

WKE  
PROJECT ID:  
WITH: 2225-00-74, 2225-00-83

2225-00-73

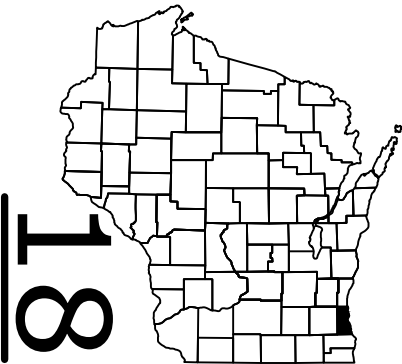
COUNTY:

MILWAUKEE

JANUARY 2025  
ORDER OF SHEETS

|             |   |                              |
|-------------|---|------------------------------|
| Section No. | 1 | Title                        |
| Section No. | 2 | Typical Sections and Details |
| Section No. | 3 | Estimate of Quantities       |
| Section No. | 3 | Miscellaneous Quantities     |
| Section No. | 4 | Right of Way Plat            |
| Section No. | 5 | Plan and Profile             |
| Section No. | 6 | Standard Detail Drawings     |
| Section No. | 7 | Sign Plates                  |
| Section No. | 8 | Structure Plans              |
| Section No. | 9 | Computer Earthwork Data      |
| Section No. | 9 | Cross Sections               |

TOTAL SHEETS = 432



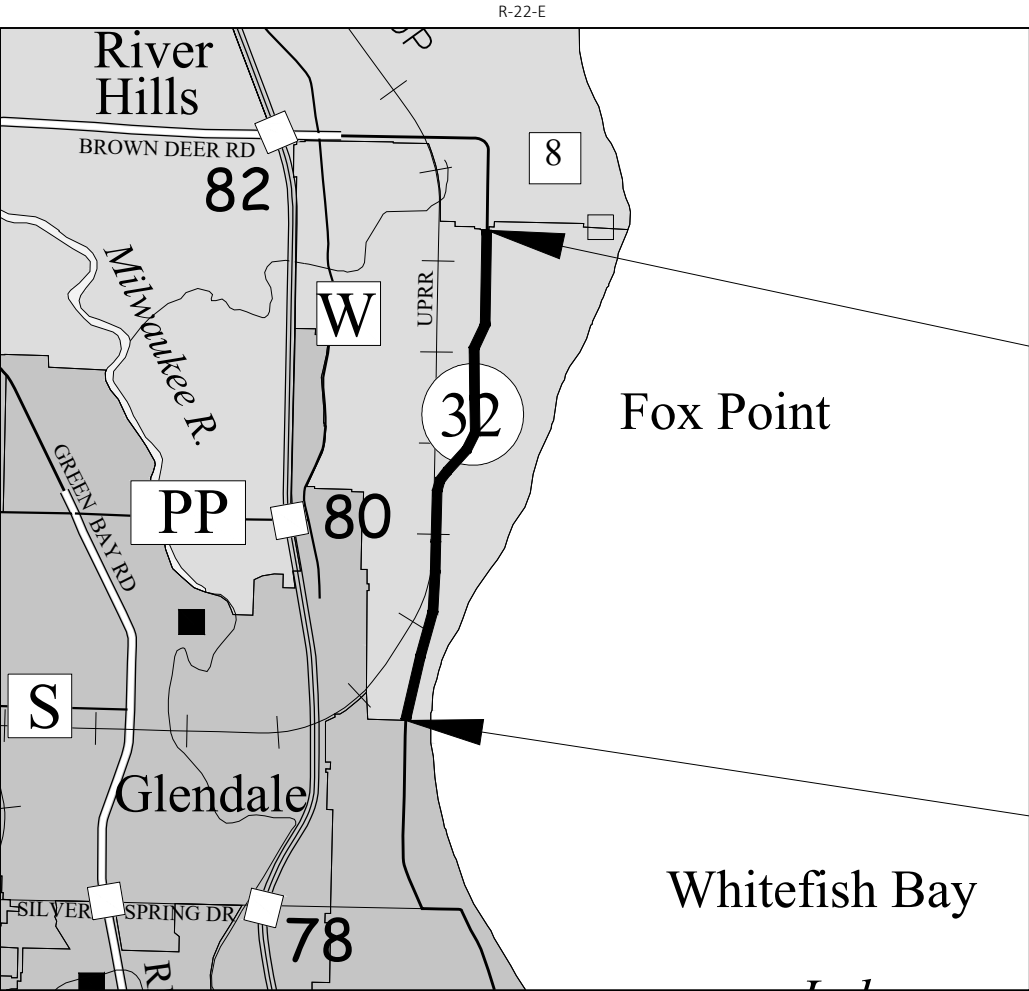
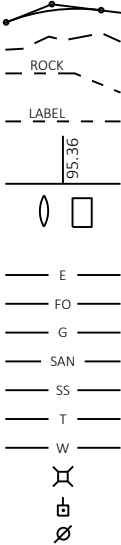
DESIGN DESIGNATION

|              |        |   |         |
|--------------|--------|---|---------|
| A.A.D.T.     | (2025) | = | 8,000   |
| A.A.D.T.     | (2045) | = | 8,300   |
| D.H.V.       |        | = | 872     |
| D.D.         |        | = | 59/41   |
| T.           |        | = | 1.32%   |
| DESIGN SPEED |        | = | 40 MPH  |
| ESALS        |        | = | 170,000 |

CONVENTIONAL SYMBOLS

|                                |  |
|--------------------------------|--|
| PLAN                           |  |
| CORPORATE LIMITS               |  |
| PROPERTY LINE                  |  |
| LOT LINE                       |  |
| LIMITED HIGHWAY EASEMENT       |  |
| EXISTING RIGHT OF WAY          |  |
| PROPOSED OR NEW R/W LINE       |  |
| SLOPE INTERCEPT                |  |
| REFERENCE LINE                 |  |
| EXISTING CULVERT               |  |
| PROPOSED CULVERT (Box or Pipe) |  |
| COMBUSTIBLE FLUIDS             |  |
| MARSH AREA                     |  |
| WOODED OR SHRUB AREA           |  |

|                                             |  |
|---------------------------------------------|--|
| PROFILE                                     |  |
| GRADE LINE                                  |  |
| ORIGINAL GROUND                             |  |
| MARSH OR ROCK PROFILE (To be noted as such) |  |
| SPECIAL DITCH                               |  |
| GRADE ELEVATION                             |  |
| CULVERT (Profile View)                      |  |
| UTILITIES                                   |  |
| ELECTRIC                                    |  |
| FIBER OPTIC                                 |  |
| GAS                                         |  |
| SANITARY SEWER                              |  |
| STORM SEWER                                 |  |
| TELEPHONE                                   |  |
| WATER                                       |  |
| UTILITY PEDESTAL                            |  |
| POWER POLE                                  |  |
| TELEPHONE POLE                              |  |



LAYOUT  
SCALE 0 1 MI  
TOTAL NET LENGTH OF CENTERLINE = 2.625 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN STATE PLANE COORDINATE SYSTEM NAD 1927, SOUTH ZONE, IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NGVD 1929.

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

V FOX POINT, N LAKE DR  
SCHOOL ROAD TO DEAN ROAD  
STH 32  
MILWAUKEE COUNTY

|                      |
|----------------------|
| STATE PROJECT NUMBER |
| 2225-00-73           |

V FOX POINT CROSSWALK ENHANCEMENTS  
6 LOCATIONS ON LAKE DR  
CONST/PED ENHANCEMENT  
MILWAUKEE COUNTY

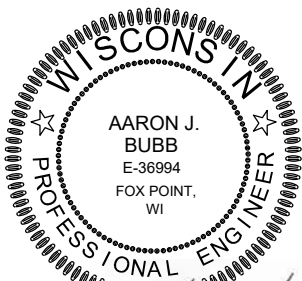
|                      |
|----------------------|
| STATE PROJECT NUMBER |
| 2225-00-74           |

V FOX POINT, N LAKE DR  
SCHOOL ROAD TO DEAN ROAD  
CONST/WATERMAIN  
MILWAUKEE COUNTY

|                      |
|----------------------|
| STATE PROJECT NUMBER |
| 2225-00-83           |

| STATE PROJECT | FEDERAL PROJECT |          |
|---------------|-----------------|----------|
|               | PROJECT         | CONTRACT |
| 2225-00-73    | WISC 2025181    | 1        |
| 2225-00-74    | WISC 2025182    |          |
| 2225-00-83    |                 |          |
|               |                 |          |

ORIGINAL PLANS PREPARED BY



DATE: 10/7/24  
(Professional Engineer Signature)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

|                     |                    |
|---------------------|--------------------|
| PREPARED BY         |                    |
| Surveyor            | KAPUR & ASSOCIATES |
| Designer            | KAPUR & ASSOCIATES |
| Project Manager     | NGUYEN LY          |
| Regional Examiner   | STEVE CHOJNACKI    |
| Regional Supervisor | BEN ERUCHALU       |

APPROVED FOR THE DEPARTMENT  
DATE: 10/7/2024  
(Signature)

E

GENERAL NOTES

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL OF THE ENGINEER.

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. EXISTING UTILITIES ARE SHOWN FROM AS-BUILT PLANS PROVIDED BY THE UTILITY. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

THE CONTRACTOR MUST NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPAL UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE FILLED WITH BACKFILL GRANULAR.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

INLET PROTECTION IS REQUIRED AT ALL INLETS AS PER DETAIL OR AS DIRECTED BY THE ENGINEER.

CROSS SECTIONS SHOWN INCLUDE THE THICKNESS OF TOPSOIL WHERE REQUIRED. TOPSOIL SHALL BE REPLACED WITH 6-INCH TYPICAL DEPTH.

EROSION CONTROL DEVICES SHALL BE PLACED IN SEQUENCE WITH CONSTRUCTION OPERATIONS OR AS DETERMINED BY THE ENGINEER.

THE EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S ECIP AND ENGINEER IN THE FIELD.

ALL PRIVATE EXISTING UTILITIES ARE TO BE ADJUSTED BY THE UTILITIES CONCERNED. SANITARY SEWER MANHOLES, WATER MANHOLES, WATER VALVE BOXES, AND HYDRANTS WILL BE ADJUSTED AND PAID FOR AS NON-PARTICIPATING ITEMS.

THE EXACT LOCATION OF EXCAVATION BELOW SUBGRADE (EBS) WILL BE DETERMINED BY THE ENGINEER.

BROKEN CONCRETE CONTAINING RE-BAR SHALL NOT BE USED AS RIPRAP OR EBS BACKFILL.

CONCRETE CURB AND GUTTER GRADES ARE TO THE FLANGE OF CURB AND GUTTER OR THE THEORETICAL FLANGE POINT OF INTEGRAL CURB AND GUTTER. DISTANCES SHOWN FOR CURB AND GUTTER RADII ARE MEASURED TO THE FACE OF CURB.

THE EXACT LOCATION OF DRIVEWAYS IS TO BE DETERMINED BY THE ENGINEER AND REPLACED IN KIND UNLESS NOTED OTHERWISE.

SIGNS IN CONFLICT WITH TRAFFIC CONTROL "IN USE" WILL BE COVERED AS DIRECTED BY THE ENGINEER AND PAID FOR UNDER ITEM "TRAFFIC CONTROL COVERING SIGNS TYPE II."

TRAFFIC CONTROL DEVICES WILL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

CONTRACTOR MUST CONTACT PROJECT ENGINEER AND SEWRPC AT LEAST TWO WEEKS PRIOR TO CONDUCTING WORK NEAR ANY PUBLIC SURVEY MONUMENT

A SAWED JOINT IS REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.

STATIONING DISTANCES AND OFFSETS OF SIGNS SHOWN IN THE PLANS ARE APPROXIMATE AND THE FINAL LOCATION OF SIGNS ARE TO BE DETERMINED BY THE ENGINEER.

(P) UTILITY LINETYPE INDICATES A UTILITY THAT WAS DRAWN BASED ON FACILITY MAPPING AND NOT FIELD LOCATED.

CONSTRUCT ASPHALT PAVEMENT WITH THE FOLLOWING LAYERS:

4-INCH  
2.25-INCH LOWER LAYER 3 LT 58-28 S  
1.75-INCH UPPER LAYER 4 LT 58-28 S

5-INCH  
3.25-INCH LOWER LAYER 3 LT 58-28 S  
1.75-INCH UPPER LAYER 4 LT 58-28 S

6.5-INCH  
2.5-INCH LOWER LAYER 3 LT 58-28 S  
2.25-INCH MIDDLE LAYER 3 LT 58-28 S  
1.75-INCH UPPER LAYER 4 LT 58-28 S

STANDARD ABBREVIATIONS

|       |                                                    |     |                                |
|-------|----------------------------------------------------|-----|--------------------------------|
| AEW   | APRON ENDWALL                                      | SY  | SQUARE YARD                    |
| AGG   | AGGREGATE                                          | T   | TANGENT LENGTH                 |
| BAD   | BASE AGGREGATE DENSE                               | TLE | TEMPORARY LIMITED EASEMENT     |
| BM    | BENCHMARK                                          | VCL | VERTICAL CURVE LENGTH          |
| BTWN  | BETWEEN                                            | VPC | POINT OF VERTICAL CURVE        |
| C&G   | CURB AND GUTTER                                    | VPI | POINT OF VERTICAL INTERSECTION |
| C/L   | CENTER OR CONSTRUCTION LINE                        | VPT | POINT OF VERTICAL TANGENT      |
| CMCP  | CULVERT PIPE CORRUGATED METAL                      |     |                                |
| CONC  | CONCRETE                                           |     |                                |
| CP    | CULVERT PIPE                                       |     |                                |
| CPRC  | CULVERT PIPE REINFORCED CONCRETE                   |     |                                |
| CSD   | CONCRETE SURFACE DRAIN                             |     |                                |
| CY    | CUBIC-YARD                                         |     |                                |
| D     | DEGREE OF CURVE                                    |     |                                |
| Δ     | DELTA                                              |     |                                |
| DISCH | DISCHARGE                                          |     |                                |
| FE    | FIELD ENTRANCE                                     |     |                                |
| HMA   | HOT MIX ASPHALT                                    |     |                                |
| INV   | INVERT                                             |     |                                |
| L     | LENGTH OF CURVE                                    |     |                                |
| LHF   | LEFT HAND FORWARD                                  |     |                                |
| LT    | LEFT                                               |     |                                |
| MIN   | MINIMUM                                            |     |                                |
| M/L   | MATCHLINE                                          |     |                                |
| NB    | NORTHBOUND                                         |     |                                |
| NC    | NORMAL CROWN                                       |     |                                |
| PAVT  | PAVEMENT                                           |     |                                |
| PC    | POINT OF CURVE                                     |     |                                |
| PCC   | POINT OF COMPOUND CURVE                            |     |                                |
| PE    | PRIVATE ENTRANCE                                   |     |                                |
| PI    | POINT OF INTERSECTION                              |     |                                |
| PLE   | PERMANENT LIMITED EASEMENT                         |     |                                |
| PT    | POINT OF TANGENT                                   |     |                                |
| R     | RADIUS OF CURVE                                    |     |                                |
| R/L   | REFERENCE LINE                                     |     |                                |
| R/W   | RIGHT OF WAY                                       |     |                                |
| RC    | REVERSE CROWN                                      |     |                                |
| RCAEW | APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE |     |                                |
| REQD  | REQUIRED                                           |     |                                |
| RHF   | RIGHT HAND FORWARD                                 |     |                                |
| RO    | RUN OFF LENGTH                                     |     |                                |
| RRSP  | RAILROAD SPIKE                                     |     |                                |
| RT    | RIGHT                                              |     |                                |
| SALV  | SALVAGED                                           |     |                                |
| SAPBC | SALVAGED ASPHALTIC PAVEMENT BASE COURSE            |     |                                |
| SB    | SOUTHBOUND                                         |     |                                |
| SDD   | STANDARD DETAIL DRAWING                            |     |                                |
| SE    | SUPERELEVATION                                     |     |                                |
| SF    | SQUARE FOOT                                        |     |                                |
| STA   | STATION                                            |     |                                |



UTILITY CONTACTS

AT&T WISCONSIN - COMMUNICATION LINE

JAY BULANEK  
435 S 95TH STREET  
MILWAUKEE, WI 53214  
PHONE: (414) 491-2855  
EMAIL: JB5175@ATT.COM

EVERSTREAM - COMMUNICATION LINE

JOE HINES  
324 E WISCONSIN AVENUE  
MILWAUKEE, WI 53202  
PHONE: (847) 525-3511  
EMAIL: JHINES@EVERSTREAM.NET

FOX POINT, VILLAGE OF - SEWER

SCOTT BRANDMEIER  
7200 N SANTA MONICA BLVD  
FOX POINT, WI 53217  
PHONE: (414) 247-6624  
EMAIL: SBRANDMEIER@VILLAGEOFFOXPOINT.COM

FOX POINT, VILLAGE OF - WATER

SCOTT BRANDMEIER  
7200 N SANTA MONICA BLVD  
FOX POINT, WI 53217  
PHONE: (414) 247-6624  
EMAIL: SBRANDMEIER@VILLAGEOFFOXPOINT.COM

MILWAUKEE METROPOLITAN SEWERAGE DISTRICT - SEWER

MICHAEL LEE  
260 W SEEBOTH STREET  
MILWAUKEE, WI 53204  
PHONE: (414) 225-2241  
EMAIL: MLEE@MMSD.COM

SPECTRUM - COMMUNICATION LINE

BEAU ABUYA  
1320 NORTH DR. MARTIN LUTHER KING JR. DRIVE  
MILWAUKEE, WI 53212  
PHONE: (414) 758-9241  
EMAIL: BEAU.ABUYA@CHARTER.COM

VERIZON BUSINESS - COMMUNICATION LINE

RJ CICATELLO JR  
15725 W RYERSON ROAD  
NEW BERLIN, WI 53151  
PHONE: (262) 232-1323  
EMAIL: RANDY.CICATELLO@VERIZON.COM

WE ENERGIES - ELECTRIC

JACOB SCHAEFER  
W140 N9100 LILLY ROAD  
MENOMONEE FALLS, WI 53051  
PHONE: (262) 365-6452  
EMAIL: JACOB.SCHAEFER@WE-ENERGIES.COM

WE ENERGIES - ELECTRIC EMERGENCY  
PHONE: (800) 662-4797

WE ENERGIES - GAS

STEVE SCHECHER  
500 S 116 ST  
WEST ALLIS, WI 53214  
PHONE: (414) 550-7102  
EMAIL: STEVE.SCHECHER@WE-ENERGIES.COM

WE ENERGIES - GAS EMERGENCY  
PHONE: (800) 261-5325

STATE AGENCIES

WISCONSIN DEPT. OF NATURAL RESOURCES

RYAN PAPPAS  
1027 W SAINT PAUL AVE  
MILWAUKEE, WI 53233  
PHONE: (414) 750-7495  
EMAIL: RYAN.PAPPAS@WI.GOV

WISDOT - PROJECT MANAGER

NGUYEN LY  
141 NW BARSTOW STREET  
WAUKESHA, WI 53188  
PHONE: (262) 548-8739  
EMAIL: NGUYEN.LY@DOT.WI.GOV

WISDOT - UTILITY ENGINEER

DYLAN GATES  
141 NW BARSTOW STREET  
WAUKESHA, WI 53188  
PHONE: (414) 550-2689  
EMAIL: DYLAN.GATES@DOT.WI.GOV

OTHER CONTACTS

KAPUR & ASSOCIATES

AARON BUBB  
7711 N PORT WASHINGTON ROAD  
MILWAUKEE, WI 53217  
PHONE: (414) 751-7230  
EMAIL: ABUBB@KAPURINC.COM

NORTH SHORE FIRE RESCUE

TOBY CARLSON  
4401 W RIVER LANE  
BROWN DEER, WI 53223  
PHONE: (414) 357-0113  
EMAIL: TCARLSON@NSFIRE.ORG

FOX POINT POLICE DEPARTMENT

CHRISTOPHER FREEDY  
7300 N SANTA MONICA BLVD  
FOX POINT, WI 53217  
PHONE: (414) 351-8911  
EMAIL: CFREEDY@VILLAGEOFFOXPOINT.COM

MILWAUKEE COUNTY DEPARTMENT OF TRANSPORTATION

DONNA BROWN-MARTIN  
10320 W WATERTOWN PLANK RD, 2ND FLOOR  
WAUWATOSA, WI 53226  
PHONE: (414) 257-5992  
EMAIL: DONNA.BROWNMARTIN@MILWAUKEECOUNTYWI.GOV

MILWAUKEE COUNTY PARKS

SARAH TOOMSEN  
9480 W WATERTOWN PLANK RD  
WAUWATOSA, WI 53226  
PHONE: (414) 257-7275  
EMAIL: SARAH.TOOMSEN@MILWAUKEECOUNTYWI.GOV

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

ROB MERRY - CHIEF SURVEYOR  
W239 N1812 ROCKWOOD DRIVE  
PO BOX 1607  
WAUKESHA, WI 53187-1607  
PHONE: (262) 953-4289  
EMAIL: RMERRY@SEWRPC.ORG

SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

ANDY TRAEGER - CONSTRUCTION COORDINATOR  
W239 N1812 ROCKWOOD DRIVE  
PO BOX 1607  
WAUKESHA, WI 53187-1607  
PHONE: (262) 953-4296  
EMAIL: ATRAEGER@SEWRPC.ORG

UNION PACIFIC RAILROAD COMPANY

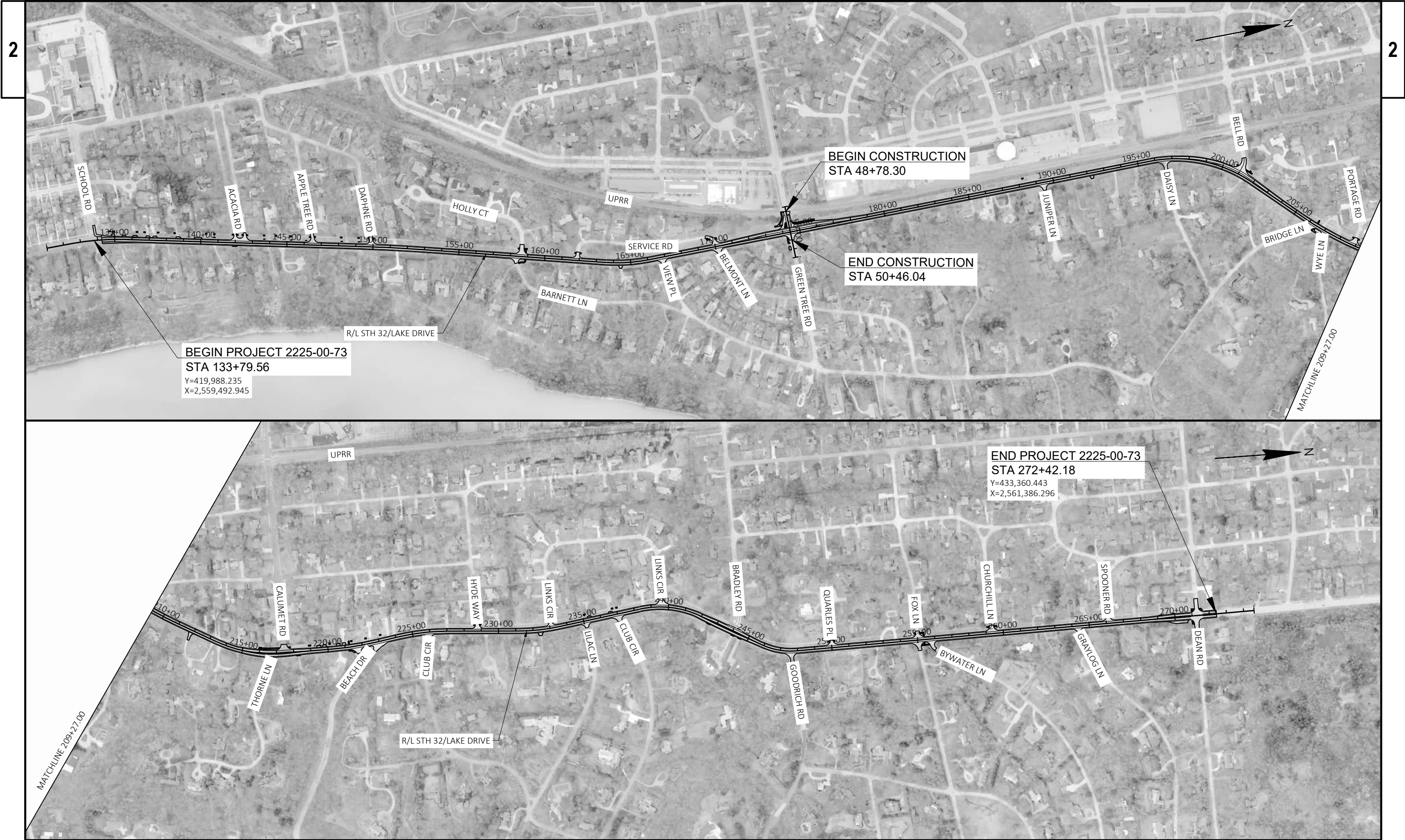
SEAN COLLIER  
1525 RALEIGH STREET, SUITE 400  
DENVER, CO 80204  
PHONE: (303) 374-3162  
EMAIL: SCOLLIER@OLSSON.COM

ORDER OF SECTION 2 SHEETS

GENERAL NOTES  
PROJECT OVERVIEW  
TYPICAL SECTIONS  
CONSTRUCTION DETAILS  
PLAN DETAILS  
PAVING GRADES  
CURB RAMP DETAILS  
EROSION CONTROL PLAN  
DRAINAGE PLAN  
WATERMAIN PLANS  
SIGNING PLAN  
RECTANGULAR RAPID FLASHING BEACONS  
PAVEMENT MARKING  
TRAFFIC CONTROL  
STAGE CONSTRUCTION  
DETOUR PLAN  
PEDESTRIAN TRAFFIC CONTROL PLAN  
ALIGNMENT PLAN

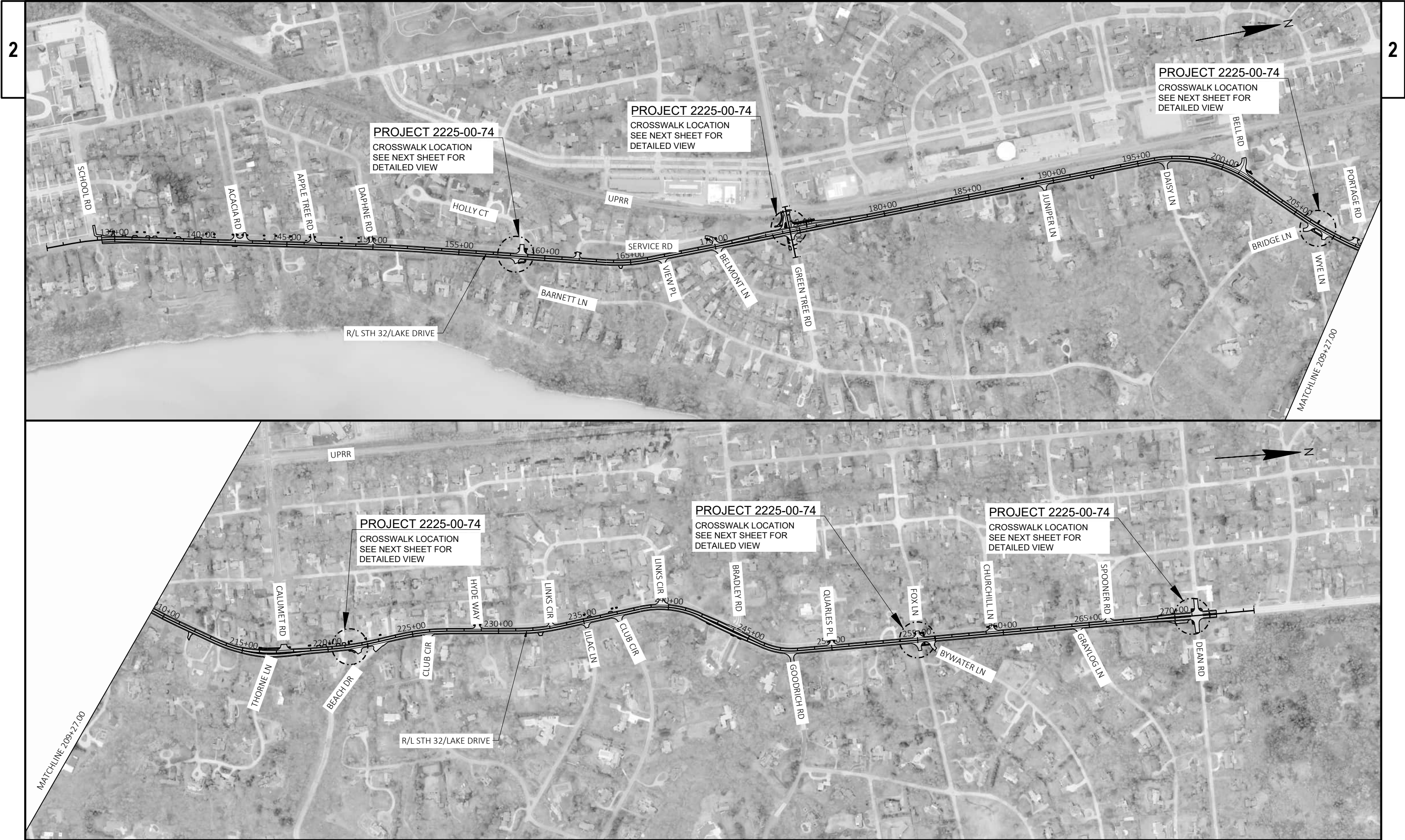


Dial 811 or (800)242-8511  
www.DiggersHotline.com

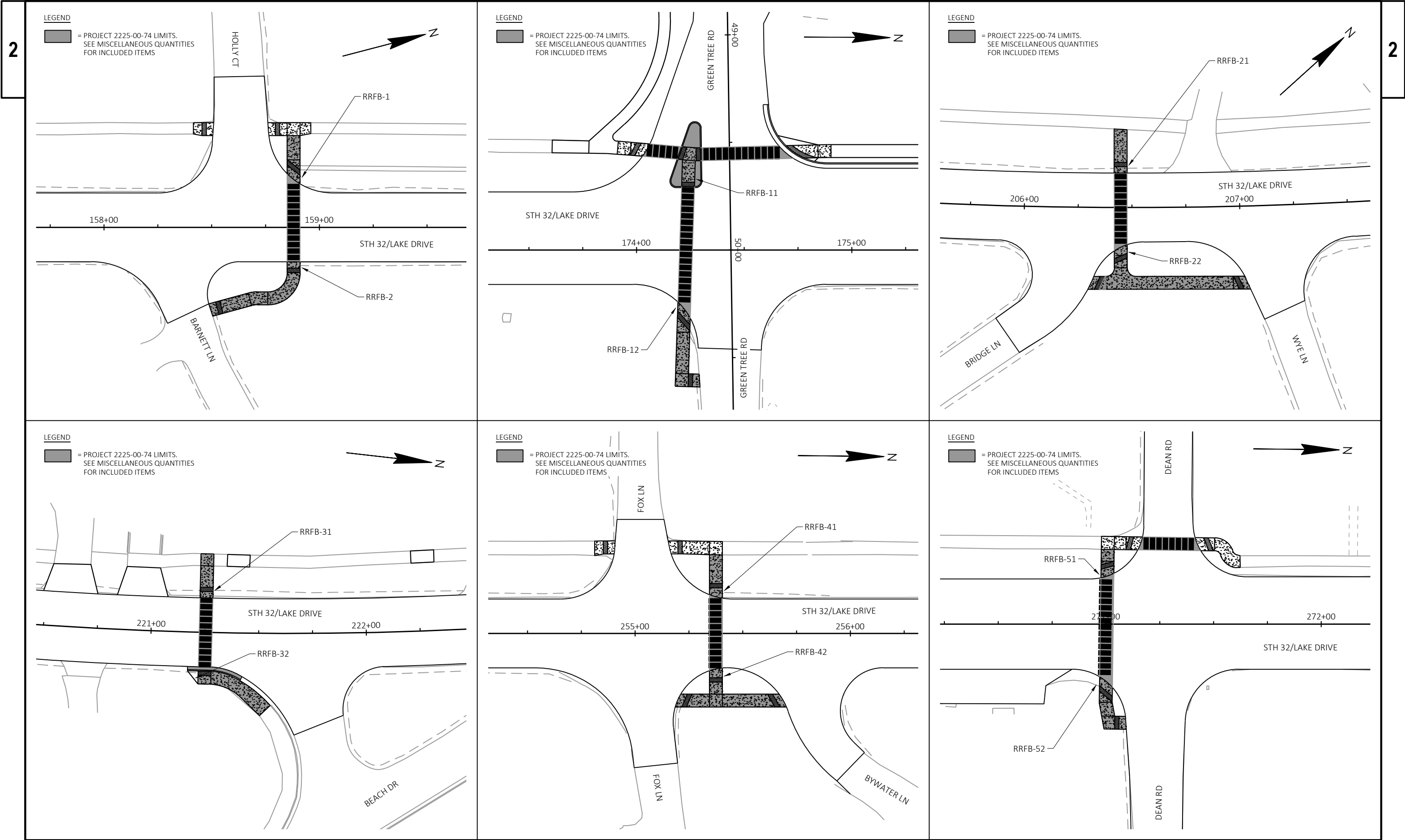


|                        |             |                   |                            |         |   |
|------------------------|-------------|-------------------|----------------------------|---------|---|
| PROJECT NO: 2225-00-73 | HWY: STH 32 | COUNTY: MILWAUKEE | PROJECT OVERVIEW - ROADWAY | SHEET 4 | E |
|------------------------|-------------|-------------------|----------------------------|---------|---|





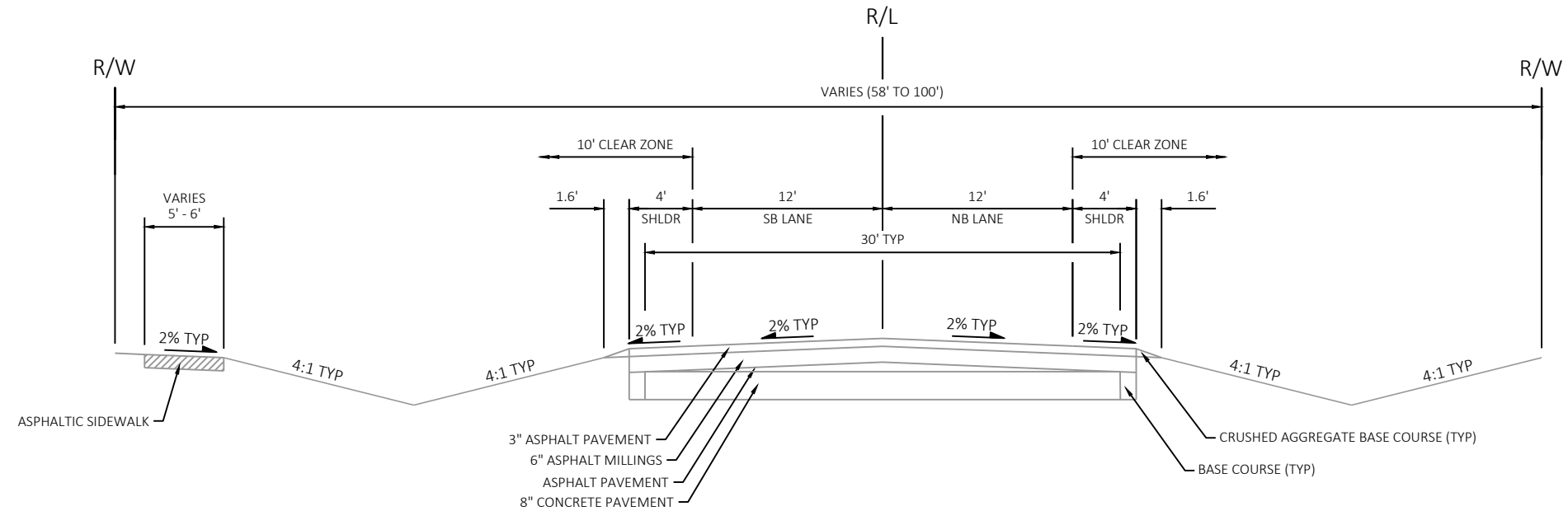
|                        |             |                   |                               |         |   |
|------------------------|-------------|-------------------|-------------------------------|---------|---|
| PROJECT NO: 2225-00-74 | HWY: STH 32 | COUNTY: MILWAUKEE | PROJECT OVERVIEW - CROSSWALKS | SHEET 5 | E |
|------------------------|-------------|-------------------|-------------------------------|---------|---|





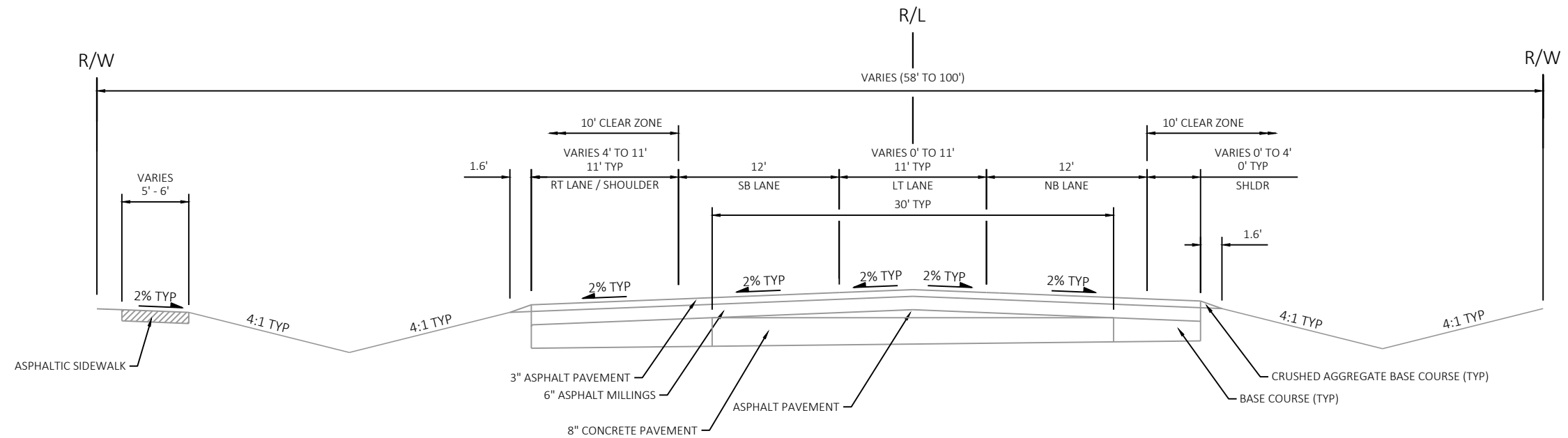


|                        |             |                   |                              |         |   |
|------------------------|-------------|-------------------|------------------------------|---------|---|
| PROJECT NO: 2225-00-83 | HWY: STH 32 | COUNTY: MILWAUKEE | PROJECT OVERVIEW - WATERMAIN | SHEET 7 | E |
|------------------------|-------------|-------------------|------------------------------|---------|---|



**EXISTING TYPICAL SECTION**

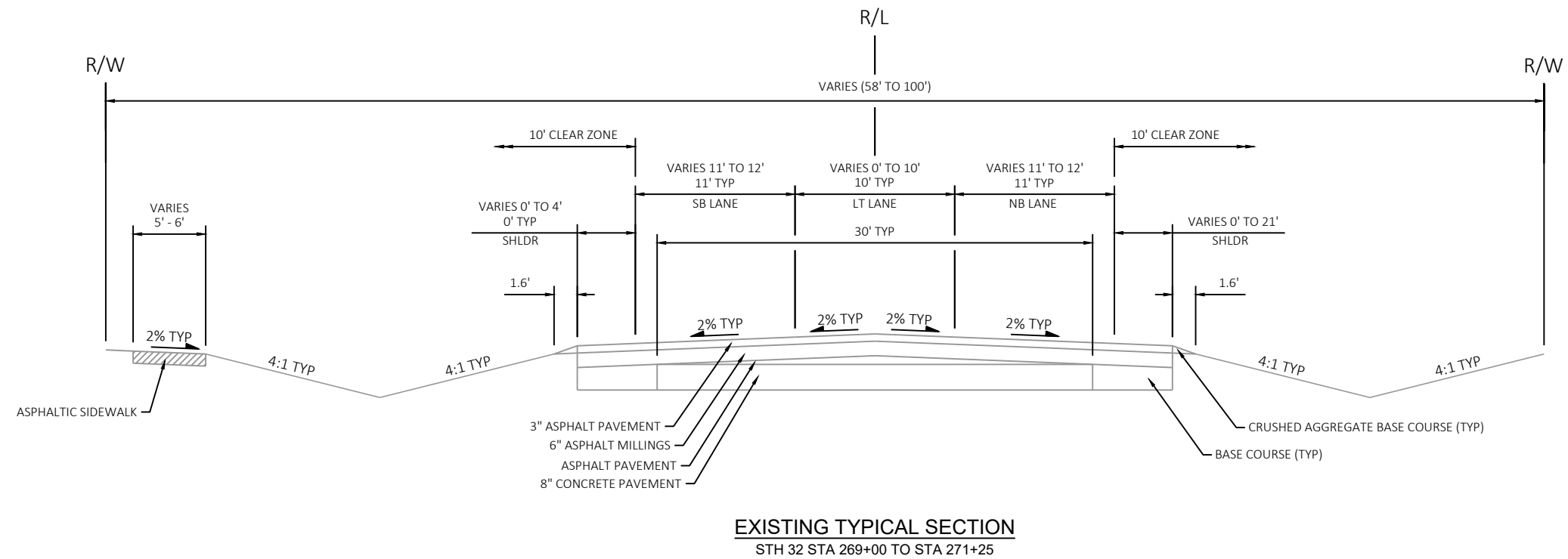
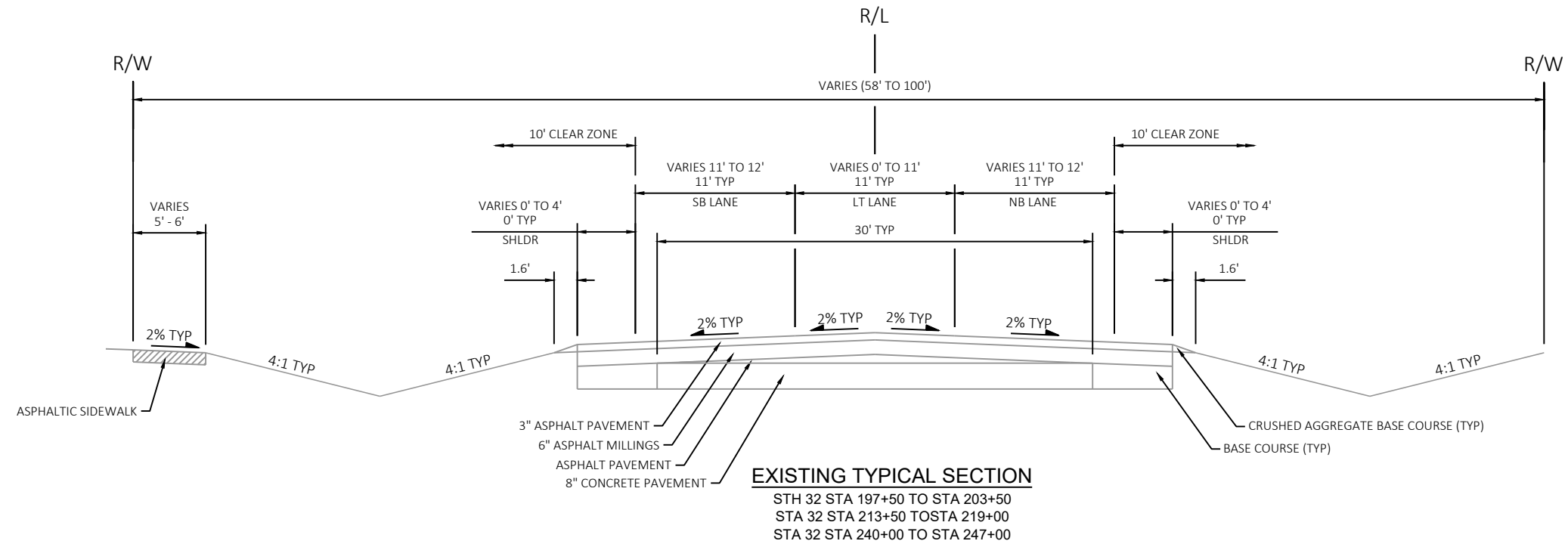
STH 32 STA 134+25 TO STA 171+60  
STH 32 STA 178+90 TO STA 197+50  
STH 32 STA 203+50 TO STA 213+50  
STH 32 STA 219+00 TO STA 240+00  
STH 32 STA 247+00 TO STA 269+00



**EXISTING TYPICAL SECTION**

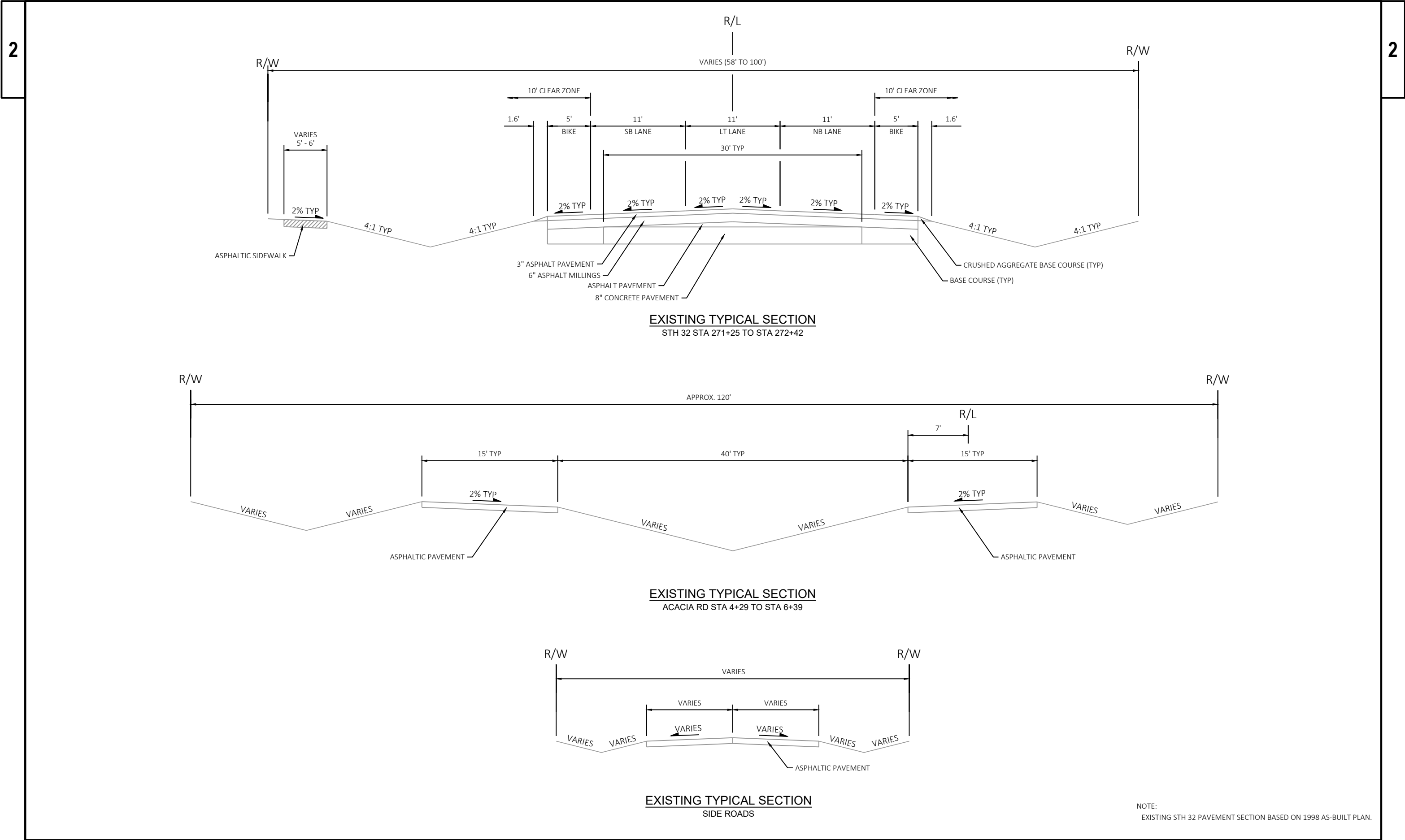
STH 32 STA 171+60 TO STA 178+90

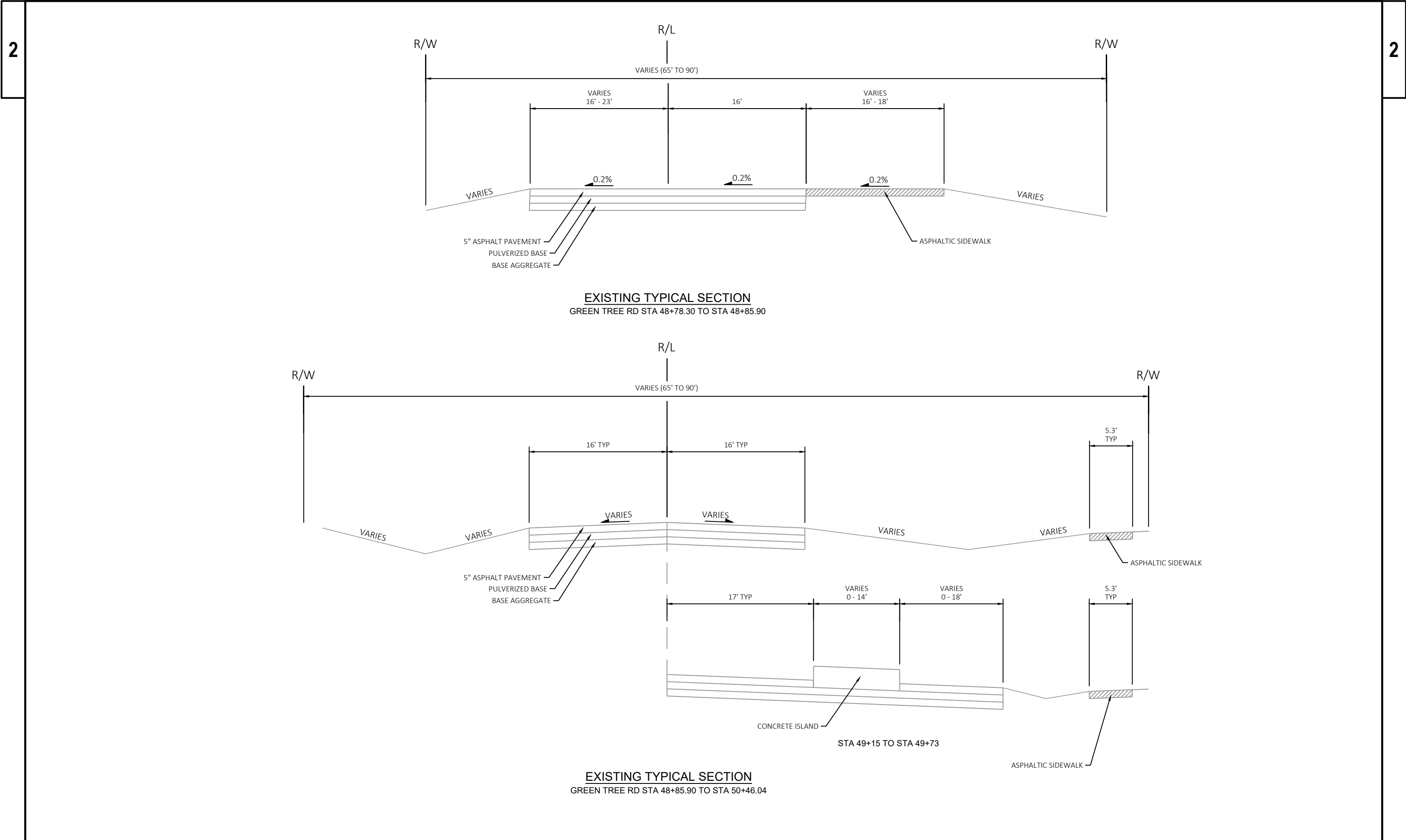
NOTE:  
EXISTING STH 32 PAVEMENT SECTION BASED ON 1998 AS-BUILT PLAN.

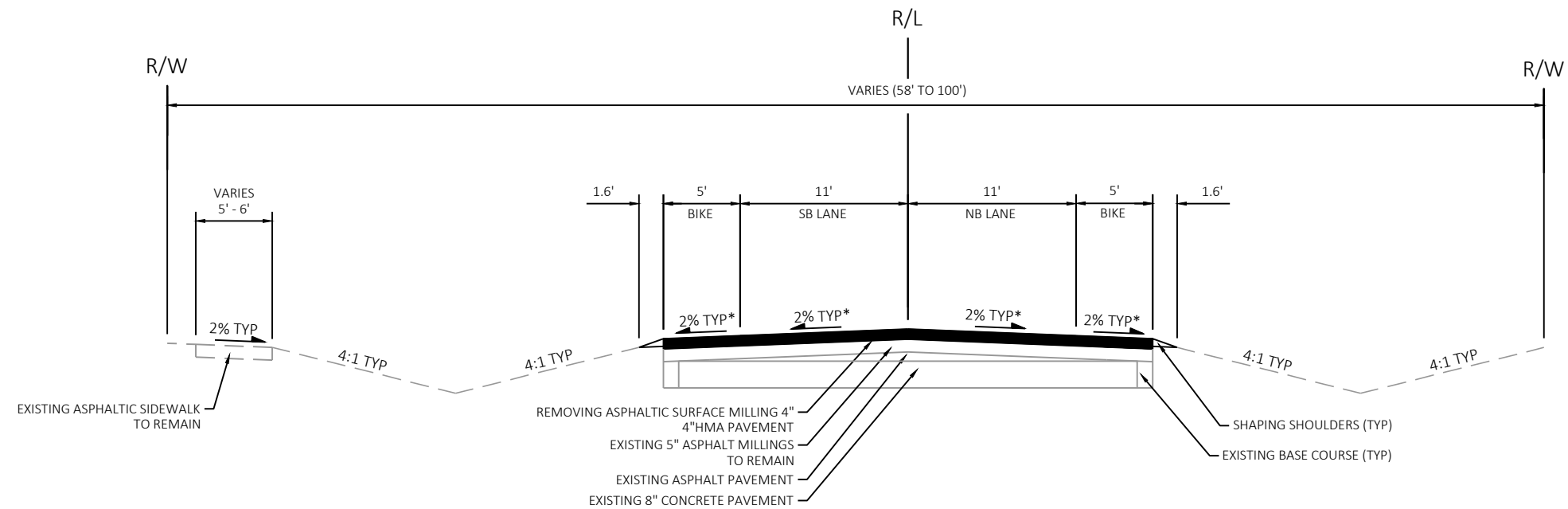


NOTE:  
EXISTING STH 32 PAVEMENT SECTION BASED ON 1998 AS-BUILT PLAN.

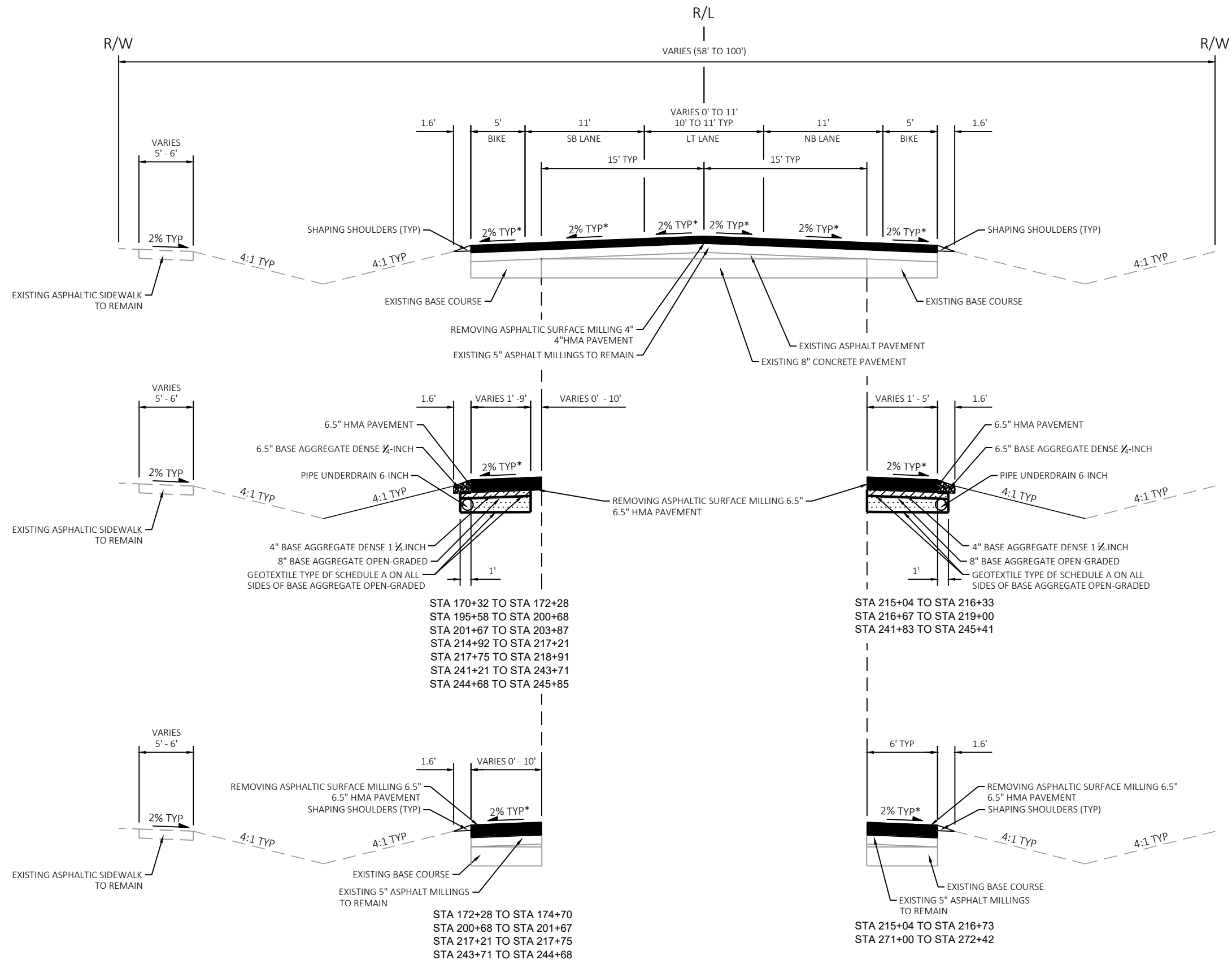








**PROPOSED TYPICAL SECTION**  
STH 32 STA 134+25 TO STA 170+00  
STH 32 STA 178+77 TO STA 195+58  
STH 32 STA 203+98 TO STA 214+77  
STH 32 STA 218+98 TO STA 241+60  
STH 32 STA 245+71 TO STA 268+49

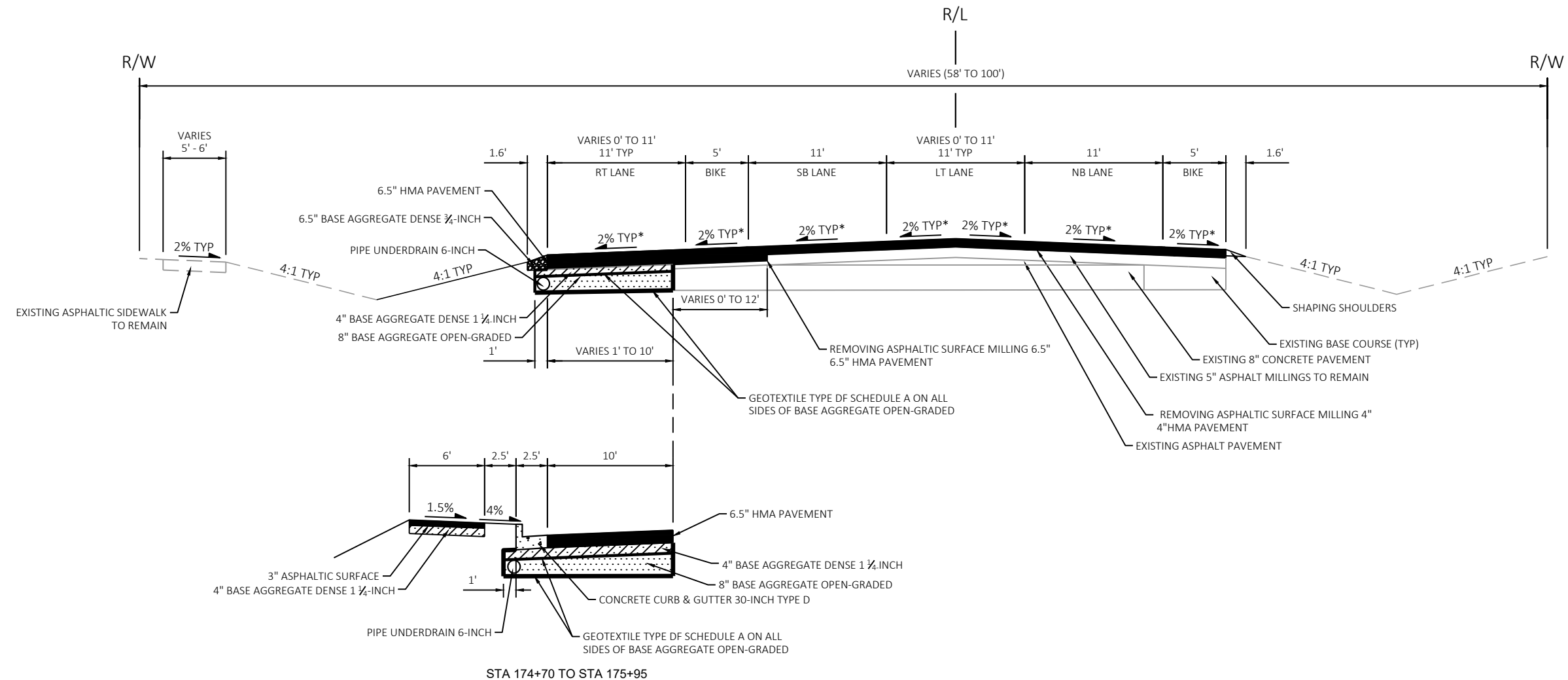


NOTE:  
EXISTING STH 32 PAVEMENT SECTION BASED ON 1998 AS-BUILT PLAN.  
SEE CONSTRUCTION DETAIL "TRENCH RESTORATION" FOR PAVEMENT SECTION AT STORM SEWER AND WATERMAIN TRENCHES.

LEGEND  
\* MATCH EXISTING CROSS SLOPE.  
SEE CROSS SECTIONS FOR WIDENING.

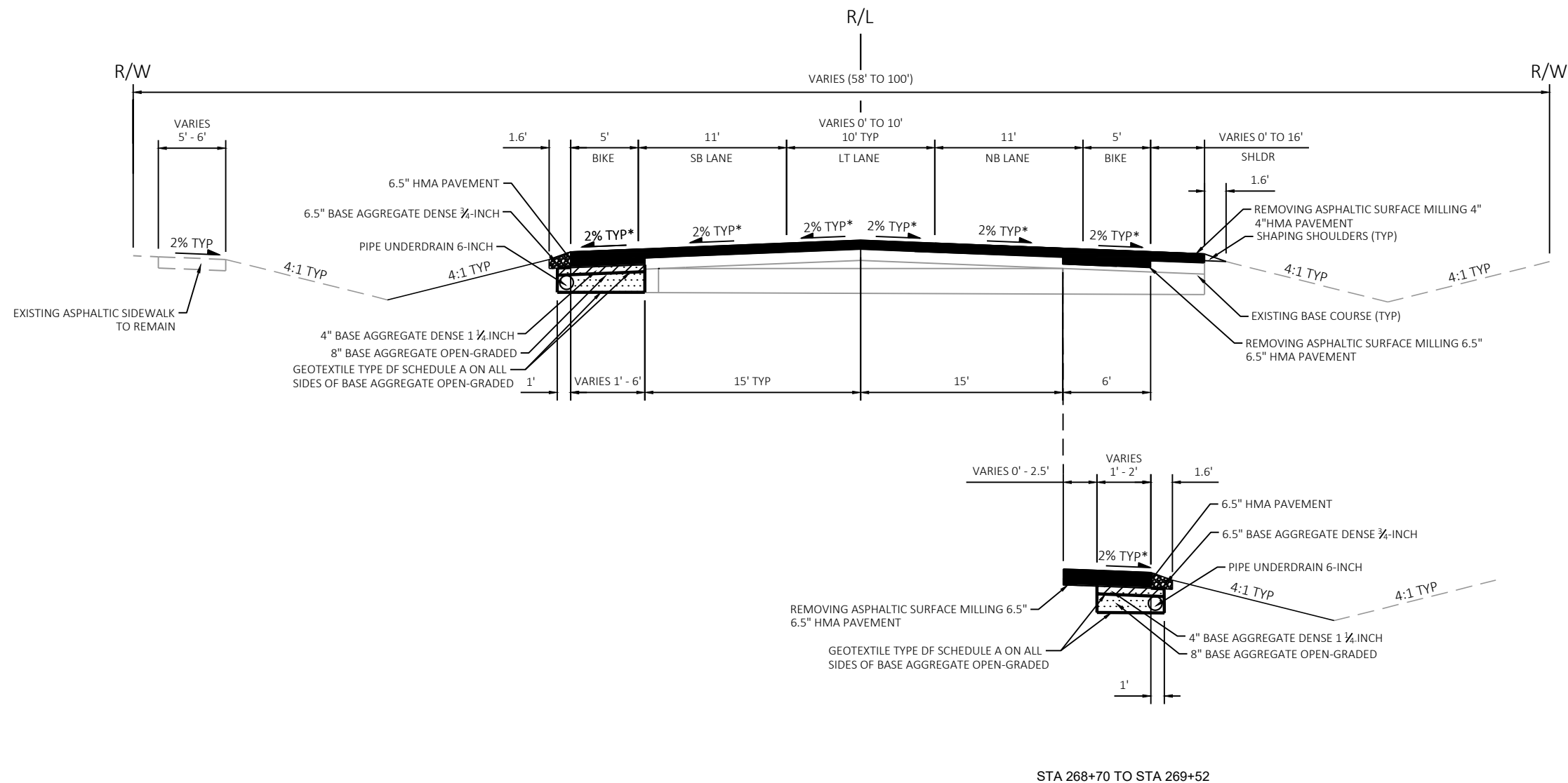


NOTE:  
EXISTING STH 32 PAVEMENT SECTION BASED ON 1998 AS-BUILT PLAN.  
SEE CONSTRUCTION DETAIL "TRENCH RESTORATION" FOR PAVEMENT  
SECTION AT STORM SEWER AND WATERMAIN TRENCHES.  
LEGEND  
\* MATCH EXISTING CROSS SLOPE.  
SEE CROSS SECTIONS FOR WIDENING.

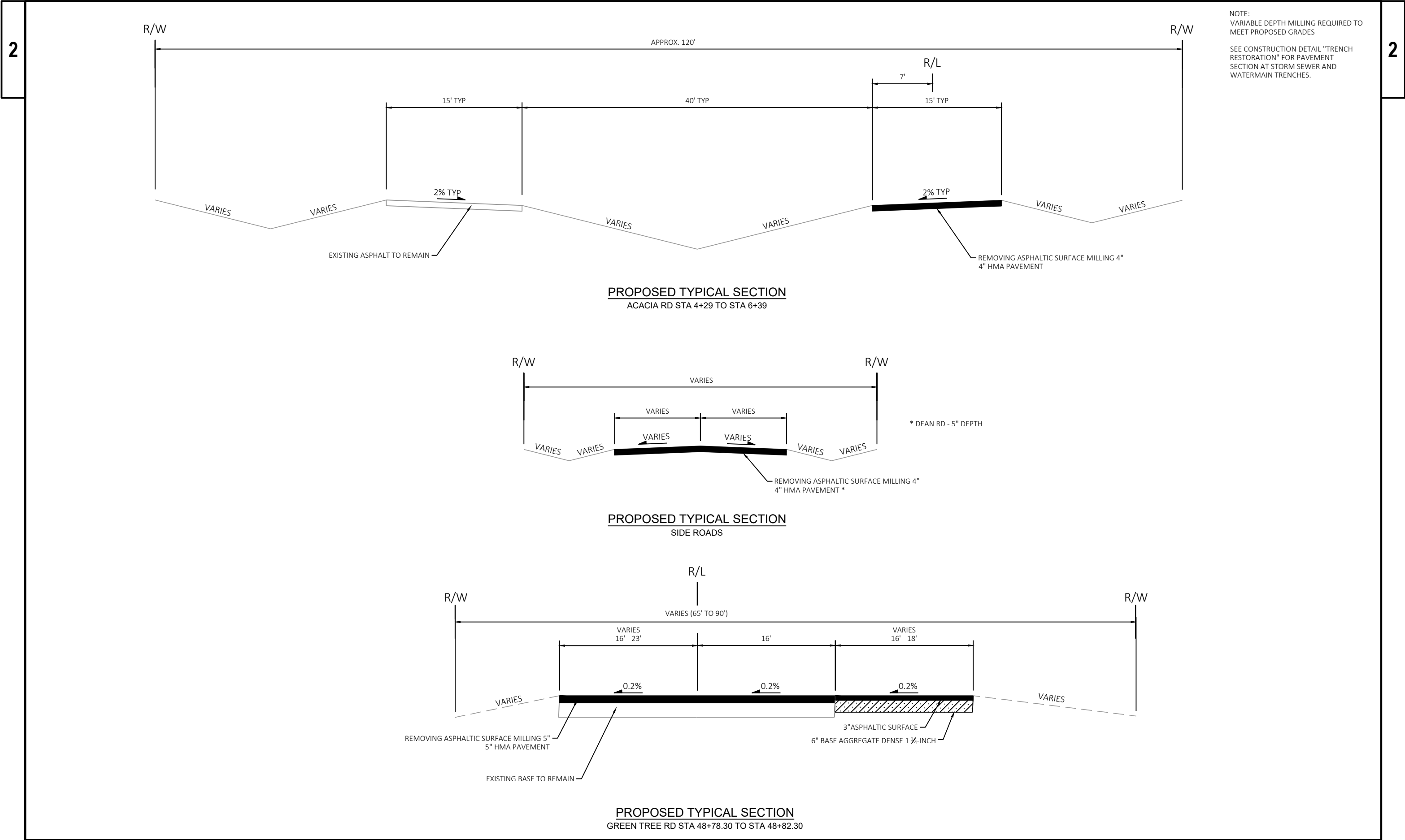


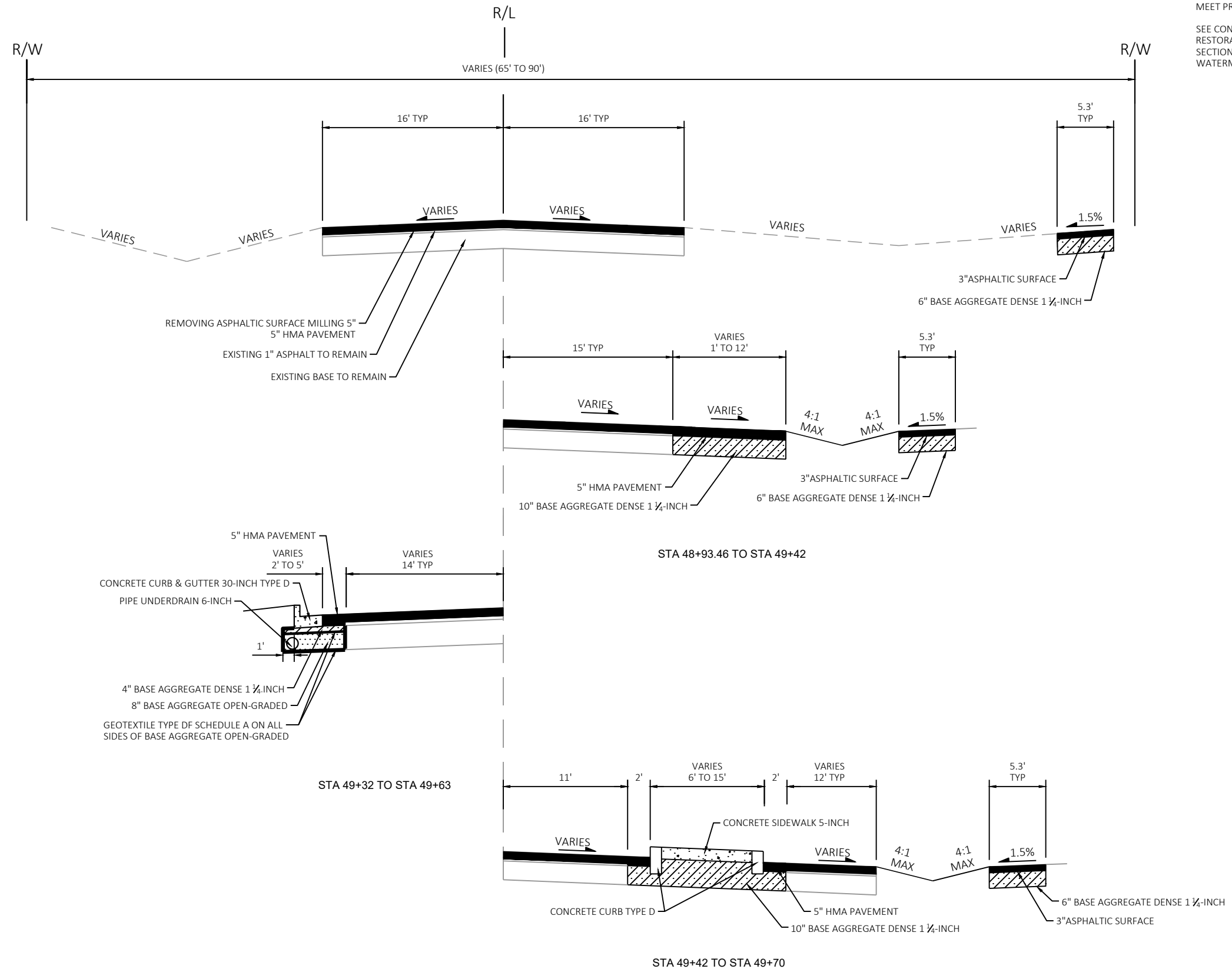
**PROPOSED TYPICAL SECTION**  
STH 32 STA 174+70 TO STA 178+77

NOTE:  
EXISTING STH 32 PAVEMENT SECTION BASED ON 1998 AS-BUILT PLAN.  
SEE CONSTRUCTION DETAIL "TRENCH RESTORATION" FOR PAVEMENT  
SECTION AT STORM SEWER AND WATERMAIN TRENCHES.  
LEGEND  
\* MATCH EXISTING CROSS SLOPE.  
SEE CROSS SECTIONS FOR WIDENING.



**PROPOSED TYPICAL SECTION**  
STH 32 STA 268+49 TO STA 271+00





NOTE:  
VARIABLE DEPTH MILLING REQUIRED TO  
MEET PROPOSED GRADES

SEE CONSTRUCTION DETAIL "TRENCH  
RESTORATION" FOR PAVEMENT  
SECTION AT STORM SEWER AND  
WATERMAIN TRENCHES.

**PROPOSED TYPICAL SECTION**  
GREEN TREE RD STA 48+82.30 TO STA 50+46.04

PROJECT NO: 2225-00-73

HWY: STH 32

COUNTY: MILWAUKEE

PROPOSED TYPICAL SECTION

SHEET

17

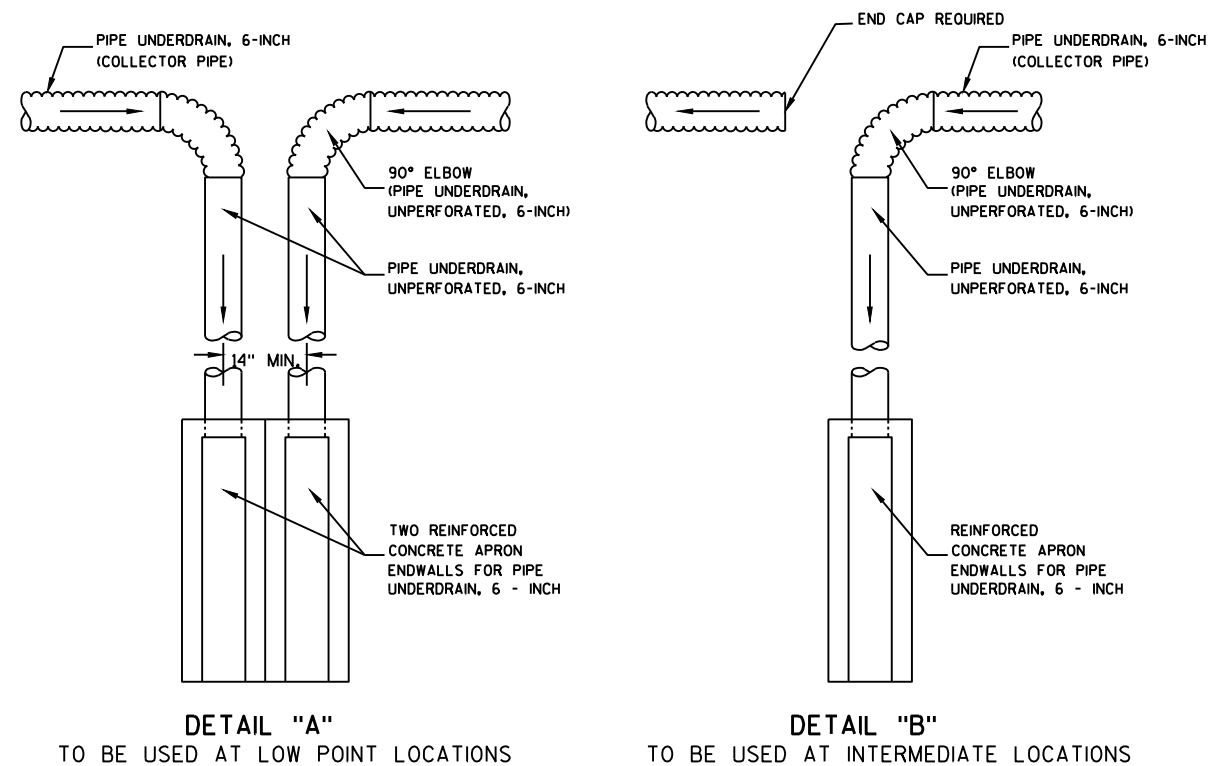
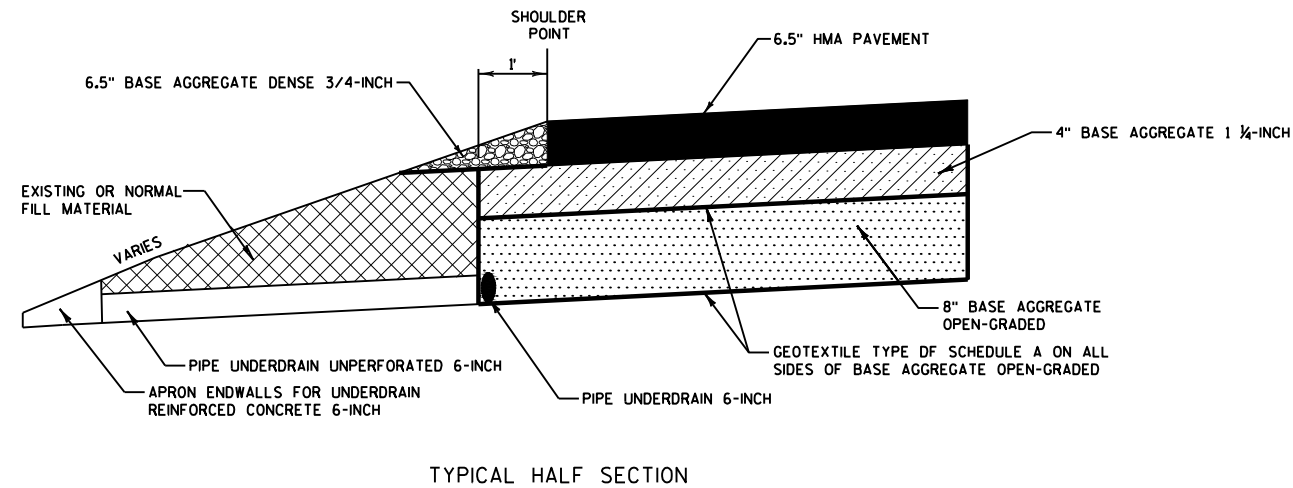
E

**NOTE:**

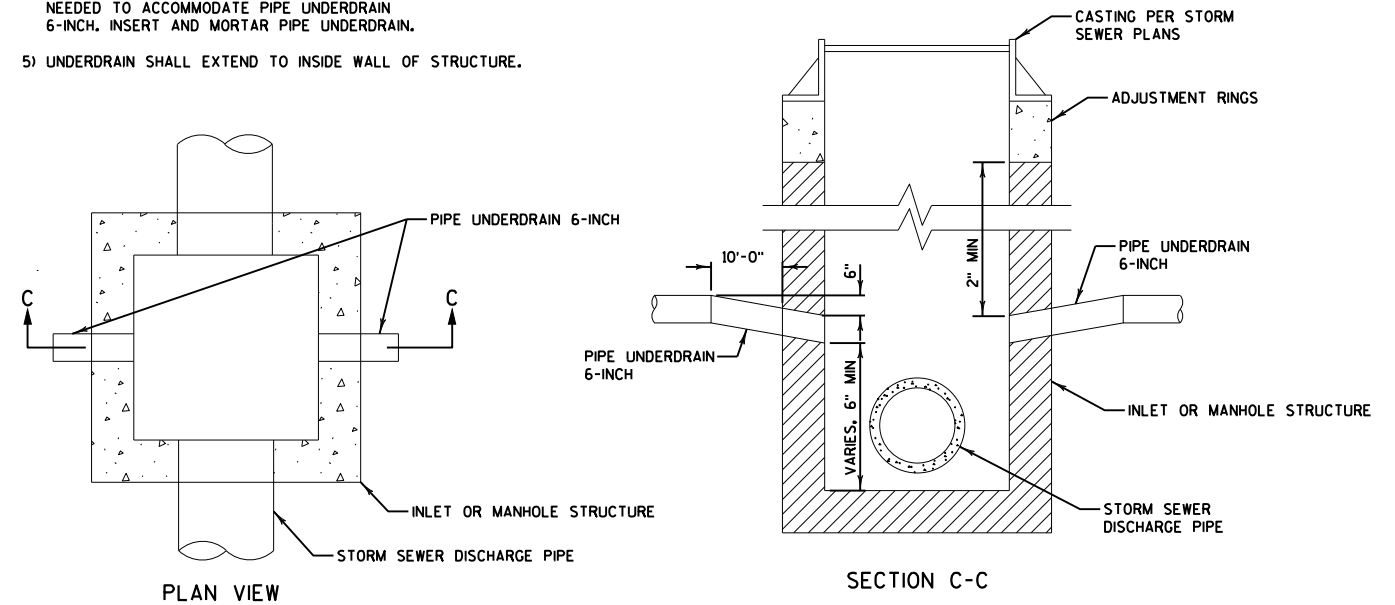
UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.

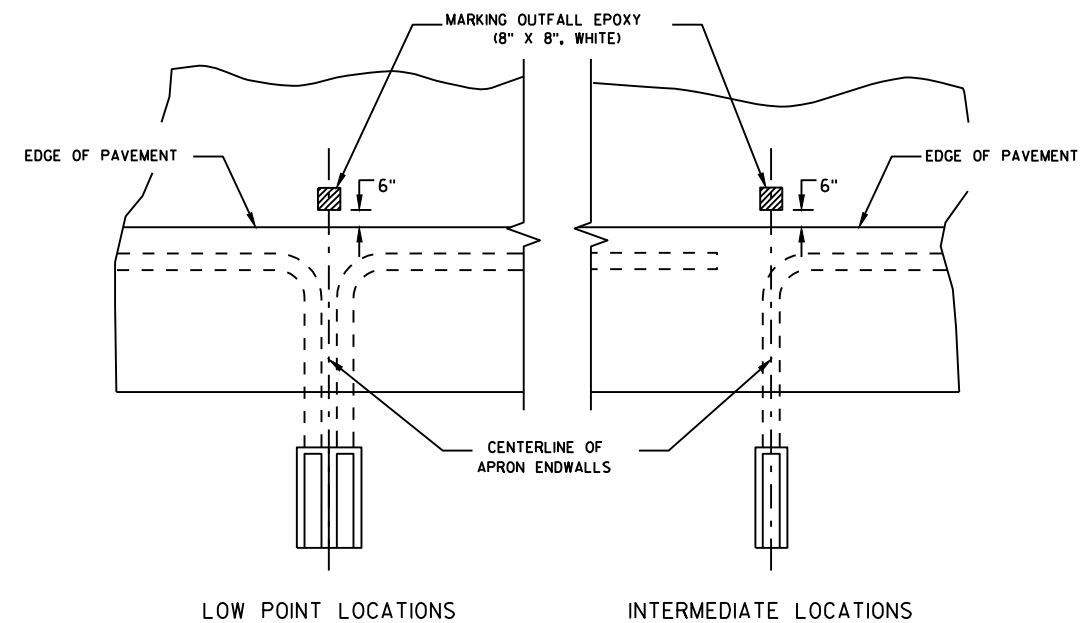
TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.

**UNDERDRAIN OUTFALLS****NOTES**

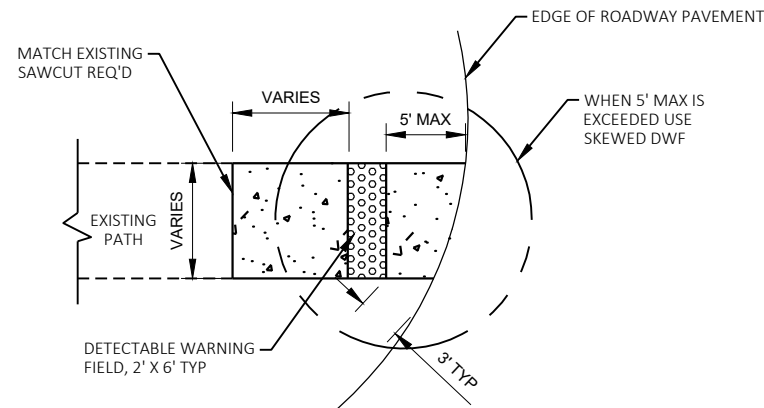
- 1) CONNECTIONS TO INLETS/MANHOLE SHALL USE PIPE UNDERDRAIN 6-INCH.
- 2) SEE TYPICAL SECTIONS, STORM SEWER PLANS, AND MISCELLANEOUS QUANTITIES FOR PIPE UNDERDRAIN LOCATIONS.
- 3) CONNECTION TO INLET/MANHOLE IS INCIDENTAL TO THE PIPE UNDERDRAIN 6-INCH BID ITEM.
- 4) CORE/DRILL HOLE INTO INLET/MANHOLE STRUCTURE AS NEEDED TO ACCOMMODATE PIPE UNDERDRAIN 6-INCH. INSERT AND MORTAR PIPE UNDERDRAIN.
- 5) UNDERDRAIN SHALL EXTEND TO INSIDE WALL OF STRUCTURE.

**UNDERDRAIN CONNECTION AT INLET/MANHOLE**

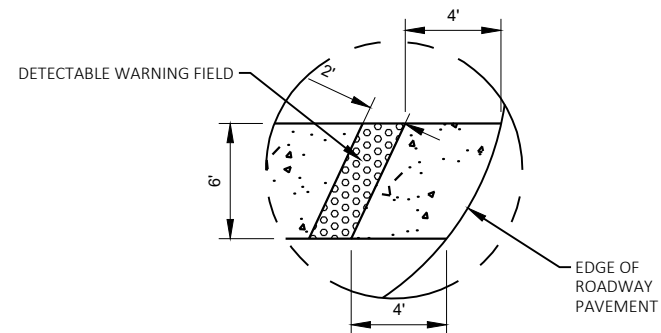
SEE STORM SEWER PLANS AND MISCELLANEOUS QUANTITIES FOR LOCATIONS

**PAVEMENT MARKINGS FOR UNDERDRAIN OUTFALLS**





PERPENDICULAR DWF (PREFERRED)



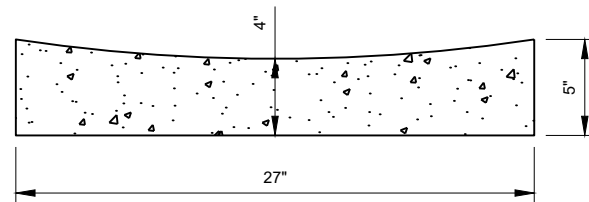
SKEWED DWF

DETECTABLE WARNING FIELD WITH NO CURB

NTS

NOTES:

- 1) REPLACE CONCRETE DITCH BOTTOM WHERE IMPACTED BY PROJECT WORK.
- 2) SEE PLAN DETAILS FOR LOCATIONS.
- 3) ADJUST DIMENSIONS TO MATCH EXISTING.
- 4) REMOVAL OF EXISTING CONCRETE DITCH BOTTOM PAID UNDER ITEMS "REMOVING CONCRETE SIDEWALK " AND "SAWING CONCRETE".

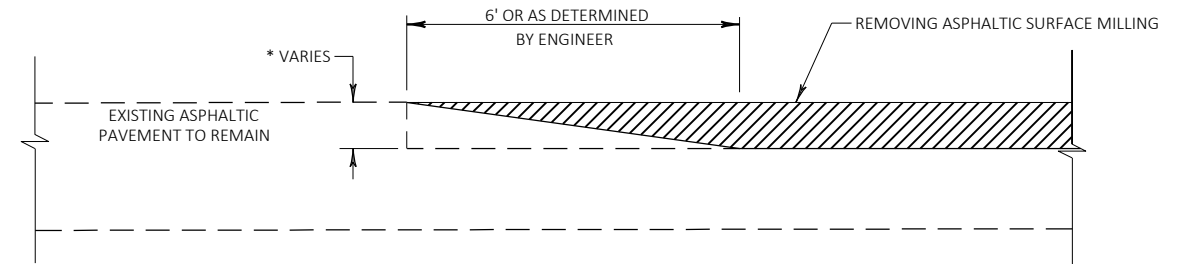


SECTION VIEW

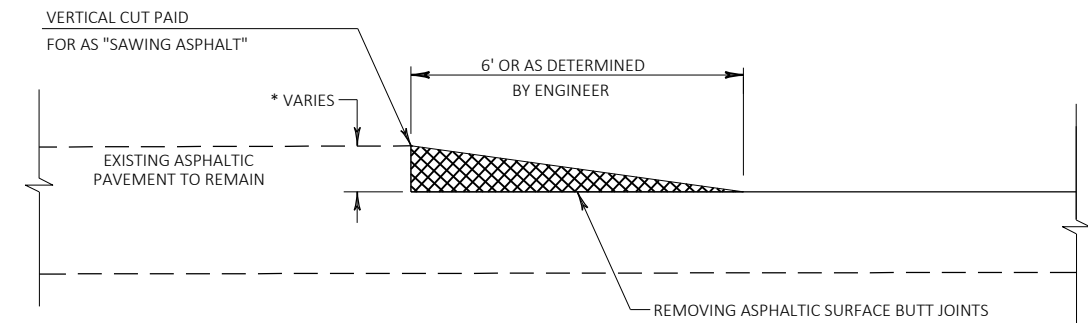
CONCRETE DITCH BOTTOM

NTS

\* SEE PLAN DETAILS FOR DEPTH



STEP 1

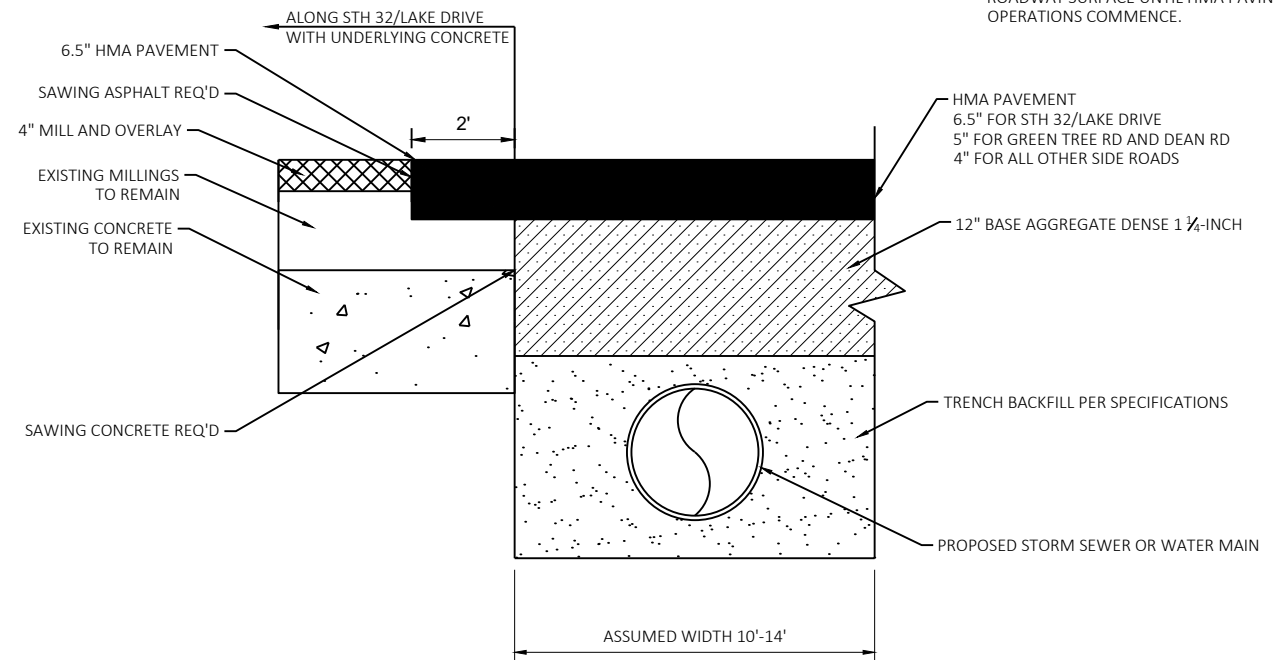


STEP 2

BUTT JOINT DETAIL

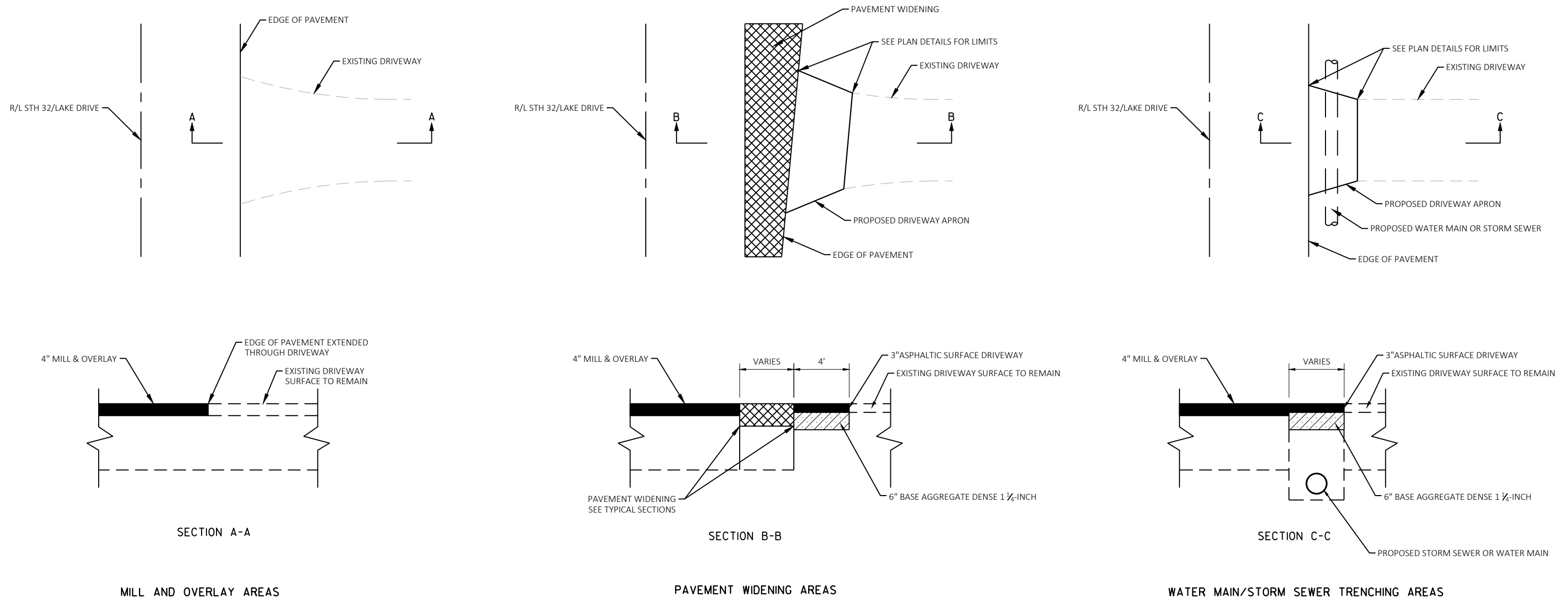
NOTE:

1. BASE AGGREGATE DENSE 1- $\frac{1}{4}$  INCH MAY BE TEMPORARILY PLACED UP TO THE ROADWAY SURFACE UNTIL HMA PAVING OPERATIONS COMMENCE.



TRENCH RESTORATION

NTS

**DRIVEWAY DETAILS**

NTS

PROJECT NO: 2225-00-73

HWY: STH 32

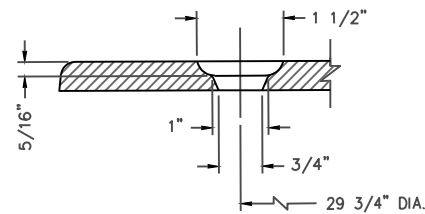
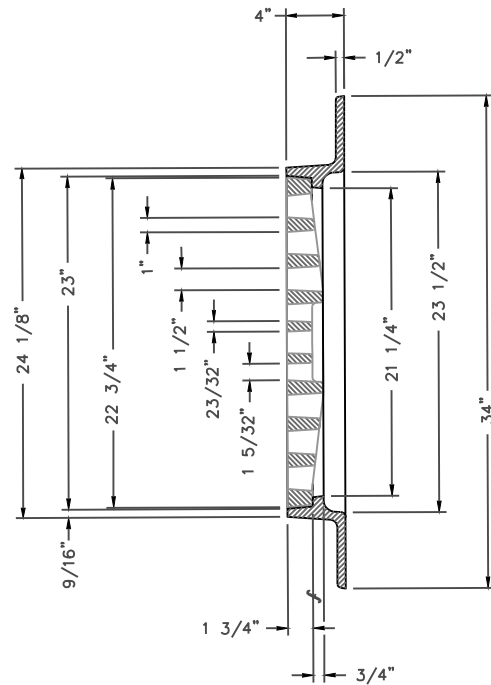
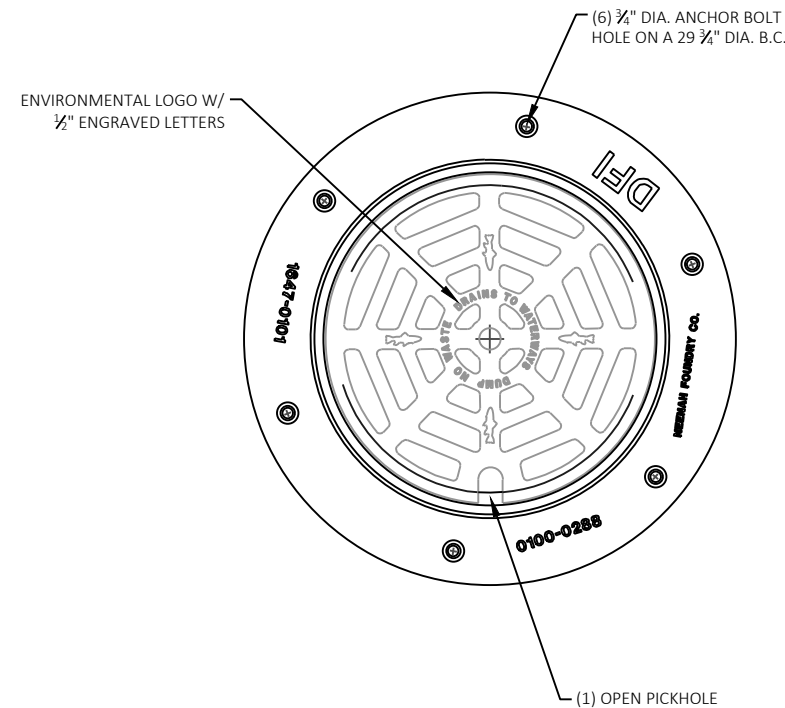
COUNTY: MILWAUKEE

CONSTRUCTION DETAILS

SHEET

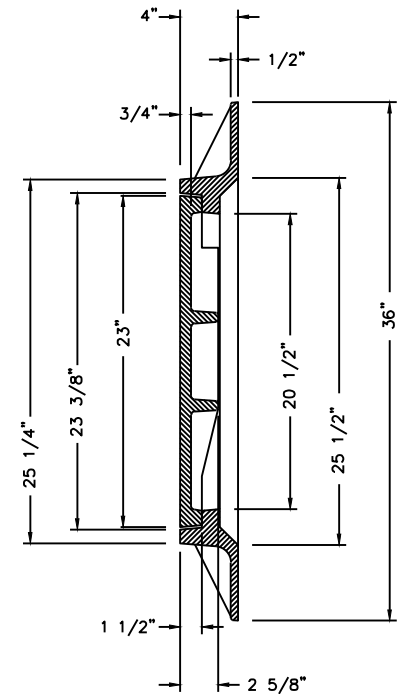
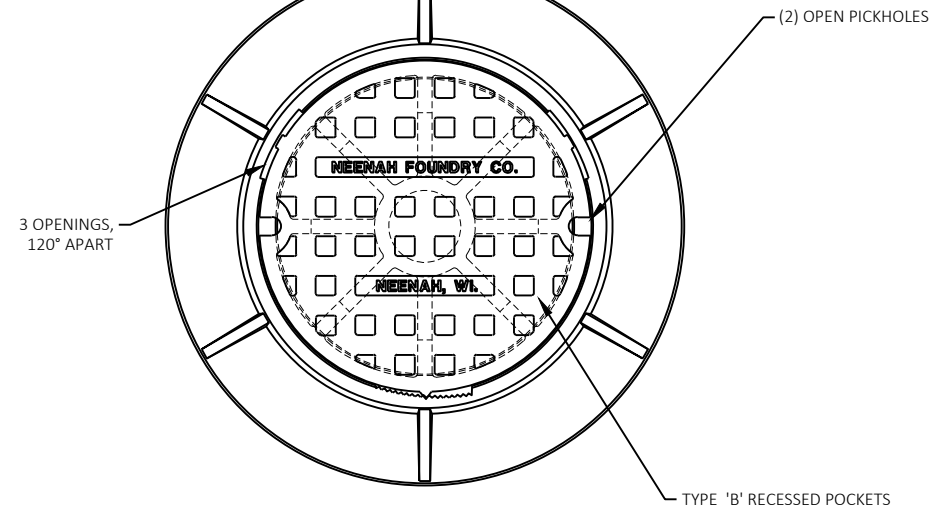
20

E

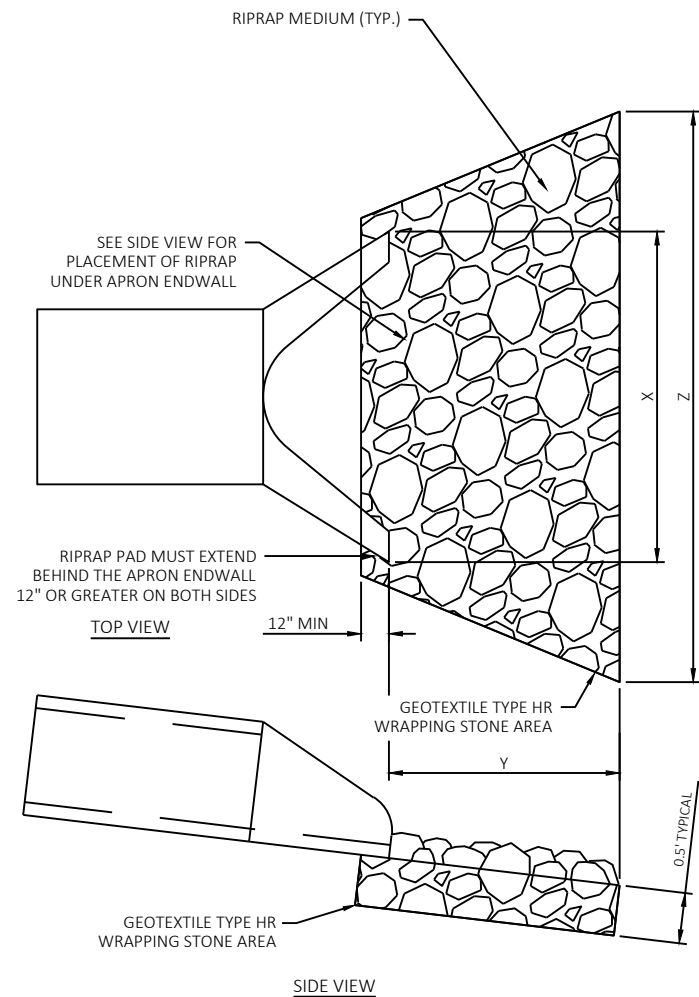


ANCHOR HOLE DETAIL  
HALF SCALE

INLET COVERS SPECIAL  
NOT TO SCALE



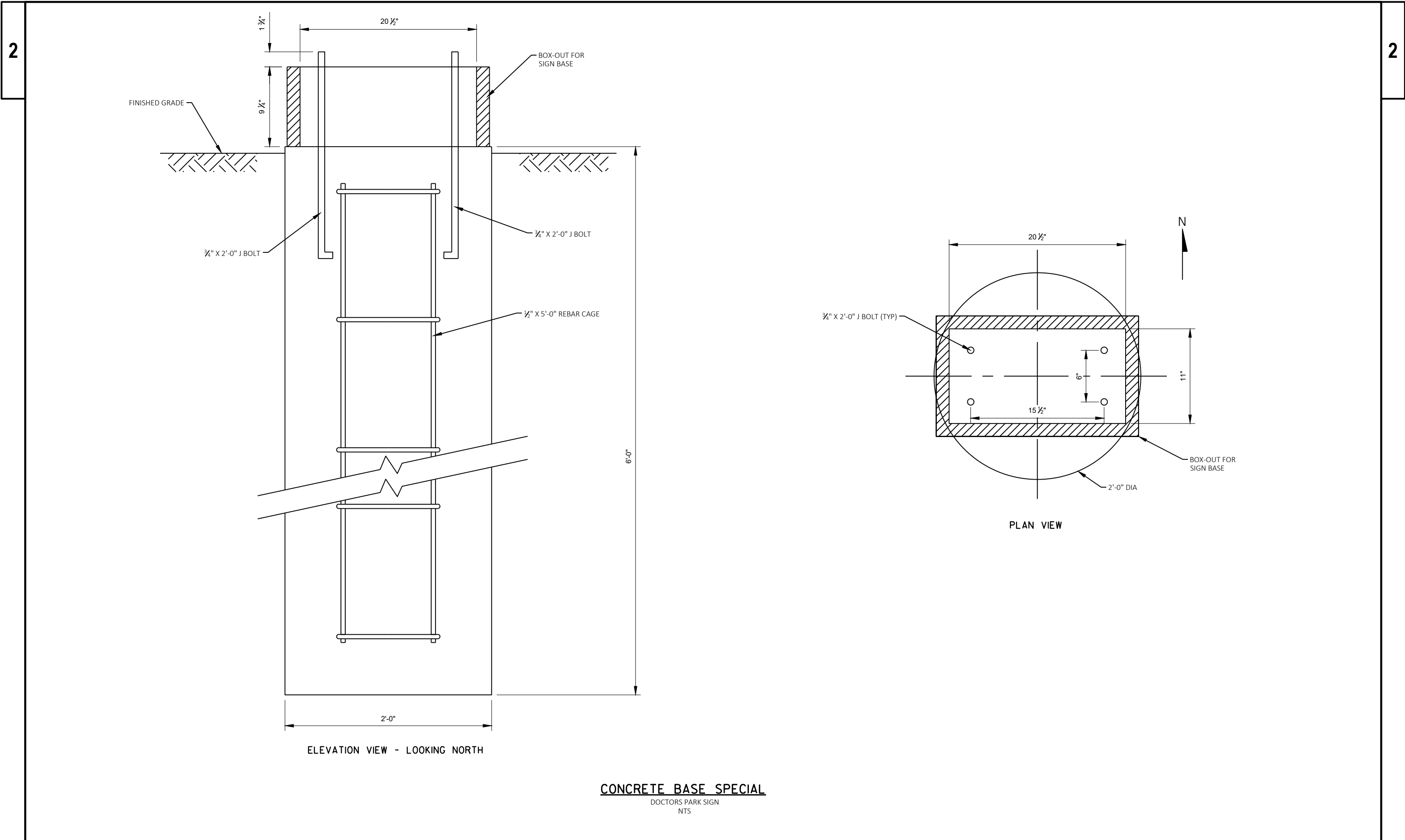
MANHOLE COVERS SPECIAL  
NOT TO SCALE

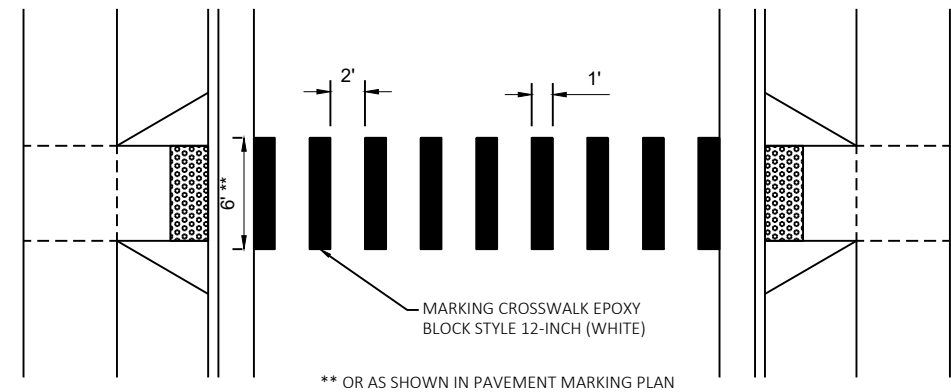


| DIA<br>(INCH) | X<br>(INCH) | Y<br>(INCH) | Z<br>(INCH) |
|---------------|-------------|-------------|-------------|
| 12            | 24          | 120         | 48          |
| 15            | 30          | 120         | 60          |
| 18            | 36          | 120         | 60          |
| 21            | 42          | 120         | 72          |
| 24            | 48          | 120         | 72          |
| 27            | 54          | 120         | 81          |
| 30            | 60          | 120         | 90          |
| 36            | 72          | 120         | 108         |
| 42            | 78          | 120         | 120         |
| 48            | 84          | 120         | 120         |
| 54            | 90          | 120         | 150         |
| 60            | 96          | 120         | 162         |
| 66            | 102         | 120         | 174         |
| 72            | 108         | 120         | 186         |

NOTES:  
1) STANDARD SPECIFICATION SHALL APPLY TO ALL INSTALLATIONS.

**RIPRAP AT ENDWALLS**  
NOT TO SCALE  
SEE EROSION CONTROL PLAN AND  
MISCELLANEOUS QUANTITIES FOR LOCATIONS

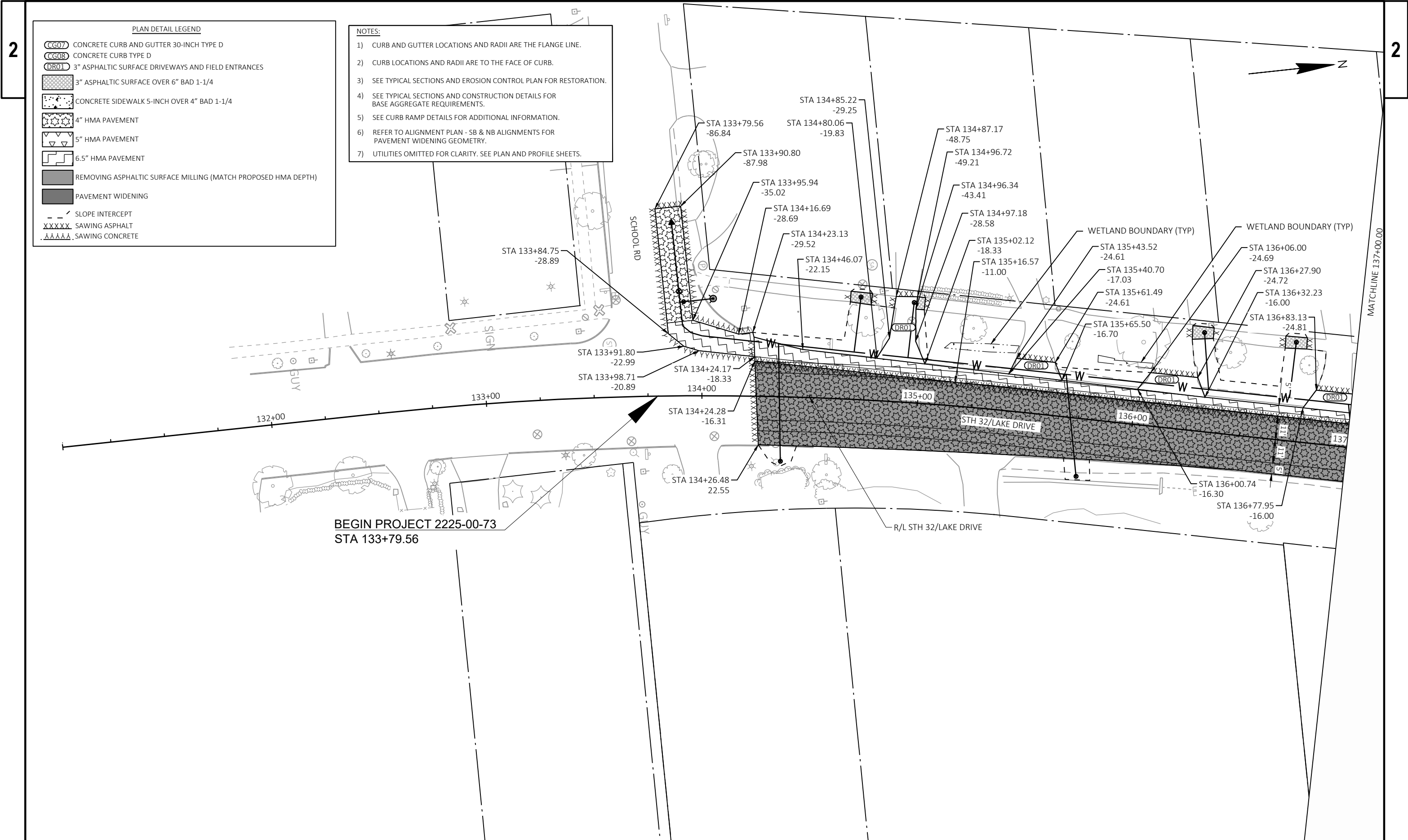




**BLOCK STYLE CROSSWALK PAVEMENT MARKING DETAIL**

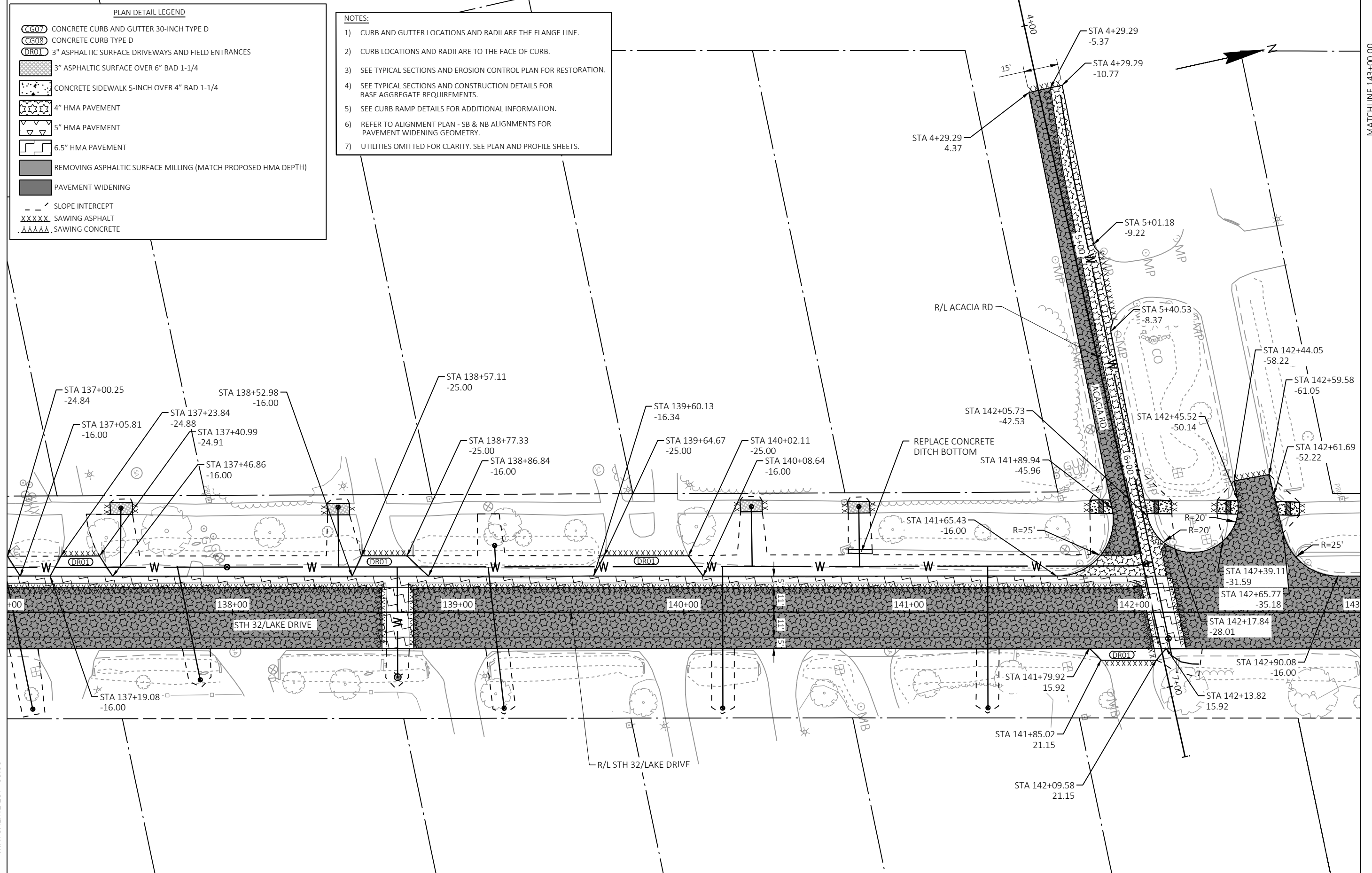
SEE PAVEMENT MARKING PLAN FOR LOCATIONS AND MARKING TYPES





2

# 2



|             |                         |
|-------------|-------------------------|
| PROJECT NO: | 2225-00-73 & 2225-00-74 |
|-------------|-------------------------|

HWY: STH 32

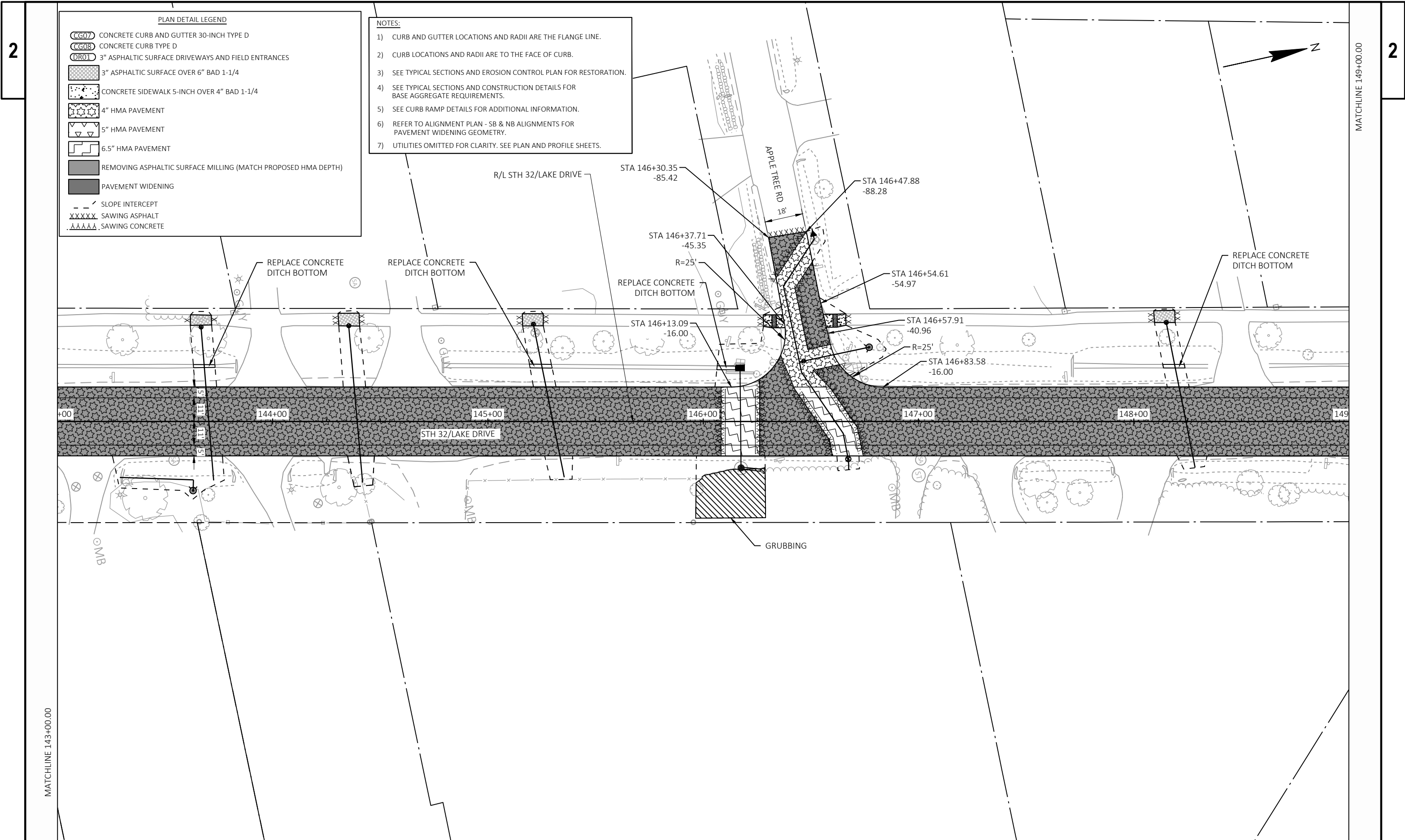
COUNTY: MILWAUKEE

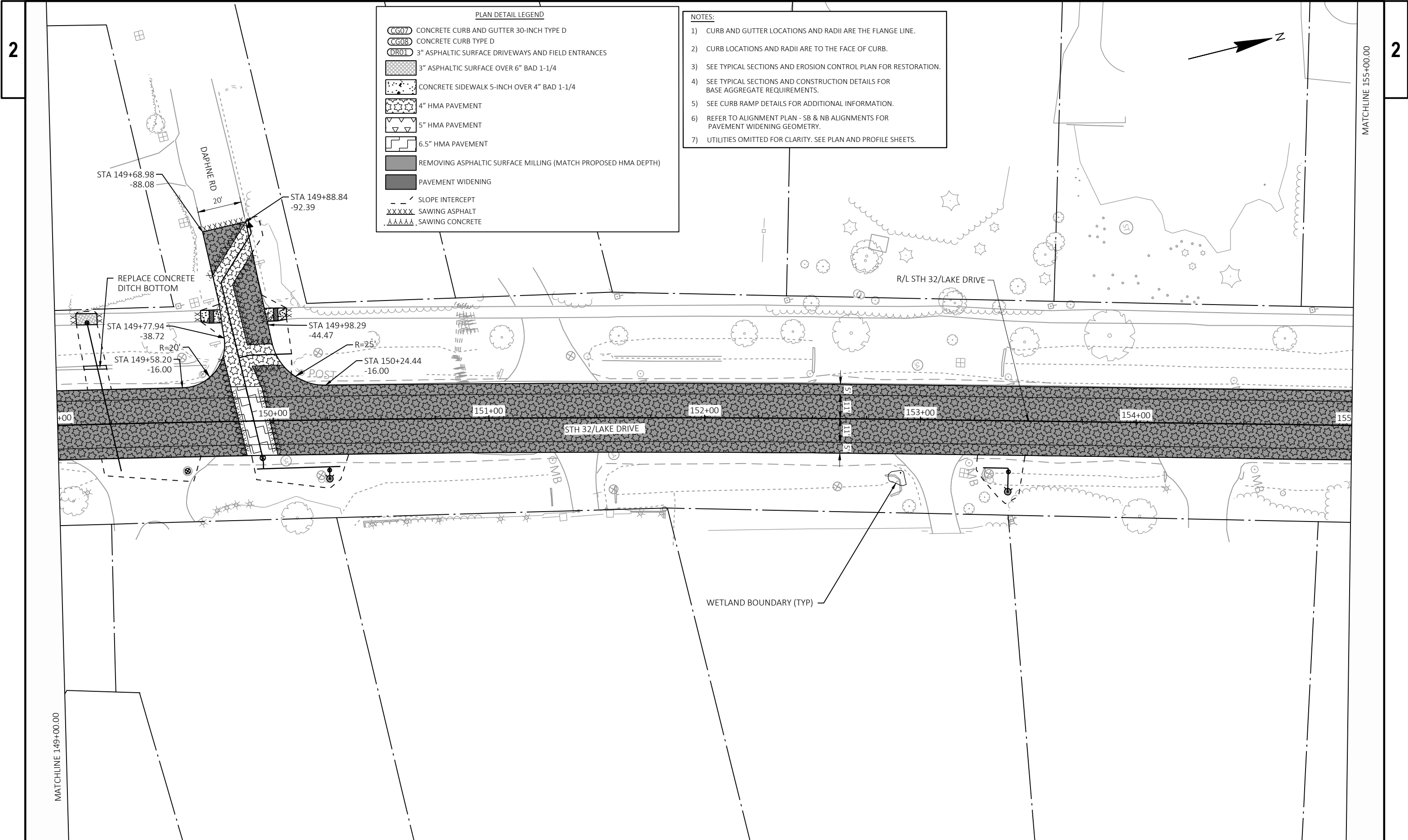
## PLAN DETAILS

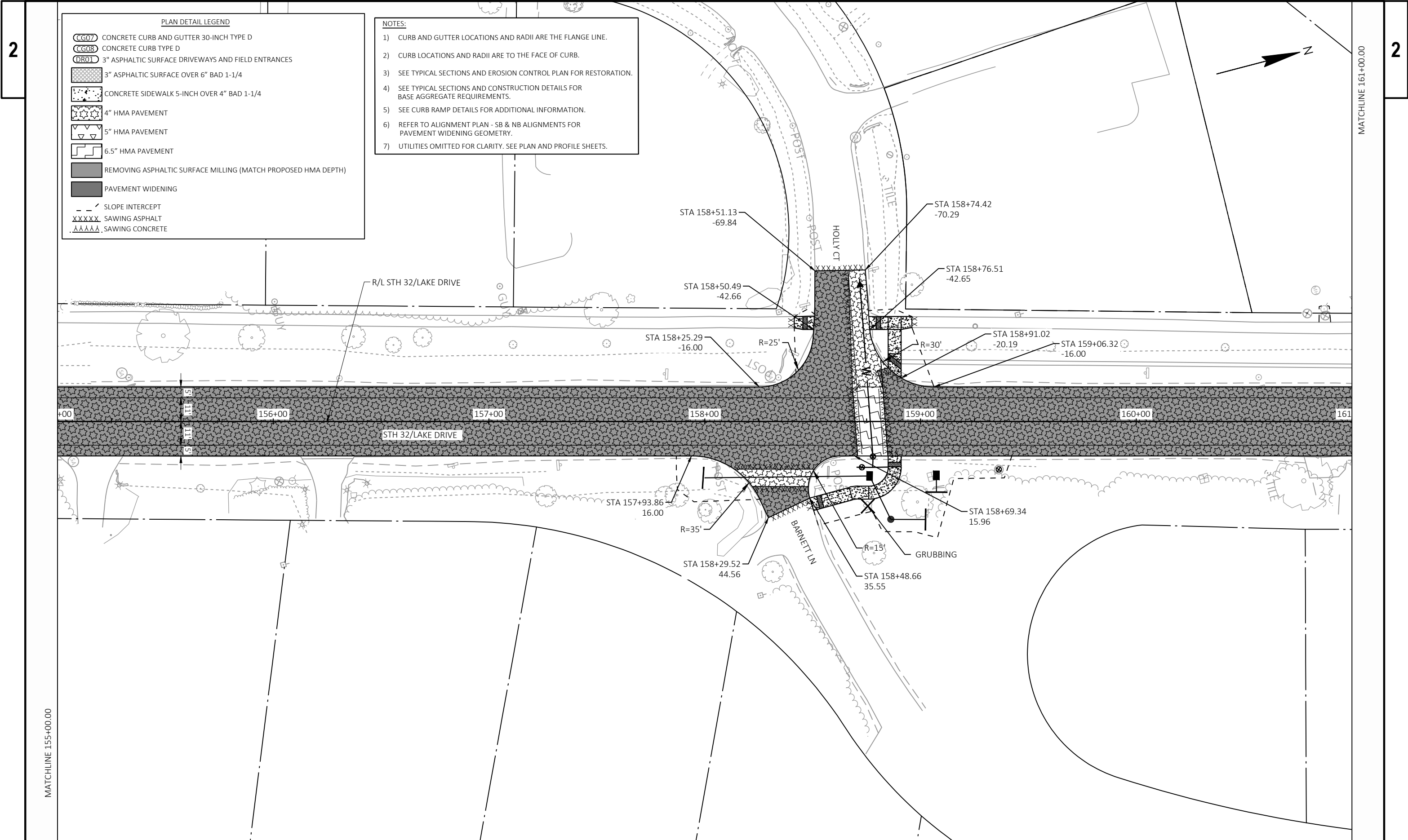
SHEET

26

11







PLAN DETAIL LEGEND

- CG07 CONCRETE CURB AND GUTTER 30-INCH TYPE D
- CG08 CONCRETE CURB TYPE D
- DR01 3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
- 3" ASPHALTIC SURFACE OVER 6" BAD 1-1/4
- CONCRETE SIDEWALK 5-INCH OVER 4" BAD 1-1/4
- 4" HMA PAVEMENT
- 5" HMA PAVEMENT
- 6.5" HMA PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING (MATCH PROPOSED HMA DEPTH)
- PAVEMENT WIDENING
- SLOPE INTERCEPT
- XXXXX SAWING ASPHALT
- AAAAA SAWING CONCRETE

NOTES:

- 1) CURB AND GUTTER LOCATIONS AND RADII ARE THE FLANGE LINE.
- 2) CURB LOCATIONS AND RADII ARE TO THE FACE OF CURB.
- 3) SEE TYPICAL SECTIONS AND EROSION CONTROL PLAN FOR RESTORATION.
- 4) SEE TYPICAL SECTIONS AND CONSTRUCTION DETAILS FOR BASE AGGREGATE REQUIREMENTS.
- 5) SEE CURB RAMP DETAILS FOR ADDITIONAL INFORMATION.
- 6) REFER TO ALIGNMENT PLAN - SB & NB ALIGNMENTS FOR PAVEMENT WIDENING GEOMETRY.
- 7) UTILITIES OMITTED FOR CLARITY. SEE PLAN AND PROFILE SHEETS.

PROJECT NO: 2225-00-73 & 2225-00-74

HWY: STH 32

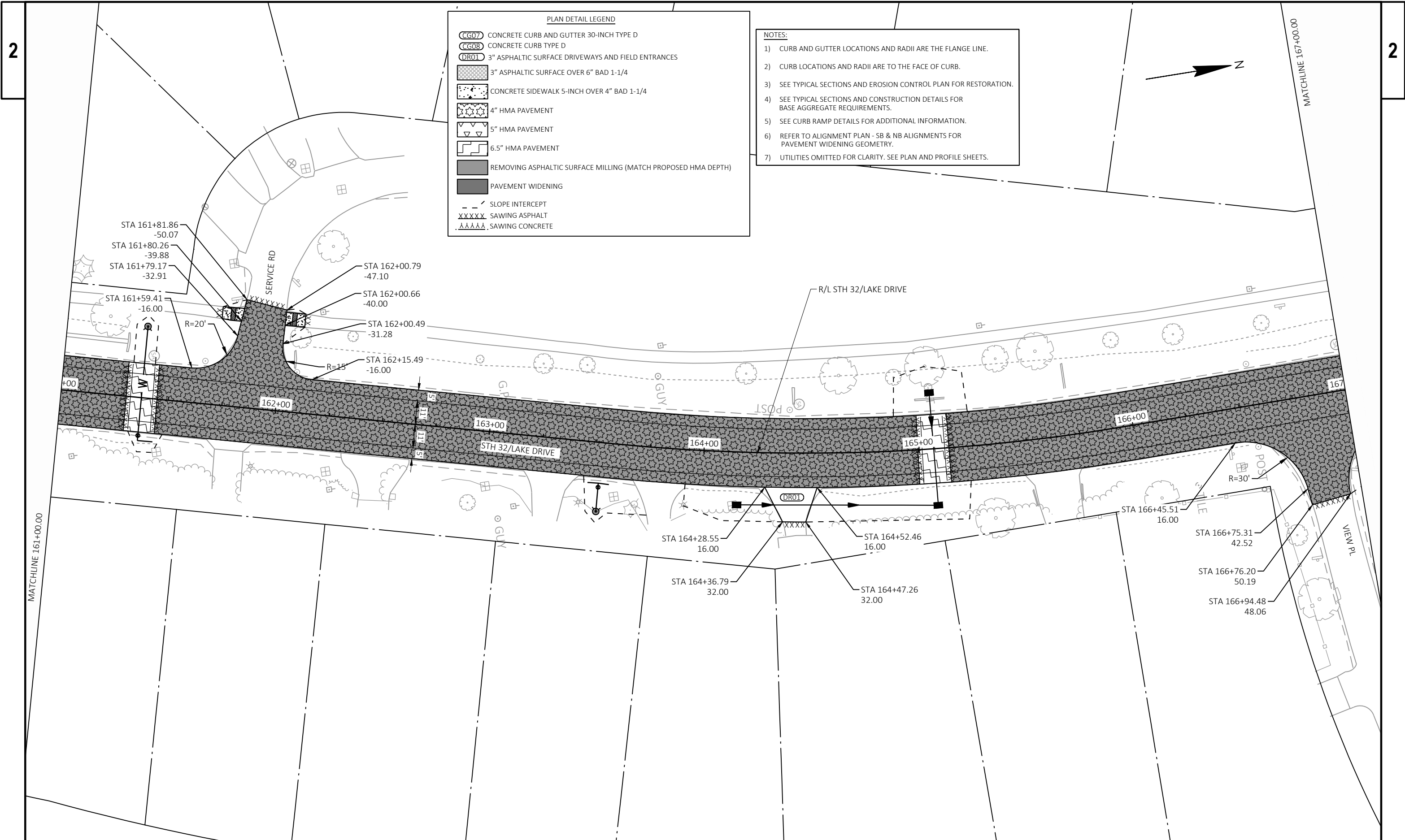
COUNTY: MILWAUKEE

PLAN DETAILS

SHEET

29

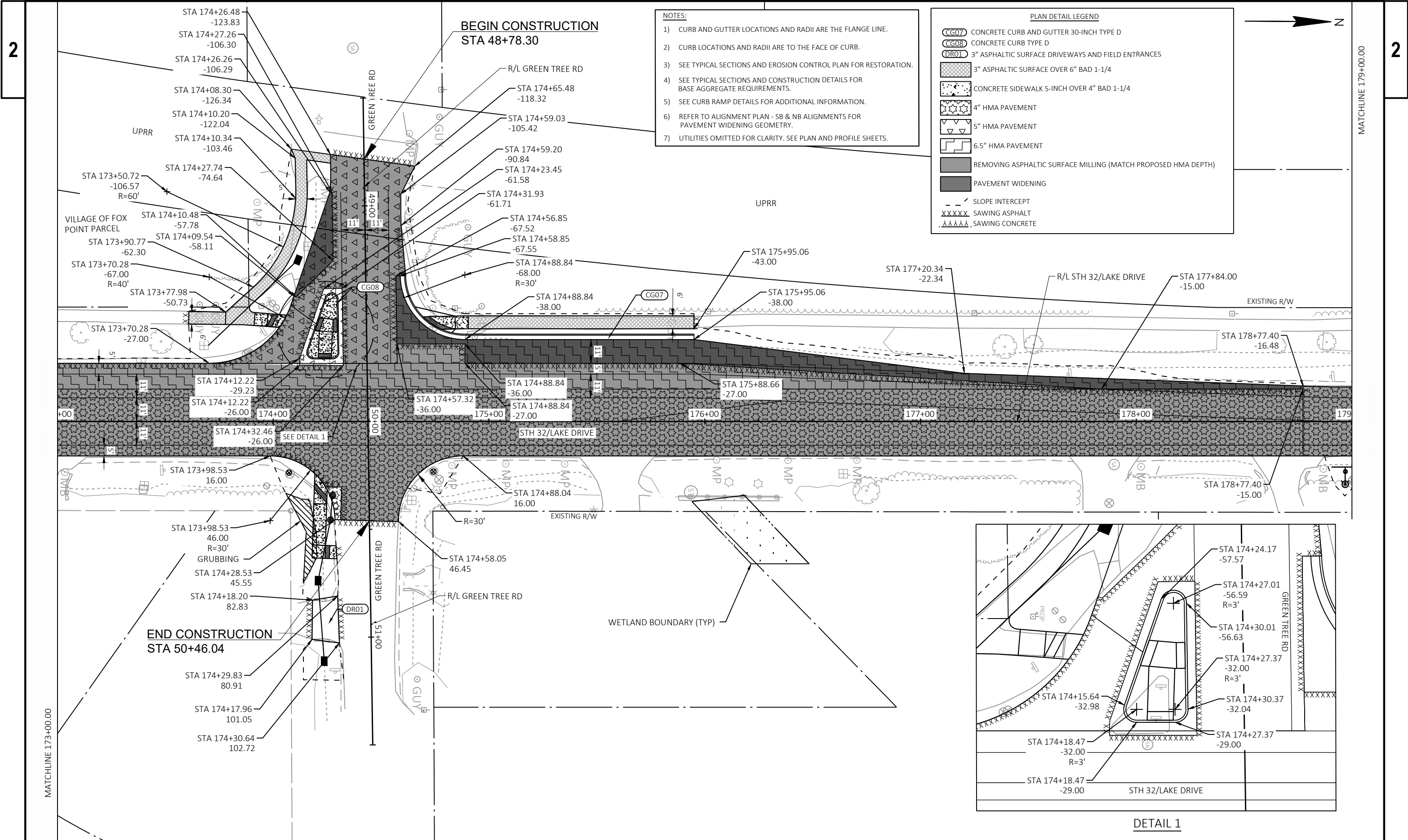
E







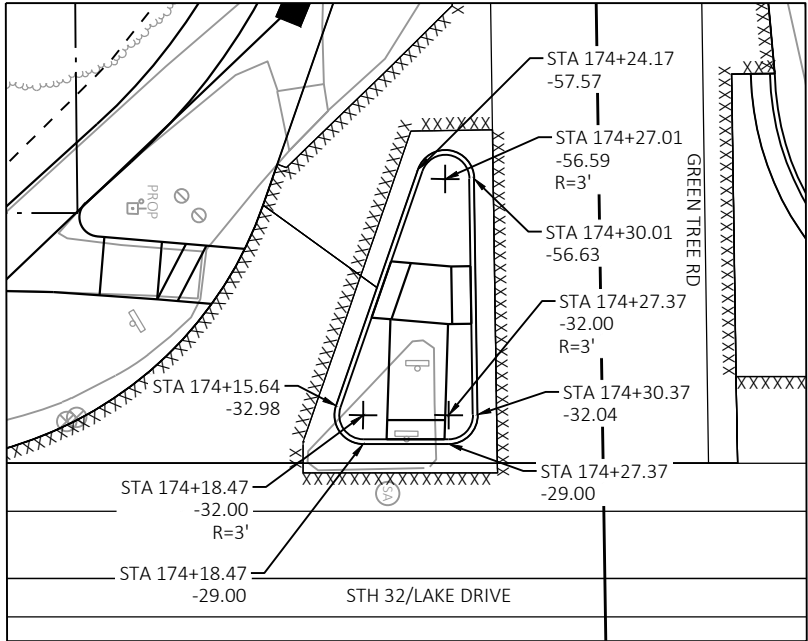




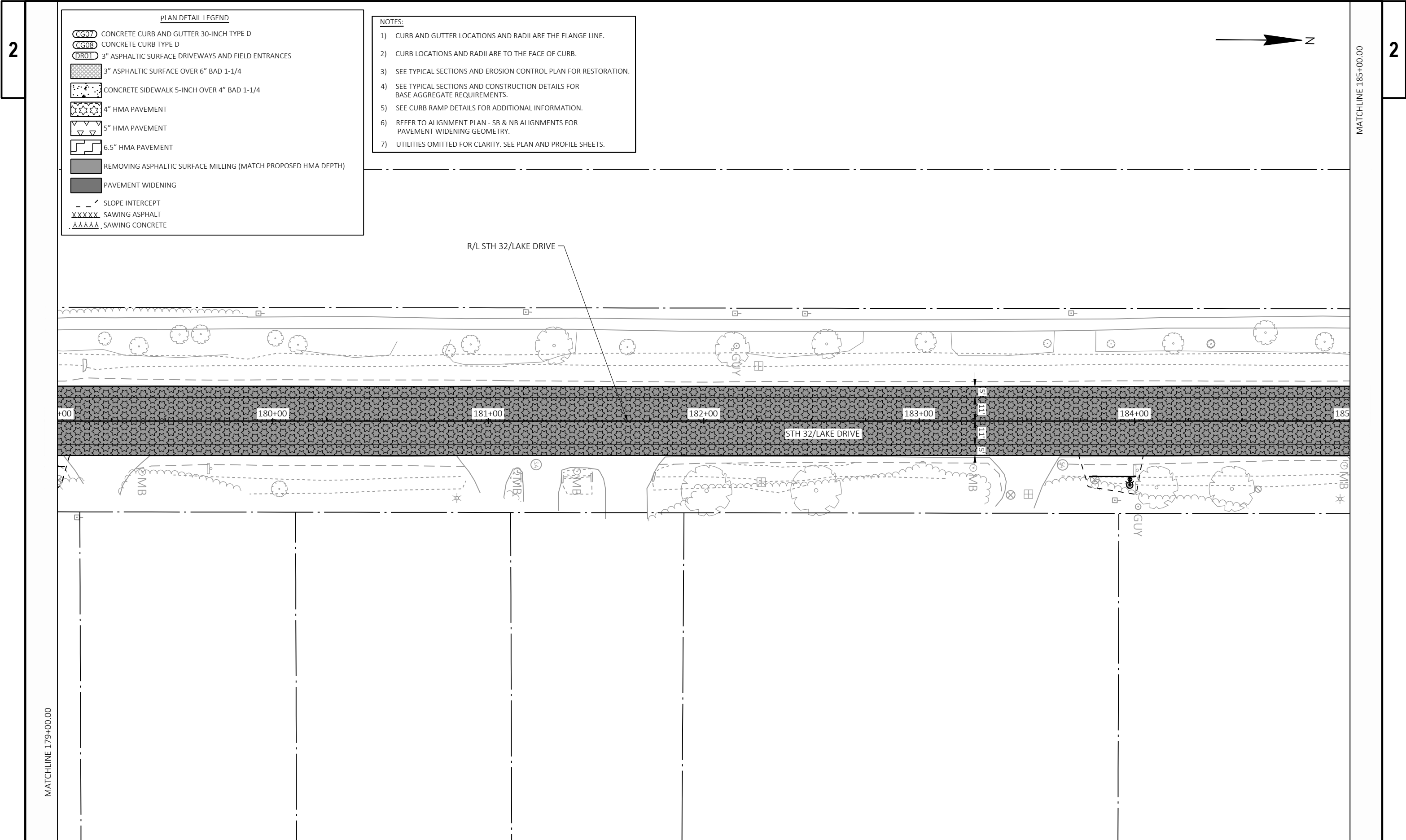
- NOTES:
- 1) CURB AND GUTTER LOCATIONS AND RADII ARE THE FLANGE LINE.
  - 2) CURB LOCATIONS AND RADII ARE TO THE FACE OF CURB.
  - 3) SEE TYPICAL SECTIONS AND EROSION CONTROL PLAN FOR RESTORATION.
  - 4) SEE TYPICAL SECTIONS AND CONSTRUCTION DETAILS FOR BASE AGGREGATE REQUIREMENTS.
  - 5) SEE CURB RAMP DETAILS FOR ADDITIONAL INFORMATION.
  - 6) REFER TO ALIGNMENT PLAN - SB & NB ALIGNMENTS FOR PAVEMENT WIDENING GEOMETRY.
  - 7) UTILITIES OMITTED FOR CLARITY. SEE PLAN AND PROFILE SHEETS.

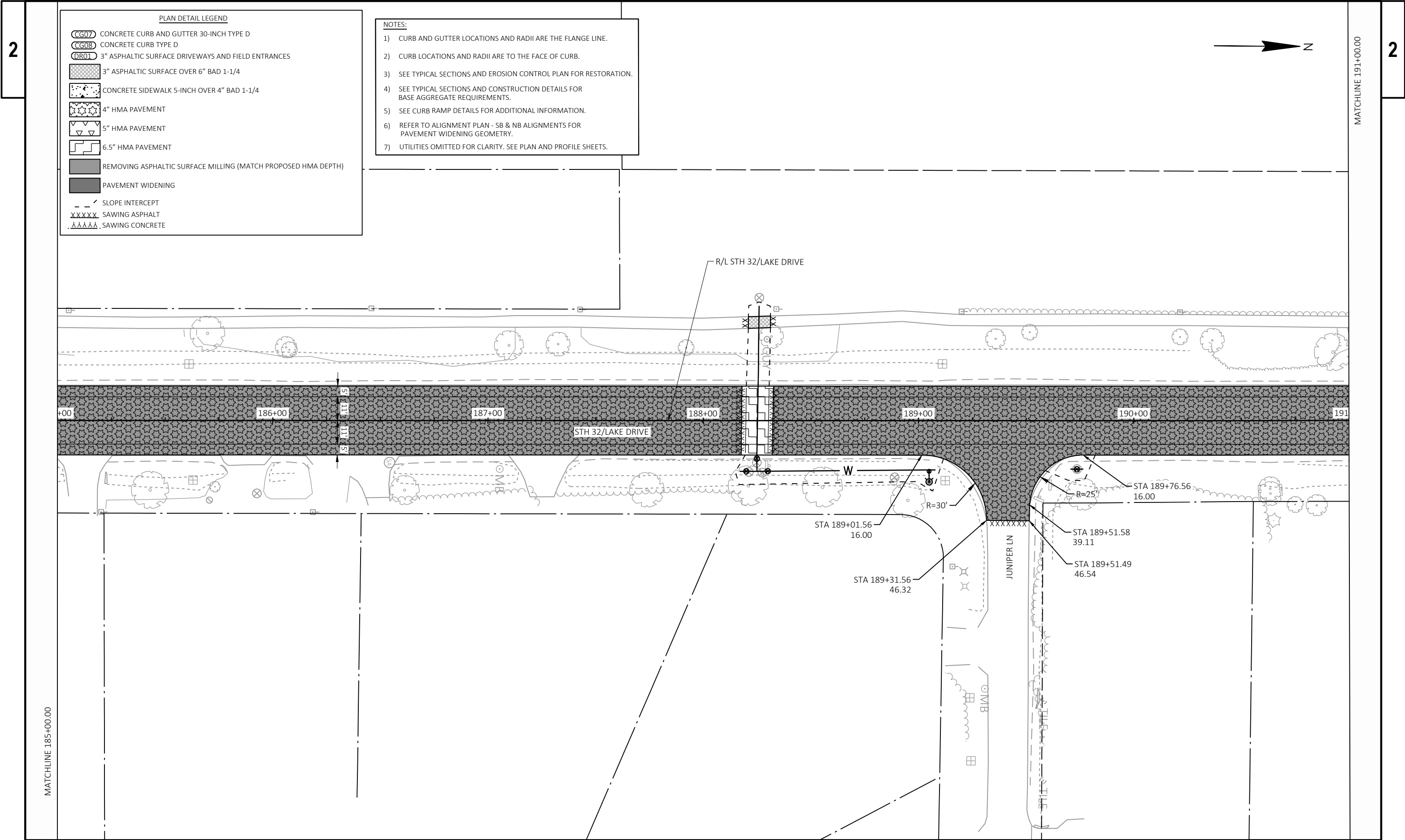
PLAN DETAIL LEGEND

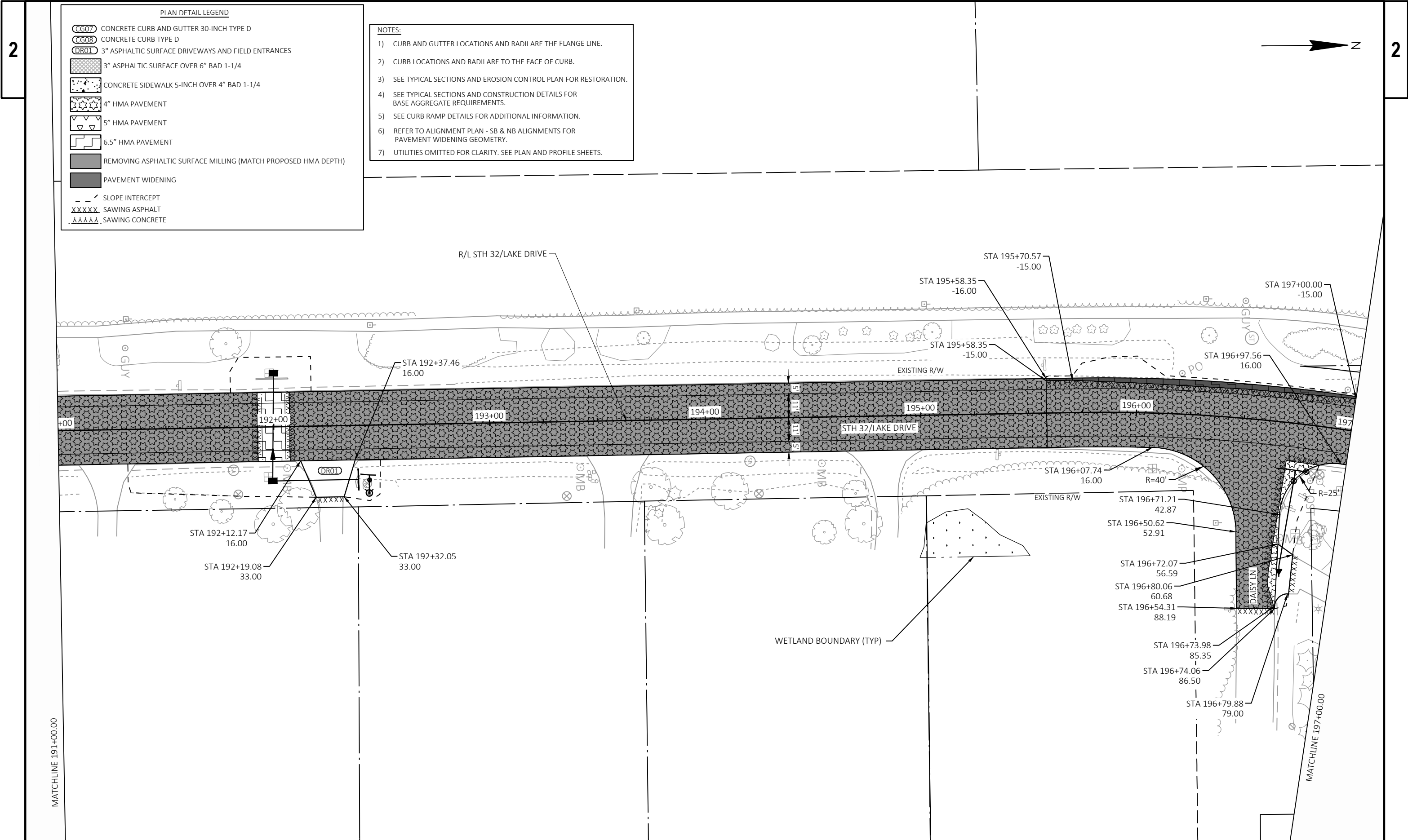
- CG07 CONCRETE CURB AND GUTTER 30-INCH TYPE D
- CG08 CONCRETE CURB TYPE D
- DR01 3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
- 3" ASPHALTIC SURFACE OVER 6" BAD 1-1/4
- CONCRETE SIDEWALK 5-INCH OVER 4" BAD 1-1/4
- 4" HMA PAVEMENT
- 5" HMA PAVEMENT
- 6.5" HMA PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING (MATCH PROPOSED HMA DEPTH)
- PAVEMENT WIDENING
- SLOPE INTERCEPT
- SAWING ASPHALT
- SAWING CONCRETE

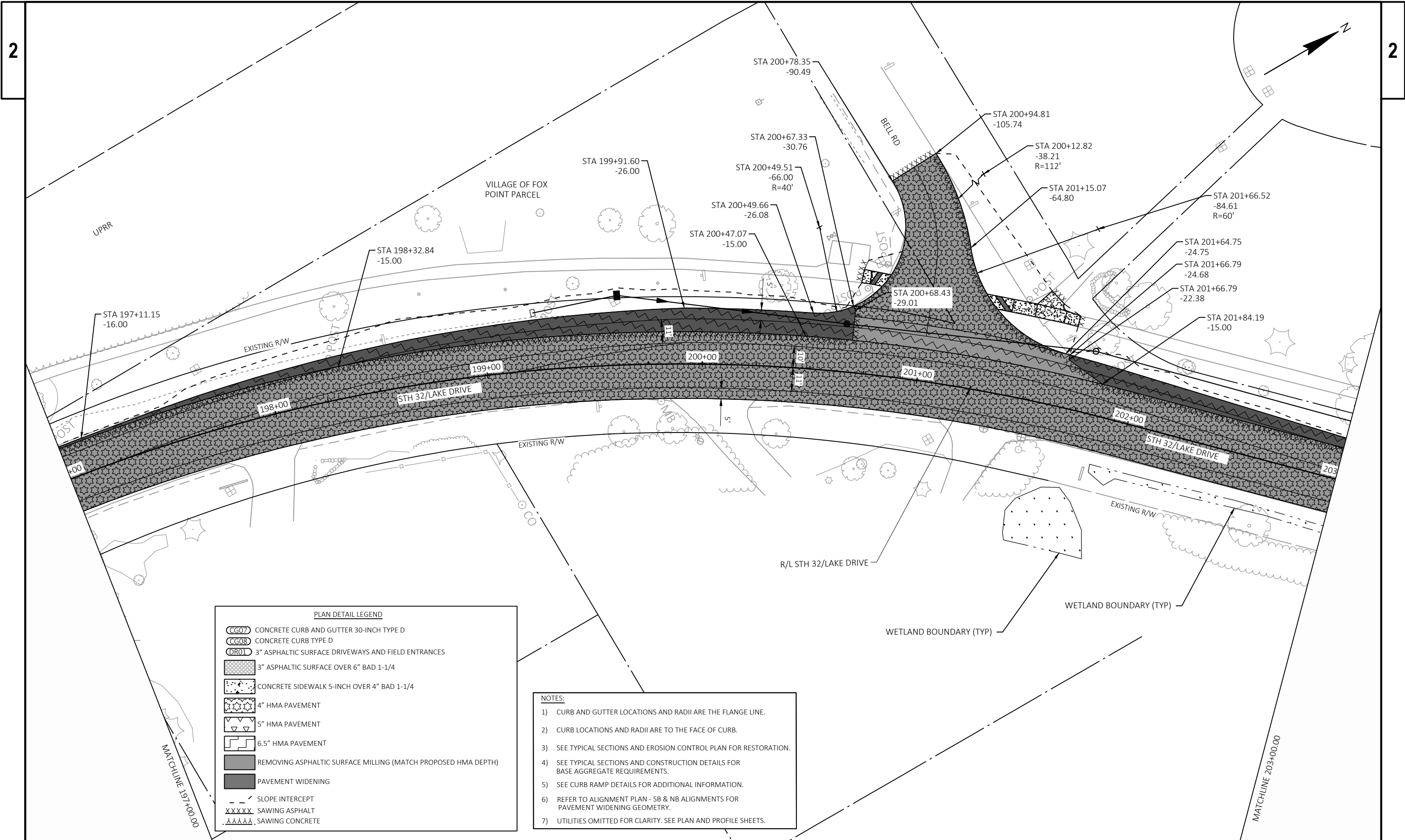


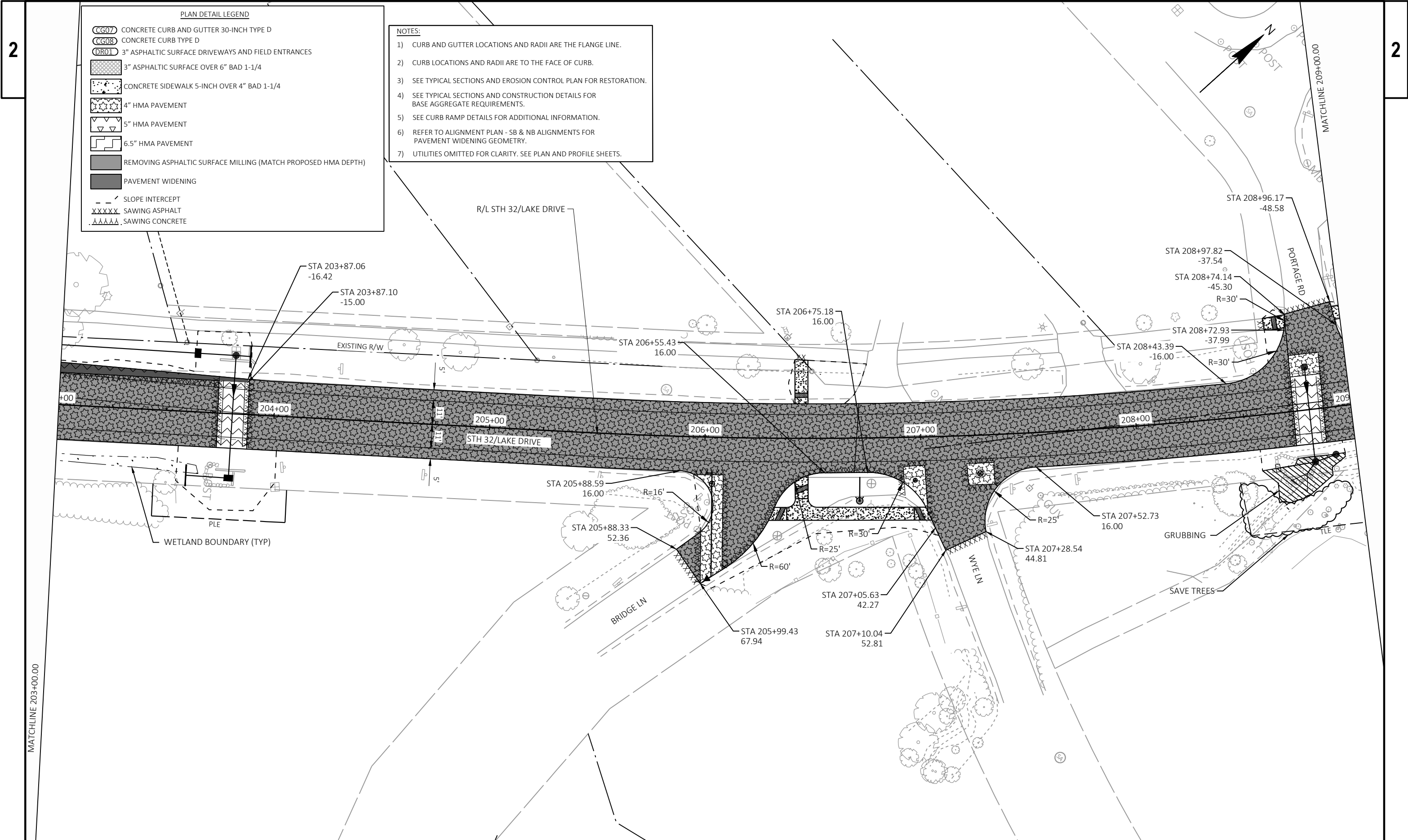






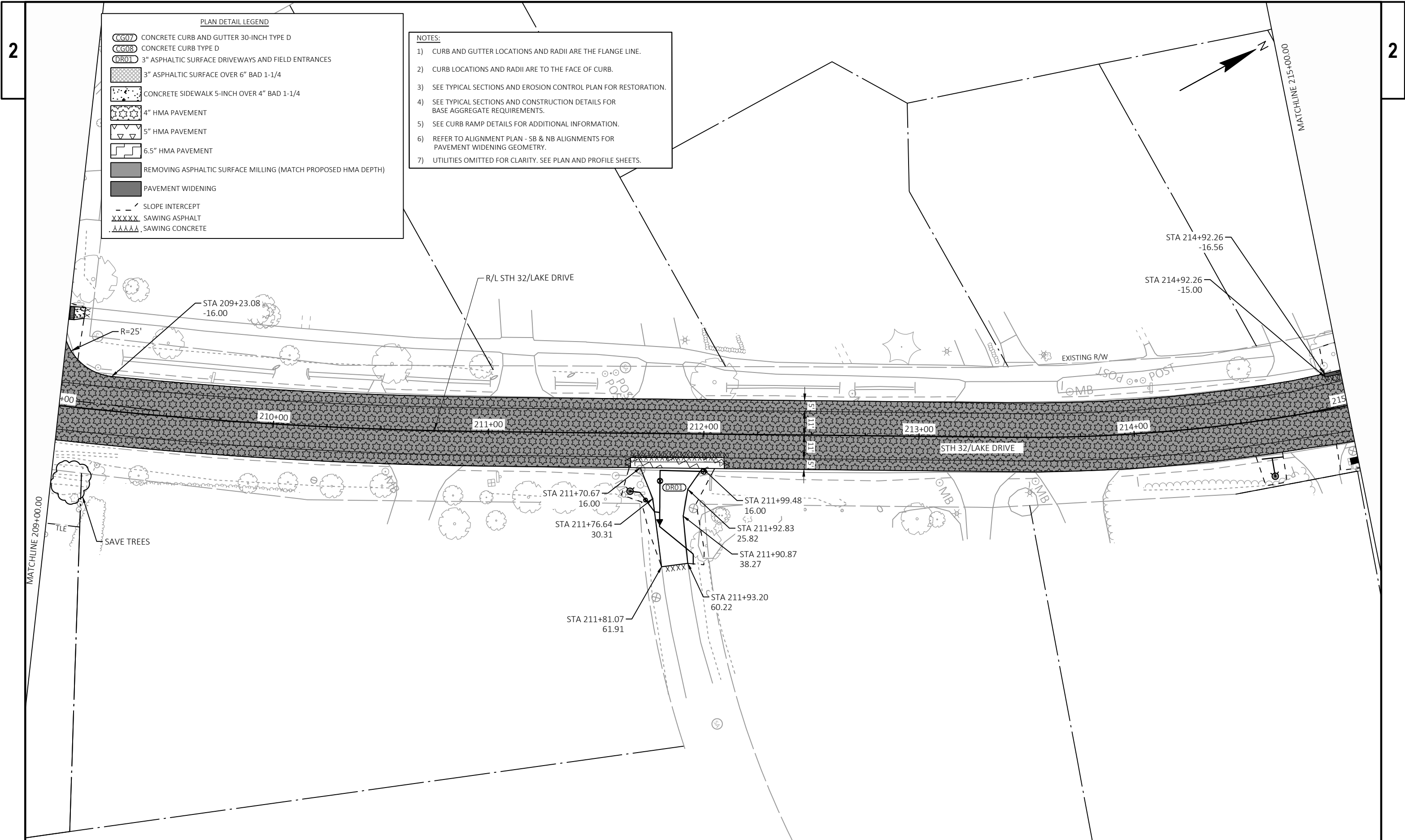




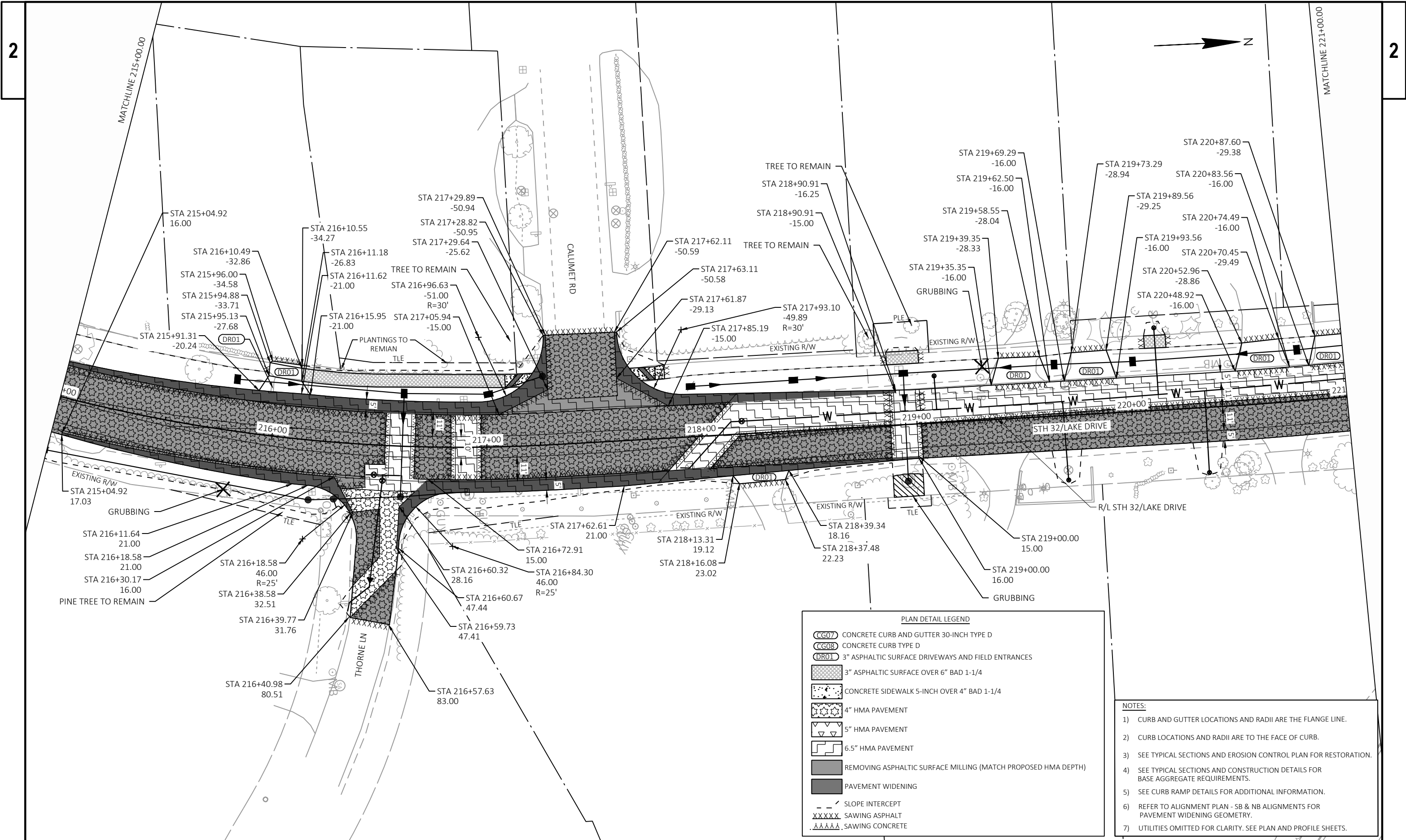


2

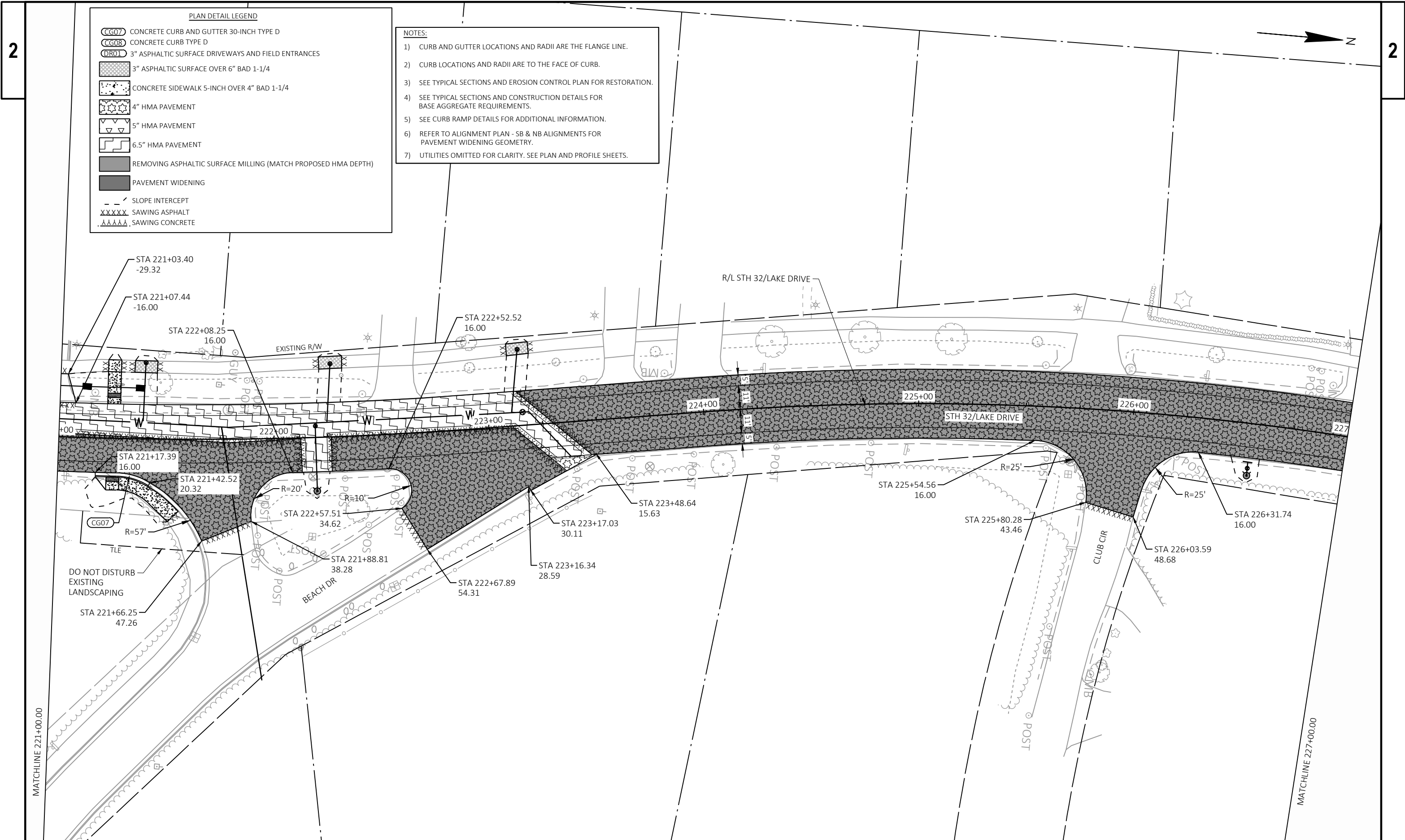
2

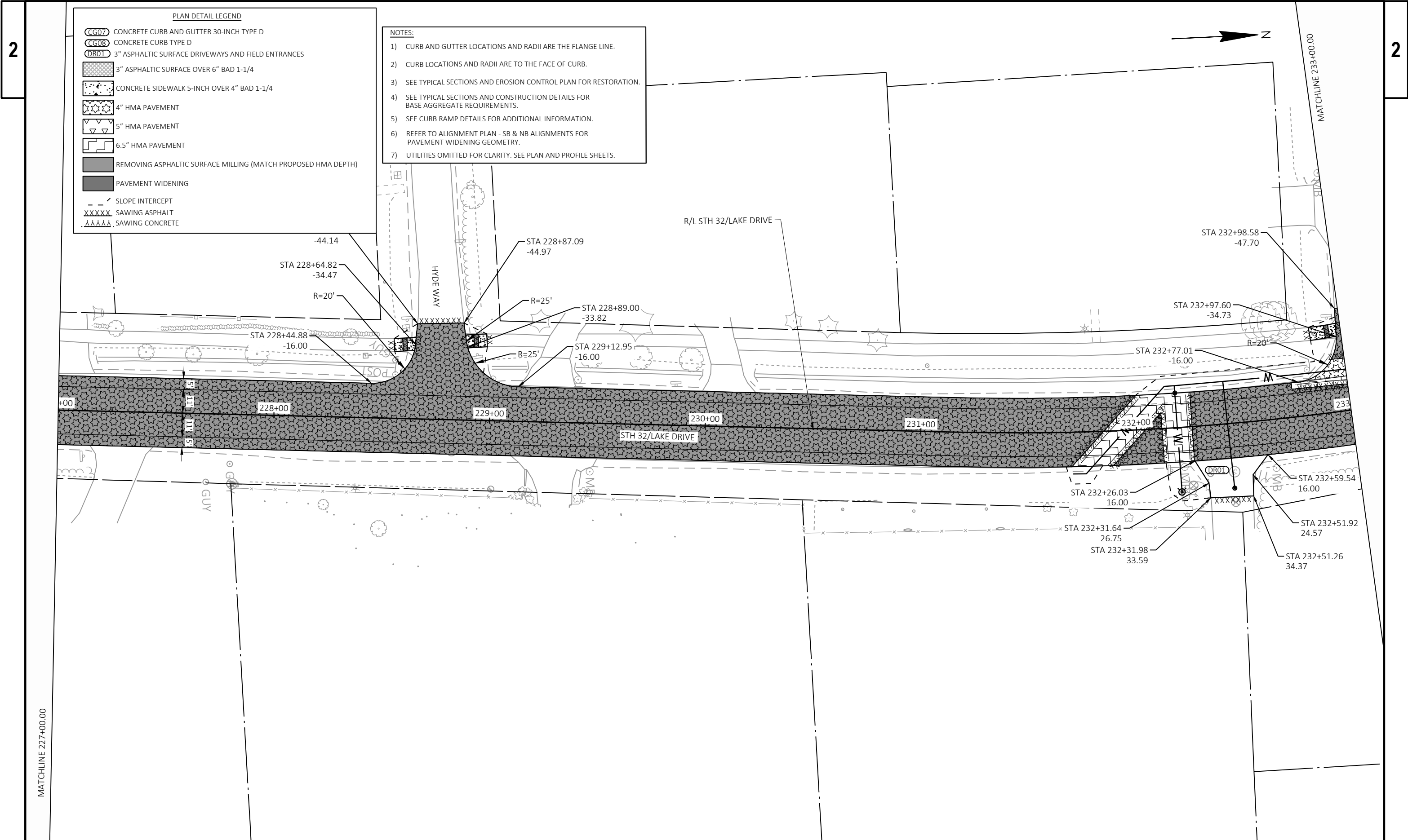






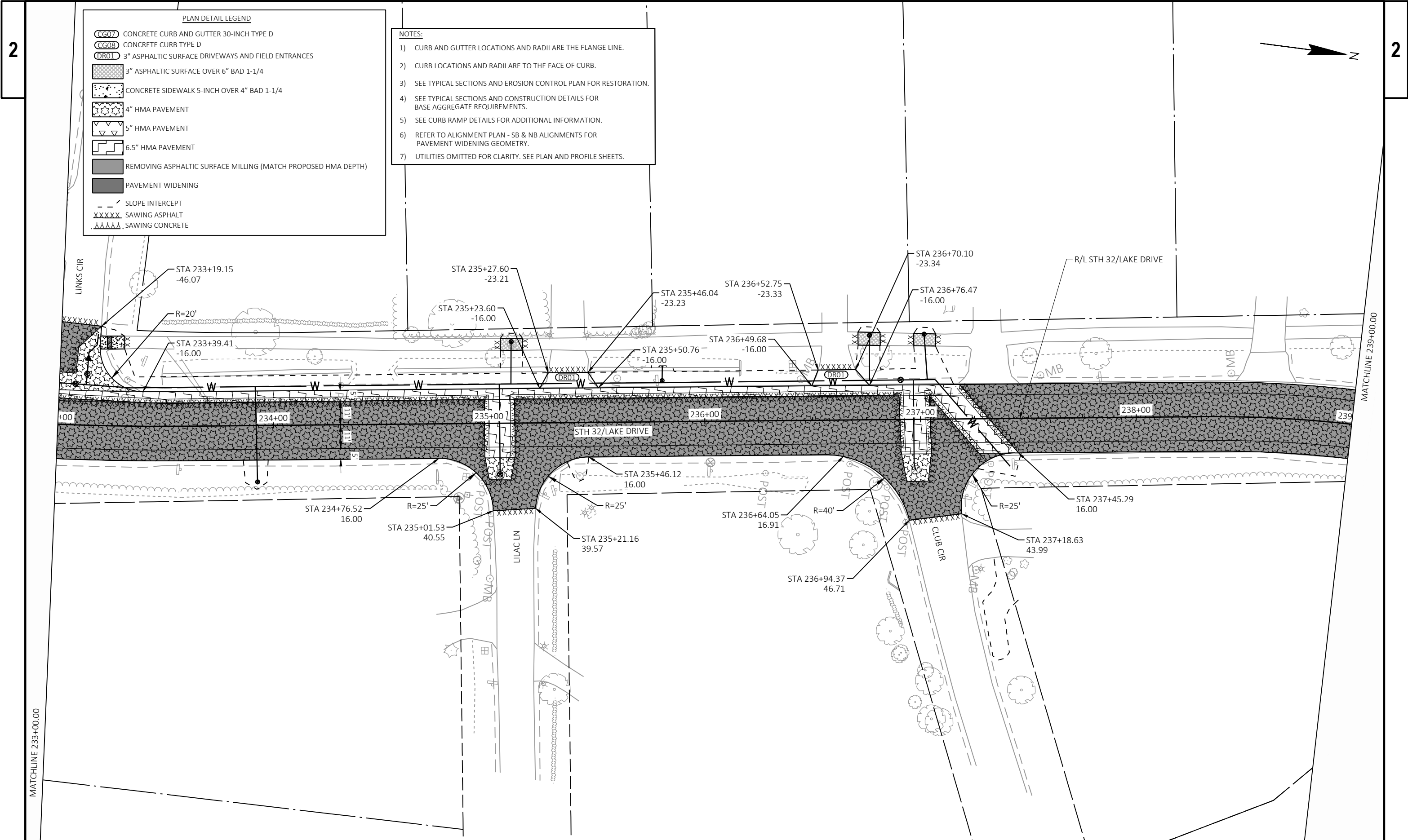






2

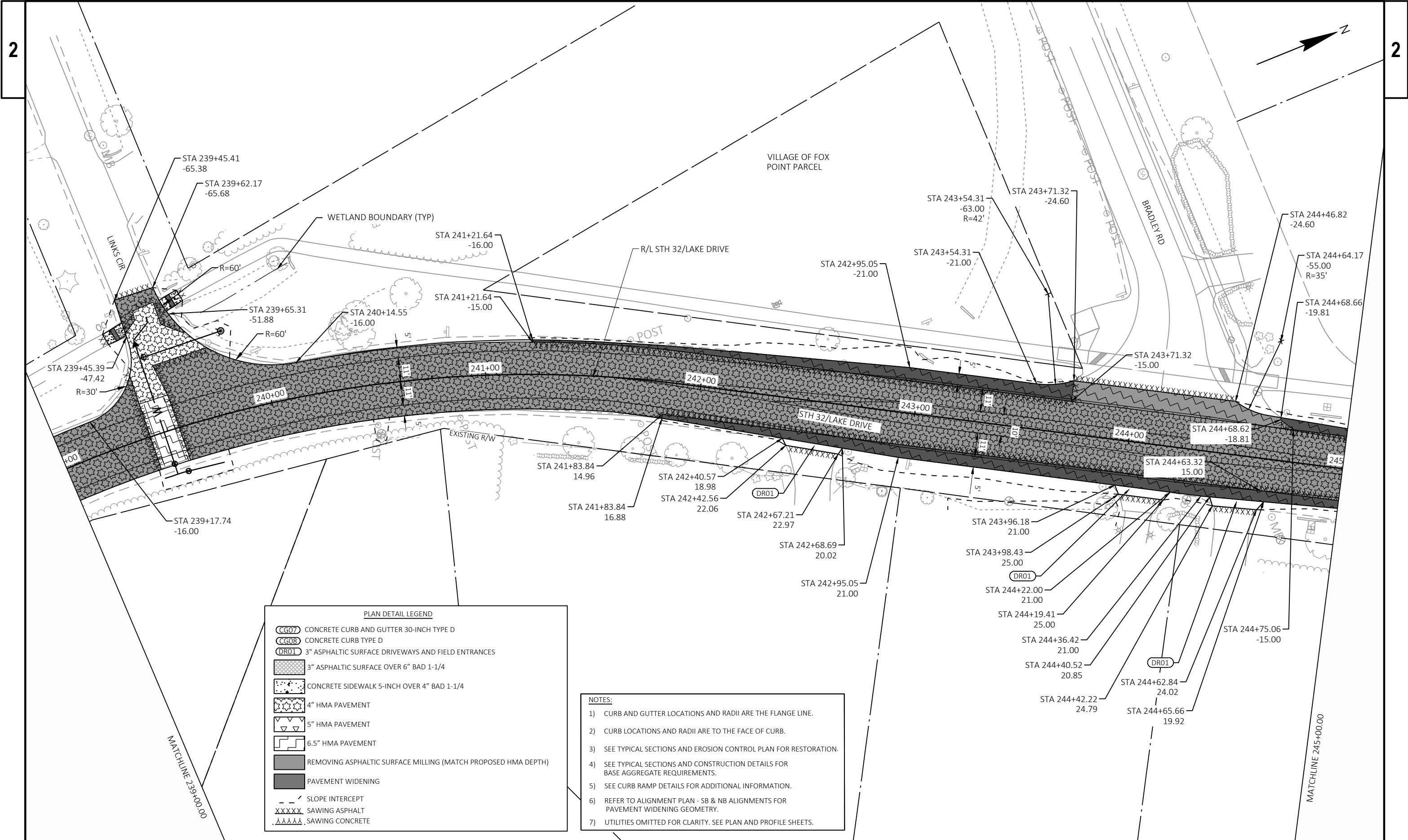
2



**PLAN DETAIL LEGEND**

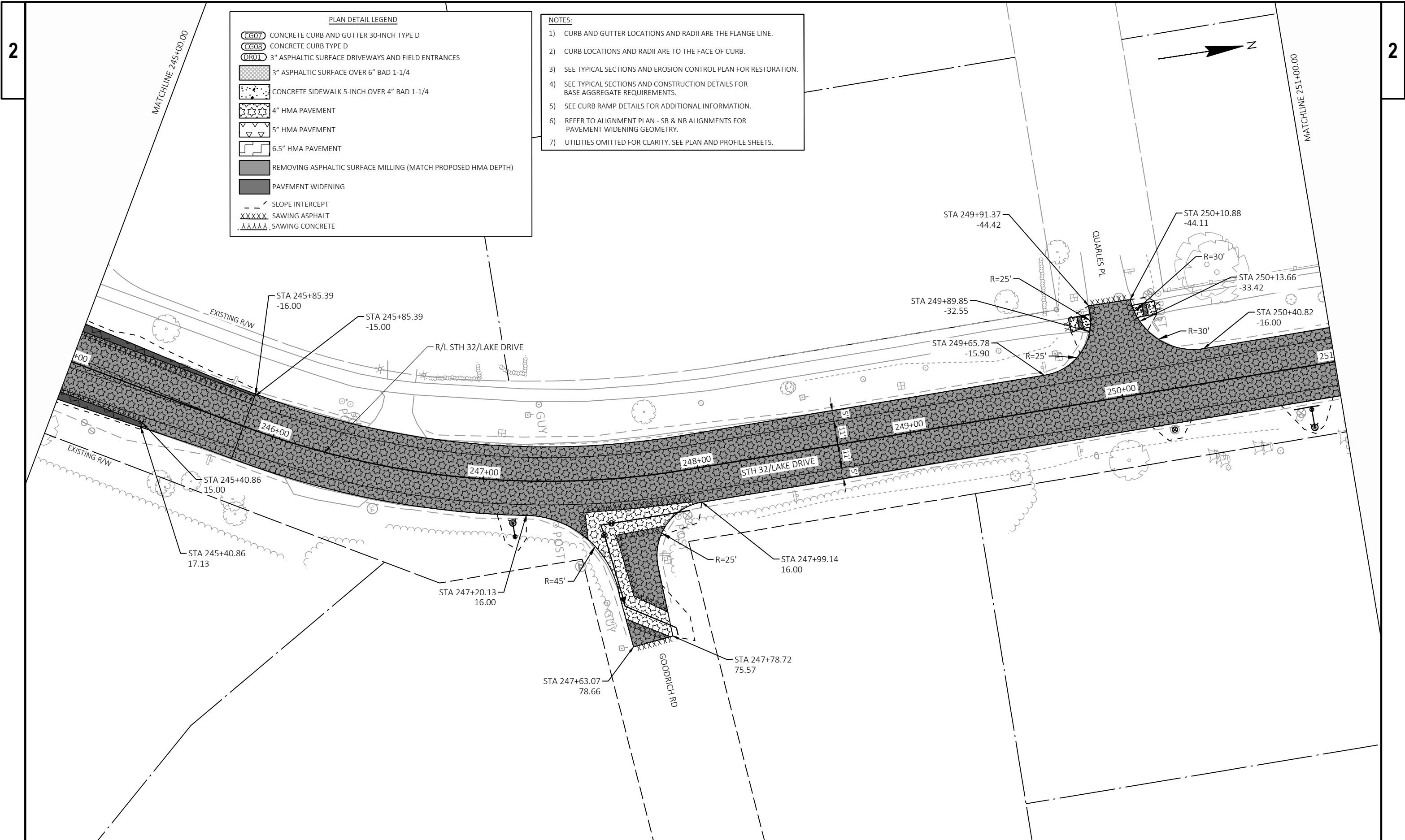
- CG07 CONCRETE CURB AND GUTTER 30-INCH TYPE D
- CG08 CONCRETE CURB TYPE D
- DR01 3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
- 3" ASPHALTIC SURFACE OVER 6" BAD 1-1/4
- CONCRETE SIDEWALK 5-INCH OVER 4" BAD 1-1/4
- 4" HMA PAVEMENT
- 5" HMA PAVEMENT
- 6.5" HMA PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING (MATCH PROPOSED HMA DEPTH)
- PAVEMENT WIDENING
- SLOPE INTERCEPT
- XXXXXX SAWING ASPHALT
- AAAAAA SAWING CONCRETE

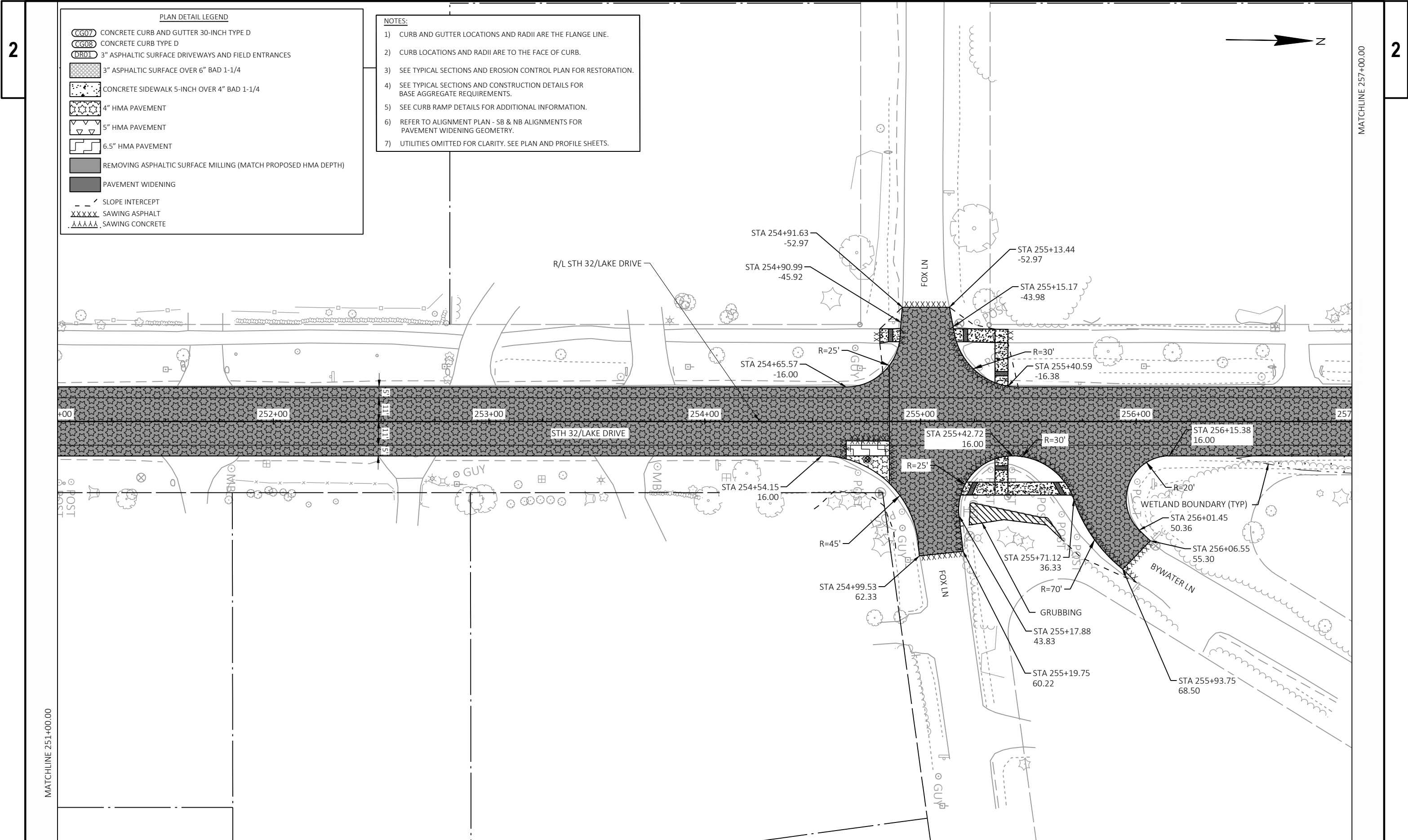
- NOTES:**
- 1) CURB AND GUTTER LOCATIONS AND RADII ARE THE FLANGE LINE.
  - 2) CURB LOCATIONS AND RADII ARE TO THE FACE OF CURB.
  - 3) SEE TYPICAL SECTIONS AND EROSION CONTROL PLAN FOR RESTORATION.
  - 4) SEE TYPICAL SECTIONS AND CONSTRUCTION DETAILS FOR BASE AGGREGATE REQUIREMENTS.
  - 5) SEE CURB RAMP DETAILS FOR ADDITIONAL INFORMATION.
  - 6) REFER TO ALIGNMENT PLAN - SB & NB ALIGNMENTS FOR PAVEMENT WIDENING GEOMETRY.
  - 7) UTILITIES OMITTED FOR CLARITY. SEE PLAN AND PROFILE SHEETS.



| PLAN DETAIL LEGEND |                                                               |
|--------------------|---------------------------------------------------------------|
|                    | CONCRETE CURB AND GUTTER 30-INCH TYPE D                       |
|                    | CONCRETE CURB TYPE D                                          |
|                    | 3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES            |
|                    | 3" ASPHALTIC SURFACE OVER 6" BAD 1-1/4                        |
|                    | CONCRETE SIDEWALK 5-INCH OVER 4" BAD 1-1/4                    |
|                    | 4" HMA PAVEMENT                                               |
|                    | 5" HMA PAVEMENT                                               |
|                    | 6.5" HMA PAVEMENT                                             |
|                    | REMOVING ASPHALTIC SURFACE MILLING (MATCH PROPOSED HMA DEPTH) |
|                    | PAVEMENT WIDENING                                             |
|                    | SLOPE INTERCEPT                                               |
|                    | SAWING ASPHALT                                                |
|                    | SAWING CONCRETE                                               |

- NOTES:
- 1) CURB AND GUTTER LOCATIONS AND RADII ARE THE FLANGE LINE.
  - 2) CURB LOCATIONS AND RADII ARE TO THE FACE OF CURB.
  - 3) SEE TYPICAL SECTIONS AND EROSION CONTROL PLAN FOR RESTORATION.
  - 4) SEE TYPICAL SECTIONS AND CONSTRUCTION DETAILS FOR BASE AGGREGATE REQUIREMENTS.
  - 5) SEE CURB RAMP DETAILS FOR ADDITIONAL INFORMATION.
  - 6) REFER TO ALIGNMENT PLAN - SB & NB ALIGNMENTS FOR PAVEMENT WIDENING GEOMETRY.
  - 7) UTILITIES OMITTED FOR CLARITY. SEE PLAN AND PROFILE SHEETS.

