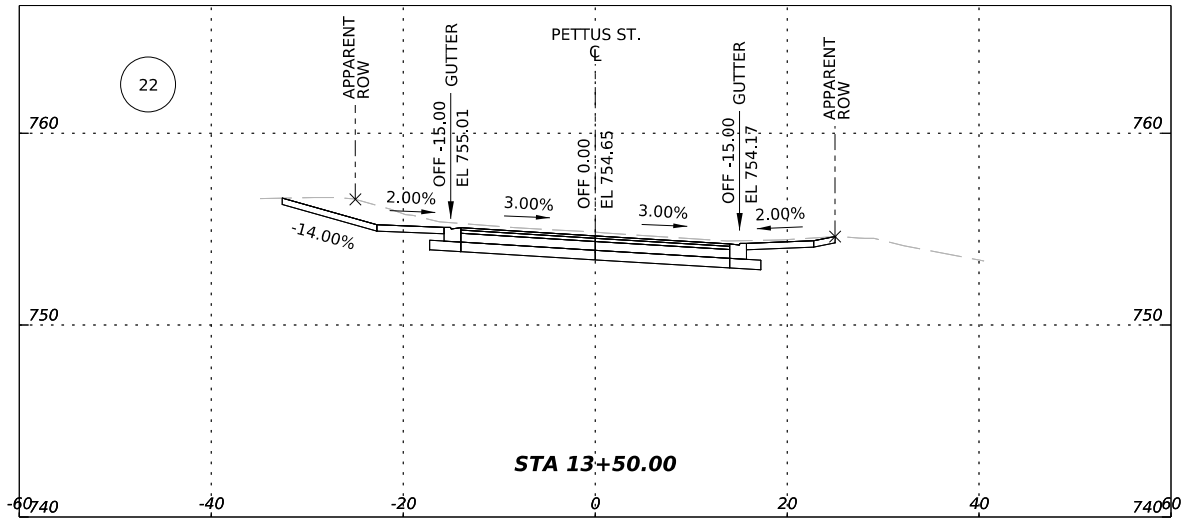
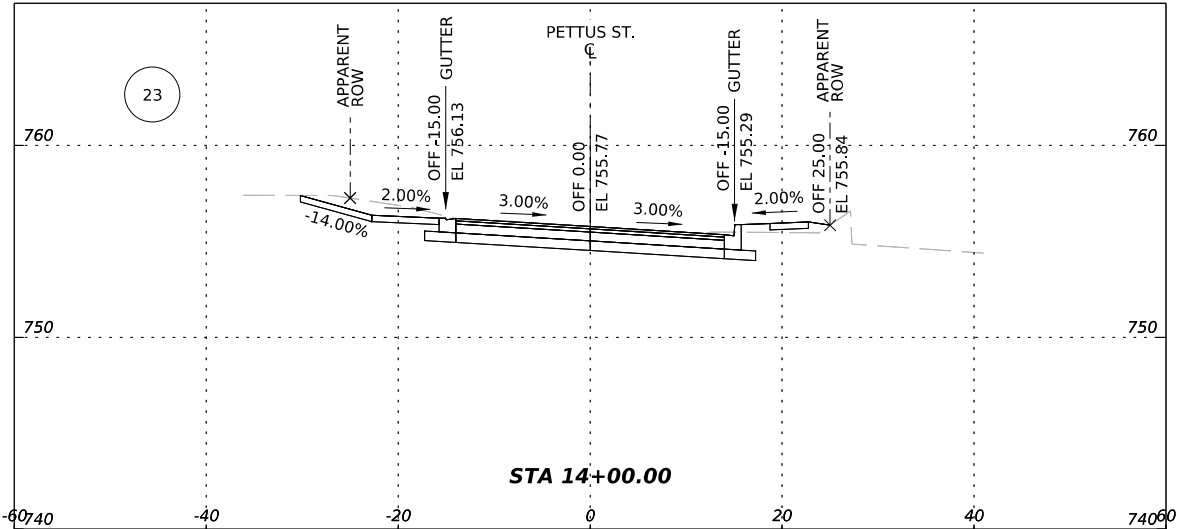
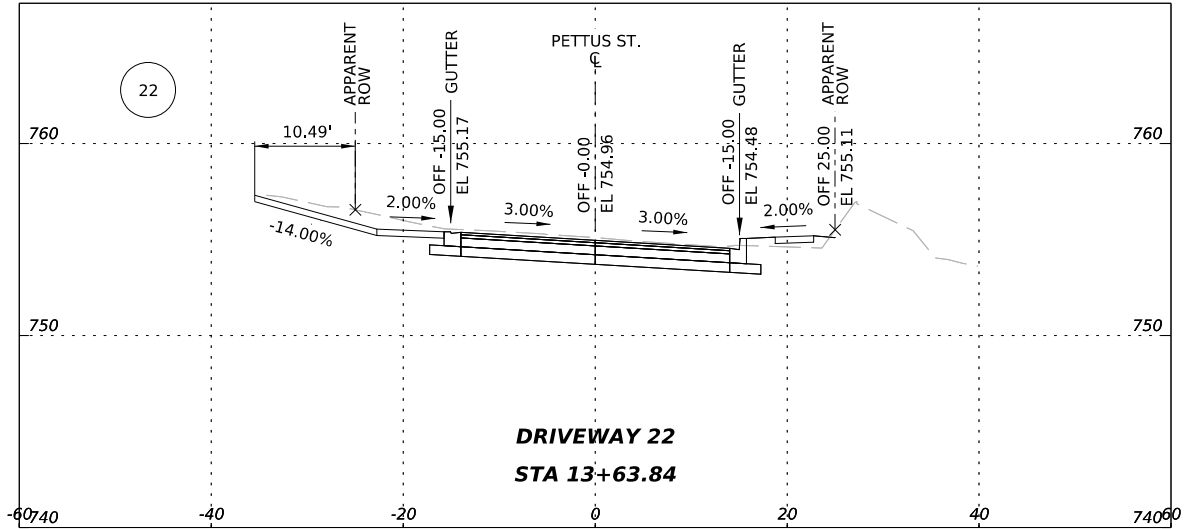
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SHEET NO: 78



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| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS PETTUS ST. CROSS SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 79 |



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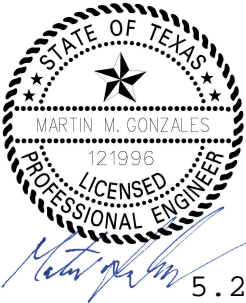
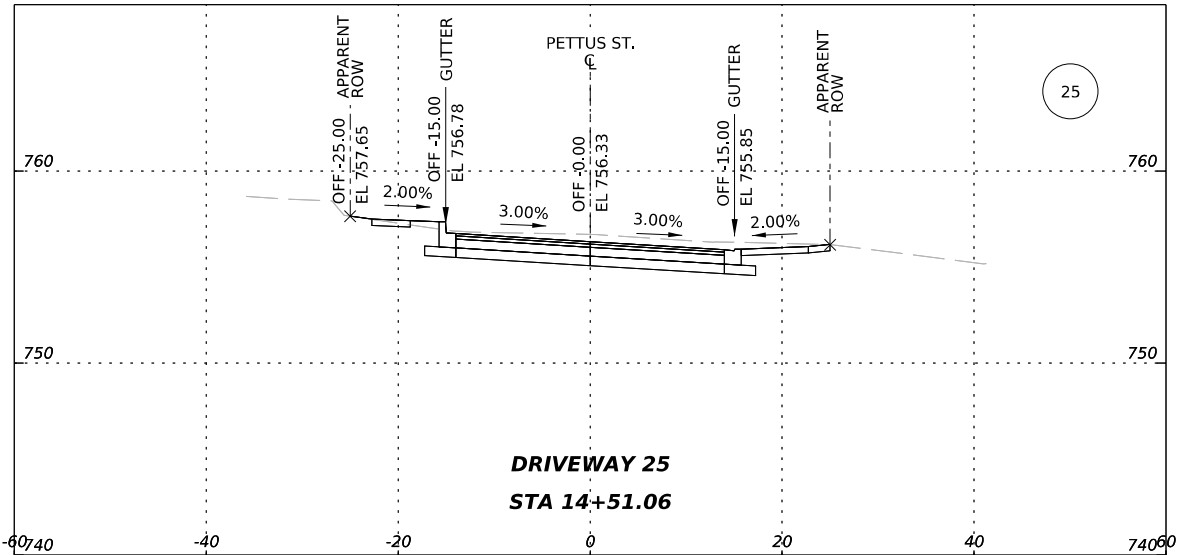
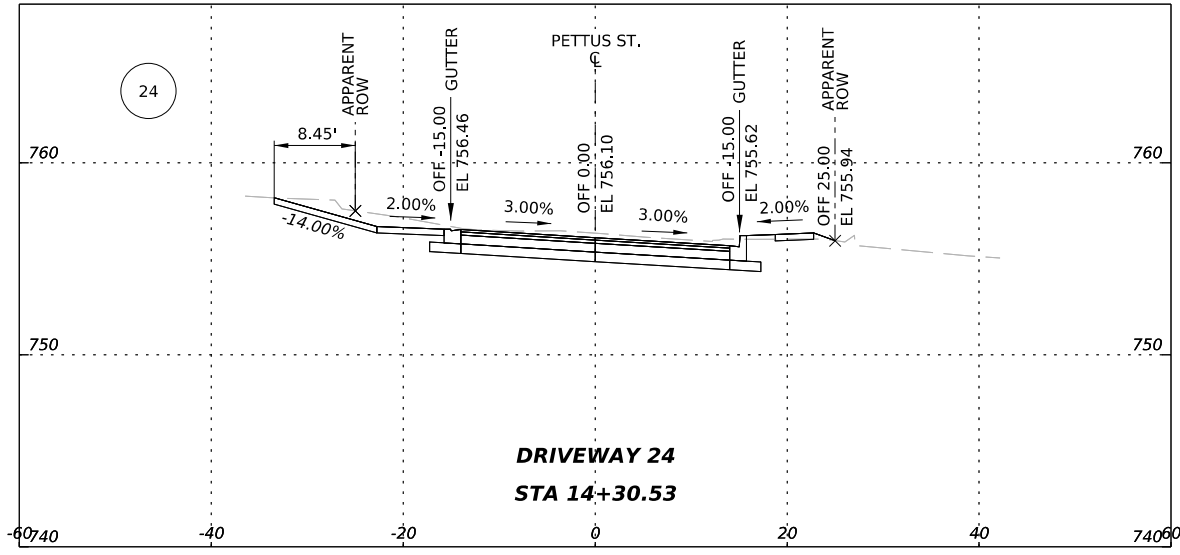
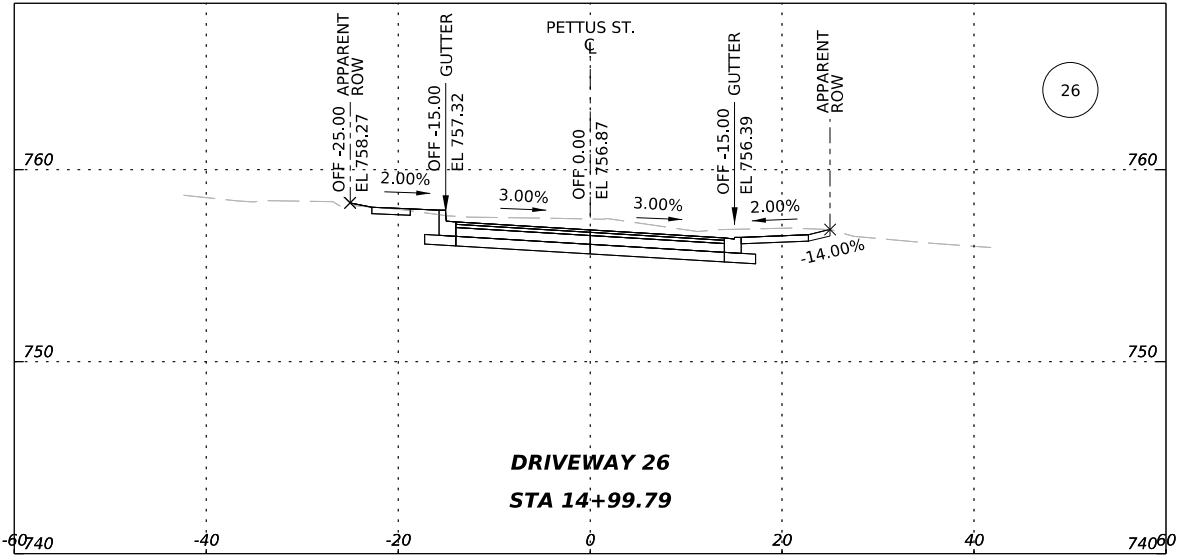
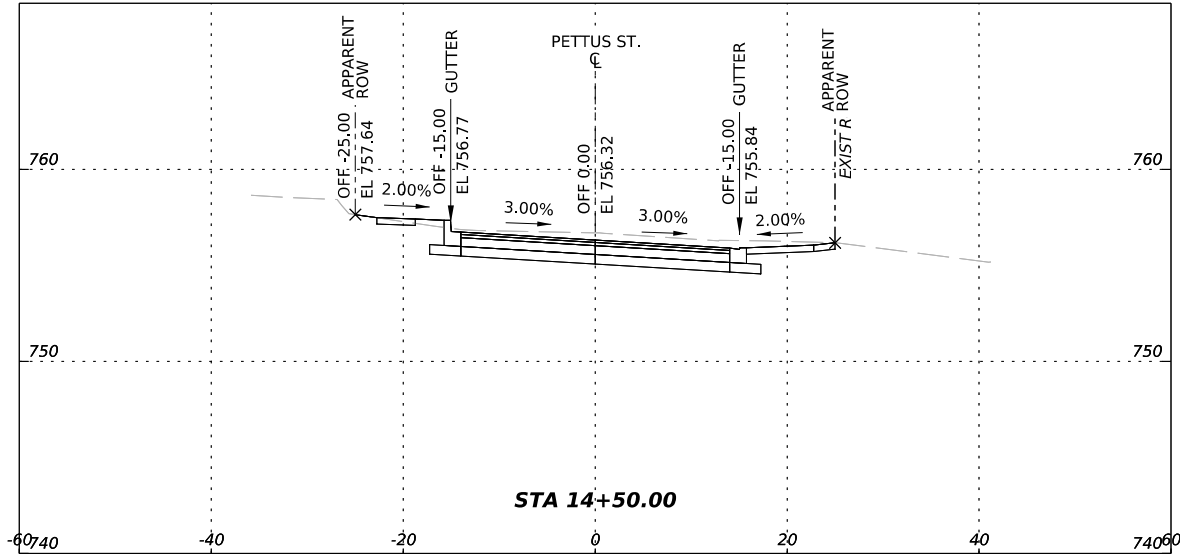


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CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

CULEBRA AREA STREETS
PETTUS ST. CROSS SECTIONS

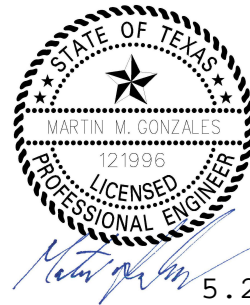
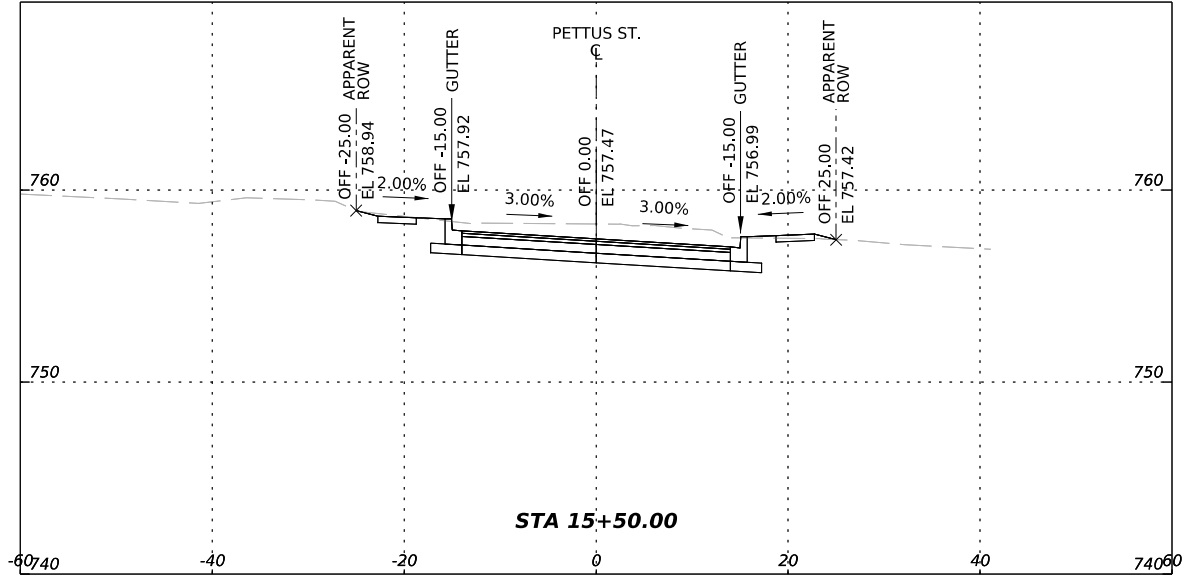
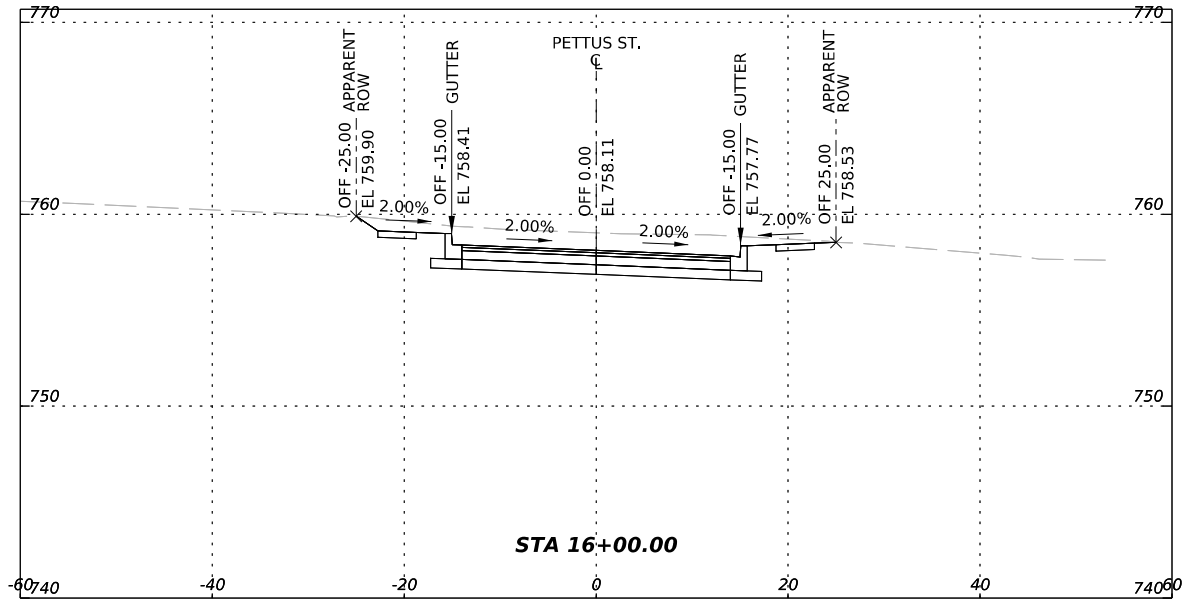
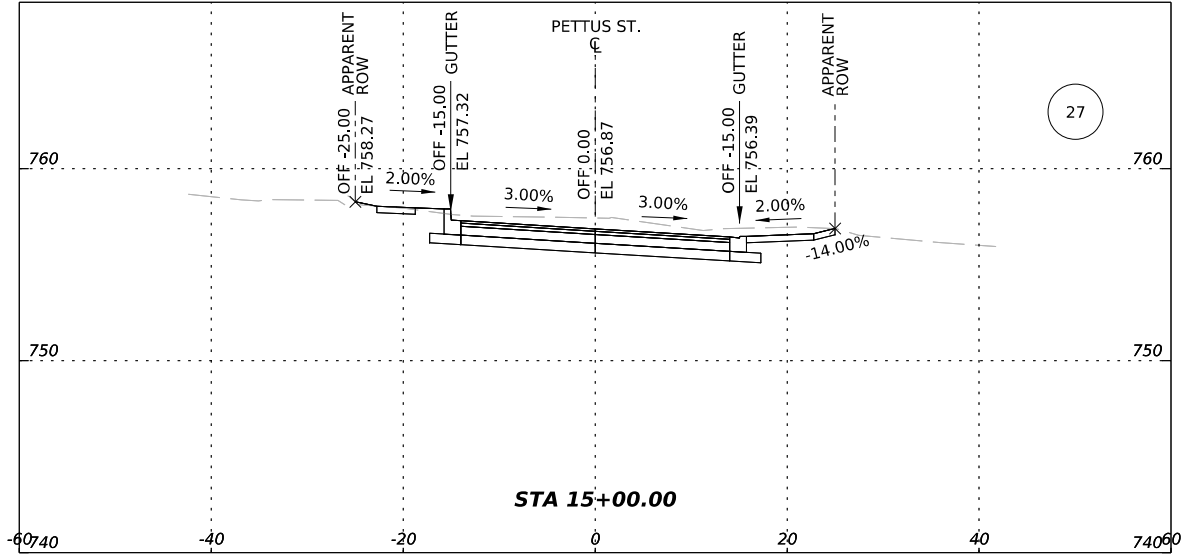
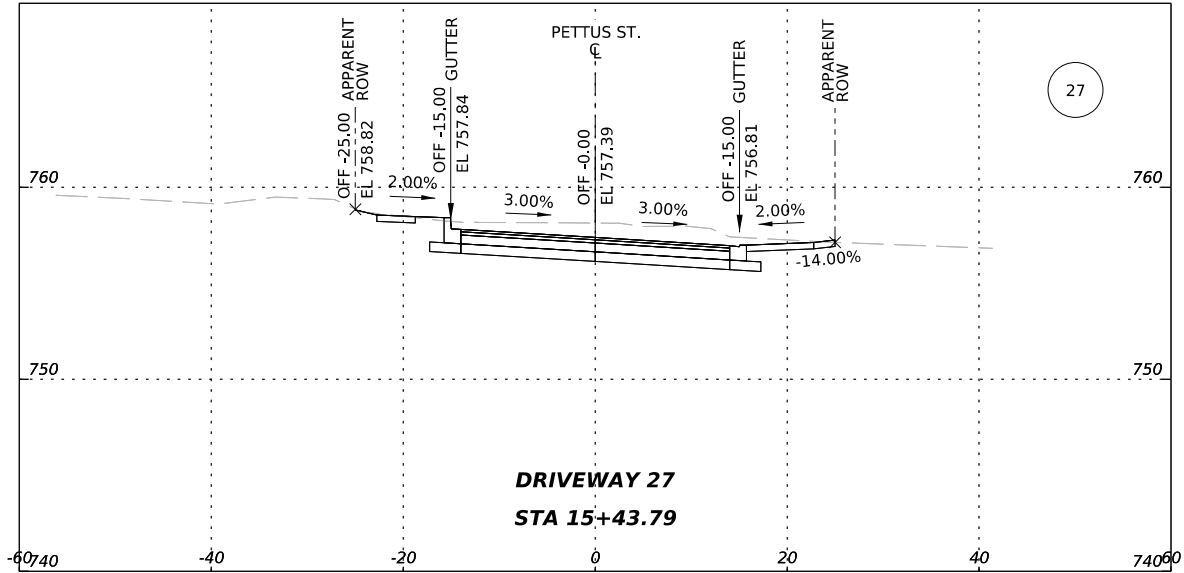
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| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG |
| | | SHEET NO: 80 |