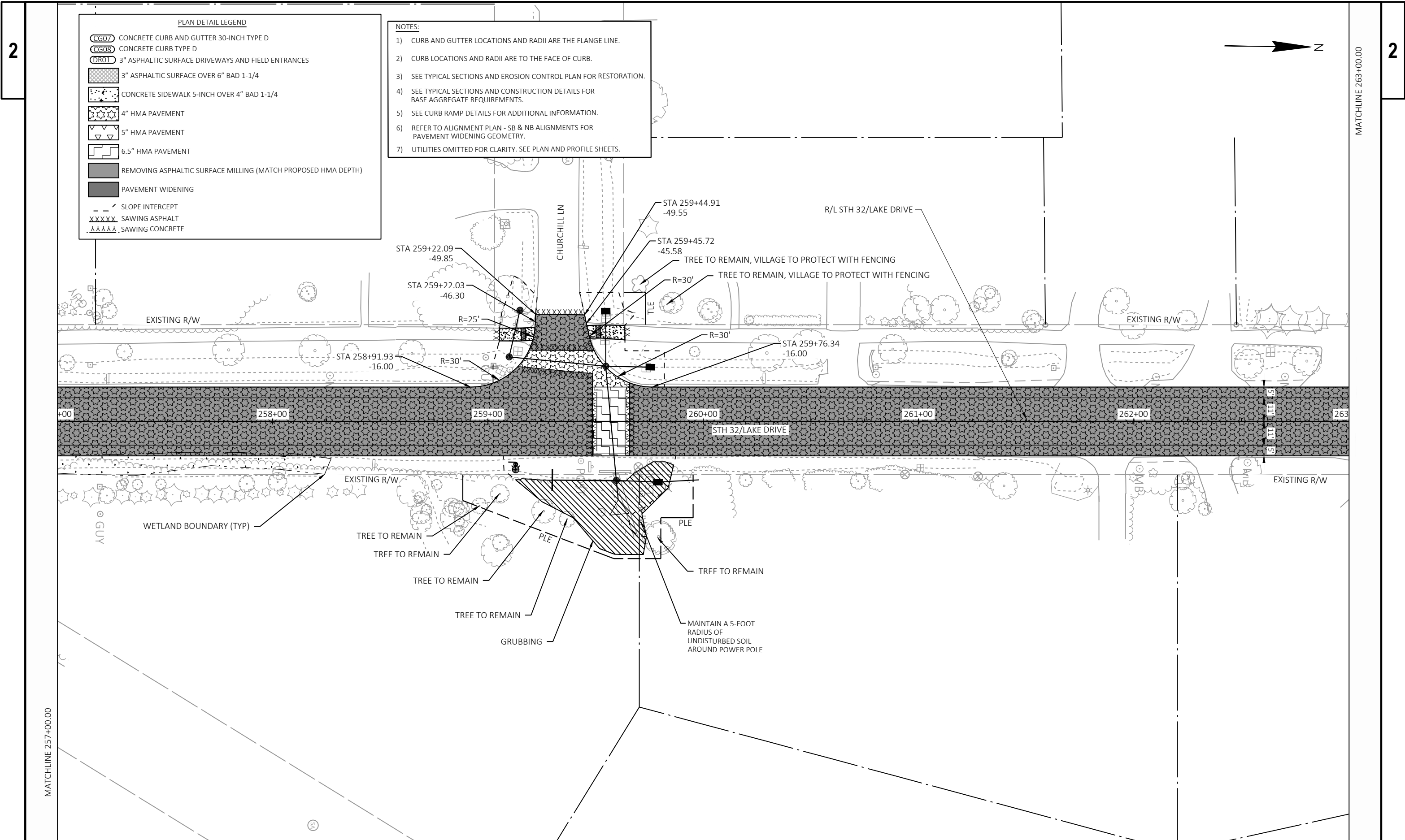




| PLAN DETAIL LEGEND |                                                               |
|--------------------|---------------------------------------------------------------|
|                    | CONCRETE CURB AND GUTTER 30-INCH TYPE D                       |
|                    | CONCRETE CURB TYPE D                                          |
|                    | 3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES            |
|                    | 3" ASPHALTIC SURFACE OVER 6" BAD 1-1/4                        |
|                    | CONCRETE SIDEWALK 5-INCH OVER 4" BAD 1-1/4                    |
|                    | 4" HMA PAVEMENT                                               |
|                    | 5" HMA PAVEMENT                                               |
|                    | 6.5" HMA PAVEMENT                                             |
|                    | REMOVING ASPHALTIC SURFACE MILLING (MATCH PROPOSED HMA DEPTH) |
|                    | PAVEMENT WIDENING                                             |
|                    | SLOPE INTERCEPT                                               |
|                    | SAWING ASPHALT                                                |
|                    | SAWING CONCRETE                                               |

- NOTES:
- 1) CURB AND GUTTER LOCATIONS AND RADII ARE THE FLANGE LINE.
  - 2) CURB LOCATIONS AND RADII ARE TO THE FACE OF CURB.
  - 3) SEE TYPICAL SECTIONS AND EROSION CONTROL PLAN FOR RESTORATION.
  - 4) SEE TYPICAL SECTIONS AND CONSTRUCTION DETAILS FOR BASE AGGREGATE REQUIREMENTS.
  - 5) SEE CURB RAMP DETAILS FOR ADDITIONAL INFORMATION.
  - 6) REFER TO ALIGNMENT PLAN - SB & NB ALIGNMENTS FOR PAVEMENT WIDENING GEOMETRY.
  - 7) UTILITIES OMITTED FOR CLARITY. SEE PLAN AND PROFILE SHEETS.



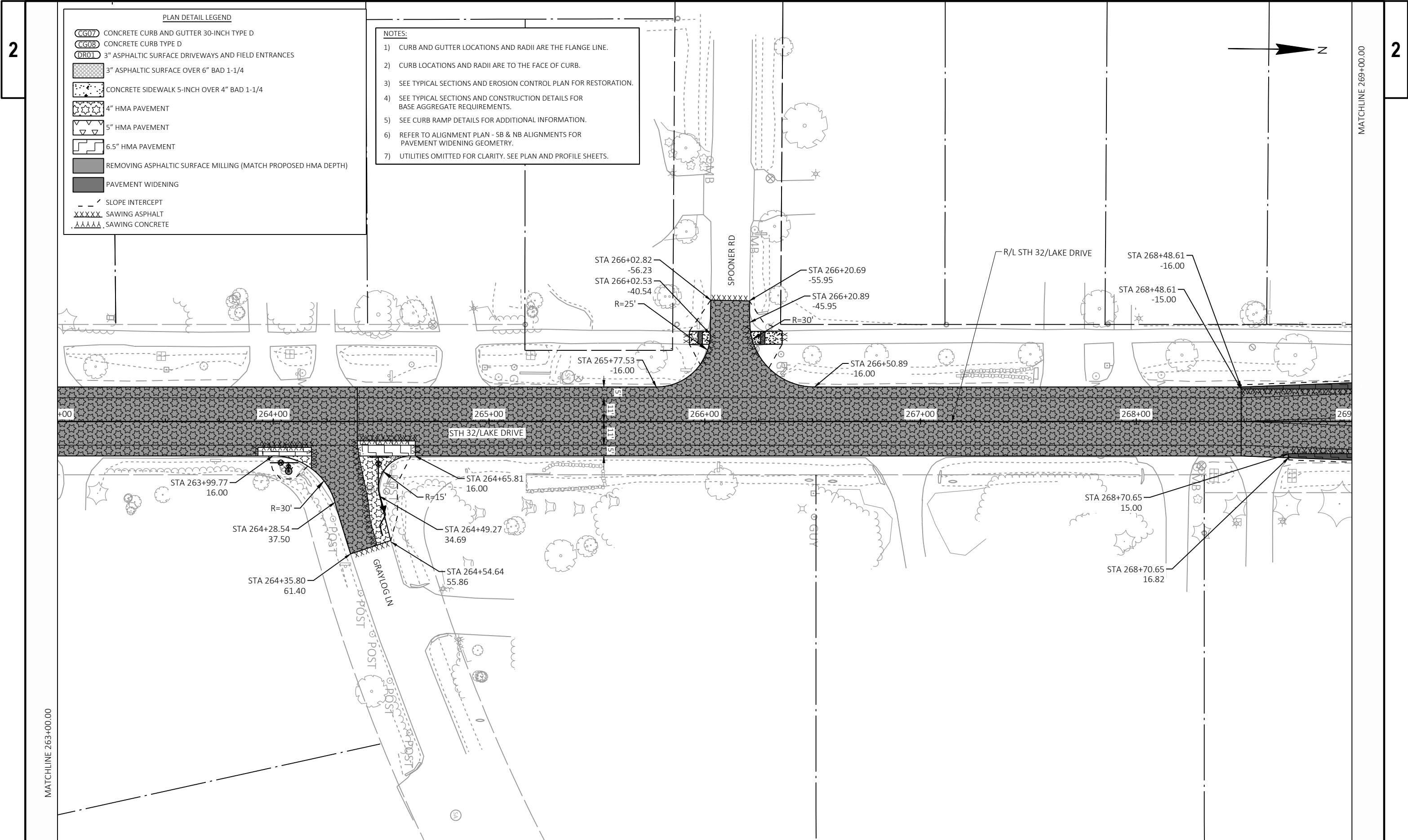


**PLAN DETAIL LEGEND**

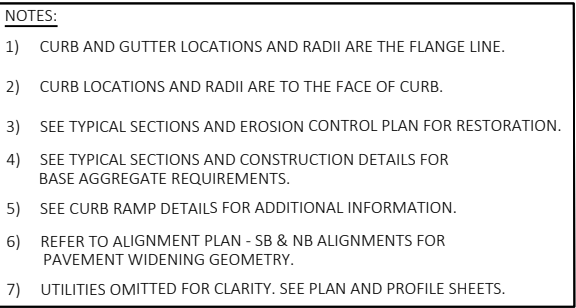
- CG07 CONCRETE CURB AND GUTTER 30-INCH TYPE D
- CG08 CONCRETE CURB TYPE D
- DR01 3" ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES
- 3" ASPHALTIC SURFACE OVER 6" BAD 1-1/4
- CONCRETE SIDEWALK 5-INCH OVER 4" BAD 1-1/4
- 4" HMA PAVEMENT
- 5" HMA PAVEMENT
- 6.5" HMA PAVEMENT
- REMOVING ASPHALTIC SURFACE MILLING (MATCH PROPOSED HMA DEPTH)
- PAVEMENT WIDENING
- SLOPE INTERCEPT
- SAWING ASPHALT
- SAWING CONCRETE

- NOTES:**
- 1) CURB AND GUTTER LOCATIONS AND RADII ARE THE FLANGE LINE.
  - 2) CURB LOCATIONS AND RADII ARE TO THE FACE OF CURB.
  - 3) SEE TYPICAL SECTIONS AND EROSION CONTROL PLAN FOR RESTORATION.
  - 4) SEE TYPICAL SECTIONS AND CONSTRUCTION DETAILS FOR BASE AGGREGATE REQUIREMENTS.
  - 5) SEE CURB RAMP DETAILS FOR ADDITIONAL INFORMATION.
  - 6) REFER TO ALIGNMENT PLAN - SB & NB ALIGNMENTS FOR PAVEMENT WIDENING GEOMETRY.
  - 7) UTILITIES OMITTED FOR CLARITY. SEE PLAN AND PROFILE SHEETS.





# 2

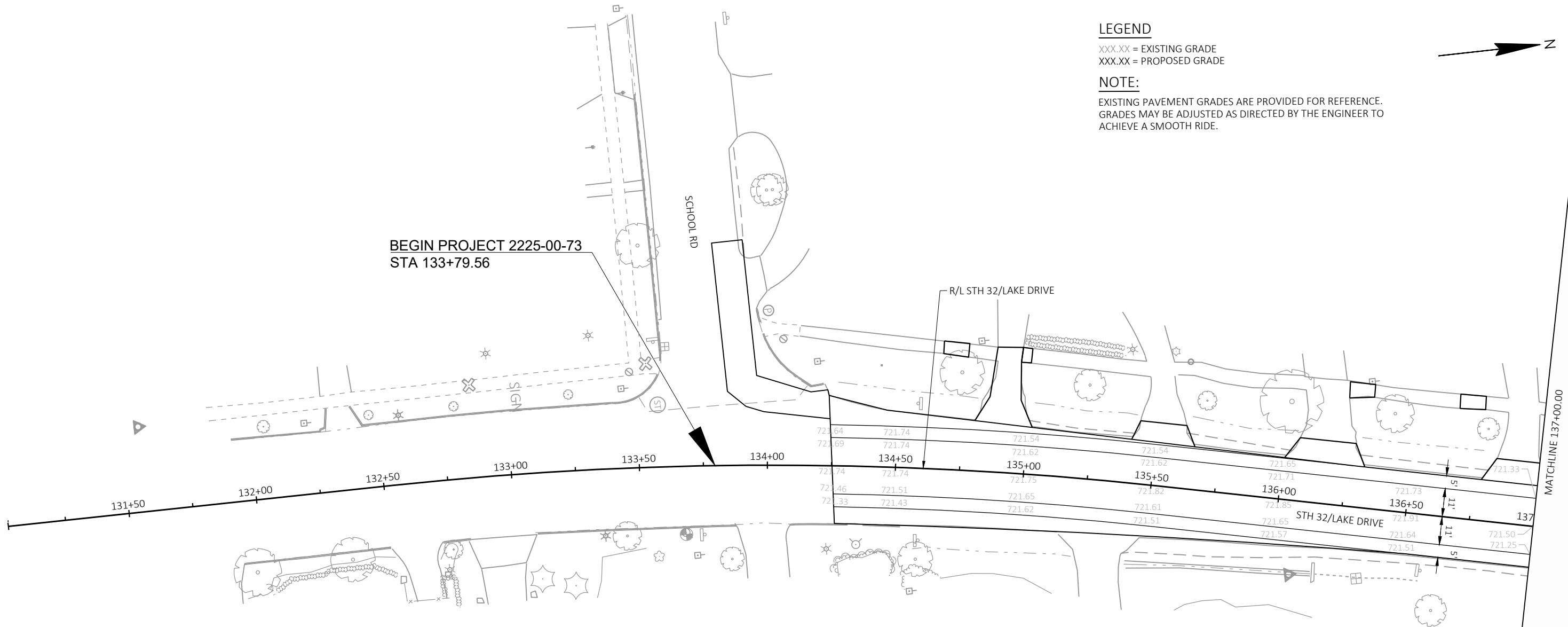


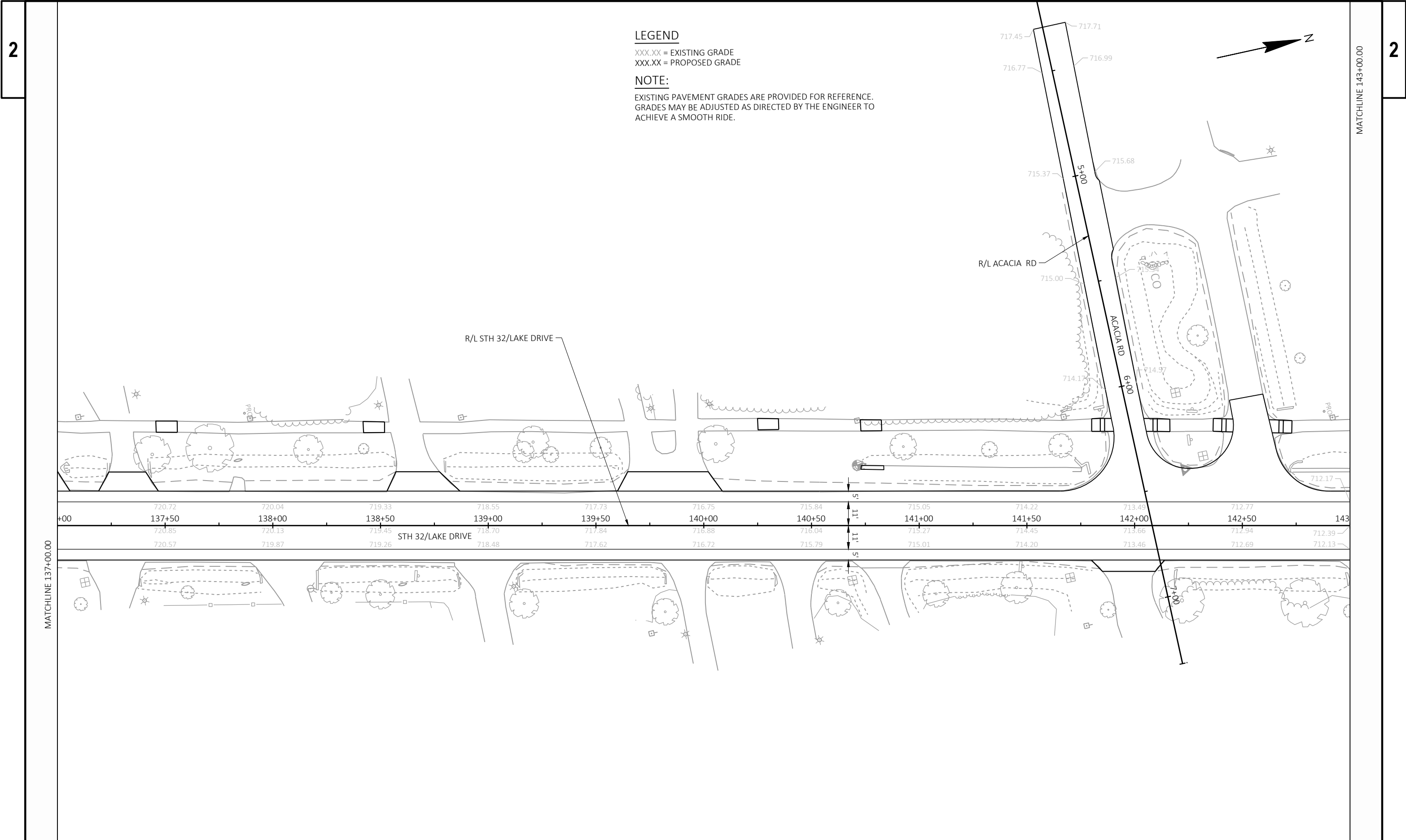
LEGEND

XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.





LEGEND

XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.

MATCHLINE 137+00.00

MATCHLINE 143+00.00

PROJECT NO: 2225-00-73

HWY: STH 32

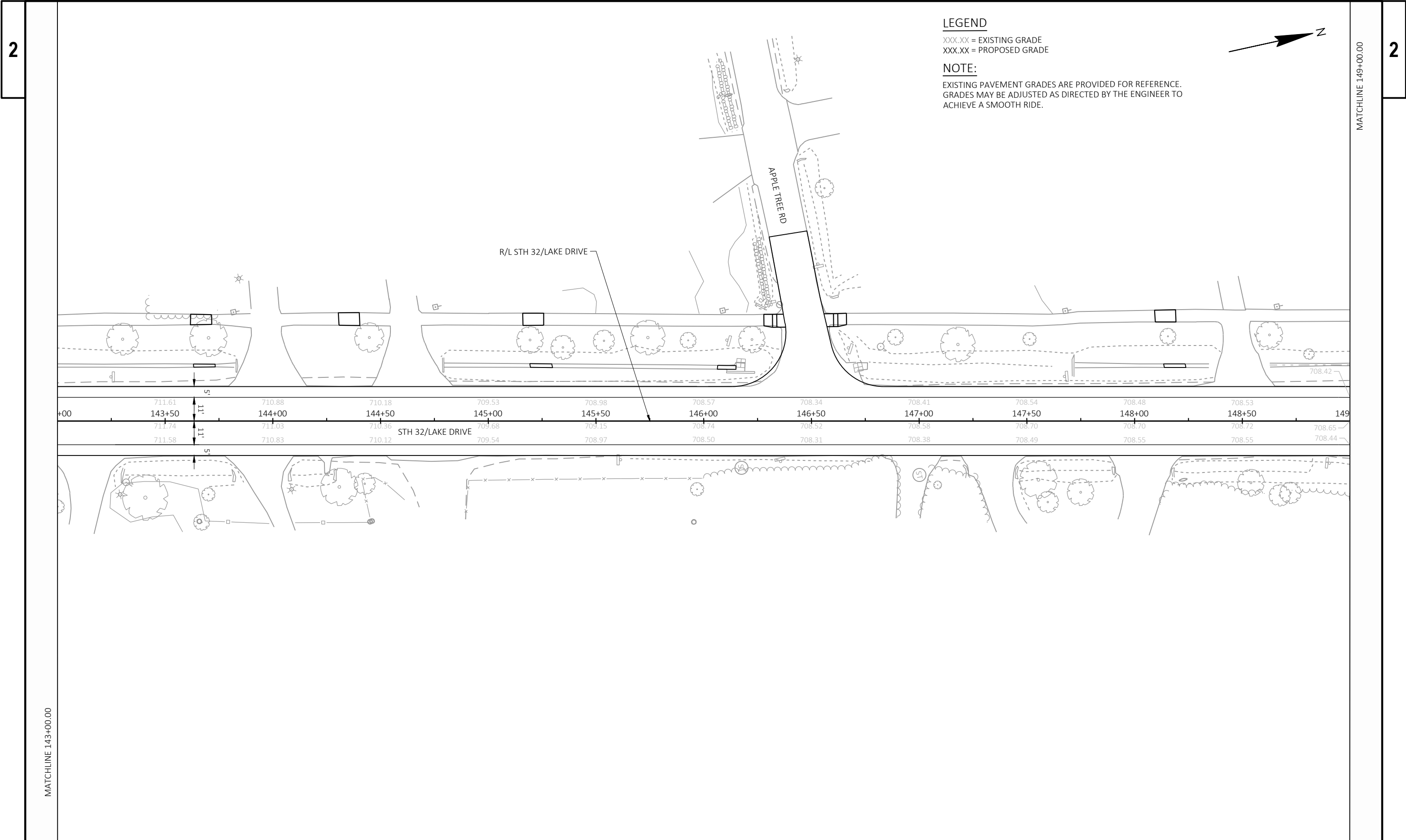
COUNTY: MILWAUKEE

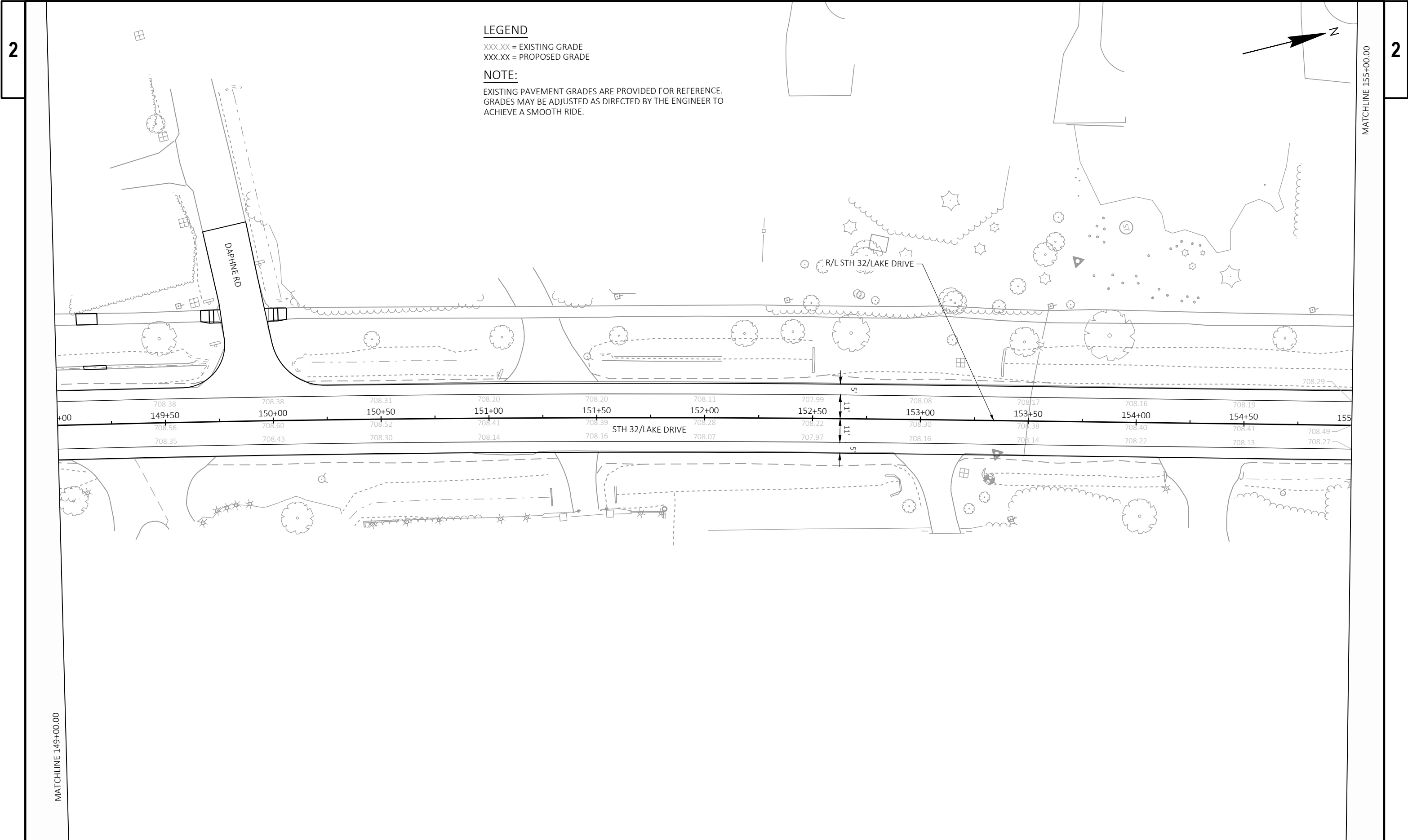
PAVING GRADES

SHEET

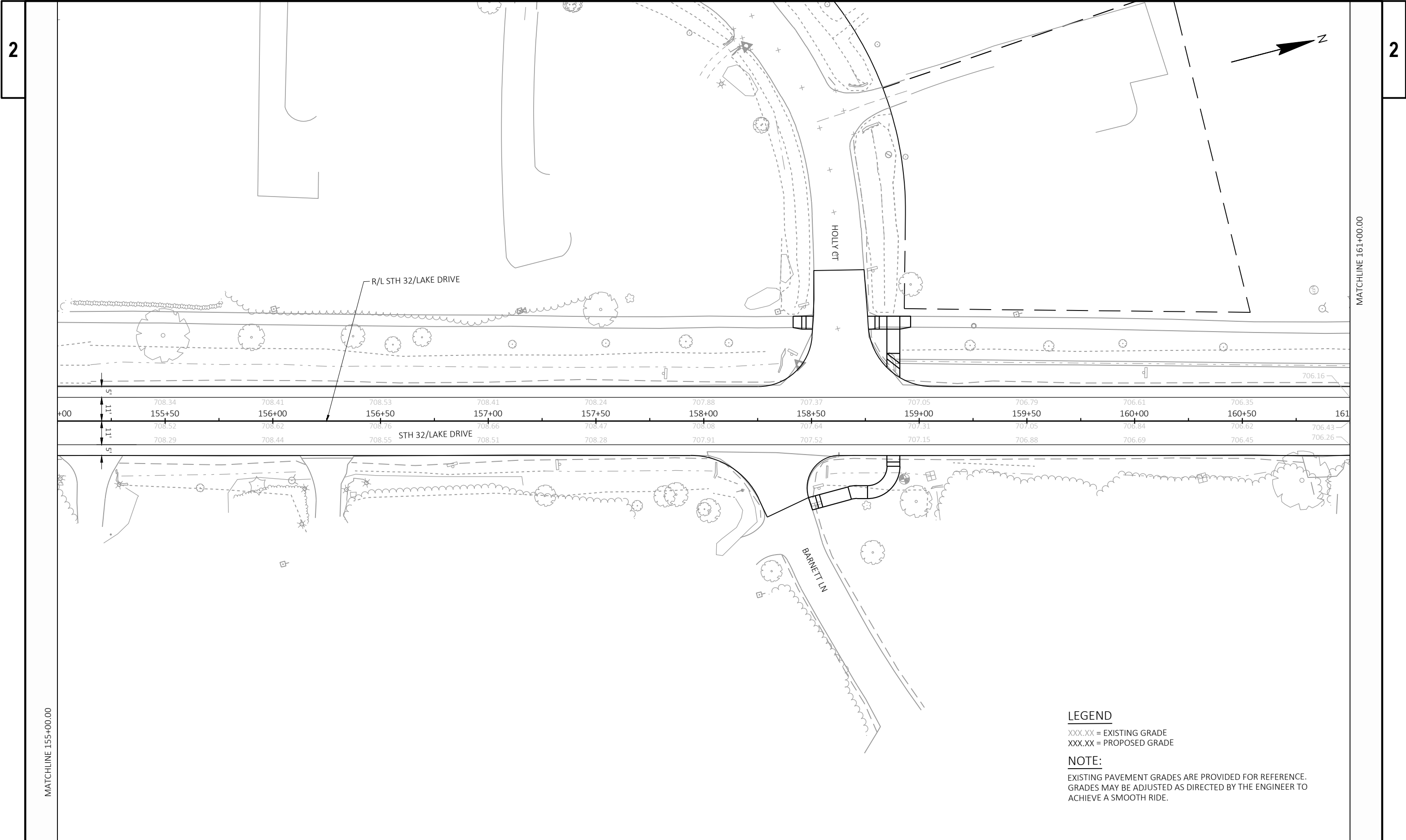
50

E









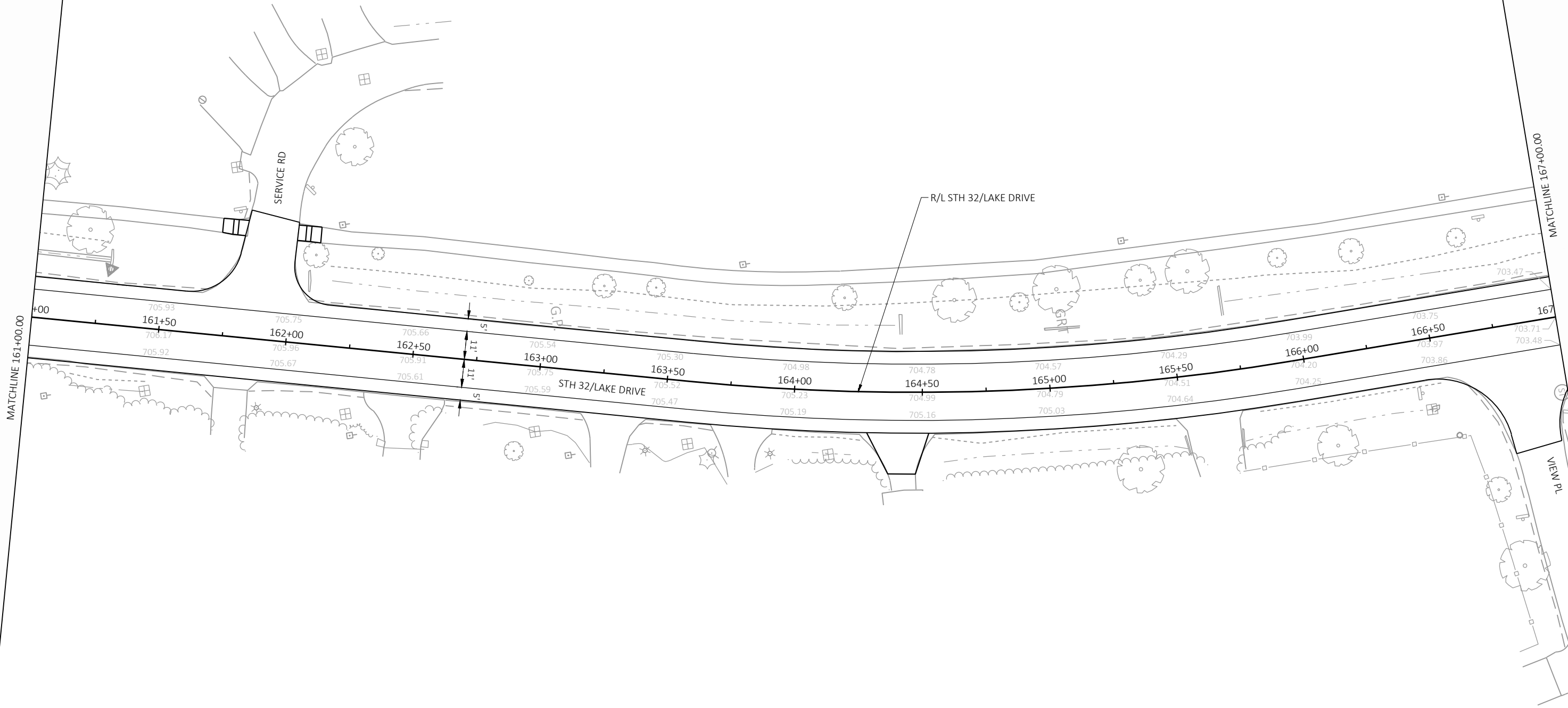


LEGEND

XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.

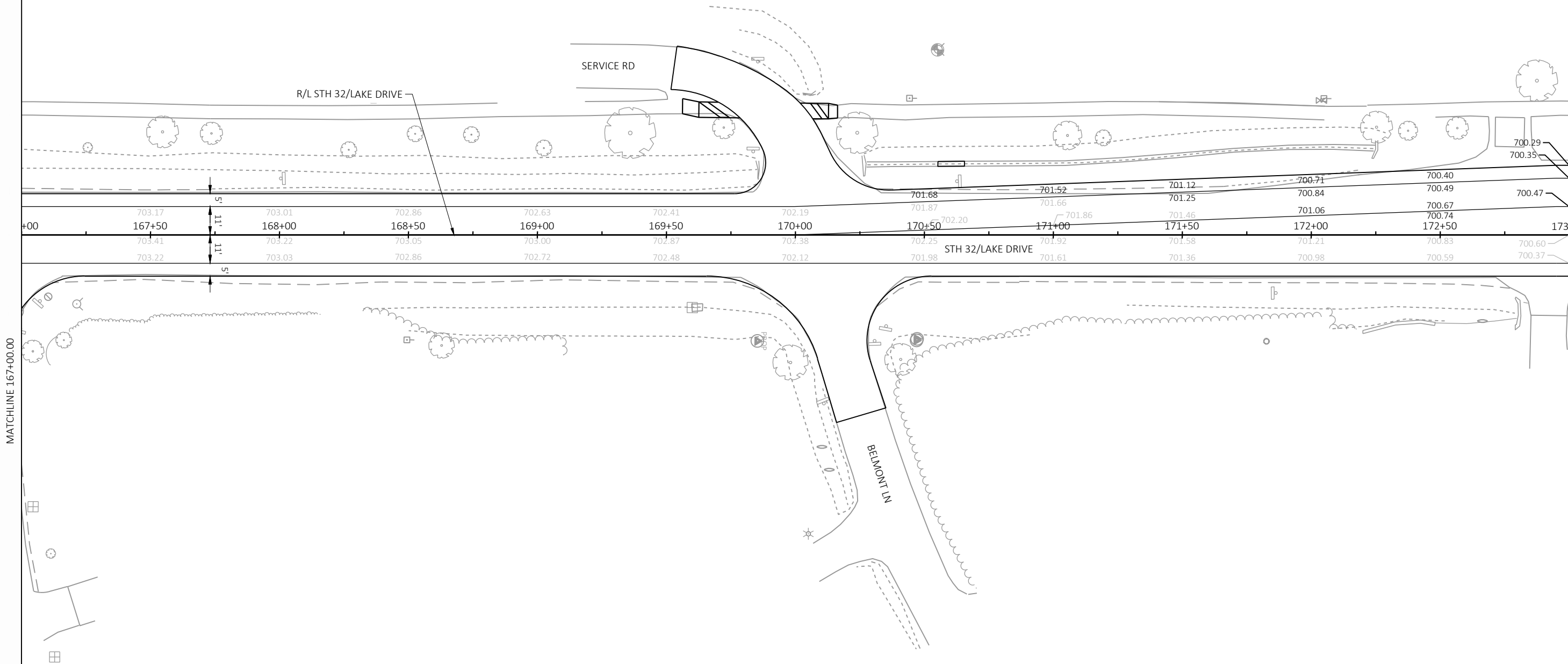


LEGEND

XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.

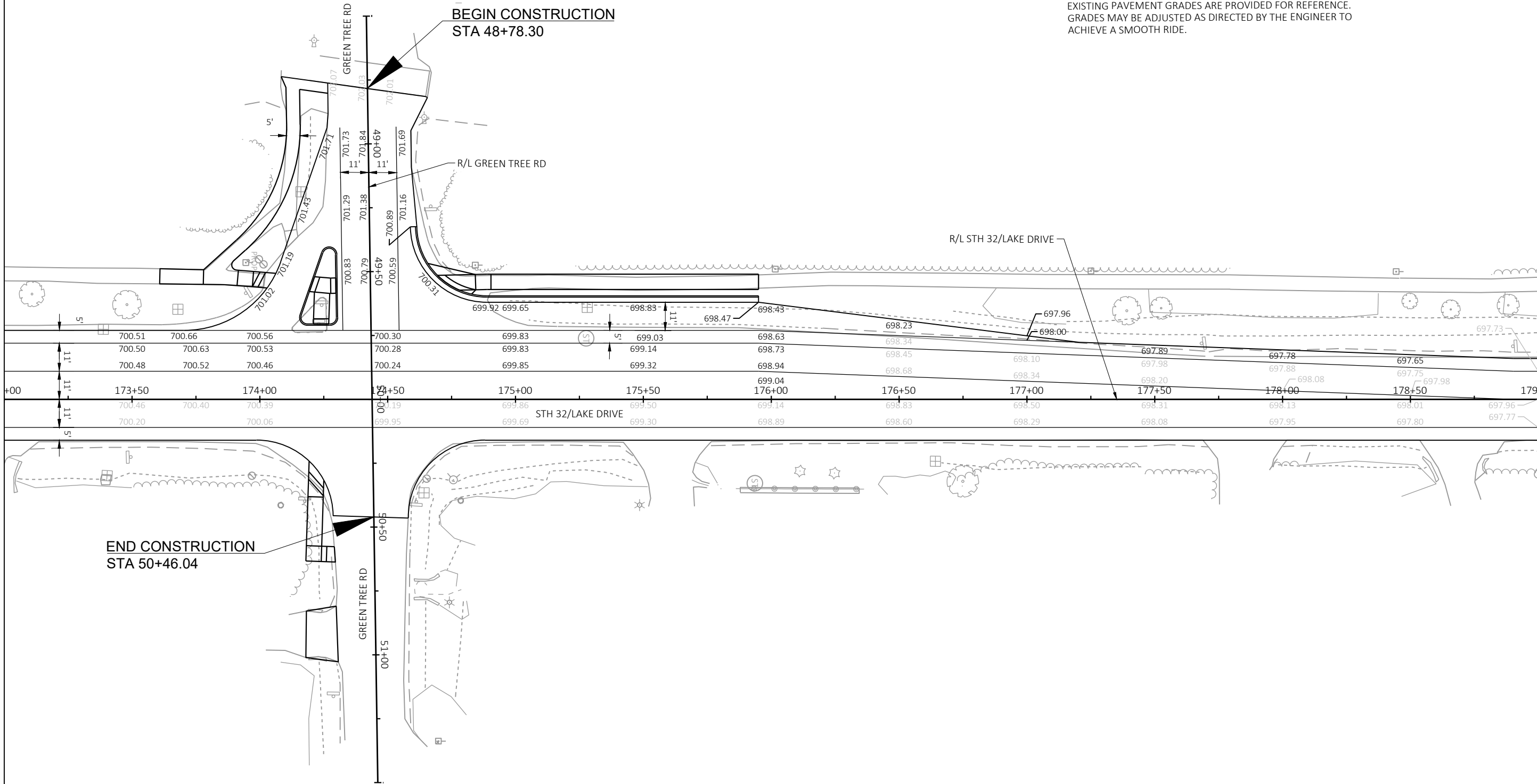


LEGEND

XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.



MATCHLINE 173+00.00

MATCHLINE 179+00.00

PROJECT NO: 2225-00-73

HWY: STH 32

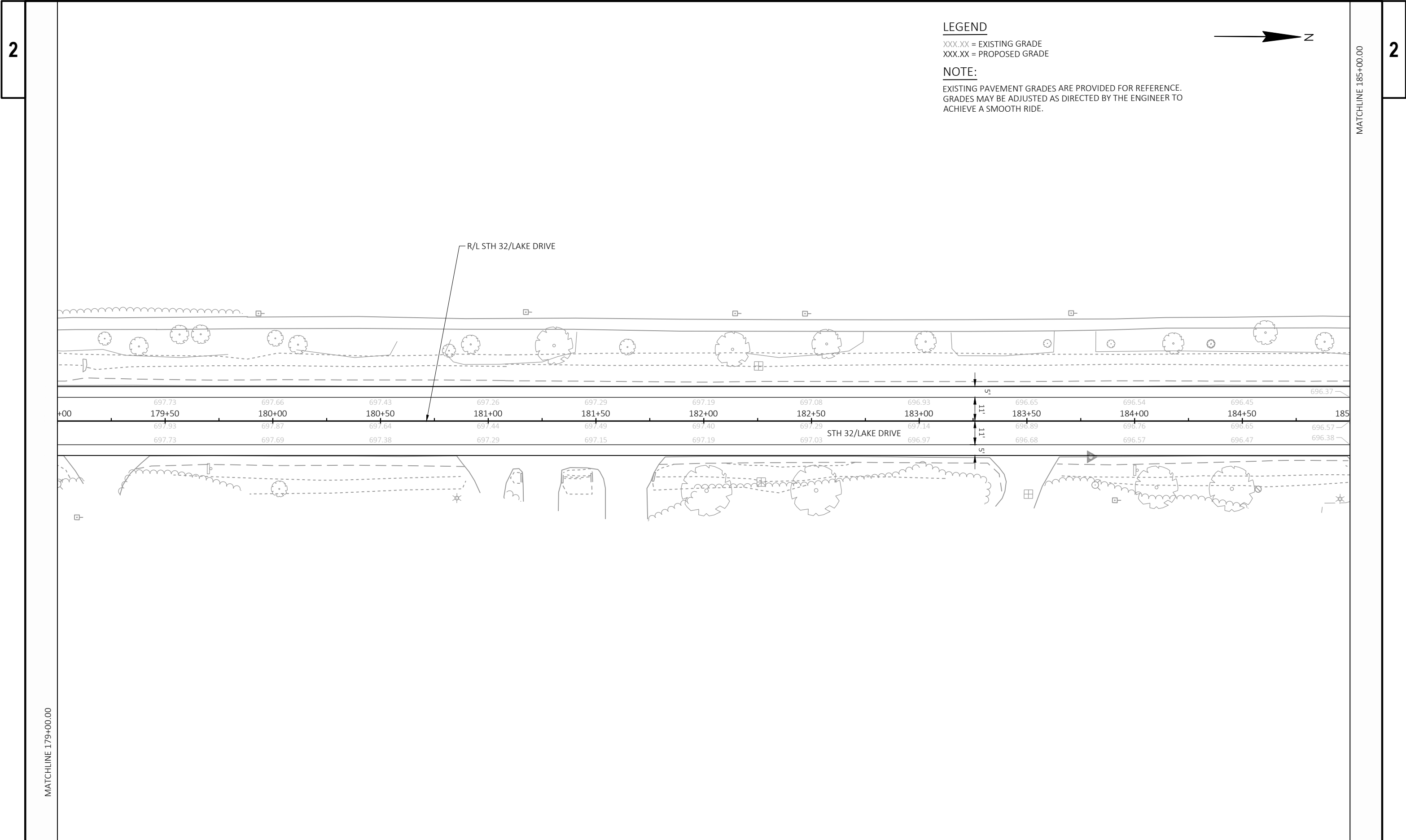
COUNTY: MILWAUKEE

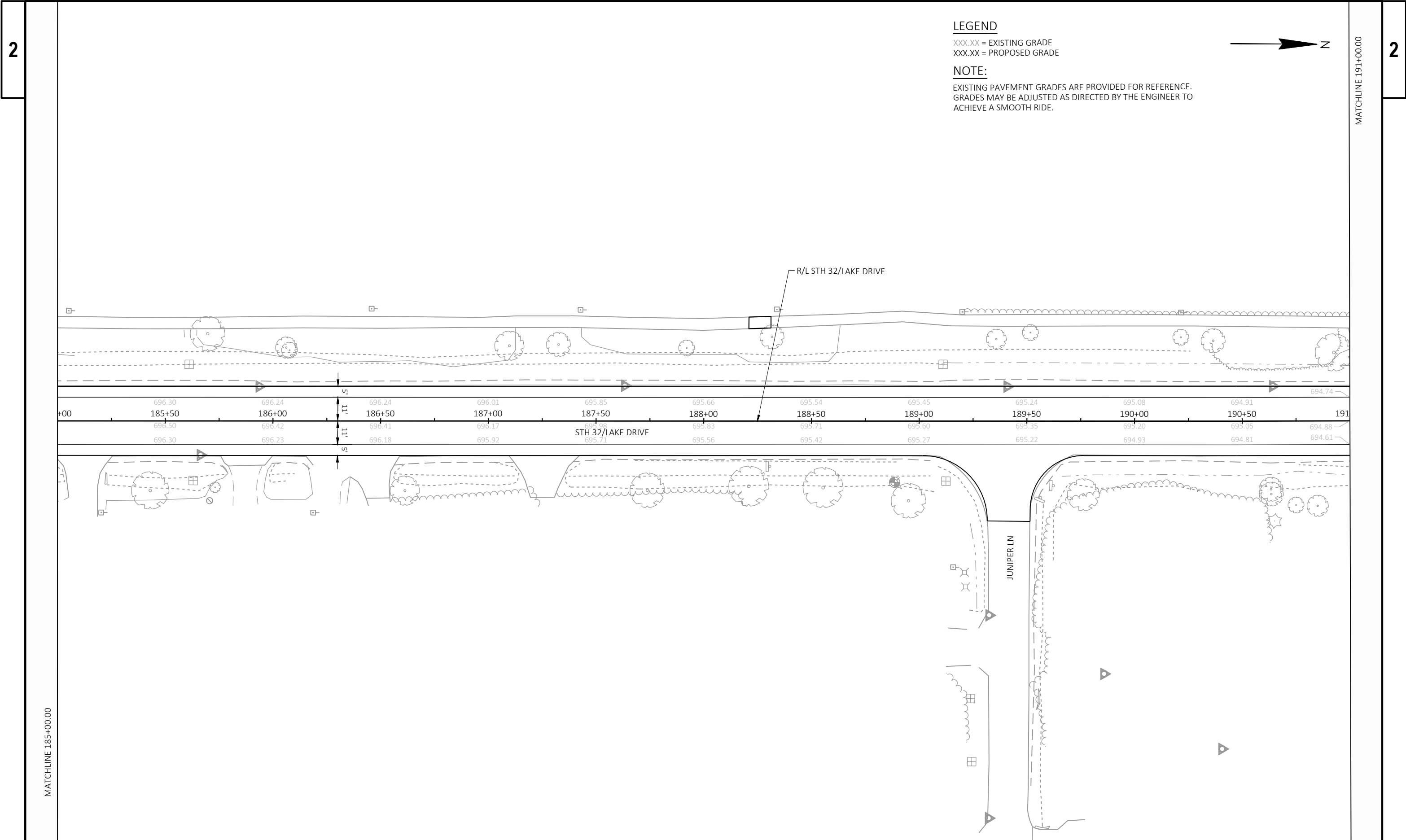
PAVING GRADES

SHEET

56

E



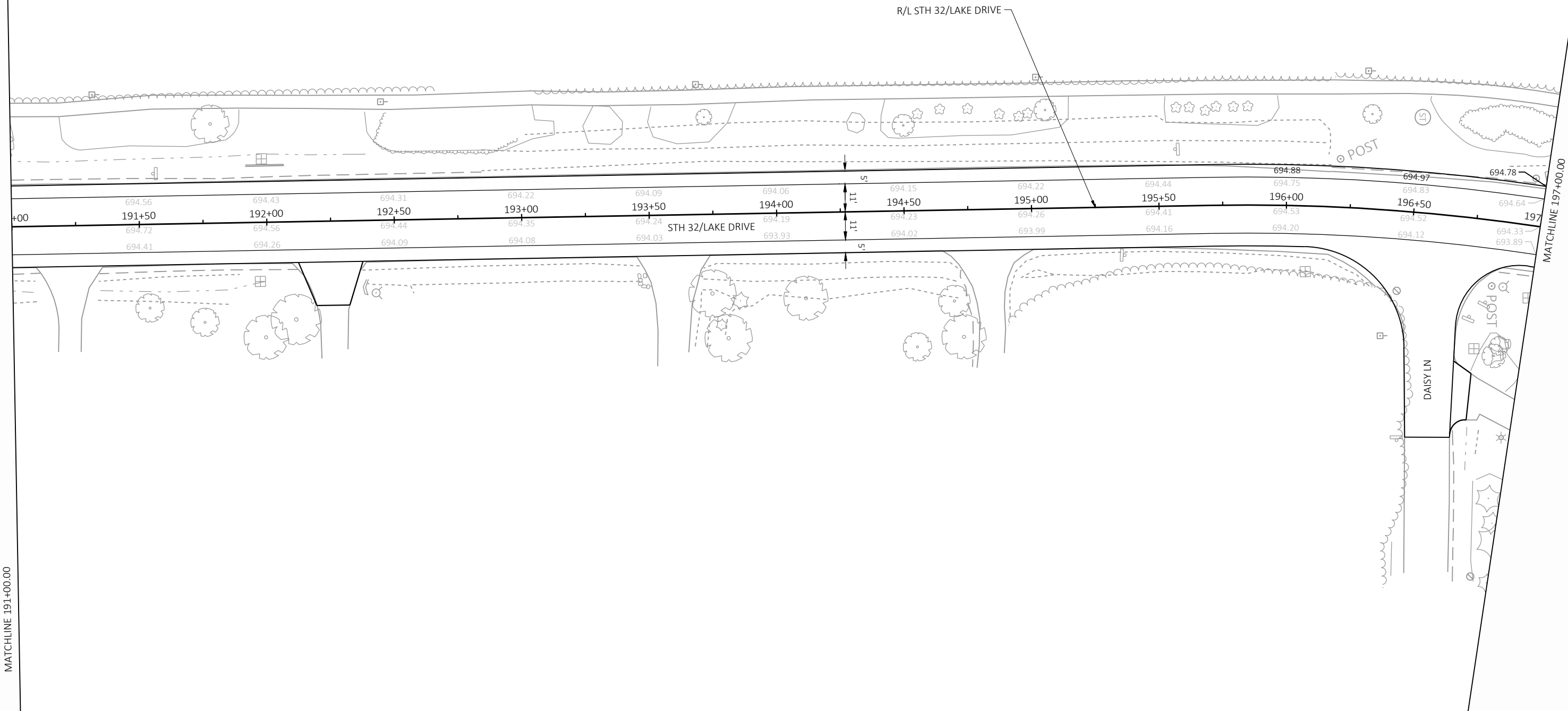


LEGEND

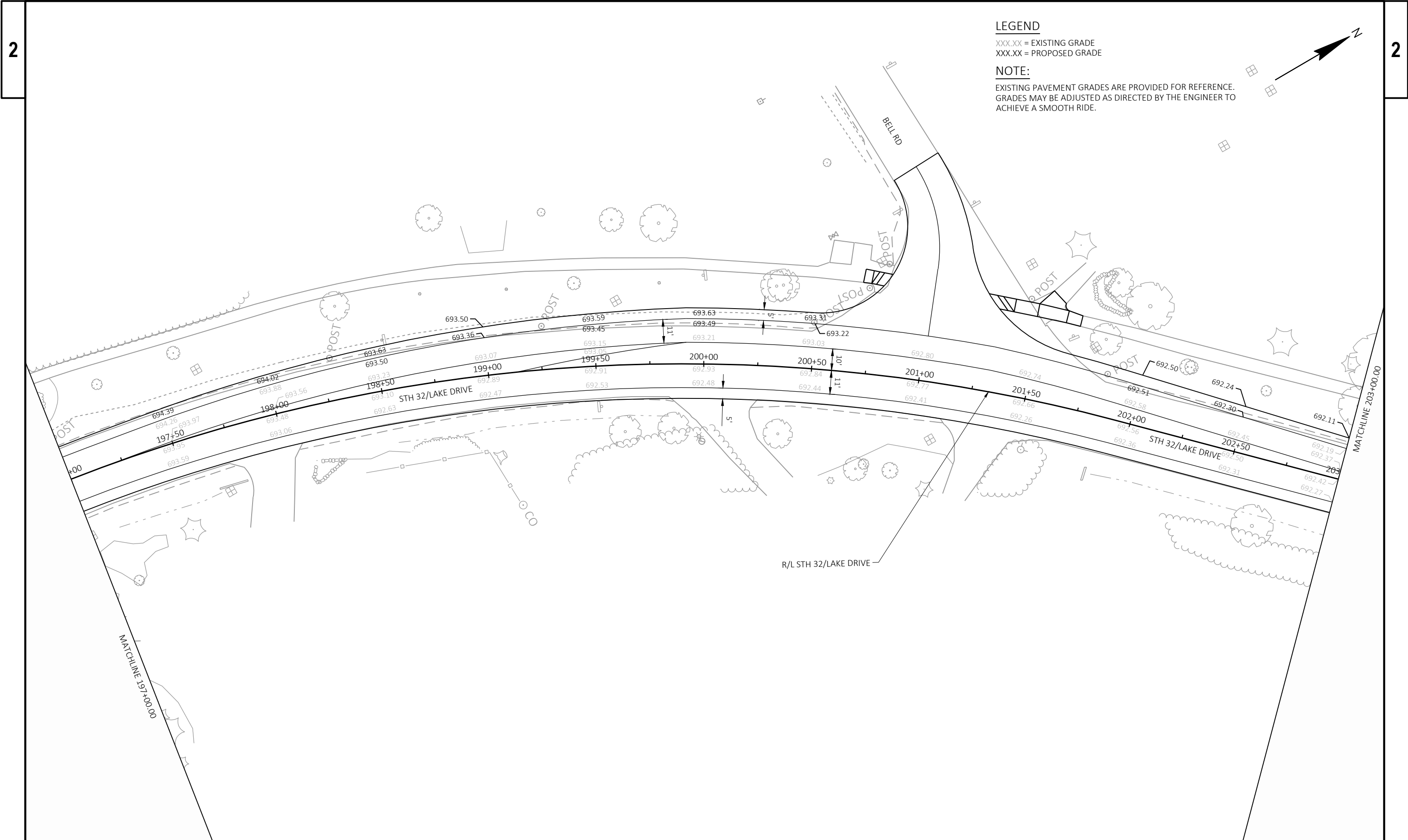
XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.







**LEGEND**  
XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

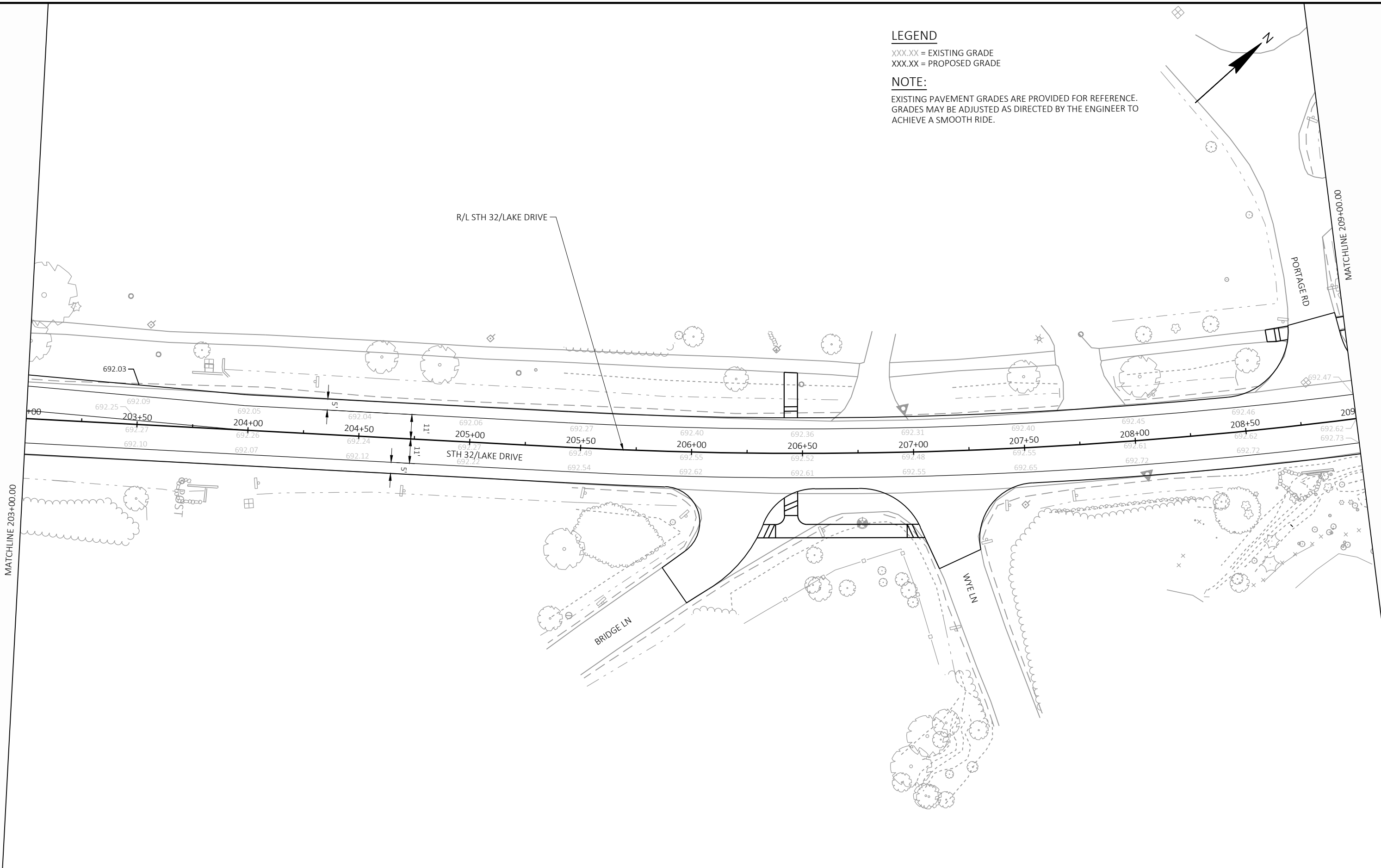
**NOTE:**  
EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.

LEGEND

XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.



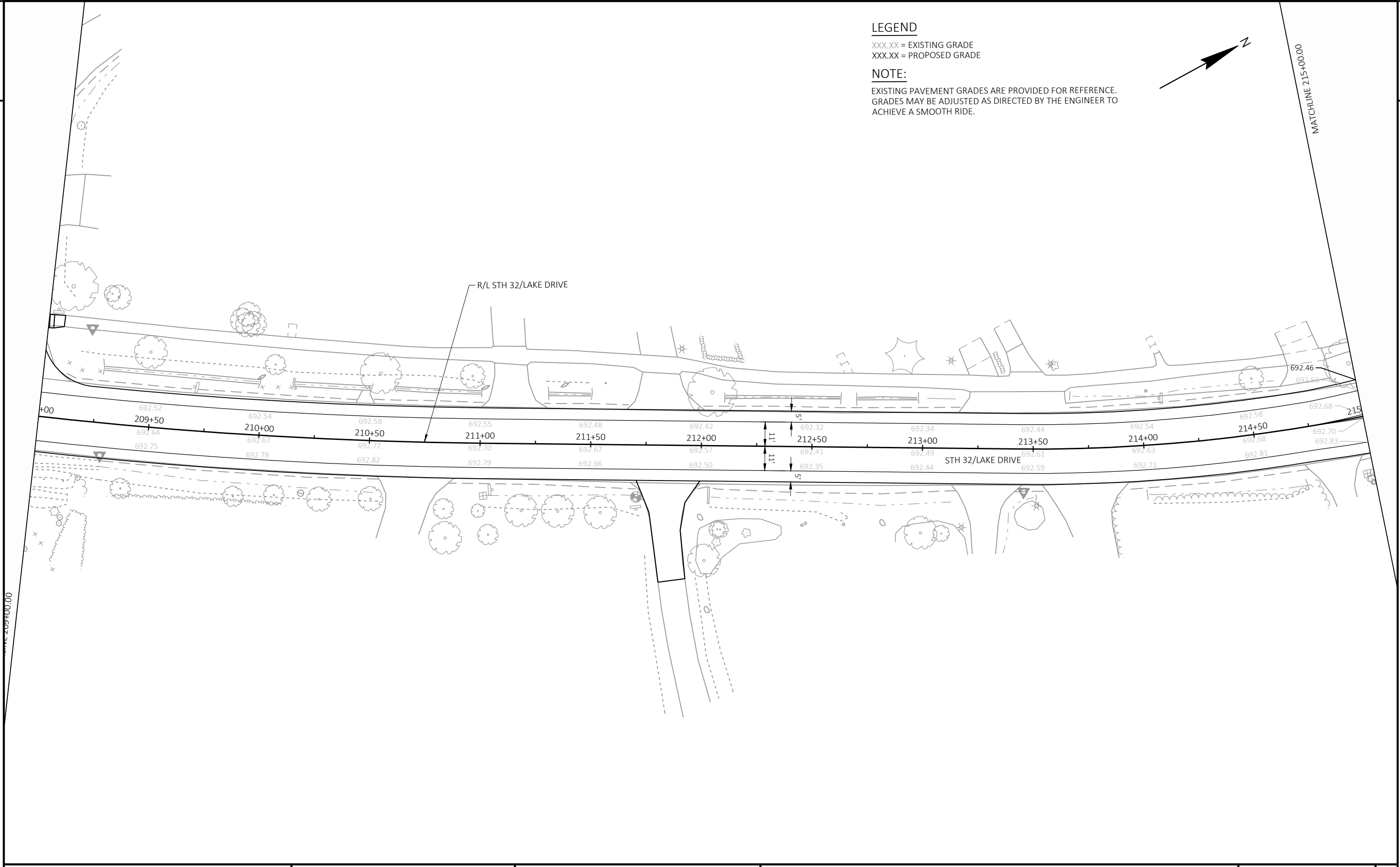
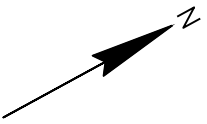


LEGEND

XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.

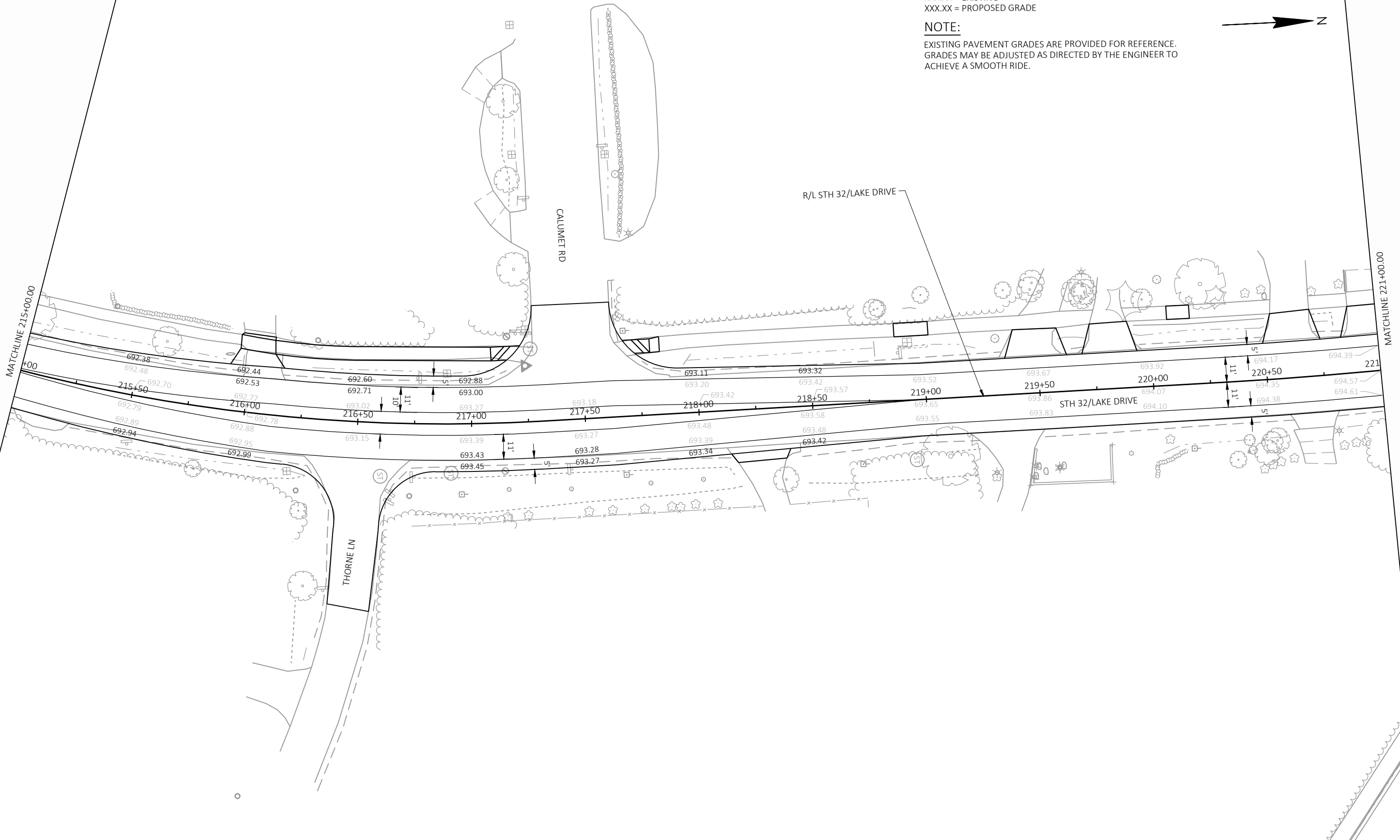


LEGEND

XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.

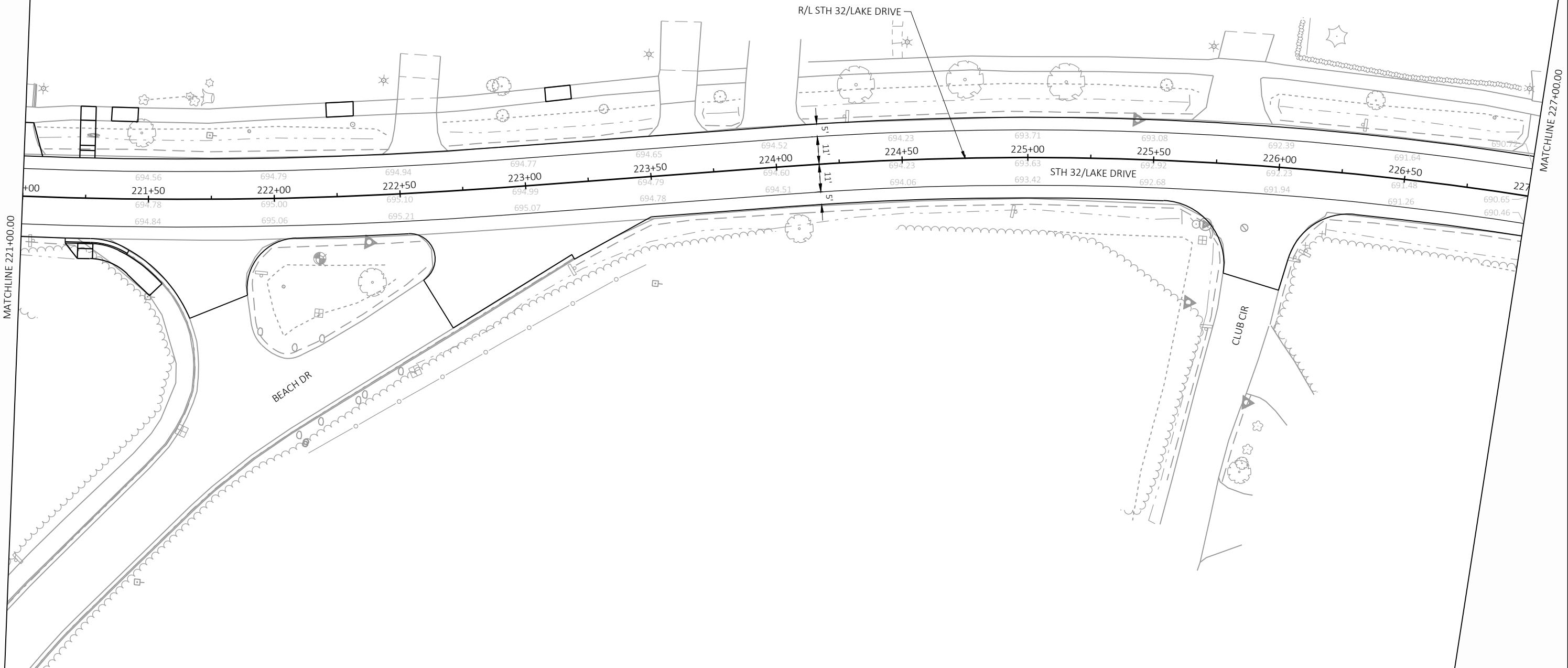


LEGEND

XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.



PROJECT NO: 2225-00-73

HWY: STH 32

COUNTY: MILWAUKEE

PAVING GRADES

SHEET

64

E

LEGEND

XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.



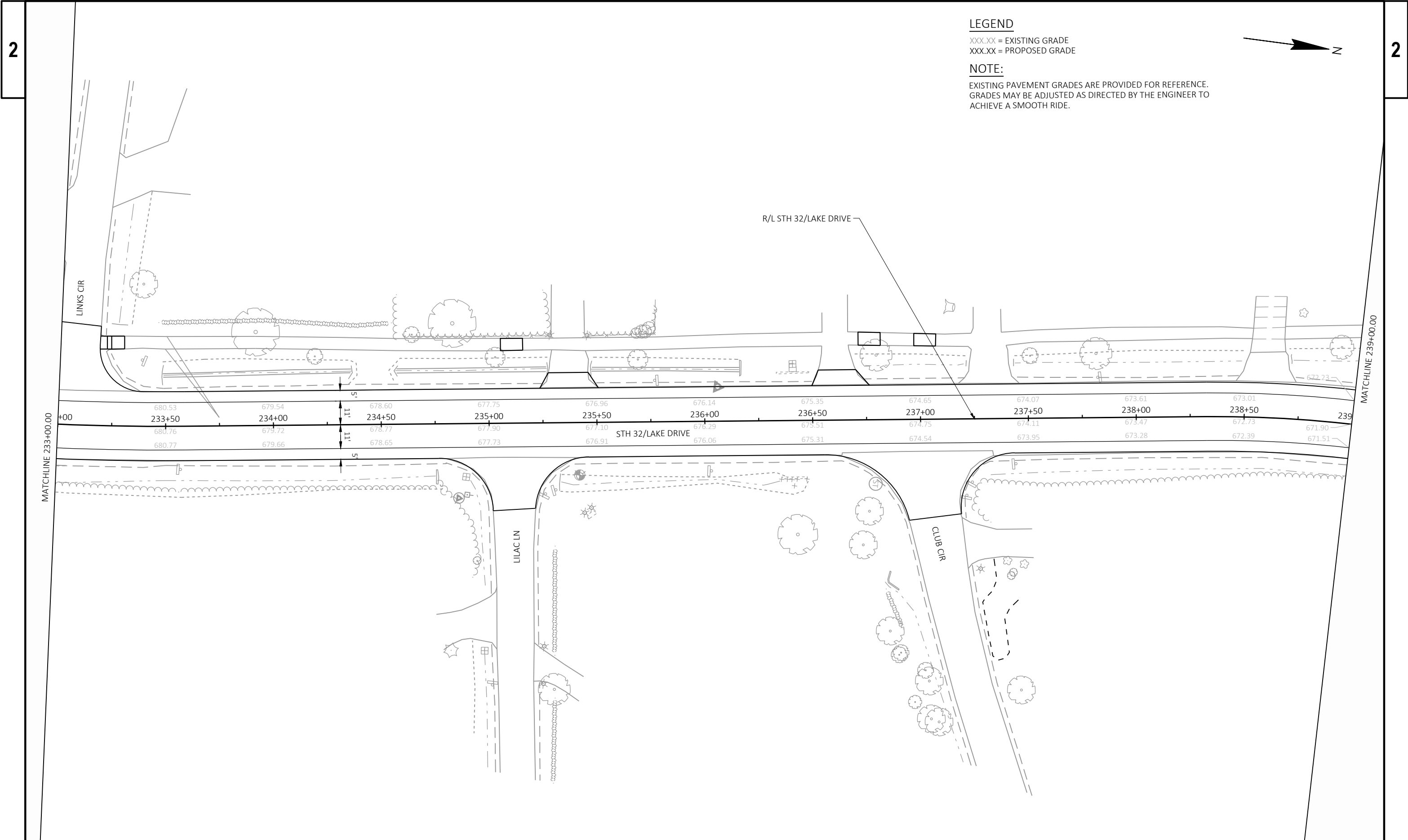
R/L STH 32/LAKE DRIVE

HYDE WAY

STH 32/LAKE DRIVE

MATCHLINE 227+00.00

MATCHLINE 233+00.00



LEGEND

XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.

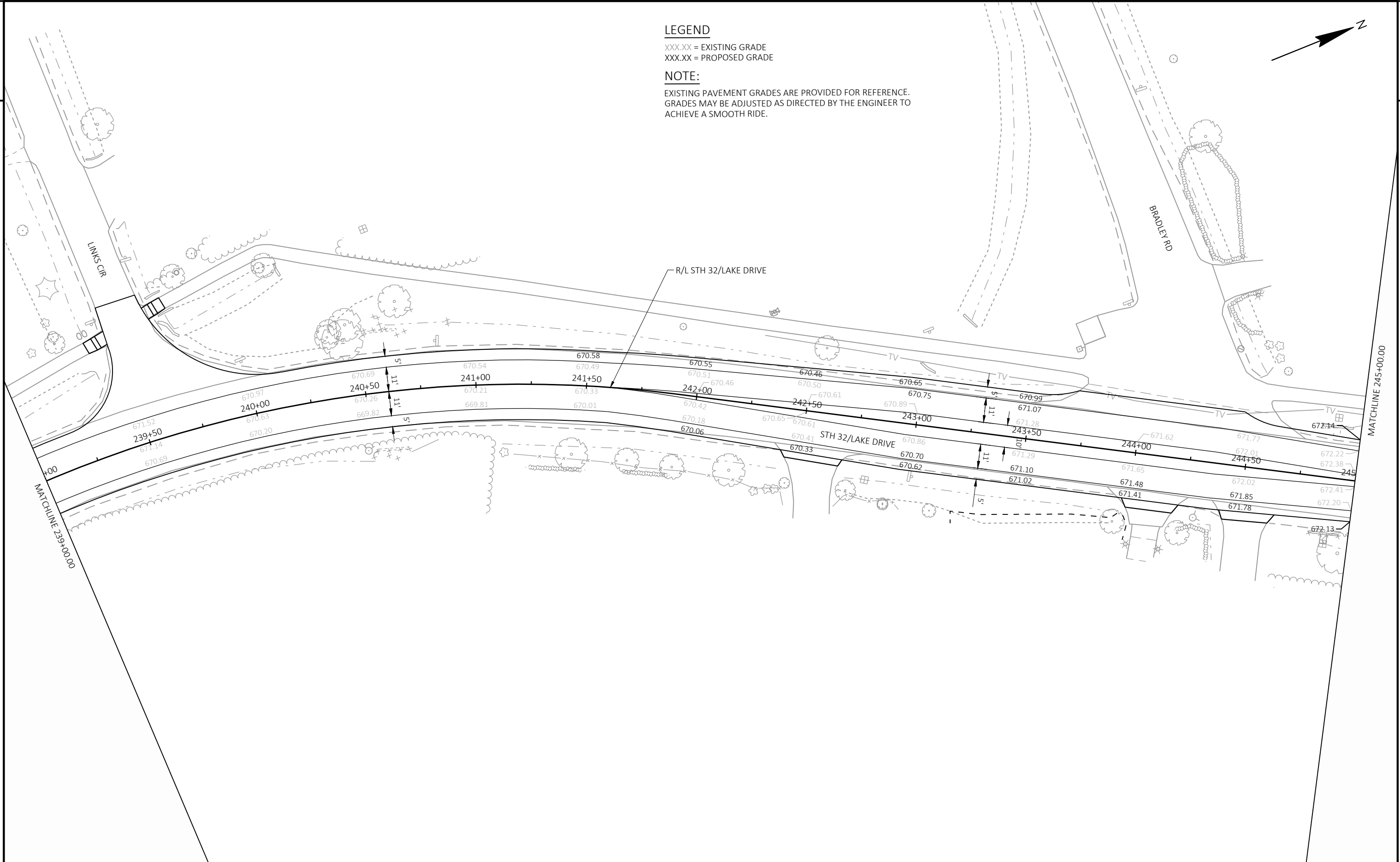


2

2

XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

**NOTE:**  
EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.



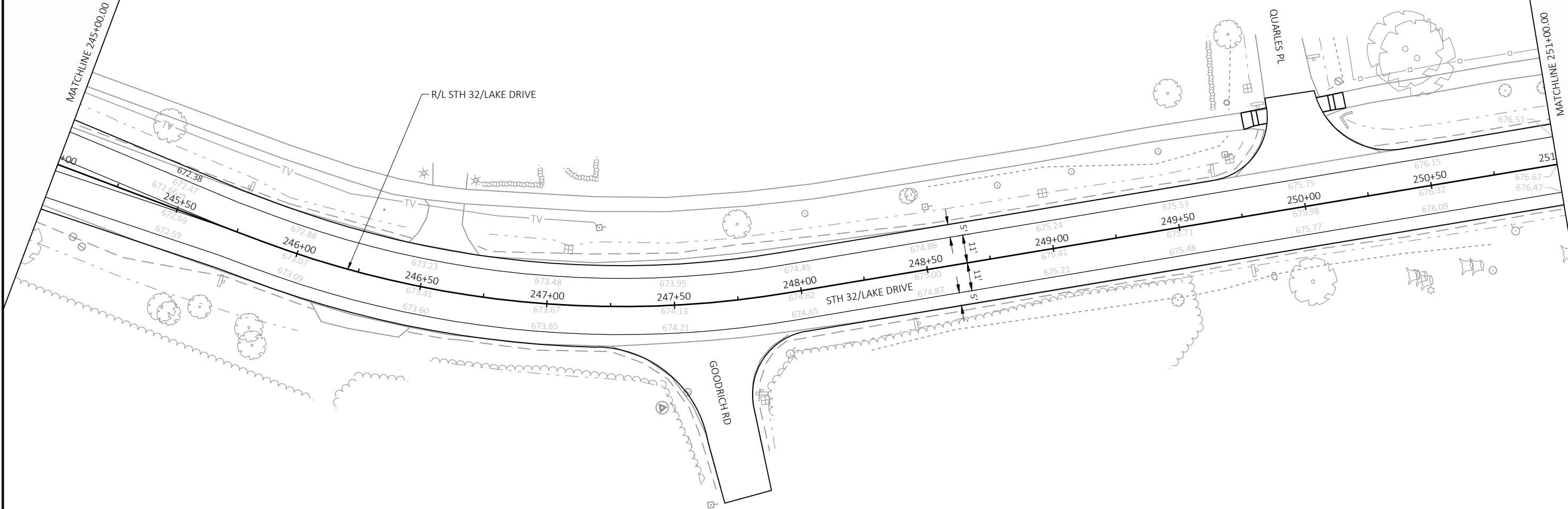


LEGEND

XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.

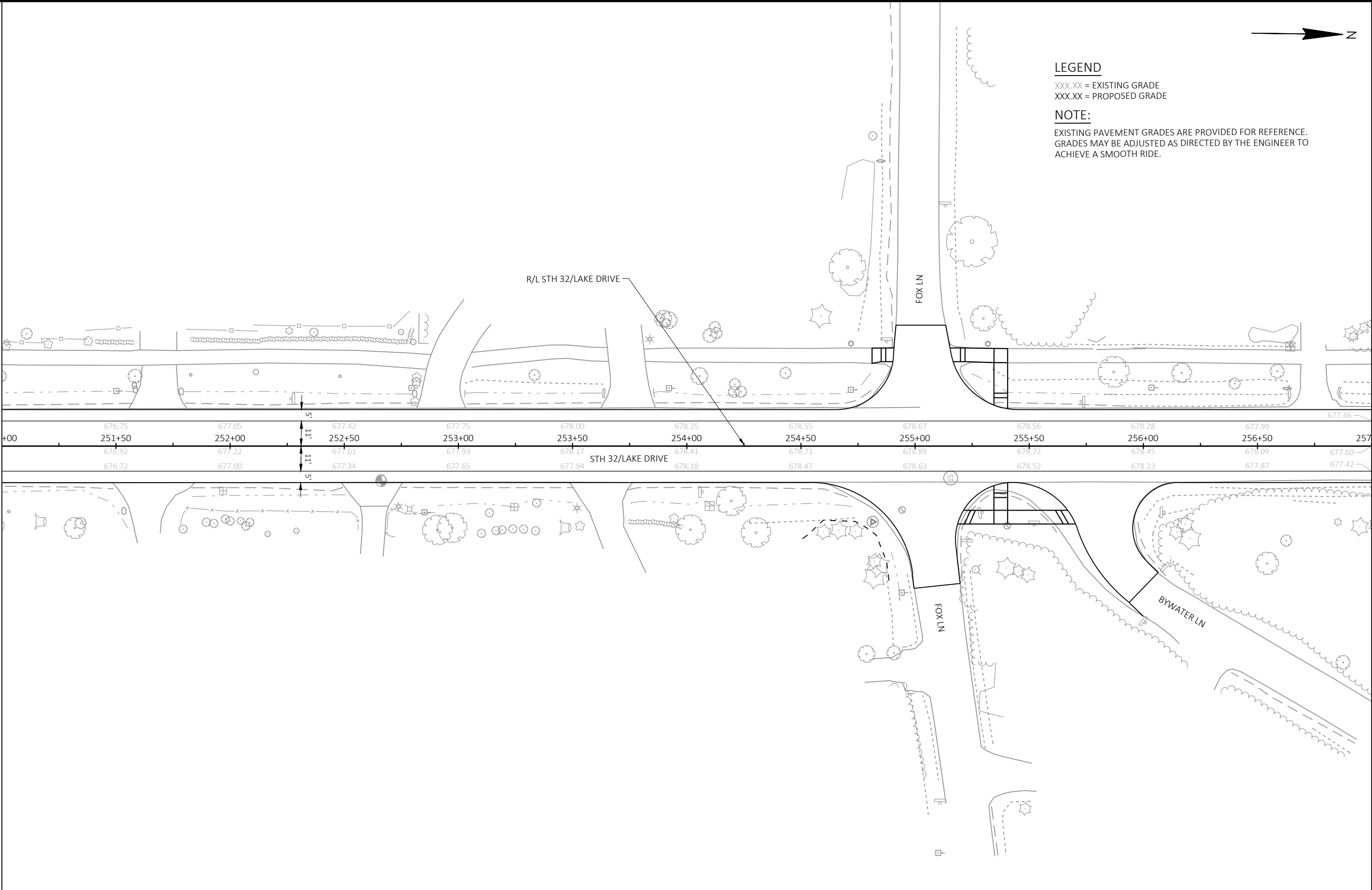


LEGEND

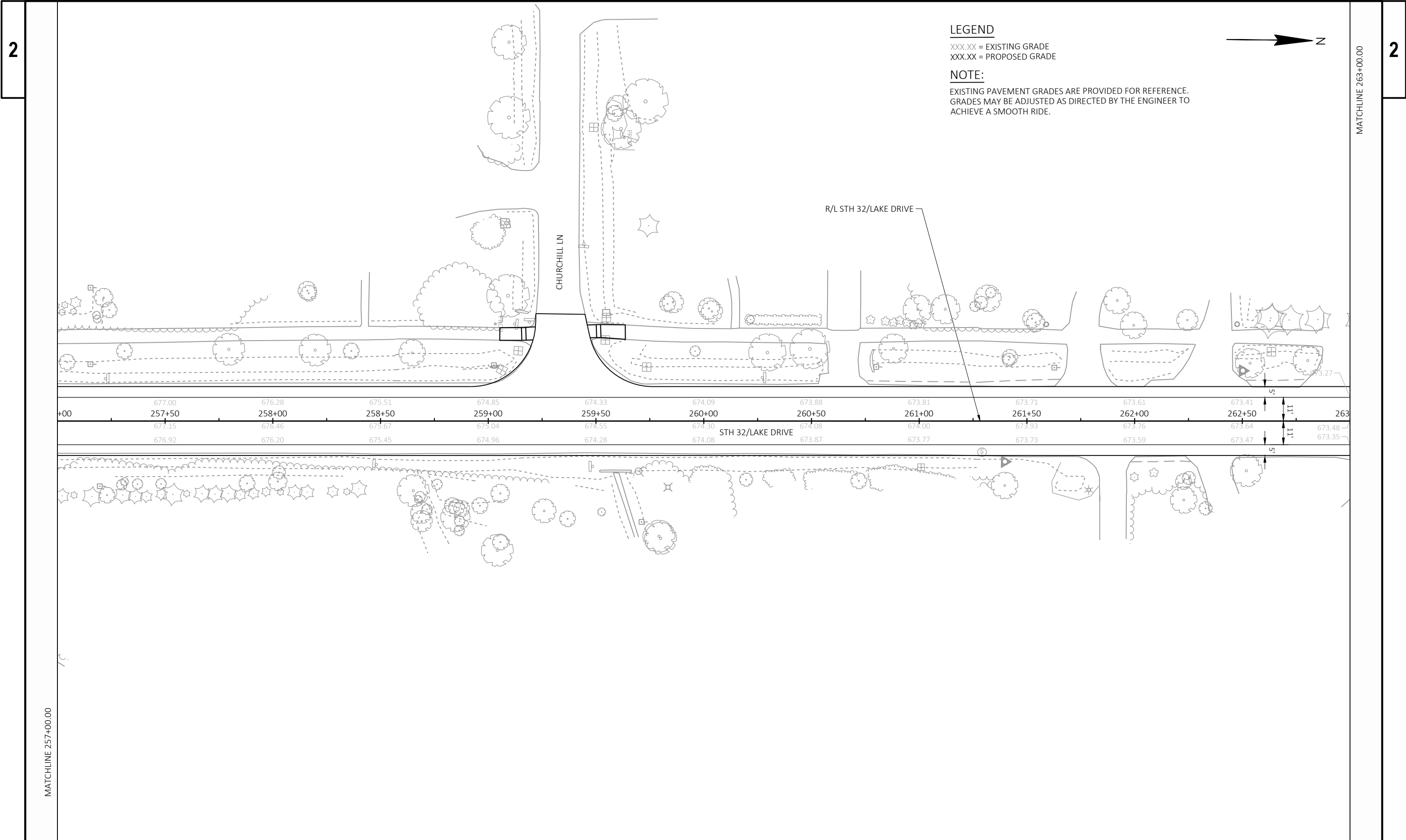
XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

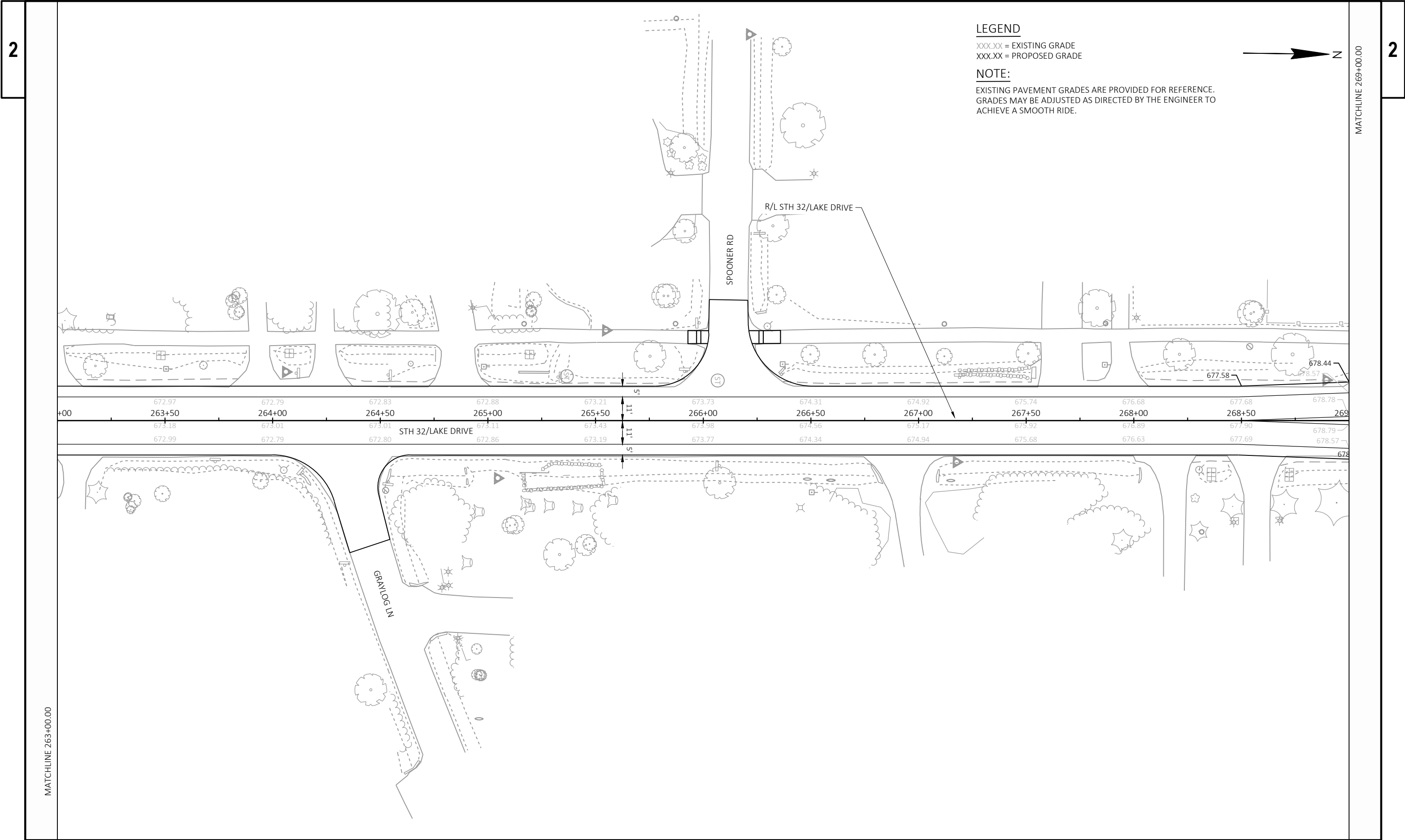
NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.









LEGEND

XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.

PROJECT NO: 2225-00-73

HWY: STH 32

COUNTY: MILWAUKEE

PAVING GRADES

SHEET

71

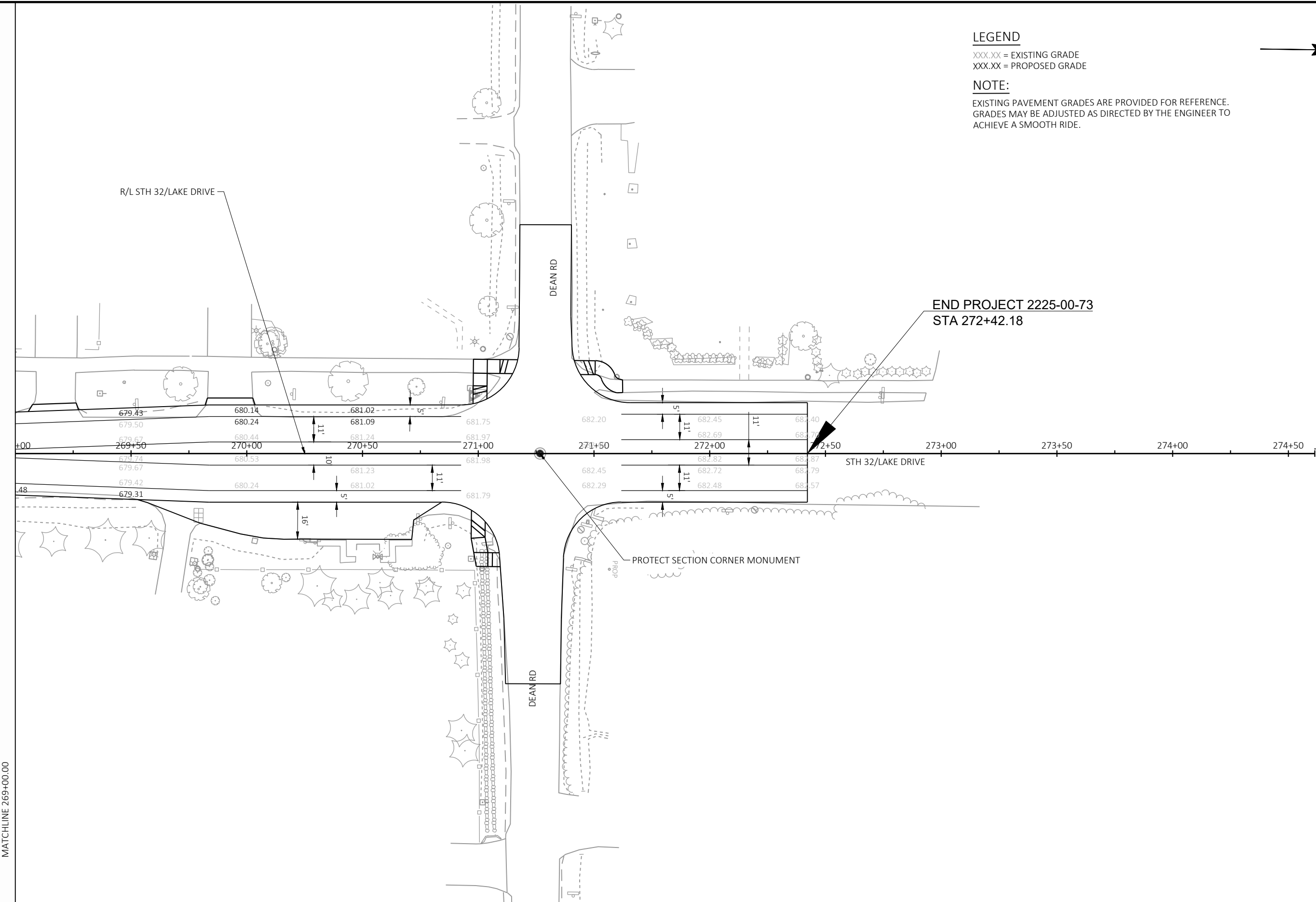
E

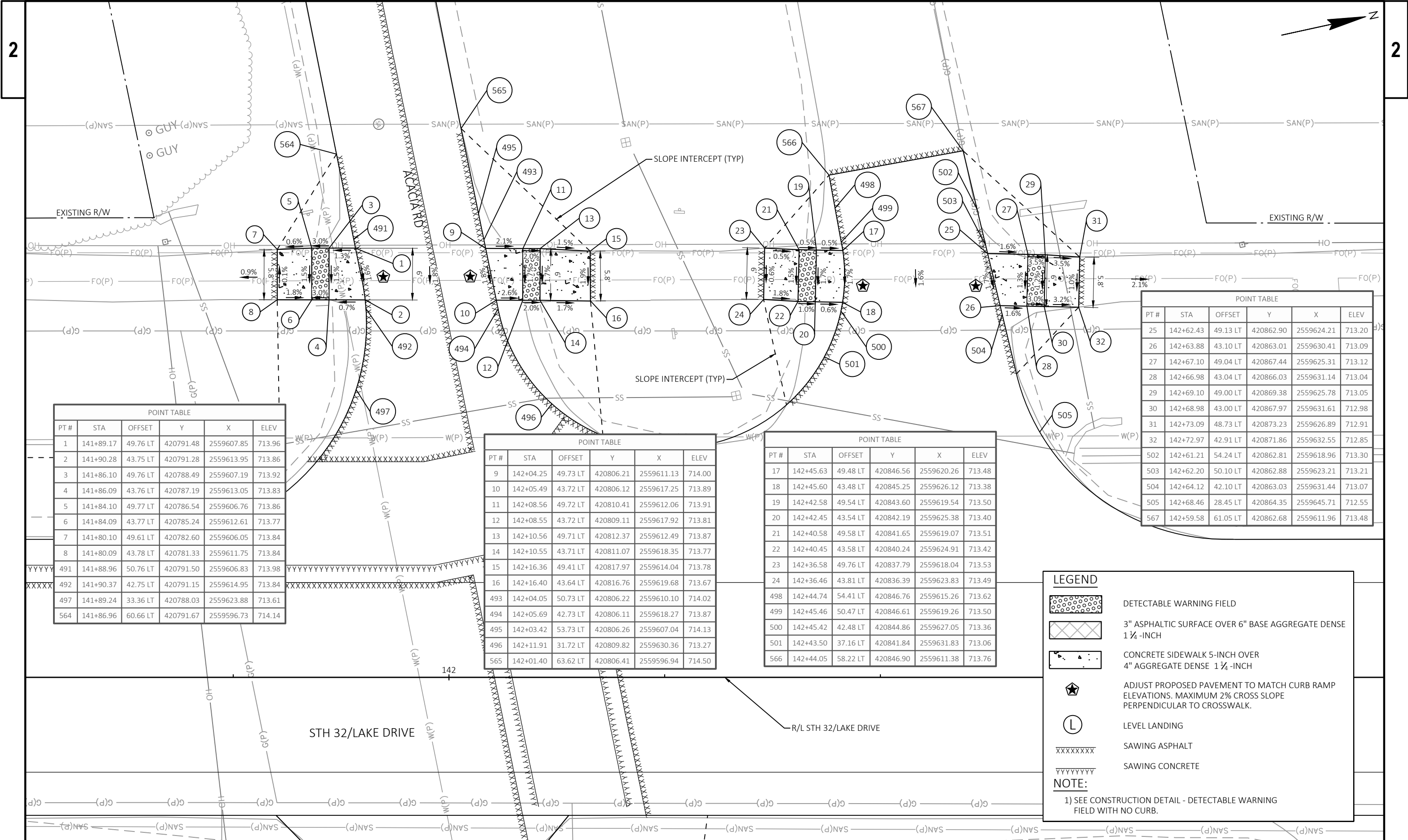
LEGEND

XXX.XX = EXISTING GRADE  
XXX.XX = PROPOSED GRADE

NOTE:

EXISTING PAVEMENT GRADES ARE PROVIDED FOR REFERENCE.  
GRADES MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER TO  
ACHIEVE A SMOOTH RIDE.





| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 1           | 141+89.17 | 49.76 LT | 420791.48 | 2559607.85 | 713.96 |
| 2           | 141+90.28 | 43.75 LT | 420791.28 | 2559613.95 | 713.86 |
| 3           | 141+86.10 | 49.76 LT | 420788.49 | 2559607.19 | 713.92 |
| 4           | 141+86.09 | 43.76 LT | 420787.19 | 2559613.05 | 713.83 |
| 5           | 141+84.10 | 49.77 LT | 420786.54 | 2559606.76 | 713.86 |
| 6           | 141+84.09 | 43.77 LT | 420785.24 | 2559612.61 | 713.77 |
| 7           | 141+80.10 | 49.61 LT | 420782.60 | 2559606.05 | 713.84 |
| 8           | 141+80.09 | 43.78 LT | 420781.33 | 2559611.75 | 713.84 |
| 491         | 141+88.96 | 50.76 LT | 420791.50 | 2559606.83 | 713.98 |
| 492         | 141+90.37 | 42.75 LT | 420791.15 | 2559614.95 | 713.84 |
| 497         | 141+89.24 | 33.36 LT | 420788.03 | 2559623.88 | 713.61 |
| 564         | 141+86.96 | 60.66 LT | 420791.67 | 2559596.73 | 714.14 |

| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 9           | 142+04.25 | 49.73 LT | 420806.21 | 2559611.13 | 714.00 |
| 10          | 142+05.49 | 43.72 LT | 420806.12 | 2559617.25 | 713.89 |
| 11          | 142+08.56 | 49.72 LT | 420810.41 | 2559612.06 | 713.91 |
| 12          | 142+08.55 | 43.72 LT | 420809.11 | 2559617.92 | 713.81 |
| 13          | 142+10.56 | 49.71 LT | 420812.37 | 2559612.49 | 713.87 |
| 14          | 142+10.55 | 43.71 LT | 420811.07 | 2559618.35 | 713.77 |
| 15          | 142+16.36 | 49.41 LT | 420817.97 | 2559614.04 | 713.78 |
| 16          | 142+16.40 | 43.64 LT | 420816.76 | 2559619.68 | 713.67 |
| 493         | 142+04.05 | 50.73 LT | 420806.22 | 2559610.10 | 714.02 |
| 494         | 142+05.69 | 42.73 LT | 420806.11 | 2559618.27 | 713.87 |
| 495         | 142+03.42 | 53.73 LT | 420806.26 | 2559607.04 | 714.13 |
| 496         | 142+11.91 | 31.72 LT | 420809.82 | 2559630.36 | 713.27 |
| 565         | 142+01.40 | 63.62 LT | 420806.41 | 2559596.94 | 714.50 |

| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 17          | 142+45.63 | 49.48 LT | 420846.56 | 2559620.26 | 713.48 |
| 18          | 142+45.60 | 43.48 LT | 420845.25 | 2559626.12 | 713.38 |
| 19          | 142+42.58 | 49.54 LT | 420843.60 | 2559619.54 | 713.50 |
| 20          | 142+42.45 | 43.54 LT | 420842.19 | 2559625.38 | 713.40 |
| 21          | 142+40.58 | 49.58 LT | 420841.65 | 2559619.07 | 713.51 |
| 22          | 142+40.45 | 43.58 LT | 420840.24 | 2559624.91 | 713.42 |
| 23          | 142+36.58 | 49.76 LT | 420837.79 | 2559618.04 | 713.53 |
| 24          | 142+36.46 | 43.81 LT | 420836.39 | 2559623.83 | 713.49 |
| 498         | 142+44.74 | 54.41 LT | 420846.76 | 2559615.26 | 713.62 |
| 499         | 142+45.46 | 50.47 LT | 420846.61 | 2559619.26 | 713.50 |
| 500         | 142+45.42 | 42.48 LT | 420844.86 | 2559627.05 | 713.36 |
| 501         | 142+43.50 | 37.16 LT | 420841.84 | 2559631.83 | 713.06 |
| 566         | 142+44.05 | 58.22 LT | 420846.90 | 2559611.38 | 713.76 |

| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 25          | 142+62.43 | 49.13 LT | 420862.90 | 2559624.21 | 713.20 |
| 26          | 142+63.88 | 43.10 LT | 420863.01 | 2559630.41 | 713.09 |
| 27          | 142+67.10 | 49.04 LT | 420867.44 | 2559625.31 | 713.12 |
| 28          | 142+66.98 | 43.04 LT | 420866.03 | 2559631.14 | 713.04 |
| 29          | 142+69.10 | 49.00 LT | 420869.38 | 2559625.78 | 713.05 |
| 30          | 142+68.98 | 43.00 LT | 420867.97 | 2559631.61 | 712.98 |
| 31          | 142+73.09 | 48.73 LT | 420873.23 | 2559626.89 | 712.91 |
| 32          | 142+72.97 | 42.91 LT | 420871.86 | 2559632.55 | 712.85 |
| 502         | 142+61.21 | 54.24 LT | 420862.81 | 2559618.96 | 713.30 |
| 503         | 142+62.20 | 50.10 LT | 420862.88 | 2559623.21 | 713.21 |
| 504         | 142+64.12 | 42.10 LT | 420863.03 | 2559631.44 | 713.07 |
| 505         | 142+68.46 | 28.45 LT | 420864.35 | 2559645.71 | 712.55 |
| 567         | 142+59.58 | 61.05 LT | 420862.68 | 2559611.96 | 713.48 |

LEGEND

DETECTABLE WARNING FIELD

3" ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE 1 1/4 -INCH

CONCRETE SIDEWALK 5-INCH OVER 4" AGGREGATE DENSE 1 1/4 -INCH

ADJUST PROPOSED PAVEMENT TO MATCH CURB RAMP ELEVATIONS. MAXIMUM 2% CROSS SLOPE PERPENDICULAR TO CROSSWALK.

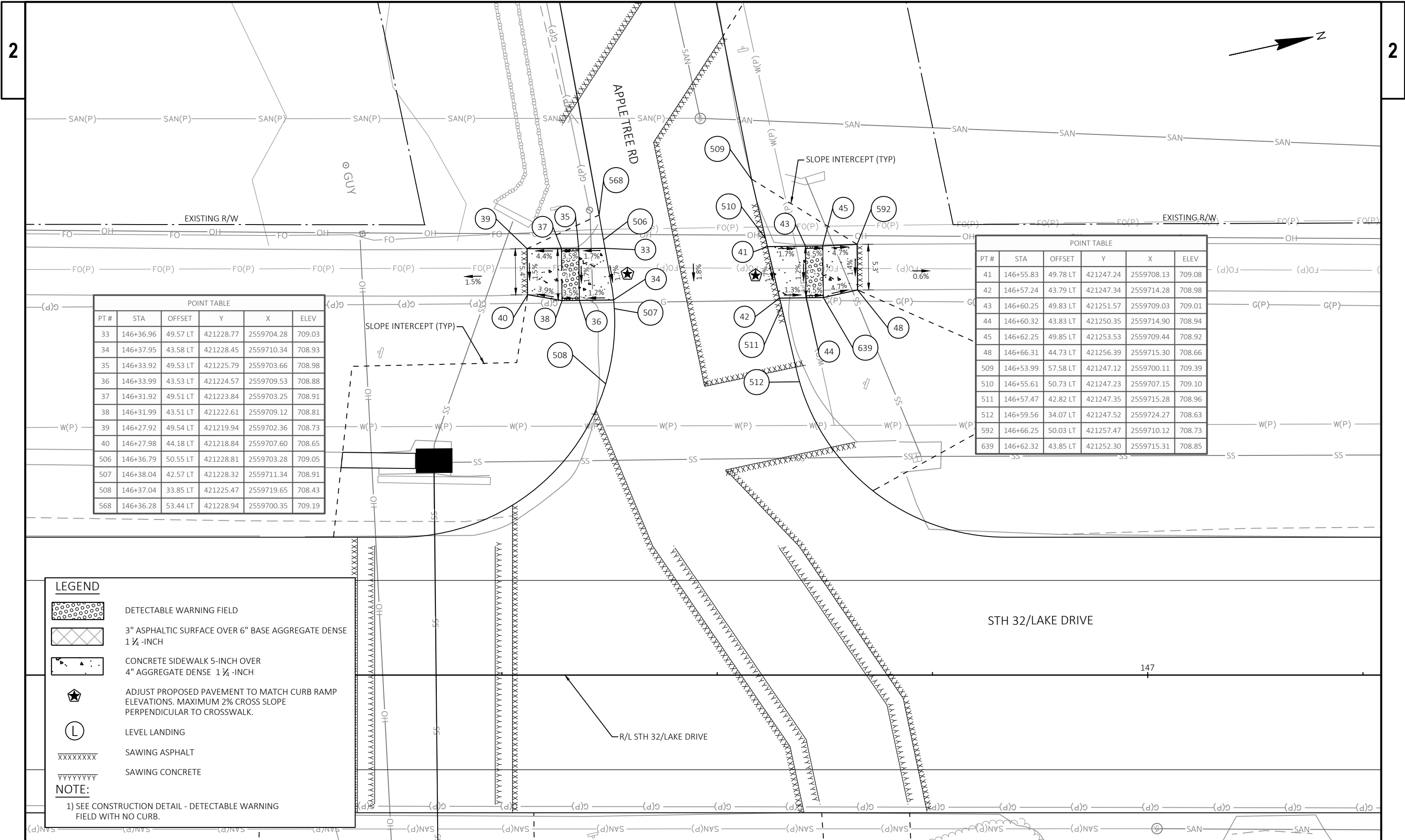
LEVEL LANDING

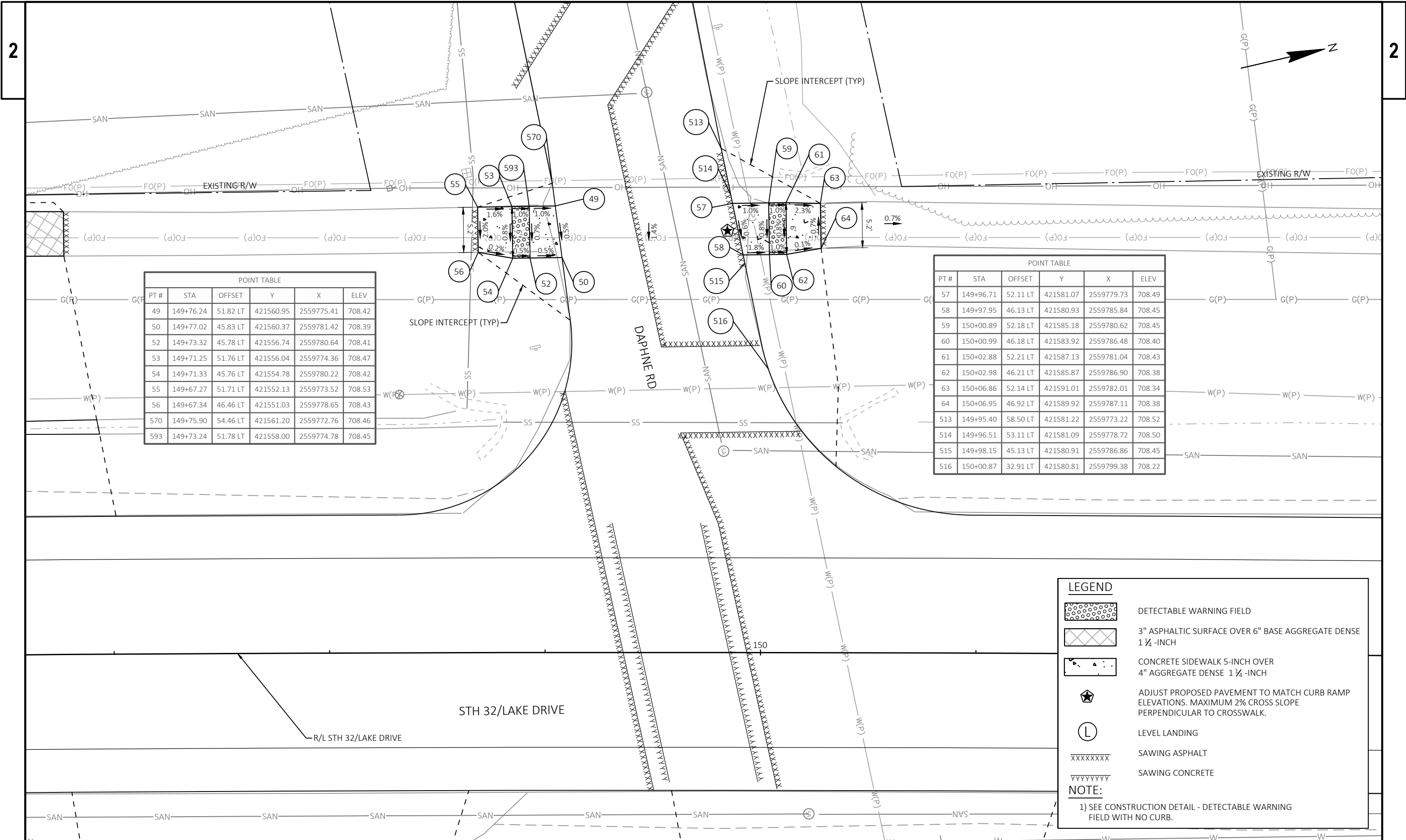
SAWING ASPHALT

SAWING CONCRETE

NOTE:

1) SEE CONSTRUCTION DETAIL - DETECTABLE WARNING FIELD WITH NO CURB.

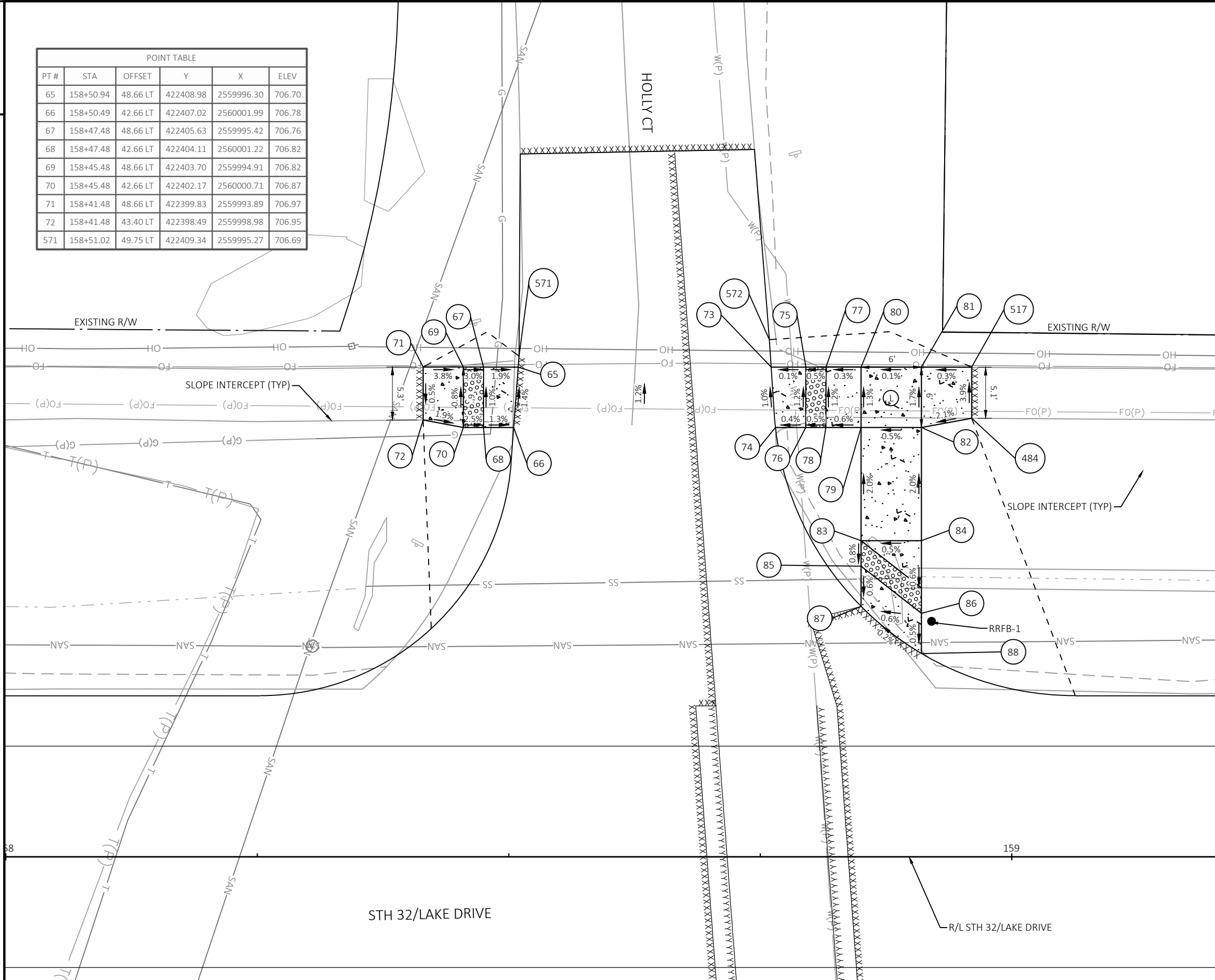






2

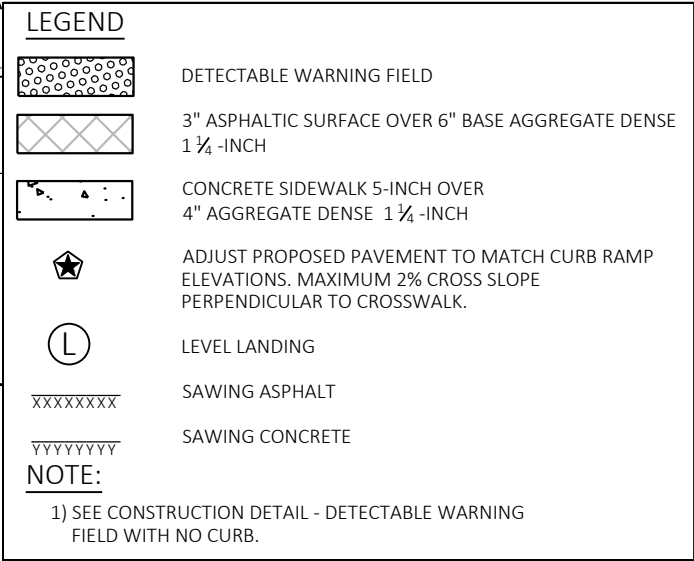
| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 65          | 158+50.94 | 48.66 LT | 422408.98 | 2559996.30 | 706.70 |
| 66          | 158+50.49 | 42.66 LT | 422407.02 | 2560001.99 | 706.78 |
| 67          | 158+47.48 | 48.66 LT | 422405.63 | 2559995.42 | 706.76 |
| 68          | 158+47.48 | 42.66 LT | 422404.11 | 2560001.22 | 706.82 |
| 69          | 158+45.48 | 48.66 LT | 422403.70 | 2559994.91 | 706.82 |
| 70          | 158+45.48 | 42.66 LT | 422402.17 | 2560000.71 | 706.87 |
| 71          | 158+41.48 | 48.66 LT | 422399.83 | 2559993.89 | 706.97 |
| 72          | 158+41.48 | 43.40 LT | 422398.49 | 2559998.98 | 706.95 |
| 571         | 158+51.02 | 49.75 LT | 422409.34 | 2559995.27 | 706.69 |



| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 73          | 158+76.08 | 48.65 LT | 422433.29 | 2560002.70 | 706.61 |
| 74          | 158+76.51 | 42.65 LT | 422432.18 | 2560008.61 | 706.67 |
| 75          | 158+79.53 | 48.65 LT | 422436.63 | 2560003.58 | 706.61 |
| 76          | 158+79.53 | 42.65 LT | 422435.10 | 2560009.38 | 706.68 |
| 77          | 158+81.53 | 48.65 LT | 422438.56 | 2560004.09 | 706.62 |
| 78          | 158+81.53 | 42.65 LT | 422437.03 | 2560009.89 | 706.69 |
| 79          | 158+85.02 | 42.65 LT | 422440.41 | 2560010.78 | 706.71 |
| 80          | 158+85.03 | 48.65 LT | 422441.94 | 2560004.98 | 706.63 |
| 81          | 158+91.02 | 48.67 LT | 422447.75 | 2560006.49 | 706.64 |
| 82          | 158+91.03 | 42.65 LT | 422446.22 | 2560012.31 | 706.74 |
| 83          | 158+85.02 | 31.40 LT | 422437.55 | 2560021.66 | 706.93 |
| 84          | 158+91.02 | 31.40 LT | 422443.35 | 2560023.19 | 706.96 |
| 85          | 158+85.02 | 28.87 LT | 422436.91 | 2560024.11 | 706.91 |
| 86          | 158+91.02 | 24.19 LT | 422441.52 | 2560030.16 | 706.92 |
| 87          | 158+85.02 | 24.87 LT | 422435.89 | 2560027.98 | 706.88 |
| 88          | 158+91.02 | 20.19 LT | 422440.50 | 2560034.03 | 706.90 |
| 484         | 158+96.02 | 43.57 LT | 422451.29 | 2560012.69 | 706.85 |
| 517         | 158+96.02 | 48.67 LT | 422452.58 | 2560007.77 | 706.65 |
| 572         | 158+75.90 | 51.39 LT | 422433.81 | 2560000.02 | 706.60 |

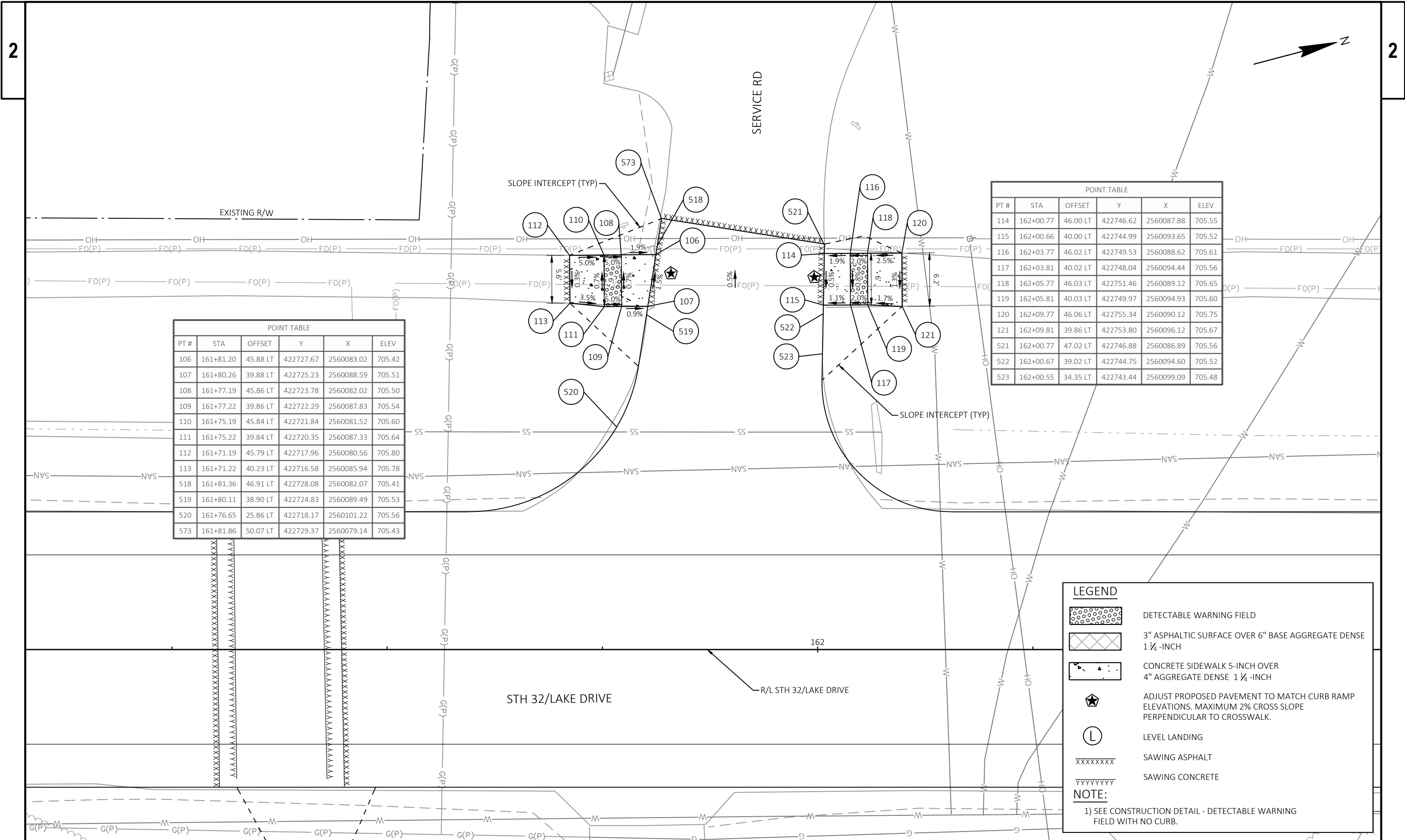
| <u>LEGEND</u>                                                                         |                                                                                                                  |
|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
|  | DETECTABLE WARNING FIELD                                                                                         |
|  | 3" ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE<br>1 ¼ -INCH                                                   |
|  | CONCRETE SIDEWALK 5-INCH OVER<br>4" AGGREGATE DENSE 1 ¼ -INCH                                                    |
|  | ADJUST PROPOSED PAVEMENT TO MATCH CURB RAMP<br>ELEVATIONS. MAXIMUM 2% CROSS SLOPE<br>PERPENDICULAR TO CROSSWALK. |
|  | LEVEL LANDING                                                                                                    |
|  | SAWING ASPHALT                                                                                                   |
|  | SAWING CONCRETE                                                                                                  |
| <u>NOTE:</u>                                                                          |                                                                                                                  |
| 1) SEE CONSTRUCTION DETAIL - DETECTABLE WARNING<br>FIELD WITH NO CURB.                |                                                                                                                  |

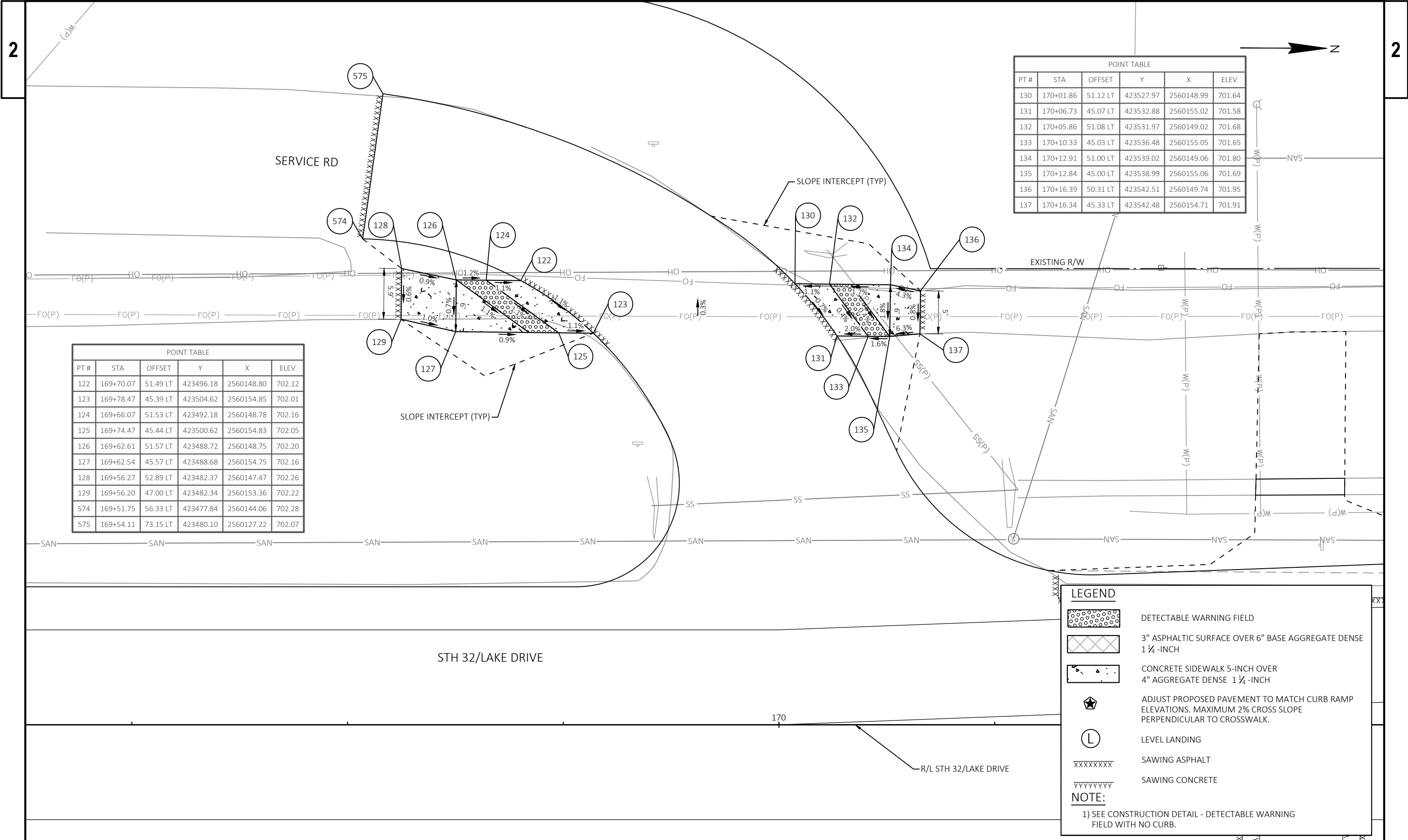
# 2

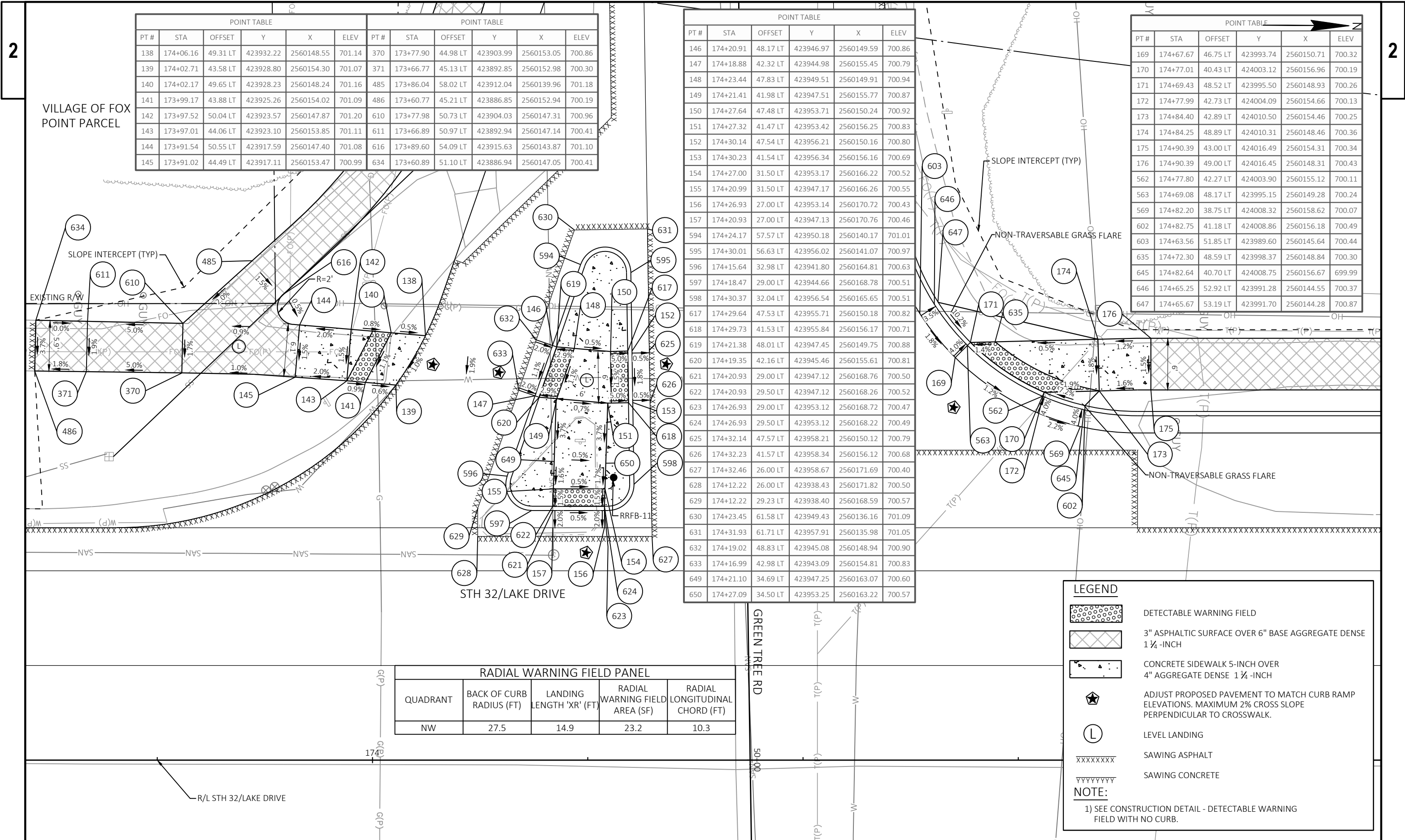


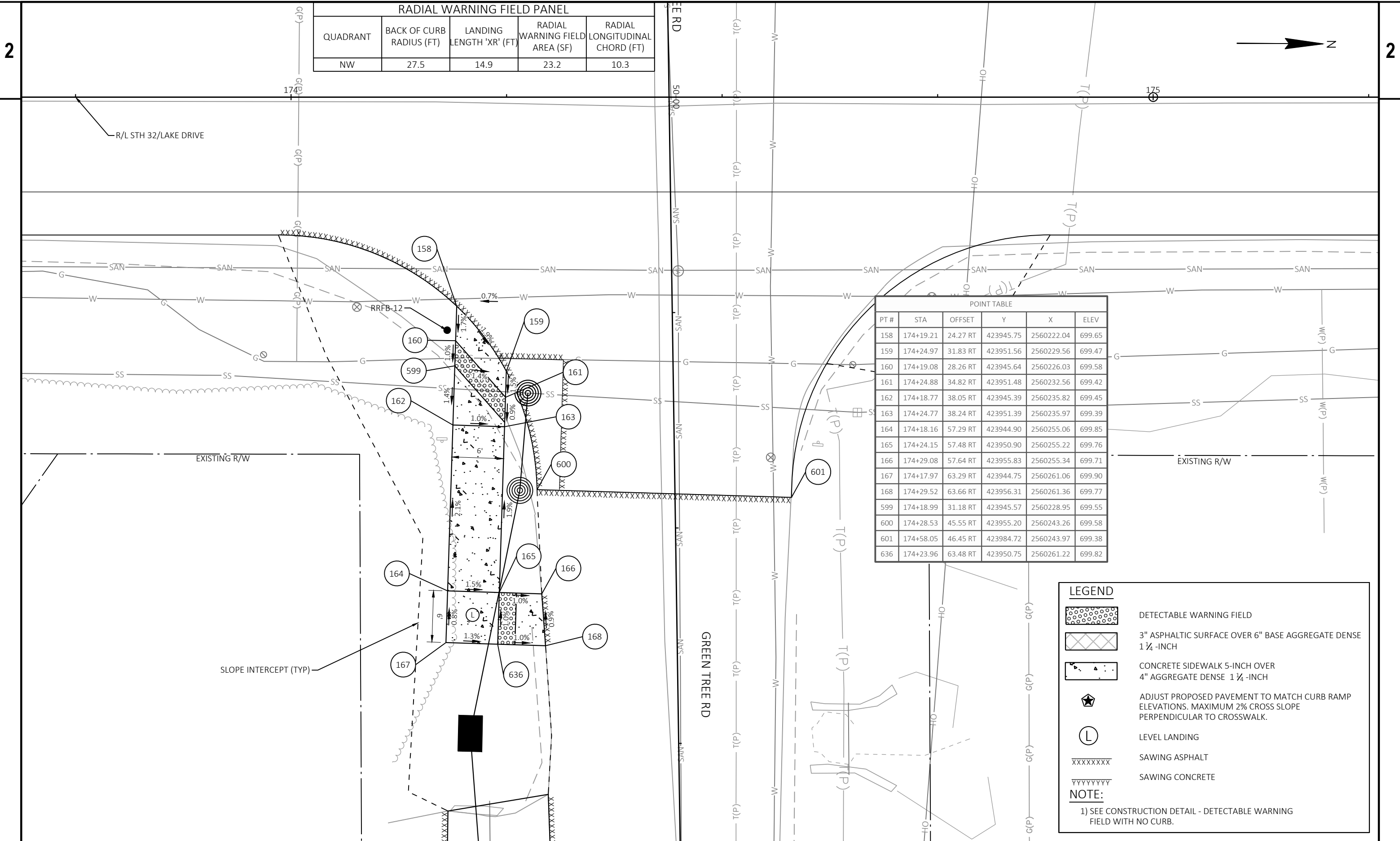
| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 89          | 158+91.02 | 16.00 RT | 422431.29 | 2560069.03 | 707.12 |
| 90          | 158+85.02 | 16.00 RT | 422425.49 | 2560067.51 | 707.15 |
| 91          | 158+91.02 | 19.00 RT | 422430.53 | 2560071.93 | 707.15 |
| 92          | 158+85.02 | 19.00 RT | 422424.73 | 2560070.41 | 707.18 |
| 93          | 158+91.02 | 21.50 RT | 422429.89 | 2560074.35 | 707.19 |
| 94          | 158+85.01 | 21.50 RT | 422424.08 | 2560072.82 | 707.22 |
| 95          | 158+86.63 | 31.61 RT | 422423.07 | 2560083.01 | 707.55 |
| 96          | 158+82.39 | 27.36 RT | 422420.05 | 2560077.82 | 707.45 |
| 97          | 158+76.02 | 30.00 RT | 422413.22 | 2560078.75 | 707.79 |
| 98          | 158+76.02 | 36.00 RT | 422411.70 | 2560084.56 | 707.85 |
| 99          | 158+66.98 | 30.56 RT | 422404.34 | 2560077.00 | 707.90 |
| 100         | 158+68.56 | 36.35 RT | 422404.39 | 2560083.00 | 707.95 |
| 101         | 158+53.73 | 34.17 RT | 422390.60 | 2560077.11 | 707.70 |
| 102         | 158+71.18 | 30.00 RT | 422408.54 | 2560077.52 | 707.85 |
| 103         | 158+48.66 | 35.55 RT | 422385.35 | 2560077.16 | 707.65 |
| 104         | 158+55.30 | 39.96 RT | 422390.65 | 2560083.11 | 707.76 |
| 105         | 158+50.48 | 41.27 RT | 422385.65 | 2560083.16 | 707.70 |

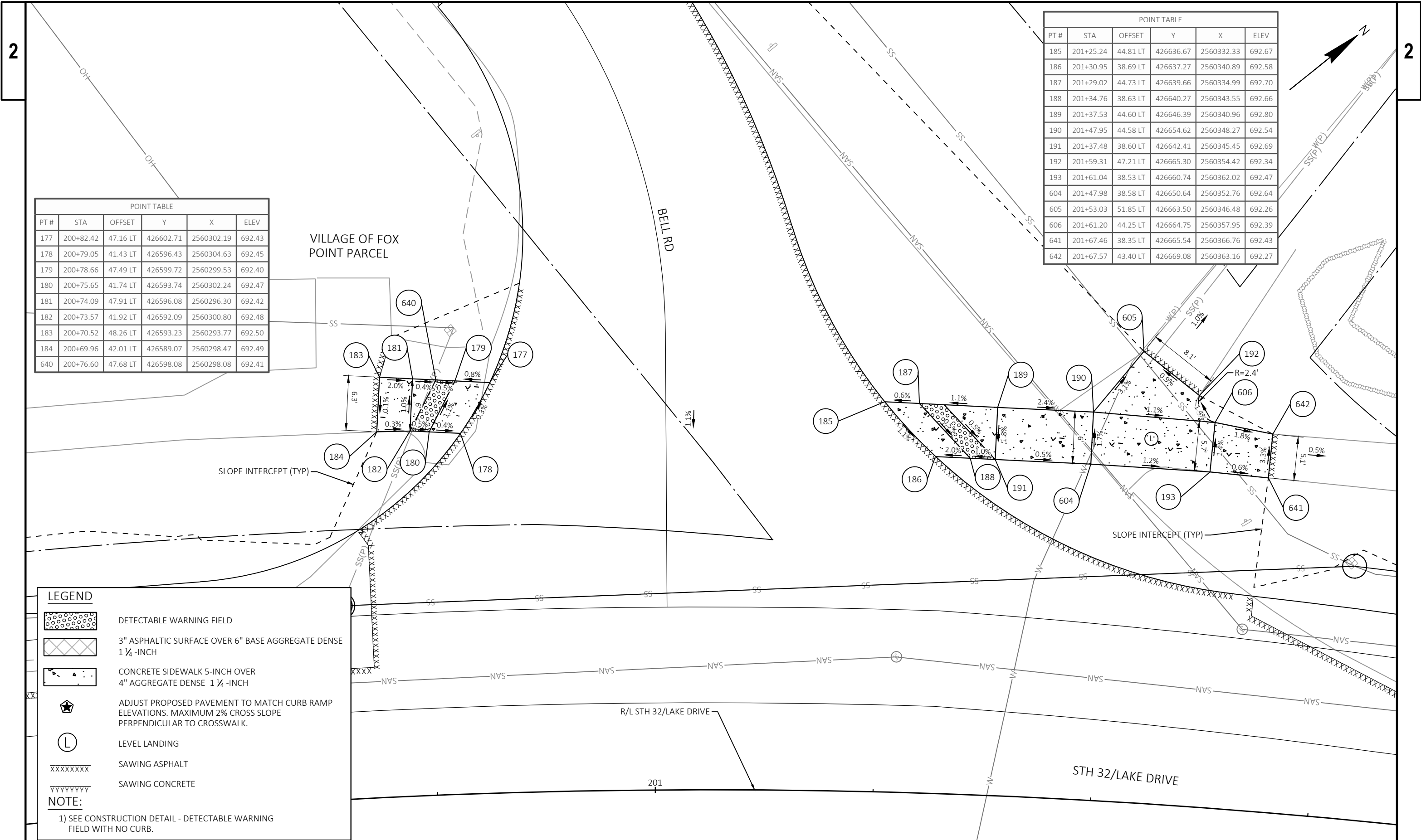


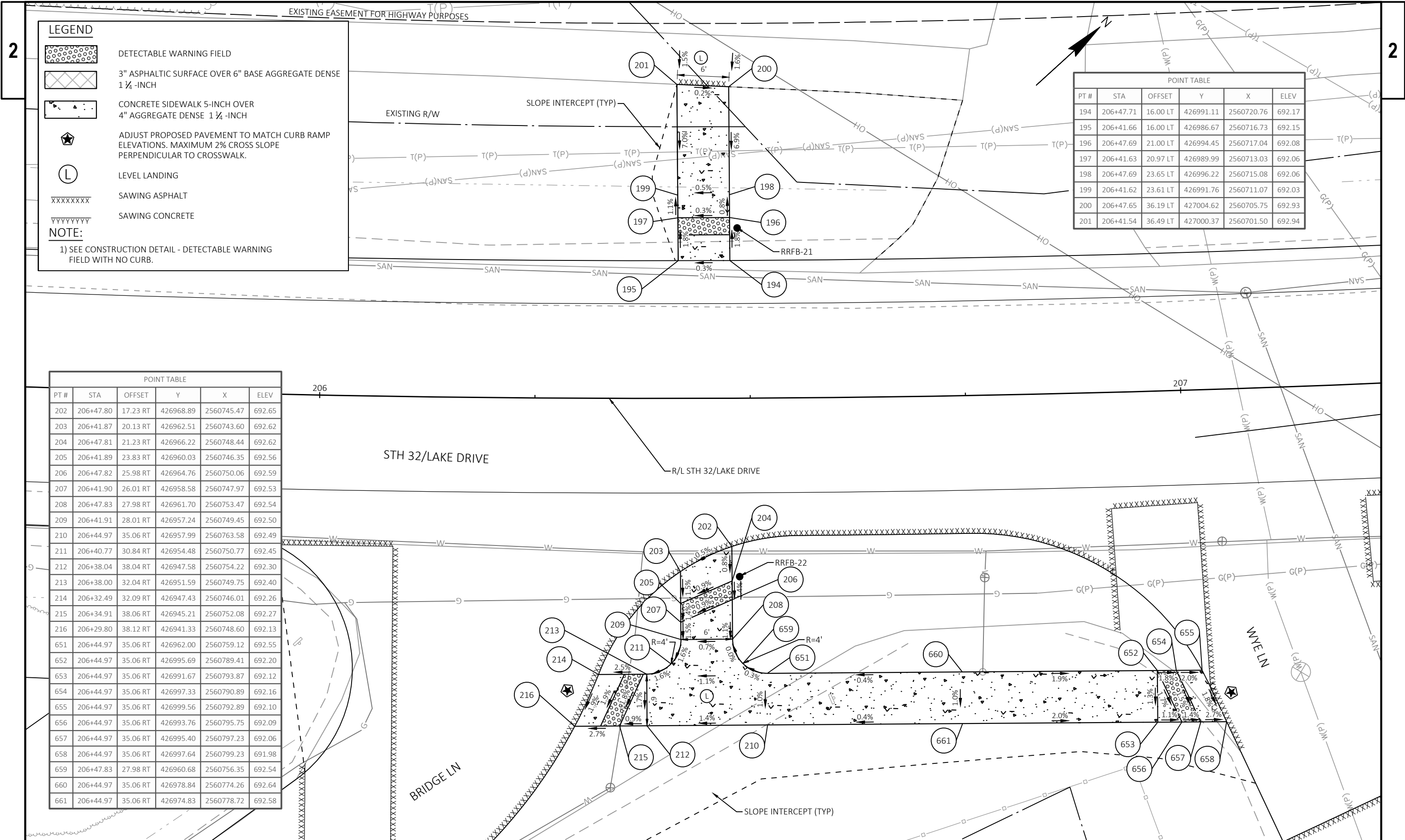








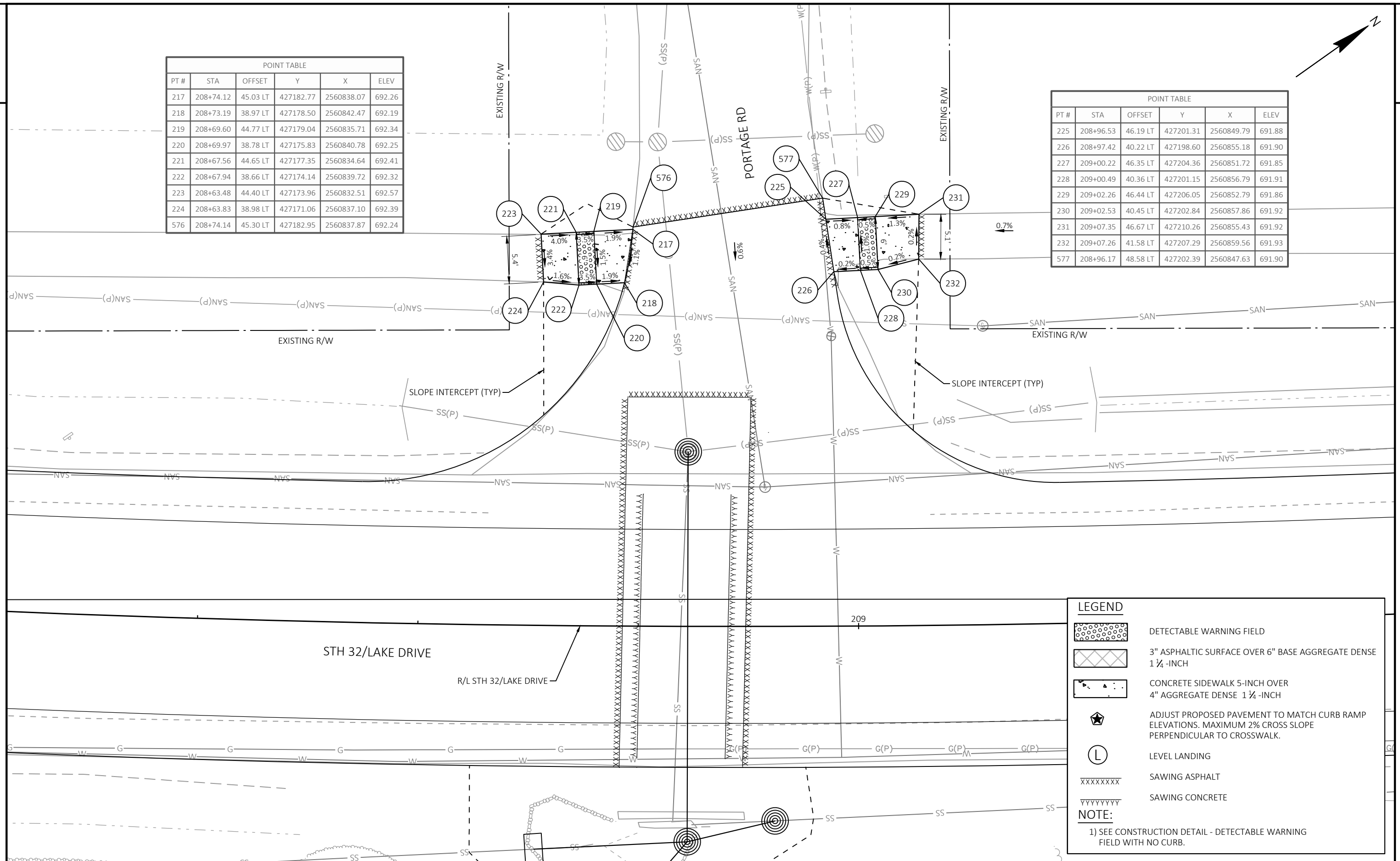


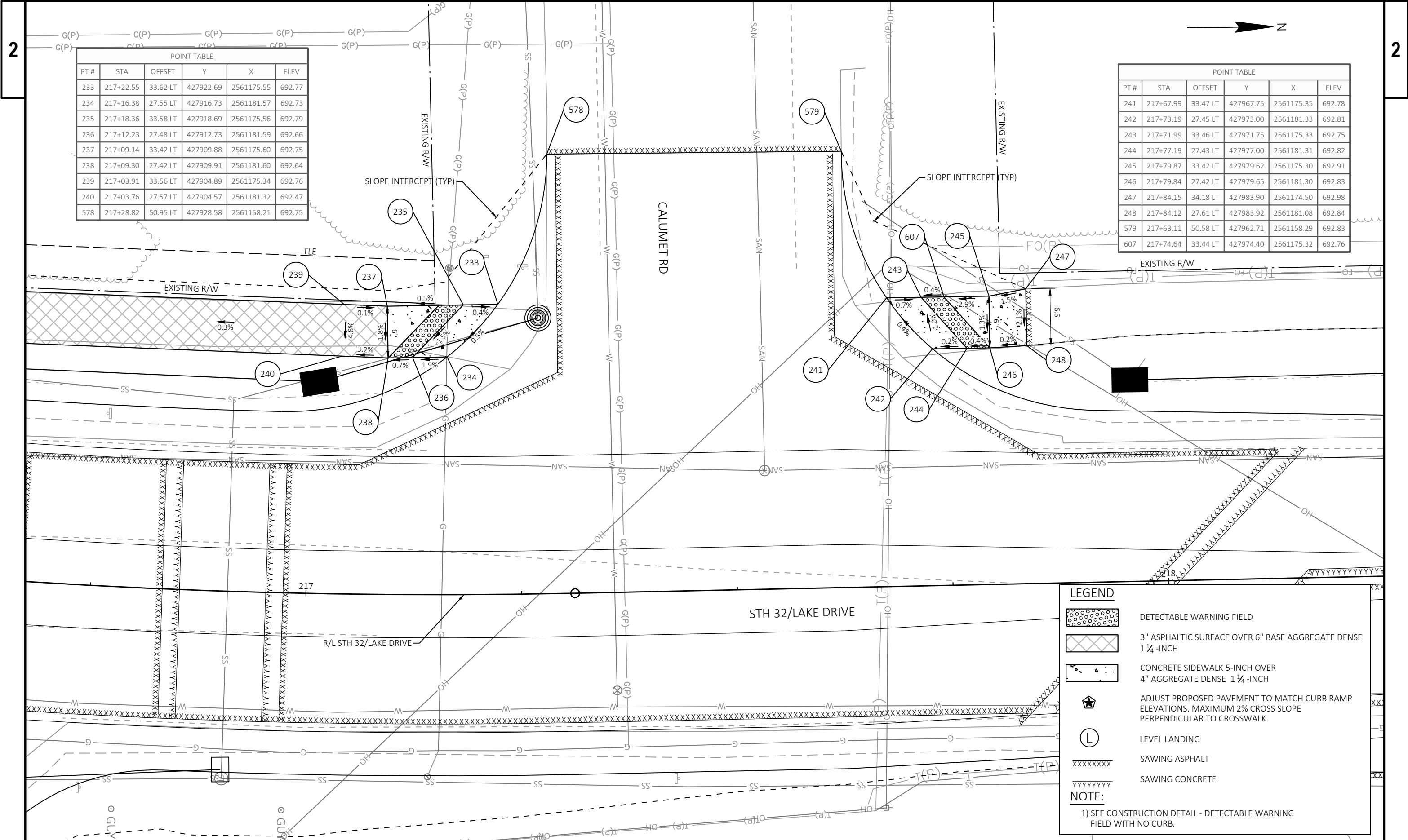




2

| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 225         | 208+96.53 | 46.19 LT | 427201.31 | 2560849.79 | 691.88 |
| 226         | 208+97.42 | 40.22 LT | 427198.60 | 2560855.18 | 691.90 |
| 227         | 209+00.22 | 46.35 LT | 427204.36 | 2560851.72 | 691.85 |
| 228         | 209+00.49 | 40.36 LT | 427201.15 | 2560856.79 | 691.91 |
| 229         | 209+02.26 | 46.44 LT | 427206.05 | 2560852.79 | 691.86 |
| 230         | 209+02.53 | 40.45 LT | 427202.84 | 2560857.86 | 691.92 |
| 231         | 209+07.35 | 46.67 LT | 427210.26 | 2560855.43 | 691.92 |
| 232         | 209+07.26 | 41.58 LT | 427207.29 | 2560859.56 | 691.93 |
| 577         | 208+96.17 | 48.58 LT | 427202.39 | 2560847.63 | 691.90 |





| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 233         | 217+22.55 | 33.62 LT | 427922.69 | 2561175.55 | 692.77 |
| 234         | 217+16.38 | 27.55 LT | 427916.73 | 2561181.57 | 692.73 |
| 235         | 217+18.36 | 33.58 LT | 427918.69 | 2561175.56 | 692.79 |
| 236         | 217+12.23 | 27.48 LT | 427912.73 | 2561181.59 | 692.66 |
| 237         | 217+09.14 | 33.42 LT | 427909.88 | 2561175.60 | 692.75 |
| 238         | 217+09.30 | 27.42 LT | 427909.91 | 2561181.60 | 692.64 |
| 239         | 217+03.91 | 33.56 LT | 427904.89 | 2561175.34 | 692.76 |
| 240         | 217+03.76 | 27.57 LT | 427904.57 | 2561181.32 | 692.47 |
| 578         | 217+28.82 | 50.95 LT | 427928.58 | 2561158.21 | 692.75 |

| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 241         | 217+67.99 | 33.47 LT | 427967.75 | 2561175.35 | 692.78 |
| 242         | 217+73.19 | 27.45 LT | 427973.00 | 2561181.33 | 692.81 |
| 243         | 217+71.99 | 33.46 LT | 427971.75 | 2561175.33 | 692.75 |
| 244         | 217+77.19 | 27.43 LT | 427977.00 | 2561181.31 | 692.82 |
| 245         | 217+79.87 | 33.42 LT | 427979.62 | 2561175.30 | 692.91 |
| 246         | 217+79.84 | 27.42 LT | 427979.65 | 2561181.30 | 692.83 |
| 247         | 217+84.15 | 34.18 LT | 427983.90 | 2561174.50 | 692.98 |
| 248         | 217+84.12 | 27.61 LT | 427983.92 | 2561181.08 | 692.84 |
| 579         | 217+63.11 | 50.58 LT | 427962.71 | 2561158.29 | 692.83 |
| 607         | 217+74.64 | 33.44 LT | 427974.40 | 2561175.32 | 692.76 |

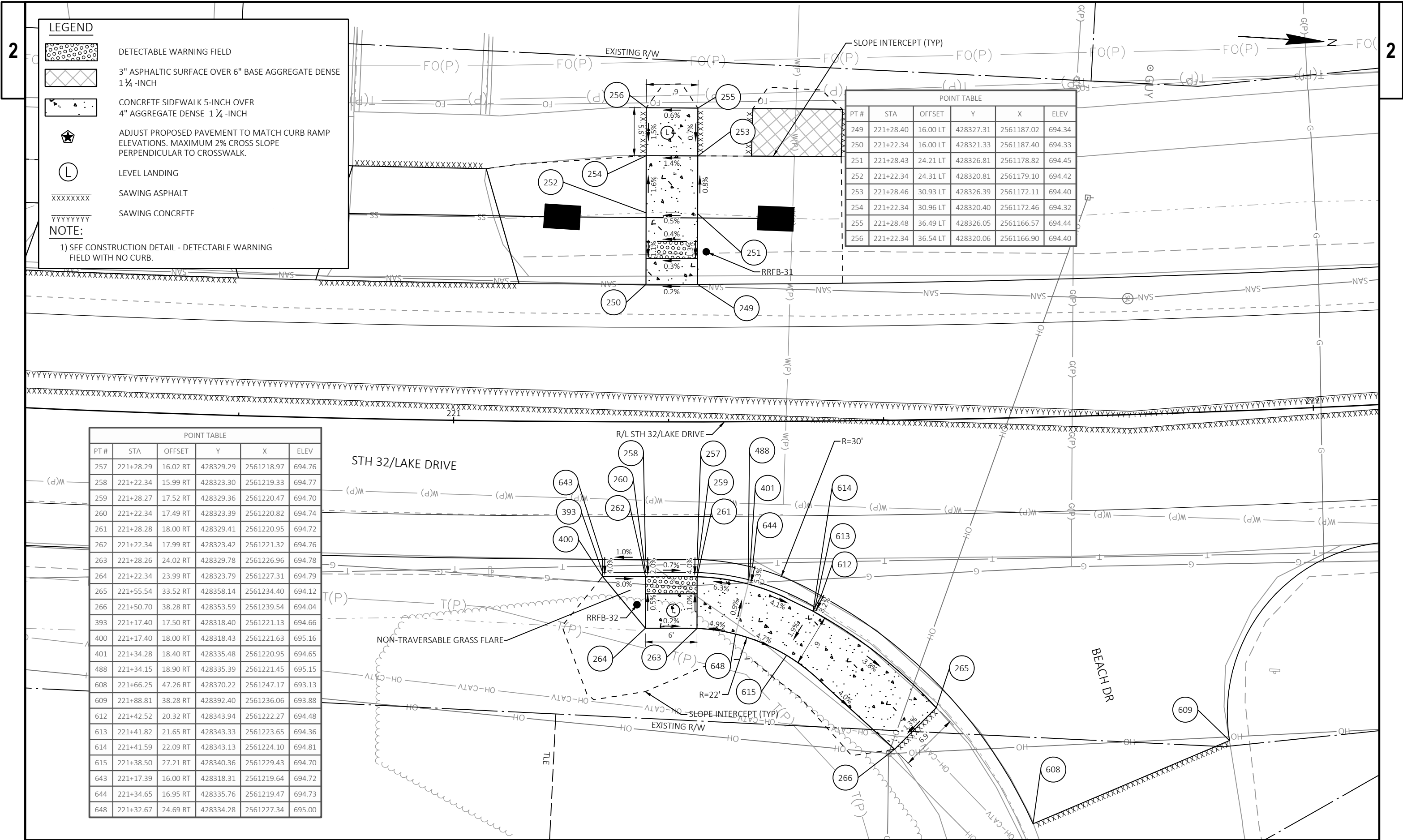
LEGEND

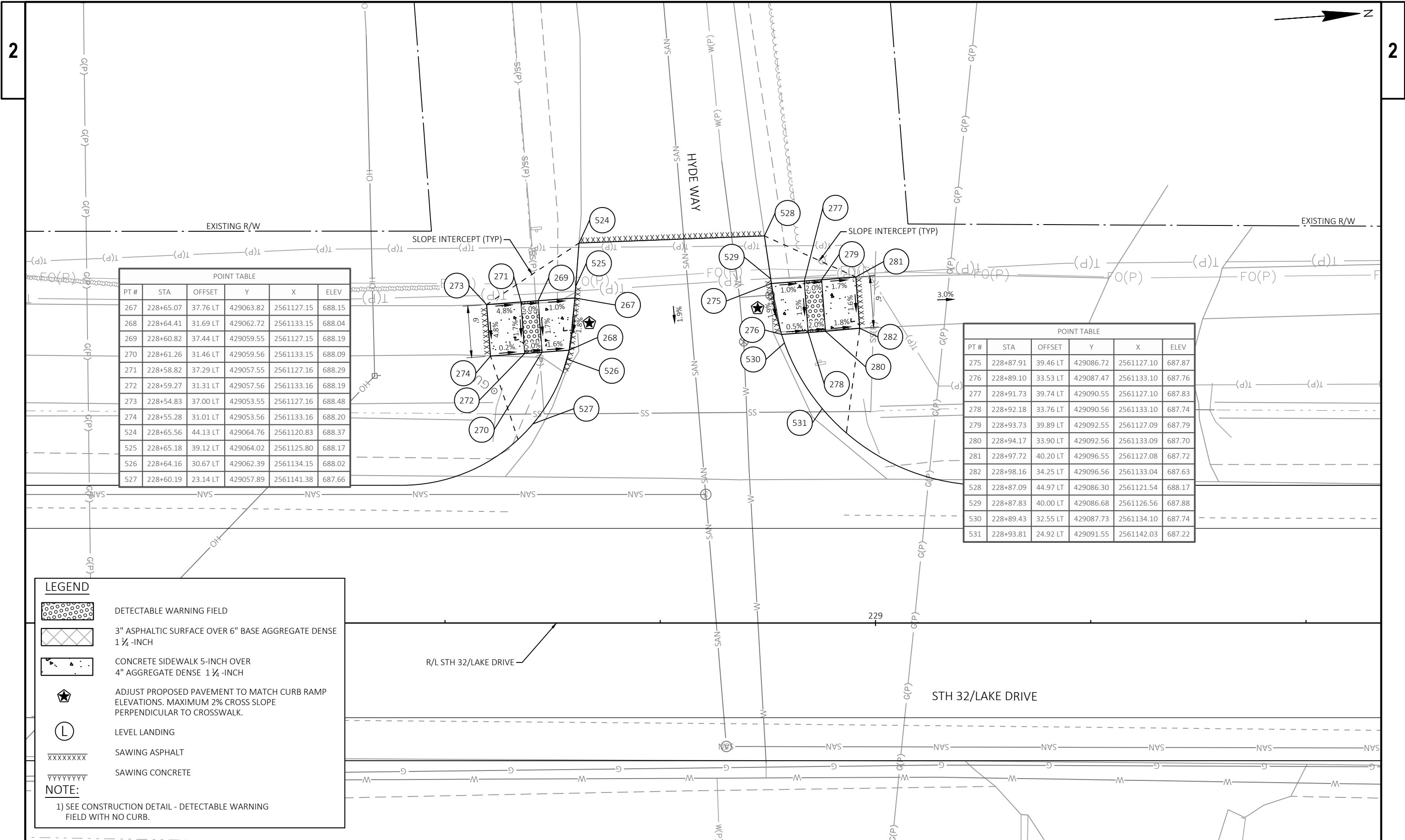
- DETECTABLE WARNING FIELD
- 3" ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE 1 3/4 -INCH
- CONCRETE SIDEWALK 5-INCH OVER 4" AGGREGATE DENSE 1 3/4 -INCH
- ADJUST PROPOSED PAVEMENT TO MATCH CURB RAMP ELEVATIONS. MAXIMUM 2% CROSS SLOPE PERPENDICULAR TO CROSSWALK.
- LEVEL LANDING
- SAWING ASPHALT
- SAWING CONCRETE

NOTE:

1) SEE CONSTRUCTION DETAIL - DETECTABLE WARNING FIELD WITH NO CURB.







LEGEND

DETECTABLE WARNING FIELD

3" ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE 1 1/4 -INCH

CONCRETE SIDEWALK 5-INCH OVER 4" AGGREGATE DENSE 1 1/4 -INCH

ADJUST PROPOSED PAVEMENT TO MATCH CURB RAMP ELEVATIONS. MAXIMUM 2% CROSS SLOPE PERPENDICULAR TO CROSSWALK.

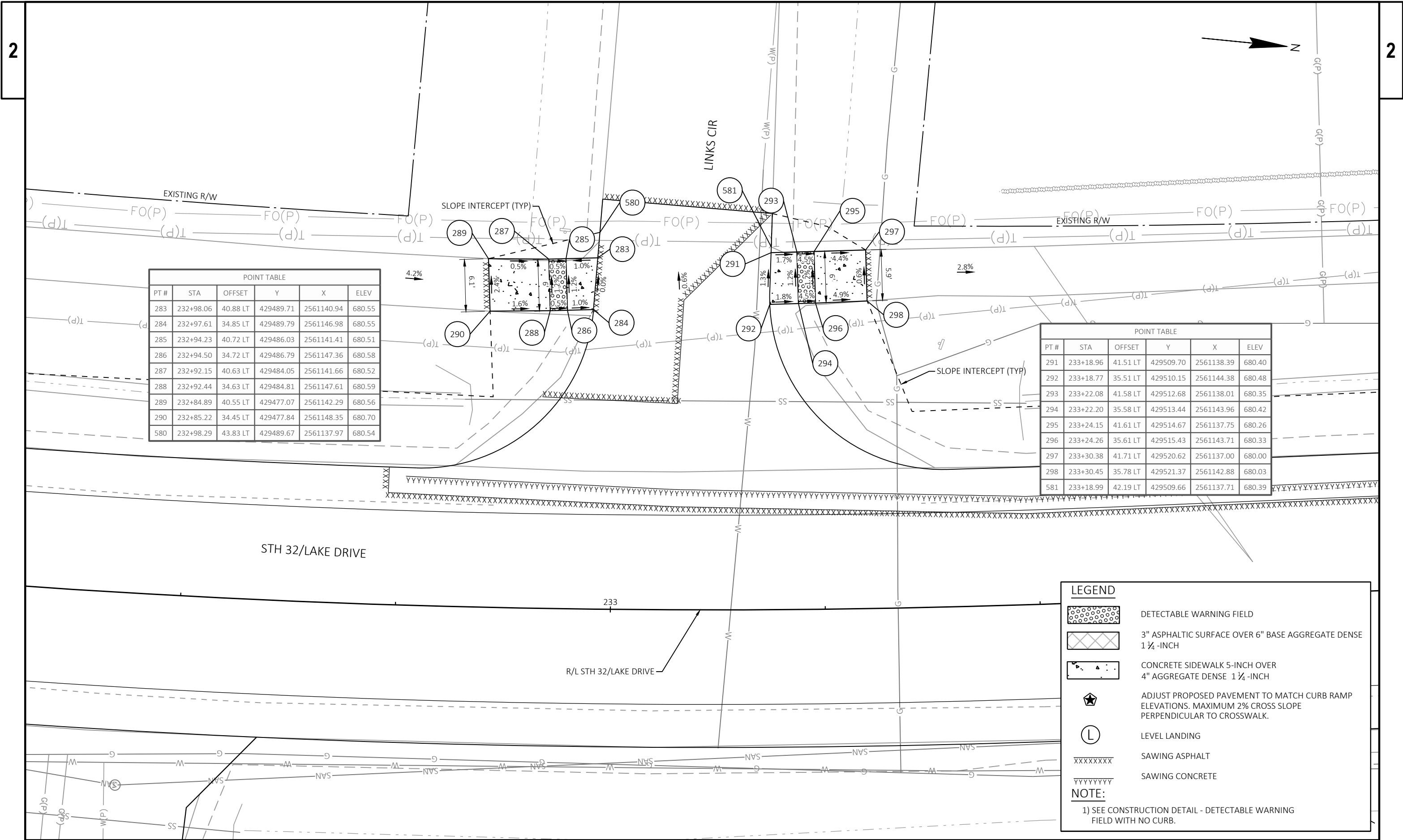
LEVEL LANDING

SAWING ASPHALT

SAWING CONCRETE

NOTE:

1) SEE CONSTRUCTION DETAIL - DETECTABLE WARNING FIELD WITH NO CURB.



| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 283         | 232+98.06 | 40.88 LT | 429489.71 | 2561140.94 | 680.55 |
| 284         | 232+97.61 | 34.85 LT | 429489.79 | 2561146.98 | 680.55 |
| 285         | 232+94.23 | 40.72 LT | 429486.03 | 2561141.41 | 680.51 |
| 286         | 232+94.50 | 34.72 LT | 429486.79 | 2561147.36 | 680.58 |
| 287         | 232+92.15 | 40.63 LT | 429484.05 | 2561141.66 | 680.52 |
| 288         | 232+92.44 | 34.63 LT | 429484.81 | 2561147.61 | 680.59 |
| 289         | 232+84.89 | 40.55 LT | 429477.07 | 2561142.29 | 680.56 |
| 290         | 232+85.22 | 34.45 LT | 429477.84 | 2561148.35 | 680.70 |
| 580         | 232+98.29 | 43.83 LT | 429489.67 | 2561137.97 | 680.54 |

| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 291         | 233+18.96 | 41.51 LT | 429509.70 | 2561138.39 | 680.40 |
| 292         | 233+18.77 | 35.51 LT | 429510.15 | 2561144.38 | 680.48 |
| 293         | 233+22.08 | 41.58 LT | 429512.68 | 2561138.01 | 680.35 |
| 294         | 233+22.20 | 35.58 LT | 429513.44 | 2561143.96 | 680.42 |
| 295         | 233+24.15 | 41.61 LT | 429514.67 | 2561137.75 | 680.26 |
| 296         | 233+24.26 | 35.61 LT | 429515.43 | 2561143.71 | 680.33 |
| 297         | 233+30.38 | 41.71 LT | 429520.62 | 2561137.00 | 680.00 |
| 298         | 233+30.45 | 35.78 LT | 429521.37 | 2561142.88 | 680.03 |
| 581         | 233+18.99 | 42.19 LT | 429509.66 | 2561137.71 | 680.39 |

LEGEND

DETECTABLE WARNING FIELD

3" ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE 1 1/4" -INCH

CONCRETE SIDEWALK 5-INCH OVER 4" AGGREGATE DENSE 1 1/4" -INCH

ADJUST PROPOSED PAVEMENT TO MATCH CURB RAMP ELEVATIONS. MAXIMUM 2% CROSS SLOPE PERPENDICULAR TO CROSSWALK.

LEVEL LANDING

SAWING ASPHALT

SAWING CONCRETE

NOTE:

1) SEE CONSTRUCTION DETAIL - DETECTABLE WARNING FIELD WITH NO CURB.

LEGEND

DETECTABLE WARNING FIELD

3" ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE 1 1/4 -INCH

CONCRETE SIDEWALK 5-INCH OVER 4" AGGREGATE DENSE 1 1/4 -INCH

ADJUST PROPOSED PAVEMENT TO MATCH CURB RAMP ELEVATIONS. MAXIMUM 2% CROSS SLOPE PERPENDICULAR TO CROSSWALK.

LEVEL LANDING

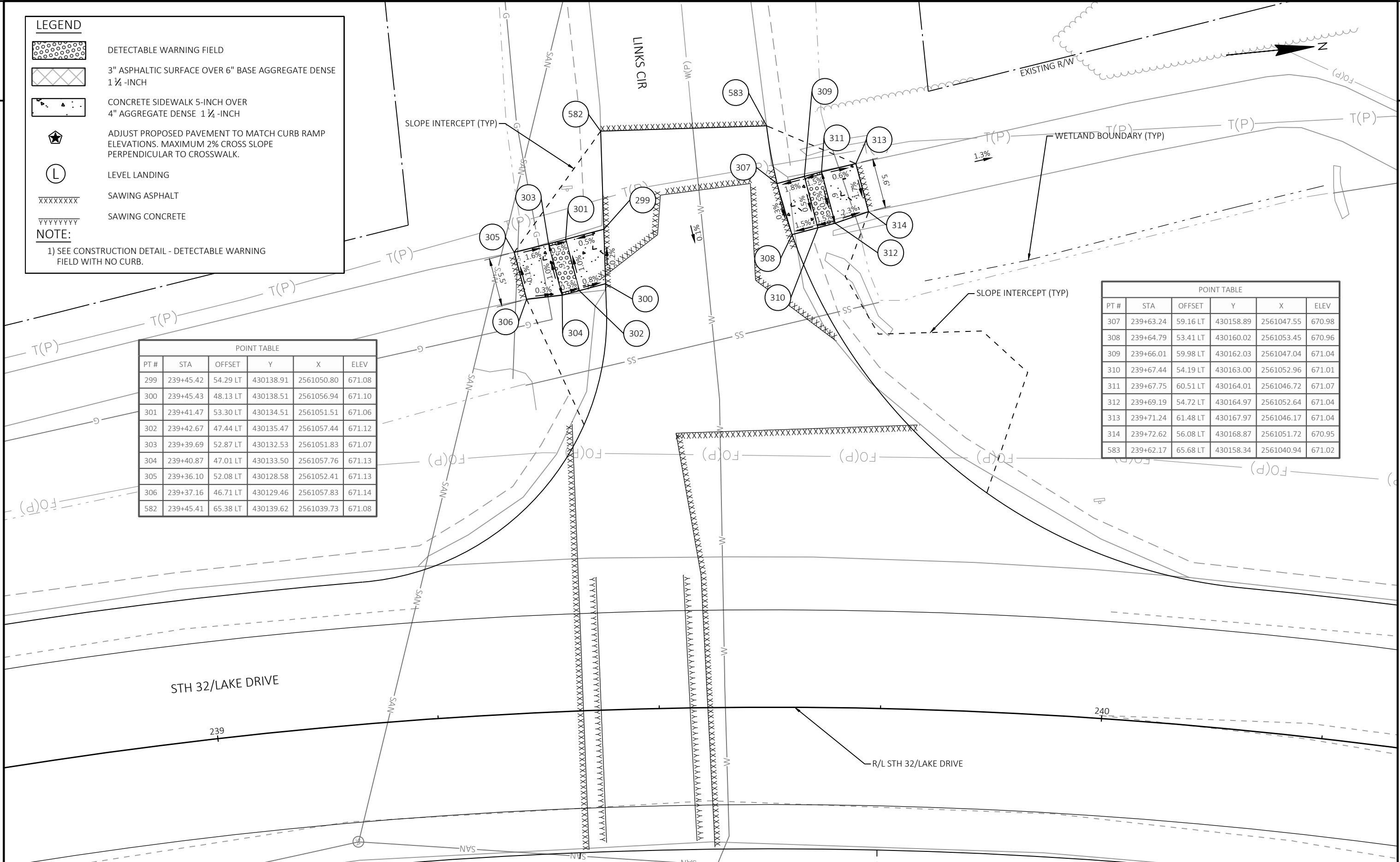
SAWING ASPHALT

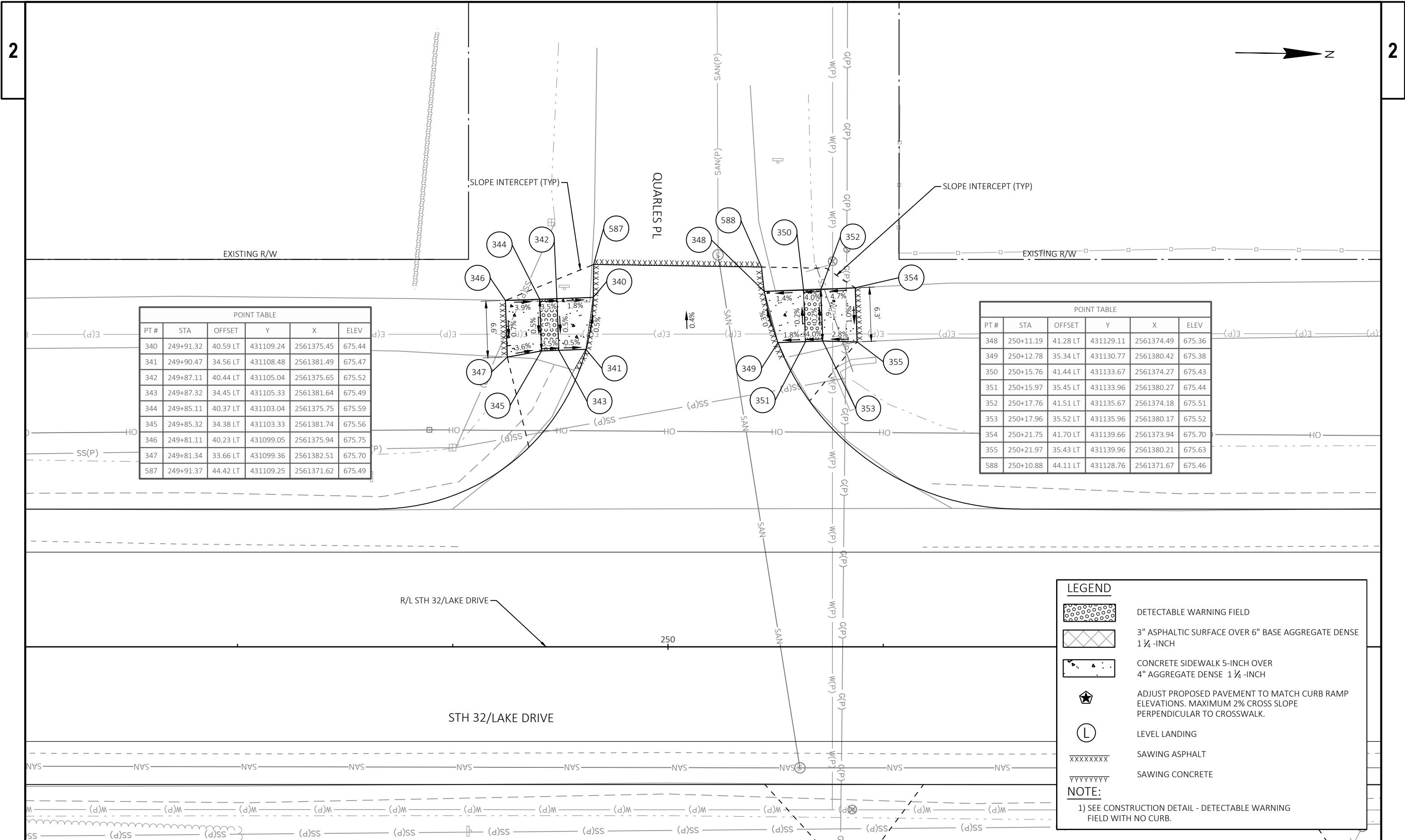
SAWING CONCRETE

NOTE:  
1) SEE CONSTRUCTION DETAIL - DETECTABLE WARNING FIELD WITH NO CURB.

| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 299         | 239+45.42 | 54.29 LT | 430138.91 | 2561050.80 | 671.08 |
| 300         | 239+45.43 | 48.13 LT | 430138.51 | 2561056.94 | 671.10 |
| 301         | 239+41.47 | 53.30 LT | 430134.51 | 2561051.51 | 671.06 |
| 302         | 239+42.67 | 47.44 LT | 430135.47 | 2561057.44 | 671.12 |
| 303         | 239+39.69 | 52.87 LT | 430132.53 | 2561051.83 | 671.07 |
| 304         | 239+40.87 | 47.01 LT | 430133.50 | 2561057.76 | 671.13 |
| 305         | 239+36.10 | 52.08 LT | 430128.58 | 2561052.41 | 671.13 |
| 306         | 239+37.16 | 46.71 LT | 430129.46 | 2561057.83 | 671.14 |
| 582         | 239+45.41 | 65.38 LT | 430139.62 | 2561039.73 | 671.08 |

| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 307         | 239+63.24 | 59.16 LT | 430158.89 | 2561047.55 | 670.98 |
| 308         | 239+64.79 | 53.41 LT | 430160.02 | 2561053.45 | 670.96 |
| 309         | 239+66.01 | 59.98 LT | 430162.03 | 2561047.04 | 671.04 |
| 310         | 239+67.44 | 54.19 LT | 430163.00 | 2561052.96 | 671.01 |
| 311         | 239+67.75 | 60.51 LT | 430164.01 | 2561046.72 | 671.07 |
| 312         | 239+69.19 | 54.72 LT | 430164.97 | 2561052.64 | 671.04 |
| 313         | 239+71.24 | 61.48 LT | 430167.97 | 2561046.17 | 671.04 |
| 314         | 239+72.62 | 56.08 LT | 430168.87 | 2561051.72 | 670.95 |
| 583         | 239+62.17 | 65.68 LT | 430158.34 | 2561040.94 | 671.02 |





| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 340         | 249+91.32 | 40.59 LT | 431109.24 | 2561375.45 | 675.44 |
| 341         | 249+90.47 | 34.56 LT | 431108.48 | 2561381.49 | 675.47 |
| 342         | 249+87.11 | 40.44 LT | 431105.04 | 2561375.65 | 675.52 |
| 343         | 249+87.32 | 34.45 LT | 431105.33 | 2561381.64 | 675.49 |
| 344         | 249+85.11 | 40.37 LT | 431103.04 | 2561375.75 | 675.59 |
| 345         | 249+85.32 | 34.38 LT | 431103.33 | 2561381.74 | 675.56 |
| 346         | 249+81.11 | 40.23 LT | 431099.05 | 2561375.94 | 675.75 |
| 347         | 249+81.34 | 33.66 LT | 431099.36 | 2561382.51 | 675.70 |
| 587         | 249+91.37 | 44.42 LT | 431109.25 | 2561371.62 | 675.49 |

| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 348         | 250+11.19 | 41.28 LT | 431129.11 | 2561374.49 | 675.36 |
| 349         | 250+12.78 | 35.34 LT | 431130.77 | 2561380.42 | 675.38 |
| 350         | 250+15.76 | 41.44 LT | 431133.67 | 2561374.27 | 675.43 |
| 351         | 250+15.97 | 35.45 LT | 431133.96 | 2561380.27 | 675.44 |
| 352         | 250+17.76 | 41.51 LT | 431135.67 | 2561374.18 | 675.51 |
| 353         | 250+17.96 | 35.52 LT | 431135.96 | 2561380.17 | 675.52 |
| 354         | 250+21.75 | 41.70 LT | 431139.66 | 2561373.94 | 675.70 |
| 355         | 250+21.97 | 35.43 LT | 431139.96 | 2561380.21 | 675.63 |
| 588         | 250+10.88 | 44.11 LT | 431128.76 | 2561371.67 | 675.46 |

LEGEND

DETECTABLE WARNING FIELD

3" ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE 1 1/4 -INCH

CONCRETE SIDEWALK 5-INCH OVER 4" AGGREGATE DENSE 1 1/4 -INCH

ADJUST PROPOSED PAVEMENT TO MATCH CURB RAMP ELEVATIONS. MAXIMUM 2% CROSS SLOPE PERPENDICULAR TO CROSSWALK.

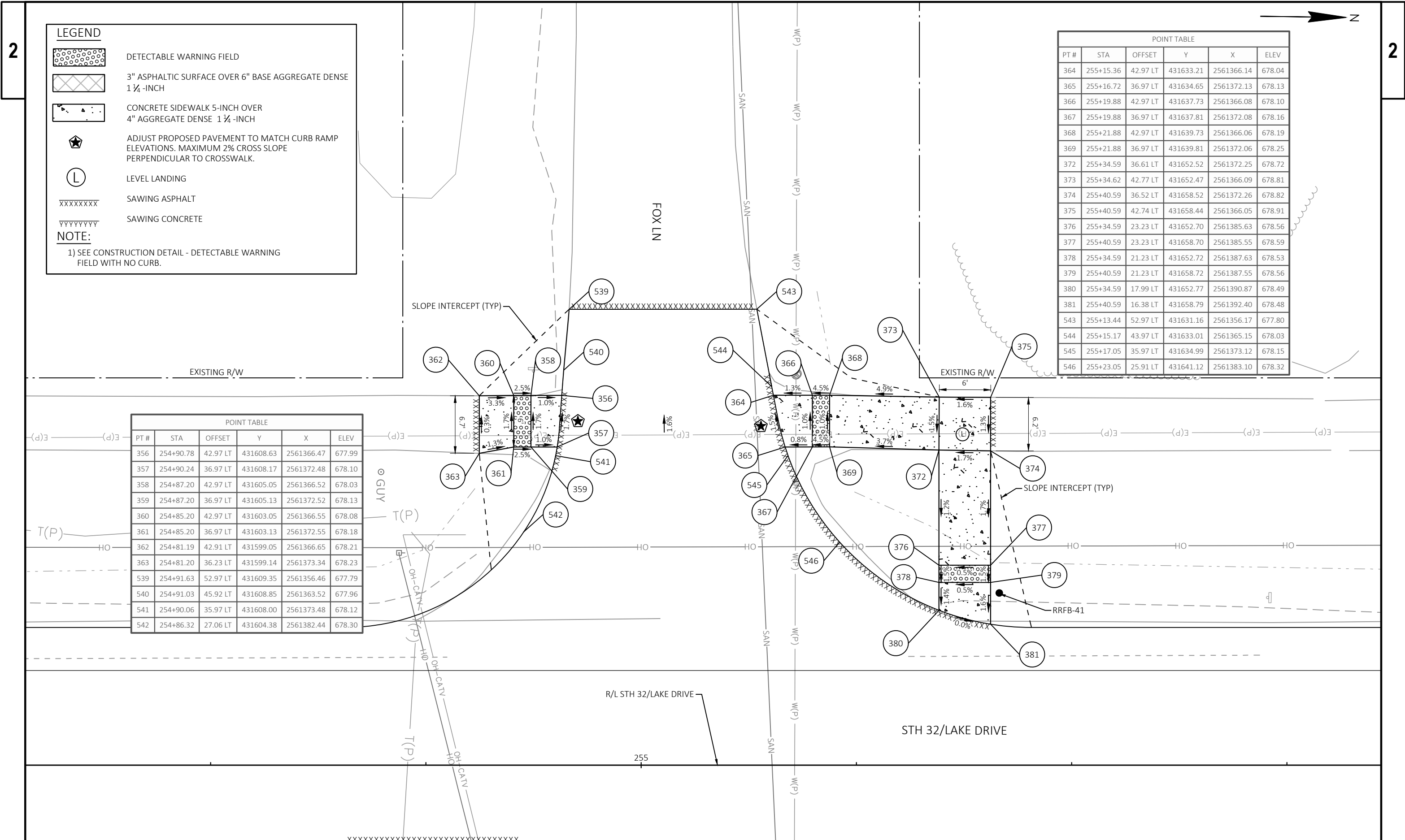
LEVEL LANDING

SAWING ASPHALT

SAWING CONCRETE

NOTE:

1) SEE CONSTRUCTION DETAIL - DETECTABLE WARNING FIELD WITH NO CURB.



LEGEND

DETECTABLE WARNING FIELD

3" ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE 1 1/4 -INCH

CONCRETE SIDEWALK 5-INCH OVER 4" AGGREGATE DENSE 1 1/4 -INCH

ADJUST PROPOSED PAVEMENT TO MATCH CURB RAMP ELEVATIONS. MAXIMUM 2% CROSS SLOPE PERPENDICULAR TO CROSSWALK.

LEVEL LANDING

XXXXXXXXXX

SAWING ASPHALT

YYYYYYYYYY

SAWING CONCRETE

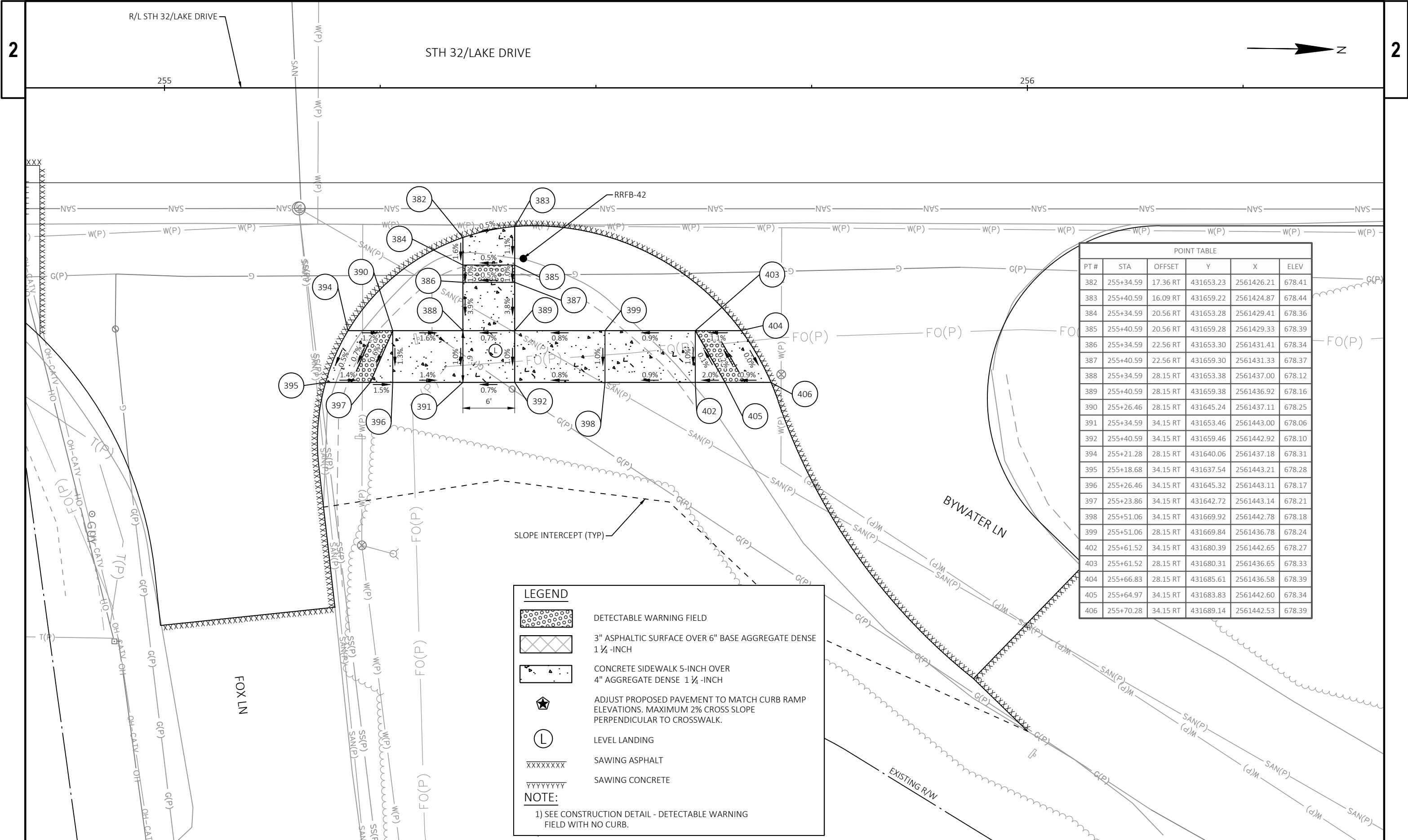
NOTE:

1) SEE CONSTRUCTION DETAIL - DETECTABLE WARNING FIELD WITH NO CURB.

| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 356         | 254+90.78 | 42.97 LT | 431608.63 | 2561366.47 | 677.99 |
| 357         | 254+90.24 | 36.97 LT | 431608.17 | 2561372.48 | 678.10 |
| 358         | 254+87.20 | 42.97 LT | 431605.05 | 2561366.52 | 678.03 |
| 359         | 254+87.20 | 36.97 LT | 431605.13 | 2561372.52 | 678.13 |
| 360         | 254+85.20 | 42.97 LT | 431603.05 | 2561366.55 | 678.08 |
| 361         | 254+85.20 | 36.97 LT | 431603.13 | 2561372.55 | 678.18 |
| 362         | 254+81.19 | 42.91 LT | 431599.05 | 2561366.65 | 678.21 |
| 363         | 254+81.20 | 36.23 LT | 431599.14 | 2561373.34 | 678.23 |
| 539         | 254+91.63 | 52.97 LT | 431609.35 | 2561356.46 | 677.79 |
| 540         | 254+91.03 | 45.92 LT | 431608.85 | 2561363.52 | 677.96 |
| 541         | 254+90.06 | 35.97 LT | 431608.00 | 2561373.48 | 678.12 |
| 542         | 254+86.32 | 27.06 LT | 431604.38 | 2561382.44 | 678.30 |

| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 364         | 255+15.36 | 42.97 LT | 431633.21 | 2561366.14 | 678.04 |
| 365         | 255+16.72 | 36.97 LT | 431634.65 | 2561372.13 | 678.13 |
| 366         | 255+19.88 | 42.97 LT | 431637.73 | 2561366.08 | 678.10 |
| 367         | 255+19.88 | 36.97 LT | 431637.81 | 2561372.08 | 678.16 |
| 368         | 255+21.88 | 42.97 LT | 431639.73 | 2561366.06 | 678.19 |
| 369         | 255+21.88 | 36.97 LT | 431639.81 | 2561372.06 | 678.25 |
| 372         | 255+34.59 | 36.61 LT | 431652.52 | 2561372.25 | 678.72 |
| 373         | 255+34.62 | 42.77 LT | 431652.47 | 2561366.09 | 678.81 |
| 374         | 255+40.59 | 36.52 LT | 431658.52 | 2561372.26 | 678.82 |
| 375         | 255+40.59 | 42.74 LT | 431658.44 | 2561366.05 | 678.91 |
| 376         | 255+34.59 | 23.23 LT | 431652.70 | 2561385.63 | 678.56 |
| 377         | 255+40.59 | 23.23 LT | 431658.70 | 2561385.55 | 678.59 |
| 378         | 255+34.59 | 21.23 LT | 431652.72 | 2561387.63 | 678.53 |
| 379         | 255+40.59 | 21.23 LT | 431658.72 | 2561387.55 | 678.56 |
| 380         | 255+34.59 | 17.99 LT | 431652.77 | 2561390.87 | 678.49 |
| 381         | 255+40.59 | 16.38 LT | 431658.79 | 2561392.40 | 678.48 |
| 543         | 255+13.44 | 52.97 LT | 431631.16 | 2561356.17 | 677.80 |
| 544         | 255+15.17 | 43.97 LT | 431633.01 | 2561365.15 | 678.03 |
| 545         | 255+17.05 | 35.97 LT | 431634.99 | 2561373.12 | 678.15 |
| 546         | 255+23.05 | 25.91 LT | 431641.12 | 2561383.10 | 678.32 |





| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 382         | 255+34.59 | 17.36 RT | 431653.23 | 2561426.21 | 678.41 |
| 383         | 255+40.59 | 16.09 RT | 431659.22 | 2561424.87 | 678.44 |
| 384         | 255+34.59 | 20.56 RT | 431653.28 | 2561429.41 | 678.36 |
| 385         | 255+40.59 | 20.56 RT | 431659.28 | 2561429.33 | 678.39 |
| 386         | 255+34.59 | 22.56 RT | 431653.30 | 2561431.41 | 678.34 |
| 387         | 255+40.59 | 22.56 RT | 431659.30 | 2561431.33 | 678.37 |
| 388         | 255+34.59 | 28.15 RT | 431653.38 | 2561437.00 | 678.12 |
| 389         | 255+40.59 | 28.15 RT | 431659.38 | 2561436.92 | 678.16 |
| 390         | 255+26.46 | 28.15 RT | 431645.24 | 2561437.11 | 678.25 |
| 391         | 255+34.59 | 34.15 RT | 431653.46 | 2561443.00 | 678.06 |
| 392         | 255+40.59 | 34.15 RT | 431659.46 | 2561442.92 | 678.10 |
| 394         | 255+21.28 | 28.15 RT | 431640.06 | 2561437.18 | 678.31 |
| 395         | 255+18.68 | 34.15 RT | 431637.54 | 2561443.21 | 678.28 |
| 396         | 255+26.46 | 34.15 RT | 431645.32 | 2561443.11 | 678.17 |
| 397         | 255+23.86 | 34.15 RT | 431642.72 | 2561443.14 | 678.21 |
| 398         | 255+51.06 | 34.15 RT | 431669.92 | 2561442.78 | 678.18 |
| 399         | 255+51.06 | 28.15 RT | 431669.84 | 2561436.78 | 678.24 |
| 402         | 255+61.52 | 34.15 RT | 431680.39 | 2561442.65 | 678.27 |
| 403         | 255+61.52 | 28.15 RT | 431680.31 | 2561436.65 | 678.33 |
| 404         | 255+66.83 | 28.15 RT | 431685.61 | 2561436.58 | 678.39 |
| 405         | 255+64.97 | 34.15 RT | 431683.83 | 2561442.60 | 678.34 |
| 406         | 255+70.28 | 34.15 RT | 431689.14 | 2561442.53 | 678.39 |

LEGEND

DETECTABLE WARNING FIELD

3" ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE 1 1/4 -INCH

CONCRETE SIDEWALK 5-INCH OVER 4" AGGREGATE DENSE 1 1/4 -INCH

ADJUST PROPOSED PAVEMENT TO MATCH CURB RAMP ELEVATIONS. MAXIMUM 2% CROSS SLOPE PERPENDICULAR TO CROSSWALK.

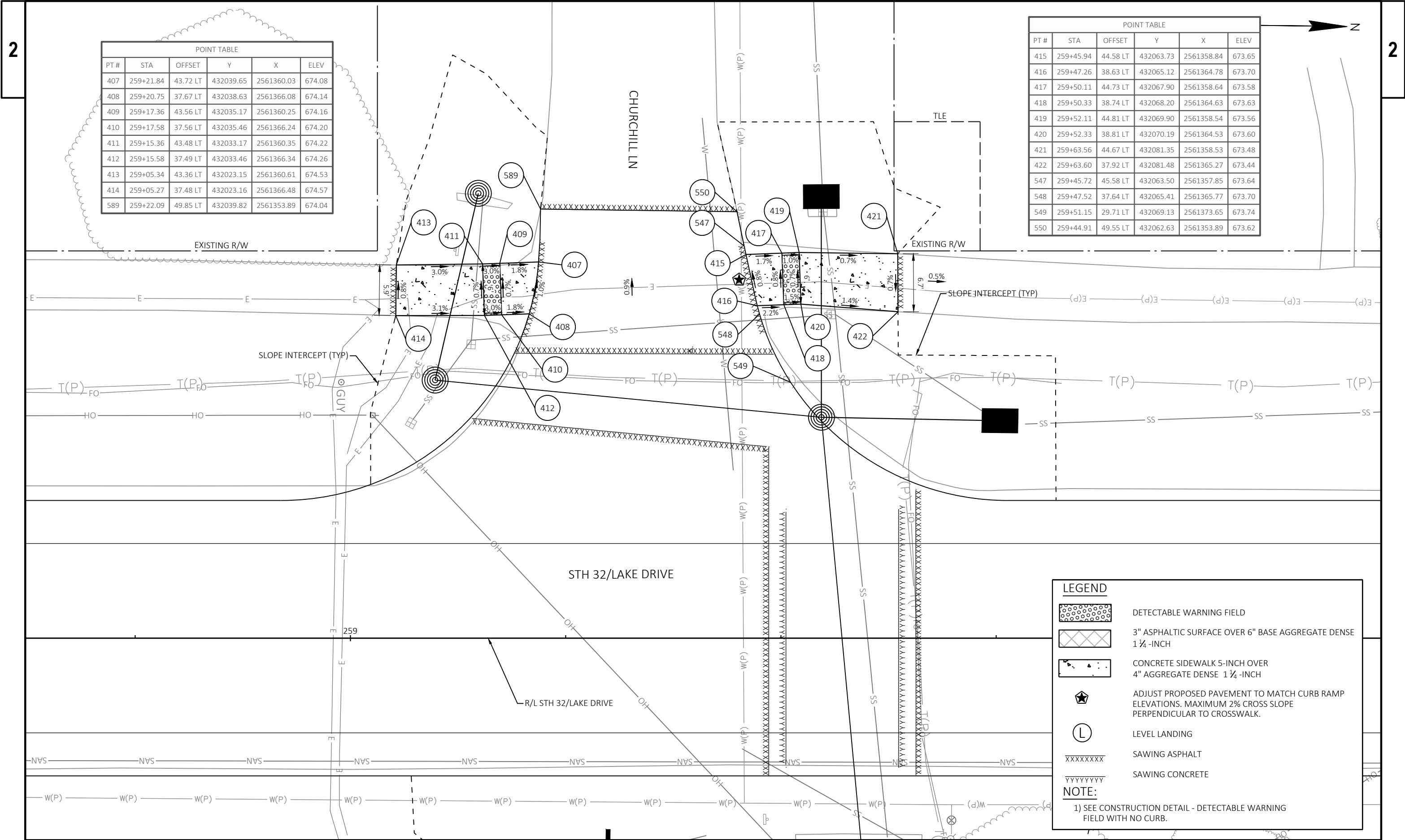
LEVEL LANDING

SAWING ASPHALT

SAWING CONCRETE

NOTE:

1) SEE CONSTRUCTION DETAIL - DETECTABLE WARNING FIELD WITH NO CURB.



| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 407         | 259+21.84 | 43.72 LT | 432039.65 | 2561360.03 | 674.08 |
| 408         | 259+20.75 | 37.67 LT | 432038.63 | 2561366.08 | 674.14 |
| 409         | 259+17.36 | 43.56 LT | 432035.17 | 2561360.25 | 674.16 |
| 410         | 259+17.58 | 37.56 LT | 432035.46 | 2561366.24 | 674.20 |
| 411         | 259+15.36 | 43.48 LT | 432033.17 | 2561360.35 | 674.22 |
| 412         | 259+15.58 | 37.49 LT | 432033.46 | 2561366.34 | 674.26 |
| 413         | 259+05.34 | 43.36 LT | 432023.15 | 2561360.61 | 674.53 |
| 414         | 259+05.27 | 37.48 LT | 432023.16 | 2561366.48 | 674.57 |
| 589         | 259+22.09 | 49.85 LT | 432039.82 | 2561353.89 | 674.04 |

| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 415         | 259+45.94 | 44.58 LT | 432063.73 | 2561358.84 | 673.65 |
| 416         | 259+47.26 | 38.63 LT | 432065.12 | 2561364.78 | 673.70 |
| 417         | 259+50.11 | 44.73 LT | 432067.90 | 2561358.64 | 673.58 |
| 418         | 259+50.33 | 38.74 LT | 432068.20 | 2561364.63 | 673.63 |
| 419         | 259+52.11 | 44.81 LT | 432069.90 | 2561358.54 | 673.56 |
| 420         | 259+52.33 | 38.81 LT | 432070.19 | 2561364.53 | 673.60 |
| 421         | 259+63.56 | 44.67 LT | 432081.35 | 2561358.53 | 673.48 |
| 422         | 259+63.60 | 37.92 LT | 432081.48 | 2561365.27 | 673.44 |
| 547         | 259+45.72 | 45.58 LT | 432063.50 | 2561357.85 | 673.64 |
| 548         | 259+47.52 | 37.64 LT | 432065.41 | 2561365.77 | 673.70 |
| 549         | 259+51.15 | 29.71 LT | 432069.13 | 2561373.65 | 673.74 |
| 550         | 259+44.91 | 49.55 LT | 432062.63 | 2561353.89 | 673.62 |

LEGEND

DETECTABLE WARNING FIELD

3" ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE 1 1/4 -INCH

CONCRETE SIDEWALK 5-INCH OVER 4" AGGREGATE DENSE 1 1/4 -INCH

ADJUST PROPOSED PAVEMENT TO MATCH CURB RAMP ELEVATIONS. MAXIMUM 2% CROSS SLOPE PERPENDICULAR TO CROSSWALK.

LEVEL LANDING

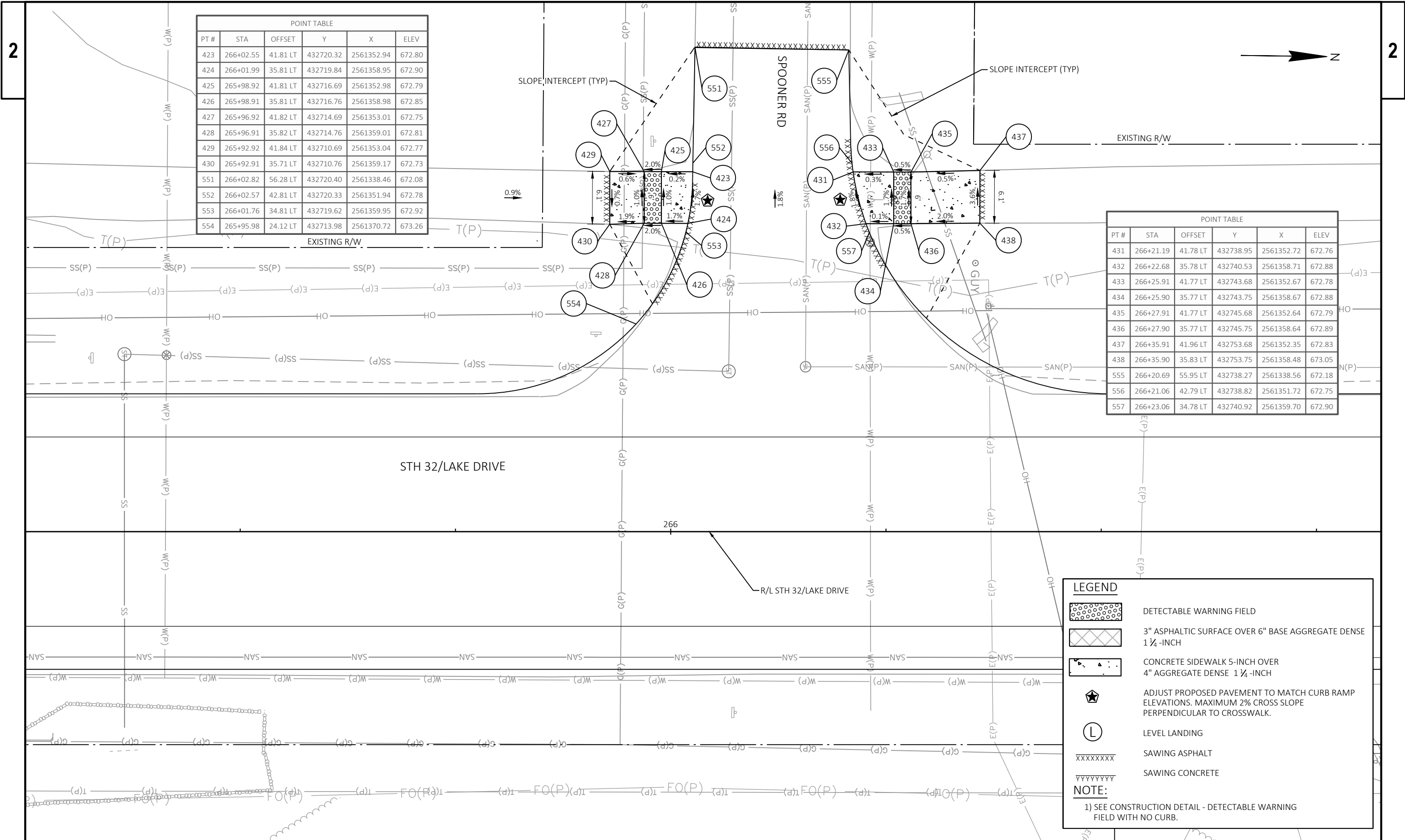
SAWING ASPHALT

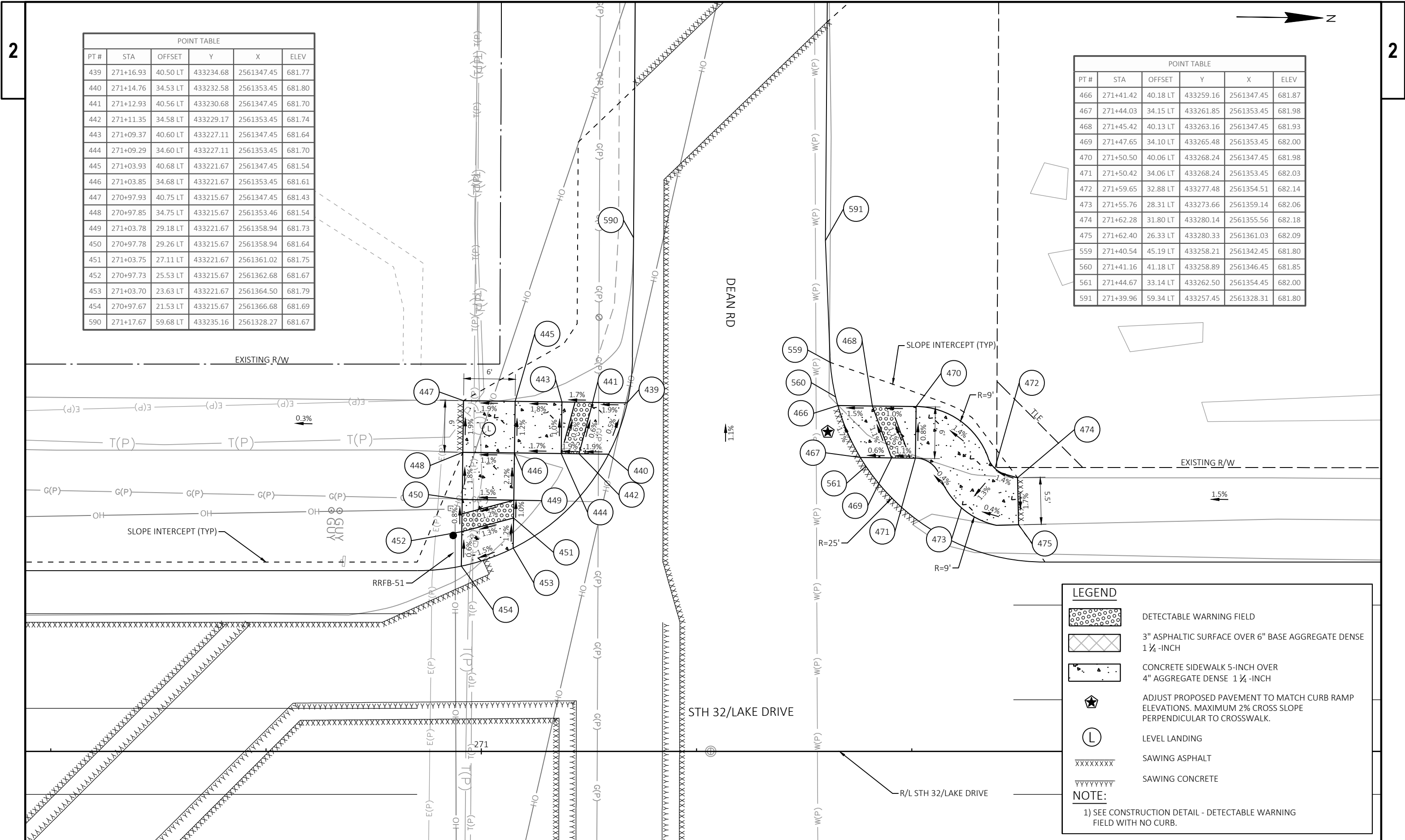
SAWING CONCRETE

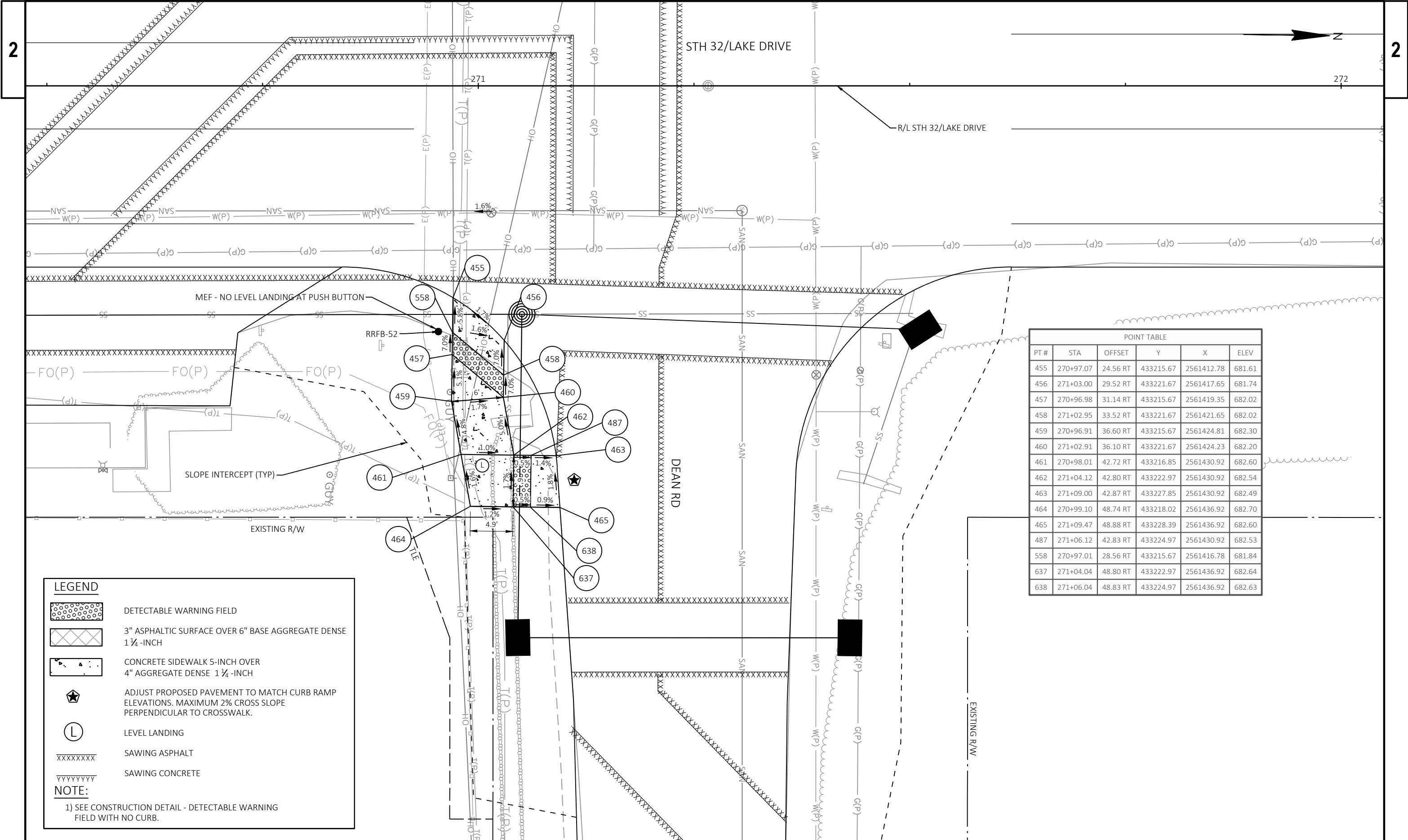
NOTE:

1) SEE CONSTRUCTION DETAIL - DETECTABLE WARNING FIELD WITH NO CURB.









**LEGEND**

DETECTABLE WARNING FIELD

3" ASPHALTIC SURFACE OVER 6" BASE AGGREGATE DENSE 1 1/4 -INCH

CONCRETE SIDEWALK 5-INCH OVER 4" AGGREGATE DENSE 1 1/4 -INCH

ADJUST PROPOSED PAVEMENT TO MATCH CURB RAMP ELEVATIONS. MAXIMUM 2% CROSS SLOPE PERPENDICULAR TO CROSSWALK.

LEVEL LANDING

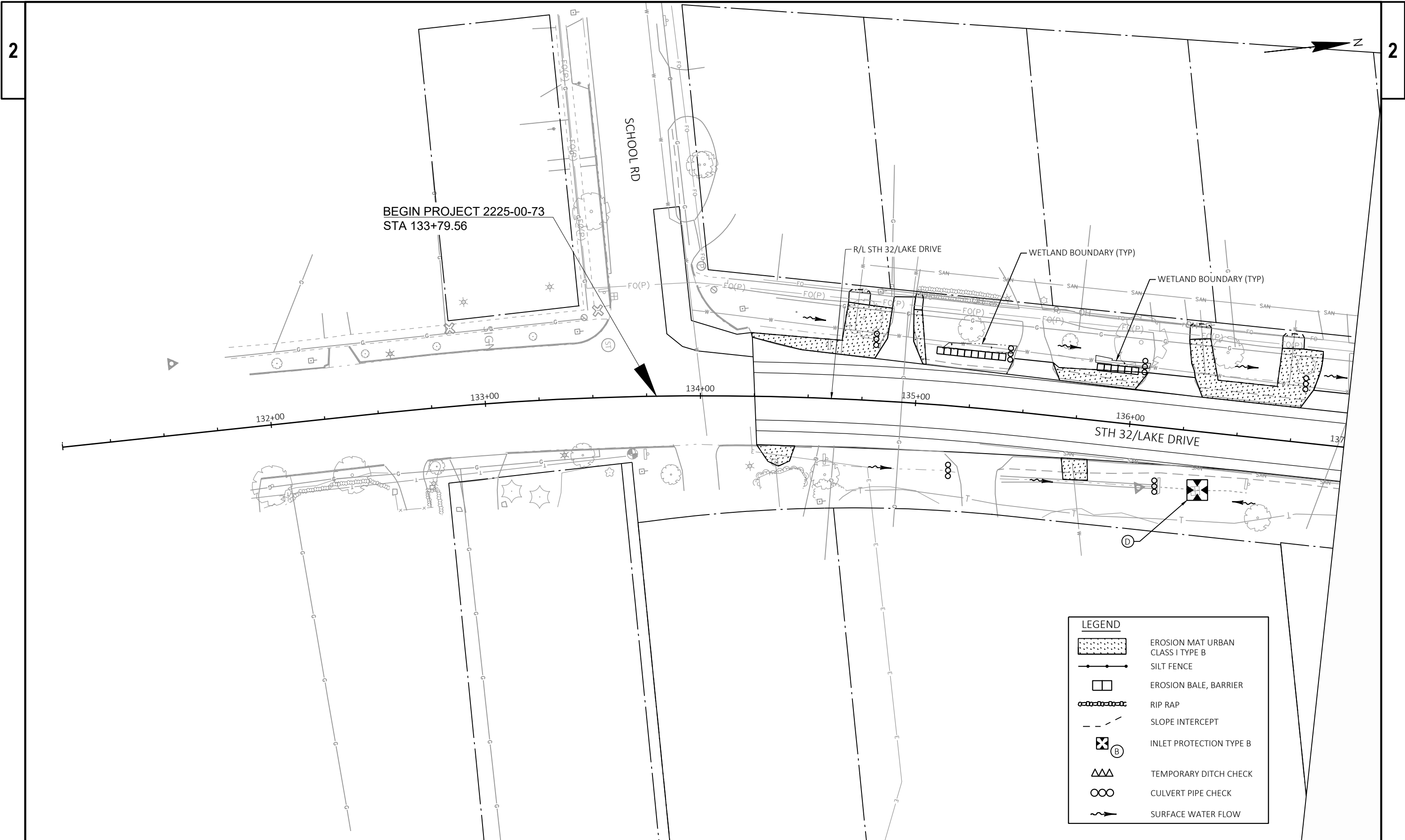
SAWING ASPHALT

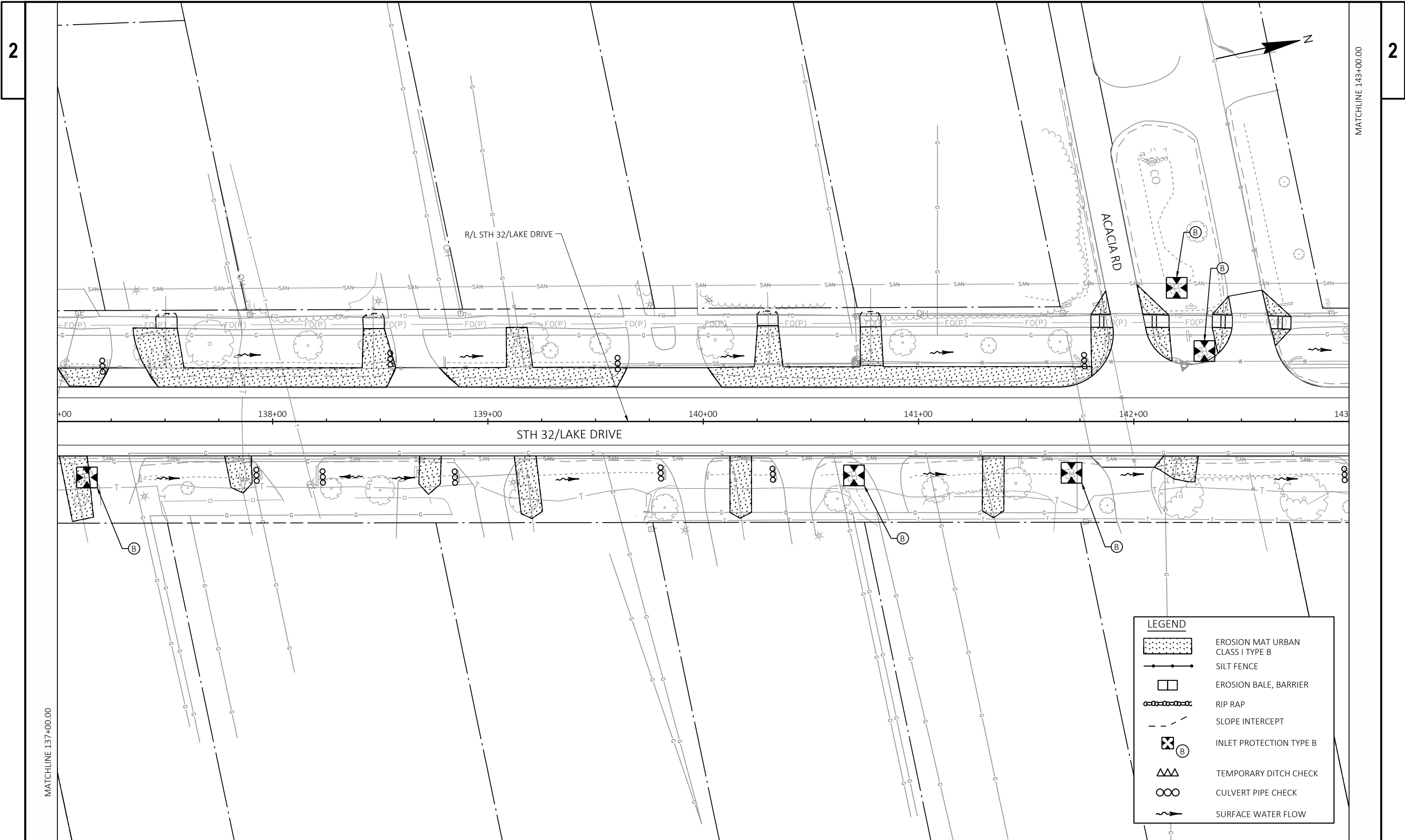
SAWING CONCRETE

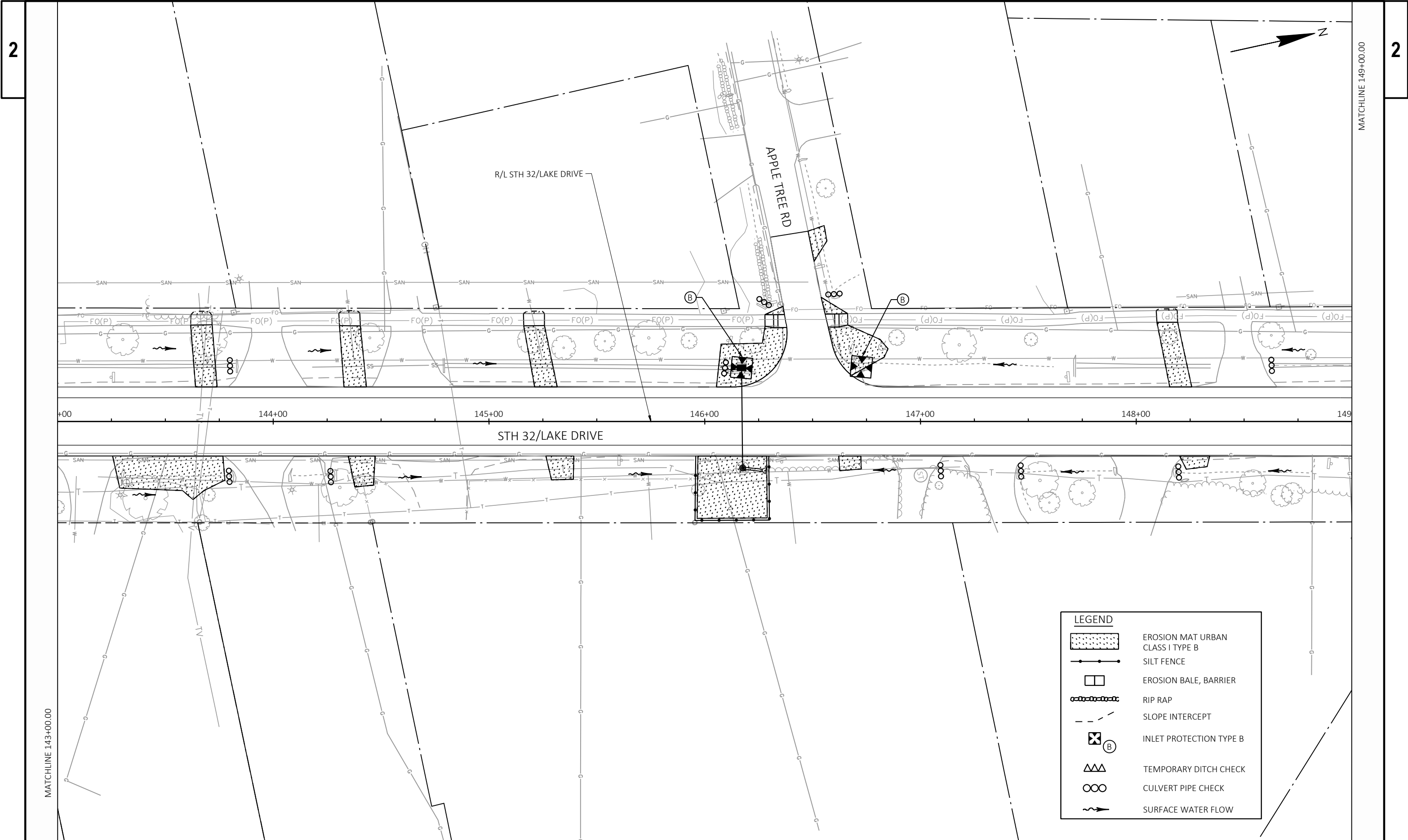
**NOTE:**

1) SEE CONSTRUCTION DETAIL - DETECTABLE WARNING FIELD WITH NO CURB.

| POINT TABLE |           |          |           |            |        |
|-------------|-----------|----------|-----------|------------|--------|
| PT #        | STA       | OFFSET   | Y         | X          | ELEV   |
| 455         | 270+97.07 | 24.56 RT | 433215.67 | 2561412.78 | 681.61 |
| 456         | 271+03.00 | 29.52 RT | 433221.67 | 2561417.65 | 681.74 |
| 457         | 270+96.98 | 31.14 RT | 433215.67 | 2561419.35 | 682.02 |
| 458         | 271+02.95 | 33.52 RT | 433221.67 | 2561421.65 | 682.02 |
| 459         | 270+96.91 | 36.60 RT | 433215.67 | 2561424.81 | 682.30 |
| 460         | 271+02.91 | 36.10 RT | 433221.67 | 2561424.23 | 682.20 |
| 461         | 270+98.01 | 42.72 RT | 433216.85 | 2561430.92 | 682.60 |
| 462         | 271+04.12 | 42.80 RT | 433222.97 | 2561430.92 | 682.54 |
| 463         | 271+09.00 | 42.87 RT | 433227.85 | 2561430.92 | 682.49 |
| 464         | 270+99.10 | 48.74 RT | 433218.02 | 2561436.92 | 682.70 |
| 465         | 271+09.47 | 48.88 RT | 433228.39 | 2561436.92 | 682.60 |
| 487         | 271+06.12 | 42.83 RT | 433224.97 | 2561430.92 | 682.53 |
| 558         | 270+97.01 | 28.56 RT | 433215.67 | 2561416.78 | 681.84 |
| 637         | 271+04.04 | 48.80 RT | 433222.97 | 2561436.92 | 682.64 |
| 638         | 271+06.04 | 48.83 RT | 433224.97 | 2561436.92 | 682.63 |



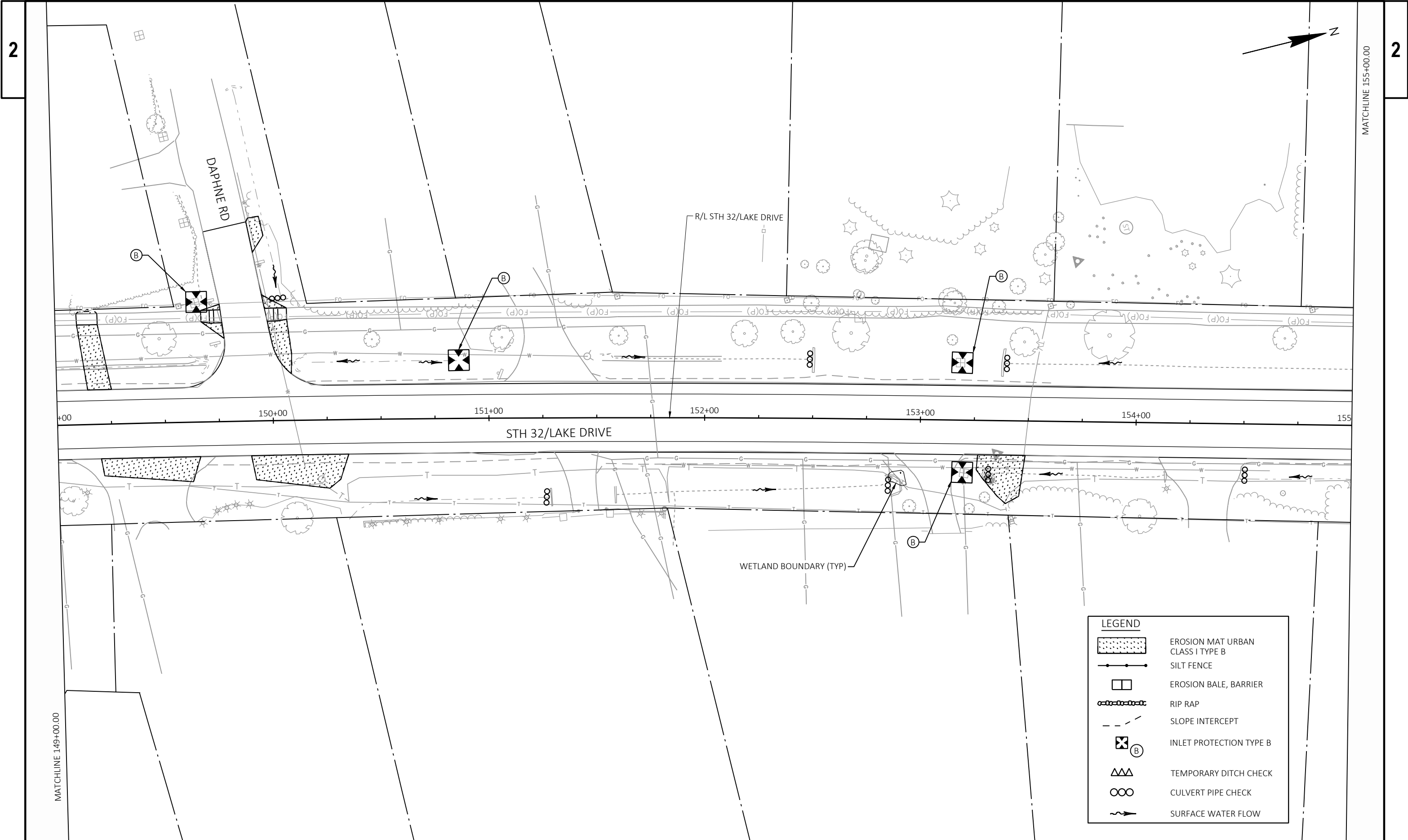


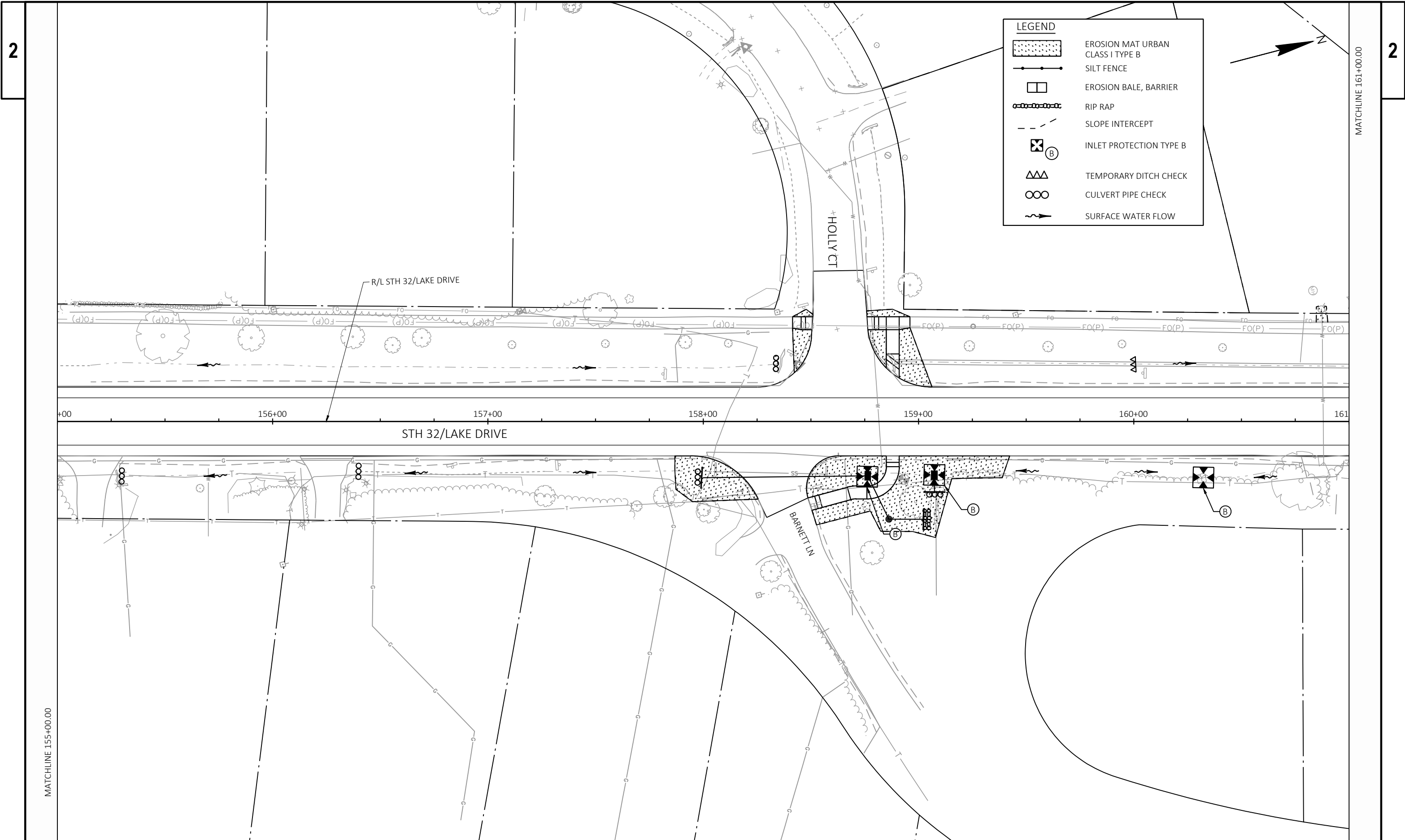


2

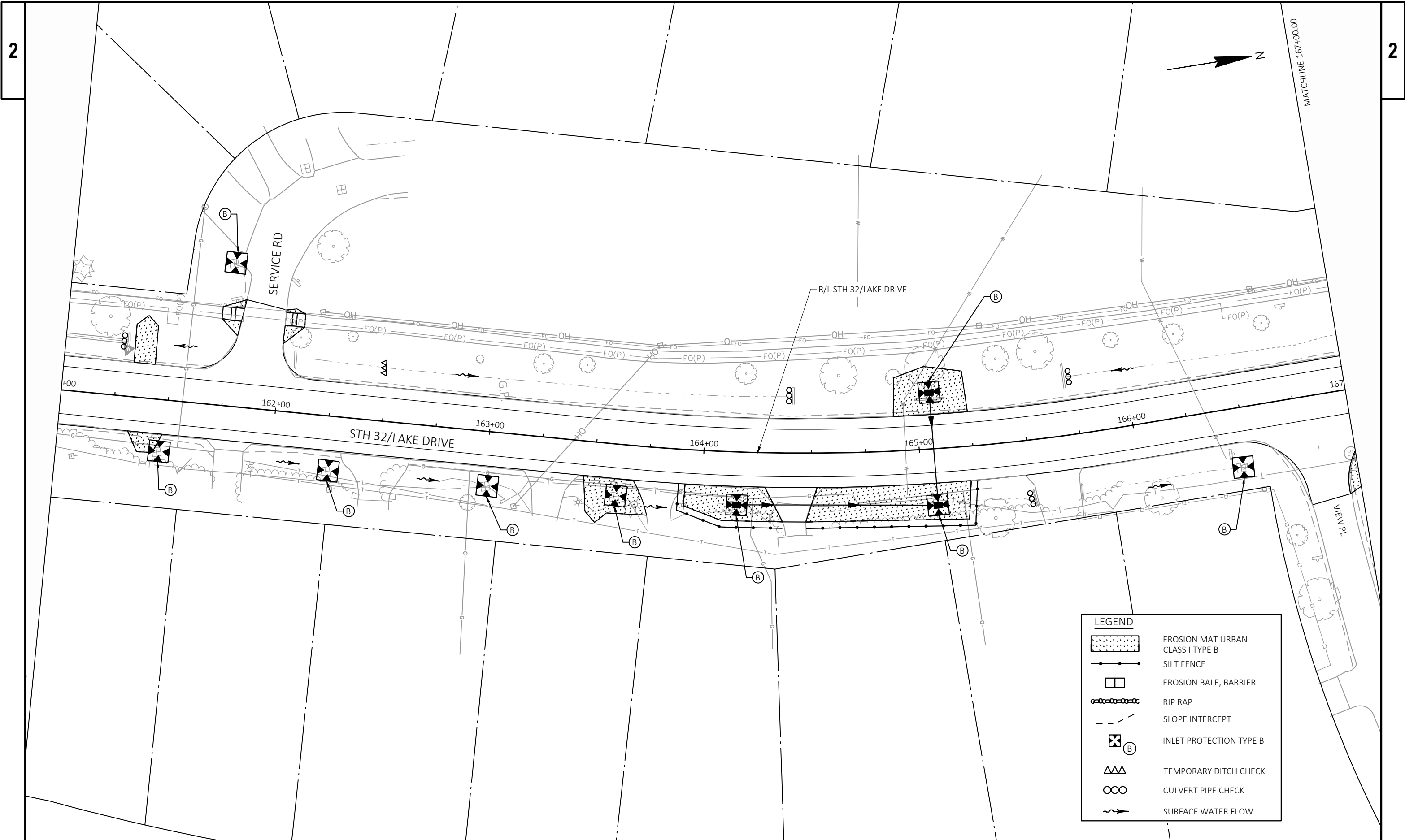
2

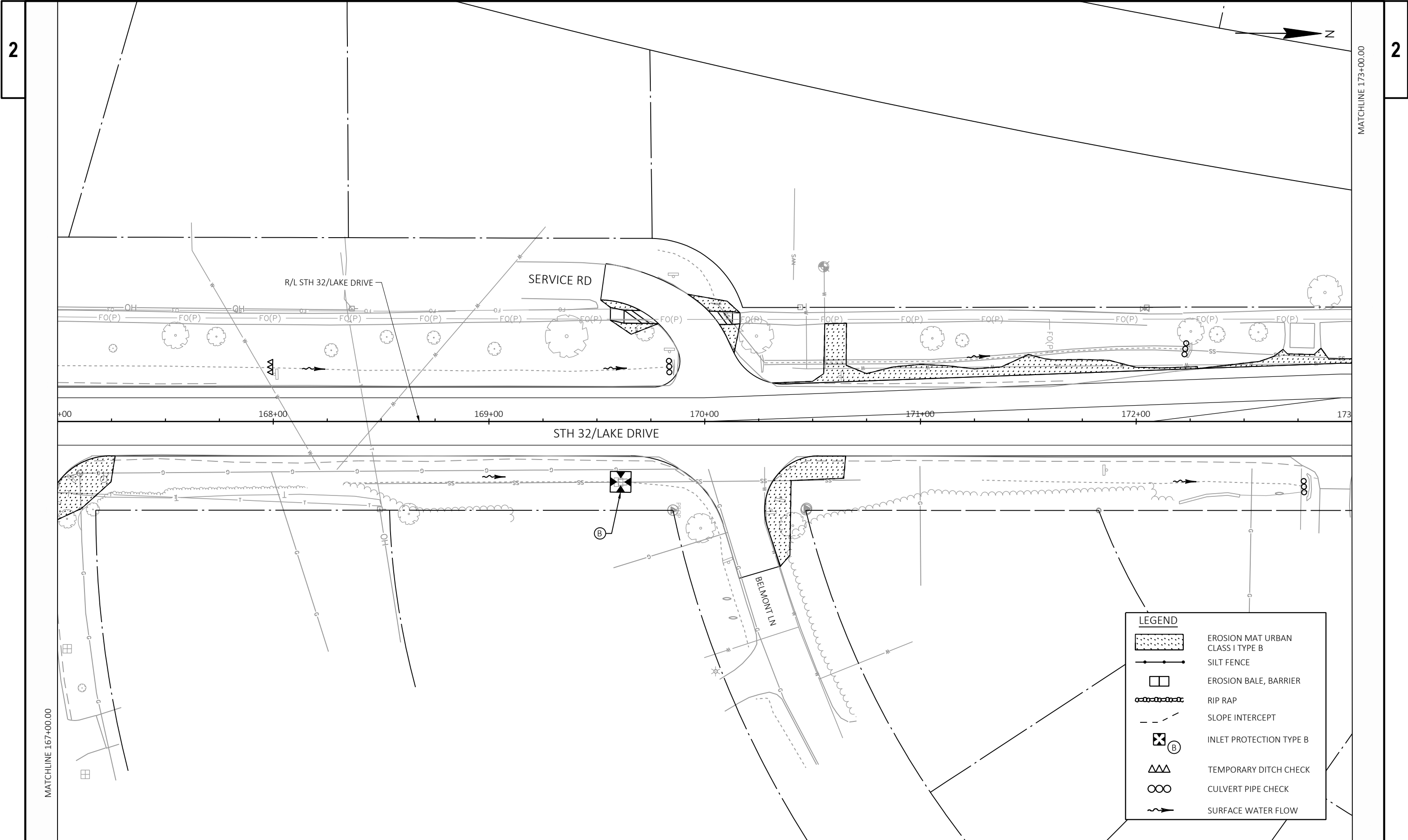






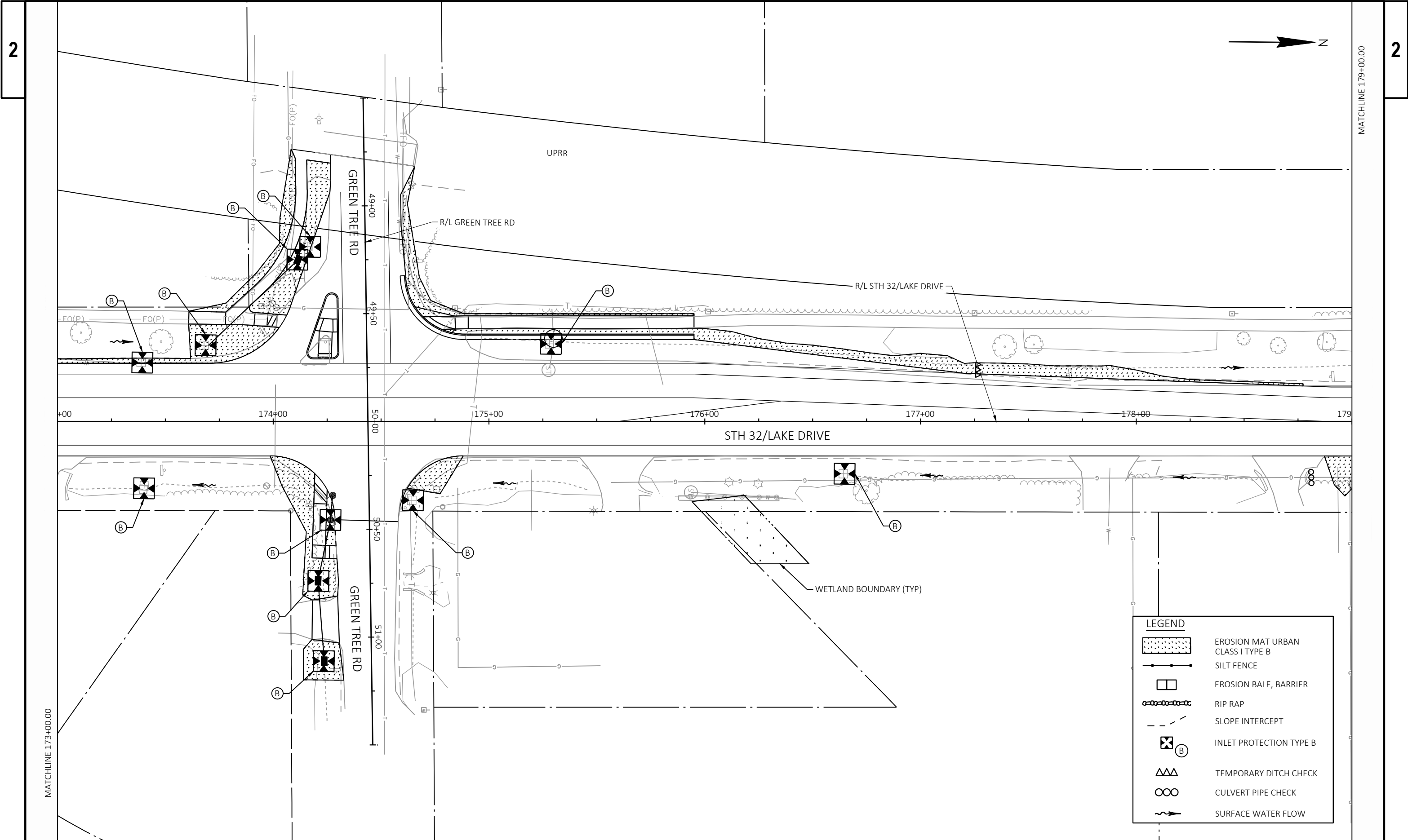


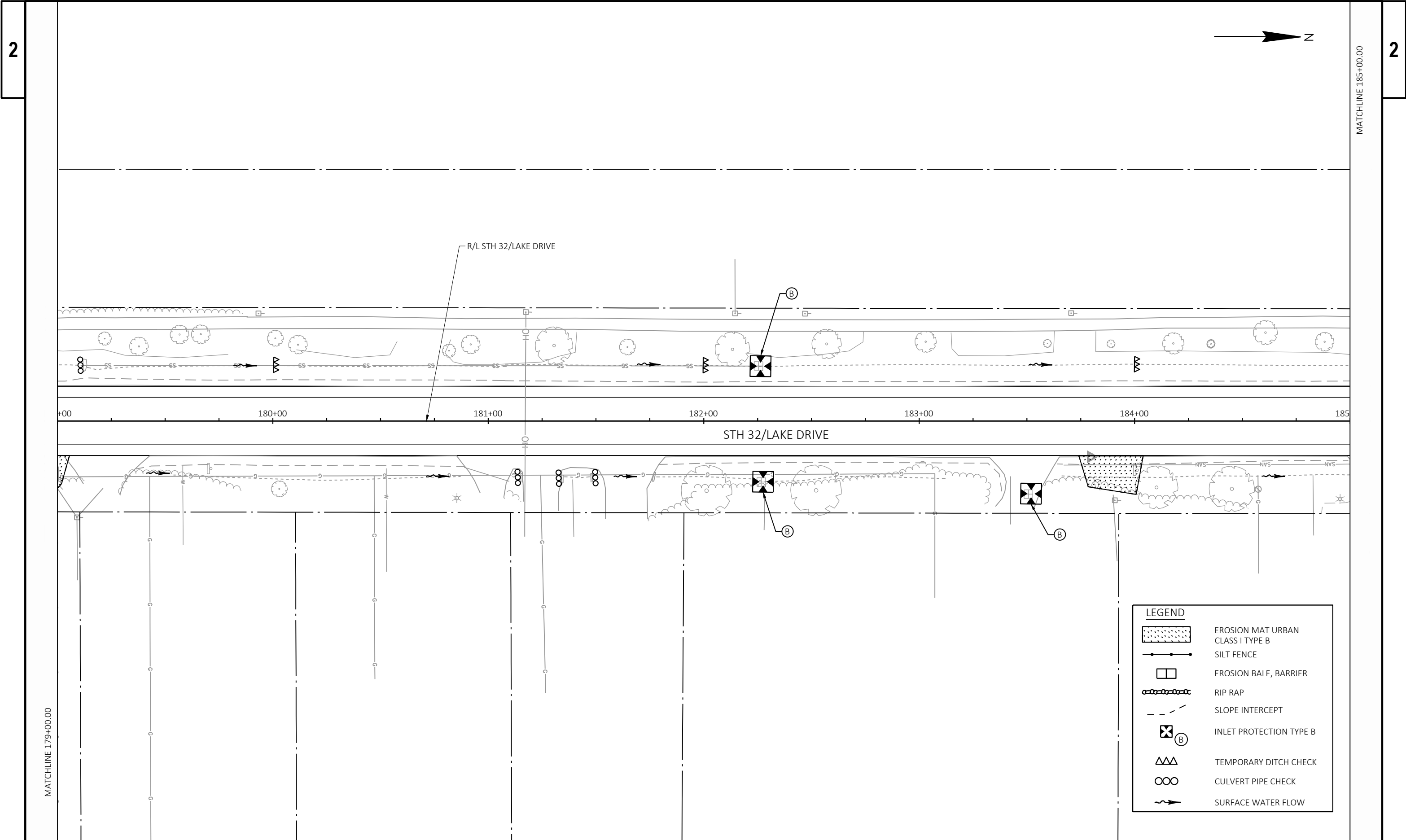


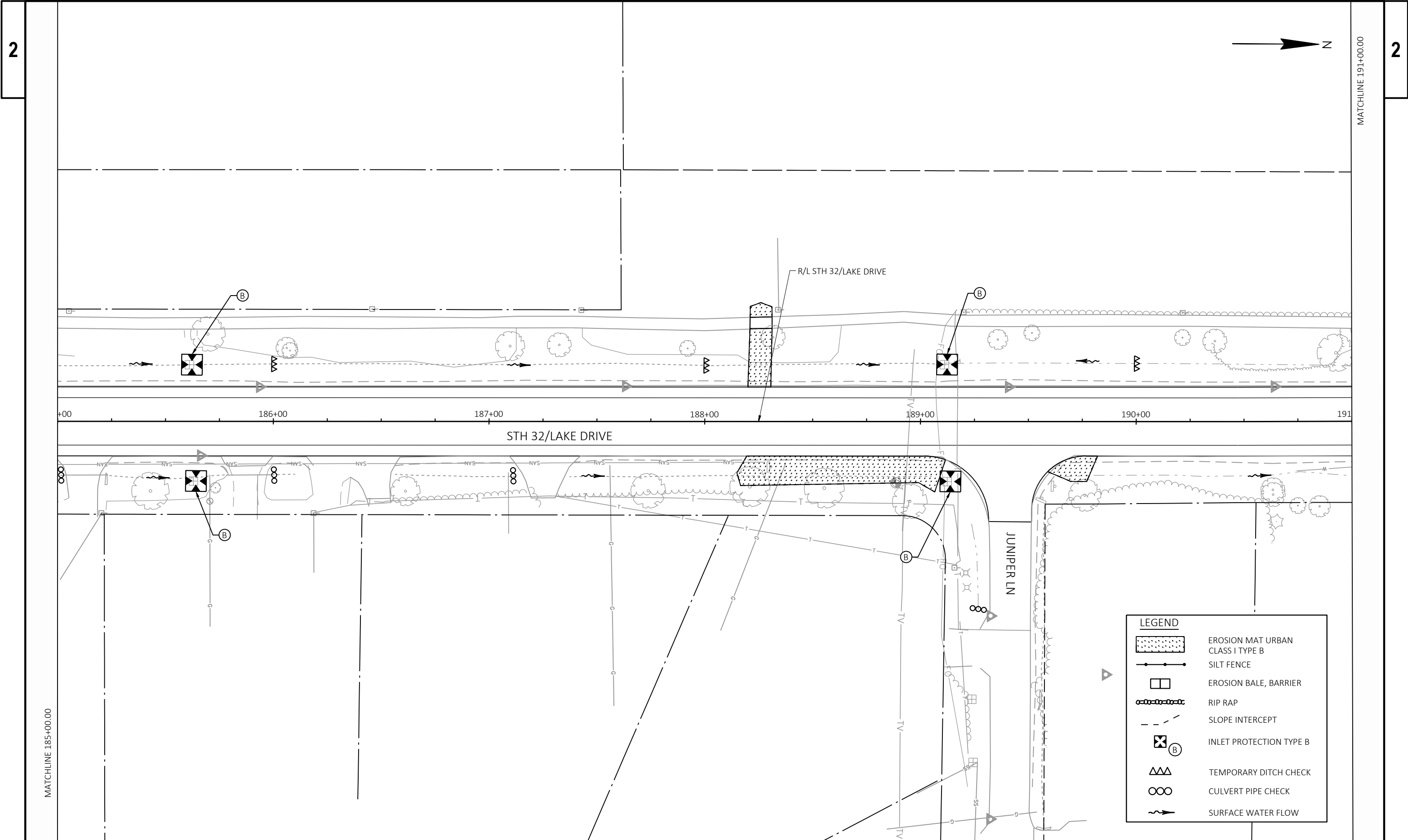


**LEGEND**

|  |                                  |
|--|----------------------------------|
|  | EROSION MAT URBAN CLASS I TYPE B |
|  | SILT FENCE                       |
|  | EROSION BALE, BARRIER            |
|  | RIP RAP                          |
|  | SLOPE INTERCEPT                  |
|  | INLET PROTECTION TYPE B          |
|  | TEMPORARY DITCH CHECK            |
|  | CULVERT PIPE CHECK               |
|  | SURFACE WATER FLOW               |







LEGEND

EROSION MAT URBAN  
CLASS I TYPE B

SILT FENCE

EROSION BALE, BARRIER

RIP RAP

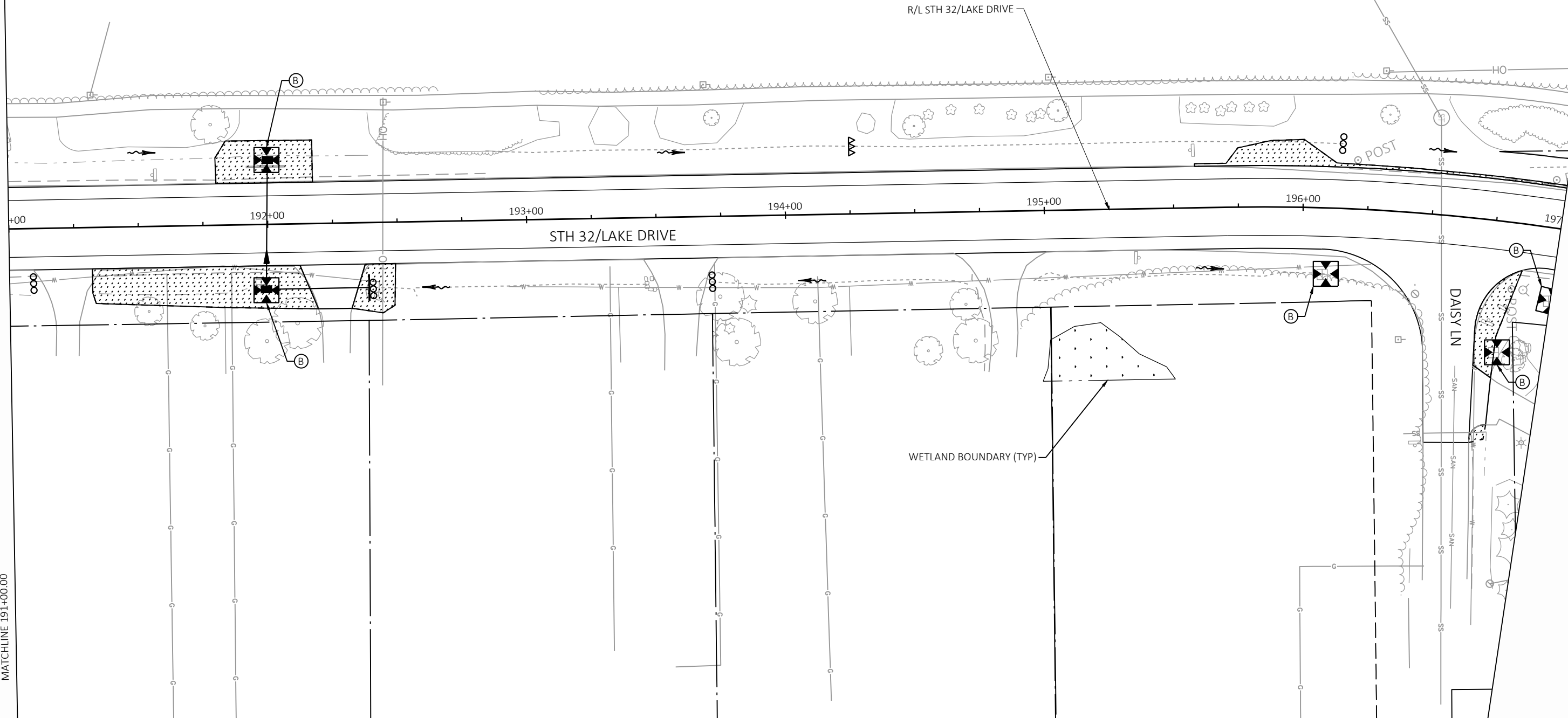
SLOPE INTERCEPT

INLET PROTECTION TYPE B

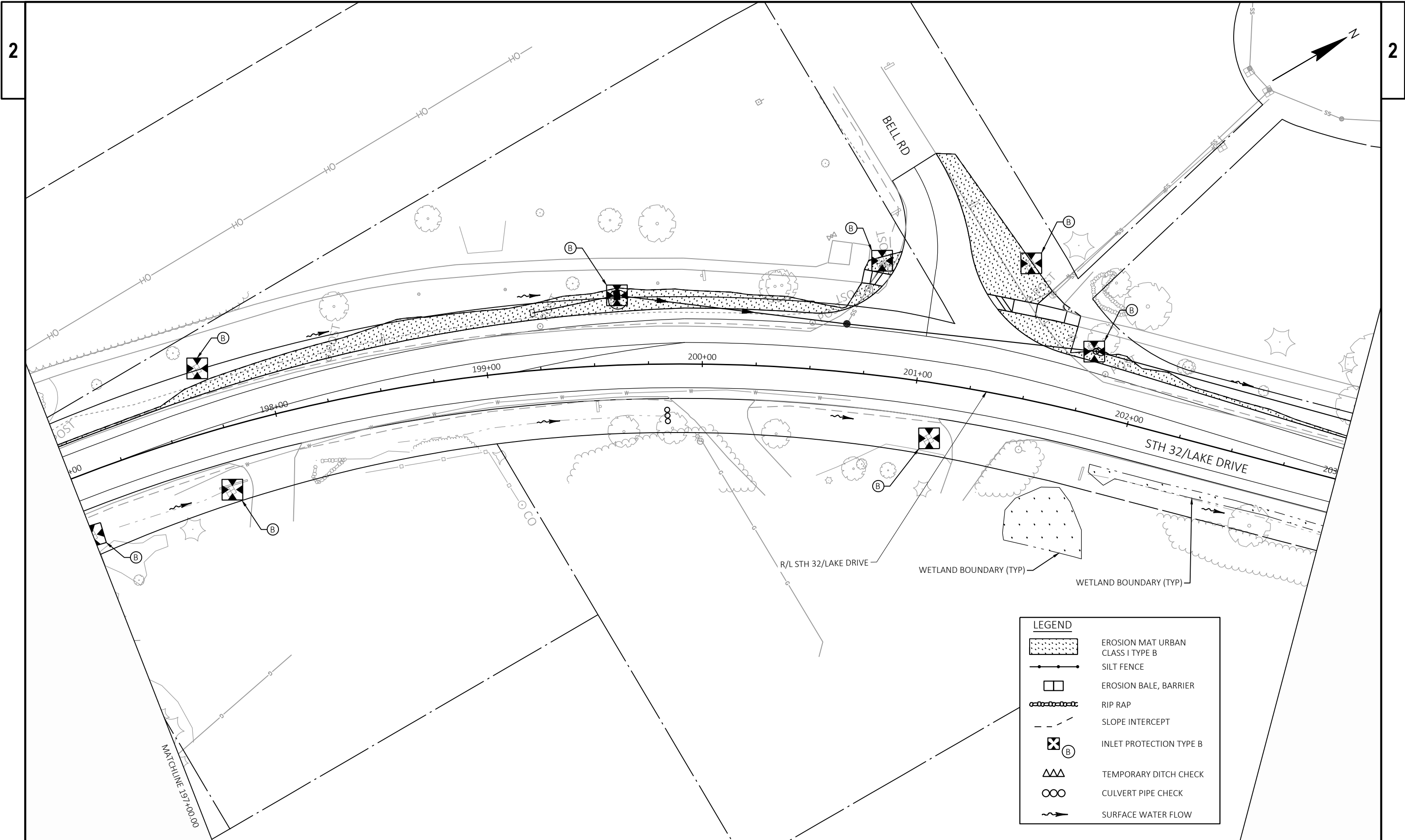
TEMPORARY DITCH CHECK

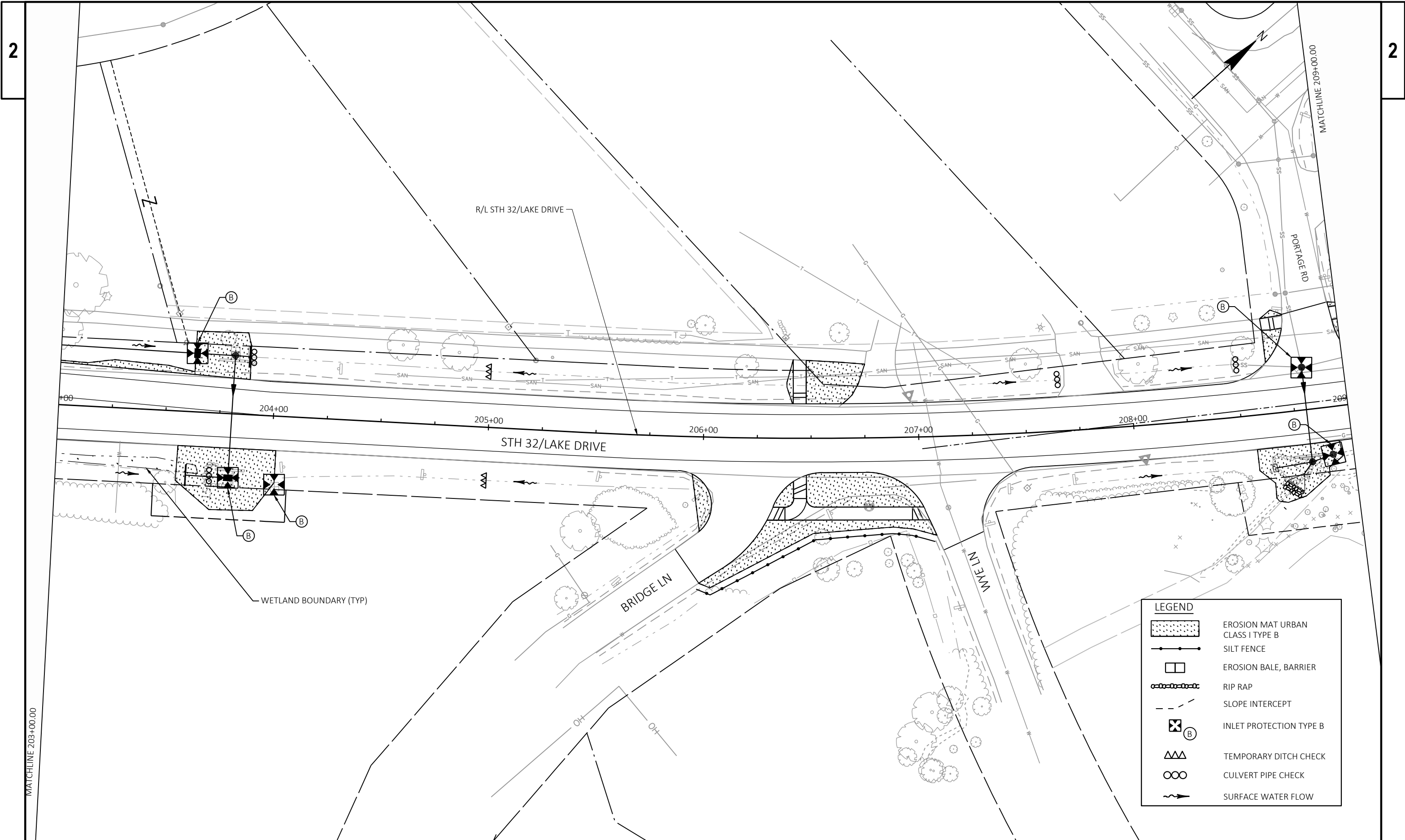
CULVERT PIPE CHECK

SURFACE WATER FLOW

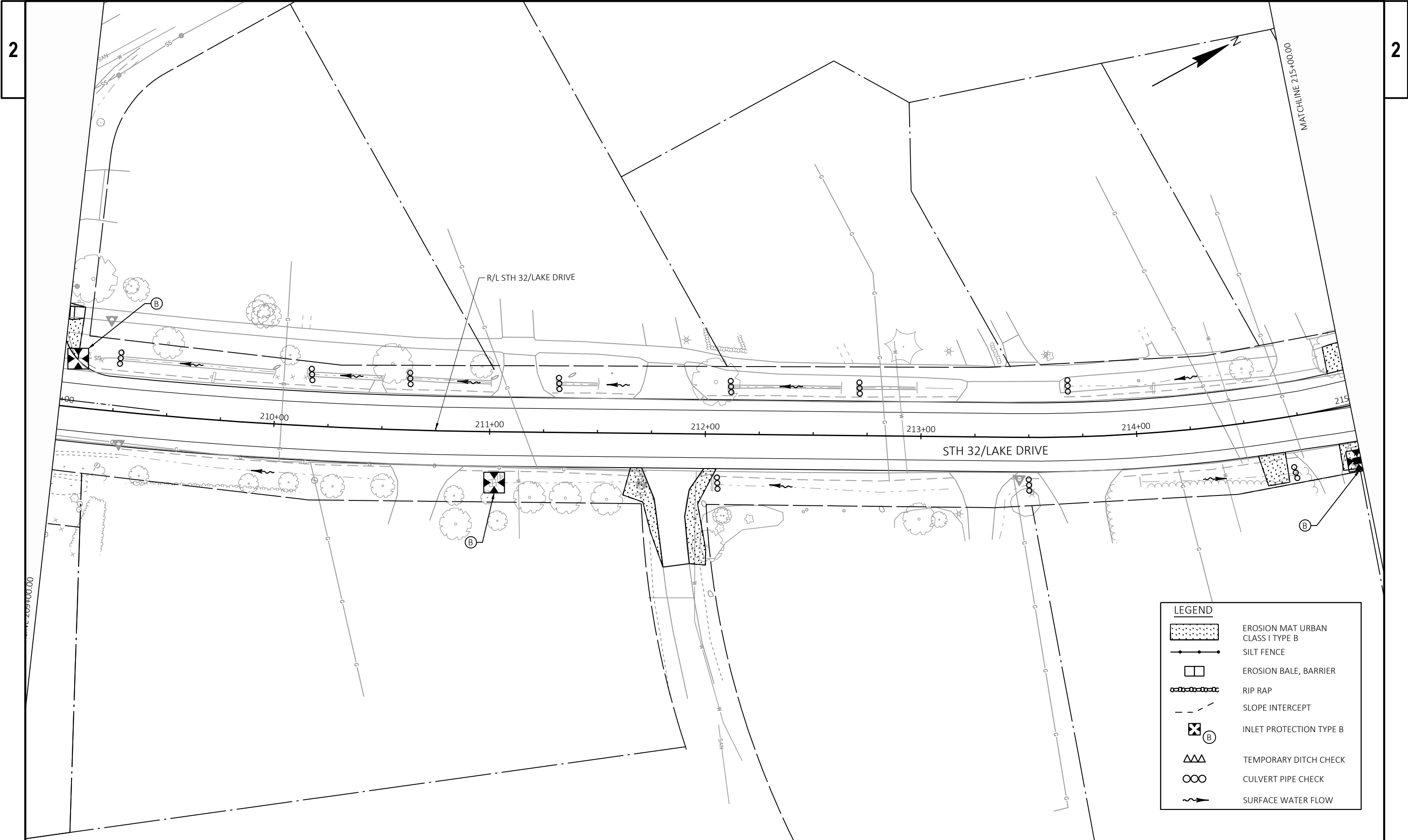


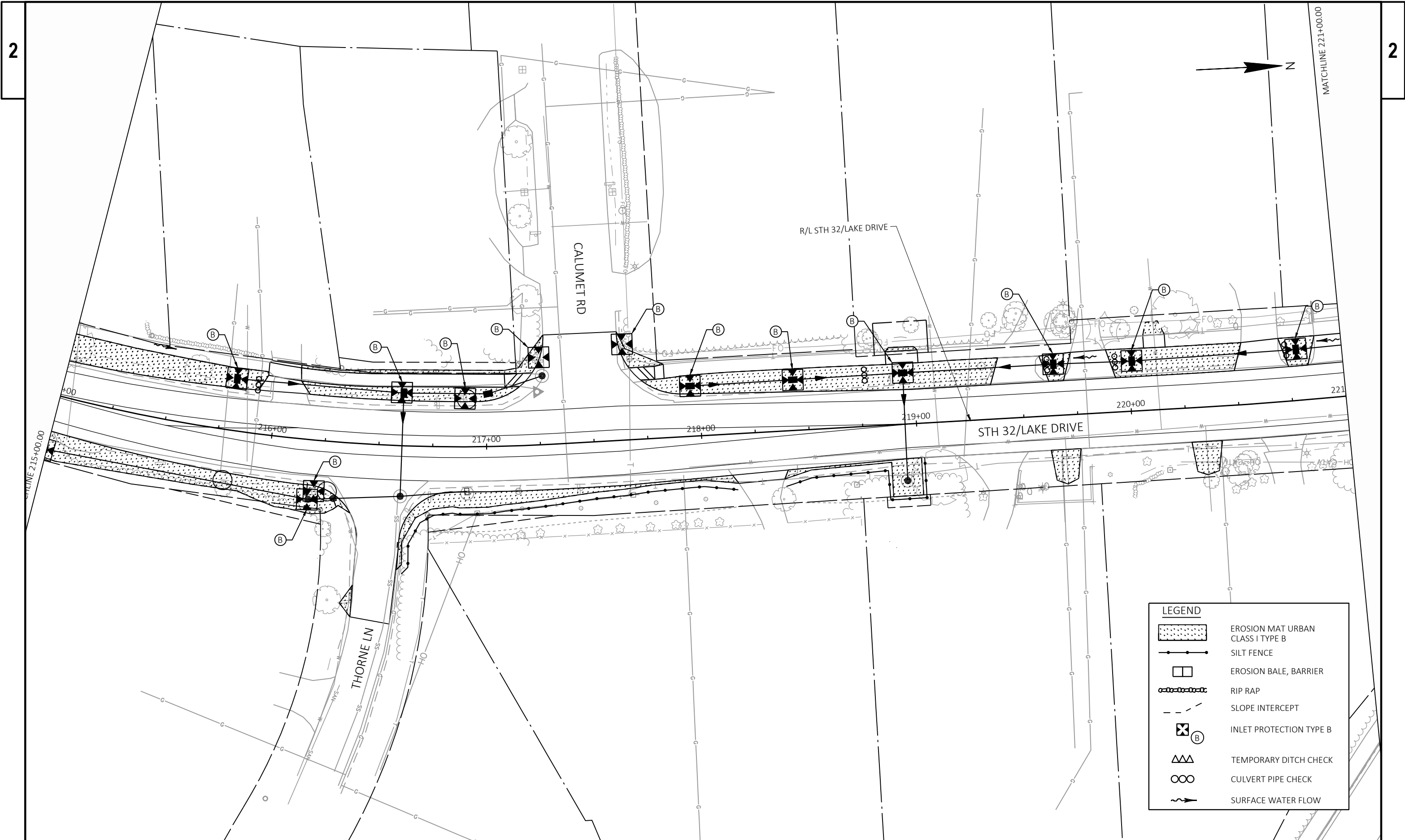


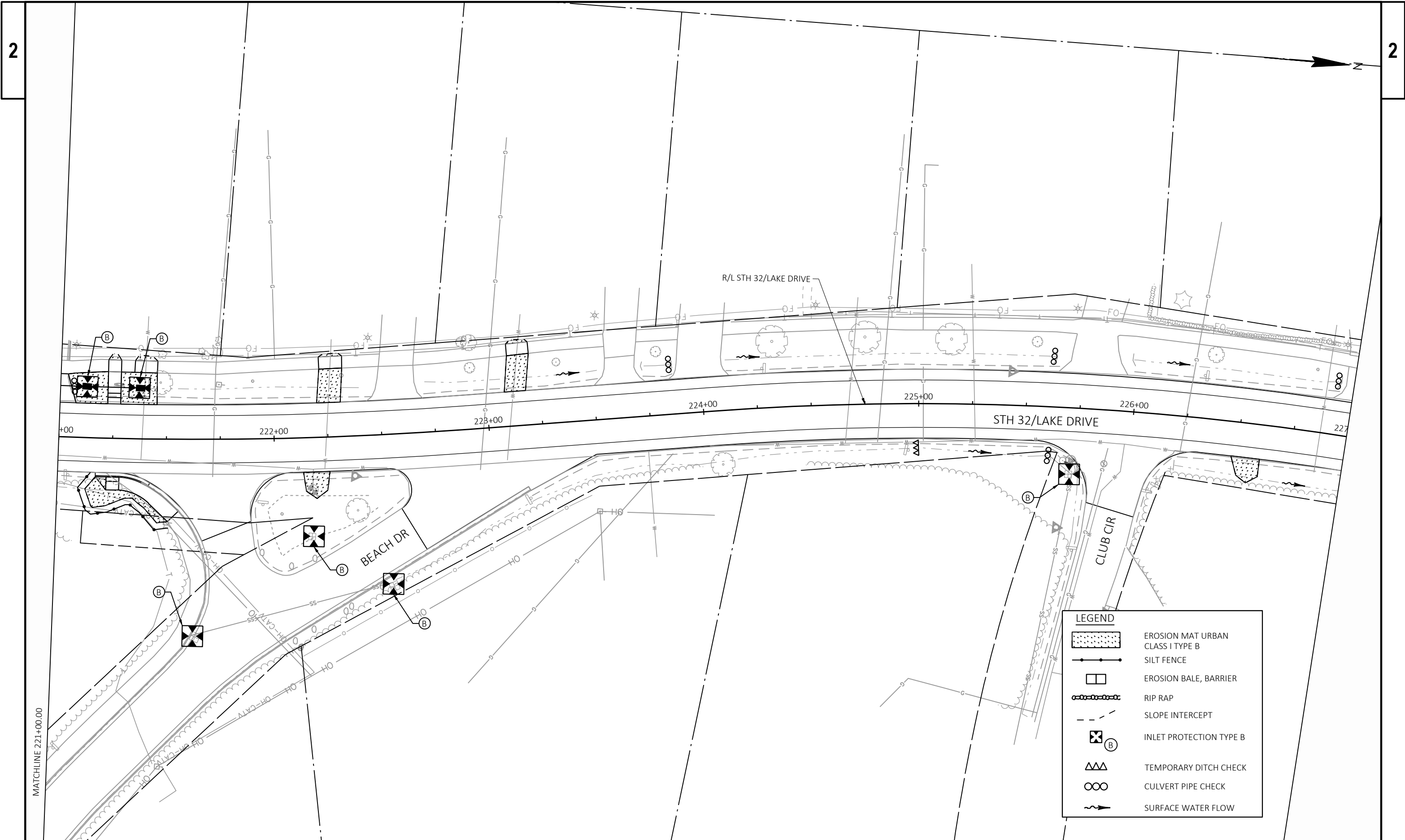


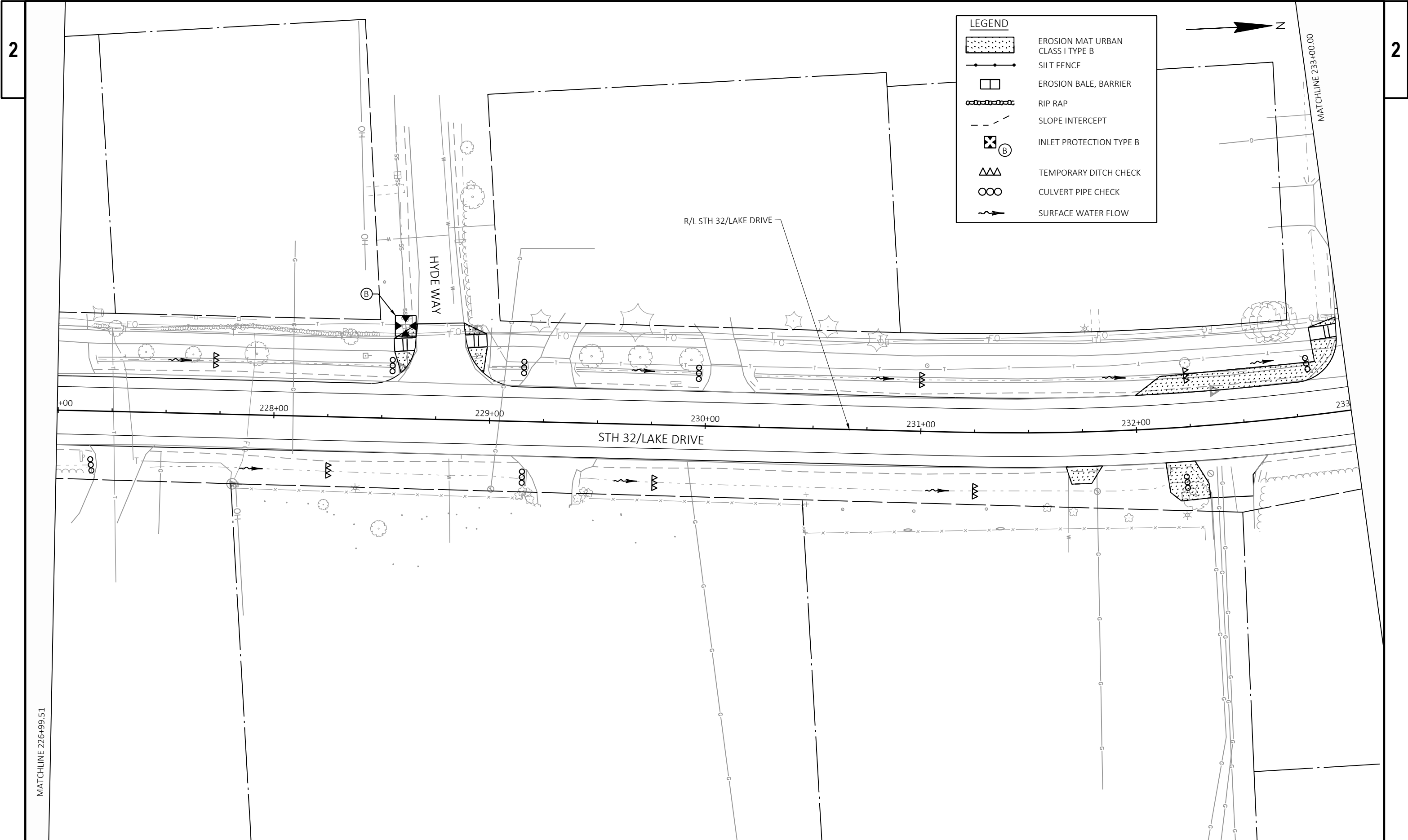


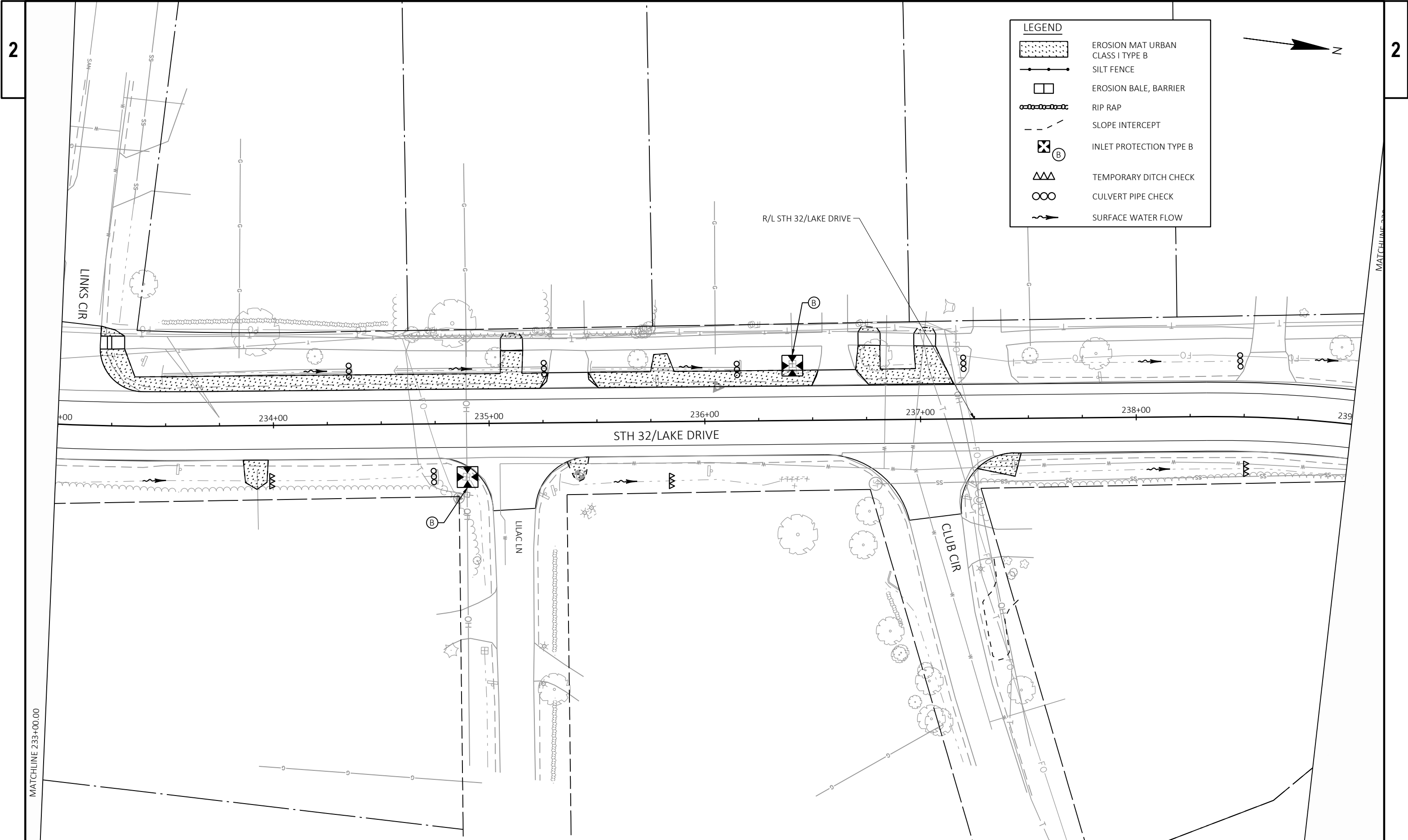


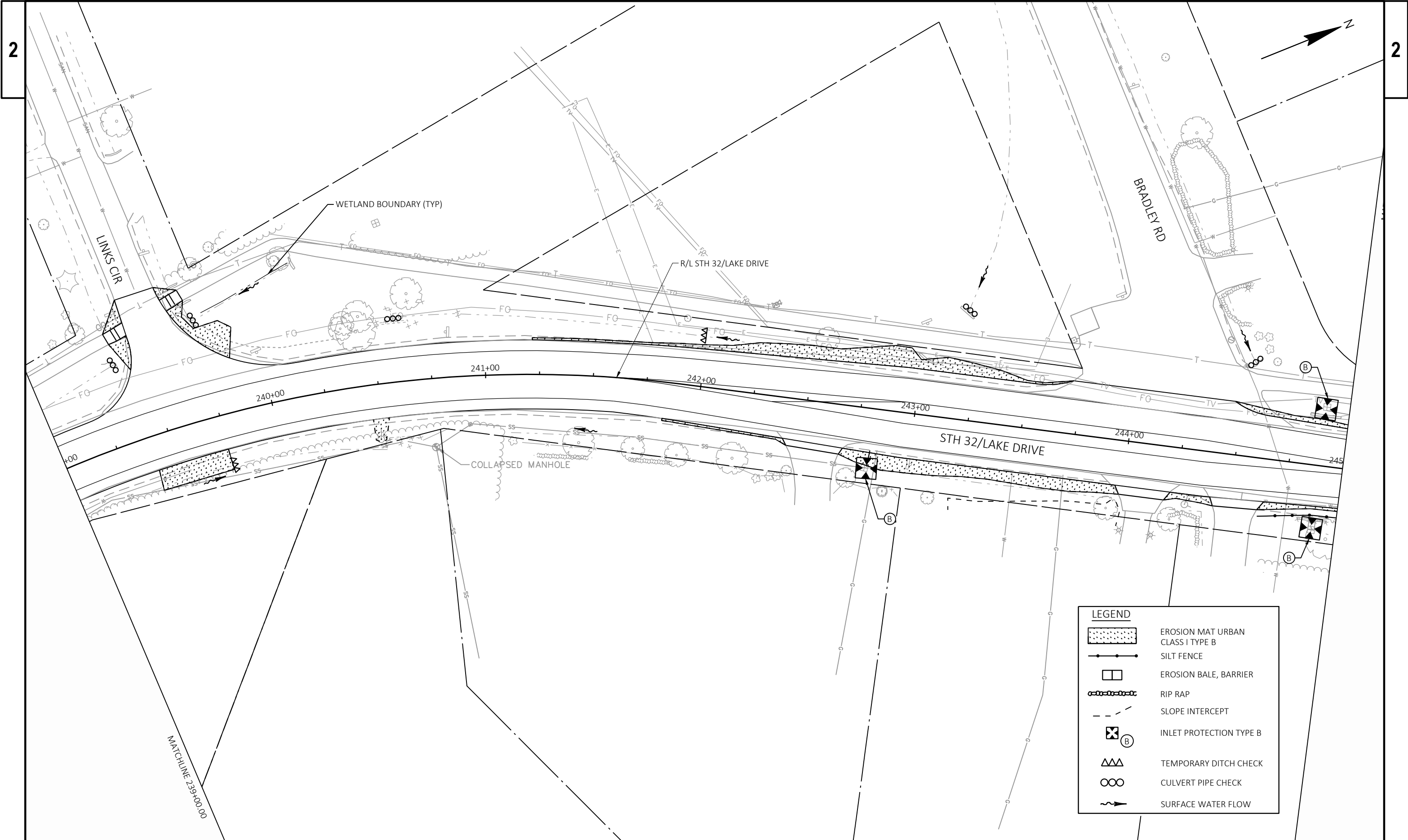








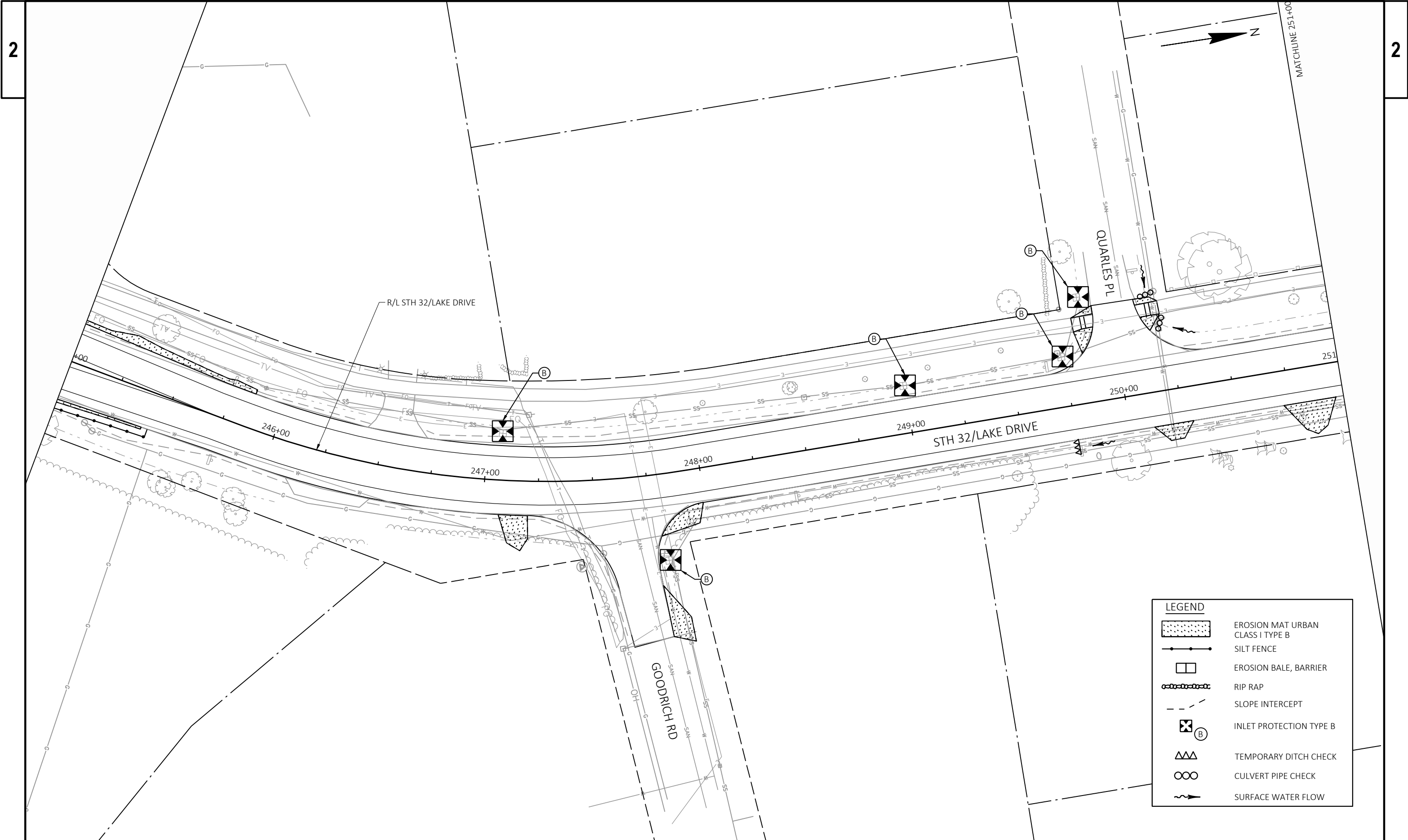




**LEGEND**

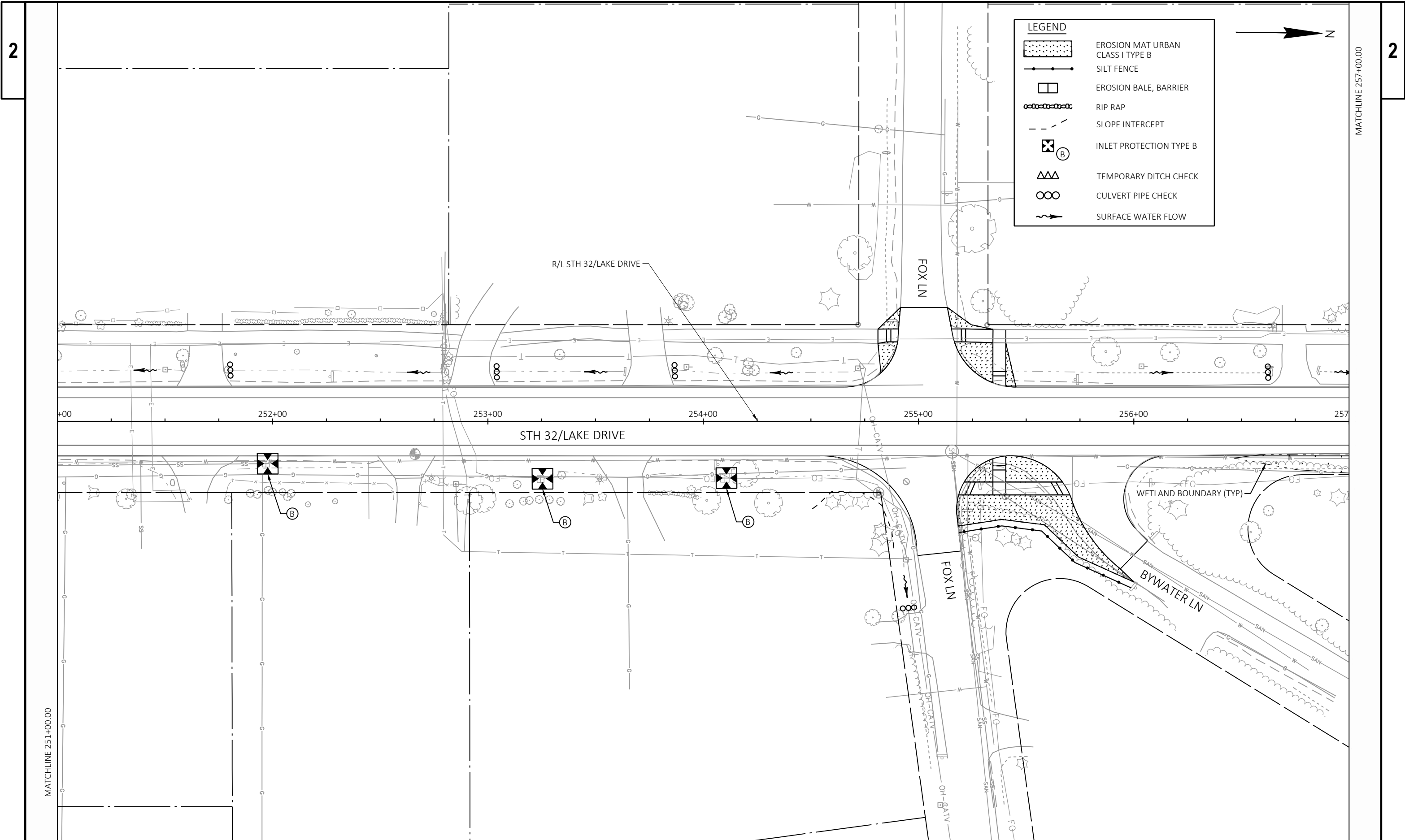
|  |                                     |
|--|-------------------------------------|
|  | EROSION MAT URBAN<br>CLASS I TYPE B |
|  | SILT FENCE                          |
|  | EROSION BALE, BARRIER               |
|  | RIP RAP                             |
|  | SLOPE INTERCEPT                     |
|  | INLET PROTECTION TYPE B             |
|  | TEMPORARY DITCH CHECK               |
|  | CULVERT PIPE CHECK                  |
|  | SURFACE WATER FLOW                  |



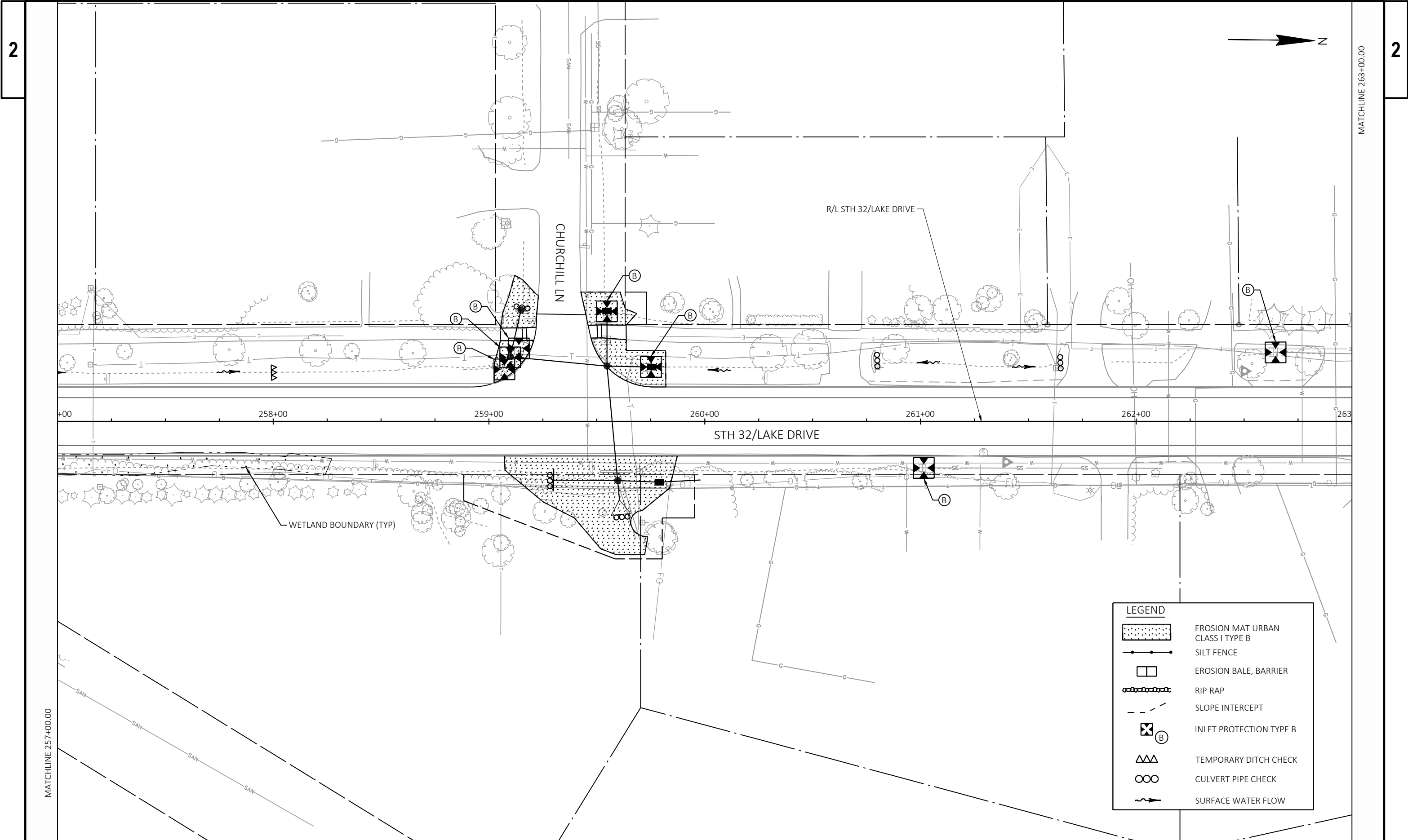


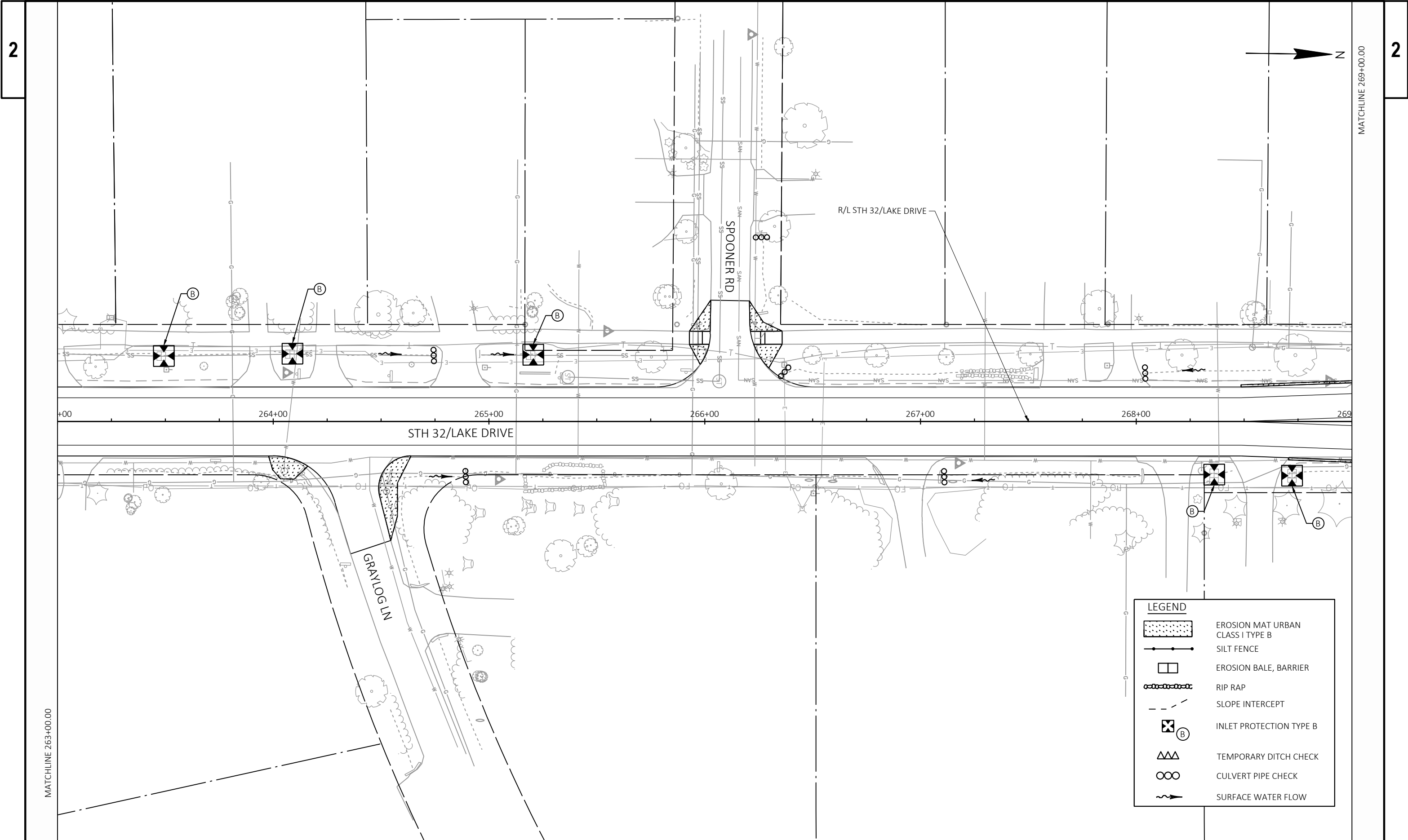
**LEGEND**

|  |                                  |
|--|----------------------------------|
|  | EROSION MAT URBAN CLASS I TYPE B |
|  | SILT FENCE                       |
|  | EROSION BALE, BARRIER            |
|  | RIP RAP                          |
|  | SLOPE INTERCEPT                  |
|  | INLET PROTECTION TYPE B          |
|  | TEMPORARY DITCH CHECK            |
|  | CULVERT PIPE CHECK               |
|  | SURFACE WATER FLOW               |









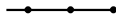
LEGEND

|  |                                  |
|--|----------------------------------|
|  | EROSION MAT URBAN CLASS I TYPE B |
|  | SILT FENCE                       |
|  | EROSION BALE, BARRIER            |
|  | RIP RAP                          |
|  | SLOPE INTERCEPT                  |
|  | INLET PROTECTION TYPE B          |
|  | TEMPORARY DITCH CHECK            |
|  | CULVERT PIPE CHECK               |
|  | SURFACE WATER FLOW               |

LEGEND



EROSION MAT URBAN  
CLASS I TYPE B



SILT FENCE



EROSION BALE, BARRIER



RIP RAP



SLOPE INTERCEPT



INLET PROTECTION TYPE B



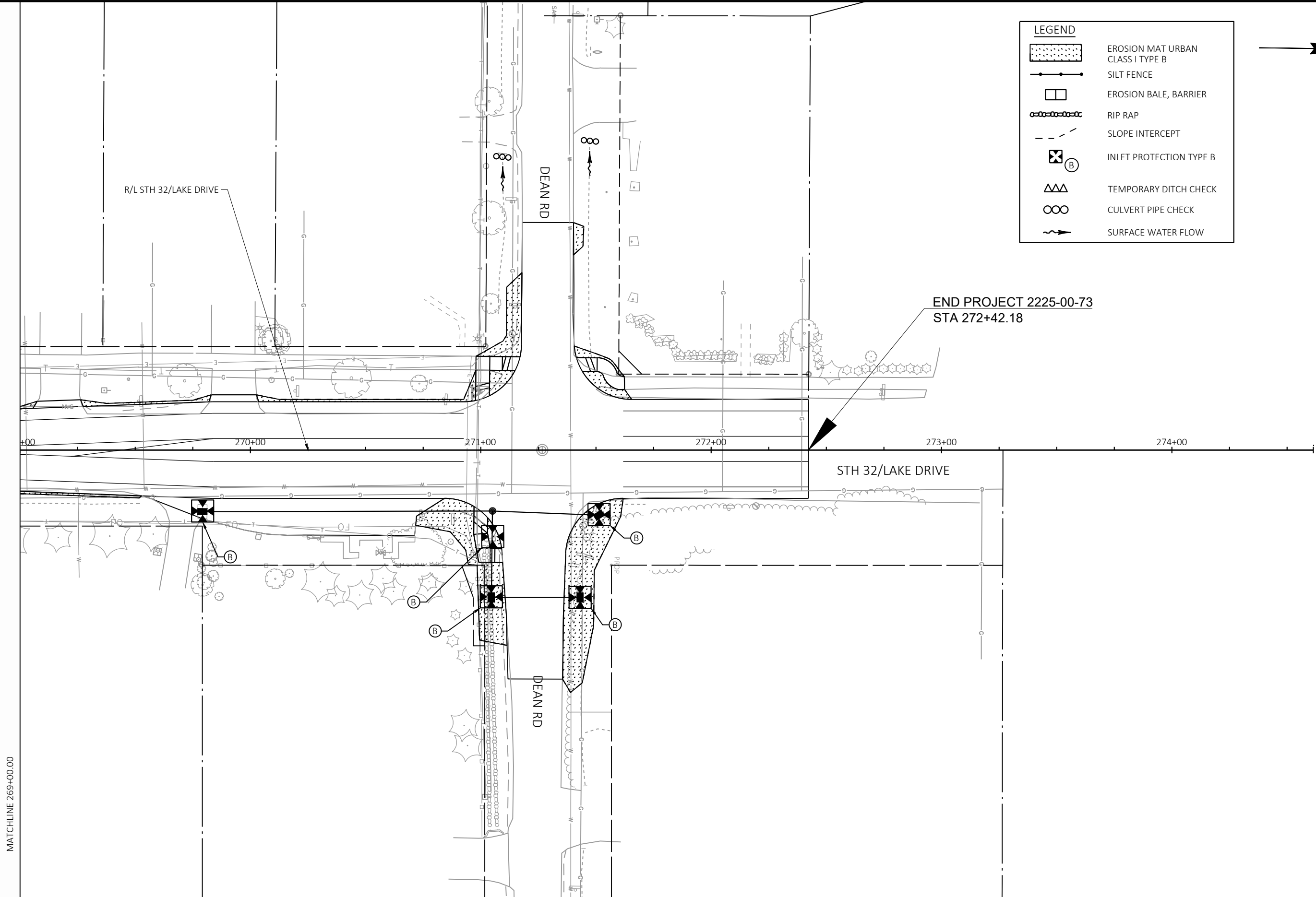
TEMPORARY DITCH CHECK



CULVERT PIPE CHECK



SURFACE WATER FLOW



GENERAL DRAINAGE NOTES

LOCATION OF STRUCTURES REFER TO CENTER OF STRUCTURE OR AS NOTED ON PLAN.

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES AND PIPES SHOWN ON THE PLANS MAY BE ADJUSTED BY THE ENGINEER TO FIT EXISTING FIELD CONDITIONS.

UTILITY INFORMATION SHOWN ON THE PLANS IS APPROXIMATE. LOCATIONS SHOWN ARE TAKEN FROM EXISTING RECORDS AND BEST INFORMATION AVAILABLE FROM EXISTING PLANS. IT IS EXPECTED THAT THERE MAY BE DISCREPANCIES AND OMISSIONS IN THE LOCATION OF UTILITIES AND STRUCTURES SHOWN. VERIFY ALL LOCATIONS IN THE FIELD.

COORDINATE WITH DIGGERS HOTLINE TO FIELD LOCATE UTILITIES. SHEETING SHALL NOT GO THROUGH UTILITIES. ANY UTILITIES DAMAGED DUE TO CONTRACTOR ACTIVITIES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE COMPLETE SATISFACTION OF THE UTILITY FACILITY.

VERIFY THE EXISTING DRAINAGE SYSTEM CONNECTION LOCATIONS AND ELEVATIONS PRIOR TO ORDERING DRAINAGE STRUCTURES AND PIPES. NOTIFY THE ENGINEER OF ANY DEVIATIONS FROM THE INFORMATION SHOWN ON THE PLANS PRIOR TO INSTALLING THE PROPOSED STORM SEWER.

PROVIDE TEMPORARY POSITIVE DRAINAGE THROUGHOUT THE PROJECT DURING ALL PROJECT STAGES. PROVIDING TEMPORARY POSITIVE DRAINAGE IS INCIDENTAL TO CONSTRUCTION.

SUPPORTING UTILITIES DURING DRAINAGE CONSTRUCTION IS INCIDENTAL TO DRAINAGE PIPE AND/OR DRAINAGE STRUCTURE.

CONTRACTOR SHALL VERIFY EXISTING INVERT ELEVATIONS AND PIPE SIZES PRIOR TO PRODUCTION OF NEW DRAINAGE STRUCTURES.

STORM SEWER LEGEND

- E ##

EXISTING DRAINAGE STRUCTURE
- ## #

PROPOSED DRAINAGE STRUCTURE
- ✕

REMOVING MANHOLES
- PROPOSED MANHOLE
- ⌵

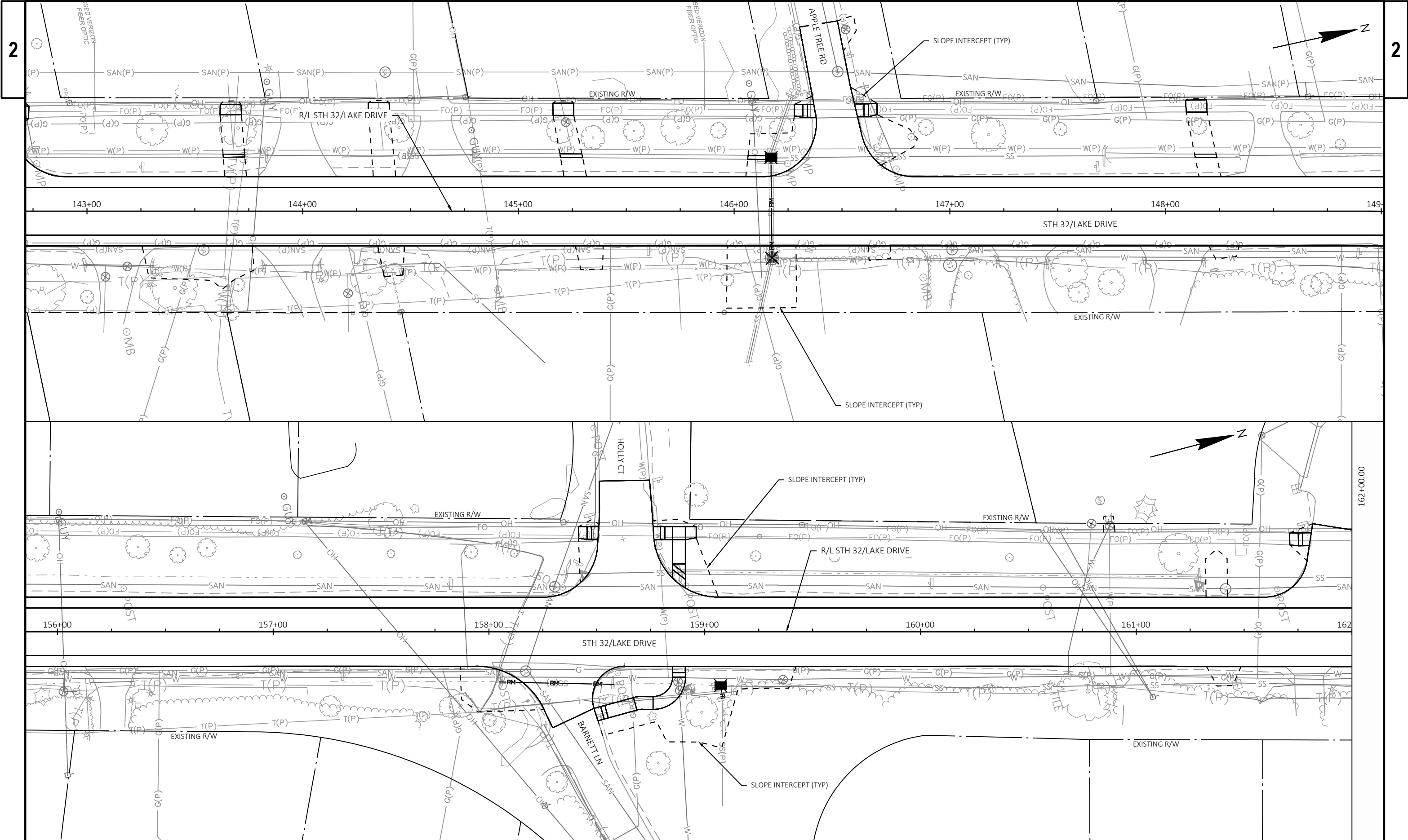
REMOVING INLETS
- PROPOSED INLET
- △

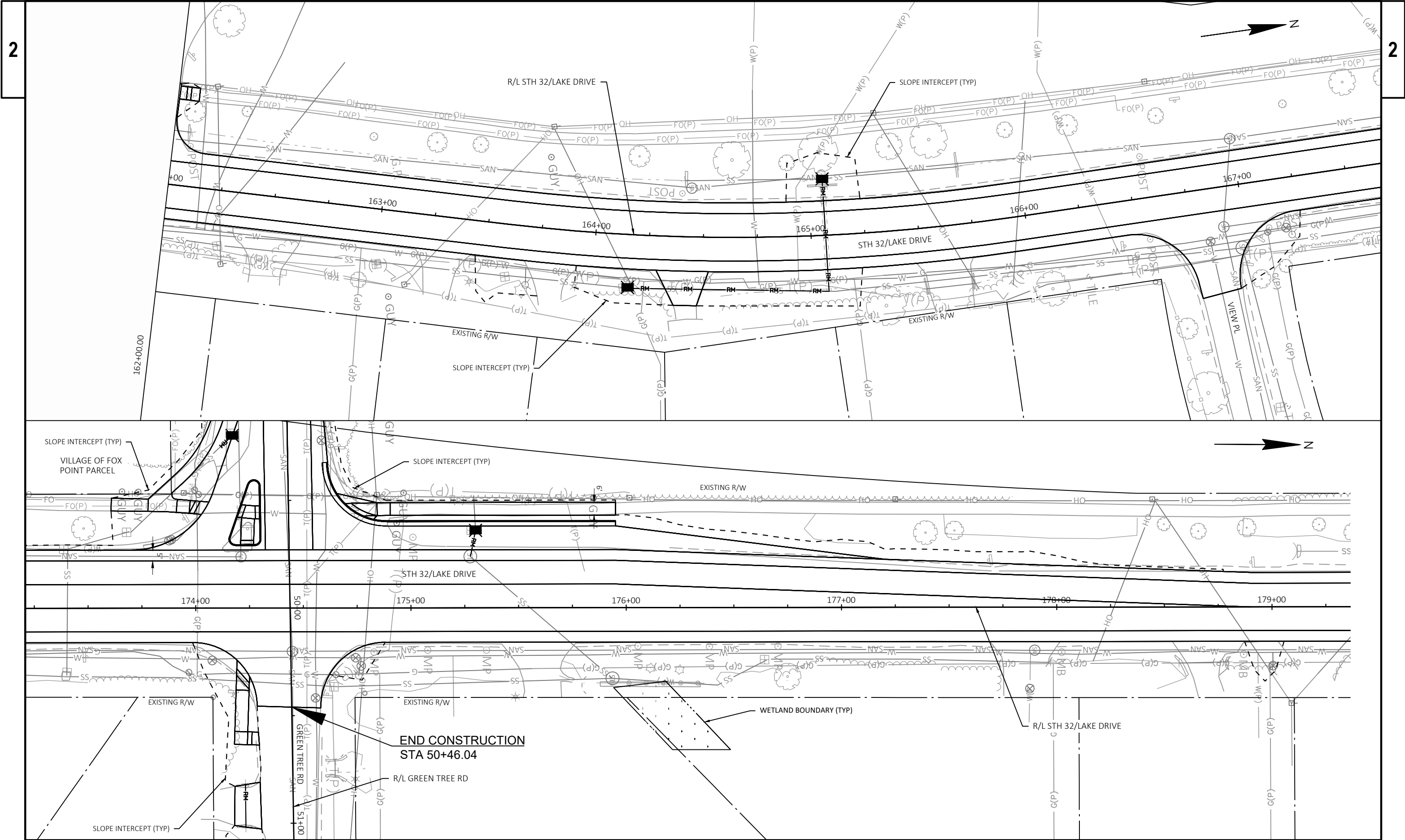
PROPOSED ENDWALL
- RM—

REMOVING STORM SEWER PIPE
- PROPOSED STORM SEWER/CULVERT PIPE PLAN VIEW
- · · · · ·

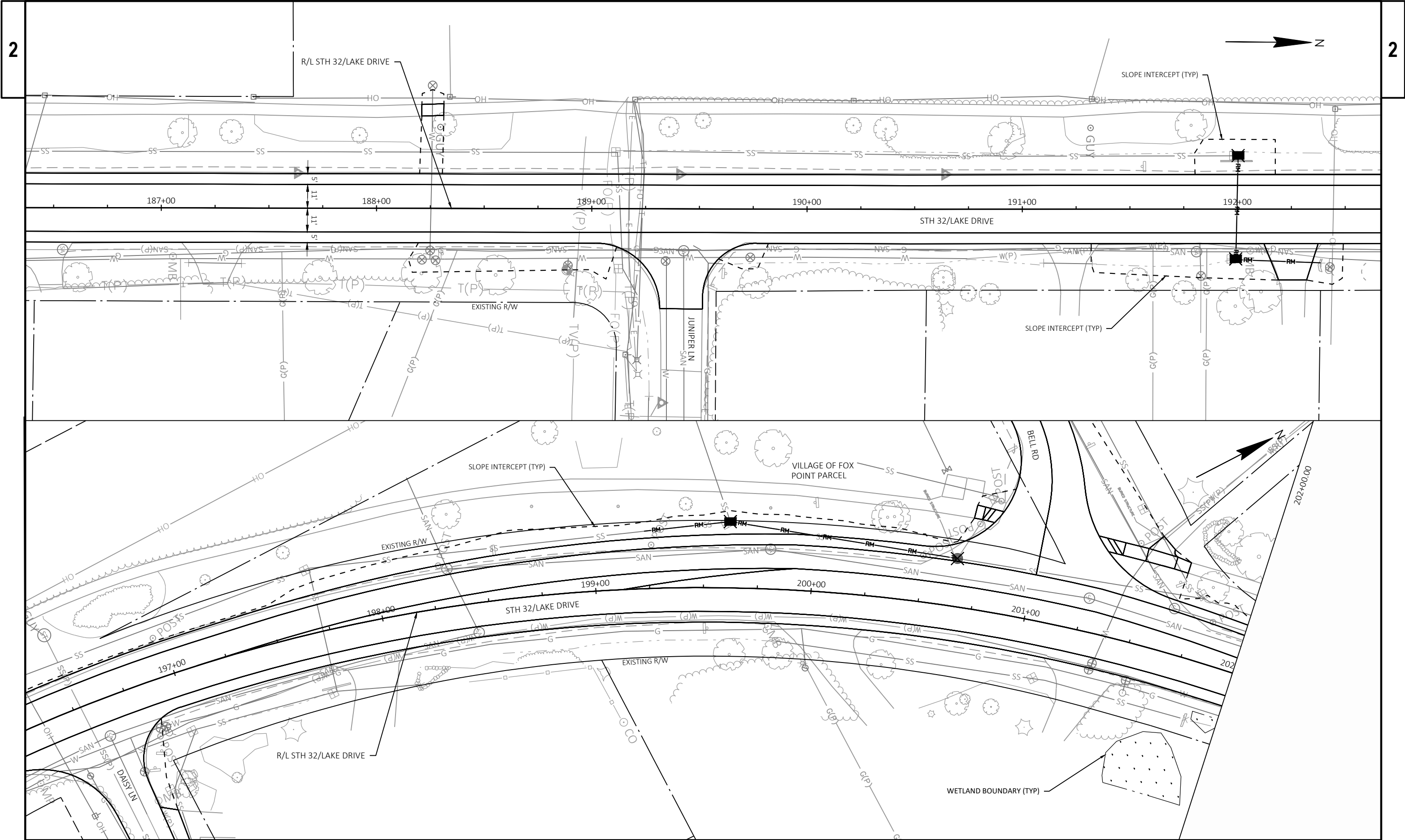
PROPOSED PIPE UNDERDRAIN
- · · · — ▵

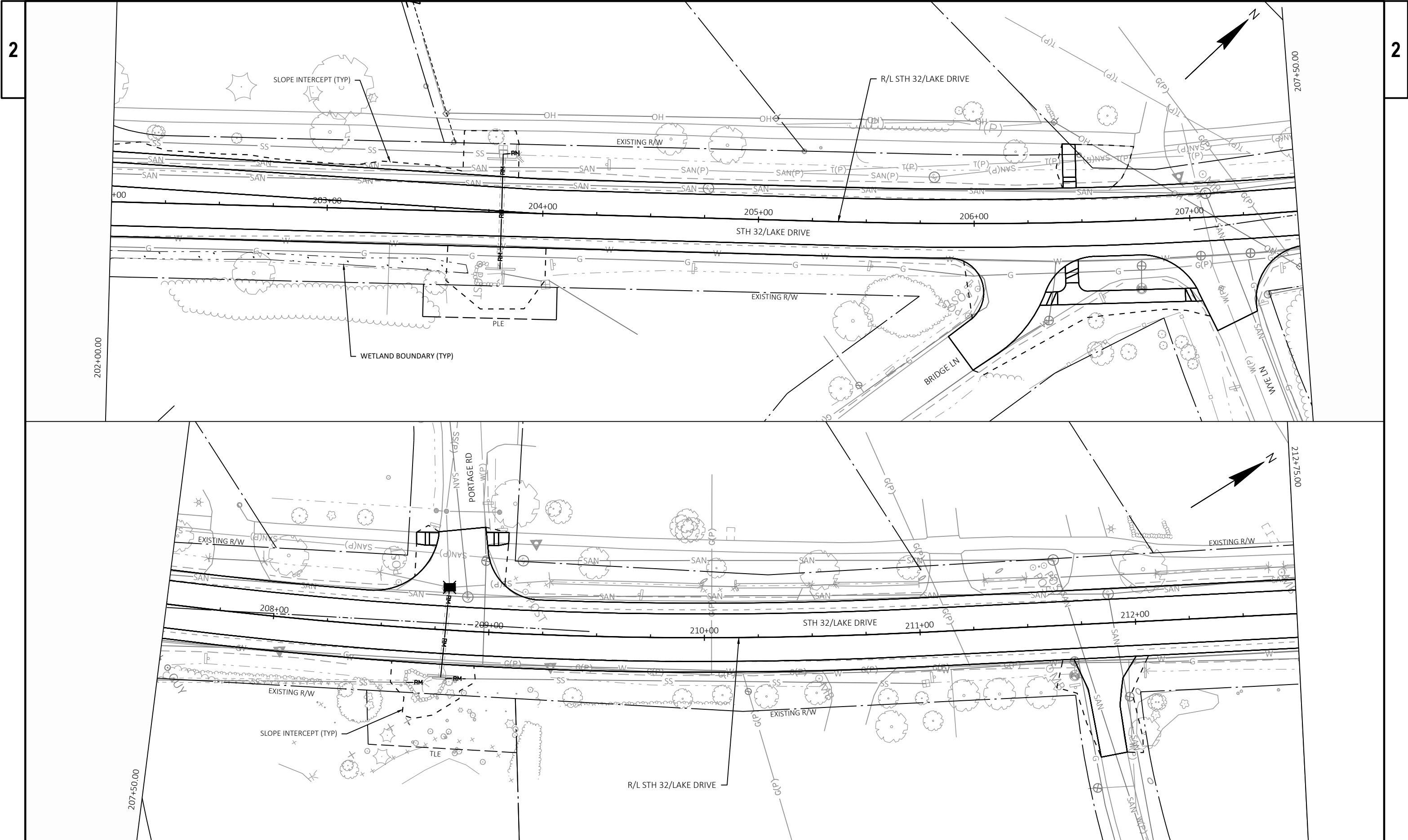
PROPOSED PIPE UNDERDRAIN ENDWALL



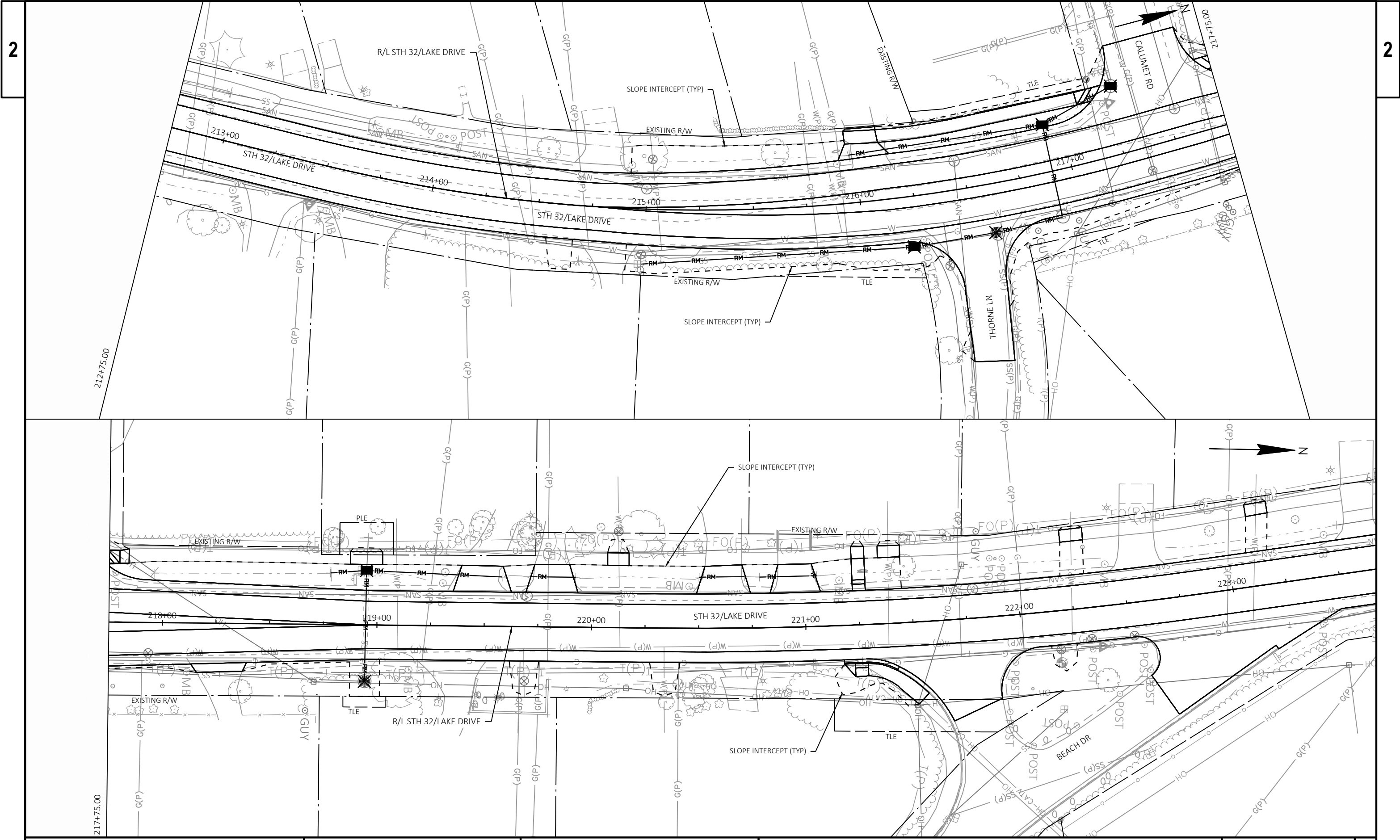


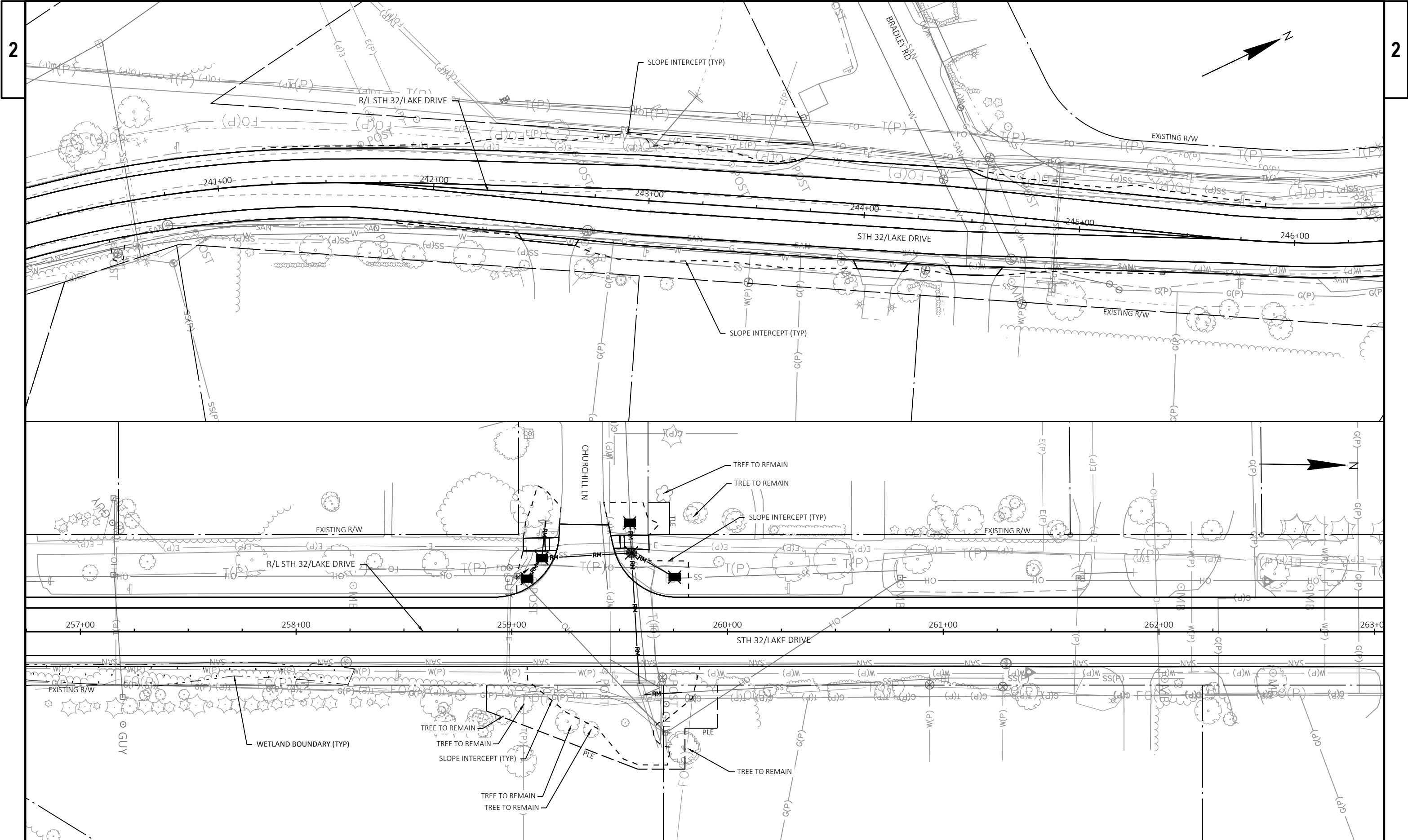


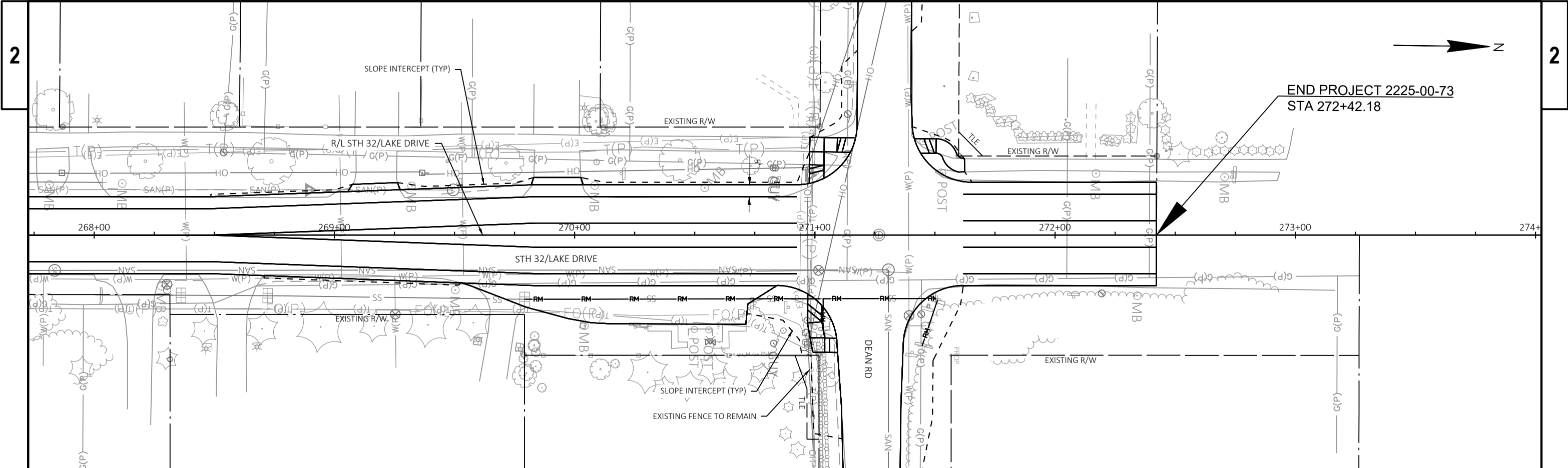


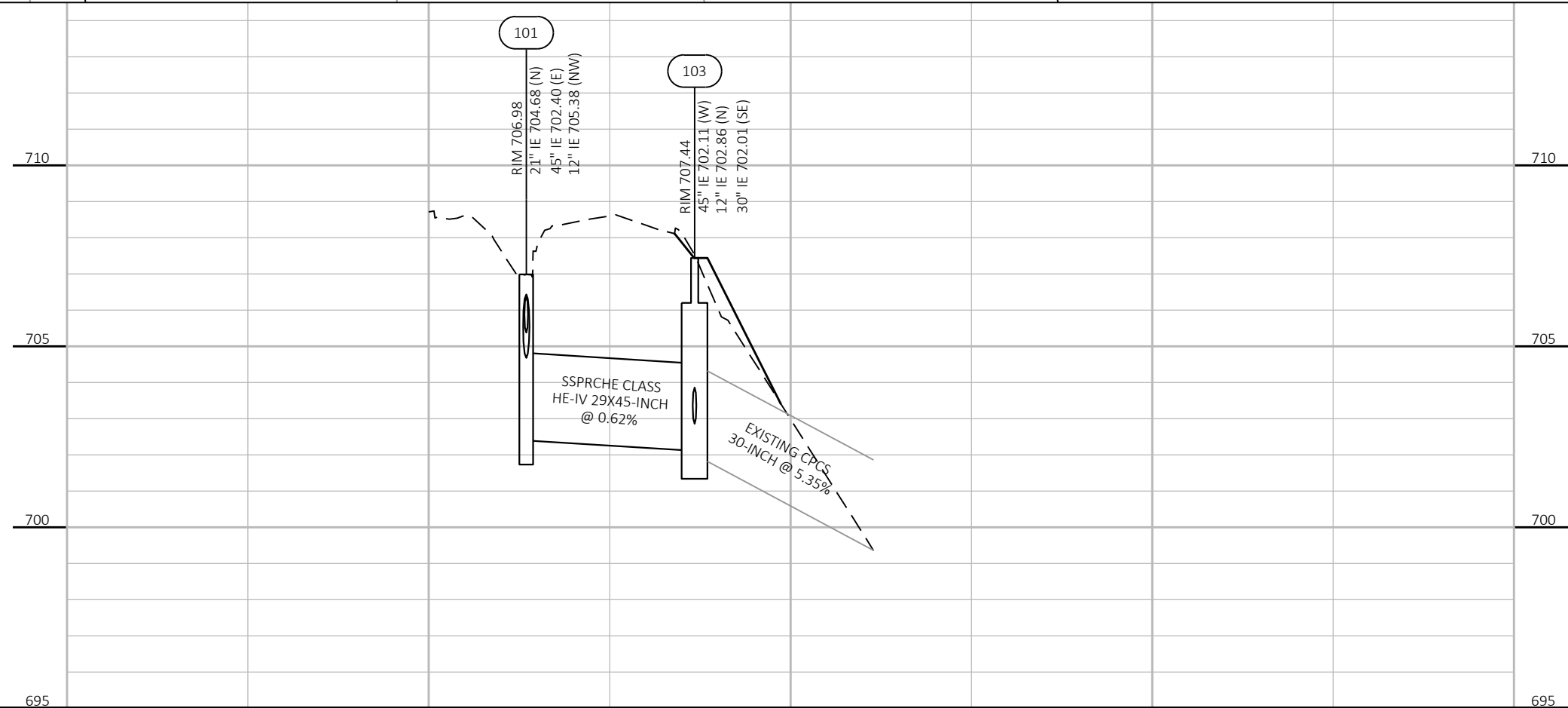
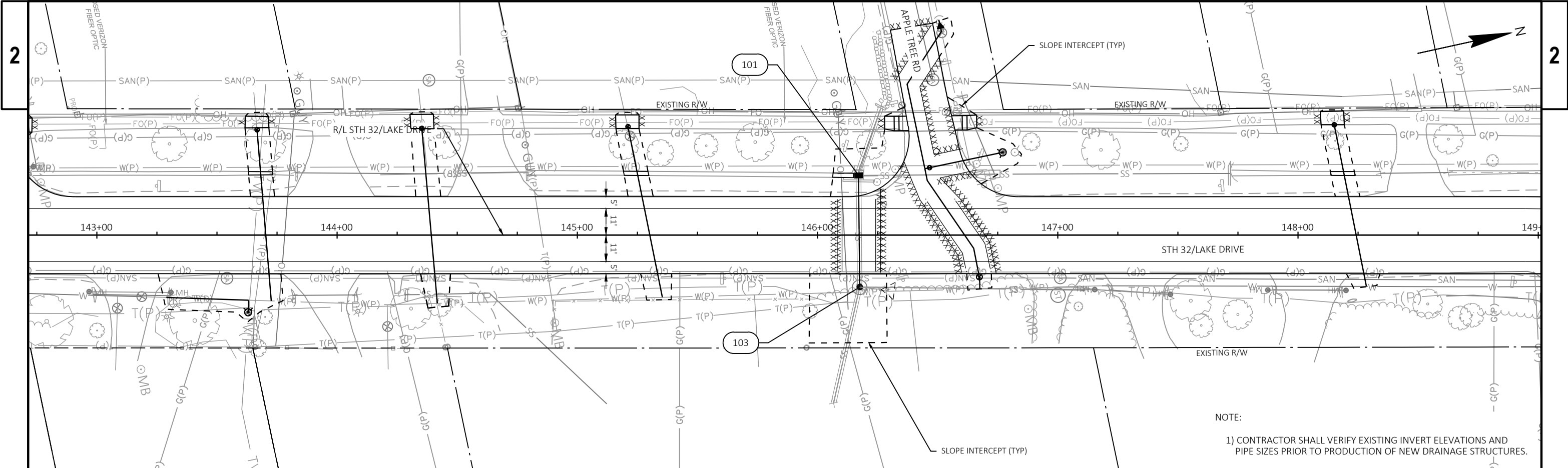


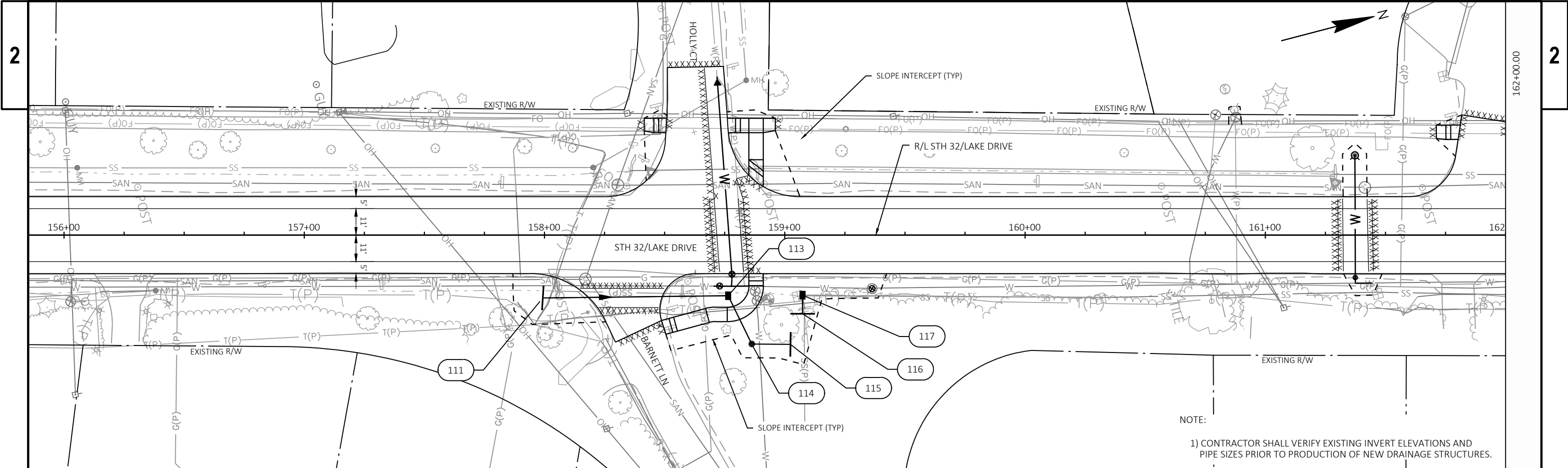




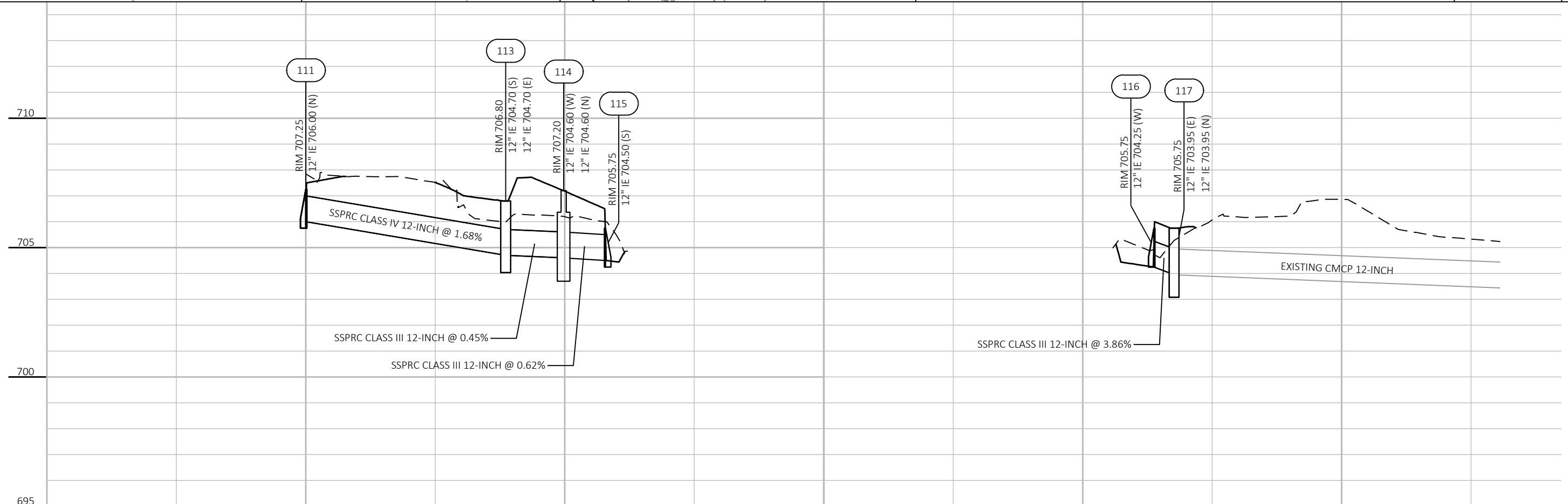


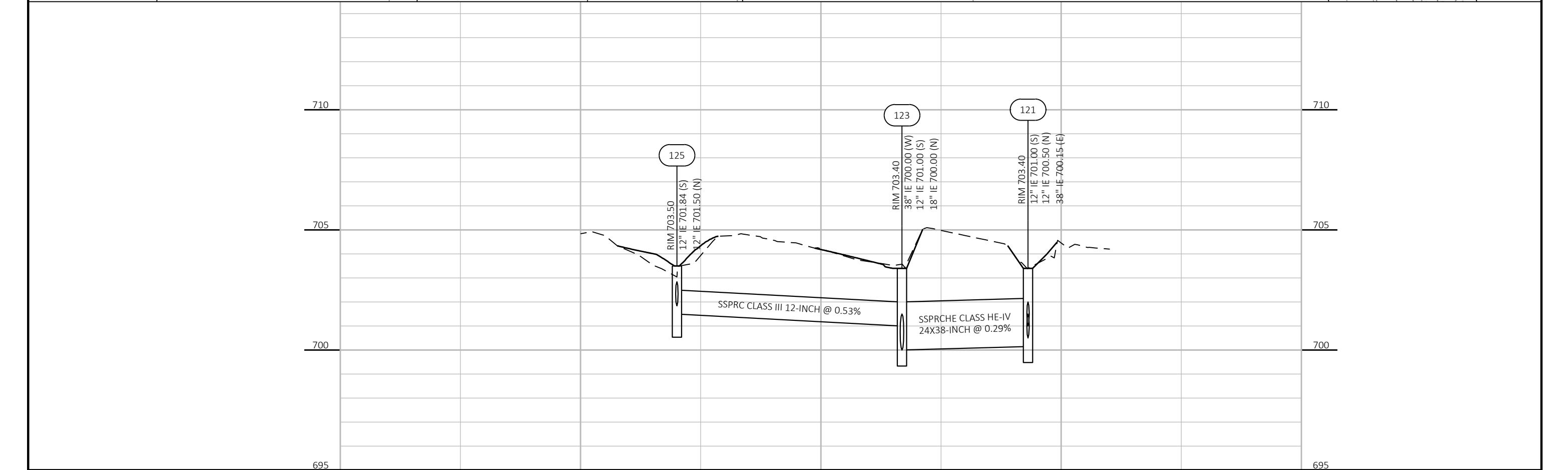
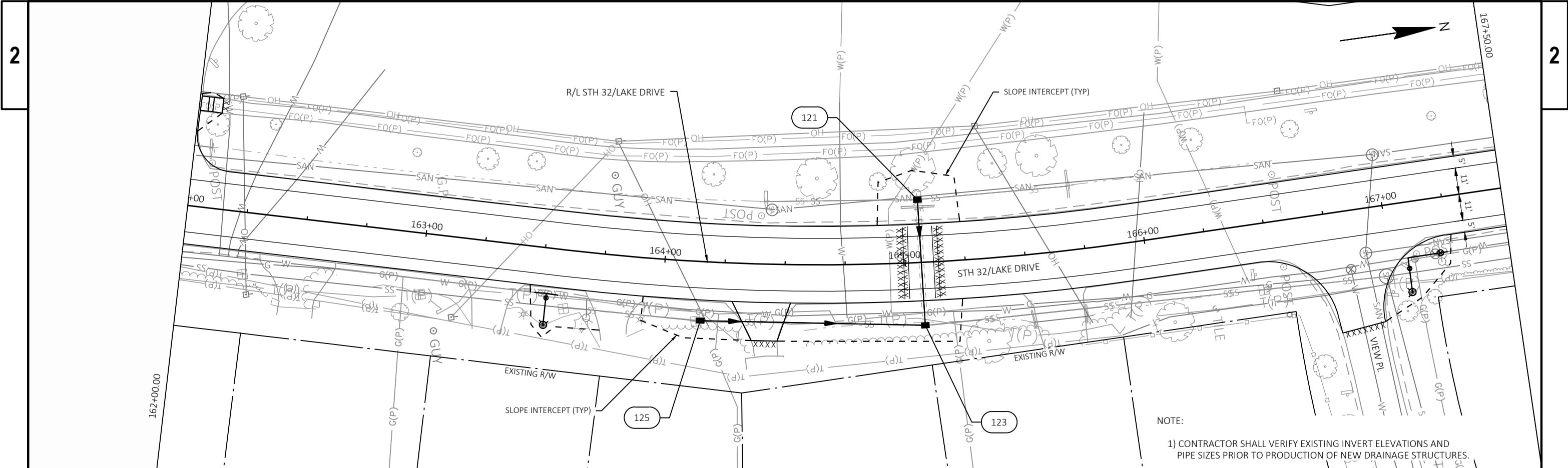




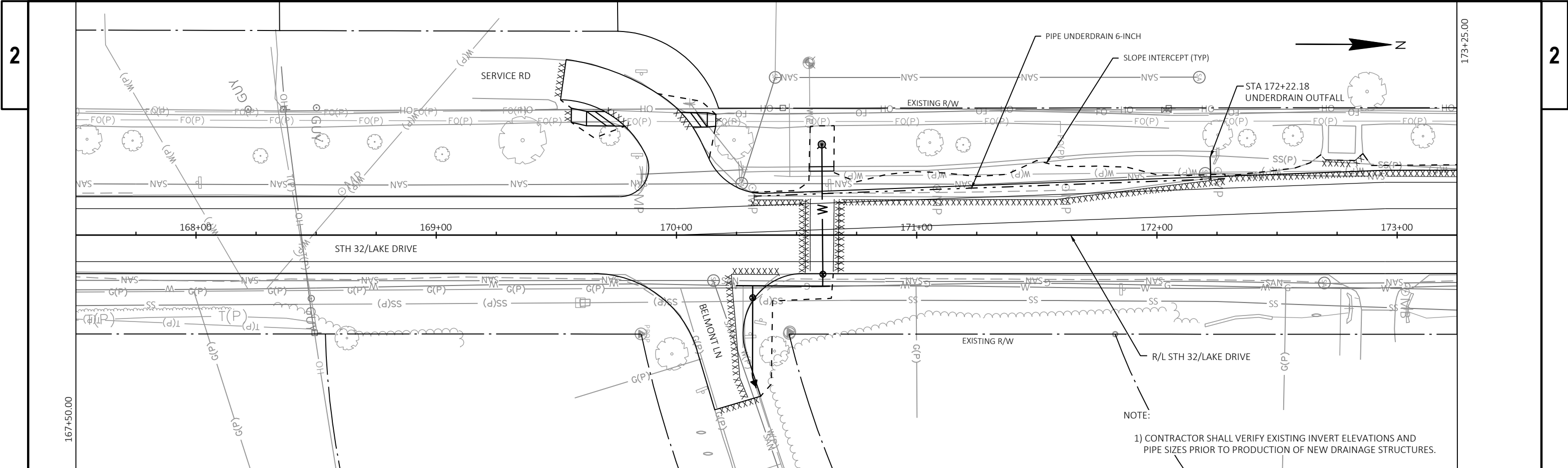


NOTE:  
1) CONTRACTOR SHALL VERIFY EXISTING INVERT ELEVATIONS AND PIPE SIZES PRIOR TO PRODUCTION OF NEW DRAINAGE STRUCTURES.

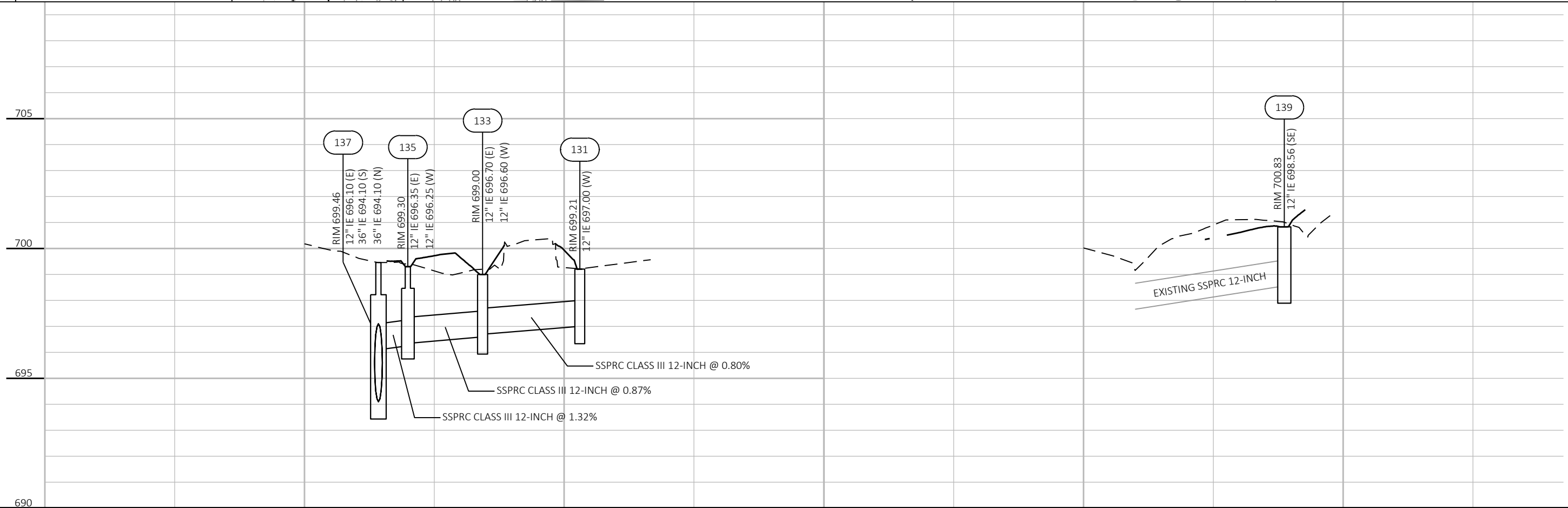
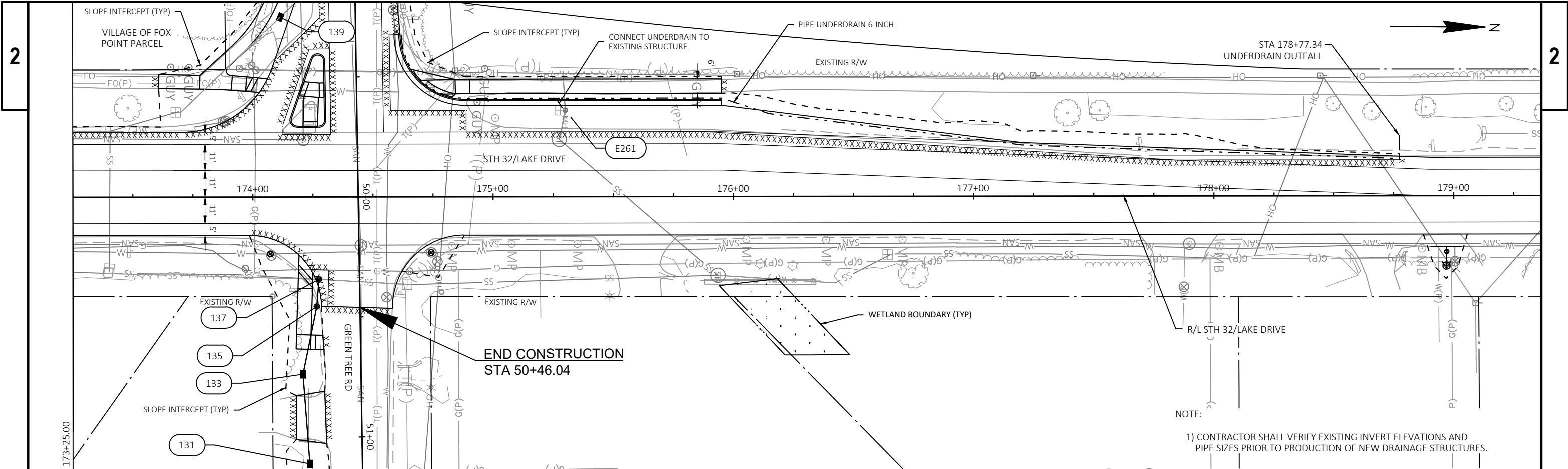




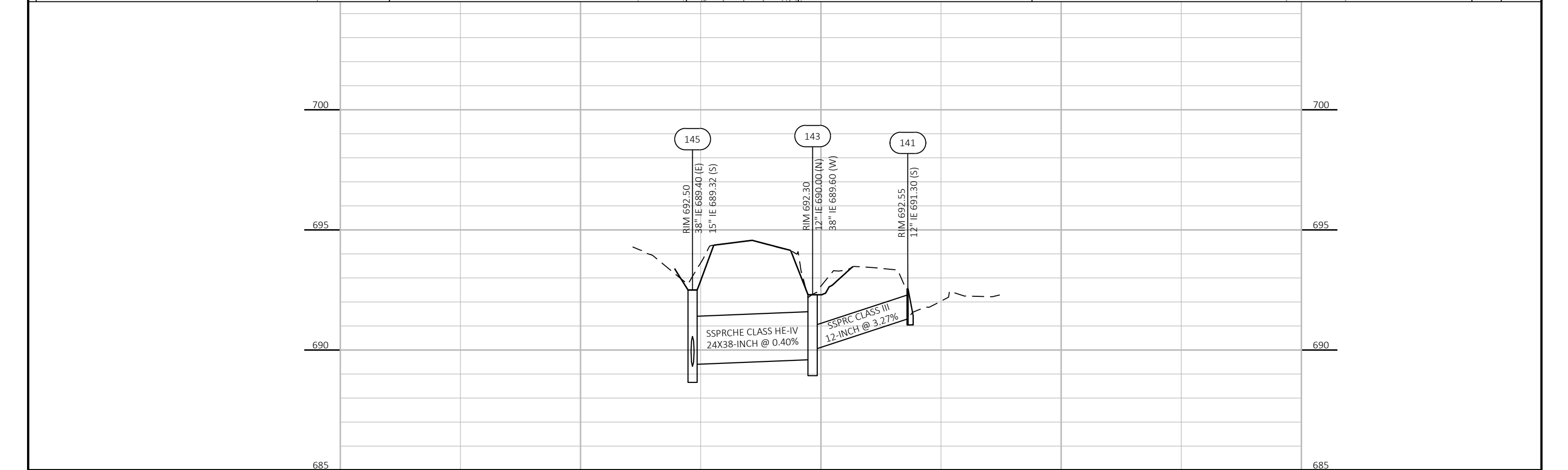
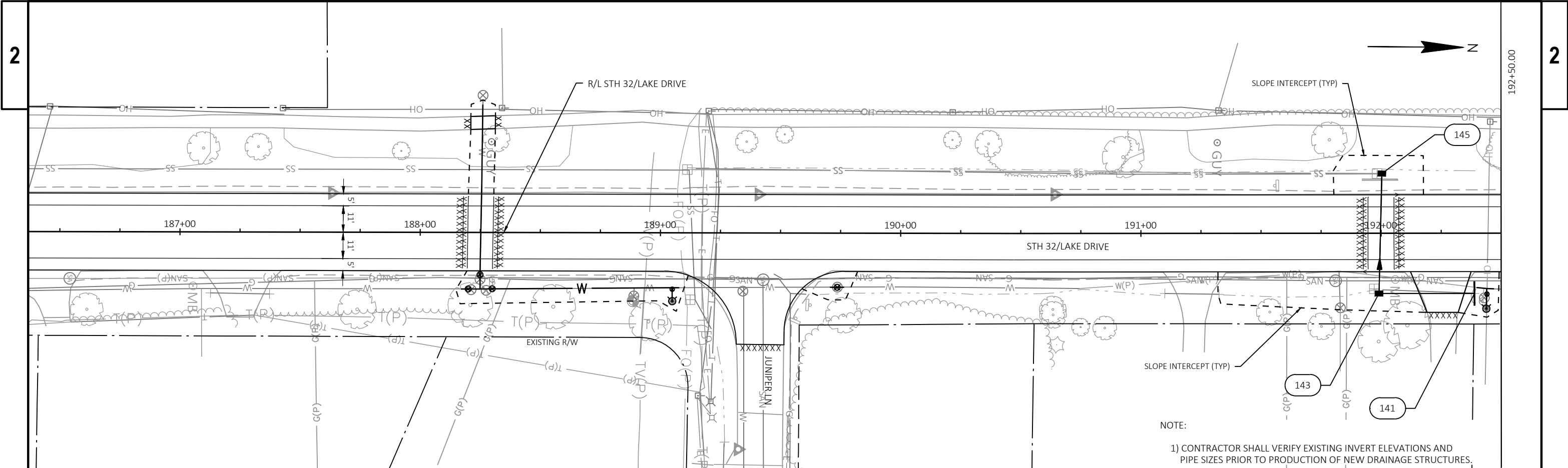


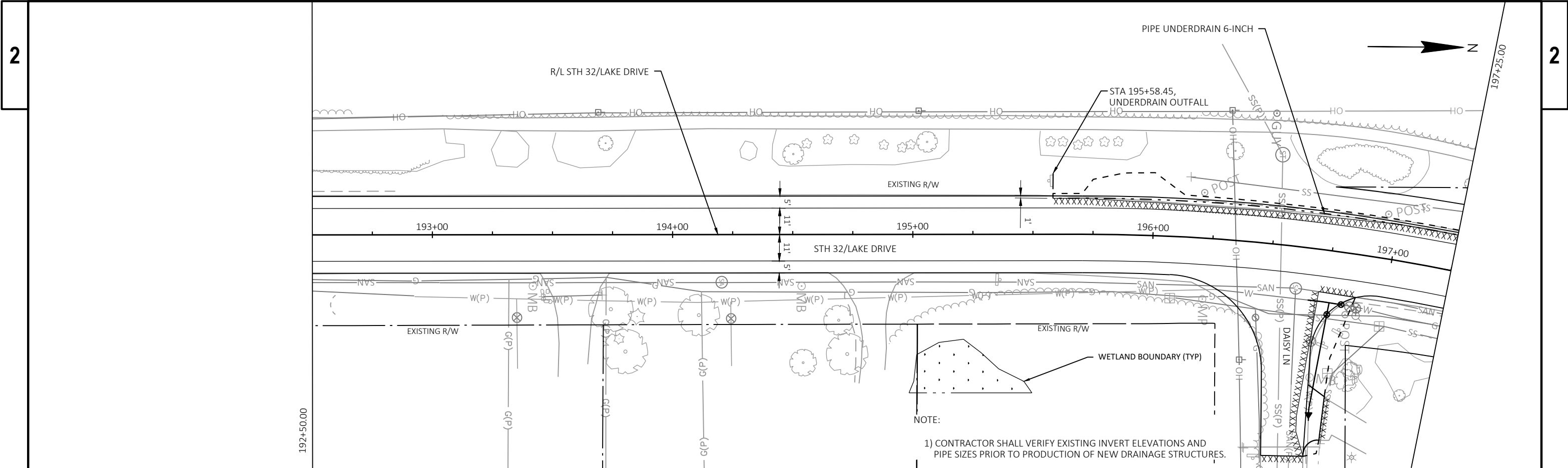


NO PROFILES THIS SHEET

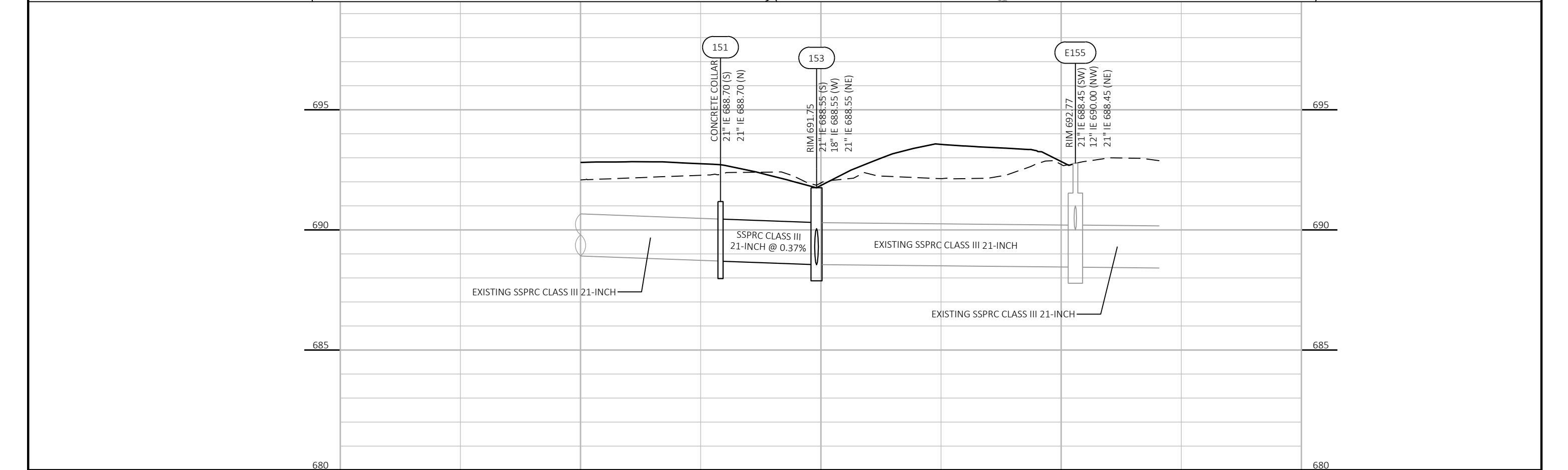
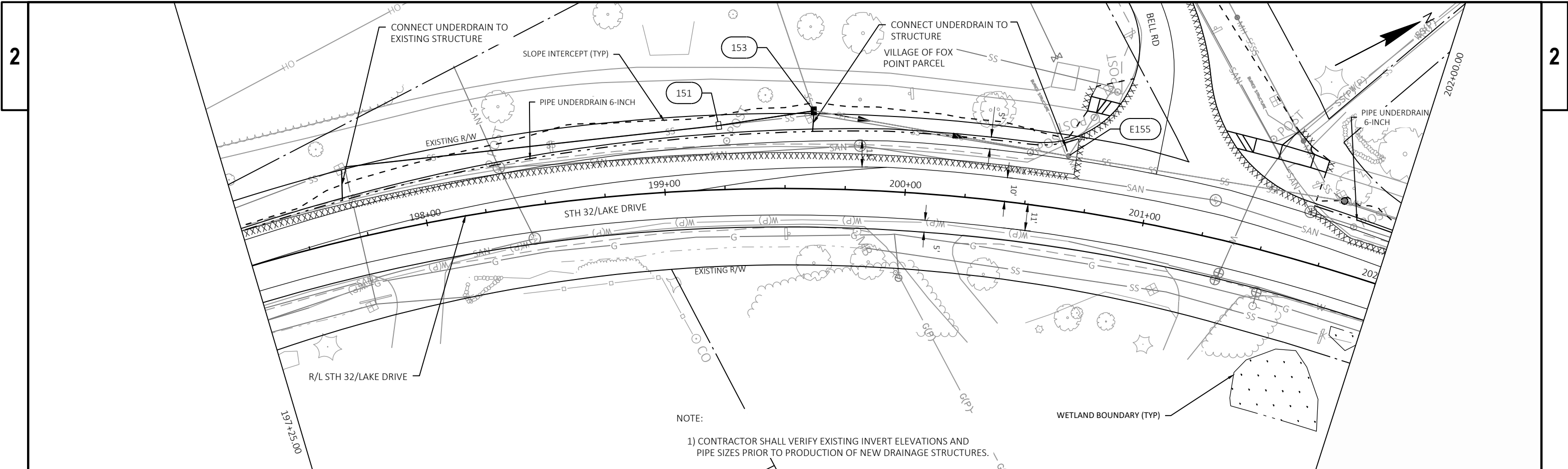


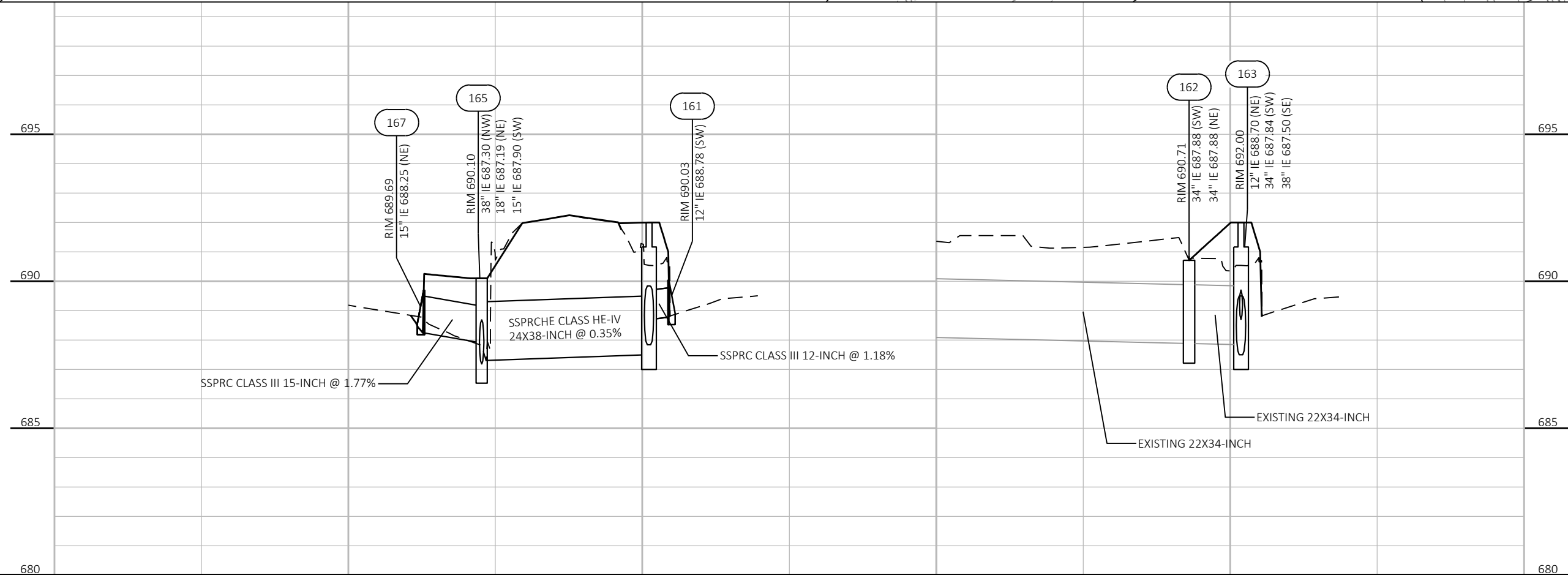
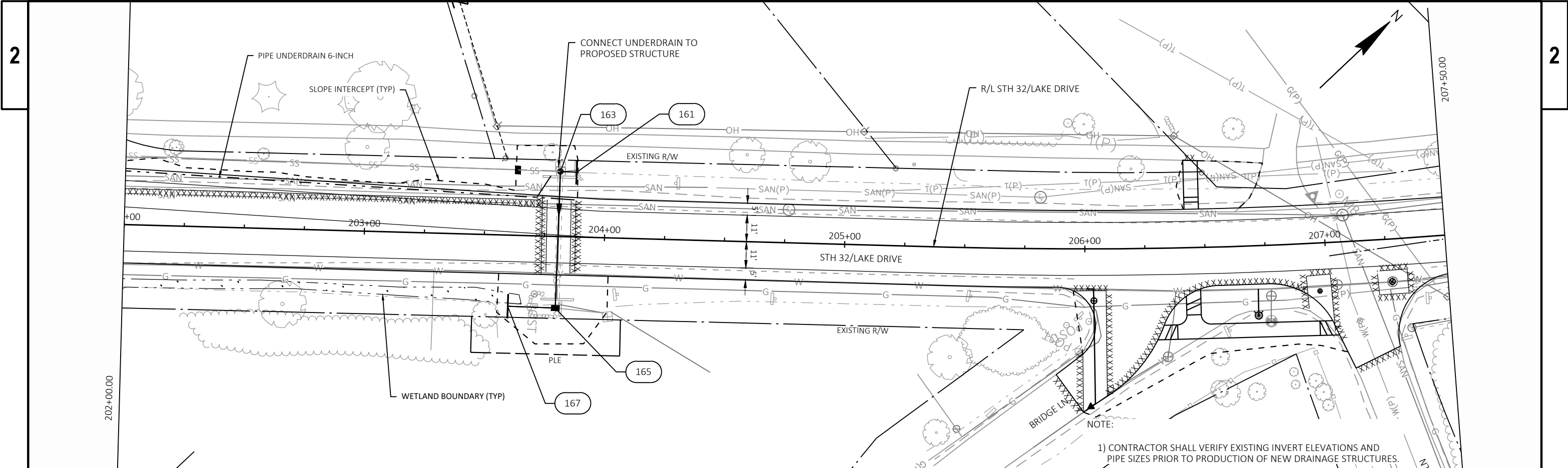


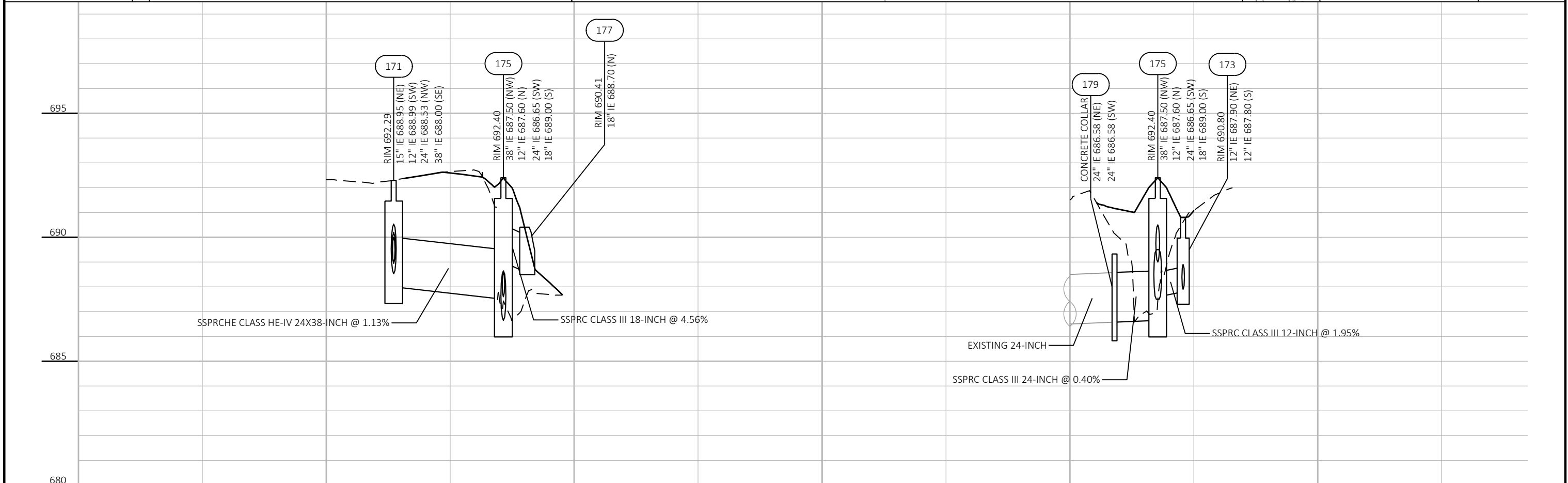
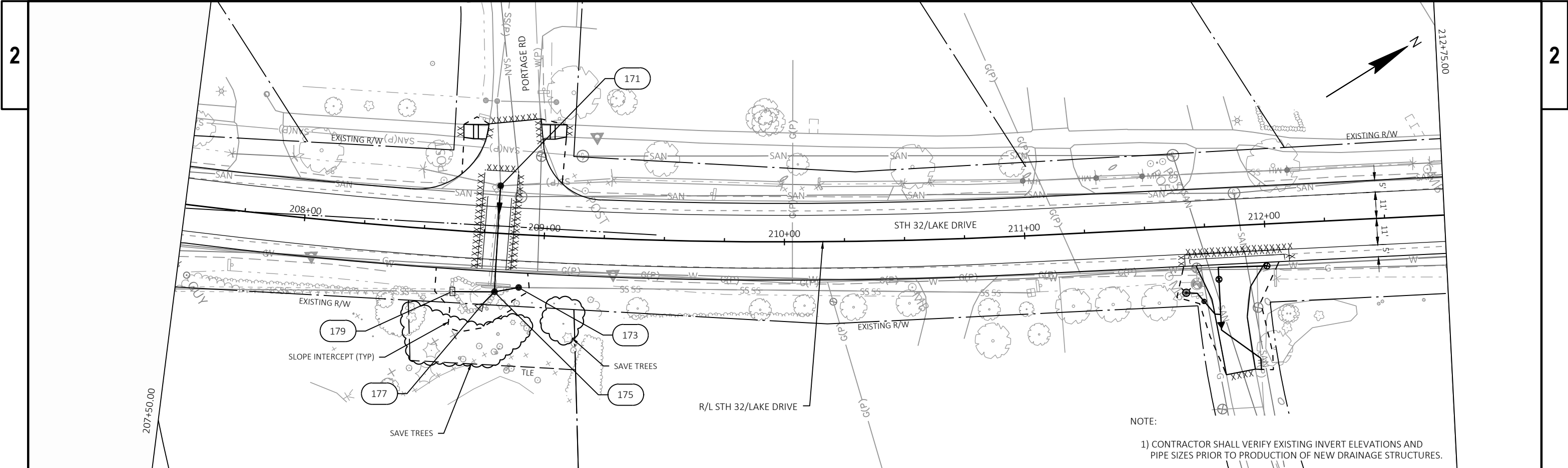


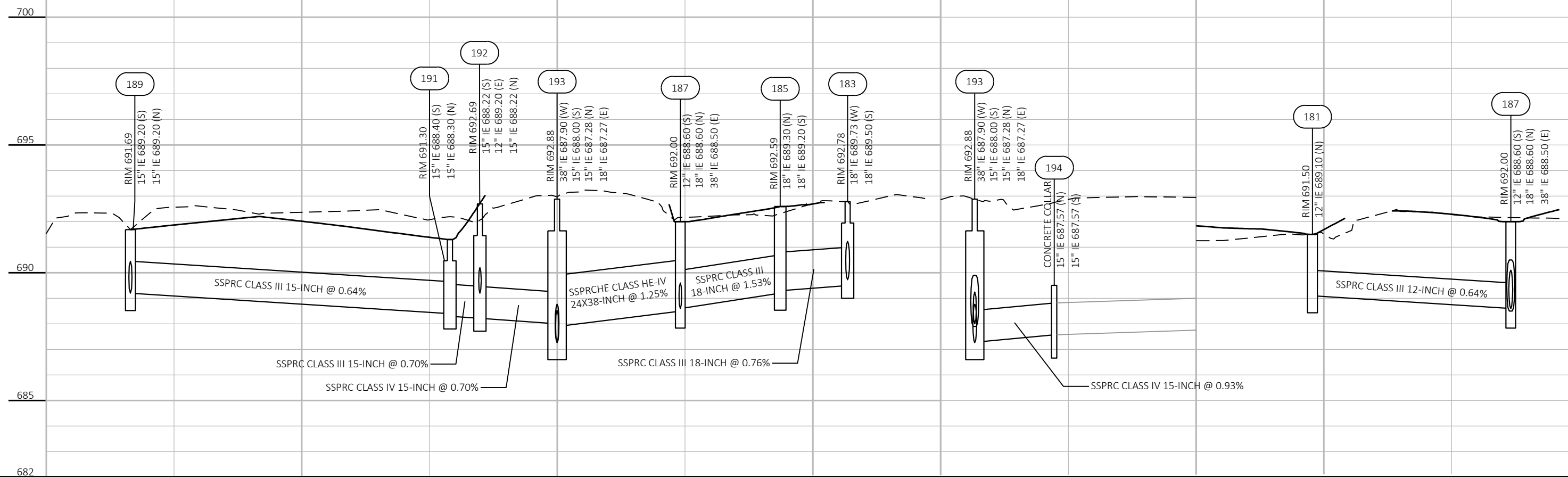
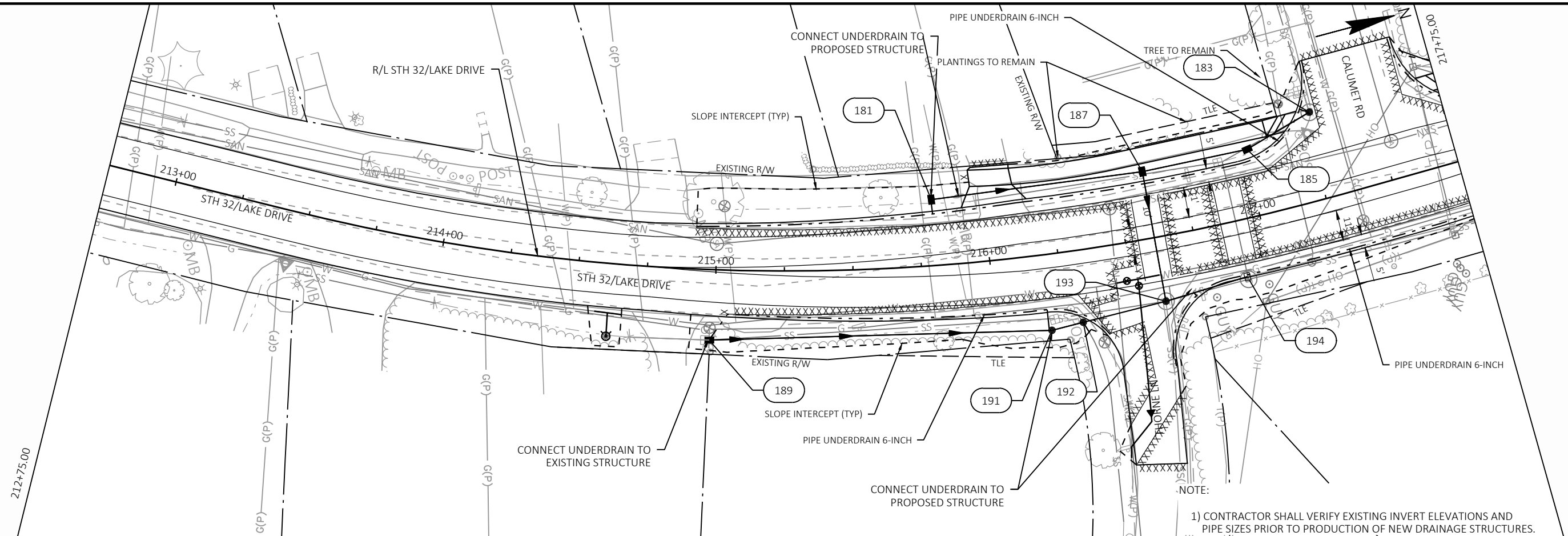


NO PROFILES THIS SHEET









PROJECT NO: 2225-00-73

HWY: STH 32

COUNTY: MILWAUKEE

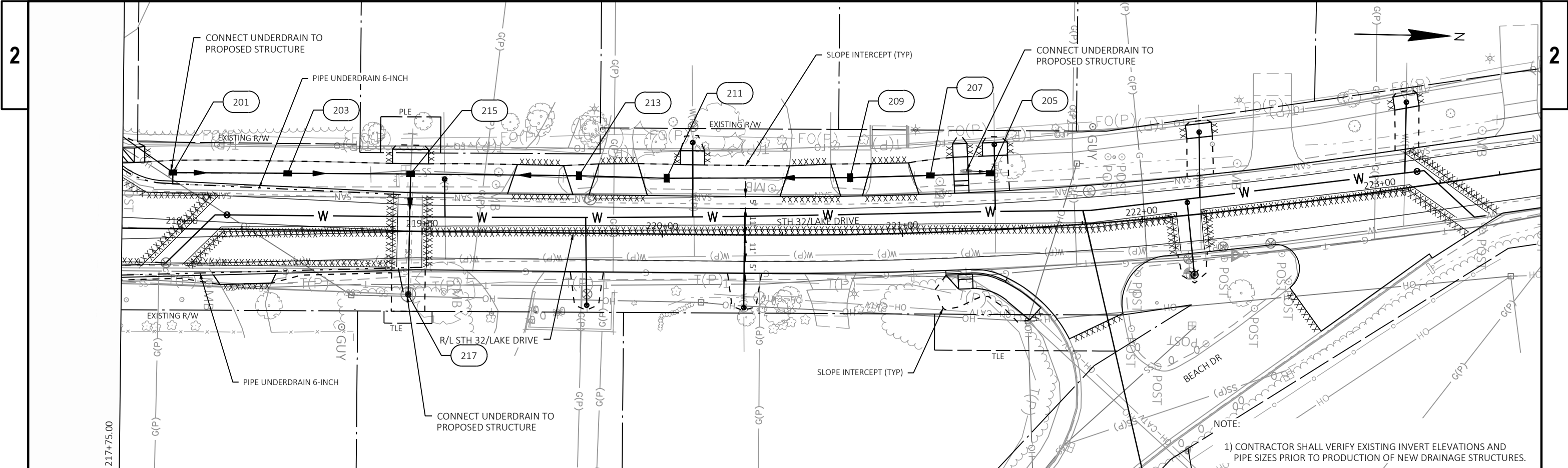
DRAINAGE PLAN

SHEET

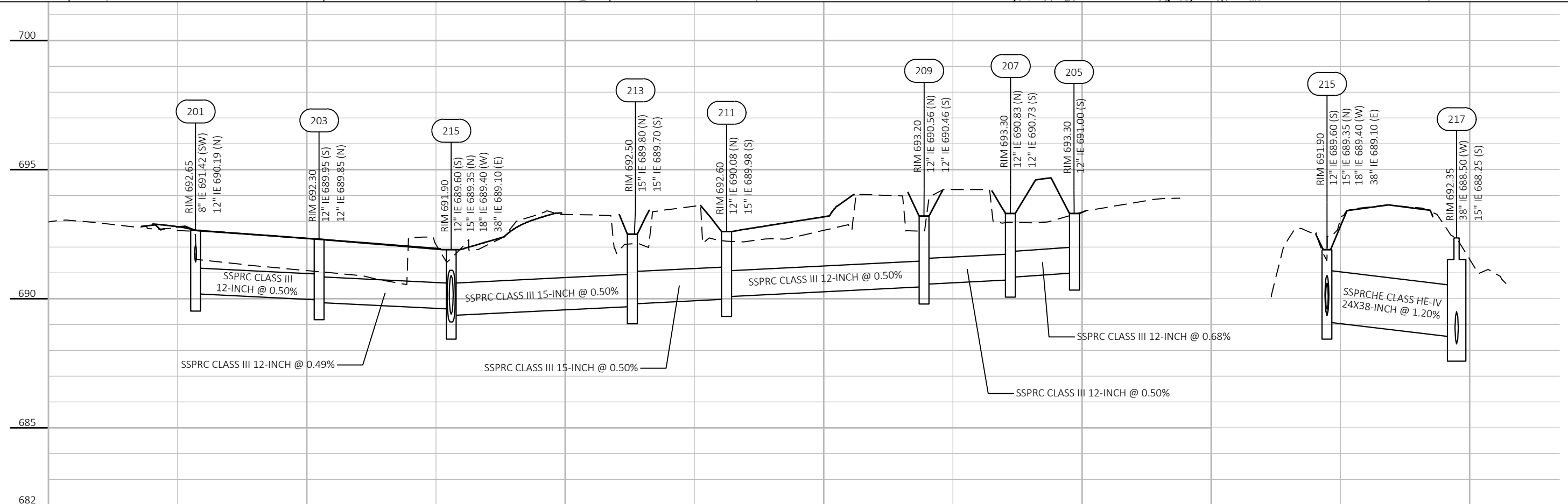
139

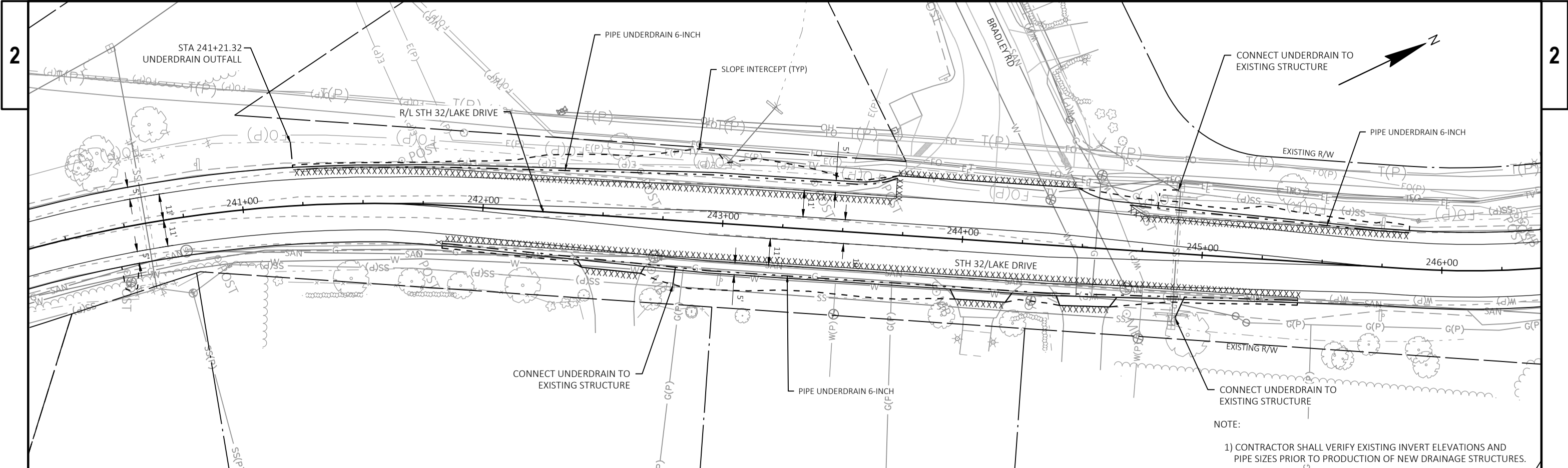
E





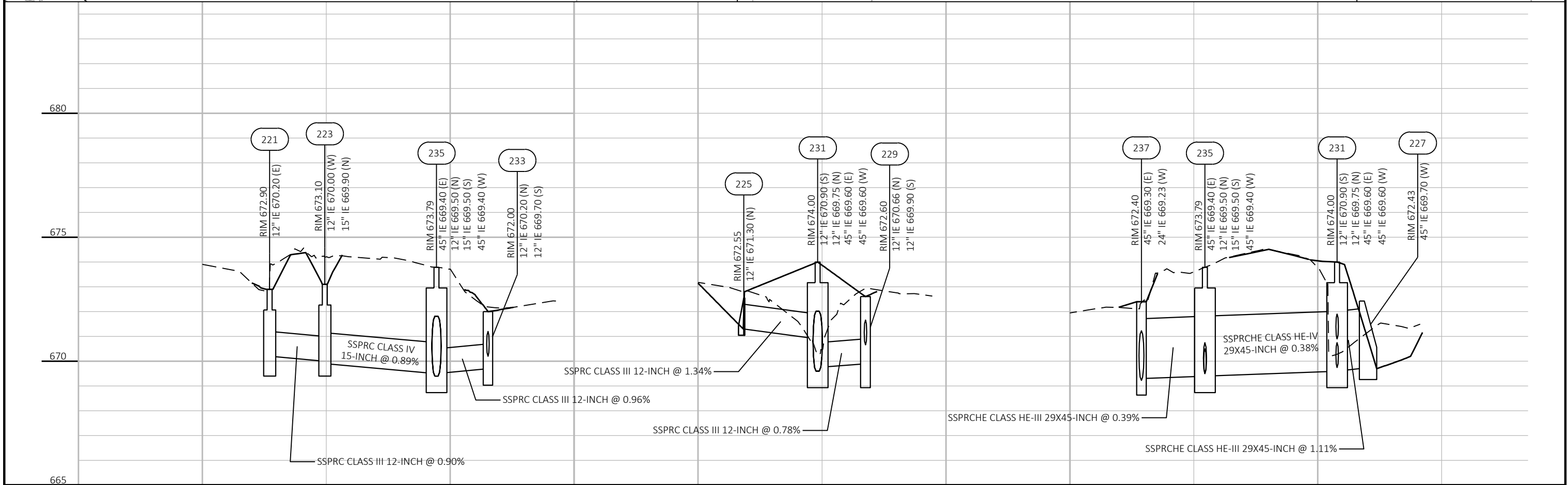
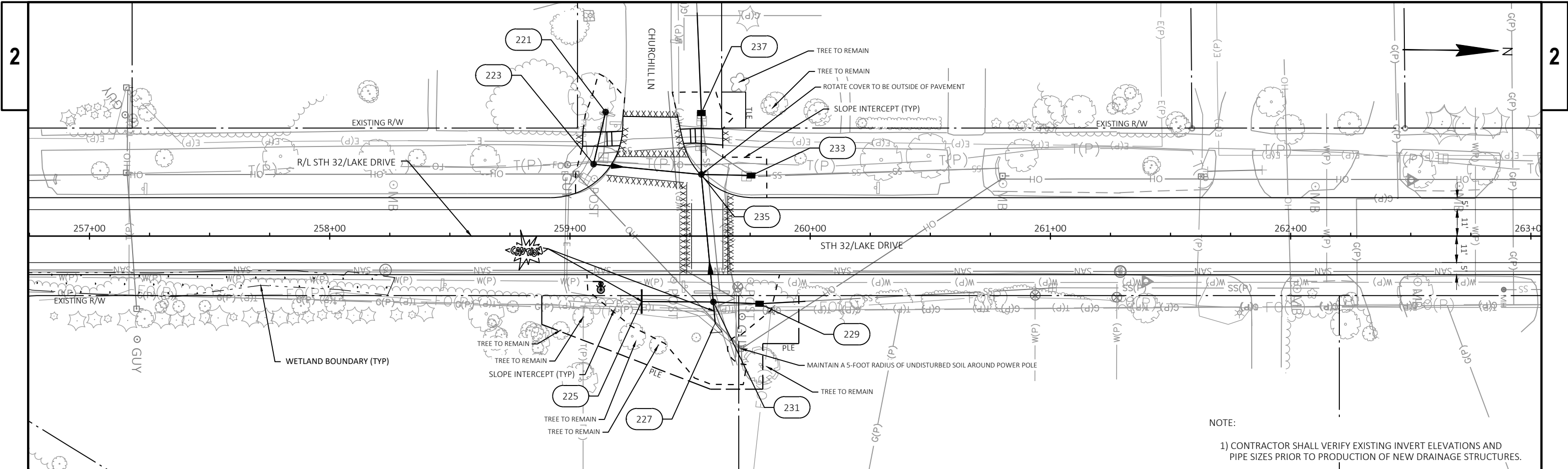
NOTE:  
1) CONTRACTOR SHALL VERIFY EXISTING INVERT ELEVATIONS AND PIPE SIZES PRIOR TO PRODUCTION OF NEW DRAINAGE STRUCTURES.