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|  AG3 Group, LLC ENGINEERING • SURVEY • CONSTRUCTION | | 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS PETTUS ST. CROSS SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 81 |

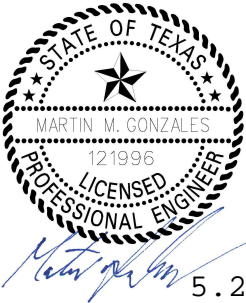
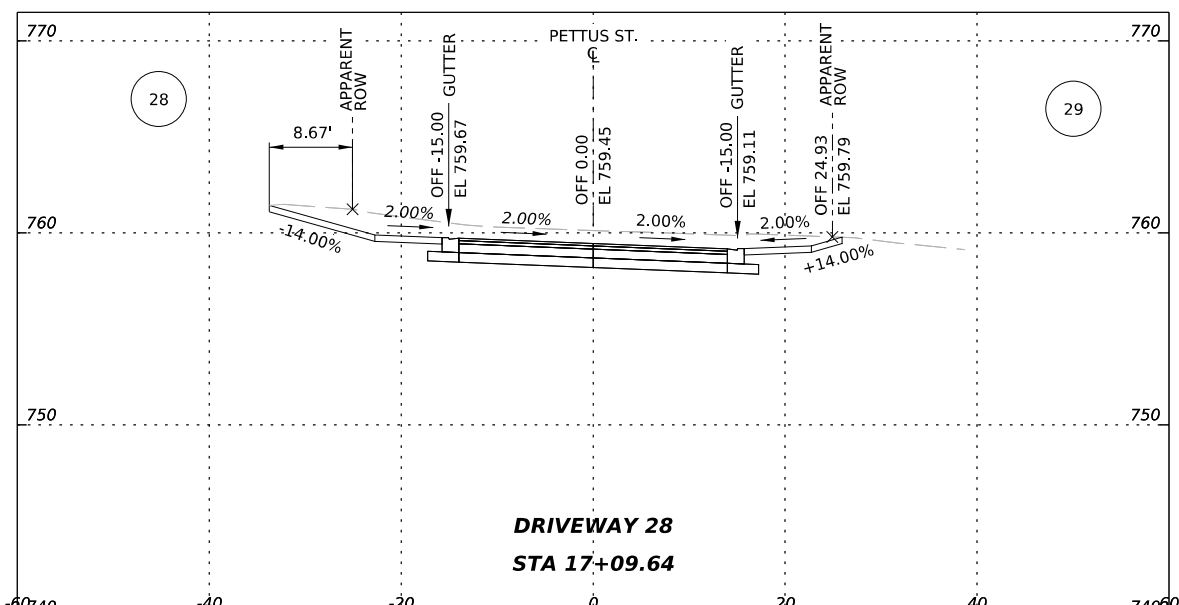
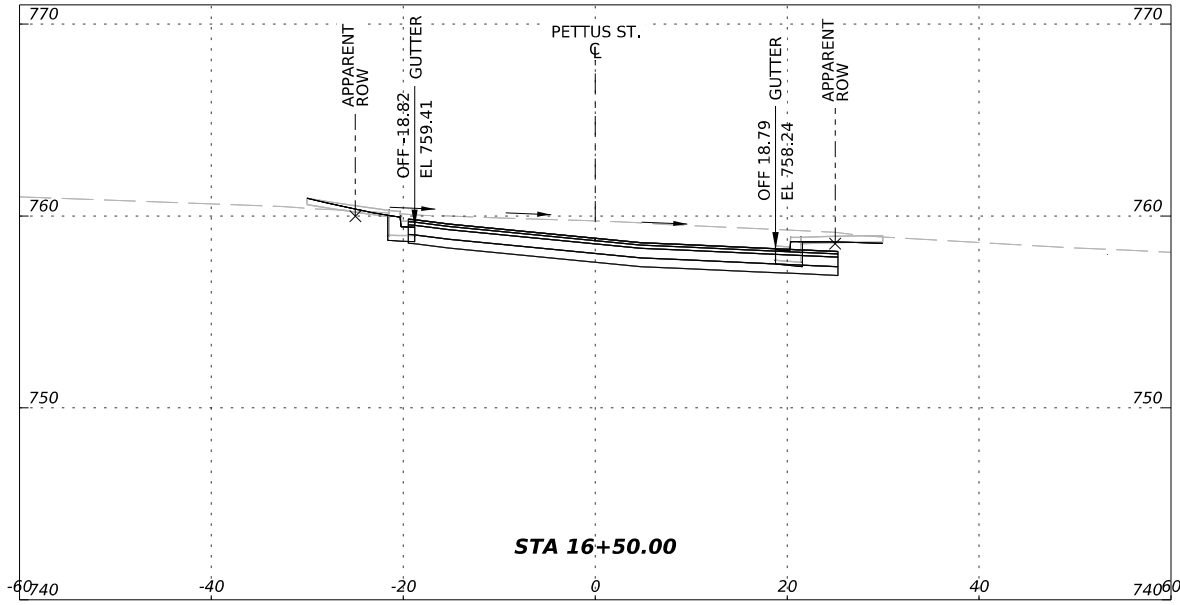
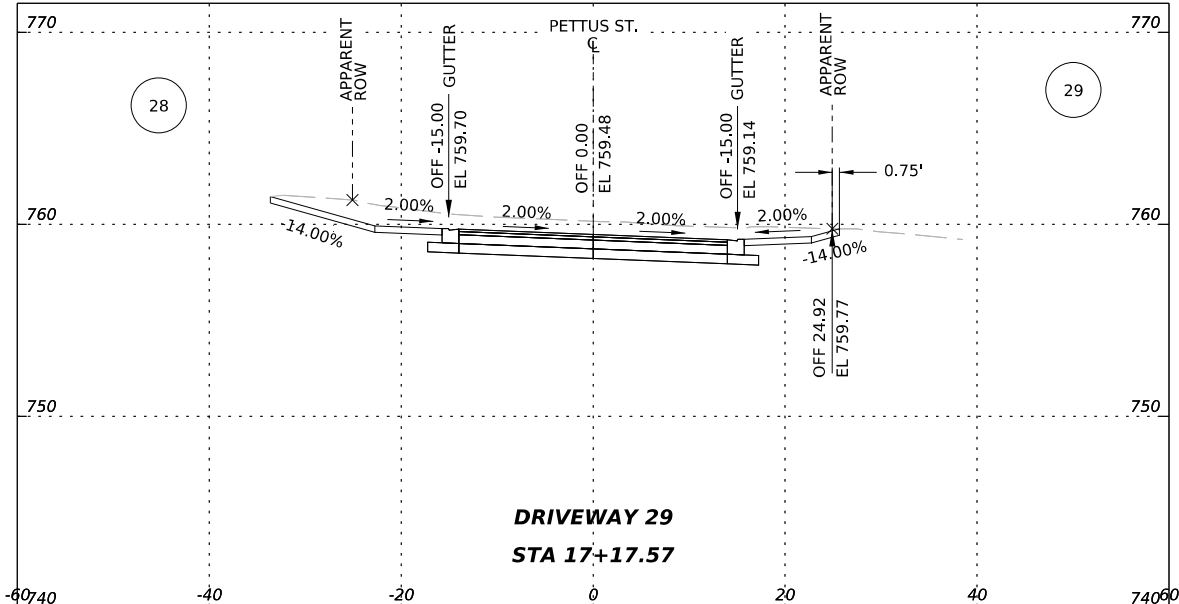
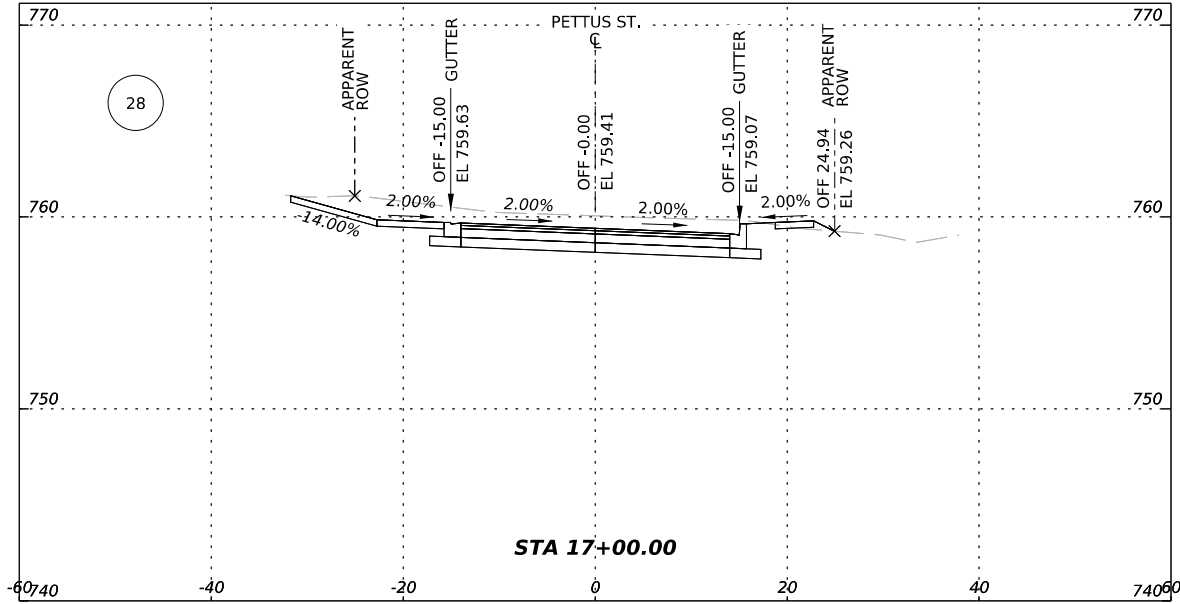
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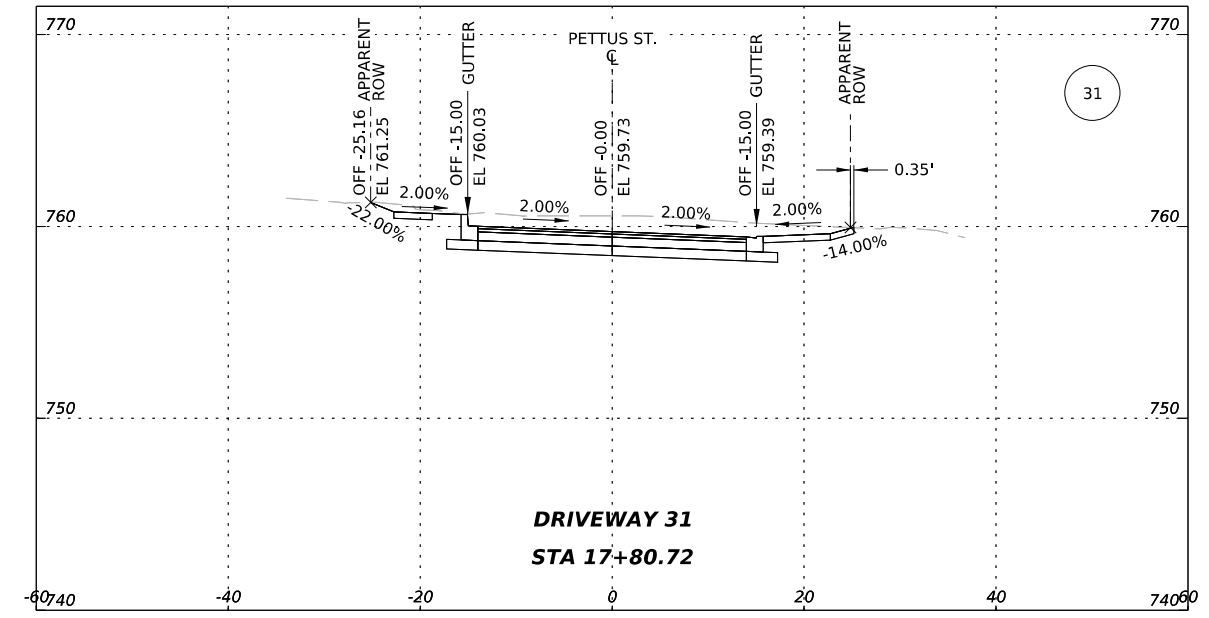
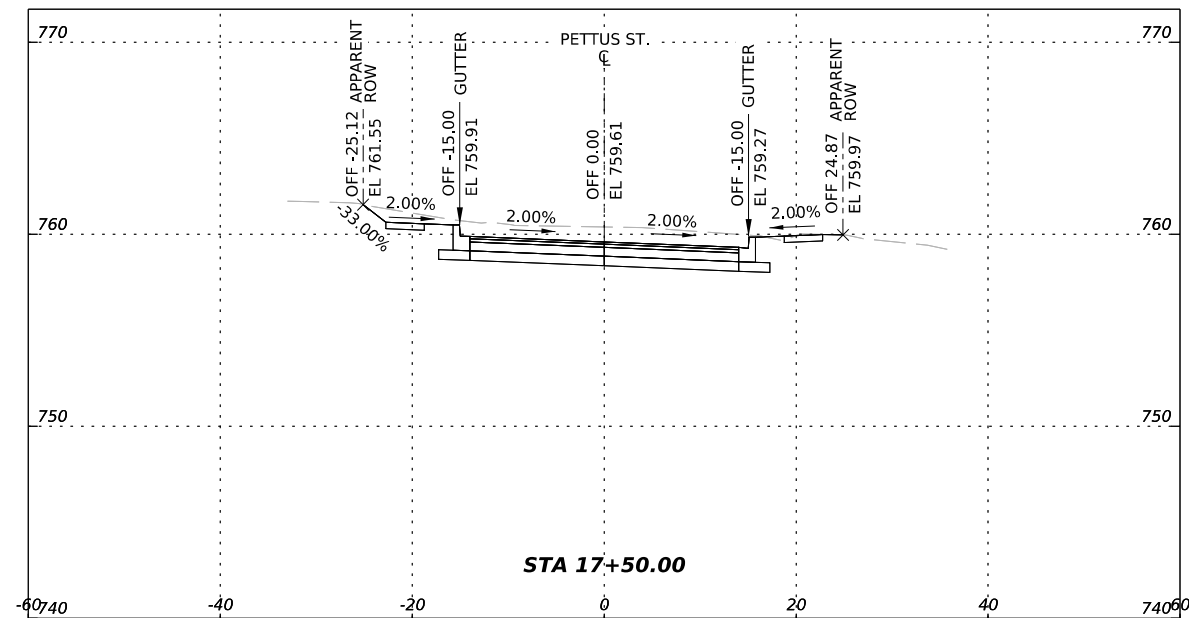
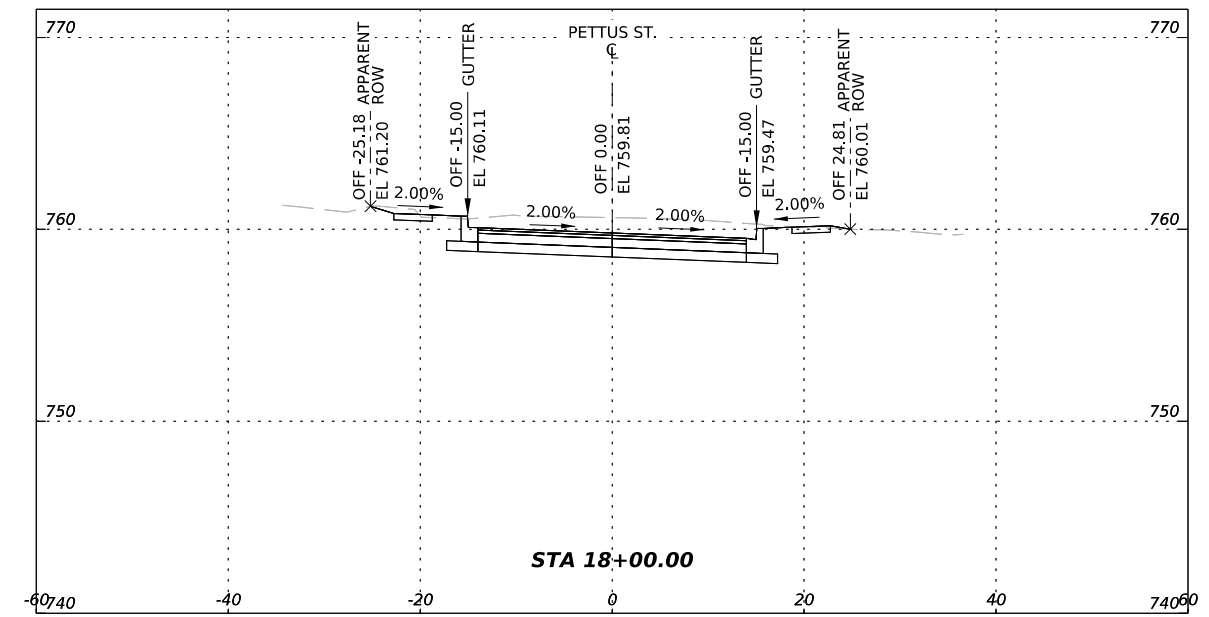
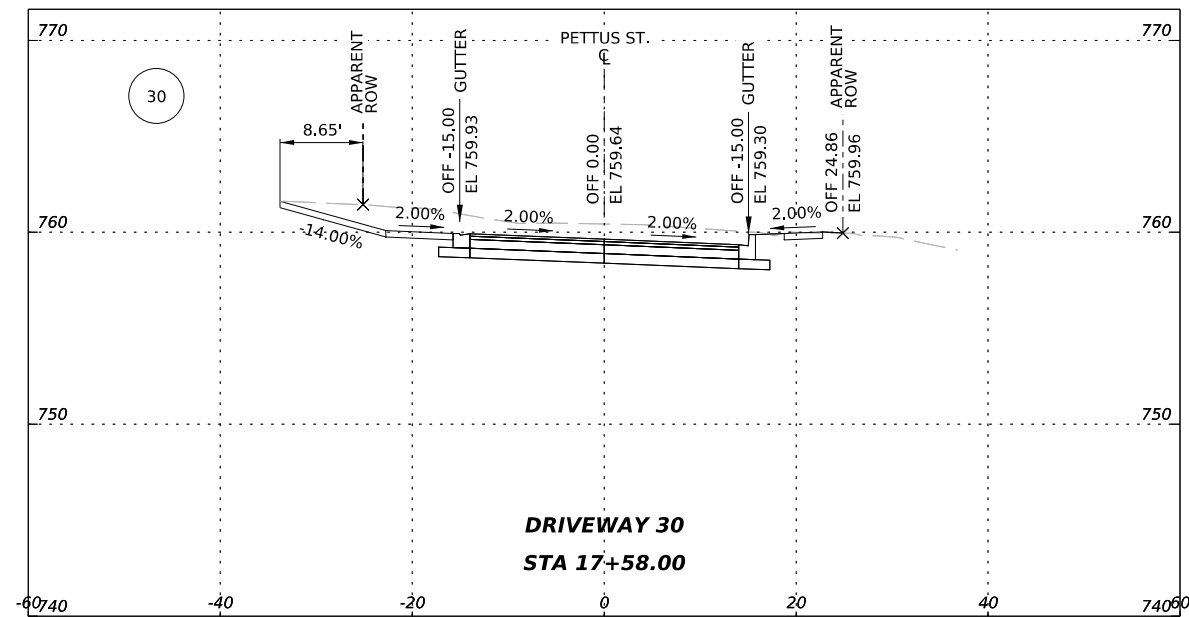
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|  AG3 Group, LLC ENGINEERING • SURVEY • CONSTRUCTION | | 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS PETTUS ST. CROSS SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 82 |

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|--|----------------------|--|------------------|
|  AG3 Group, LLC ENGINEERING • SURVEY • CONSTRUCTION | | 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS PETTUS ST. CROSS SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 83 |