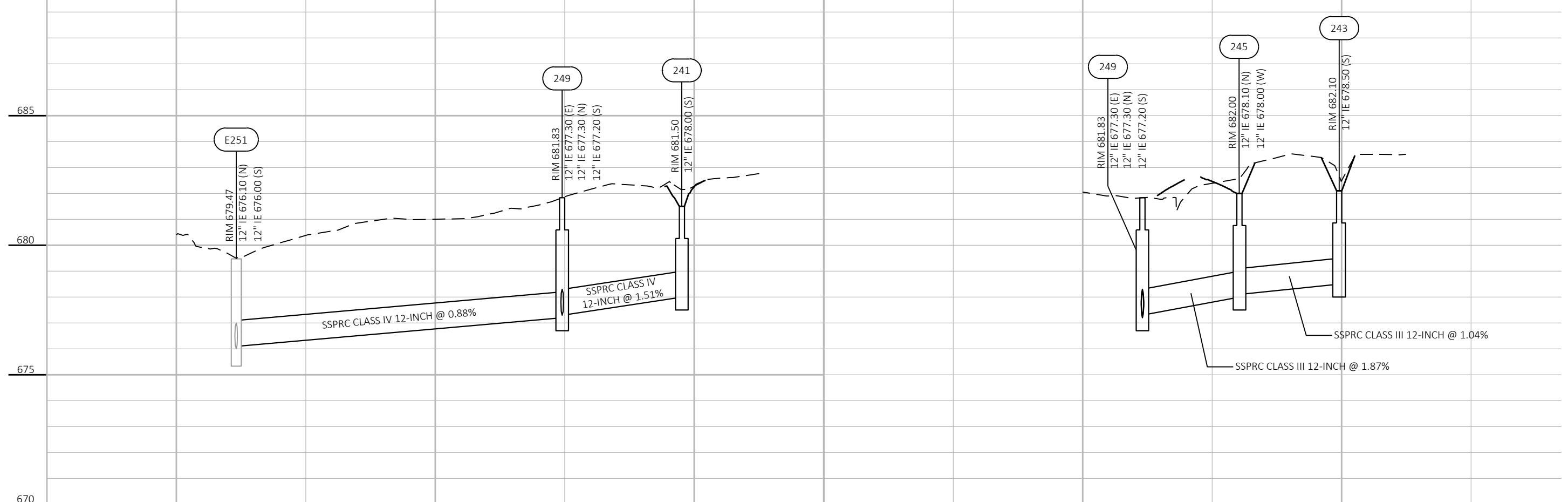
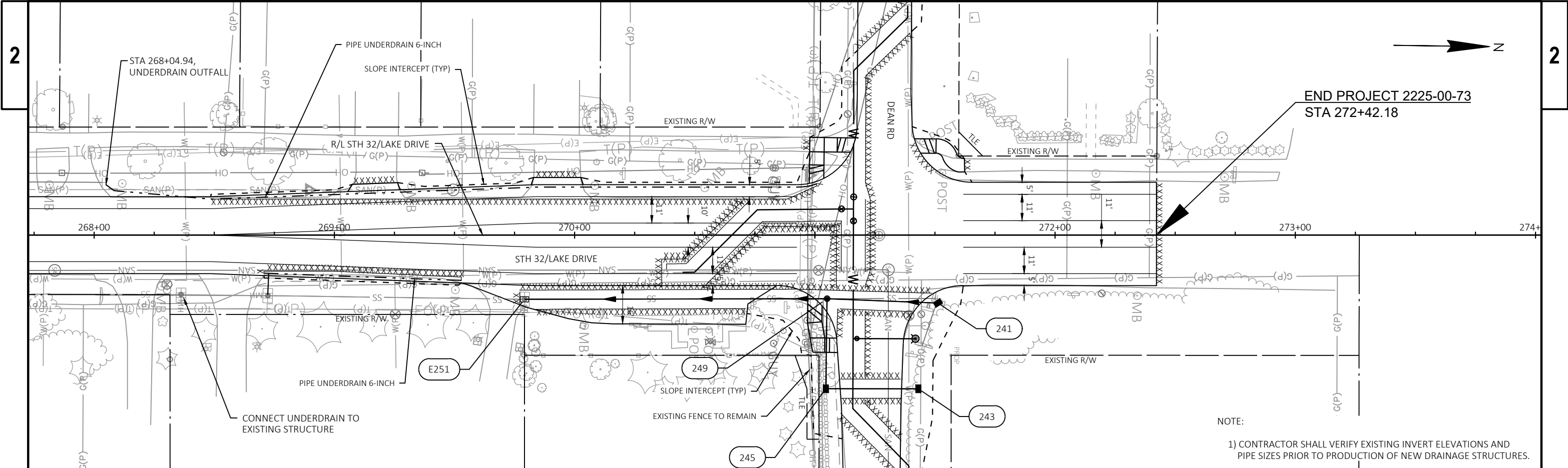




NO PROFILES THIS SHEET







F:\NAME: S:\View\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\220651\_Cover-Details.DWG

WATERMAIN GENERAL NOTES

ALL CONSTRUCTION SHALL MEET STANDARDS IN THE CONTRACT DOCUMENTS, "WISCONSIN STANDARD SPECIFICATIONS FOR SEWER AND WATER" AND "DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION," LATEST EDITIONS AND AMENDMENTS.

CONTRACTOR SHALL SET BENCHMARKS AND STAKING NECESSARY TO ESTABLISH LINE AND GRADE FOR ALL WATERMAIN ITEMS INCIDENTAL TO THE WATERMAIN ITEMS.

NO TREES OF SHRUBS ARE TO BE REMOVED UNLESS INDICATED FOR REMOVAL BY THE ENGINEER OR OWNER.

THE INFORMATION IN THIS PLAN SET REPRESENTS THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IN THE FIELD VERIFICATION OF ALL INFORMATION.

THE LOCATIONS OF UTILITIES, AS NOTED ON THE PLANS ARE APPROXIMATE, THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. CONTRACTOR IS RESPONSIBLE FOR VERIFYING DEPTHS OF UTILITIES.

ALL HOLES OR OPENINGS BELOW SUBGRADE RESULTING FROM THE ABANDONMENT OR REMOVAL OF EXISTING STRUCTURES SHALL BE BACKFILLED WITH BACKFILL GRANULAR GRADE 1 CONFORMING TO SECTION 209 OF THE STANDARD SPECIFICATIONS.

CONTRACTOR SHALL MAINTAIN TRAFFIC ACCESS AT ALL TIMES.

EROSION CONTROL MEASURES ARE TO BE IN PLACE BEFORE WORK COMMENCES AND MAINTAINED DURING CONSTRUCTION. ALL EROSION AND SEDIMENT CONTROL SHALL BE PROVIDED, INSTALLED, AND MAINTAINED IN ACCORDANCE WITH THE LATEST EDITION OF THE WDNR "TECHNICAL STANDARDS"

ALL WATER MAINS WITH LESS THAN 5' OF COVER SHALL BE INSULATED TRENCHWALL TO TRENCHWALL WITH 2" RIGID BLUE STYROFOAM.

RETURN ALL EXISTING MANHOLE CASTINGS, INLET CASTINGS, AND HYDRANTS PLANNED TO BE ABANDONED TO OWNER.

CONTRACTOR SHALL ABANDON HYDRANTS 2' BELOW THE FINISH GRADE SURFACE AND FILL WITH GRANULAR MATERIAL. THIS WORK IS INCIDENTAL TO THE PROJECT.

COST OF ALL FITTINGS TO CONNECT TO EXISTING PIPES ARE INCIDENTAL TO THE PIPE ITEM.

HYDRANTS CONNECTED TO THE ABANDONED WATER MAIN SHALL BE REMOVED AND THE HYDRANT LEAD BULKHEADED. COST TO REMOVE HYDRANTS CONNECTED TO THE ABANDONED WATER MAIN IS INCIDENTAL TO THE HYDRANT ITEM.

THE VALVE BOXES OF EXISTING VALVES CONNECTED TO THE ABANDONED WATER MAIN SHALL BE REMOVED. COST TO REMOVE EXISTING VALVE BOXES CONNECTED TO THE ABANDONED WATER MAIN IS INCIDENTAL TO THE VALVE ITEMS.

ADJUSTMENT OF EXISTING ACTIVE AND PROPOSED VALVES IS INCIDENTAL TO THE VALVE ITEM.

BACKFILL GRANULAR GRADE 1 CONFORMING TO SECTION 209 OF THE STANDARD SPECIFICATIONS IS REQUIRED FOR ALL WATER MAIN, AND LATERALS INSTALLED OR RELAYED UNDER THIS CONTRACT.

CONTRACTOR SHALL FOLLOW ALL REGULATORY REQUIREMENTS REGARDING THE HANDLING, TRANSPORTING, AND DISPOSING OF LEAD WATER SERVICES.

SUPPORTING UTILITIES DURING WATER MAIN CONSTRUCTION IS INCIDENTAL TO WATER MAIN PIPE.

MAIL BOXES, DECORATIVE ROCKS, FLOWERS, WOOD FENCES OR TIMBERS, PLANTERS AND OTHER MISCELLANEOUS ITEMS ALONG THE ROADWAY WITHIN THE WORK ZONE SHALL BE CAREFULLY REMOVED, SALVAGED AND PLACED OUT OF THE CONSTRUCTION ZONE AT A LOCATION REQUESTED BY THE PROPERTY OWNER. THIS WORK SHALL BE COMPLETED UNDER ASSOCIATED BID ITEMS, OTHERWISE THIS WORK SHALL INCIDENTAL TO THIS CONTRACT.

REMOVAL/ABANDONMENT OF EXISTING WATER MAIN INCLUDING ALL PIPES, FITTINGS, HYDRANTS, VALVES AND STRUCTURES IS INCIDENTAL TO NEW UTILITY WORK. BACKFILL TRENCHES RESULTING FROM REMOVAL/ABANDONMENTS WITH BACKFILL GRANULAR GRADE 1 CONFORMING TO SECTION 209 OF THE STANDARD SPECIFICATIONS, INCIDENTAL TO NEW UTILITY WORK.

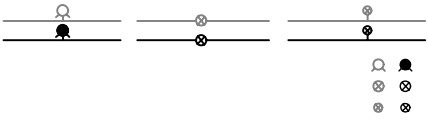
ALL PROPOSED WATER SERVICES SHALL BE 1.25-INCH UNLESS OTHERWISE CALLED OUT ON THE PLANS.

IF DEWATERING IS NECESSARY, FOLLOW PROCEDURES SET FORTH IN SECTION 02140-DEWATERING IN THE PROJECT SPECIFICATIONS AND THE FOLLOWING WDNR TECHNICAL STANDARDS.

WDNR TECHNICAL STANDARD 1061 FOR DEWATERING –  
[http://dnr.wi.gov/runoff/pdf/stormwater/techstds/erosion/Dewatering\\_1061.pdf](http://dnr.wi.gov/runoff/pdf/stormwater/techstds/erosion/Dewatering_1061.pdf)

WDNR TECHNICAL STANDARD 1051 FOR POLYMER –  
[http://dnr.wi.gov/runoff/pdf/stormwater/techstds/erosion/Dewatering\\_1061.pdf](http://dnr.wi.gov/runoff/pdf/stormwater/techstds/erosion/Dewatering_1061.pdf)

LEGEND



EXISTING WATER MAIN, HYDRANT, VALVE & CURB STOP

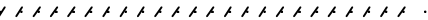
PROPOSED WATER MAIN, HYDRANT, VALVE & CURB STOP

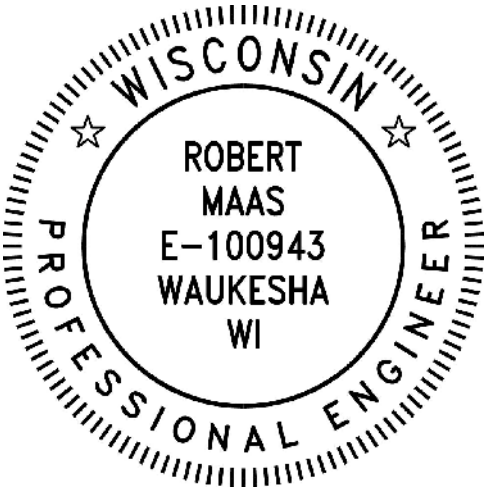
HYDRANT EXISTING, PROPOSED

WATER VALVE EXISTING, PROPOSED

CURB STOP EXISTING, PROPOSED

ABANDON WATERMAIN





Robert Maas  
10/15/24

PROJECT:  
ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:  
  
VILLAGE OF FOX  
POINT

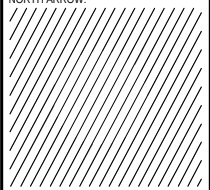


RELEASE:  
  
CONSTRUCTION  
SET

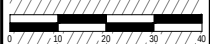
REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |
|   |          |                      |
|   |          |                      |

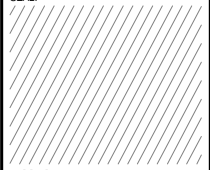
NORTH ARROW:



HORIZ. SCALE: N.T.S.



SEAL:



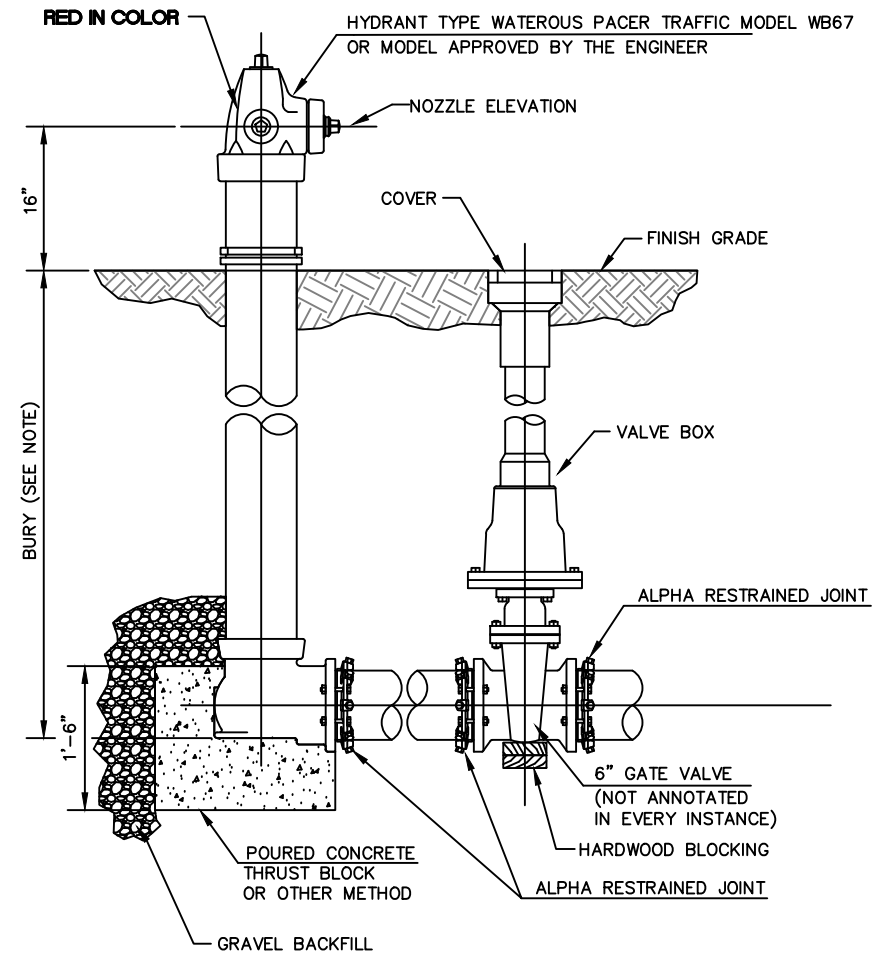
all in

SHEET:  
  
WATER MAIN  
GENERAL NOTES

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

SHEET NUMBER:  
  
144 --

FILENAME: S:\Village\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\220651\_Cover-Details.DWG



NOTE:  
BURY IS THE DISTANCE FROM FINISH  
GRADE TO BOTTOM OF CONNECTING PIPE.

1 HYDRANT  
N.T.S.

PROJECT:  
ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

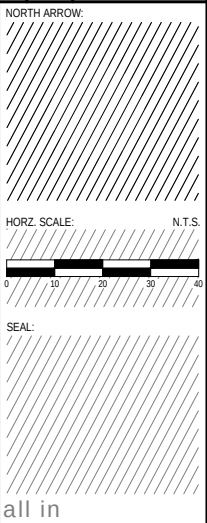
LOCATION:  
VILLAGE OF FOX  
POINT



RELEASE:  
CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

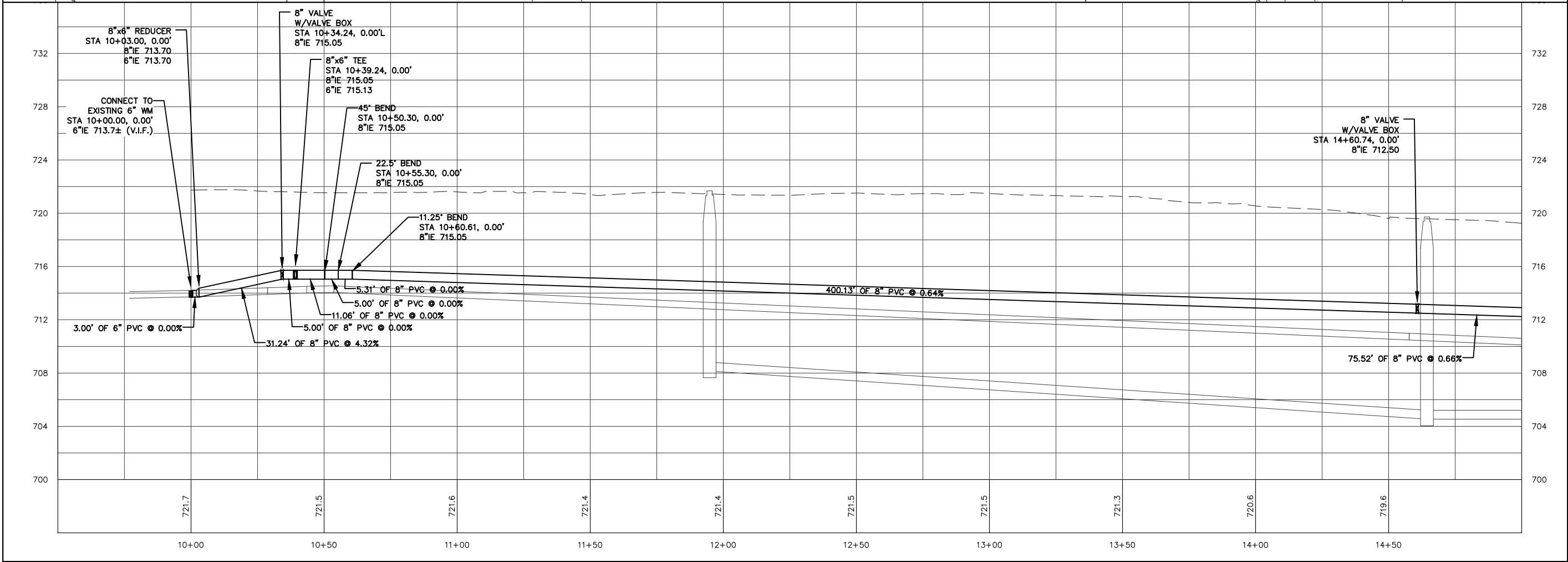
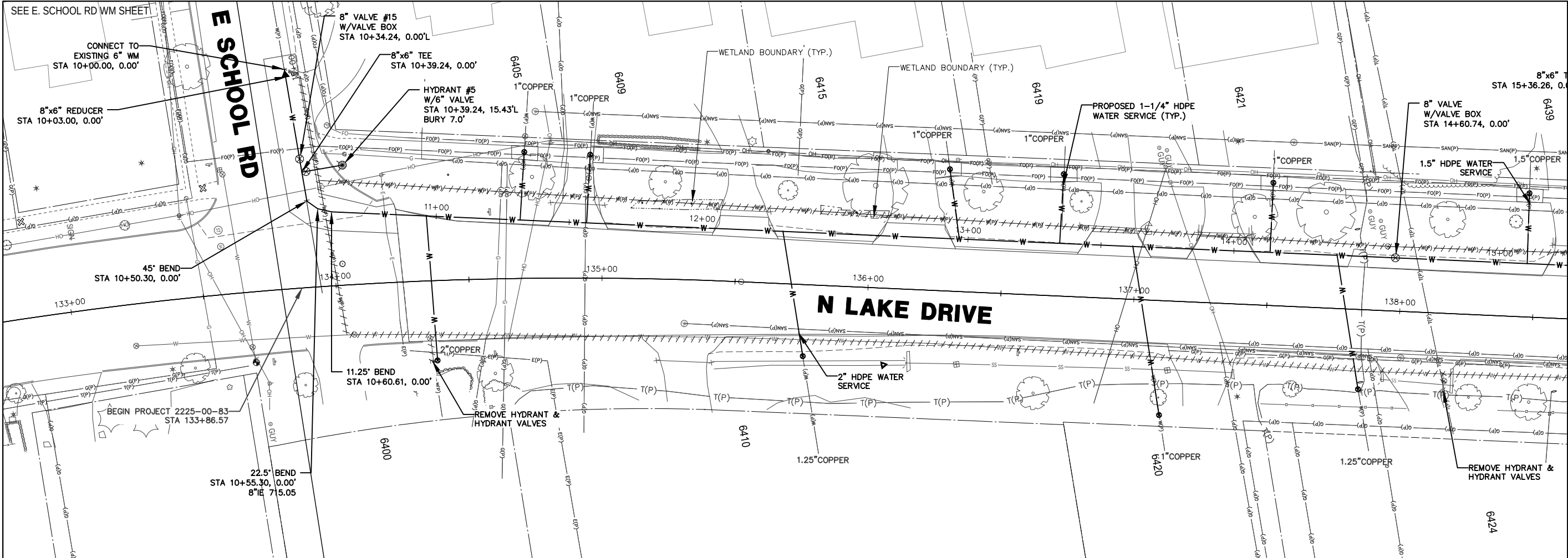


SHEET:  
WATER MAIN  
CONSTRUCTION  
DETAILS

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651-01  
DATE: 10/15/24

SHEET NUMBER:  
145

FILENAME: S:\Milw\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr-dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



VILLAGE OF  
FOX POINT

RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE:

HORIZ. SCALE:

1" = 5'

1" = 20'

0 10 20 30 40

SEAL:

all in

SHEET:

N. LAKE DRIVE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

SHEET NUMBER:

146







| REVISIONS: |          |                      |
|------------|----------|----------------------|
| #          | DATE     | DESCRIPTION          |
| 1          | 3/1/24   | DT1078 UTILITY PLANS |
| 2          | 7/1/24   | 90% PLANS            |
| 3          | 11/1/24  | FINAL PS&E           |
| 4          | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



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

A horizontal scale bar with alternating black and white segments. Below the bar, numerical markings are provided at intervals of 10, from 0 to 40.

SEAL:

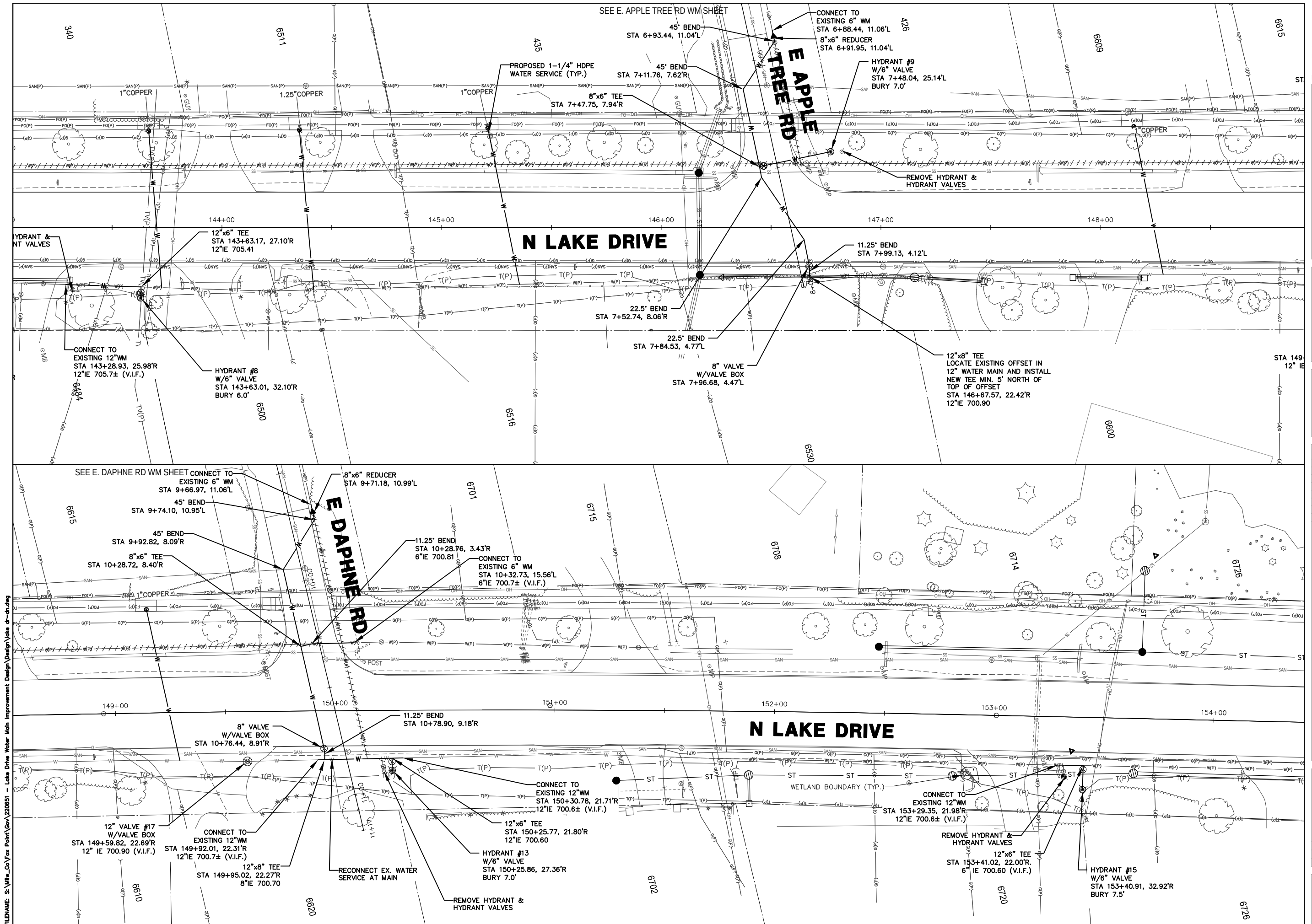
SHEET:

N. LAKE DRIVE  
WATER MAIN

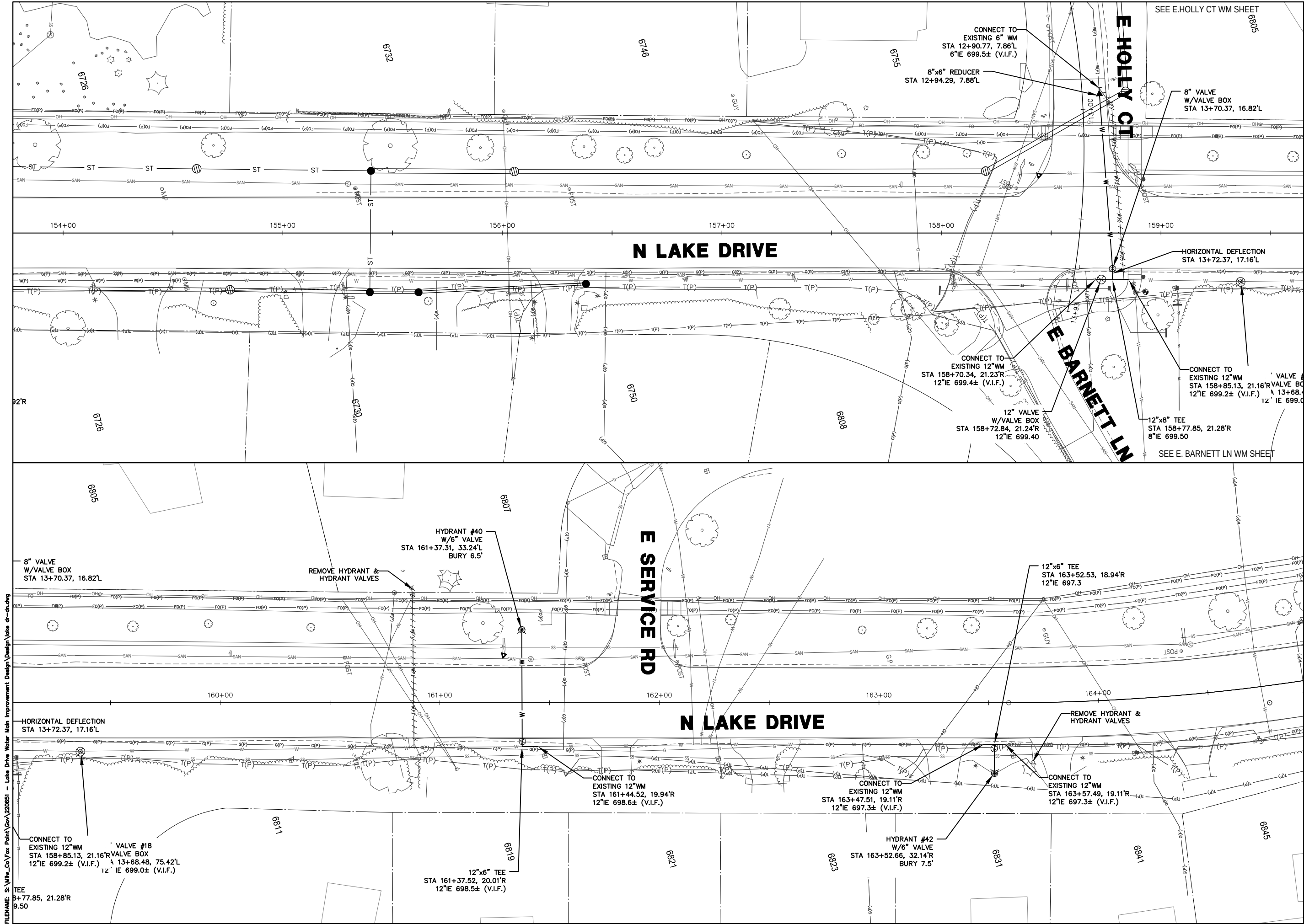
|                  |            |
|------------------|------------|
| PROJECT MANAGER: | YA         |
| PROJECT NUMBER:  | 22.0651.01 |
| DATE:            | 10/15/24   |

SHEET NUMBER:

148







7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



VILLAGE OF  
FOX POINT

RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



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



SEAL:

all in

SHEET:

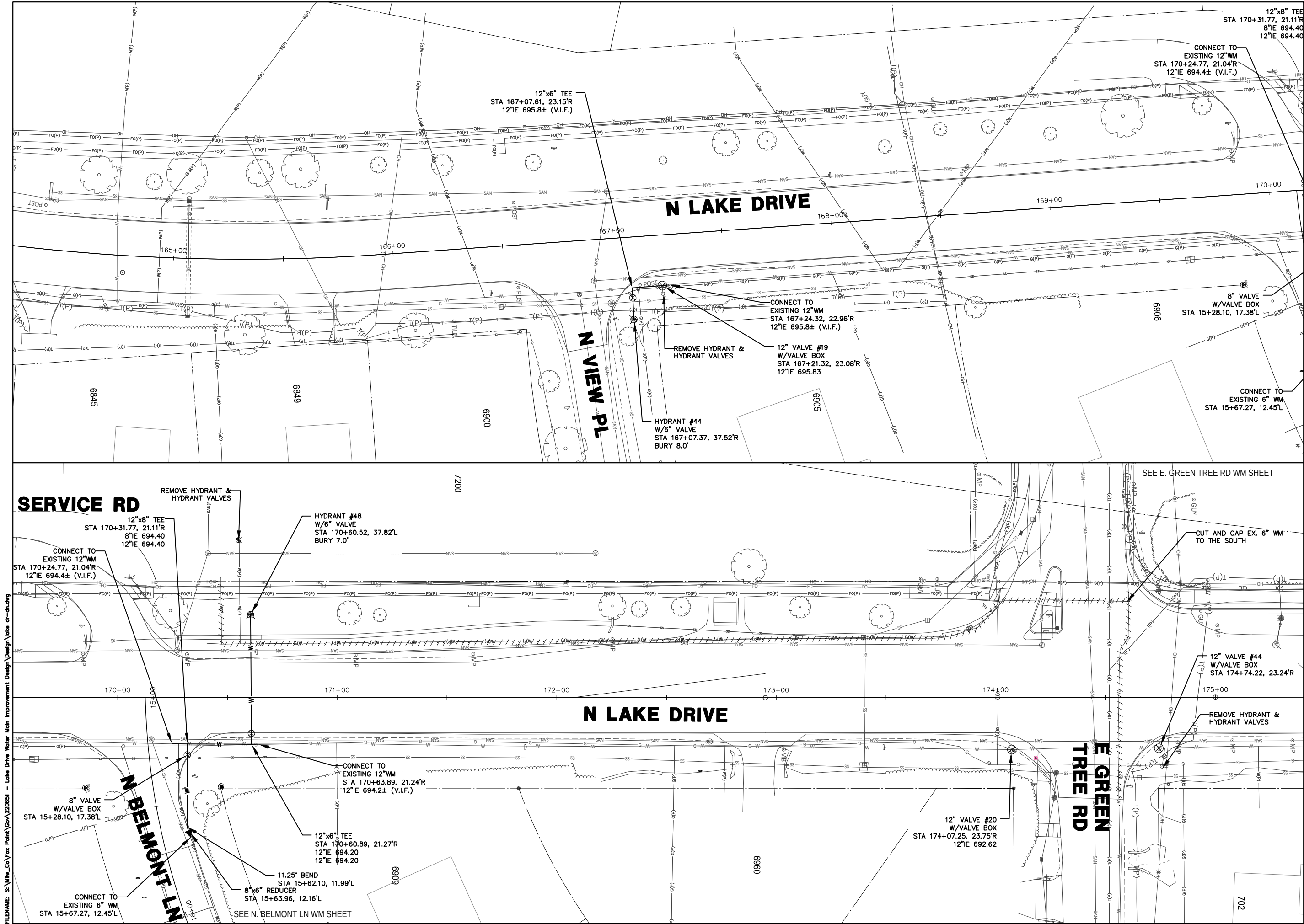
N. LAKE DRIVE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22 0651.01  
DATE: 10/15/24

SHEET NUMBER:

149





7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:  
ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



VILLAGE OF  
FOX POINT

RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



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

SEAL:

all in

SHEET:

N. LAKE DRIVE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

SHEET NUMBER:

150

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



**FOX POINT**

RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



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

A horizontal scale bar with alternating black and white segments. Below the bar are numerical markings at 0, 10, 20, 30, and 40, representing feet.

SEAL:

all in

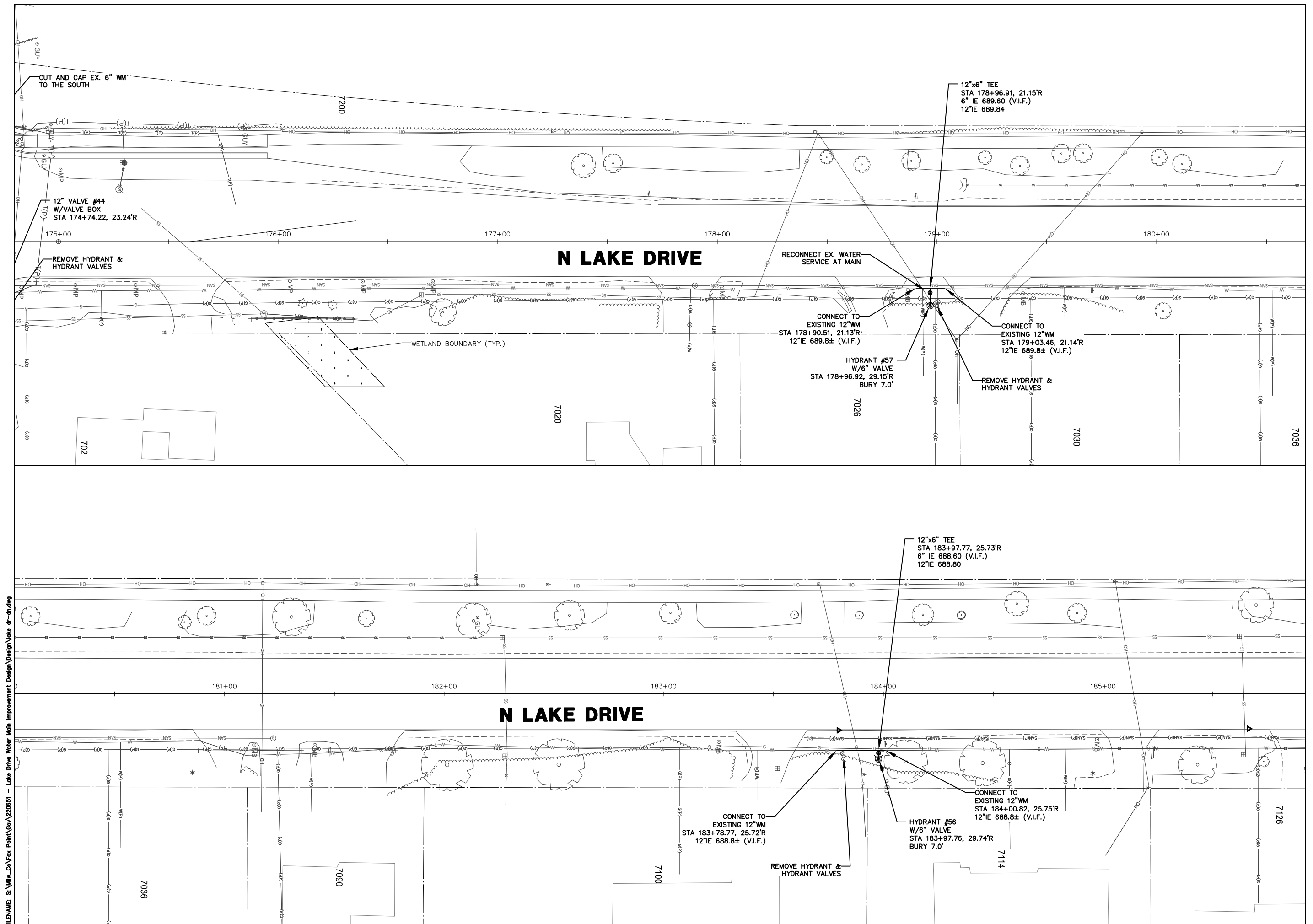
SHEET:

N. LAKE DRIVE  
WATER MAIN

|                  |            |
|------------------|------------|
| PROJECT MANAGER: | YA         |
| PROJECT NUMBER:  | 22.0651.01 |
| DATE:            | 10/15/24   |

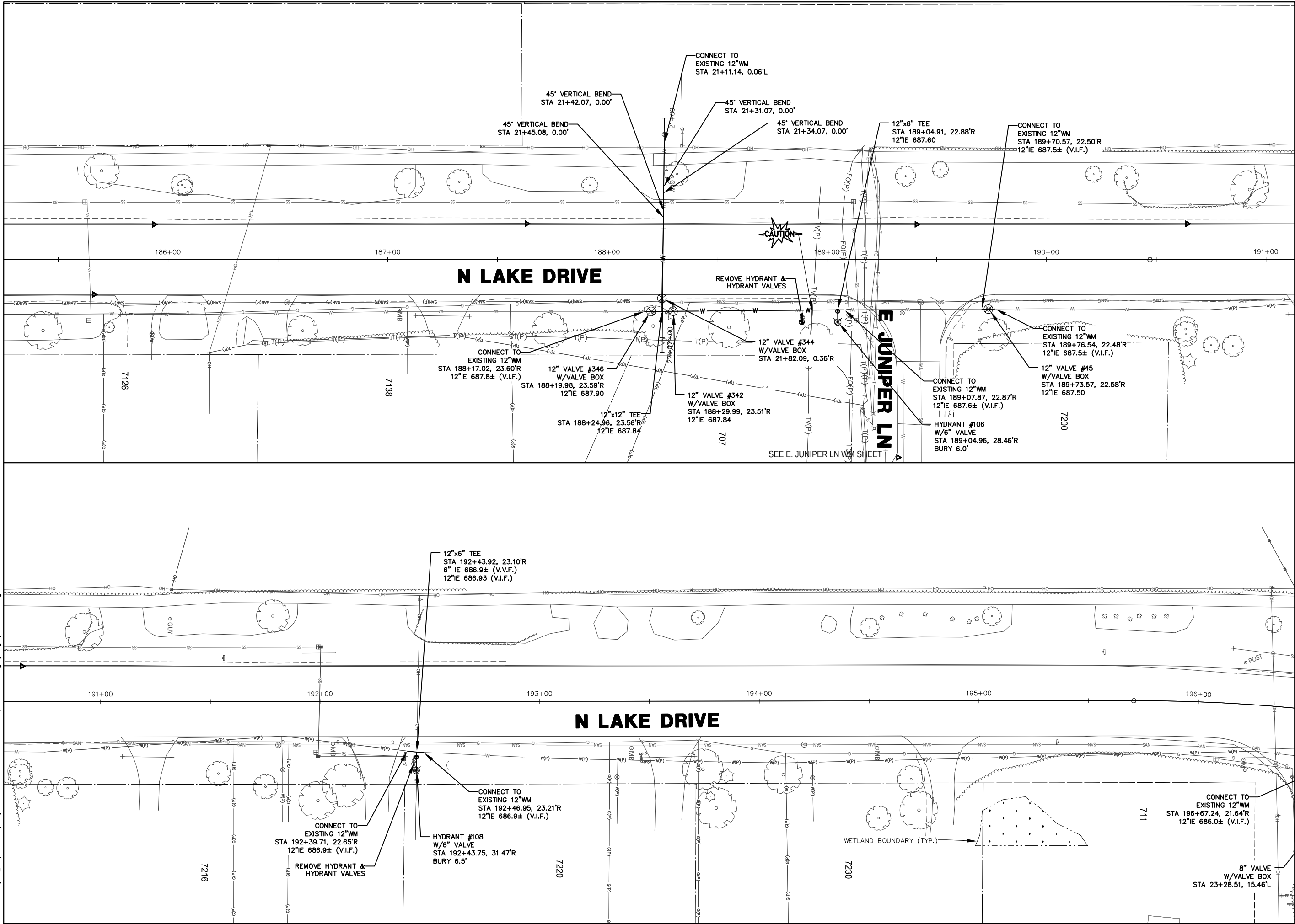
SHEET NUMBER:

151



FILENAME: S:\Willi\_Co\Fox Point\Gov\220651 - Lake Drive Water Main Improvement Design\lake dr-dn.dwg

FILENAME: S:\Milwaukee\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr-dwg.dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 5'

HORZ. SCALE: 1" = 20'



SEAL:

all in

SHEET:

N. LAKE DRIVE  
WATER MAIN

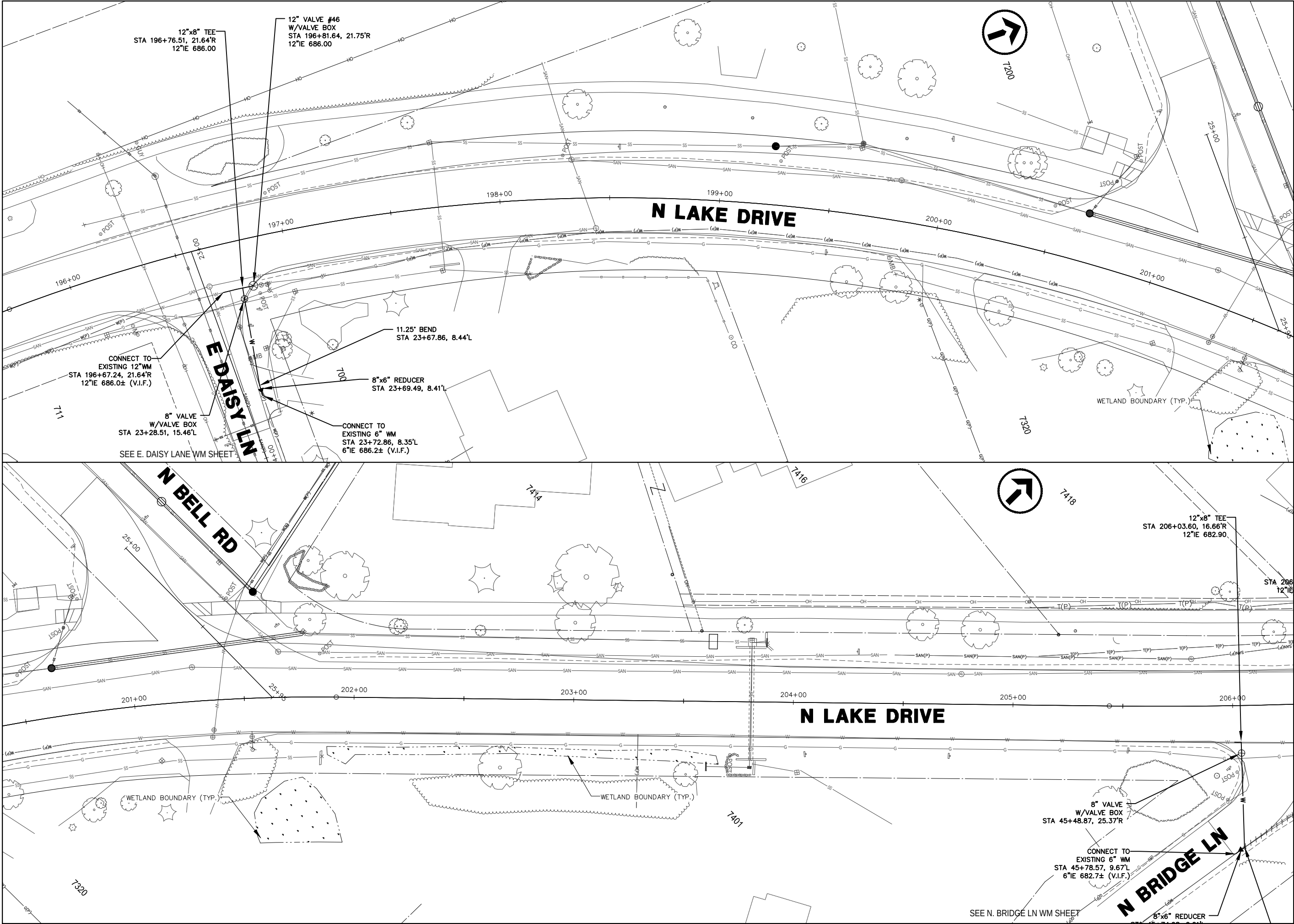
PROJECT MANAGER: YA  
PROJECT NUMBER: 22 0651 01  
DATE: 10/15/24

SHEET NUMBER:

152



FILENAME: S:\Milw\_Co\Fox Point\Gov\220651 - Lake Drive Water Main Improvement Design\lake dr-dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



VILLAGE OF  
FOX POINT

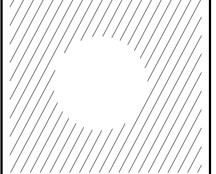
RELEASE:

CONSTRUCTION  
SET

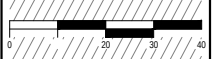
REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



HORIZ. SCALE:



SEAL:



SHEET:

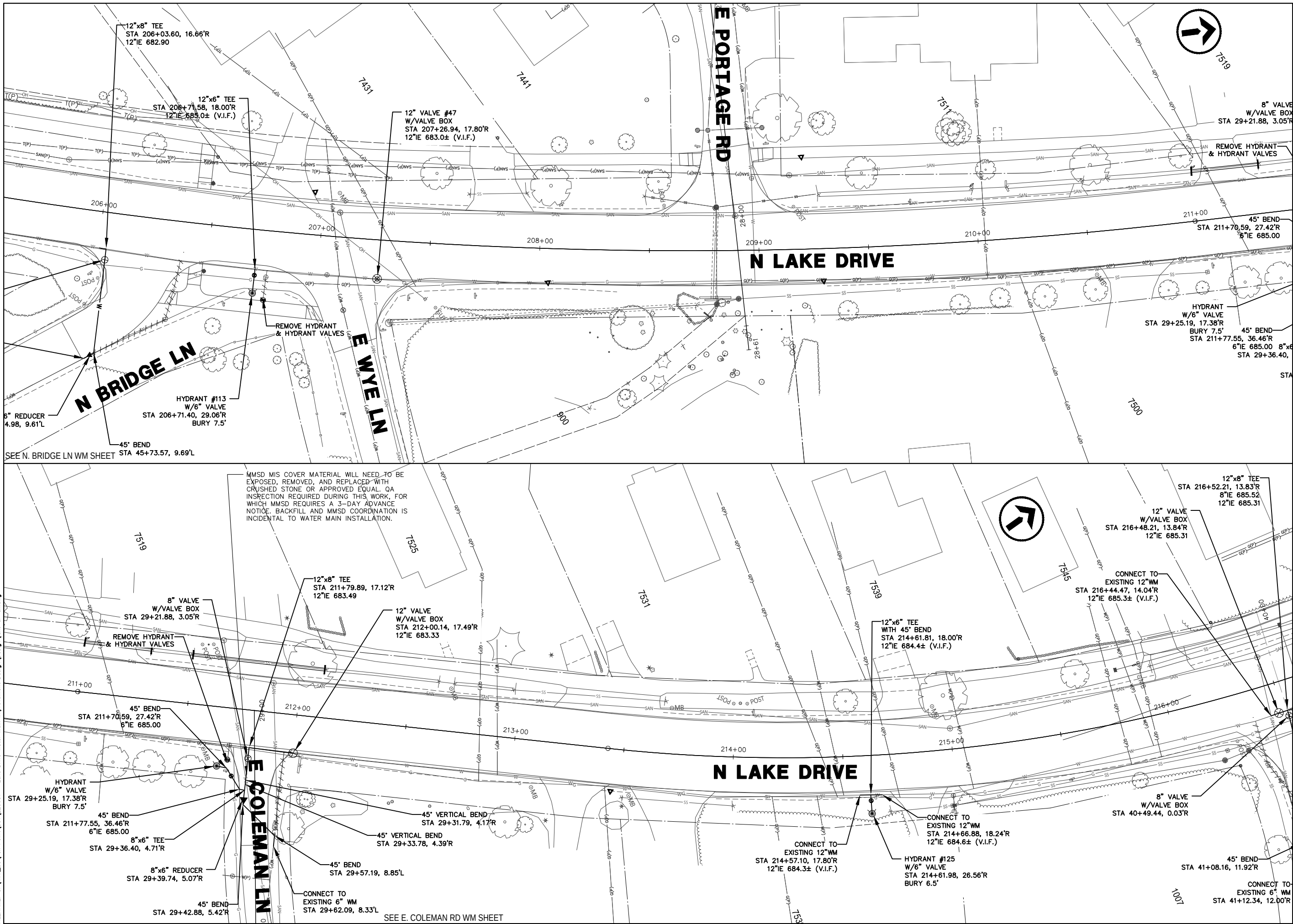
N. LAKE DRIVE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

SHEET NUMBER:

153

FILENAME: S:\Village\Fox Point\Gov\220651 - Lake Drive Water Main Improvement Design\lake-dr-dwg





7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



VILLAGE OF  
FOX POINT

RELEASE:

CONSTRUCTION  
SET

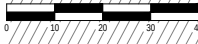
REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'  
HORIZ. SCALE: 1" = 20'



SEAL:

all in

SHEET:

N. LAKE DRIVE  
WATER MAIN

PROJECT MANAGER: YA

PROJECT NUMBER: 22-0651.01

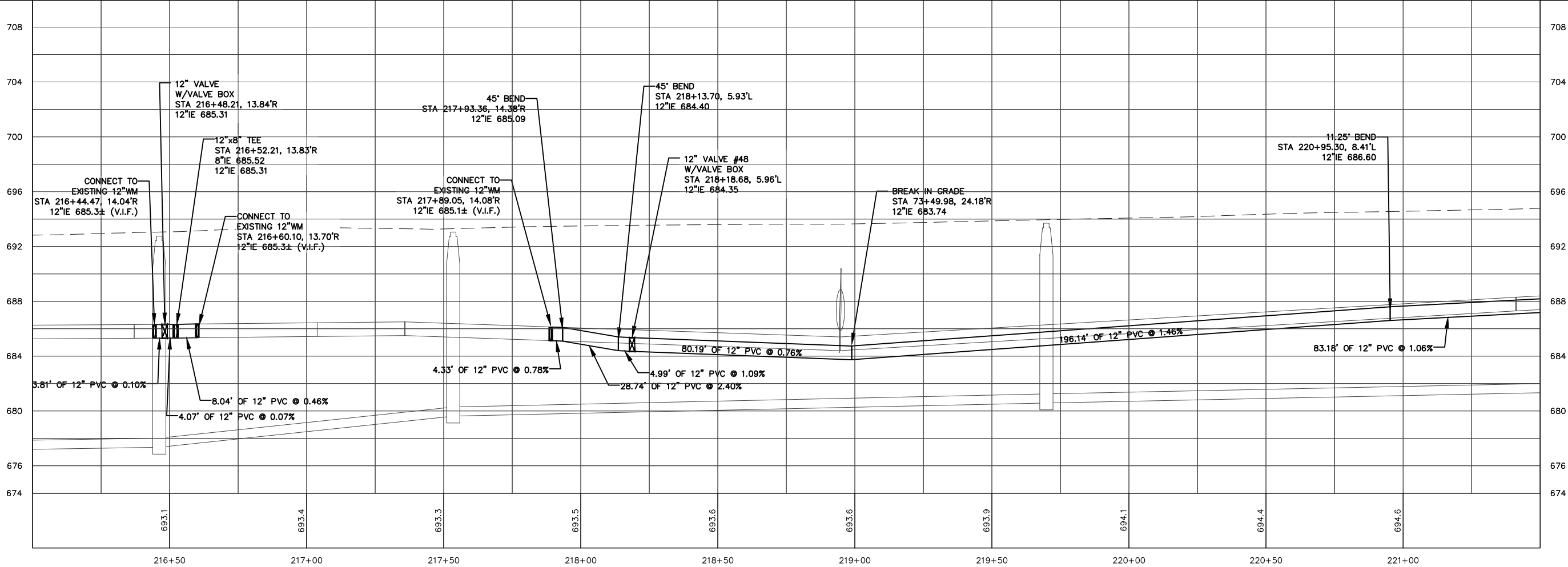
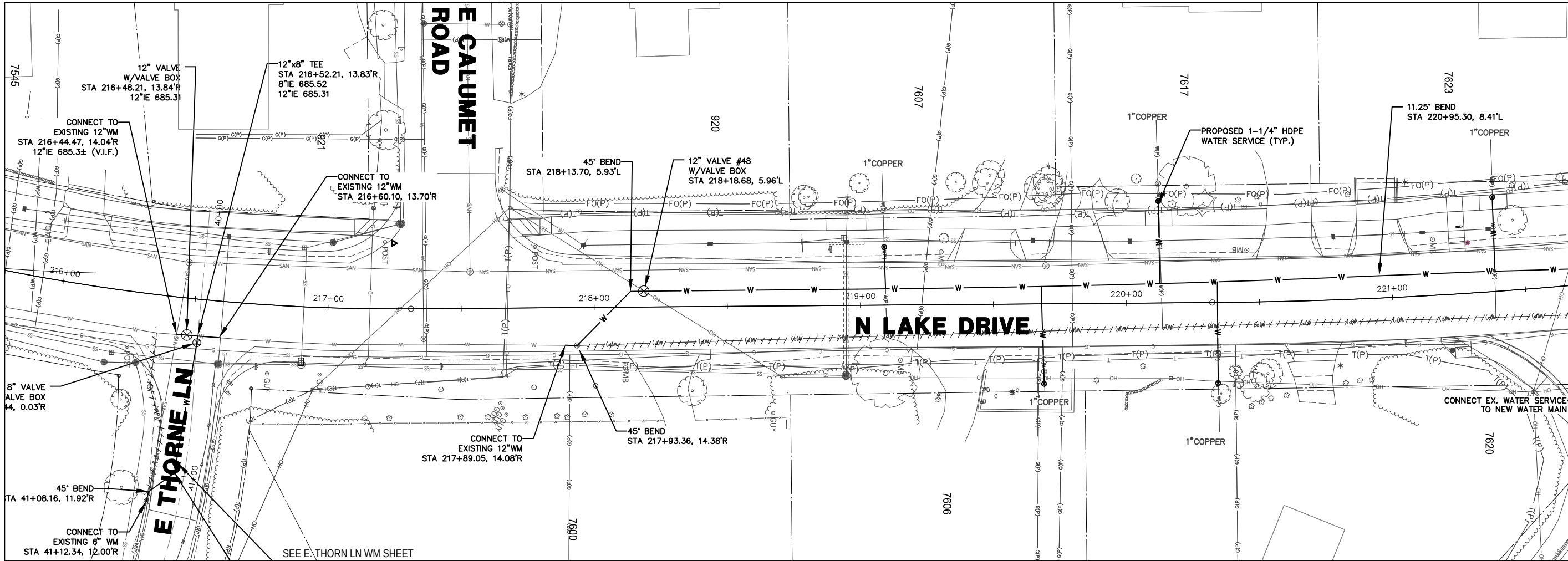
DATE: 10/15/24

SHEET NUMBER:

154



FILENAME: S:\m\w\_co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr-dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

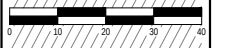
REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'  
HORIZ. SCALE: 1" = 20'



SEAL:

all in

SHEET:

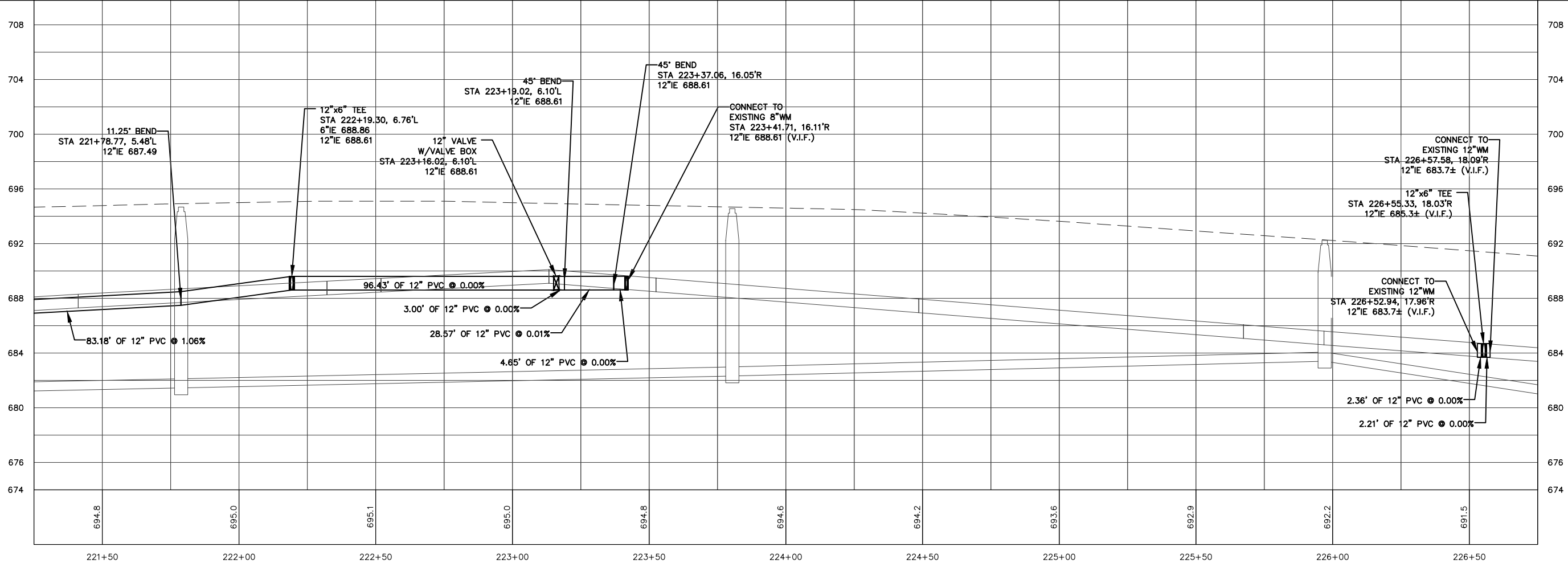
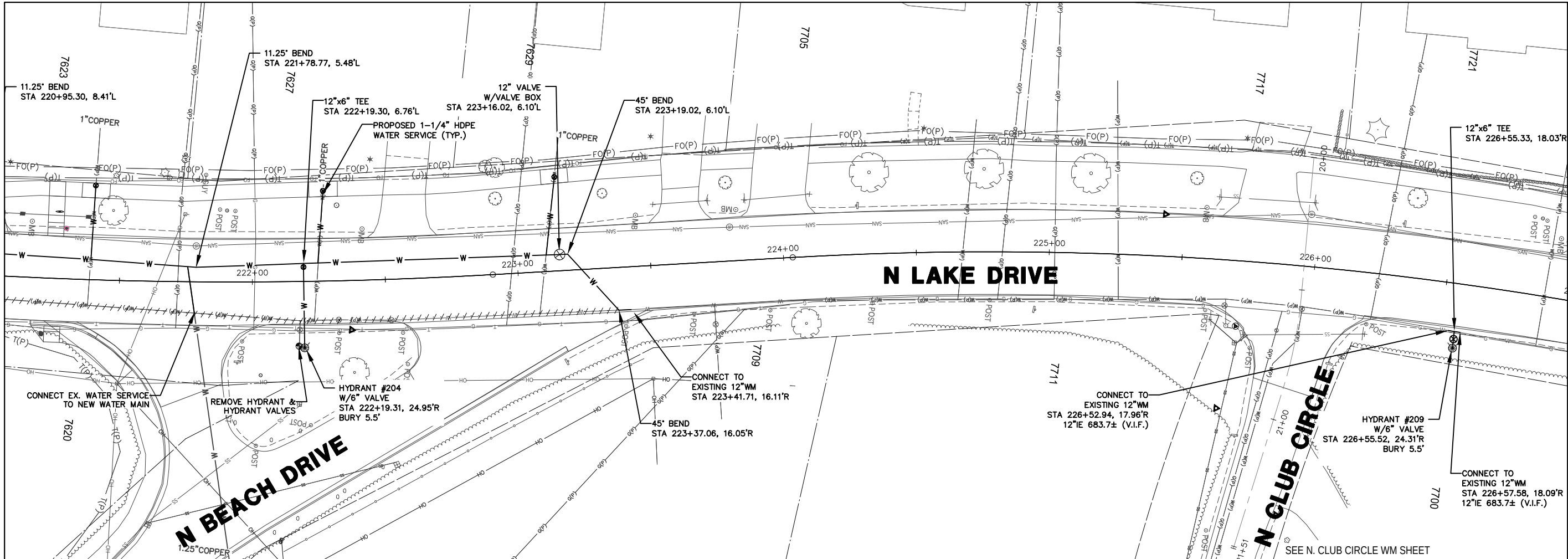
N. LAKE DRIVE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22 0651 01  
DATE: 10/15/24

SHEET NUMBER:

155

FILENAME: S:\Village\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr-dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



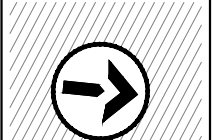
RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'  
HORZ. SCALE: 1" = 20'

SEAL:

all in

SHEET:

N. LAKE DRIVE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

SHEET NUMBER:

156

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



**FOX POINT**

RELEASE:

CONSTRUCTION  
SET

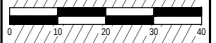
REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'  
HORIZ. SCALE: 1" = 20'



SEAL:

all in

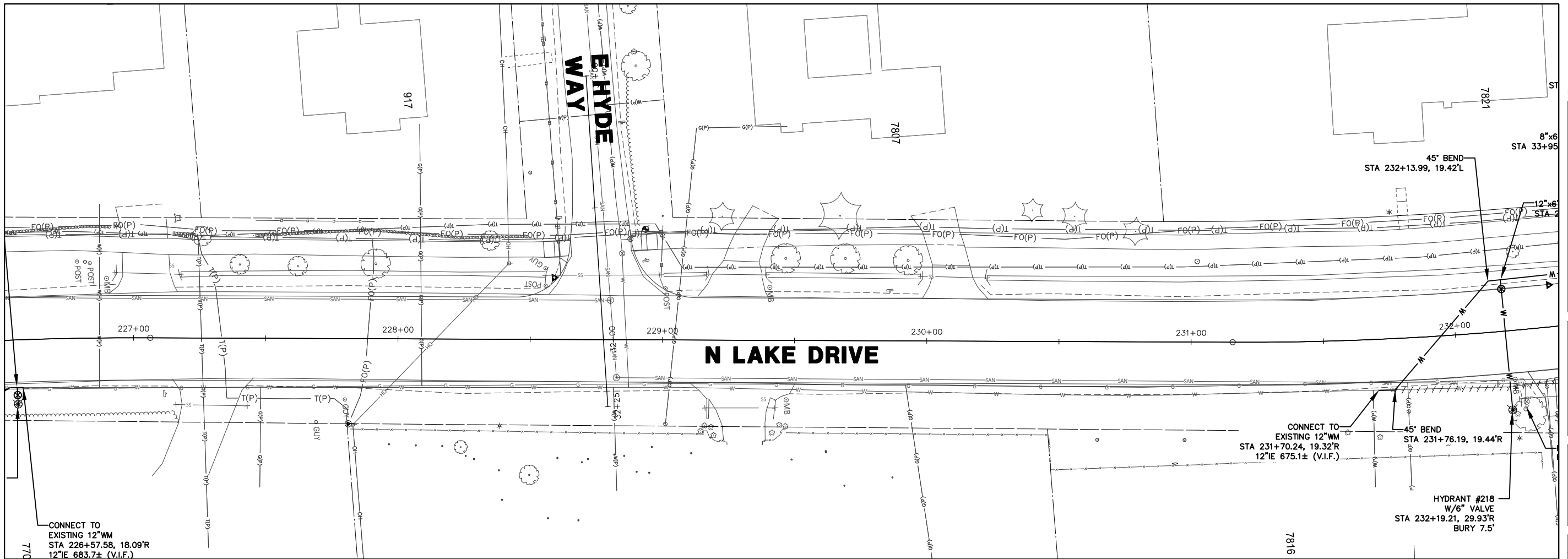
SHEET:

N. LAKE DRIVE  
WATER MAIN

|                  |            |
|------------------|------------|
| PROJECT MANAGER: | YA         |
| PROJECT NUMBER:  | 22.0651.01 |
| DATE:            | 10/15/24   |

SHEET NUMBER:

157







PROJECT:  
ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FO  
POINT

CLIENT:



**FOX POINT**

RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'  
HORIZ. SCALE: 1" = 20'



SEAL:

all in

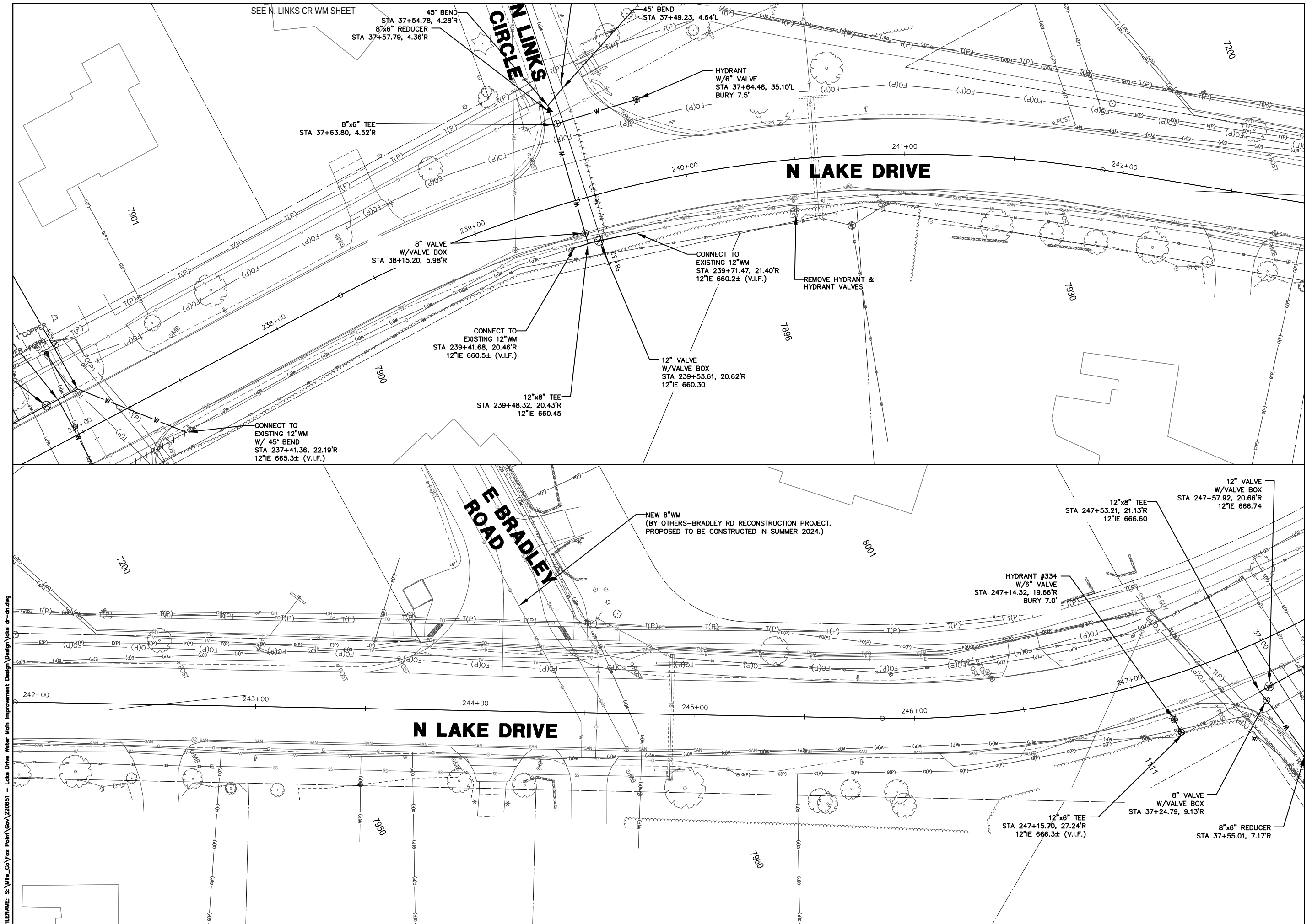
SHEET:

N. LAKE DRIVE  
WATER MAIN

|                  |            |
|------------------|------------|
| PROJECT MANAGER: | YA         |
| PROJECT NUMBER:  | 22.0651.01 |
| DATE:            | 10/15/24   |

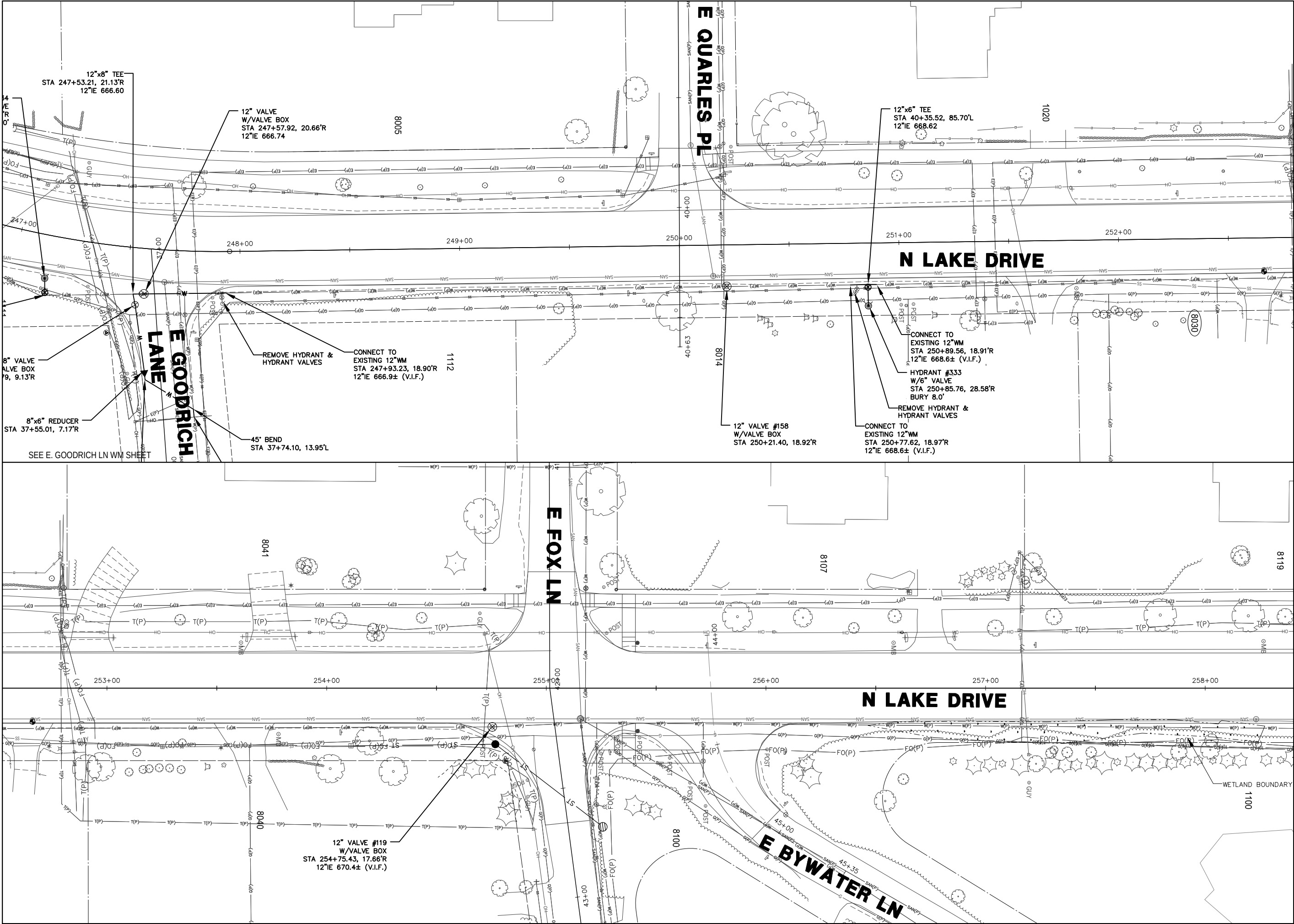
SHEET NUMBER:

159





FILENAME: S:\Mw\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr-dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:  
ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'  
HORZ. SCALE: 1" = 20'

SEAL:

all in

SHEET:

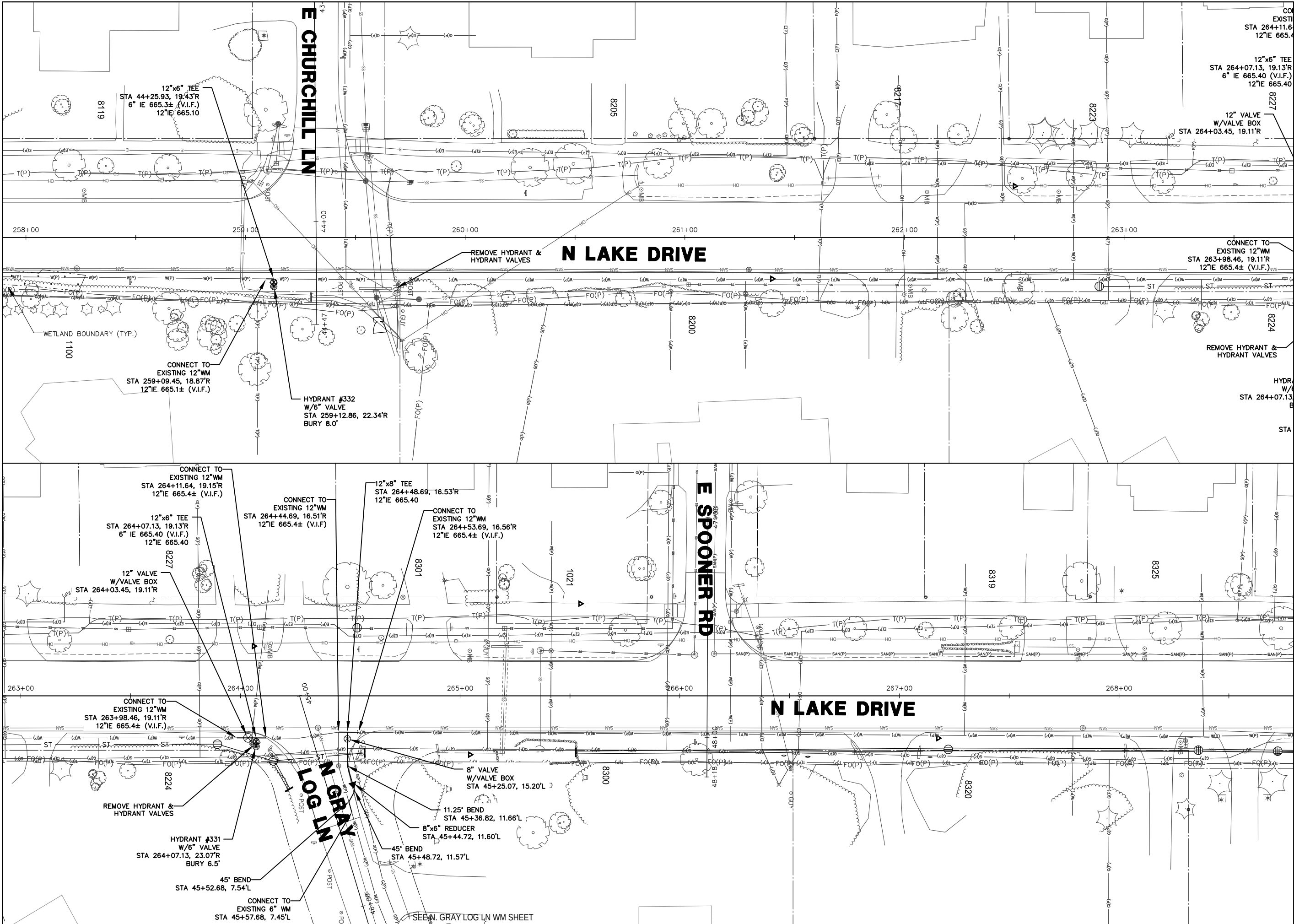
N. LAKE DRIVE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22 0651.01  
DATE: 10/15/24

SHEET NUMBER:

160

FILENAME: S:\Milwaukee\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake-dr-dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



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

SEAL:

all in

SHEET:

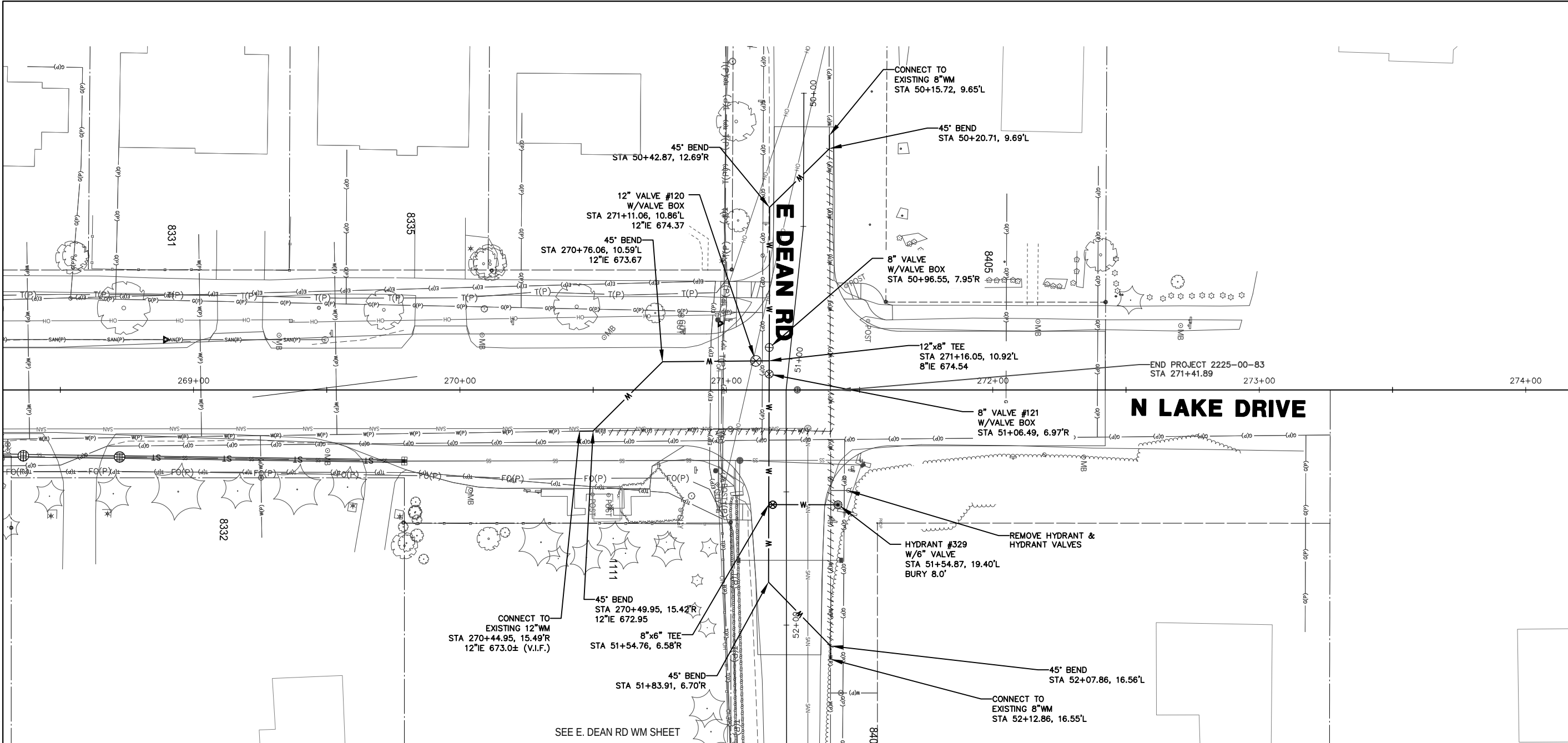
N. LAKE DRIVE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22 0651.01  
DATE: 10/15/24

SHEET NUMBER:

161

FILENAME: S:\Milw\_Co\Fox\220651 - Lake Drive Water Main Improvement Design\lake dr-ds.dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

REVISIONS:

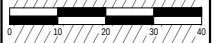
| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 5'

HORIZ. SCALE: 1" = 20'



SEAL:

all in

SHEET:

N. LAKE DRIVE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

SHEET NUMBER:

162



FILENAME: S:\Milw\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr--ds.dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

REVISIONS:

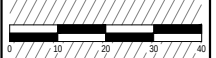
| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'

HORZ. SCALE: 1" = 20'



SEAL:

all in

SHEET:

E. SCHOOL ROAD  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

SHEET NUMBER:

163

6406

E SCHOOL ROAD

N LAKE DRIVE

HYDRANT #5  
W/6" VALVE  
STA 10+39.24, 15.43'L  
BURY 7.0'

8" VALVE #15  
W/VALVE BOX  
STA 10+34.24, 0.00'L

REMOVE HYDRANT &  
HYDRANT VALVES

11.25' BEND  
STA 10+60.61, 0.00'

22.5' BEND  
STA 10+55.30, 0.00'  
8"IE 715.05

BEGIN PROJECT 2225-00-83  
STA 133+86.57

45' BEND  
STA 10+50.30, 0.00'

CONNECT TO  
EXISTING 6" WM  
STA 10+00.00, 0.00'

8"x6" REDUCER  
STA 10+03.00, 0.00'

740

736

732

728

724

720

716

712

708

706

0+00

0+50

1+00

1+50

740

736

732

728

724

720

716

712

708

706

8" VALVE  
W/VALVE BOX  
STA 10+34.24, 0.00'L  
8"IE 715.05

8"x6" REDUCER  
STA 10+03.00, 0.00'  
8"IE 713.70  
6"IE 713.70

CONNECT TO  
EXISTING 6" WM  
STA 10+00.00, 0.00'  
6"IE 713.7± (V.I.F.)

3.00' OF 6" PVC @ 0.00%

8"x6" TEE  
STA 10+39.24, 0.00'  
8"IE 715.05  
6"IE 715.13

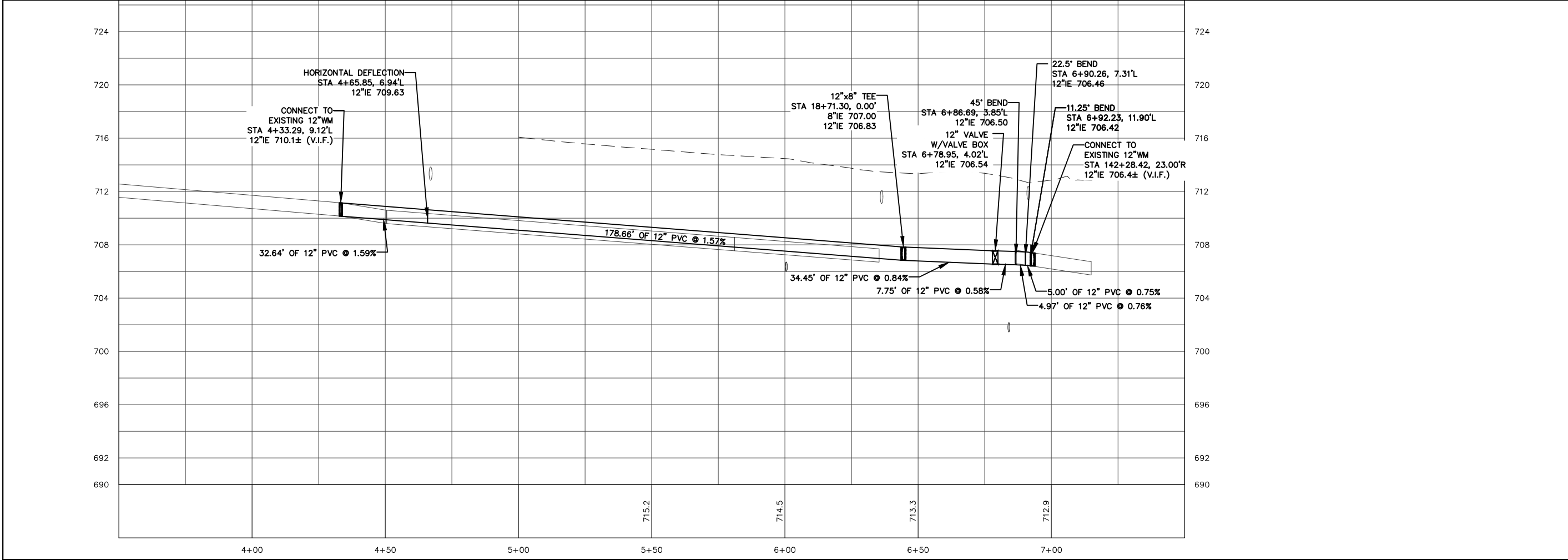
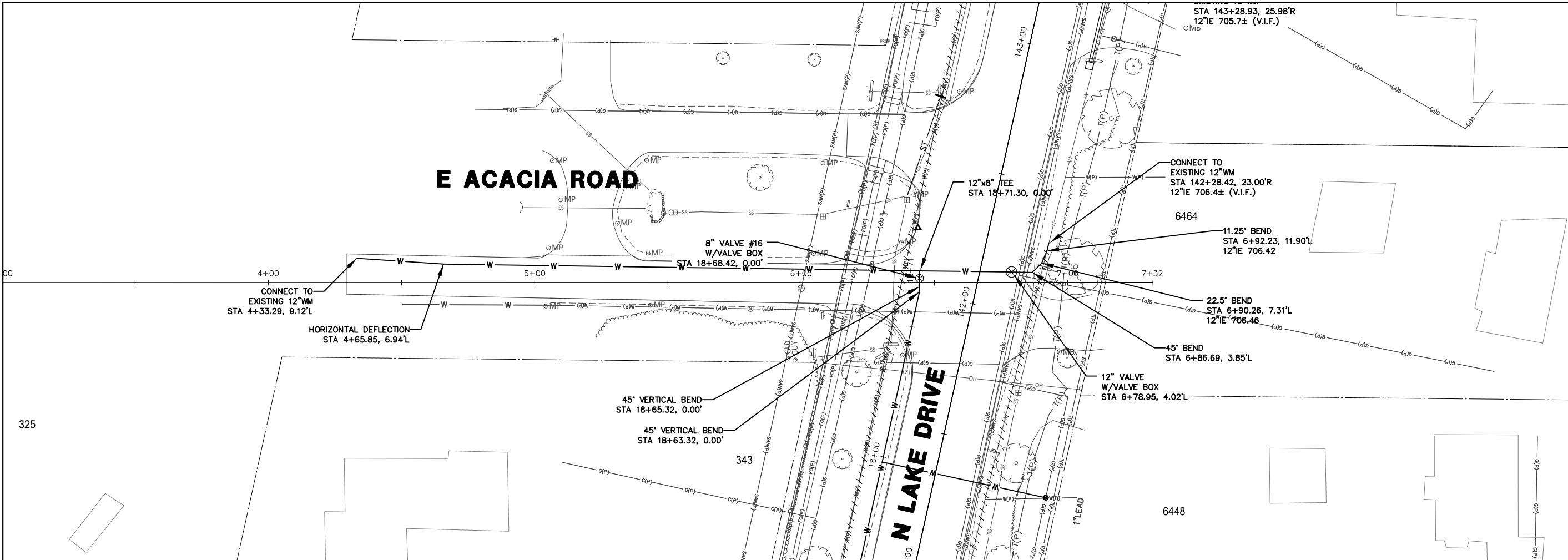
45' BEND  
STA 10+50.30, 0.00'  
8"IE 715.05

11.06' OF 8" PVC @ 0.00%

5.00' OF 8" PVC @ 0.00%

31.24' OF 8" PVC @ 4.32%

FILENAME: S:\Milw\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr--ds.dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



VILLAGE OF  
FOX POINT

RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'  
HORZ. SCALE: 1" = 20'

SEAL:

all in

SHEET:

E. ACACIA ROAD  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22 0651 01  
DATE: 10/15/24

SHEET NUMBER:

164

FILENAME: S:\Milw\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr--dn.dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



VILLAGE OF  
FOX POINT

RELEASE:

CONSTRUCTION  
SET

REVISIONS:

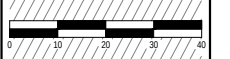
| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'

HORIZ. SCALE: 1" = 20'



SEAL:

all in

SHEET:

E. APPLE TREE  
ROAD  
WATER MAIN

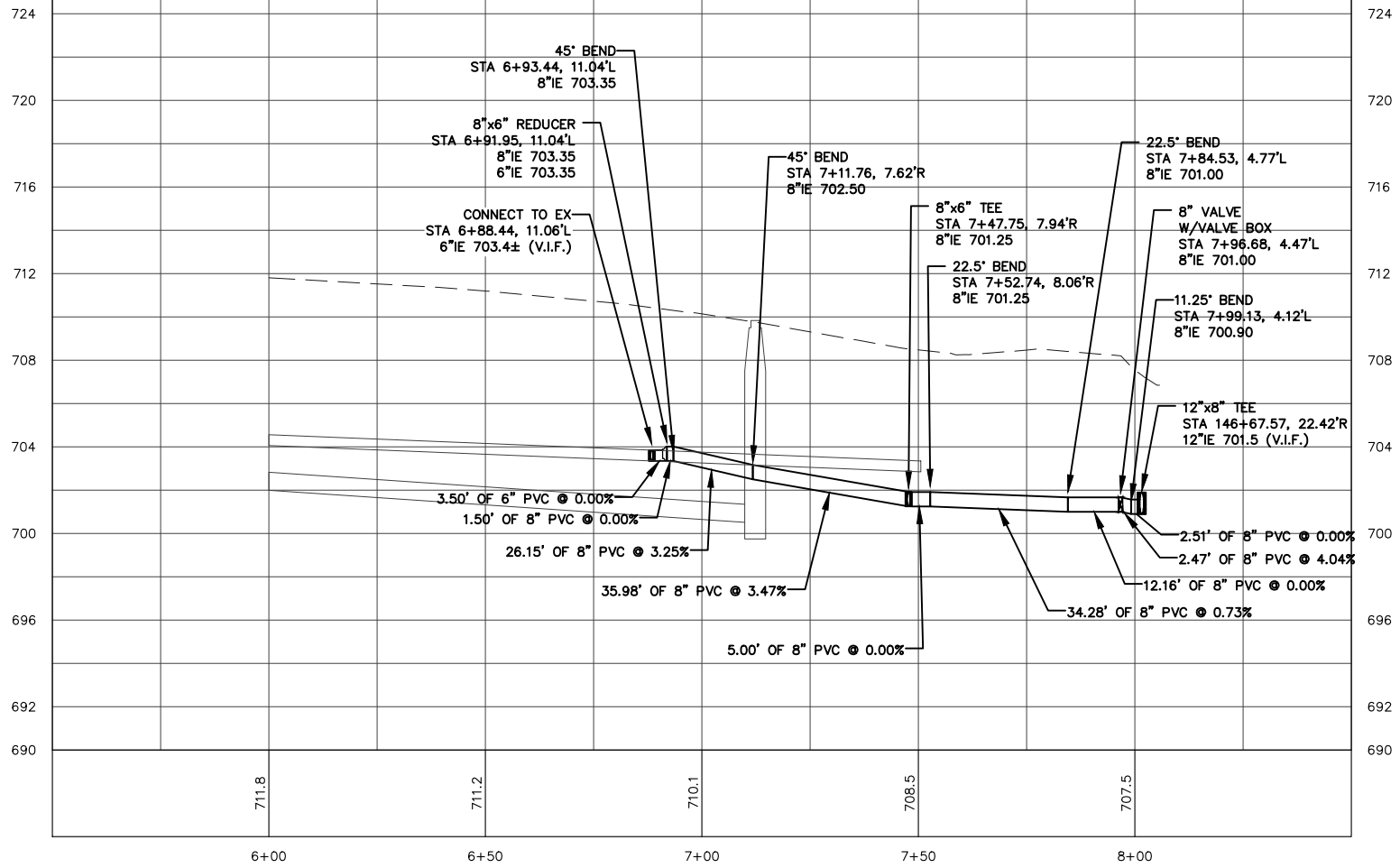
PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

SHEET NUMBER:

165

E APPLE TREE ROAD

N LAKE DRIVE





PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



**FOX POINT**

RELEASE:

CONSTRUCTION  
SET

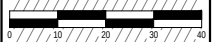
REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'  
HORIZ. SCALE: 1" = 20'



SEAL:

all in

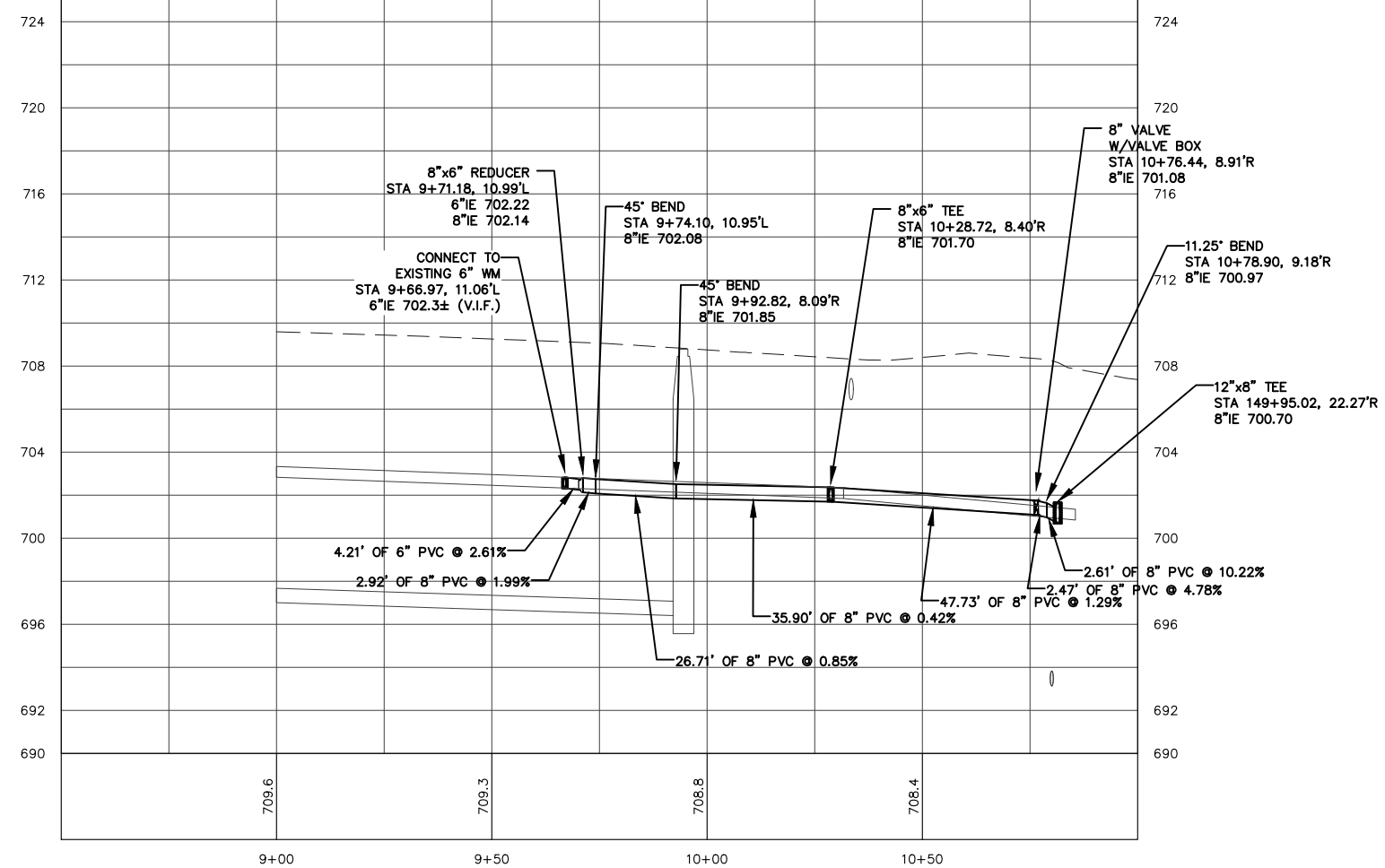
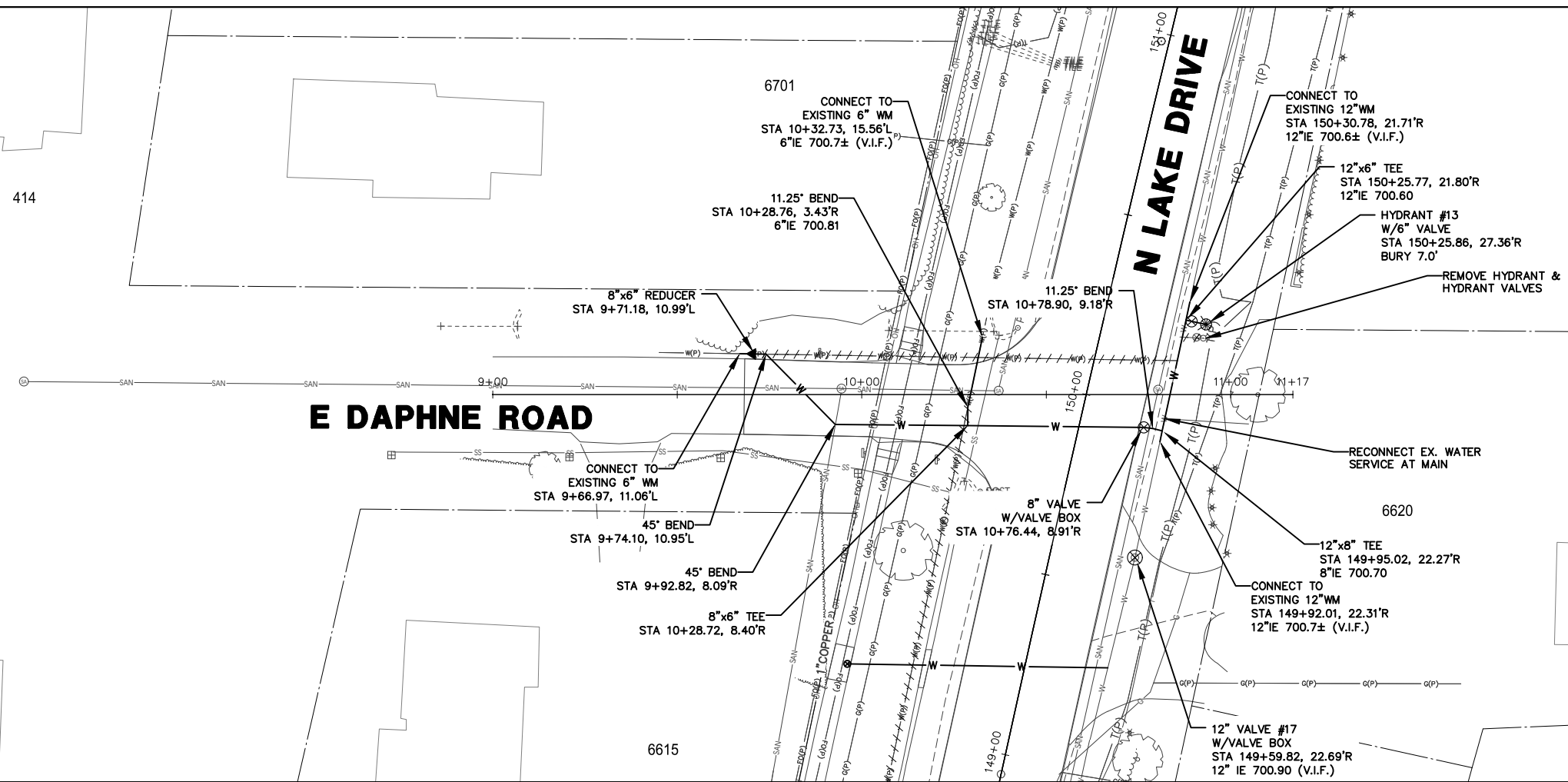
SHEET:

E. DAPHNE ROAD  
WATER MAIN

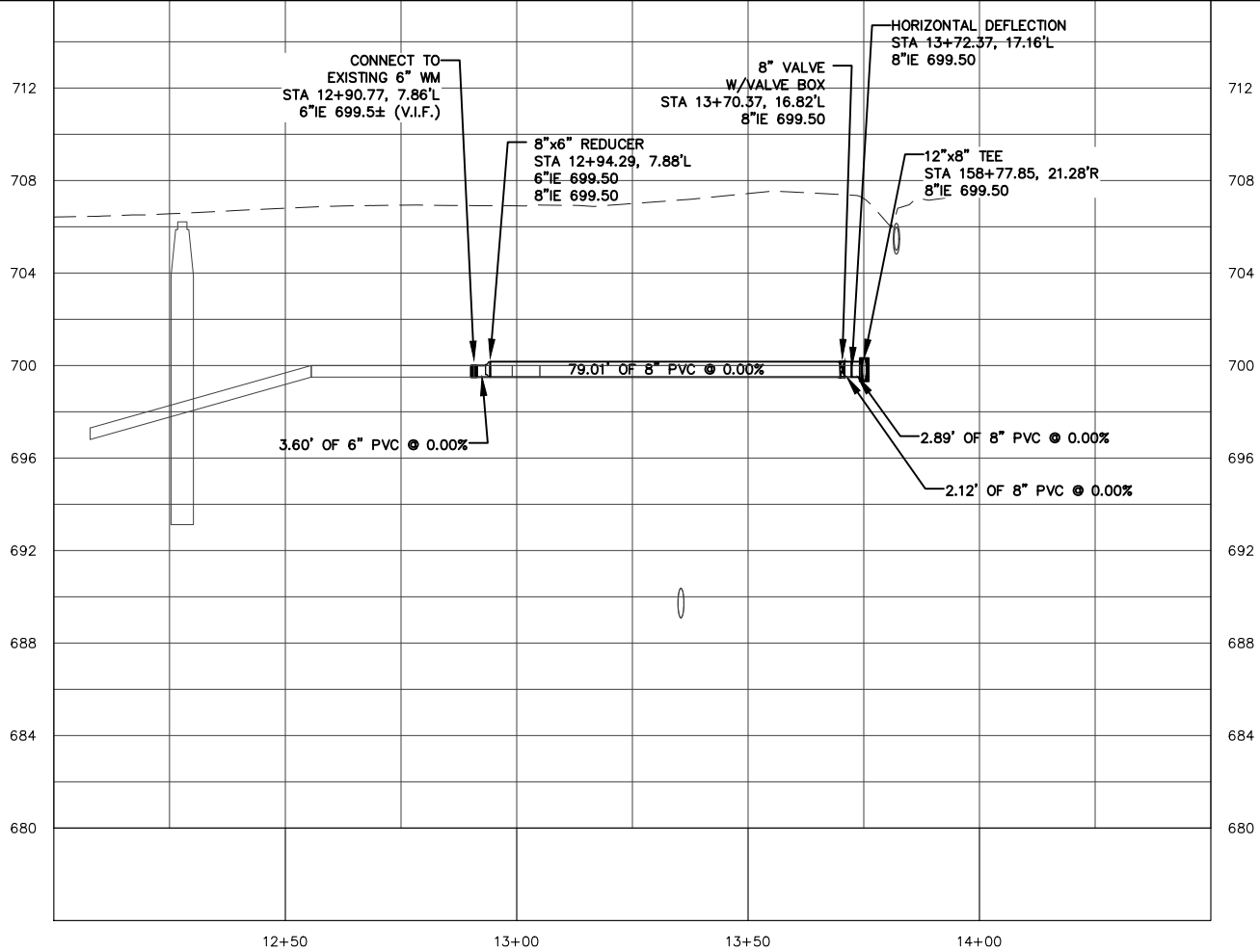
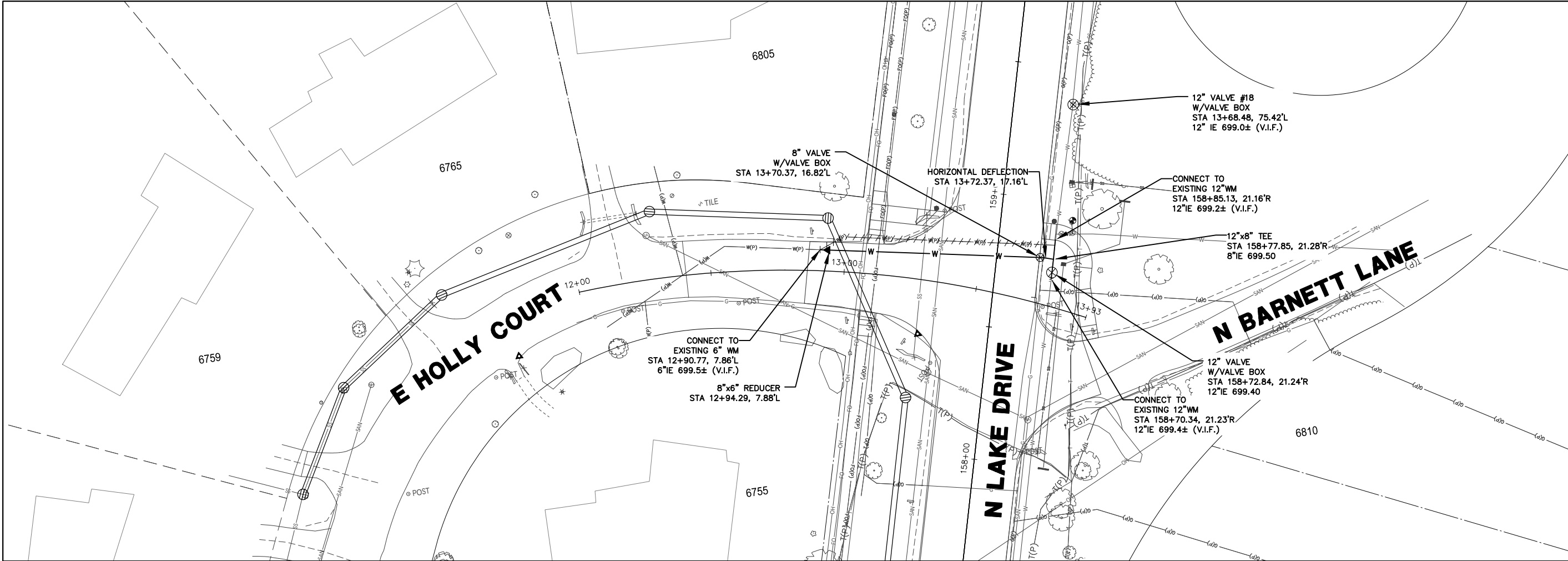
|                  |            |
|------------------|------------|
| PROJECT MANAGER: | YA         |
| PROJECT NUMBER:  | 22.0651.01 |
| DATE:            | 10/15/24   |

SHEET NUMBER:

166



FILENAME: S:\Milw\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr--ds.dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

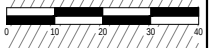
REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'  
HORZ. SCALE: 1" = 20'



SEAL:

all in

SHEET:

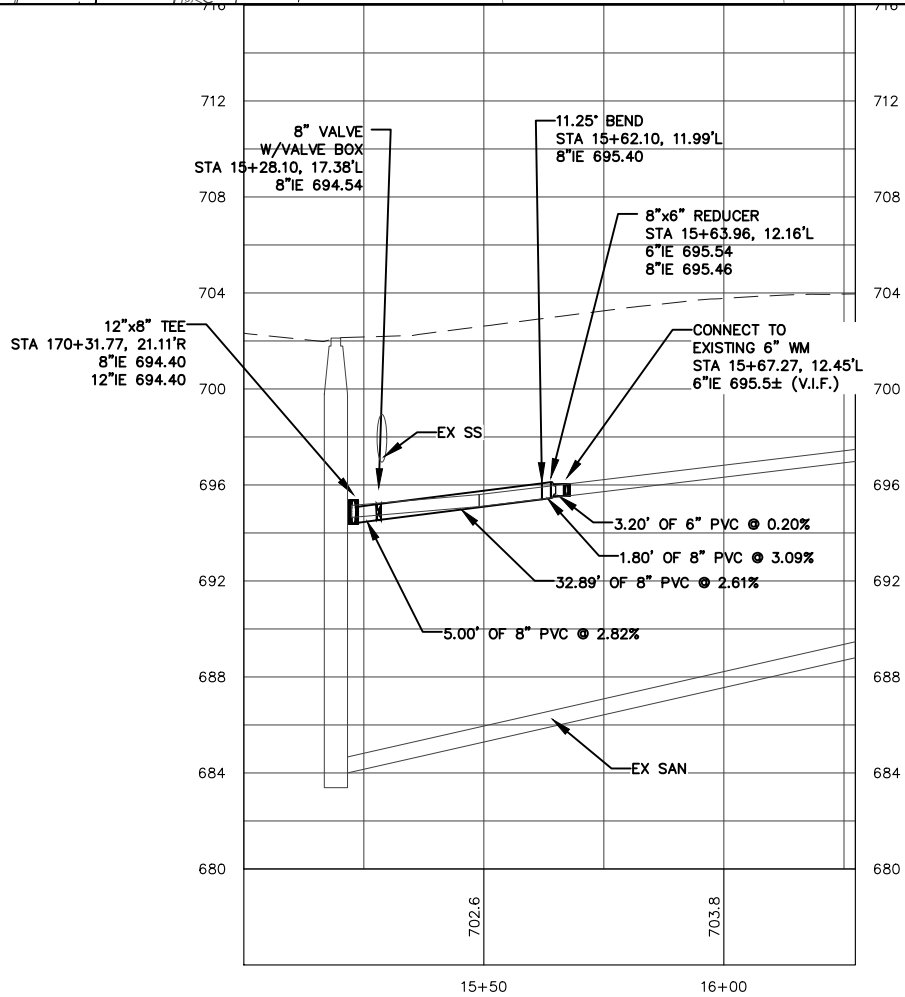
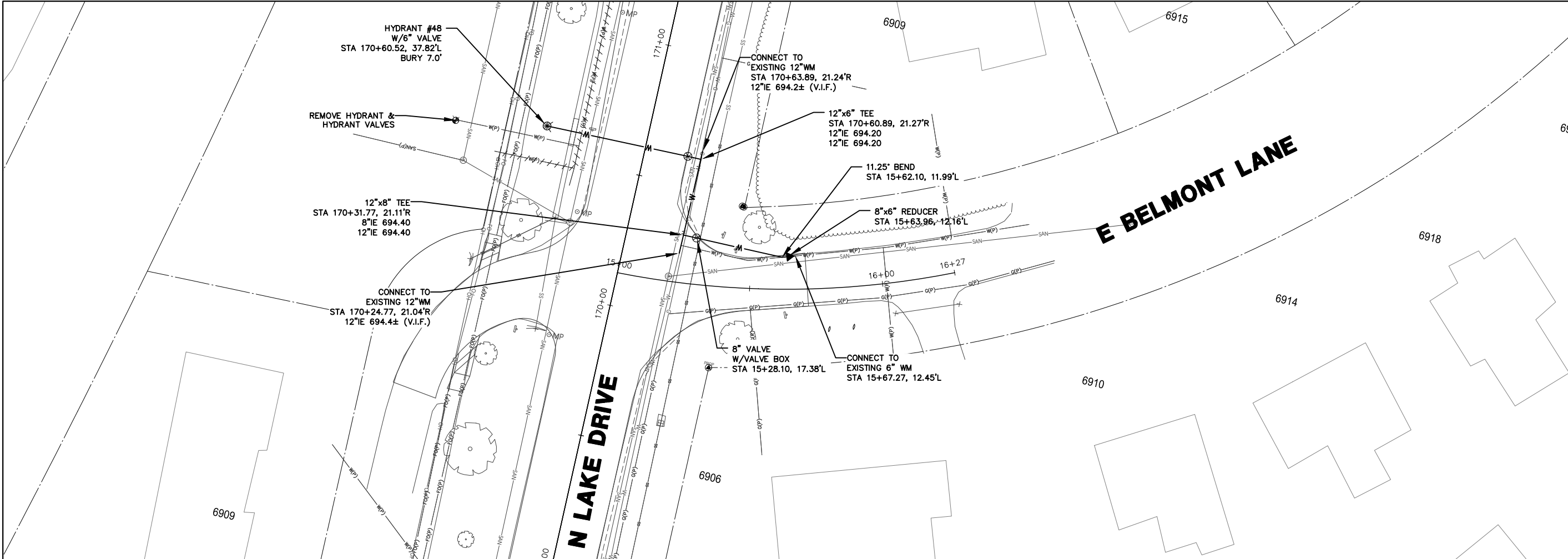
N. HOLLY COURT  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

SHEET NUMBER:

167

FILENAME: S:\Milw\_Co\Fox Point\Gov\220651 - Lake Drive Water Main Improvement Design\lake dr--du.dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

REVISIONS:

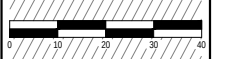
| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'

HORIZ. SCALE: 1" = 20'



SEAL:

all in

SHEET:

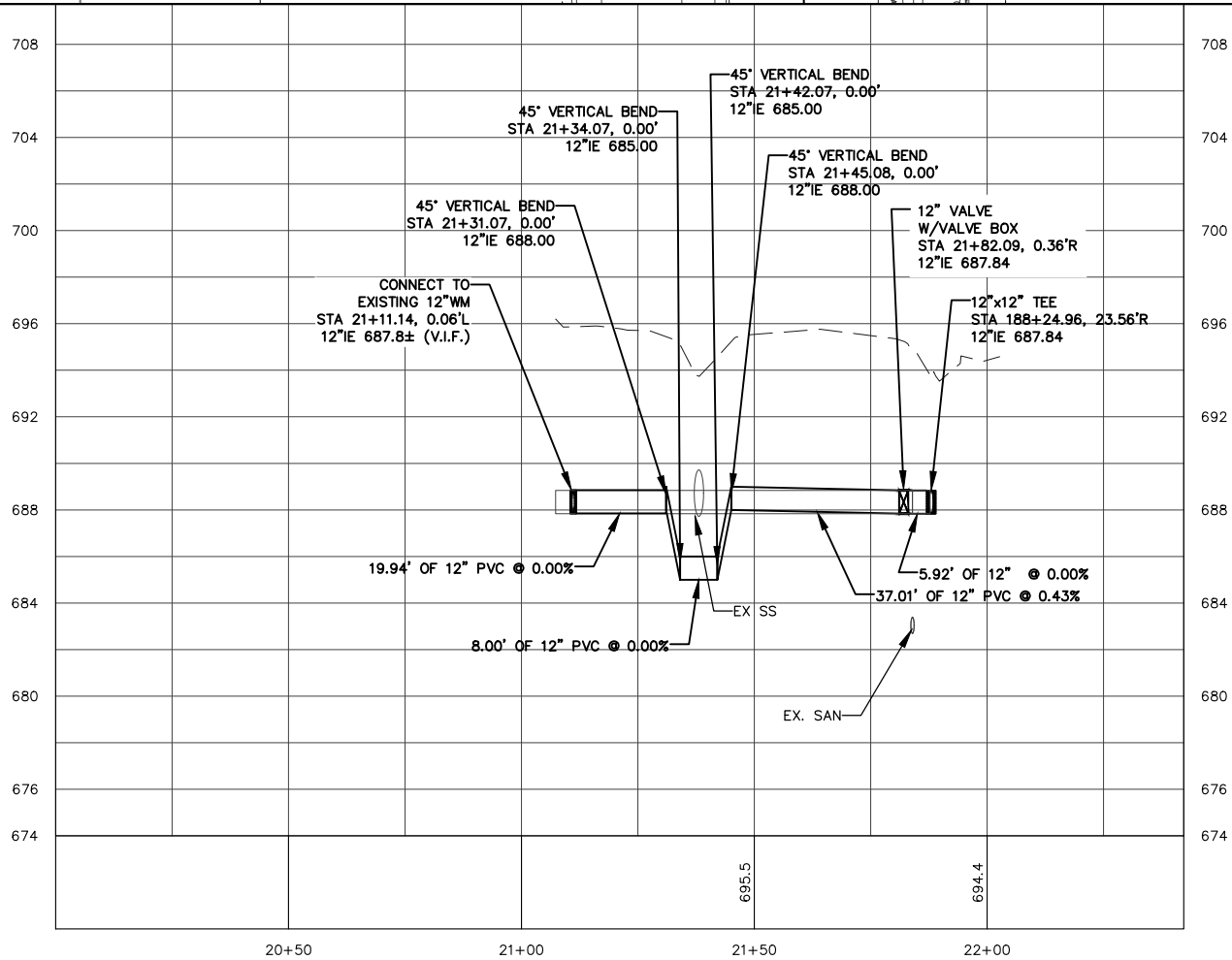
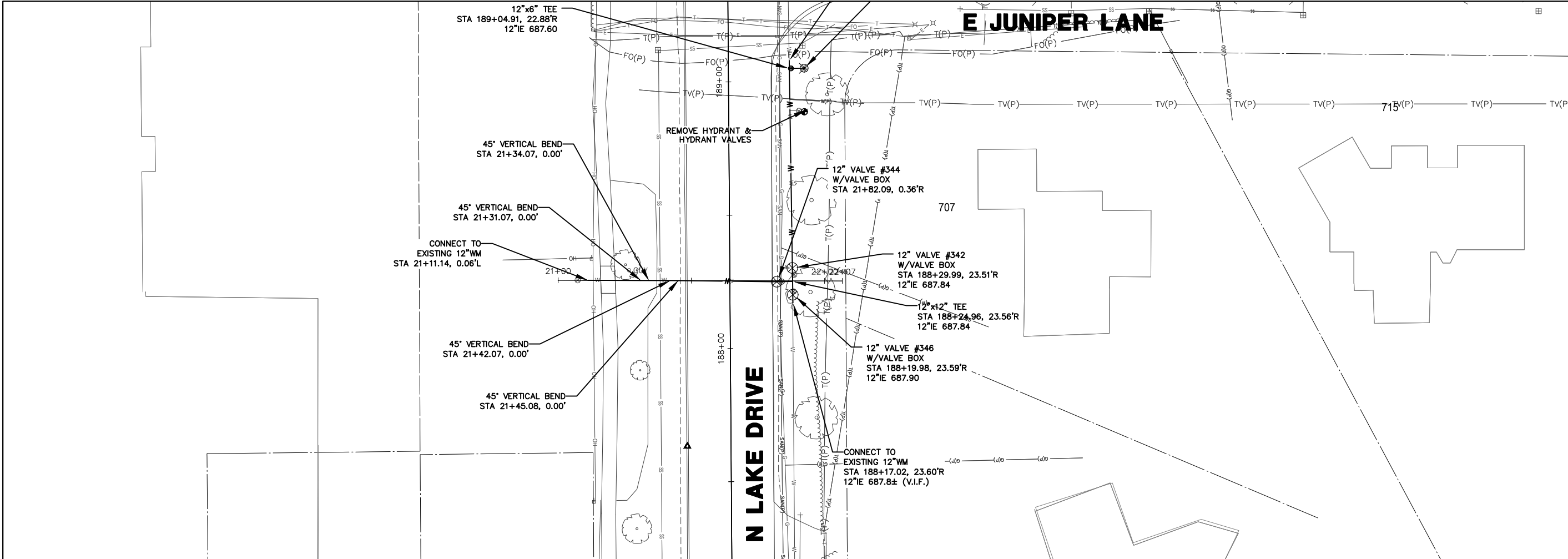
N. BELMONT LANE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

SHEET NUMBER:

168

FILENAME: S:\Milw\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr-ds.dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

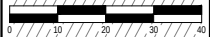
REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'  
HORIZ. SCALE: 1" = 20'



SEAL:

all in

SHEET:

E. JUNIPER LANE  
WATER MAIN

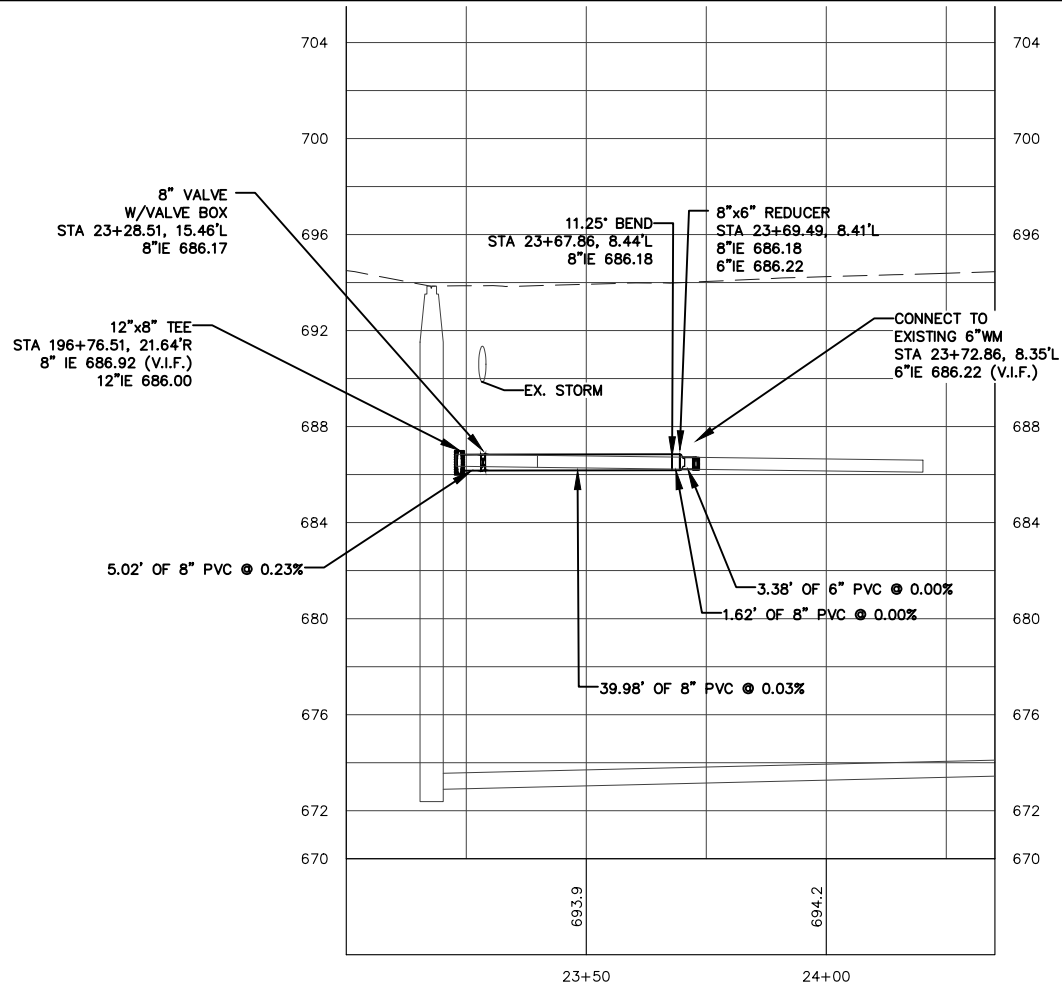
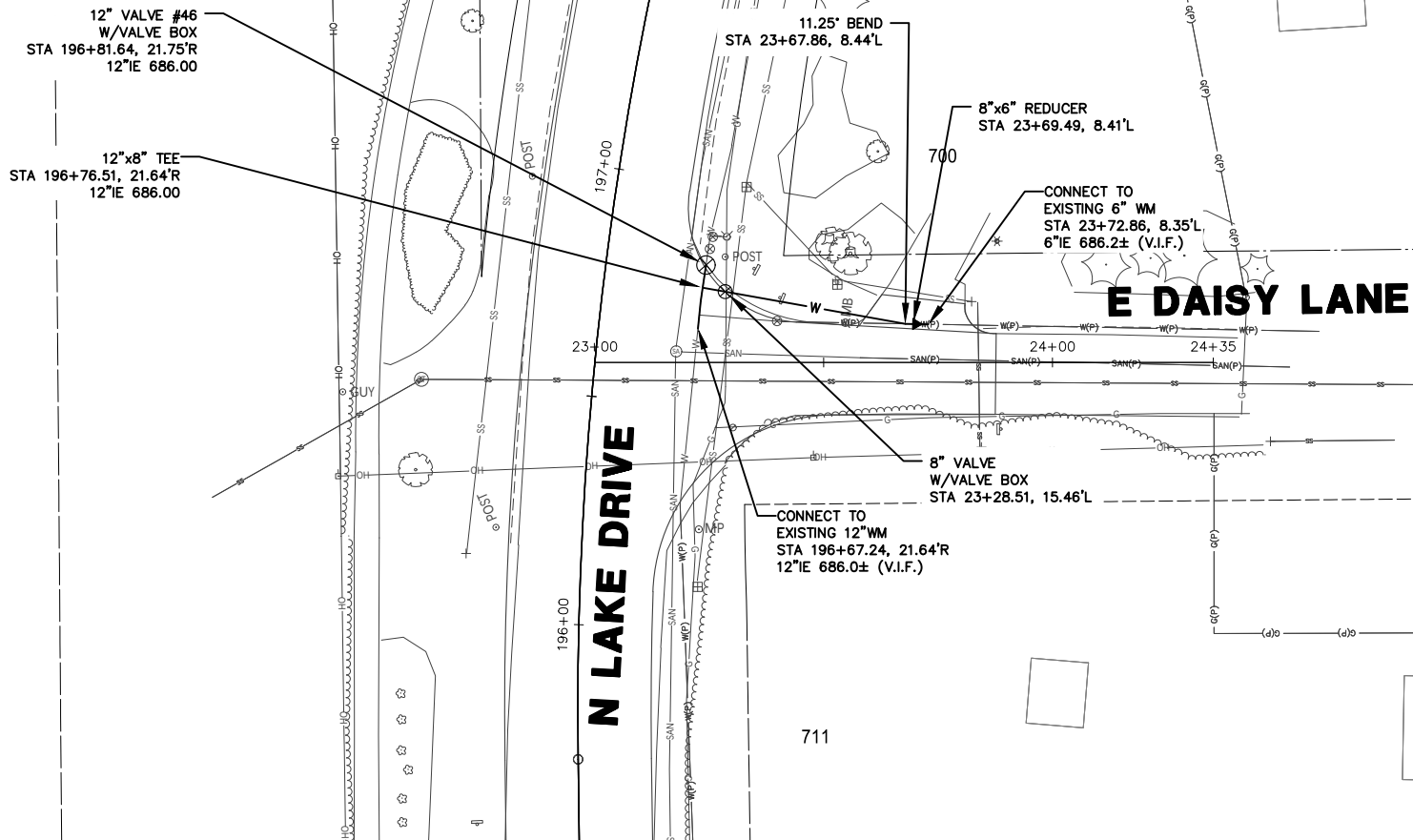
PROJECT MANAGER: YA  
PROJECT NUMBER: 22 0651 01  
DATE: 10/15/24

SHEET NUMBER:

169



FILENAME: S:\Milw\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr-da.dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

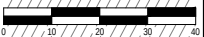
REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'  
HORIZ. SCALE: 1" = 20'



SEAL:

all in

SHEET:

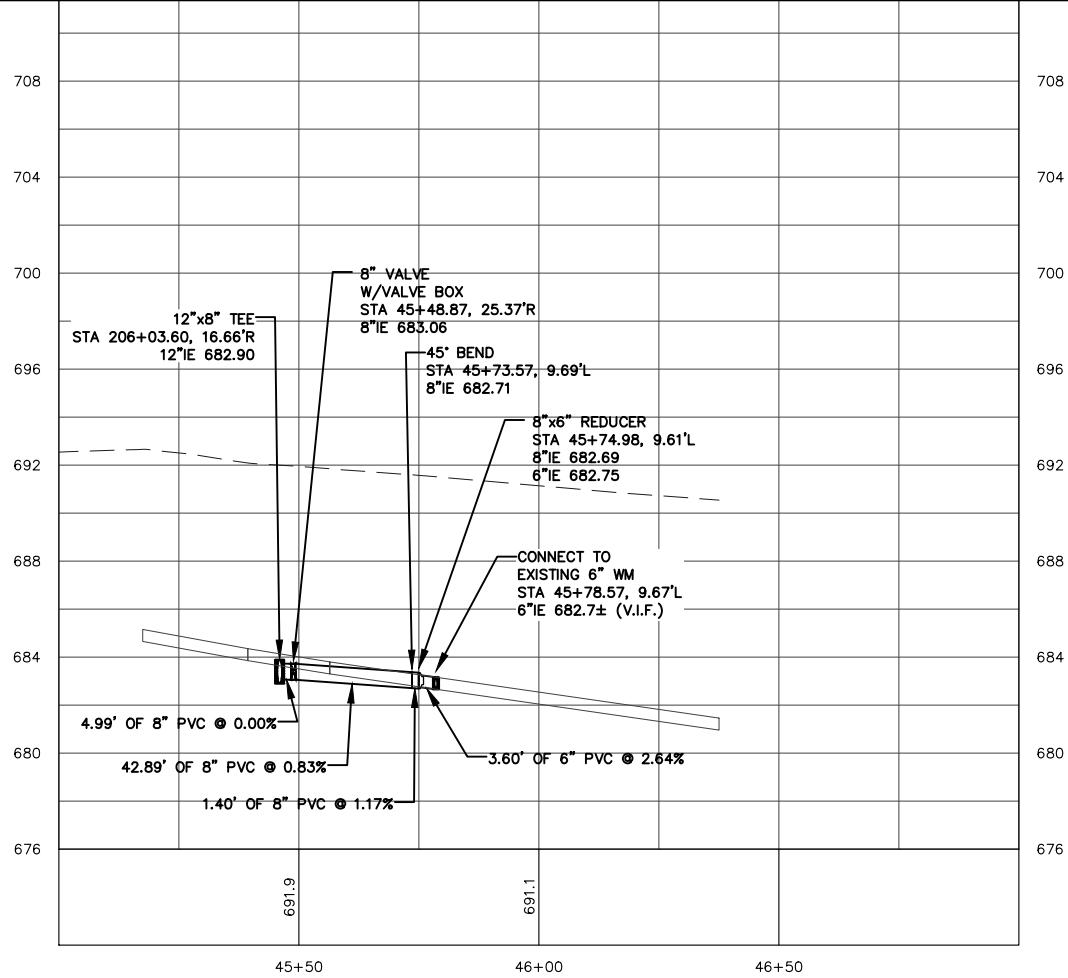
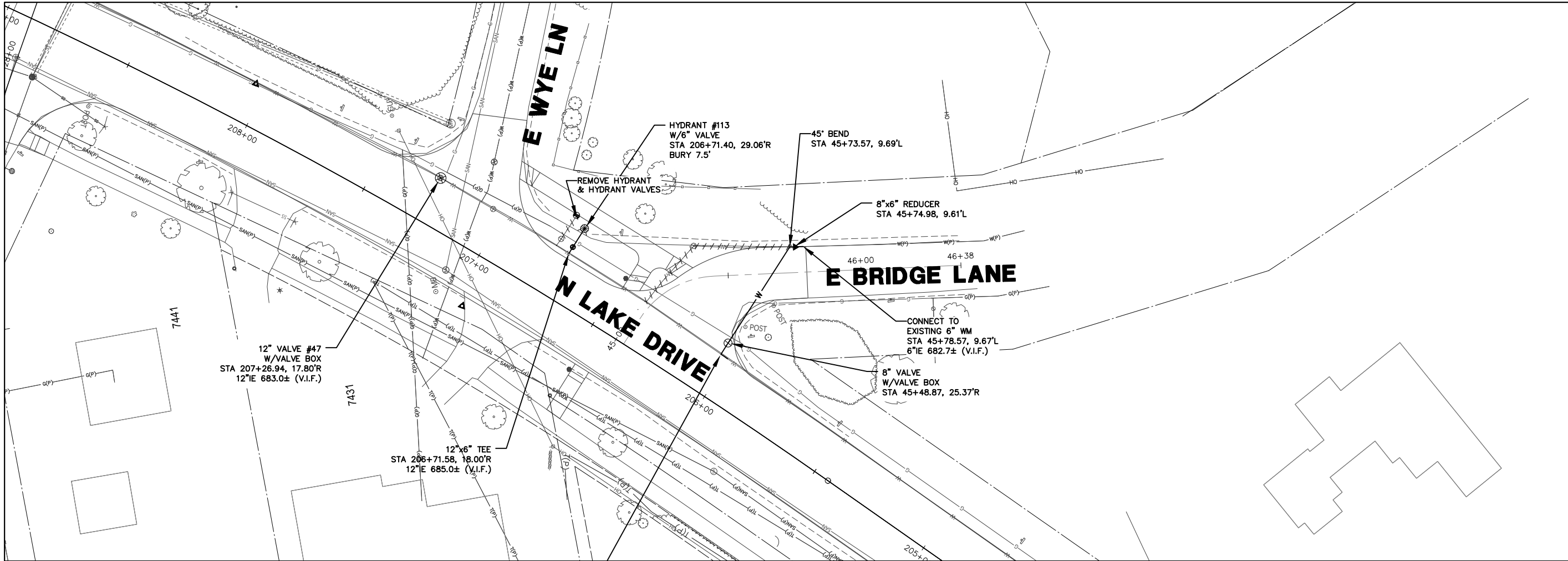
E. DAISY LANE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

SHEET NUMBER:

170

FILENAME: S:\Milw\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr-dm.dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



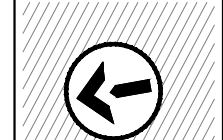
RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

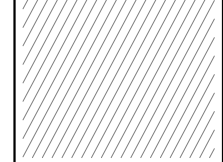
NORTH ARROW:



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



SEAL:



all in

SHEET:

E. BRIDGE LANE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

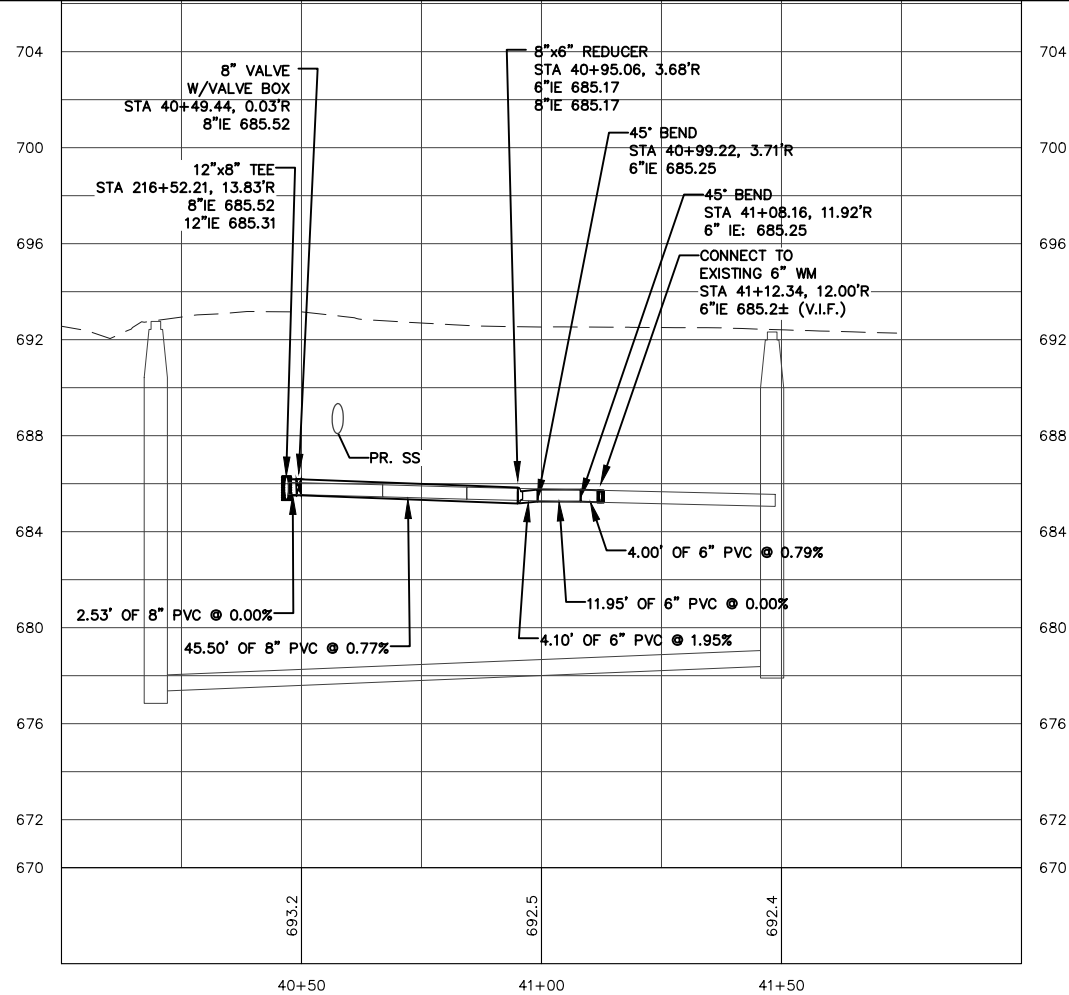
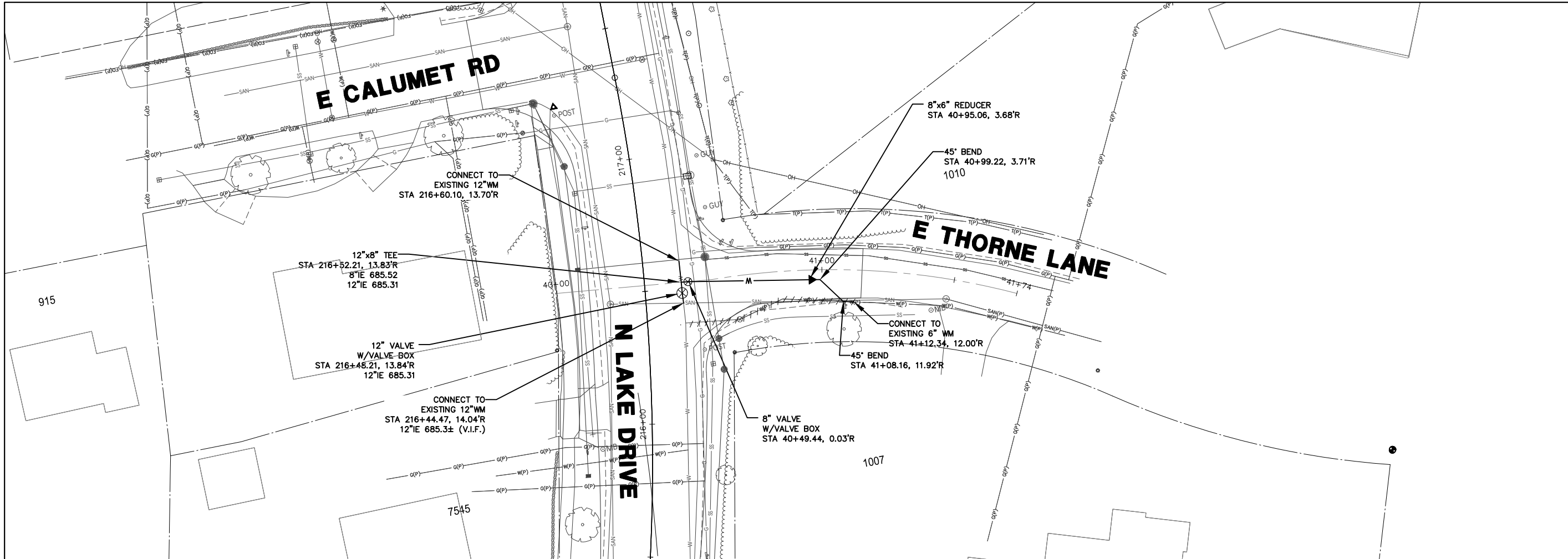
SHEET NUMBER:

171





FILENAME: S:\Milw\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr--dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 5'

HORZ. SCALE: 1" = 20'



SEAL:

all in

SHEET:

E. THORNE LANE  
WATER MAIN

PROJECT MANAGER: YA

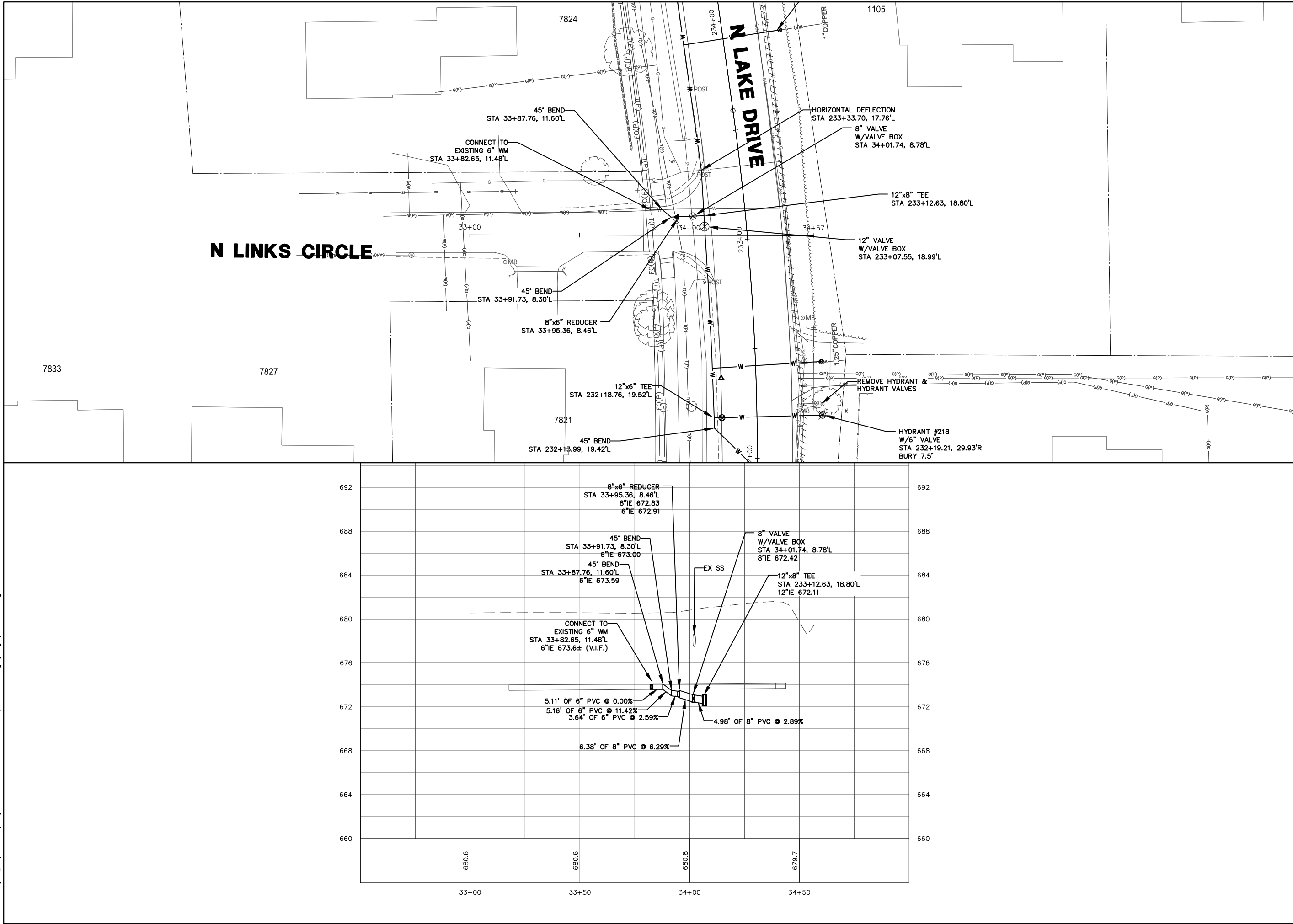
PROJECT NUMBER: 22-0651.01

DATE: 10/15/24

SHEET NUMBER:

173

FILENAME: S:\Milw\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr-da.dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'  
HORIZ. SCALE: 1" = 20'



SEAL:

all in

SHEET:

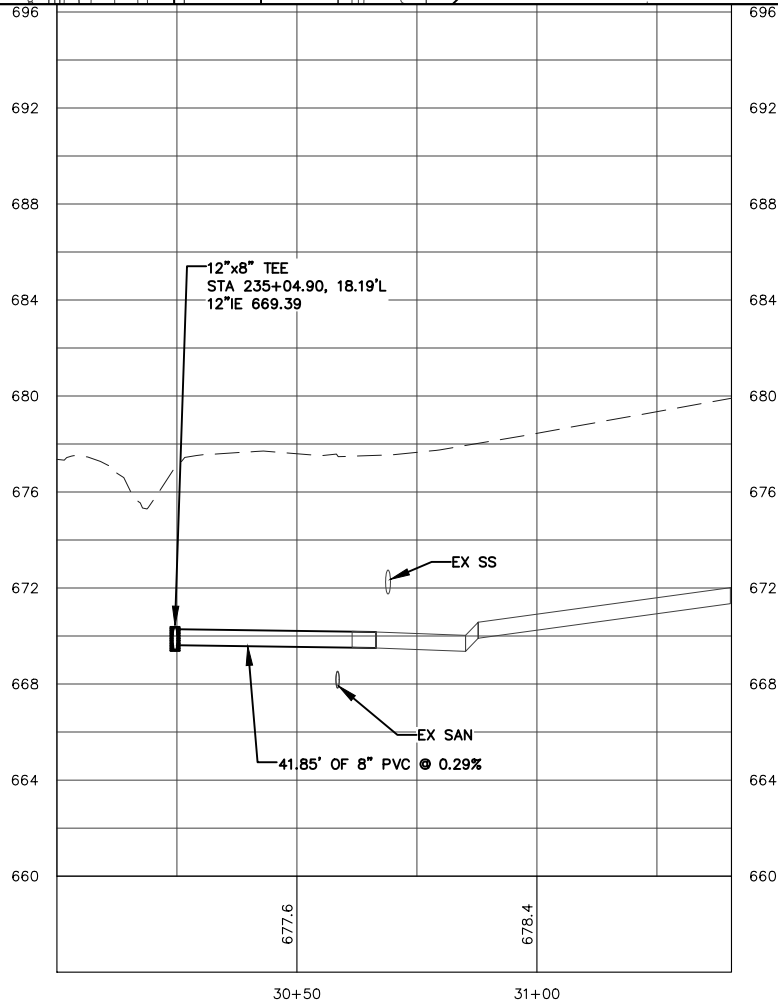
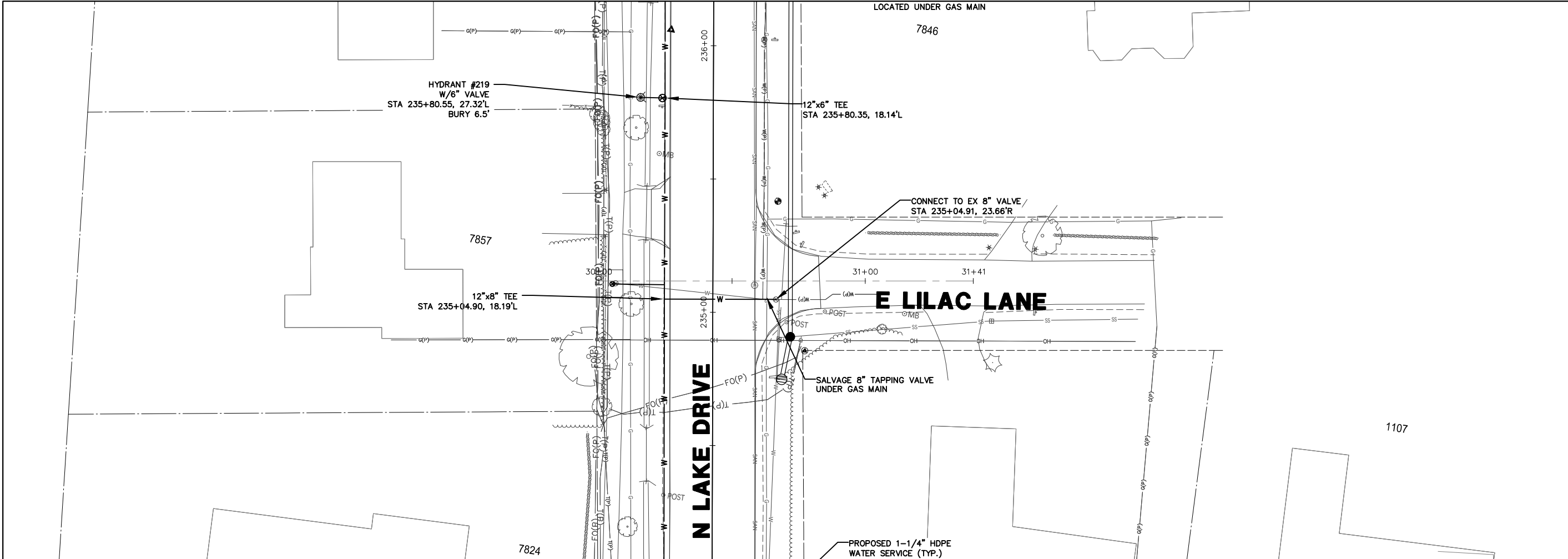
N. LINKS CIRCLE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

SHEET NUMBER:

174

FILENAME: S:\Milw\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr-ds.dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



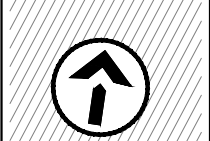
RELEASE:

CONSTRUCTION  
SET

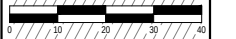
REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



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



SEAL:

all in

SHEET:

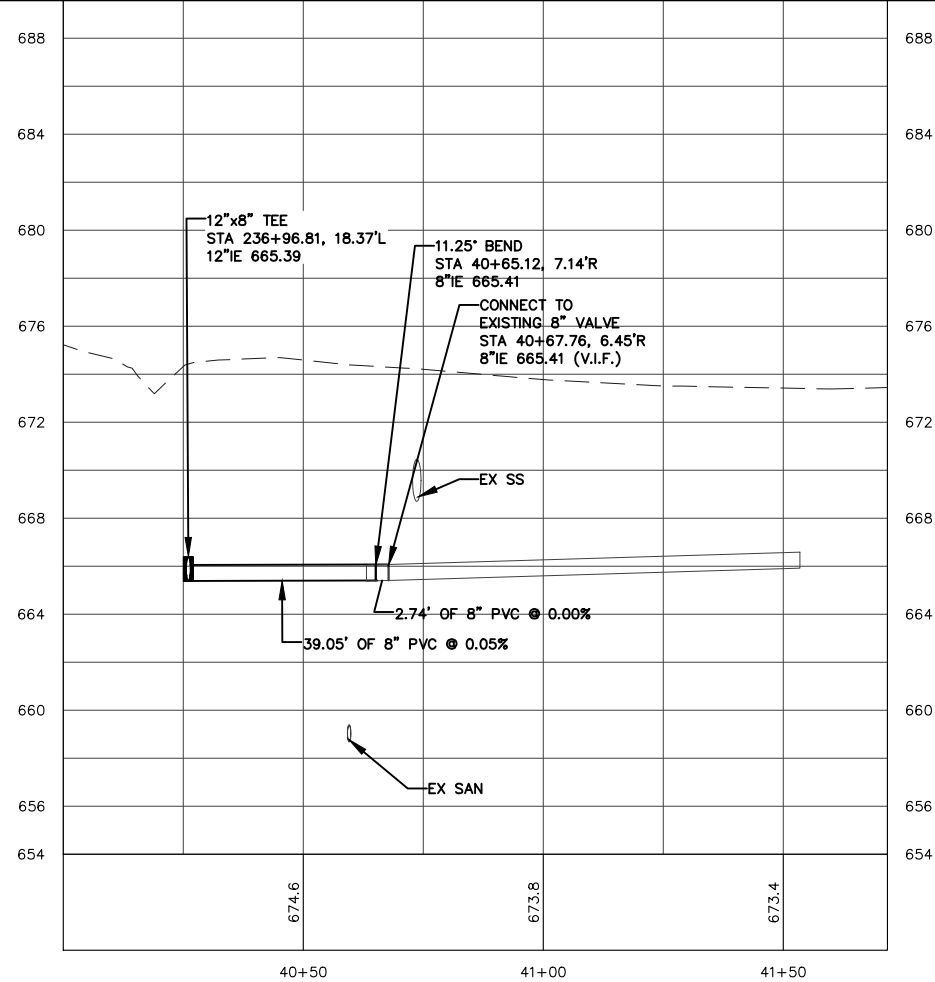
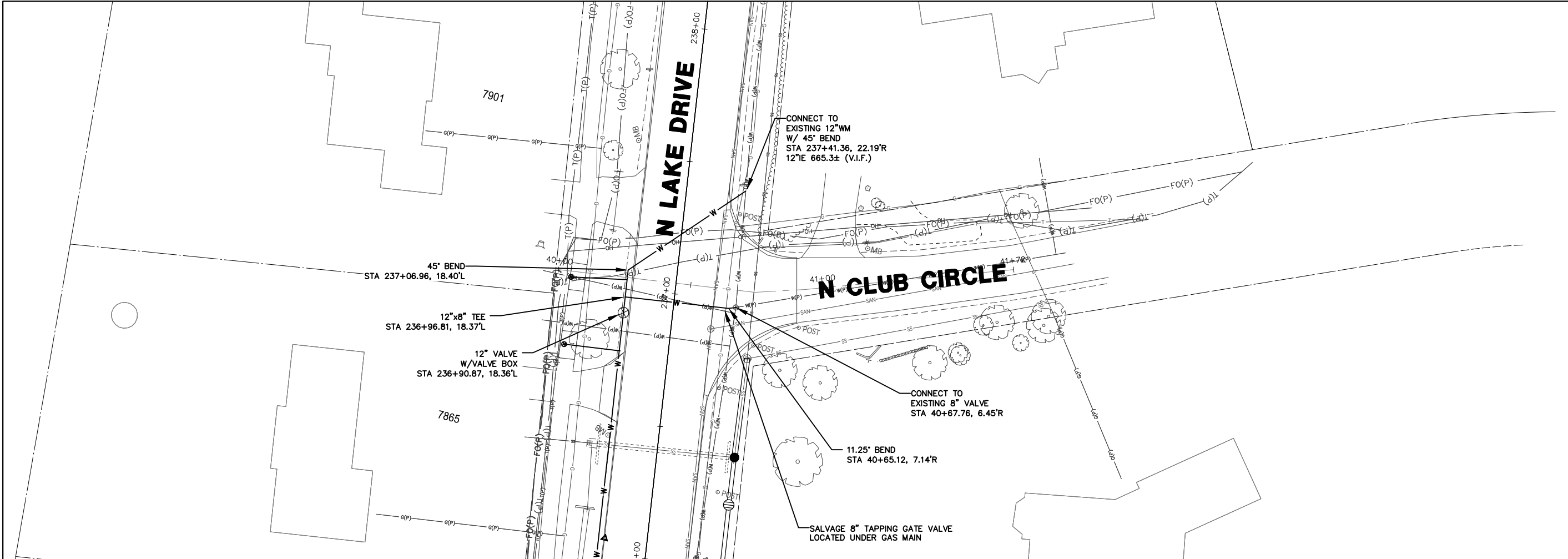
**E. LILAC LANE  
WATER MAIN**

PROJECT MANAGER: YA  
PROJECT NUMBER: 22.0651.01  
DATE: 10/15/24

SHEET NUMBER:

175

FILENAME: S:\Milw\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr-ds.dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 5'

HORZ. SCALE: 1" = 20'



SEAL:

all in

SHEET:

N. CLUB CIRCLE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

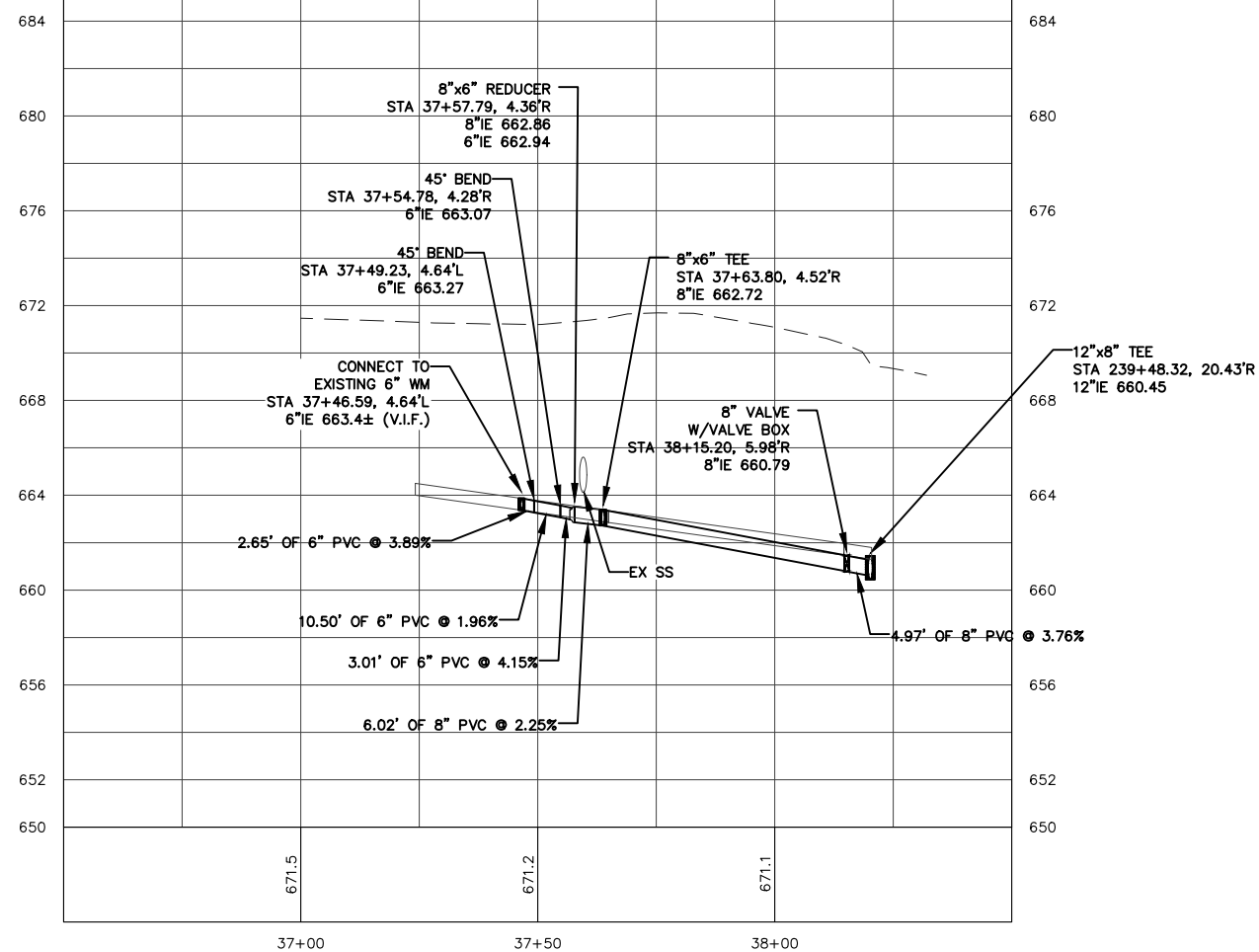
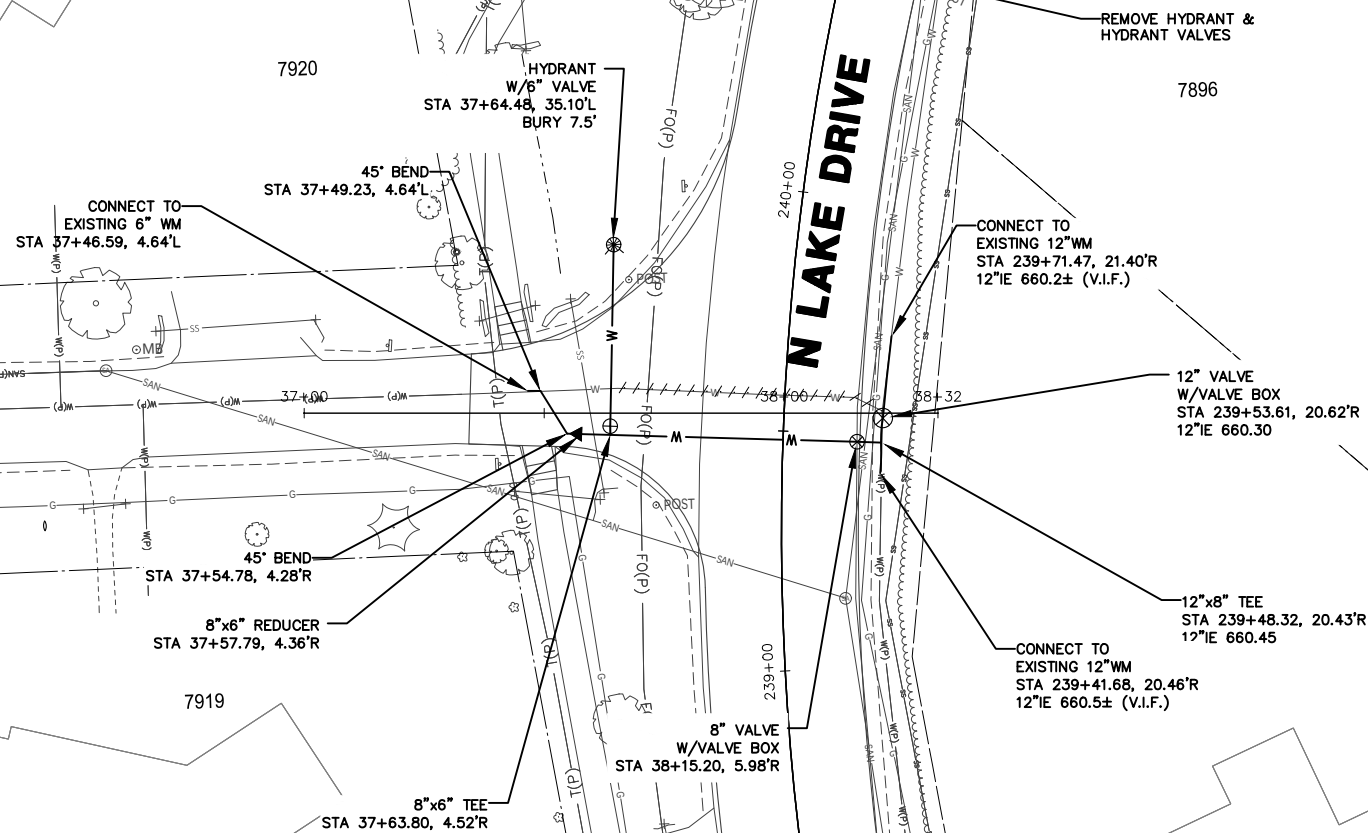
SHEET NUMBER:

176

FILENAME: S:\Milw\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr-ds.dwg

N LINKS CIRCLE

N LAKE DRIVE



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

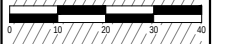
REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'  
HORZ. SCALE: 1" = 20'



SEAL:

all in

SHEET:

N. LINKS CIRCLE  
WATER MAIN

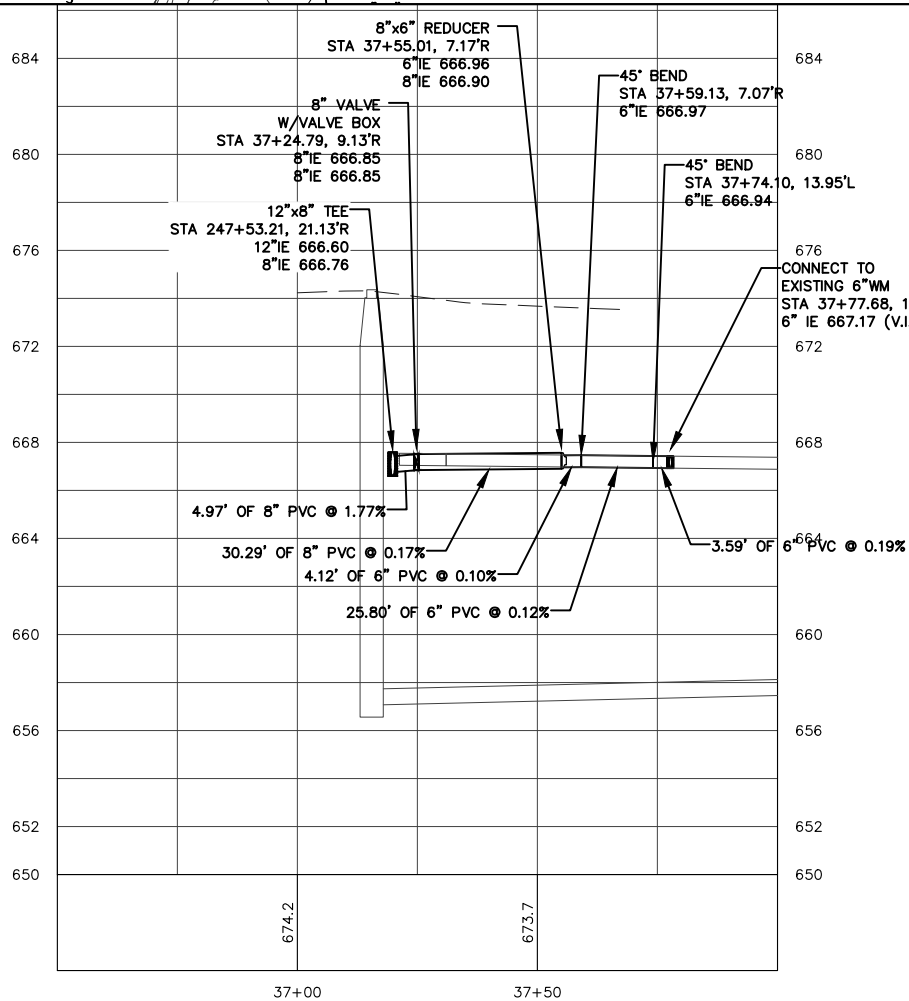
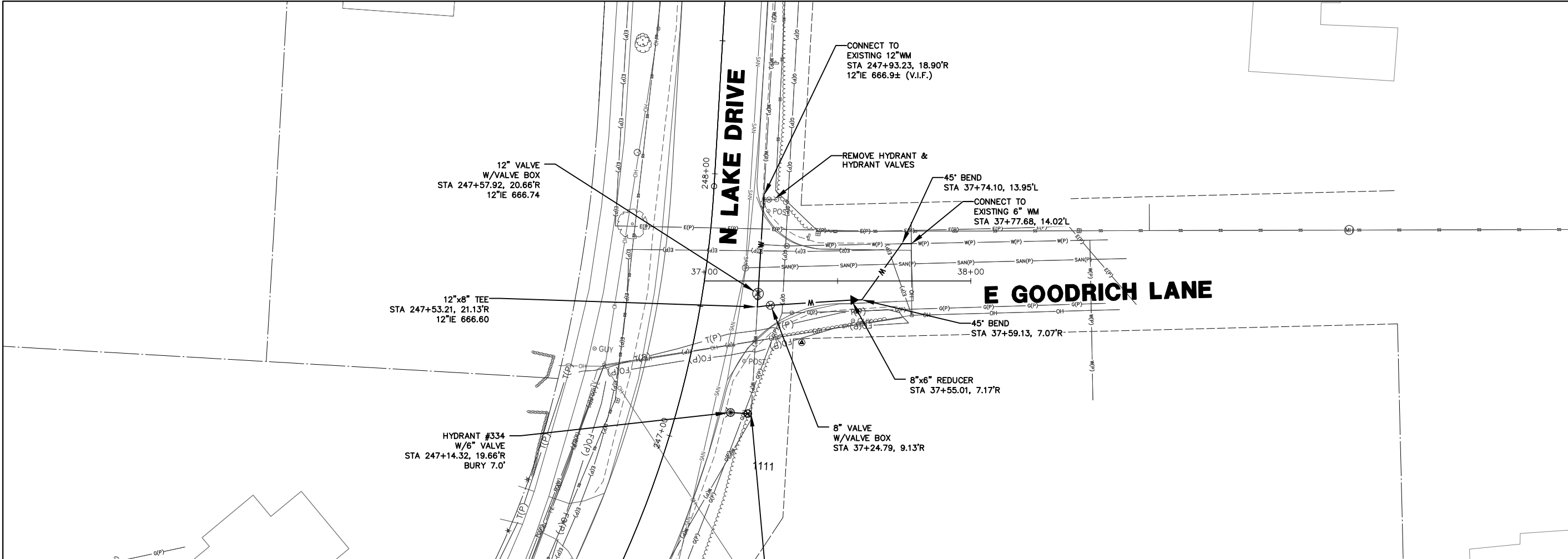
PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651-01  
DATE: 10/15/24

SHEET NUMBER:

177



FILENAME: S:\Milw\_Co\Fox Point\Gen\220651 - Lake Drive Water Main Improvement Design\lake dr-ds.dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'

HORIZ. SCALE: 1" = 20'



SEAL:

all in

SHEET:

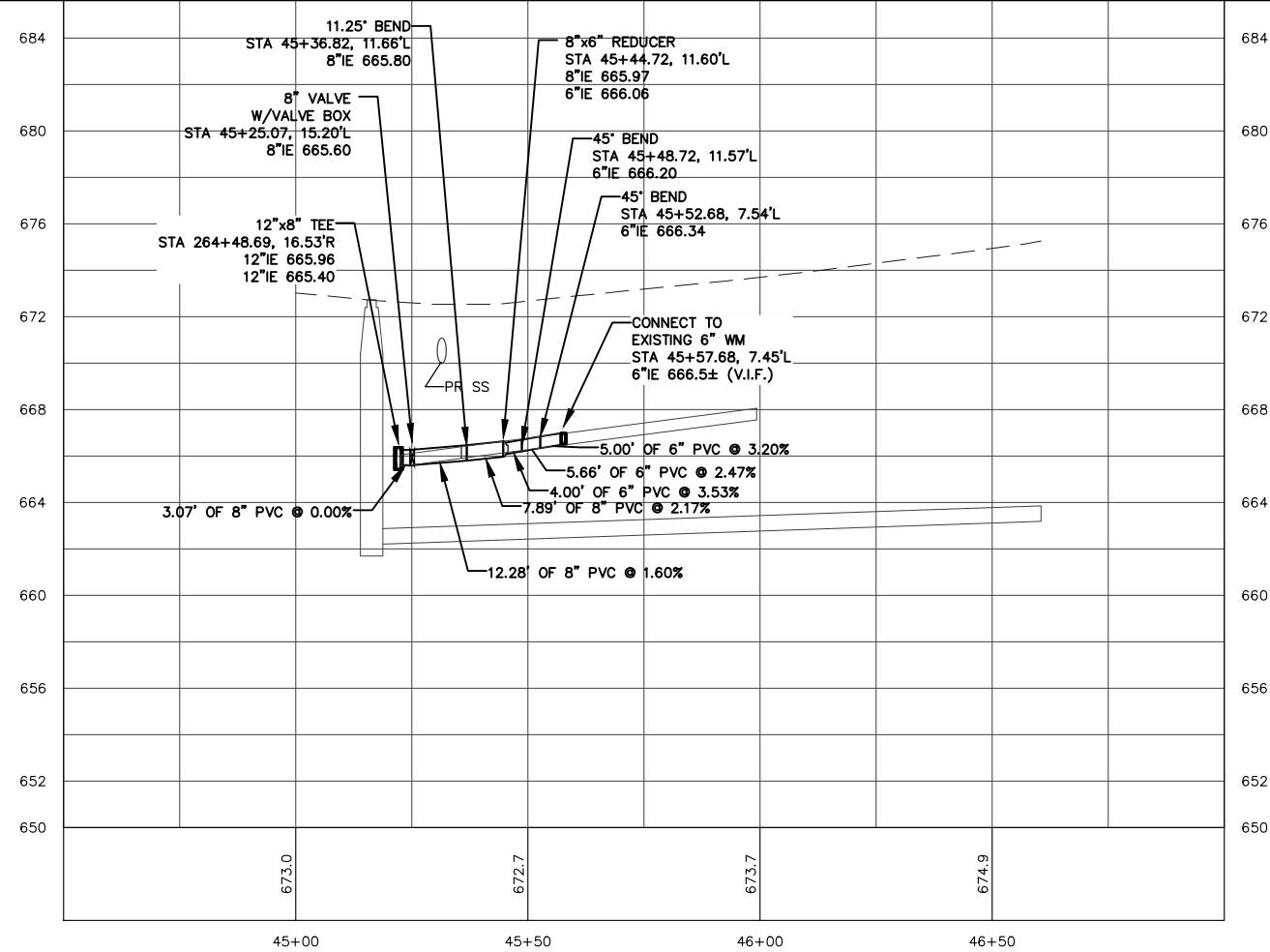
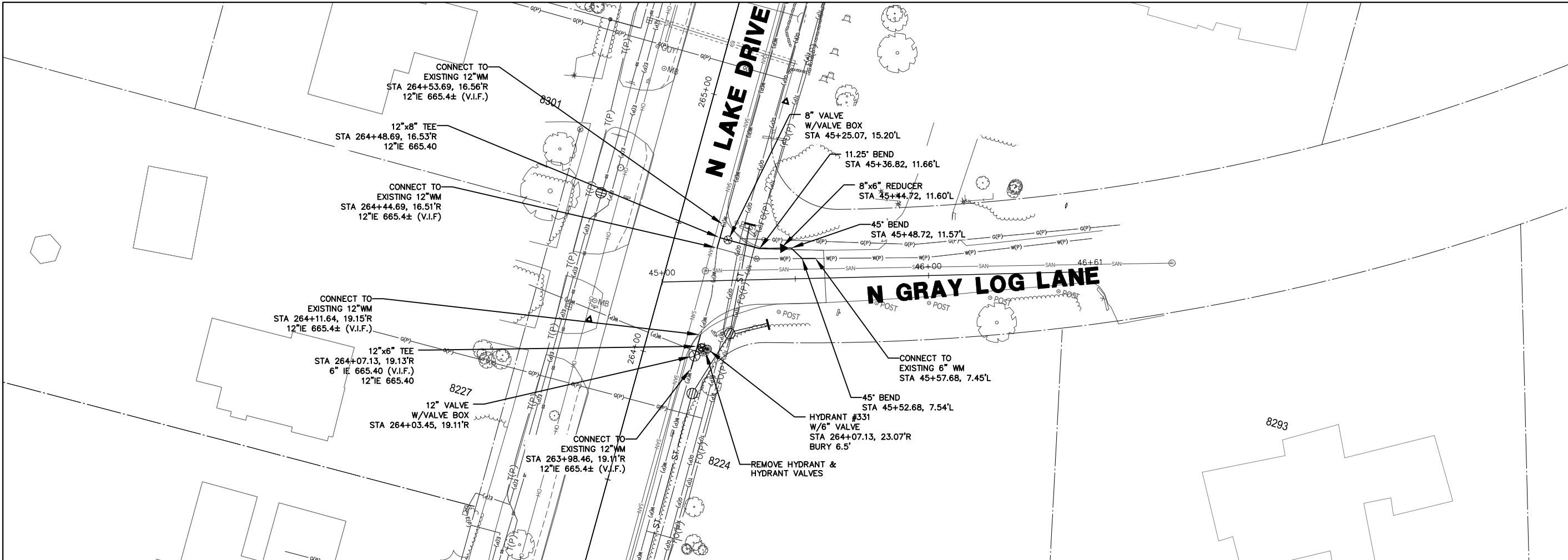
E. GOODRICH LANE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

SHEET NUMBER:

178

FILENAME: S:\Milw\_Co\Fox Point\Gov\220651 - Lake Drive Water Main Improvement Design\lake dr--ds.dwg



7711 N. Port Washington Road  
Milwaukee, Wisconsin 53217

kapurinc.com

PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FOX  
POINT

CLIENT:



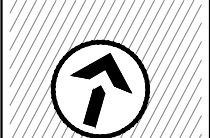
RELEASE:

CONSTRUCTION  
SET

REVISIONS:

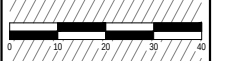
| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'

HORZ. SCALE: 1" = 20'



SEAL:



SHEET:

N. GRAY LOG LANE  
WATER MAIN

PROJECT MANAGER: YA  
PROJECT NUMBER: 22-0651.01  
DATE: 10/15/24

SHEET NUMBER:

179



PROJECT:

ID 2225-00-83  
STH 32 SCHOOL RD  
TO DEAN RD  
WATERMAIN

LOCATION:

VILLAGE OF FO  
POINT

CLIENT:



RELEASE:

CONSTRUCTION  
SET

REVISIONS:

| # | DATE     | DESCRIPTION          |
|---|----------|----------------------|
| 1 | 3/1/24   | DT1078 UTILITY PLANS |
| 2 | 7/1/24   | 90% PLANS            |
| 3 | 11/1/24  | FINAL PS&E           |
| 4 | 10/15/24 | CONSTRUCTION SET     |

NORTH ARROW:



VERT. SCALE: 1" = 2'

HORZ. SCALE: 1" = 20'

SEAL:

all in

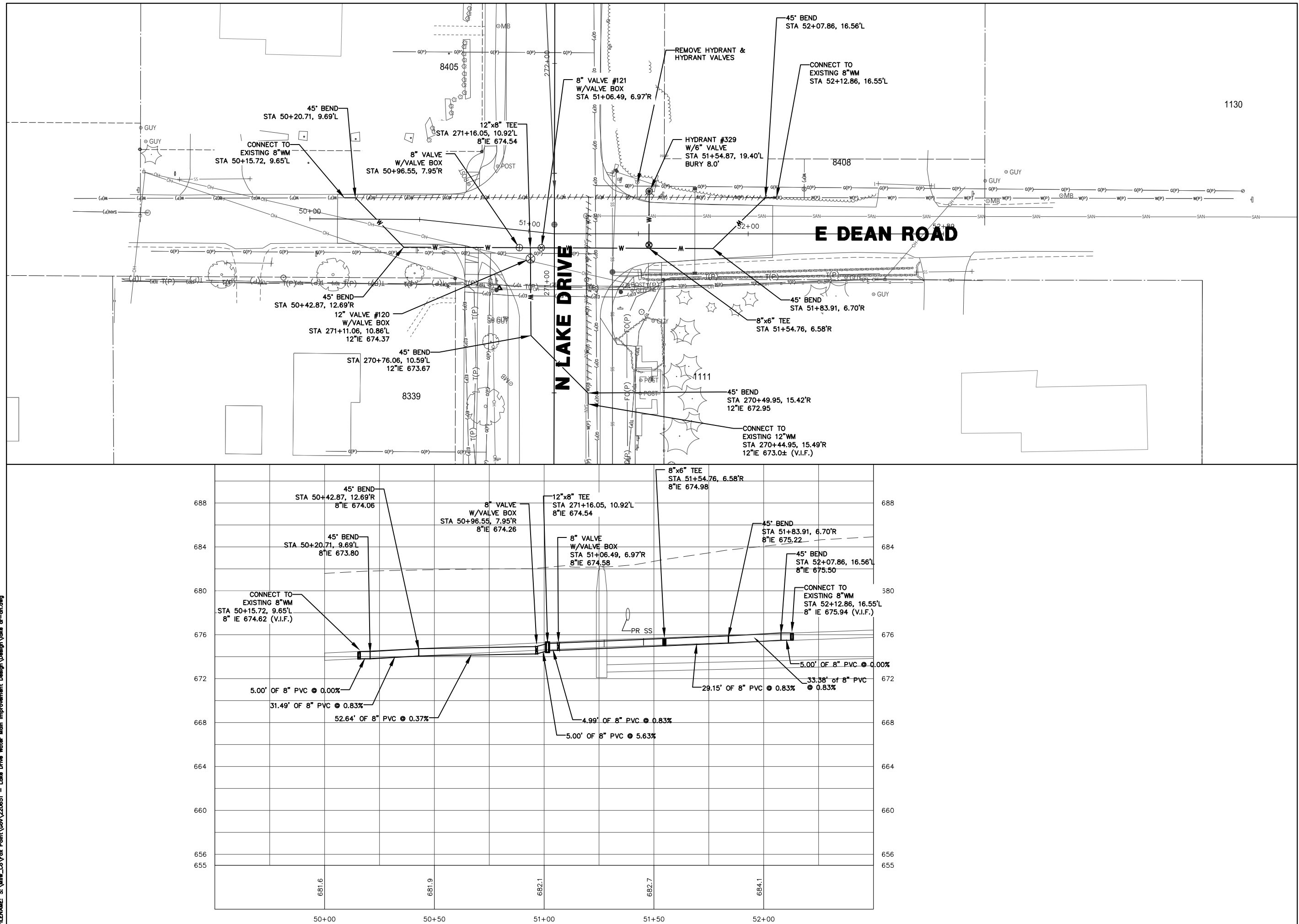
SHEET:

E. DEAN ROAD  
WATER MAIN

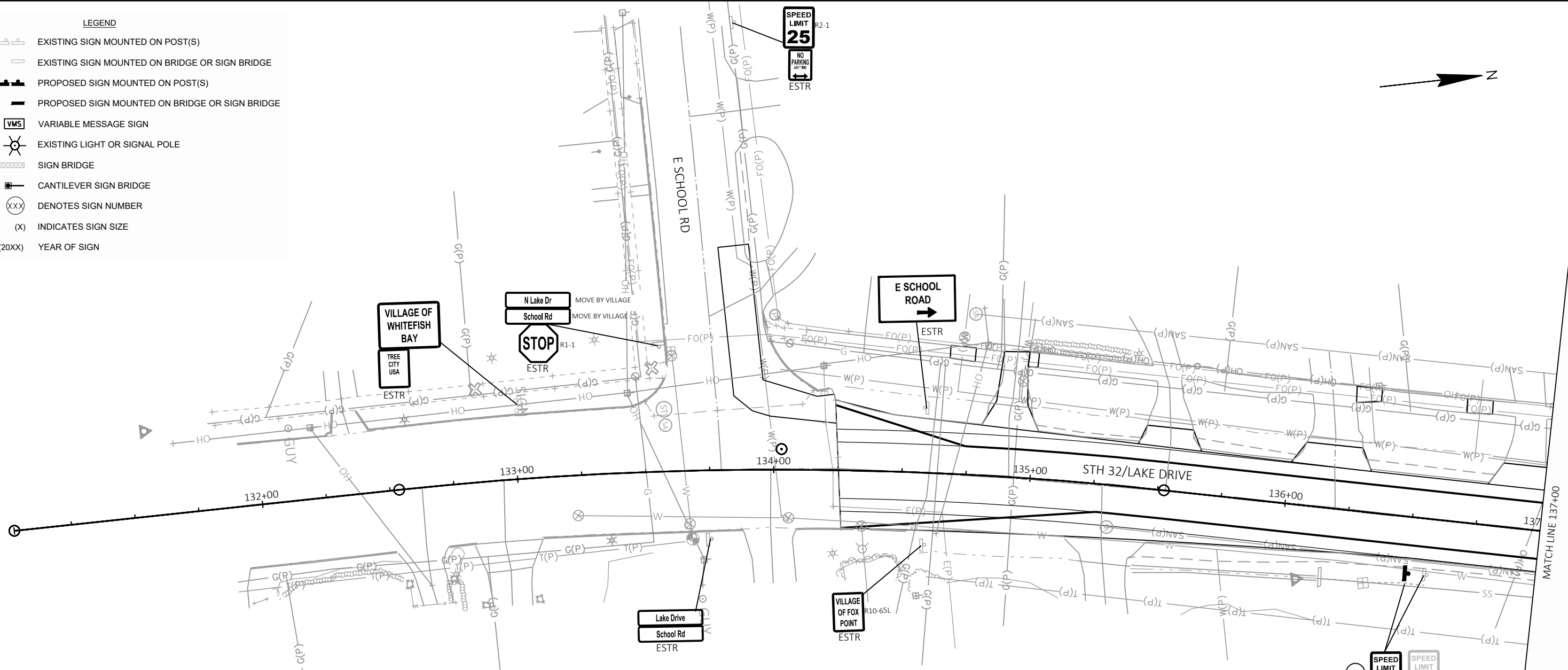
|                  |            |
|------------------|------------|
| PROJECT MANAGER: | YA         |
| PROJECT NUMBER:  | 22.0651.01 |
| DATE:            | 10/15/24   |

SHEET NUMBER:

180



- LEGEND
- EXISTING SIGN MOUNTED ON POST(S)
  - EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
  - PROPOSED SIGN MOUNTED ON POST(S)
  - PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
  - VMS VARIABLE MESSAGE SIGN
  - EXISTING LIGHT OR SIGNAL POLE
  - SIGN BRIDGE
  - CANTILEVER SIGN BRIDGE
  - DENOTES SIGN NUMBER
  - (X) INDICATES SIGN SIZE
  - (20XX) YEAR OF SIGN



TYPE II ALUMINUM SIGNS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE COUNTY SIGN SHOP. CONTACT THE FOLLOWING INDIVIDUAL AT THE SIGN SHOP FOR DISTRIBUTION COUNTY LOCATION.

| SIGNING COORDINATOR | COUNTIES                               | PHONE #      |
|---------------------|----------------------------------------|--------------|
| BREE JOHNS-KONKEL   | MILWAUKEE, RACINE, OZAUKEE, WASHINGTON | 414-750-2814 |
| CHUCK SALDIVAR      | KENOSHA, WALWORTH, WAUKESHA            | 414-750-1682 |

SIGNS SHALL BE CAREFULLY REMOVED FROM SIGN SUPPORTS. THE SIGNS SHALL BE PALLETIZED FOR HANDLING WITH A FORKLIFT (SEE STANDARD SPEC 638.3.4). THE REGIONAL SIGN SHOP (GENERAL PHONE # 414-266-1164) SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF THE SIGNS.