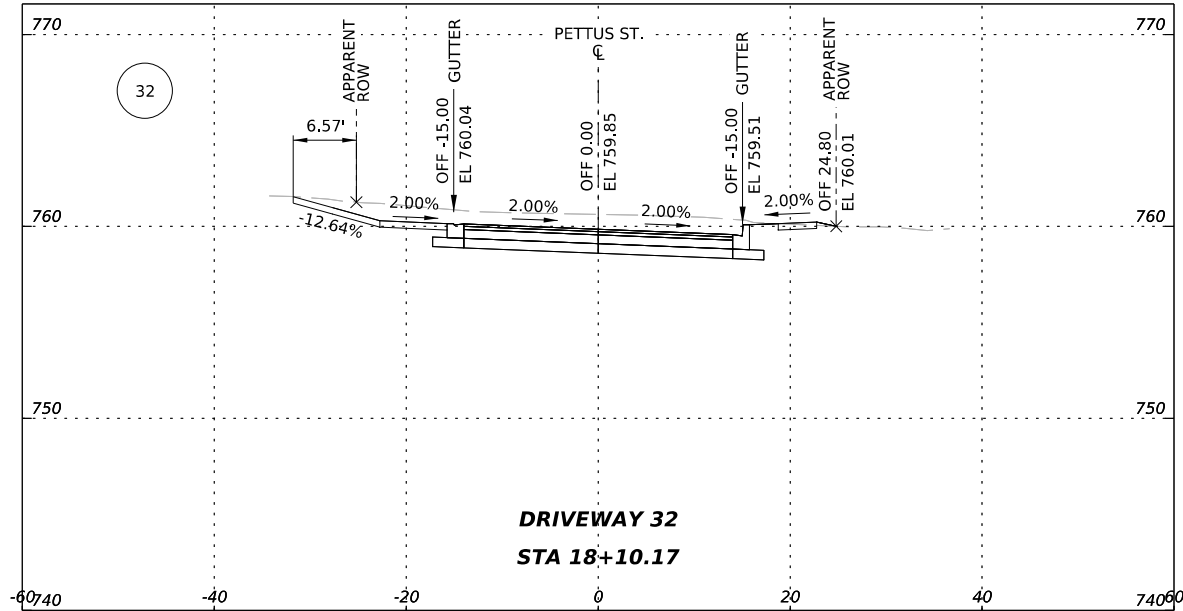
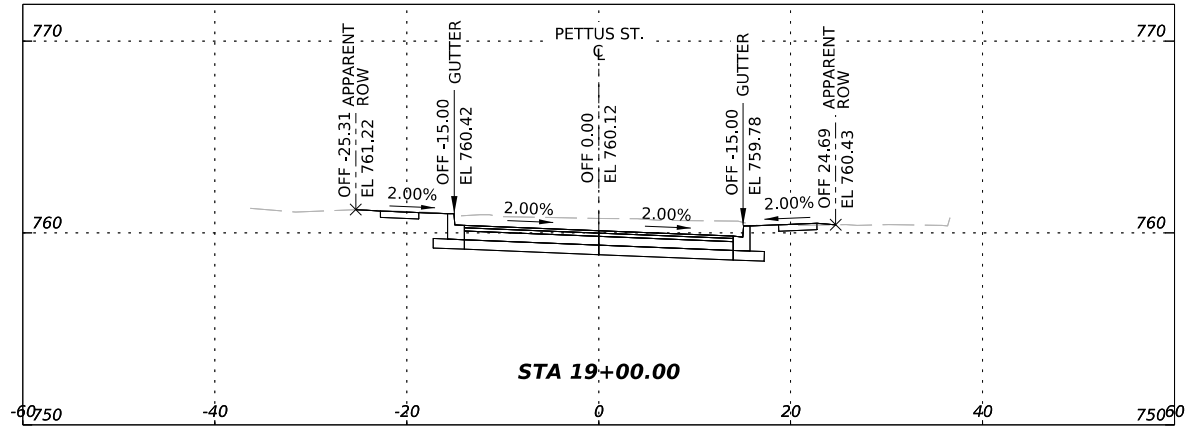
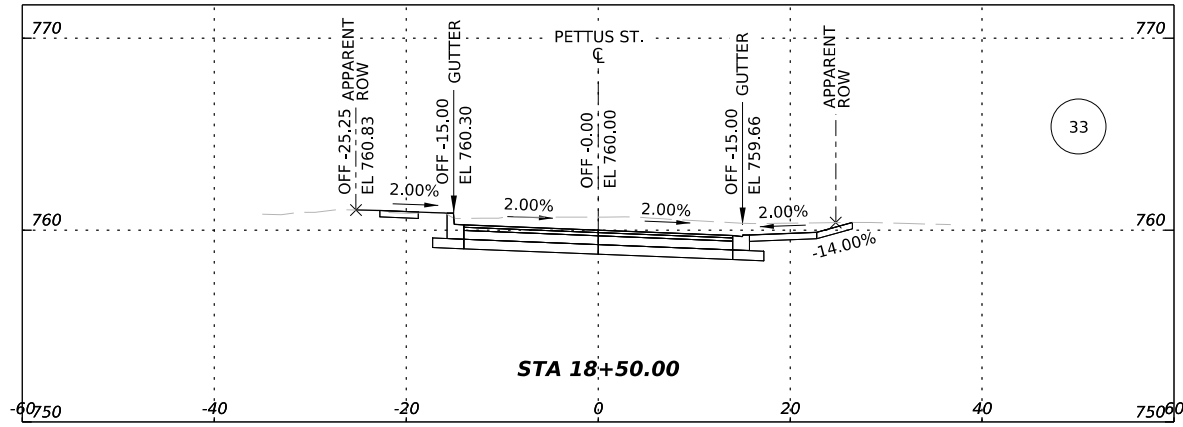
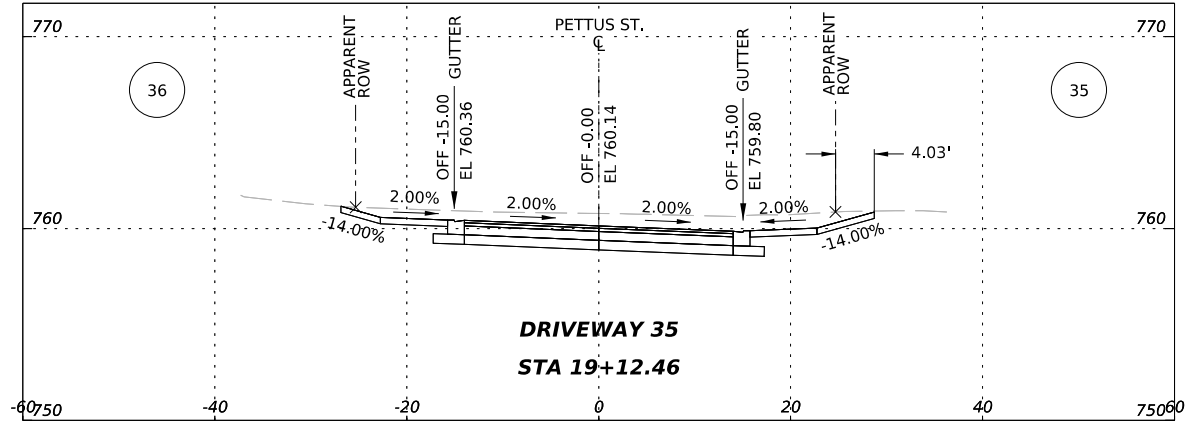
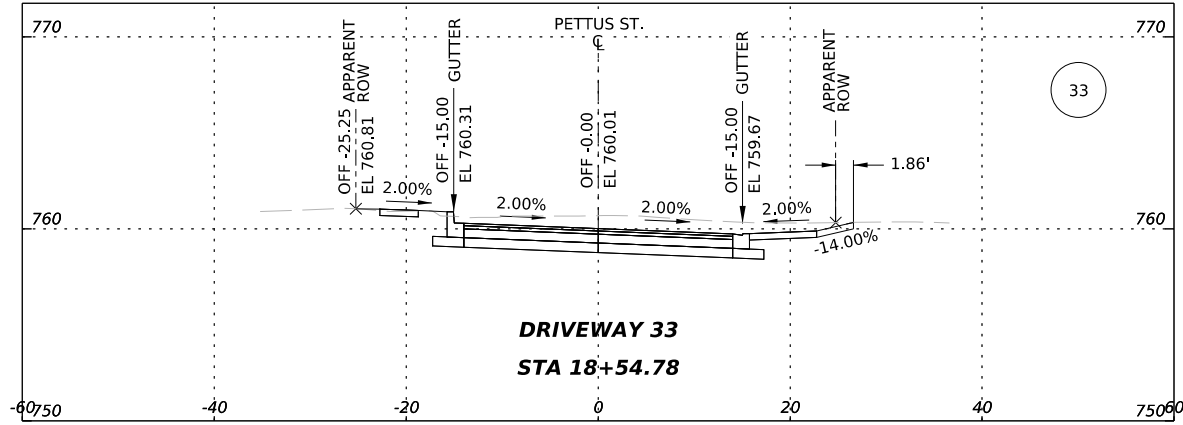


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|  AG3 Group, LLC <small>ENGINEERING • SURVEY • CONSTRUCTION</small> | 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | |
| <h2 style="margin: 0;">CITY OF SAN ANTONIO</h2> <p style="margin: 0;">PUBLIC WORKS DEPARTMENT</p> | | |
| <p style="margin: 0;">CULEBRA AREA STREETS</p> <h2 style="margin: 0;">PETTUS ST. CROSS SECTIONS</h2> | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG |
| SHEET NO: 84 | | |



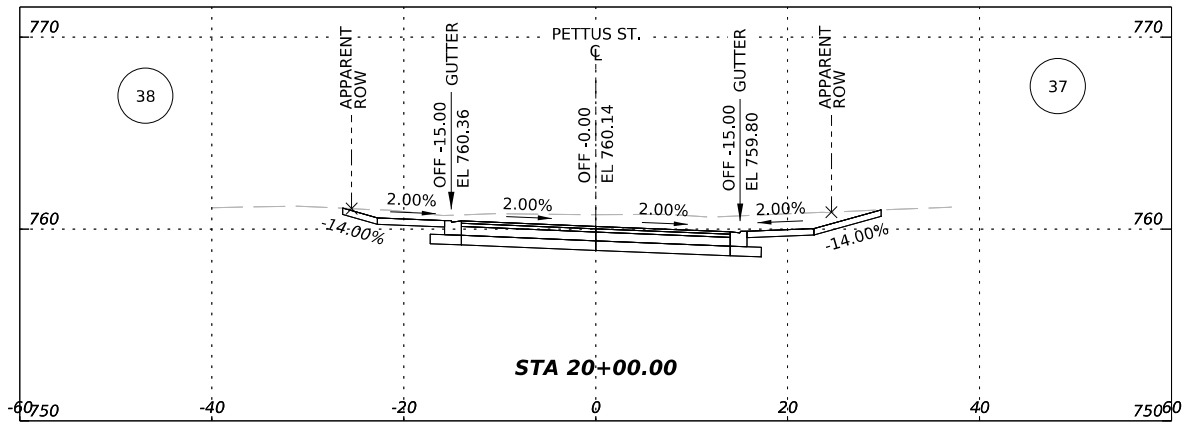
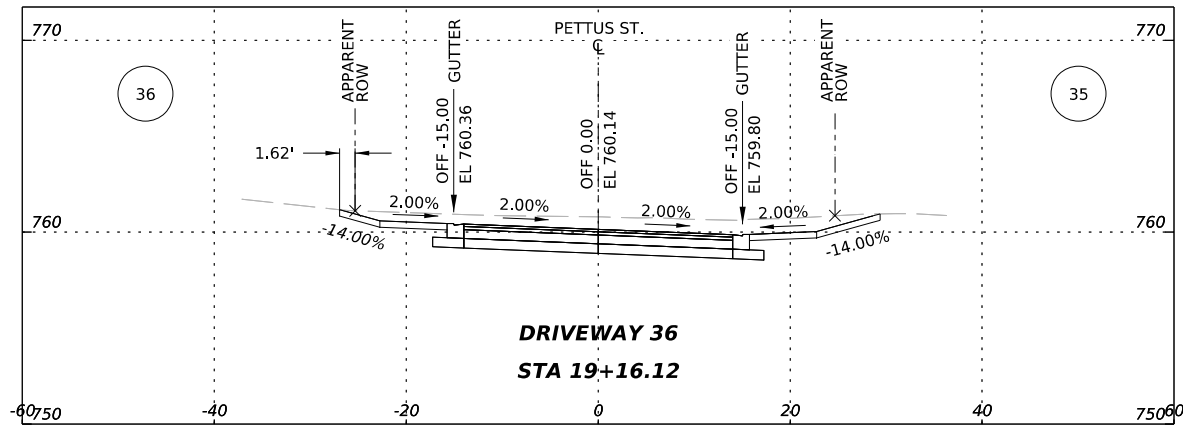
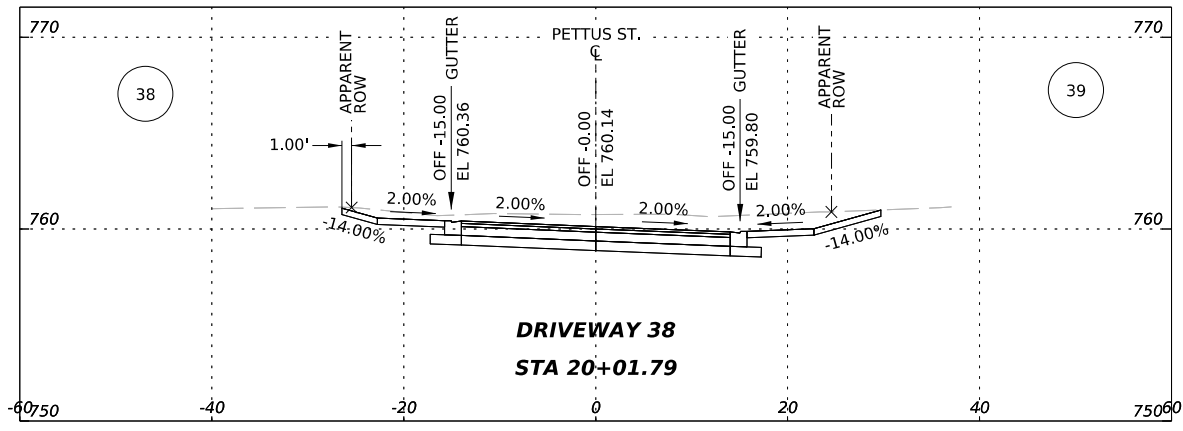
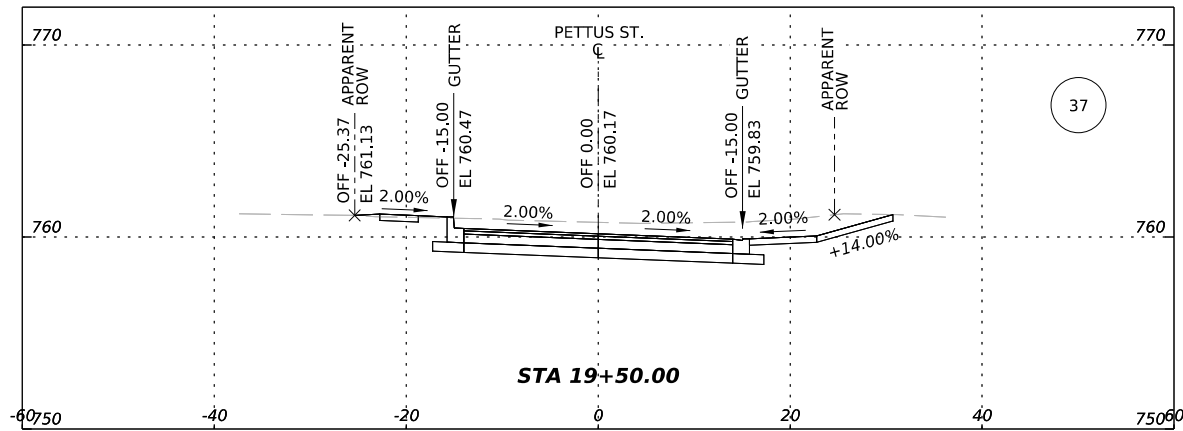
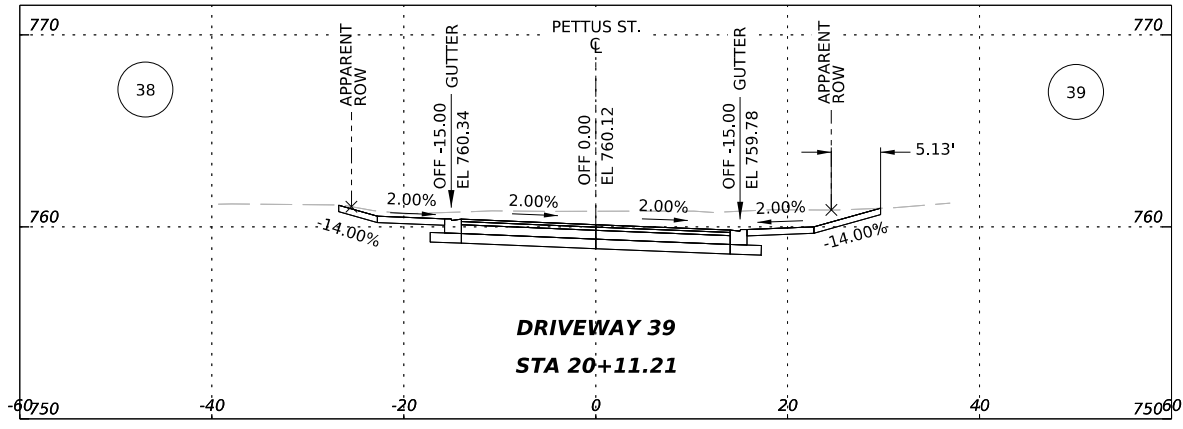
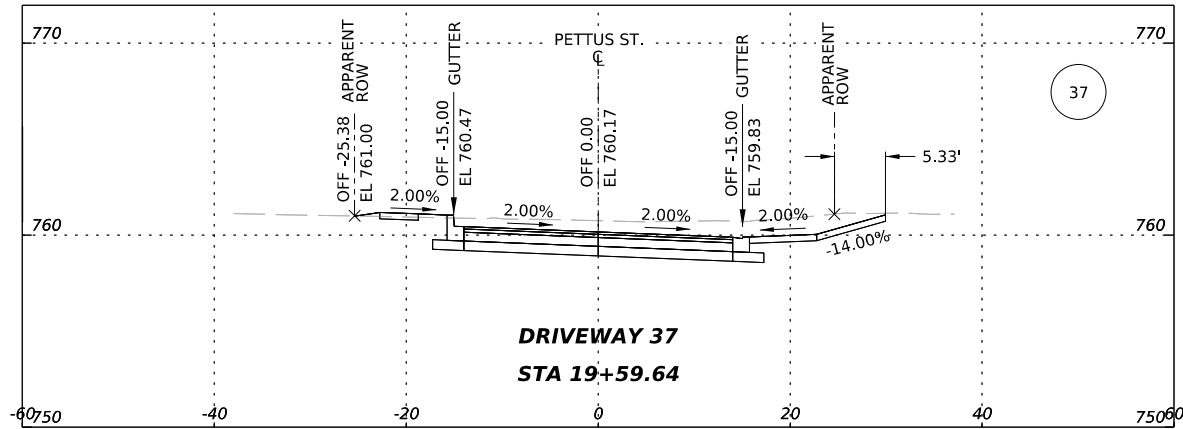
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AG3
AG3 Group, LLC
ENGINEERING • SURVEY • CONSTRUCTION
4800 FREDERICKSBURG RD SUITE 200SL
SAN ANTONIO, TX 78229
P:210-208-9400 F:210-208-9401
TBPE #F-21809
TBPLS #10194622

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

CULEBRA AREA STREETS
PETTUS ST. CROSS SECTIONS

| | | |
|----------------|----------------------|------------------|
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG |
| | | SHEET NO: 85 |



5.28.25

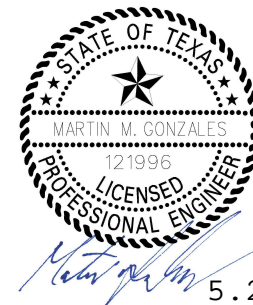
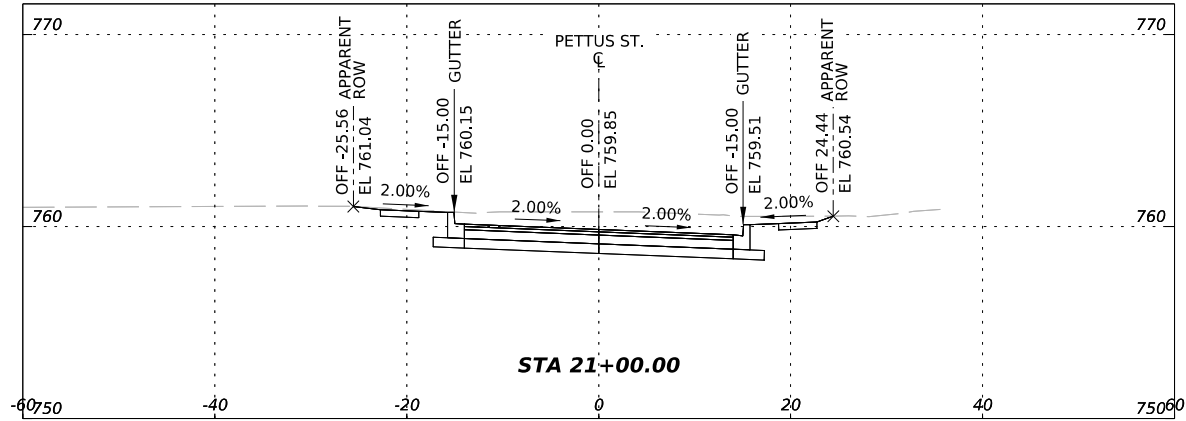
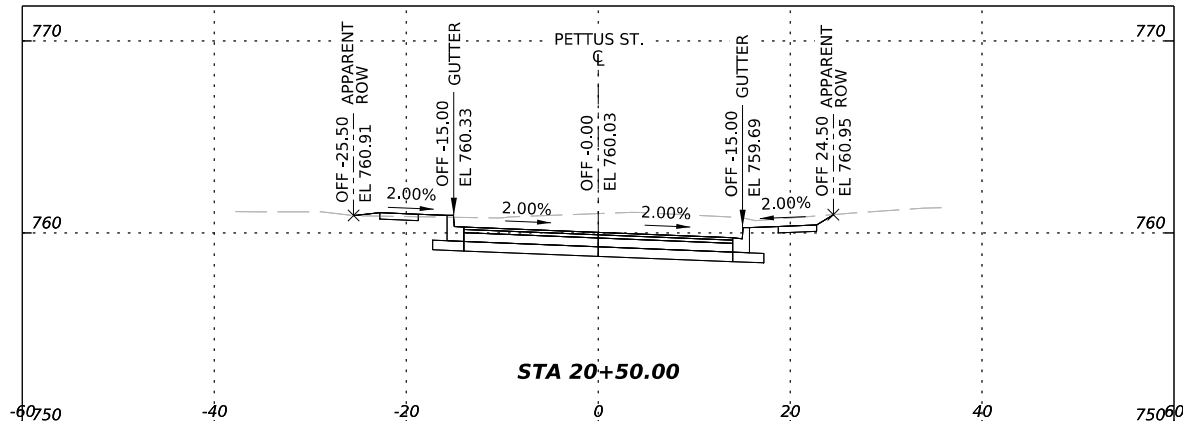
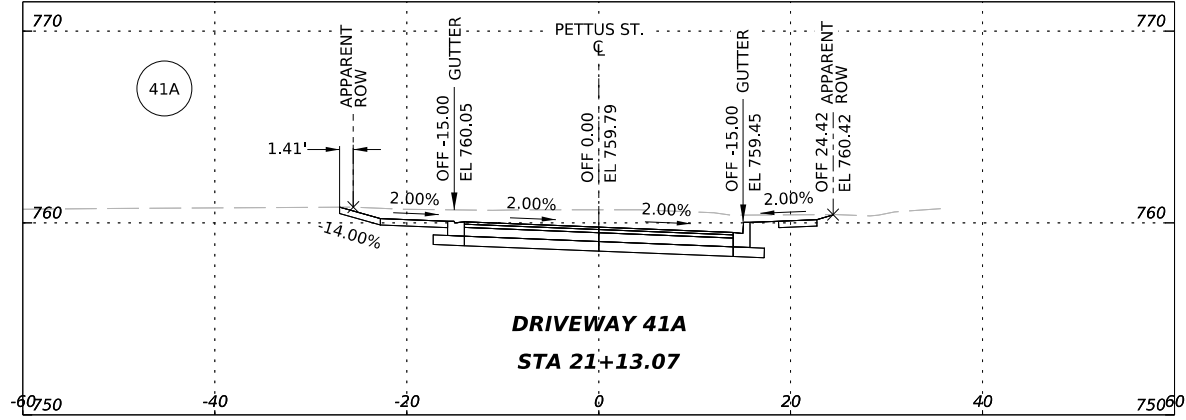
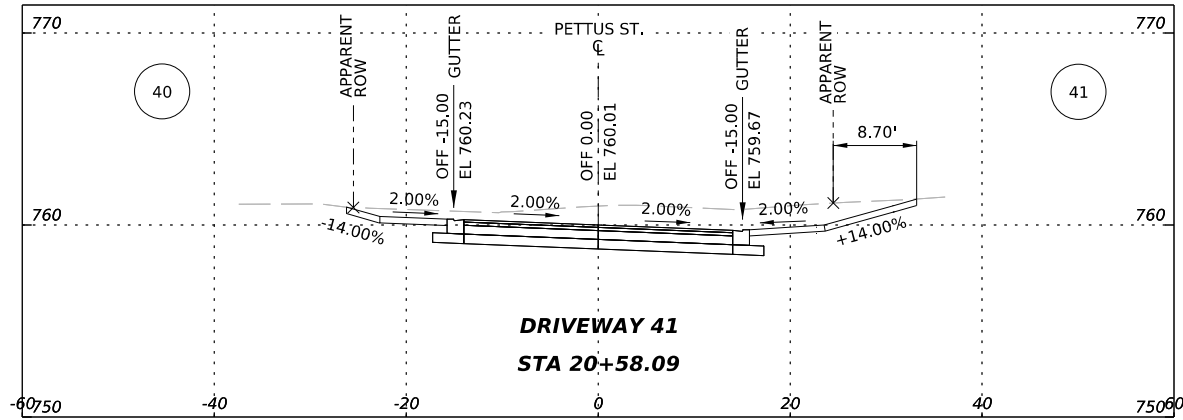
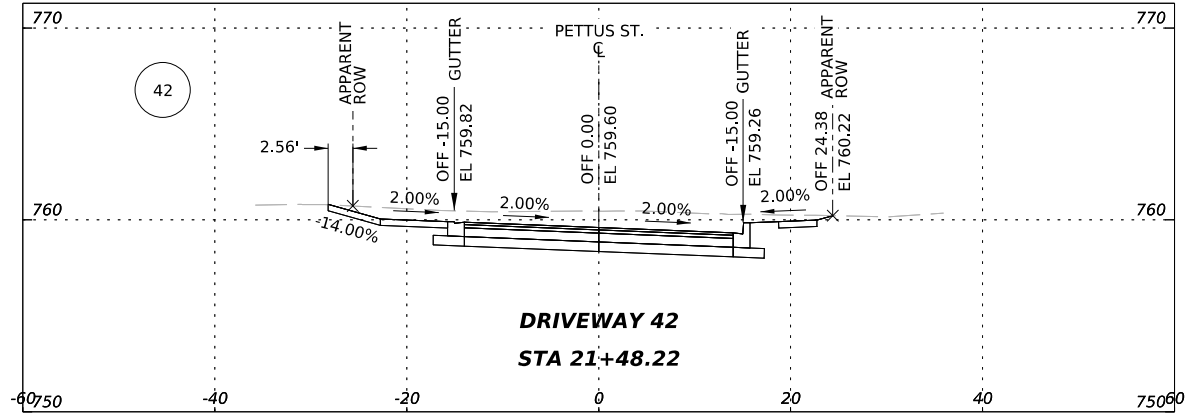
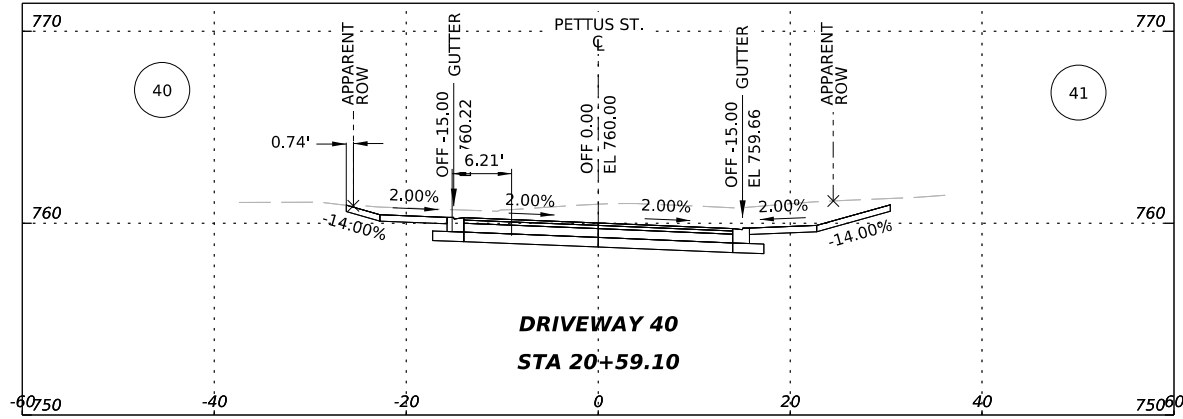