WHEN AN EXISTING STOP SIGN SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED, THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POST SIZES FOR TYPE II SIGNS ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

STREET NAME SIGNS ARE PROPERTY OF THE MUNICIPALITY (CITY, VILLAGE OR TOWN). THE MUNICIPALITY SHALL BE CONTACTED TO REMOVE THEIR STREET NAME SIGNS PRIOR TO CONSTRUCTION AND IT IS THEIR RESPONSIBILITY TO REINSTALL THE OLD SIGNS OR REPLACE THEM FOLLOWING CONSTRUCTION. WISDOT DOES NOT FURNISH OR INSTALL STREET NAME SIGNS. THE STREET NAME SIGNS SHALL NOT BE PLACED ON TOP OF THE STOP SIGNS.

LOCATE NO PASSING PENNANTS BASED ON ESTABLISHING NO PASSING ZONES PAY ITEM. PLACE SIGNS BASED ON WHERE THE PAVEMENT MARKING FOR NO PASSING ZONES BEGIN.

BOX OUT OR CORING OF CONCRETE SIGN POSTS IS INCIDENTAL TO THE POST

SHEET 1 OF 24

PROJECT NO: 2225-00-73

HWY: STH 32

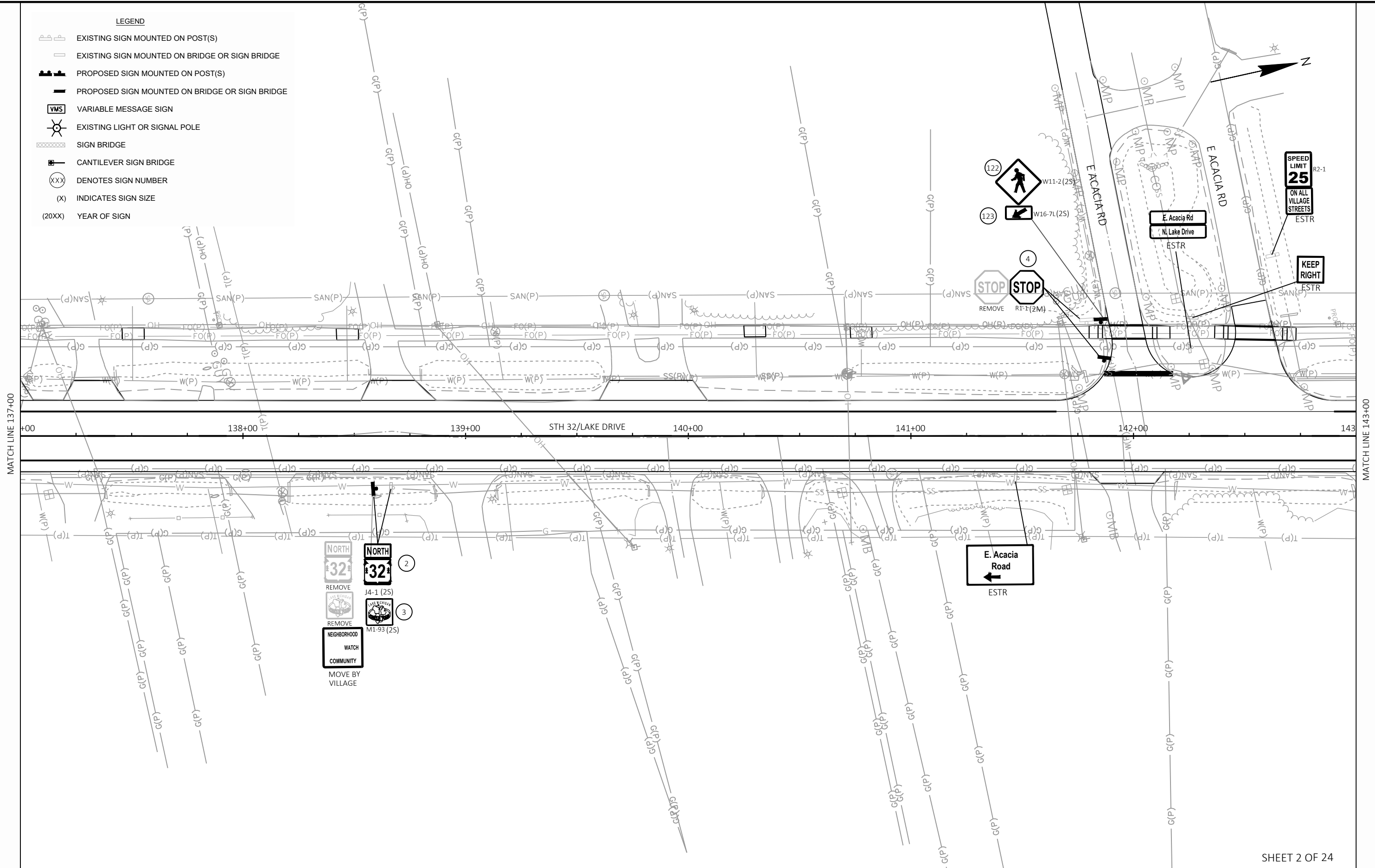
COUNTY: MILWAUKEE

PERMANENT SIGNING

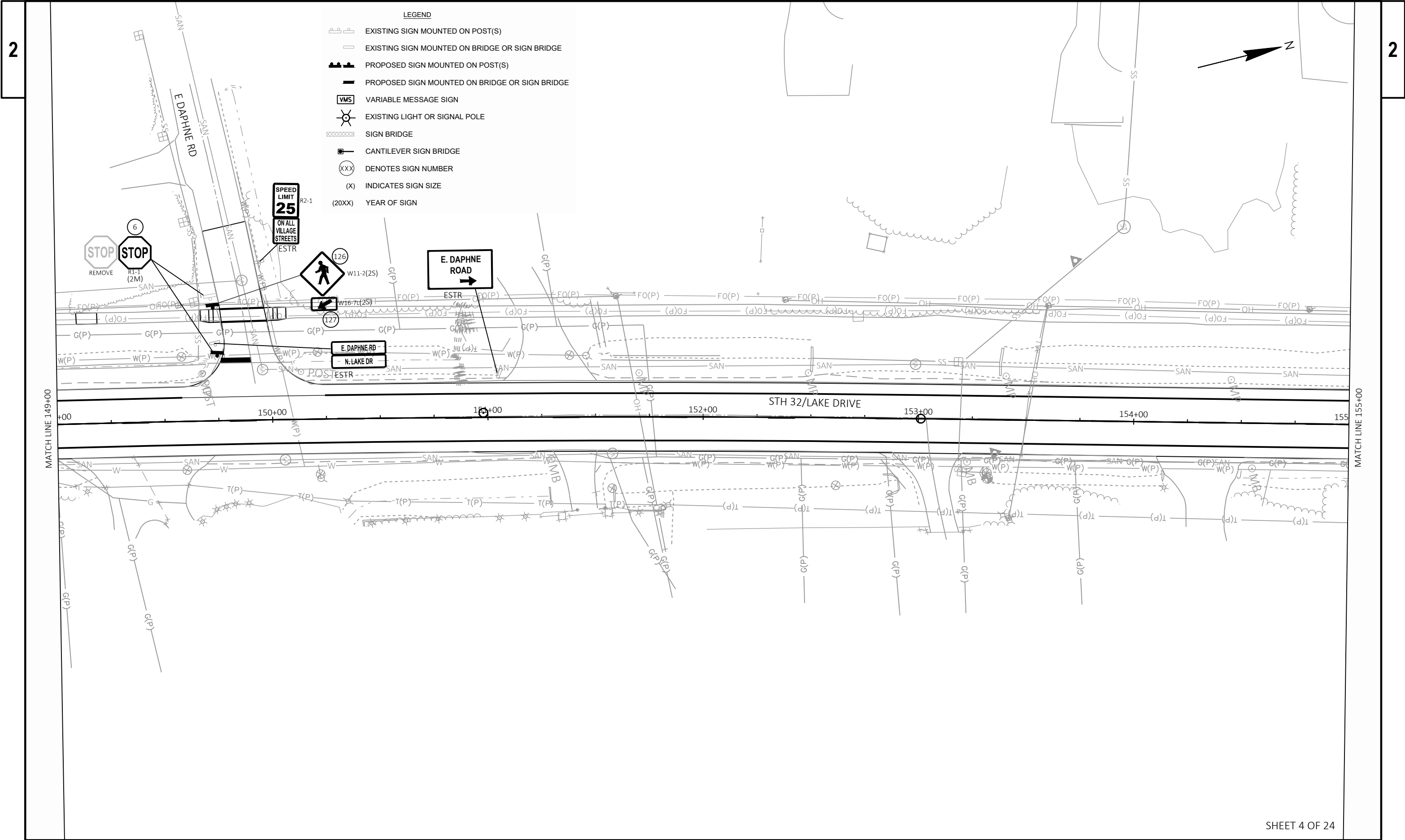
SHEET

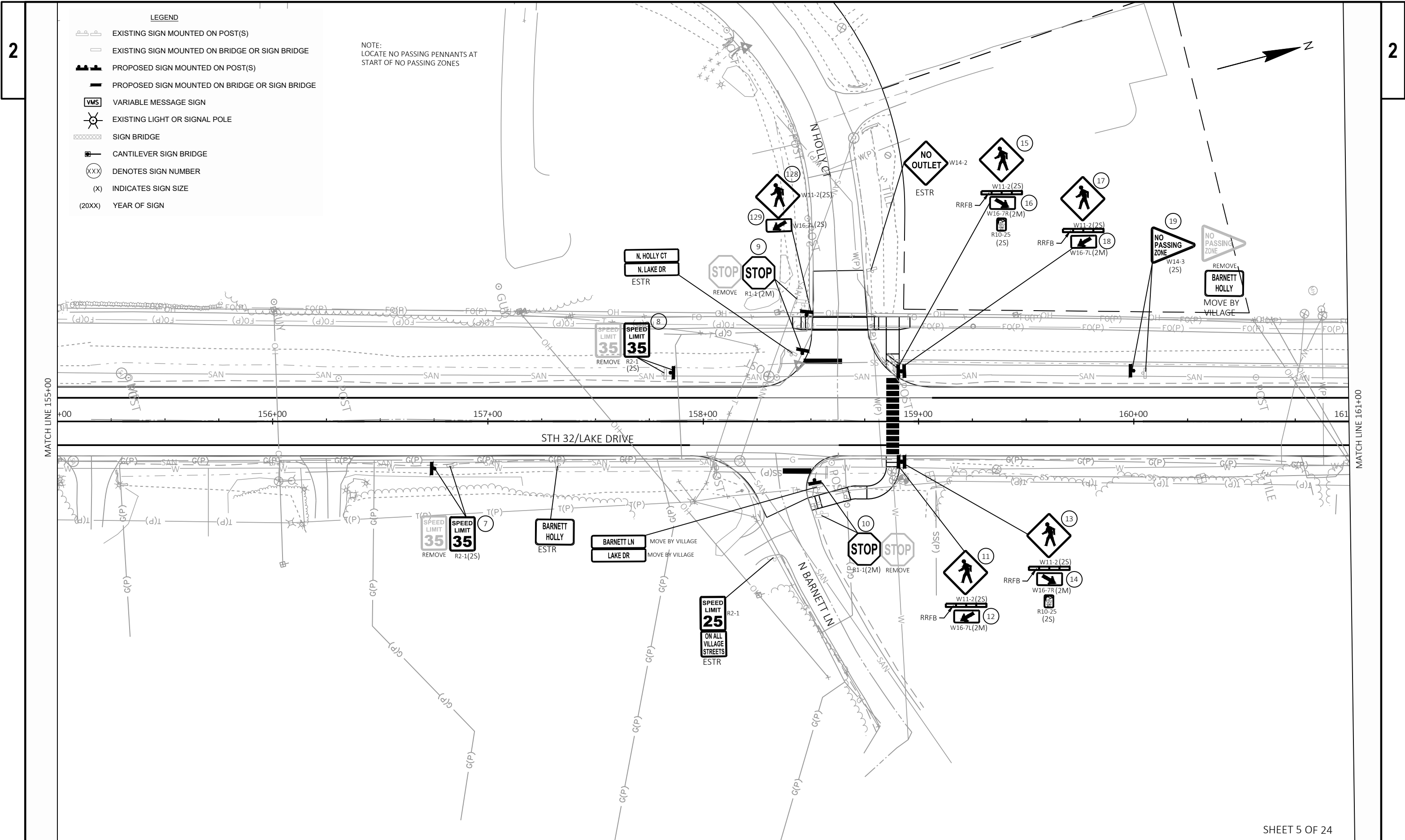
181

E









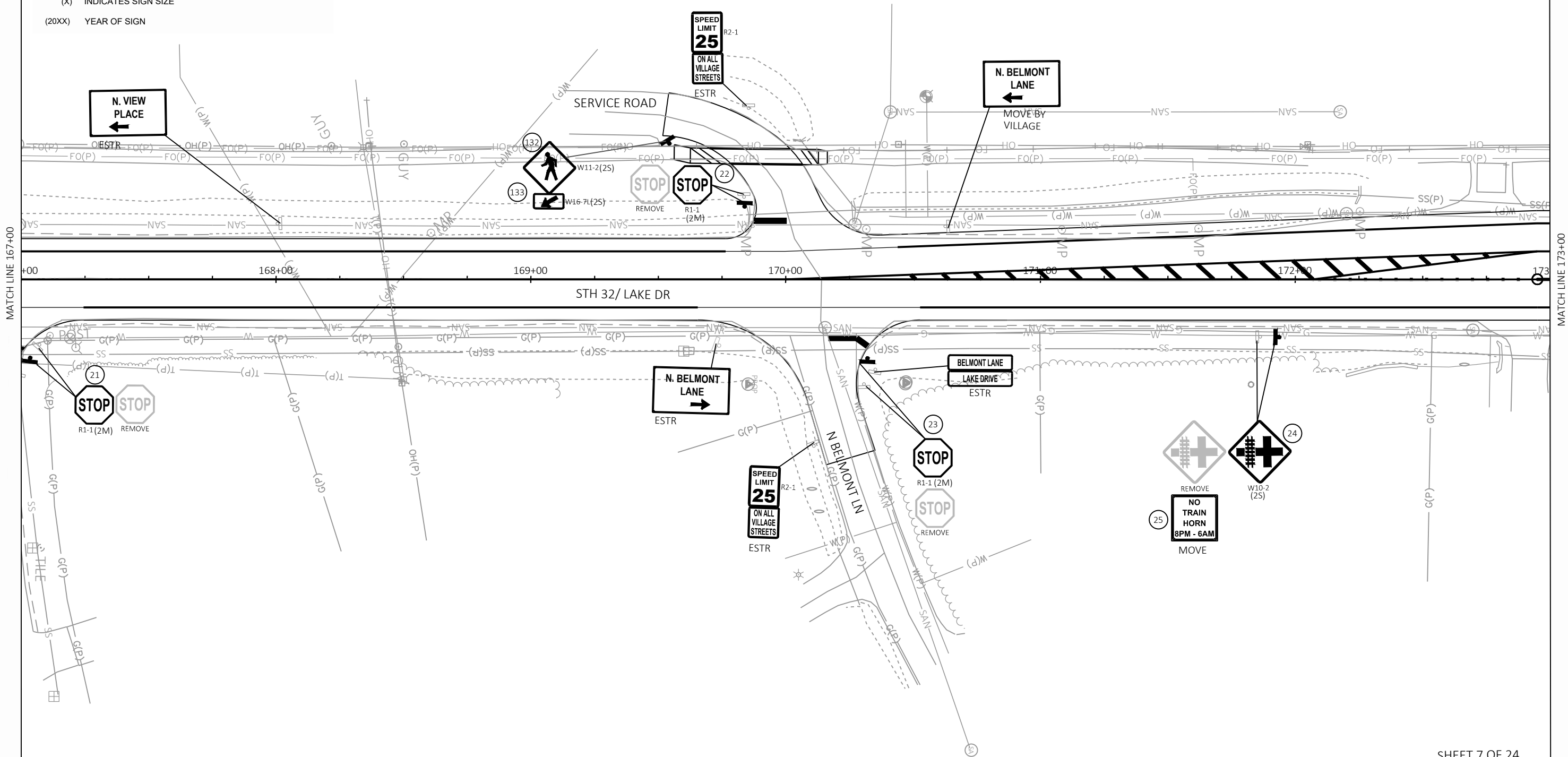






LEGEND

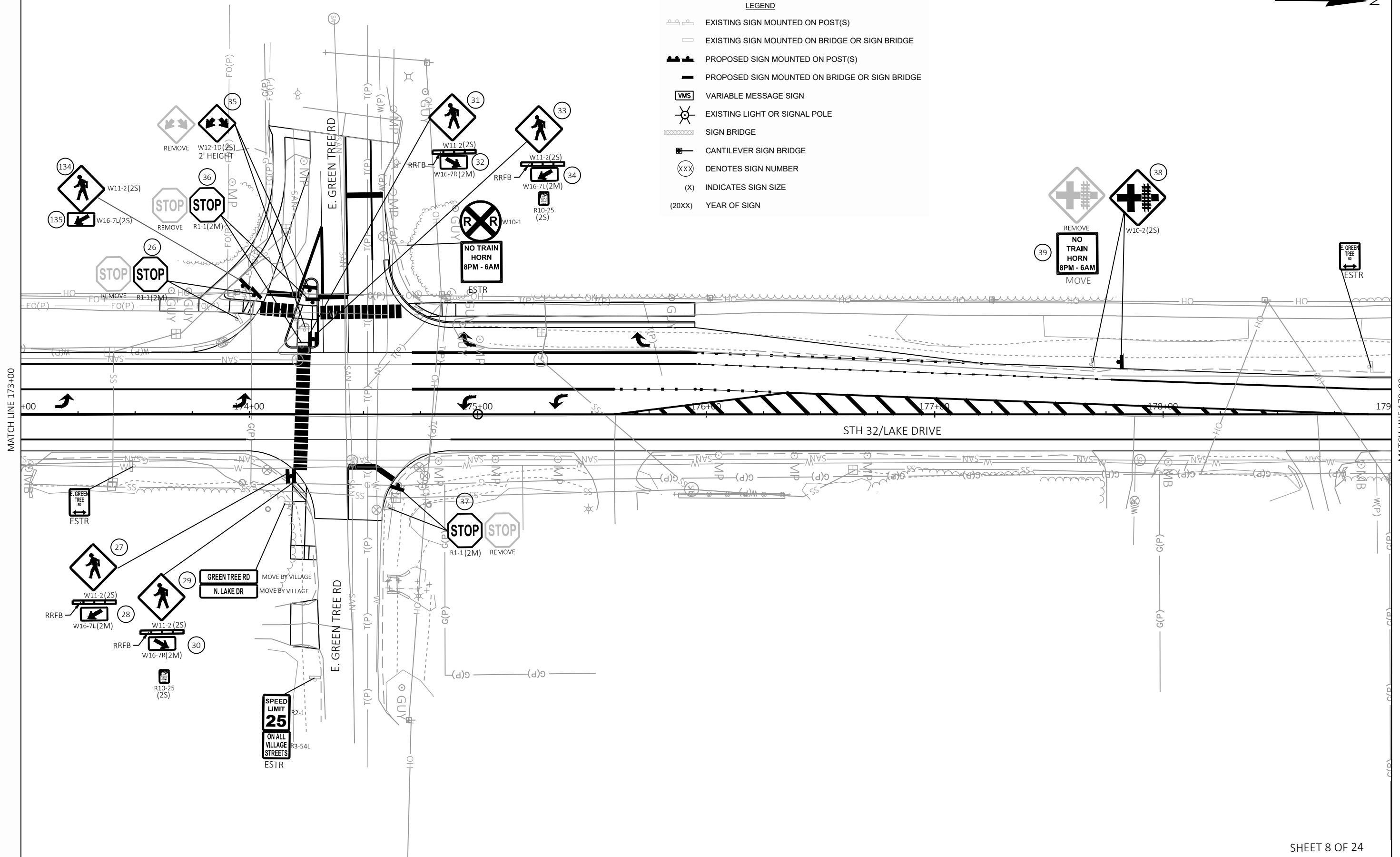
- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE
- YEAR OF SIGN



SHEET 7 OF 24

MATCH LINE 173+00

MATCH LINE 179+00



SHEET 8 OF 24

PROJECT NO: 2225-00-73

HWY: STH 32

COUNTY: MILWAUKEE

PERMANENT SIGNING

SHEET

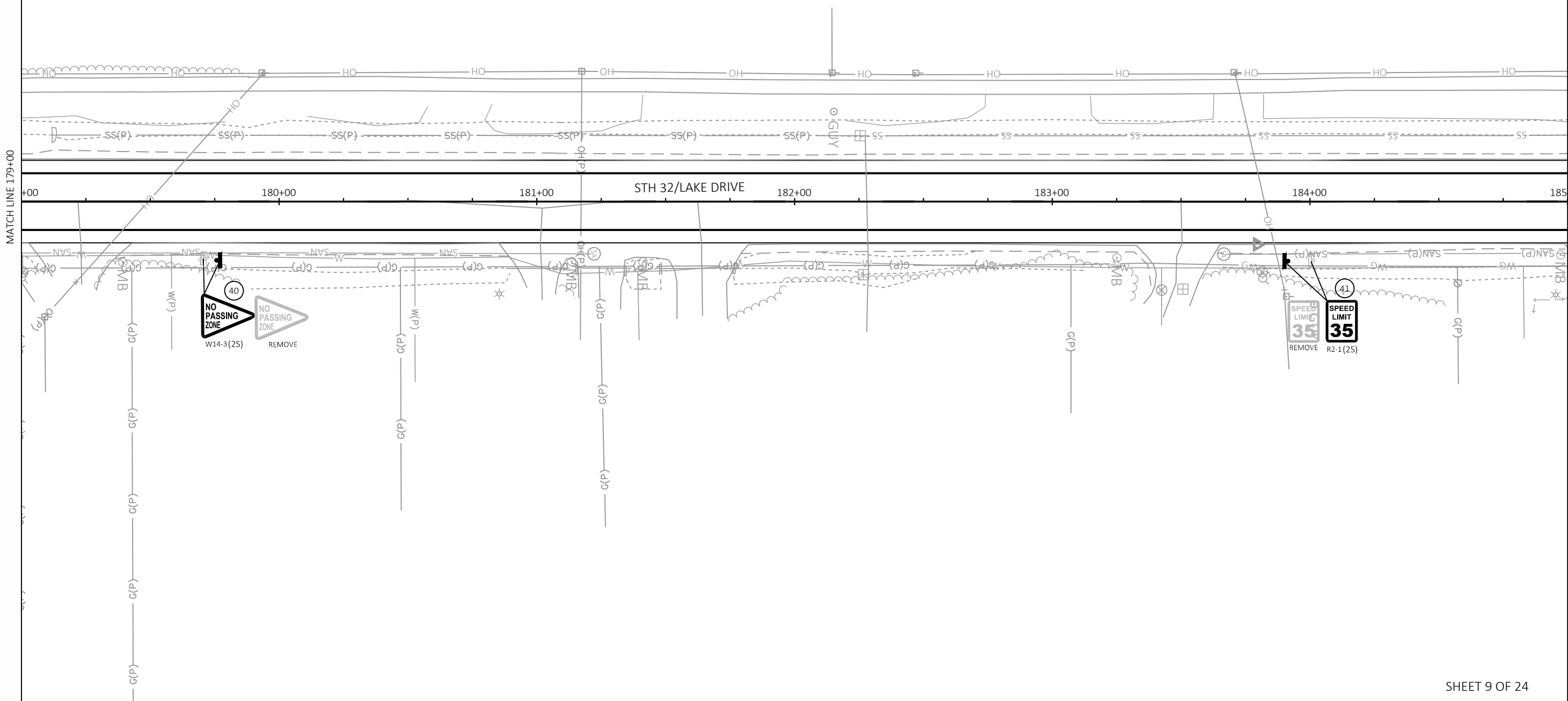
188

E

LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE
- YEAR OF SIGN

NOTE:  
LOCATE NO PASSING PENNANTS AT  
START OF NO PASSING ZONES



SHEET 9 OF 24

PROJECT NO: 2225-00-73

HWY: STH 32

COUNTY: MILWAUKEE

PERMANENT SIGNING

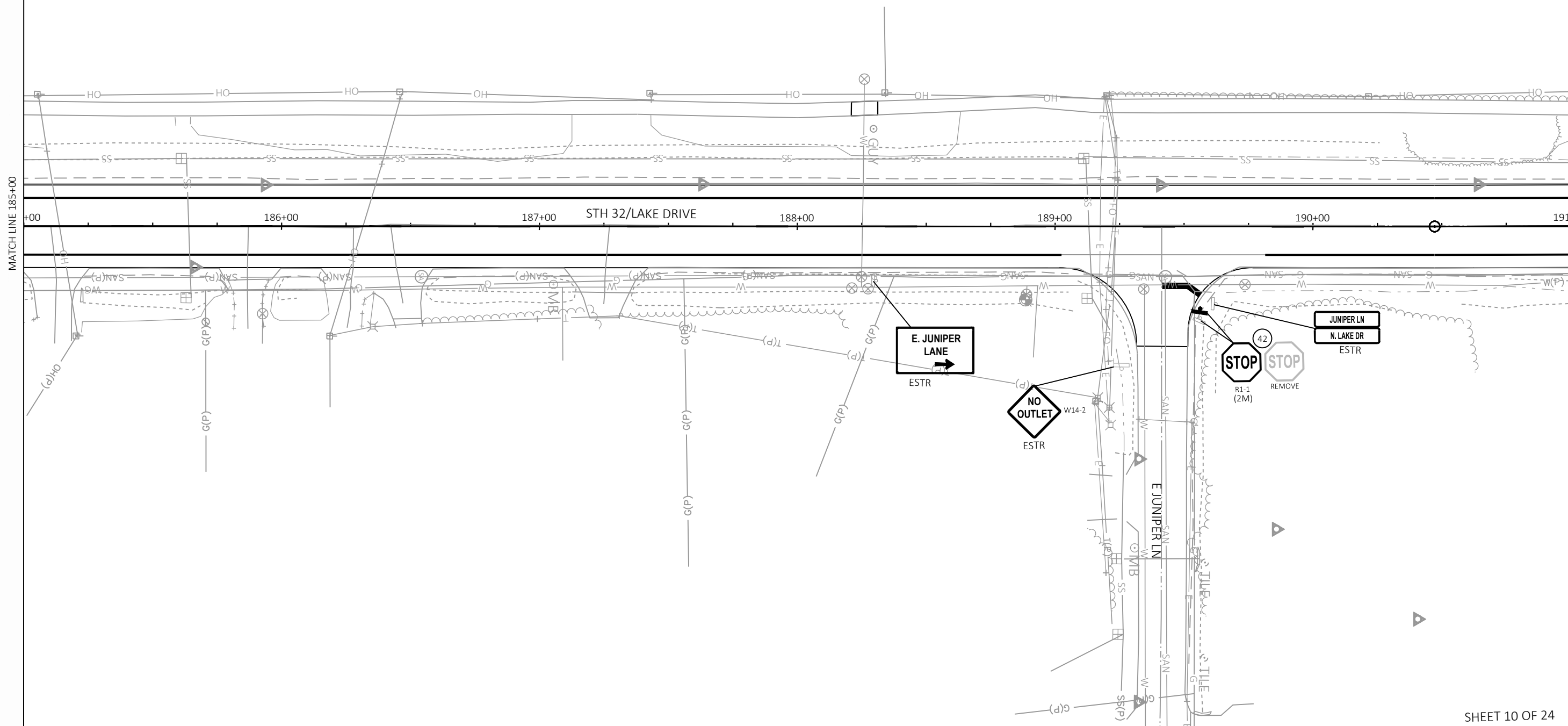
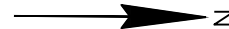
SHEET

189

E

## LEGEND

-  EXISTING SIGN MOUNTED ON POST(S)
-  EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
-  PROPOSED SIGN MOUNTED ON POST(S)
-  PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
-  VARIABLE MESSAGE SIGN
-  EXISTING LIGHT OR SIGNAL POLE
-  SIGN BRIDGE
-  CANTILEVER SIGN BRIDGE
-  DENOTES SIGN NUMBER
-  INDICATES SIGN SIZE
-  YEAR OF SIGN



SHEET 10 OF 24

PROJECT NO: 2225-00-73

HWY: STH 32

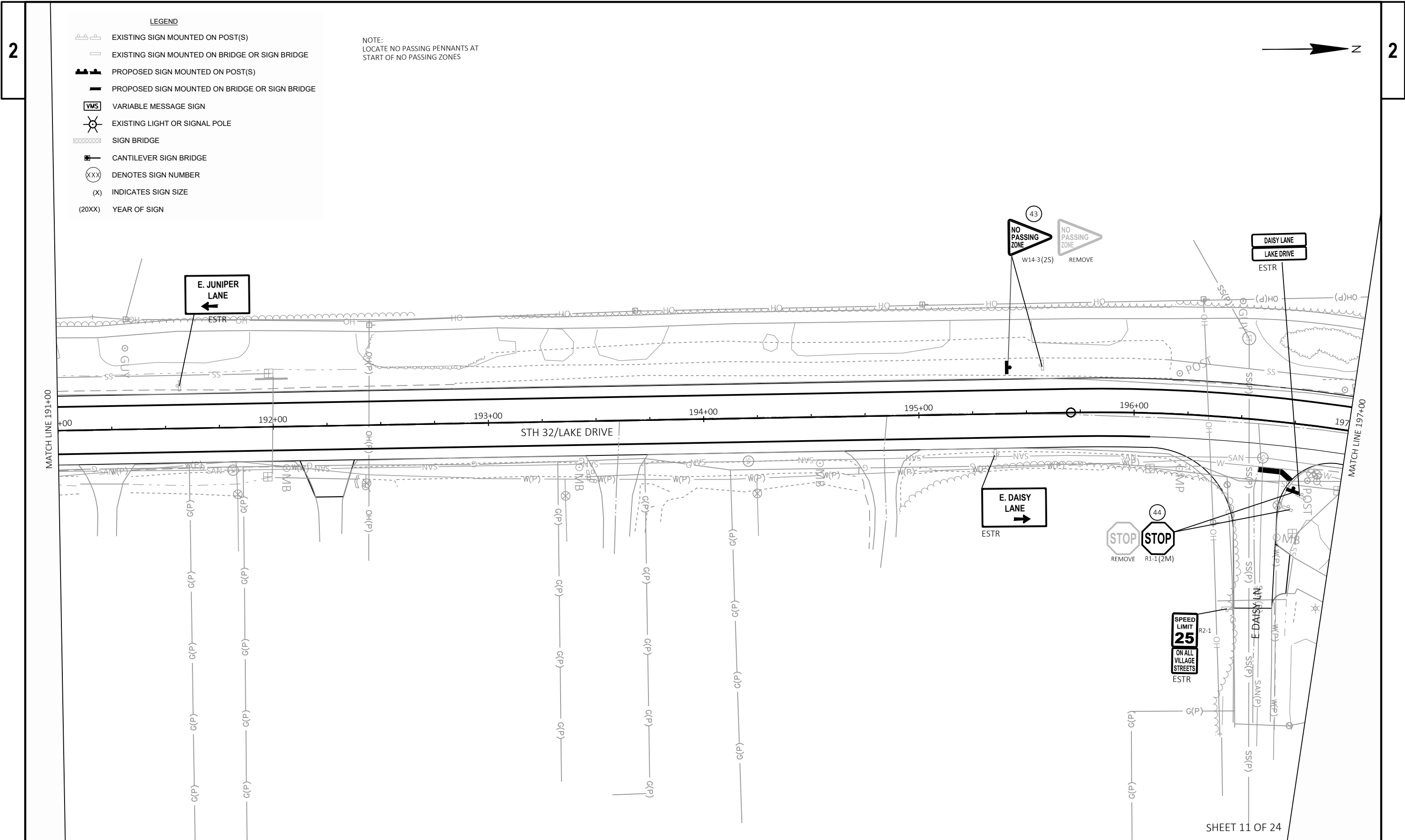
COUNTY: MILWAUKEE

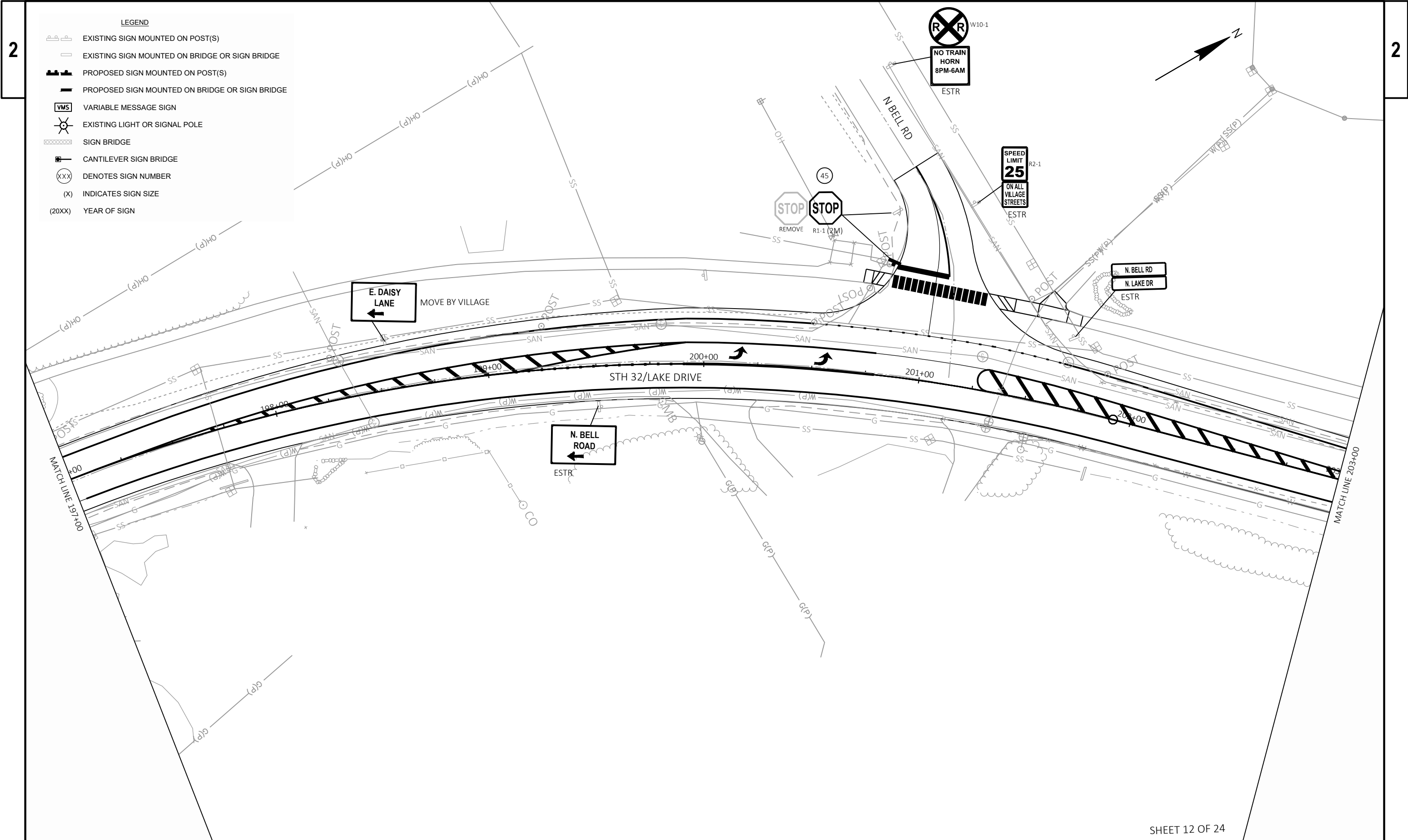
PERMANENT SIGNING

SHEET

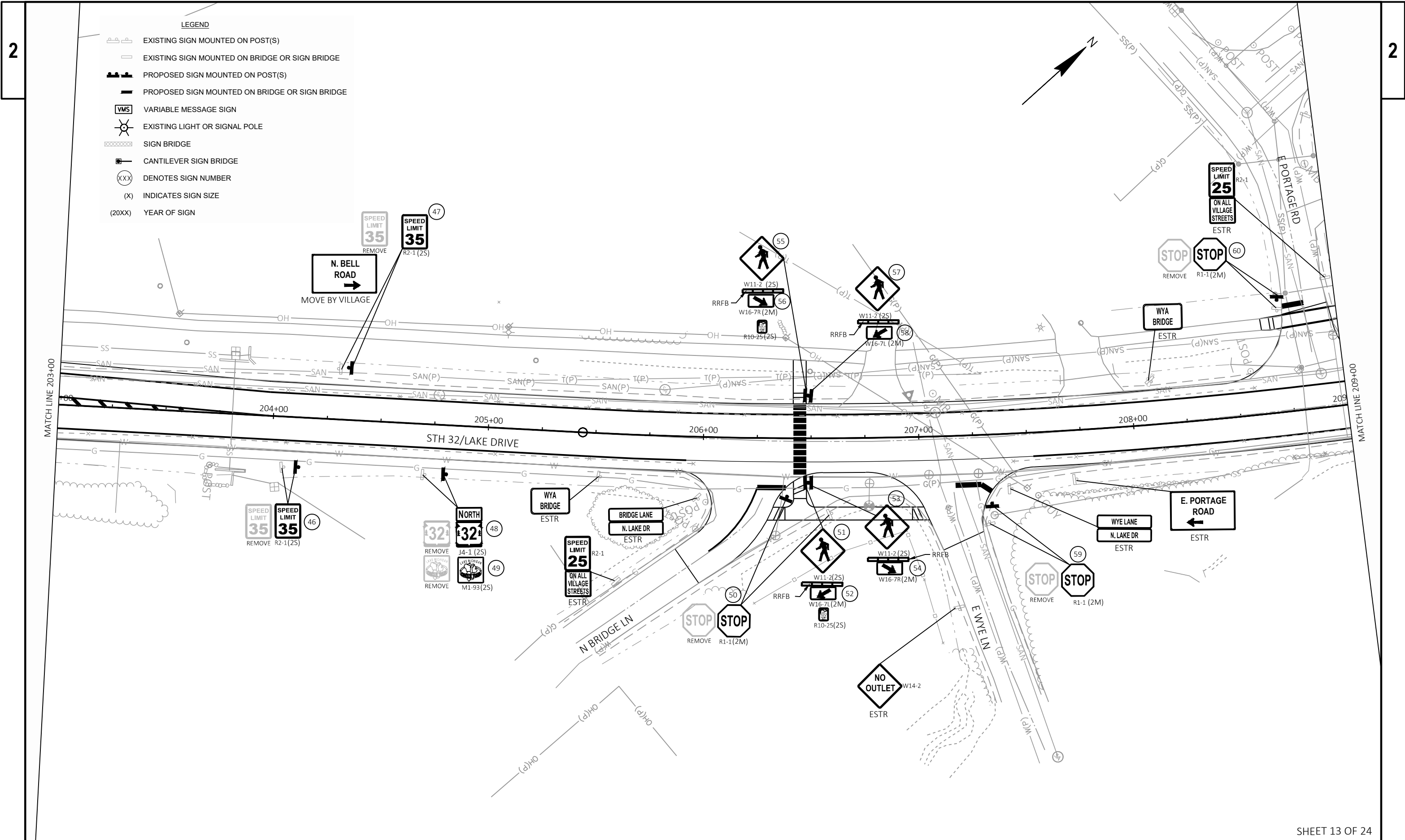
190

E





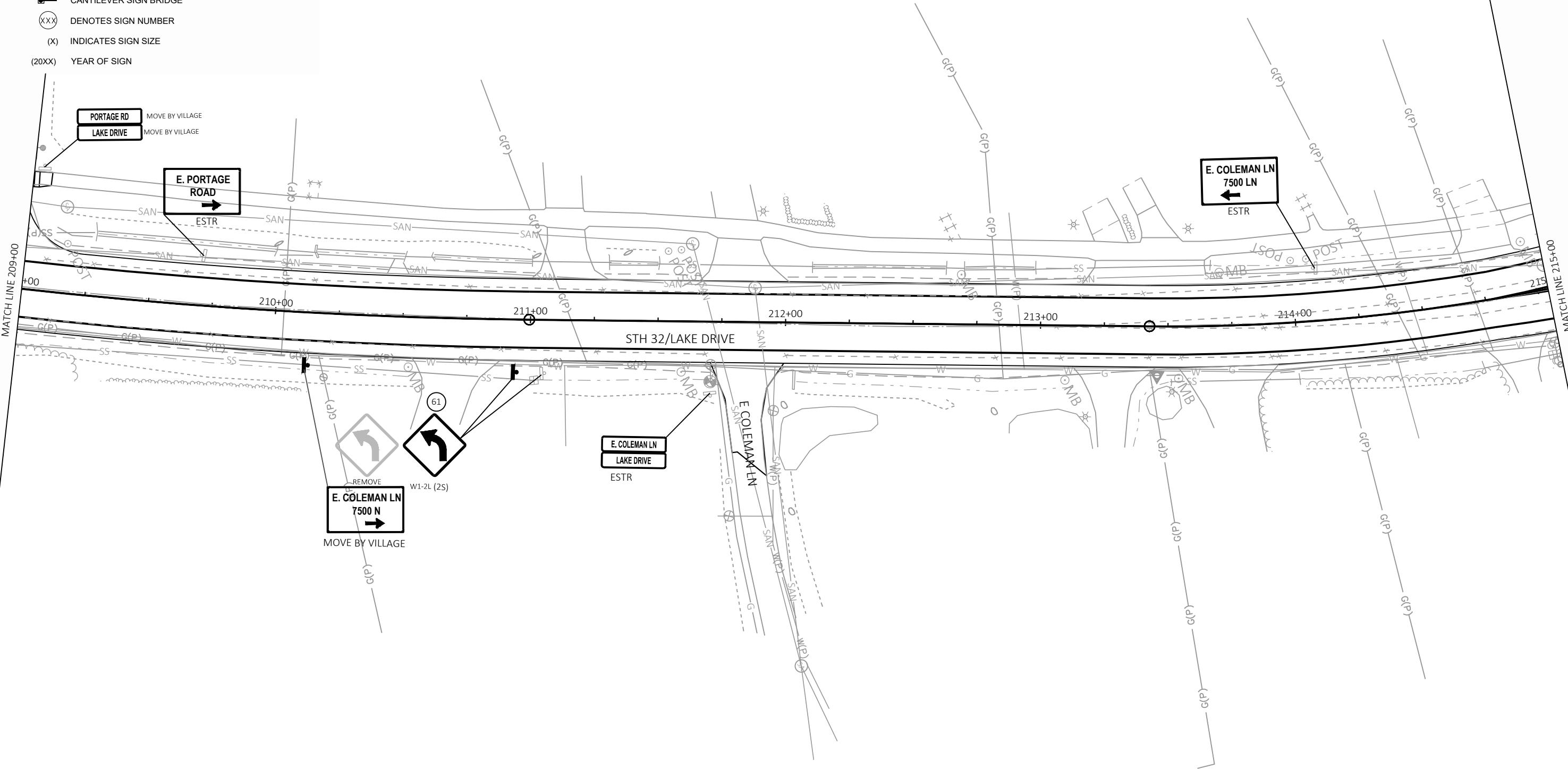






LEGEND

- EXISTING SIGN MOUNTED ON POST(S)
- EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
- VMS VARIABLE MESSAGE SIGN
- EXISTING LIGHT OR SIGNAL POLE
- SIGN BRIDGE
- CANTILEVER SIGN BRIDGE
- DENOTES SIGN NUMBER
- INDICATES SIGN SIZE
- (20XX) YEAR OF SIGN



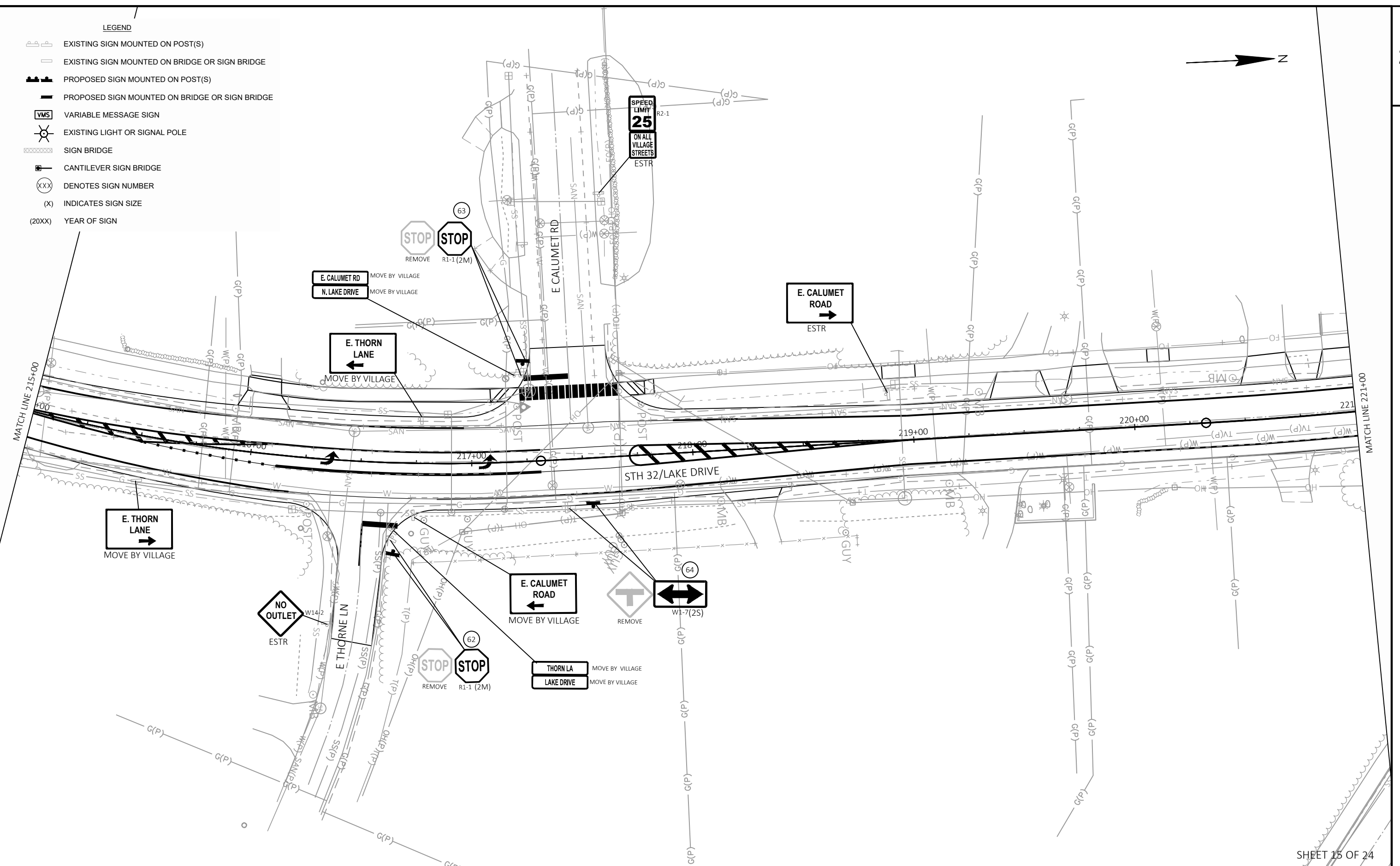
## LEGEND

-  EXISTING SIGN MOUNTED ON POST(S)
-  EXISTING SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
-  PROPOSED SIGN MOUNTED ON POST(S)
-  PROPOSED SIGN MOUNTED ON BRIDGE OR SIGN BRIDGE
-  VARIABLE MESSAGE SIGN
-  EXISTING LIGHT OR SIGNAL POLE
-  SIGN BRIDGE
-  CANTILEVER SIGN BRIDGE
-  DENOTES SIGN NUMBER
-  INDICATES SIGN SIZE
-  YEAR OF SIGN

MATCH LINE 215+00

MATCH LINE 221+00

N



SHEET 15 OF 24

PROJECT NO: 2225-00-73

HWY: STH 32

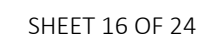
COUNTY: MILWAUKEE

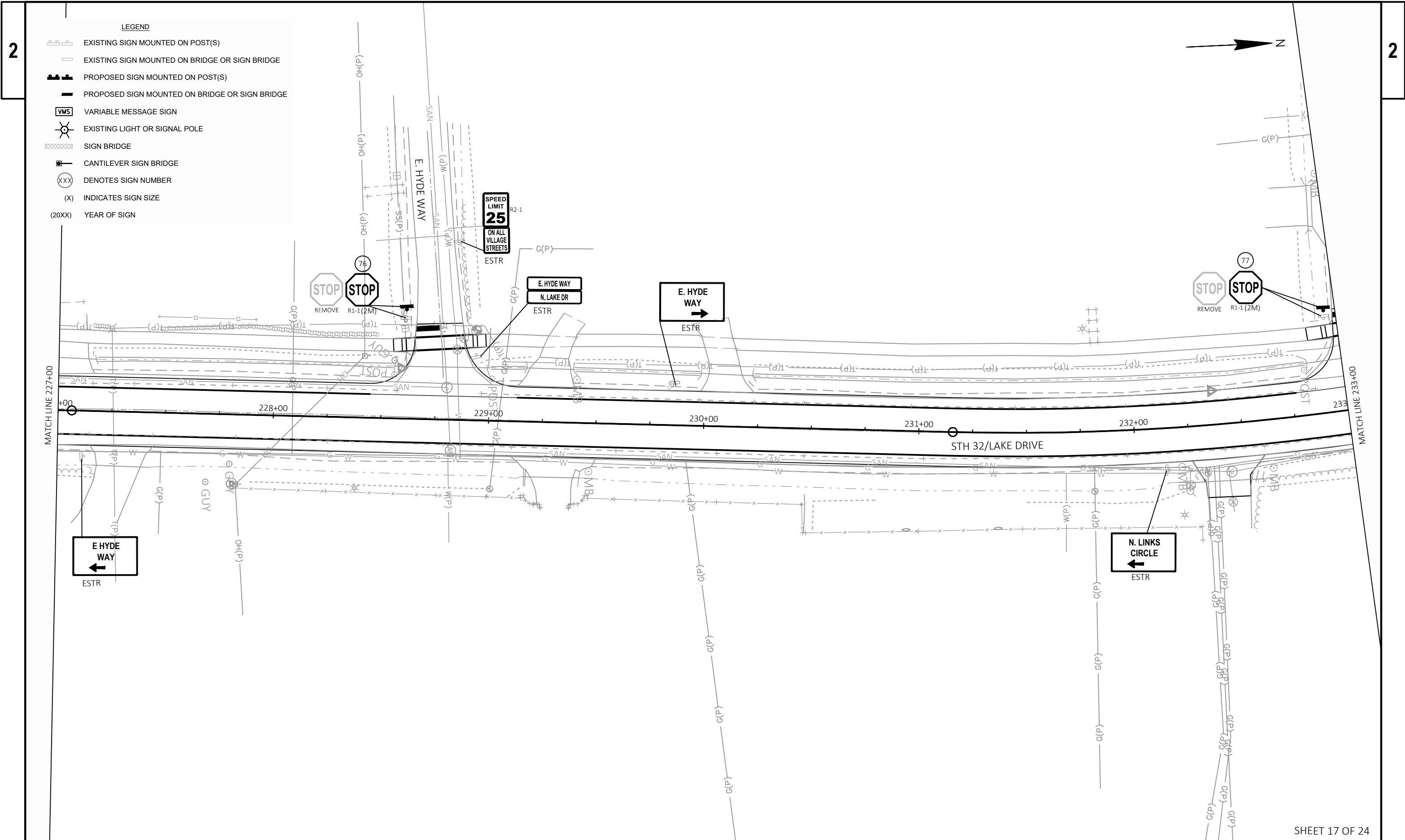
PERMANENT SIGNING

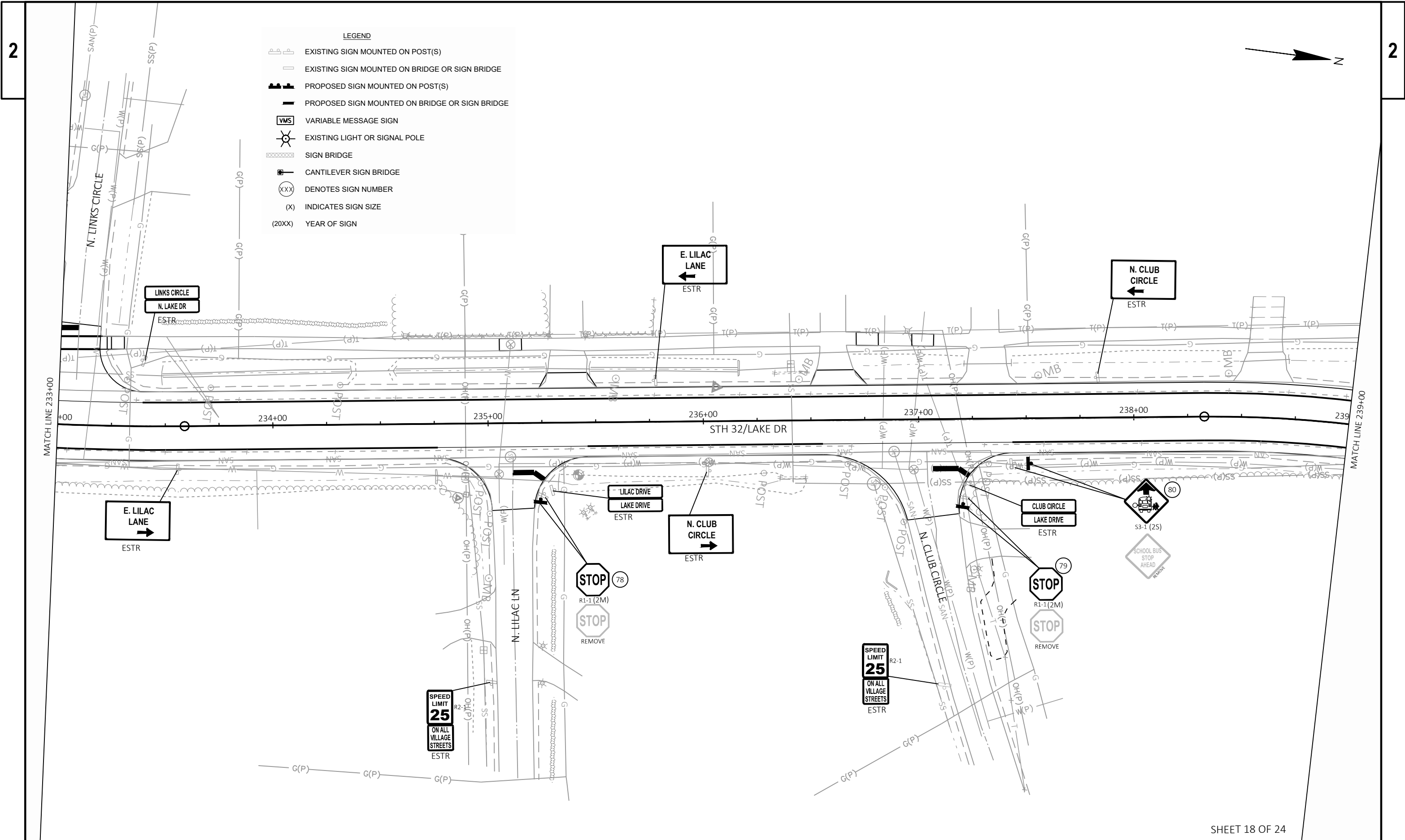
SHEET

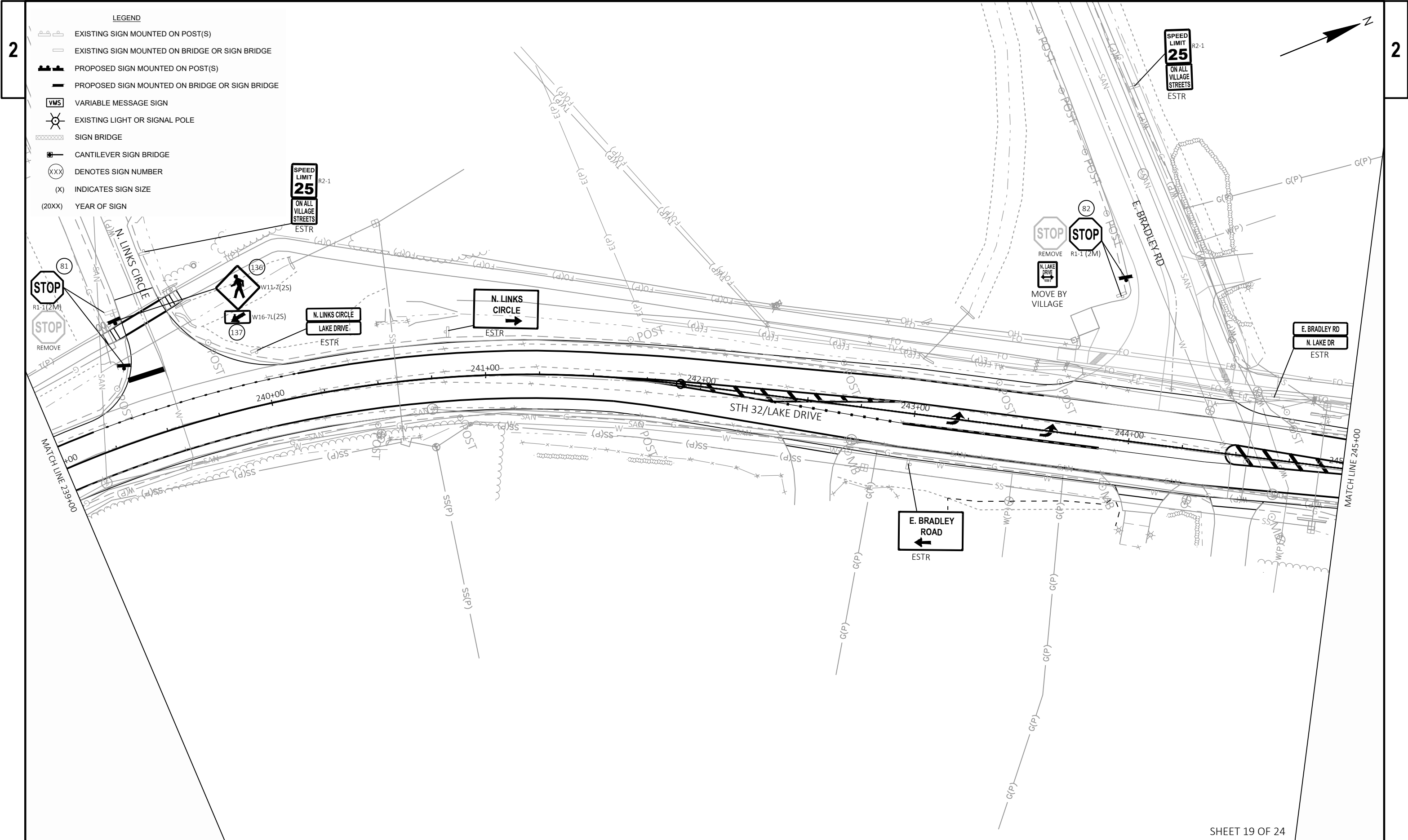
195

E

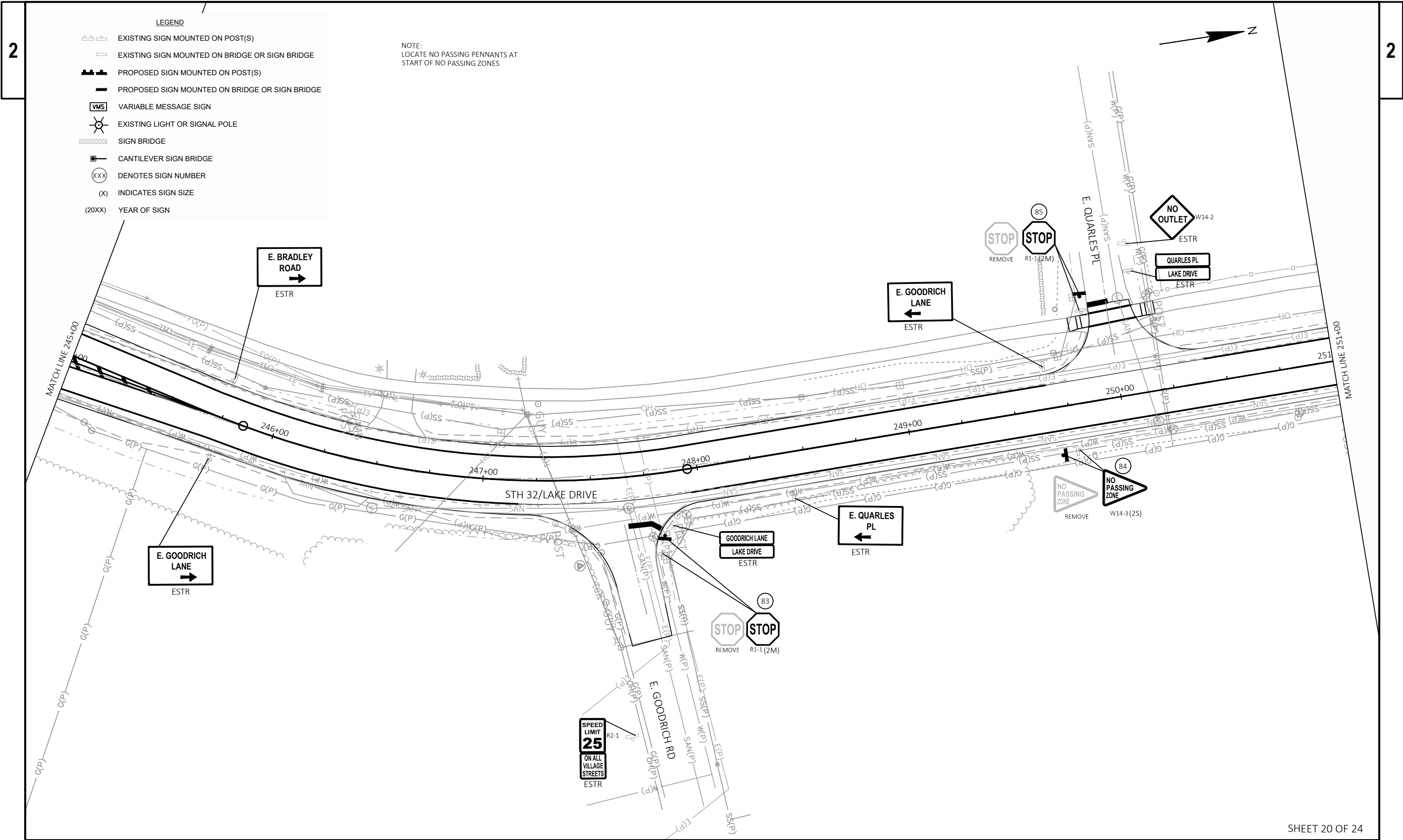






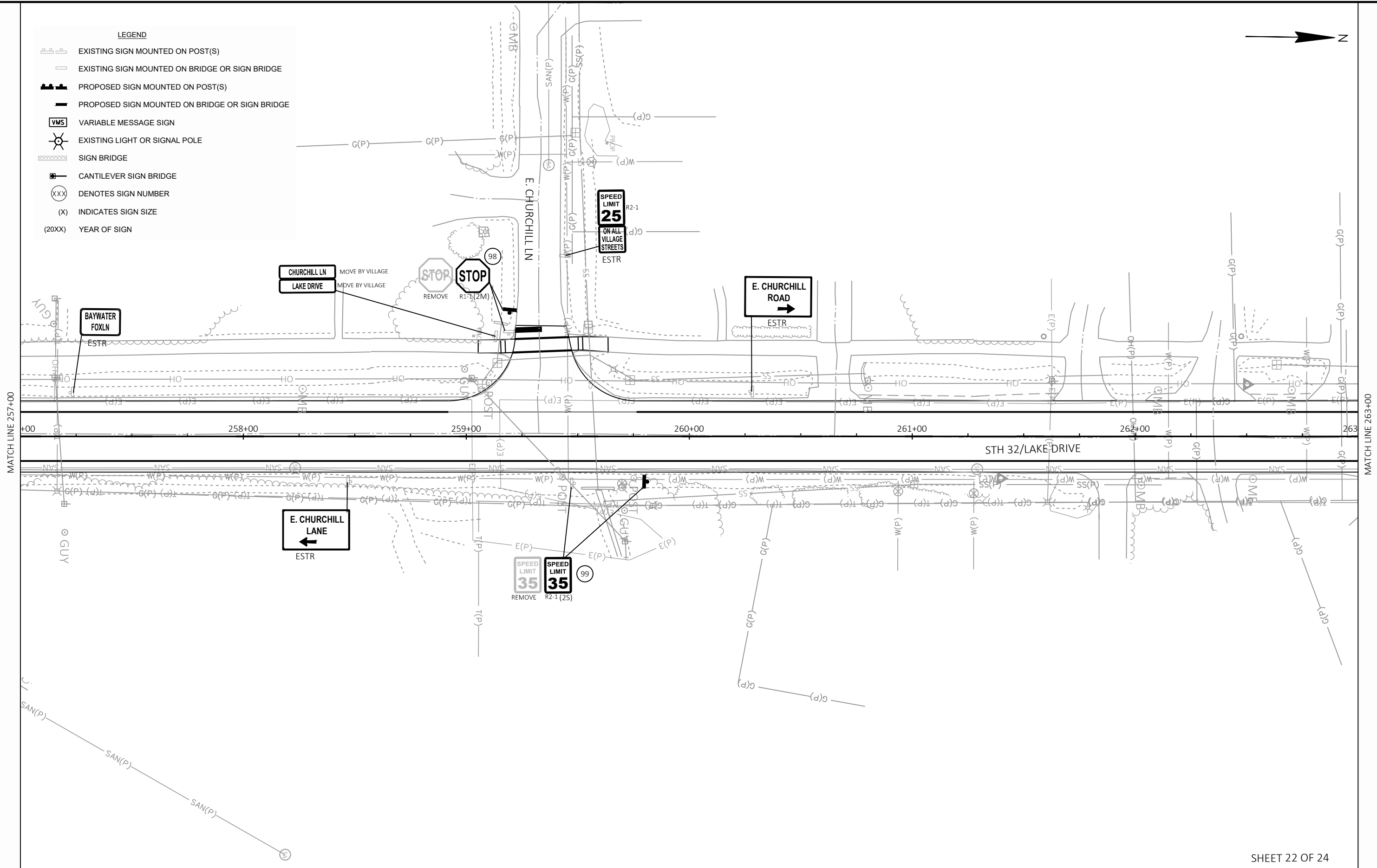






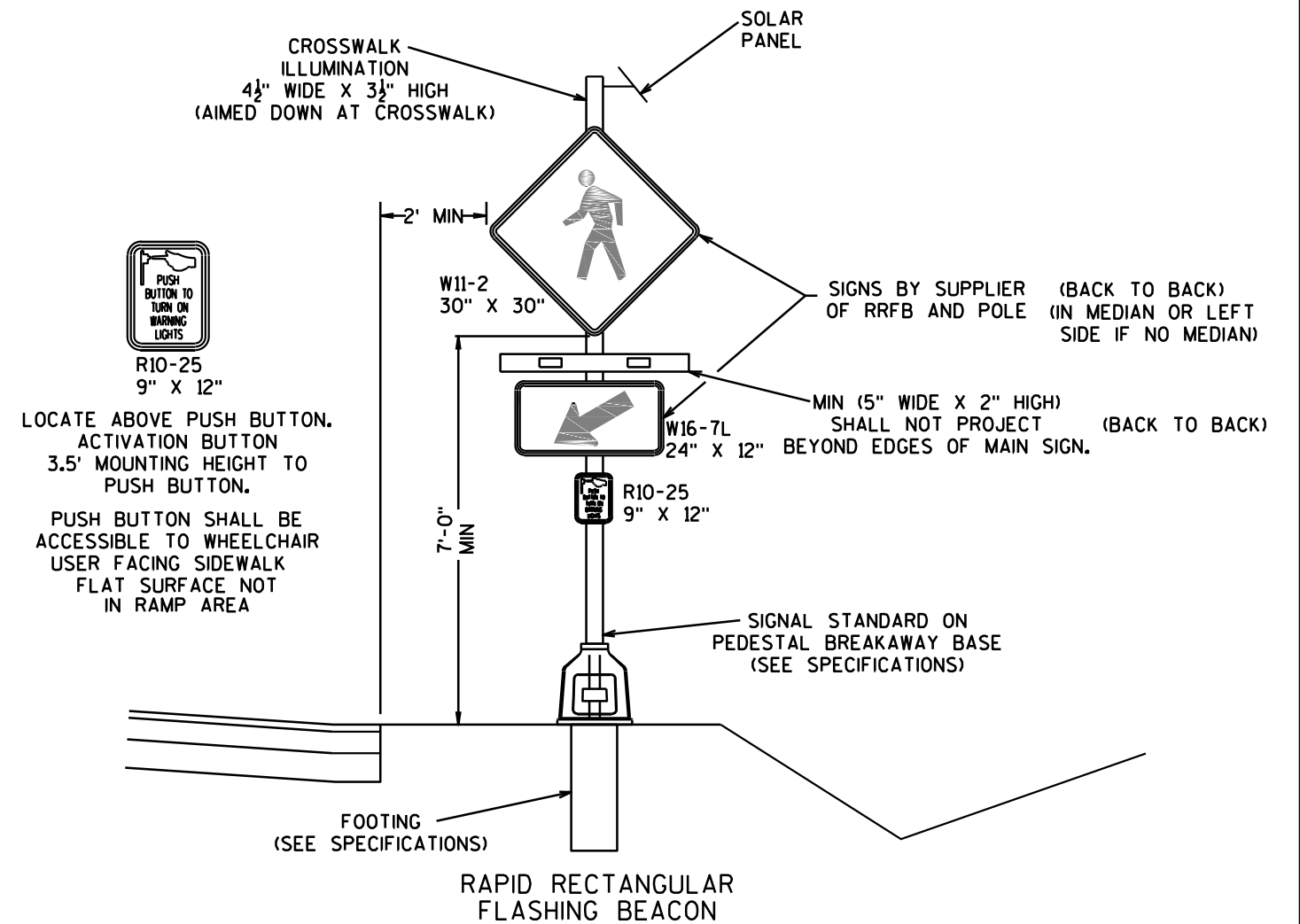
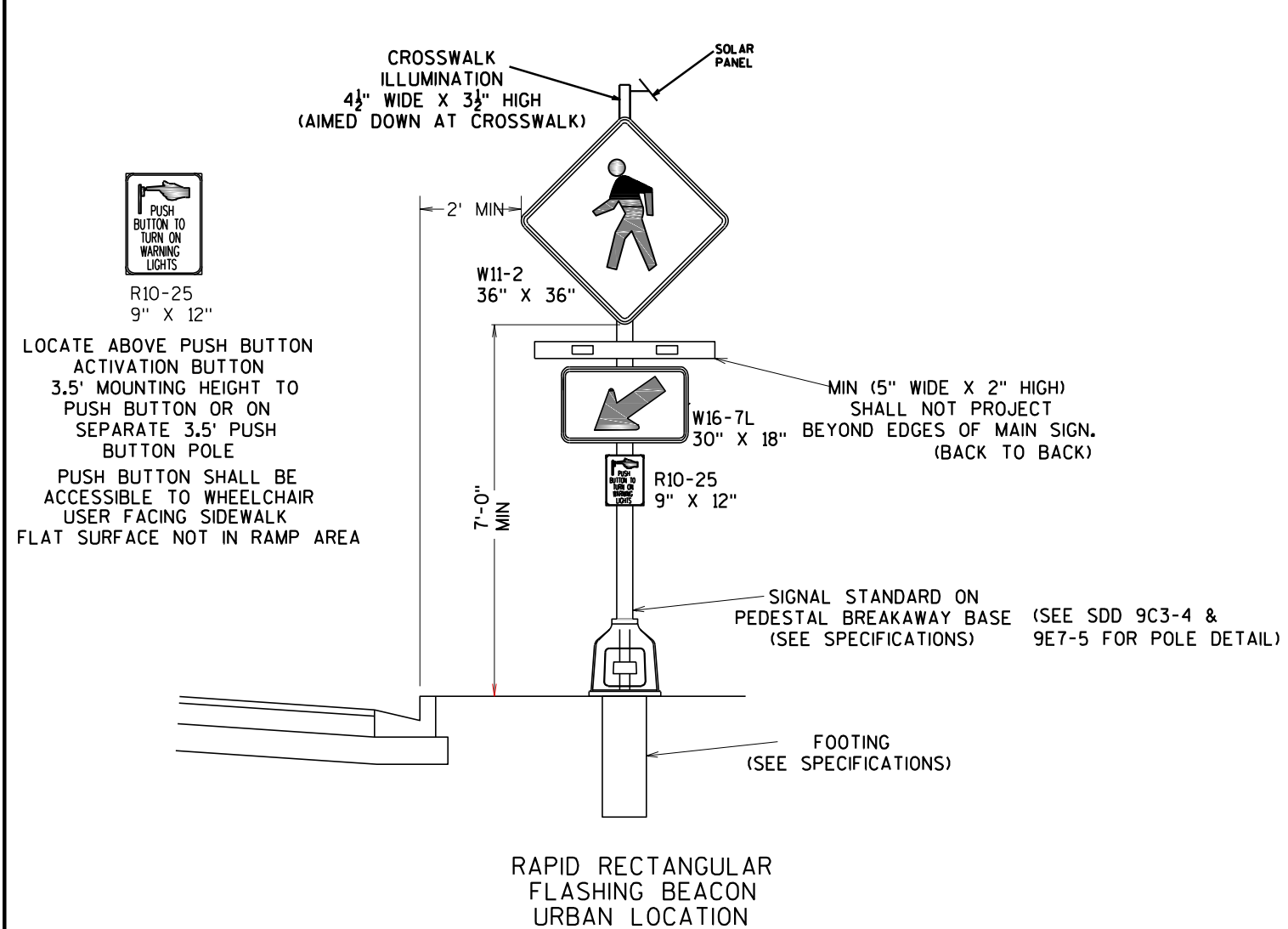






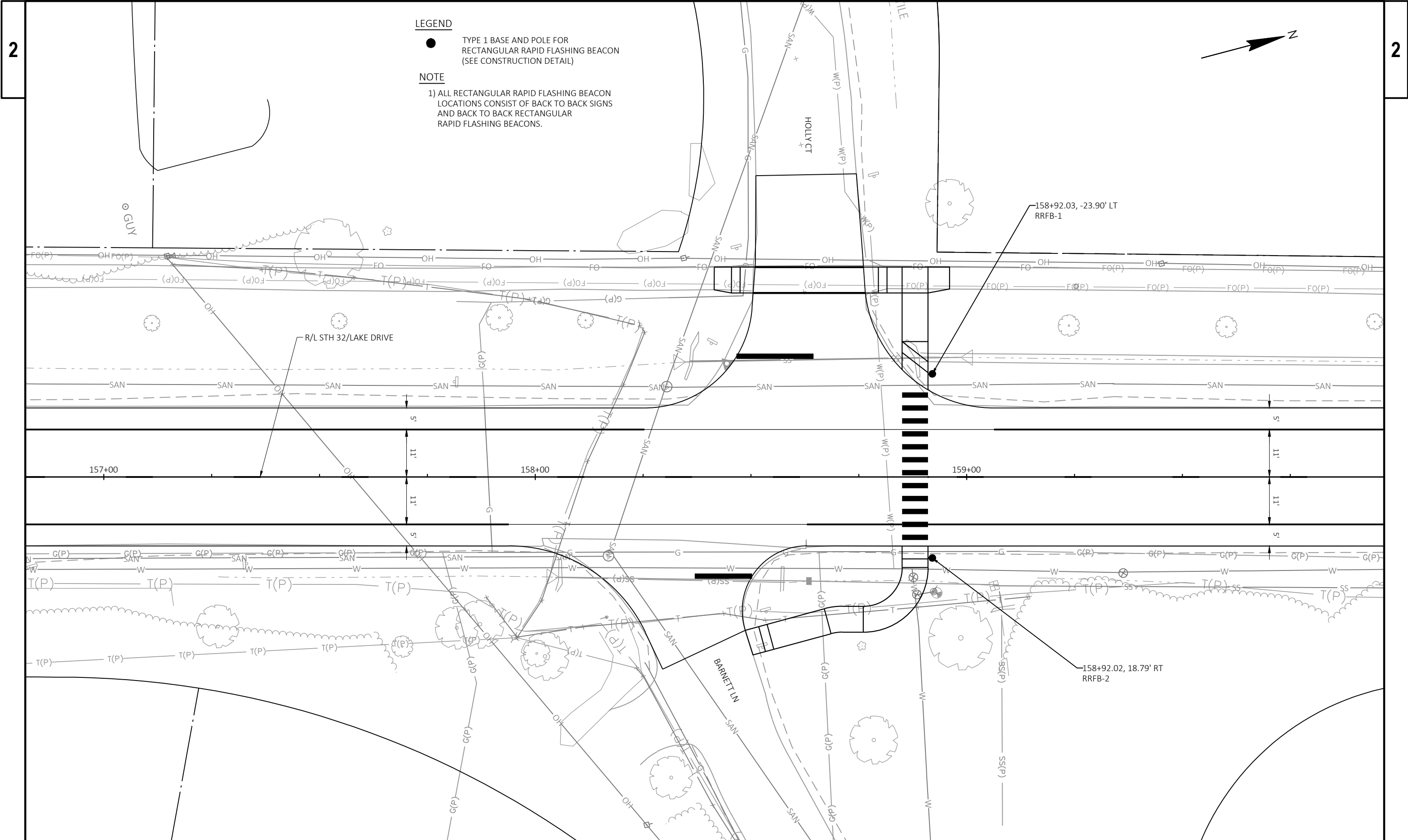






### RECTANGULAR RAPID FLASHING BEACON DETAIL

SEE RECTANGULAR RAPID FLASHING BEACON PLANS FOR LOCATIONS  
NTS



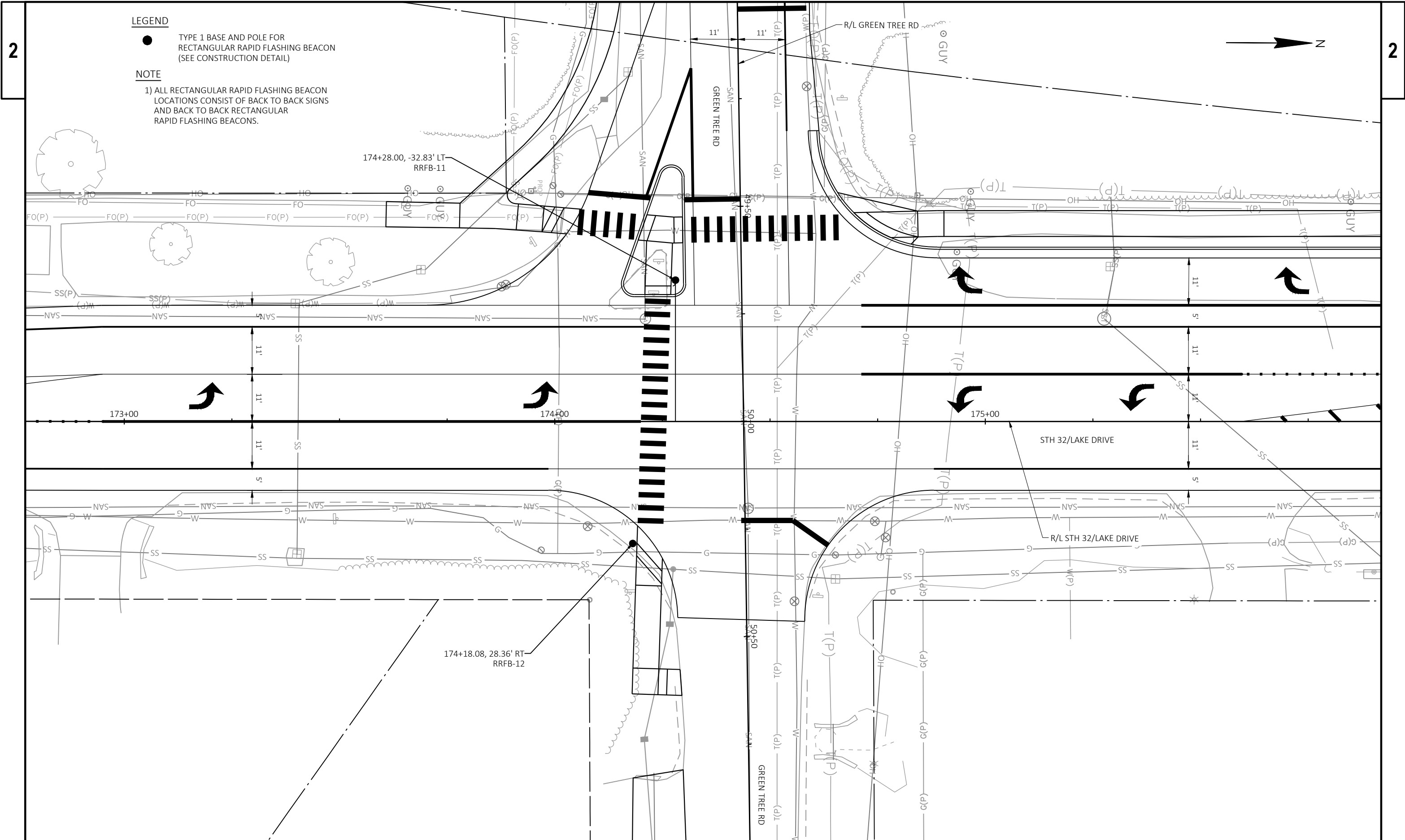
**LEGEND**

● TYPE 1 BASE AND POLE FOR RECTANGULAR RAPID FLASHING BEACON (SEE CONSTRUCTION DETAIL)

**NOTE**

1) ALL RECTANGULAR RAPID FLASHING BEACON LOCATIONS CONSIST OF BACK TO BACK SIGNS AND BACK TO BACK RECTANGULAR RAPID FLASHING BEACONS.





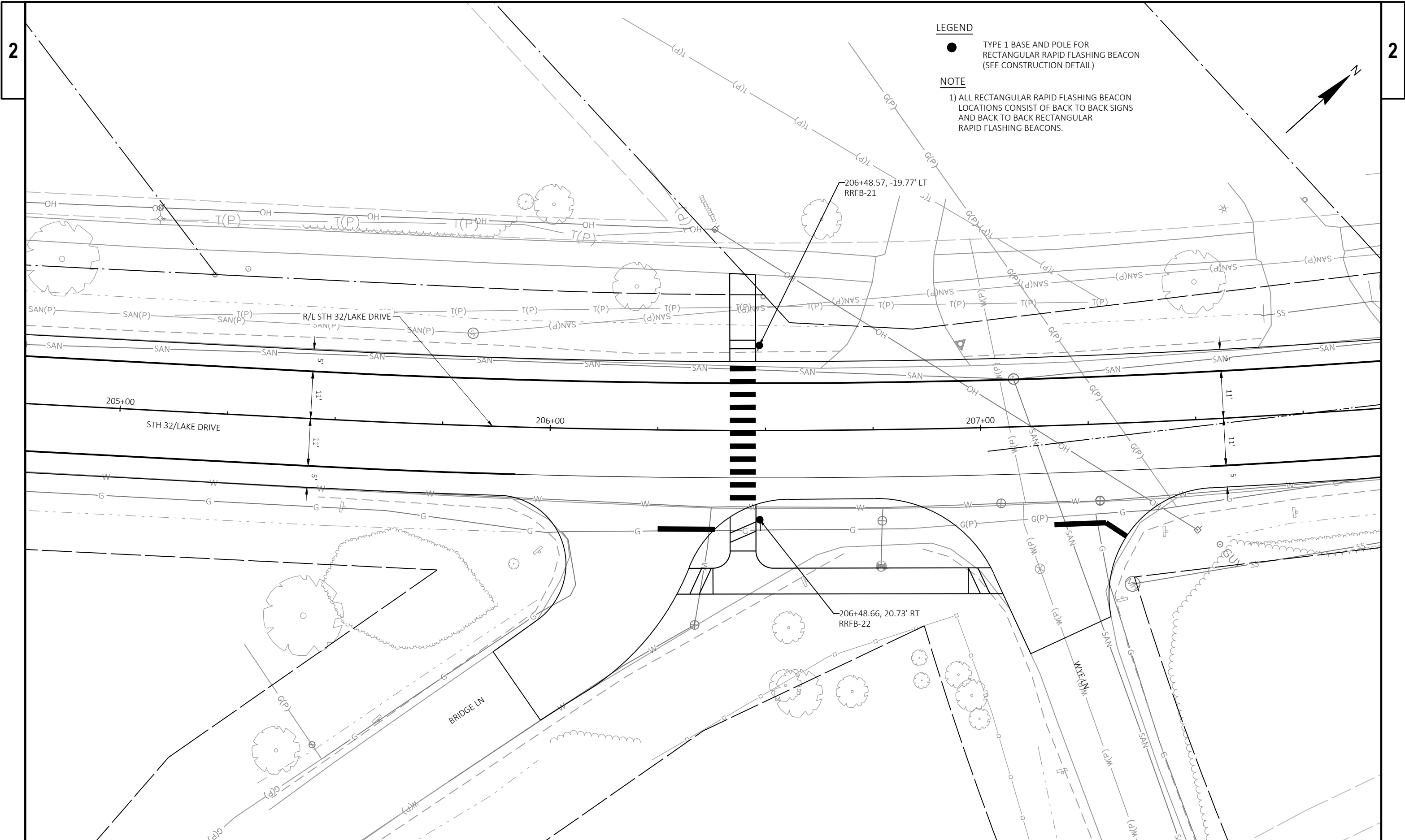
**LEGEND**

● TYPE 1 BASE AND POLE FOR RECTANGULAR RAPID FLASHING BEACON (SEE CONSTRUCTION DETAIL)

**NOTE**

1) ALL RECTANGULAR RAPID FLASHING BEACON LOCATIONS CONSIST OF BACK TO BACK SIGNS AND BACK TO BACK RECTANGULAR RAPID FLASHING BEACONS.





LEGEND

● TYPE 1 BASE AND POLE FOR  
RECTANGULAR RAPID FLASHING BEACON  
(SEE CONSTRUCTION DETAIL)

NOTE

1) ALL RECTANGULAR RAPID FLASHING BEACON  
LOCATIONS CONSIST OF BACK TO BACK SIGNS  
AND BACK TO BACK RECTANGULAR  
RAPID FLASHING BEACONS.

PROJECT NO: 2225-00-74

HWY: STH 32

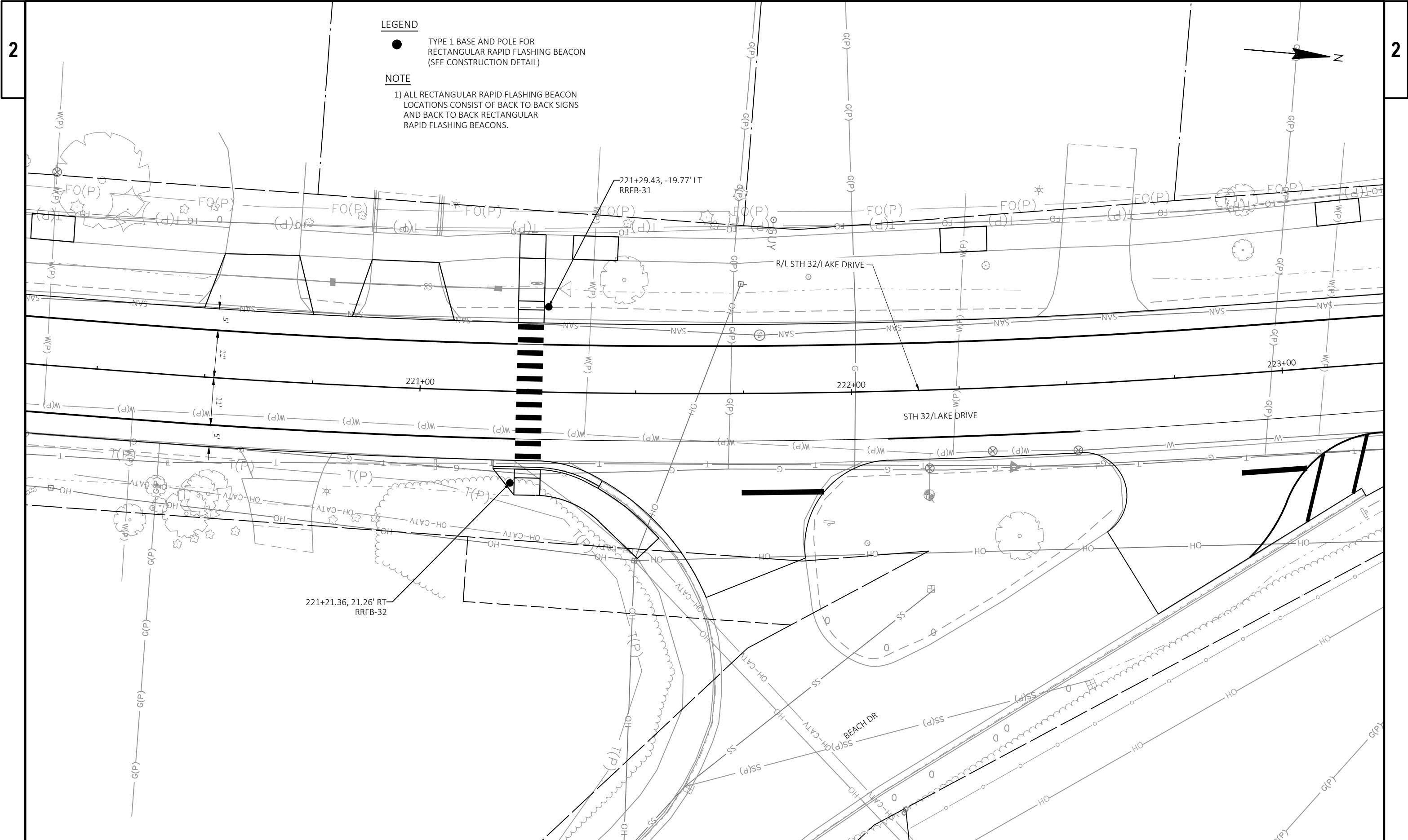
COUNTY: MILWAUKEE

RECTANGULAR RAPID FLASHING BEACONS

SHEET

208

E



LEGEND

- TYPE 1 BASE AND POLE FOR RECTANGULAR RAPID FLASHING BEACON (SEE CONSTRUCTION DETAIL)

NOTE

1) ALL RECTANGULAR RAPID FLASHING BEACON LOCATIONS CONSIST OF BACK TO BACK SIGNS AND BACK TO BACK RECTANGULAR RAPID FLASHING BEACONS.

PROJECT NO: 2225-00-74

HWY: STH 32

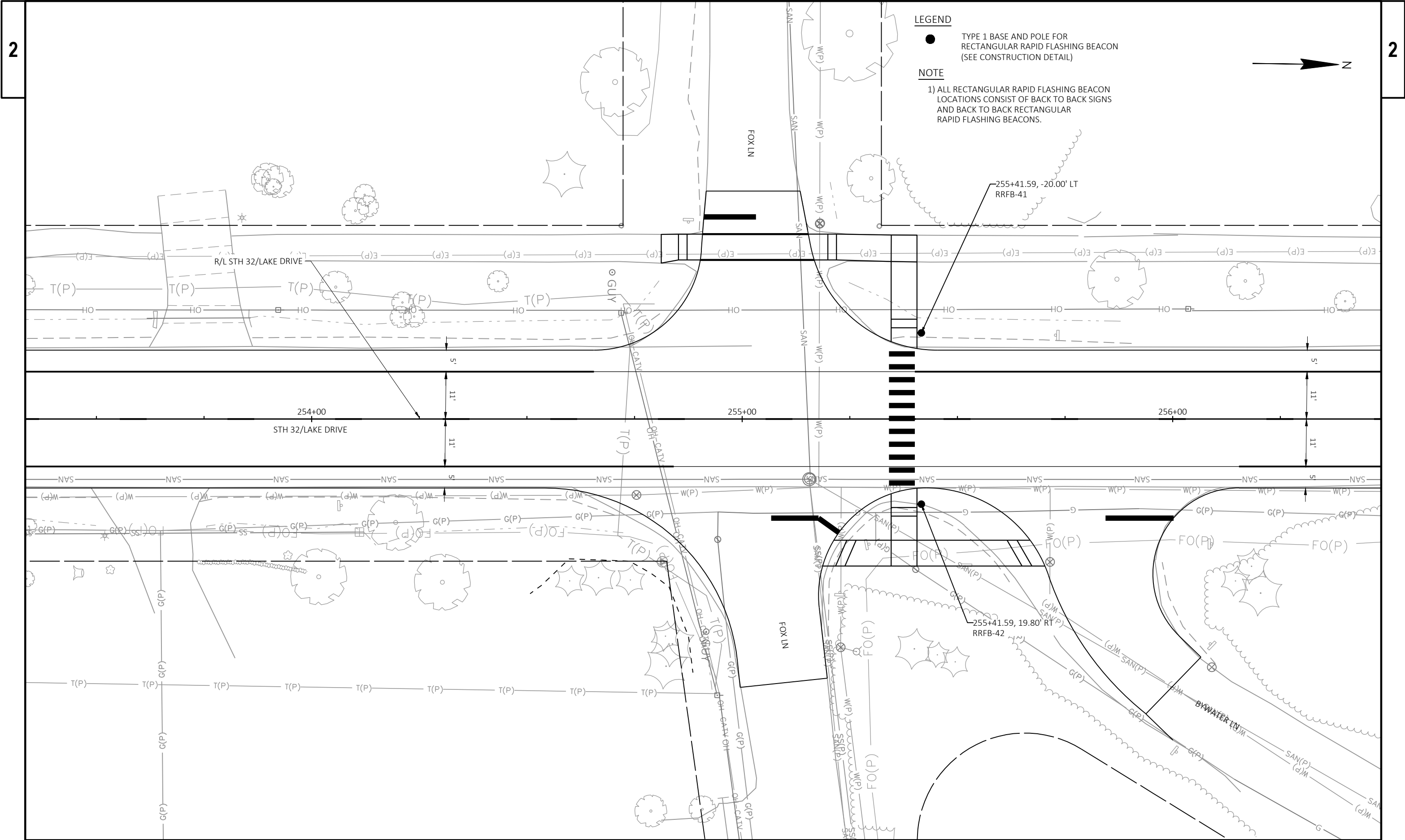
COUNTY: MILWAUKEE

RECTANGULAR RAPID FLASHING BEACONS

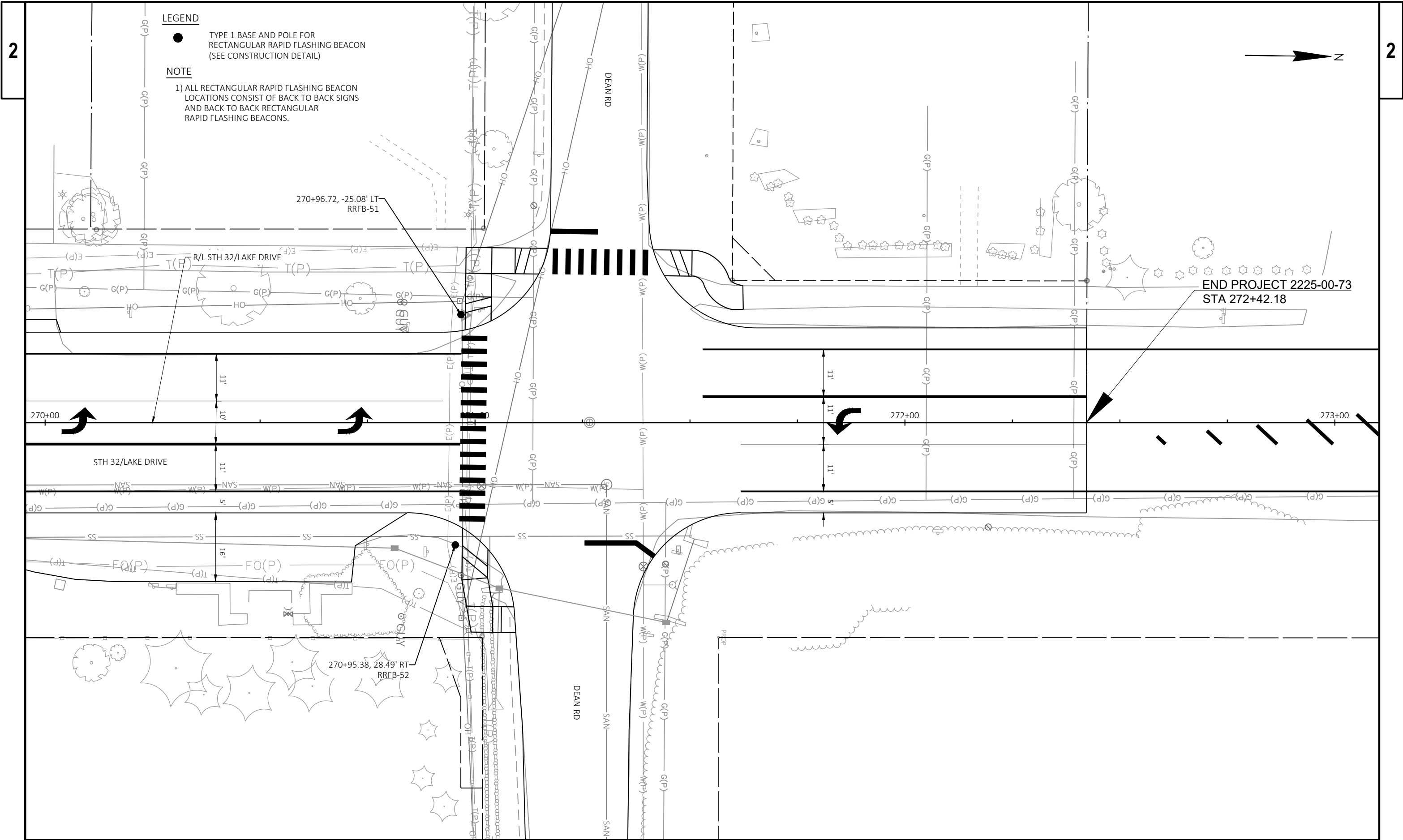
SHEET

209

E



|                        |             |                   |                                    |           |   |
|------------------------|-------------|-------------------|------------------------------------|-----------|---|
| PROJECT NO: 2225-00-74 | HWY: STH 32 | COUNTY: MILWAUKEE | RECTANGULAR RAPID FLASHING BEACONS | SHEET 210 | E |
|------------------------|-------------|-------------------|------------------------------------|-----------|---|

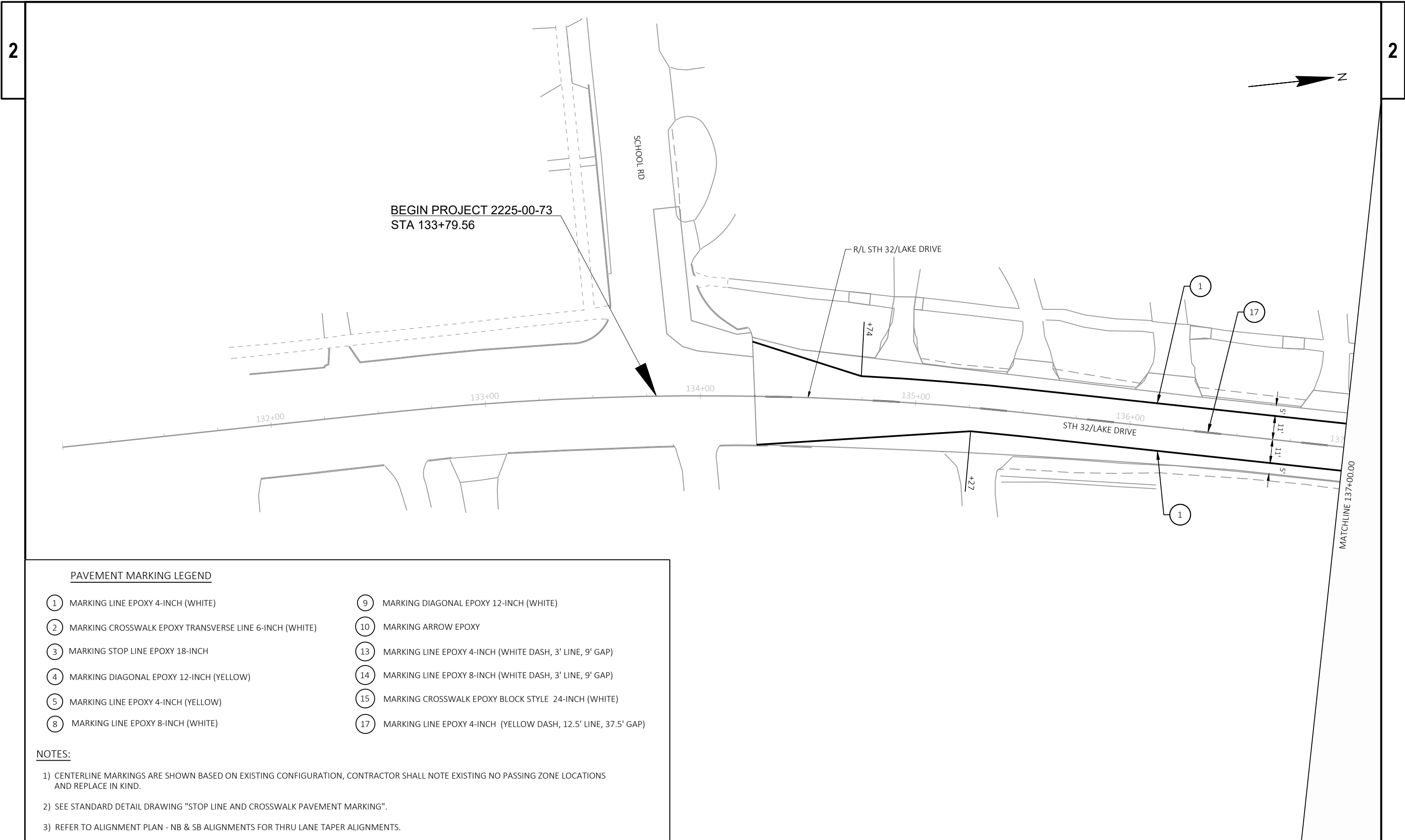


LEGEND

- TYPE 1 BASE AND POLE FOR RECTANGULAR RAPID FLASHING BEACON (SEE CONSTRUCTION DETAIL)

NOTE

- 1) ALL RECTANGULAR RAPID FLASHING BEACON LOCATIONS CONSIST OF BACK TO BACK SIGNS AND BACK TO BACK RECTANGULAR RAPID FLASHING BEACONS.



PAVEMENT MARKING LEGEND

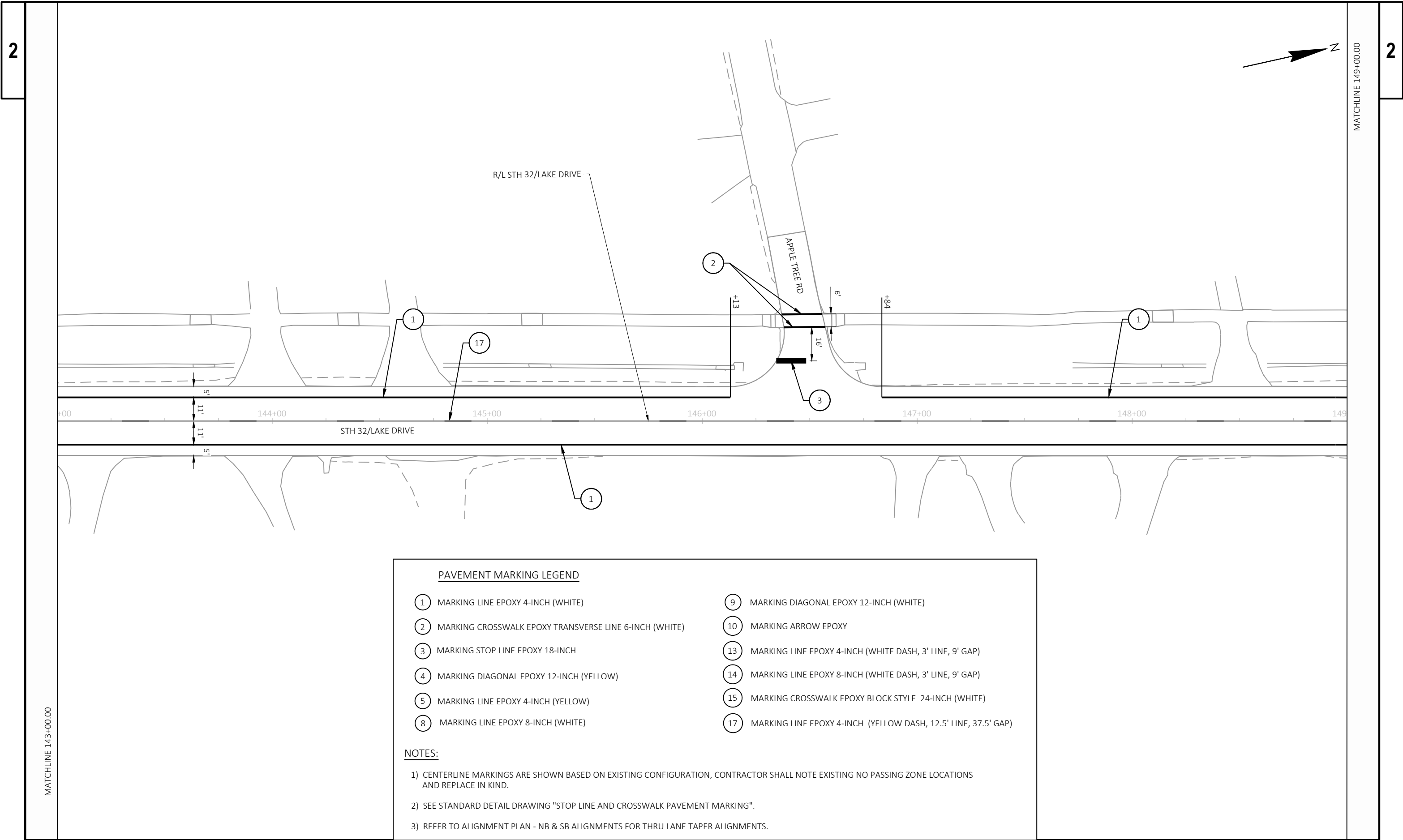
- |                                                            |                                                                     |
|------------------------------------------------------------|---------------------------------------------------------------------|
| (1) MARKING LINE EPOXY 4-INCH (WHITE)                      | (9) MARKING DIAGONAL EPOXY 12-INCH (WHITE)                          |
| (2) MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) | (10) MARKING ARROW EPOXY                                            |
| (3) MARKING STOP LINE EPOXY 18-INCH                        | (13) MARKING LINE EPOXY 4-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| (4) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)                | (14) MARKING LINE EPOXY 8-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| (5) MARKING LINE EPOXY 4-INCH (YELLOW)                     | (15) MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH (WHITE)            |
| (8) MARKING LINE EPOXY 8-INCH (WHITE)                      | (17) MARKING LINE EPOXY 4-INCH (YELLOW DASH, 12.5' LINE, 37.5' GAP) |

NOTES:

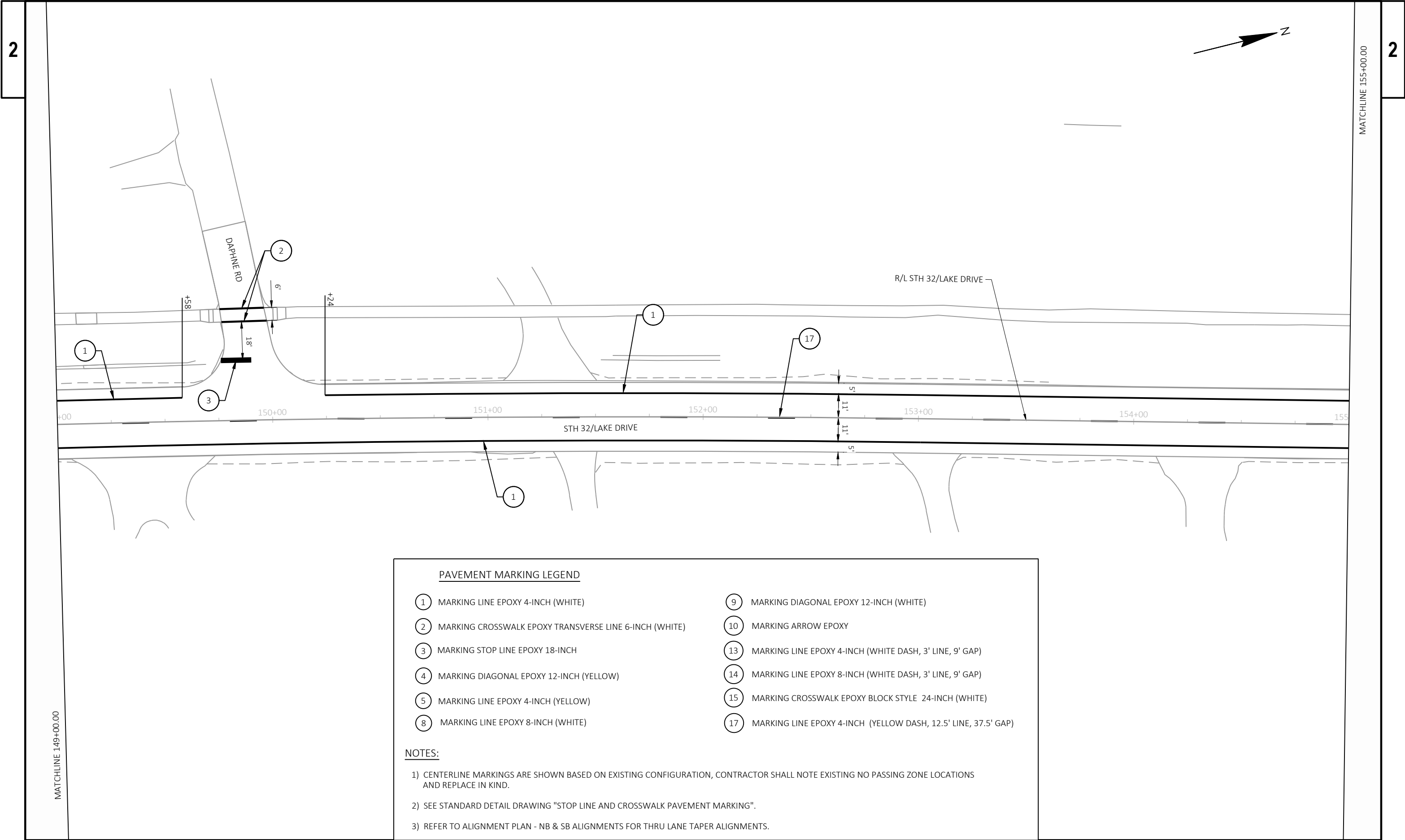
- 1) CENTERLINE MARKINGS ARE SHOWN BASED ON EXISTING CONFIGURATION, CONTRACTOR SHALL NOTE EXISTING NO PASSING ZONE LOCATIONS AND REPLACE IN KIND.
- 2) SEE STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".
- 3) REFER TO ALIGNMENT PLAN - NB & SB ALIGNMENTS FOR THRU LANE TAPER ALIGNMENTS.











PAVEMENT MARKING LEGEND

- |                                                          |                                                                  |
|----------------------------------------------------------|------------------------------------------------------------------|
| ① MARKING LINE EPOXY 4-INCH (WHITE)                      | ⑨ MARKING DIAGONAL EPOXY 12-INCH (WHITE)                         |
| ② MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) | ⑩ MARKING ARROW EPOXY                                            |
| ③ MARKING STOP LINE EPOXY 18-INCH                        | ⑬ MARKING LINE EPOXY 4-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| ④ MARKING DIAGONAL EPOXY 12-INCH (YELLOW)                | ⑭ MARKING LINE EPOXY 8-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| ⑤ MARKING LINE EPOXY 4-INCH (YELLOW)                     | ⑮ MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH (WHITE)            |
| ⑧ MARKING LINE EPOXY 8-INCH (WHITE)                      | ⑰ MARKING LINE EPOXY 4-INCH (YELLOW DASH, 12.5' LINE, 37.5' GAP) |

NOTES:

- 1) CENTERLINE MARKINGS ARE SHOWN BASED ON EXISTING CONFIGURATION, CONTRACTOR SHALL NOTE EXISTING NO PASSING ZONE LOCATIONS AND REPLACE IN KIND.
- 2) SEE STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".
- 3) REFER TO ALIGNMENT PLAN - NB & SB ALIGNMENTS FOR THRU LANE TAPER ALIGNMENTS.

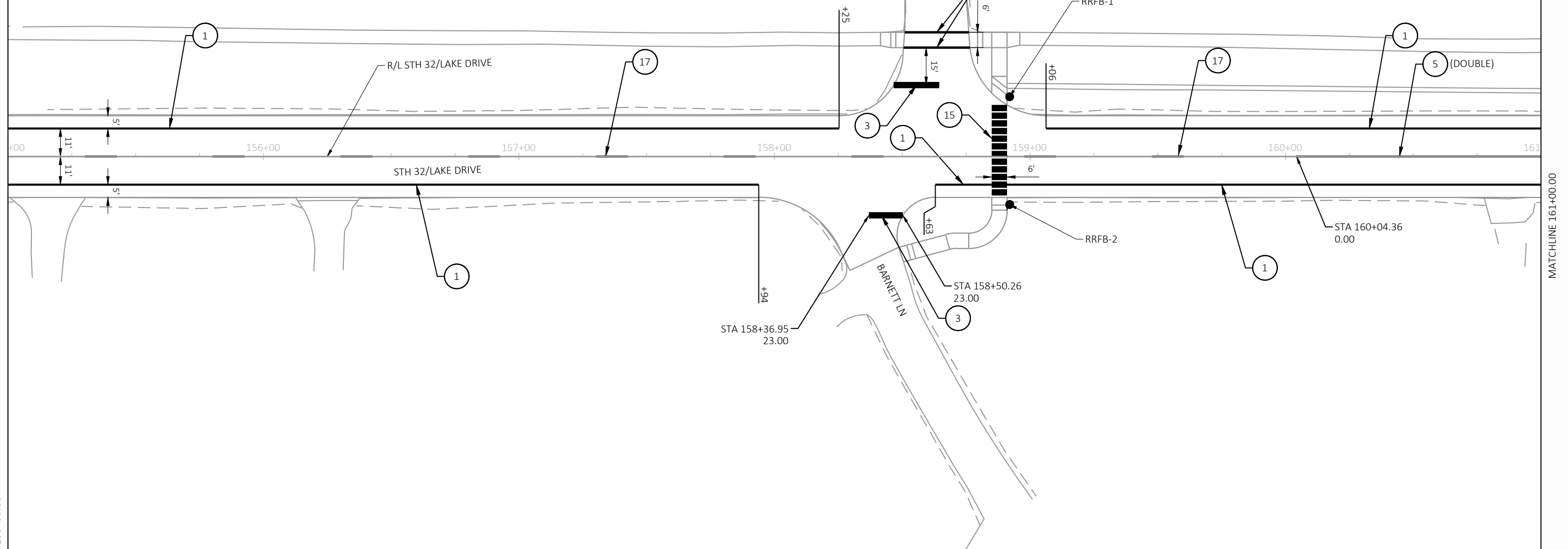
2

## PAVEMENT MARKING LEGEND

- |                                                          |                                                                   |
|----------------------------------------------------------|-------------------------------------------------------------------|
| 1 MARKING LINE EPOXY 4-INCH (WHITE)                      | 9 MARKING DIAGONAL EPOXY 12-INCH (WHITE)                          |
| 2 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) | 10 MARKING ARROW EPOXY                                            |
| 3 MARKING STOP LINE EPOXY 18-INCH                        | 13 MARKING LINE EPOXY 4-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| 4 MARKING DIAGONAL EPOXY 12-INCH (YELLOW)                | 14 MARKING LINE EPOXY 8-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| 5 MARKING LINE EPOXY 4-INCH (YELLOW)                     | 15 MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH (WHITE)            |
| 8 MARKING LINE EPOXY 8-INCH (WHITE)                      | 17 MARKING LINE EPOXY 4-INCH (YELLOW DASH, 12.5' LINE, 37.5' GAP) |

NOTES:

- 1) CENTERLINE MARKINGS ARE SHOWN BASED ON EXISTING CONFIGURATION, CONTRACTOR SHALL NOTE EXISTING NO PASSING ZONE LOCATIONS AND REPLACE IN KIND.
- 2) SEE STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".
- 3) REFER TO ALIGNMENT PLAN - NB & SB ALIGNMENTS FOR THRU LANE TAPER ALIGNMENTS.



2 |

|             |                         |
|-------------|-------------------------|
| PROJECT NO: | 2225-00-73 & 2225-00-74 |
|-------------|-------------------------|

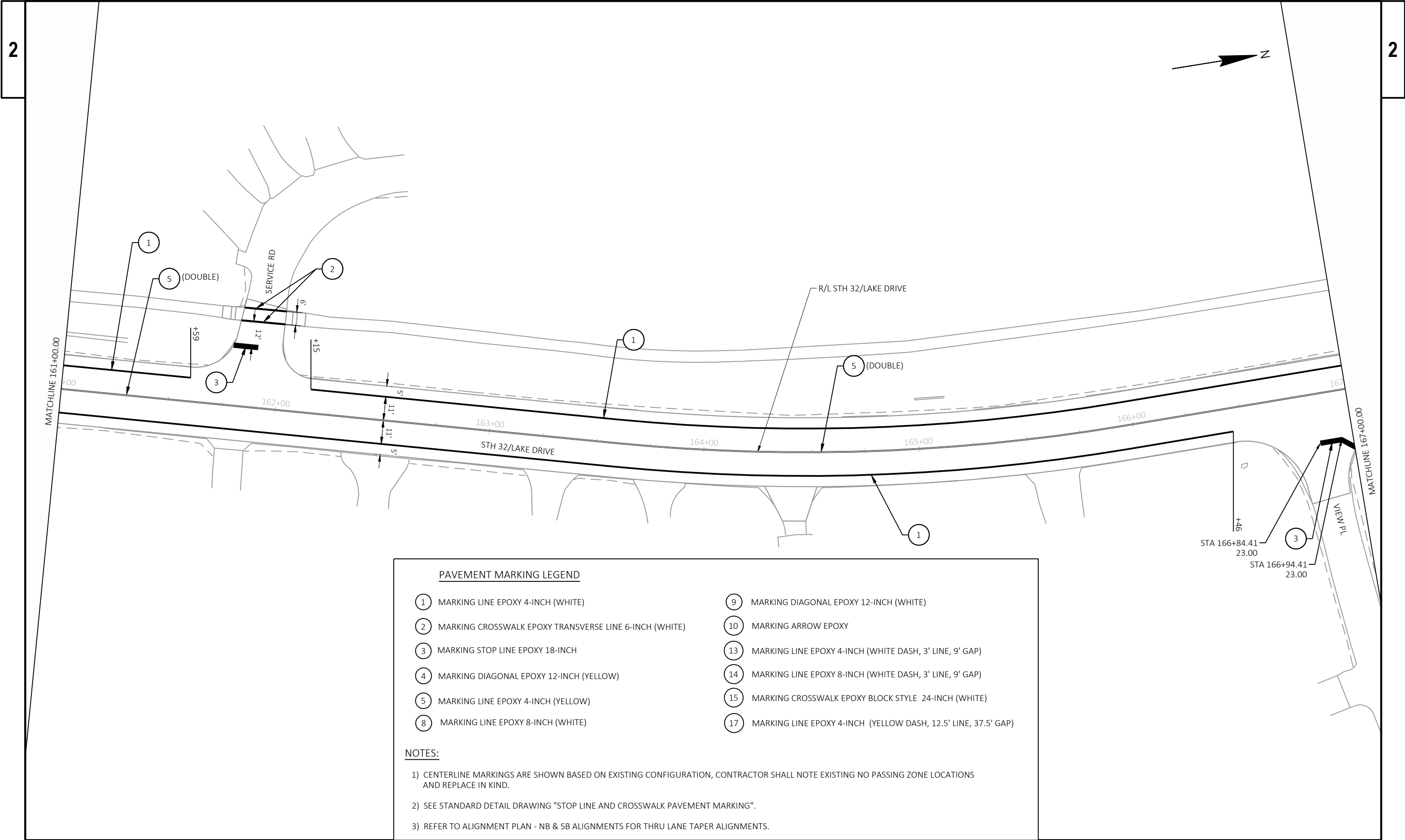
HWY: STH 32

COUNTY: MILWAUKEE

PAVEMENT MARKING

SHEET 216

11

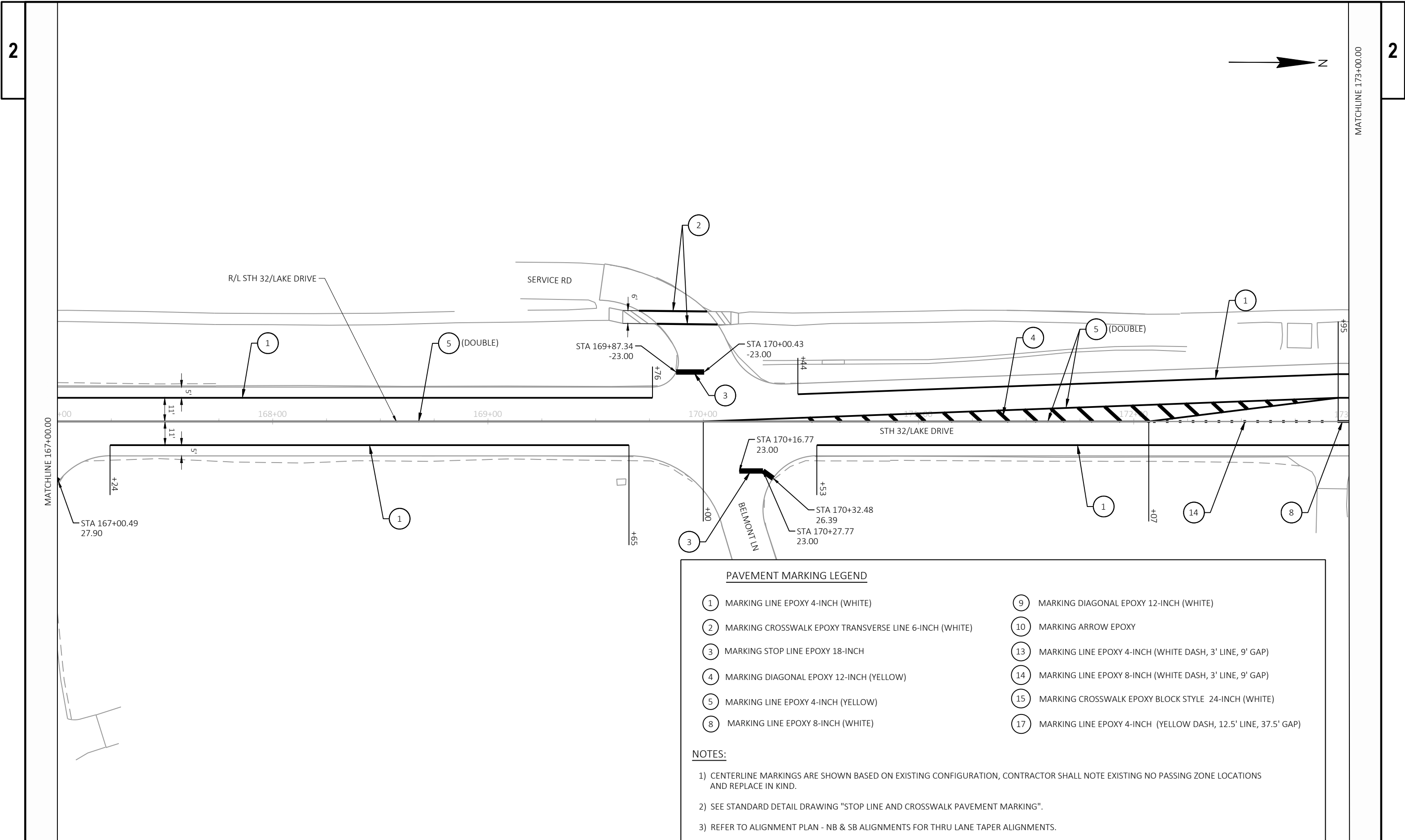


PAVEMENT MARKING LEGEND

- |                                                          |                                                                  |
|----------------------------------------------------------|------------------------------------------------------------------|
| ① MARKING LINE EPOXY 4-INCH (WHITE)                      | ⑨ MARKING DIAGONAL EPOXY 12-INCH (WHITE)                         |
| ② MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) | ⑩ MARKING ARROW EPOXY                                            |
| ③ MARKING STOP LINE EPOXY 18-INCH                        | ⑬ MARKING LINE EPOXY 4-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| ④ MARKING DIAGONAL EPOXY 12-INCH (YELLOW)                | ⑭ MARKING LINE EPOXY 8-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| ⑤ MARKING LINE EPOXY 4-INCH (YELLOW)                     | ⑮ MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH (WHITE)            |
| ⑧ MARKING LINE EPOXY 8-INCH (WHITE)                      | ⑰ MARKING LINE EPOXY 4-INCH (YELLOW DASH, 12.5' LINE, 37.5' GAP) |

NOTES:

- 1) CENTERLINE MARKINGS ARE SHOWN BASED ON EXISTING CONFIGURATION, CONTRACTOR SHALL NOTE EXISTING NO PASSING ZONE LOCATIONS AND REPLACE IN KIND.
- 2) SEE STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".
- 3) REFER TO ALIGNMENT PLAN - NB & SB ALIGNMENTS FOR THRU LANE TAPER ALIGNMENTS.



PAVEMENT MARKING LEGEND

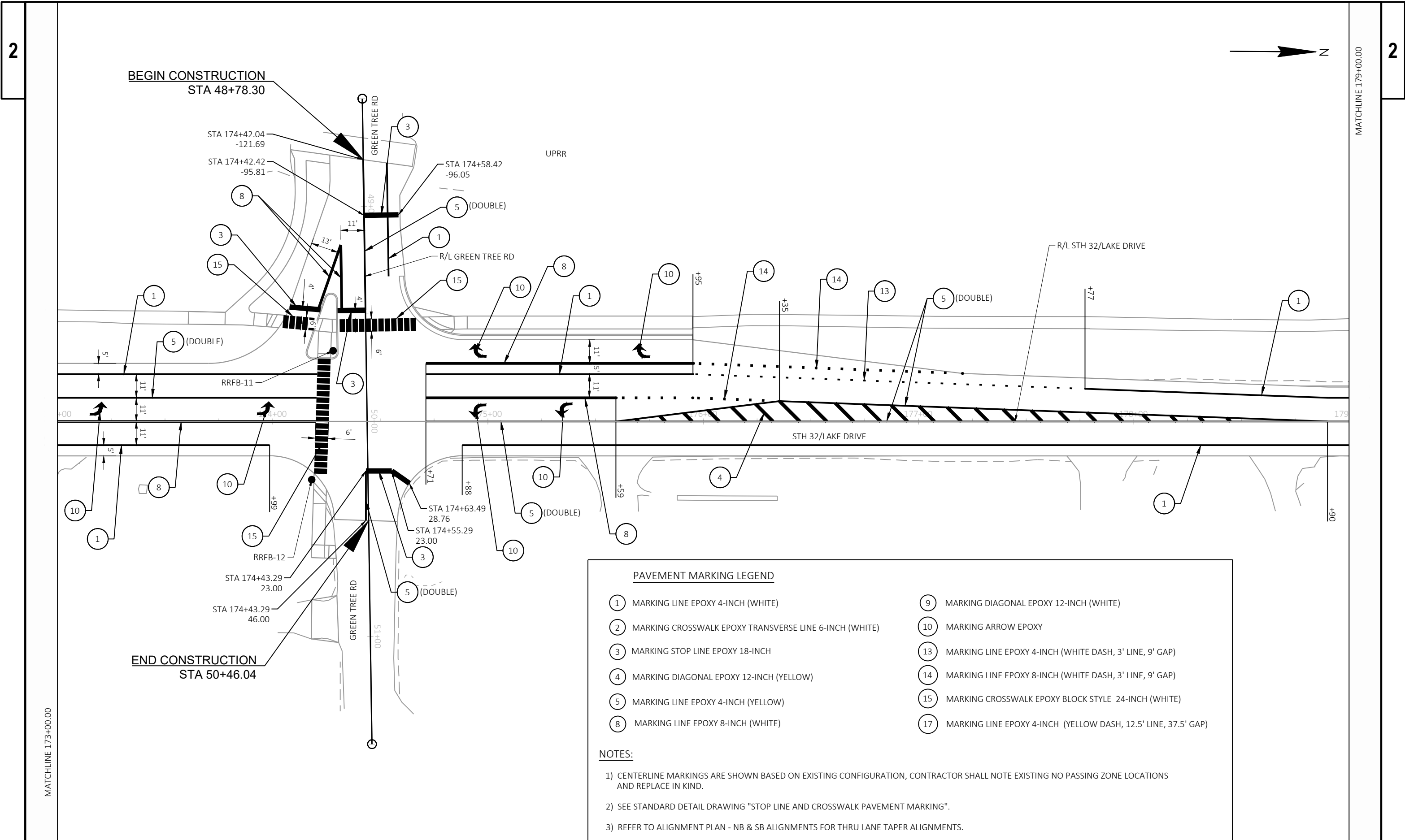
|                                                           |                                                                    |
|-----------------------------------------------------------|--------------------------------------------------------------------|
| 1) MARKING LINE EPOXY 4-INCH (WHITE)                      | 9) MARKING DIAGONAL EPOXY 12-INCH (WHITE)                          |
| 2) MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) | 10) MARKING ARROW EPOXY                                            |
| 3) MARKING STOP LINE EPOXY 18-INCH                        | 13) MARKING LINE EPOXY 4-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| 4) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)                | 14) MARKING LINE EPOXY 8-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| 5) MARKING LINE EPOXY 4-INCH (YELLOW)                     | 15) MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH (WHITE)            |
| 8) MARKING LINE EPOXY 8-INCH (WHITE)                      | 17) MARKING LINE EPOXY 4-INCH (YELLOW DASH, 12.5' LINE, 37.5' GAP) |

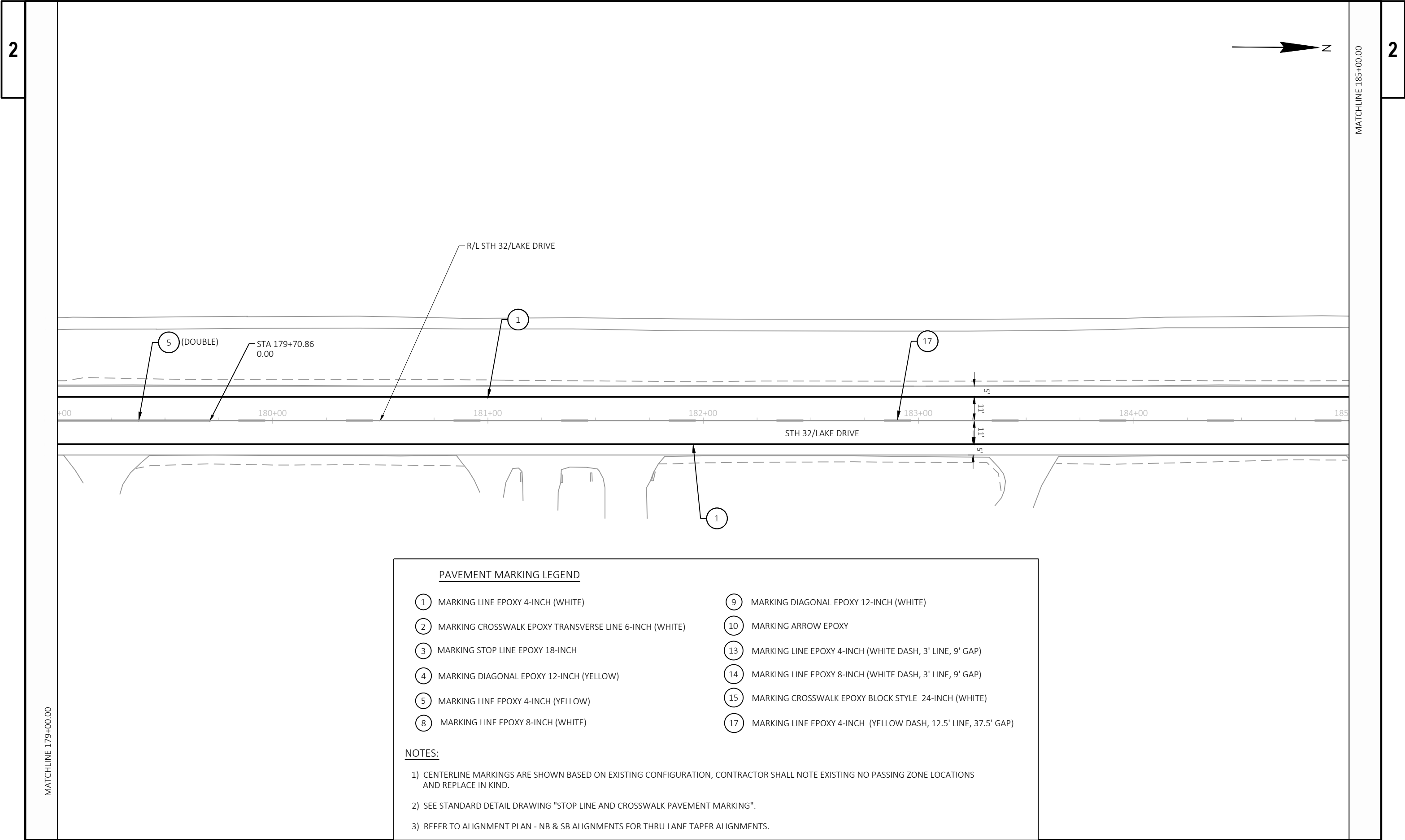
NOTES:

1) CENTERLINE MARKINGS ARE SHOWN BASED ON EXISTING CONFIGURATION, CONTRACTOR SHALL NOTE EXISTING NO PASSING ZONE LOCATIONS AND REPLACE IN KIND.

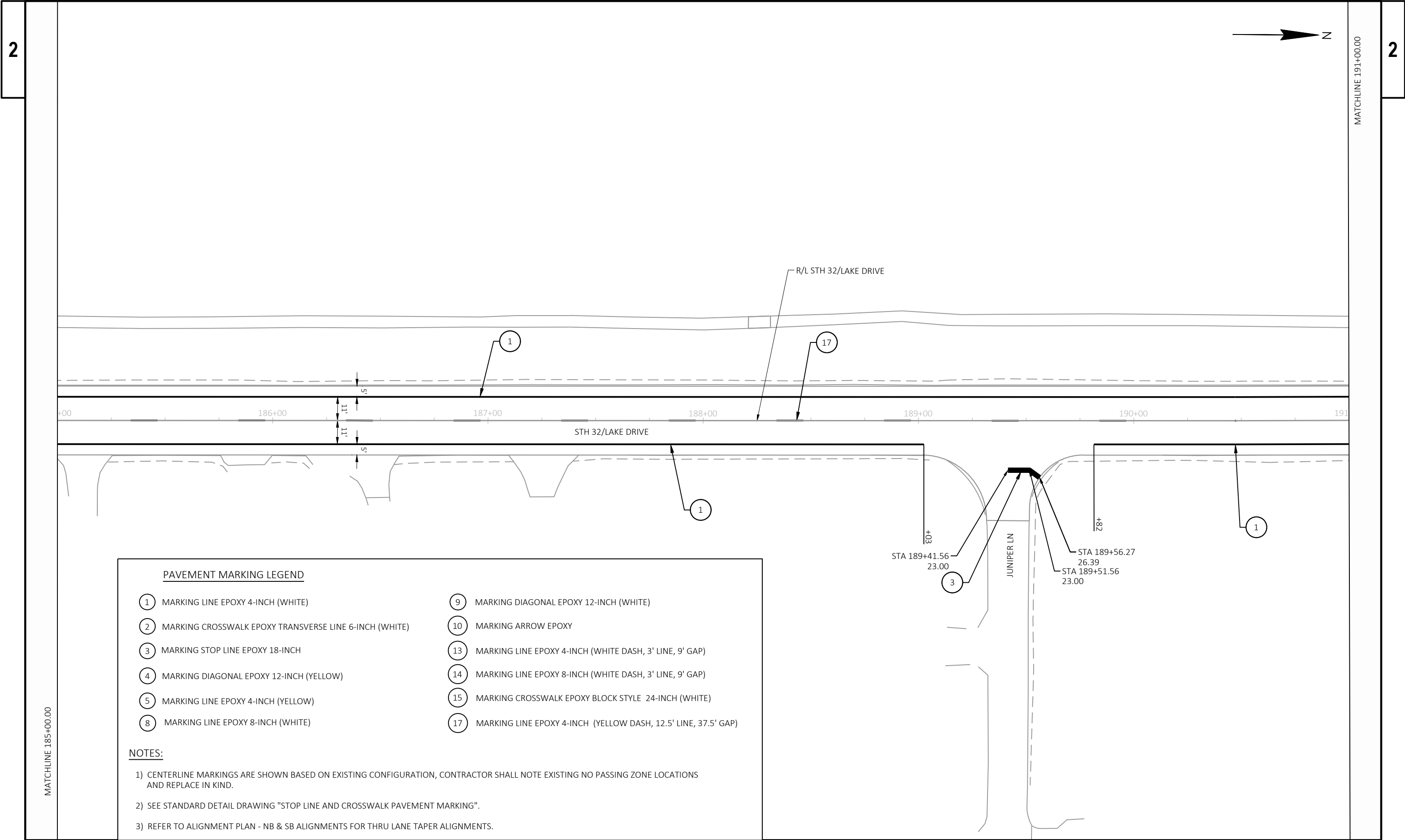
2) SEE STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".

3) REFER TO ALIGNMENT PLAN - NB & SB ALIGNMENTS FOR THRU LANE TAPER ALIGNMENTS.









PAVEMENT MARKING LEGEND

- |                                                           |                                                                    |
|-----------------------------------------------------------|--------------------------------------------------------------------|
| 1) MARKING LINE EPOXY 4-INCH (WHITE)                      | 9) MARKING DIAGONAL EPOXY 12-INCH (WHITE)                          |
| 2) MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) | 10) MARKING ARROW EPOXY                                            |
| 3) MARKING STOP LINE EPOXY 18-INCH                        | 13) MARKING LINE EPOXY 4-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| 4) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)                | 14) MARKING LINE EPOXY 8-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| 5) MARKING LINE EPOXY 4-INCH (YELLOW)                     | 15) MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH (WHITE)            |
| 8) MARKING LINE EPOXY 8-INCH (WHITE)                      | 17) MARKING LINE EPOXY 4-INCH (YELLOW DASH, 12.5' LINE, 37.5' GAP) |

NOTES:

- 1) CENTERLINE MARKINGS ARE SHOWN BASED ON EXISTING CONFIGURATION, CONTRACTOR SHALL NOTE EXISTING NO PASSING ZONE LOCATIONS AND REPLACE IN KIND.
- 2) SEE STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".
- 3) REFER TO ALIGNMENT PLAN - NB & SB ALIGNMENTS FOR THRU LANE TAPER ALIGNMENTS.

PROJECT NO: 2225-00-73 & 2225-00-74

HWY: STH 32

COUNTY: MILWAUKEE

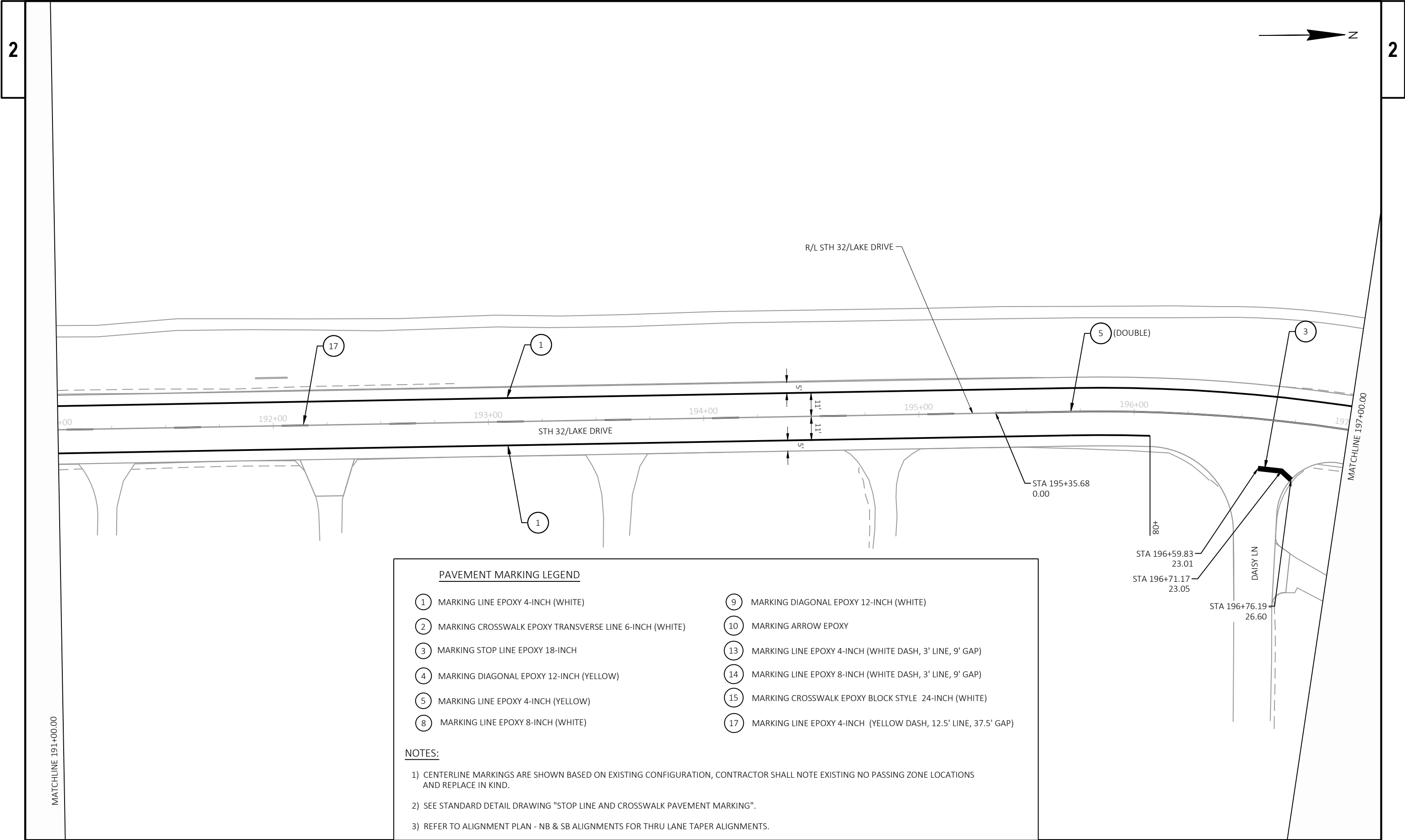
PAVEMENT MARKING

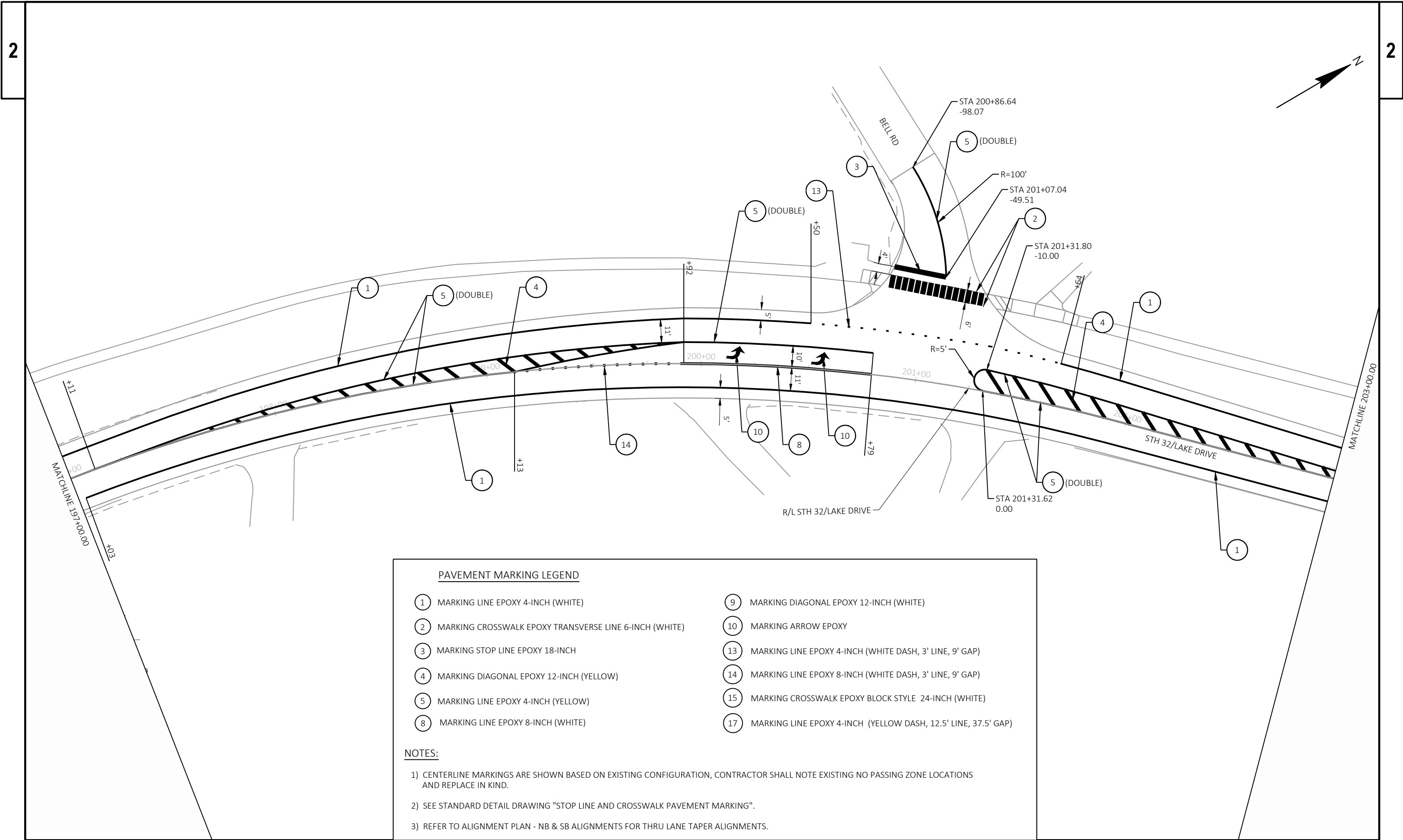
SHEET

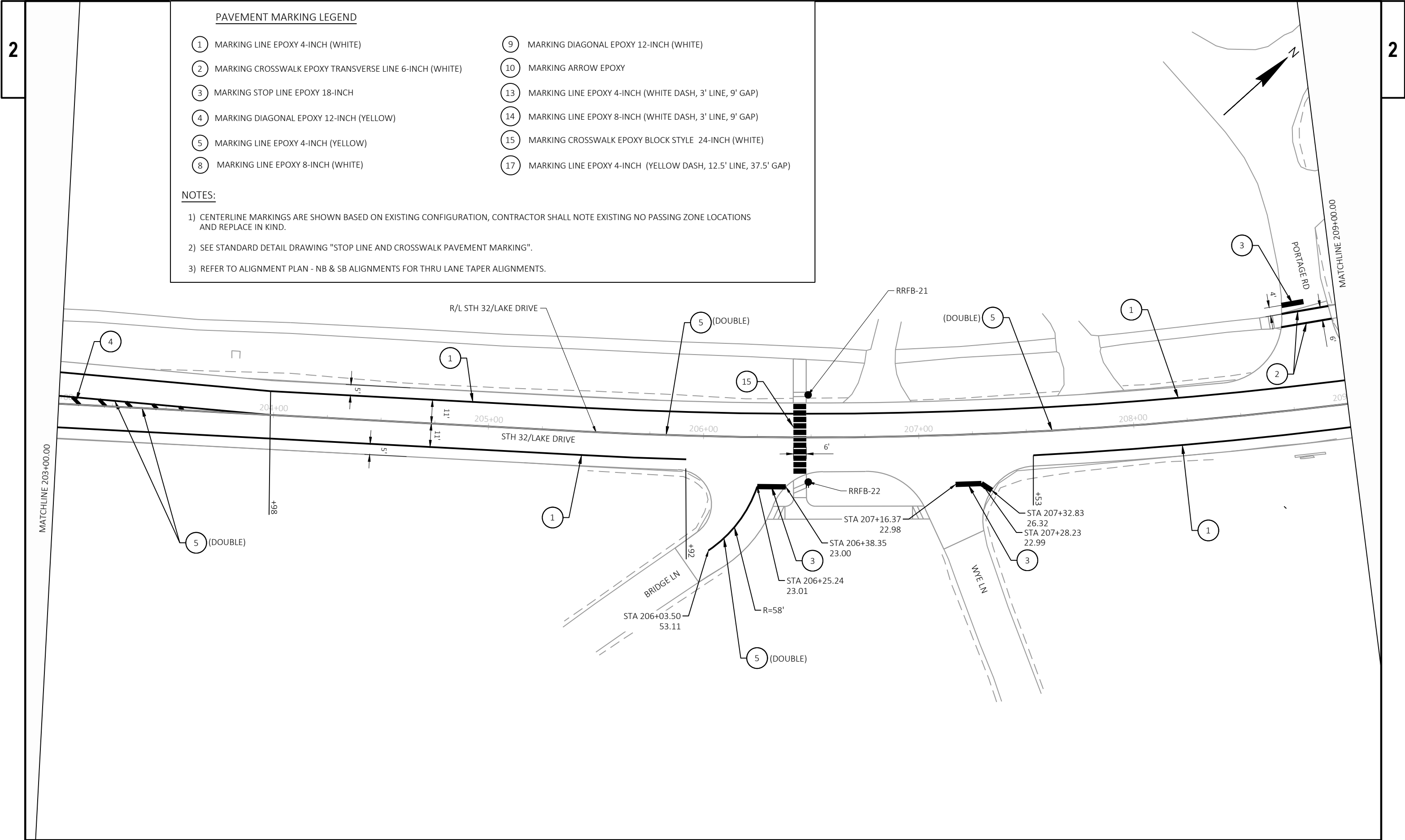
221

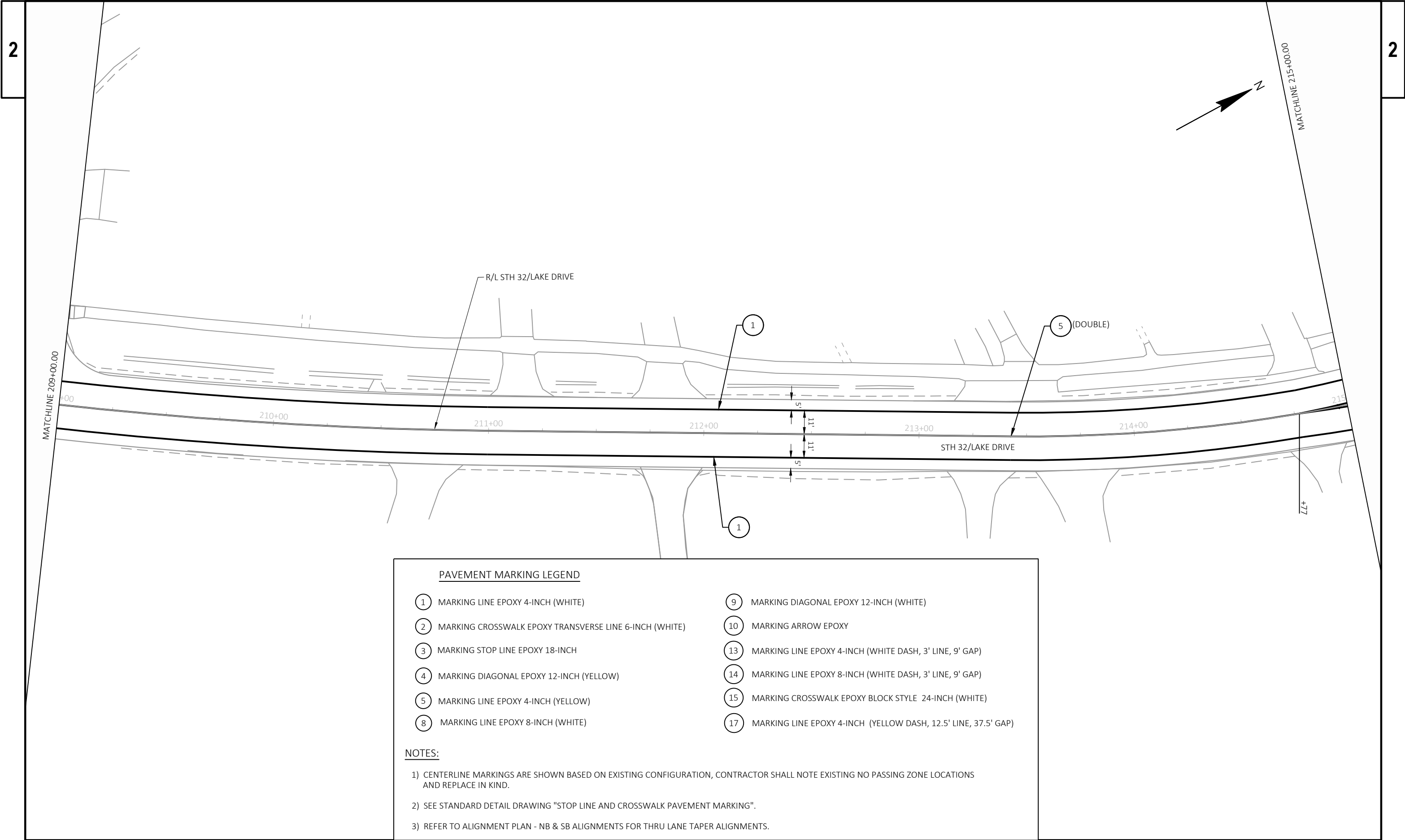
E

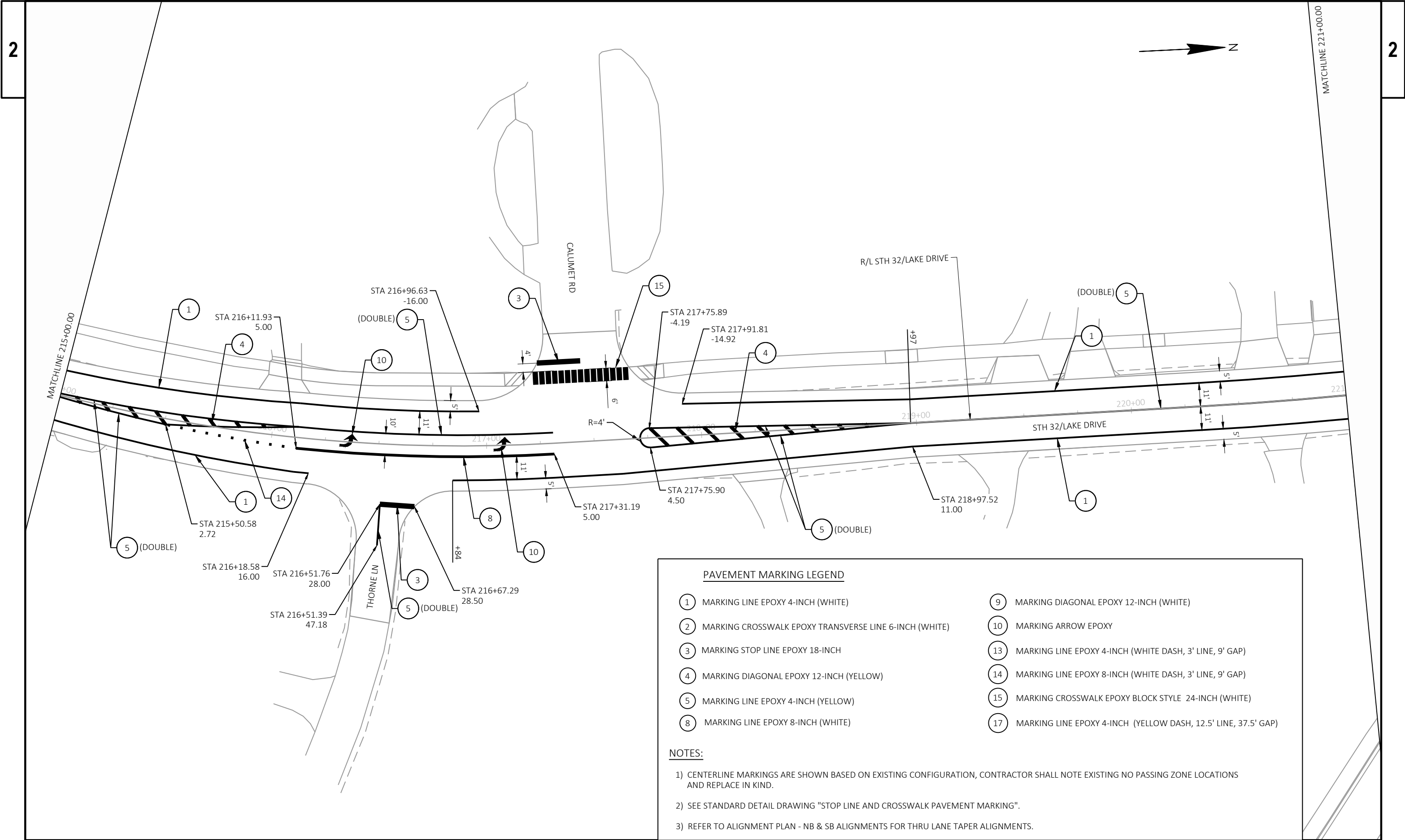


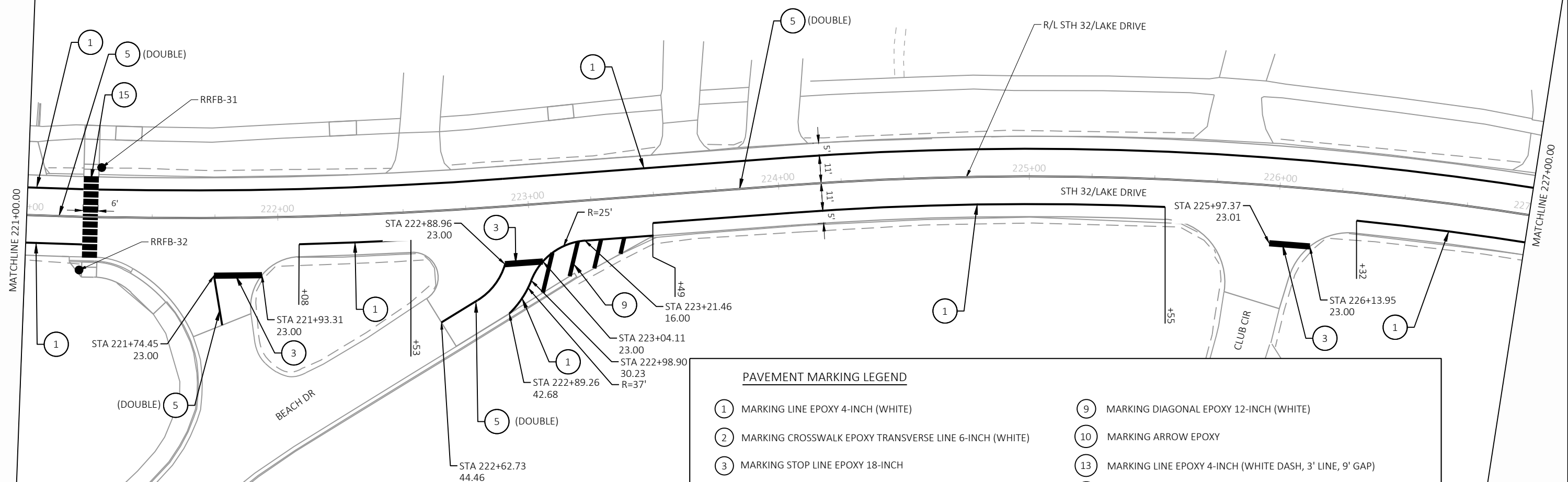












#### PAVEMENT MARKING LEGEND

- |                                                          |                                                                  |
|----------------------------------------------------------|------------------------------------------------------------------|
| ① MARKING LINE EPOXY 4-INCH (WHITE)                      | ⑨ MARKING DIAGONAL EPOXY 12-INCH (WHITE)                         |
| ② MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) | ⑩ MARKING ARROW EPOXY                                            |
| ③ MARKING STOP LINE EPOXY 18-INCH                        | ⑬ MARKING LINE EPOXY 4-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| ④ MARKING DIAGONAL EPOXY 12-INCH (YELLOW)                | ⑭ MARKING LINE EPOXY 8-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| ⑤ MARKING LINE EPOXY 4-INCH (YELLOW)                     | ⑮ MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH (WHITE)            |
| ⑧ MARKING LINE EPOXY 8-INCH (WHITE)                      | ⑰ MARKING LINE EPOXY 4-INCH (YELLOW DASH, 12.5' LINE, 37.5' GAP) |

#### NOTES:

- 1) CENTERLINE MARKINGS ARE SHOWN BASED ON EXISTING CONFIGURATION, CONTRACTOR SHALL NOTE EXISTING NO PASSING ZONE LOCATIONS AND REPLACE IN KIND.
- 2) SEE STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".
- 3) REFER TO ALIGNMENT PLAN - NB & SB ALIGNMENTS FOR THRU LANE TAPER ALIGNMENTS.

PROJECT NO: 2225-00-73 &amp; 2225-00-74

HWY: STH 32

COUNTY: MILWAUKEE

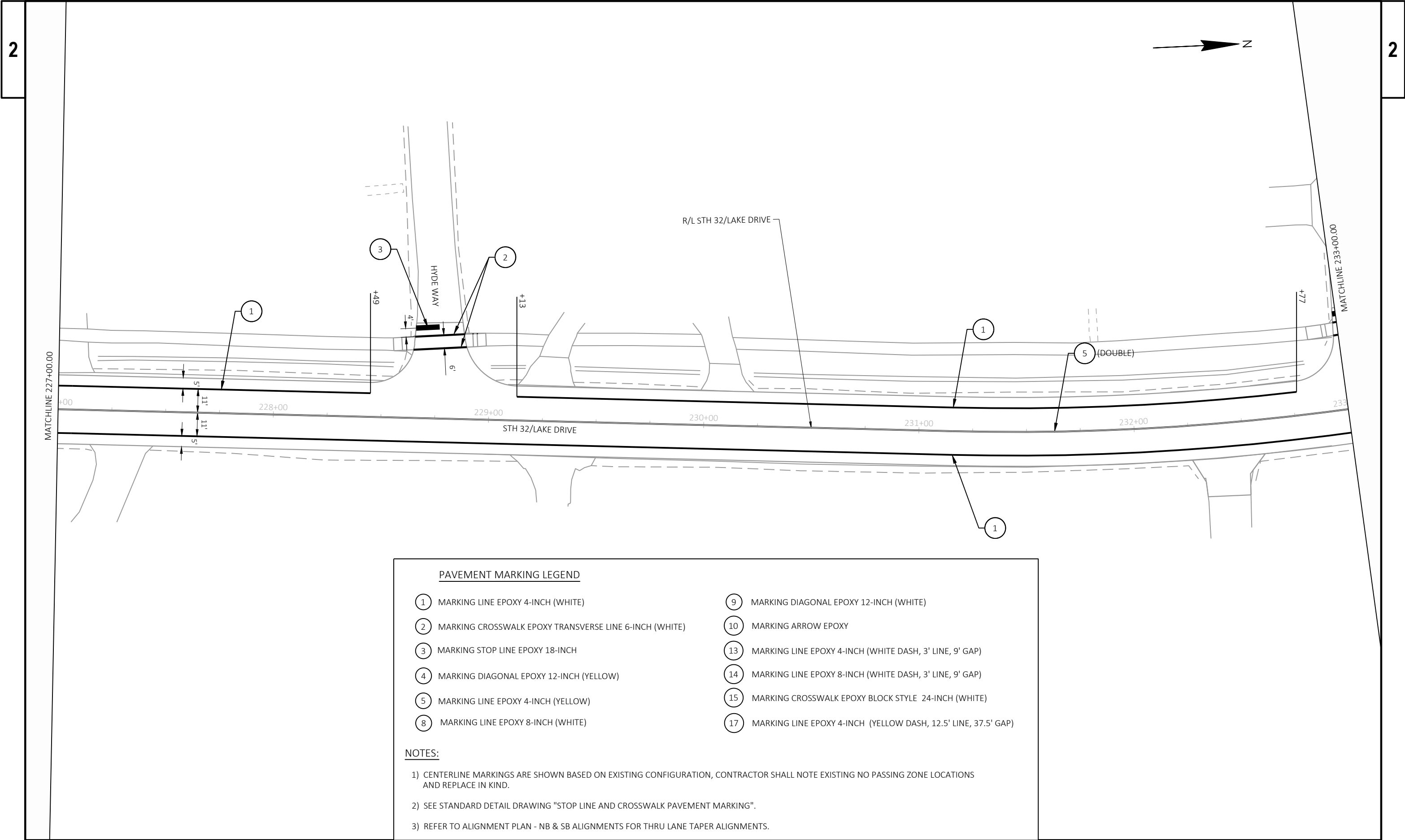
PAVEMENT MARKING

SHEET

227

E





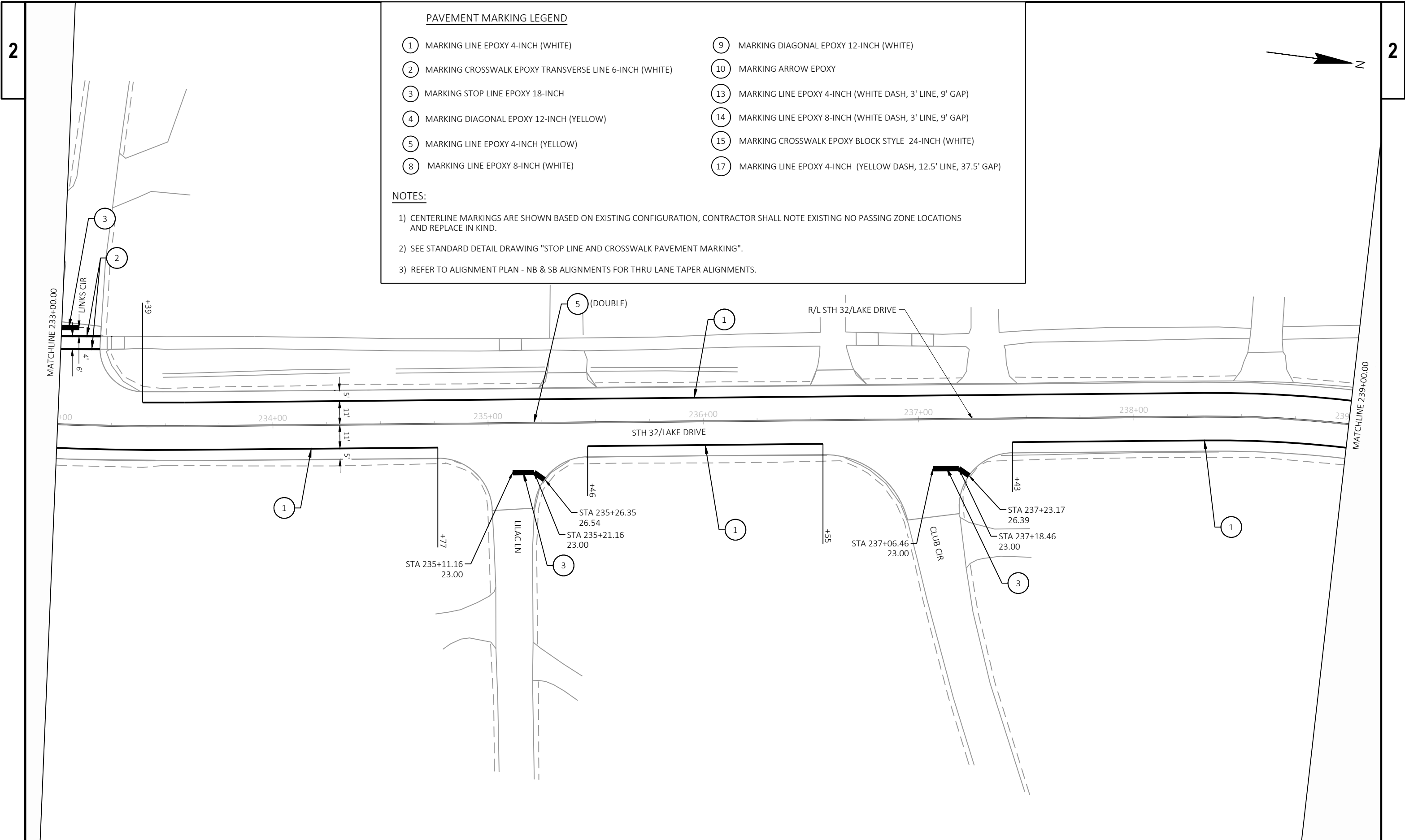
PAVEMENT MARKING LEGEND

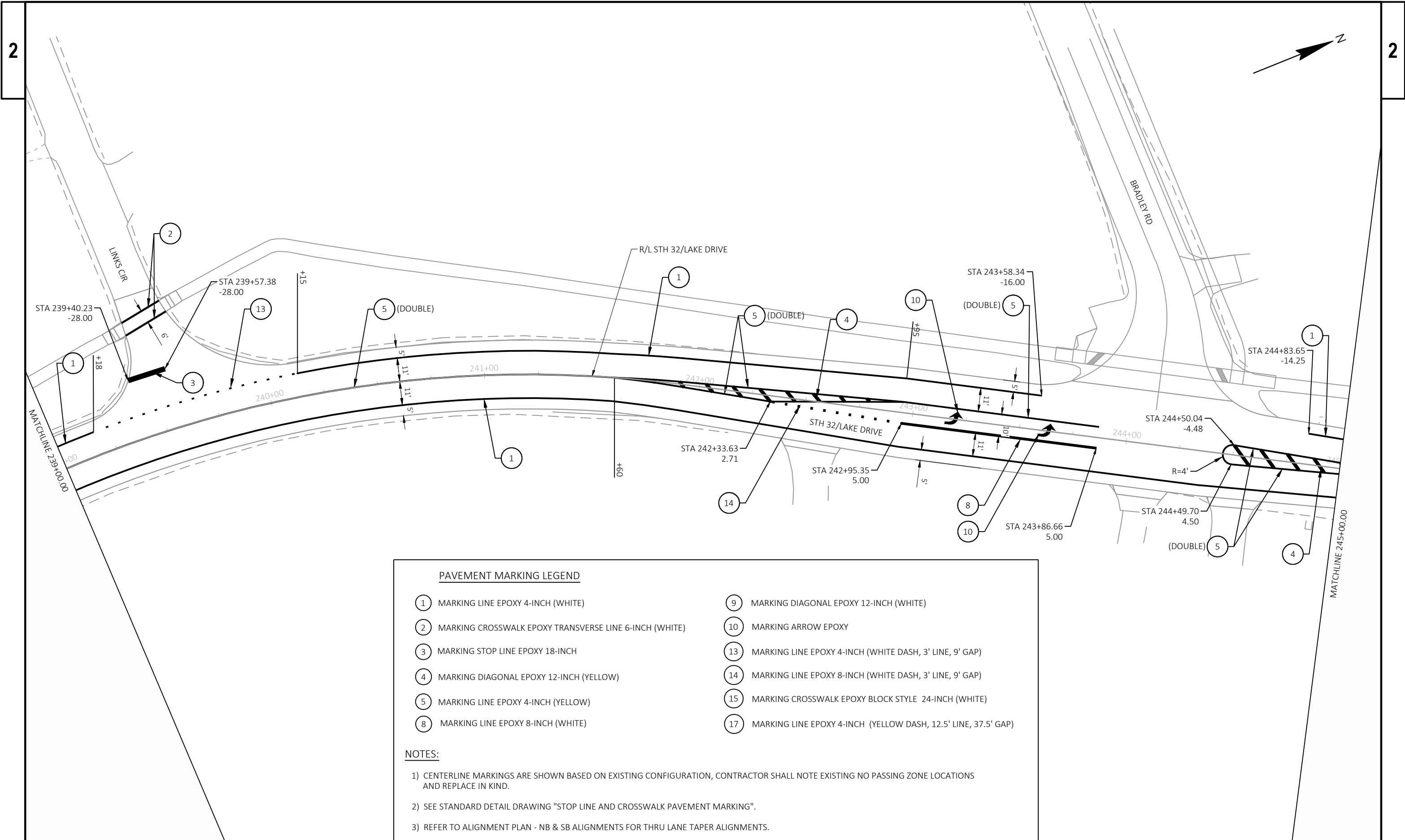
- |                                                          |                                                                  |
|----------------------------------------------------------|------------------------------------------------------------------|
| ① MARKING LINE EPOXY 4-INCH (WHITE)                      | ⑨ MARKING DIAGONAL EPOXY 12-INCH (WHITE)                         |
| ② MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) | ⑩ MARKING ARROW EPOXY                                            |
| ③ MARKING STOP LINE EPOXY 18-INCH                        | ⑬ MARKING LINE EPOXY 4-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| ④ MARKING DIAGONAL EPOXY 12-INCH (YELLOW)                | ⑭ MARKING LINE EPOXY 8-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| ⑤ MARKING LINE EPOXY 4-INCH (YELLOW)                     | ⑮ MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH (WHITE)            |
| ⑧ MARKING LINE EPOXY 8-INCH (WHITE)                      | ⑰ MARKING LINE EPOXY 4-INCH (YELLOW DASH, 12.5' LINE, 37.5' GAP) |

NOTES:

- 1) CENTERLINE MARKINGS ARE SHOWN BASED ON EXISTING CONFIGURATION, CONTRACTOR SHALL NOTE EXISTING NO PASSING ZONE LOCATIONS AND REPLACE IN KIND.
- 2) SEE STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".
- 3) REFER TO ALIGNMENT PLAN - NB & SB ALIGNMENTS FOR THRU LANE TAPER ALIGNMENTS.







PAVEMENT MARKING LEGEND

- |                                                          |                                                                  |
|----------------------------------------------------------|------------------------------------------------------------------|
| ① MARKING LINE EPOXY 4-INCH (WHITE)                      | ⑨ MARKING DIAGONAL EPOXY 12-INCH (WHITE)                         |
| ② MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) | ⑩ MARKING ARROW EPOXY                                            |
| ③ MARKING STOP LINE EPOXY 18-INCH                        | ⑬ MARKING LINE EPOXY 4-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| ④ MARKING DIAGONAL EPOXY 12-INCH (YELLOW)                | ⑭ MARKING LINE EPOXY 8-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| ⑤ MARKING LINE EPOXY 4-INCH (YELLOW)                     | ⑮ MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH (WHITE)            |
| ⑧ MARKING LINE EPOXY 8-INCH (WHITE)                      | ⑰ MARKING LINE EPOXY 4-INCH (YELLOW DASH, 12.5' LINE, 37.5' GAP) |

NOTES:

- CENTERLINE MARKINGS ARE SHOWN BASED ON EXISTING CONFIGURATION, CONTRACTOR SHALL NOTE EXISTING NO PASSING ZONE LOCATIONS AND REPLACE IN KIND.
- SEE STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".
- REFER TO ALIGNMENT PLAN - NB & SB ALIGNMENTS FOR THRU LANE TAPER ALIGNMENTS.