4800 FREDERICKSBURG RD SUITE 200SL
SAN ANTONIO, TX 78229
P:210-208-9400 F:210-208-9401
TBPE #F-21809
TBPLS #10194622

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

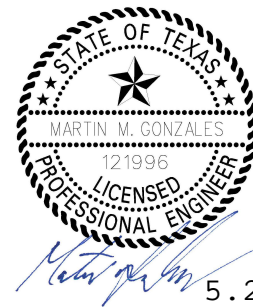
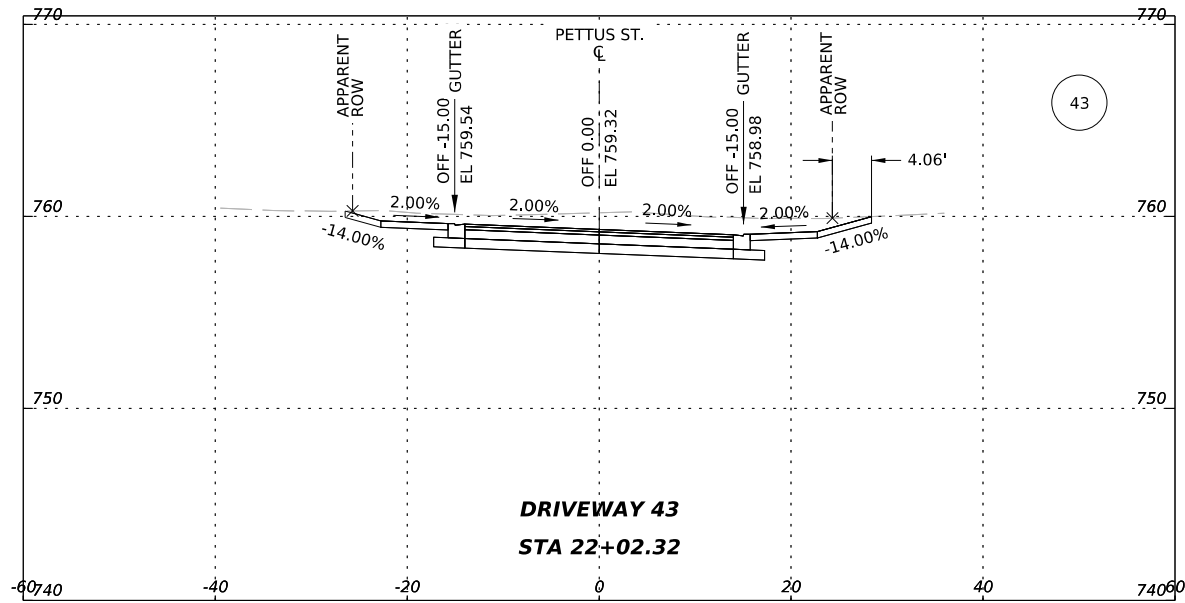
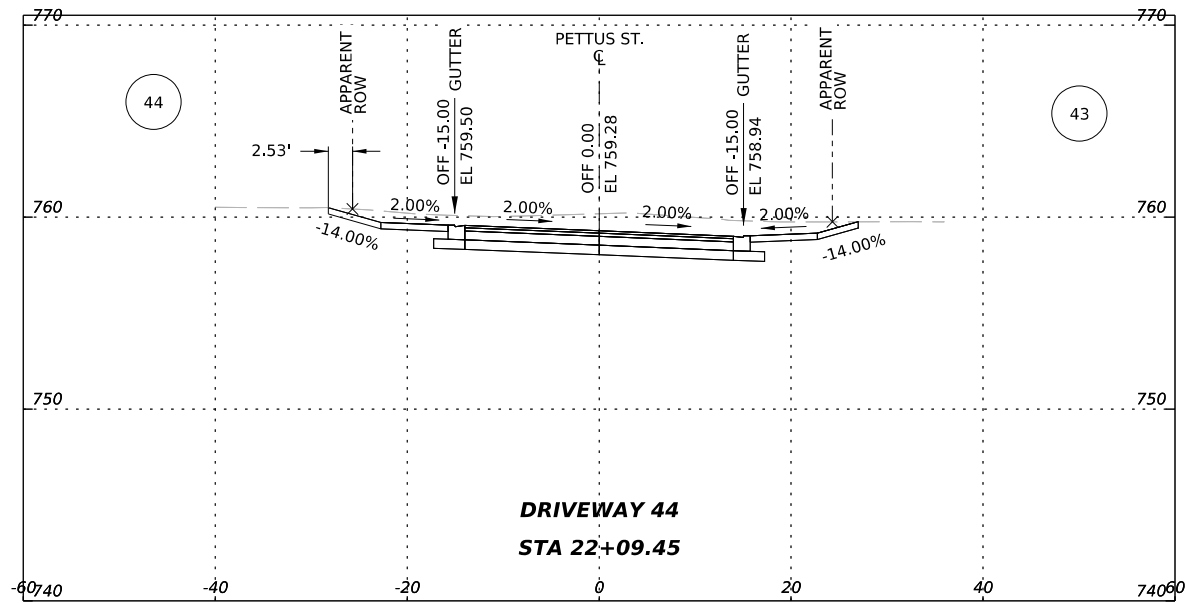
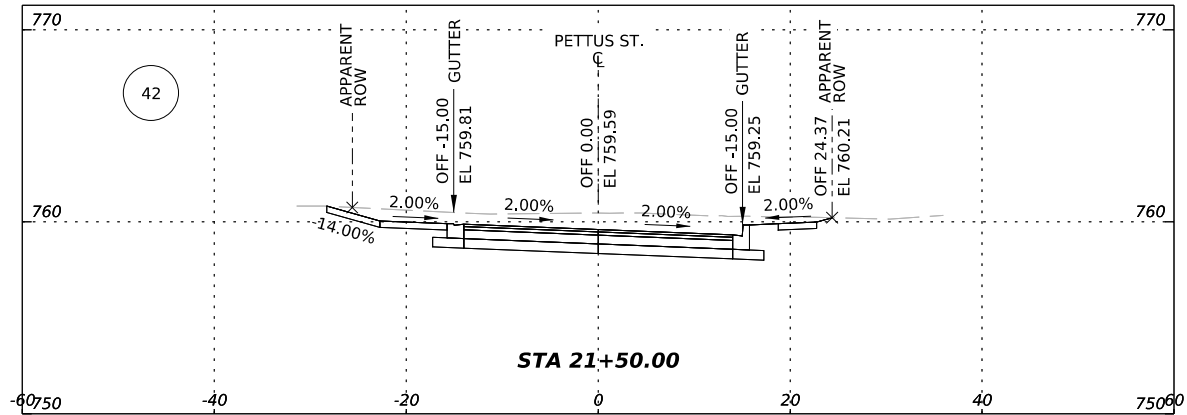
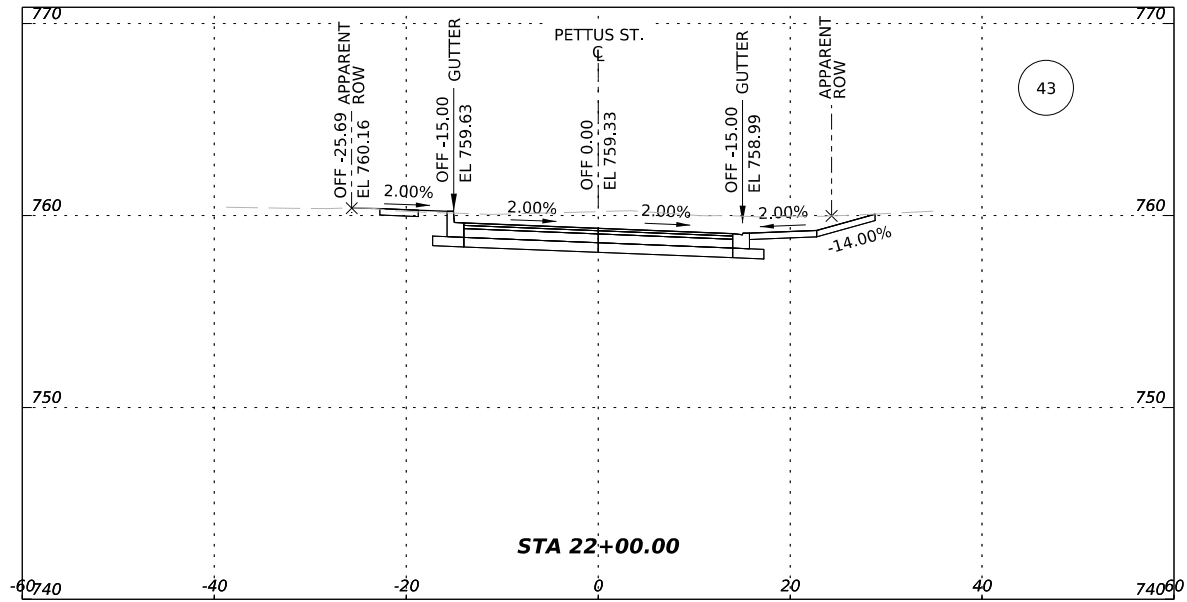
CULEBRA AREA STREETS
PETTUS ST. CROSS SECTIONS

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| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG |
| | | SHEET NO: 86 |



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| <div><div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div><div><div>4800 FREDERICKSBURG RD SUITE 200SL</div><div>SAN ANTONIO, TX 78229</div><div>P:210-208-9400 F:210-208-9401</div><div>TBPE #F-21809</div><div>TBPLS #10194622</div></div></div> | | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | |
| CULEBRA AREA STREETS PETTUS ST. CROSS SECTIONS | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG |
| | | SHEET NO: 87 |



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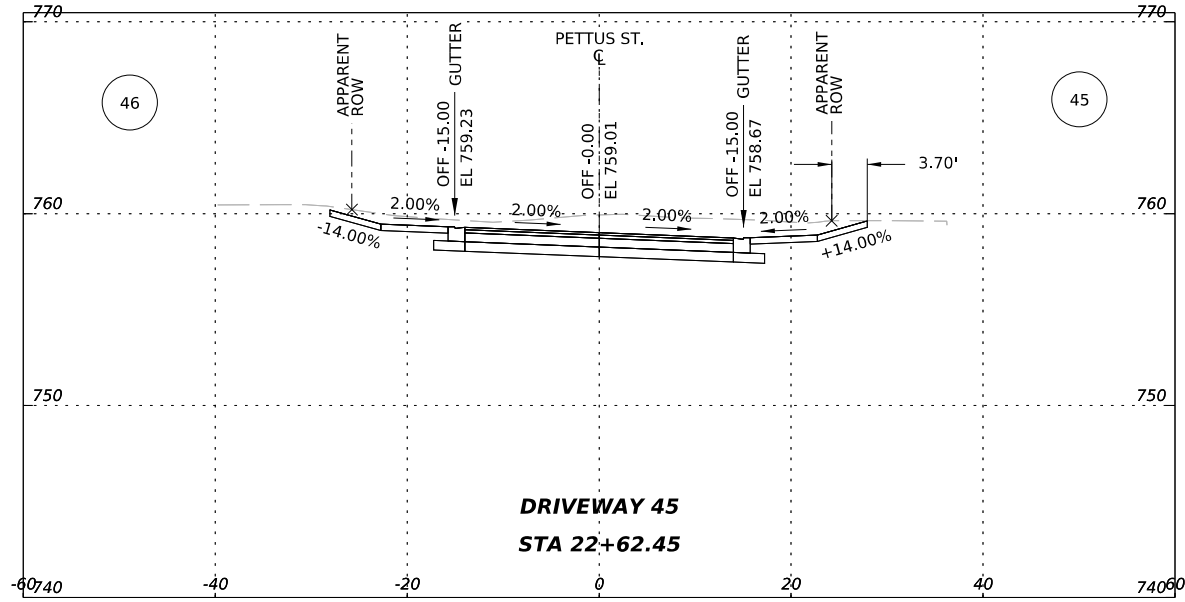
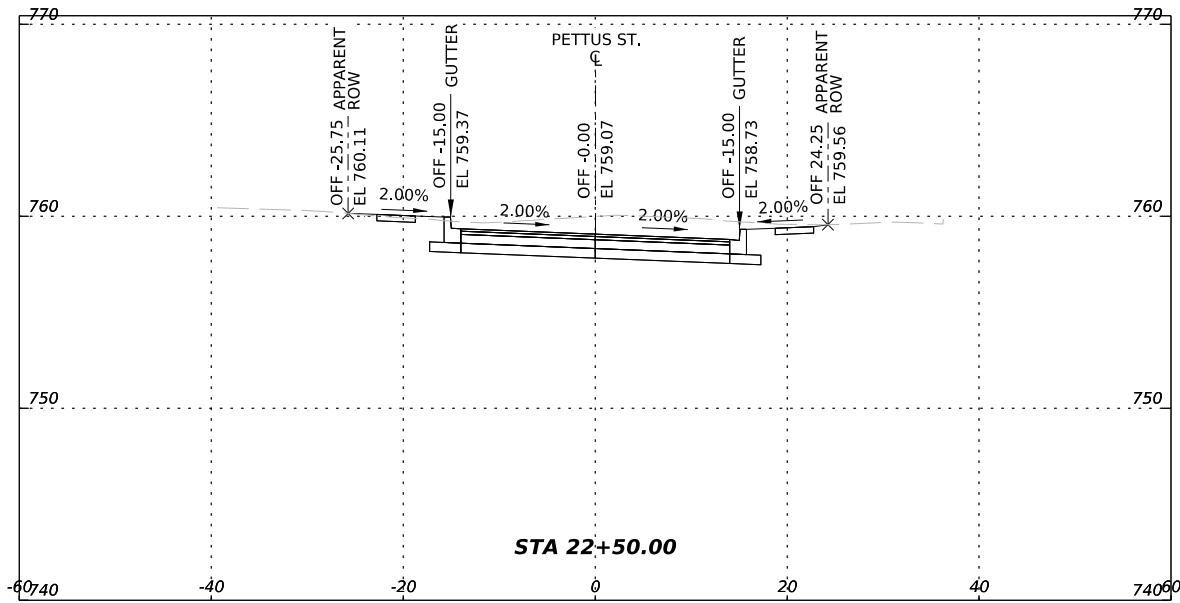
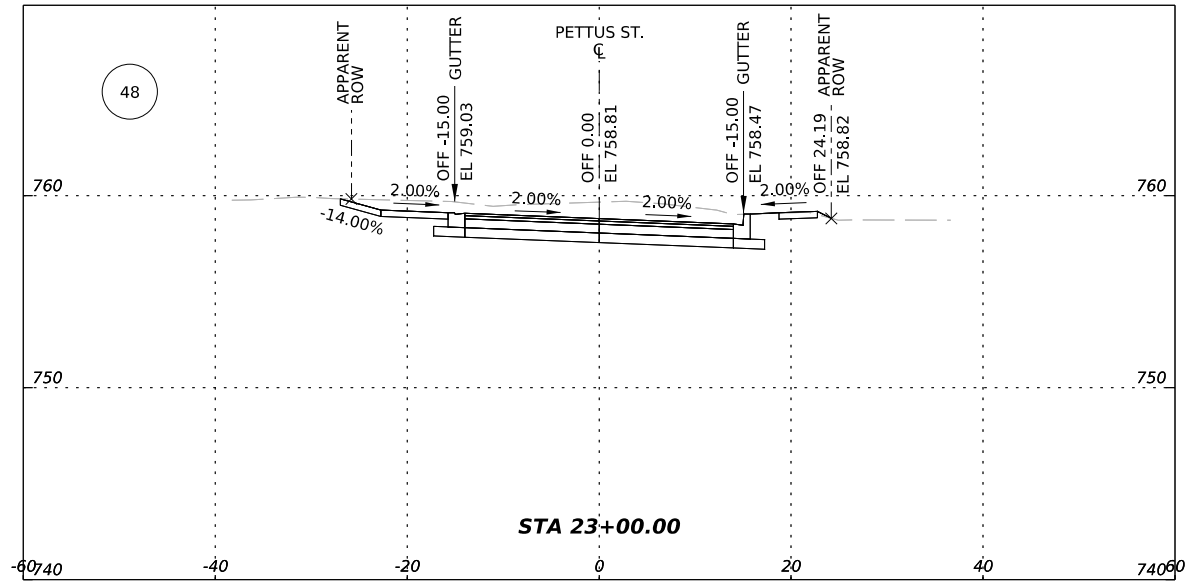
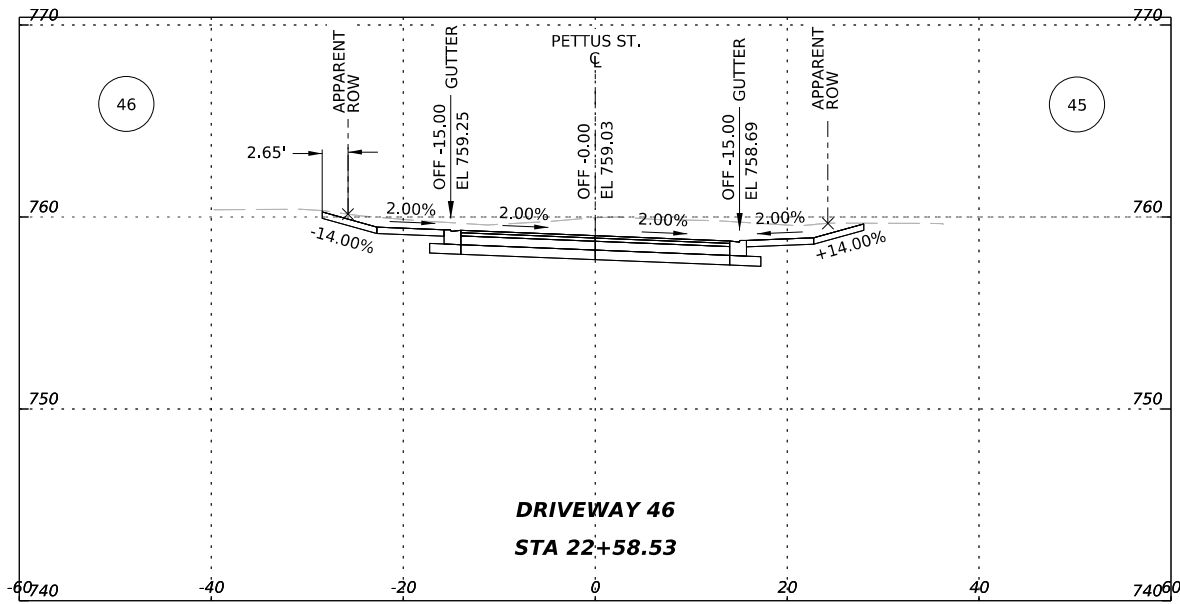