PROJECT NO: 2225-00-73 & 2225-00-74

HWY: STH 32

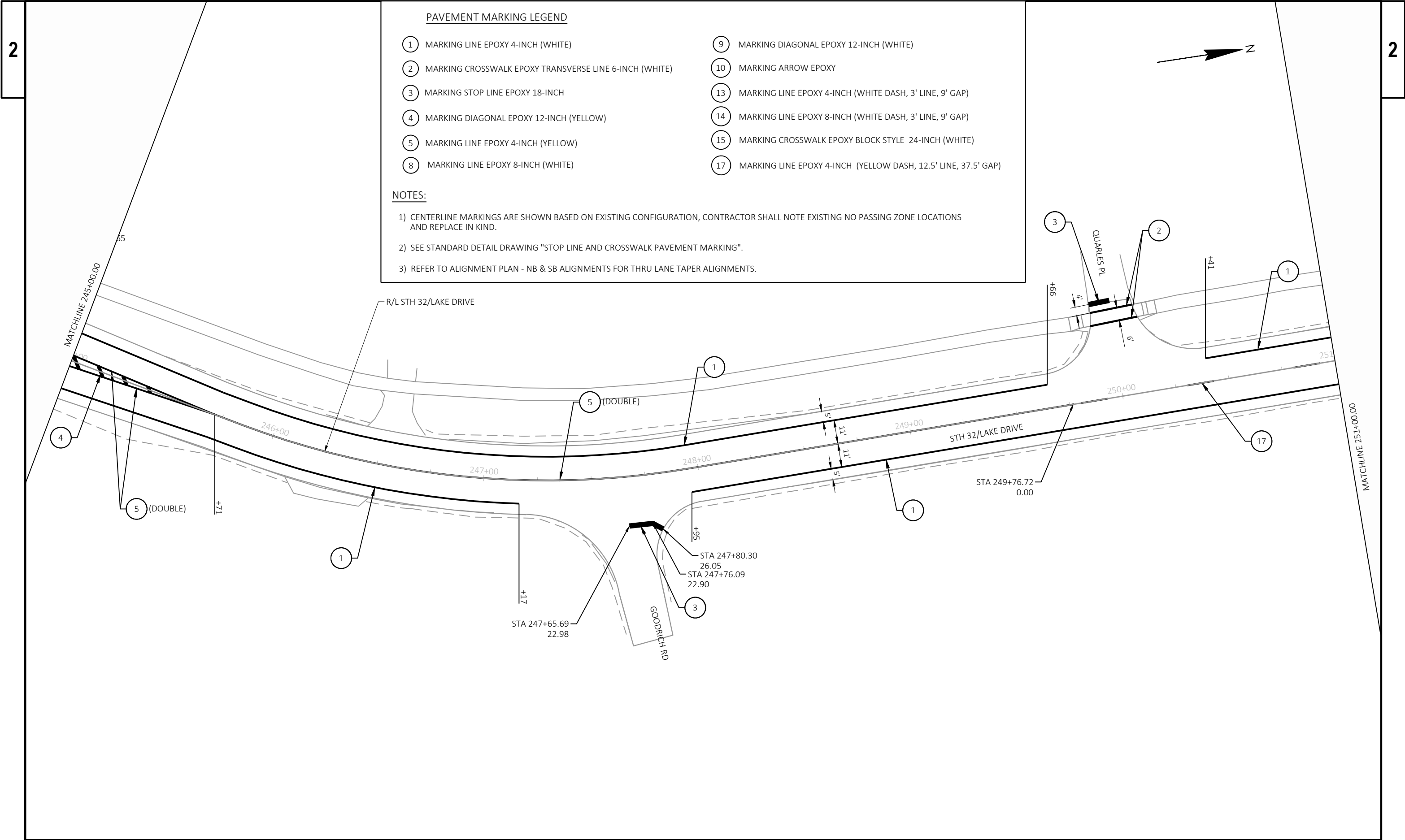
COUNTY: MILWAUKEE

PAVEMENT MARKING

SHEET

230

E

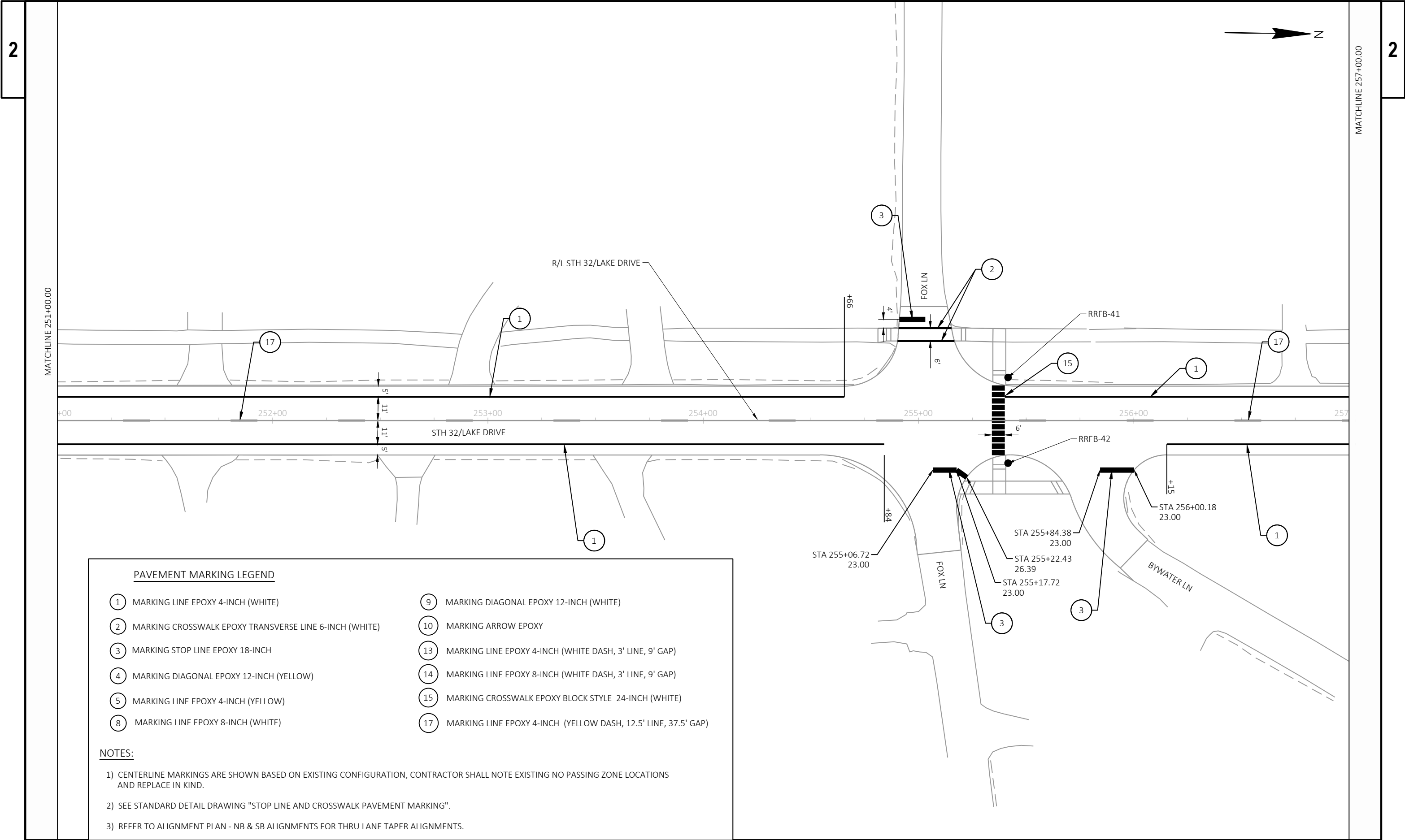


PAVEMENT MARKING LEGEND

- |                                                           |                                                                    |
|-----------------------------------------------------------|--------------------------------------------------------------------|
| 1) MARKING LINE EPOXY 4-INCH (WHITE)                      | 9) MARKING DIAGONAL EPOXY 12-INCH (WHITE)                          |
| 2) MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) | 10) MARKING ARROW EPOXY                                            |
| 3) MARKING STOP LINE EPOXY 18-INCH                        | 13) MARKING LINE EPOXY 4-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| 4) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)                | 14) MARKING LINE EPOXY 8-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| 5) MARKING LINE EPOXY 4-INCH (YELLOW)                     | 15) MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH (WHITE)            |
| 8) MARKING LINE EPOXY 8-INCH (WHITE)                      | 17) MARKING LINE EPOXY 4-INCH (YELLOW DASH, 12.5' LINE, 37.5' GAP) |

NOTES:

- 1) CENTERLINE MARKINGS ARE SHOWN BASED ON EXISTING CONFIGURATION, CONTRACTOR SHALL NOTE EXISTING NO PASSING ZONE LOCATIONS AND REPLACE IN KIND.
- 2) SEE STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".
- 3) REFER TO ALIGNMENT PLAN - NB & SB ALIGNMENTS FOR THRU LANE TAPER ALIGNMENTS.

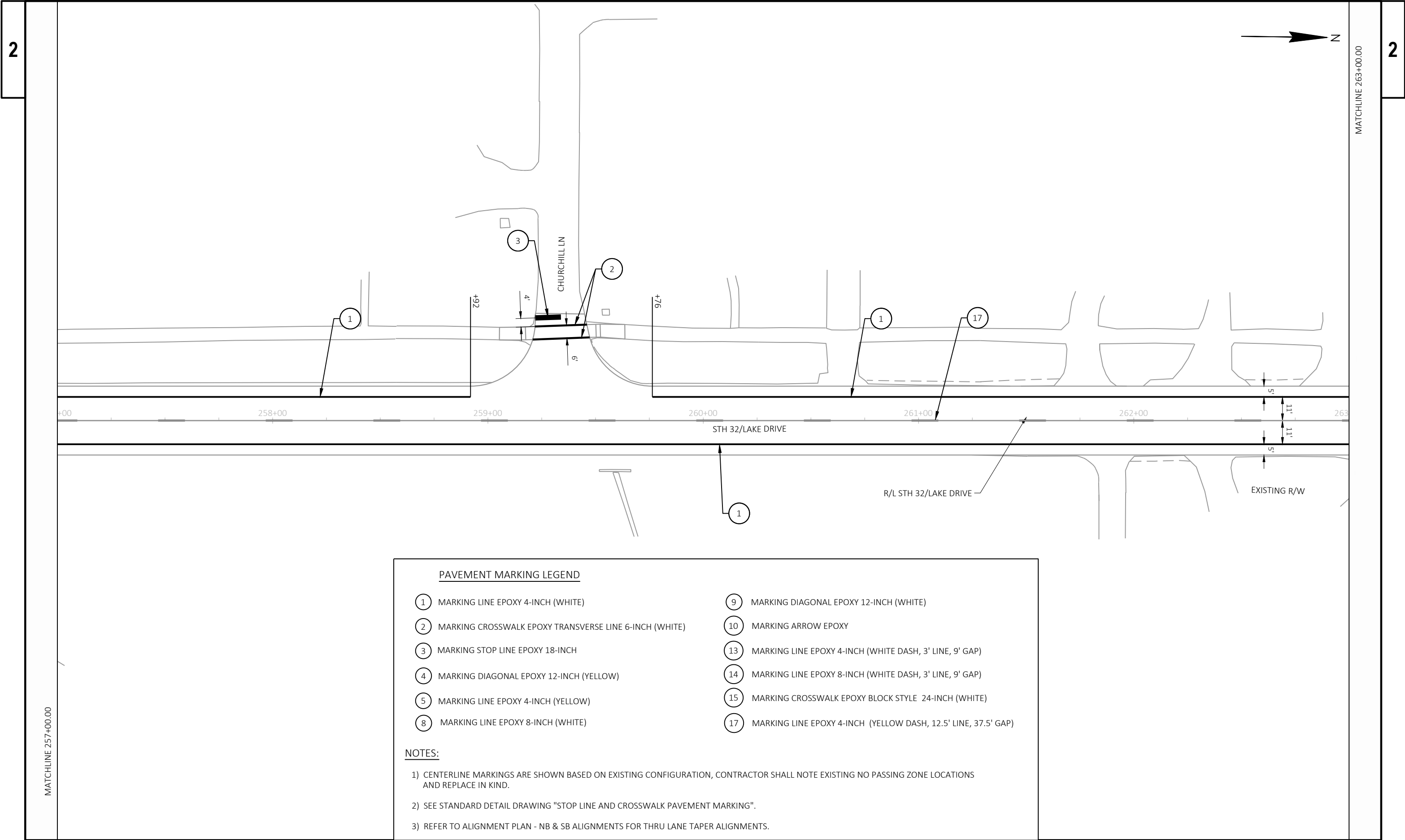


PAVEMENT MARKING LEGEND

- |                                                           |                                                                    |
|-----------------------------------------------------------|--------------------------------------------------------------------|
| 1) MARKING LINE EPOXY 4-INCH (WHITE)                      | 9) MARKING DIAGONAL EPOXY 12-INCH (WHITE)                          |
| 2) MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) | 10) MARKING ARROW EPOXY                                            |
| 3) MARKING STOP LINE EPOXY 18-INCH                        | 13) MARKING LINE EPOXY 4-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| 4) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)                | 14) MARKING LINE EPOXY 8-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| 5) MARKING LINE EPOXY 4-INCH (YELLOW)                     | 15) MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH (WHITE)            |
| 8) MARKING LINE EPOXY 8-INCH (WHITE)                      | 17) MARKING LINE EPOXY 4-INCH (YELLOW DASH, 12.5' LINE, 37.5' GAP) |

NOTES:

- 1) CENTERLINE MARKINGS ARE SHOWN BASED ON EXISTING CONFIGURATION, CONTRACTOR SHALL NOTE EXISTING NO PASSING ZONE LOCATIONS AND REPLACE IN KIND.
- 2) SEE STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".
- 3) REFER TO ALIGNMENT PLAN - NB & SB ALIGNMENTS FOR THRU LANE TAPER ALIGNMENTS.

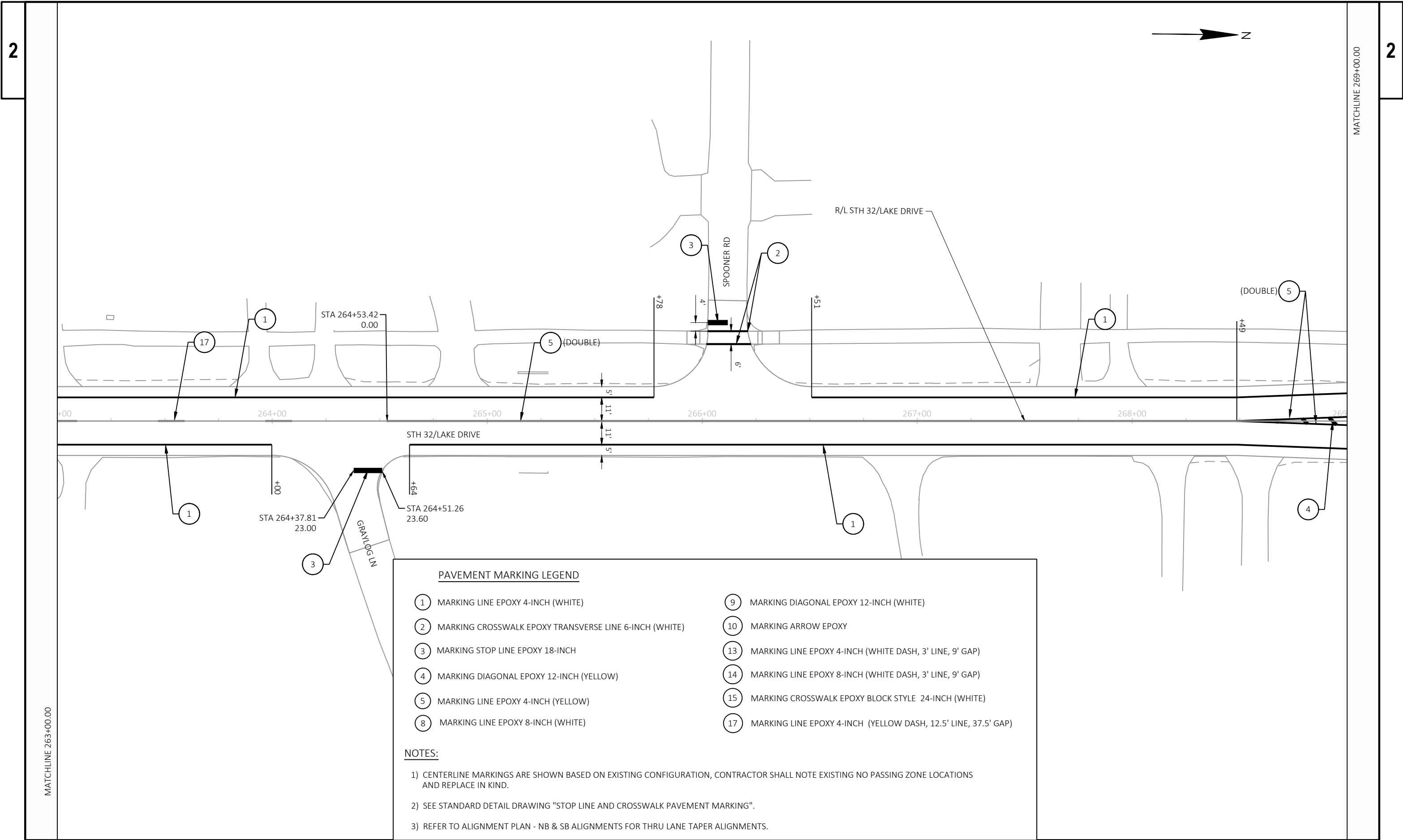


PAVEMENT MARKING LEGEND

- |                                                          |                                                                  |
|----------------------------------------------------------|------------------------------------------------------------------|
| ① MARKING LINE EPOXY 4-INCH (WHITE)                      | ⑨ MARKING DIAGONAL EPOXY 12-INCH (WHITE)                         |
| ② MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) | ⑩ MARKING ARROW EPOXY                                            |
| ③ MARKING STOP LINE EPOXY 18-INCH                        | ⑬ MARKING LINE EPOXY 4-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| ④ MARKING DIAGONAL EPOXY 12-INCH (YELLOW)                | ⑭ MARKING LINE EPOXY 8-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| ⑤ MARKING LINE EPOXY 4-INCH (YELLOW)                     | ⑮ MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH (WHITE)            |
| ⑧ MARKING LINE EPOXY 8-INCH (WHITE)                      | ⑰ MARKING LINE EPOXY 4-INCH (YELLOW DASH, 12.5' LINE, 37.5' GAP) |

NOTES:

- 1) CENTERLINE MARKINGS ARE SHOWN BASED ON EXISTING CONFIGURATION, CONTRACTOR SHALL NOTE EXISTING NO PASSING ZONE LOCATIONS AND REPLACE IN KIND.
- 2) SEE STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".
- 3) REFER TO ALIGNMENT PLAN - NB & SB ALIGNMENTS FOR THRU LANE TAPER ALIGNMENTS.



PAVEMENT MARKING LEGEND

- |                                                           |                                                                    |
|-----------------------------------------------------------|--------------------------------------------------------------------|
| 1) MARKING LINE EPOXY 4-INCH (WHITE)                      | 9) MARKING DIAGONAL EPOXY 12-INCH (WHITE)                          |
| 2) MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) | 10) MARKING ARROW EPOXY                                            |
| 3) MARKING STOP LINE EPOXY 18-INCH                        | 13) MARKING LINE EPOXY 4-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| 4) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)                | 14) MARKING LINE EPOXY 8-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| 5) MARKING LINE EPOXY 4-INCH (YELLOW)                     | 15) MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH (WHITE)            |
| 8) MARKING LINE EPOXY 8-INCH (WHITE)                      | 17) MARKING LINE EPOXY 4-INCH (YELLOW DASH, 12.5' LINE, 37.5' GAP) |

NOTES:

- 1) CENTERLINE MARKINGS ARE SHOWN BASED ON EXISTING CONFIGURATION, CONTRACTOR SHALL NOTE EXISTING NO PASSING ZONE LOCATIONS AND REPLACE IN KIND.
- 2) SEE STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".
- 3) REFER TO ALIGNMENT PLAN - NB & SB ALIGNMENTS FOR THRU LANE TAPER ALIGNMENTS.

PROJECT NO: 2225-00-73 & 2225-00-74

HWY: STH 32

COUNTY: MILWAUKEE

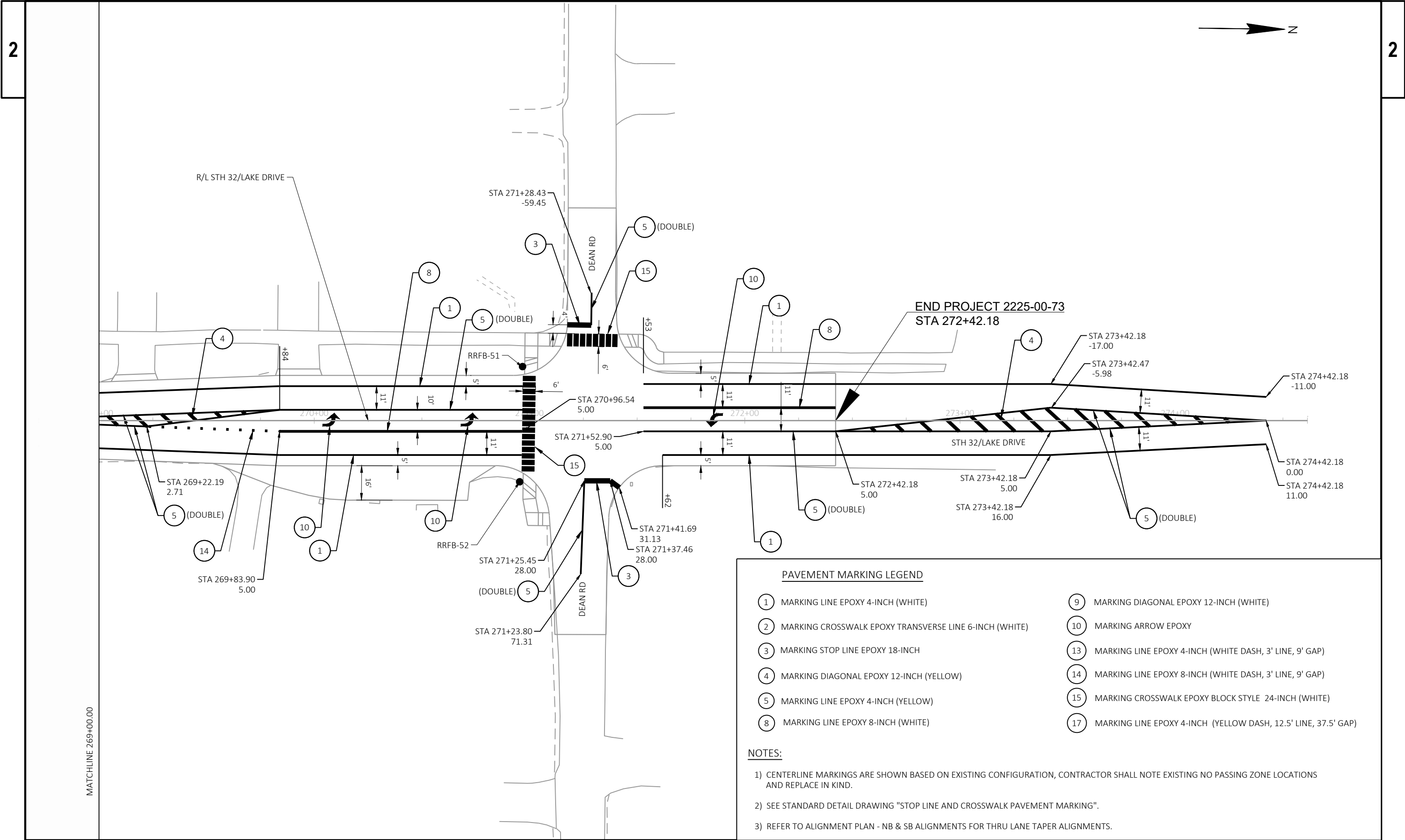
PAVEMENT MARKING

SHEET

234

E



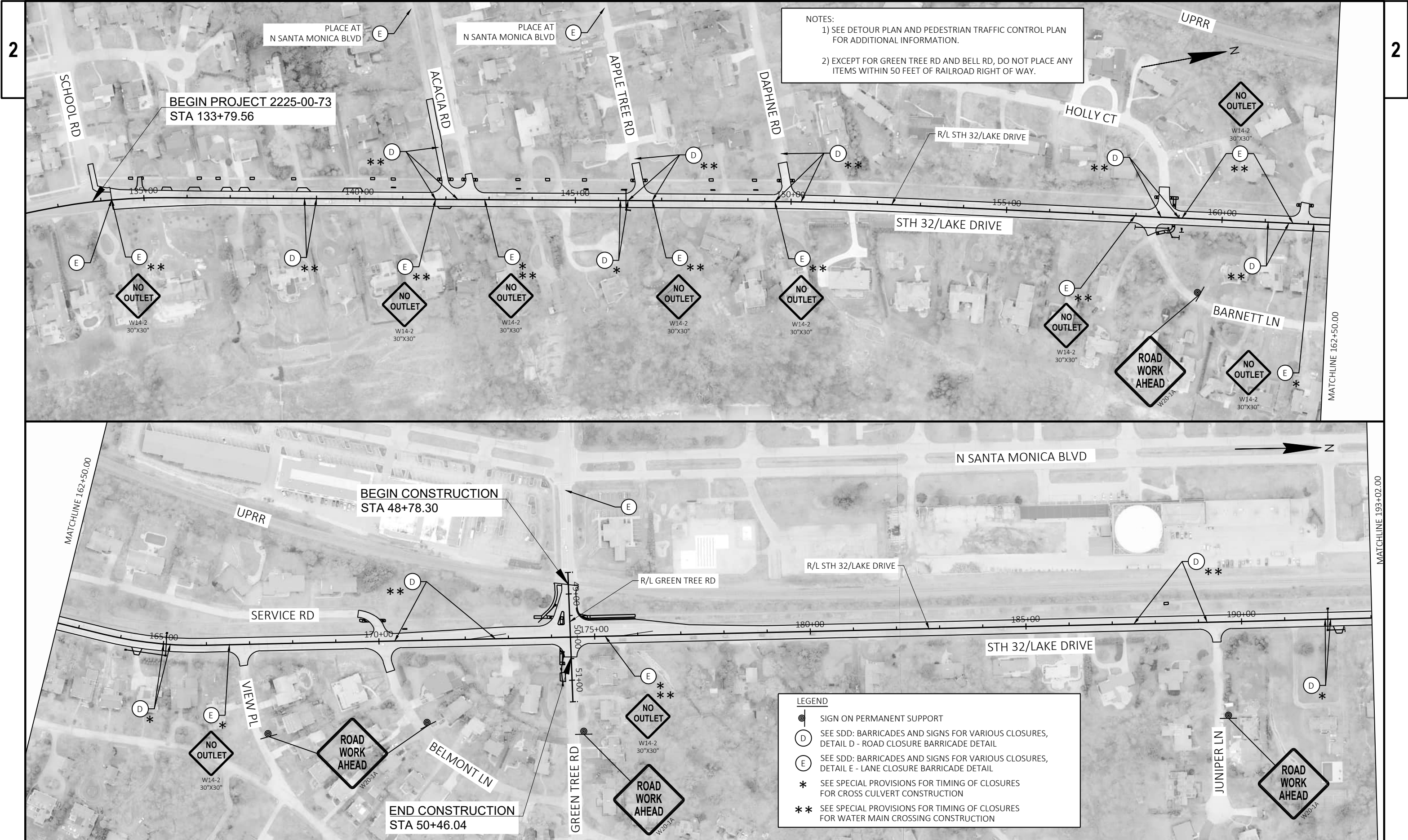


PAVEMENT MARKING LEGEND

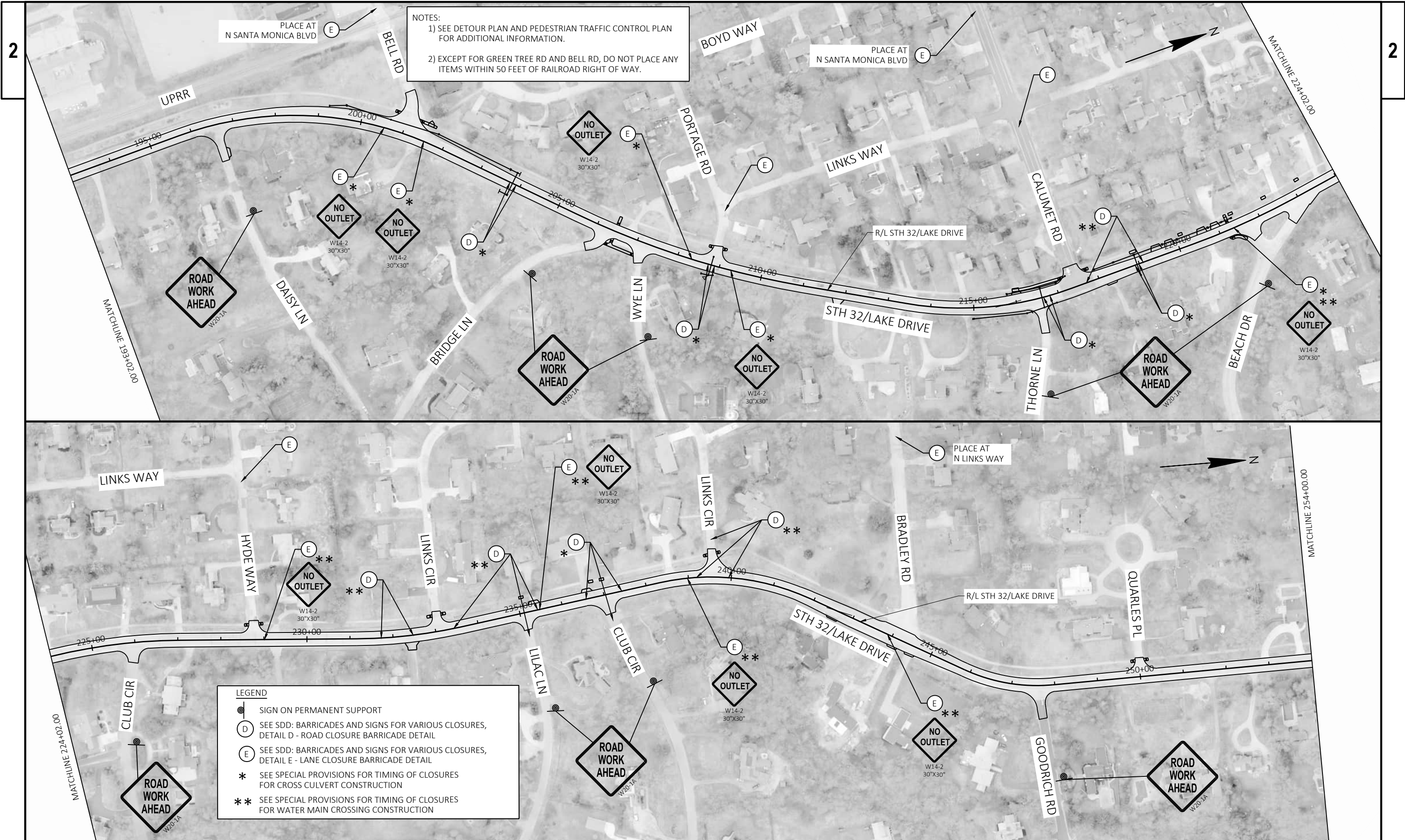
- |                                                           |                                                                    |
|-----------------------------------------------------------|--------------------------------------------------------------------|
| 1) MARKING LINE EPOXY 4-INCH (WHITE)                      | 9) MARKING DIAGONAL EPOXY 12-INCH (WHITE)                          |
| 2) MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH (WHITE) | 10) MARKING ARROW EPOXY                                            |
| 3) MARKING STOP LINE EPOXY 18-INCH                        | 13) MARKING LINE EPOXY 4-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| 4) MARKING DIAGONAL EPOXY 12-INCH (YELLOW)                | 14) MARKING LINE EPOXY 8-INCH (WHITE DASH, 3' LINE, 9' GAP)        |
| 5) MARKING LINE EPOXY 4-INCH (YELLOW)                     | 15) MARKING CROSSWALK EPOXY BLOCK STYLE 24-INCH (WHITE)            |
| 8) MARKING LINE EPOXY 8-INCH (WHITE)                      | 17) MARKING LINE EPOXY 4-INCH (YELLOW DASH, 12.5' LINE, 37.5' GAP) |

NOTES:

- 1) CENTERLINE MARKINGS ARE SHOWN BASED ON EXISTING CONFIGURATION, CONTRACTOR SHALL NOTE EXISTING NO PASSING ZONE LOCATIONS AND REPLACE IN KIND.
- 2) SEE STANDARD DETAIL DRAWING "STOP LINE AND CROSSWALK PAVEMENT MARKING".
- 3) REFER TO ALIGNMENT PLAN - NB & SB ALIGNMENTS FOR THRU LANE TAPER ALIGNMENTS.



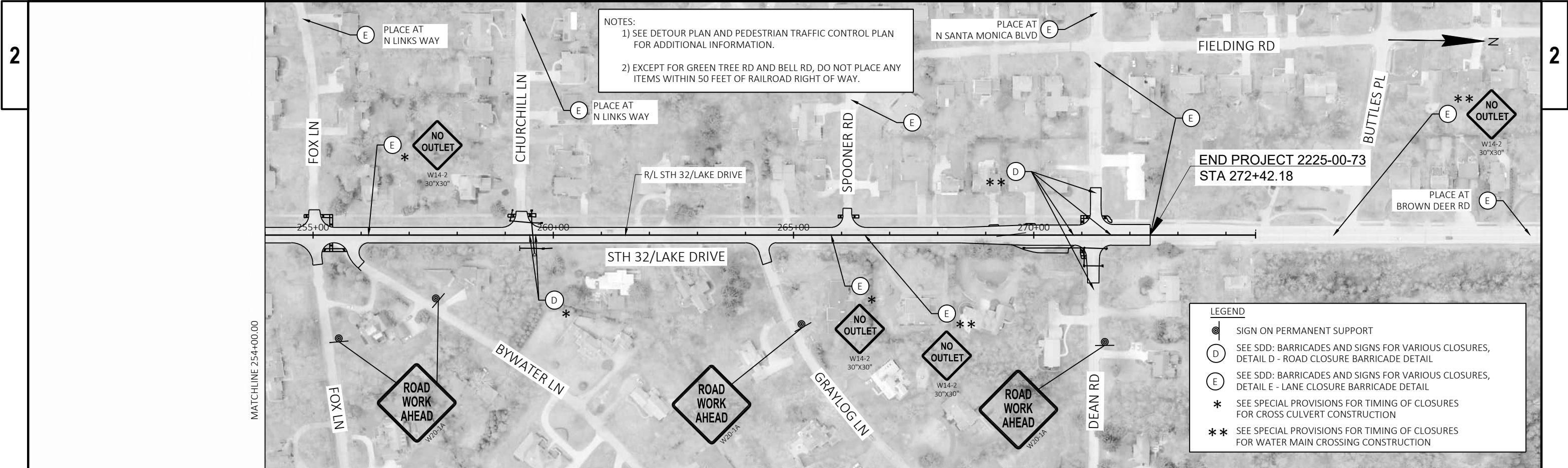




NOTES:  
1) SEE DETOUR PLAN AND PEDESTRIAN TRAFFIC CONTROL PLAN FOR ADDITIONAL INFORMATION.  
2) EXCEPT FOR GREEN TREE RD AND BELL RD, DO NOT PLACE ANY ITEMS WITHIN 50 FEET OF RAILROAD RIGHT OF WAY.

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- SEE SDD: BARRICADES AND SIGNS FOR VARIOUS CLOSURES, DETAIL D - ROAD CLOSURE BARRICADE DETAIL
- SEE SDD: BARRICADES AND SIGNS FOR VARIOUS CLOSURES, DETAIL E - LANE CLOSURE BARRICADE DETAIL
- SEE SPECIAL PROVISIONS FOR TIMING OF CLOSURES FOR CROSS CULVERT CONSTRUCTION
- SEE SPECIAL PROVISIONS FOR TIMING OF CLOSURES FOR WATER MAIN CROSSING CONSTRUCTION



ANTICIPATED SEQUENCE OF CONSTRUCTION OPERATIONS

WATER MAIN  
STORM SEWER  
ROADWAY WIDENING ON BOTH SIDES  
MILL EXISTING SURFACE AND PAVE LOWER LEVEL HMA, ONE DIRECTION AT A TIME  
PAVE SURFACE LAYER HMA, ONE DIRECTION AT A TIME

TRAFFIC

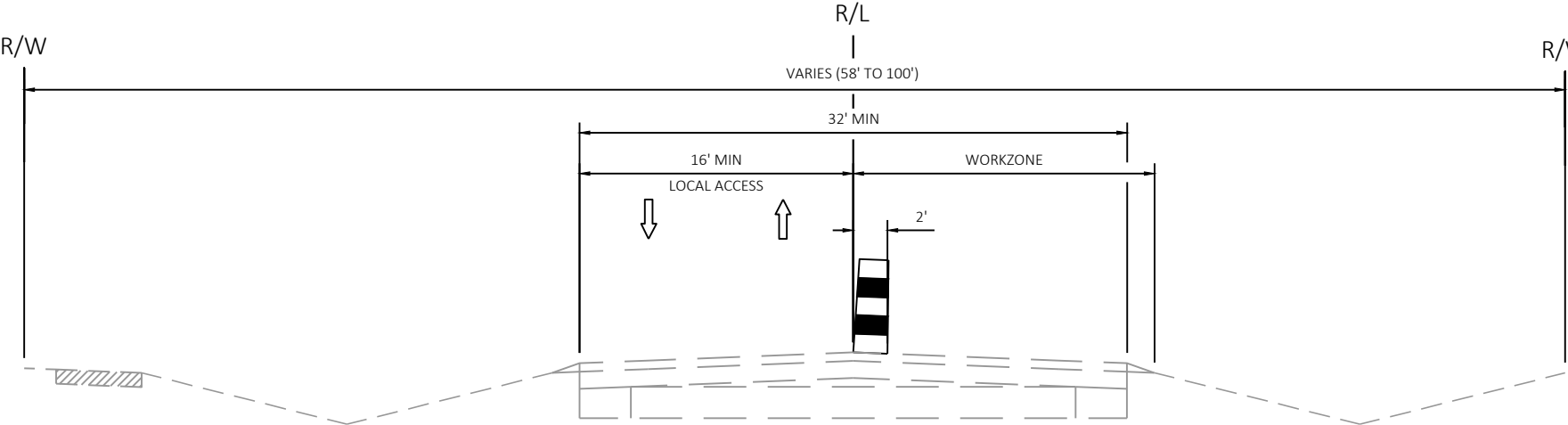
STH 32 (LAKE DR) IS CLOSED TO THROUGH TRAFFIC. SEE DETOUR PLAN.

LOCAL AND EMERGENCY ACCESS IS MAINTAINED ON PAVEMENT. A MINIMUM WIDTH OF 16 FEET IS REQUIRED FOR TWO-WAY LOCAL TRAFFIC. FLAGGING OPERATIONS MUST BE USED WHEN WIDTH IS REDUCED TO LESS THAN 16 FEET.

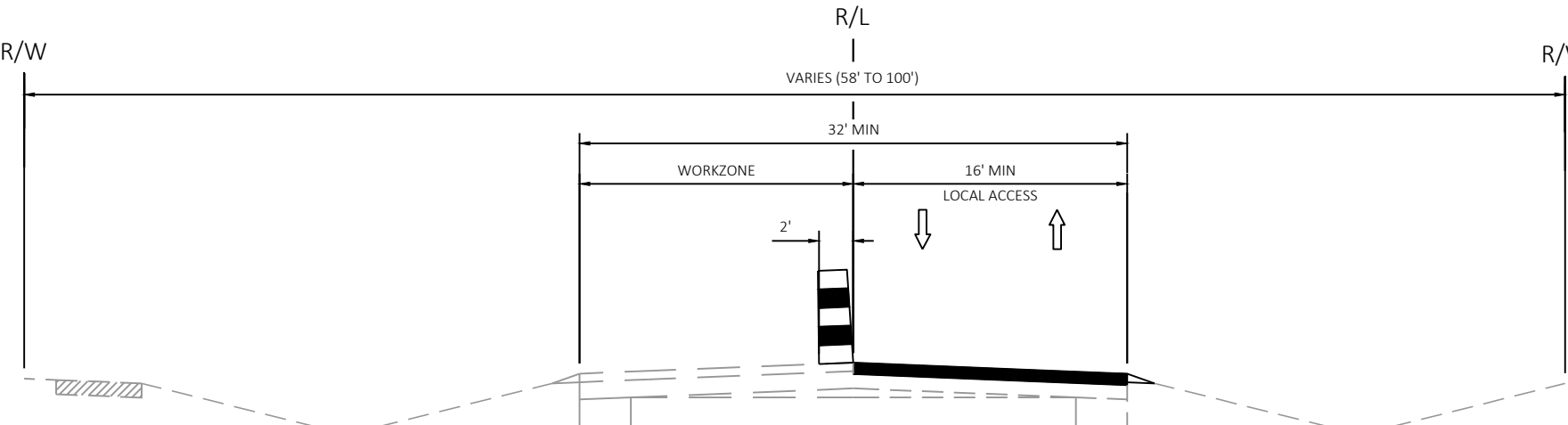
TEMPORARY FULL CLOSURES OF STH 32 WILL BE REQUIRED FOR STORM SEWER AND WATER MAIN CROSSINGS. ONLY ONE FULL CLOSURE MAY BE IN PLACE AT A TIME.

PEDESTRIAN ACCESS IS MAINTAINED AT ALL TIMES.

NOTE:  
MAINTAIN 16' MIN WIDTH ON PAVEMENT FOR TWO-WAY TRAFFIC.  
USE FLAGGING OPERATION DURING MILLING AND PAVING  
WHEN WIDTH IS REDUCED TO LESS THAN 16'.



STH 32 (LAKE DRIVE) TYPICAL SECTION - LOCAL ACCESS ON EXISTING PAVEMENT

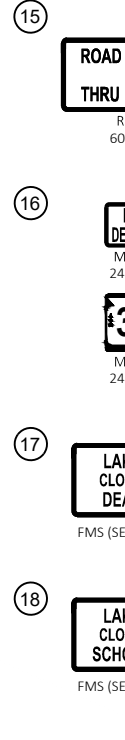
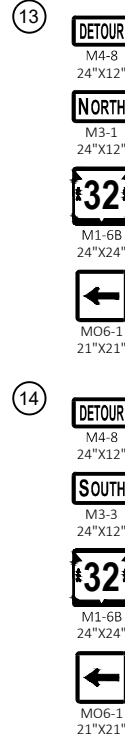
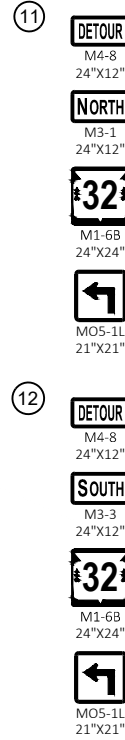
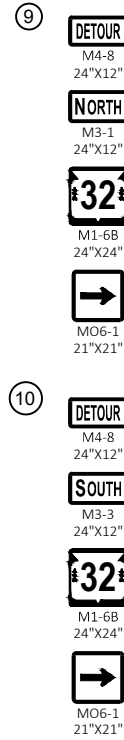
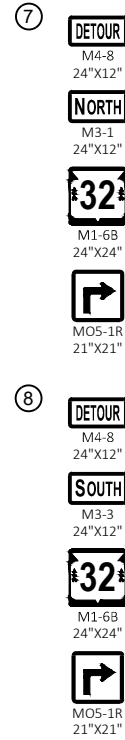
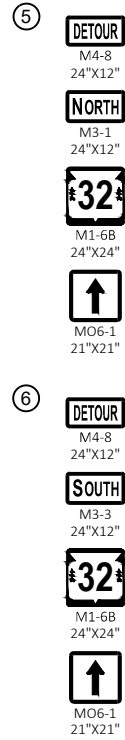
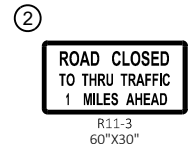
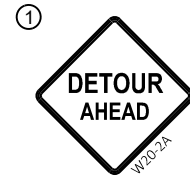


STH 32 (LAKE DRIVE) TYPICAL SECTION - LOCAL ACCESS ON PROPOSED PAVEMENT



LEGEND

- — DETOUR ROUTE
- WORKZONE - ROAD CLOSED
- † TYPE III BARRICADE WITH ATTACHED SIGN AND TWO TYPE "A" WARNING LIGHTS
- ⊙ SIGN ON PERMANENT SUPPORT



NOTES:

- SEE SDD: BARRICADES AND SIGNS FOR MAINLINE CLOSURES.
- SEE SDD: BARRICADES AND SIGNS FOR VARIOUS CLOSURES.
- SEE SDD: BARRICADES AND SIGNS FOR SIDE ROAD CLOSURES.
- SEE TRAFFIC CONTROL OVERVIEW AND PEDESTRIAN TRAFFIC CONTROL PLAN FOR ADDITIONAL INFORMATION.
- EXCEPT FOR GREEN TREE RD AND BELL RD, DO NOT PLACE ANY ITEMS WITHIN 50 FEET OF RAILROAD RIGHT OF WAY.



PEDESTRIAN TRAFFIC CONTROL LEGEND

- x x x x x x x x

CLOSED PEDESTRIAN ROUTE
- — — —

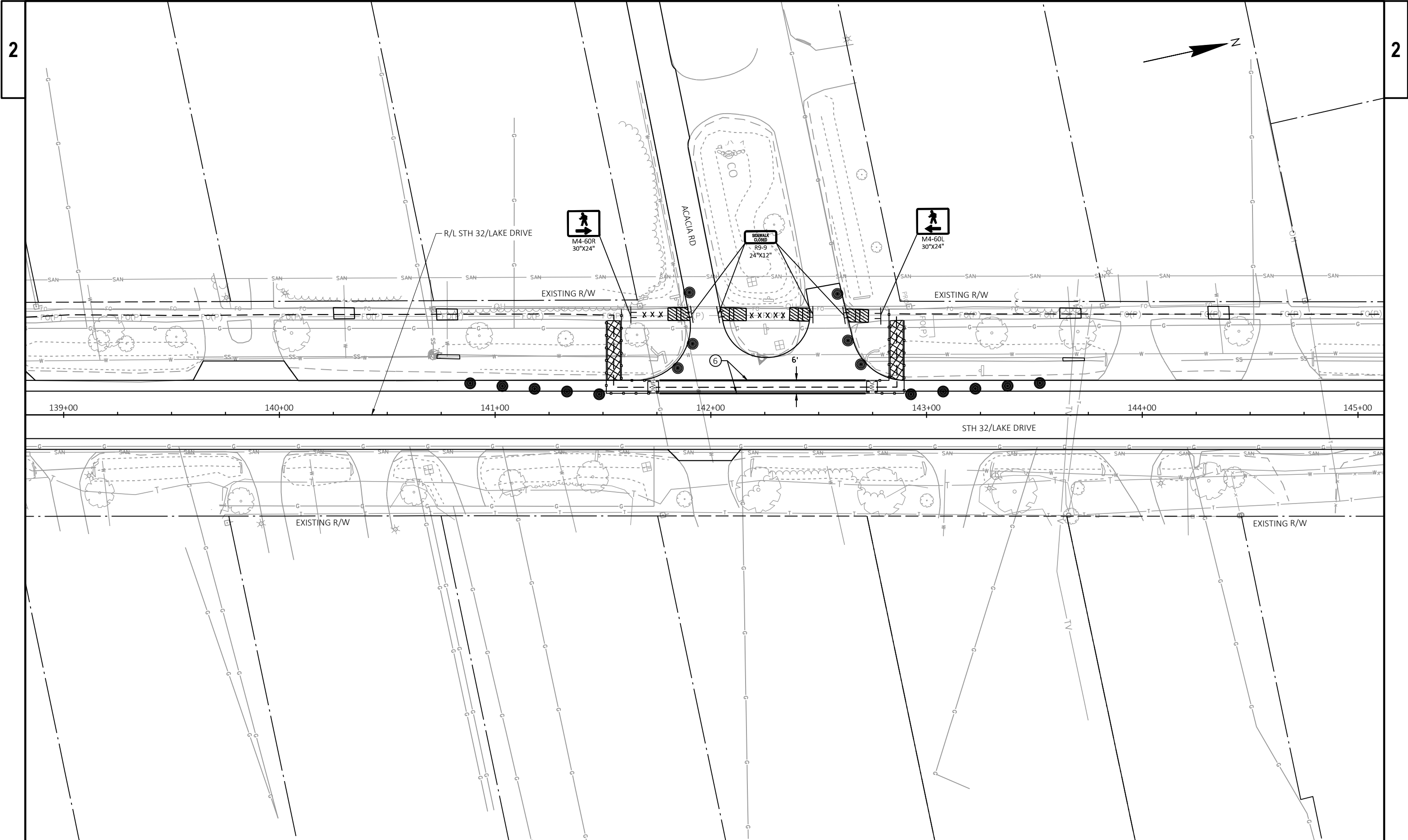
OPEN PEDESTRIAN ROUTE
- WORK ZONE
- CR

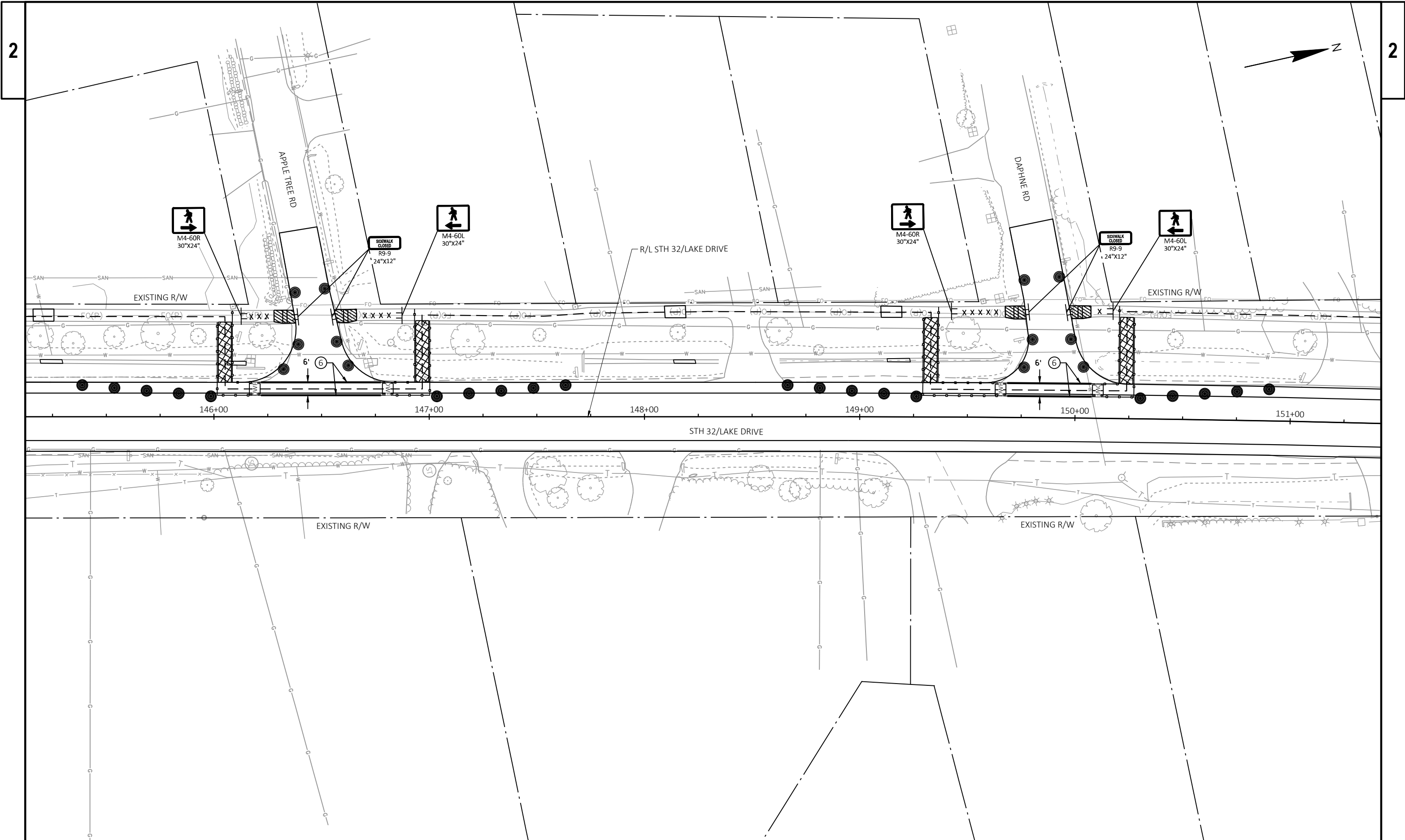
TEMPORARY PEDESTRIAN CURB RAMP
- DWF

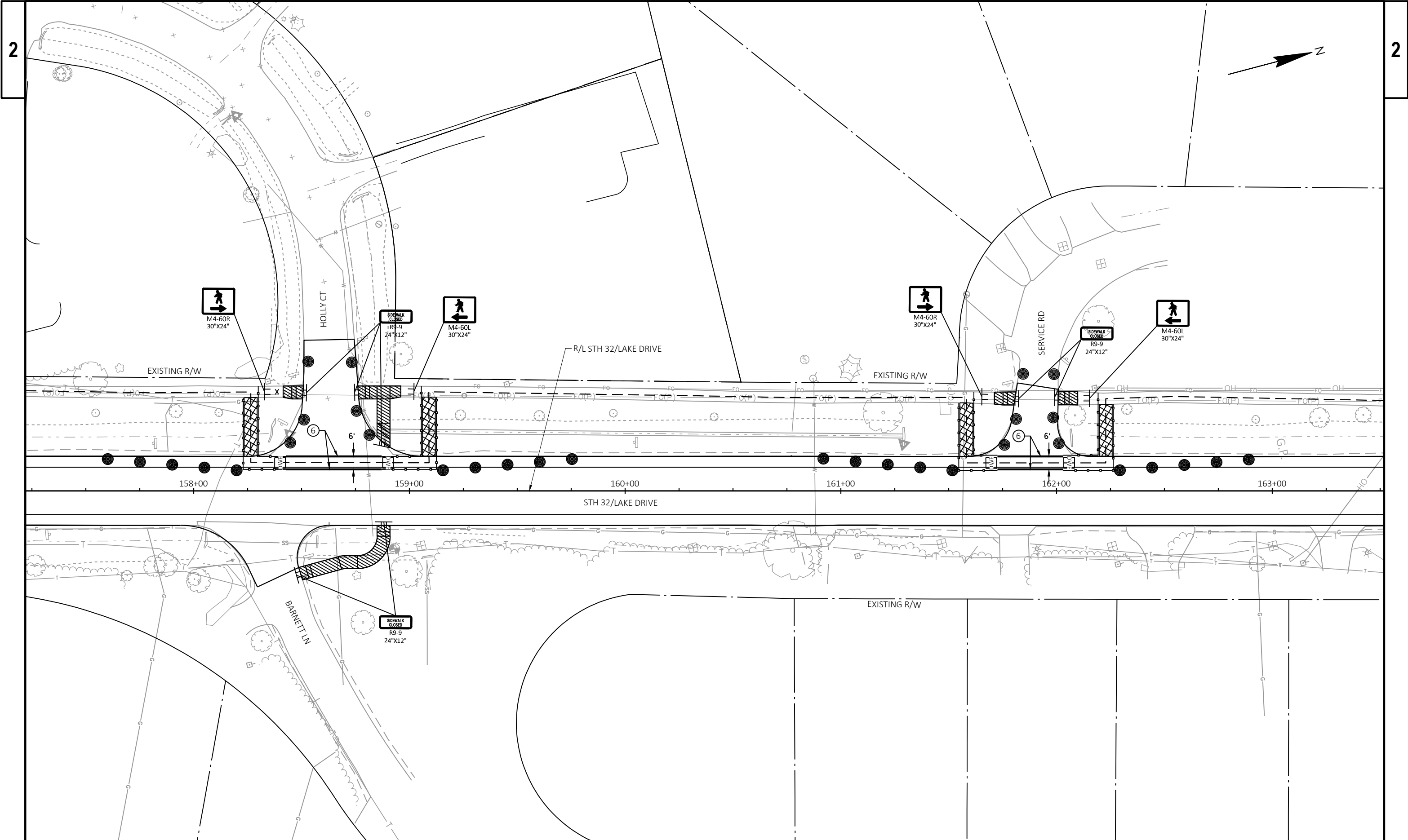
TEMPORARY PEDESTRIAN DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN SURFACE
- TEMPORARY PEDESTRIAN BARRICADE
- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TYPE III BARRICADE WITH TWO TYPE "A" WARNING LIGHTS
- TYPE III BARRICADE WTH ATTACHED SIGN AND TWO TYPE "A" WARNING LIGHTS
- 6

TEMPORARY MARKING LINE CROSSWALK, REMOVABLE TAPE 6-INCH (WHITE)

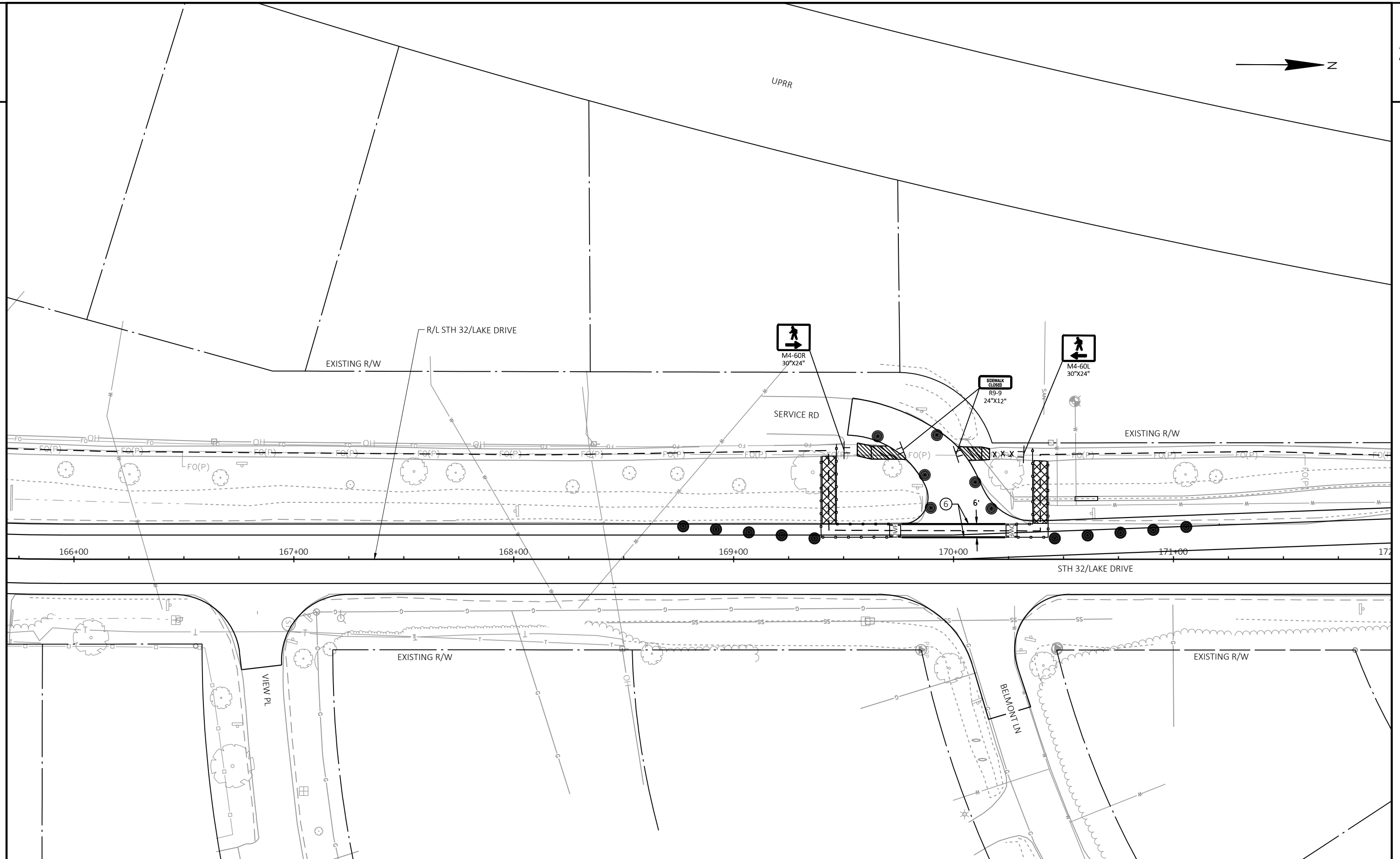
- NOTES:
- 1) SEE TRAFFIC CONTROL PLAN AND DETOUR PLAN FOR ADDITIONAL INFORMATION.
- 2) SEE STANDARD DETAIL DRAWING: "TRAFFIC CONTROL, PEDESTRIAN ACCOMODATION."
- 3) MAINTAIN PEDESTRIAN ACCESS ALONG EXISTING ROUTES OR TEMPORARY ROUTES THROUGHOUT THE DURATION OF THE PROJECT.
- 4) ITEMS REQUIRED FOR TEMPORARY PEDESTRIAN ACCOMMODATIONS WILL BE PAID FOR UNDER ITEM "TEMPORARY PEDESTRIAN CROSSINGS" SEE SPECIFICATIONS.
- 5) TEMPORARY PEDESTRIAN ROUTES ARE SHOWN AT SUGGESTED LOCATIONS. FINAL LOCATIONS AND CONFIGURATIONS TO BE APPROVED BY THE ENGINEER IN THE FIELD.
- 6) WHERE TEMPORARY PEDESTRIAN ROUTES CROSS DITCH LINES, MAINTAIN POSITIVE DRAINAGE AT ALL TIMES.
- 7) SIDE SLOPES ALONG TEMPORARY PEDESTRIAN ROUTES SHALL BE FLATTER THAN 3:1 OR PROTECTED WITH A RAILING.
- 8) WHERE PEDESTRIAN ROUTES ARE BLOCKED BY WATER MAIN CONSTRUCTION, ESCORT PEDESTRIANS THROUGH THE WORK ZONE AND RESTORE THE PEDESTRIAN ROUTE WITH TEMPORARY OR PERMANENT SURFACE BY THE END OF THE WORK DAY.
- 9) EXCEPT FOR GREEN TREE RD AND BELL RD, DO NOT PLACE ANY ITEMS WITHIN 50 FEET OF RAILROAD RIGHT OF WAY.











PROJECT NO: 2225-00-73

HWY: STH 32

COUNTY: MILWAUKEE

PEDESTRIAN TRAFFIC CONTROL PLAN

SHEET

245

E

FILE NAME : S:\MILW\_CO\FOX POINT\GOV\210250\_LAKE DRIVE RESURFACE\22250003\SHEETS\PLAN\027101-DT.DWG  
LAYOUT NAME - 04

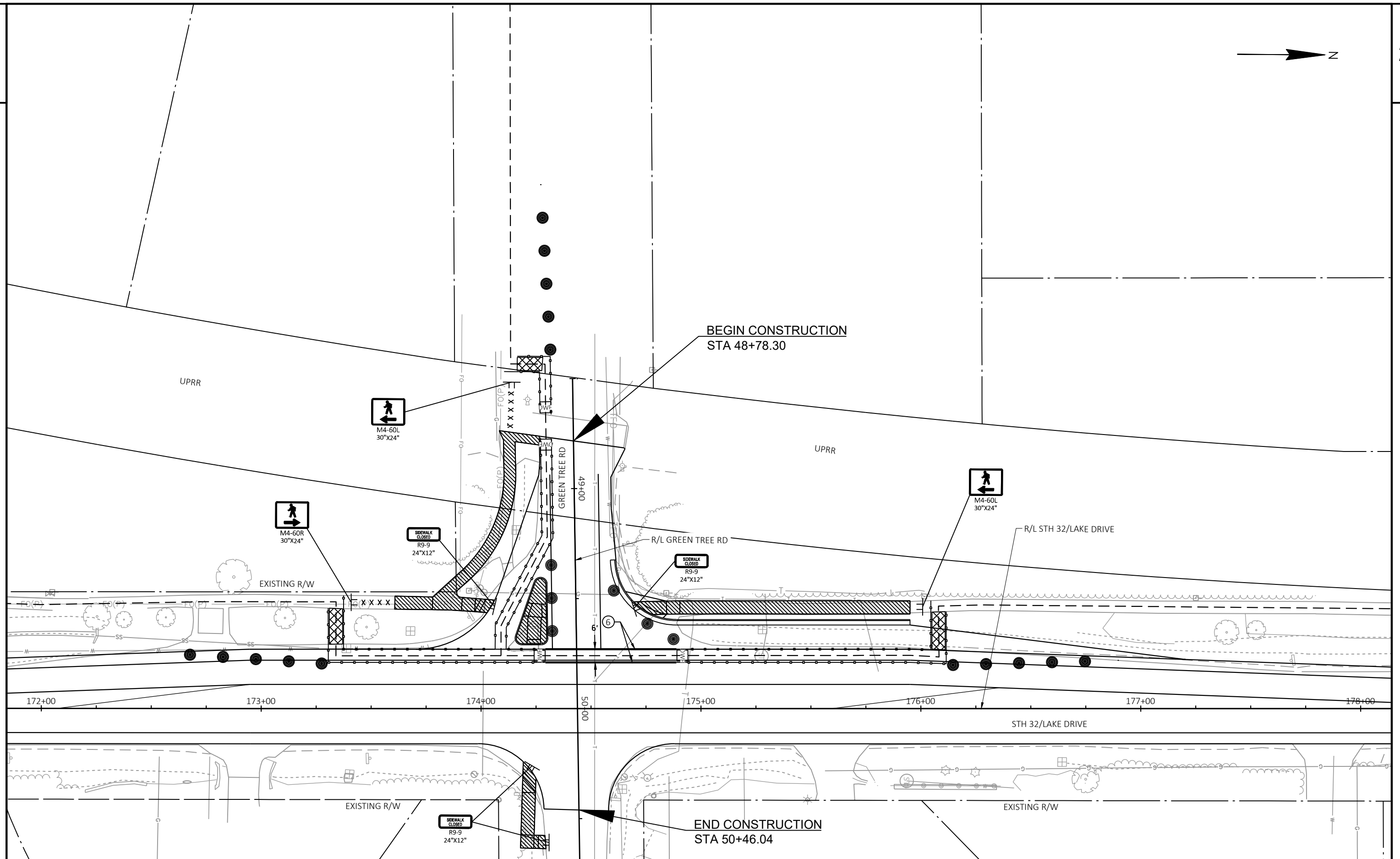
PLOT DATE : 10/14/2024 3:43 PM

PLOT BY : WALTER A. WOLAK II

PLOT NAME :

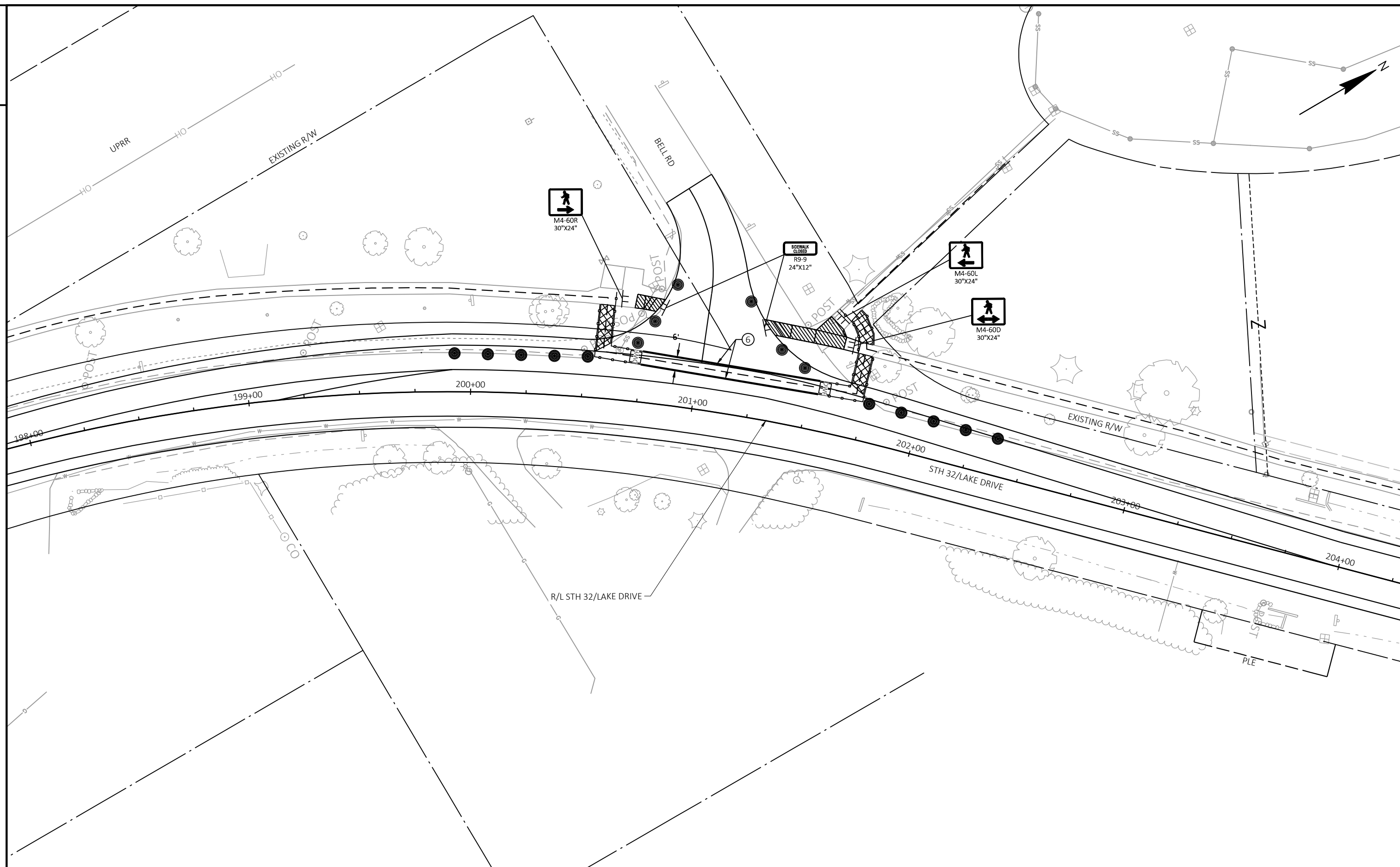
PLOT SCALE : 1 IN=40 FT

WISDOT/CADDs SHEET 42



2

2



|             |            |
|-------------|------------|
| PROJECT NO: | 2225-00-73 |
|-------------|------------|

HWY: STH 32

COUNTY: MILWAUKEE

PEDESTRIAN TRAFFIC CONTROL PLAN

|       |     |   |
|-------|-----|---|
| SHEET | 247 | E |
|-------|-----|---|

FILE NAME : S:\MILW\_CO\FOX POINT\GOV\210250\_LAKE DRIVE RESURFACE\22250003\SHEETSPLAN\027101-DT.DWG  
LAYOUT NAME - 06

PLOT DATE : 10/14/2024 3:43 PM

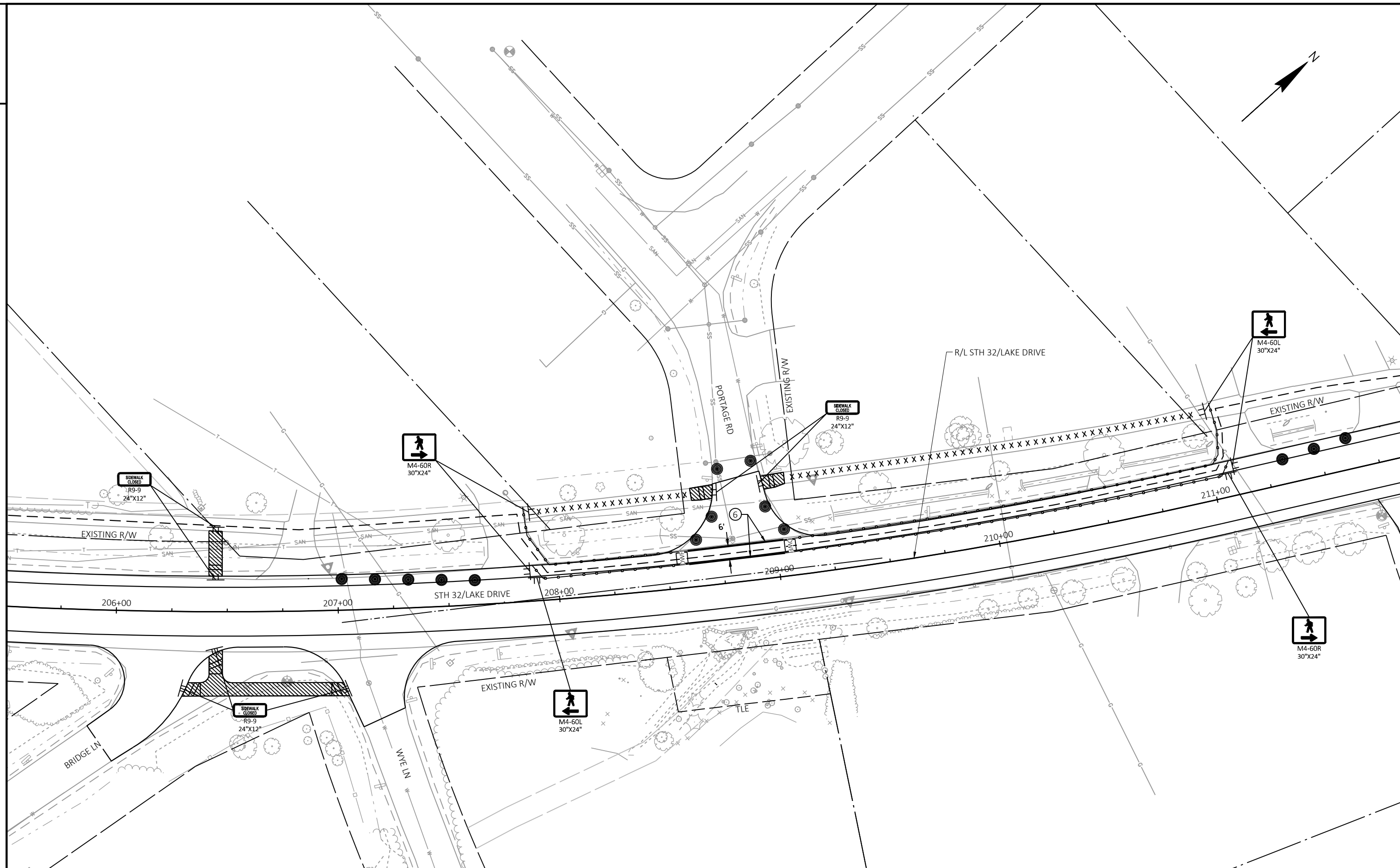
PLOT BY : WALTER A. WOLAK II

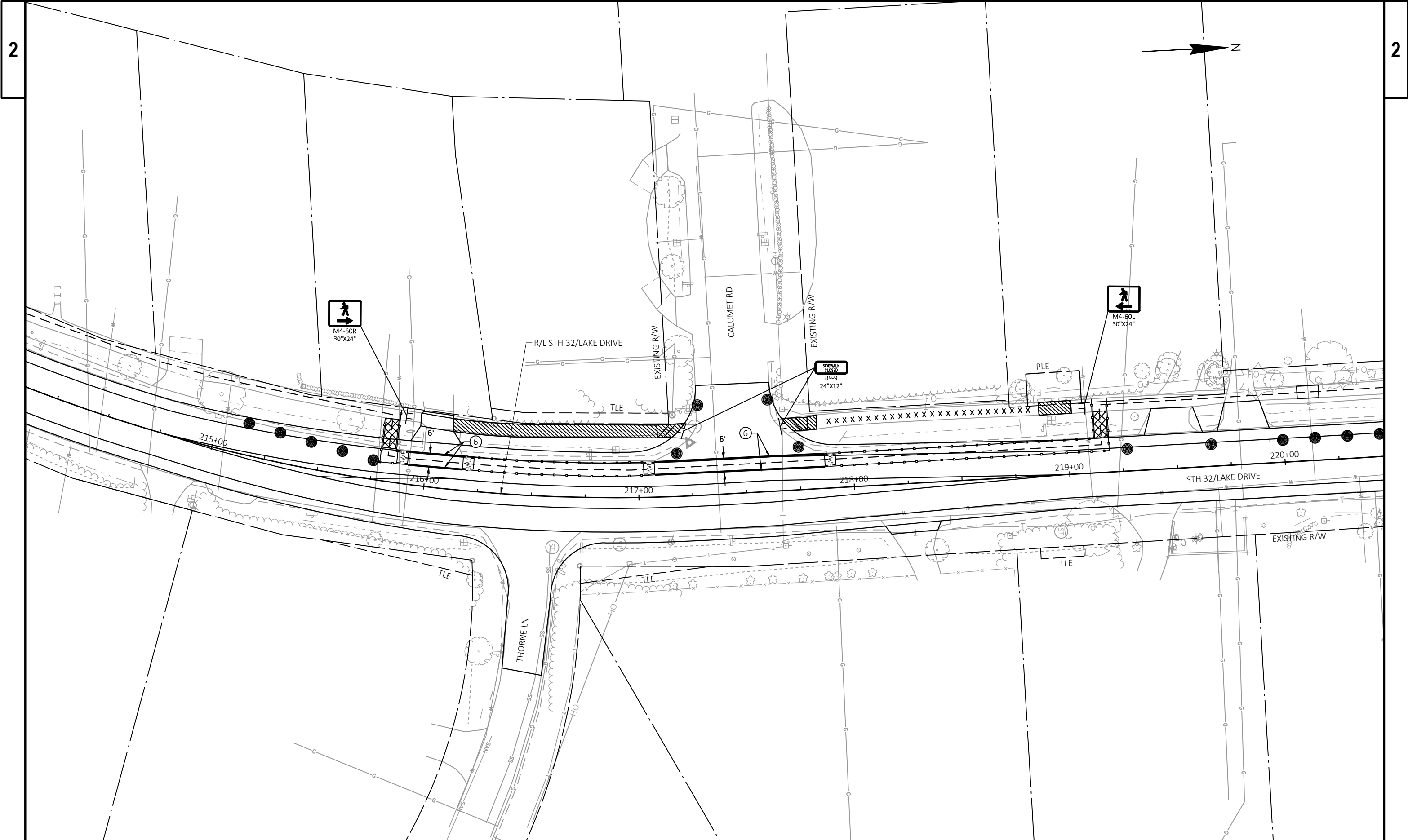
---

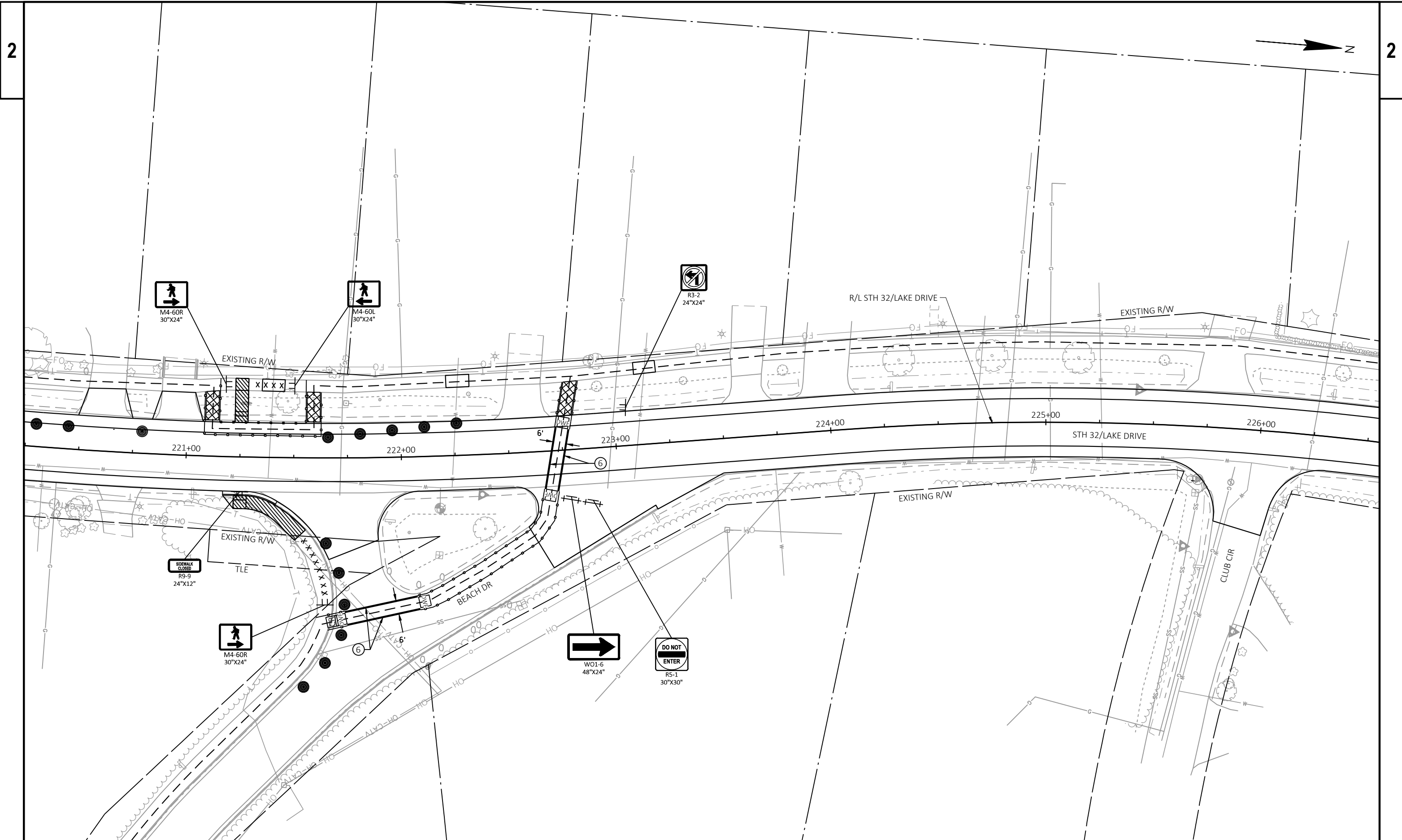
PLOT NAME :

PLOT SCALE : 1 IN:40 FT

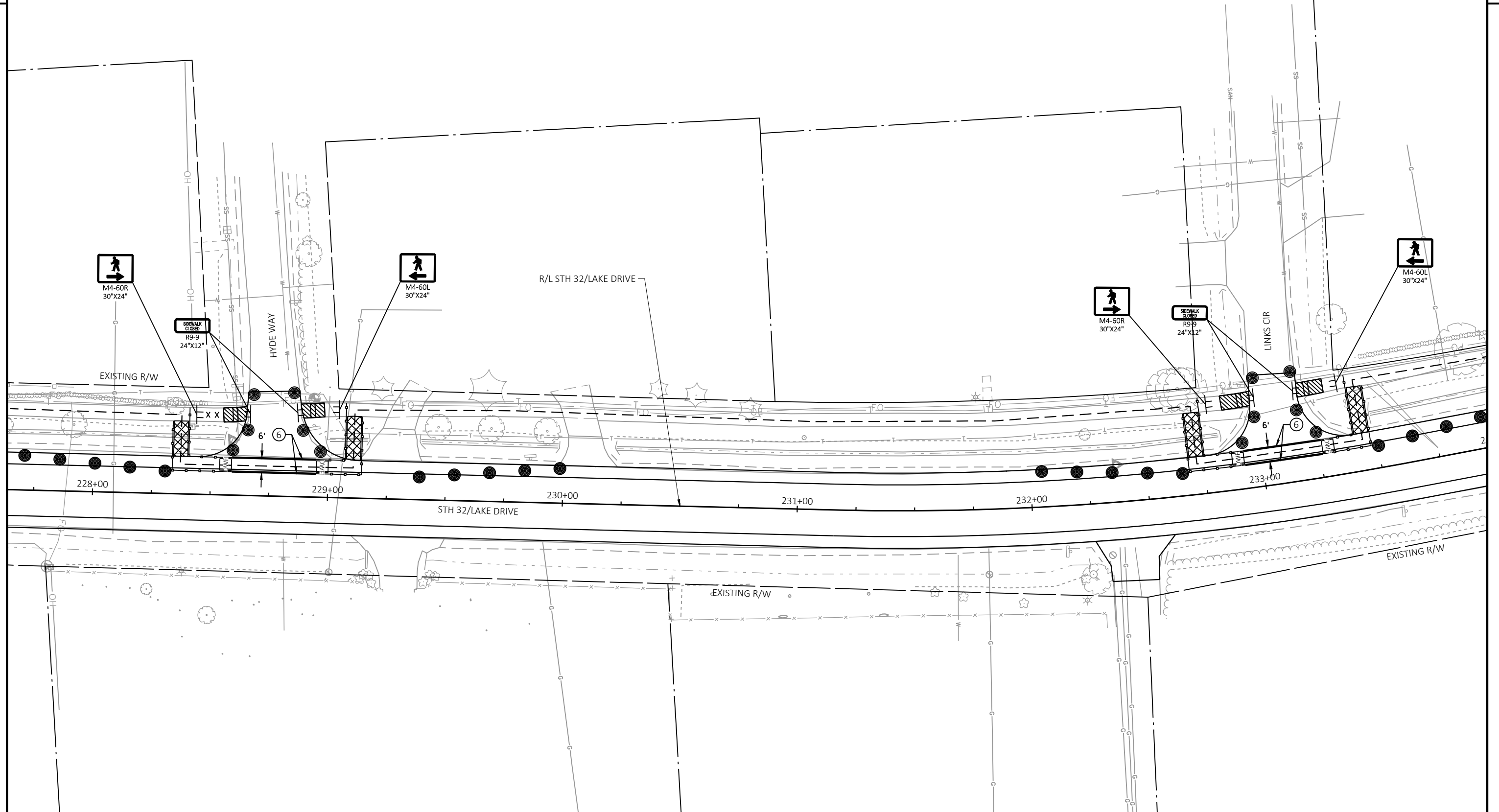
WISDOT/CADDS SHEET 42



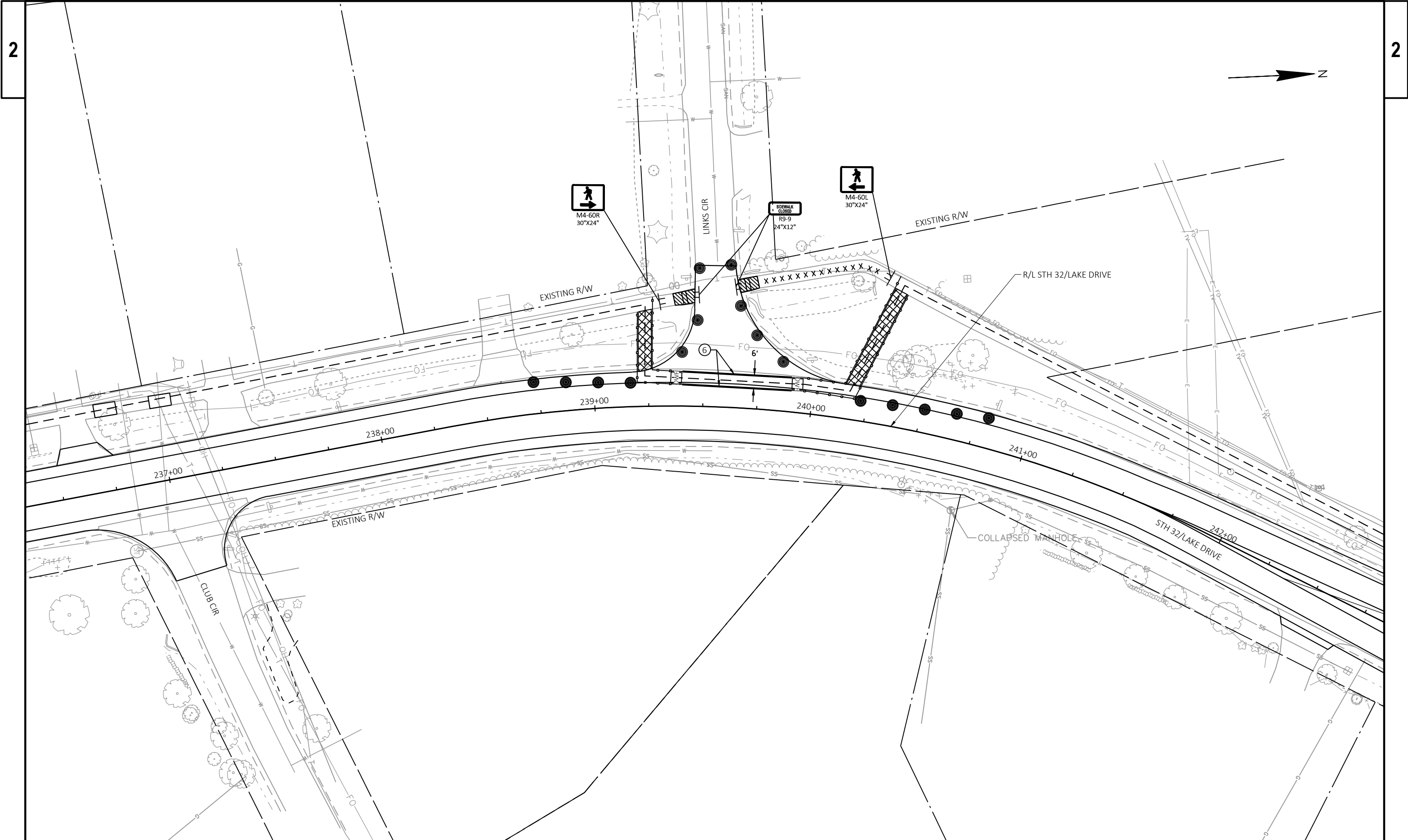


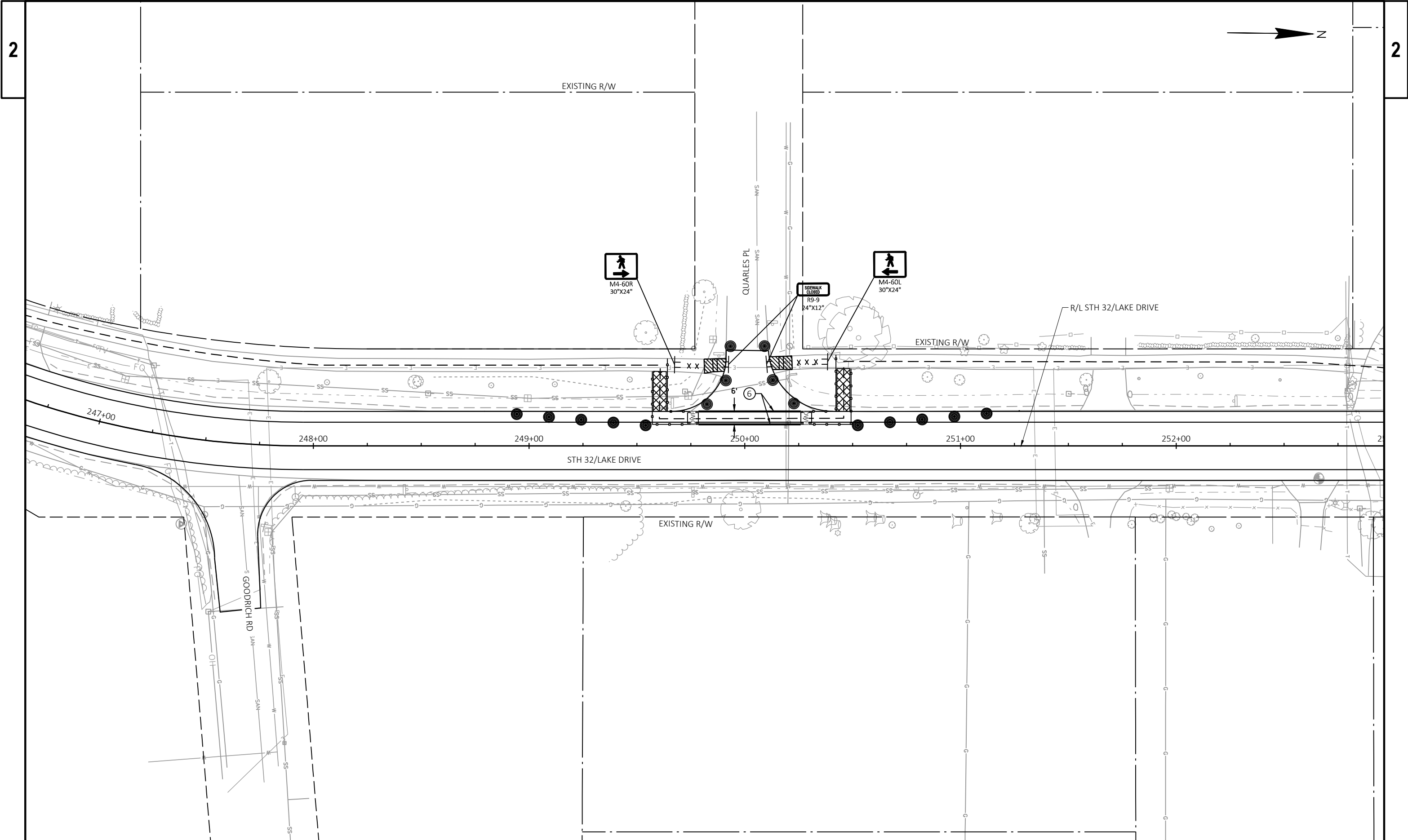


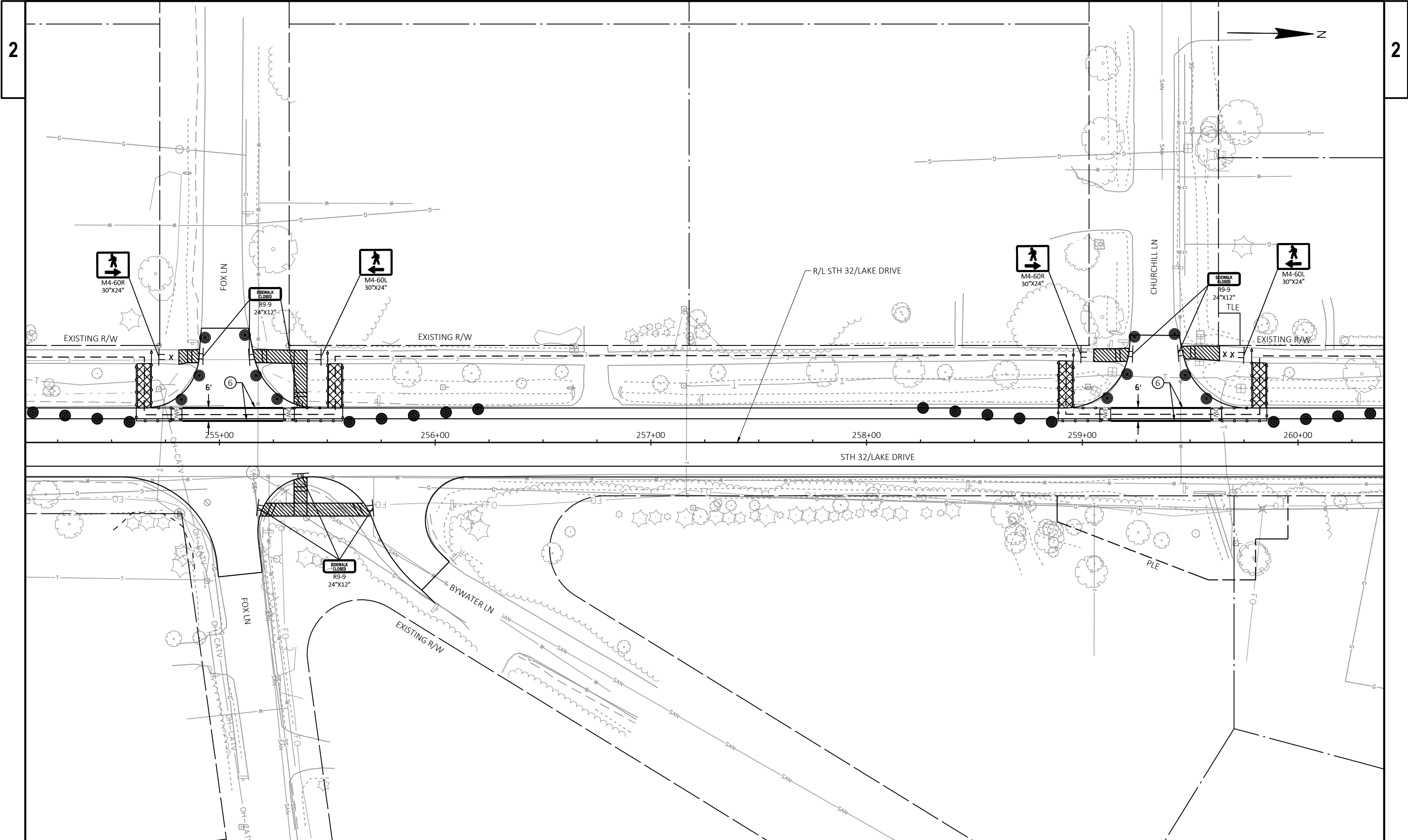


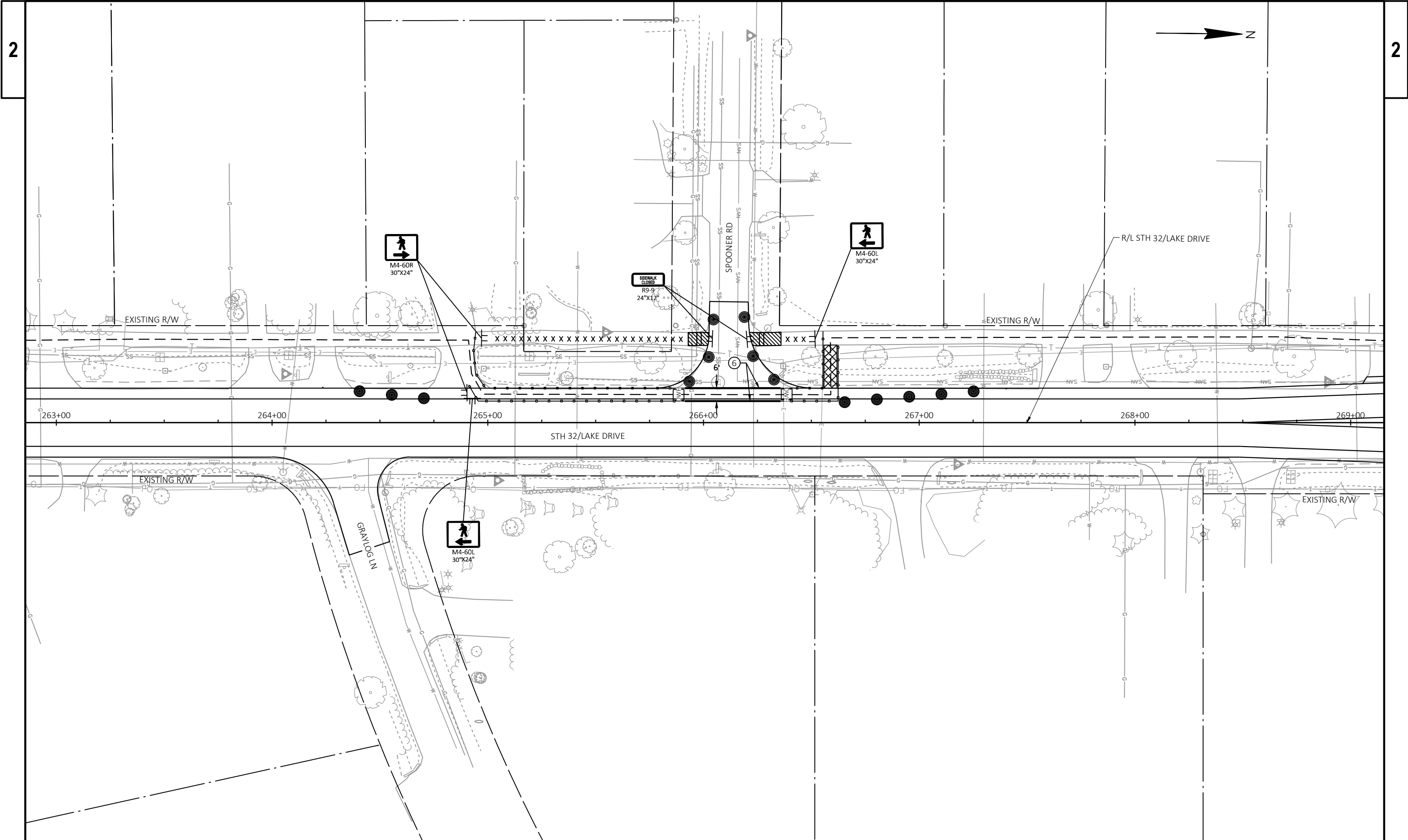


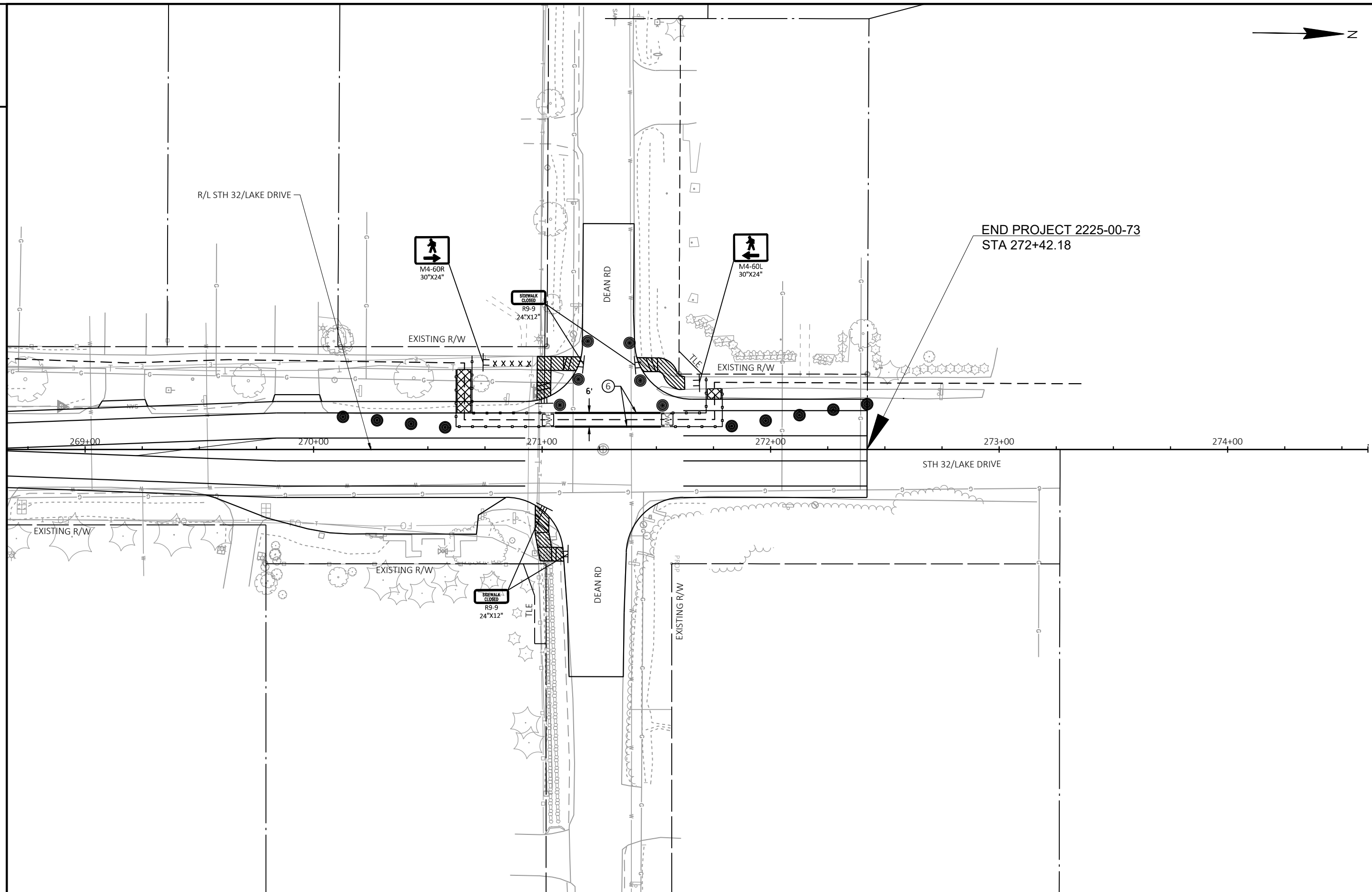












PROJECT NO: 2225-00-73

HWY: STH 32

COUNTY: MILWAUKEE

PEDESTRIAN TRAFFIC CONTROL PLAN

SHEET

256

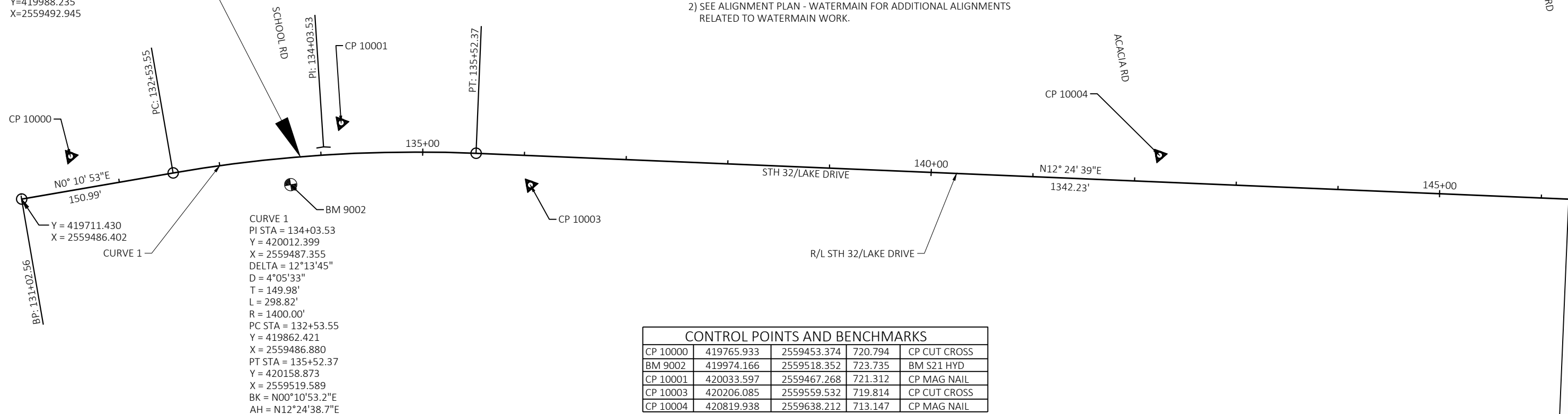
E

2

STA 133+79.56

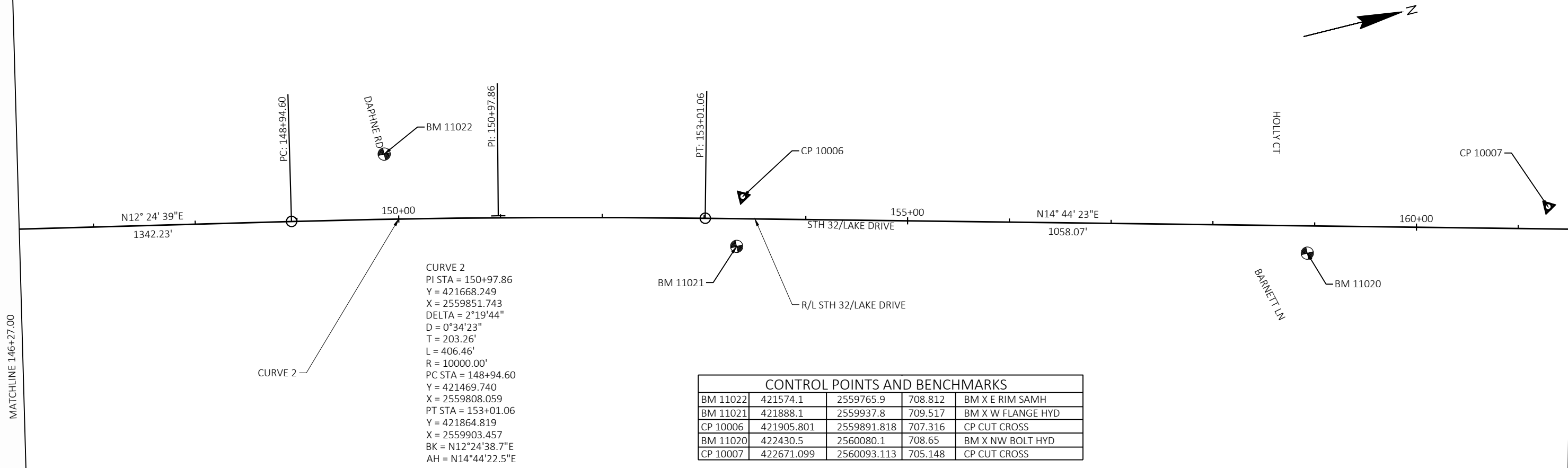
$$Y=419988.235$$
$$X=2559492.945$$

- 1) SEE ALIGNMENT PLAN - SB & NB ALIGNMENTS FOR SUPPLEMENTAL LANE ALIGNMENTS AT INTERSECTIONS.
- 2) SEE ALIGNMENT PLAN - WATERMAIN FOR ADDITIONAL ALIGNMENTS RELATED TO WATERMAIN WORK.



| CONTROL POINTS AND BENCHMARKS |            |             |         |              |
|-------------------------------|------------|-------------|---------|--------------|
| CP 10000                      | 419765.933 | 2559453.374 | 720.794 | CP CUT CROSS |
| BM 9002                       | 419974.166 | 2559518.352 | 723.735 | BM S21 HYD   |
| CP 10001                      | 420033.597 | 2559467.268 | 721.312 | CP MAG NAIL  |
| CP 10003                      | 420206.085 | 2559559.532 | 719.814 | CP CUT CROSS |
| CP 10004                      | 420819.938 | 2559638.212 | 713.147 | CP MAG NAIL  |

P 10005

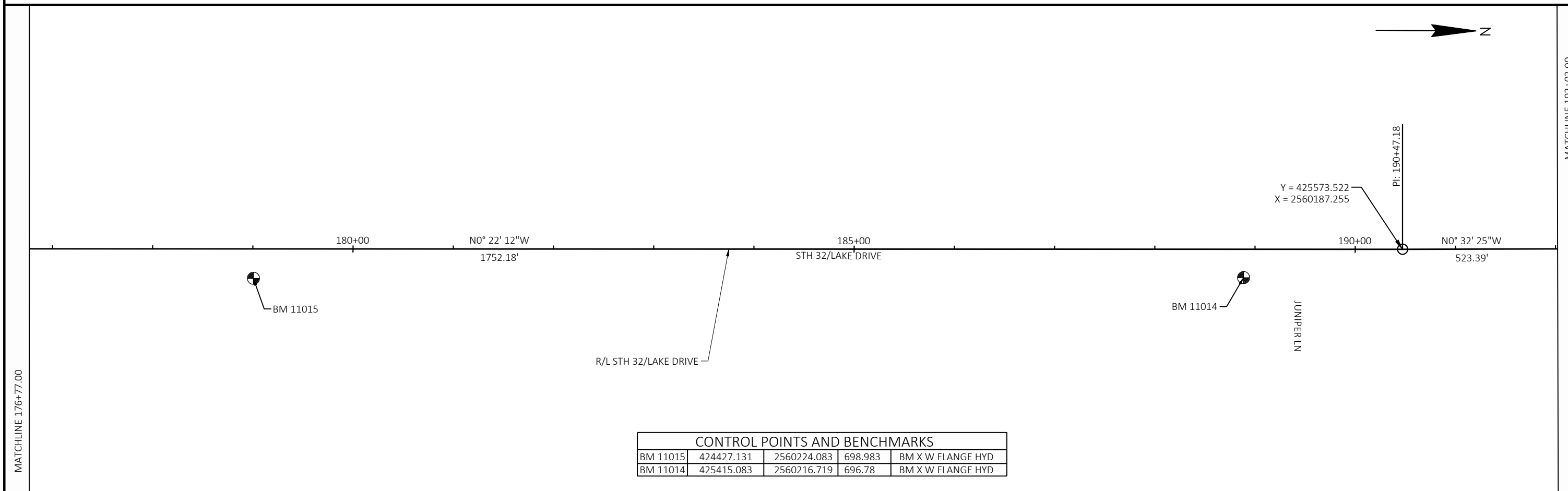
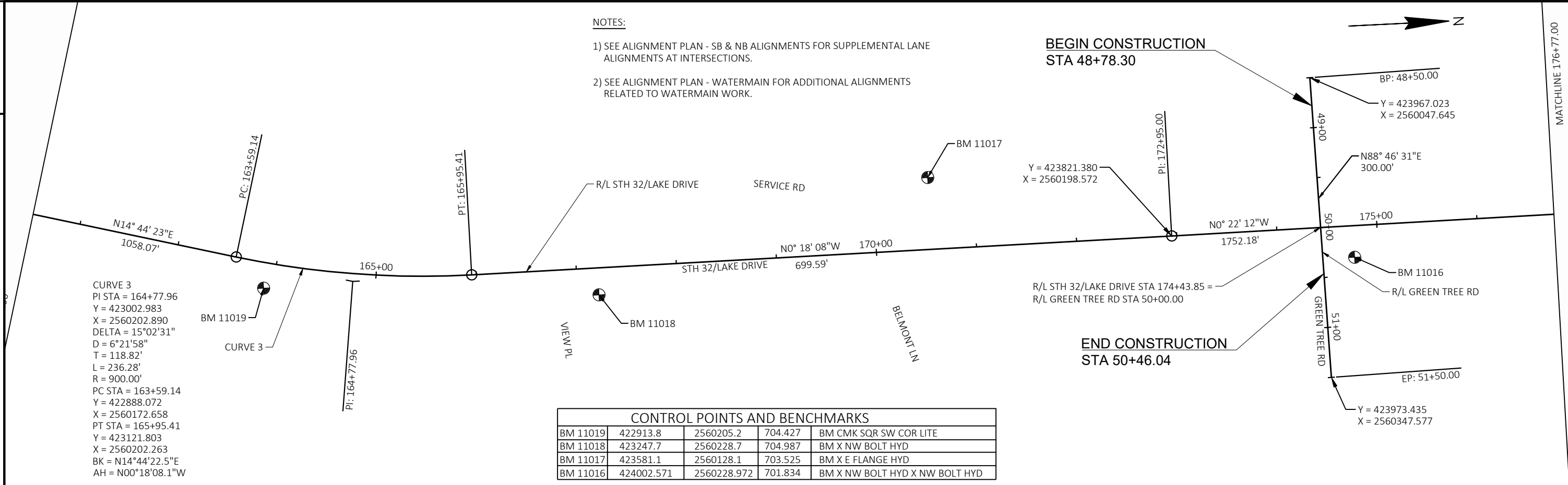


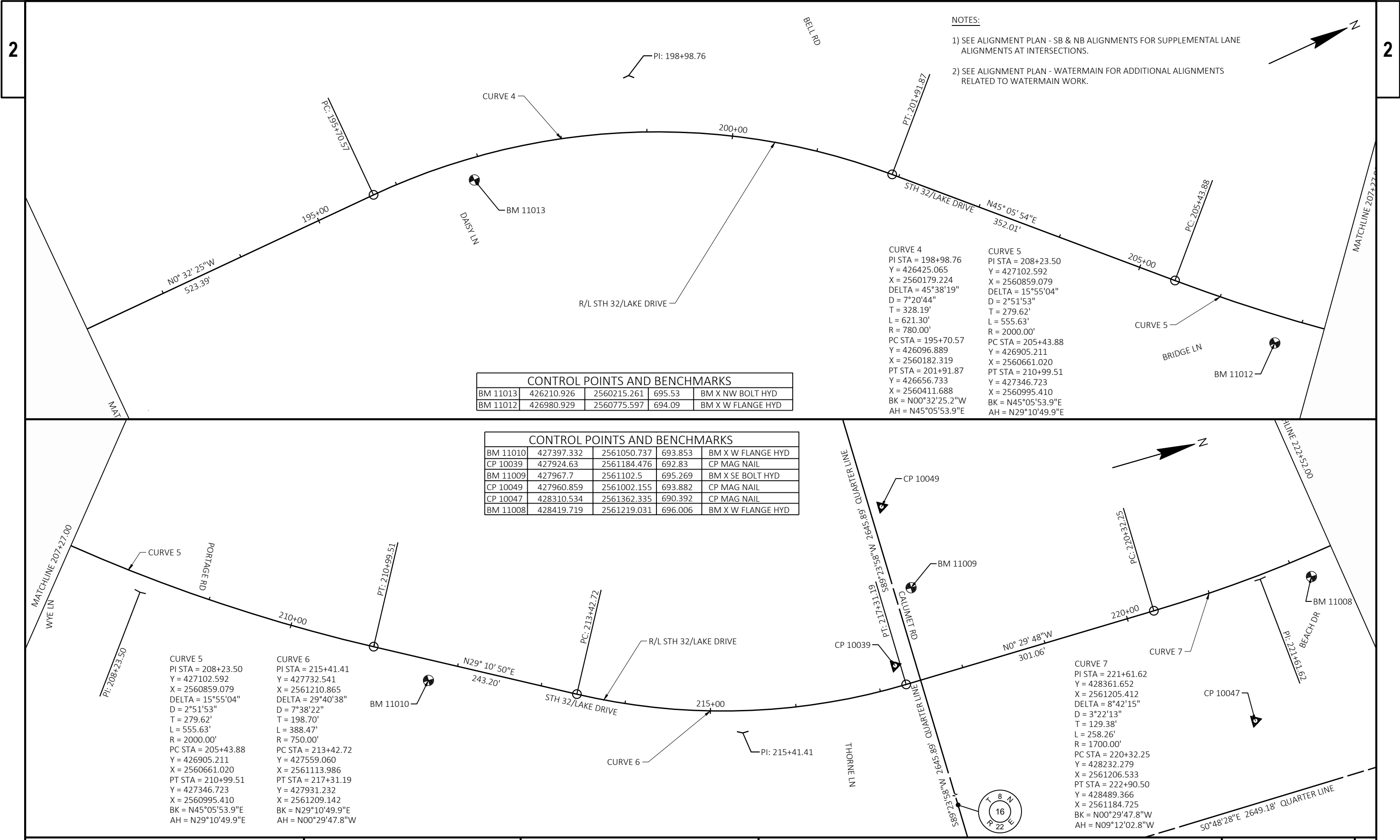
| CONTROL POINTS AND BENCHMARKS |            |             |         |                   |
|-------------------------------|------------|-------------|---------|-------------------|
| BM 11022                      | 421574.1   | 2559765.9   | 708.812 | BM X E RIM SAMH   |
| BM 11021                      | 421888.1   | 2559937.8   | 709.517 | BM X W FLANGE HYD |
| CP 10006                      | 421905.801 | 2559891.818 | 707.316 | CP CUT CROSS      |
| BM 11020                      | 422430.5   | 2560080.1   | 708.65  | BM X NW BOLT HYD  |
| CP 10007                      | 422671.099 | 2560093.113 | 705.148 | CP CUT CROSS      |



2

2





- NOTES:
- 1) SEE ALIGNMENT PLAN - SB & NB ALIGNMENTS FOR SUPPLEMENTAL LANE ALIGNMENTS AT INTERSECTIONS.
  - 2) SEE ALIGNMENT PLAN - WATERMAIN FOR ADDITIONAL ALIGNMENTS RELATED TO WATERMAIN WORK.

| CONTROL POINTS AND BENCHMARKS |            |             |        |                   |
|-------------------------------|------------|-------------|--------|-------------------|
| BM 11013                      | 426210.926 | 2560215.261 | 695.53 | BM X NW BOLT HYD  |
| BM 11012                      | 426980.929 | 2560775.597 | 694.09 | BM X W FLANGE HYD |

CURVE 4  
PI STA = 198+98.76  
Y = 426425.065  
X = 2560179.224  
DELTA = 45°38'19"  
D = 7°20'44"  
T = 328.19'  
L = 621.30'  
R = 780.00'  
PC STA = 195+70.57  
Y = 426096.889  
X = 2560182.319  
PT STA = 201+91.87  
Y = 426656.733  
X = 2560411.688  
BK = N00°32'25.2"W  
AH = N45°05'53.9"E

CURVE 5  
PI STA = 208+23.50  
Y = 427102.592  
X = 2560859.079  
DELTA = 15°55'04"  
D = 2°51'53"  
T = 279.62'  
L = 555.63'  
R = 2000.00'  
PC STA = 205+43.88  
Y = 426905.211  
X = 2560661.020  
PT STA = 210+99.51  
Y = 427346.723  
X = 2560995.410  
BK = N45°05'53.9"E  
AH = N29°10'49.9"E

| CONTROL POINTS AND BENCHMARKS |            |             |         |                   |
|-------------------------------|------------|-------------|---------|-------------------|
| BM 11010                      | 427397.332 | 2561050.737 | 693.853 | BM X W FLANGE HYD |
| CP 10039                      | 427924.63  | 2561184.476 | 692.83  | CP MAG NAIL       |
| BM 11009                      | 427967.7   | 2561102.5   | 695.269 | BM X SE BOLT HYD  |
| CP 10049                      | 427960.859 | 2561002.155 | 693.882 | CP MAG NAIL       |
| CP 10047                      | 428310.534 | 2561362.335 | 690.392 | CP MAG NAIL       |
| BM 11008                      | 428419.719 | 2561219.031 | 696.006 | BM X W FLANGE HYD |

CURVE 5  
PI STA = 208+23.50  
Y = 427102.592  
X = 2560859.079  
DELTA = 15°55'04"  
D = 2°51'53"  
T = 279.62'  
L = 555.63'  
R = 2000.00'  
PC STA = 205+43.88  
Y = 426905.211  
X = 2560661.020  
PT STA = 210+99.51  
Y = 427346.723  
X = 2560995.410  
BK = N45°05'53.9"E  
AH = N29°10'49.9"E

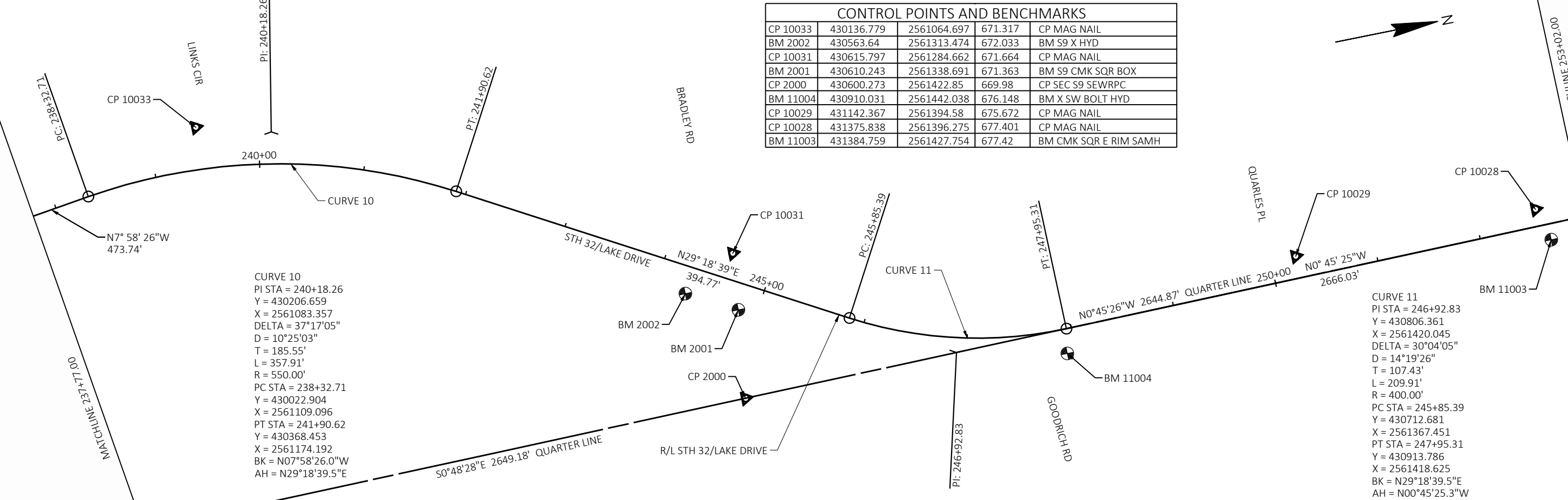
CURVE 6  
PI STA = 215+41.41  
Y = 427732.541  
X = 2561210.865  
DELTA = 29°40'38"  
D = 7°38'22"  
T = 198.70'  
L = 388.47'  
R = 750.00'  
PC STA = 213+42.72  
Y = 427559.060  
X = 2561113.986  
PT STA = 217+31.19  
Y = 427931.232  
X = 2561209.142  
BK = N29°10'49.9"E  
AH = N00°29'47.8"W

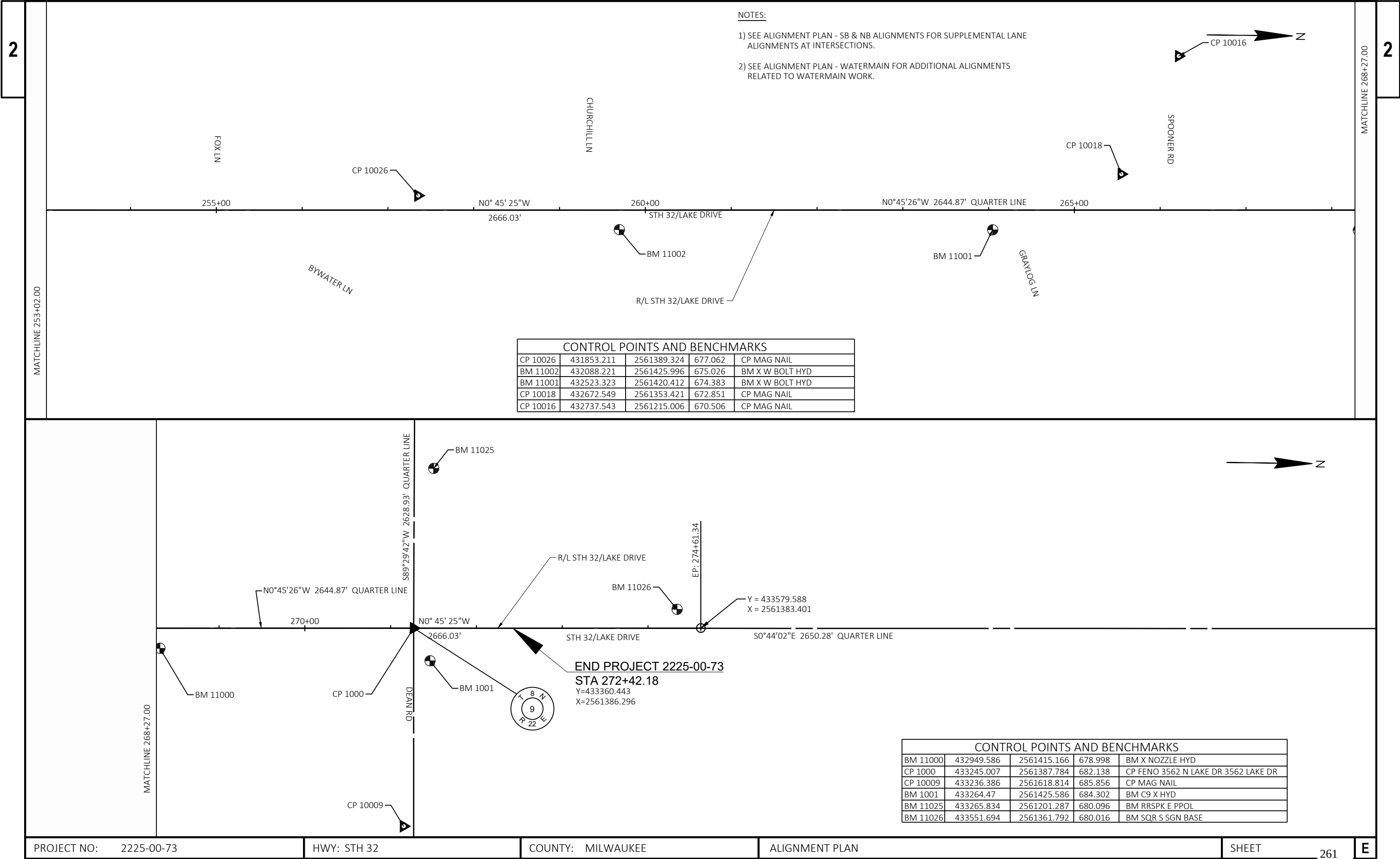
CURVE 7  
PI STA = 221+61.62  
Y = 428361.652  
X = 2561205.412  
DELTA = 8°42'15"  
D = 3°22'13"  
T = 129.38'  
L = 258.26'  
R = 1700.00'  
PC STA = 220+32.25  
Y = 428232.279  
X = 2561206.533  
PT STA = 222+90.50  
Y = 428489.366  
X = 2561184.725  
BK = N00°29'47.8"W  
AH = N09°12'02.8"W



**NOTES:**

- 1) SEE ALIGNMENT PLAN - SB & NB ALIGNMENTS FOR SUPPLEMENTAL LANE ALIGNMENTS AT INTERSECTIONS.
- 2) SEE ALIGNMENT PLAN - WATERMAIN FOR ADDITIONAL ALIGNMENTS RELATED TO WATERMAIN WORK.

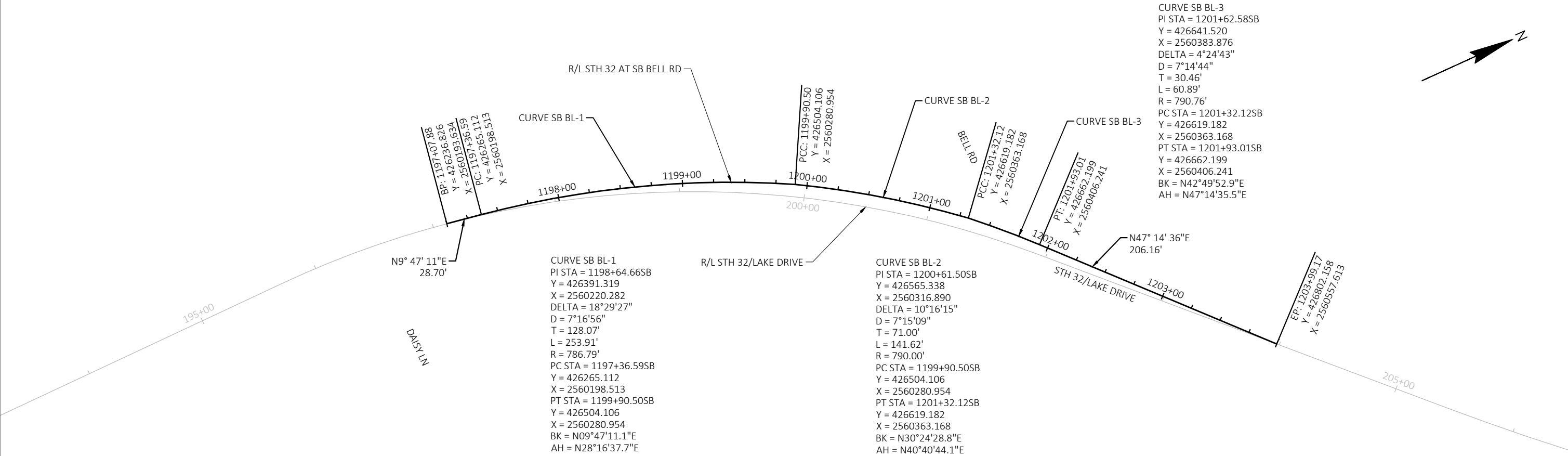
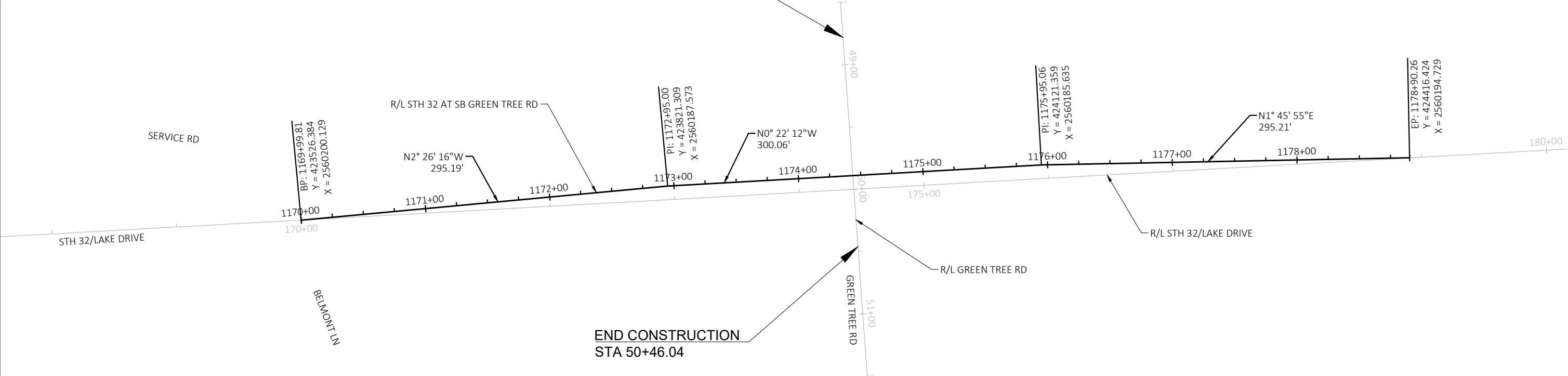




NOTES:  
1) STH 32 AND GREEN TREE ALIGNMENTS SHOWN FOR REFERENCE  
ONLY SEE ALIGNMENT PLAN FOR ADDITIONAL INFORMATION.

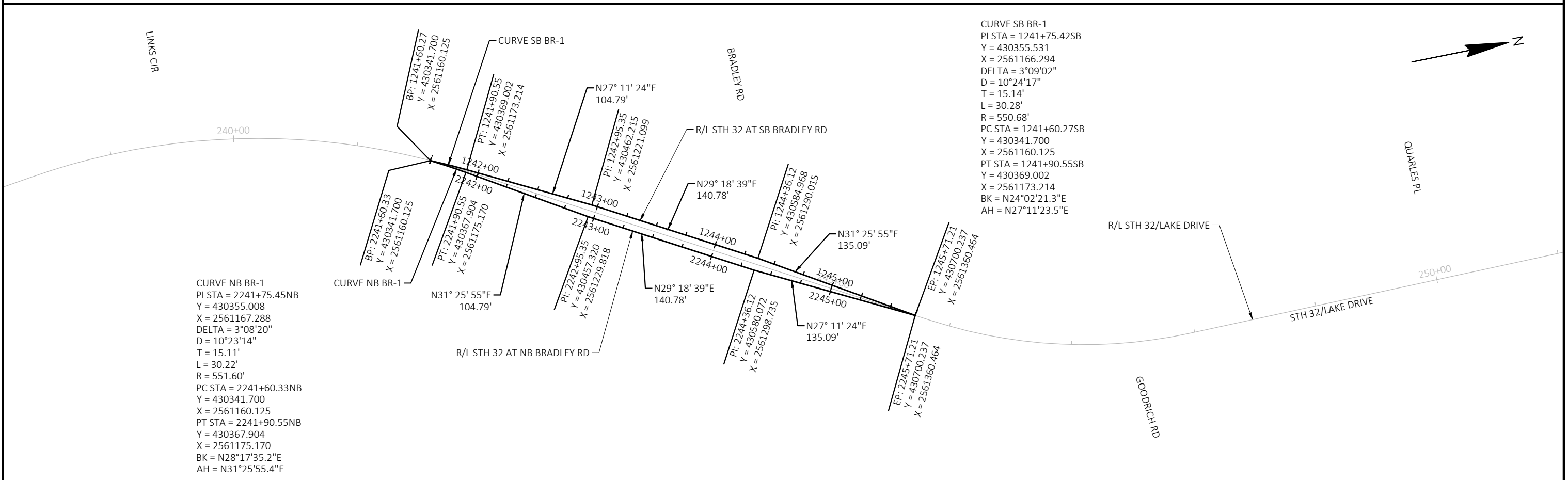
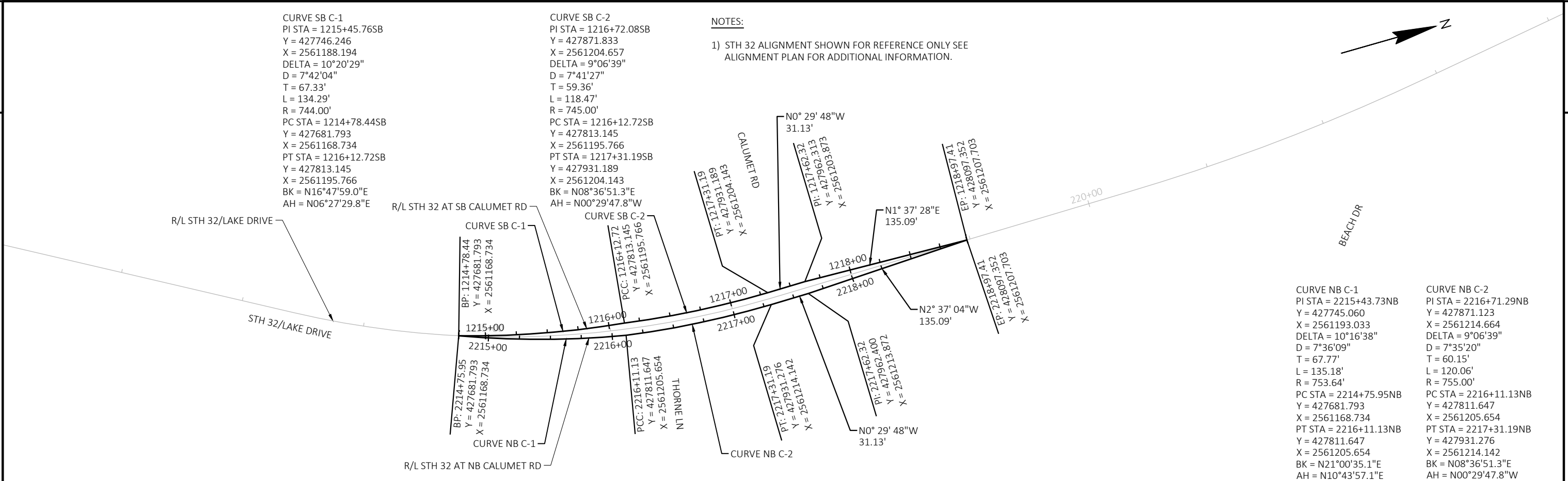
BEGIN CONSTRUCTION  
STA 48+78.30

END CONSTRUCTION  
STA 50+46.04



2

2



|             |            |
|-------------|------------|
| PROJECT NO: | 2225-00-73 |
|-------------|------------|

HWY: STH 32

COUNTY: MILWAUKEE

## ALIGNMENT PLAN - SB & NB ALIGNMENTS

|       |     |   |
|-------|-----|---|
| SHEET | 263 | E |
|-------|-----|---|

## E

FILE NAME : S:\MILW\_CO\FOX POINT\GOV\210250\_LAKE DRIVE RESURFACE\22250003\SHEETSPLAN\027203-AD.DWG  
LAYOUT NAME - AD-(2)

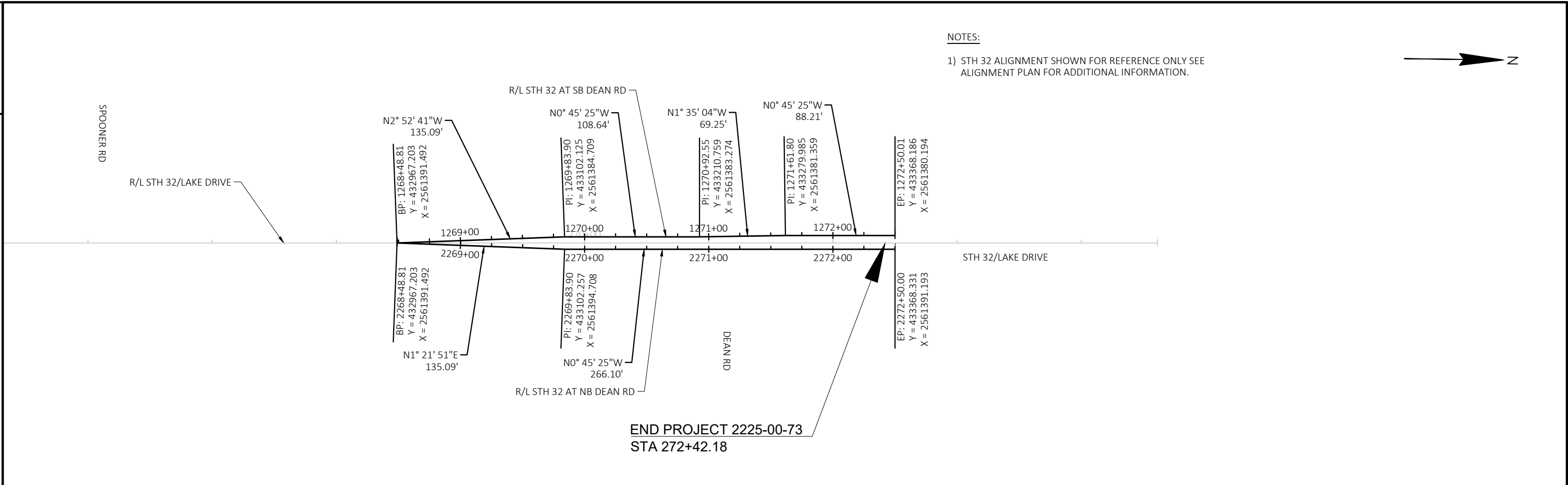
PLOT DATE : 10/14/2024 3:45 PM

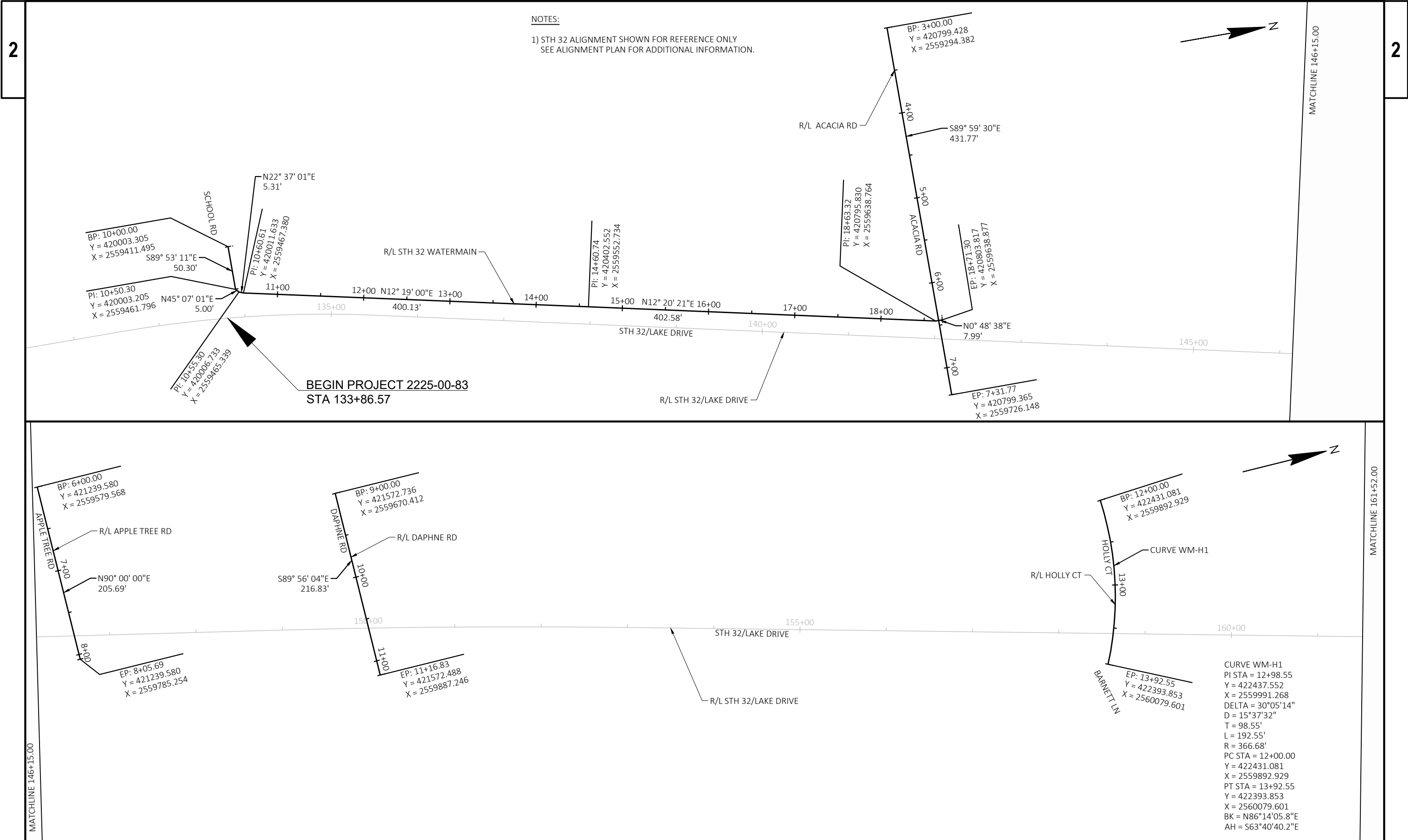
PLOT BY : WALTER A. WOLAK II

PLOT NAME :

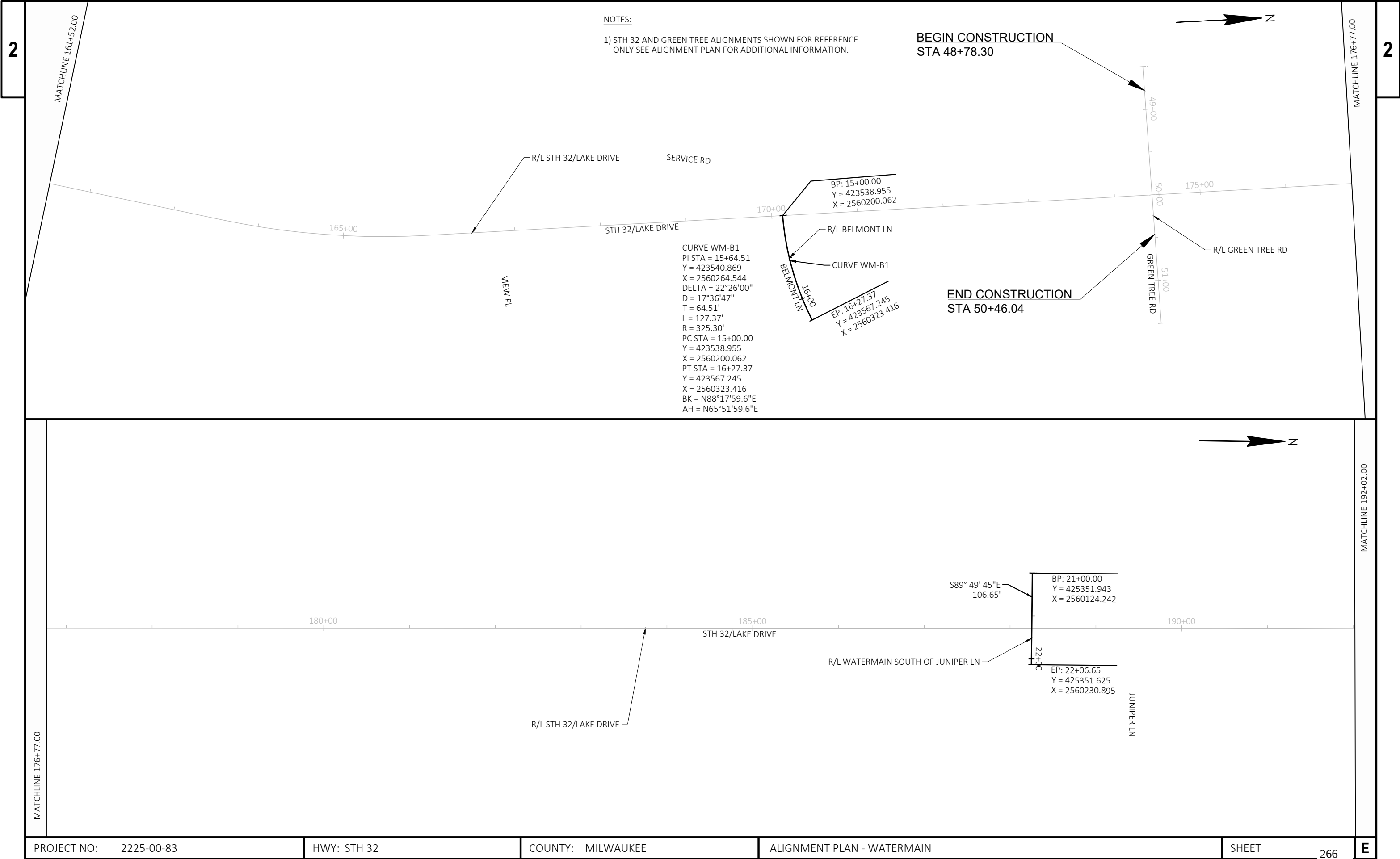
PLOT SCALE : 1 IN:80 FT

WISDOT/CADDS SHEET 44



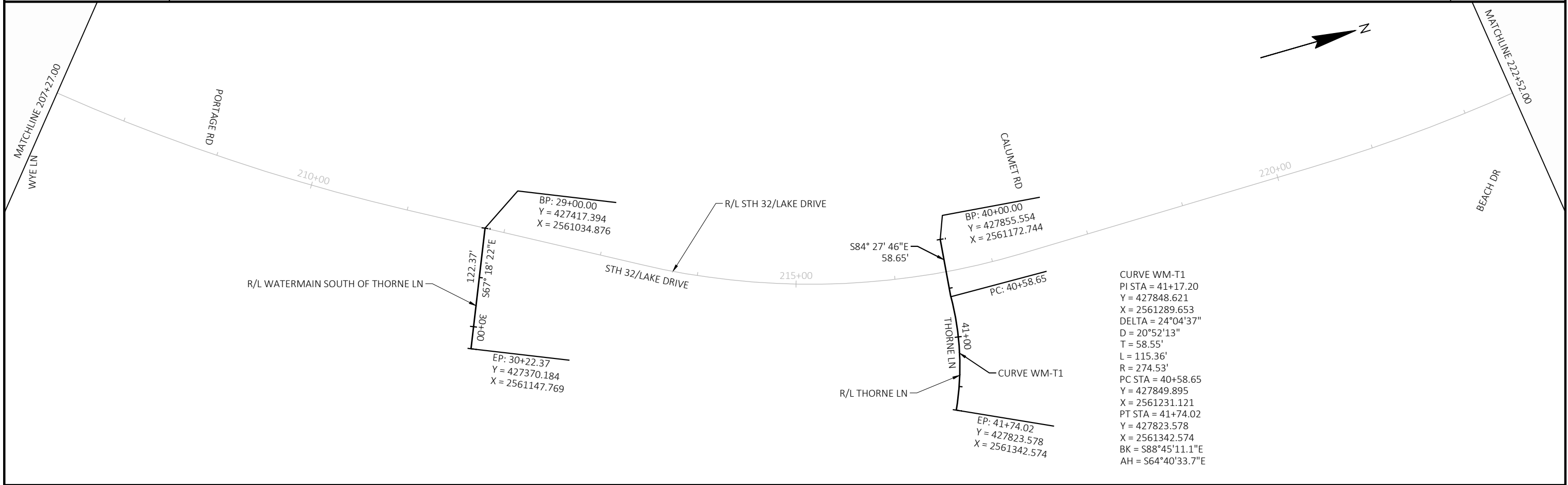
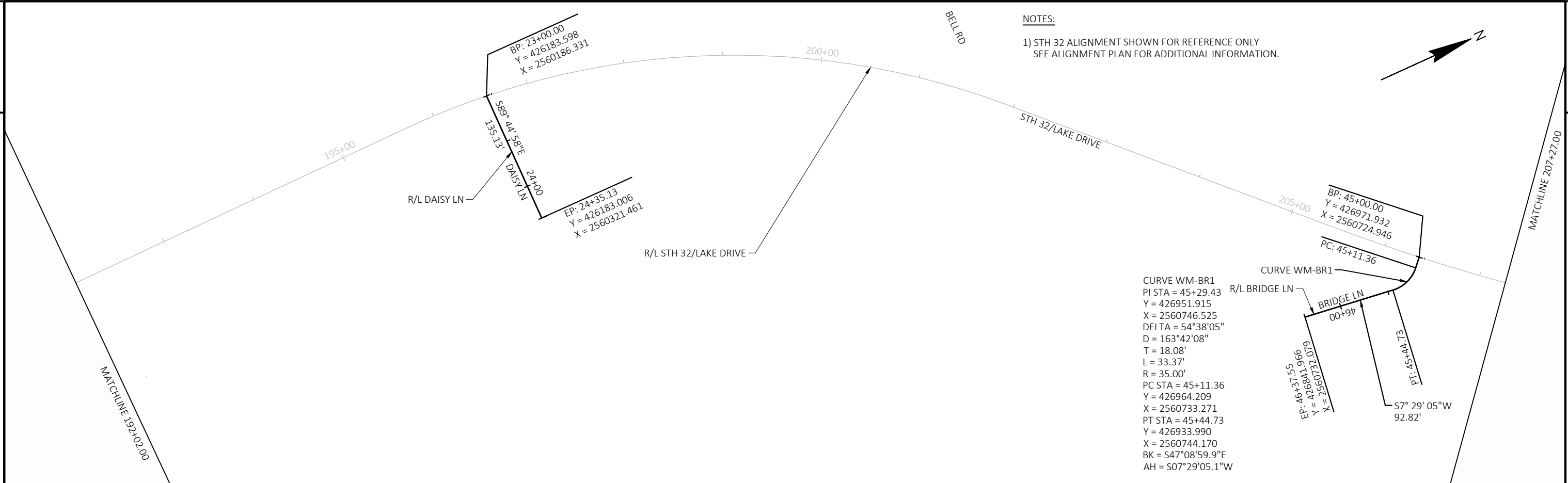




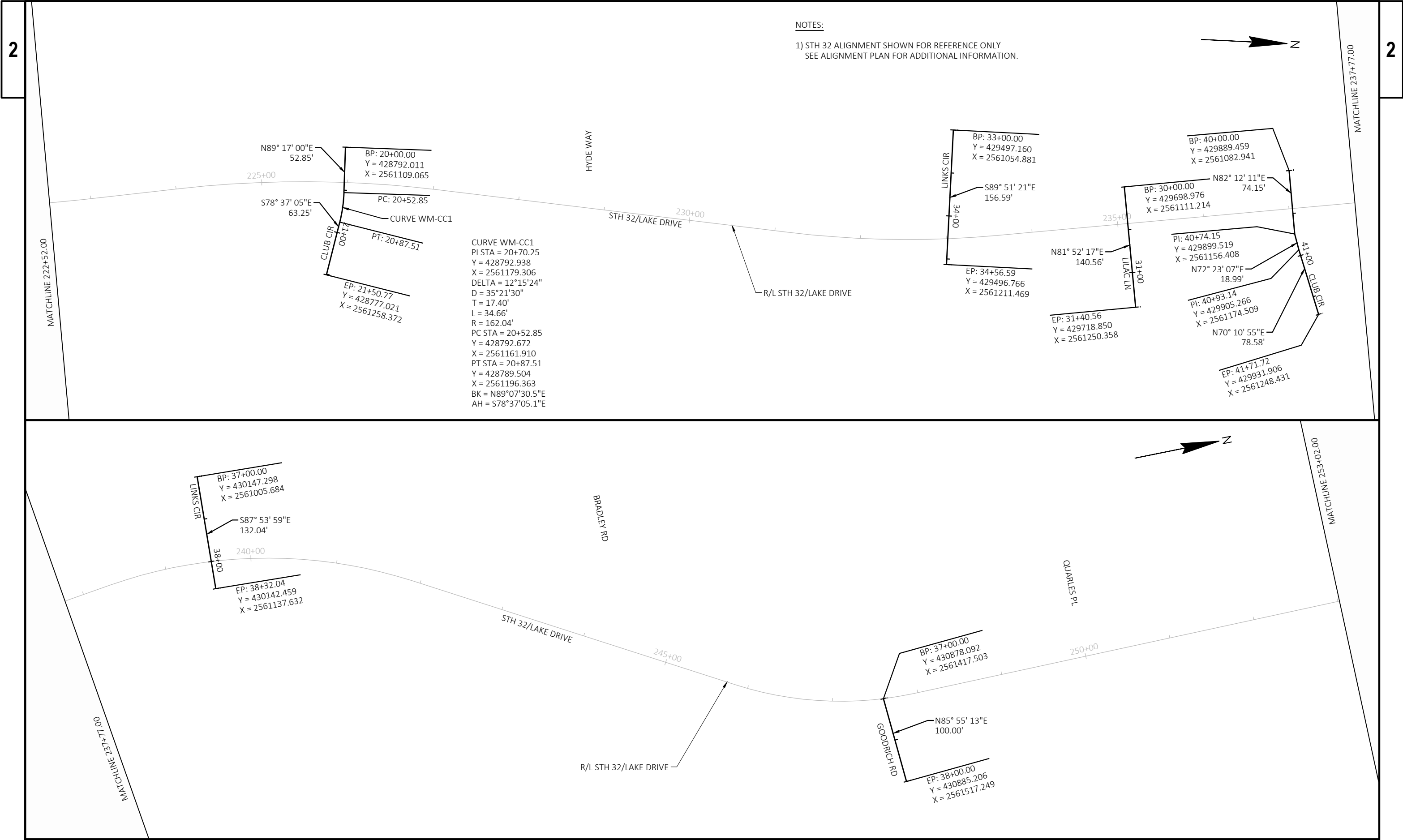


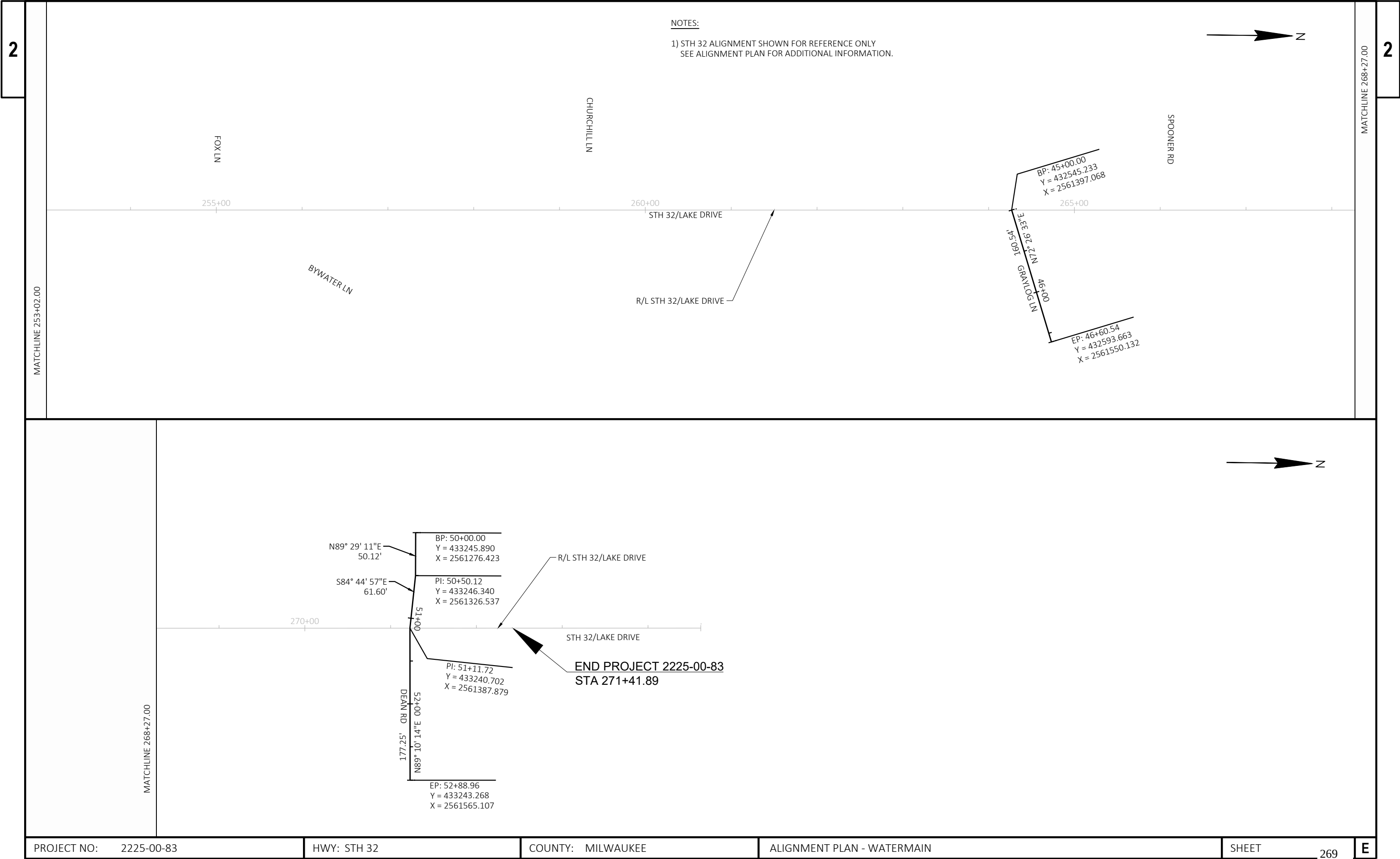
2

2









Estimate Of Quantities

|      |            |                                                                                      |      |            | 2225-00-73 | 2225-00-74 | 2225-00-83 |
|------|------------|--------------------------------------------------------------------------------------|------|------------|------------|------------|------------|
| Line | Item       | Item Description                                                                     | Unit | Total      | Qty        | Qty        | Qty        |
| 0002 | 201.0205   | Grubbing                                                                             | STA  | 9.000      | 9.000      |            |            |
| 0004 | 201.0220   | Grubbing                                                                             | ID   | 28.000     | 28.000     |            |            |
| 0006 | 203.0100   | Removing Small Pipe Culverts                                                         | EACH | 5.000      | 5.000      |            |            |
| 0008 | 204.0100   | Removing Concrete Pavement                                                           | SY   | 10,855.000 | 10,855.000 |            |            |
| 0010 | 204.0115   | Removing Asphaltic Surface Butt Joints                                               | SY   | 653.000    | 653.000    |            |            |
| 0012 | 204.0120   | Removing Asphaltic Surface Milling                                                   | SY   | 49,578.000 | 49,578.000 |            |            |
| 0014 | 204.0150   | Removing Curb & Gutter                                                               | LF   | 4.000      | 4.000      |            |            |
| 0016 | 204.0155   | Removing Concrete Sidewalk                                                           | SY   | 102.000    | 102.000    |            |            |
| 0018 | 204.0185   | Removing Masonry                                                                     | CY   | 86.000     | 86.000     |            |            |
| 0020 | 204.0195   | Removing Concrete Bases                                                              | EACH | 1.000      | 1.000      |            |            |
| 0022 | 204.0210   | Removing Manholes                                                                    | EACH | 5.000      | 5.000      |            |            |
| 0024 | 204.0220   | Removing Inlets                                                                      | EACH | 18.000     | 18.000     |            |            |
| 0026 | 204.0245   | Removing Storm Sewer (size) 01. 10-Inch                                              | LF   | 167.000    | 167.000    |            |            |
| 0028 | 204.0245   | Removing Storm Sewer (size) 02. 12-Inch                                              | LF   | 664.000    | 664.000    |            |            |
| 0030 | 204.0245   | Removing Storm Sewer (size) 03. 15-Inch                                              | LF   | 74.000     | 74.000     |            |            |
| 0032 | 204.0245   | Removing Storm Sewer (size) 04. 18-Inch                                              | LF   | 128.000    | 128.000    |            |            |
| 0034 | 204.0245   | Removing Storm Sewer (size) 05. 21-Inch                                              | LF   | 147.000    | 147.000    |            |            |
| 0036 | 204.0245   | Removing Storm Sewer (size) 06. 24-Inch                                              | LF   | 83.000     | 83.000     |            |            |
| 0038 | 204.0245   | Removing Storm Sewer (size) 07. 30-Inch                                              | LF   | 45.000     | 45.000     |            |            |
| 0040 | 204.9060.S | Removing (item description) 01. Removing Decorative Headwalls                        | EACH | 18.000     | 18.000     |            |            |
| 0042 | 205.0100   | Excavation Common                                                                    | CY   | 2,459.000  | 2,459.000  |            |            |
| 0044 | 209.1100   | Backfill Granular Grade 1                                                            | CY   | 170.000    | 170.000    |            |            |
| 0046 | 211.0101   | Prepare Foundation for Asphaltic Paving (project) 01. 2225-00-73                     | EACH | 1.000      | 1.000      |            |            |
| 0048 | 213.0100   | Finishing Roadway (project) 01. 2225-00-73                                           | EACH | 1.000      | 1.000      |            |            |
| 0050 | 305.0110   | Base Aggregate Dense 3/4-Inch                                                        | TON  | 2,002.000  | 2,002.000  |            |            |
| 0052 | 305.0120   | Base Aggregate Dense 1 1/4-Inch                                                      | TON  | 1,002.000  | 921.000    | 81.000     |            |
| 0054 | 305.0500   | Shaping Shoulders                                                                    | STA  | 277.000    | 277.000    |            |            |
| 0056 | 310.0110   | Base Aggregate Open-Graded                                                           | TON  | 915.000    | 915.000    |            |            |
| 0058 | 311.0110   | Breaker Run                                                                          | TON  | 2,070.000  | 2,070.000  |            |            |
| 0060 | 455.0605   | Tack Coat                                                                            | GAL  | 9,014.000  | 9,014.000  |            |            |
| 0062 | 460.2000   | Incentive Density HMA Pavement                                                       | DOL  | 14,919.000 | 14,919.000 |            |            |
| 0064 | 460.5223   | HMA Pavement 3 LT 58-28 S                                                            | TON  | 8,441.000  | 8,441.000  |            |            |
| 0066 | 460.5224   | HMA Pavement 4 LT 58-28 S                                                            | TON  | 5,855.000  | 5,855.000  |            |            |
| 0068 | 465.0105   | Asphaltic Surface                                                                    | TON  | 73.000     | 73.000     |            |            |
| 0070 | 465.0120   | Asphaltic Surface Driveways and Field Entrances                                      | TON  | 119.000    | 119.000    |            |            |
| 0072 | 520.8000   | Concrete Collars for Pipe                                                            | EACH | 31.000     | 31.000     |            |            |
| 0074 | 522.1018   | Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch                          | EACH | 1.000      | 1.000      |            |            |
| 0076 | 522.2629   | Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 29x45-Inch | EACH | 1.000      | 1.000      |            |            |
| 0078 | 601.0110   | Concrete Curb Type D                                                                 | LF   | 76.000     |            | 76.000     |            |
| 0080 | 601.0411   | Concrete Curb & Gutter 30-Inch Type D                                                | LF   | 176.000    | 150.000    | 26.000     |            |
| 0082 | 602.0410   | Concrete Sidewalk 5-Inch                                                             | SF   | 5,749.000  | 3,345.000  | 2,404.000  |            |
| 0084 | 602.0515   | Curb Ramp Detectable Warning Field Natural Patina                                    | SF   | 468.000    | 360.000    | 108.000    |            |
| 0086 | 602.0615   | Curb Ramp Detectable Warning Field Radial Natural Patina                             | SF   | 301.000    | 174.000    | 127.000    |            |
| 0088 | 606.0200   | Riprap Medium                                                                        | CY   | 6.000      | 6.000      |            |            |
| 0090 | 608.0312   | Storm Sewer Pipe Reinforced Concrete Class III 12-Inch                               | LF   | 753.000    | 753.000    |            |            |
| 0092 | 608.0315   | Storm Sewer Pipe Reinforced Concrete Class III 15-Inch                               | LF   | 468.000    | 468.000    |            |            |
| 0094 | 608.0318   | Storm Sewer Pipe Reinforced Concrete Class III 18-Inch                               | LF   | 72.000     | 72.000     |            |            |
| 0096 | 608.0321   | Storm Sewer Pipe Reinforced Concrete Class III 21-Inch                               | LF   | 148.000    | 148.000    |            |            |
| 0098 | 608.0324   | Storm Sewer Pipe Reinforced Concrete Class III 24-Inch                               | LF   | 17.000     | 17.000     |            |            |

Estimate Of Quantities

|      |            |                                                                                    |      |           | 2225-00-73 | 2225-00-74 | 2225-00-83 |
|------|------------|------------------------------------------------------------------------------------|------|-----------|------------|------------|------------|
| Line | Item       | Item Description                                                                   | Unit | Total     | Qty        | Qty        | Qty        |
| 0100 | 608.0412   | Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch                              | LF   | 249.000   | 249.000    |            |            |
| 0102 | 608.0415   | Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch                              | LF   | 107.000   | 107.000    |            |            |
| 0104 | 608.2329   | Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 29x45-Inch | LF   | 35.000    | 35.000     |            |            |
| 0106 | 608.2424   | Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 24x38-Inch  | LF   | 301.000   | 301.000    |            |            |
| 0108 | 608.2429   | Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 29x45-Inch  | LF   | 100.000   | 100.000    |            |            |
| 0110 | 611.0530   | Manhole Covers Type J                                                              | EACH | 3.000     | 3.000      |            |            |
| 0112 | 611.0535   | Manhole Covers Type J-Special                                                      | EACH | 3.000     | 3.000      |            |            |
| 0114 | 611.0612   | Inlet Covers Type C                                                                | EACH | 3.000     | 3.000      |            |            |
| 0116 | 611.0642   | Inlet Covers Type MS                                                               | EACH | 30.000    | 30.000     |            |            |
| 0118 | 611.2004   | Manholes 4-FT Diameter                                                             | EACH | 10.000    | 10.000     |            |            |
| 0120 | 611.2005   | Manholes 5-FT Diameter                                                             | EACH | 2.000     | 2.000      |            |            |
| 0122 | 611.2006   | Manholes 6-FT Diameter                                                             | EACH | 5.000     | 5.000      |            |            |
| 0124 | 611.2007   | Manholes 7-FT Diameter                                                             | EACH | 2.000     | 2.000      |            |            |
| 0126 | 611.2055   | Manholes 5x5-FT                                                                    | EACH | 1.000     | 1.000      |            |            |
| 0128 | 611.3004   | Inlets 4-FT Diameter                                                               | EACH | 3.000     | 3.000      |            |            |
| 0130 | 611.3901   | Inlets Median 1 Grate                                                              | EACH | 19.000    | 19.000     |            |            |
| 0132 | 611.3902   | Inlets Median 2 Grate                                                              | EACH | 11.000    | 11.000     |            |            |
| 0134 | 612.0106   | Pipe Underdrain 6-Inch                                                             | LF   | 3,282.000 | 3,282.000  |            |            |
| 0136 | 612.0206   | Pipe Underdrain Unperforated 6-Inch                                                | LF   | 172.000   | 172.000    |            |            |
| 0138 | 612.0600   | Underdrain Trench                                                                  | LF   | 172.000   | 172.000    |            |            |
| 0140 | 612.0806   | Apron Endwalls for Underdrain Reinforced Concrete 6-Inch                           | EACH | 20.000    | 20.000     |            |            |
| 0142 | 616.0700.S | Fence Safety                                                                       | LF   | 600.000   | 600.000    |            |            |
| 0144 | 618.0100   | Maintenance and Repair of Haul Roads (project) 01. 2225-00-73                      | EACH | 1.000     | 1.000      |            |            |
| 0146 | 619.1000   | Mobilization                                                                       | EACH | 1.000     | 1.000      |            |            |
| 0148 | 623.0200   | Dust Control Surface Treatment                                                     | SY   | 6,931.000 | 6,931.000  |            |            |
| 0150 | 624.0100   | Water                                                                              | MGAL | 42.000    | 42.000     |            |            |
| 0152 | 625.0100   | Topsoil                                                                            | SY   | 8,847.000 | 8,847.000  |            |            |
| 0154 | 627.0200   | Mulching                                                                           | SY   | 8,847.000 | 8,847.000  |            |            |
| 0156 | 628.1104   | Erosion Bales                                                                      | EACH | 41.000    | 41.000     |            |            |
| 0158 | 628.1504   | Silt Fence                                                                         | LF   | 1,113.000 | 1,113.000  |            |            |
| 0160 | 628.1520   | Silt Fence Maintenance                                                             | LF   | 1,113.000 | 1,113.000  |            |            |
| 0162 | 628.1905   | Mobilizations Erosion Control                                                      | EACH | 4.000     | 4.000      |            |            |
| 0164 | 628.1910   | Mobilizations Emergency Erosion Control                                            | EACH | 4.000     | 4.000      |            |            |
| 0166 | 628.2008   | Erosion Mat Urban Class I Type B                                                   | SY   | 8,847.000 | 8,847.000  |            |            |
| 0168 | 628.7005   | Inlet Protection Type A                                                            | EACH | 24.000    | 24.000     |            |            |
| 0170 | 628.7010   | Inlet Protection Type B                                                            | EACH | 119.000   | 119.000    |            |            |
| 0172 | 628.7504   | Temporary Ditch Checks                                                             | LF   | 214.000   | 214.000    |            |            |
| 0174 | 628.7555   | Culvert Pipe Checks                                                                | EACH | 436.000   | 436.000    |            |            |
| 0176 | 628.7570   | Rock Bags                                                                          | EACH | 100.000   | 100.000    |            |            |
| 0178 | 629.0210   | Fertilizer Type B                                                                  | CWT  | 11.000    | 11.000     |            |            |
| 0180 | 630.0140   | Seeding Mixture No. 40                                                             | LB   | 164.000   | 164.000    |            |            |
| 0182 | 630.0200   | Seeding Temporary                                                                  | LB   | 68.000    | 68.000     |            |            |
| 0184 | 630.0500   | Seed Water                                                                         | MGAL | 57.000    | 57.000     |            |            |
| 0186 | 634.0618   | Posts Wood 4x6-Inch X 18-FT                                                        | EACH | 6.000     | 6.000      |            |            |
| 0188 | 634.0818   | Posts Tubular Steel 2x2-Inch X 18-FT                                               | EACH | 74.000    | 74.000     |            |            |
| 0190 | 637.2210   | Signs Type II Reflective H                                                         | SF   | 380.270   | 380.270    |            |            |
| 0192 | 637.2230   | Signs Type II Reflective F                                                         | SF   | 390.860   | 390.860    |            |            |
| 0194 | 638.2102   | Moving Signs Type II                                                               | EACH | 7.000     | 7.000      |            |            |
| 0196 | 638.2602   | Removing Signs Type II                                                             | EACH | 71.000    | 71.000     |            |            |

Estimate Of Quantities

|      |          |                                                                    |      |            | 2225-00-73 | 2225-00-74 | 2225-00-83 |
|------|----------|--------------------------------------------------------------------|------|------------|------------|------------|------------|
| Line | Item     | Item Description                                                   | Unit | Total      | Qty        | Qty        | Qty        |
| 0198 | 638.3000 | Removing Small Sign Supports                                       | EACH | 71.000     | 71.000     |            |            |
| 0200 | 642.5001 | Field Office Type B                                                | EACH | 1.000      | 1.000      |            |            |
| 0202 | 643.0300 | Traffic Control Drums                                              | DAY  | 87,334.000 | 87,334.000 |            |            |
| 0204 | 643.0420 | Traffic Control Barricades Type III                                | DAY  | 9,587.000  | 9,587.000  |            |            |
| 0206 | 643.0705 | Traffic Control Warning Lights Type A                              | DAY  | 19,173.000 | 19,173.000 |            |            |
| 0208 | 643.0900 | Traffic Control Signs                                              | DAY  | 36,840.000 | 36,840.000 |            |            |
| 0210 | 643.0920 | Traffic Control Covering Signs Type II                             | EACH | 10.000     | 10.000     |            |            |
| 0212 | 643.1000 | Traffic Control Signs Fixed Message                                | SF   | 257.000    | 257.000    |            |            |
| 0214 | 643.1050 | Traffic Control Signs PCMS                                         | DAY  | 28.000     | 28.000     |            |            |
| 0216 | 643.5000 | Traffic Control                                                    | EACH | 1.000      | 1.000      |            |            |
| 0218 | 645.0111 | Geotextile Type DF Schedule A                                      | SY   | 4,365.000  | 4,365.000  |            |            |
| 0220 | 645.0120 | Geotextile Type HR                                                 | SY   | 33.000     | 33.000     |            |            |
| 0222 | 645.0220 | Geogrid Type SR                                                    | SY   | 850.000    | 850.000    |            |            |
| 0224 | 646.1020 | Marking Line Epoxy 4-Inch                                          | LF   | 36,244.000 | 36,244.000 |            |            |
| 0226 | 646.3020 | Marking Line Epoxy 8-Inch                                          | LF   | 1,039.000  | 1,039.000  |            |            |
| 0228 | 646.5020 | Marking Arrow Epoxy                                                | EACH | 15.000     | 15.000     |            |            |
| 0230 | 646.5520 | Marking Outfall Epoxy                                              | EACH | 22.000     | 22.000     |            |            |
| 0232 | 646.6120 | Marking Stop Line Epoxy 18-Inch                                    | LF   | 622.000    | 622.000    |            |            |
| 0234 | 646.7120 | Marking Diagonal Epoxy 12-Inch                                     | LF   | 851.000    | 851.000    |            |            |
| 0236 | 646.7420 | Marking Crosswalk Epoxy Transverse Line 6-Inch                     | LF   | 656.000    | 656.000    |            |            |
| 0238 | 646.7520 | Marking Crosswalk Epoxy Block Style 24-Inch                        | LF   | 798.000    | 180.000    | 618.000    |            |
| 0240 | 650.4000 | Construction Staking Storm Sewer                                   | EACH | 48.000     | 48.000     |            |            |
| 0242 | 650.4500 | Construction Staking Subgrade                                      | LF   | 3,337.000  | 3,337.000  |            |            |
| 0244 | 650.5000 | Construction Staking Base                                          | LF   | 3,337.000  | 3,337.000  |            |            |
| 0246 | 650.5500 | Construction Staking Curb Gutter and Curb & Gutter                 | LF   | 251.000    | 251.000    |            |            |
| 0248 | 650.8000 | Construction Staking Resurfacing Reference                         | LF   | 13,817.000 | 13,817.000 |            |            |
| 0250 | 650.9000 | Construction Staking Curb Ramps                                    | EACH | 55.000     | 38.000     | 17.000     |            |
| 0252 | 650.9911 | Construction Staking Supplemental Control (project) 01. 2225-00-73 | EACH | 1.000      | 1.000      |            |            |
| 0254 | 650.9920 | Construction Staking Slope Stakes                                  | LF   | 3,337.000  | 3,337.000  |            |            |
| 0256 | 690.0150 | Sawing Asphalt                                                     | LF   | 12,527.000 | 12,527.000 |            |            |
| 0258 | 690.0250 | Sawing Concrete                                                    | LF   | 3,650.000  | 3,650.000  |            |            |
| 0260 | 740.0440 | Incentive IRI Ride                                                 | DOL  | 5,234.000  | 5,234.000  |            |            |
| 0262 | ASP.1T0A | On-the-Job Training Apprentice at \$5.00/HR                        | HRS  | 1,000.000  | 1,000.000  |            |            |
| 0264 | ASP.1T0G | On-the-Job Training Graduate at \$5.00/HR                          | HRS  | 2,400.000  | 2,400.000  |            |            |
| 0266 | SPV.0060 | Special 01. Temporary Pedestrian Crossings                         | EACH | 20.000     | 20.000     |            |            |
| 0268 | SPV.0060 | Special 02. Utility Line Opening                                   | EACH | 24.000     | 8.000      | 6.000      | 10.000     |
| 0270 | SPV.0060 | Special 03. Concrete Base Special                                  | EACH | 1.000      | 1.000      |            |            |
| 0272 | SPV.0060 | Special 31. Pipe Connection to Existing Structure                  | EACH | 6.000      | 6.000      |            |            |
| 0274 | SPV.0060 | Special 32. Manhole Covers Special                                 | EACH | 8.000      | 8.000      |            |            |
| 0276 | SPV.0060 | Special 33. Inlet Covers Special                                   | EACH | 5.000      | 5.000      |            |            |
| 0278 | SPV.0060 | Special 40. Hydrant Assembly With 6-Inch Gate Valve                | EACH | 27.000     |            |            | 27.000     |
| 0280 | SPV.0060 | Special 41. 8-Inch Gate Valve and Valve Box                        | EACH | 14.000     |            |            | 14.000     |
| 0282 | SPV.0060 | Special 42. 12-Inch Gate Valve and Valve Box                       | EACH | 24.000     |            |            | 24.000     |
| 0284 | SPV.0060 | Special 43. 1.25-Inch Corporation Stop                             | EACH | 31.000     |            |            | 31.000     |
| 0286 | SPV.0060 | Special 44. 1.5-Inch Corporation Stop                              | EACH | 1.000      |            |            | 1.000      |
| 0288 | SPV.0060 | Special 45. 2-Inch Corporation Stop                                | EACH | 1.000      |            |            | 1.000      |
| 0290 | SPV.0060 | Special 46. 1.25-Inch Curb Box                                     | EACH | 31.000     |            |            | 31.000     |
| 0292 | SPV.0060 | Special 47. 1.5-inch Curb Box                                      | EACH | 1.000      |            |            | 1.000      |
| 0294 | SPV.0060 | Special 48. 2-Inch Curb Box                                        | EACH | 1.000      |            |            | 1.000      |

Estimate Of Quantities

|      |          |                                                             |      |           | 2225-00-73 | 2225-00-74 | 2225-00-83 |
|------|----------|-------------------------------------------------------------|------|-----------|------------|------------|------------|
| Line | Item     | Item Description                                            | Unit | Total     | Qty        | Qty        | Qty        |
| 0296 | SPV.0060 | Special 49. Cap and Abandon Existing Water Main             | EACH | 20.000    |            |            | 20.000     |
| 0298 | SPV.0060 | Special 50. Adjusting Sanitary Manhole                      | EACH | 6.000     |            |            | 6.000      |
| 0300 | SPV.0060 | Special 51. Adjusting Water Valve Boxes                     | EACH | 10.000    |            |            | 10.000     |
| 0302 | SPV.0060 | Special 61. RRFB System STH 32 NB at Barnett Ln Assembly    | EACH | 1.000     |            | 1.000      |            |
| 0304 | SPV.0060 | Special 62. RRFB System STH 32 SB at Holly Ct Assembly      | EACH | 1.000     |            | 1.000      |            |
| 0306 | SPV.0060 | Special 63. RRFB System STH 32 NB at Green Tree Rd Assembly | EACH | 1.000     |            | 1.000      |            |
| 0308 | SPV.0060 | Special 64. RRFB System STH 32 SB at Green Tree Rd Assembly | EACH | 1.000     |            | 1.000      |            |
| 0310 | SPV.0060 | Special 65. RRFB System STH 32 NB at Bridge Ln Assembly     | EACH | 1.000     |            | 1.000      |            |
| 0312 | SPV.0060 | Special 66. RRFB System STH 32 SB at Bridge Ln Assembly     | EACH | 1.000     |            | 1.000      |            |
| 0314 | SPV.0060 | Special 67. RRFB System STH 32 NB at Beach Dr Assembly      | EACH | 1.000     |            | 1.000      |            |
| 0316 | SPV.0060 | Special 68. RRFB System STH 32 SB at Beach Dr Assembly      | EACH | 1.000     |            | 1.000      |            |
| 0318 | SPV.0060 | Special 69. RRFB System STH 32 NB at Fox Ln Assembly        | EACH | 1.000     |            | 1.000      |            |
| 0320 | SPV.0060 | Special 70. RRFB System STH 32 SB at Fox Ln Assembly        | EACH | 1.000     |            | 1.000      |            |
| 0322 | SPV.0060 | Special 71. RRFB System STH 32 NB at Dean Rd Assembly       | EACH | 1.000     |            | 1.000      |            |
| 0324 | SPV.0060 | Special 72. RRFB System STH 32 SB at Dean Rd Assembly       | EACH | 1.000     |            | 1.000      |            |
| 0326 | SPV.0075 | Special 01. Pavement Cleanup Project 2225-00-73             | HRS  | 40.000    | 40.000     |            |            |
| 0328 | SPV.0090 | Special 01. Concrete Ditch Bottoms                          | LF   | 72.000    | 72.000     |            |            |
| 0330 | SPV.0090 | Special 31. Pipe Underdrain Exploration                     | LF   | 100.000   | 100.000    |            |            |
| 0332 | SPV.0090 | Special 32. Storm Sewer Lateral Exploation                  | LF   | 100.000   | 100.000    |            |            |
| 0334 | SPV.0090 | Special 40. Hydrant Lead 6-Inch                             | LF   | 513.000   |            |            | 513.000    |
| 0336 | SPV.0090 | Special 41. PVC Water Main 6-Inch                           | LF   | 166.000   |            |            | 166.000    |
| 0338 | SPV.0090 | Special 42. PVC Water Main 8-Inch                           | LF   | 1,820.000 |            |            | 1,820.000  |
| 0340 | SPV.0090 | Special 43. PVC Water Main 12-Inch                          | LF   | 2,133.000 |            |            | 2,133.000  |
| 0342 | SPV.0090 | Special 44. HDPE Water Service 1.25-Inch                    | LF   | 1,267.000 |            |            | 1,267.000  |
| 0344 | SPV.0090 | Special 45. HDPE Water Service 1.5-Inch                     | LF   | 26.000    |            |            | 26.000     |
| 0346 | SPV.0090 | Special 46. HDPE Water Service 2-Inch                       | LF   | 55.000    |            |            | 55.000     |
| 0348 | SPV.0195 | Special 01. Management of Solid Waste                       | TON  | 125.000   | 125.000    |            |            |



| GRUBBING                  |         |         |        |                             |                            |
|---------------------------|---------|---------|--------|-----------------------------|----------------------------|
| CATEGORY                  | ROADWAY | STATION | OFFSET | 201.0205<br>GRUBBING<br>STA | 201.0220<br>GRUBBING<br>ID |
| 0010                      | STH 32  | 146+15  | RT     | 2                           | --                         |
| 0010                      | STH 32  | 158+75  | RT     | --                          | 10                         |
| 0010                      | STH 32  | 174+15  | RT     | 1                           | --                         |
| 0010                      | STH 32  | 208+75  | RT     | 1                           | --                         |
| 0010                      | STH 32  | 215+81  | RT     | --                          | 12                         |
| 0010                      | STH 32  | 218+95  | RT     | 2                           | --                         |
| 0010                      | STH 32  | 219+32  | LT     | --                          | 6                          |
| 0010                      | STH 32  | 255+40  | RT     | 1                           | --                         |
| 0010                      | STH 32  | 259+50  | RT     | 1                           | --                         |
| 0010                      | STH 32  | 271+50  | RT     | 1                           | --                         |
| TOTAL 2225-00-73 CAT 0010 |         |         |        | 9                           | 28                         |

3

3

REMOVALS

| CATEGORY                  | ROADWAY | STATION | TO | STATION | 204.0100                               | 204.0150                           | 204.0155                               |
|---------------------------|---------|---------|----|---------|----------------------------------------|------------------------------------|----------------------------------------|
|                           |         |         |    |         | REMOVING<br>CONCRETE<br>PAVEMENT<br>SY | REMOVING<br>CURB &<br>GUTTER<br>LF | REMOVING<br>CONCRETE<br>SIDEWALK<br>SY |
| 0010                      | STH 32  | 134+25  | -  | 153+00  | 2,400                                  | --                                 | --                                     |
| 0010                      | STH 32  | 153+00  | -  | 168+00  | 925                                    | --                                 | --                                     |
| 0010                      | STH 32  | 168+00  | -  | 183+00  | 906                                    | --                                 | 102                                    |
| 0010                      | STH 32  | 183+00  | -  | 198+00  | 640                                    | --                                 | --                                     |
| 0010                      | STH 32  | 198+00  | -  | 213+00  | 605                                    | --                                 | --                                     |
| 0010                      | STH 32  | 213+00  | -  | 228+00  | 2,699                                  | 4                                  | --                                     |
| 0010                      | STH 32  | 228+00  | -  | 243+00  | 1,674                                  | --                                 | --                                     |
| 0010                      | STH 32  | 243+00  | -  | 258+00  | --                                     | --                                 | --                                     |
| 0010                      | STH 32  | 258+00  | -  | 272+42  | 1,006                                  | --                                 | --                                     |
| TOTAL 2225-00-73 CAT 0010 |         |         |    |         | 10,855                                 | 4                                  | 102                                    |

REMOVING ASPHALTIC SURFACE

| CATEGORY                  | ROADWAY | STATION | TO | STATION | 204.0115                                              | 204.0120                                          |
|---------------------------|---------|---------|----|---------|-------------------------------------------------------|---------------------------------------------------|
|                           |         |         |    |         | REMOVING<br>ASPHALTIC<br>SURFACE<br>BUTT JOINTS<br>SY | REMOVING<br>ASPHALTIC<br>SURFACE<br>MILLING<br>SY |
| 0010                      | STH 32  | 134+25  | -  | 153+00  | 104                                                   | 6,633                                             |
| 0010                      | STH 32  | 153+00  | -  | 168+00  | 55                                                    | 5,568                                             |
| 0010                      | STH 32  | 168+00  | -  | 183+00  | 71                                                    | 6,702                                             |
| 0010                      | STH 32  | 183+00  | -  | 198+00  | 14                                                    | 4,615                                             |
| 0010                      | STH 32  | 198+00  | -  | 213+00  | 69                                                    | 4,399                                             |
| 0010                      | STH 32  | 213+00  | -  | 228+00  | 82                                                    | 4,816                                             |
| 0010                      | STH 32  | 228+00  | -  | 243+00  | 70                                                    | 5,168                                             |
| 0010                      | STH 32  | 243+00  | -  | 258+00  | 117                                                   | 5,967                                             |
| 0010                      | STH 32  | 258+00  | -  | 272+42  | 71                                                    | 5,710                                             |
| TOTAL 2225-00-73 CAT 0010 |         |         |    |         | 653                                                   | 49,578                                            |



EARTHWORK

| DIVISION                              | FROM/TO<br>STATION  | 205.0100<br>EXCAVATION COMMON<br>(1) |                       | AVAILABLE<br>MATERIAL<br>(4) | EXPANDED EBS<br>BACKFILL<br>(5) | UNEXPANDED<br>FILL | EXPANDED FILL<br>(6) | MASS ORDINATE +/-<br>(7) | WASTE |
|---------------------------------------|---------------------|--------------------------------------|-----------------------|------------------------------|---------------------------------|--------------------|----------------------|--------------------------|-------|
|                                       |                     | CUT<br>(2)                           | EBS EXCAVATION<br>(3) |                              | FACTOR                          |                    | FACTOR               |                          |       |
|                                       |                     |                                      |                       |                              | 1.00                            |                    | 1.00                 |                          |       |
| DIVISION 1                            |                     |                                      |                       |                              |                                 |                    |                      |                          |       |
| STH 32 NB                             | 215+04.93/269+51.67 | 239                                  | 0                     | 239                          | 0                               | 10                 | 10                   | 229                      | 229   |
| STH 32 SB                             | 170+32.34/270+97.74 | 620                                  | 0                     | 620                          | 0                               | 67                 | 67                   | 553                      | 553   |
| DITCHING AT<br>DRAINAGE<br>STRUCTURES |                     | 400                                  |                       | 400                          |                                 |                    |                      | 400                      | 400   |
| CURB RAMPS                            |                     | 200                                  |                       | 200                          |                                 |                    |                      | 200                      | 200   |
| UNDISTRIBUTED                         |                     |                                      | 1,000                 |                              | 1,000                           |                    |                      | 1,000                    | 1,000 |
| DIVISION 1<br>SUBTOTAL                |                     | 1,459                                | 1,000                 | 1,459                        | 1,000                           | 77                 | 77                   | 2,382                    | 2,382 |
| GRAND TOTAL                           |                     | 1,459                                | 1,000                 | 1,459                        | 1,000                           | 77                 | 77                   | 2,382                    | 2,382 |
| TOTAL EXCAVATION<br>COMMON CAT 0010   |                     | 2,459                                |                       |                              |                                 |                    |                      |                          |       |

NOTES:  
(1) EXCAVATION COMMON IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100  
(2) SALVAGED/UNSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT. NO ADJUSTMENTS HAVE BEEN MADE FOR SALVAGED/UNUSABLE PAVEMENT MATERIAL.  
(3) EBS EXCAVATION TO BE BACKFILLED WITH BREAKER RUN  
(4) AVAILABLE MATERIAL = CUT  
(5) EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH BREAKER RUN. EBS BACKFILL FACTOR = 1.00  
(6) EXPANDED FILL FACTOR = 1.00  
EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH - REDUCED EBS) \* FILL FACTOR  
(7) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.  
(8) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.  
(9) STORM SEWER AND WATER MAIN EXCAVATION ARE NOT INCLUDED IN THIS TABLE AND SHOULD BE CONSIDERED ADDITIONAL WASTE. EXCAVATION FOR THESE ITEMS IS INCIDENTAL TO THE RESPECTIVE BID ITEMS.

3

| BACKFILL GRANULAR         |          |                                                   |                                                                                      |
|---------------------------|----------|---------------------------------------------------|--------------------------------------------------------------------------------------|
| CATEGORY                  | LOCATION | 209.1100<br>BACKFILL<br>GRANULAR<br>GRADE 1<br>CY | REMARKS                                                                              |
| 0010                      | STH 32   | 170                                               | BACKFILL GRANULAR TO BE USED AT LOCATION OF ABANDONED OR REMOVED DRAINAGE STRUCTURES |
| TOTAL 2225-00-73 CAT 0010 |          | 170                                               |                                                                                      |

| PREPARE FOUNDATION        |         |    |         |                                                                                          |      |
|---------------------------|---------|----|---------|------------------------------------------------------------------------------------------|------|
| CATEGORY                  | STATION | TO | STATION | 211.0101.01<br>PREPARE<br>FOUNDATION FOR<br>ASPHALTIC PAVING<br>(2225-00-73)<br>LOCATION | EACH |
| 0010                      | 134+25  | -  | 272+42  | STH 32 / SIDE<br>ROADS                                                                   | 1    |
| TOTAL 2225-00-73 CAT 0010 |         |    |         |                                                                                          | 1    |

3

| SHAPING SHOULDERS         |          |         |    |                                         |     |
|---------------------------|----------|---------|----|-----------------------------------------|-----|
| CATEGORY                  | LOCATION | STATION | TO | 305.0500<br>SHAPING<br>SHOULDERS<br>STA |     |
| 0010                      | STH 32   | 134+25  | -  | 153+00                                  | 38  |
| 0010                      | STH 32   | 153+00  | -  | 168+00                                  | 30  |
| 0010                      | STH 32   | 168+00  | -  | 183+00                                  | 30  |
| 0010                      | STH 32   | 183+00  | -  | 198+00                                  | 30  |
| 0010                      | STH 32   | 198+00  | -  | 213+00                                  | 30  |
| 0010                      | STH 32   | 213+00  | -  | 228+00                                  | 30  |
| 0010                      | STH 32   | 228+00  | -  | 243+00                                  | 30  |
| 0010                      | STH 32   | 243+00  | -  | 258+00                                  | 30  |
| 0010                      | STH 32   | 258+00  | -  | 272+42                                  | 29  |
| TOTAL 2225-00-73 CAT 0010 |          |         |    |                                         | 277 |

| AGGREGATE                 |               |         |    |         |                                                     |                                                            |                                                  |                                |
|---------------------------|---------------|---------|----|---------|-----------------------------------------------------|------------------------------------------------------------|--------------------------------------------------|--------------------------------|
| CATEGORY                  | ROADWAY       | STATION | TO | STATION | 305.0110<br>BASE AGGREGATE<br>DENSE 3/4-INCH<br>TON | 305.0120<br>* BASE<br>AGGREGATE<br>DENSE 1 1/4-INCH<br>TON | 310.0110<br>BASE AGGREGATE<br>OPEN-GRADED<br>TON | 311.0110<br>BREAKER RUN<br>TON |
| 0010                      | STH 32        | 134+25  | -  | 153+00  | 186                                                 | 118                                                        | --                                               | --                             |
| 0010                      | STH 32        | 153+00  | -  | 168+00  | 133                                                 | 22                                                         | --                                               | --                             |
| 0010                      | STH 32        | 168+00  | -  | 183+00  | 134                                                 | 189                                                        | 269                                              | --                             |
| 0010                      | STH 32        | 183+00  | -  | 198+00  | 112                                                 | 18                                                         | 4                                                | --                             |
| 0010                      | STH 32        | 198+00  | -  | 213+00  | 157                                                 | 162                                                        | 214                                              | --                             |
| 0010                      | STH 32        | 213+00  | -  | 228+00  | 128                                                 | 187                                                        | 191                                              | --                             |
| 0010                      | STH 32        | 228+00  | -  | 243+00  | 132                                                 | 85                                                         | 55                                               | --                             |
| 0010                      | STH 32        | 243+00  | -  | 258+00  | 134                                                 | 76                                                         | 108                                              | --                             |
| 0010                      | STH 32        | 258+00  | -  | 272+42  | 136                                                 | 64                                                         | 74                                               | --                             |
| 0010                      | UNDISTRIBUTED |         |    |         | 750                                                 | --                                                         | --                                               | 2,070                          |
| TOTAL 2225-00-73 CAT 0010 |               |         |    |         | 2,002                                               | 921                                                        | 915                                              | 2,070                          |

\* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

BREAKER RUN TO BE USED AS EBS BACKFILL AS DIRECTED BY THE ENGINEER

PROJECT NO: 2225-00-73

HWY: STH 32

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET

277

E

| HMA PAVEMENT                         |         |         |    |         |          |          |            |           |              |              |                              |
|--------------------------------------|---------|---------|----|---------|----------|----------|------------|-----------|--------------|--------------|------------------------------|
| 455.0605      460.5223      460.5224 |         |         |    |         |          |          |            |           |              |              |                              |
| CATEGORY                             | ROADWAY | STATION | TO | STATION | 4-IN HMA | 5-IN HMA | 6.5-IN HMA | TACK COAT | HMA PAVEMENT | HMA PAVEMENT | REMARKS                      |
|                                      |         |         |    |         | SF       | SF       | SF         | GAL       | 3 LT 58-28 S | 4 LT 58-28 S |                              |
|                                      |         |         |    |         |          |          |            |           | TON          | TON          |                              |
| 0010                                 | STH 32  | 134+25  | -  | 153+00  | 63763    | --       | --         | 1,042     | 917          | 713          |                              |
| 0010                                 | STH 32  | 153+00  | -  | 168+00  | 50915    | --       | --         | 832       | 732          | 569          |                              |
| 0010                                 | STH 32  | 168+00  | -  | 183+00  | 51253    | --       | --         | 838       | 737          | 573          |                              |
| 0010                                 | STH 32  | 183+00  | -  | 198+00  | 41533    | --       | --         | 680       | 597          | 464          |                              |
| 0010                                 | STH 32  | 198+00  | -  | 213+00  | 60812    | --       | --         | 994       | 874          | 680          |                              |
| 0010                                 | STH 32  | 213+00  | -  | 228+00  | 43430    | --       | --         | 710       | 624          | 486          |                              |
| 0010                                 | STH 32  | 228+00  | -  | 243+00  | 48074    | --       | --         | 786       | 691          | 537          |                              |
| 0010                                 | STH 32  | 243+00  | -  | 258+00  | 53898    | --       | --         | 882       | 775          | 603          |                              |
| 0010                                 | STH 32  | 258+00  | -  | 272+42  | 48130    | --       | --         | 788       | 692          | 538          |                              |
| 0010                                 | STH 32  | 168+00  | -  | 183+00  | --       | 4,018    | --         | 66        | 83           | 45           | GREEN TREE ROAD<br>DEAN ROAD |
| 0010                                 | STH 32  | 258+00  | -  | 272+42  | --       | 4,281    | --         | 66        | 82           | 44           |                              |
| 0010                                 | STH 32  | 134+25  | -  | 153+00  | --       | --       | 6,675      | 165       | 203          | 75           |                              |
| 0010                                 | STH 32  | 153+00  | -  | 168+00  | --       | --       | 1,369      | 35        | 42           | 15           |                              |
| 0010                                 | STH 32  | 168+00  | -  | 183+00  | --       | --       | 10,276     | 252       | 312          | 115          |                              |
| 0010                                 | STH 32  | 183+00  | -  | 198+00  | --       | --       | 1,002      | 26        | 30           | 11           |                              |
| 0010                                 | STH 32  | 198+00  | -  | 213+00  | --       | --       | 6,200      | 153       | 188          | 69           |                              |
| 0010                                 | STH 32  | 213+00  | -  | 228+00  | --       | --       | 14,069     | 345       | 427          | 157          |                              |
| 0010                                 | STH 32  | 228+00  | -  | 243+00  | --       | --       | 5,872      | 144       | 178          | 66           |                              |
| 0010                                 | STH 32  | 243+00  | -  | 258+00  | --       | --       | 3,002      | 75        | 91           | 34           |                              |
| 0010                                 | STH 32  | 258+00  | -  | 272+42  | --       | --       | 5,484      | 135       | 166          | 61           |                              |
|                                      |         |         |    |         |          |          |            |           |              |              |                              |
|                                      |         |         |    |         |          |          |            |           |              |              |                              |
| TOTAL 2225-00-73 CAT 0010            |         |         |    |         |          |          |            | 9,014     | 8,441        | 5,855        |                              |

| ASPHALTIC SURFACE         |         |         |    |         |                                         |                                                                                |
|---------------------------|---------|---------|----|---------|-----------------------------------------|--------------------------------------------------------------------------------|
| CATEGORY                  | ROADWAY | STATION | TO | STATION | 465.0105<br>ASPHALTIC<br>SURFACE<br>TON | 465.0120<br>ASPHALTIC<br>SURFACE<br>DRIVEWAYS<br>AND FIELD<br>ENTRANCES<br>TON |
| 0010                      | STH 32  | 134+25  | -  | 153+00  | 13                                      | 40                                                                             |
| 0010                      | STH 32  | 153+00  | -  | 168+00  | --                                      | 6                                                                              |
| 0010                      | STH 32  | 168+00  | -  | 183+00  | 27                                      | 5                                                                              |
| 0010                      | STH 32  | 183+00  | -  | 198+00  | 2                                       | 7                                                                              |
| 0010                      | STH 32  | 198+00  | -  | 213+00  | --                                      | 16                                                                             |
| 0010                      | STH 32  | 213+00  | -  | 228+00  | 18                                      | 29                                                                             |
| 0010                      | STH 32  | 228+00  | -  | 243+00  | 13                                      | 9                                                                              |
| 0010                      | STH 32  | 243+00  | -  | 258+00  | --                                      | 4                                                                              |
| 0010                      | STH 32  | 258+00  | -  | 272+42  | --                                      | 3                                                                              |
| TOTAL 2225-00-73 CAT 0010 |         |         |    |         | 73                                      | 119                                                                            |

| CURB AND GUTTER           |         |         |    |         |                                                                       |
|---------------------------|---------|---------|----|---------|-----------------------------------------------------------------------|
| CATEGORY                  | ROADWAY | STATION | TO | STATION | 601.0411<br>* CONCRETE<br>CURB &<br>GUTTER<br>30-INCH TYPE<br>D<br>LF |
| 0010                      | STH 32  | 168+00  | -  | 183+00  | 150                                                                   |
| TOTAL 2225-00-73 CAT 0010 |         |         |    |         | 150                                                                   |

\* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

| CONCRETE SIDEWALK         |         |         |    |         | 602.0410                         | 602.0515                                                        | 602.0615                                                                  |
|---------------------------|---------|---------|----|---------|----------------------------------|-----------------------------------------------------------------|---------------------------------------------------------------------------|
|                           |         |         |    |         | * CONCRETE<br>SIDEWALK<br>5-INCH | * CURB RAMP<br>DETECTABLE<br>WARNING FIELD<br>NATURAL<br>PATINA | * CURB RAMP<br>DETECTABLE<br>WARNING FIELD<br>RADIAL<br>NATURAL<br>PATINA |
| CATEGORY                  | ROADWAY | STATION | TO | STATION | SF                               | SF                                                              | SF                                                                        |
| 0010                      | STH 32  | 134+25  | -  | 153+00  | 464                              | 96                                                              | --                                                                        |
| 0010                      | STH 32  | 153+00  | -  | 168+00  | 281                              | 48                                                              | --                                                                        |
| 0010                      | STH 32  | 168+00  | -  | 183+00  | 684                              | 24                                                              | 85                                                                        |
| 0010                      | STH 32  | 183+00  | -  | 198+00  | --                               | --                                                              | --                                                                        |
| 0010                      | STH 32  | 198+00  | -  | 213+00  | 483                              | 24                                                              | 31                                                                        |
| 0010                      | STH 32  | 213+00  | -  | 228+00  | 145                              | --                                                              | 33                                                                        |
| 0010                      | STH 32  | 228+00  | -  | 243+00  | 369                              | 72                                                              | --                                                                        |
| 0010                      | STH 32  | 243+00  | -  | 258+00  | 328                              | 48                                                              | --                                                                        |
| 0010                      | STH 32  | 258+00  | -  | 272+42  | 591                              | 48                                                              | 25                                                                        |
| TOTAL 2225-00-73 CAT 0010 |         |         |    |         | 3,345                            | 360                                                             | 174                                                                       |

| PIPE UNDERDRAIN                     |          |         |    |         |                                 |                                                 |                            |                                                                           |
|-------------------------------------|----------|---------|----|---------|---------------------------------|-------------------------------------------------|----------------------------|---------------------------------------------------------------------------|
| 612.0106 612.0206 612.0600 612.0806 |          |         |    |         |                                 |                                                 |                            |                                                                           |
| CATEGORY                            | LOCATION | STATION | TO | STATION | PIPE UNDERDRAIN<br>6-INCH<br>LF | PIPE UNDERDRAIN<br>UNPERFORATED<br>6-INCH<br>LF | UNDERDRAIN<br>TRENCH<br>LF | APRON ENDWALLS<br>FOR UNDERDRAIN<br>REINFORCED<br>CONCRETE 6-INCH<br>EACH |
| 0010                                | STH 32   | 134+25  | -  | 153+00  | --                              | --                                              | --                         | --                                                                        |
| 0010                                | STH 32   | 153+00  | -  | 168+00  | --                              | --                                              | --                         | --                                                                        |
| 0010                                | STH 32   | 168+00  | -  | 183+00  | 629                             | 24                                              | 24                         | 2                                                                         |
| 0010                                | STH 32   | 183+00  | -  | 198+00  | 43                              | 11                                              | 11                         | 1                                                                         |
| 0010                                | STH 32   | 198+00  | -  | 213+00  | 713                             | 35                                              | 35                         | 4                                                                         |
| 0010                                | STH 32   | 213+00  | -  | 228+00  | 795                             | 45                                              | 45                         | 7                                                                         |
| 0010                                | STH 32   | 228+00  | -  | 243+00  | 297                             | 19                                              | 19                         | 2                                                                         |
| 0010                                | STH 32   | 243+00  | -  | 258+00  | 430                             | 25                                              | 25                         | 2                                                                         |
| 0010                                | STH 32   | 258+00  | -  | 272+42  | 375                             | 13                                              | 13                         | 2                                                                         |
| TOTAL 2225-00-73 CAT 0010           |          |         |    |         | 3,282                           | 172                                             | 172                        | 20                                                                        |

\* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

| RIPRAP                    |          |         |           |               |                    |
|---------------------------|----------|---------|-----------|---------------|--------------------|
|                           |          |         |           | 606.0200      | 645.0120           |
|                           |          |         |           | RIPRAP MEDIUM | GEOTEXTILE TYPE HR |
| CATEGORY                  | LOCATION | STATION | OFFSET    | CY            | SY                 |
| 0010                      | STH 32   | 159+02  | 45.49' RT | 3             | 17                 |
| 0010                      | STH 32   | 208+76  | 29.42' RT | 3             | 16                 |
| TOTAL 2225-00-73 CAT 0010 |          |         |           | 6             | 33                 |

| WATER                     |                           |
|---------------------------|---------------------------|
| LOCATION                  | 624.0100<br>WATER<br>MGAL |
| PROJECT-BASE AGGREGATE    | 2                         |
| PROJECT- EXCAVATION       | 10                        |
| UNDISTRIBUTED             | 30                        |
| TOTAL 2225-00-73 CAT 0010 |                           |
| 42                        |                           |

3

| DUST CONTROL              |            |                                   |
|---------------------------|------------|-----------------------------------|
|                           |            | 623.0200                          |
|                           |            | DUST CONTROL SURFACE<br>TREATMENT |
| CATEGORY                  | PROJECT    | SY                                |
| 0010                      | 2225-00-03 | 6,931                             |
| TOTAL 2225-00-73 CAT 0010 |            | 6,931                             |

| FIELD OFFICE              |            |                                         |
|---------------------------|------------|-----------------------------------------|
|                           |            | 642.5001<br>FIELD OFFICE TYPE B<br>EACH |
| CATEGORY                  | PROJECT    |                                         |
| 0010                      | 2225-00-03 | 1                                       |
| TOTAL 2225-00-73 CAT 0010 |            | 1                                       |



|                                                                                                         |  |             |  |                                |  |                           |  |             |  |                      |  |                       |  |
|---------------------------------------------------------------------------------------------------------|--|-------------|--|--------------------------------|--|---------------------------|--|-------------|--|----------------------|--|-----------------------|--|
| PROJECT NO: 2225-00-73                                                                                  |  | HWY: STH 32 |  | COUNTY: MILWAUKEE              |  | MISCELLANEOUS QUANTITIES  |  |             |  | SHEET 282            |  | E                     |  |
| FILE NAME : S:\MILW_CO\FOX POINT\GOV\210250_LAKE DRIVE RESURFACE\22250003\SHEETSP\030201-MQ_ROADWAY.DWG |  |             |  | PLOT DATE : 11/19/2024 2:39 PM |  | PLOT BY : MITCHELL FULLER |  | PLOT NAME : |  | PLOT SCALE : 1" = 1' |  | WISDOT/CADDs SHEET 42 |  |
| LAYOUT NAME - 09                                                                                        |  |             |  |                                |  |                           |  |             |  |                      |  |                       |  |

| PAVEMENT MARKING          |          |          |    |         |                       |                      |                                                                               |                                            |                      |                                            |               |                 |                    |                                 |                                |                                        |                                     |          |
|---------------------------|----------|----------|----|---------|-----------------------|----------------------|-------------------------------------------------------------------------------|--------------------------------------------|----------------------|--------------------------------------------|---------------|-----------------|--------------------|---------------------------------|--------------------------------|----------------------------------------|-------------------------------------|----------|
| 646.1020                  |          |          |    |         | 646.3020              |                      |                                                                               |                                            |                      | 646.5020                                   |               | 646.5520        | 646.6120           | 646.7120                        |                                | 646.7420                               |                                     | 646.7520 |
| CATEGORY                  | LOCATION | STATION  | TO | STATION | MARKING LINE          | MARKING LINE         | MARKING LINE                                                                  | MARKING LINE                               | MARKING LINE         | MARKING LINE                               | MARKING ARROW | MARKING OUTFALL | MARKING STOP       | MARKING                         | MARKING                        | MARKING                                | * MARKING                           |          |
|                           |          |          |    |         | EPOXY 4-INCH (YELLOW) | EPOXY 4-INCH (WHITE) | EPOXY 4-INCH (DOT PATTERN YELLOW) (DASHED YELLOW) (12.5 FT LINE 37.5 FT SKIP) | EPOXY 4-INCH (WHITE) (3 FT LINE 9 FT SKIP) | EPOXY 8-INCH (WHITE) | EPOXY 8-INCH (WHITE) (3 FT LINE 9 FT SKIP) | EPOXY EACH    | EPOXY EACH      | LINE EPOXY 18-INCH | DIAGONAL EPOXY 12-INCH (YELLOW) | DIAGONAL EPOXY 12-INCH (WHITE) | CROSSWALK EPOXY TRANSVERSE LINE 6-INCH | CROSSWALK EPOXY BLOCK STYLE 24-INCH |          |
|                           |          |          |    |         | LF                    | LF                   | LF                                                                            | LF                                         | LF                   | LF                                         |               |                 | LF                 | LF                              | LF                             | LF                                     | LF                                  |          |
| 0010                      | STH 32   | 134+25   | -  | 153+00  | --                    | 3,491                | 469                                                                           | --                                         | --                   | --                                         | --            | --              | 73                 | --                              | --                             | 145                                    | --                                  |          |
| 0010                      | STH 32   | 153+00   | -  | 168+00  | 796                   | 2,709                | 175                                                                           | --                                         | --                   | --                                         | --            | --              | 61                 | --                              | --                             | 91                                     | --                                  |          |
| 0010                      | STH 32   | 168+00   | -  | 183+00  | 1,840                 | 2,576                | 82                                                                            | 46                                         | 400                  | 72                                         | 6             | 3               | 95                 | 299                             | --                             | 60                                     | --                                  |          |
| 0010                      | STH 32   | 183+00   | -  | 198+00  | 64                    | 2,521                | 309                                                                           | --                                         | --                   | --                                         | --            | 1               | 16                 | --                              | --                             | --                                     | --                                  |          |
| 0010                      | STH 32   | 198+00   | -  | 213+00  | 2,301                 | 3,025                | --                                                                            | 30                                         | 87                   | 20                                         | 2             | 4               | 83                 | 258                             | --                             | 46                                     | 90                                  |          |
| 0010                      | STH 32   | 213+00   | -  | 228+00  | 1,794                 | 2,645                | --                                                                            | --                                         | 120                  | 15                                         | 2             | 8               | 87                 | 103                             | 49                             | --                                     | 90                                  |          |
| 0010                      | STH 32   | 228+00   | -  | 243+00  | 1,636                 | 2,614                | --                                                                            | 25                                         | --                   | 15                                         | --            | 2               | 73                 | 41                              | --                             | 130                                    |                                     |          |
| 0010                      | STH 32   | 243+00   | -  | 258+00  | 749                   | 2,514                | 204                                                                           | --                                         | 91                   | --                                         | 2             | 2               | 71                 | 60                              | --                             | 93                                     |                                     |          |
| 0010                      | STH 32   | 25800.00 | -  | 272+42  | 927                   | 2,541                | 163                                                                           | --                                         | 202                  | 15                                         | 3             | 2               | 63                 | 41                              | --                             | 90                                     |                                     |          |
| SUBTOTAL                  |          |          |    |         | 10,106                | 24,635               | 1,402                                                                         | 100                                        | 900                  | 138                                        | 15            | 22              | 622                | 802                             | 49                             | 656                                    | 180                                 |          |
| TOTAL 2225-00-73 CAT 0010 |          |          |    |         | 36,244                |                      |                                                                               |                                            | 1,039                |                                            | 15            |                 | 22                 | 622                             | 851                            |                                        | 656                                 | 180      |



| GEOSYNTHETIC                           |         |    |         |               |                                        |                       | REMARKS                                          |
|----------------------------------------|---------|----|---------|---------------|----------------------------------------|-----------------------|--------------------------------------------------|
| 645.0111                      645.0220 |         |    |         |               |                                        |                       |                                                  |
| CATEGORY                               | STATION | TO | STATION | LOCATION      | GEOTEXTILE TYPE DF<br>SCHEDULE A<br>SY | GEOGRID TYPE SR<br>SY |                                                  |
| 0010                                   | 134+25  | -  | 153+00  | STH 32        |                                        |                       |                                                  |
| 0010                                   | 153+00  | -  | 168+00  | STH 32        | --                                     | --                    |                                                  |
| 0010                                   | 168+00  | -  | 183+00  | STH 32        | 1,097                                  | --                    |                                                  |
| 0010                                   | 183+00  | -  | 198+00  | STH 32        | 25                                     | --                    |                                                  |
| 0010                                   | 198+00  | -  | 213+00  | STH 32        | 1,054                                  | --                    |                                                  |
| 0010                                   | 213+00  | -  | 228+00  | STH 32        | 950                                    | --                    |                                                  |
| 0010                                   | 228+00  | -  | 243+00  | STH 32        | 298                                    | --                    |                                                  |
| 0010                                   | 243+00  | -  | 258+00  | STH 32        | 548                                    | --                    |                                                  |
| 0010                                   | 258+00  | -  | 272+42  | STH 32        | 393                                    | --                    |                                                  |
| 0010                                   |         |    |         | UNDISTRIBUTED | --                                     | 850                   | FOR USE AT EBS AREAS AS DIRECTED BY THE ENGINEER |
| TOTAL 2225-00-73 CAT 0010              |         |    |         |               | 4,365                                  | 850                   |                                                  |

| CONSTRUCTION STAKING                                                                                                                                                                                                       |               |         |    |         |                                       |                                  |                              |                                                       |                                               |                                        |                                                           |                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|---------|----|---------|---------------------------------------|----------------------------------|------------------------------|-------------------------------------------------------|-----------------------------------------------|----------------------------------------|-----------------------------------------------------------|--------------------------------------|
| 650.4000                      650.4500                      650.5000                      650.5500                      650.8000                      650.9000                      650.9911                      650.9920 |               |         |    |         |                                       |                                  |                              |                                                       |                                               |                                        |                                                           |                                      |
| CATEGORY                                                                                                                                                                                                                   | ROADWAY       | STATION | TO | STATION | CONSTRUCTION STAKING STORM SEWER EACH | CONSTRUCTION STAKING SUBGRADE LF | CONSTRUCTION STAKING BASE LF | CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER LF | CONSTRUCTION STAKING RESURFACING REFERENCE LF | * CONSTRUCTION STAKING CURB RAMPS EACH | CONSTRUCTION STAKING SUPPLEMENTAL CONTROL 2225-00-73 EACH | CONSTRUCTION STAKING SLOPE STAKES LF |
| 0010                                                                                                                                                                                                                       | STH 32        | 134+25  | -  | 153+00  | 2                                     | --                               | --                           | --                                                    | 1,875                                         | 8                                      | --                                                        | --                                   |
| 0010                                                                                                                                                                                                                       | STH 32        | 153+00  | -  | 168+00  | 6                                     | --                               | --                           | --                                                    | 1,500                                         | 4                                      | --                                                        | --                                   |
| 0010                                                                                                                                                                                                                       | STH 32        | 168+00  | -  | 183+00  | 5                                     | 714                              | 714                          | 225                                                   | 1,500                                         | 4                                      | --                                                        | 714                                  |
| 0010                                                                                                                                                                                                                       | STH 32        | 183+00  | -  | 198+00  | 2                                     | 42                               | 42                           | --                                                    | 1,500                                         | --                                     | --                                                        | 42                                   |
| 0010                                                                                                                                                                                                                       | STH 32        | 198+00  | -  | 213+00  | 7                                     | 700                              | 700                          | --                                                    | 1,500                                         | 4                                      | --                                                        | 700                                  |
| 0010                                                                                                                                                                                                                       | STH 32        | 213+00  | -  | 228+00  | 16                                    | 808                              | 808                          | 25                                                    | 1,500                                         | 2                                      | --                                                        | 808                                  |
| 0010                                                                                                                                                                                                                       | STH 32        | 228+00  | -  | 243+00  | --                                    | 296                              | 296                          | --                                                    | 1,500                                         | 6                                      | --                                                        | 296                                  |
| 0010                                                                                                                                                                                                                       | STH 32        | 243+00  | -  | 258+00  | --                                    | 441                              | 441                          | --                                                    | 1,500                                         | 4                                      | --                                                        | 441                                  |
| 0010                                                                                                                                                                                                                       | STH 32        | 258+00  | -  | 272+42  | 10                                    | 336                              | 336                          | --                                                    | 1,442                                         | 6                                      | --                                                        | 336                                  |
|                                                                                                                                                                                                                            | UNDISTRIBUTED |         |    |         |                                       |                                  |                              |                                                       |                                               |                                        | 1                                                         |                                      |
| TOTAL 2225-00-73 CAT 0010                                                                                                                                                                                                  |               |         |    |         | 48                                    | 3,337                            | 3,337                        | 251                                                   | 13,817                                        | 38                                     | 1                                                         | 3,337                                |

\* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

| SAWING                    |          |         |    |         |                                     |                                      |
|---------------------------|----------|---------|----|---------|-------------------------------------|--------------------------------------|
| CATEGORY                  | LOCATION | STATION | TO | STATION | 690.0150<br>SAWING<br>ASPHALT<br>LF | 690.0250<br>SAWING<br>CONCRETE<br>LF |
| 0010                      | STH 32   | 134+25  | -  | 153+00  | 2,320                               | 1,207                                |
| 0010                      | STH 32   | 153+00  | -  | 168+00  | 484                                 | 180                                  |
| 0010                      | STH 32   | 168+00  | -  | 183+00  | 1,457                               | 60                                   |
| 0010                      | STH 32   | 183+00  | -  | 198+00  | 226                                 | 120                                  |
| 0010                      | STH 32   | 198+00  | -  | 213+00  | 1,648                               | 164                                  |
| 0010                      | STH 32   | 213+00  | -  | 228+00  | 2,025                               | 823                                  |
| 0010                      | STH 32   | 228+00  | -  | 243+00  | 1,608                               | 795                                  |
| 0010                      | STH 32   | 243+00  | -  | 258+00  | 1,111                               | 24                                   |
| 0010                      | STH 32   | 258+00  | -  | 272+42  | 1,648                               | 277                                  |
| TOTAL 2225-00-73 CAT 0010 |          |         |    |         | 12,527                              | 3,650                                |

| MANAGEMENT OF SOLID WASTE |               |         |    |         |                                                    |
|---------------------------|---------------|---------|----|---------|----------------------------------------------------|
| CATEGORY                  | ROADWAY       | STATION | TO | STATION | SPV.0195.01<br>MANAGEMENT OF<br>SOLID WASTE<br>TON |
| 0010                      | GREEN TREE RD | 49+15   | -  | 49+35   | 125                                                |
| TOTAL 2225-00-73 CAT 0010 |               |         |    |         | 125                                                |

| FENCE SAFETY              |          |                                  |
|---------------------------|----------|----------------------------------|
| CATEGORY                  | LOCATION | 616.0700.S<br>FENCE SAFETY<br>LF |
| 0010                      | STH 32   | 600                              |
| TTOAL 2225-00-73 CAT 0010 |          | 600                              |

| TRAFFIC CONTROL           |                      |                           |          |                                   |        |                                                    |       |                                                      |        |                                   |        |                                                             |    |                                                   |    |                                        |  |
|---------------------------|----------------------|---------------------------|----------|-----------------------------------|--------|----------------------------------------------------|-------|------------------------------------------------------|--------|-----------------------------------|--------|-------------------------------------------------------------|----|---------------------------------------------------|----|----------------------------------------|--|
|                           |                      |                           |          | 643.0300                          |        | 643.0420                                           |       | 643.0705                                             |        | 643.0900                          |        | 643.0920<br>TRAFFIC<br>CONTROL<br>COVERING<br>SIGNS TYPE II |    | 643.1000                                          |    | 643.1050                               |  |
| CATEGORY                  | STAGE                | STAGE<br>DURATION<br>DAYS | LOCATION | TRAFFIC CONTROL DRUMS<br>EACH DAY |        | TRAFFIC CONTROL<br>BARRICADES TYPE III<br>EACH DAY |       | TRAFFIC CONTROL<br>WARNING LIGHTS TYPE A<br>EACH DAY |        | TRAFFIC CONTROL SIGNS<br>EACH DAY |        | TRAFFIC CONTROL COVERING<br>SIGNS TYPE II<br>EACH^          |    | TRAFFIC CONTROL SIGNS<br>FIXED MESSAGE<br>EACH SF |    | TRAFFIC CONTROL SIGNS PCMS<br>EACH DAY |  |
| 0010                      | ROADWAY              | 145                       | STH 32   | 553                               | 80,185 | 48                                                 | 6,960 | 96                                                   | 13,920 | 49                                | 7,105  | --                                                          | -- | --                                                | -- | --                                     |  |
| 0010                      | CULVERT CROSSINGS    | 5                         | STH 32   | --                                | --     | 117                                                | 585   | 234                                                  | 1,170  | 41                                | 205    | --                                                          | -- | --                                                | -- | --                                     |  |
| 0010                      | WATER MAIN CROSSINGS | 5                         | STH 32   | --                                | --     | 197                                                | 985   | 394                                                  | 1,970  | 65                                | 325    | --                                                          | -- | --                                                | -- | --                                     |  |
| 0010                      | DETOUR               | 145                       | STH 32   | --                                | --     | 4                                                  | 580   | 8                                                    | 1,160  | 182                               | 26,390 | --                                                          | 9  | 257                                               | -- | --                                     |  |
| 0010                      | PED DETOUR           | 10                        | STH 32   | 299                               | 2,990  | 2                                                  | 20    | 4                                                    | 40     | 106                               | 1,060  | --                                                          | -- | --                                                | -- | --                                     |  |
| SUBTOTAL                  |                      |                           |          | 83,175                            |        | 9,130                                              |       | 18,260                                               |        | 35,085                            |        | --                                                          |    | 257                                               |    | --                                     |  |
| UNDISTRIBUTED             |                      |                           |          | 4,159                             |        | 457                                                |       | 913                                                  |        | 1,754                             |        | 10                                                          |    | --                                                |    | 28                                     |  |
| TOTAL 2225-00-73 CAT 0010 |                      |                           |          | 87,334                            |        | 9,587                                              |       | 19,173                                               |        | 36,840                            |        | 10                                                          |    | 257                                               |    | 28                                     |  |

^=ONE CYCLE

TEMPORARY PEDESTRIAN CROSSINGS

| CATEGORY                  | LOCATION              | STATION | TO | STATION | SPV.0060.01                         |
|---------------------------|-----------------------|---------|----|---------|-------------------------------------|
|                           |                       |         |    |         | TEMPORARY PEDESTRIAN CROSSINGS EACH |
| 0010                      | LAKE DR/ACACIA RD     | --      | -  | --      | 1                                   |
| 0010                      | LAKE DR/APPLE TREE RD | --      | -  | --      | 1                                   |
| 0010                      | LAKE DR/DAPHNE RD     | --      | -  | --      | 1                                   |
| 0010                      | LAKE DR/HOLLY CT      | --      | -  | --      | 1                                   |
| 0010                      | LAKE DR               | 161+25  | -  | 162+50  | 1                                   |
| 0010                      | LAKE DR               | 169+25  | -  | 170+50  | 1                                   |
| 0010                      | LAKE DR/GREEN TREE RD | --      | -  | --      | 1                                   |
| 0010                      | LAKE DR/BELL RD       | --      | -  | --      | 1                                   |
| 0010                      | LAKE DR/PORTAGE RD    | --      | -  | --      | 1                                   |
| 0010                      | LAKE DR/CALUMET RD    | --      | -  | --      | 1                                   |
| 0010                      | LAKE DR               | 221+00  | -  | 221+50  | 1                                   |
| 0010                      | LAKE DR/BEACH DR      | --      | -  | --      | 1                                   |
| 0010                      | LAKE DR/HYDE WAY      | --      | -  | --      | 1                                   |
| 0010                      | LAKE DR               | 232+50  | -  | 233+50  | 1                                   |
| 0010                      | LAKE DR               | 239+00  | -  | 240+50  | 1                                   |
| 0010                      | LAKE DR/QUARLES PL    | --      | -  | --      | 1                                   |
| 0010                      | LAKE DR/FOX LN        | --      | -  | --      | 1                                   |
| 0010                      | LAKE DR/CHURCHILL LN  | --      | -  | --      | 1                                   |
| 0010                      | LAKE DR/SPOONER RD    | --      | -  | --      | 1                                   |
| 0010                      | LAKE DR/DEAN RD       | --      | -  | --      | 1                                   |
| TOTAL 2225-00-73 CAT 0010 |                       |         |    |         | 20                                  |

PAVEMENT CLEANUP PROJECT

| CATEGORY                  | PROJECT    | SPV.0075.01                               |
|---------------------------|------------|-------------------------------------------|
|                           |            | PAVEMENT CLEANUP PROJECT (2225-00-73) HRS |
| 0010                      | 2225-00-73 | 40                                        |
| TOTAL 2225-00-73 CAT 0010 |            | 40                                        |

TYPE II PERMANENT SIGNING

2225-00-73 STH 32

| SIGN NO. | SIGN CODE & SIZE | SIGN TYPE | SIGN MESSAGE  | TYPE II SIGN SIZE |   |       | 637.2210                   | 637.2230                   | 638.2102                  | 638.2602                    | 638.3000                          | 634.0618                   | 634.0818                            | MOUNT ON SAME POST AS SIGN # | REMARKS / NEW SIGN LOCATION |
|----------|------------------|-----------|---------------|-------------------|---|-------|----------------------------|----------------------------|---------------------------|-----------------------------|-----------------------------------|----------------------------|-------------------------------------|------------------------------|-----------------------------|
|          |                  |           |               | W                 | x | H     | SIGNS TYPE II REFLC H [SF] | SIGNS TYPE II REFLC F [SF] | MOVING SIGNS TYPE II [EA] | REMOVING SIGNS TYPE II [EA] | REMOVING SMALL SIGN SUPPORTS [EA] | POSTS WOOD 4"X 6"X18' [EA] | POSTS TUBULAR STEEL 2"X 2"X18' [EA] |                              |                             |
|          |                  |           |               | [IN.]             | x | [IN.] |                            |                            |                           |                             |                                   |                            |                                     |                              |                             |
| 1        | R2-1 (2S)        | II        | 35 MPH        | 24                | x | 30    | 5.00                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 2        | J4-1 (2S)        | II        | --            | 24                | x | 36    | 6.00                       | --                         | --                        | 2                           | 1                                 | 1                          | --                                  | --                           | --                          |
|          | M3-1             |           | --            | 24                | x | 12    | --                         | --                         | --                        | --                          | --                                | --                         | --                                  | --                           | --                          |
|          | M1-6B            |           | --            | 24                | x | 24    | --                         | --                         | --                        | --                          | --                                | --                         | --                                  | --                           | --                          |
| 3        | M1-93 (2S)       | II        | --            | 24                | x | 24    | 4.00                       | --                         | --                        | --                          | --                                | --                         | --                                  | 2                            | --                          |
| 4        | R1-1 (2M)        | II        | --            | 36                | x | 36    | 7.46                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 5        | R1-1 (2M)        | II        | --            | 36                | x | 36    | 7.46                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 6        | R1-1 (2M)        | II        | --            | 36                | x | 36    | 7.46                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 7        | R2-1 (2S)        | II        | 35 MPH        | 24                | x | 30    | 5.00                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 8        | R2-1 (2S)        | II        | 35 MPH        | 24                | x | 30    | 5.00                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 9        | R1-1 (2M)        | II        | --            | 36                | x | 36    | 7.46                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 10       | R1-1 (2M)        | II        | --            | 36                | x | 36    | 7.46                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 11       | W11-2 (2S)       | II        | --            | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 12       | W16-7L (2M)      | II        | --            | 30                | x | 18    | --                         | 3.75                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 13       | W11-2 (2S)       | II        | --            | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 14       | W16-7R (2M)      | II        | --            | 30                | x | 18    | --                         | 3.75                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 15       | W11-2 (2S)       | II        | --            | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 16       | W16-7R (2M)      | II        | --            | 30                | x | 18    | --                         | 3.75                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 17       | W11-2 (2S)       | II        | --            | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 18       | W16-7L (2M)      | II        | --            | 30                | x | 18    | --                         | 3.75                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 19       | W14-3 (2S)       | II        | --            | 48                | x | 36    | --                         | 5.56                       | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 20       | R1-1 (2M)        | II        | --            | 36                | x | 36    | 7.46                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 21       | R1-1 (2M)        | II        | --            | 36                | x | 36    | 7.46                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 22       | R1-1 (2M)        | II        | --            | 36                | x | 36    | 9.00                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 23       | R1-1 (2M)        | II        | --            | 36                | x | 36    | 9.00                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 24       | W10-2 (2S)       | II        | --            | 36                | x | 36    | --                         | 9.00                       | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 25       | --               | --        | NO TRAIN HORN | --                | x | --    | --                         | --                         | 1                         | --                          | --                                | --                         | --                                  | 24                           | --                          |
| 26       | R1-1 (2M)        | II        | --            | 36                | x | 36    | 7.46                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 27       | W11-2 (2S)       | II        | --            | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 28       | W16-7L (2M)      | II        | --            | 30                | x | 18    | --                         | 3.75                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 29       | W11-2 (2S)       | II        | --            | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 30       | W16-7R (2M)      | II        | --            | 30                | x | 18    | --                         | 3.75                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 31       | W11-2 (2S)       | II        | --            | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 32       | W16-7R (2M)      | II        | --            | 30                | x | 18    | --                         | 3.75                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 33       | W11-2 (2S)       | II        | --            | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 34       | W16-7L (2M)      | II        | --            | 30                | x | 18    | --                         | 3.75                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |

| TYPE II PERMANENT SIGNING |                  |      |           |               |                   |   |            |                     |                     |                      |                        |                              |                       |                                | 2225-00-73 STH 32            |                             |
|---------------------------|------------------|------|-----------|---------------|-------------------|---|------------|---------------------|---------------------|----------------------|------------------------|------------------------------|-----------------------|--------------------------------|------------------------------|-----------------------------|
| SIGN NO.                  | SIGN CODE & SIZE |      | SIGN TYPE | SIGN MESSAGE  | TYPE II SIGN SIZE |   |            | 637.2210            | 637.2230            | 638.2102             | 638.2602               | 638.3000                     | 634.0618              | 634.0818                       | MOUNT ON SAME POST AS SIGN # | REMARKS / NEW SIGN LOCATION |
|                           |                  |      |           |               | W<br>[IN.]        | x | H<br>[IN.] | SIGNS TYPE II REFLC | SIGNS TYPE II REFLC | MOVING SIGNS TYPE II | REMOVING SIGNS TYPE II | REMOVING SMALL SIGN SUPPORTS | POSTS WOOD 4"X 6"X18' | POSTS TUBULAR STEEL 2"X 2"X18' |                              |                             |
|                           |                  |      |           |               |                   |   |            | H [SF]              | F [SF]              | [EA]                 | [EA]                   | [EA]                         | [EA]                  | [EA]                           |                              |                             |
| 35                        | W12-1D           | (2S) | II        | --            | 24                | x | 24         | --                  | 4.00                | --                   | 1                      | 1                            | --                    | 1                              | --                           | 2' HEIGHT                   |
| 36                        | R1-1             | (2M) | II        | --            | 36                | x | 36         | 7.46                | --                  | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 37                        | R1-1             | (2M) | II        | --            | 36                | x | 36         | 7.46                | --                  | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 38                        | W10-2            | (2S) | II        | --            | 36                | x | 36         | --                  | 9.00                | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 39                        | --               | --   | --        | NO TRAIN HORN | --                | x | --         | --                  | --                  | 1                    | --                     | --                           | --                    | --                             | 38                           | --                          |
| 40                        | W14-3            | (2S) | II        | --            | 48                | x | 36         | --                  | 5.56                | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 41                        | R2-1             | (2S) | II        | 35 MPH        | 24                | x | 30         | 5.00                | --                  | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 42                        | R1-1             | (2M) | II        | --            | 36                | x | 36         | 7.46                | --                  | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 43                        | W14-3            | (2S) | II        | --            | 48                | x | 36         | --                  | 5.56                | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 44                        | R1-1             | (2M) | II        | --            | 36                | x | 36         | 7.46                | --                  | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 45                        | R1-1             | (2M) | II        | --            | 36                | x | 36         | 7.46                | --                  | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 46                        | R2-1             | (2S) | II        | 35 MPH        | 24                | x | 30         | 5.00                | --                  | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 47                        | R2-1             | (2S) | II        | 35 MPH        | 24                | x | 30         | 5.00                | --                  | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 48                        | J4-1             | (2S) | II        | --            | 24                | x | 36         | 6.00                | --                  | --                   | 2                      | 1                            | 1                     | --                             | --                           | --                          |
|                           | M3-1             |      |           | --            | 24                | x | 12         | --                  | --                  | --                   | --                     | --                           | --                    | --                             | --                           | --                          |
|                           | M1-6B            |      |           | --            | 24                | x | 24         | --                  | --                  | --                   | --                     | --                           | --                    | --                             | --                           | --                          |
| 49                        | M1-93            | (2S) | II        | --            | 24                | x | 24         | 4.00                | --                  | --                   | --                     | --                           | --                    | --                             | 48                           | --                          |
| 50                        | R1-1             | (2S) | II        | --            | 36                | x | 36         | 7.46                | --                  | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 51                        | W11-2            | (2S) | II        | --            | 30                | x | 30         | --                  | 6.25                | --                   | --                     | --                           | --                    | --                             | --                           | Mount on RRFB Assembly      |
| 52                        | W16-7L           | (2M) | II        | --            | 30                | x | 18         | --                  | 3.75                | --                   | --                     | --                           | --                    | --                             | --                           | Mount on RRFB Assembly      |
| 53                        | W11-2            | (2S) | II        | --            | 30                | x | 30         | --                  | 6.25                | --                   | --                     | --                           | --                    | --                             | --                           | Mount on RRFB Assembly      |
| 54                        | W16-7R           | (2M) | II        | --            | 30                | x | 18         | --                  | 3.75                | --                   | --                     | --                           | --                    | --                             | --                           | Mount on RRFB Assembly      |
| 55                        | W11-2            | (2S) | II        | --            | 30                | x | 30         | --                  | 6.25                | --                   | --                     | --                           | --                    | --                             | --                           | Mount on RRFB Assembly      |
| 56                        | W16-7R           | (2M) | II        | --            | 30                | x | 18         | --                  | 3.75                | --                   | --                     | --                           | --                    | --                             | --                           | Mount on RRFB Assembly      |
| 57                        | W11-2            | (2S) | II        | --            | 30                | x | 30         | --                  | 6.25                | --                   | --                     | --                           | --                    | --                             | --                           | Mount on RRFB Assembly      |
| 58                        | W16-7L           | (2M) | II        | --            | 30                | x | 18         | --                  | 3.75                | --                   | --                     | --                           | --                    | --                             | --                           | Mount on RRFB Assembly      |
| 59                        | R1-1             | (2M) | II        | --            | 36                | x | 36         | 7.46                | --                  | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 60                        | R1-1             | (2M) | II        | --            | 36                | x | 36         | 7.46                | --                  | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 61                        | W1-2L            | (2S) | II        | --            | 30                | x | 30         | 6.25                | --                  | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 62                        | R1-1             | (2M) | II        | --            | 36                | x | 36         | 7.46                | --                  | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 63                        | R1-1             | (2M) | II        | --            | 36                | x | 36         | 7.46                | --                  | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 64                        | W1-7             | (2S) | II        | --            | 48                | x | 24         | --                  | 8.00                | --                   | 1                      | 1                            | --                    | 1                              | --                           | --                          |
| 65                        | W11-2            | (2S) | II        | --            | 30                | x | 30         | --                  | 6.25                | --                   | --                     | --                           | --                    | --                             | --                           | Mount on RRFB Assembly      |
| 66                        | W16-7L           | (2M) | II        | --            | 30                | x | 18         | --                  | 3.75                | --                   | --                     | --                           | --                    | --                             | --                           | Mount on RRFB Assembly      |
| 67                        | W11-2            | (2S) | II        | --            | 30                | x | 30         | --                  | 6.25                | --                   | --                     | --                           | --                    | --                             | --                           | Mount on RRFB Assembly      |
| 68                        | W16-7R           | (2M) | II        | --            | 30                | x | 18         | --                  | 3.75                | --                   | --                     | --                           | --                    | --                             | --                           | Mount on RRFB Assembly      |

TYPE II PERMANENT SIGNING

2225-00-73 STH 32

| SIGN NO. | SIGN CODE & SIZE |      | SIGN TYPE | SIGN MESSAGE | TYPE II SIGN SIZE |        |            | 637.2210                               | 637.2230                               | 638.2102                           | 638.2602                             | 638.3000                                      | 634.0618                            | 634.0818                                        | MOUNT ON SAME POST AS SIGN # | REMARKS / NEW SIGN LOCATION |
|----------|------------------|------|-----------|--------------|-------------------|--------|------------|----------------------------------------|----------------------------------------|------------------------------------|--------------------------------------|-----------------------------------------------|-------------------------------------|-------------------------------------------------|------------------------------|-----------------------------|
|          |                  |      |           |              | W<br>[IN.]        | x<br>x | H<br>[IN.] | SIGNS<br>TYPE II<br>REFLC<br>H<br>[SF] | SIGNS<br>TYPE II<br>REFLC<br>F<br>[SF] | MOVING<br>SIGNS<br>TYPE II<br>[EA] | REMOVING<br>SIGNS<br>TYPE II<br>[EA] | REMOVING<br>SMALL<br>SIGN<br>SUPPORTS<br>[EA] | POSTS<br>WOOD<br>4"X 6"X18'<br>[EA] | POSTS<br>TUBULAR<br>STEEL<br>2"X 2"X18'<br>[EA] |                              |                             |
| 69       | W11-2            | (2S) | II        | --           | 30                | x      | 30         | --                                     | 6.25                                   | --                                 | --                                   | --                                            | --                                  | --                                              | --                           | Mount on RRFB Assembly      |
| 70       | W16-7R           | (2M) | II        | --           | 30                | x      | 18         | --                                     | 3.75                                   | --                                 | --                                   | --                                            | --                                  | --                                              | --                           | Mount on RRFB Assembly      |
| 71       | W11-2            | (2S) | II        | --           | 30                | x      | 30         | --                                     | 6.25                                   | --                                 | --                                   | --                                            | --                                  | --                                              | --                           | Mount on RRFB Assembly      |
| 72       | W16-7L           | (2M) | II        | --           | 30                | x      | 18         | --                                     | 3.75                                   | --                                 | --                                   | --                                            | --                                  | --                                              | --                           | Mount on RRFB Assembly      |
| 73       | R1-1             | (2M) | II        | --           | 36                | x      | 36         | 7.46                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 74       | R1-1             | (2M) | II        | --           | 36                | x      | 36         | 7.46                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 75       | R1-1             | (2M) | II        | --           | 36                | x      | 36         | 7.46                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 76       | R1-1             | (2M) | II        | --           | 36                | x      | 36         | 7.46                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 77       | R1-1             | (2M) | II        | --           | 36                | x      | 36         | 7.46                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 78       | R1-1             | (2M) | II        | --           | 36                | x      | 36         | 7.46                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 79       | R1-1             | (2M) | II        | --           | 36                | x      | 36         | 7.46                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 80       | S3-1             | (2S) | II        | --           | 36                | x      | 36         | --                                     | 9.00                                   | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 81       | R1-1             | (2M) | II        | --           | 36                | x      | 36         | 7.46                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 82       | R1-1             | (2M) | II        | --           | 36                | x      | 36         | 7.46                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 83       | R1-1             | (2M) | II        | --           | 36                | x      | 36         | 7.46                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 84       | W14-3            | (2S) | II        | --           | 48                | x      | 36         | --                                     | 5.56                                   | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 85       | R1-1             | (2M) | II        | --           | 36                | x      | 36         | 7.46                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 86       | W1-2R            | (2S) | II        | --           | 30                | x      | 30         | --                                     | 6.25                                   | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 87       | R1-1             | (2M) | II        | --           | 36                | x      | 36         | 7.46                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 88       | R1-1             | (2M) | II        | --           | 36                | x      | 36         | 7.46                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 89       | W11-2            | (2S) | II        | --           | 30                | x      | 30         | --                                     | 6.25                                   | --                                 | --                                   | --                                            | --                                  | --                                              | --                           | Mount on RRFB Assembly      |
| 90       | W16-7R           | (2M) | II        | --           | 30                | x      | 18         | --                                     | 3.75                                   | --                                 | --                                   | --                                            | --                                  | --                                              | --                           | Mount on RRFB Assembly      |
| 91       | W11-2            | (2S) | II        | --           | 30                | x      | 30         | --                                     | 6.25                                   | --                                 | --                                   | --                                            | --                                  | --                                              | --                           | Mount on RRFB Assembly      |
| 92       | W16-7L           | (2M) | II        | --           | 30                | x      | 18         | --                                     | 3.75                                   | --                                 | --                                   | --                                            | --                                  | --                                              | --                           | Mount on RRFB Assembly      |
| 93       | W11-2            | (2S) | II        | --           | 30                | x      | 30         | --                                     | 6.25                                   | --                                 | --                                   | --                                            | --                                  | --                                              | --                           | Mount on RRFB Assembly      |
| 94       | W16-7L           | (2M) | II        | --           | 30                | x      | 18         | --                                     | 3.75                                   | --                                 | --                                   | --                                            | --                                  | --                                              | --                           | Mount on RRFB Assembly      |
| 95       | W11-2            | (2S) | II        | --           | 30                | x      | 30         | --                                     | 6.25                                   | --                                 | --                                   | --                                            | --                                  | --                                              | --                           | Mount on RRFB Assembly      |
| 96       | W16-7R           | (2M) | II        | --           | 30                | x      | 18         | --                                     | 3.75                                   | --                                 | --                                   | --                                            | --                                  | --                                              | --                           | Mount on RRFB Assembly      |
| 97       | R1-1             | (2M) | II        | --           | 36                | x      | 36         | 7.46                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 98       | R1-1             | (2M) | II        | --           | 36                | x      | 36         | 7.46                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 99       | R2-1             | (2S) | II        | 35 MPH       | 24                | x      | 30         | 5.00                                   | --                                     | --                                 | 1                                    | 1                                             | --                                  | 1                                               | --                           | --                          |
| 100      |                  |      |           | --           | --                | x      | --         | --                                     | --                                     | --                                 | 1                                    | 1                                             | --                                  | --                                              | --                           | --                          |
| 101      |                  |      |           | --           | --                | x      | --         | --                                     | --                                     | --                                 | 1                                    | --                                            | --                                  | --                                              | 100                          | --                          |



| SIGN NO. | SIGN CODE & SIZE |       | SIGN TYPE | SIGN MESSAGE | TYPE II SIGN SIZE |   |       | 637.2210                   | 637.2230                   | 638.2102                  | 638.2602                    | 638.3000                          | 634.0618                   | 634.0818                            | MOUNT ON SAME POST AS SIGN # | REMARKS / NEW SIGN LOCATION |
|----------|------------------|-------|-----------|--------------|-------------------|---|-------|----------------------------|----------------------------|---------------------------|-----------------------------|-----------------------------------|----------------------------|-------------------------------------|------------------------------|-----------------------------|
|          |                  |       |           |              | W                 | x | H     | SIGNS TYPE II REFLC H [SF] | SIGNS TYPE II REFLC F [SF] | MOVING SIGNS TYPE II [EA] | REMOVING SIGNS TYPE II [EA] | REMOVING SMALL SIGN SUPPORTS [EA] | POSTS WOOD 4"X 6"X18' [EA] | POSTS TUBULAR STEEL 2"X 2"X18' [EA] |                              |                             |
|          |                  |       |           |              | [IN.]             | x | [IN.] |                            |                            |                           |                             |                                   |                            |                                     |                              |                             |
| 102      | R1-1             | (2M)  | II        | --           | 36                | x | 36    | 7.46                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 103      | W14-3            | (2S)  | II        | --           | 48                | x | 36    | --                         | 5.56                       | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 104      | W2-1             | (2S)  | II        | --           | 30                | x | 30    | --                         | 6.25                       | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 105      | R1-1             | (2M)  | II        | --           | 36                | x | 36    | 7.46                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 106      | R2-1             | (2MS) | II        | 35 MPH       | 24                | x | 30    | 5.00                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 107      | J4-1             | (2S)  | II        | --           | 24                | x | 36    | 6.00                       | --                         | --                        | 2                           | 1                                 | 1                          | --                                  | --                           | --                          |
|          | M3-1             |       |           | --           | 24                | x | 12    | --                         | --                         | --                        | --                          | --                                | --                         | --                                  | --                           | --                          |
|          | M1-6B            |       |           | --           | 24                | x | 24    | --                         | --                         | --                        | --                          | --                                | --                         | --                                  | --                           | --                          |
| 108      | M1-93            | (2S)  | II        | --           | 24                | x | 24    | 4.00                       | --                         | --                        | --                          | --                                | --                         | --                                  | 107                          | --                          |
| 109      | W11-2            | (2S)  | II        | --           | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 110      | W16-7L           | (2M)  | II        | --           | 30                | x | 18    | --                         | 3.75                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 111      | W11-2            | (2S)  | II        | --           | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 112      | W16-7R           | (2M)  | II        | --           | 30                | x | 18    | --                         | 3.75                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 113      | W11-2            | (2S)  | II        | --           | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 114      | W16-7R           | (2M)  | II        | --           | 30                | x | 18    | --                         | 3.75                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 115      | W11-2            | (2S)  | II        | --           | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 116      | W16-7L           | (2M)  | II        | --           | 30                | x | 18    | --                         | 3.75                       | --                        | --                          | --                                | --                         | --                                  | --                           | Mount on RRFB Assembly      |
| 117      | R1-1             | (2M)  | II        | --           | 36                | x | 36    | 7.46                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 118      | R1-1             | (2M)  | II        | --           | 36                | x | 36    | 7.46                       | --                         | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 119      | W14-3            | (2S)  | II        | --           | 48                | x | 36    | --                         | 5.56                       | --                        | 1                           | 1                                 | --                         | 1                                   | --                           | --                          |
| 120      | J4-1             | (2S)  | II        | --           | 24                | x | 36    | 6.00                       | --                         | --                        | 2                           | 1                                 | 1                          | --                                  | --                           | --                          |
|          | M3-1             |       |           | --           | 24                | x | 12    | --                         | --                         | --                        | --                          | --                                | --                         | --                                  | --                           | --                          |
|          | M1-6B            |       |           | --           | 24                | x | 24    | --                         | --                         | --                        | --                          | --                                | --                         | --                                  | --                           | --                          |
| 121      | M1-93            | (2S)  | II        | --           | 24                | x | 24    | 4.00                       | --                         | --                        | --                          | --                                | --                         | --                                  | 120                          | --                          |
| 122      | W11-2            | (2S)  | II        | --           | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | 1                                   | --                           | SHEET 2                     |
| 123      | W16-7L           | (2S)  | II        | --           | 24                | x | 12    | --                         | 2.00                       | --                        | --                          | --                                | --                         | --                                  | 122                          | SHEET 2                     |
| 124      | W11-2            | (2S)  | II        | --           | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | 1                                   | --                           | SHEET3                      |
| 125      | W16-7L           | (2S)  | II        | --           | 24                | x | 12    | --                         | 2.00                       | --                        | --                          | --                                | --                         | --                                  | 124                          | SHEET 3                     |
| 126      | W11-2            | (2S)  | II        | --           | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | 1                                   | --                           | SHEET 4                     |
| 127      | W16-7L           | (2S)  | II        | --           | 24                | x | 12    | --                         | 2.00                       | --                        | --                          | --                                | --                         | --                                  | 126                          | SHEET 4                     |
| 128      | W11-2            | (2S)  | II        | --           | 30                | x | 30    | --                         | 6.25                       | --                        | --                          | --                                | --                         | 1                                   | --                           | SHEET 5                     |
| 129      | W16-7L           | (2S)  | II        | --           | 24                | x | 12    | --                         | 2.00                       | --                        | --                          | --                                | --                         | --                                  | 128                          | SHEET 5                     |

| TYPE II PERMANENT SIGNING |                  |           |               |                   |   |       |                     |                     |                      |                        |                              |                 |                     | 2225-00-73 STH 32            |                             |
|---------------------------|------------------|-----------|---------------|-------------------|---|-------|---------------------|---------------------|----------------------|------------------------|------------------------------|-----------------|---------------------|------------------------------|-----------------------------|
| SIGN NO.                  | SIGN CODE & SIZE | SIGN TYPE | SIGN MESSAGE  | TYPE II SIGN SIZE |   |       | 637.2210            | 637.2230            | 638.2102             | 638.2602               | 638.3000                     | 634.0618        | 634.0818            | MOUNT ON SAME POST AS SIGN # | REMARKS / NEW SIGN LOCATION |
|                           |                  |           |               | W                 | x | H     | SIGNS TYPE II REFLC | SIGNS TYPE II REFLC | MOVING SIGNS TYPE II | REMOVING SIGNS TYPE II | REMOVING SMALL SIGN SUPPORTS | POSTS WOOD      | POSTS TUBULAR STEEL |                              |                             |
|                           |                  |           |               | [IN.]             | x | [IN.] | H [SF]              | F [SF]              | [EA]                 | [EA]                   | [EA]                         | 4"X 6"X18' [EA] | 2"X 2"X18' [EA]     |                              |                             |
| 130                       | W11-2 (2S)       | II        | --            | 30                | x | 30    | --                  | 6.25                | --                   | --                     | --                           | --              | 1                   | --                           | SHEET 6                     |
| 131                       | W16-7L (2S)      | II        | --            | 24                | x | 12    | --                  | 2.00                | --                   | --                     | --                           | --              | --                  | 130                          | SHEET 6                     |
| 132                       | W11-2 (2S)       | II        | --            | 30                | x | 30    | --                  | 6.25                | --                   | --                     | --                           | --              | 1                   | --                           | SHEET 7                     |
| 133                       | W16-7L (2S)      | II        | --            | 24                | x | 12    | --                  | 2.00                | --                   | --                     | --                           | --              | --                  | 132                          | SHEET 7                     |
| 134                       | W11-2 (2S)       | II        | --            | 30                | x | 30    | --                  | 6.25                | --                   | --                     | --                           | --              | 1                   | --                           | SHEET 8                     |
| 135                       | W16-7L (2S)      | II        | --            | 24                | x | 12    | --                  | 2.00                | --                   | --                     | --                           | --              | --                  | 134                          | SHEET 8                     |
| 136                       | W11-2 (2S)       | II        | --            | 30                | x | 30    | --                  | 6.25                | --                   | --                     | --                           | --              | 1                   | --                           | SHEET 19                    |
| 137                       | W16-7L (2S)      | II        | --            | 24                | x | 12    | --                  | 2.00                | --                   | --                     | --                           | --              | --                  | 136                          | SHEET 19                    |
|                           |                  |           | --            | --                | x | --    | --                  | --                  | --                   | --                     | --                           | --              | --                  | --                           | --                          |
|                           |                  |           | UNDISTRIBUTED | --                | x | --    | --                  | --                  | 5                    | --                     | 5                            | 2               | 5                   | --                           | --                          |
| TOTALS                    |                  |           |               |                   |   |       | 380.27              | 390.86              | 7                    | 71                     | 71                           | 6               | 74                  |                              |                             |



3

| UTILITY LINE OPENING      |         |                                             |
|---------------------------|---------|---------------------------------------------|
| CATEGORY                  | ROADWAY | SPV.0060.02<br>UTILITY LINE OPENING<br>EACH |
| 0010                      | STH 32  | 8                                           |
| TOTAL 2225-00-73 CAT 0010 |         | 8                                           |

3

| CONCRETE BASE SPECIAL     |         |         |        |                                        |                                              |                    |
|---------------------------|---------|---------|--------|----------------------------------------|----------------------------------------------|--------------------|
| CATEGORY                  | ROADWAY | STATION | OFFSET | 204.0195<br>REMOVING CONCRETE<br>BASES | SPV.0060.03<br>CONCRETE BASE SPECIAL<br>EACH | REMARKS            |
| 0010                      | STH 32  | 271+48  | 32' RT | 1                                      | 1                                            | DOCTOR'S PARK SIGN |
| TOTAL 2225-00-73 CAT 0010 |         |         |        | 1                                      | 1                                            |                    |

| CONCRETE DITCH BOTTOMS    |         |          |        |                                            |
|---------------------------|---------|----------|--------|--------------------------------------------|
| CATEGORY                  | ROADWAY | LOCATION | OFFSET | SPV.0090.01<br>CONCRETE DITCH BOTTOM<br>LF |
| 0010                      | STH 32  | 140+78   | LT     | 11                                         |
| 0010                      | STH 32  | 143+68   | LT     | 10                                         |
| 0010                      | STH 32  | 145+25   | LT     | 10                                         |
| 0010                      | STH 32  | 146+11   | LT     | 9                                          |
| 0010                      | STH 32  | 148+19   | LT     | 10                                         |
| 0010                      | STH 32  | 149+18   | LT     | 11                                         |
| 0010                      | STH 32  | 170+60   | LT     | 11                                         |
| TOTAL 2225-00-73 CAT 0010 |         |          |        | 72                                         |

\* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

3

3

REMOVING INLETS

| CATEGORY | ROADWAY | STATION                   | OFFSET | 204.0220<br>REMOVING<br>INLETS<br>EACH |
|----------|---------|---------------------------|--------|----------------------------------------|
| 0010     | STH 32  | 146+17                    | 25' LT | 1                                      |
|          |         | 159+07                    | 25' RT | 1                                      |
|          |         | 164+16                    | 25' RT | 1                                      |
|          |         | 165+06                    | 26' LT | 1                                      |
|          |         | 174+18                    | 81' LT | 1                                      |
|          |         | 175+30                    | 36' LT | 1                                      |
|          |         | 191+99                    | 23' RT | 1                                      |
|          |         | 192+00                    | 25' LT | 1                                      |
|          |         | 199+62                    | 31' LT | 1                                      |
|          |         | 208+81                    | 20' LT | 1                                      |
|          |         | 216+22                    | 24' RT | 1                                      |
|          |         | 216+91                    | 22' LT | 1                                      |
|          |         | 217+27                    | 32' LT | 1                                      |
|          |         | 218+95                    | 25' LT | 1                                      |
|          |         | 259+07                    | 25' LT | 1                                      |
|          |         | 259+14                    | 35' LT | 1                                      |
|          |         | 256+55                    | 50' LT | 1                                      |
|          |         | 259+75                    | 25' LT | 1                                      |
|          |         | TOTAL 2225-00-73 CAT 0010 |        | 18                                     |

REMOVING MANHOLES

|                           |         |         |        | 204.0210<br>REMOVING<br>MANHOLES |
|---------------------------|---------|---------|--------|----------------------------------|
| CATEGORY                  | ROADWAY | STATION | OFFSET | EACH                             |
| 0010                      | STH 32  | 146+18  | 22' RT | 1                                |
|                           |         | 200+65  | 22' LT | 1                                |
|                           |         | 216+60  | 23' RT | 1                                |
|                           |         | 218+94  | 26' RT | 1                                |
|                           |         | 259+56  | 37' LT | 1                                |
| TOTAL 2225-00-73 CAT 0010 |         |         |        | 5                                |

REMOVING SMALL PIPE CULVERTS

| 203.0100<br>REMOVING SMALL<br>PIPE CULVERTS |         |                           |         |    |           |        |      |          |
|---------------------------------------------|---------|---------------------------|---------|----|-----------|--------|------|----------|
| CATEGORY                                    | ROADWAY | STATION                   | OFFSET  | TO | STATION   | OFFSET | EACH | NOTES    |
| 0010                                        | STH 32  | 174+23.23                 | 102' RT | -- | 174+23.03 | 82' RT | 1    | 12" CMCP |
|                                             |         | 192+38.61                 | 25' RT  | -- | 191+99.10 | 23' RT | 1    | 12" CMCP |
|                                             |         | 219+92.44                 | 23' LT  | -- | 219+71.16 | 23' LT | 1    | 12" CMCP |
|                                             |         | 220+71.47                 | 24' LT  | -- | 220+50.19 | 24' LT | 1    | 12" CMCP |
|                                             |         | 221+05.71                 | 24' LT  | -- | 220+78.76 | 24' LT | 1    | 12" CMCP |
|                                             |         | TOTAL 2225-00-73 CAT 0010 |         |    |           |        | 5    |          |

REMOVING MASONRY

| 204.0185<br>REMOVING MASONRY<br>CY |         |                           |        |    |           |        |    |
|------------------------------------|---------|---------------------------|--------|----|-----------|--------|----|
| CATEGORY                           | ROADWAY | STATION                   | OFFSET | TO | STATION   | OFFSET |    |
| 0010                               | STH 32  | 165+06.29                 | 26' LT | -- | 165+07.13 | 26' RT | 15 |
|                                    |         | 191+99.10                 | 23' RT | -- | 192+00.30 | 25' LT | 14 |
|                                    |         | 203+80.91                 | 27' LT | -- | 203+80.32 | 30' RT | 15 |
|                                    |         | 208+80.62                 | 20' LT | -- | 208+78.99 | 22' RT | 14 |
|                                    |         | 216+90.91                 | 22' LT | -- | 216+90.70 | 22' RT | 12 |
|                                    |         | 218+94.95                 | 25' LT | -- | 218+94.47 | 26' RT | 15 |
|                                    |         | TOTAL 2225-00-73 CAT 0010 |        |    |           |        | 86 |

| STORM SEWER PIPE REMOVALS |         |           |         |    |           |        |                                       |                                       |                                       |                                       |                                       |                                       |                                       |    |
|---------------------------|---------|-----------|---------|----|-----------|--------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|----|
| CATEGORY                  | ROADWAY | STATION   | OFFSET  | TO | STATION   | OFFSET | 204.0245.01                           | 204.0245.02                           | 204.0245.03                           | 204.0245.04                           | 204.0245.05                           | 204.0245.06                           | 204.0245.07                           |    |
|                           |         |           |         |    |           |        | REMOVING STORM SEWER<br>10-INCH<br>LF | REMOVING STORM SEWER<br>12-INCH<br>LF | REMOVING STORM SEWER<br>15-INCH<br>LF | REMOVING STORM SEWER<br>18-INCH<br>LF | REMOVING STORM SEWER<br>21-INCH<br>LF | REMOVING STORM SEWER<br>24-INCH<br>LF | REMOVING STORM SEWER<br>30-INCH<br>LF |    |
| 0010                      | STH 32  | 146+17.08 | 23' LT  | -- | 146+17.58 | 22' RT | --                                    | --                                    | --                                    | --                                    | --                                    | --                                    | 45                                    |    |
|                           |         | 158+04.63 | 23' RT  | -- | 158+57.98 | 24' RT | --                                    | 53                                    | --                                    | --                                    | --                                    | --                                    | --                                    |    |
|                           |         | 159+08.36 | 31' RT  | -- | 159+07.37 | 25' RT | --                                    | 6                                     | --                                    | --                                    | --                                    | --                                    | --                                    |    |
|                           |         | 164+15.98 | 25' RT  | -- | 165+07.13 | 26' RT | --                                    | 94                                    | --                                    | --                                    | --                                    | --                                    | --                                    |    |
|                           |         | 174+18.04 | 81' LT  | -- | 174+11.42 | 75' LT | --                                    | 9                                     | --                                    | --                                    | --                                    | --                                    | --                                    |    |
|                           |         | 174+23.23 | 102' RT | -- | 174+23.03 | 82' RT | --                                    | 21                                    | --                                    | --                                    | --                                    | --                                    | --                                    |    |
|                           |         | 175+30.04 | 36' LT  | -- | 175+27.65 | 24' LT | --                                    | 12                                    | --                                    | --                                    | --                                    | --                                    | --                                    |    |
|                           |         | 192+38.61 | 25' RT  | -- | 191+99.10 | 23' RT | --                                    | 40                                    | --                                    | --                                    | --                                    | --                                    | --                                    |    |
|                           |         | 199+23.29 | 27' LT  | -- | 199+62.01 | 31' LT | --                                    | --                                    | --                                    | --                                    | 40                                    | --                                    | --                                    |    |
|                           |         | 199+62.01 | 31' LT  | -- | 200+65.14 | 22' LT | --                                    | --                                    | --                                    | --                                    | 107                                   | --                                    | --                                    |    |
|                           |         | 203+87.64 | 28' LT  | -- | 203+80.91 | 27' LT | --                                    | 7                                     | --                                    | --                                    | --                                    | --                                    | --                                    |    |
|                           |         | 208+71.29 | 25' RT  | -- | 208+63.40 | 25' RT | --                                    | --                                    | --                                    | --                                    | --                                    | --                                    | 8                                     | -- |
|                           |         | 208+90.46 | 22' RT  | -- | 208+81.08 | 23' RT | --                                    | 9                                     | --                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 214+98.49 | 26' RT  | -- | 216+22.30 | 24' RT | 128                                   | --                                    | --                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 215+96.48 | 22' LT  | -- | 216+90.91 | 22' LT | --                                    | --                                    | --                                    | --                                    | 92                                    | --                                    | --                                    | -- |
|                           |         | 216+22.30 | 24' RT  | -- | 216+59.68 | 23' RT | 39                                    | --                                    | --                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 216+90.70 | 22' RT  | -- | 216+59.68 | 23' RT | --                                    | --                                    | 32                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 217+27.38 | 32' LT  | -- | 216+90.91 | 22' LT | --                                    | --                                    | --                                    | --                                    | 36                                    | --                                    | --                                    | -- |
|                           |         | 218+78.15 | 24' LT  | -- | 218+94.95 | 25' LT | --                                    | --                                    | 17                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 219+58.08 | 23' LT  | -- | 218+94.95 | 25' LT | --                                    | --                                    | 63                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 219+92.44 | 23' LT  | -- | 219+71.16 | 23' LT | --                                    | 21                                    | --                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 220+71.47 | 24' LT  | -- | 220+50.19 | 24' LT | --                                    | 21                                    | --                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 221+05.71 | 24' LT  | -- | 220+78.76 | 24' LT | --                                    | 27                                    | --                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 259+07.28 | 25' LT  | -- | 259+14.05 | 34' LT | --                                    | 11                                    | --                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 259+14.05 | 34' LT  | -- | 259+56.34 | 37' LT | --                                    | --                                    | 42                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 259+15.82 | 52' LT  | -- | 259+14.05 | 34' LT | --                                    | 17                                    | --                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 259+56.34 | 37' LT  | -- | 259+54.70 | 50' LT | --                                    | --                                    | --                                    | --                                    | --                                    | --                                    | 13                                    | -- |
|                           |         | 259+59.07 | 24' RT  | -- | 259+56.34 | 37' LT | --                                    | --                                    | --                                    | --                                    | --                                    | --                                    | 62                                    | -- |
|                           |         | 259+75.45 | 25' LT  | -- | 259+56.34 | 37' LT | --                                    | 23                                    | --                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 259+78.95 | 28' RT  | -- | 259+61.46 | 29' RT | --                                    | 18                                    | --                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 271+03.44 | 26' RT  | -- | 269+89.14 | 27' RT | --                                    | 114                                   | --                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 271+03.46 | 40' RT  | -- | 271+03.44 | 26' RT | --                                    | 13                                    | --                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 271+44.64 | 46' RT  | -- | 271+51.03 | 27' RT | --                                    | 20                                    | --                                    | --                                    | --                                    | --                                    | --                                    | -- |
|                           |         | 271+51.03 | 26' RT  | -- | 271+03.44 | 26' RT | --                                    | 48                                    | --                                    | --                                    | --                                    | --                                    | --                                    | -- |
| TOTAL 2225-00-73 CAT 0010 |         |           |         |    |           |        | 167                                   | 664                                   | 74                                    | 128                                   | 147                                   | 83                                    | 45                                    |    |

REMOVING DECORATIVE HEADWALLS

|                           |         |         |        | 204.9060.S.01<br>REMOVING<br>DECORATIVE HEADWALLS<br>EACH |
|---------------------------|---------|---------|--------|-----------------------------------------------------------|
| CATEGORY                  | ROADWAY | STATION | OFFSET |                                                           |
| 0010                      | STH 32  | 158+06  | 23' RT | 1                                                         |
|                           |         | 158+57  | 24' RT | 1                                                         |
|                           |         | 159+09  | 30' RT | 1                                                         |
|                           |         | 165+06  | 23' LT | 1                                                         |
|                           |         | 191+99  | 22' LT | 1                                                         |
|                           |         | 203+80  | 25' LT | 1                                                         |
|                           |         | 203+81  | 26' RT | 1                                                         |
|                           |         | 203+87  | 27' LT | 1                                                         |
|                           |         | 208+80  | 21' RT | 1                                                         |
|                           |         | 215+97  | 22' LT | 1                                                         |
|                           |         | 217+96  | 24' LT | 1                                                         |
|                           |         | 218+78  | 23' LT | 1                                                         |
|                           |         | 218+95  | 23' LT | 1                                                         |
|                           |         | 259+16  | 51' LT | 1                                                         |
|                           |         | 259+59  | 23' RT | 1                                                         |
|                           |         | 271+04  | 39' RT | 1                                                         |
|                           |         | 271+45  | 46' RT | 1                                                         |
|                           |         | 271+50  | 27' RT | 1                                                         |
|                           |         |         |        |                                                           |
| TOTAL 2225-00-73 CAT 0010 |         |         |        |                                                           |

CONCRETE COLLARS FOR PIPE

| 520.8000*<br>CONCRETE<br>COLLARS<br>FOR PIPE<br>EACH |         |                           |        |           |    |
|------------------------------------------------------|---------|---------------------------|--------|-----------|----|
| CATEGORY                                             | ROADWAY | STATION                   | OFFSET | SIZE (IN) |    |
| 0010                                                 | STH 32  | 146+18                    | 22' RT | 30        | 1  |
|                                                      |         | 146+17                    | 25' LT | 12        | 1  |
|                                                      |         | 146+17                    | 25' LT | 21        | 1  |
|                                                      |         | 159+07                    | 25' RT | 12        | 1  |
|                                                      |         | 164+16                    | 25' RT | 12        | 1  |
|                                                      |         | 165+06                    | 26' LT | 12        | 2  |
|                                                      |         | 165+07                    | 26' RT | 18        | 1  |
|                                                      |         | 174+11                    | 75' LT | 12        | 1  |
|                                                      |         | 174+27                    | 34' RT | 32        | 2  |
|                                                      |         | 192+00                    | 25' LT | 15        | 1  |
|                                                      |         | 199+23                    | 27' LT | 21        | 1  |
|                                                      |         | 199+61                    | 32' LT | 18        | 1  |
|                                                      |         | 200+65                    | 22' LT | 4         | 1  |
|                                                      |         | 200+65                    | 22' LT | 12        | 1  |
|                                                      |         | 203+80                    | 30' RT | 18        | 1  |
|                                                      |         | 208+81                    | 20' LT | 12        | 1  |
|                                                      |         | 208+81                    | 20' LT | 24        | 1  |
|                                                      |         | 208+81                    | 20' LT | 15        | 1  |
|                                                      |         | 208+90                    | 22' RT | 12        | 1  |
|                                                      |         | 216+60                    | 23' RT | 18        | 1  |
|                                                      |         | 217+96                    | 23' LT | 8         | 1  |
|                                                      |         | 218+94                    | 26' RT | 15        | 1  |
|                                                      |         | 218+95                    | 25' LT | 18        | 1  |
|                                                      |         | 259+56                    | 37' LT | 24        | 1  |
|                                                      |         | 259+75                    | 25' LT | 12        | 1  |
|                                                      |         | 259+79                    | 28' RT | 12        | 1  |
|                                                      |         | TOTAL 2225-00-73 CAT 0010 |        |           |    |
|                                                      |         |                           |        |           |    |
|                                                      |         |                           |        |           | 28 |

\* - ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SUBSURFACE EXPLORATION

| CATEGORY                  | LOCATION      | SPV.0090.31<br>PIPE UNDERDRAIN<br>EXPLORATION<br>LF | SPV.0090.32<br>STORM SEWER LATERAL<br>EXPLORATION<br>LF |
|---------------------------|---------------|-----------------------------------------------------|---------------------------------------------------------|
|                           |               | 100                                                 | 100                                                     |
| 0010                      | UNDISTRIBUTED | 100                                                 | 100                                                     |
| TOTAL 2225-00-73 CAT 0010 |               | 100                                                 | 100                                                     |

PIPE CONNECTION TO EXISTING STRUCTURE

| SPV.0060.31<br>PIPE<br>CONNECTION<br>TO EXISTING<br>STRUCTURE<br>EACH |         |                 |         |        |   |
|-----------------------------------------------------------------------|---------|-----------------|---------|--------|---|
| CATEGORY                                                              | ROADWAY | STRUCTURE<br>ID | STATION | OFFSET |   |
| 0010                                                                  | STH 32  | E163            | 203+81  | 27' LT | 2 |
|                                                                       |         | E189            | 214+98  | 26' RT | 1 |
|                                                                       |         | EXIST           | 216+91  | 22' RT | 1 |
|                                                                       |         | E183            | 217+27  | 32' LT | 1 |
|                                                                       |         | E251            | 269+89  | 27' RT | 1 |
|                                                                       |         |                 |         |        |   |
| TOTAL 2225-00-73 CAT 0010                                             |         |                 |         |        | 6 |



| STORM SEWER PIPES         |          |      |   |      |                    |                        |            |                               |                               |                               |                               |                               |
|---------------------------|----------|------|---|------|--------------------|------------------------|------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| CATEGORY                  | LOCATION | FROM | - | TO   | INLET<br>ELEVATION | DISCHARGE<br>ELEVATION | SLOPE<br>% | 608.0312                      | 608.0315                      | 608.0318                      | 608.0321                      | 608.0324                      |
|                           |          |      |   |      |                    |                        |            | SSPRC CLASS III 12-INCH<br>LF | SSPRC CLASS III 15-INCH<br>LF | SSPRC CLASS III 18-INCH<br>LF | SSPRC CLASS III 21-INCH<br>LF | SSPRC CLASS III 24-INCH<br>LF |
| 0010                      | STH 32   | 101  | - | 103  | 702.40             | 702.11                 | 0.62%      |                               |                               |                               |                               |                               |
|                           | STH 32   | 111  | - | 113  | 706.00             | 704.70                 | 1.68%      |                               |                               |                               |                               |                               |
|                           | STH 32   | 113  | - | 114  | 704.70             | 704.60                 | 0.45%      | 22                            |                               |                               |                               |                               |
|                           | STH 32   | 114  | - | 115  | 704.60             | 704.50                 | 0.62%      | 16                            |                               |                               |                               |                               |
|                           | STH 32   | 116  | - | 117  | 704.25             | 703.95                 | 3.86%      | 8                             |                               |                               |                               |                               |
|                           | STH 32   | 121  | - | 123  | 700.15             | 700.00                 | 0.29%      |                               |                               |                               |                               |                               |
|                           | STH 32   | 125  | - | 123  | 701.50             | 701.00                 | 0.53%      | 94                            |                               |                               |                               |                               |
|                           | STH 32   | 131  | - | 133  | 697.00             | 696.70                 | 0.80%      | 37                            |                               |                               |                               |                               |
|                           | STH 32   | 133  | - | 135  | 696.60             | 696.35                 | 0.87%      | 29                            |                               |                               |                               |                               |
|                           | STH 32   | 135  | - | 137  | 696.25             | 696.10                 | 1.32%      | 11                            |                               |                               |                               |                               |
|                           | STH 32   | 141  | - | 143  | 691.30             | 690.00                 | 3.27%      | 40                            |                               |                               |                               |                               |
|                           | STH 32   | 143  | - | 145  | 689.60             | 689.40                 | 0.40%      |                               |                               |                               |                               |                               |
|                           | STH 32   | 151  | - | 153  | 688.70             | 688.55                 | 0.37%      |                               |                               |                               | 40                            |                               |
|                           | STH 32   | 153  | - | E155 | 688.55             | 688.45                 | 0.10%      |                               |                               |                               | 108                           |                               |
|                           | STH 32   | 161  | - | 163  | 688.78             | 688.70                 | 1.18%      | 7                             |                               |                               |                               |                               |
|                           | STH 32   | 163  | - | 165  | 687.50             | 687.30                 | 0.35%      |                               |                               |                               |                               |                               |
|                           | STH 32   | 165  | - | 167  | 688.25             | 687.90                 | 1.77%      |                               | 20                            |                               |                               |                               |
|                           | STH 32   | 171  | - | 175  | 688.00             | 687.50                 | 1.13%      |                               |                               |                               |                               |                               |
|                           | STH 32   | 173  | - | 175  | 687.80             | 687.60                 | 1.95%      | 10                            |                               |                               |                               |                               |
|                           | STH 32   | 175  | - | 177  | 686.65             | 686.58                 | 0.40%      |                               |                               | 7                             |                               |                               |
|                           | STH 32   | 175  | - | 179  | 686.65             | 686.58                 | 0.40%      |                               |                               |                               |                               | 17                            |
|                           | STH 32   | 181  | - | 187  | 689.10             | 688.60                 | 0.64%      | 78                            |                               |                               |                               |                               |
|                           | STH 32   | 183  | - | 185  | 689.50             | 689.30                 | 0.76%      |                               |                               | 26                            |                               |                               |
|                           | STH 32   | 185  | - | 187  | 689.20             | 688.60                 | 1.53%      |                               |                               | 39                            |                               |                               |
|                           | STH 32   | 187  | - | 193  | 688.50             | 687.90                 | 1.25%      |                               |                               |                               |                               |                               |
|                           | STH 32   | 189  | - | 191  | 689.20             | 688.40                 | 0.64%      |                               | 125                           |                               |                               |                               |
|                           | STH 32   | 191  | - | 192  | 688.30             | 688.22                 | 0.70%      |                               | 12                            |                               |                               |                               |
|                           | STH 32   | 192  | - | 193  | 688.22             | 688.00                 | 0.70%      |                               |                               |                               |                               |                               |
|                           | STH 32   | 194  | - | 193  | 687.57             | 687.28                 | 0.93%      |                               |                               |                               |                               |                               |
|                           | STH 32   | 201  | - | 203  | 690.19             | 689.95                 | 0.50%      | 48                            |                               |                               |                               |                               |
|                           | STH 32   | 203  | - | 215  | 689.85             | 689.60                 | 0.49%      | 51                            |                               |                               |                               |                               |
|                           | STH 32   | 205  | - | 207  | 691.00             | 690.83                 | 0.68%      | 25                            |                               |                               |                               |                               |
|                           | STH 32   | 207  | - | 209  | 690.73             | 690.56                 | 0.50%      | 33                            |                               |                               |                               |                               |
|                           | STH 32   | 209  | - | 211  | 690.46             | 690.08                 | 0.50%      | 76                            |                               |                               |                               |                               |
|                           | STH 32   | 211  | - | 213  | 689.98             | 689.80                 | 0.50%      |                               |                               | 36                            |                               |                               |
|                           | STH 32   | 213  | - | 215  | 689.70             | 689.35                 | 0.50%      |                               |                               | 70                            |                               |                               |
|                           | STH 32   | 215  | - | 217  | 689.10             | 688.50                 | 1.20%      |                               |                               |                               |                               |                               |
|                           | STH 32   | 217  | - | 314  | 688.25             | 687.57                 | 0.33%      |                               | 205                           |                               |                               |                               |
|                           | STH 32   | 221  | - | 223  | 670.20             | 670.00                 | 0.90%      | 22                            |                               |                               |                               |                               |
|                           | STH 32   | 223  | - | 235  | 669.90             | 669.50                 | 0.89%      |                               |                               |                               |                               |                               |
|                           | STH 32   | 225  | - | 231  | 671.30             | 670.90                 | 1.34%      | 30                            |                               |                               |                               |                               |
|                           | STH 32   | 227  | - | 231  | 669.70             | 669.60                 | 1.11%      |                               |                               |                               |                               |                               |
|                           | STH 32   | 229  | - | 231  | 669.90             | 669.75                 | 0.78%      | 19                            |                               |                               |                               |                               |
|                           | STH 32   | 231  | - | 235  | 669.60             | 669.40                 | 0.38%      |                               |                               |                               |                               |                               |
|                           | STH 32   | 233  | - | 235  | 669.70             | 669.50                 | 0.96%      | 21                            |                               |                               |                               |                               |
|                           | STH 32   | 235  | - | 237  | 669.40             | 669.30                 | 0.39%      |                               |                               |                               |                               |                               |
|                           | STH 32   | 241  | - | 249  | 678.00             | 677.30                 | 1.51%      |                               |                               |                               |                               |                               |
|                           | STH 32   | 243  | - | 245  | 678.50             | 678.10                 | 1.04%      | 38                            |                               |                               |                               |                               |
|                           | STH 32   | 245  | - | 249  | 678.00             | 677.30                 | 1.87%      | 38                            |                               |                               |                               |                               |
|                           | STH 32   | 249  | - | E251 | 677.20             | 676.10                 | 0.88%      |                               |                               |                               |                               |                               |
| TOTAL 2225-00-73 CAT 0010 |          |      |   |      |                    |                        |            | 753                           | 468                           | 72                            | 148                           | 17                            |

| STORM SEWER PIPES         |          |      |   |      |                    |                        |            |                              |                              |                                       |                                      |                                      |
|---------------------------|----------|------|---|------|--------------------|------------------------|------------|------------------------------|------------------------------|---------------------------------------|--------------------------------------|--------------------------------------|
| CATEGORY                  | LOCATION | FROM | - | TO   | INLET<br>ELEVATION | DISCHARGE<br>ELEVATION | SLOPE<br>% | 608.0412                     | 608.0415                     | 608.2329                              | 608.2424                             | 608.2429                             |
|                           |          |      |   |      |                    |                        |            | SSPRC CLASS IV 12-INCH<br>LF | SSPRC CLASS IV 15-INCH<br>LF | SSPRCHE CLASS HE-III 29X45-INCH<br>LF | SSPRCHE CLASS HE-IV 24X38-INCH<br>LF | SSPRCHE CLASS HE-IV 29X45-INCH<br>LF |
| 0010                      | STH 32   | 101  | - | 103  | 702.40             | 702.11                 | 0.62%      | 77                           |                              |                                       |                                      | 47                                   |
|                           | STH 32   | 111  | - | 113  | 706.00             | 704.70                 | 1.68%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 113  | - | 114  | 704.70             | 704.60                 | 0.45%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 114  | - | 115  | 704.60             | 704.50                 | 0.62%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 116  | - | 117  | 704.25             | 703.95                 | 3.86%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 121  | - | 123  | 700.15             | 700.00                 | 0.29%      |                              |                              |                                       | 52                                   |                                      |
|                           | STH 32   | 125  | - | 123  | 701.50             | 701.00                 | 0.53%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 131  | - | 133  | 697.00             | 696.70                 | 0.80%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 133  | - | 135  | 696.60             | 696.35                 | 0.87%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 135  | - | 137  | 696.25             | 696.10                 | 1.32%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 141  | - | 143  | 691.30             | 690.00                 | 3.27%      |                              |                              |                                       | 50                                   |                                      |
|                           | STH 32   | 143  | - | 145  | 689.60             | 689.40                 | 0.40%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 151  | - | 153  | 688.70             | 688.55                 | 0.37%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 153  | - | E155 | 688.55             | 688.45                 | 0.10%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 161  | - | 163  | 688.78             | 688.70                 | 1.18%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 163  | - | 165  | 687.50             | 687.30                 | 0.35%      |                              |                              |                                       | 57                                   |                                      |
|                           | STH 32   | 165  | - | 167  | 688.25             | 687.90                 | 1.77%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 171  | - | 175  | 688.00             | 687.50                 | 1.13%      |                              |                              |                                       | 44                                   |                                      |
|                           | STH 32   | 173  | - | 175  | 687.80             | 687.60                 | 1.95%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 175  | - | 177  | 686.65             | 686.58                 | 0.40%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 175  | - | 179  | 686.65             | 686.58                 | 0.40%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 181  | - | 187  | 689.10             | 688.60                 | 0.64%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 183  | - | 185  | 689.50             | 689.30                 | 0.76%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 185  | - | 187  | 689.20             | 688.60                 | 1.53%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 187  | - | 193  | 688.50             | 687.90                 | 1.25%      |                              |                              |                                       | 48                                   |                                      |
|                           | STH 32   | 189  | - | 191  | 689.20             | 688.40                 | 0.64%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 191  | - | 192  | 688.30             | 688.22                 | 0.70%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 192  | - | 193  | 688.22             | 688.00                 | 0.70%      |                              | 31                           |                                       |                                      |                                      |
|                           | STH 32   | 194  | - | 193  | 687.57             | 687.28                 | 0.93%      |                              | 31                           |                                       |                                      |                                      |
|                           | STH 32   | 201  | - | 203  | 690.19             | 689.95                 | 0.50%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 203  | - | 215  | 689.85             | 689.60                 | 0.49%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 205  | - | 207  | 691.00             | 690.83                 | 0.68%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 207  | - | 209  | 690.73             | 690.56                 | 0.50%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 209  | - | 211  | 690.46             | 690.08                 | 0.50%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 211  | - | 213  | 689.98             | 689.80                 | 0.50%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 213  | - | 215  | 689.70             | 689.35                 | 0.50%      |                              |                              |                                       | 50                                   |                                      |
|                           | STH 32   | 215  | - | 217  | 689.10             | 688.50                 | 1.20%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 217  | - | 314  | 688.25             | 687.57                 | 0.33%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 221  | - | 223  | 670.20             | 670.00                 | 0.90%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 223  | - | 235  | 669.90             | 669.50                 | 0.89%      |                              | 45                           |                                       |                                      |                                      |
|                           | STH 32   | 225  | - | 231  | 671.30             | 670.90                 | 1.34%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 227  | - | 231  | 669.70             | 669.60                 | 1.11%      |                              |                              | 9                                     |                                      |                                      |
|                           | STH 32   | 229  | - | 231  | 669.90             | 669.75                 | 0.78%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 231  | - | 235  | 669.60             | 669.40                 | 0.38%      |                              |                              |                                       |                                      | 53                                   |
|                           | STH 32   | 233  | - | 235  | 669.70             | 669.50                 | 0.96%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 235  | - | 237  | 669.40             | 669.30                 | 0.39%      |                              |                              | 26                                    |                                      |                                      |
|                           | STH 32   | 241  | - | 249  | 678.00             | 677.30                 | 1.51%      | 46                           |                              |                                       |                                      |                                      |
|                           | STH 32   | 243  | - | 245  | 678.50             | 678.10                 | 1.04%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 245  | - | 249  | 678.00             | 677.30                 | 1.87%      |                              |                              |                                       |                                      |                                      |
|                           | STH 32   | 249  | - | E251 | 677.20             | 676.10                 | 0.88%      | 126                          |                              |                                       |                                      |                                      |
| TOTAL 2225-00-73 CAT 0010 |          |      |   |      |                    |                        |            | 249                          | 107                          | 35                                    | 301                                  | 100                                  |



3

3

| STORM SEWER STRUCTURES    |           |           |           |            |                     |                         |                  |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  |                                             |
|---------------------------|-----------|-----------|-----------|------------|---------------------|-------------------------|------------------|---------------------------------------------------|---------------------------------------------|--------------------------------------------------|----------------------------------------------|------------------------------------------------------|-----------------------------------------|---------------------------------------------|--------------------------------------------------|---------------------------------------------|
| CATEGORY                  | STRUCTURE | LOCATION  | STATION   | OFFSET**   | RIM***<br>ELEVATION | INVERT****<br>ELEVATION | DEPTH*****<br>FT | 520.8000*<br>CONCRETE COLLARS<br>FOR PIPE<br>EACH | 522.1018<br>AEW FOR CPRC<br>18-INCH<br>EACH | 522.2629<br>AEW FOR CPRCHE<br>29x45-INCH<br>EACH | 611.0530<br>MANHOLE COVERS<br>TYPE J<br>EACH | 611.0535<br>MANHOLE COVERS<br>TYPE J-SPECIAL<br>EACH | 611.0612<br>INLET COVERS TYPE C<br>EACH | 611.0642<br>INLET COVERS TYPE<br>MS<br>EACH | SPV.0060.32<br>MANHOLE COVERS<br>SPECIAL<br>EACH | SPV.0060.33<br>INLET COVERS SPECIAL<br>EACH |
| 0010                      | 101       | STH 32    | 146+17.12 | 24.90' LT  | 706.98              | 702.40                  | 4.96             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 103       | STH 32    | 146+17.58 | 21.63' RT  | 707.44              | 702.01                  | 4.46             |                                                   |                                             |                                                  | 1                                            |                                                      |                                         |                                             |                                                  |                                             |
|                           | 111       | STH 32    | 157+99.27 | 26.13' RT  |                     | 706.00                  |                  |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  |                                             |
|                           | 113       | STH 32    | 158+76.42 | 25.24' RT  | 706.80              | 704.70                  | 2.27             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 114       | STH 32    | 158+86.21 | 45.38' RT  | 707.20              | 704.20                  | 2.17             |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             | 1                                                |                                             |
|                           | 115       | STH 32    | 159+02.36 | 45.49' RT  |                     | 704.50                  |                  |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  |                                             |
|                           | 116       | STH 32    | 159+07.43 | 32.76' RT  |                     | 704.25                  |                  |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  |                                             |
|                           | 117       | STH 32    | 159+07.37 | 24.98' RT  | 705.75              | 703.75                  | 2.00             |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  |                                             |
|                           | 121       | STH 32    | 165+06.29 | 26.18' LT  | 703.40              | 700.15                  | 3.56             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 123       | STH 32    | 165+07.13 | 26.27' RT  | 703.40              | 700.00                  | 3.71             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 125       | STH 32    | 164+15.99 | 24.58' RT  | 703.50              | 701.20                  | 2.30             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 131       | STH 32    | 174+23.61 | 111.17' RT | 699.21              | 697.00                  | 2.37             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 133       | STH 32    | 174+20.79 | 73.84' RT  | 699.00              | 696.60                  | 2.57             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 135       | STH 32    | 174+26.53 | 45.64' RT  | 699.30              | 696.25                  | 2.38             |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  | 1                                           |
|                           | 137       | STH 32    | 174+27.47 | 34.34' RT  | 699.46              | 694.10                  | 4.45             |                                                   |                                             |                                                  |                                              | 1                                                    |                                         |                                             |                                                  |                                             |
|                           | 139       | STH 32    | 174+11.45 | 74.89' LT  | 700.83              | 698.56                  | 2.44             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 141       | STH 32    | 192+38.81 | 25.10' RT  |                     | 691.30                  |                  |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  |                                             |
|                           | 143       | STH 32    | 191+99.08 | 25.10' RT  | 692.30              | 689.60                  | 3.01             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 145       | STH 32    | 192+00.30 | 24.85' LT  | 692.50              | 689.32                  | 3.41             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 151       | STH 32    | 199+23.30 | 26.68' LT  |                     | 688.70                  |                  | 1                                                 |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  |                                             |
|                           | 153       | STH 32    | 199+61.44 | 32.43' LT  | 691.75              | 688.55                  | 3.43             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
| E155                      | STH 32    | 200+65.14 | 22.23' LT |            | 692.77              | 688.45                  | 3.31             |                                                   |                                             |                                                  |                                              | 1                                                    |                                         |                                             |                                                  |                                             |
| 161                       | STH 32    | 203+87.70 | 26.99' LT |            |                     | 688.78                  |                  |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  |                                             |
| 162                       | STH 32    | 203+63.26 | 27.23' LT |            | 690.71              | 687.88                  | 3.14             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
| 163                       | STH 32    | 203+80.91 | 27.07' LT |            | 692.00              | 687.50                  | 3.98             |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             | 1                                                |                                             |
|                           | 165       | STH 32    | 203+80.32 | 29.86' RT  | 690.10              | 687.19                  | 3.12             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 167       | STH 32    | 203+60.52 | 29.62' RT  |                     | 688.25                  |                  |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  |                                             |
|                           | 171       | STH 32    | 208+80.62 | 19.81' LT  | 692.29              | 688.00                  | 3.77             |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             | 1                                                |                                             |
|                           | 173       | STH 32    | 208+90.46 | 22.06' RT  | 690.80              | 687.80                  | 2.33             |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  | 1                                           |
|                           | 175       | STH 32    | 208+80.61 | 24.44' RT  | 692.40              | 686.65                  | 5.17             |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             | 1                                                |                                             |
|                           | 177       | STH 32    | 208+76.38 | 29.42' RT  |                     | 688.70                  |                  |                                                   | 1                                           |                                                  |                                              |                                                      |                                         |                                             |                                                  |                                             |
|                           | 179       | STH 32    | 208+63.40 | 25.39' RT  |                     | 686.58                  |                  | 1                                                 |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  |                                             |
|                           | 181       | STH 32    | 215+80.37 | 24.10' LT  | 691.50              | 689.10                  | 2.57             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 183       | STH 32    | 217+27.38 | 31.99' LT  | 692.78              | 689.50                  | 2.25             |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             | 1                                                |                                             |
| 185                       | STH 32    | 217+01.10 | 24.54' LT |            | 692.59              | 689.20                  | 3.60             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 187       | STH 32    | 216+60.66 | 24.47' LT  | 692.00              | 688.50                  | 3.81             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 189       | STH 32    | 214+98.49 | 25.69' RT  | 691.69              | 689.20                  | 2.67             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 191       | STH 32    | 216+19.37 | 27.70' RT  | 691.30              | 688.30                  | 2.35             |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  | 1                                           |
|                           | 192       | STH 32    | 216+30.64 | 26.33' RT  | 692.69              | 688.22                  | 3.42             |                                                   |                                             |                                                  | 1                                            |                                                      |                                         |                                             |                                                  |                                             |
|                           | 193       | STH 32    | 216+60.66 | 23.57' RT  | 692.88              | 687.27                  | 5.58             |                                                   |                                             |                                                  |                                              | 1                                                    |                                         |                                             |                                                  |                                             |
|                           | 194       | STH 32    | 216+90.74 | 20.68' RT  |                     | 689.10                  |                  | 1                                                 |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  |                                             |
|                           | 201       | STH 32    | 217+95.99 | 23.37' LT  | 692.65              | 690.19                  | 2.63             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 203       | STH 32    | 218+43.79 | 23.60' LT  | 692.30              | 689.85                  | 2.61             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 205       | STH 32    | 221+37.63 | 23.60' LT  | 693.30              | 691.00                  | 2.47             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 207       | STH 32    | 221+12.45 | 23.80' LT  | 693.30              | 690.73                  | 2.74             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 209       | STH 32    | 220+78.55 | 23.73' LT  | 693.20              | 690.46                  | 2.91             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 211       | STH 32    | 220+01.49 | 23.28' LT  | 692.60              | 689.98                  | 2.81             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 213       | STH 32    | 219+65.02 | 23.93' LT  | 692.50              | 689.70                  | 2.99             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 215       | STH 32    | 218+94.92 | 23.85' LT  | 691.90              | 689.10                  | 3.11             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 217       | STH 32    | 218+94.47 | 26.32' RT  | 692.35              | 688.25                  | 3.46             |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             | 1                                                |                                             |
|                           | 221       | STH 32    | 259+14.85 | 51.68' LT  | 672.90              | 669.90                  | 2.17             |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  | 1                                           |
|                           | 223       | STH 32    | 259+09.84 | 29.98' LT  | 673.10              | 669.90                  | 2.55             |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  | 1                                           |
|                           | 225       | STH 32    | 259+29.87 | 27.21' RT  |                     | 671.30                  |                  |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  |                                             |
|                           | 227       | STH 32    | 259+60.50 | 36.38' RT  |                     | 669.70                  |                  |                                                   |                                             | 1                                                |                                              |                                                      |                                         |                                             |                                                  |                                             |
|                           | 229       | STH 32    | 259+78.95 | 28.16' RT  | 672.60              | 669.60                  | 3.00             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 231       | STH 32    | 259+59.66 | 27.43' RT  | 674.00              | 669.60                  | 3.94             |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             | 1                                                |                                             |
|                           | 233       | STH 32    | 259+75.45 | 25.26' LT  | 672.00              | 669.70                  | 2.47             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 235       | STH 32    | 259+54.70 | 25.67' LT  | 673.79              | 669.40                  | 3.93             |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             | 1                                                |                                             |
|                           | 237       | STH 32    | 259+54.69 | 51.30' LT  | 672.40              | 669.23                  | 3.47             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
|                           | 241       | STH 32    | 271+51.24 | 28.26' RT  | 681.50              | 678.00                  | 2.43             |                                                   |                                             |                                                  |                                              |                                                      | 1                                       |                                             |                                                  |                                             |
|                           | 243       | STH 32    | 271+43.07 | 63.98' RT  | 682.10              | 678.50                  | 2.53             |                                                   |                                             |                                                  |                                              |                                                      | 1                                       |                                             |                                                  |                                             |
|                           | 245       | STH 32    | 271+04.59 | 63.96' RT  | 682.00              | 678.00                  | 2.93             |                                                   |                                             |                                                  |                                              |                                                      | 1                                       |                                             |                                                  |                                             |
|                           | 249       | STH 32    | 271+05.06 | 26.47' RT  | 681.83              | 677.20                  | 3.56             |                                                   |                                             |                                                  | 1                                            |                                                      |                                         |                                             |                                                  |                                             |
| E251                      | STH 32    | 269+79.15 | 26.72' RT |            | 679.47              | 676.00                  | 3.64             |                                                   |                                             |                                                  |                                              |                                                      |                                         | 1                                           |                                                  |                                             |
| E261                      | STH 32    | 175+30.04 | 35.99' LT |            | 699.13              | 694.13                  | 3.83             |                                                   |                                             |                                                  |                                              |                                                      |                                         |                                             |                                                  |                                             |
| TOTAL 2225-00-73 CAT 0010 |           |           |           |            |                     |                         |                  | 3                                                 | 1                                           | 1                                                | 3                                            | 3                                                    | 3                                       | 30                                          | 8                                                | 5                                           |

REMARKS:  
\*ADDITIONAL QUANTITIES SHOWN ELSEWHERE  
\*\*STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE  
\*\*\*RIM ELEV IS AT THE INLET COVER FLANGE LOCATION  
\*\*\*\*FOR STRUCTURES WITH SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE SUMP. FOR STRUCTURES WITHOUT SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE  
\*\*\*\*\*DEPTH = RIM ELEV - TOP OF STRUCTURE BASE ELEV - COVER HEIGHT - 6-INCH ADJUSTMENT RING HEIGHT

3

| STORM SEWER STRUCTURES    |           |          |           |            |                     |                         |                  |                                   |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|---------------------------|-----------|----------|-----------|------------|---------------------|-------------------------|------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-------------------------|------------------------------|----------------------------------|----------------------------------|------------------------------------|
| CATEGORY                  | STRUCTURE | LOCATION | STATION   | OFFSET**   | RIM***<br>ELEVATION | INVERT****<br>ELEVATION | DEPTH*****<br>FT | 611.2004                          | 611.2005                          | 611.2006                          | 611.2007                          | 611.2055                | 611.3004                     | 611.3901                         | 611.3902                         | DECORATIVE HEADWALL<br>- #<br>EACH |
|                           |           |          |           |            |                     |                         |                  | MANHOLES 4-FT<br>DIAMETER<br>EACH | MANHOLES 5-FT<br>DIAMETER<br>EACH | MANHOLES 6-FT<br>DIAMETER<br>EACH | MANHOLES 7-FT<br>DIAMETER<br>EACH | MANHOLES 5X5-FT<br>EACH | INLETS 4-FT DIAMETER<br>EACH | INLETS MEDIAN 1<br>GRATE<br>EACH | INLETS MEDIAN 2<br>GRATE<br>EACH |                                    |
| 0010                      | 101       | STH 32   | 146+17.12 | 24.90' LT  | 706.98              | 702.40                  | 4.96             |                                   |                                   |                                   |                                   |                         |                              |                                  | 1                                |                                    |
|                           | 103       | STH 32   | 146+17.58 | 21.63' RT  | 707.44              | 702.01                  | 4.46             |                                   |                                   | 1                                 |                                   |                         |                              |                                  |                                  |                                    |
|                           | 111       | STH 32   | 157+99.27 | 26.13' RT  |                     | 706.00                  |                  |                                   |                                   |                                   |                                   |                         |                              |                                  |                                  | 1                                  |
|                           | 113       | STH 32   | 158+76.42 | 25.24' RT  | 706.80              | 704.70                  | 2.27             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 114       | STH 32   | 158+86.21 | 45.38' RT  | 707.20              | 704.20                  | 2.17             | 1                                 |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 115       | STH 32   | 159+02.36 | 45.49' RT  |                     | 704.50                  |                  |                                   |                                   |                                   |                                   |                         |                              |                                  |                                  | 1                                  |
|                           | 116       | STH 32   | 159+07.43 | 32.76' RT  |                     | 704.25                  |                  |                                   |                                   |                                   |                                   |                         |                              |                                  | 1                                |                                    |
|                           | 117       | STH 32   | 159+07.37 | 24.98' RT  | 705.75              | 703.75                  | 2.00             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 121       | STH 32   | 165+06.29 | 26.18' LT  | 703.40              | 700.15                  | 3.56             |                                   |                                   |                                   |                                   |                         |                              |                                  | 1                                |                                    |
|                           | 123       | STH 32   | 165+07.13 | 26.27' RT  | 703.40              | 700.00                  | 3.71             |                                   |                                   |                                   |                                   |                         |                              |                                  | 1                                |                                    |
|                           | 125       | STH 32   | 164+15.99 | 24.58' RT  | 703.50              | 701.20                  | 2.30             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 131       | STH 32   | 174+23.61 | 111.17' RT | 699.21              | 697.00                  | 2.37             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 133       | STH 32   | 174+20.79 | 73.84' RT  | 699.00              | 696.60                  | 2.57             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 135       | STH 32   | 174+26.53 | 45.64' RT  | 699.30              | 696.25                  | 2.38             | 1                                 |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 137       | STH 32   | 174+27.47 | 34.34' RT  | 699.46              | 694.10                  | 4.45             |                                   | 1                                 |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 139       | STH 32   | 174+11.45 | 74.89' LT  | 700.83              | 698.56                  | 2.44             |                                   |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 141       | STH 32   | 192+38.81 | 25.10' RT  |                     | 691.30                  |                  |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  | 1                                  |
|                           | 143       | STH 32   | 191+99.08 | 25.10' RT  | 692.30              | 689.60                  | 3.01             |                                   |                                   |                                   |                                   |                         |                              |                                  | 1                                |                                    |
|                           | 145       | STH 32   | 192+00.30 | 24.85' LT  | 692.50              | 689.32                  | 3.41             |                                   |                                   |                                   |                                   |                         |                              |                                  | 1                                |                                    |
|                           | 151       | STH 32   | 199+23.30 | 26.68' LT  |                     | 688.70                  |                  |                                   |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 153       | STH 32   | 199+61.44 | 32.43' LT  | 691.75              | 688.55                  | 3.43             |                                   |                                   |                                   |                                   |                         |                              |                                  | 1                                |                                    |
|                           | E155      | STH 32   | 200+65.14 | 22.23' LT  | 692.77              | 688.45                  | 3.31             |                                   | 1                                 |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 161       | STH 32   | 203+87.70 | 26.99' LT  |                     | 688.78                  |                  |                                   |                                   |                                   |                                   |                         |                              |                                  |                                  | 1                                  |
|                           | 162       | STH 32   | 203+63.26 | 27.23' LT  | 690.71              | 687.88                  | 3.14             |                                   |                                   |                                   |                                   |                         |                              |                                  | 1                                |                                    |
|                           | 163       | STH 32   | 203+80.91 | 27.07' LT  | 692.00              | 687.50                  | 3.98             |                                   |                                   |                                   |                                   | 1                       |                              |                                  |                                  |                                    |
|                           | 165       | STH 32   | 203+80.32 | 29.86' RT  | 690.10              | 687.19                  | 3.12             |                                   |                                   |                                   |                                   |                         |                              |                                  | 1                                |                                    |
|                           | 167       | STH 32   | 203+60.52 | 29.62' RT  |                     | 688.25                  |                  |                                   |                                   |                                   |                                   |                         |                              |                                  |                                  | 1                                  |
|                           | 171       | STH 32   | 208+80.62 | 19.81' LT  | 692.29              | 688.00                  | 3.77             |                                   |                                   | 1                                 |                                   |                         |                              |                                  |                                  |                                    |
|                           | 173       | STH 32   | 208+90.46 | 22.06' RT  | 690.80              | 687.80                  | 2.33             | 1                                 |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 175       | STH 32   | 208+80.61 | 24.44' RT  | 692.40              | 686.65                  | 5.17             |                                   |                                   | 1                                 |                                   |                         |                              |                                  |                                  |                                    |
|                           | 177       | STH 32   | 208+76.38 | 29.42' RT  |                     | 688.70                  |                  |                                   |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 179       | STH 32   | 208+63.40 | 25.39' RT  |                     | 686.58                  |                  |                                   |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 181       | STH 32   | 215+80.37 | 24.10' LT  | 691.50              | 689.10                  | 2.57             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 183       | STH 32   | 217+27.38 | 31.99' LT  | 692.78              | 689.50                  | 2.25             | 1                                 |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 185       | STH 32   | 217+01.10 | 24.54' LT  | 692.59              | 689.20                  | 3.60             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 187       | STH 32   | 216+60.66 | 24.47' LT  | 692.00              | 688.50                  | 3.81             |                                   |                                   |                                   |                                   |                         |                              |                                  | 1                                |                                    |
|                           | 189       | STH 32   | 214+98.49 | 25.69' RT  | 691.69              | 689.20                  | 2.67             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 191       | STH 32   | 216+19.37 | 27.70' RT  | 691.30              | 688.30                  | 2.35             | 1                                 |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 192       | STH 32   | 216+30.64 | 26.33' RT  | 692.69              | 688.22                  | 3.42             | 1                                 |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 193       | STH 32   | 216+60.66 | 23.57' RT  | 692.88              | 687.27                  | 5.58             |                                   |                                   | 1                                 |                                   |                         |                              |                                  |                                  |                                    |
|                           | 194       | STH 32   | 216+90.74 | 20.68' RT  |                     | 689.10                  |                  |                                   |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 201       | STH 32   | 217+95.99 | 23.37' LT  | 692.65              | 690.19                  | 2.63             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 203       | STH 32   | 218+43.79 | 23.60' LT  | 692.30              | 689.85                  | 2.61             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 205       | STH 32   | 221+37.63 | 23.60' LT  | 693.30              | 691.00                  | 2.47             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 207       | STH 32   | 221+12.45 | 23.80' LT  | 693.30              | 690.73                  | 2.74             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 209       | STH 32   | 220+78.55 | 23.73' LT  | 693.20              | 690.46                  | 2.91             |                                   |                                   |                                   |                                   |                         |                              |                                  | 1                                |                                    |
|                           | 211       | STH 32   | 220+01.49 | 23.28' LT  | 692.60              | 689.98                  | 2.81             |                                   |                                   |                                   |                                   |                         |                              |                                  | 1                                |                                    |
|                           | 213       | STH 32   | 219+65.02 | 23.93' LT  | 692.50              | 689.70                  | 2.99             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 215       | STH 32   | 218+94.92 | 23.85' LT  | 691.90              | 689.10                  | 3.11             |                                   |                                   |                                   |                                   |                         |                              |                                  | 1                                |                                    |
|                           | 217       | STH 32   | 218+94.47 | 26.32' RT  | 692.35              | 688.25                  | 3.46             |                                   |                                   | 1                                 |                                   |                         |                              |                                  |                                  |                                    |
|                           | 221       | STH 32   | 259+14.85 | 51.68' LT  | 672.90              | 669.90                  | 2.17             | 1                                 |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 223       | STH 32   | 259+09.84 | 29.98' LT  | 673.10              | 669.90                  | 2.55             | 1                                 |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 225       | STH 32   | 259+29.87 | 27.21' RT  |                     | 671.30                  |                  |                                   |                                   |                                   |                                   |                         |                              |                                  |                                  | 1                                  |
|                           | 227       | STH 32   | 259+60.50 | 36.38' RT  |                     | 669.70                  |                  |                                   |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | 229       | STH 32   | 259+78.95 | 28.16' RT  | 672.60              | 669.60                  | 3.00             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 231       | STH 32   | 259+59.66 | 27.43' RT  | 674.00              | 669.60                  | 3.94             |                                   |                                   |                                   | 1                                 |                         |                              |                                  |                                  |                                    |
|                           | 233       | STH 32   | 259+75.45 | 25.26' LT  | 672.00              | 669.70                  | 2.47             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 235       | STH 32   | 259+54.70 | 25.67' LT  | 673.79              | 669.40                  | 3.93             |                                   |                                   |                                   | 1                                 |                         |                              |                                  |                                  |                                    |
|                           | 237       | STH 32   | 259+54.69 | 51.30' LT  | 672.40              | 669.23                  | 3.47             |                                   |                                   |                                   |                                   |                         |                              |                                  | 1                                |                                    |
|                           | 241       | STH 32   | 271+51.24 | 28.26' RT  | 681.50              | 678.00                  | 2.43             |                                   |                                   |                                   |                                   |                         | 1                            |                                  |                                  |                                    |
|                           | 243       | STH 32   | 271+43.07 | 63.98' RT  | 682.10              | 678.50                  | 2.53             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | 245       | STH 32   | 271+04.59 | 63.96' RT  | 682.00              | 678.00                  | 2.93             |                                   |                                   |                                   |                                   |                         | 1                            |                                  |                                  |                                    |
|                           | 249       | STH 32   | 271+05.06 | 26.47' RT  | 681.83              | 677.20                  | 3.56             | 1                                 |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
|                           | E251      | STH 32   | 269+79.15 | 26.72' RT  | 679.47              | 676.00                  | 3.64             |                                   |                                   |                                   |                                   |                         |                              | 1                                |                                  |                                    |
|                           | E261      | STH 32   | 175+30.04 | 35.99' LT  | 699.13              | 694.13                  | 3.83             | 1                                 |                                   |                                   |                                   |                         |                              |                                  |                                  |                                    |
| TOTAL 2225-00-73 CAT 0010 |           |          |           |            |                     |                         |                  | 10                                | 2                                 | 5                                 | 2                                 | 1                       | 3                            | 19                               | 11                               | 7                                  |

REMARKS:  
\*\*STATIONS AND OFFSETS ARE TO CENTER OF STRUCTURE  
\*\*\*RIM ELEV IS AT THE INLET COVER FLANGE LOCATION  
\*\*\*\*FOR STRUCTURES WITH SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE SUMP. FOR STRUCTURES WITHOUT SUMPS, THE INVERT ELEVATION IS THE ELEVATION OF THE LOWEST PIPE FLOW LINE  
\*\*\*\*\*DEPTH = RIM ELEV - TOP OF STRUCTURE BASE ELEV - COVER HEIGHT - 6-INCH ADJUSTMENT RING HEIGHT  
# DECORATIVE HEADWALLS ARE NOT A BID ITEM AND WILL BE INSTALLED BY VILLAGE

PROJECT NO: 2225-00-73

HWY: STH 32

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET

301

E

3

RRFB HOLLY CT./BARNETT LN.

|                           |          | SPV.0060.61                                        |      | SPV.0060.62                                      |  |
|---------------------------|----------|----------------------------------------------------|------|--------------------------------------------------|--|
|                           |          | RRFB SYSTEM STH<br>32 NB AT BARNETT<br>LN ASSEMBLY |      | RRFB SYSTEM STH<br>32 SB AT HOLLY CT<br>ASSEMBLY |  |
| STATION                   | OFFSET   | POLE NO                                            | EACH | EACH                                             |  |
| 158+92                    | 23.9' LT | RRFB 1                                             | --   | 1                                                |  |
| 158+92                    | 18.8' RT | RRFB 2                                             | 1    | --                                               |  |
| TOTAL 2225-00-74 CAT 0010 |          |                                                    | 1    | 1                                                |  |

RRFB GREEN TREE RD.

|                           |          | SPV.0060.63                                              |      | SPV.0060.64                                              |  |
|---------------------------|----------|----------------------------------------------------------|------|----------------------------------------------------------|--|
|                           |          | RRFB SYSTEM STH<br>32 NB AT GREEN<br>TREE RD<br>ASSEMBLY |      | RRFB SYSTEM STH<br>32 SB AT GREEN<br>TREE RD<br>ASSEMBLY |  |
| STATION                   | OFFSET   | POLE NO                                                  | EACH | EACH                                                     |  |
| 174+28                    | 32.8' LT | RRFB 11                                                  | --   | 1                                                        |  |
| 174+18                    | 28.4' RT | RRFB 12                                                  | 1    | --                                                       |  |
| TOTAL 2225-00-74 CAT 0010 |          |                                                          | 1    | 1                                                        |  |

3

RRFB BRIDGE LN.

|                           |          | SPV.0060.65                                       |      | SPV.0060.66                                       |  |
|---------------------------|----------|---------------------------------------------------|------|---------------------------------------------------|--|
|                           |          | RRFB SYSTEM STH<br>32 NB AT BRIDGE<br>LN ASSEMBLY |      | RRFB SYSTEM STH<br>32 SB AT BRIDGE<br>LN ASSEMBLY |  |
| STATION                   | OFFSET   | POLE NO                                           | EACH | EACH                                              |  |
| 206+49                    | 19.8' LT | RRFB 21                                           | --   | 1                                                 |  |
| 206+49                    | 20.7' RT | RRFB 22                                           | 1    | --                                                |  |
| TOTAL 2225-00-74 CAT 0010 |          |                                                   | 1    | 1                                                 |  |

RRFB BEACH DR.

|                           |          | SPV.0060.67                                      |      | SPV.0060.68                                      |  |
|---------------------------|----------|--------------------------------------------------|------|--------------------------------------------------|--|
|                           |          | RRFB SYSTEM STH<br>32 NB AT BEACH<br>DR ASSEMBLY |      | RRFB SYSTEM STH<br>32 SB AT BEACH DR<br>ASSEMBLY |  |
| STATION                   | OFFSET   | POLE NO                                          | EACH | EACH                                             |  |
| 221+29                    | 19.8' LT | RRFB 31                                          | --   | 1                                                |  |
| 221+21                    | 21.3' RT | RRFB 32                                          | 1    | --                                               |  |
| TOTAL 2225-00-74 CAT 0010 |          |                                                  | 1    | 1                                                |  |

RRFB FOX LN.

|                           |          | SPV.0060.69                                    |      | SPV.0060.70                                    |  |
|---------------------------|----------|------------------------------------------------|------|------------------------------------------------|--|
|                           |          | RRFB SYSTEM STH<br>32 NB AT FOX LN<br>ASSEMBLY |      | RRFB SYSTEM STH<br>32 SB AT FOX LN<br>ASSEMBLY |  |
| STATION                   | OFFSET   | POLE NO                                        | EACH | EACH                                           |  |
| 255+42                    | 20.0' LT | RRFB 41                                        | --   | 1                                              |  |
| 255+42                    | 19.8' RT | RRFB 42                                        | 1    | --                                             |  |
| TOTAL 2225-00-74 CAT 0010 |          |                                                | 1    | 1                                              |  |

RRFB DEAN RD.

|                           |          | SPV.0060.71                                     |      | SPV.0060.72                                     |  |
|---------------------------|----------|-------------------------------------------------|------|-------------------------------------------------|--|
|                           |          | RRFB SYSTEM STH<br>32 NB AT DEAN RD<br>ASSEMBLY |      | RRFB SYSTEM STH<br>32 SB AT DEAN RD<br>ASSEMBLY |  |
| STATION                   | OFFSET   | POLE NO                                         | EACH | EACH                                            |  |
| 270+97                    | 25.1' LT | RRFB 51                                         | --   | 1                                               |  |
| 270+96                    | 28.5' RT | RRFB 52                                         | 1    | --                                              |  |
| TOTAL 2225-00-74 CAT 0010 |          |                                                 | 1    | 1                                               |  |

PROJECT NO: 2225-00-74

HWY: STH 32

COUNTY: MILWAUKEE

MISCELLANEOUS QUANTITIES

SHEET

302

E

3

3

| AGGREGATE                 |         |                       |                                      |
|---------------------------|---------|-----------------------|--------------------------------------|
|                           |         |                       | 305.0120                             |
|                           |         |                       | * BASE AGGREGATE<br>DENSE 1 1/4-INCH |
| CATEGORY                  | ROADWAY | LOCATION              | TON                                  |
| 0010                      | STH 32  | HOLLY CT / BARNETT LN | 15                                   |
| 0010                      | STH 32  | GREEN TREE RD         | 9                                    |
| 0010                      | STH 32  | BRIDGE LN             | 22                                   |
| 0010                      | STH 32  | BEACH DR              | 12                                   |
| 0010                      | STH 32  | FOX LN                | 15                                   |
| 0010                      | STH 32  | DEAN ROAD             | 8                                    |
| TOTAL 2225-00-74 CAT 0010 |         |                       | 81                                   |

| CURB AND GUTTER           |         |               |                                               |                         |
|---------------------------|---------|---------------|-----------------------------------------------|-------------------------|
|                           |         |               | 601.0411                                      | 601.0110                |
|                           |         |               | * CONCRETE CURB<br>& GUTTER 30-INCH<br>TYPE D | CONCRETE CURB<br>TYPE D |
| CATEGORY                  | ROADWAY | LOCATION      | LF                                            | LF                      |
| 0010                      | STH 32  | BARNETT LN    | --                                            | --                      |
| 0010                      | STH 32  | GREEN TREE RD | --                                            | 76                      |
| 0010                      | STH 32  | BRIDGE LN     | --                                            | --                      |
| 0010                      | STH 32  | BEACH DR      | 26                                            | --                      |
| 0010                      | STH 32  | FOX LN        | --                                            | --                      |
| 0010                      | STH 32  | DEAN ROAD     | --                                            | --                      |
| TOTAL 2225-00-74 CAT 0010 |         |               | 26                                            | 76                      |

| CONCRETE SIDEWALK         |         |                       |                               |                                                              |                                                                        |
|---------------------------|---------|-----------------------|-------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------|
|                           |         |                       | 602.0410                      | 602.0515                                                     | 602.0615                                                               |
|                           |         |                       | * CONCRETE<br>SIDEWALK 5-INCH | * CURB RAMP<br>DETECTABLE<br>WARNING FIELD<br>NATURAL PATINA | * CURB RAMP<br>DETECTABLE<br>WARNING FIELD<br>RADIAL NATURAL<br>PATINA |
| CATEGORY                  | ROADWAY | LOCATION              | SF                            | SF                                                           | SF                                                                     |
| 0010                      | STH 32  | HOLLY CT / BARNETT LN | 428                           | 24                                                           | 15                                                                     |
| 0010                      | STH 32  | GREEN TREE RD         | 247                           | 12                                                           | 18                                                                     |
| 0010                      | STH 32  | BRIDGE LN             | 647                           | 12                                                           | 39                                                                     |
| 0010                      | STH 32  | BEACH DR              | 367                           | 24                                                           | --                                                                     |
| 0010                      | STH 32  | FOX LN                | 480                           | 24                                                           | 27                                                                     |
| 0010                      | STH 32  | DEAN ROAD             | 235                           | 12                                                           | 28                                                                     |
| TOTAL 2225-00-74 CAT 0010 |         |                       | 2,404                         | 108                                                          | 127                                                                    |

\* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

PAVEMENT MARKING

| 646.7520<br>* MARKING<br>CROSSWALK<br>EPOXY BLOCK<br>STYLE<br>24-INCH<br>LF |          |                       |     |
|-----------------------------------------------------------------------------|----------|-----------------------|-----|
| CATEGORY                                                                    | LOCATION | STATION               |     |
| 0010                                                                        | STH 32   | HOLLY CT / BARNETT LN | 72  |
| 0010                                                                        | STH 32   | GREEN TREE RD         | 210 |
| 0010                                                                        | STH 32   | BRIDGE LN             | 66  |
| 0010                                                                        | STH 32   | BEACH DR              | 66  |
| 0010                                                                        | STH 32   | FOX LN                | 66  |
| 0010                                                                        | STH 32   | DEAN ROAD             | 138 |
| TOTAL 2225-00-74 CAT 0010                                                   |          |                       | 618 |

CONSTRUCTION STAKING

| 650.9000<br>* CONSTRUCTION<br>STAKING CURB<br>RAMPS<br>EACH |         |                       |    |
|-------------------------------------------------------------|---------|-----------------------|----|
| CATEGORY                                                    | ROADWAY | STATION               |    |
| 0010                                                        | STH 32  | HOLLY CT / BARNETT LN | 3  |
| 0010                                                        | STH 32  | GREEN TREE RD         | 2  |
| 0010                                                        | STH 32  | BRIDGE LN             | 3  |
| 0010                                                        | STH 32  | BEACH DR              | 2  |
| 0010                                                        | STH 32  | FOX LN                | 4  |
| 0010                                                        | STH 32  | DEAN ROAD             | 3  |
| TOTAL 2225-00-74 CAT 0010                                   |         |                       | 17 |

\* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

| UTILITY LINE OPENING      |         |                                              |
|---------------------------|---------|----------------------------------------------|
| CATEGORY                  | ROADWAY | SPV.0060.02<br>*UTILITY LINE OPENING<br>EACH |
| 0010                      | STH 32  | 6                                            |
| TOTAL 2225-00-74 CAT 0010 |         | 6                                            |

\* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE



| UTILITY LINE OPENING      |         |                                              |
|---------------------------|---------|----------------------------------------------|
| CATEGORY                  | ROADWAY | SPV.0060.02<br>*UTILITY LINE OPENING<br>EACH |
| 0010                      | STH 32  | 10                                           |
| TOTAL 2225-00-83 CAT 0010 |         | 10                                           |

\* = ADDITIONAL QUANTITIES SHOWN ELSEWHERE

ADJUSTING SANITARY MANHOLES

| SPV.0060.50<br>ADJUSTING<br>SANITARY<br>MANHOLE |          |         |        |           |           |      |                        |
|-------------------------------------------------|----------|---------|--------|-----------|-----------|------|------------------------|
| CATEGORY                                        | SAN MH # | STATION | OFFSET | EXST. RIM | PROP. RIM | EACH | REMARKS                |
| 0010                                            | 5006-144 | 174+21  | 24' LT | 700.03    | 700.45    | 1    | AT GREEN TREE RD       |
| 0010                                            | 5005-002 | 198+33  | 18' LT | 693.60    | 693.69    | 1    | WITHIN WIDENING LIMITS |
| 0010                                            | 5005-016 | 199+81  | 18' LT | 693.46    | 693.49    | 1    | WITHIN WIDENING LIMITS |
| 0010                                            | 4003-133 | 242+73  | 16' RT | 670.43    | 670.51    | 1    | WITHIN WIDENING LIMITS |
| 0010                                            | 4003-048 | 244+69  | 16' RT | 672.06    | 672.04    | 1    | WITHIN WIDENING LIMITS |
| 0010                                            | 4002-084 | 269+49  | 19' LT | 679.20    | 679.43    | 1    | WITHIN WIDENING LIMITS |
| TOTAL 2225-00-83 CAT 0010                       |          |         |        |           |           | 6    |                        |

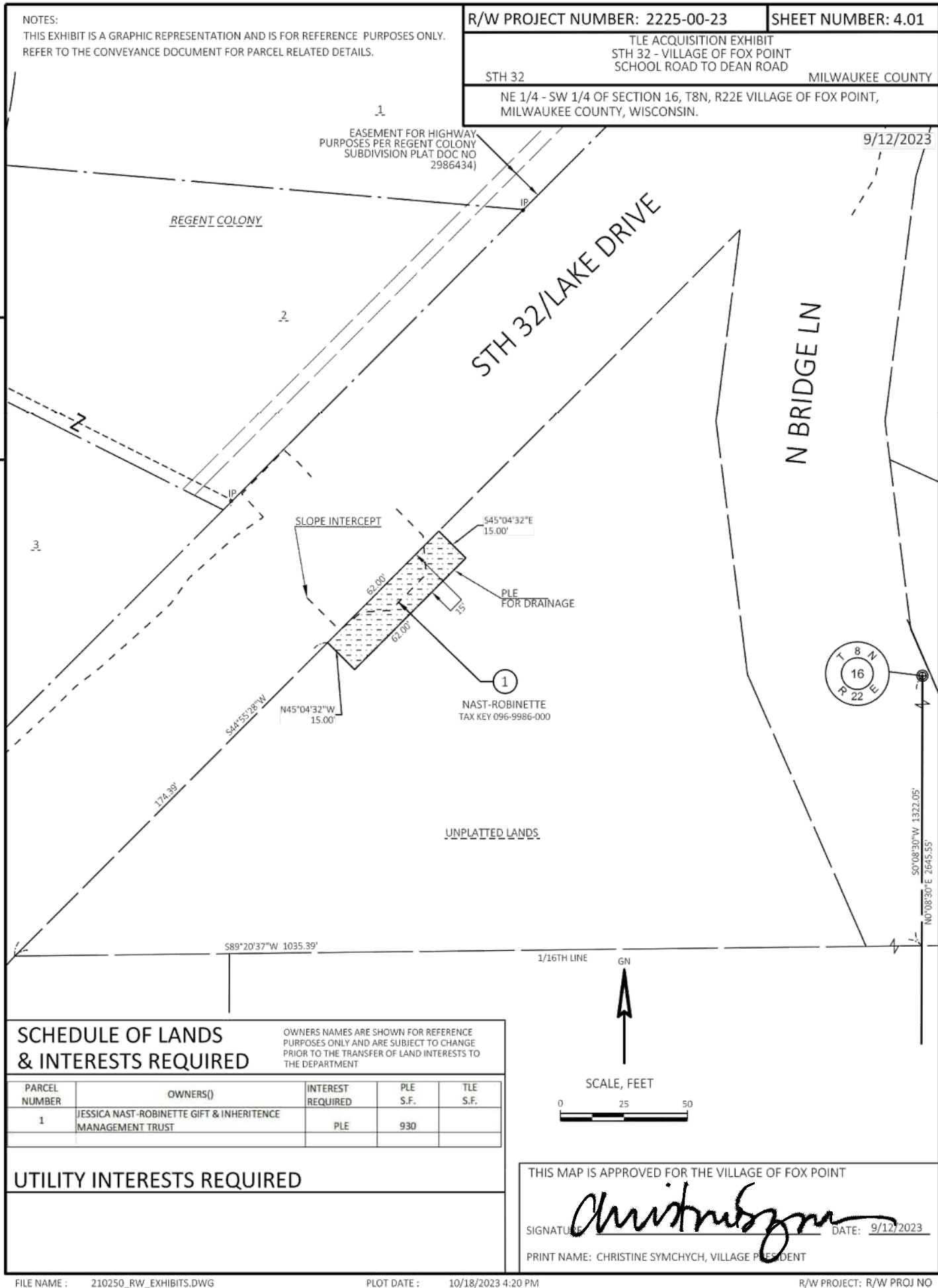
ADJUSTING WATER VALVE BOXES

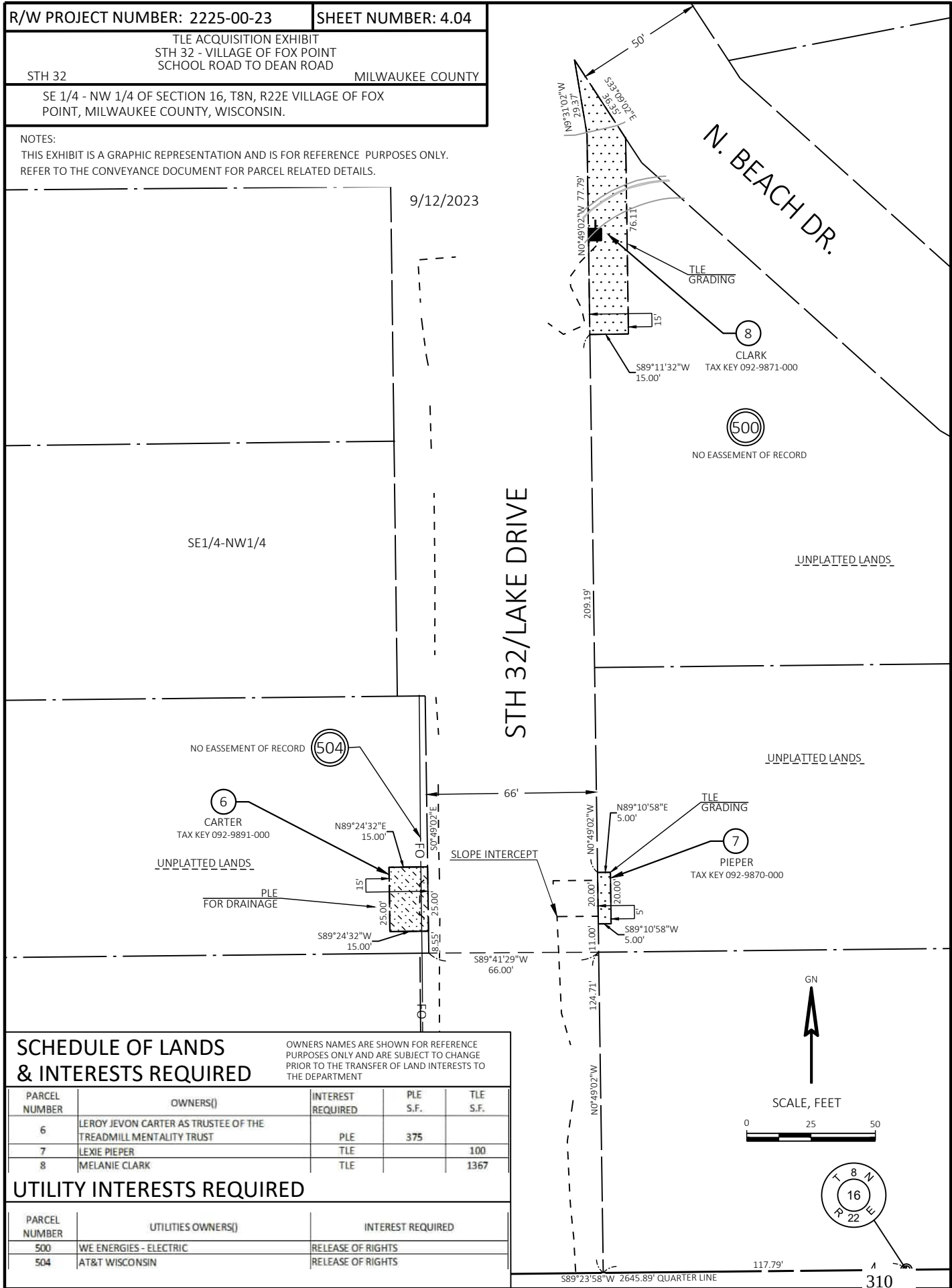
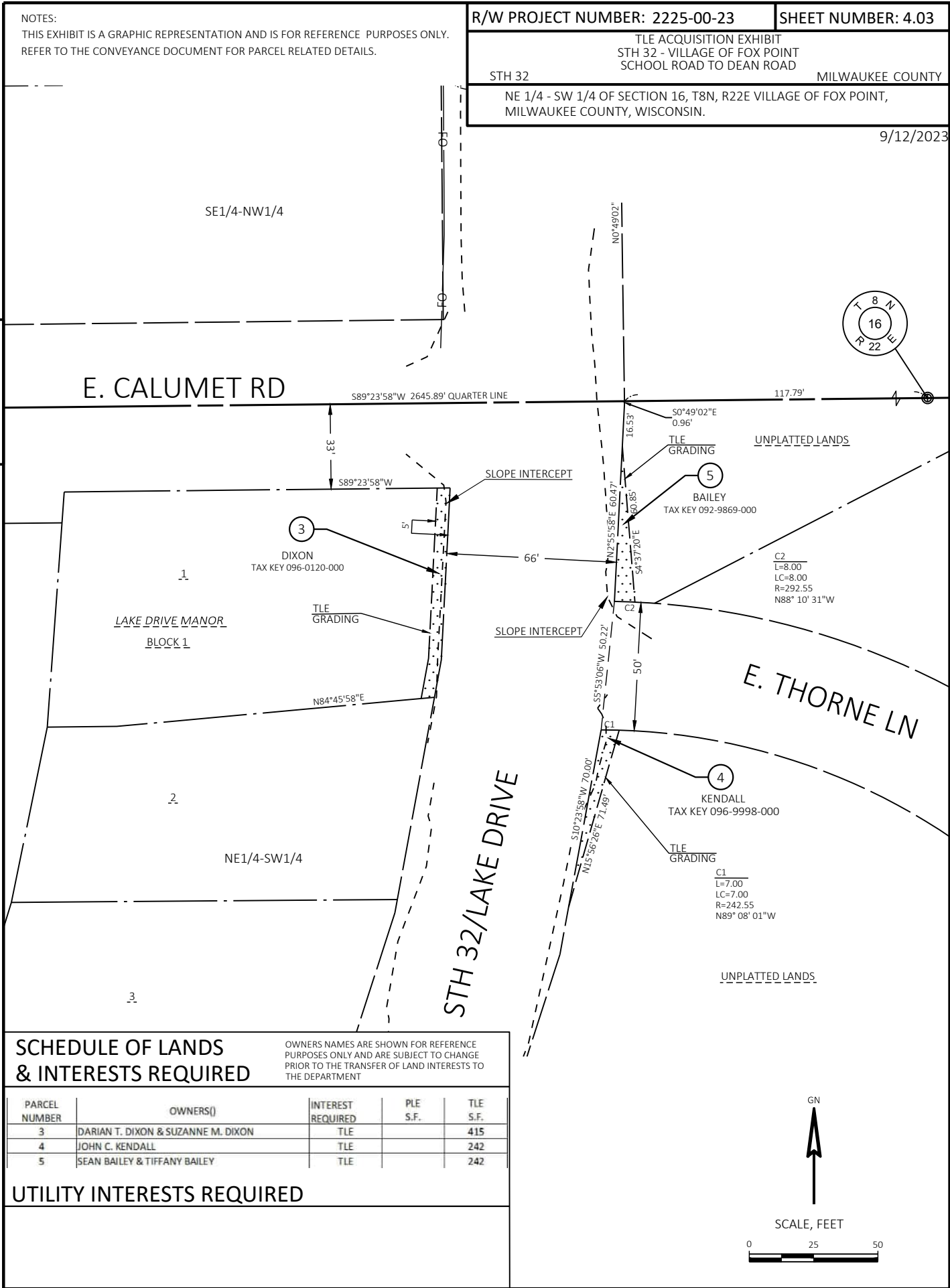
| SPV.0060.51<br>ADJUSTING WATER<br>VALVE BOXES |               |      |
|-----------------------------------------------|---------------|------|
| CATEGORY                                      | LOCATION      | EACH |
| 0010                                          | UNDISTRIBUTED | 10   |
| TOTAL 2225-00-83 CAT 0010                     |               | 10   |

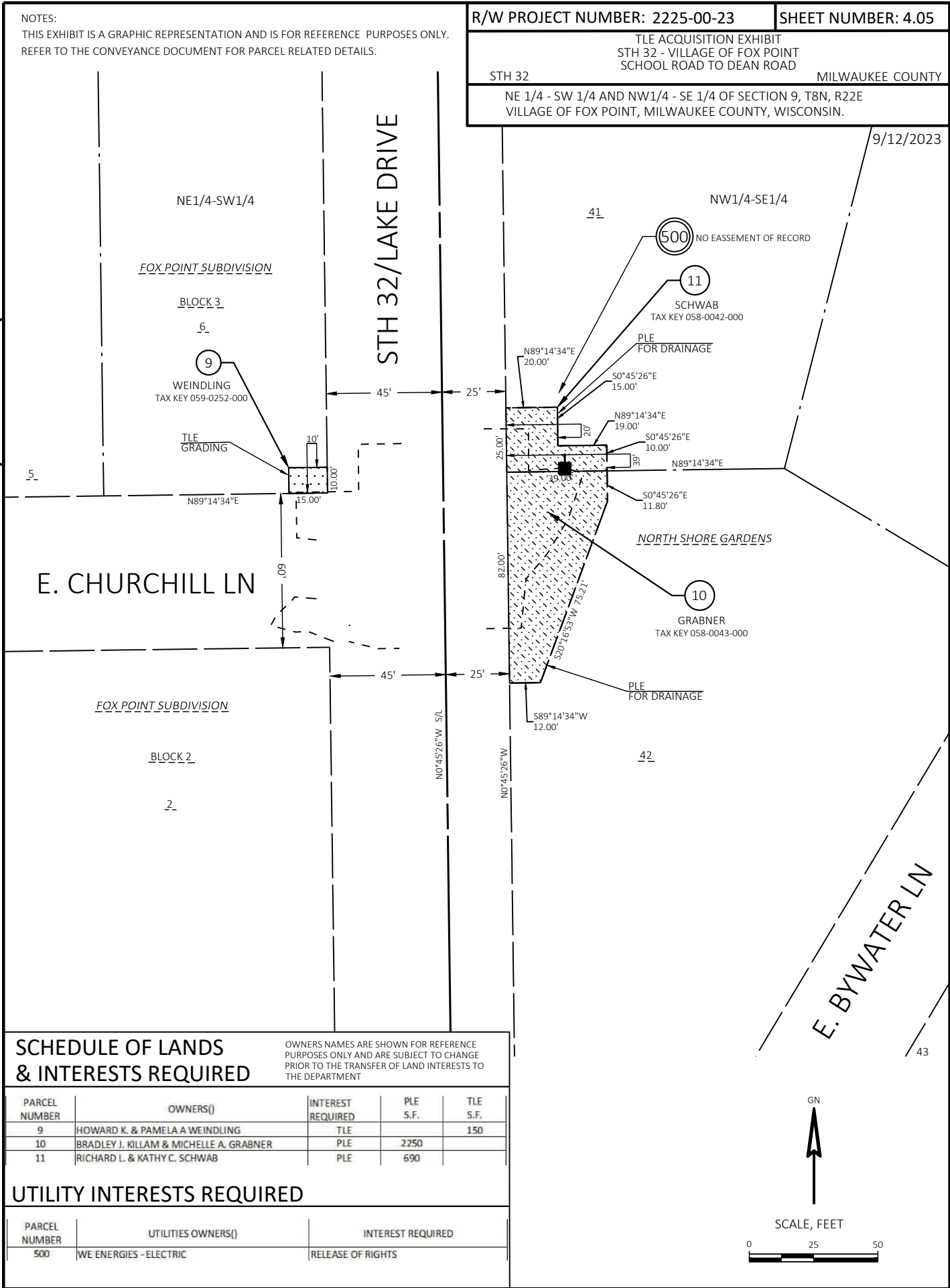


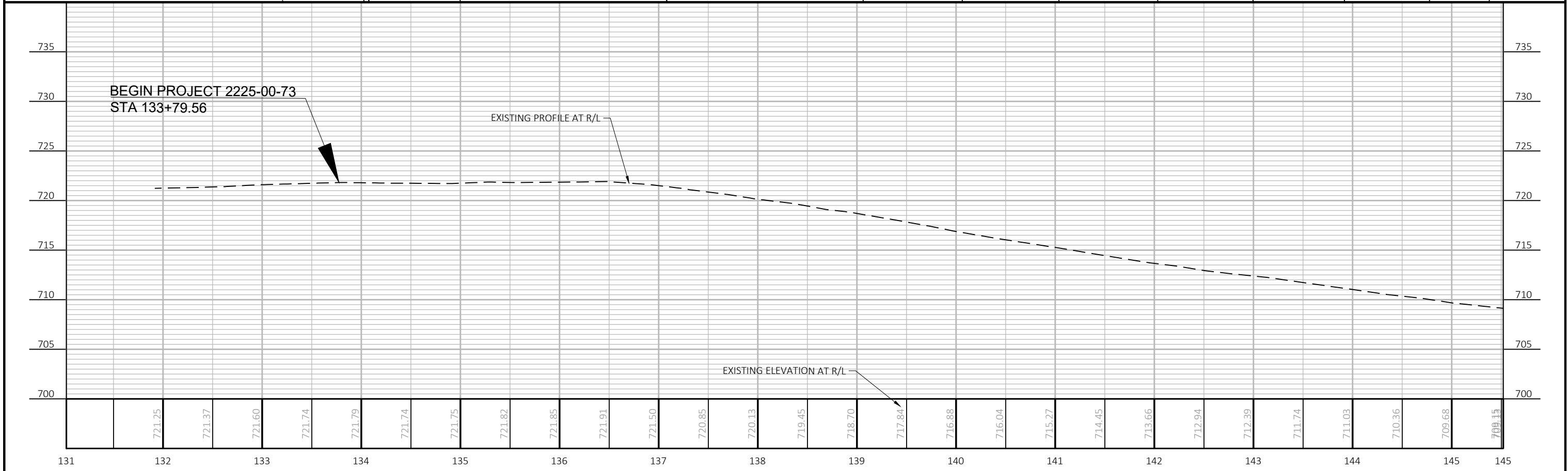
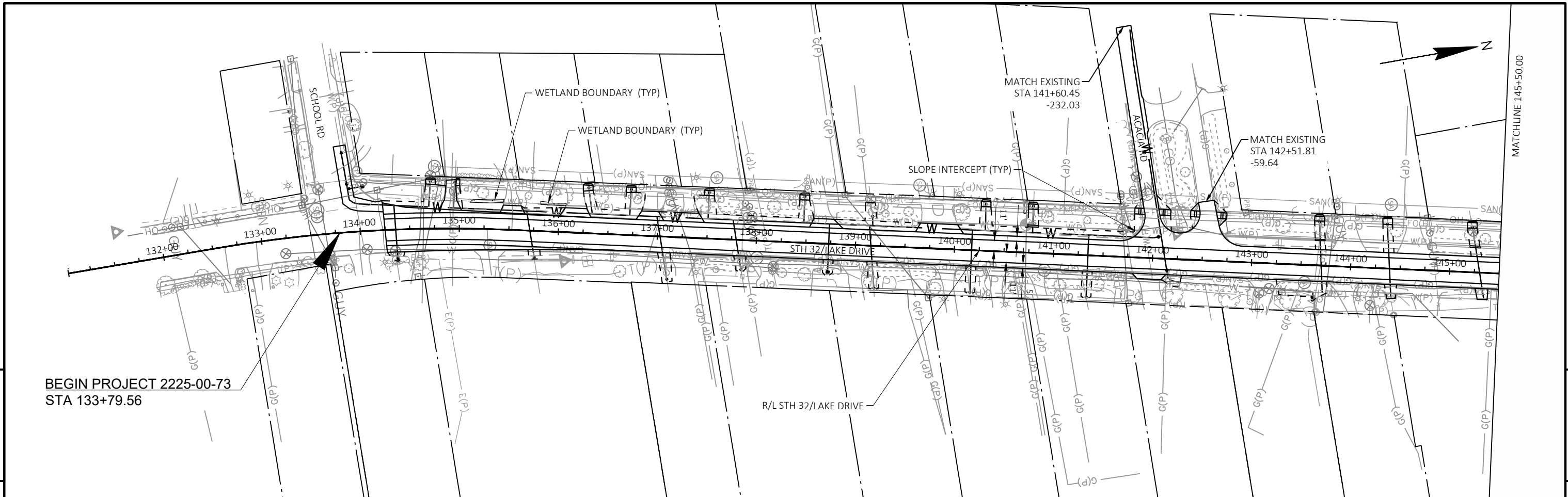
WATER MAIN ITEMS - SCHOOL ROAD TO DEAN ROAD - VILLAGE OF FOX POINT

| CATEGORY                  | LOCATION                            | SPV.0060.40<br>HYDRANT<br>ASSEMBLY WITH<br>6-INCH GATE<br>VALVE | SPV.0090.40<br>HYDRANT LEAD<br>6-INCH | SPV.0090.41<br>PVC WATER MAIN<br>6-INCH | SPV.0090.42<br>PVC WATER MAIN<br>8-INCH | SPV.0090.43<br>PVC WATER MAIN<br>12-INCH | SPV.0060.41<br>8-INCH GATE<br>VALVE AND VALVE<br>BOX | SPV.0060.42<br>12-INCH GATE<br>VALVE AND VALVE<br>BOX | SPV.0060.43<br>1.25-INCH<br>CORPORATION<br>STOP | SPV.0060.44<br>1.5-INCH<br>CORPORATION<br>STOP | SPV.0060.45<br>2-INCH<br>CORPORATION<br>STOP | SPV.0060.46<br>1.25-INCH CURB<br>BOX | SPV.0060.47<br>1.5-INCH CURB<br>BOX | SPV.0060.48<br>2-INCH CURB BOX | SPV.0090.44<br>HDPE WATER<br>SERVICE 1.25-INCH | SPV.0090.45<br>HDPE WATER<br>SERVICE 1.5-INCH | SPV.0090.46<br>HDPE WATER<br>SERVICE 2-INCH | SPV.0060.49<br>CAP AND<br>ABANDON<br>EXISTING WATER<br>MAIN |
|---------------------------|-------------------------------------|-----------------------------------------------------------------|---------------------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------|------------------------------------------------|----------------------------------------------|--------------------------------------|-------------------------------------|--------------------------------|------------------------------------------------|-----------------------------------------------|---------------------------------------------|-------------------------------------------------------------|
|                           |                                     | EACH                                                            | LF                                    | LF                                      | LF                                      | LF                                       | EACH                                                 | EACH                                                  | EACH                                            | EACH                                           | EACH                                         | EACH                                 | EACH                                | EACH                           | LF                                             | LF                                            | LF                                          | EACH                                                        |
| 0010                      | SCHOOL ROAD TO ACACIA ROAD          | 2                                                               | 62                                    | 3                                       | 868                                     | 263                                      | 2                                                    | 1                                                     | 14                                              | 1                                              | 1                                            | 14                                   | 1                                   | 1                              | 548                                            | 26                                            | 55                                          | 1                                                           |
| 0010                      | ACACIA ROAD TO DAPHNE ROAD          | 1                                                               | 5                                     | ---                                     | ---                                     | 35                                       | ---                                                  | ---                                                   | 5                                               | ---                                            | ---                                          | 5                                    | ---                                 | ---                            | 357                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | APPLE TREE ROAD                     | 1                                                               | 33                                    | 4                                       | 120                                     | 5                                        | 1                                                    | ---                                                   | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | DAPHNE ROAD                         | 1                                                               | 6                                     | 29                                      | 119                                     | 40                                       | 1                                                    | 1                                                     | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | HOLLY COURT                         | ---                                                             | ---                                   | 4                                       | 84                                      | 21                                       | 1                                                    | 2                                                     | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | SERVICE ROAD                        | 2                                                               | 67                                    | ---                                     | ---                                     | 19                                       | ---                                                  | ---                                                   | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | VIEW PLACE                          | 1                                                               | 15                                    | ---                                     | ---                                     | 17                                       | ---                                                  | 1                                                     | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | BELMONT ROAD                        | 1                                                               | 59                                    | 3                                       | 40                                      | 40                                       | 1                                                    | ---                                                   | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | GREEN TREE ROAD                     | ---                                                             | ---                                   | ---                                     | ---                                     | 10                                       | ---                                                  | 2                                                     | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | JUNIPER LANE                        | 1                                                               | 6                                     | ---                                     | ---                                     | 170                                      | ---                                                  | 3                                                     | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | ---                                                         |
| 0010                      | DAISY LANE                          | ---                                                             | ---                                   | 4                                       | 47                                      | 16                                       | 1                                                    | 1                                                     | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | BRIDGE LANE                         | ---                                                             | ---                                   | 4                                       | 49                                      | 3                                        | ---                                                  | ---                                                   | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | WYE LANE                            | 1                                                               | 12                                    | ---                                     | ---                                     | 5                                        | ---                                                  | 1                                                     | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | ---                                                         |
| 0010                      | COLEMAN LANE                        | 1                                                               | 18                                    | 28                                      | 23                                      | 21                                       | 1                                                    | 1                                                     | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | THORNE LANE                         | ---                                                             | ---                                   | 22                                      | 50                                      | 16                                       | 1                                                    | 1                                                     | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | CALUMET LANE TO BEACH DRIVE         | 1                                                               | 32                                    | ---                                     | ---                                     | 572                                      | ---                                                  | 2                                                     | 7                                               | ---                                            | ---                                          | 7                                    | ---                                 | ---                            | 205                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | CLUB CIRCLE (SOUTH LEG)             | 1                                                               | 6                                     | ---                                     | ---                                     | 5                                        | ---                                                  | ---                                                   | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | HYDE WAY TO CLUB CIRCLE (NORTH LEG) | 2                                                               | 58                                    | ---                                     | 84                                      | 604                                      | ---                                                  | 2                                                     | 5                                               | ---                                            | ---                                          | 5                                    | ---                                 | ---                            | 157                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | LINKS CIRCLE                        | 1                                                               | 40                                    | 16                                      | 63                                      | 29                                       | 1                                                    | 1                                                     | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | GOODRICH LANE                       | 1                                                               | 8                                     | 34                                      | 35                                      | 43                                       | 1                                                    | 1                                                     | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | QUARLES PLACE                       | 1                                                               | 10                                    | ---                                     | ---                                     | 17                                       | ---                                                  | 1                                                     | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | ---                                                         |
| 0010                      | FOX LANE                            | ---                                                             | ---                                   | ---                                     | ---                                     | 5                                        | ---                                                  | 1                                                     | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | ---                                                         |
| 0010                      | CHURCHILL LANE                      | 1                                                               | 4                                     | ---                                     | ---                                     | 5                                        | ---                                                  | ---                                                   | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | ---                                                         |
| 0010                      | GRAY LOG LANE                       | 1                                                               | 4                                     | 15                                      | 23                                      | 23                                       | 1                                                    | 1                                                     | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | DEAN ROAD                           | 1                                                               | 26                                    | ---                                     | 215                                     | 83                                       | 2                                                    | 1                                                     | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | 1                                                           |
| 0010                      | MISCELLANEOUS                       | 5                                                               | 42                                    | ---                                     | ---                                     | 66                                       | ---                                                  | ---                                                   | ---                                             | ---                                            | ---                                          | ---                                  | ---                                 | ---                            | ---                                            | ---                                           | ---                                         | ---                                                         |
| TOTAL 2225-00-83 CAT 0010 |                                     | 27                                                              | 513                                   | 166                                     | 1,820                                   | 2,133                                    | 14                                                   | 24                                                    | 31                                              | 1                                              | 1                                            | 31                                   | 1                                   | 1                              | 1,267                                          | 26                                            | 55                                          | 20                                                          |

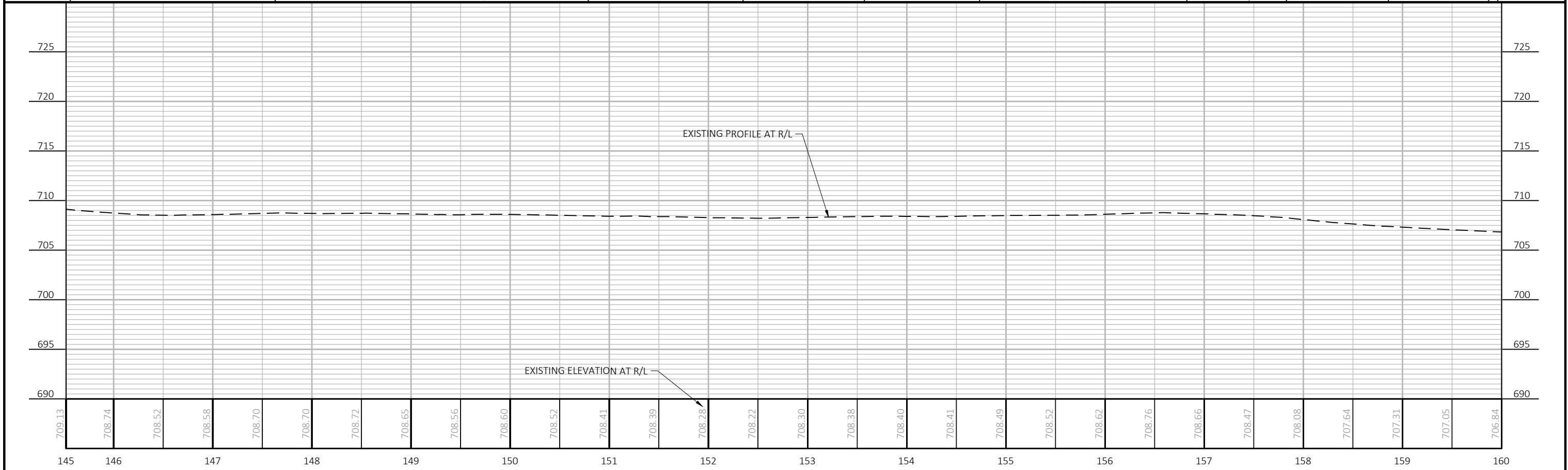






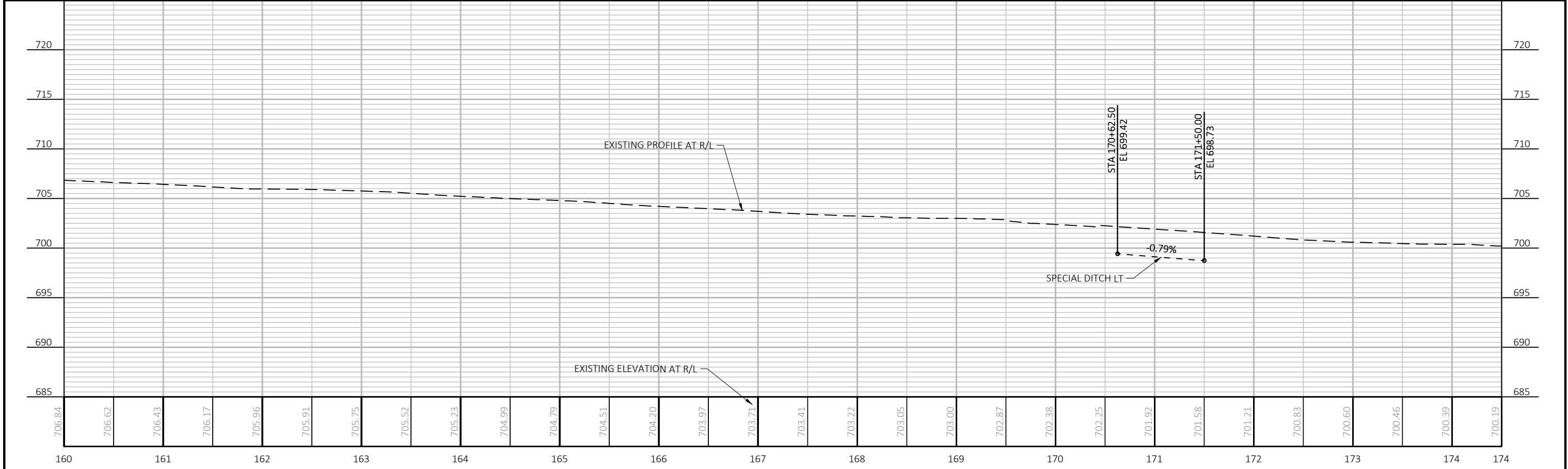
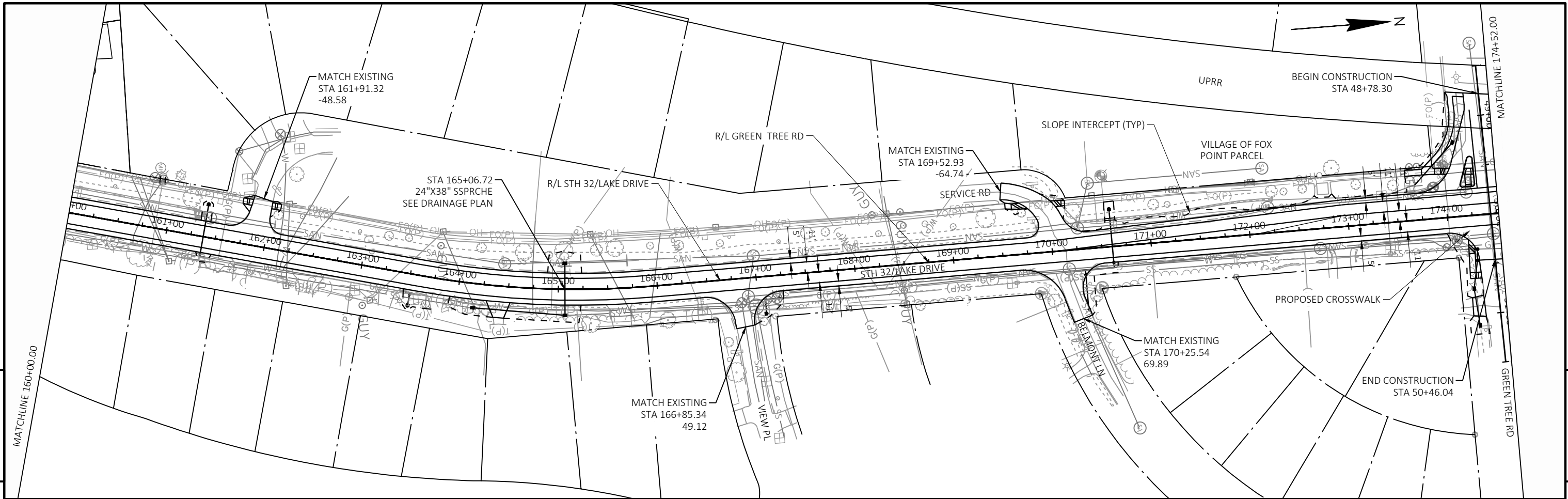


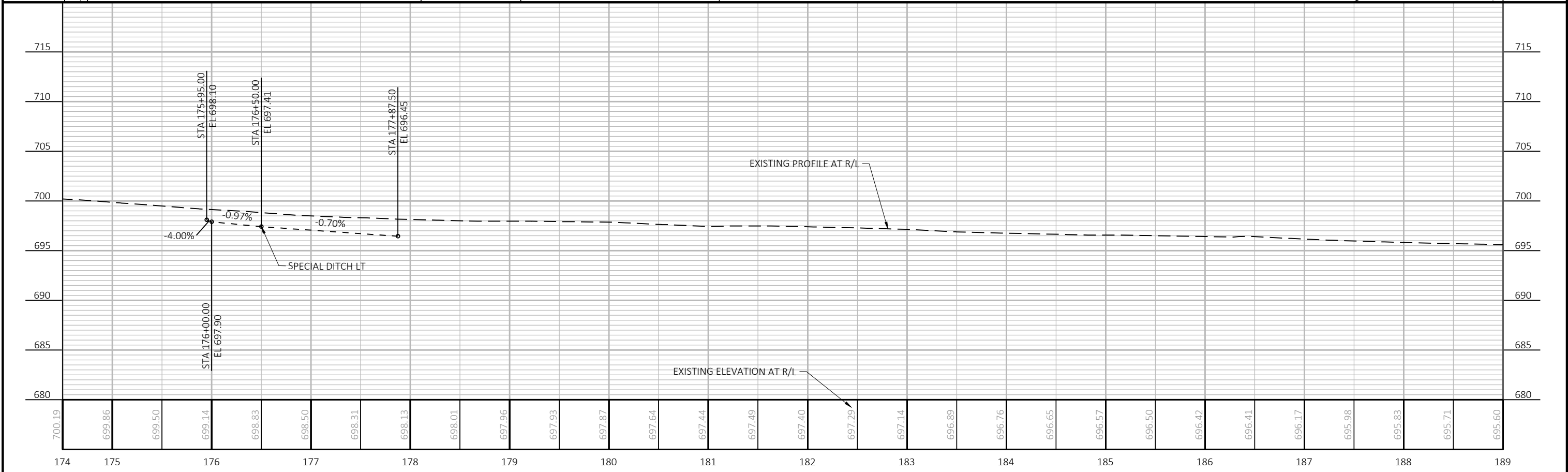
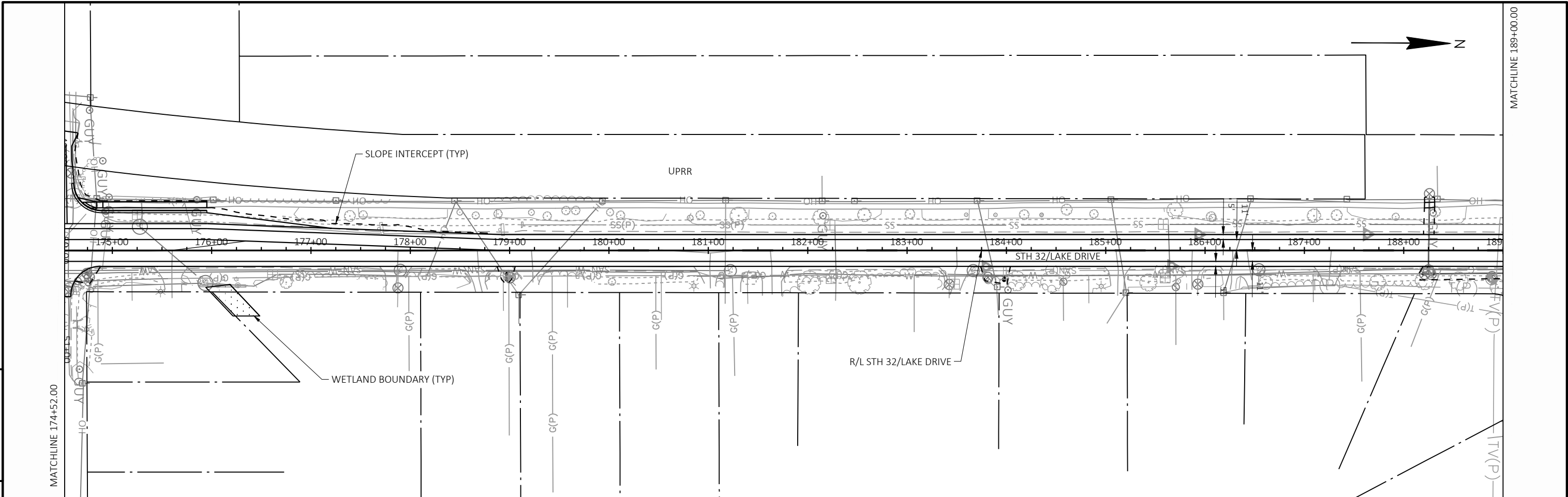
|             |            |      |        |         |           |                   |        |       |     |   |
|-------------|------------|------|--------|---------|-----------|-------------------|--------|-------|-----|---|
| PROJECT NO: | 2225-00-73 | HWY: | STH 32 | COUNTY: | MILWAUKEE | PLAN AND PROFILE: | STH 32 | SHEET | 312 | E |
|-------------|------------|------|--------|---------|-----------|-------------------|--------|-------|-----|---|



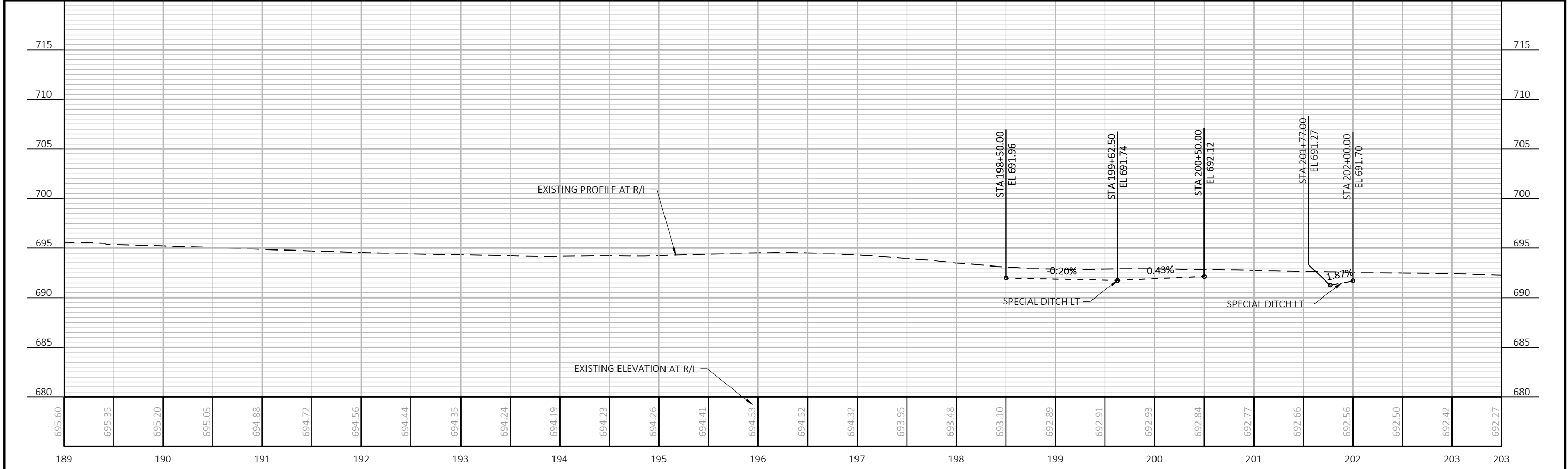
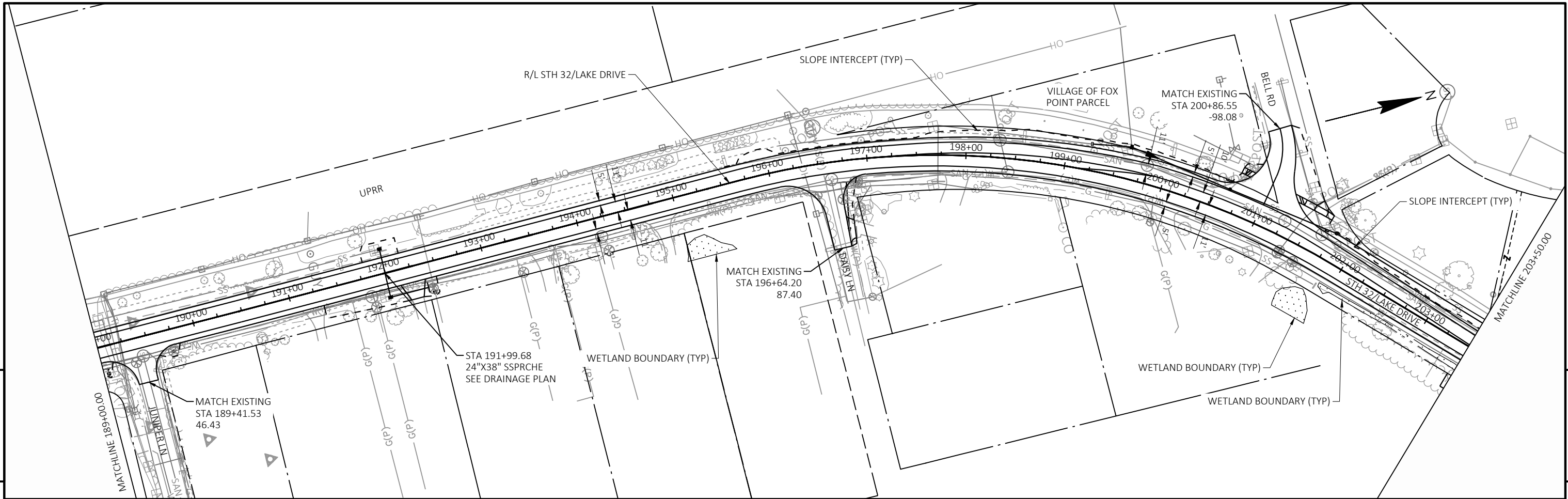
|                        |             |                   |                          |           |   |
|------------------------|-------------|-------------------|--------------------------|-----------|---|
| PROJECT NO: 2225-00-73 | HWY: STH 32 | COUNTY: MILWAUKEE | PLAN AND PROFILE: STH 32 | SHEET 313 | E |
|------------------------|-------------|-------------------|--------------------------|-----------|---|

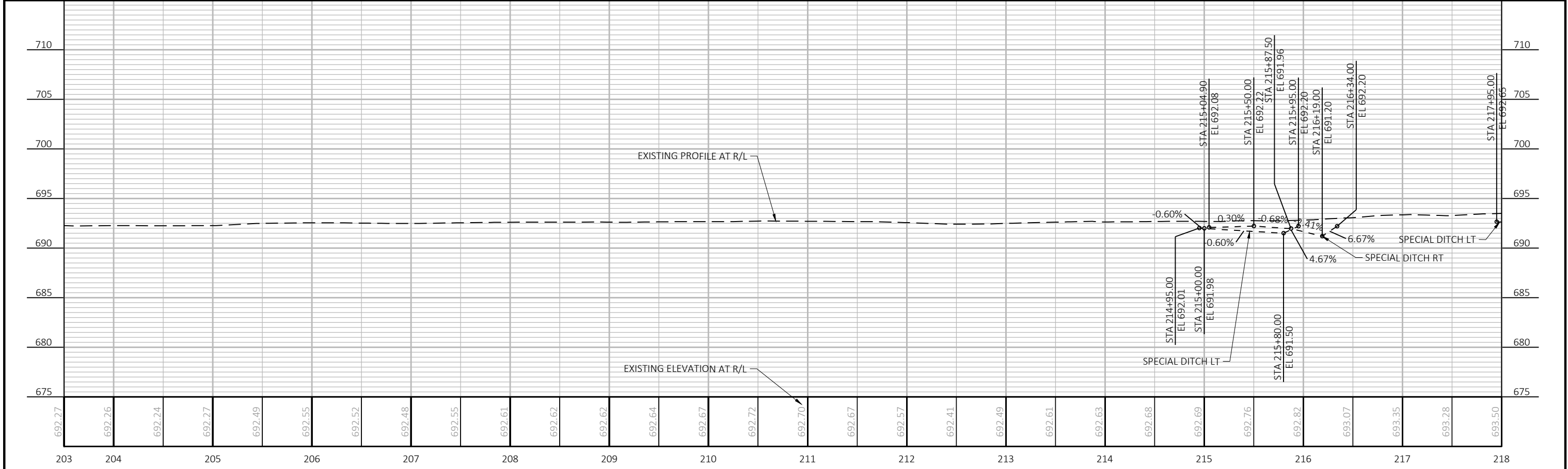
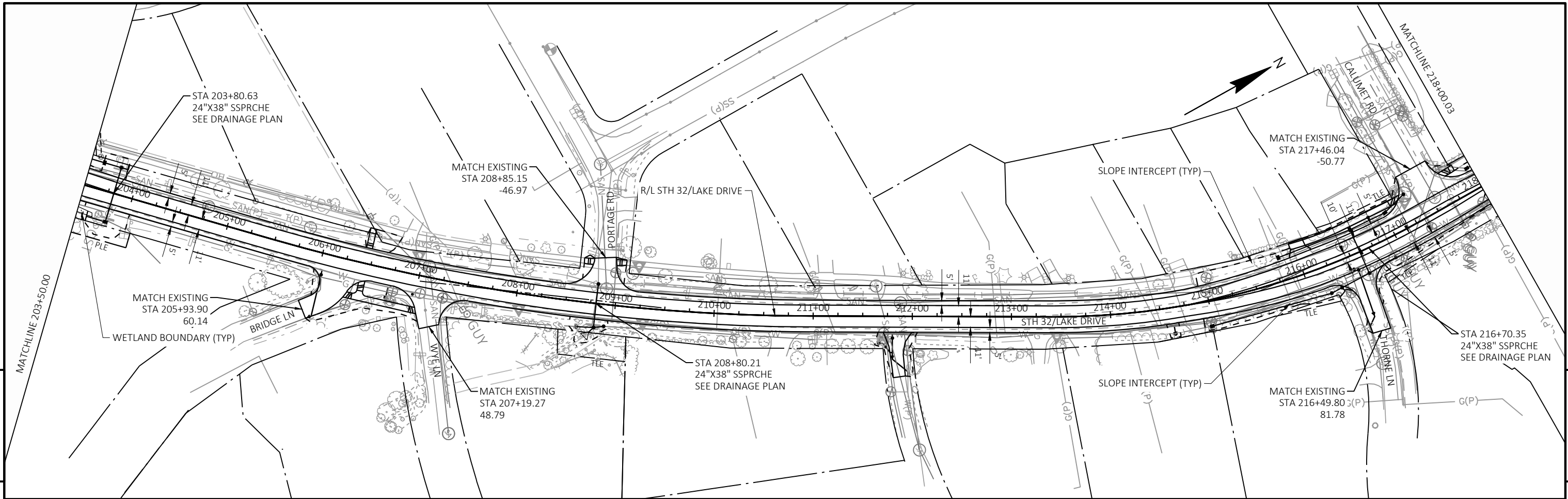




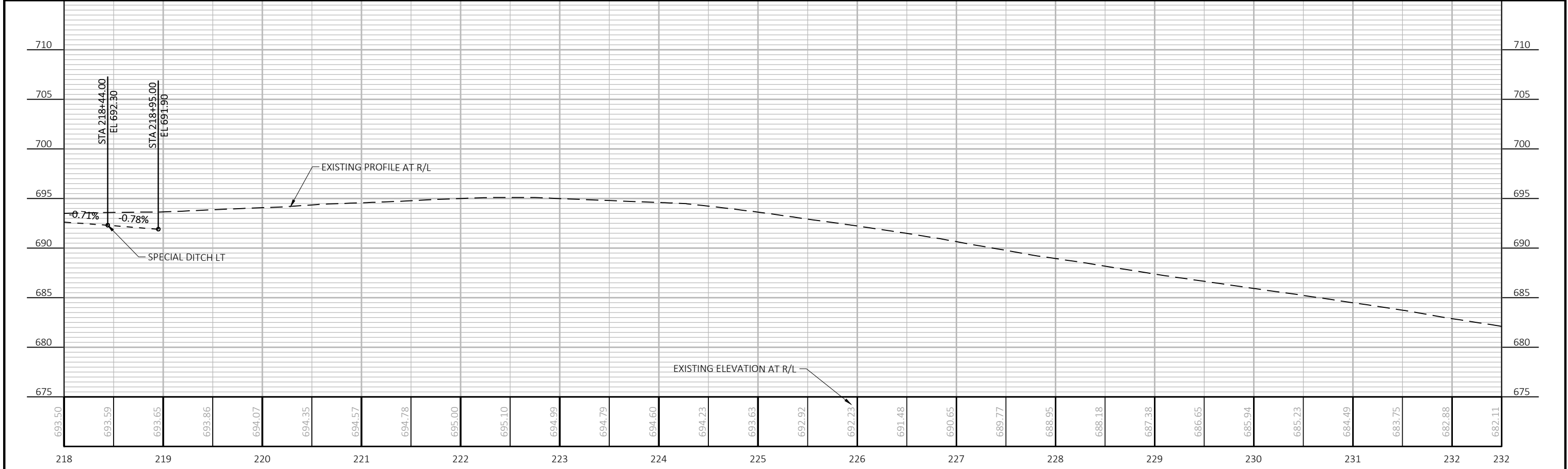
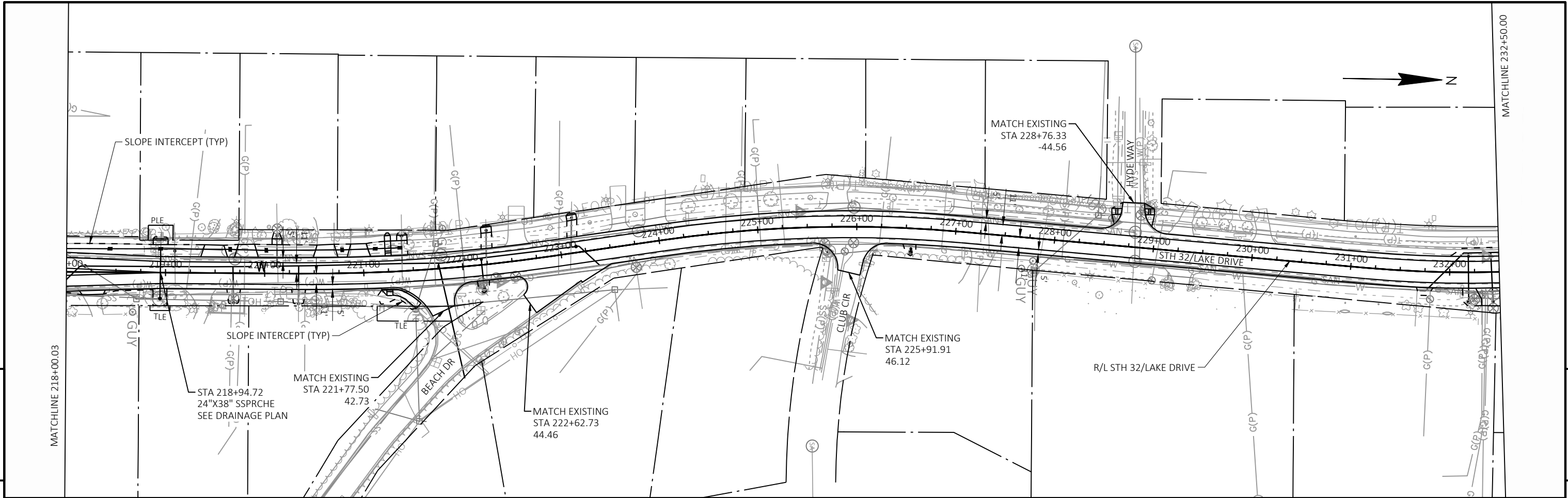


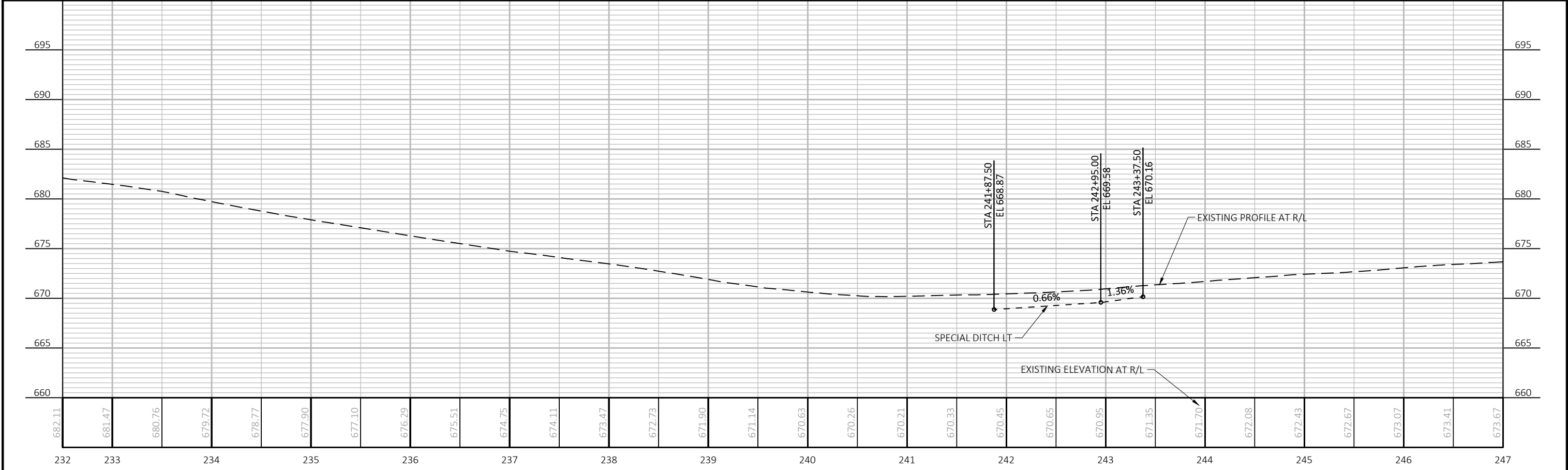
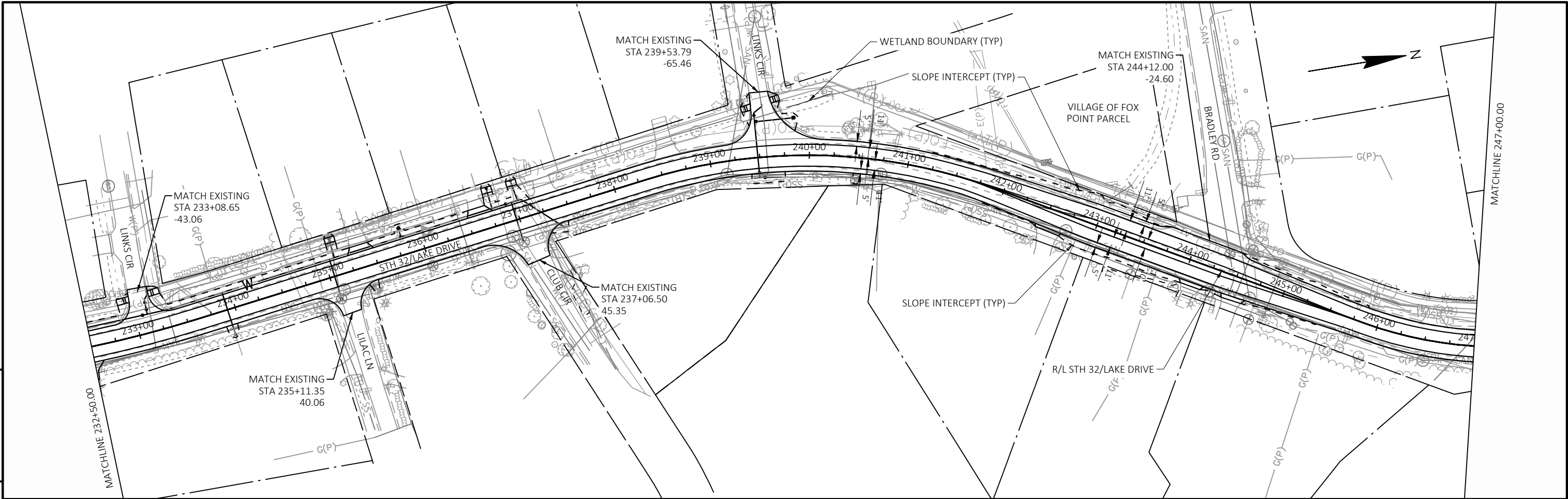


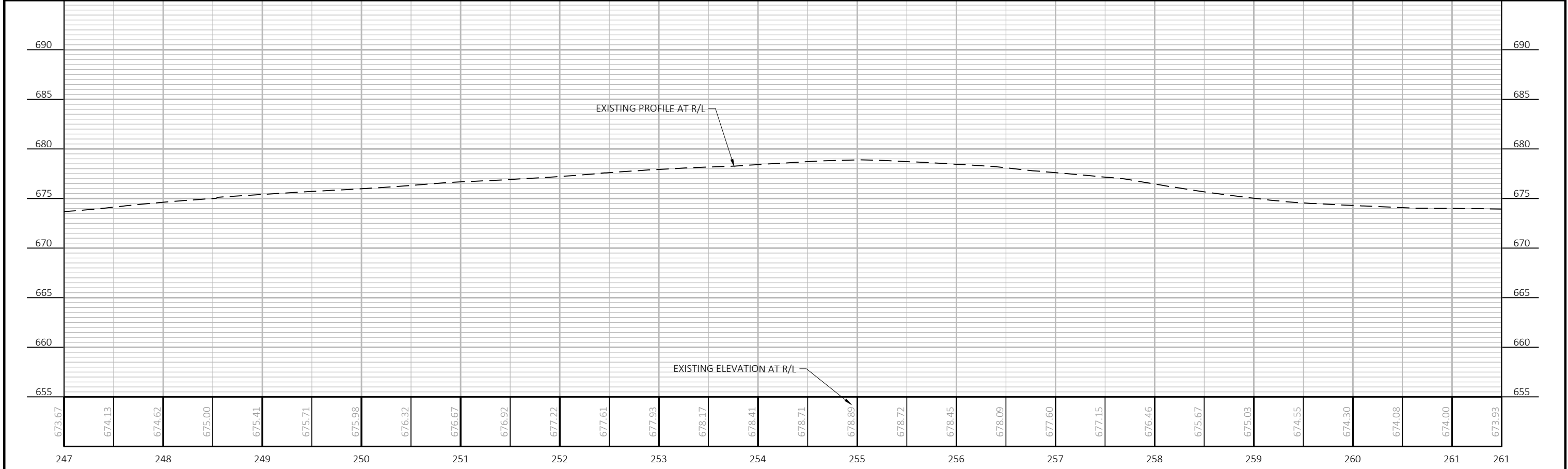
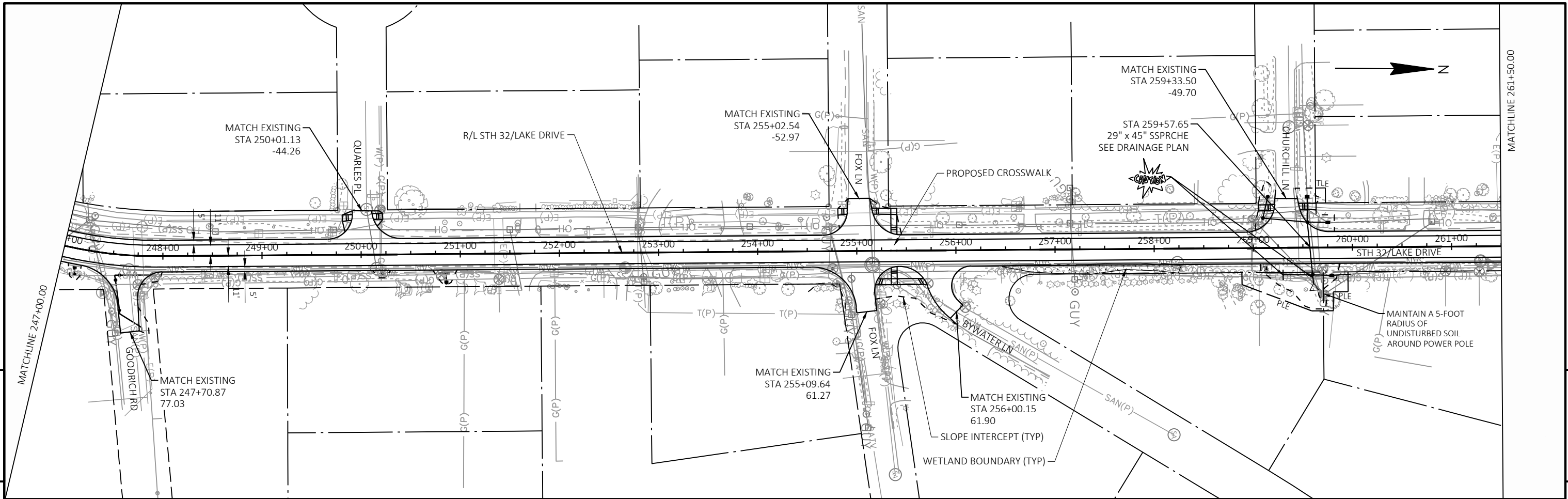


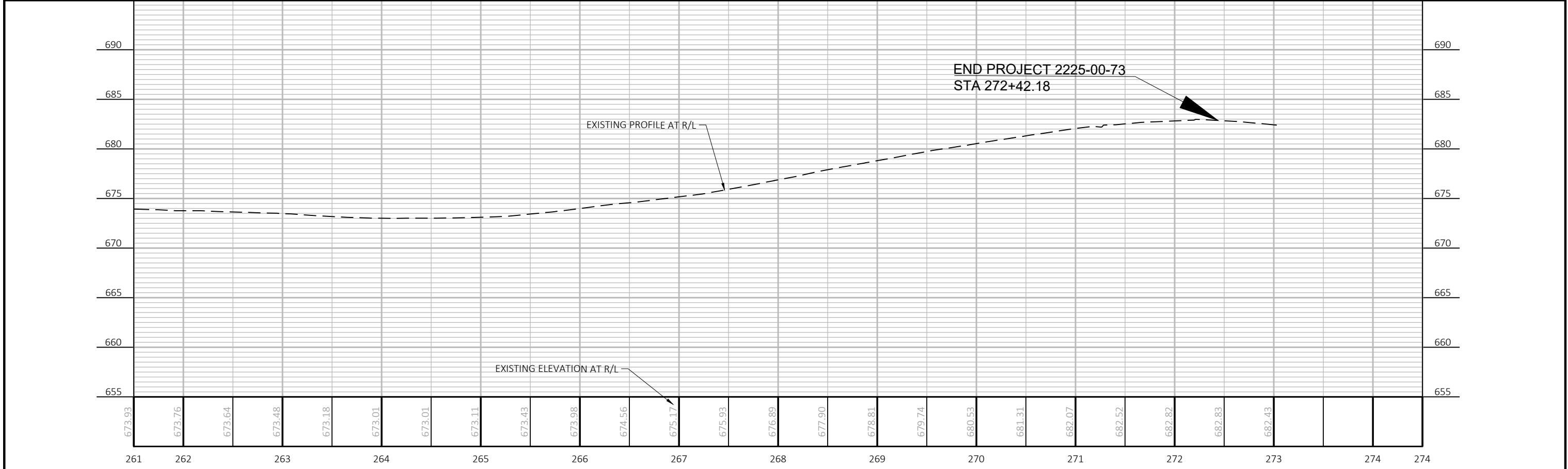
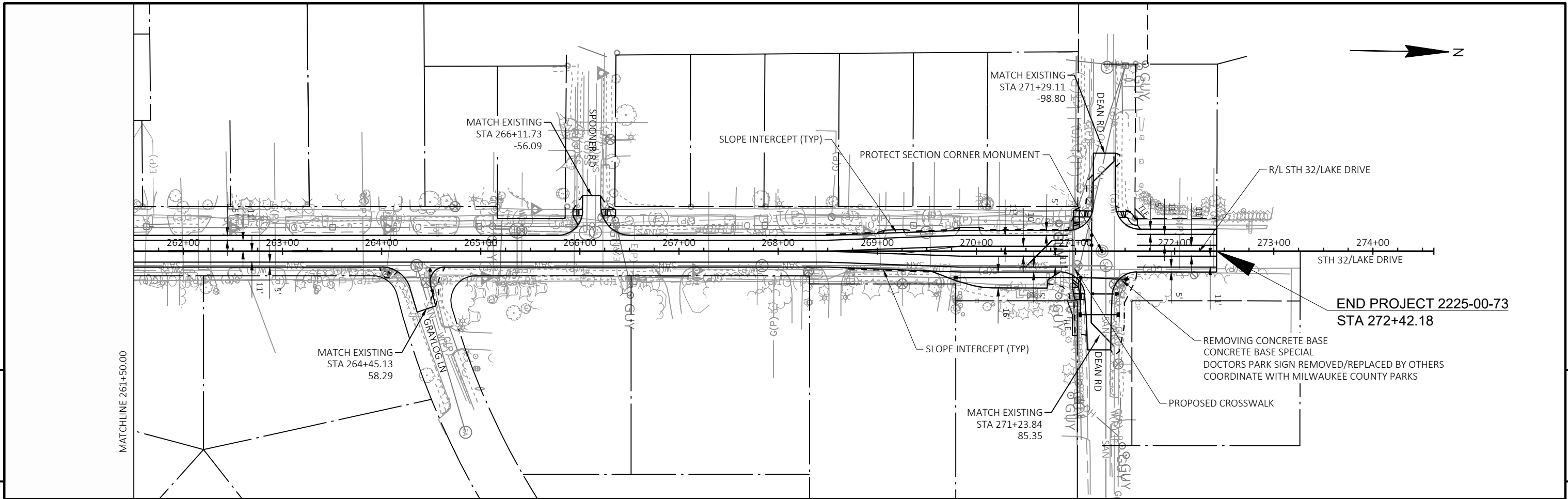


|                        |             |                   |                          |           |
|------------------------|-------------|-------------------|--------------------------|-----------|
| PROJECT NO: 2225-00-73 | HWY: STH 32 | COUNTY: MILWAUKEE | PLAN AND PROFILE: STH 32 | SHEET 317 |
|------------------------|-------------|-------------------|--------------------------|-----------|



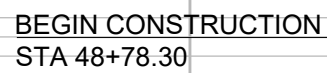




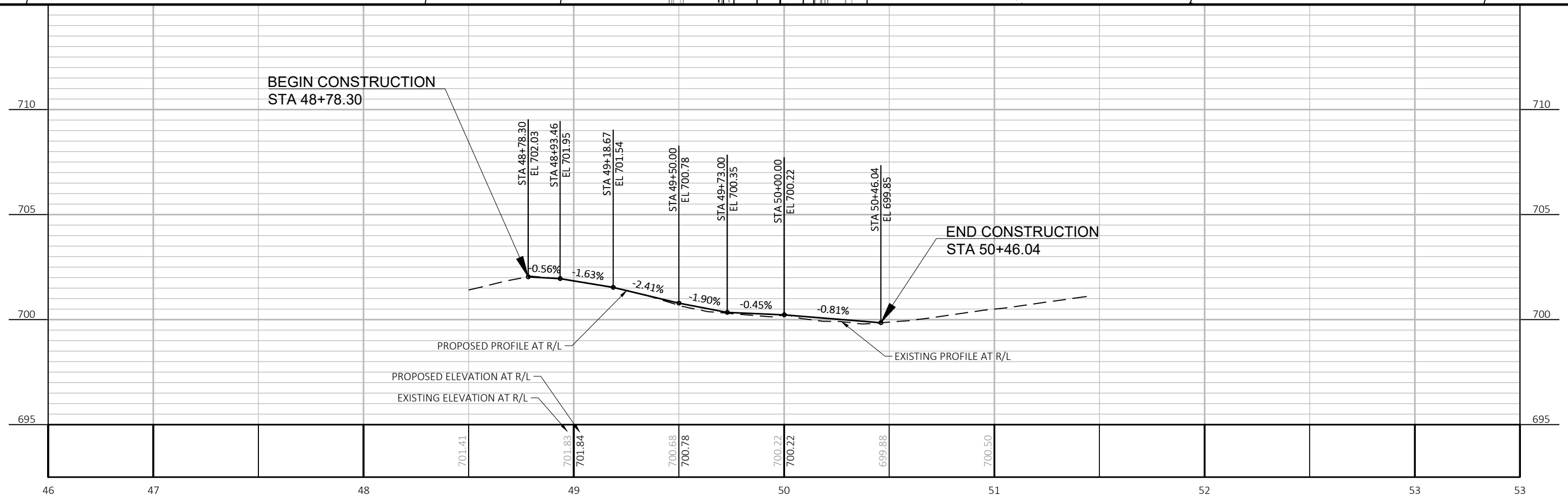


|                        |             |                   |                          |           |   |
|------------------------|-------------|-------------------|--------------------------|-----------|---|
| PROJECT NO: 2225-00-73 | HWY: STH 32 | COUNTY: MILWAUKEE | PLAN AND PROFILE: STH 32 | SHEET 321 | E |
|------------------------|-------------|-------------------|--------------------------|-----------|---|





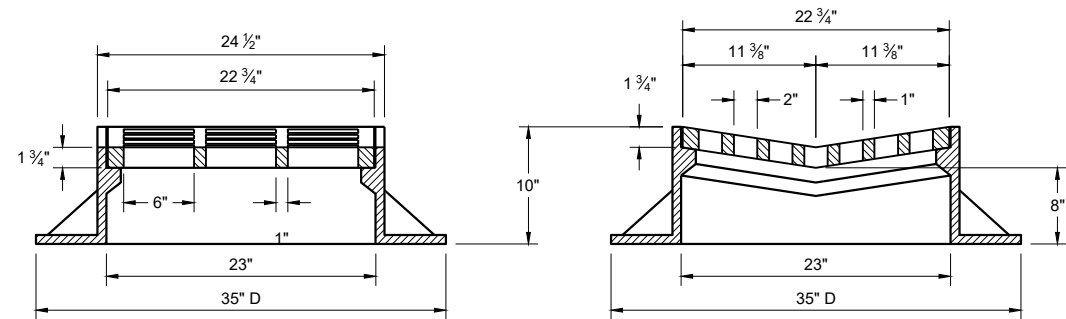
END CONSTRUCTION  
STA 50+46.04



Standard Detail Drawing List

|           |                                                                           |
|-----------|---------------------------------------------------------------------------|
| 08A05-21B | INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM                               |
| 08A05-21E | INLET COVER TYPE BW, MANHOLE COVERS, TYPE K, J, J-S, L & M                |
| 08B09-04  | MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT, 8-FT, 9-FT, 10-FT DIAMETER         |
| 08B10-03  | MANHOLES 3X3-FT, 4X4-FT, 5X5-FT AND 6X6-FT                                |
| 08C06-03  | INLETS 3-FT AND 4-FT DIAMETER                                             |
| 08C08-03  | INLETS MEDIAN 1 AND 2 GRATE                                               |
| 08D01-23A | CONCRETE CURB & GUTTER                                                    |
| 08D01-23B | CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS                      |
| 08D05-21A | CURB RAMPS TYPES 1 AND 1-A                                                |
| 08D05-21B | CURB RAMPS TYPES 2 AND 3                                                  |
| 08D05-21C | CURB RAMPS TYPES 4A AND 4A1                                               |
| 08D05-21D | CURB RAMPS TYPE 4B AND 4B1                                                |
| 08D05-21E | CURB RAMPS TYPES 5, 6, 7A, 7B & 8                                         |
| 08D05-21F | CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS                   |
| 08D05-21G | CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES               |
| 08E08-03  | TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS           |
| 08E09-06  | SILT FENCE                                                                |
| 08E10-02  | INLET PROTECTION TYPE A, B, C AND D                                       |
| 08E14-01  | TRACKING PAD                                                              |
| 08E15-01  | CULVERT PIPE CHECK                                                        |
| 08F01-11  | APRON ENDWALLS FOR CULVERT PIPE                                           |
| 08F02-01  | APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE                          |
| 08F04-08  | JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL                   |
| 08F06-04  | REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN                     |
| 09C02-09  | CONCRETE BASES, TYPES 1, 2, 5, & 6                                        |
| 09C03-04  | TRANSFORMER/PEDESTAL BASES                                                |
| 13C19-03  | HMA LONGITUDINAL JOINTS                                                   |
| 15C02-09A | BARRICADES AND SIGNS FOR MAINLINE CLOSURES                                |
| 15C02-09B | BARRICADES AND SIGNS FOR VARIOUS CLOSURES                                 |
| 15C02-09C | DETOUR SIGNING FOR MAINLINE CLOSURES                                      |
| 15C02-09H | MODIFIED ROUTE ASSEMBLY FOR DETOUR SIGNING                                |
| 15C03-05  | BARRICADES AND SIGNS FOR SIDEROAD CLOSURES                                |
| 15C07-15C | PAVEMENT MARKING ARROWS                                                   |
| 15C08-23A | PERMANENT LONGITUDINAL PAVEMENT MARKINGS                                  |
| 15C08-23C | PAVEMENT MARKING (TURN LANES)                                             |
| 15C08-23D | PAVEMENT MARKING (TURN LANES)                                             |
| 15C09-13A | SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD-HIGHWAY GRADE CROSSINGS |
| 15C11-10B | CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS         |
| 15C12-09A | TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION                  |
| 15C18-09A | MEDIAN ISLAND MARKINGS                                                    |
| 15C18-09C | MEDIAN PAVEMENT MARKINGS DOUBLE ARROW WARNING SIGN PLACEMENT              |
| 15C33-05  | STOP LINE AND CROSSWALK PAVEMENT MARKING                                  |
| 15C35-06A | PAVEMENT MARKING (INTERSECTIONS)                                          |
| 15D30-09A | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                 |
| 15D30-09B | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                 |
| 15D30-09C | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                 |
| 15D30-09D | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                 |
| 15D30-09E | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                 |
| 15D30-09F | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                 |
| 15D30-09G | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                 |
| 15D30-09H | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                 |
| 15D30-09I | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                 |
| 15D30-09J | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                 |
| 15D30-09K | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                 |
| 15D30-09L | TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION                                 |
| 15D44-02  | TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES                 |
| 15D45-03  | TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL                    |

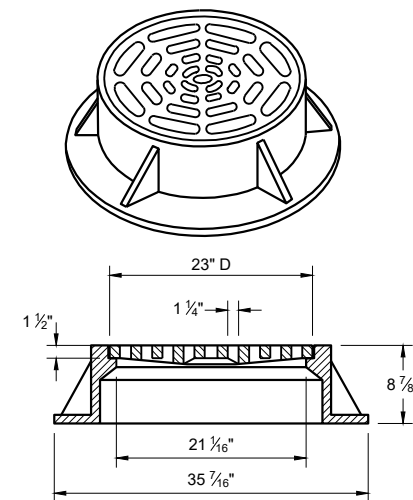
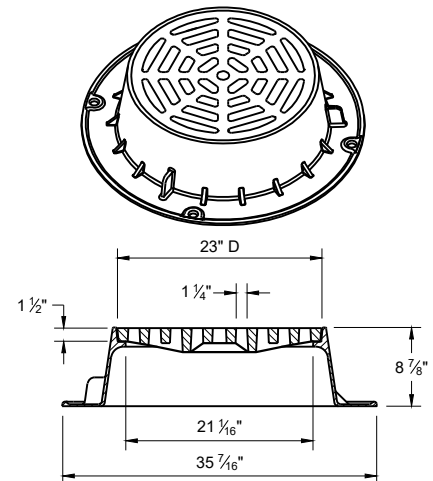




**TYPE "B"**

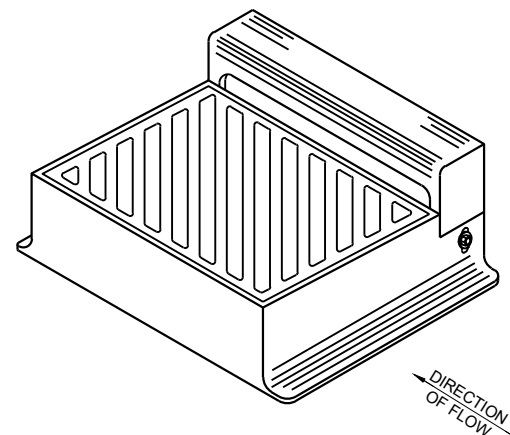
**ALTERNATIVE GRATE FOR  
TYPE "B" COVER**

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS POSSIBLE  
**NOTED AS TYPE B - A ON THE DRAINAGE TABLE**

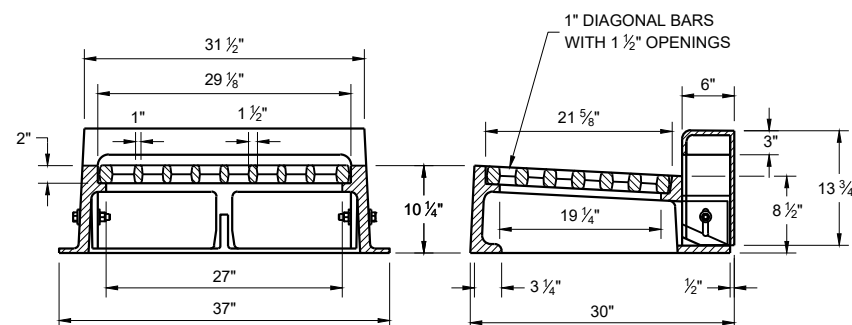


**TYPE "C"**

NOTE: EITHER CASTING IS ACCEPTABLE



DIAGONAL SLOTS SHALL BE ORIENTED TO THE  
DIRECTION OF FLOW AS ILLUSTRATED.  
GRATES ARE MANUFACTURED TO BE REVERSIBLE.