4800 FREDERICKSBURG RD SUITE 200SL
SAN ANTONIO, TX 78229
P:210-208-9400 F:210-208-9401
TBPE #F-21809
TBPLS #10194622


CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

CULEBRA AREA STREETS
PETTUS ST. CROSS SECTIONS

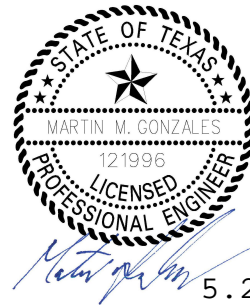
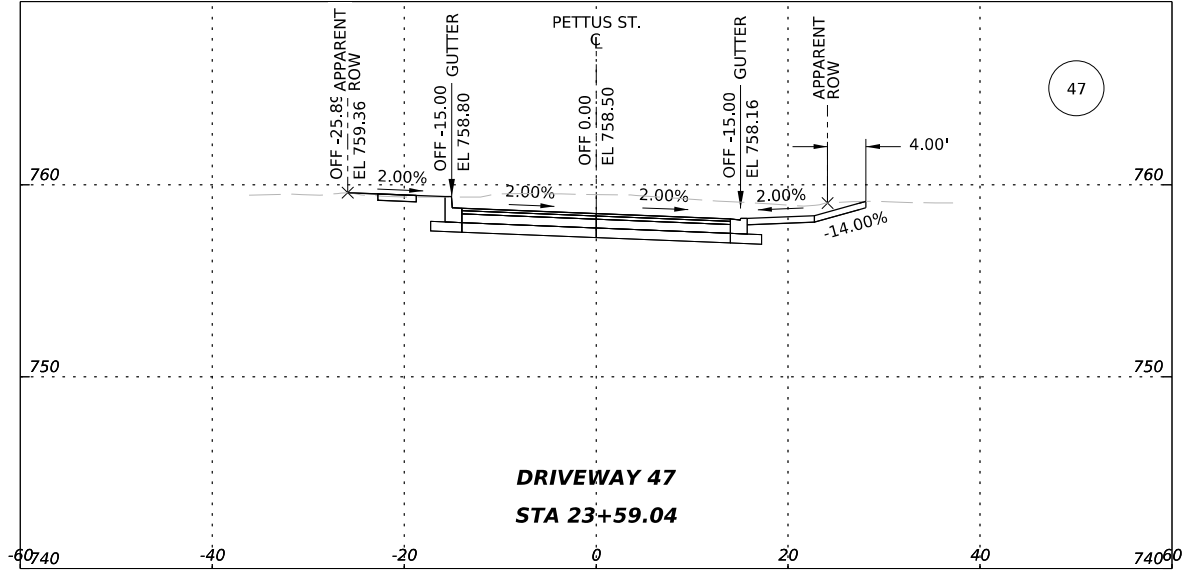
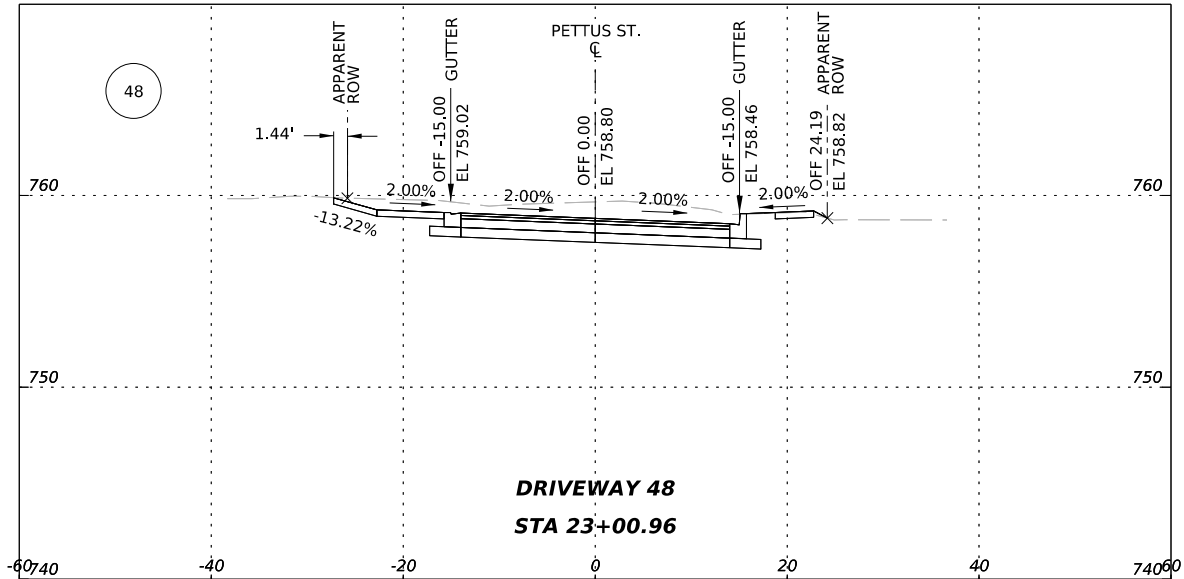
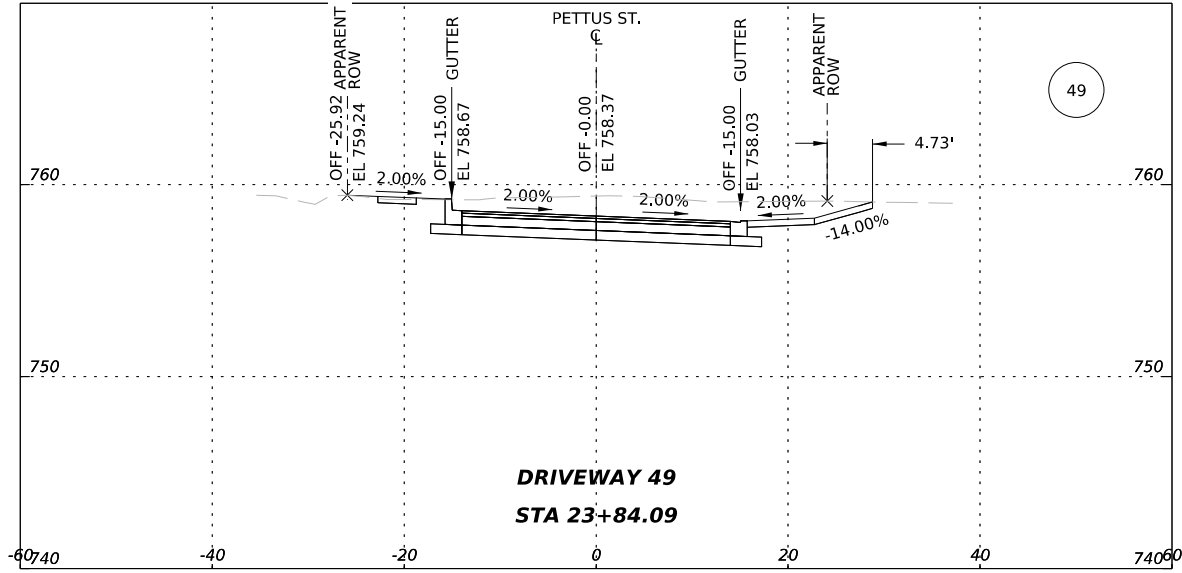
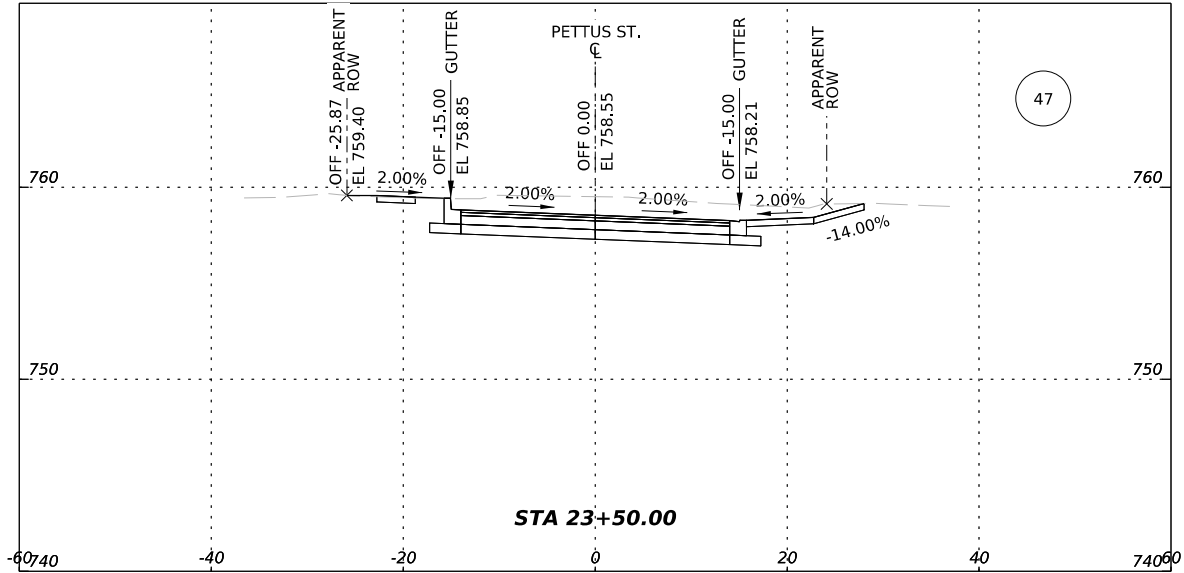
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| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG |
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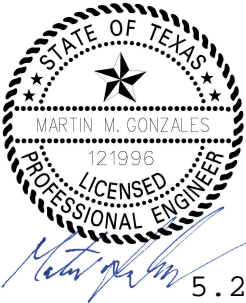
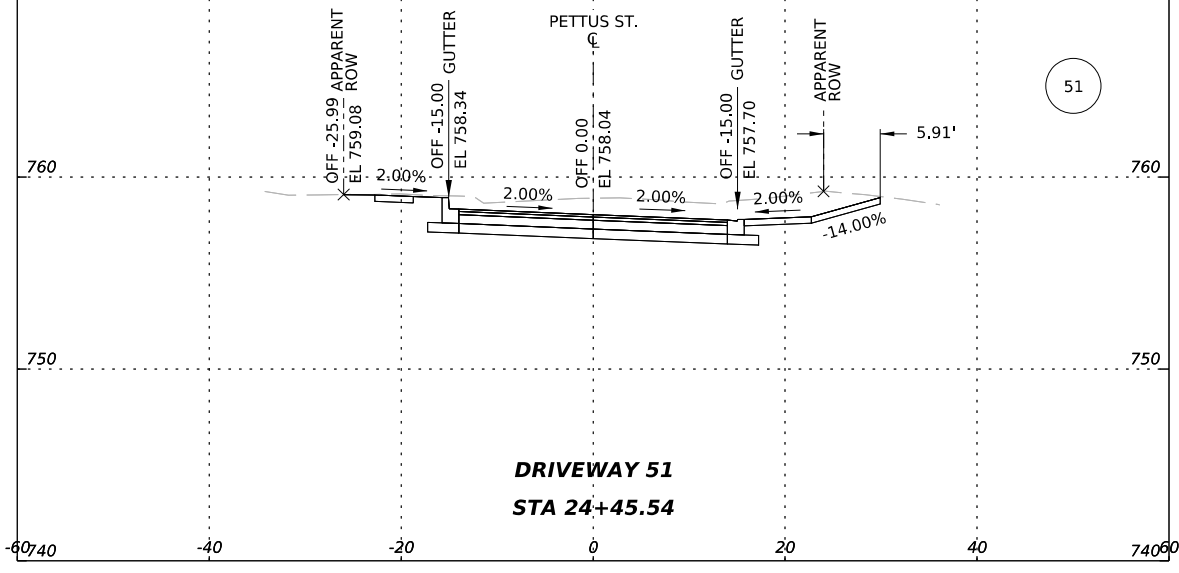
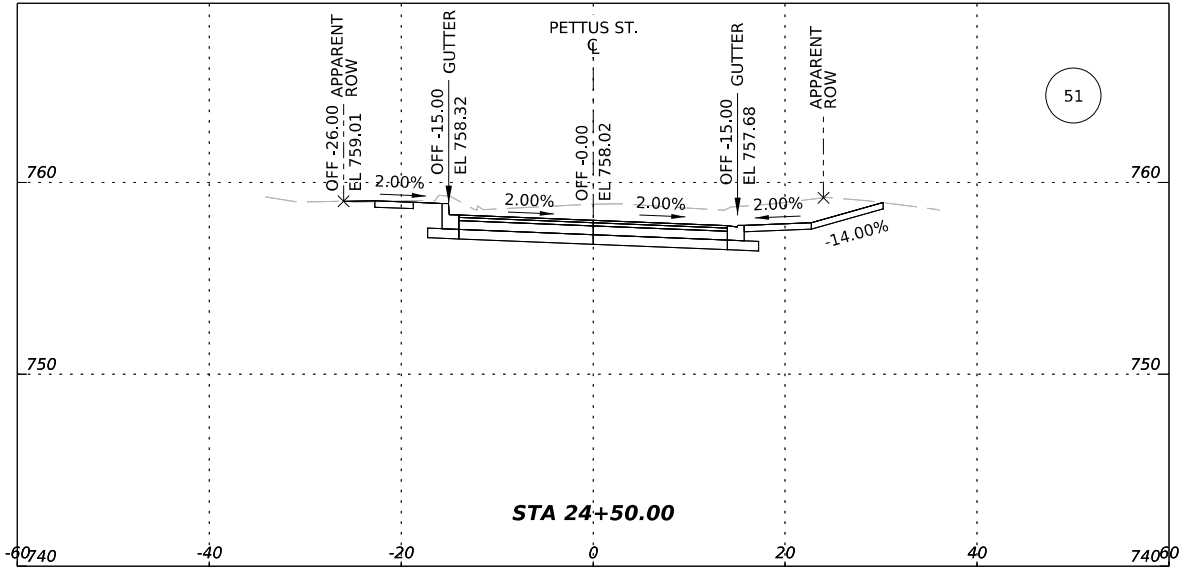
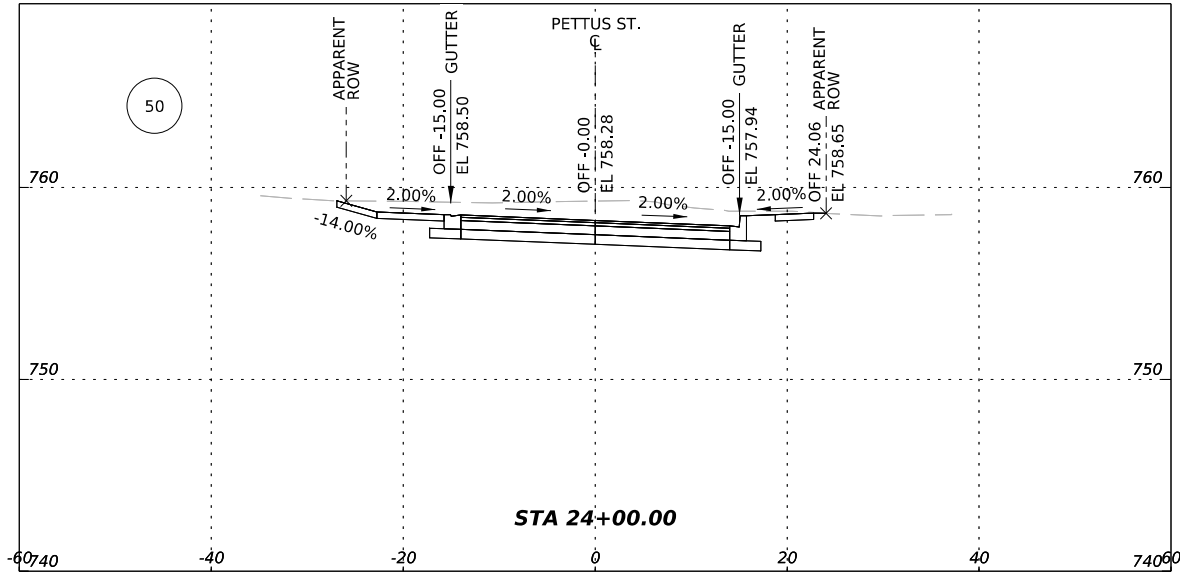
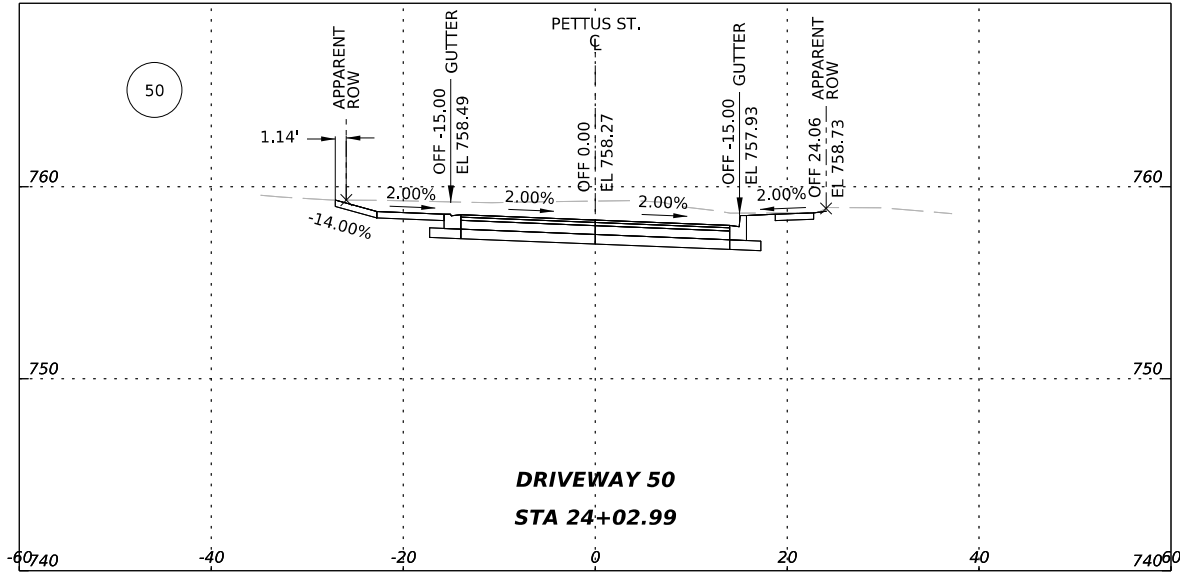
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|  AG3 Group, LLC ENGINEERING • SURVEY • CONSTRUCTION | 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | | |
| | CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | |
| | CULEBRA AREA STREETS PETTUS ST. CROSS SECTIONS | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 89 |

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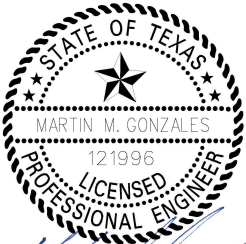
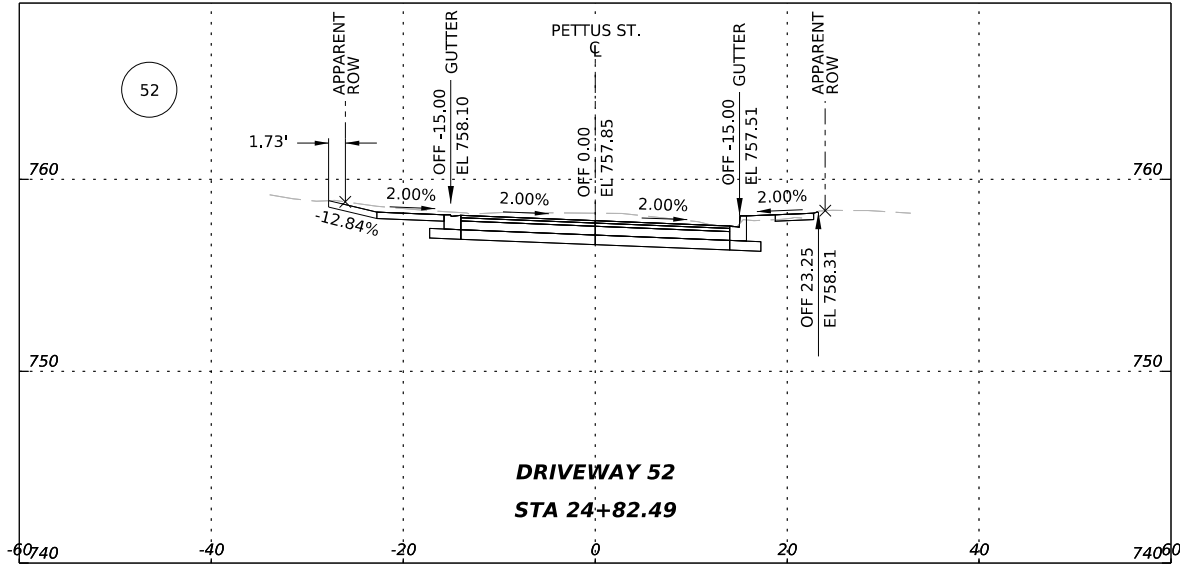
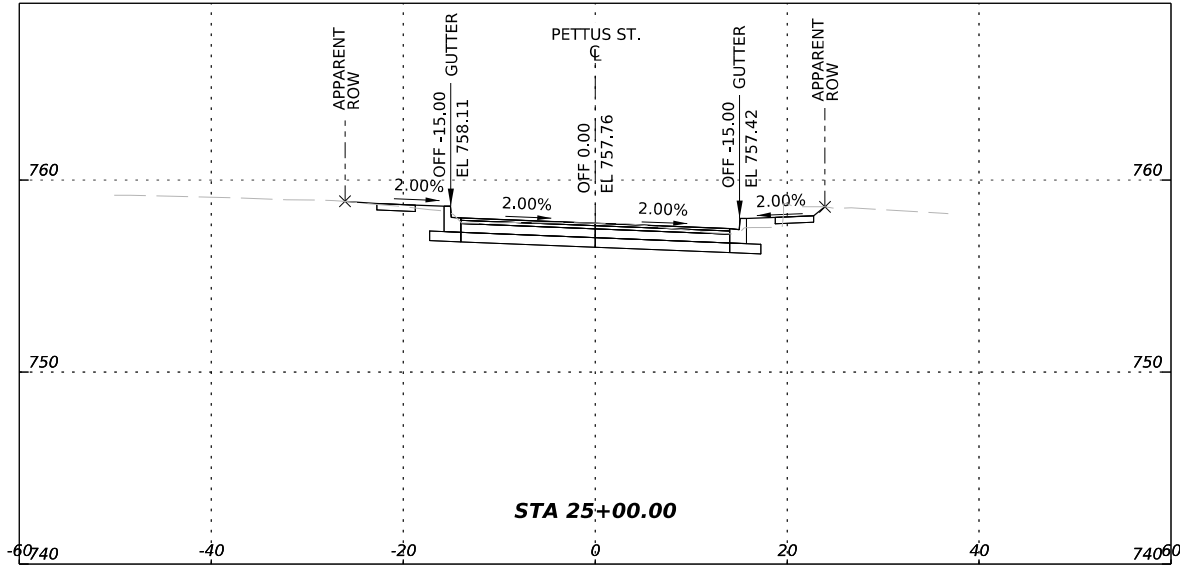
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|  AG3 Group, LLC ENGINEERING • SURVEY • CONSTRUCTION | | 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS PETTUS ST. CROSS SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 90 |



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|  AG3 Group, LLC ENGINEERING • SURVEY • CONSTRUCTION | 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | | |
| | CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | |
| | CULEBRA AREA STREETS PETTUS ST. CROSS SECTIONS | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 91 |



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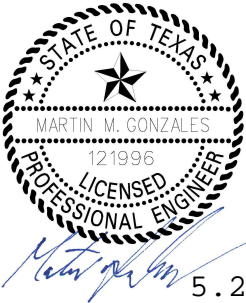
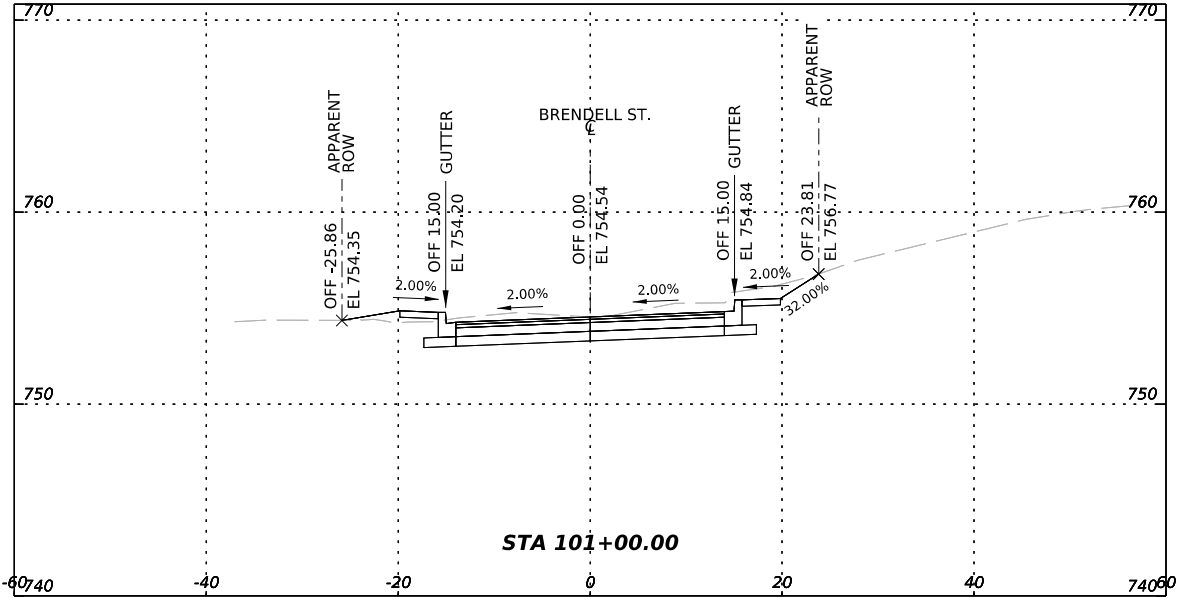
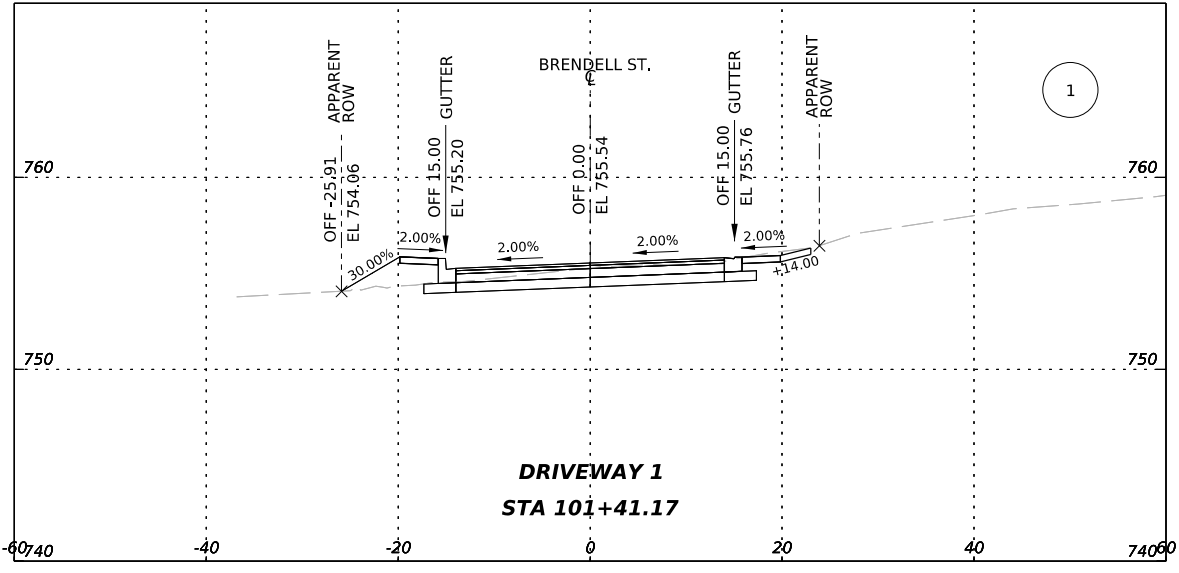
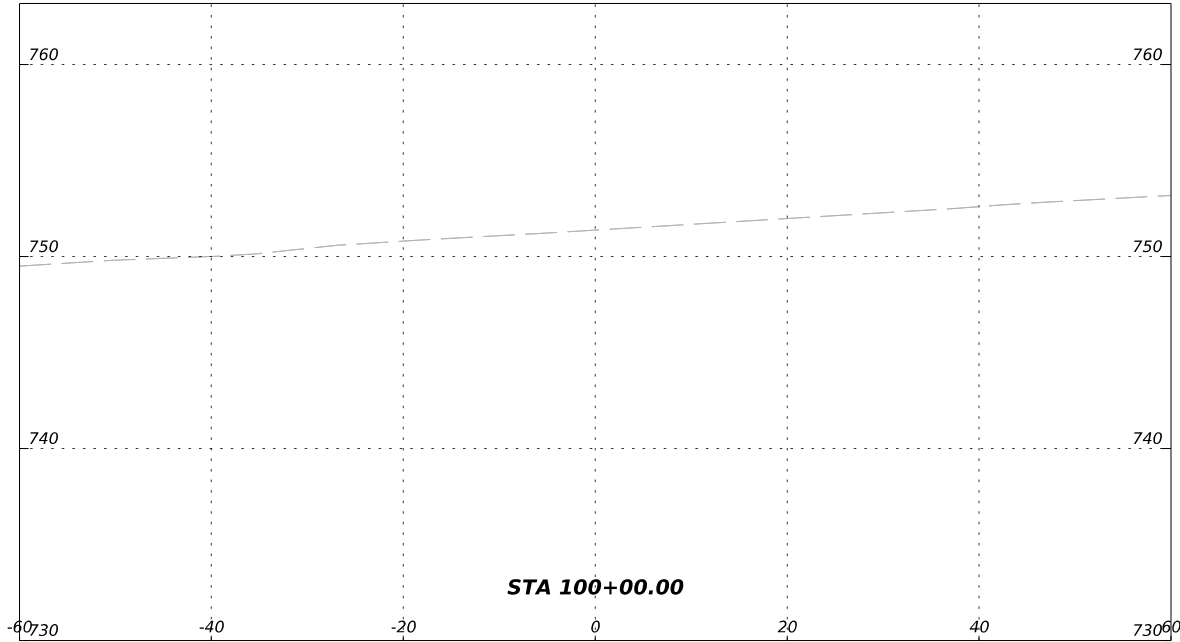
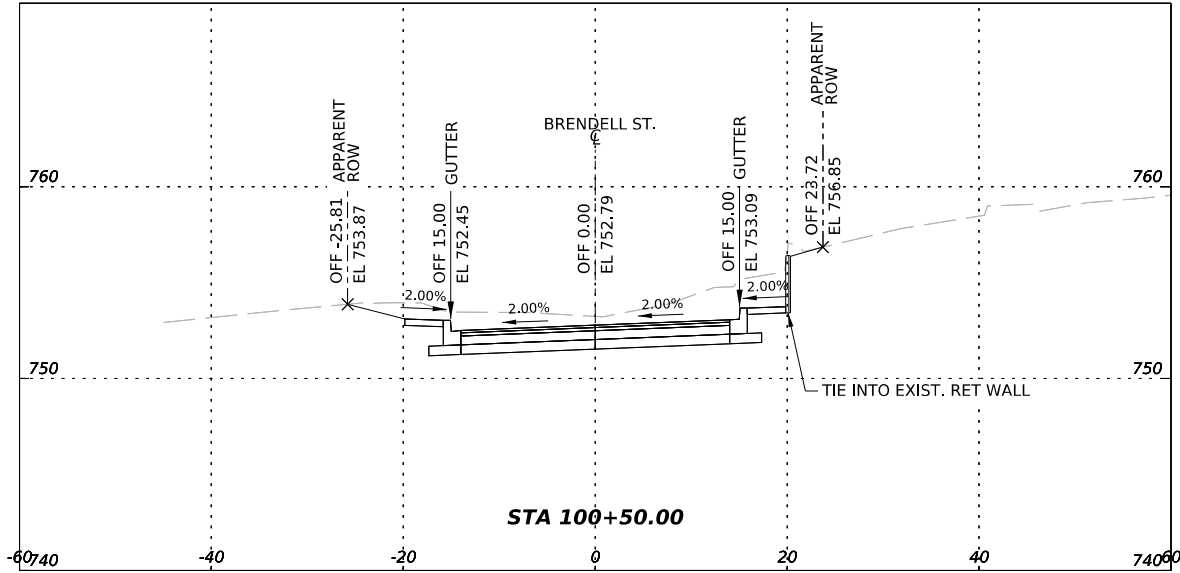


4800 FREDERICKSBURG RD SUITE 200SL
SAN ANTONIO, TX 78229
P:210-208-9400 F:210-208-9401
TBPE #F-21809
TBPLS #10194622

CITY OF SAN ANTONIO
PUBLIC WORKS DEPARTMENT

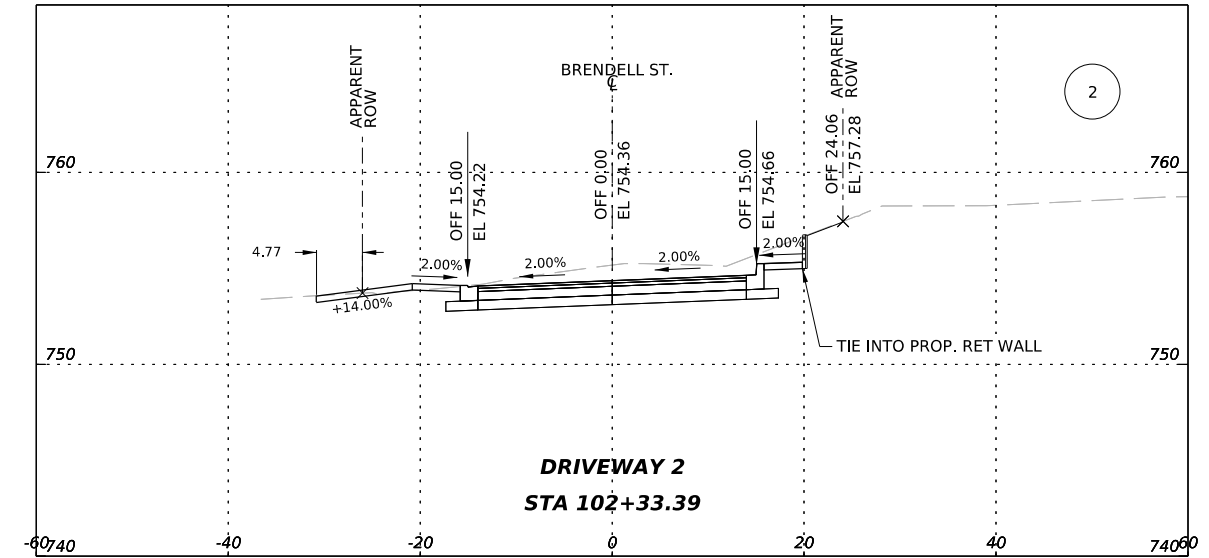
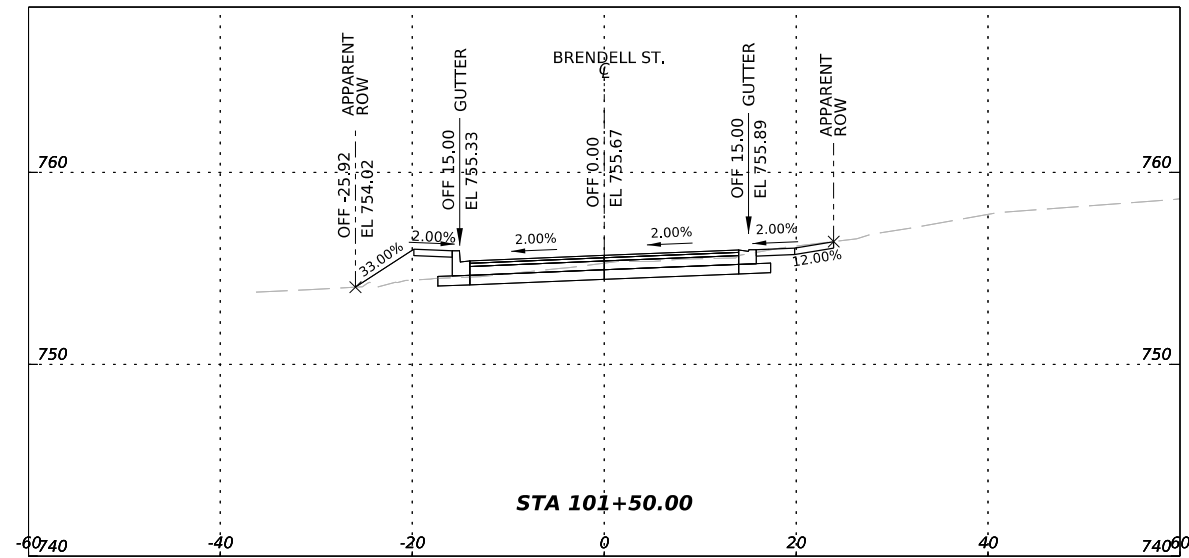
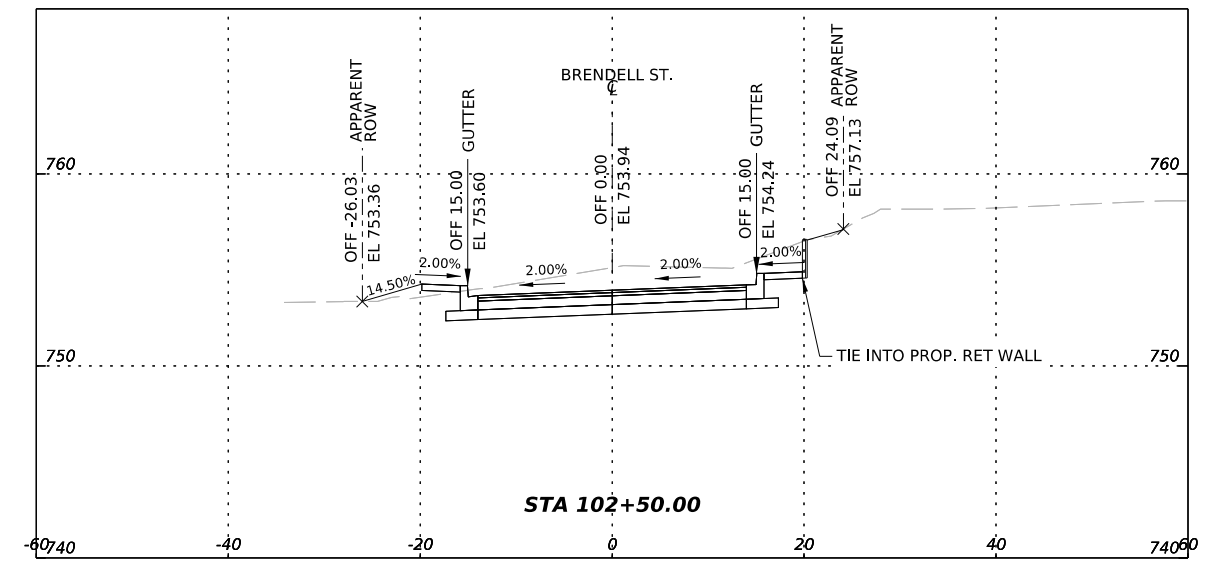
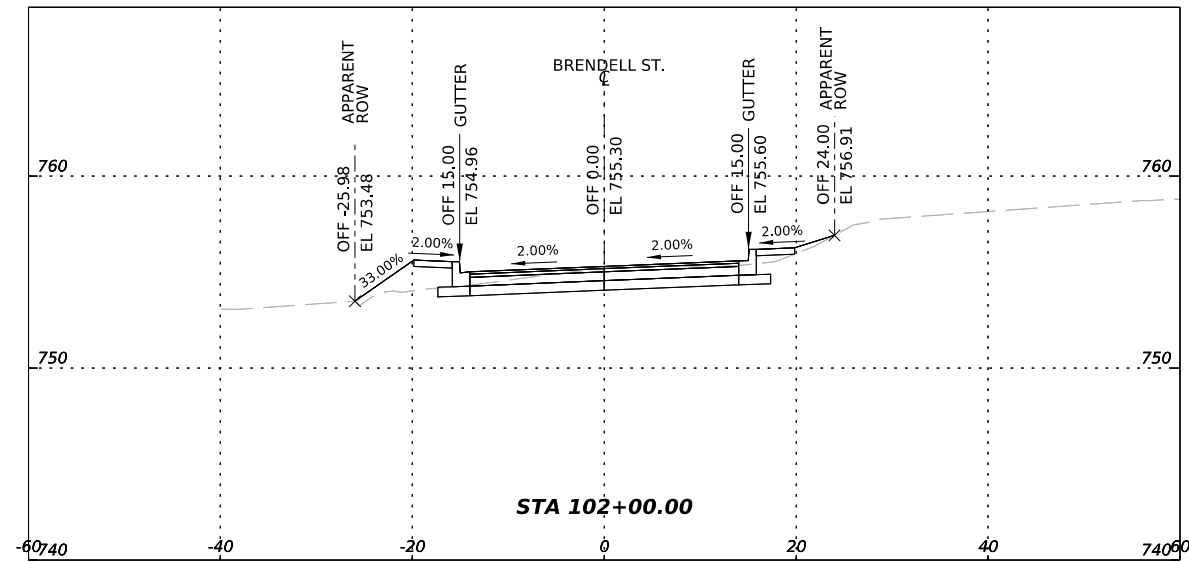
CULEBRA AREA STREETS
PETTUS ST. CROSS SECTIONS

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| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG |
| | | SHEET NO: 92 |



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|  AG3 Group, LLC ENGINEERING • SURVEY • CONSTRUCTION | | 4800 FREDERICKSBURG RD SUITE 200SL SAN ANTONIO, TX 78229 P:210-208-9400 F:210-208-9401 TBPE #F-21809 TBPLS #10194622 | |
| CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | | |
| CULEBRA AREA STREETS BRENDALL ST. CROSS SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
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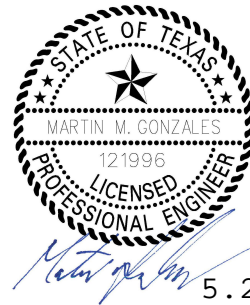
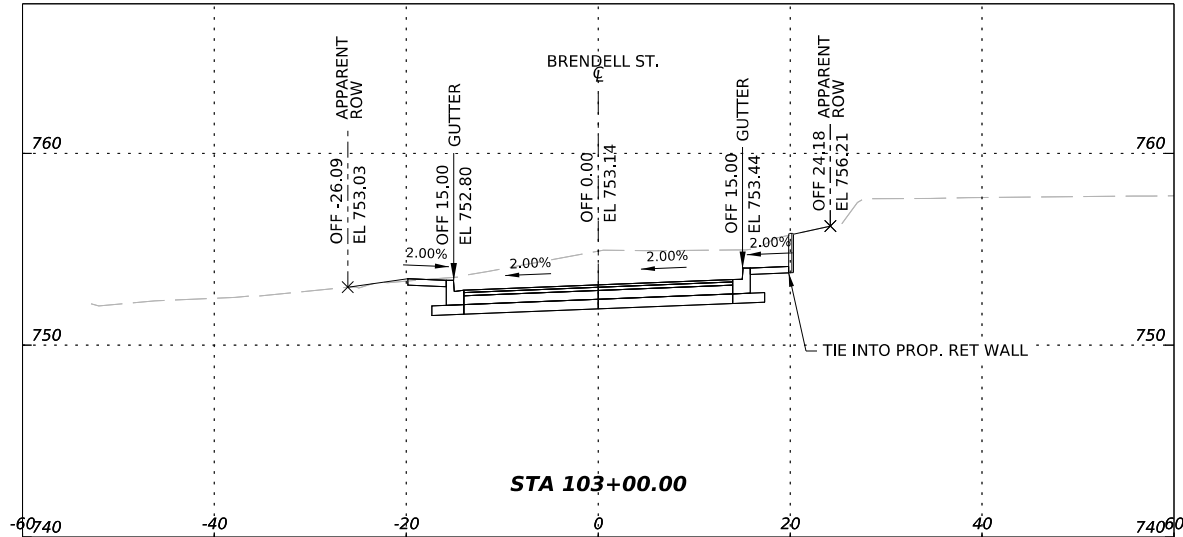
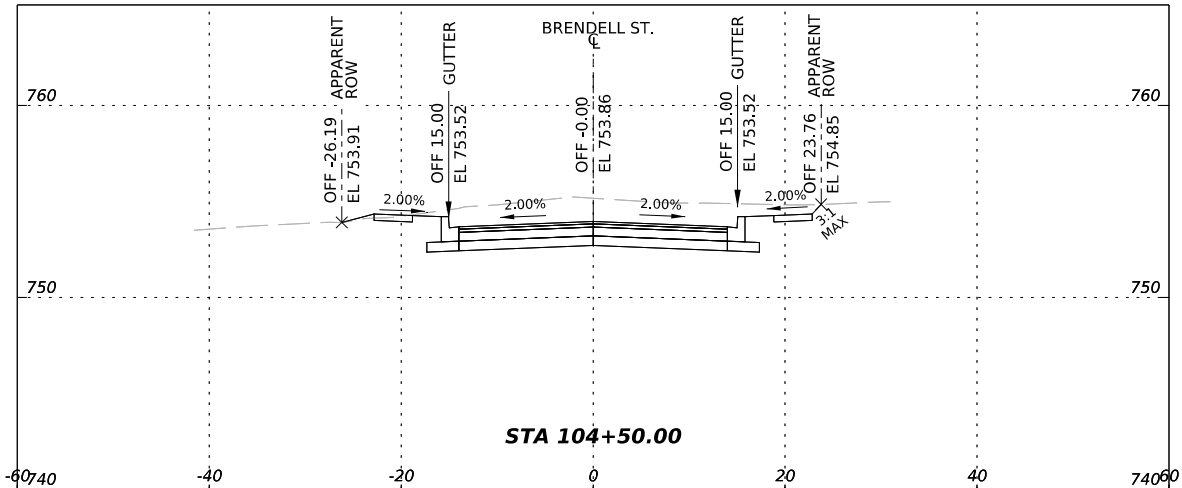
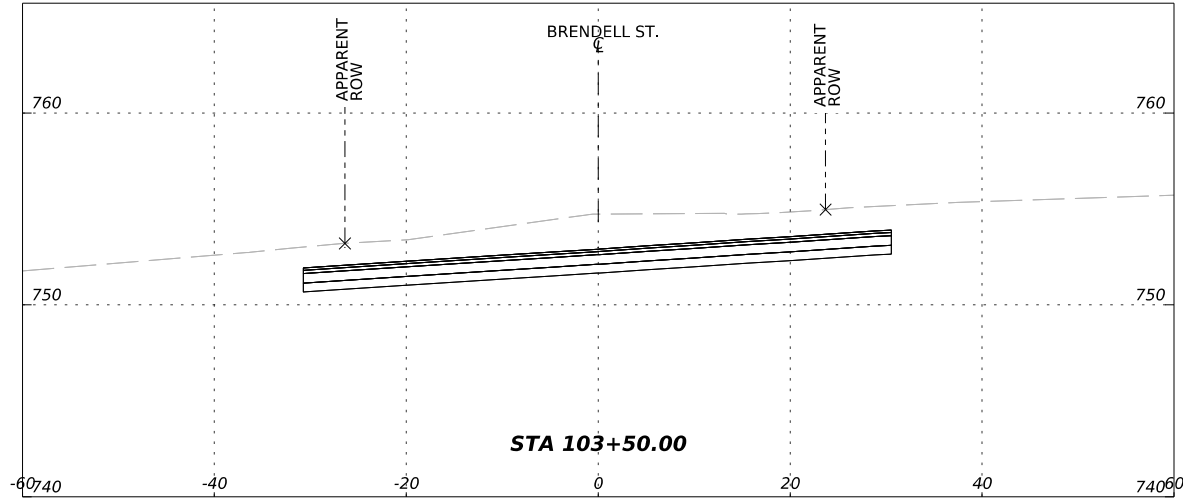
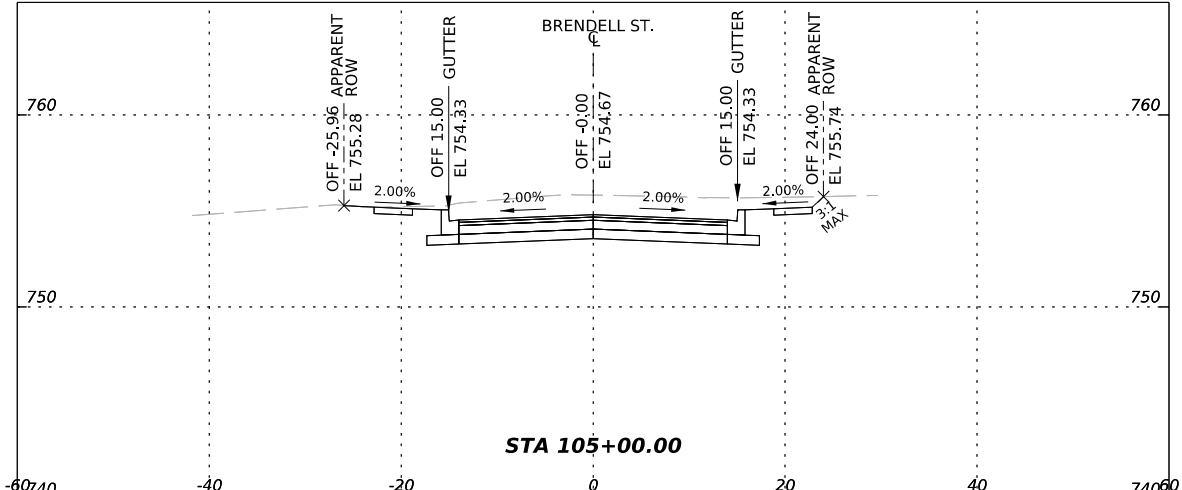
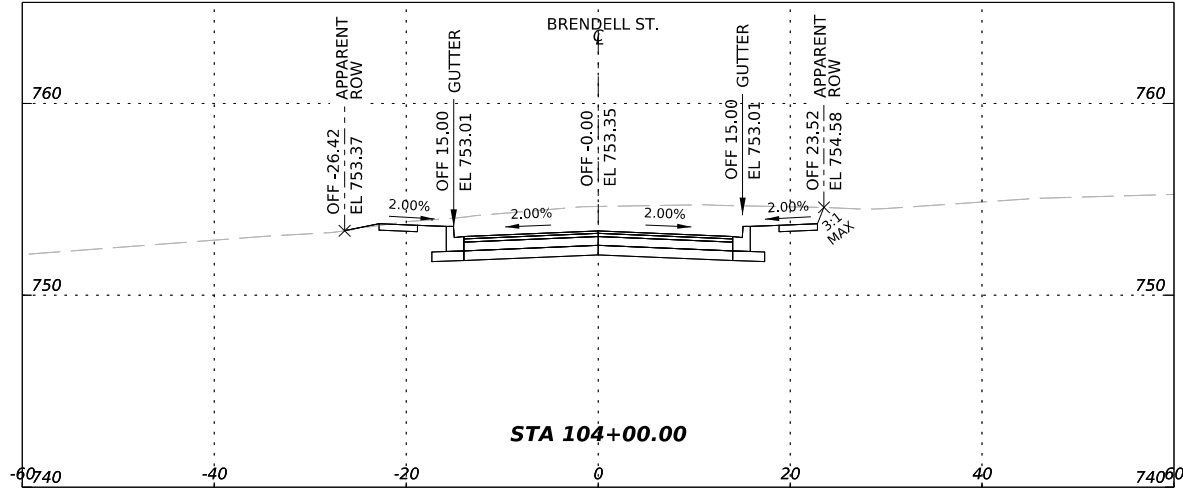
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CULEBRA AREA STREETS

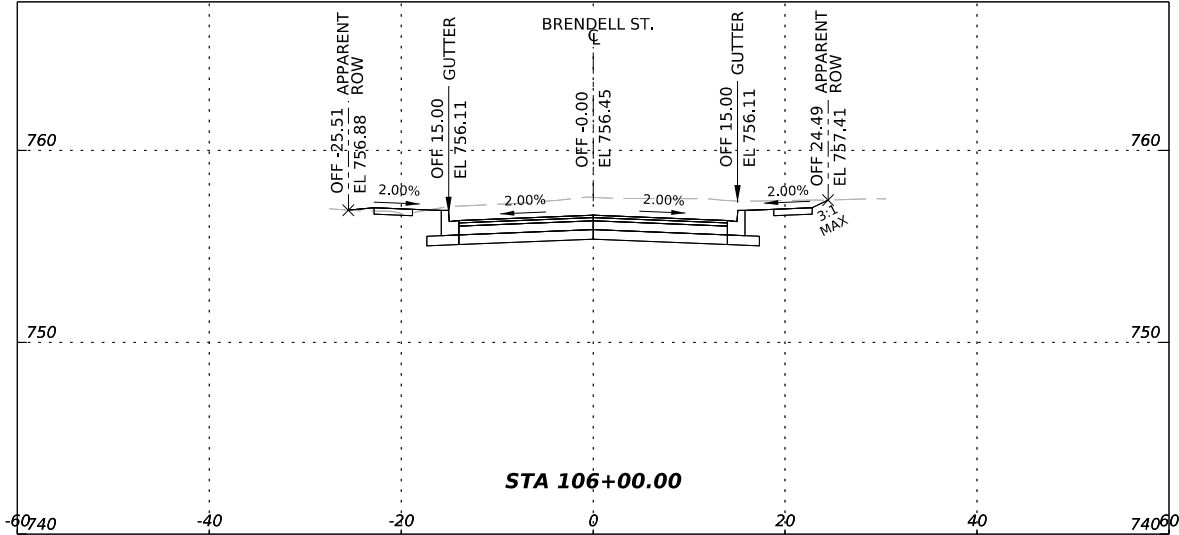
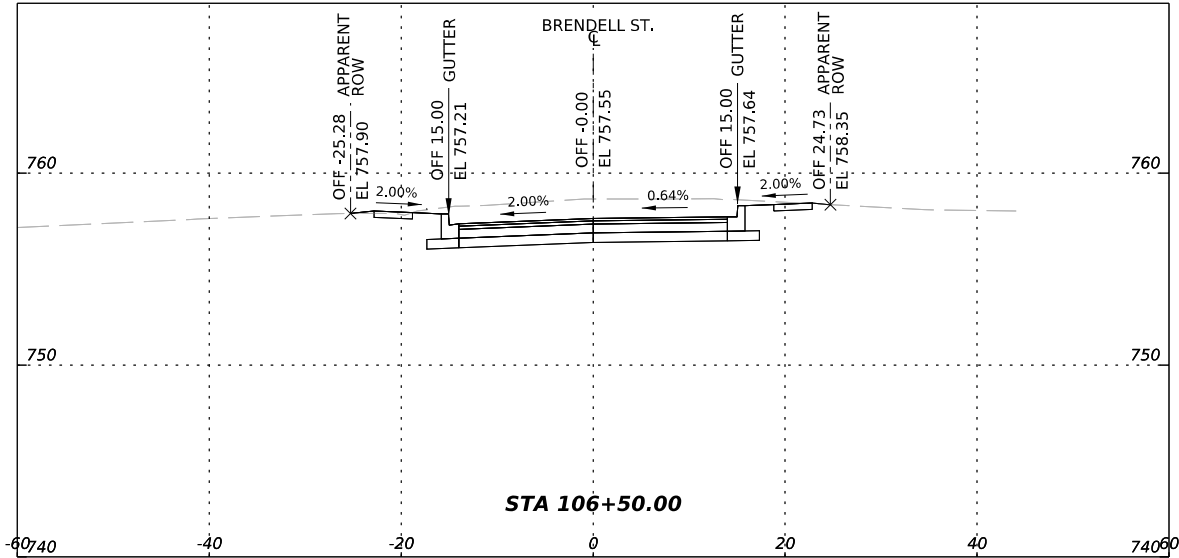
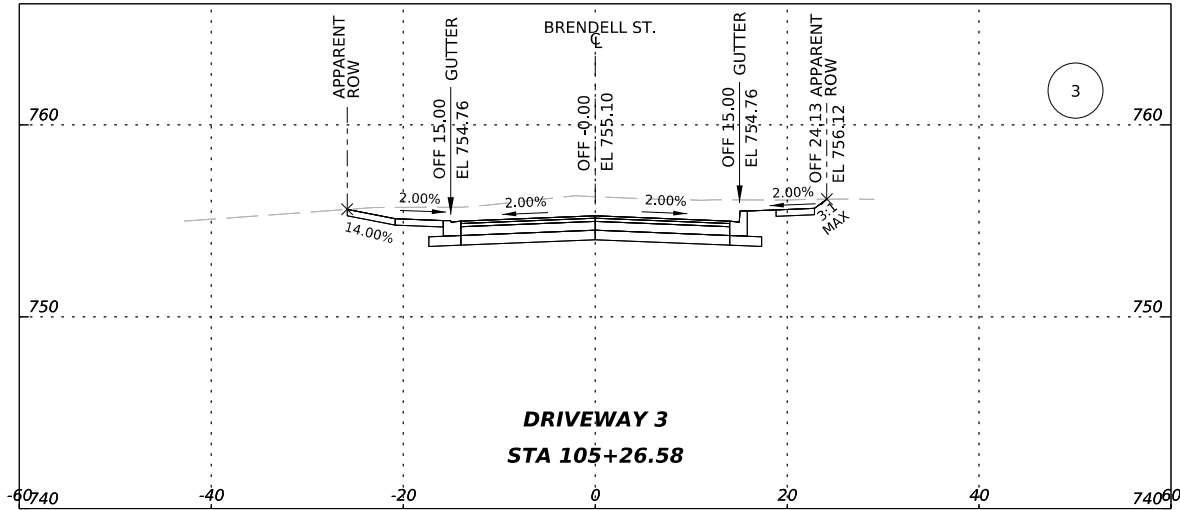
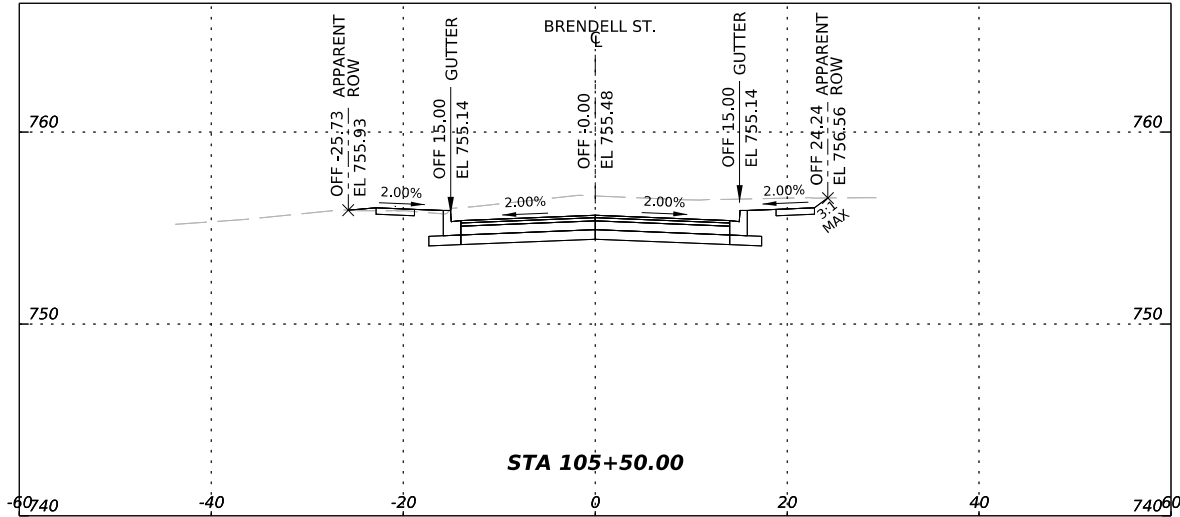
BRENDELL ST. CROSS SECTIONS


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| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 94 |

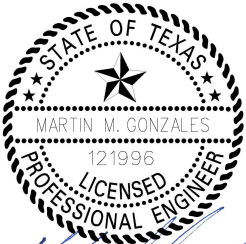
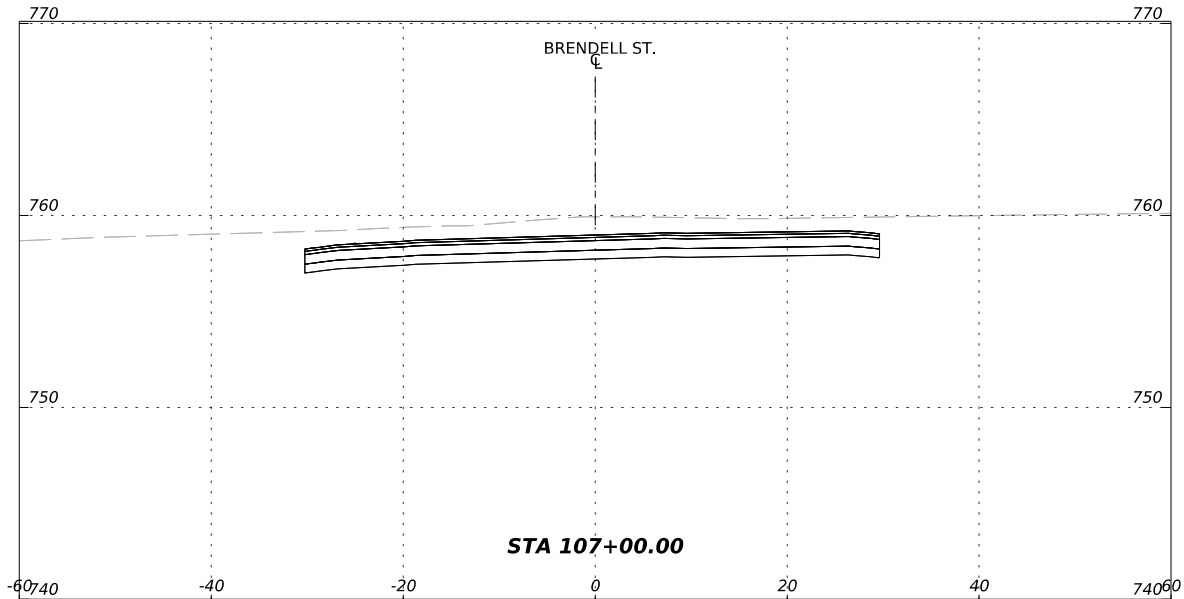


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| <div><div><div>AG3</div><div>AG3 Group, LLC</div><div>ENGINEERING • SURVEY • CONSTRUCTION</div></div><div><div>4800 FREDERICKSBURG RD SUITE 200SL</div><div>SAN ANTONIO, TX 78229</div><div>P:210-208-9400 F:210-208-9401</div><div>TBPE #F-21809</div><div>TBPLS #10194622</div></div></div> | | |
| <div>CITY OF SAN ANTONIO</div> <div>PUBLIC WORKS DEPARTMENT</div> | | |
| <div>CULEBRA AREA STREETS</div> <div>BRENDELL ST. CROSS SECTIONS</div> | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG |
| | | SHEET NO: 95 |



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| | CITY OF SAN ANTONIO PUBLIC WORKS DEPARTMENT | | |
| | CULEBRA AREA STREETS BRENDELL ST. CROSS SECTIONS | | |
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 96 |



Martin M. Gonzales
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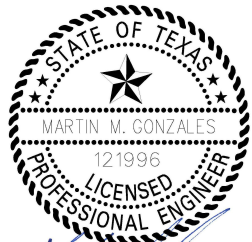
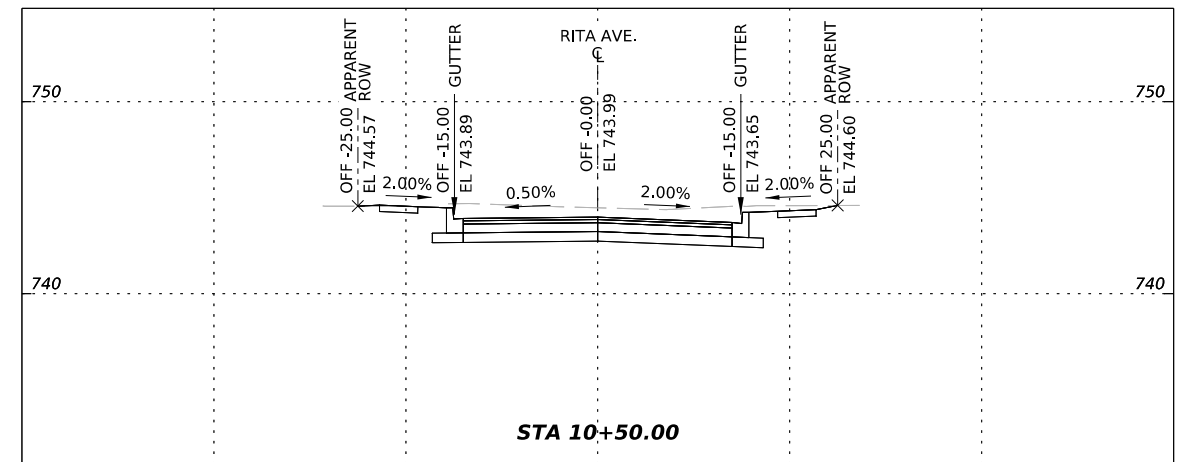
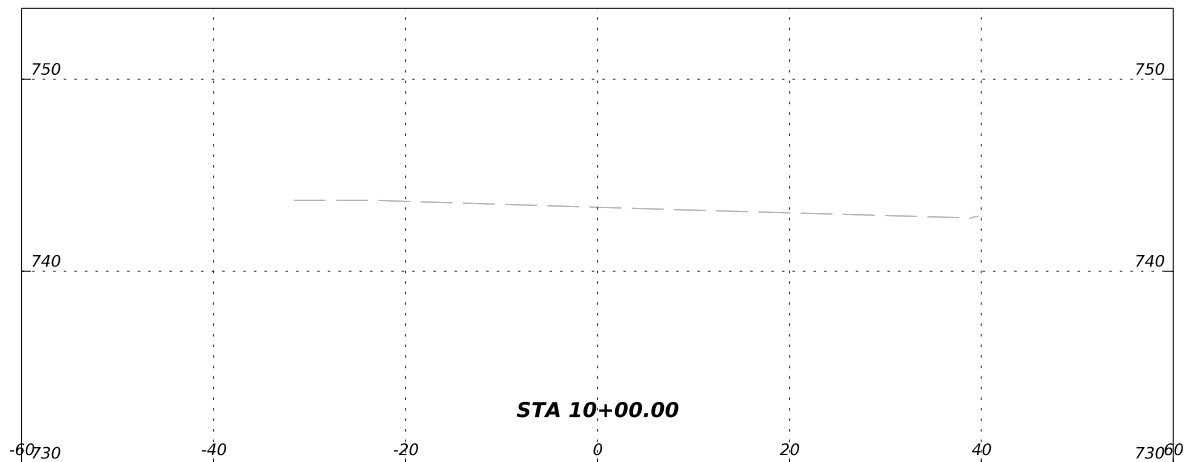
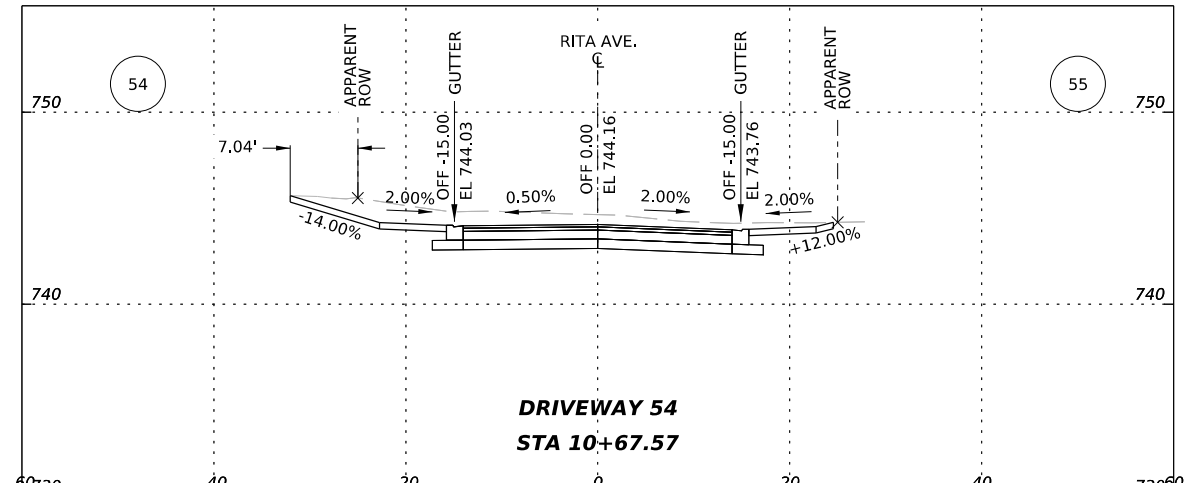
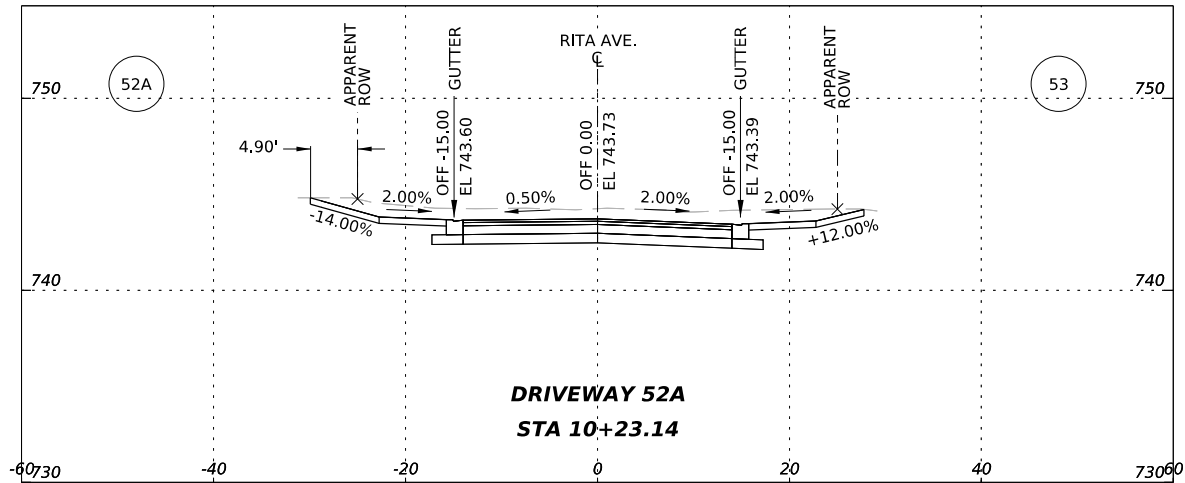
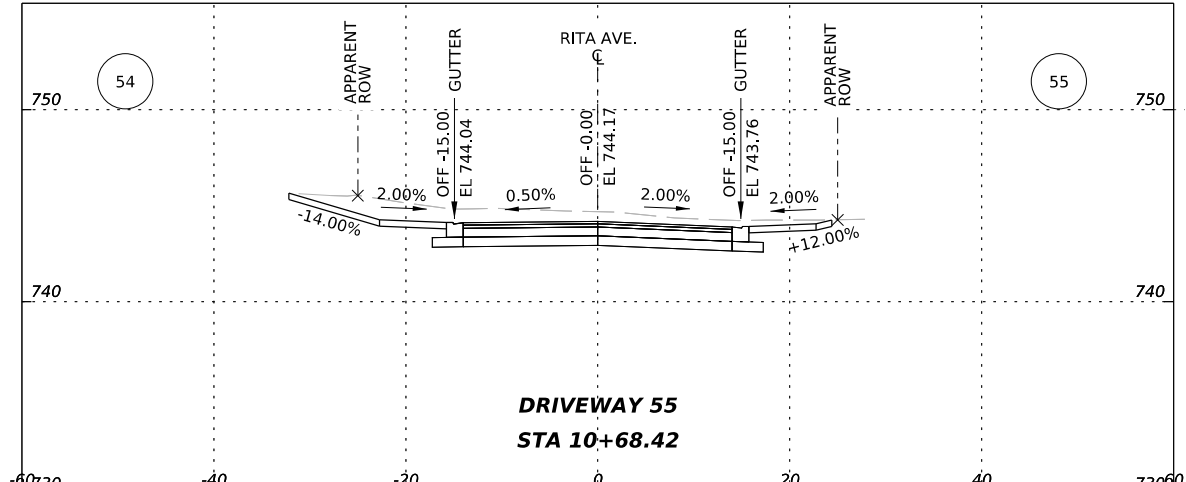
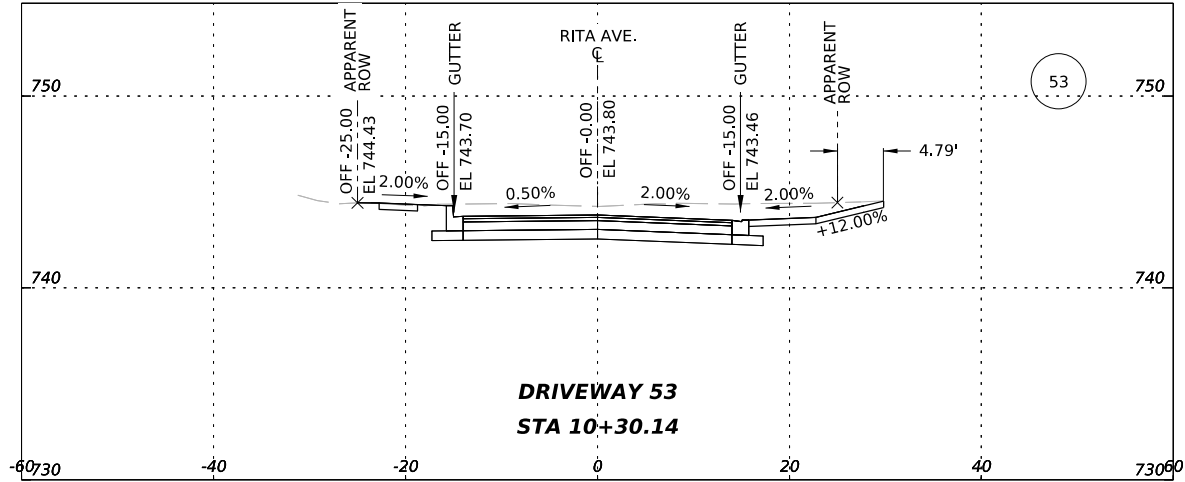


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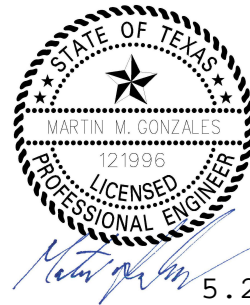
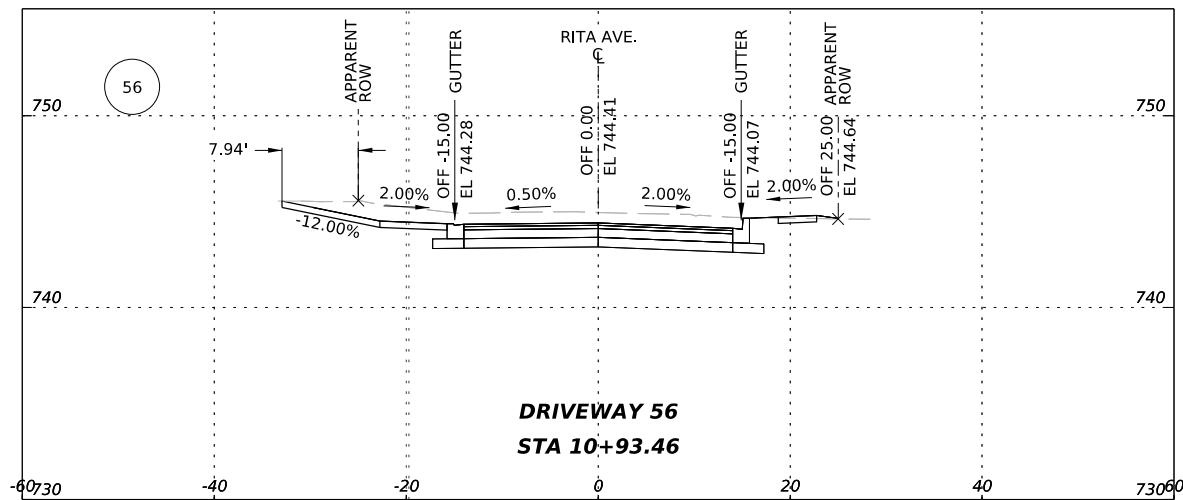
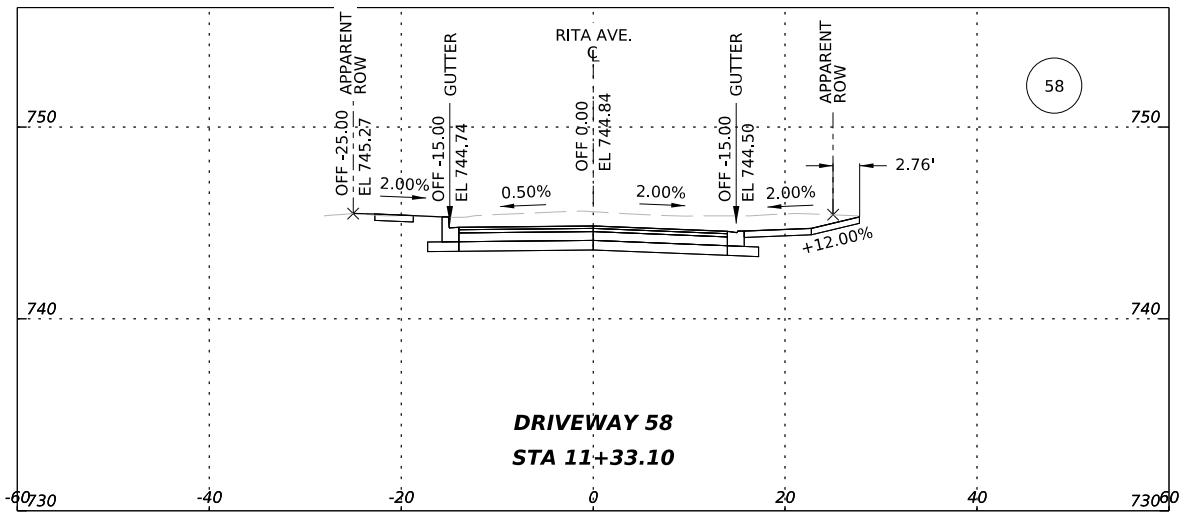
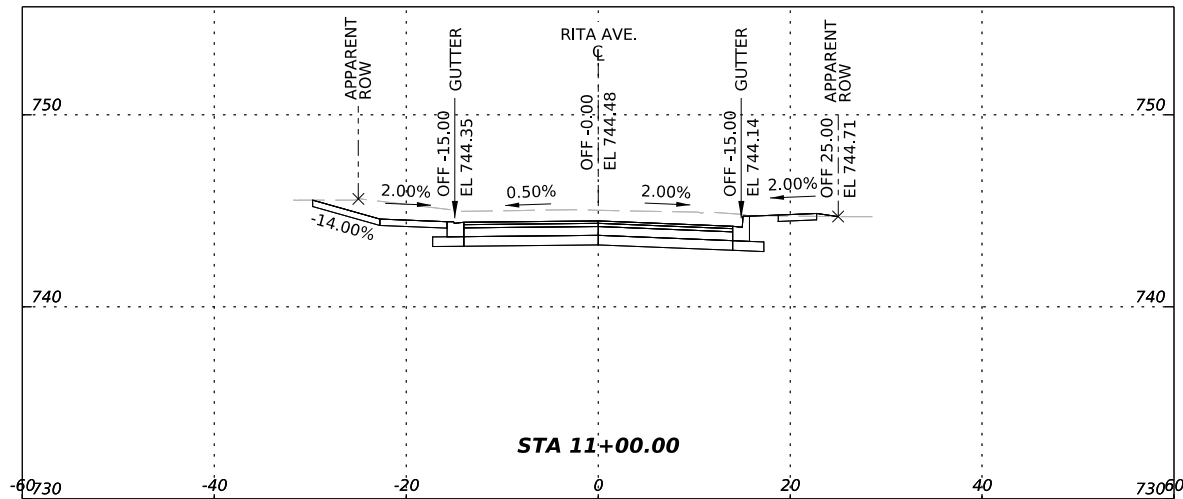
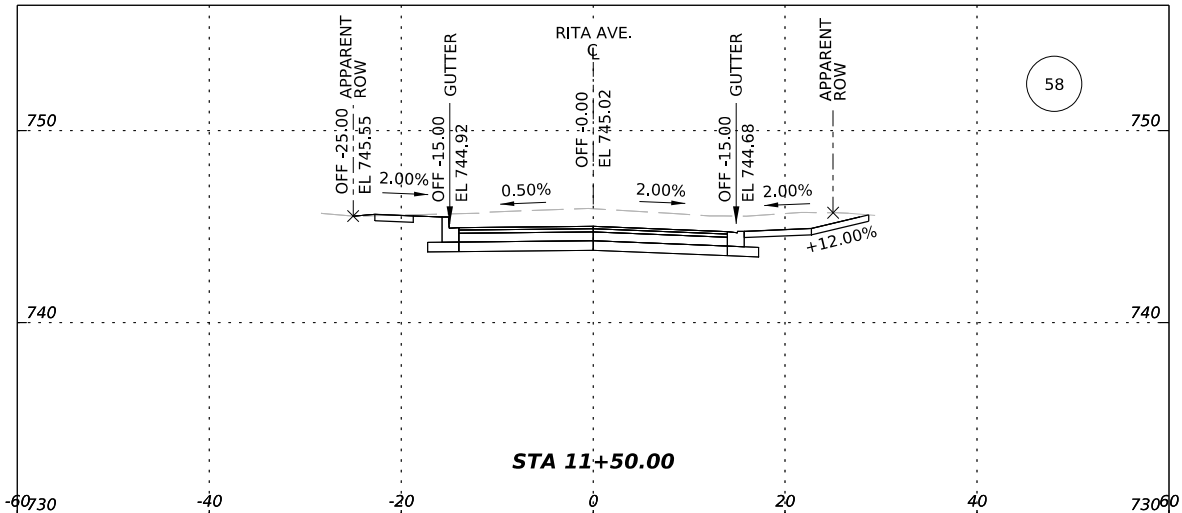
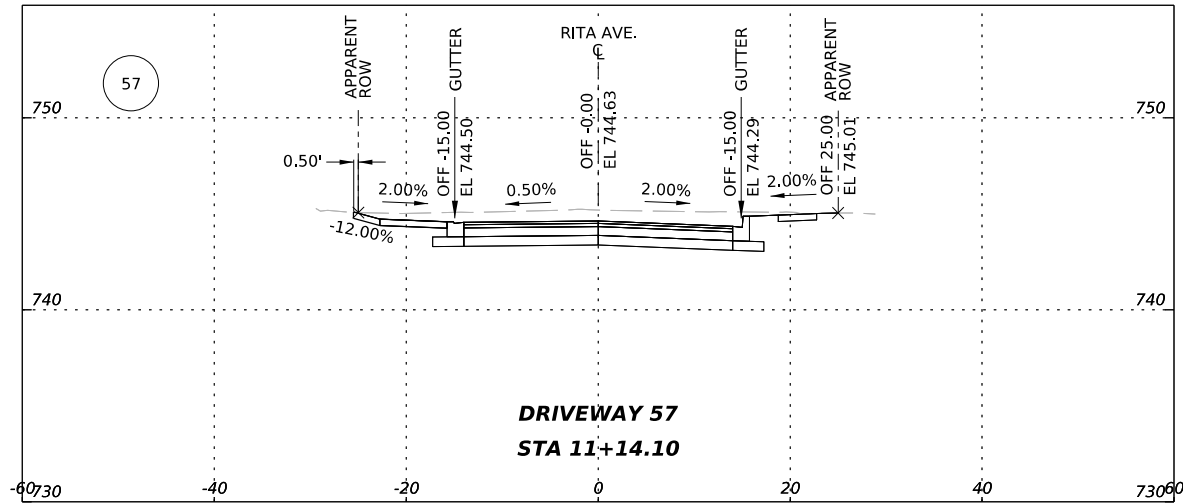
CULEBRA AREA STREETS
BRENDELL ST. CROSS SECTIONS

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| CULEBRA AREA STREETS | | | |
| RITA AVE. CROSS SECTIONS | | | |
| 100% SUBMITTAL | PROJECT NO: | 23-03873 | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 98 |



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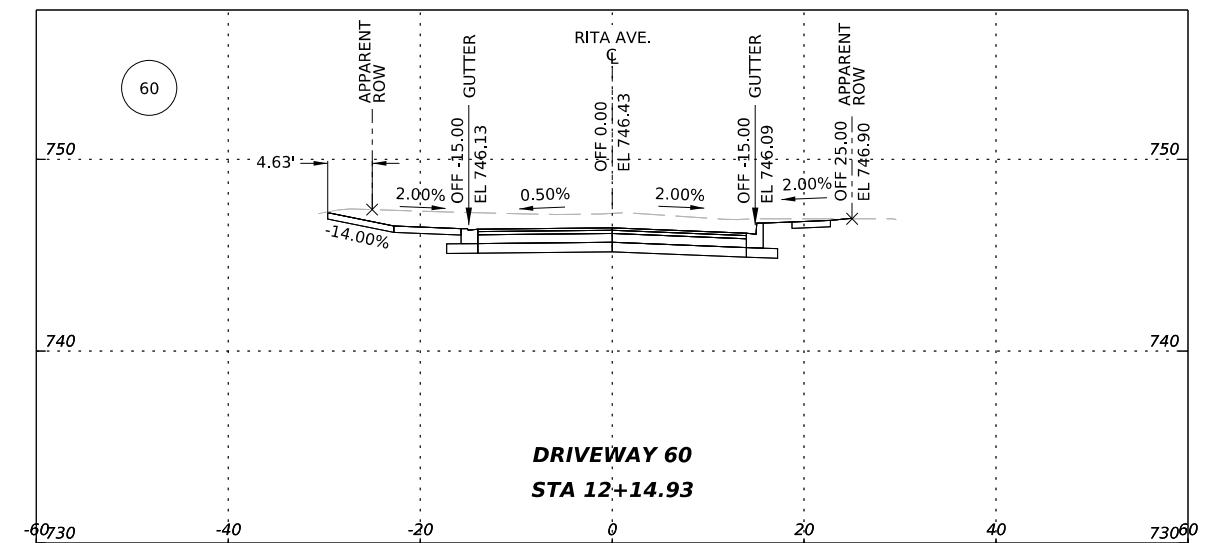
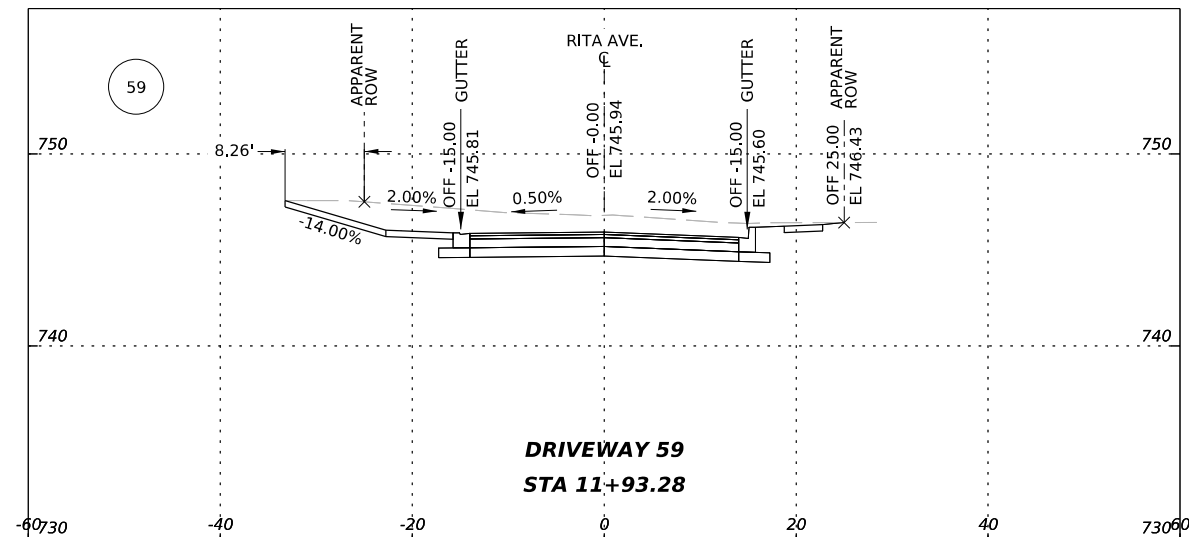
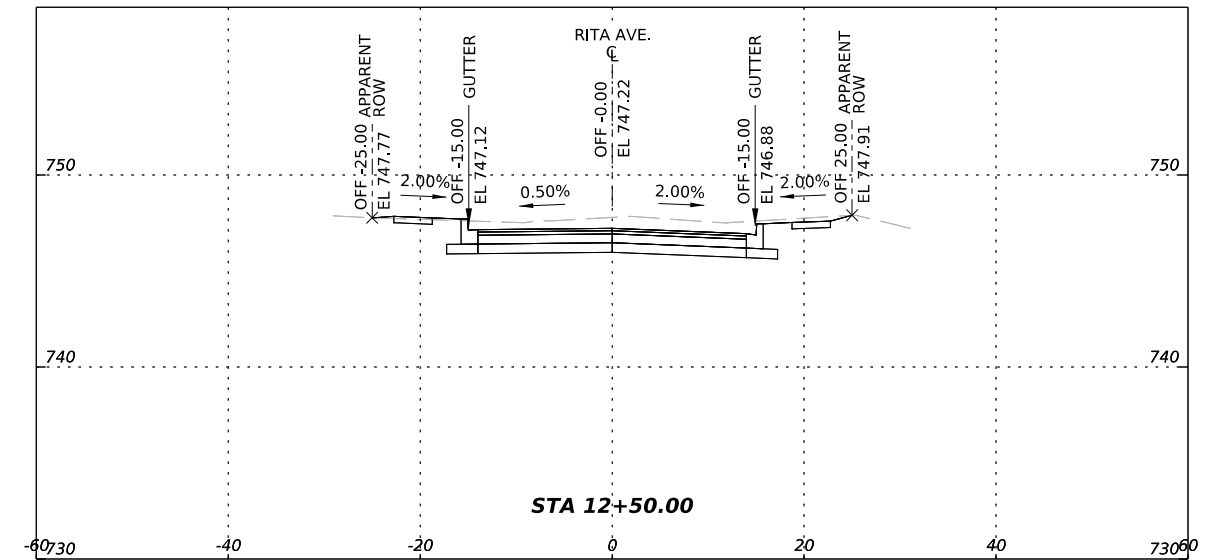
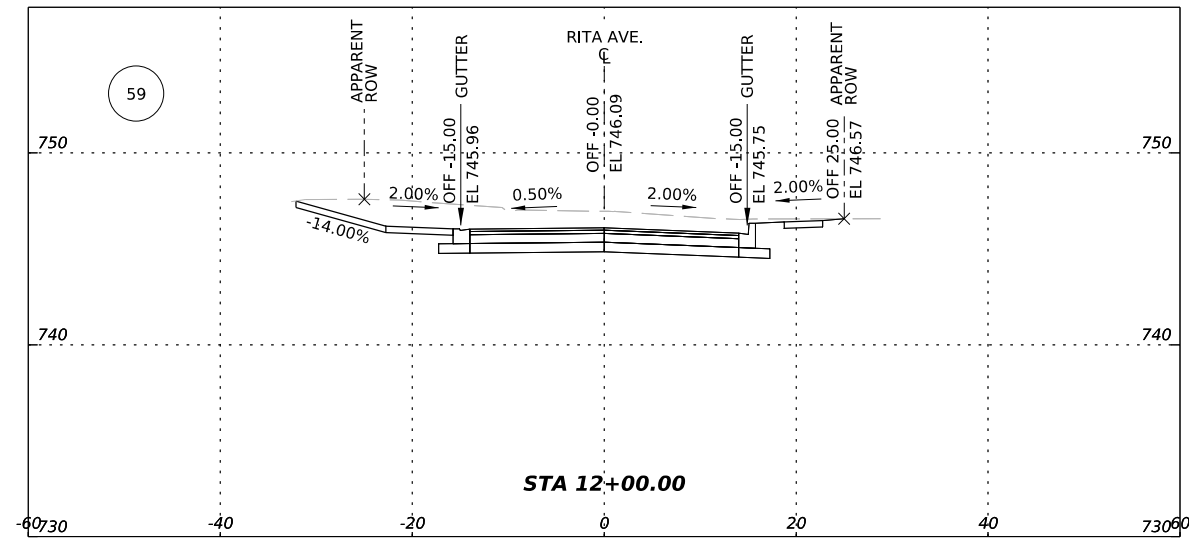
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CULEBRA AREA STREETS
RITA AVE. CROSS SECTIONS

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CULEBRA AREA STREETS

RITA AVE. CROSS SECTIONS

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|----------------|----------------------|--------------|------------------|
| 100% SUBMITTAL | PROJECT NO: 23-03873 | | DATE: 05/28/2025 |
| DRWN. BY: SS | DSGN. BY: SS | CHKD. BY: MG | SHEET NO: 100 |