**TYPE "WM"**

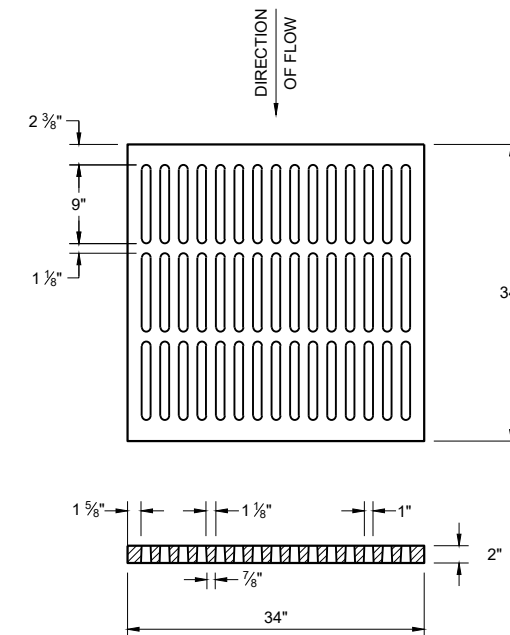
NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

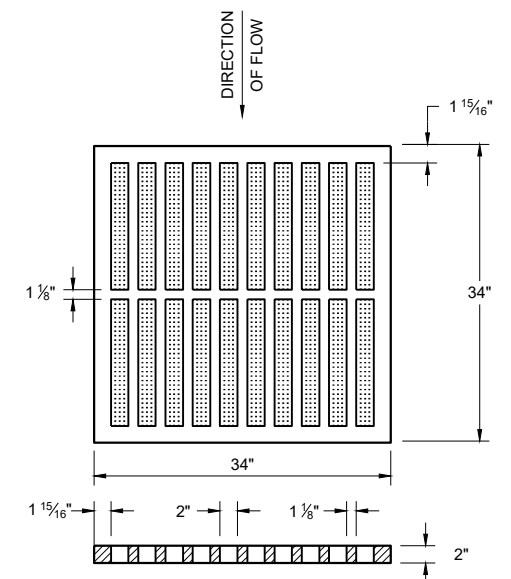
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



**ALTERNATIVE TYPE "MS"**

USE WHERE PEDESTRIAN OF BICYCLE TRAFFIC IS PERMITTED  
**NOTED AS TYPE MS-A ON THE DRAINAGE TABLE**



**TYPE "MS"**

USE ON FREEWAYS AND EXPRESSWAYS  
**NOTED AS TYPE MS ON THE DRAINAGE TABLE**

**INLET COVERS  
TYPES B, B-A, C,  
MS, MS-A AND WM**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

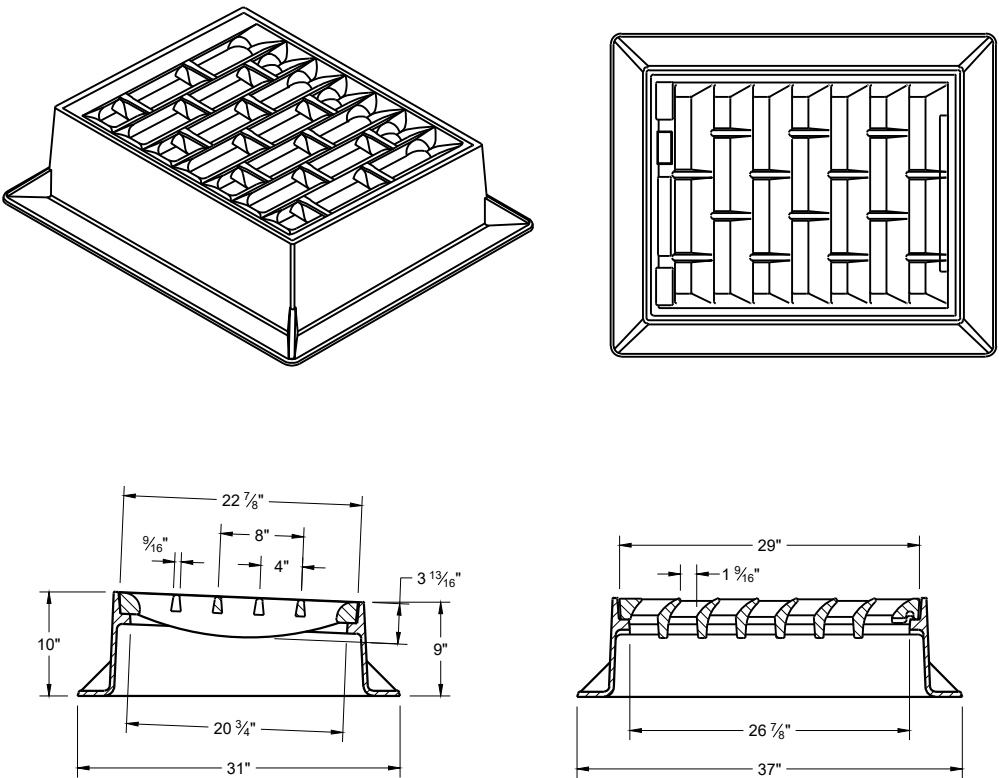
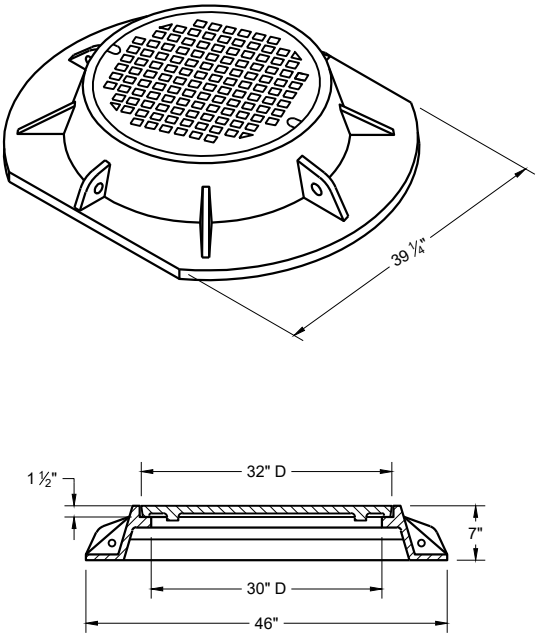
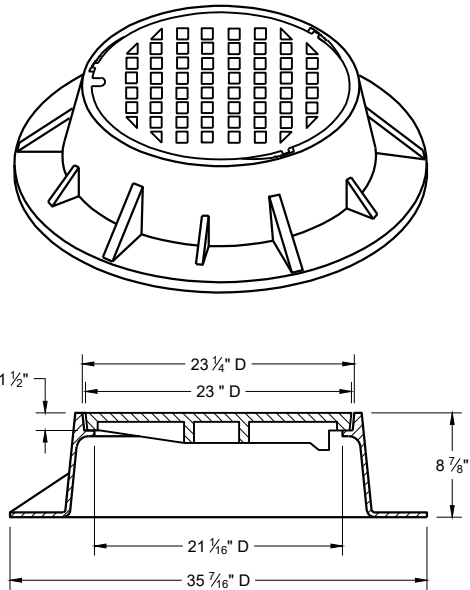
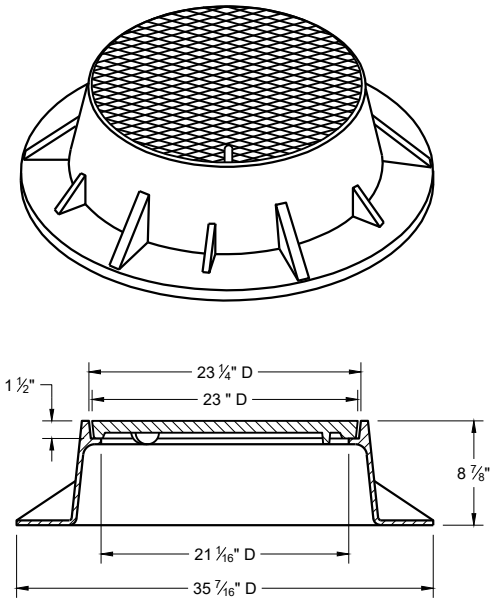
APPROVED  
December 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

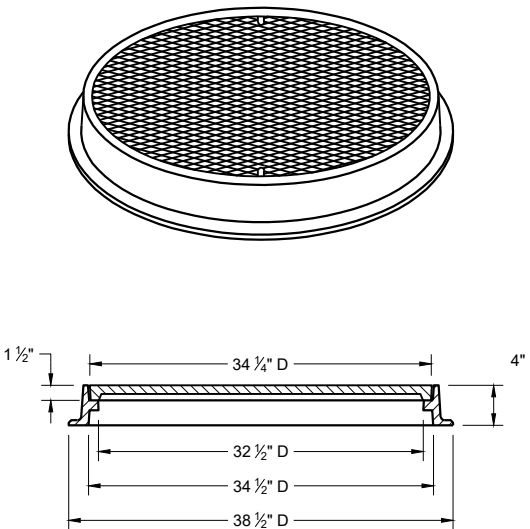
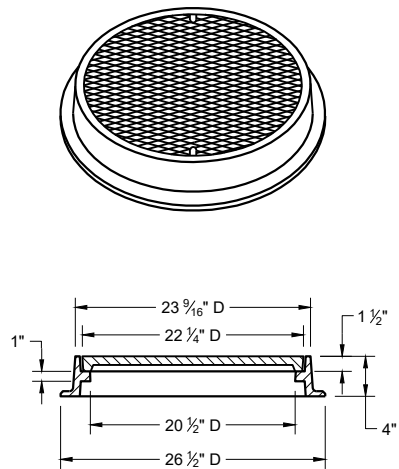
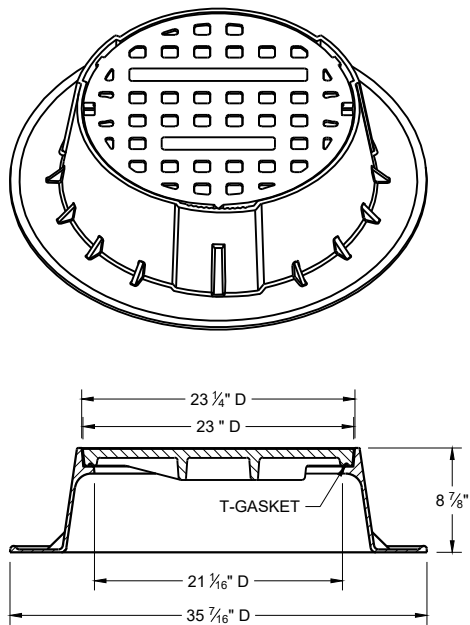
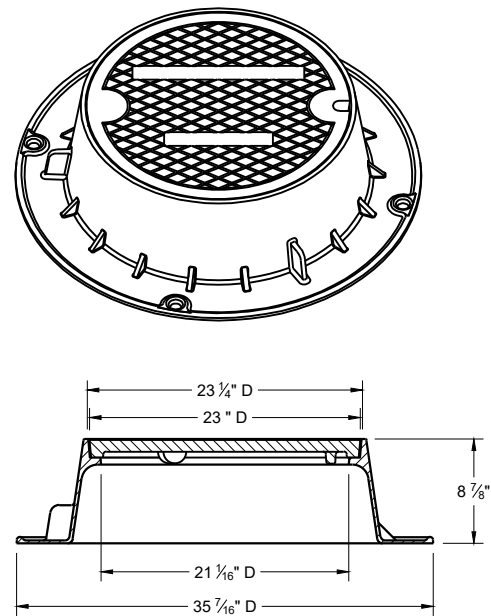
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR MANHOLE COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



TYPE "K"

INLET COVER TYPE "BW"



TYPE "J"

TYPE "J" SPECIAL

TYPE "L"

TYPE "M"

NOTE: EITHER CASTING IS ACCEPTABLE

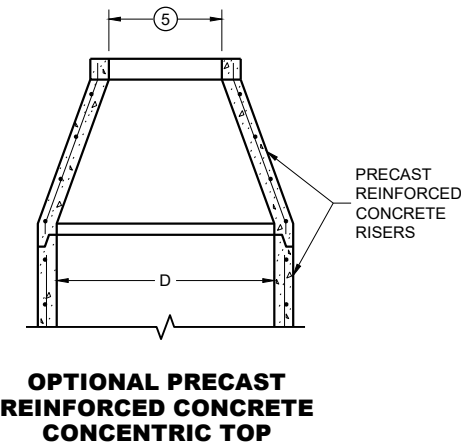
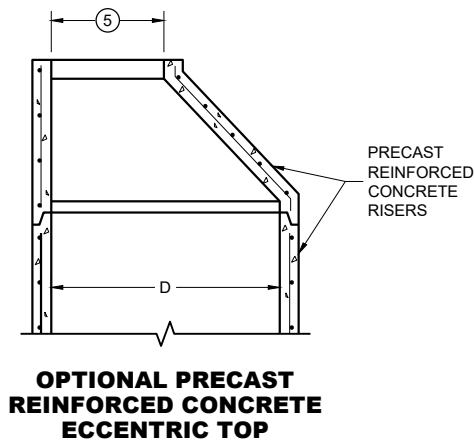
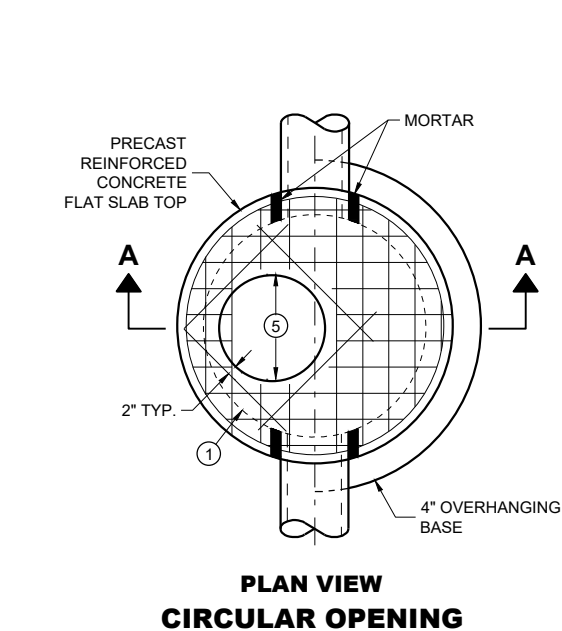
TYPE "B" NON-ROCKING SELF-SEAL LID  
(NOTED AS TYPE J-S ON THE DRAINAGE TABLE)

NOTE: EITHER CASTING IS ACCEPTABLE

INLET COVERS TYPES BW  
MANHOLE COVERS TYPES K,  
J, J-S, L, AND M

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
December 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR



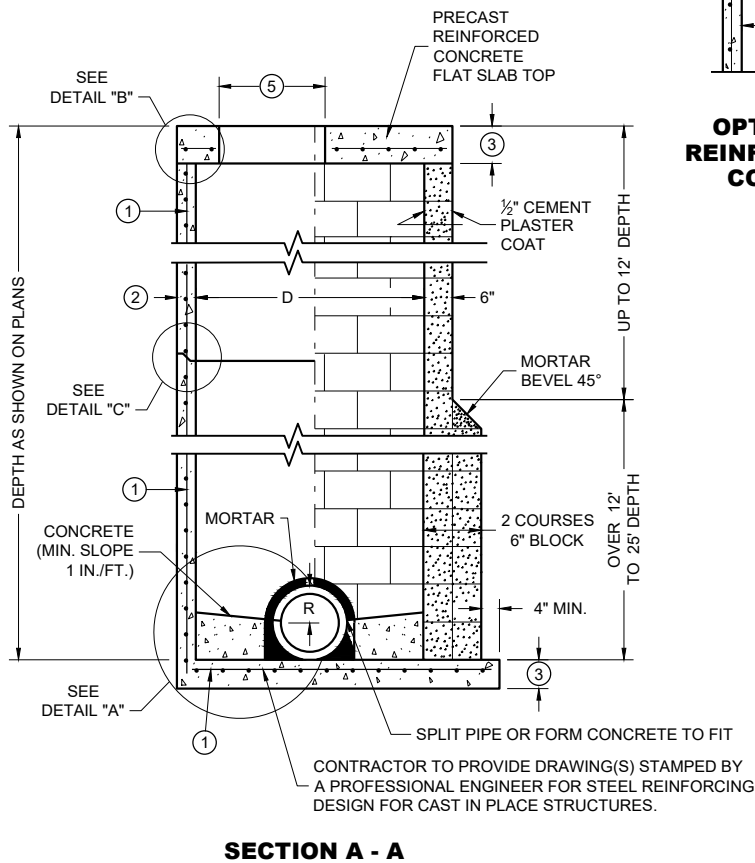
**MANHOLE COVER OPENING MATRIX**

| MANHOLE COVER<br>OPENING<br>SIZE (FT.) | MANHOLE COVER<br>TYPE | C | ALL JS | K | L | M |
|----------------------------------------|-----------------------|---|--------|---|---|---|
| 2 DIA.                                 | 5                     | X | X      |   | X |   |
| 3 DIA.                                 |                       |   |        | X |   | X |

**PIPE MATRIX**

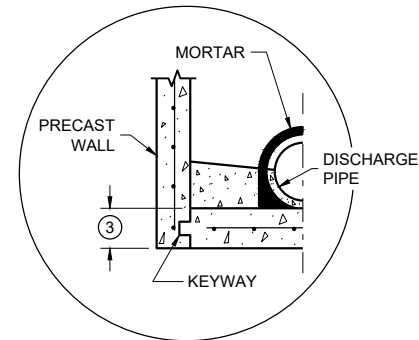
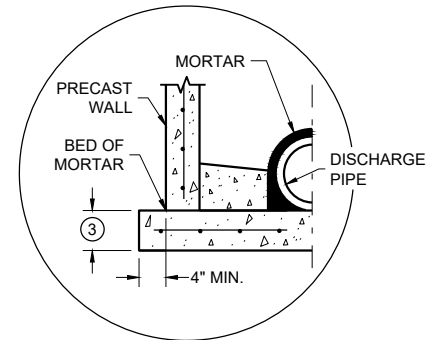
| MANHOLE<br>SIZE<br>(DIA.) | MAXIMUM INSIDE PIPE DIAMETER<br>FOR TWO PIPES |                        | MINIMUM<br>WALL<br>THICKNESS<br>(IN) | MINIMUM<br>PRECAST<br>FLAT SLAB TOP<br>AND BASE<br>THICKNESS |
|---------------------------|-----------------------------------------------|------------------------|--------------------------------------|--------------------------------------------------------------|
|                           | 180°<br>SEPARATION (IN)                       | 90°<br>SEPARATION (IN) |                                      |                                                              |
| 3-FT                      | 15                                            | 12                     | 4                                    | 6                                                            |
| 4-FT                      | 24                                            | 18                     | 4                                    | 6                                                            |
| 5-FT                      | 36                                            | 24                     | 5                                    | 8                                                            |
| 6-FT                      | 42                                            | 36                     | 6                                    | 8                                                            |
| 7-FT                      | 48                                            | 36/42 *                | 7                                    | 8                                                            |
| 8-FT                      | 60                                            | 42                     | 8                                    | 8                                                            |
| 9-FT                      | 66                                            | 54                     | 9                                    | 10                                                           |
| 10-FT                     | 72                                            | 60                     | 10                                   | 10                                                           |

\*A 36" PIPE AND A 42" PIPE CAN BE PLACED WITHIN 90 DEGREES.  
SEE MINIMUM HORIZONTAL PIPE SEPARATION DETAIL.

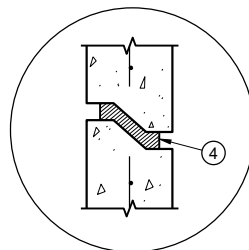
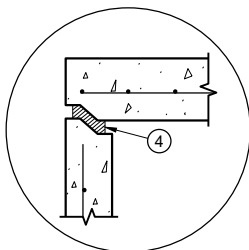
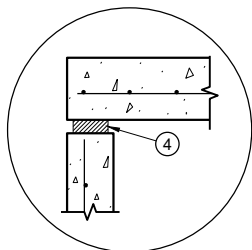


**PRECAST REINFORCED  
CONCRETE WITH  
MONOLITHIC BASE**

**CONCRETE BLOCK WITH  
CAST IN PLACE OR  
PRECAST REINFORCED  
CONCRETE BASE**

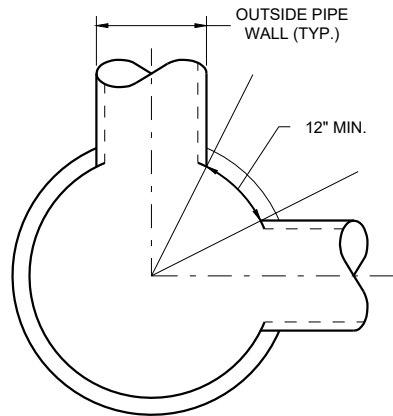


**DETAIL "A"**



**DETAIL "B"**

**DETAIL "C"**



**DETAIL "D"**

**GENERAL NOTES**

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONCRETE CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED CONCRETE FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES. CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL IMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

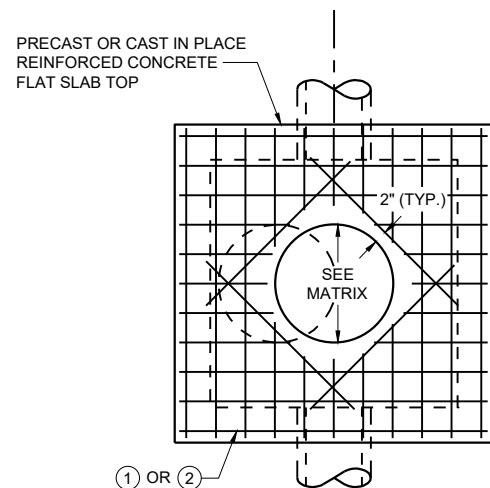
FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

- 1 FOR PRECAST MANHOLES AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- 2 SEE PIPE MATRIX TABLE FOR MINIMUM WALL THICKNESS FOR PRECAST MANHOLES
- 3 SEE PIPE MATRIX TABLE FOR MINIMUM THICKNESS OF PRECAST FLAT SLAB TOPS AND BASES.
- 4 JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFORMING TO ASTM C443.
- 5 SEE MANHOLE COVER OPENING MATRIX.

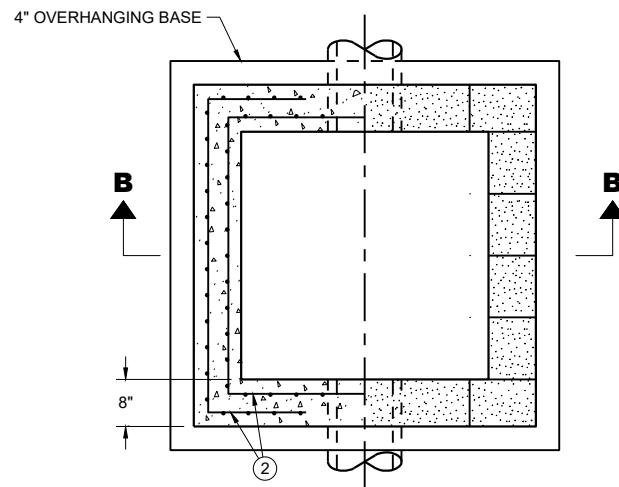
**MANHOLES, 3-FT, 4-FT  
5-FT, 6-FT, 7-FT, 8-FT, 9-FT  
AND 10-FT DIAMETER**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

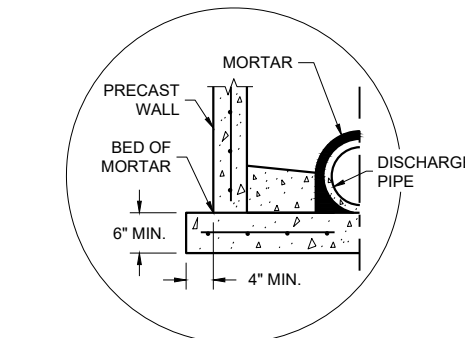
APPROVED  
December 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR



**PLAN VIEW  
CIRCULAR OPENING**

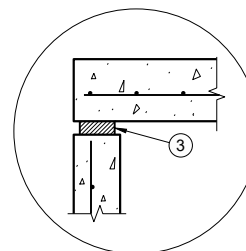


**SECTION A - A  
PLAN VIEW**

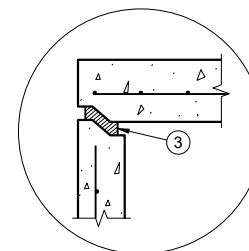


**SEPARATE PRECAST REINFORCED  
CONCRETE BASE OPTION**

**DETAIL "A"**

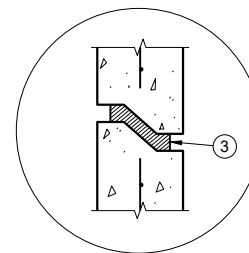


**TOP WITH PLAIN  
END JOINT**



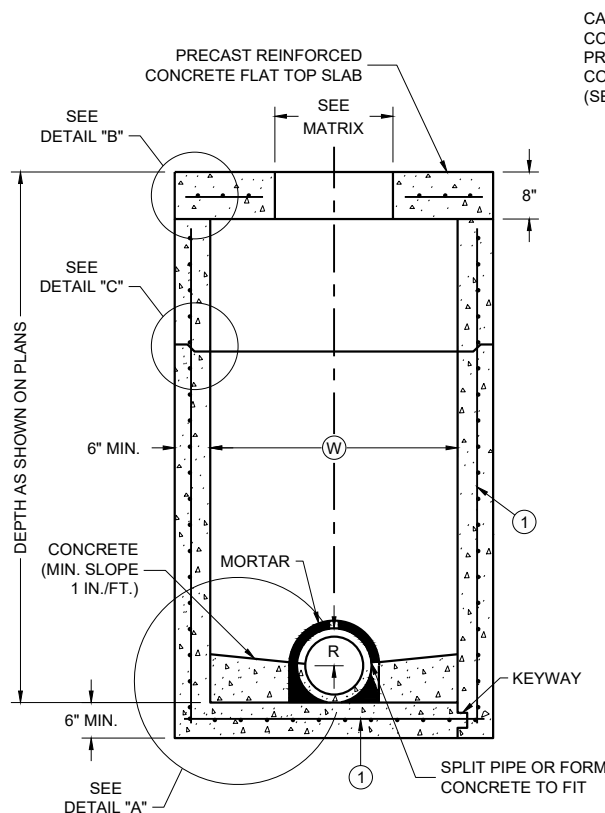
**TOP WITH TONGUE  
AND GROOVE JOINT**

**DETAIL "B"**



**RISER WITH TONGUE  
AND GROOVE JOINT**

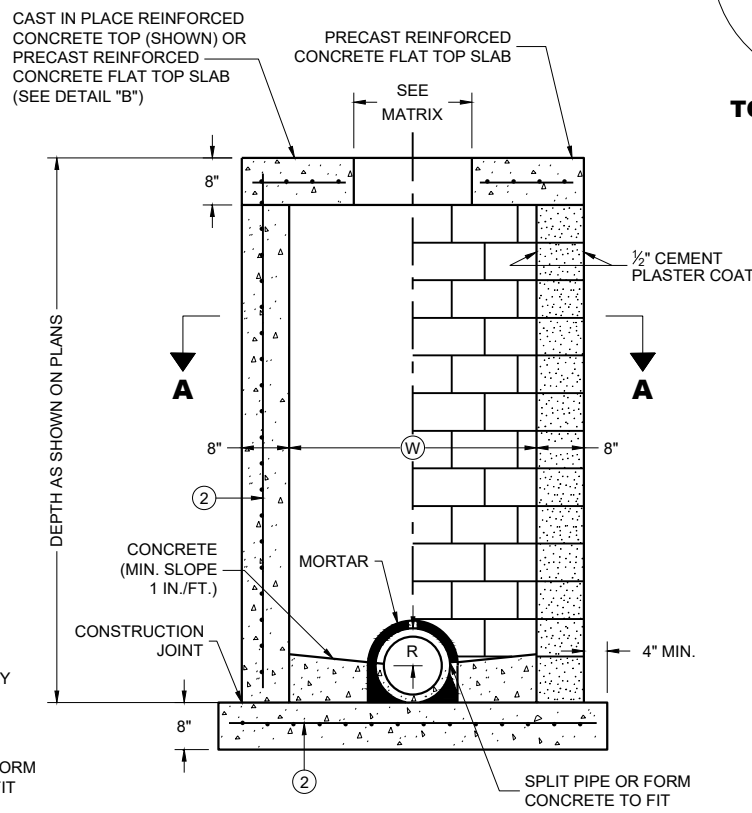
**DETAIL "C"**



**PRECAST REINFORCED  
CONCRETE WITH  
MONOLITHIC BASE**

**PRECAST REINFORCED  
CONCRETE WITH  
INTEGRAL BASE**

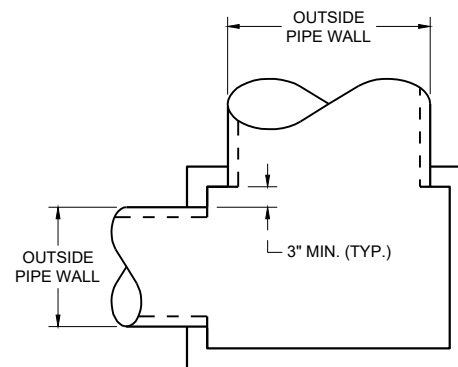
**SQUARE MANHOLES WITH FLAT TOP**



**CAST IN PLACE  
REINFORCED  
CONCRETE**

**CONCRETE BLOCK WITH  
CAST IN PLACE OR  
PRECAST REINFORCED  
CONCRETE BASE**

**MANHOLES 3 X 3-FT, 4 X 4 -FT, 5 X 5-FT AND 6 X 6-FT**



**DETAIL "D"**

## GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF 1/2 INCH AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C913.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

CONCRETE BLOCK WILL NOT BE PERMITTED FOR STRUCTURES GREATER THAN 4 FEET IN WIDTH.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "D". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

- FOR PRECAST MANHOLES AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.
- JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP.)

**MANHOLE COVER  
OPENING MATRIX**

| MANHOLE COVER TYPE | C | ALL J'S | K | L | M |
|--------------------|---|---------|---|---|---|
| OPENING SIZE (FT.) |   |         |   |   |   |
| 2 DIA.             | X | X       |   | X |   |
| 3 DIA.             |   |         | X |   | X |

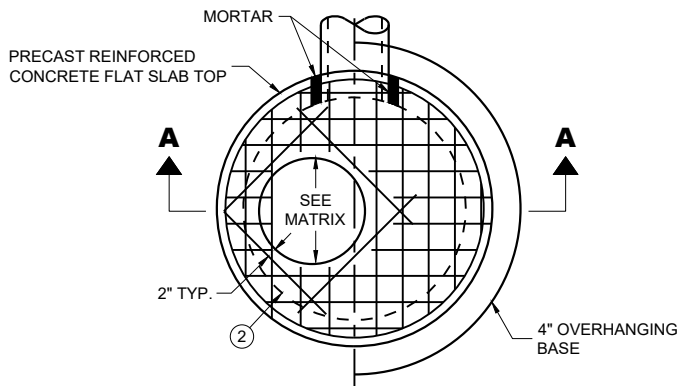
**PIPE MATRIX**

| MANHOLE SIZE WxW-FT | MAXIMUM INSIDE PIPE DIAMETER (IN) |
|---------------------|-----------------------------------|
| 3 X 3 FT            | 24                                |
| 4 X 4 FT            | 30                                |
| 5 X 5 FT            | 42                                |
| 6 X 6 FT            | 54                                |

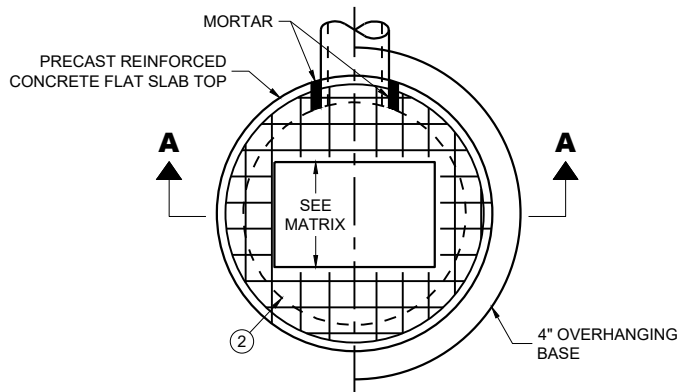
**MANHOLES  
3 X 3 -FT, 4 X 4-FT  
5 X 5-FT AND 6 X 6-FT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

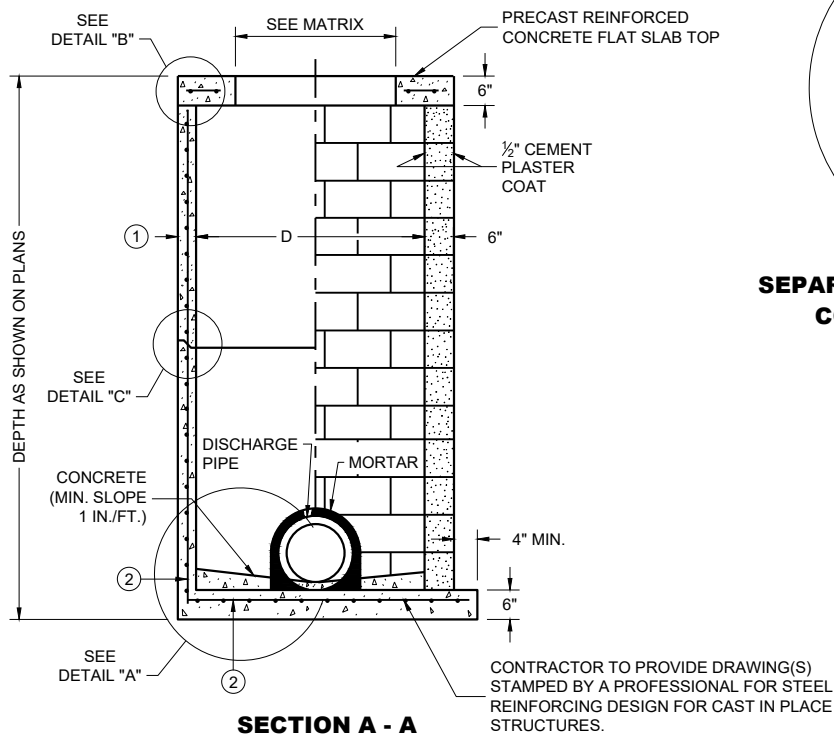
APPROVED  
December 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR



PLAN VIEW CIRCULAR OPENING



PLAN VIEW RECTANGULAR OPENING



SECTION A - A

PRECAST REINFORCED  
CONCRETE WITH  
MONOLITHIC BASE

CONCRETE BLOCK WITH  
CAST IN PLACE OR  
PRECAST REINFORCED  
CONCRETE BASE ②

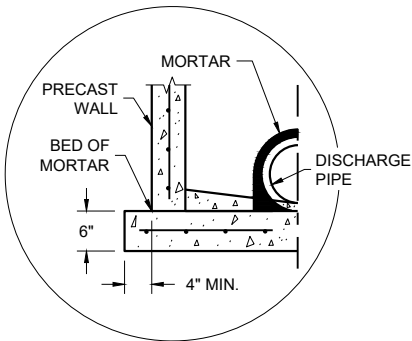
CIRCULAR INLETS WITH FLAT TOP

CATCH BASIN COVER OPENING MATRIX

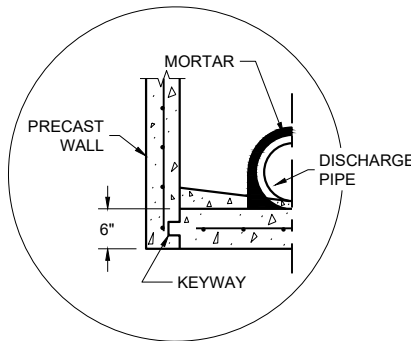
| INLET<br>SIZE | INLET<br>COVER TYPE   | ALL A'S | ALL B'S | BW | C | F | ALL H'S | S | T | V | WM | Z |
|---------------|-----------------------|---------|---------|----|---|---|---------|---|---|---|----|---|
|               | OPENING<br>SIZE (FT.) |         |         |    |   |   |         |   |   |   |    |   |
| 3-FT          | 2 DIA.                |         |         |    | X |   |         |   |   |   |    | X |
|               | 2 X 2                 | X       | X       |    |   |   |         | X |   | X |    |   |
| 4-FT          | 2 DIA.                |         |         |    | X |   |         |   |   |   |    | X |
|               | 2 X 2                 | X       | X       |    |   |   |         | X |   | X |    |   |
|               | 2 X 2.5               |         |         | X  |   |   |         | X | X | X | X  |   |
|               | 2 X 3                 |         |         |    |   |   | X       |   |   |   |    |   |
|               | 2.5 X 3               |         |         |    |   | X |         |   |   |   |    |   |

PIPE MATRIX

| INLET<br>SIZE | MAXIMUM INSIDE PIPE DIAMETER<br>FOR TWO PIPES |                     |
|---------------|-----------------------------------------------|---------------------|
|               | 180° SEPARATION (IN)                          | 90° SEPARATION (IN) |
| 3-FT          | 15                                            | 12                  |
| 4-FT          | 24                                            | 18                  |

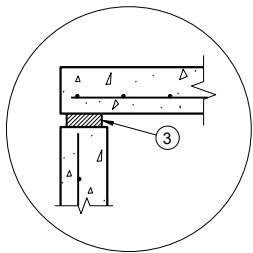


SEPARATE PRECAST REINFORCED  
CONCRETE BASE OPTION

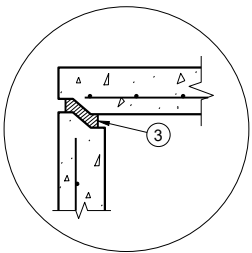


PRECAST REINFORCED CONCRETE  
WITH INTEGRAL BASE OPTION

DETAIL "A"

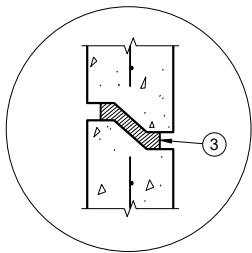


TOP WITH PLAIN  
END JOINT



TOP WITH TONGUE  
AND GROOVE JOINT

DETAIL "B"



RISER WITH TONGUE  
AND GROOVE JOINT

DETAIL "C"

INLETS 3-FT AND 4-FT DIAMETER

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

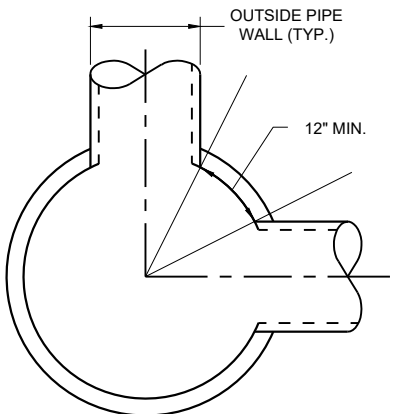
ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M199.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "D".

- ① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT DIAMETER AND 5 INCHES FOR 4-FT DIAMETER PRECAST INLETS.
- ② FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.
- ③ JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 OR RUBBER GASKETS CONFORMING TO ASTM C443.

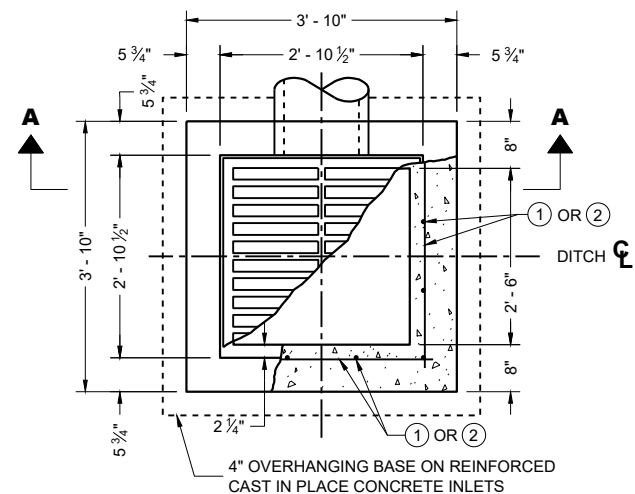


MINIMUM HORIZONTAL PIPE  
SEPARATION  
DETAIL "D"

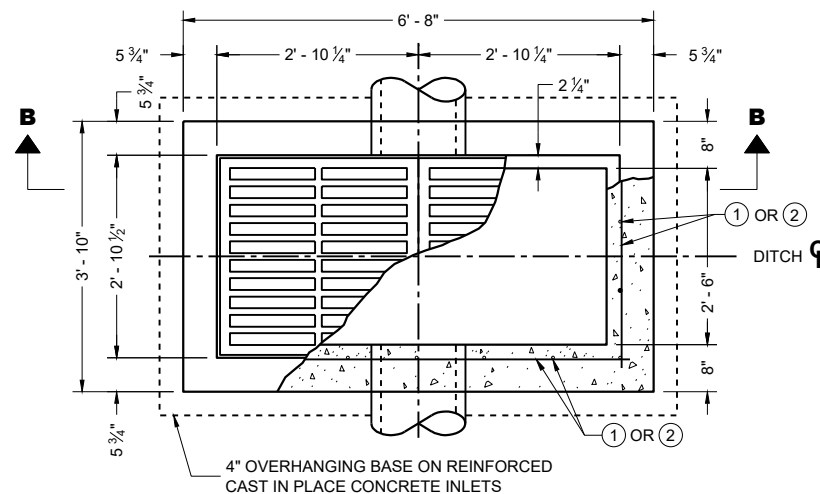
INLETS 3-FT  
AND 4-FT DIAMETER

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

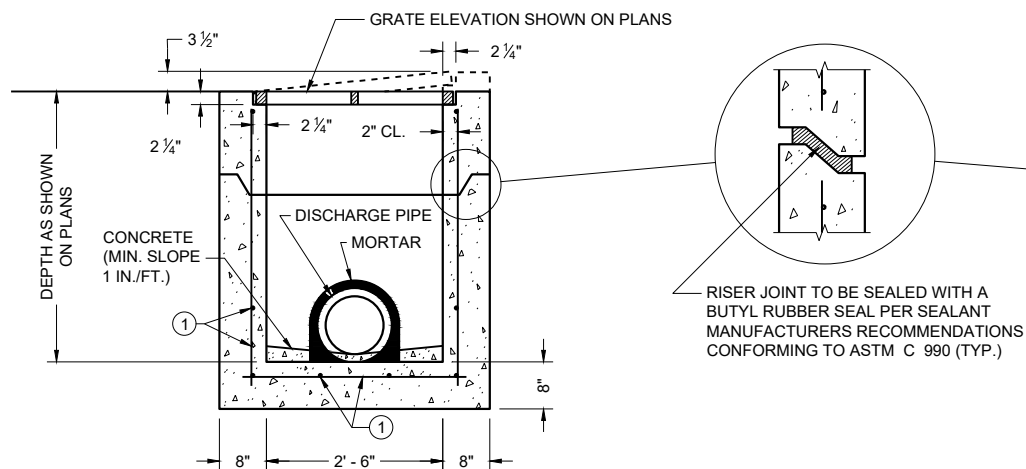
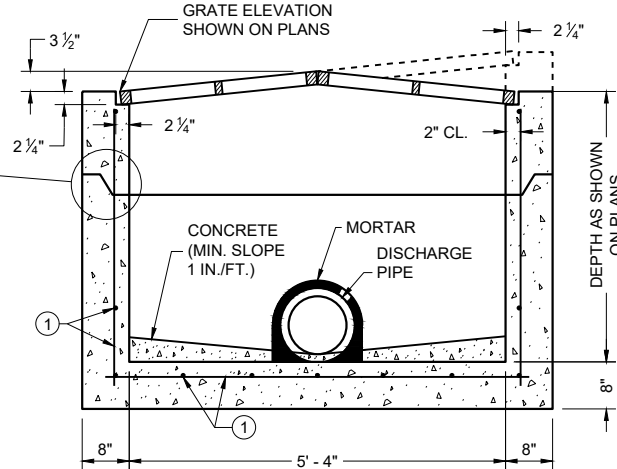
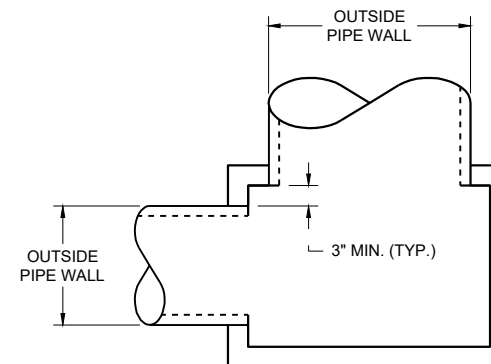
APPROVED  
December 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR



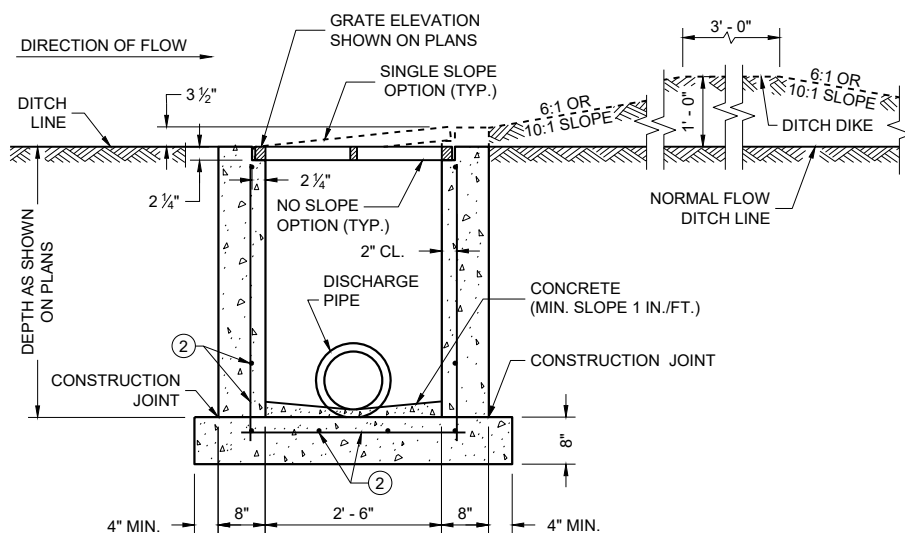
PLAN VIEW



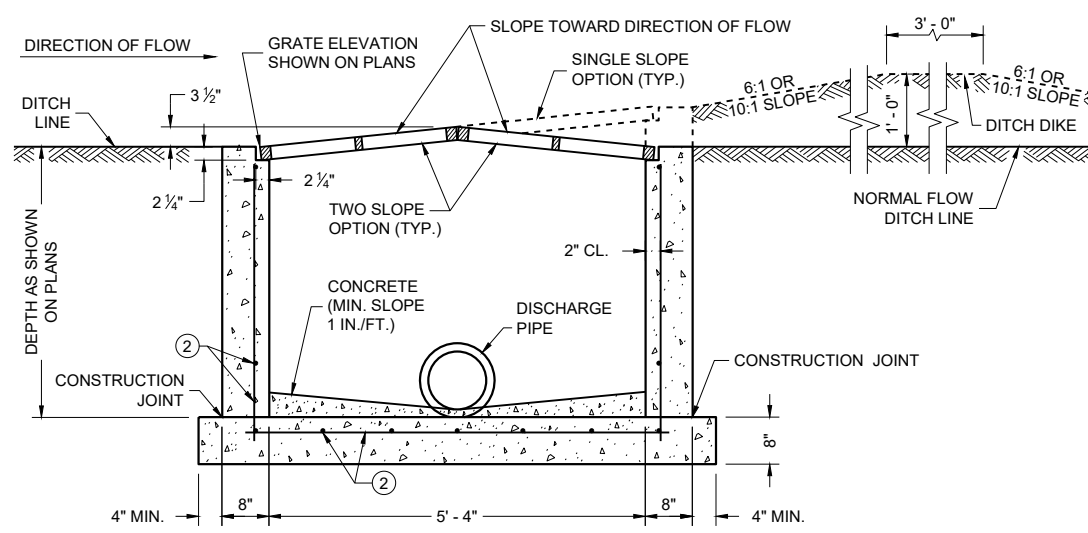
PLAN VIEW

PRECAST REINFORCED CONCRETE  
SECTION A - APRECAST REINFORCED CONCRETE  
SECTION B - B

DETAIL "A"

REINFORCED CAST IN PLACE CONCRETE  
SECTION A - A

INLETS MEDIAN 1 GRATE

REINFORCED CAST IN PLACE CONCRETE  
SECTION B - B

INLETS MEDIAN 2 GRATE

## GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

- ① FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

## PIPE MATRIX

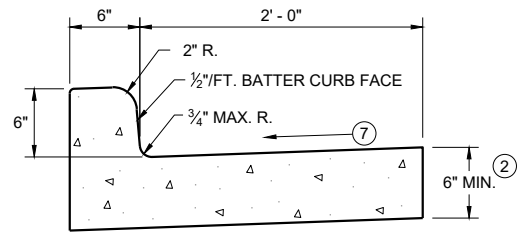
| INLET<br>SIZE | MAXIMUM INSIDE PIPE<br>DIAMETER |             |
|---------------|---------------------------------|-------------|
|               | WIDTH (IN)                      | LENGTH (IN) |
| 1 GRATE       | 18                              | 18          |
| 2 GRATE       | 18                              | 42          |

INLETS  
MEDIAN 1 AND 2 GRATE

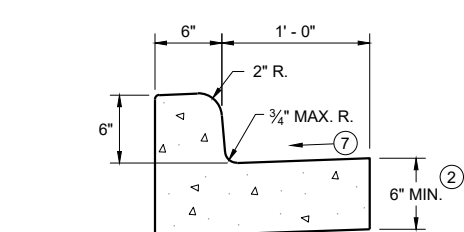
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
December 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR



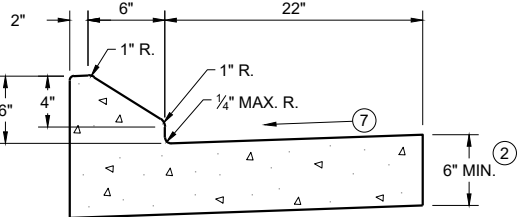


TYPES A<sup>①</sup> & D

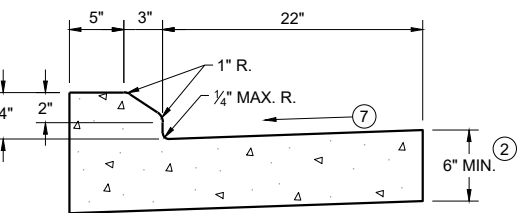


TYPES A<sup>①</sup> & D

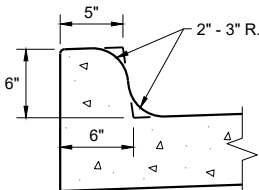
CONCRETE CURB AND GUTTER 18"



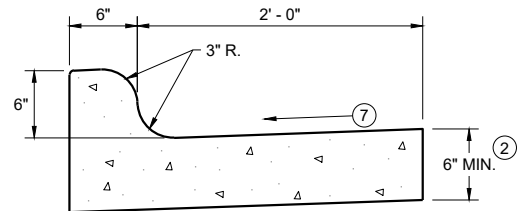
6" SLOPED CURB TYPES G<sup>①</sup> & J



4" SLOPED CURB TYPES G<sup>①</sup> & J

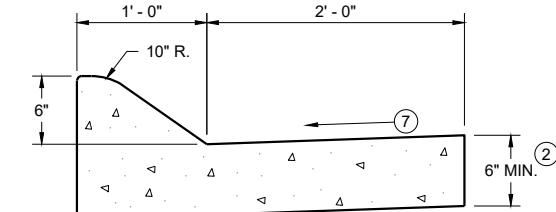


TYPES K<sup>①</sup> & L  
(OPTIONAL CURB SHAPE)

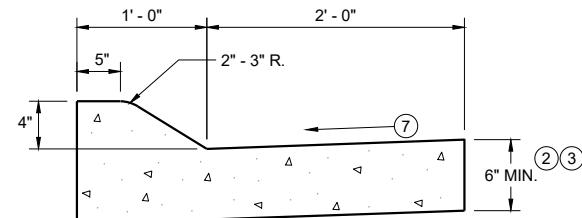


TYPES K<sup>①</sup> & L

CONCRETE CURB AND GUTTER 30"

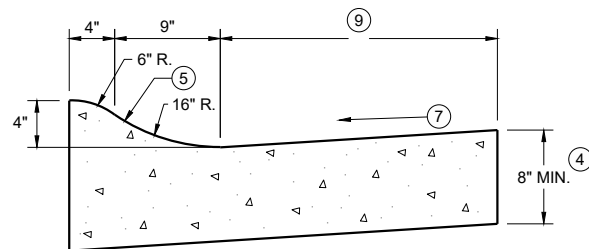


6" SLOPED CURB TYPES A<sup>①</sup> & D



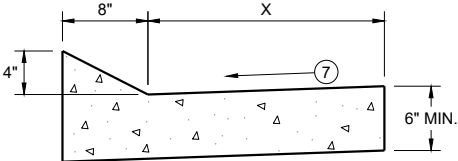
4" SLOPED CURB TYPES A<sup>①</sup> & D

CONCRETE CURB AND GUTTER 36"



4" SLOPED CURB TYPES R<sup>①</sup> & T

| TBT & TBTT | X   |
|------------|-----|
| 30"        | 22" |
| 36"        | 28" |

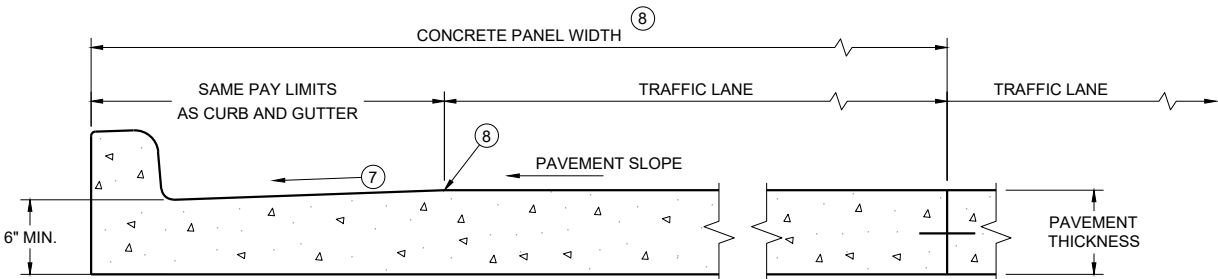


TYPES TBT & TBTT<sup>①</sup>

CONCRETE CURB AND GUTTER

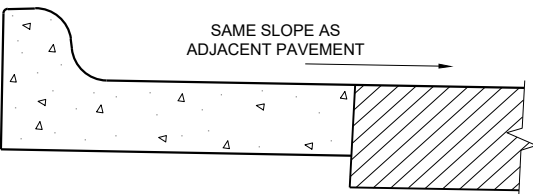
PAVEMENT THICKNESS  
AND MAXIMUM CONCRETE  
PANEL WIDTH TABLE

| PAVEMENT THICKNESS | MAXIMUM PANEL WIDTH |
|--------------------|---------------------|
| LESS THAN 10"      | 12'                 |
| 10" & ABOVE        | 15'                 |



PARTIAL SECTION OF PAVEMENT  
WITH INTEGRAL CURB AND GUTTER

\* BIKE LANE IS NOT SHOWN



REVERSE SLOPE GUTTER<sup>⑥</sup>  
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

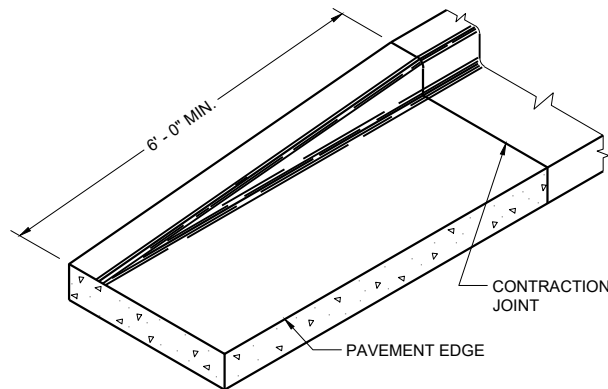
INTEGRAL CURB AND GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB AND GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

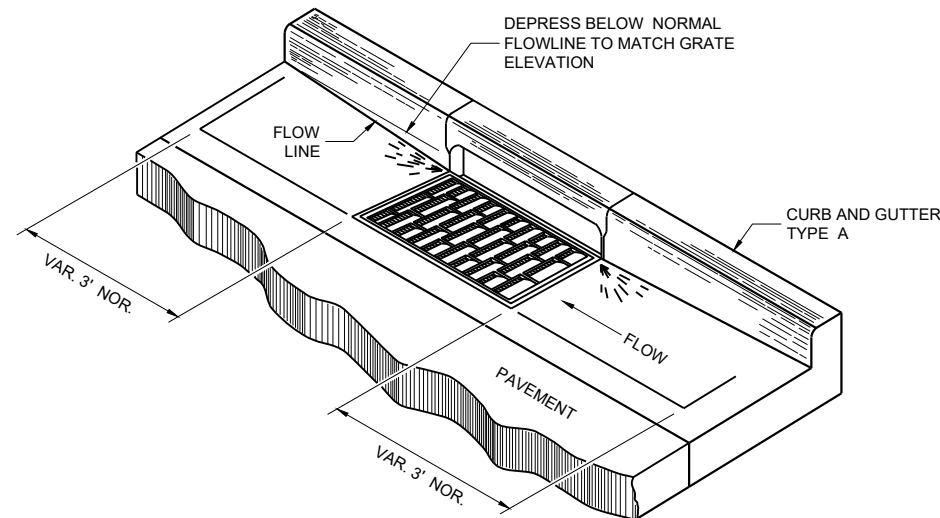
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ UNLESS OTHERWISE NOTED, FOR STAKING PURPOSES THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.
- ⑨ CONCRETE CURB AND GUTTER 4-INCH SLOPED 30-INCH TYPE "R" AND "T" = 17 INCHES  
CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE "R" AND "T" = 23 INCHES

CONCRETE CURB AND GUTTER

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

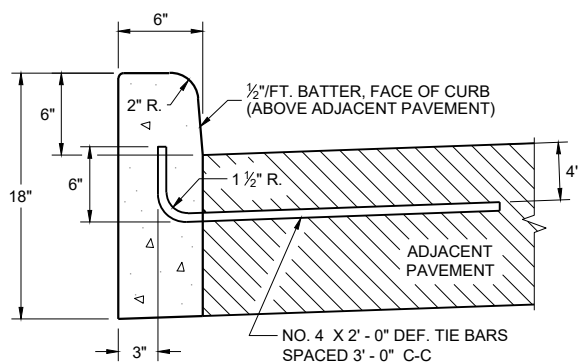


END SECTION CURB AND GUTTER

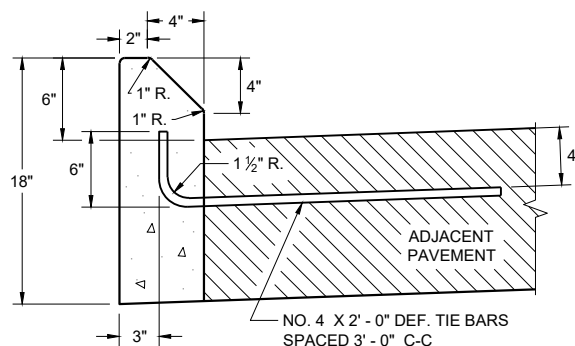


DETAIL OF CURB AND GUTTER AT INLETS

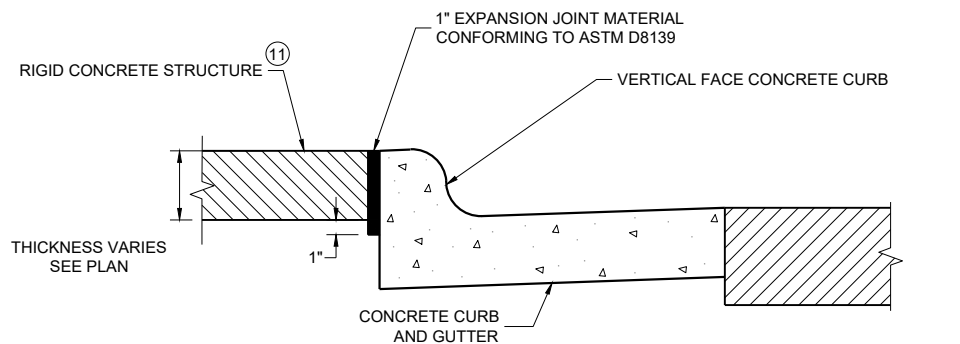
(TYPICAL H INLET COVER SHOWN)



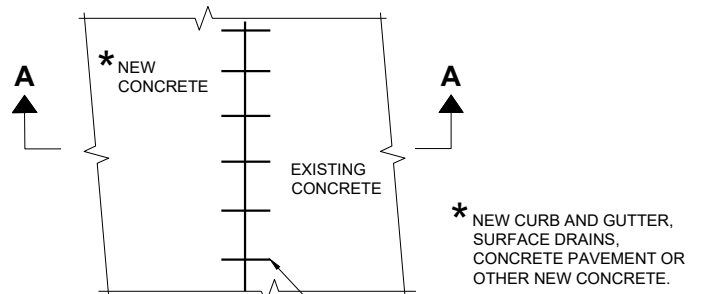
TYPES A<sup>①</sup> & D



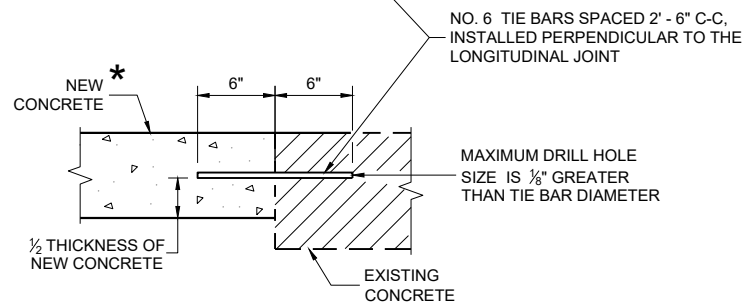
TYPES G<sup>①</sup> & J  
CONCRETE CURB



EXPANSION JOINT DETAIL FOR VERTICAL CURB ABUTTING A RIGID STRUCTURE<sup>⑪</sup>



PLAN VIEW



SECTION A - A  
TIE BARS DRILLED INTO EXISTING PAVEMENT

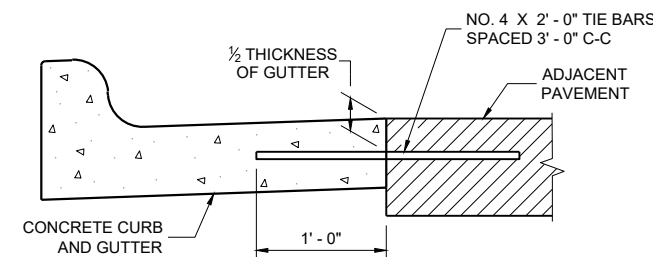
GENERAL NOTES

DETAILS OF CONSTRUCTION AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

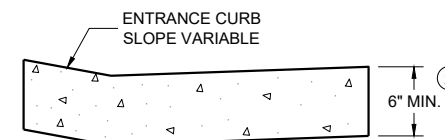
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2' - 0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTERS TYPES A, G, K, R, AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑩ REFER TO SDD 08D18 AND 08D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.
- ⑪ PLACE 1" THICK EXPANSION JOINT MATERIAL BETWEEN VERTICAL FACE CURB TYPES EXTENDING FROM THE TOP OF CURB TO 1 INCH BELOW THE ADJOINING CONCRETE SURFACE. RIGID CONCRETE STRUCTURES INCLUDE RAISED CONCRETE MEDIANS, CONCRETE SAFETY ISLANDS, SPLITTER ISLANDS, OR LOCATIONS IDENTIFIED ON THE PLANS.



TYPICAL TIE BAR LOCATION<sup>①</sup>



DRIVEWAY ENTRANCE CURB<sup>⑩</sup>  
(WHEN DIRECTED BY THE ENGINEER)

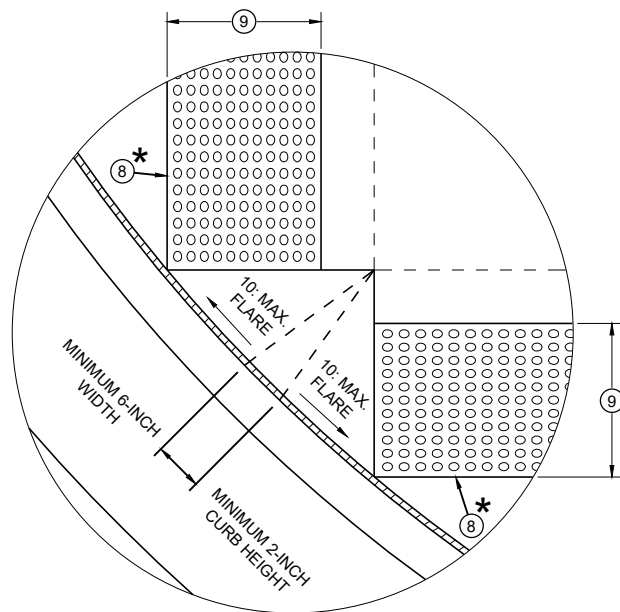
CONCRETE CURB, TIES  
AND CURB AND GUTTER  
APPLICATIONS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

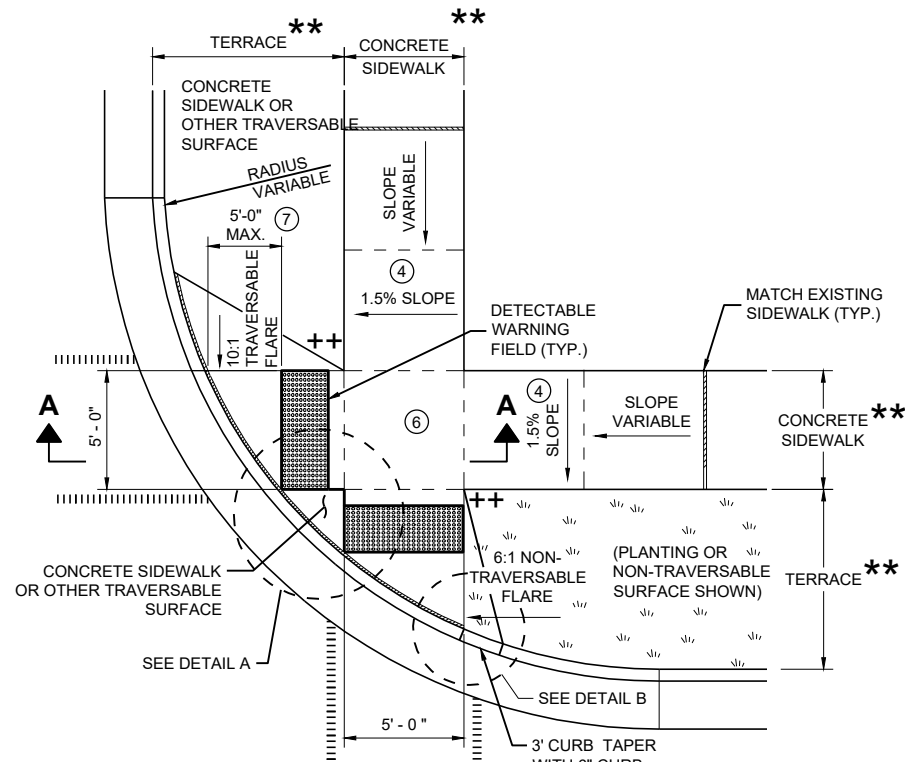
APPROVED  
May 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR



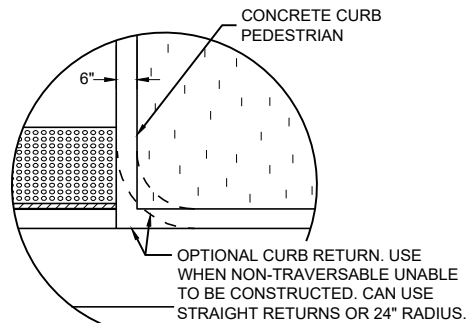




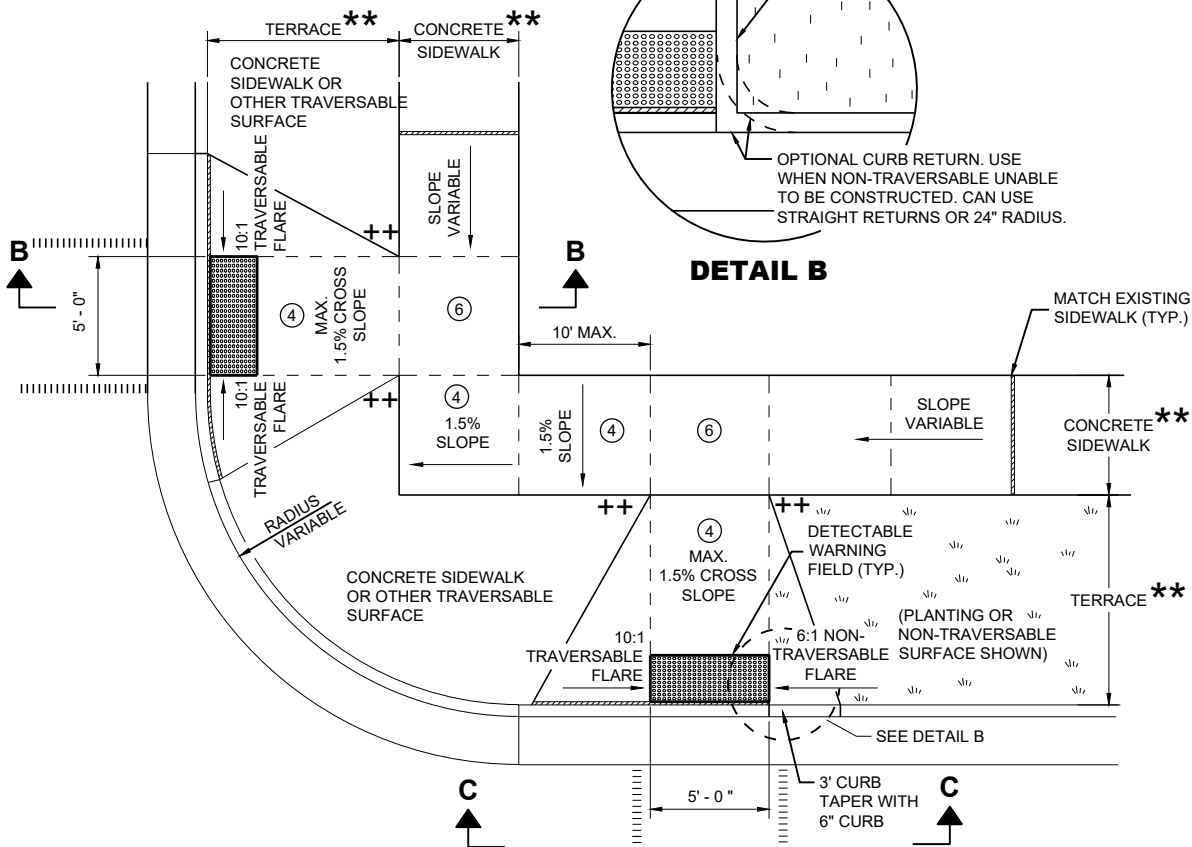
DETAIL A



PLAN VIEW  
CURB RAMP TYPE 2  
(CENTER OF CORNER RADIUS)



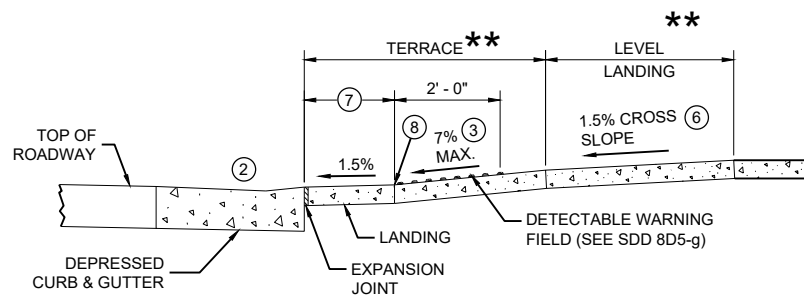
DETAIL B



PLAN VIEW  
CURB RAMP TYPE 3  
(OUTSIDE OF CROSSWALK AREA)

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
  - AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE (2.67% OR LESS) AND NOT TO EXCEED 11% GRADE CHANGE.
  - ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
  - PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET X 5 FEET.
  - WHEN GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
  - PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
  - WHEN DISTANCE IS LESS THAN 6' - 0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

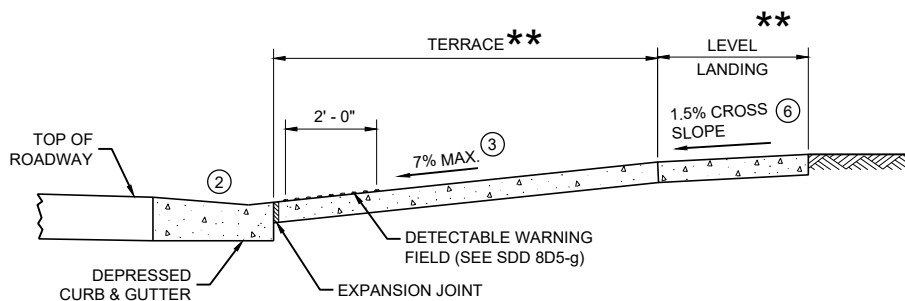


SECTION A - A FOR TYPE 2

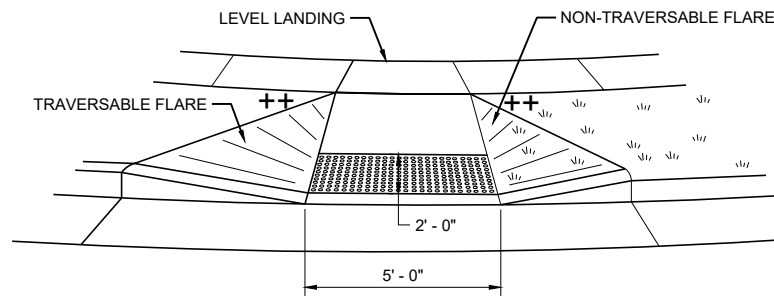
- ★ MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK
- ★★ WIDTH SHOWN ELSEWHERE IN THE PLANS
- ++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



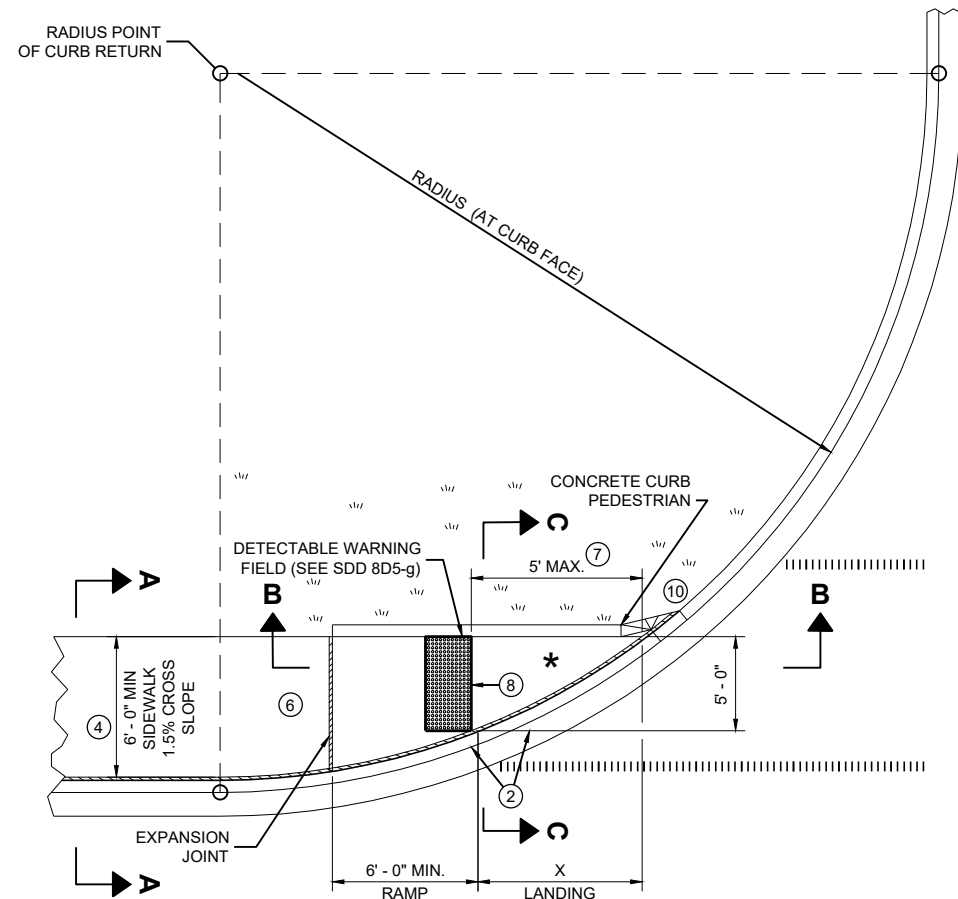
SECTION B - B FOR TYPE 3



VIEW C - C FOR TYPE 3

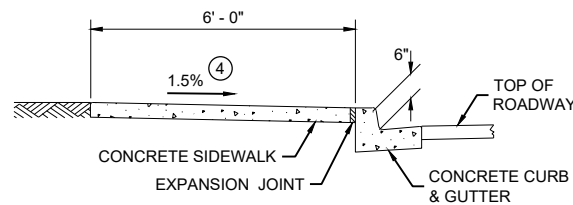
CURB RAMPS  
TYPE 2 AND 3

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



| RADIUS<br>(AT CURB FACE) | X       |
|--------------------------|---------|
| 10 FEET                  | 4' - 7" |

INTERMEDIATE RADII CAN BE INTERPOLATED



GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

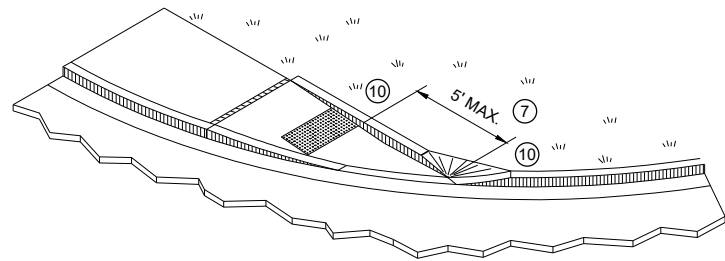
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

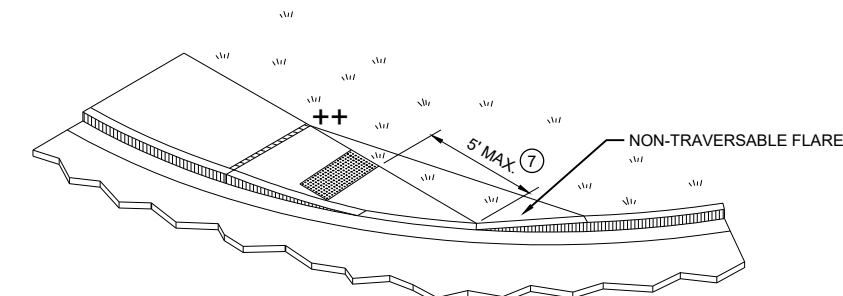
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

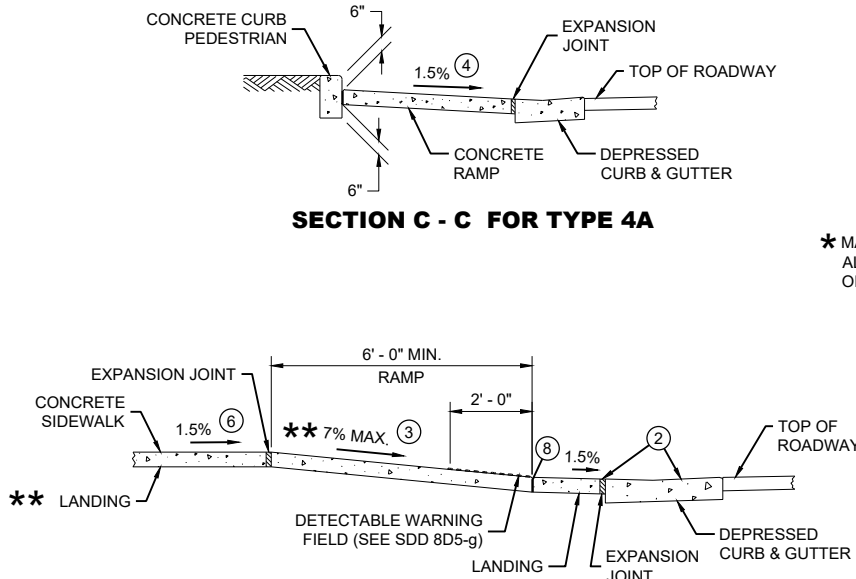
- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



ISOMETRIC VIEW FOR TYPE 4A

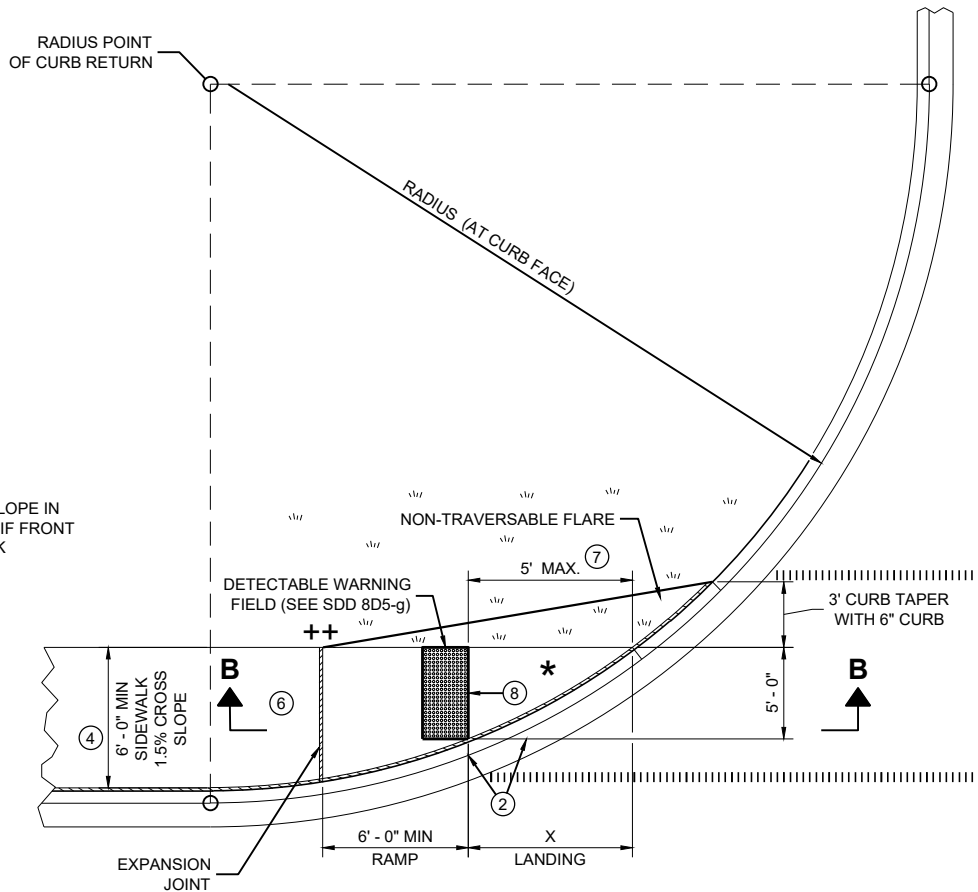


ISOMETRIC VIEW FOR TYPE 4A1



\*\* IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

SECTION B - B FOR TYPE 4A AND TYPE 4A1

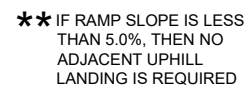


PLAN VIEW  
CURB RAMP TYPE 4A1

++ CONSTRUCT 6" WEDGE TO AVOID CONCRETE BREAKAGE

CURB RAMPS  
TYPE 4A AND 4A1

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



**SECTION B - B FOR  
TYPE 4B AND TYPE 4B1**

| RADIUS<br>(AT CURB FACE) | W = 3' - 0" |           | W = 4' - 0" |           | W = 5' - 0" |           | W = 6' - 0" |           | W = 7' - 0" |            | W = 8' - 0" |            | W = 9' - 0" |            | W = 10' - 0" |            |
|--------------------------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|------------|-------------|------------|-------------|------------|--------------|------------|
|                          | X           | Y         | X           | Y         | X           | Y         | X           | Y         | X           | Y          | X           | Y          | X           | Y          | X            | Y          |
| 10 FEET                  | 2' - 10 ¼"  | 0' - 5"   | 2' - 1"     | 1' - 4 ½" | 1' - 5"     | 2' - 1"   | 0' - 10"    | 2' - 7 ½" | 0' - 3 ¼"   | 3' - 0 ¼"  |             |            |             |            |              |            |
| 15 FEET                  | 4' - 6 ¾"   | 2' - 1 ¾" | 3' - 9"     | 3' - 5 ¾" | 3' - 1 ¼"   | 4' - 6"   | 2' - 6 ¾"   | 5' - 4 ½" | 2' - 1"     | 6' - 1"    | 1' - 8"     | 6' - 8 ½"  | 1' - 3 ¾"   | 7' - 2 ½"  | 0' - 10 ¾"   | 7' - 7 ½"  |
| 20 FEET                  |             |           | 4' - 11 ½"  | 5' - 1 ¾" | 4' - 3 ¾"   | 6' - 5 ½" | 3' - 8 ¾"   | 7' - 7"   | 3' - 3"     | 8' - 6 ½"  | 2' - 10"    | 9' - 4 ½"  | 2' - 5 ½"   | 10' - 1 ¼" | 2' - 1 ½"    | 10' - 9"   |
| 30 FEET                  |             |           |             |           |             |           |             |           | 4' - 10 ¾"  | 12' - 5 ¾" | 4' - 5 ½"   | 13' - 7 ¾" | 4' - 0 ¾"   | 14' - 8 ½" | 3' - 8 ½"    | 15' - 8 ½" |
| 40 FEET                  |             |           |             |           |             |           |             |           |             |            |             |            |             |            | 4' - 10 ¾"   | 19' - 8 ½" |

INTERMEDIATE RADII CAN BE INTERPOLATED  
 DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH  
 DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



++ CONSTRUCT 6" WEDGE TO  
AVOID CONCRETE BREAKAGE

## GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

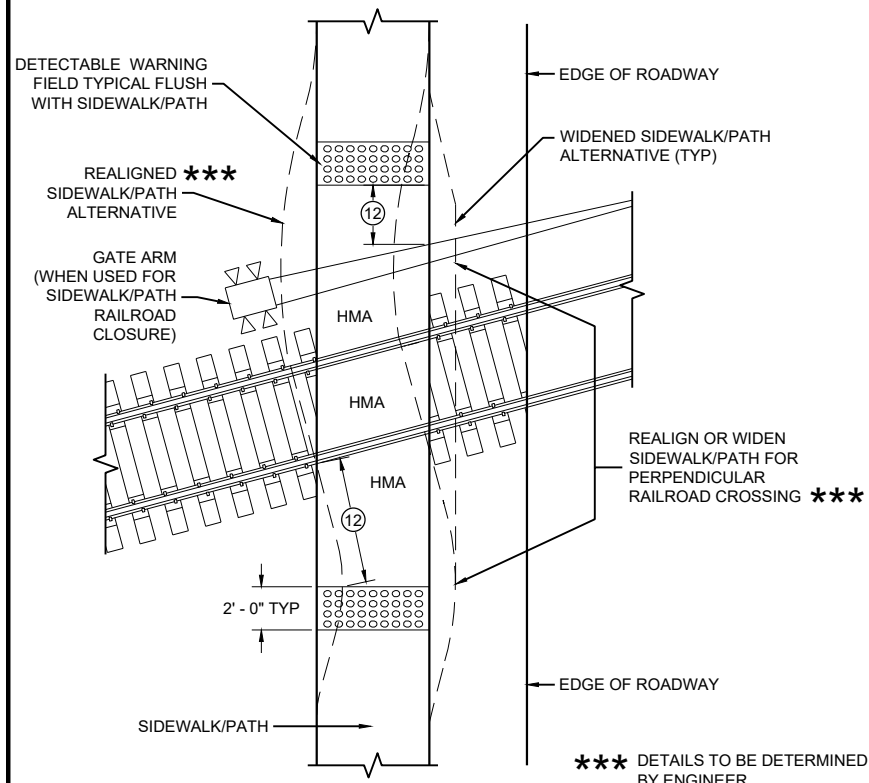
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN  $\frac{1}{4}$  - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④  $\pm 0.5\%$  CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑦ WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



## CURB RAMPS TYPE 4B AND 4B1

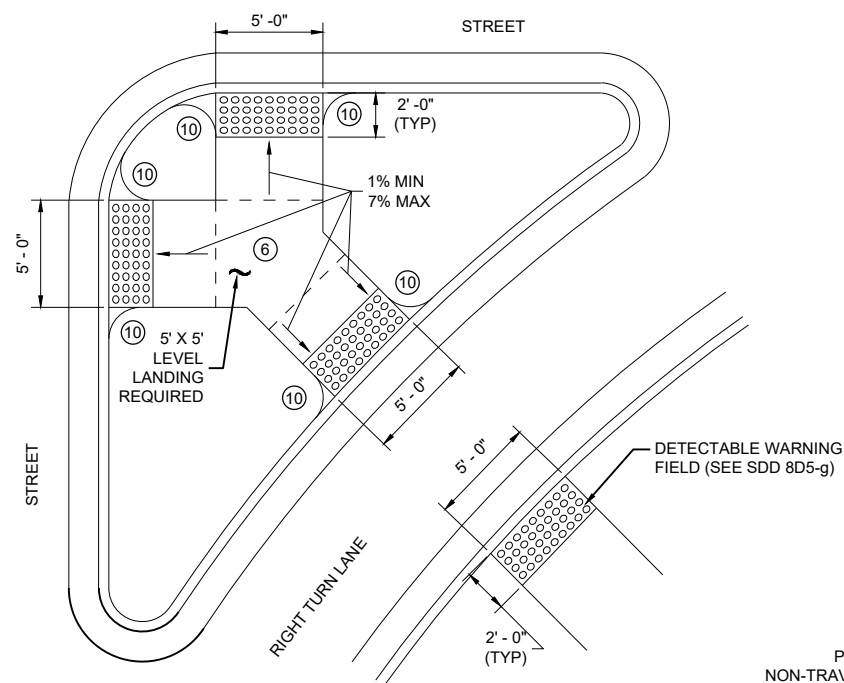
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

335



### CURB RAMP TYPE 8

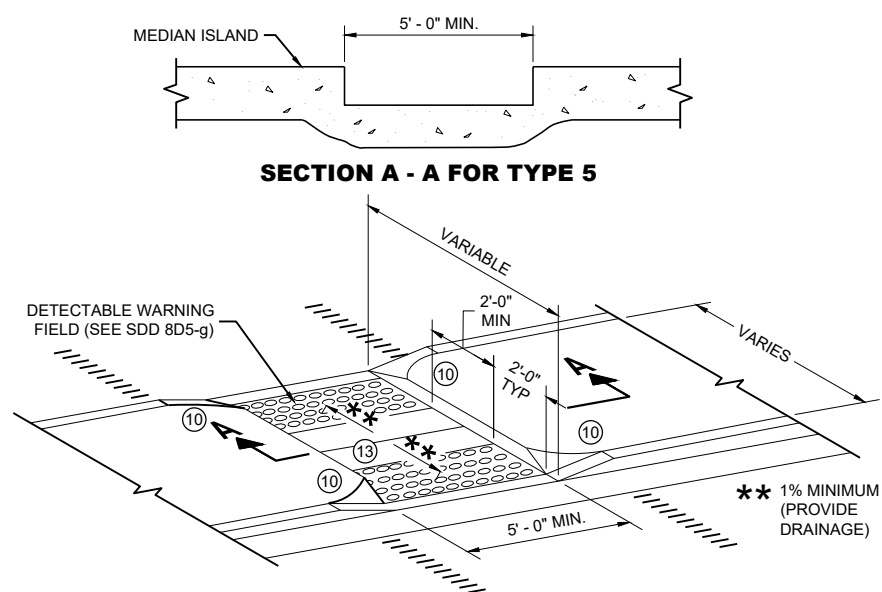
#### DETECTABLE WARNINGS FOR SIDEWALKS OR SHARED USE PATHS AT RAILROAD CROSSINGS



### CURB RAMP TYPE 6

#### DETECTABLE WARNING AT ISLANDS

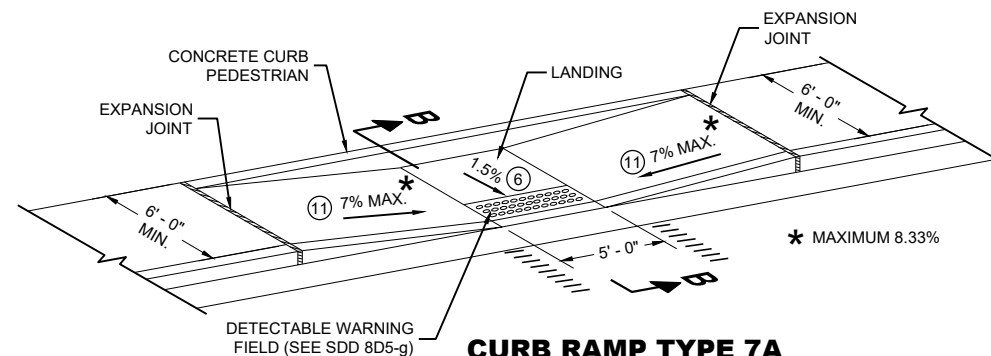
REFER TO GENERAL NOTES ② AND ③  
FOR ALL ISLAND CURB RAMPS



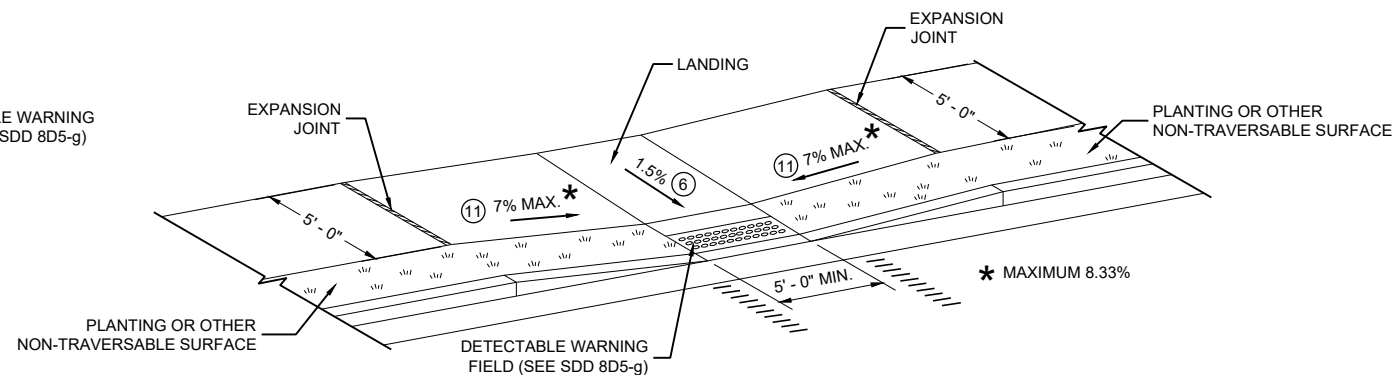
### SECTION A - A FOR TYPE 5

### CURB RAMP TYPE 5

#### MEDIAN ISLAND NON-ELEVATED PEDESTRIAN CROSSING



### CURB RAMP TYPE 7A FOR INTERSECTIONS AND MID BLOCK CROSSINGS



### CURB RAMP TYPE 7B FOR INTERSECTIONS AND MID BLOCK CROSSINGS

## GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

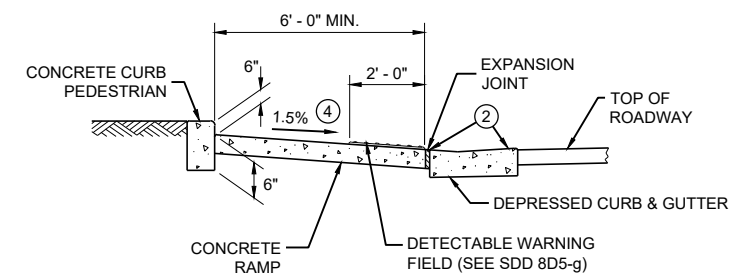
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/8 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④  $\pm 0.5\%$  CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑩ INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET  $\pm 0.1'$  FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK/PATH. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD TRACK IS 15 FEET MAXIMUM AND 12 FEET MINIMUM, 15 FEET TYPICAL FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

## LEGEND

- ===== 1/2" EXPANSION JOINT SIDEWALK
- - - - - CONTRACTION JOINT FIELD LOCATED
- ||||||| PAVEMENT MARKING CROSSWALK (WHITE)

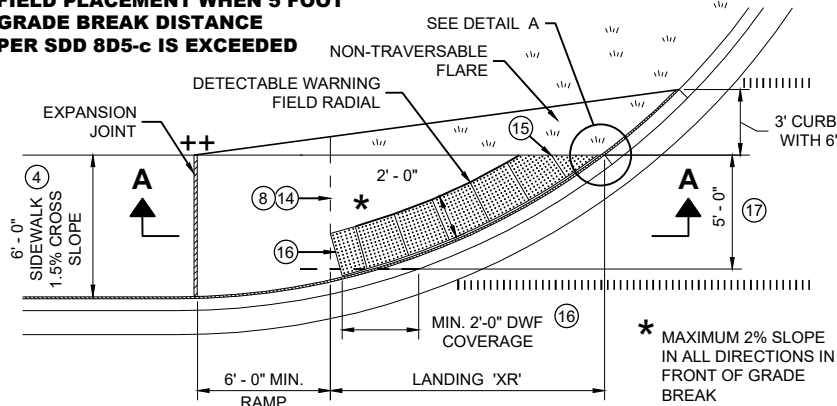


### SECTION B - B FOR TYPE 7A

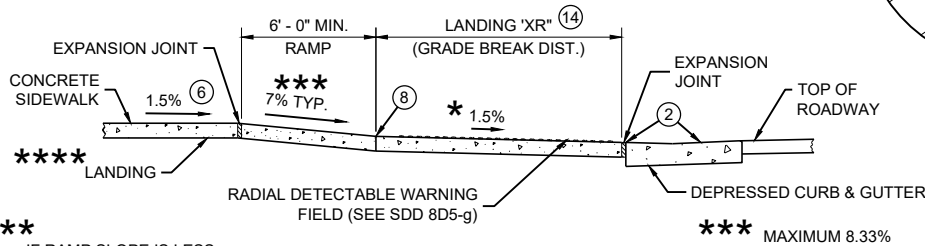
## CURB RAMPS TYPE 5, 6, 7A, 7B & 8

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-c IS EXCEEDED**

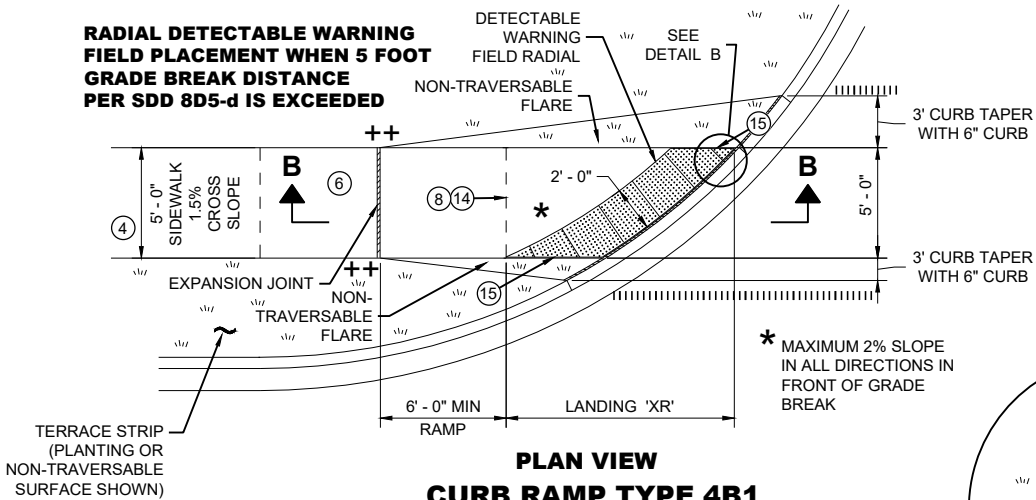


**PLAN VIEW  
CURB RAMP TYPE 4A1  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**

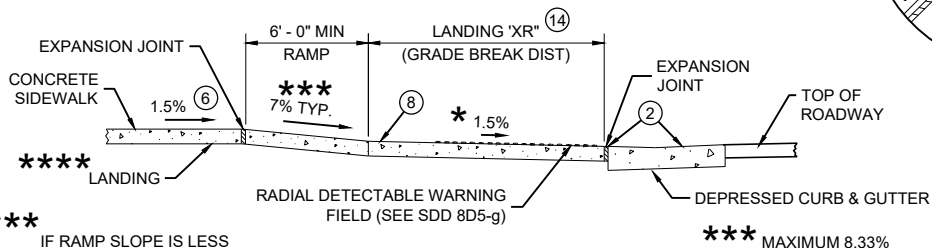


**SECTION A - A FOR TYPE 4A1**

**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-d IS EXCEEDED**



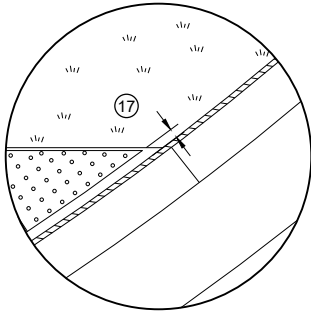
**PLAN VIEW  
CURB RAMP TYPE 4B1  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)**



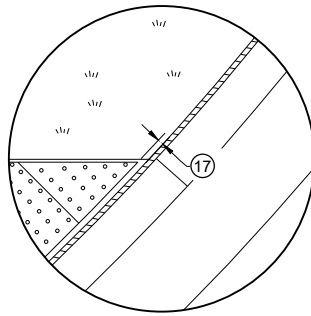
**SECTION B - B FOR TYPE 4B1**

**LEGEND**

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



**DETAIL A**



**DETAIL B**

**GENERAL NOTES**

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

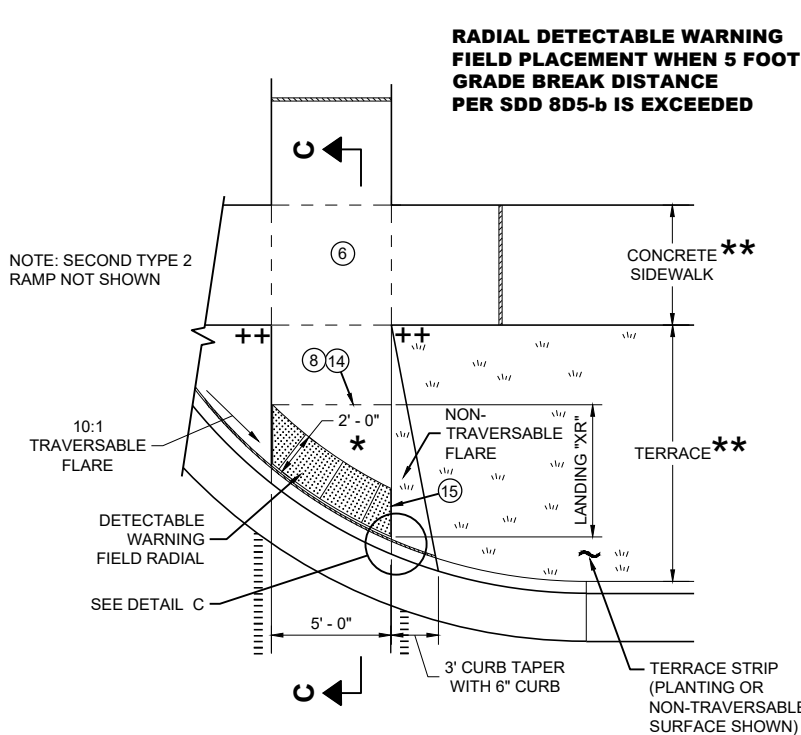
REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FIELD ARE PROHIBITED.

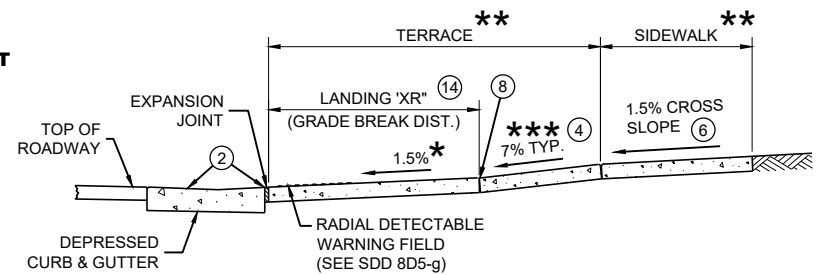
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

- 2 GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- 3 AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- 4 ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- 6 PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
- 8 PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- 14 CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- 15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/2" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- 16 USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- 17 A MAXIMUM 3 INCH CONCRETE BORDER WIDTH IS ALLOWABLE IN FRONT OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

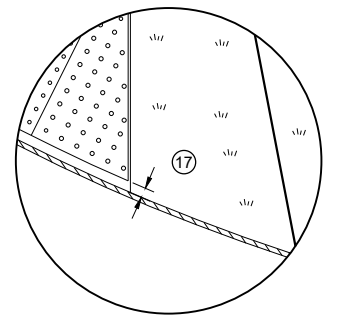
**RADIAL DETECTABLE WARNING  
FIELD PLACEMENT WHEN 5 FOOT  
GRADE BREAK DISTANCE  
PER SDD 8D5-b IS EXCEEDED**



**PLAN VIEW  
CURB RAMP TYPE 2  
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)  
(ON LINE WITH SIDEWALK)**



**SECTION C - C FOR TYPE 2**



**DETAIL C**

\*\*\* MAXIMUM 2% SLOPE  
IN ALL DIRECTIONS IN  
FRONT OF GRADE  
BREAK

\*\* WIDTH SHOWN ELSEWHERE  
IN THE PLANS

\*\*\* MAXIMUM 8.33%

++ CONSTRUCT 6" WEDGE TO  
AVOID CONCRETE BREAKAGE

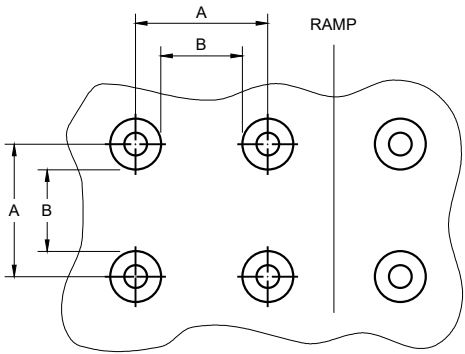
**CURB RAMPS  
RADIAL DETECTABLE WARNING**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

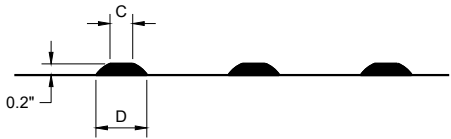


|   | MIN.  | MAX. |
|---|-------|------|
| A | 1.6"  | 2.4" |
| B | 0.65" | 1.5" |
| C | *     | *    |
| D | 0.9"  | 1.4" |

\* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

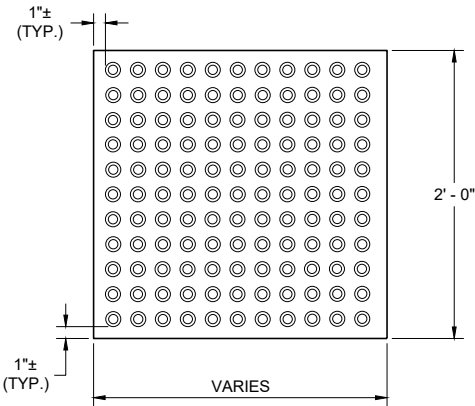


PLAN VIEW

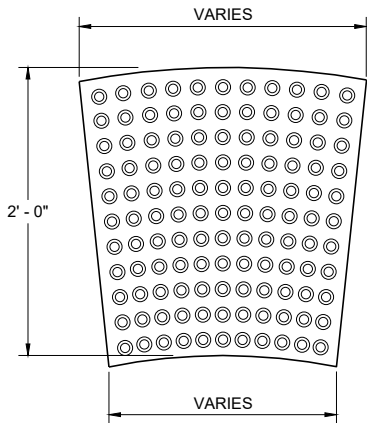


ELEVATION VIEW

TRUNCATED DOMES  
DETECTABLE WARNING PATTERN DETAIL

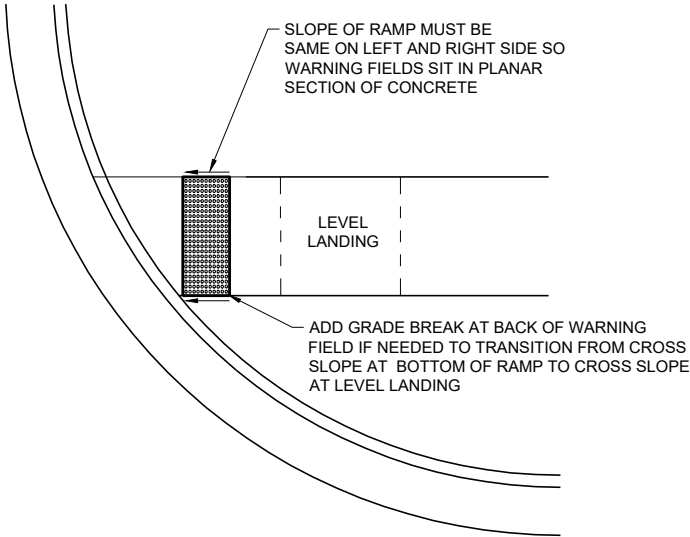


RECTANGULAR  
PLATES

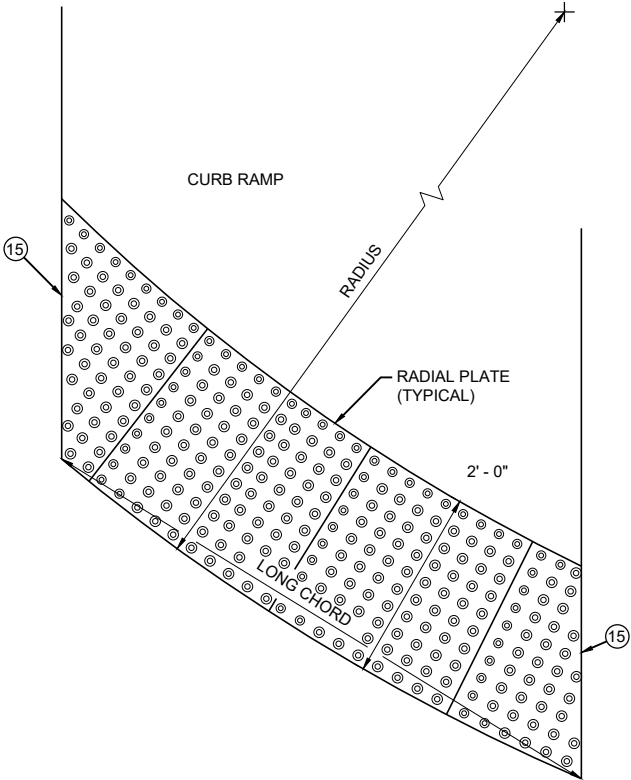


RADIAL  
PLATES

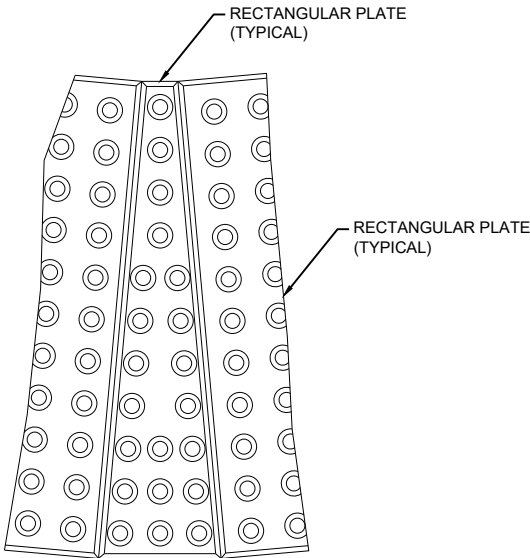
PLAN VIEW  
DETECTABLE WARNING FIELDS (TYPICAL)



DETECTABLE WARNING FIELD  
PLANAR INSTALLATION



PLAN VIEW  
RADIAL DETECTABLE  
WARNING FIELD ATTRIBUTES



PLAN VIEW  
RADIAL WEDGE PLATE  
CONNECTION DETAIL

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

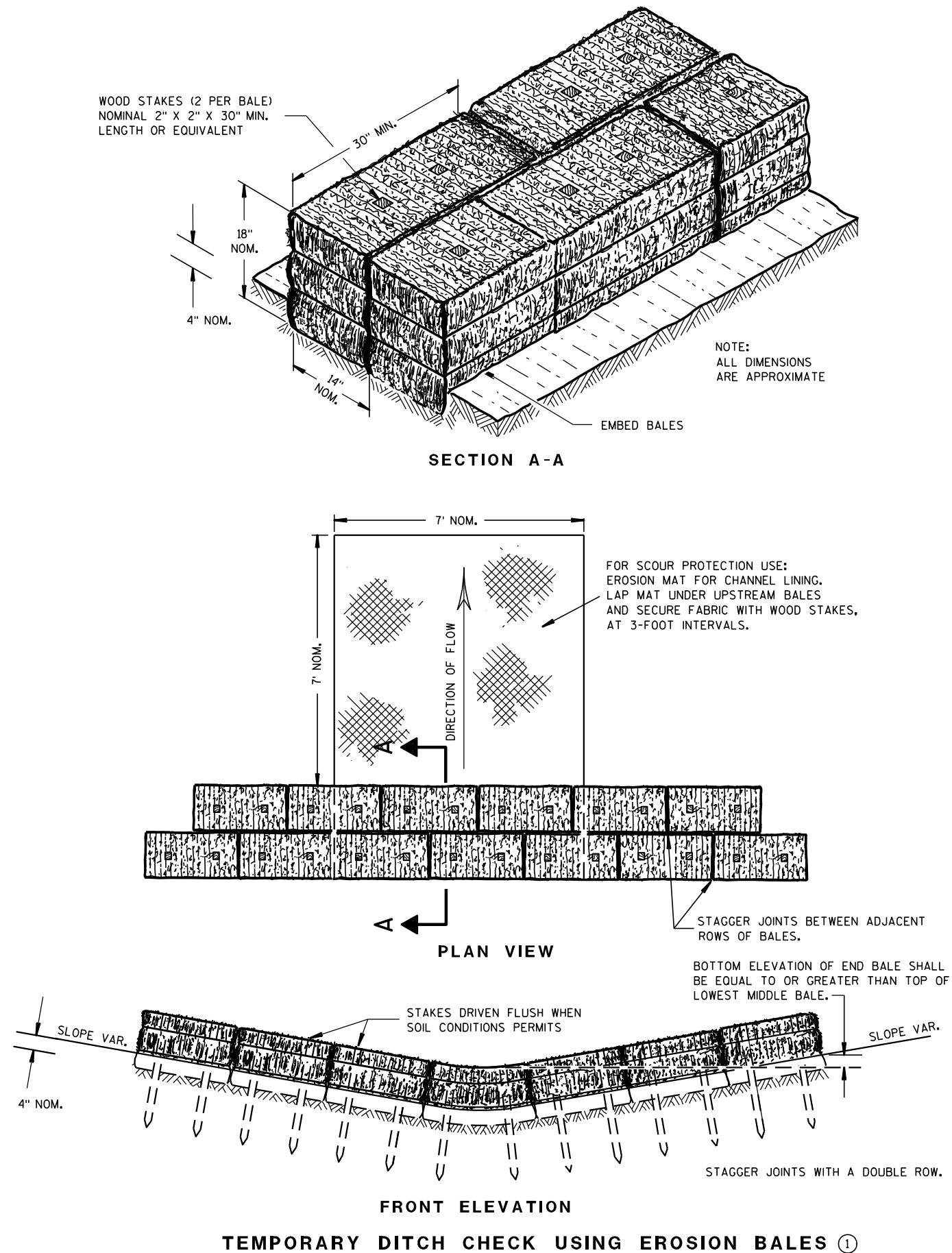
DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

15 FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8\"/>

CURB RAMPS  
RECTANGULAR AND RADIAL  
DETECTABLE WARNING PLATES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

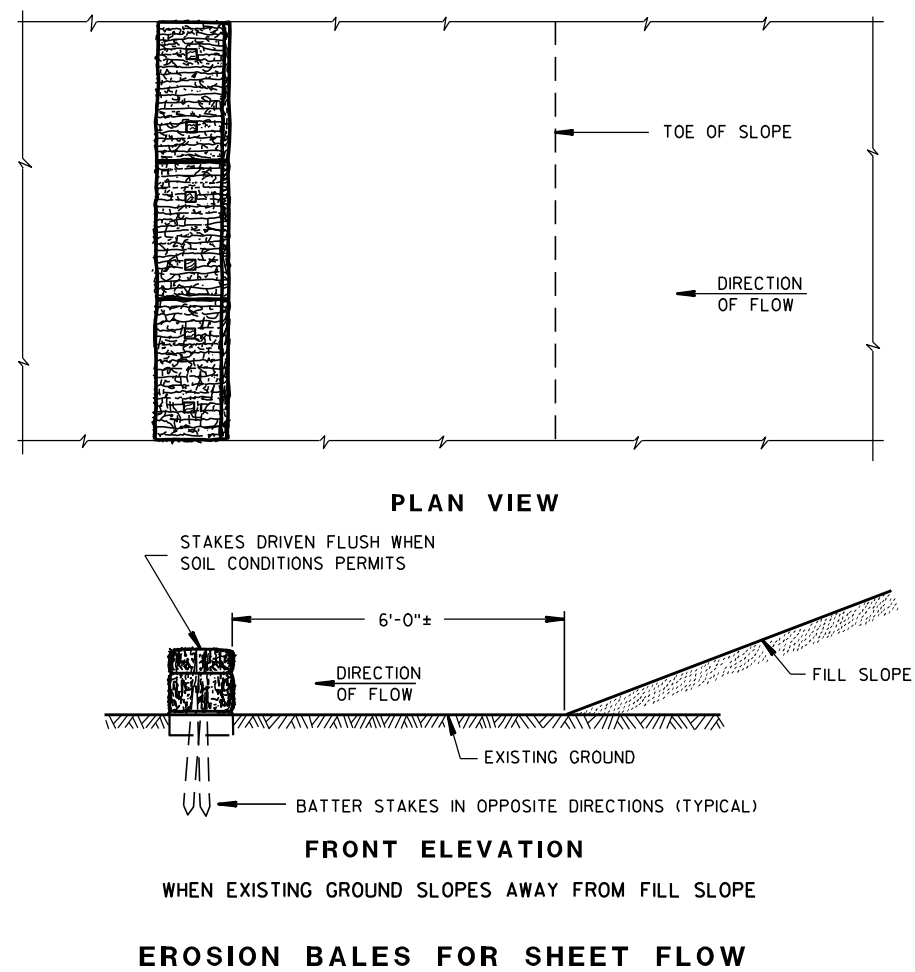
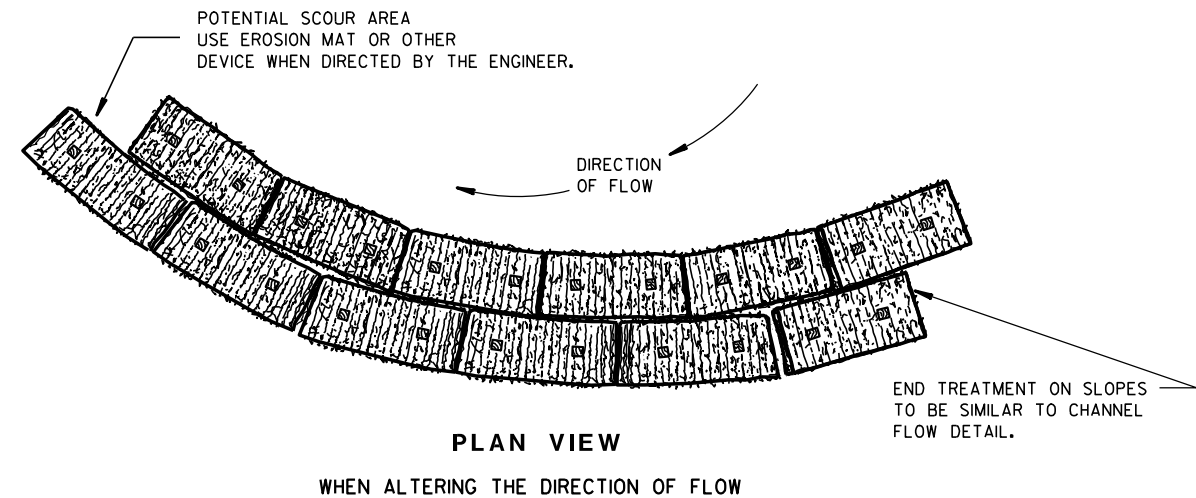
APPROVED  
July 2023 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT  
FHWA UNIT SUPERVISOR



## GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

TYPICAL INSTALLATIONS OF  
EROSION BALES / TEMPORARY  
DITCH CHECKS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02  
DATE

/S/ Beth Conn  
CHIEF ROADWAY DEVELOPER

ENGINEER

FHWA





- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



**SILT FENCE**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

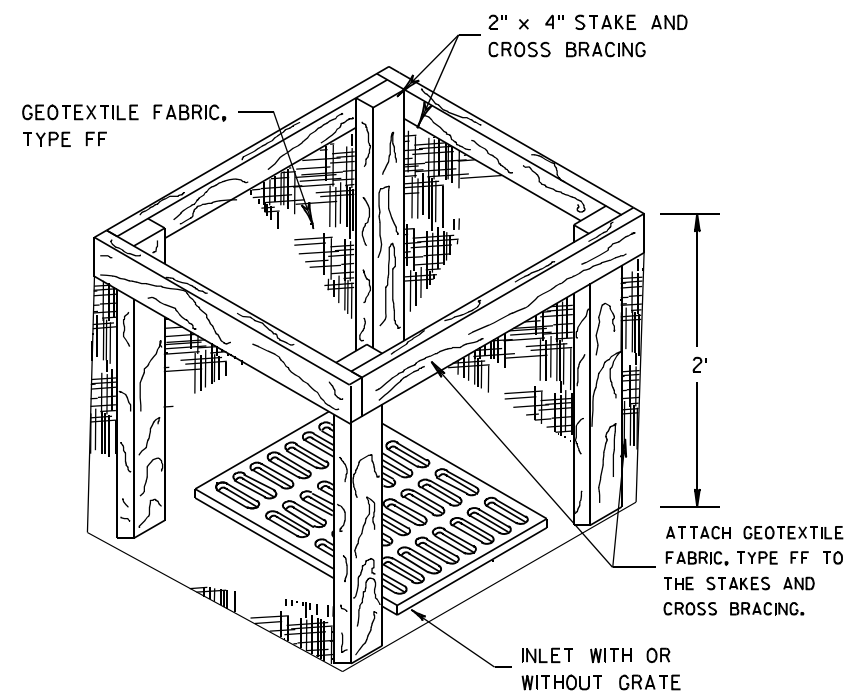
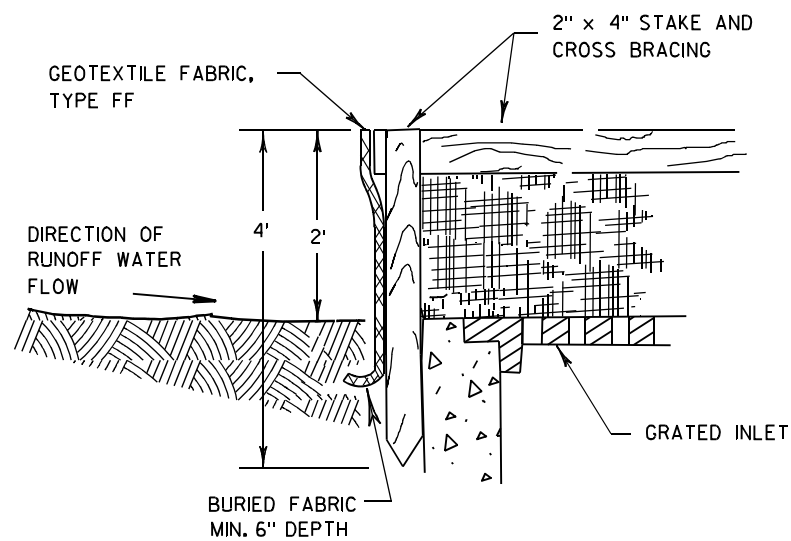
APPROVED  
4-29-05  
DATE

/S/ Beth Cannata  
CHIEF ROADWAY DEVELOPMENT

340

ENGINEER

FHWA



**INLET PROTECTION, TYPE A**

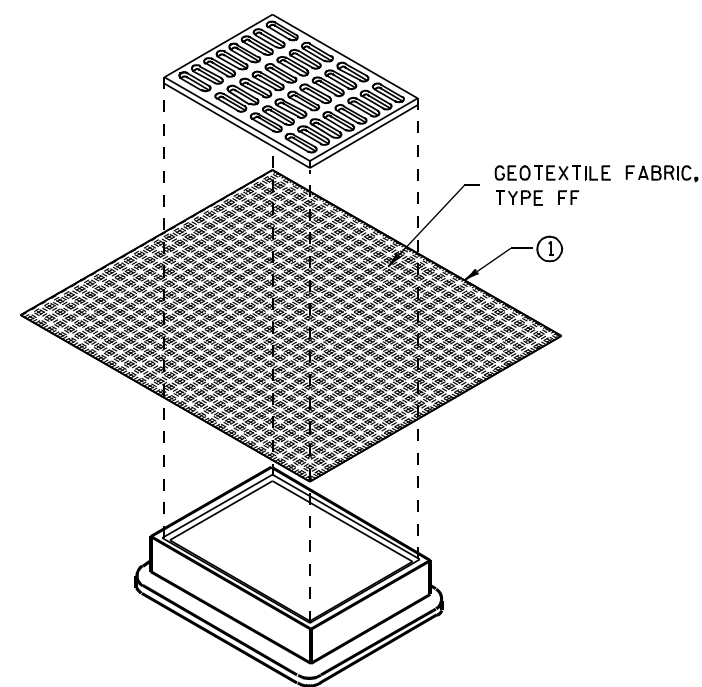
**GENERAL NOTES**

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

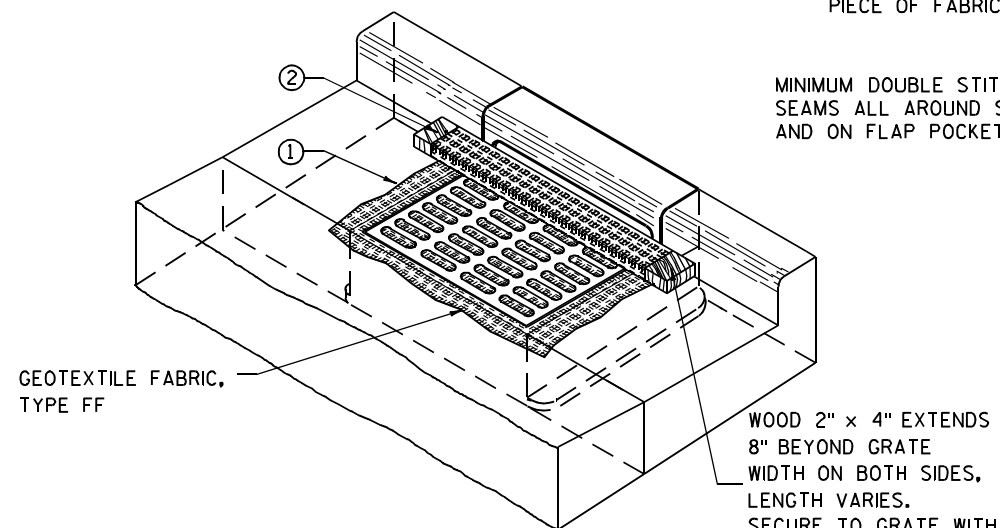
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B  
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



**INLET PROTECTION, TYPE C (WITH CURB BOX)**

**INSTALLATION NOTES**

**TYPE B & C**

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

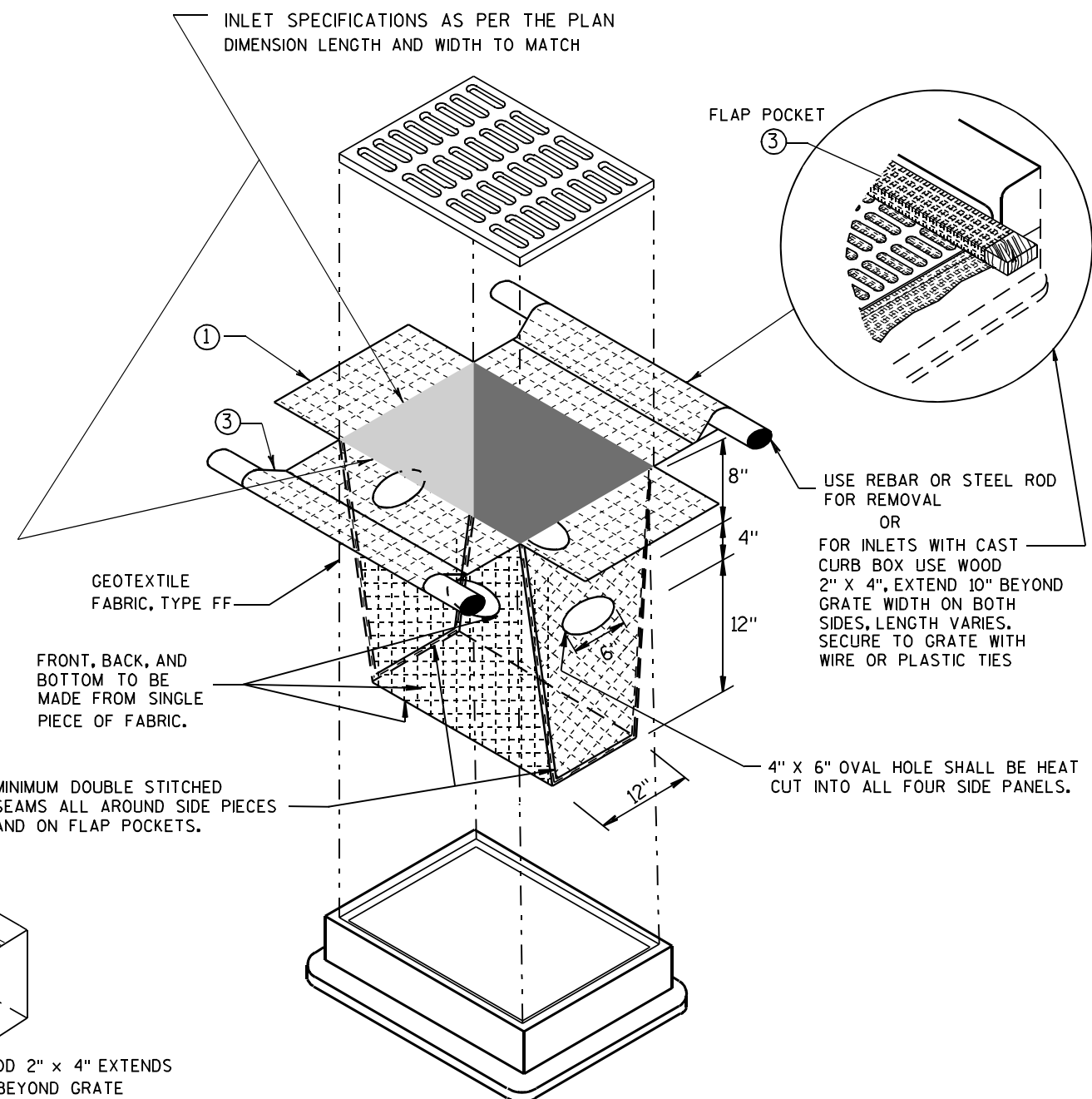
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

**TYPE D**

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLower THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



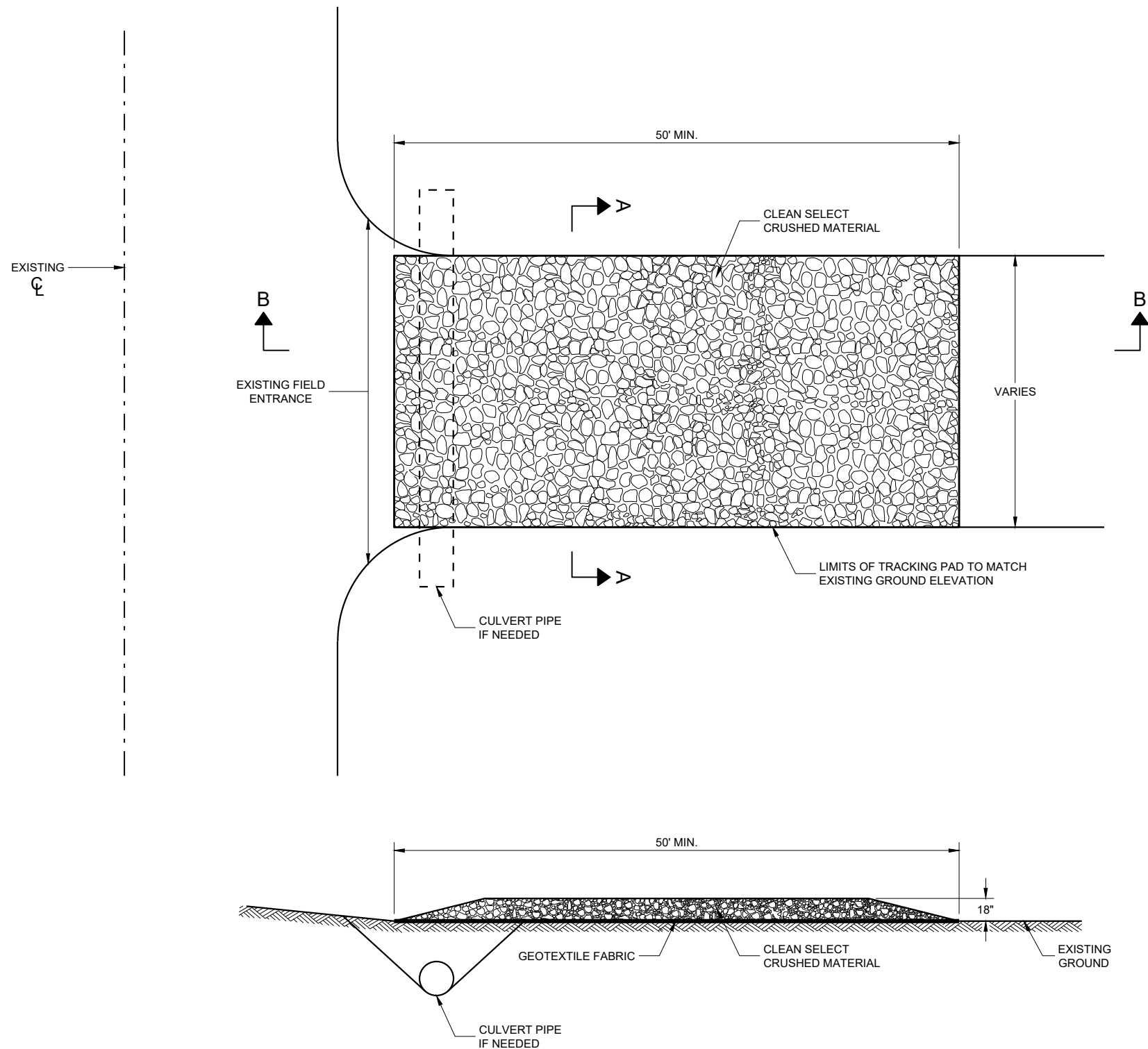
**INLET PROTECTION, TYPE D**

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

**INLET PROTECTION  
TYPE A, B, C, AND D**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
10/16/02 /S/ Beth Connolly  
DATE 341  
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



SECTION B - B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

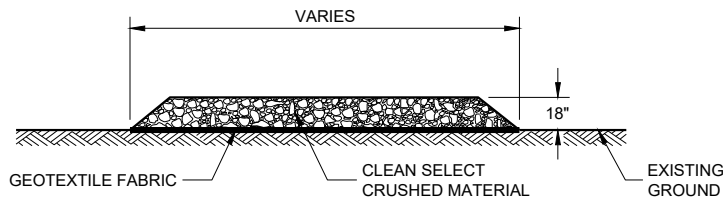
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



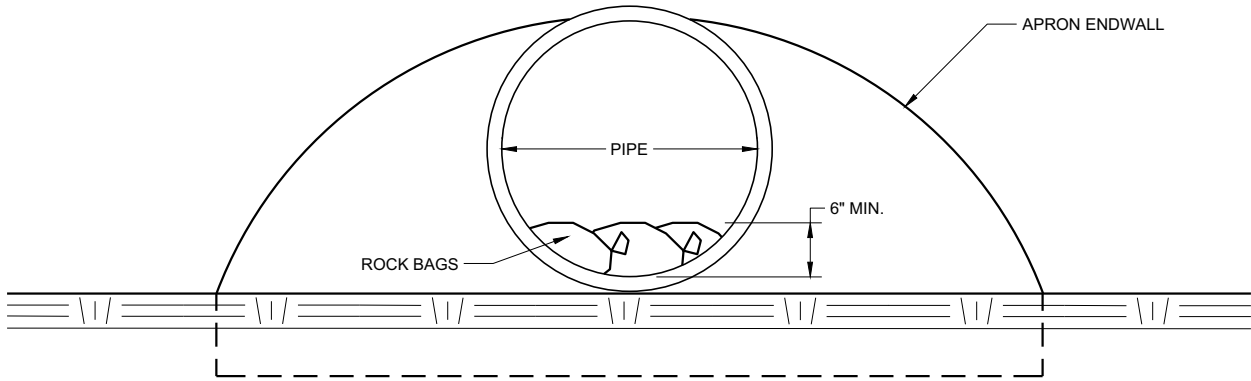
SECTION A - A

TRACKING PAD

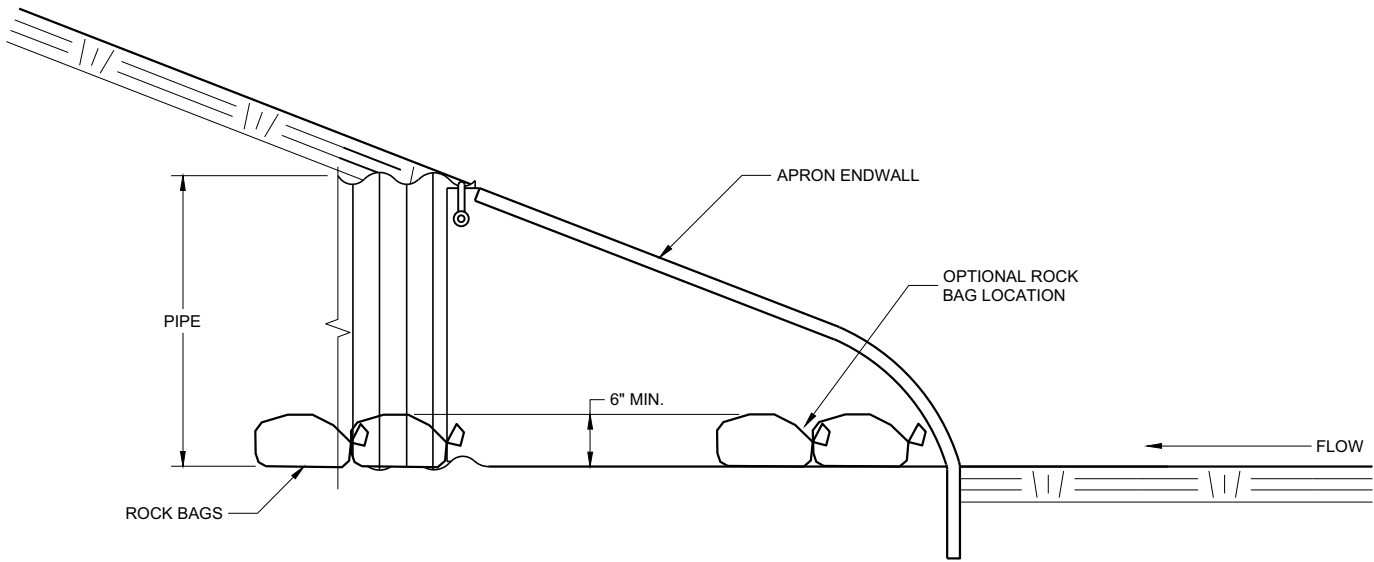
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
3/24/2011  
DATE  
/S/ Jerry H. Zogg  
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA



END VIEW

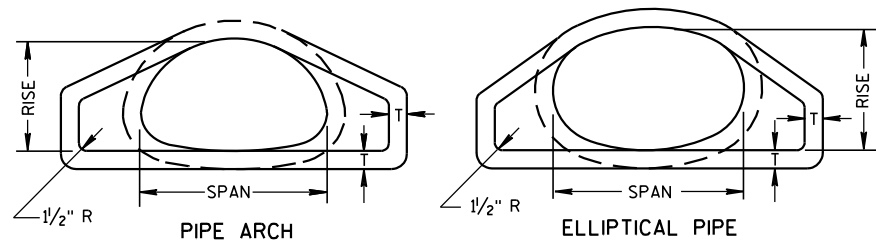


SIDE VIEW

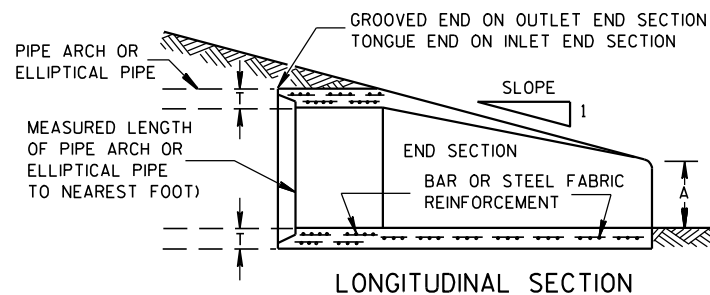
**CULVERT PIPE CHECK**  
(INSTALL ON INLET END ONLY)

|                                                    |                                               |
|----------------------------------------------------|-----------------------------------------------|
| <b>CULVERT PIPE CHECK</b>                          |                                               |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                               |
| APPROVED<br>May 2019<br>DATE                       | /S/ Daniel Schave<br>EROSION CONTROL ENGI 343 |
| FHWA                                               |                                               |



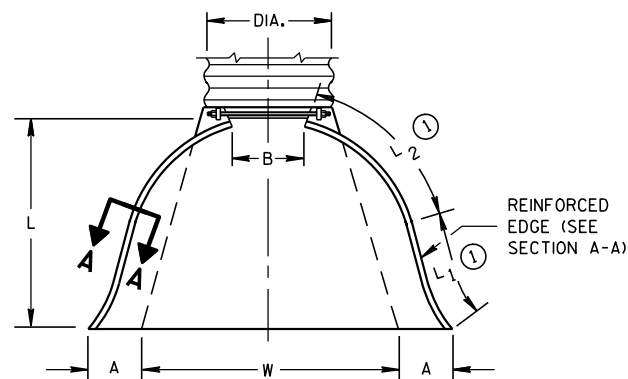


END VIEW



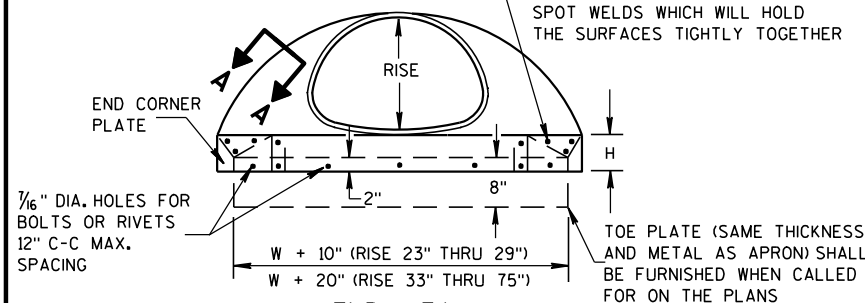
LONGITUDINAL SECTION

## CONCRETE ENDWALLS

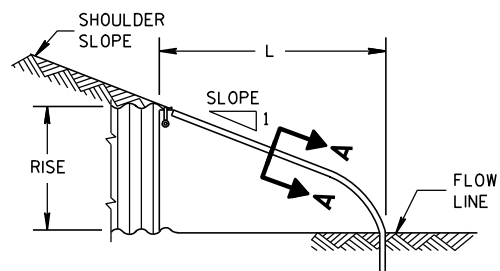
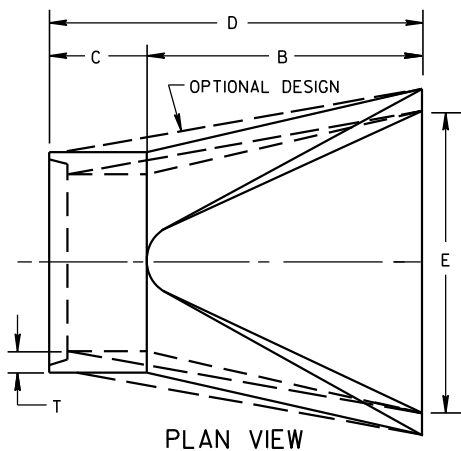


PLAN VIEW

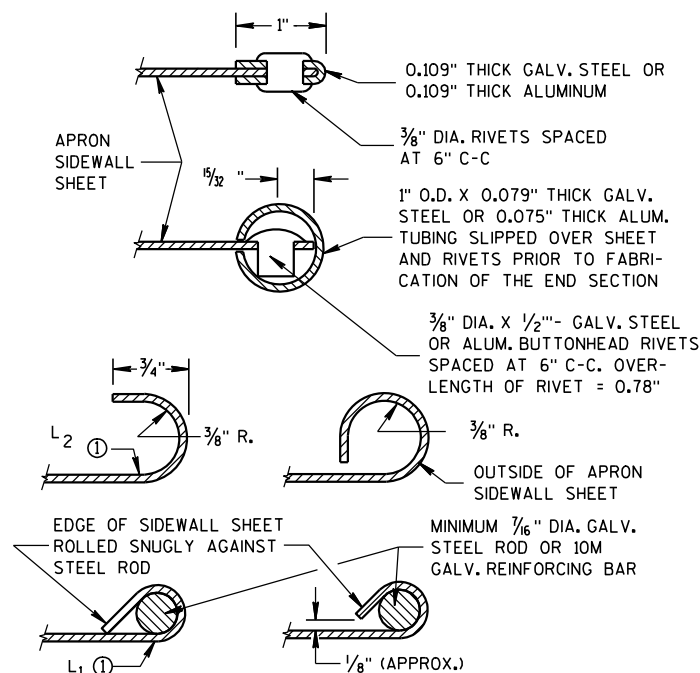
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



END VIEW

SIDE ELEVATION  
METAL ENDWALLS

PLAN VIEW



SECTION A-A

| 2- 2 <sup>2</sup> / <sub>3</sub> " x 1 <sup>1</sup> / <sub>2</sub> " CORRUGATIONS |          |      |                         |       |                     |             |            |                                         |                     |                                |            |                                    |       |
|-----------------------------------------------------------------------------------|----------|------|-------------------------|-------|---------------------|-------------|------------|-----------------------------------------|---------------------|--------------------------------|------------|------------------------------------|-------|
| EQUIV.<br>DIA.<br>(Inches)                                                        | (Inches) |      | MIN. THICK.<br>(Inches) |       | DIMENSIONS (Inches) |             |            |                                         |                     |                                |            | APPROX.<br>SLOPE                   | BODY  |
|                                                                                   | SPAN     | RISE | STEEL                   | ALUM. | A<br>(±1")          | B<br>(MAX.) | H<br>(±1") | L<br>(±1 <sup>1</sup> / <sub>2</sub> ") | L <sub>1</sub><br>① | L <sub>2</sub><br>①            | W<br>(±2") |                                    |       |
| 15                                                                                | 17       | 13   | .064                    | .060  | 7                   | 9           | 6          | 19                                      | 14                  | 16                             | 30         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 1 Pc. |
| 18                                                                                | 21       | 15   | .064                    | .060  | 7                   | 10          | 6          | 23                                      | 14                  | 19 <sup>3</sup> / <sub>8</sub> | 36         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 1 Pc. |
| 21                                                                                | 24       | 18   | .064                    | .060  | 8                   | 12          | 6          | 28                                      | 18                  | 21 <sup>3</sup> / <sub>4</sub> | 42         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 1 Pc. |
| 24                                                                                | 28       | 20   | .064                    | .060  | 9                   | 14          | 6          | 32                                      | 18                  | 27 <sup>1</sup> / <sub>2</sub> | 48         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 1 Pc. |
| 30                                                                                | 35       | 24   | .079                    | .075  | 10                  | 16          | 6          | 39                                      | 18                  | 37 <sup>5</sup> / <sub>8</sub> | 60         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 1 Pc. |
| 36                                                                                | 42       | 29   | .079                    | .075  | 12                  | 18          | 8          | 46                                      | 24                  | 45 <sup>3</sup> / <sub>8</sub> | 75         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 1 Pc. |
| 42                                                                                | 49       | 33   | .109                    | .105  | 13                  | 21          | 9          | 53                                      | 24                  | 54 <sup>3</sup> / <sub>4</sub> | 85         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 2 Pc. |
| 48                                                                                | 57       | 38   | .109                    | .105  | 18                  | 26          | 12         | 63                                      | 24                  | 68                             | 90         | 2 <sup>1</sup> / <sub>2</sub> to 1 | 3 Pc. |
| 54                                                                                | 64       | 43   | .109                    | .105  | 18                  | 30          | 12         | 70                                      | 24                  | 72 <sup>3</sup> / <sub>4</sub> | 102        | 2 <sup>1</sup> / <sub>4</sub> to 1 | 3 Pc. |
| 60                                                                                | 71       | 47   | .109*                   | .105* | 18                  | 33          | 12         | 77                                      | 30                  | 82 <sup>1</sup> / <sub>4</sub> | 114        | 2 <sup>1</sup> / <sub>4</sub> to 1 | 3 Pc. |
| 66                                                                                | 77       | 52   | .109*                   | .105* | 18                  | 36          | 12         | 77                                      | —                   | —                              | 126        | 2 to 1                             | 3 Pc. |
| 72                                                                                | 83       | 57   | .109*                   | .105* | 18                  | 39          | 12         | 77                                      | —                   | —                              | 138        | 2 to 1                             | 3 Pc. |

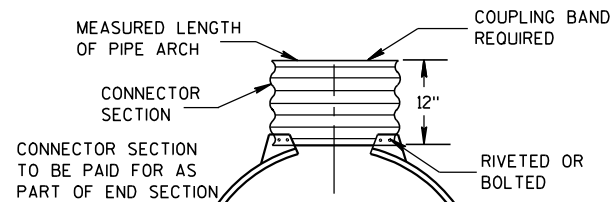
| 3" X 1" CORRUGATIONS       |          |      |                         |       |                     |             |            |                |                     |                     |            |                  |       |
|----------------------------|----------|------|-------------------------|-------|---------------------|-------------|------------|----------------|---------------------|---------------------|------------|------------------|-------|
| EQUIV.<br>DIA.<br>(Inches) | (Inches) |      | MIN. THICK.<br>(Inches) |       | DIMENSIONS (Inches) |             |            |                |                     |                     |            | APPROX.<br>SLOPE | BODY  |
|                            | SPAN     | RISE | STEEL                   | ALUM. | A<br>(±1")          | B<br>(MAX.) | H<br>(±1") | L<br>(±1 1/2") | L <sub>1</sub><br>⓪ | L <sub>2</sub><br>⓪ | W<br>(±2") |                  |       |
| 48                         | 53       | 41   | .109                    | .105  | 18                  | 26          | 12         | 63             | 24                  | 72¾                 | 90         | 2½ to 1          | 2 Pc. |
| 54                         | 60       | 46   | .109                    | .105  | 18                  | 30          | 12         | 70             | 30                  | 82¼                 | 102        | 2 to 1           | 2 Pc. |
| 60                         | 66       | 51   | .109*                   | .105* | 18                  | 33          | 12         | 77             | —                   | —                   | 114        | 1½ to 1          | 3 Pc. |
| 66                         | 73       | 55   | .109*                   | .105* | 18                  | 36          | 12         | 77             | —                   | —                   | 126        | 1½ to 1          | 3 Pc. |
| 72                         | 81       | 59   | .109*                   | .105* | 18                  | 39          | 12         | 77             | —                   | —                   | 138        | 2 to 1           | 3 Pc. |
| 78                         | 87       | 63   | .109*                   | .105* | 22                  | 38          | 12         | 77             | —                   | —                   | 148        | 1½ to 1          | 3 Pc. |
| 84                         | 95       | 67   | .109*                   | .105* | 22                  | 34          | 12         | 77             | —                   | —                   | 162        | 1½ to 1          | 3 Pc. |
| 90                         | 103      | 71   | .109*                   | .105* | 22                  | 38          | 12         | 77             | —                   | —                   | 174        | 1½ to 1          | 3 Pc. |
| 96                         | 112      | 75   | .109*                   | .105* | 24                  | 40          | 12         | 77             | —                   | —                   | 174        | 1½ to 1          | 3 Pc. |

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

\* EXCEPT CENTER PANEL  
SEE GENERAL NOTES

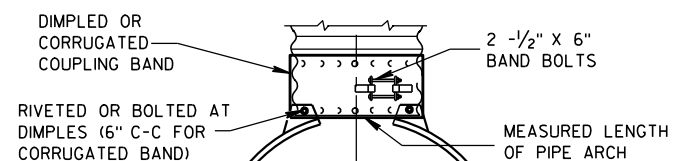
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:  
ALL SIZES CORRUGATED PIPE ARCHESNOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,  
AND CORRUGATED BAND FITS INSIDE ENDWALL.

## CONNECTION DETAILS

## REINFORCED CONCRETE PIPE ARCH

| EQUIV. DIA. (Inches) | DIMENSIONS (Inches) |         |       |         |    |    |     |     | APPROX. SLOPE |
|----------------------|---------------------|---------|-------|---------|----|----|-----|-----|---------------|
|                      | ** SPAN             | ** RISE | T     | A       | B  | C  | D   | E   |               |
| 24                   | 29                  | 18      | 3     | 8 1/2   | 39 | 33 | 72  | 48  | 3 to 1        |
| 30                   | 36                  | 22      | 3 1/2 | 9 1/2   | 50 | 46 | 96  | 60  | 3 to 1        |
| 36                   | 44                  | 27      | 4     | 11 1/8  | 60 | 36 | 96  | 72  | 3 to 1        |
| 42                   | 51                  | 31      | 4 1/2 | 15 1/16 | 60 | 36 | 96  | 78  | 3 to 1        |
| 48                   | 58                  | 36      | 5     | 21      | 60 | 36 | 96  | 84  | 3 to 1        |
| 54                   | 65                  | 40      | 5 1/2 | 25 1/2  | 60 | 36 | 96  | 90  | 3 to 1        |
| 60                   | 73                  | 45      | 6     | 31      | 60 | 36 | 96  | 96  | 3 to 1        |
| 72                   | 88                  | 54      | 7     | 31      | 60 | 39 | 99  | 120 | 2 to 1        |
| 84                   | 102                 | 62      | 8     | 28 1/2  | 83 | 19 | 102 | 144 | 2 to 1        |

## REINFORCED CONCRETE ELLIPTICAL PIPE

| EQUIV. DIA. (Inches) | DIMENSIONS (Inches) |         |       |        |    |    |    |    | APPROX. SLOPE |
|----------------------|---------------------|---------|-------|--------|----|----|----|----|---------------|
|                      | ** SPAN             | ** RISE | T     | A      | B  | C  | D  | E  |               |
| 24                   | 30                  | 19      | 3 1/4 | 8 1/2  | 39 | 33 | 72 | 48 | 3 to 1        |
| 30                   | 38                  | 24      | 3 3/4 | 9 1/2  | 54 | 18 | 72 | 60 | 3 to 1        |
| 36                   | 45                  | 29      | 4 1/2 | 11 1/8 | 60 | 24 | 84 | 72 | 2 1/2 to 1    |
| 42                   | 53                  | 34      | 5     | 15 1/4 | 60 | 36 | 96 | 78 | 2 1/2 to 1    |
| 48                   | 60                  | 38      | 5 1/2 | 21     | 60 | 36 | 96 | 84 | 2 1/2 to 1    |
| 54                   | 68                  | 43      | 6     | 25 1/2 | 60 | 36 | 96 | 90 | 2 1/2 to 1    |
| 60                   | 76                  | 48      | 6 1/2 | 30     | 60 | 36 | 96 | 96 | 2 1/2 to 1    |

\*\*NOMINAL SIZE

## GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR  
PIPE ARCH AND  
ELLIPTICAL PIPESTATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/94

DATE

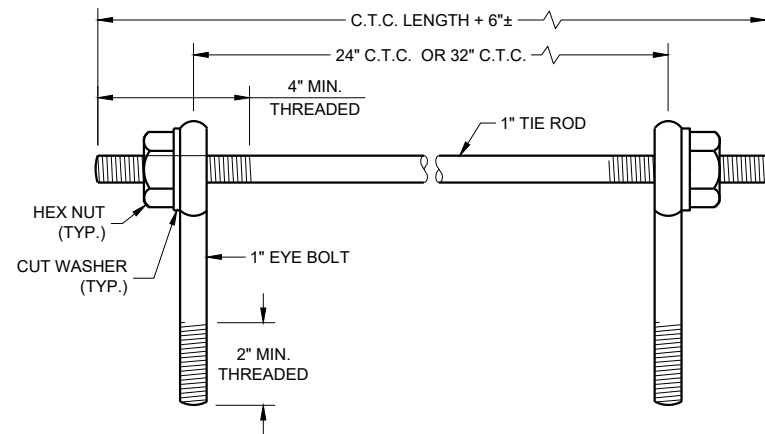
FHWA

/S/ Rory L. Rhinehart  
CHIEF ROADWAY DEVELOPER

345

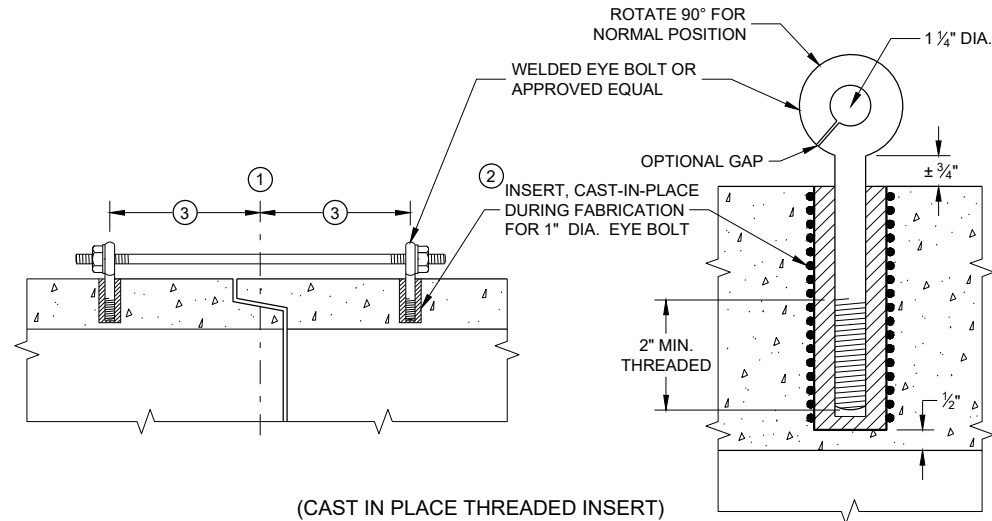
ENGINEER





EYE BOLTS AND TIE ROD

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)



(CAST IN PLACE THREADED INSERT)  
LONGITUDINAL SECTIONS

## GENERAL NOTES

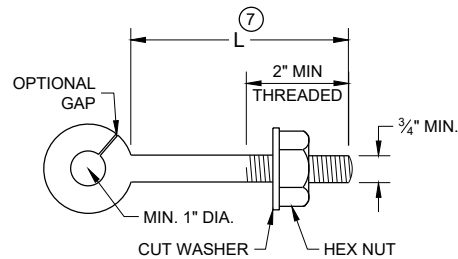
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

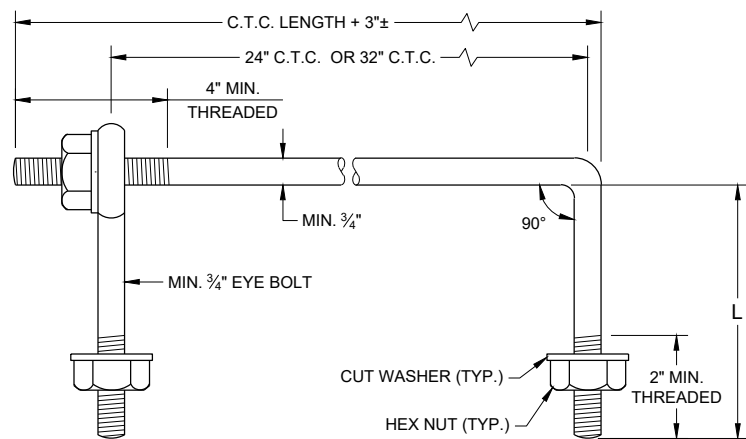
JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- 1 CENTER LINE OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- 2 THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- 3 HOLES SHALL BE CAST-IN-PLACE OR DRILLED PER THE APPLICABLE DETAIL, AND EQUAL DISTANCE FROM THE CENTERLINE OF THE JOINT.
- 4 BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- 5 OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- 6 LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.
- 7 EYE BOLT LENGTH DETERMINED BY WALL THICKNESS, BELL THICKNESS AND BOLT PROJECTION INSIDE PIPE.

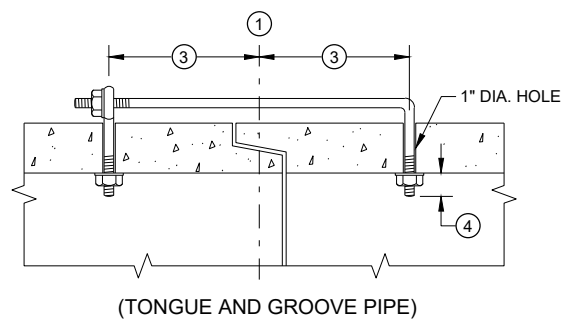


EYE BOLT 7

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" OR 38" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



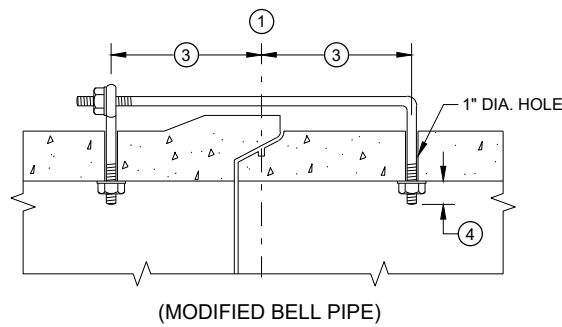
EYE BOLT AND TIE ROD



(TONGUE AND GROOVE PIPE)

LONGITUDINAL SECTION  
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

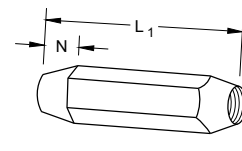


(MODIFIED BELL PIPE)

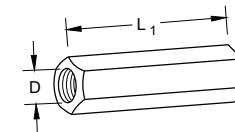
ADJUSTABLE TIE ROD TABLE

| PIPE DIAMETER | TIE ROD DIAMETER | D   | L <sub>1</sub> | N      |
|---------------|------------------|-----|----------------|--------|
| 12 - 60       | 5/8              | 5/8 | 5              | 1/2    |
| 66 - 84       | 3/4              | 3/4 | 5              | 1/2    |
| 90 - 144      | 1                | 1   | 7              | 1 1/16 |

DIMENSIONS SHOWN ARE IN INCHES

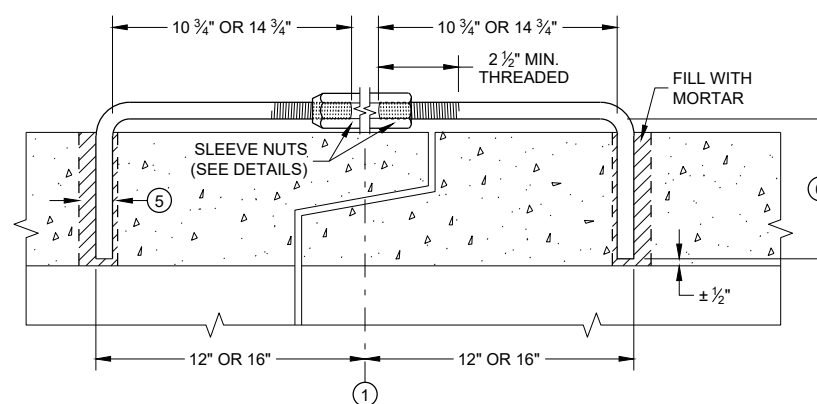


TAPERED



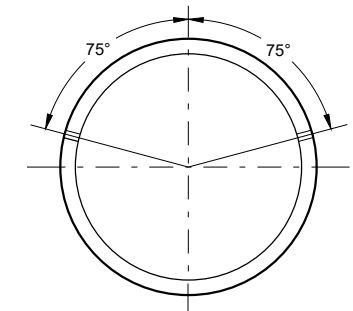
PLAIN

RIGHT AND LEFT THREADS  
SLEEVE NUTS



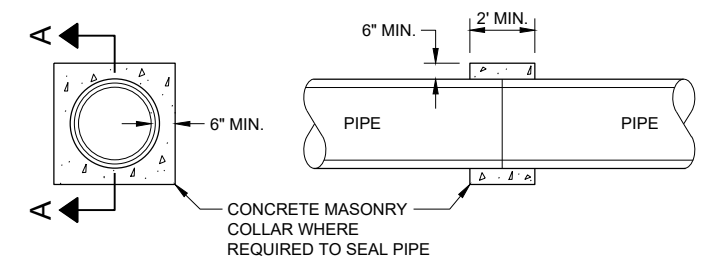
LONGITUDINAL SECTION

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A - A  
CONCRETE COLLAR DETAIL

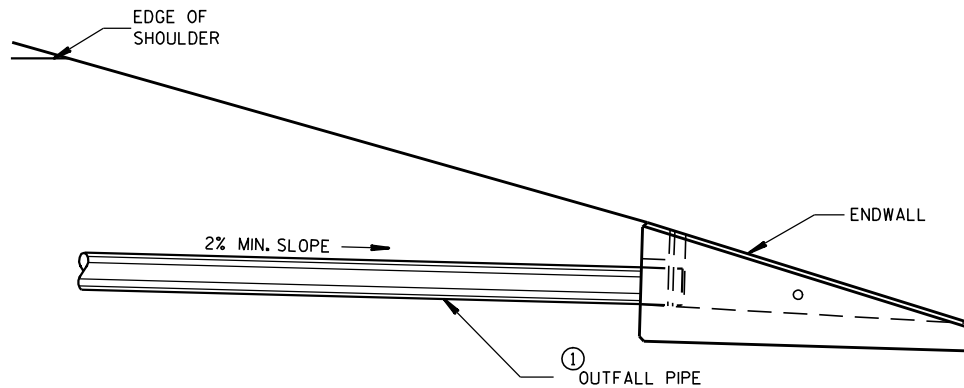
## JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

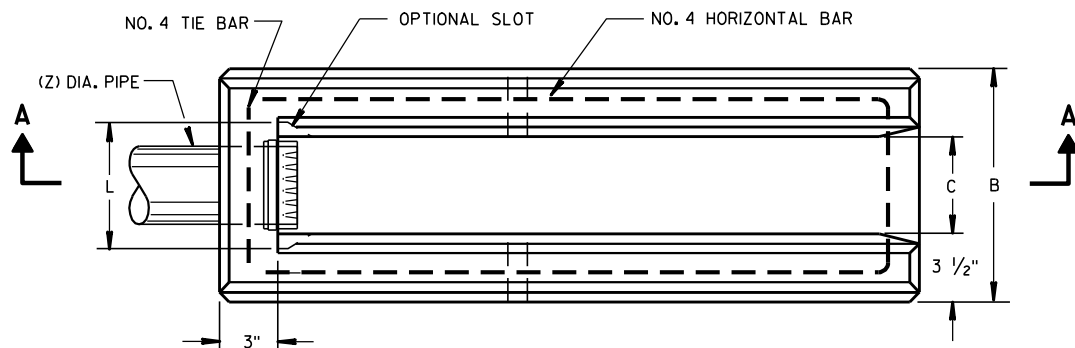
APPROVED  
November 2021 /S/ Rodney Taylor  
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER 346  
FHWA

| DIMENSIONS IN INCHES |   |    |       |    |    |    |    |    |       |       |   |
|----------------------|---|----|-------|----|----|----|----|----|-------|-------|---|
| PIPE DIA.            | A | B  | C     | D  | E  | F  | G  | H  | J     | L     | Z |
| **4                  | 6 | 12 | 5 1/4 | 9  | 8  | 32 | 36 | 11 | 2 3/8 | 6 1/2 | 4 |
| 6                    | 8 | 14 | 7 1/4 | 11 | 10 | 42 | 44 | 13 | 3 5/8 | 8 1/2 | 6 |

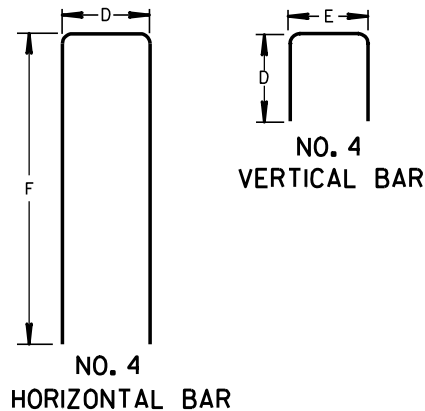
\*\* APRON ENDWALL FOR 6 INCH DIAMETER PIPE MAY BE SUBSTITUTED FOR THIS SIZE PROVIDED THE HOLE IN THE HEADWALL IS SIZED AND LOCATED TO CONFORM TO THE 4 INCH DIAMETER PIPE DIMENSIONS (C & J)



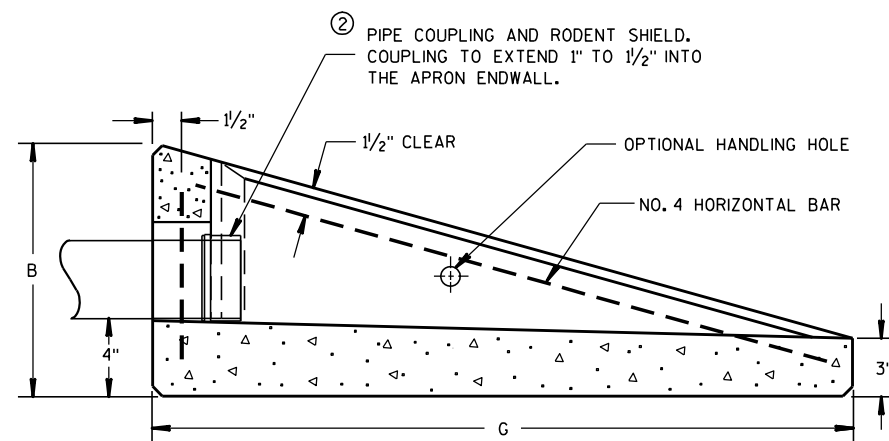
INSTALLATION DETAIL



PLAN VIEW

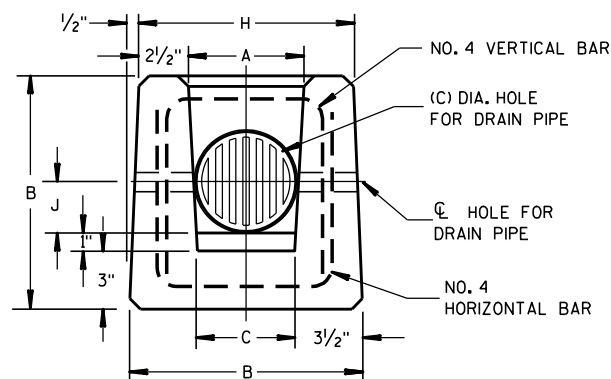


BAR STEEL REINFORCEMENT DETAILS



SECTION A-A

CONCRETE APRON ENDWALL FOR UNDERDRAIN



END VIEW

## GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ALTERNATIVE DESIGNS WHICH PROVIDE EQUIVALENT CAPACITY AND STRENGTH MAY BE USED WHEN APPROVED BY THE ENGINEER. ENDWALL MAY BE EITHER PRECAST OR CAST-IN-PLACE CONCRETE.

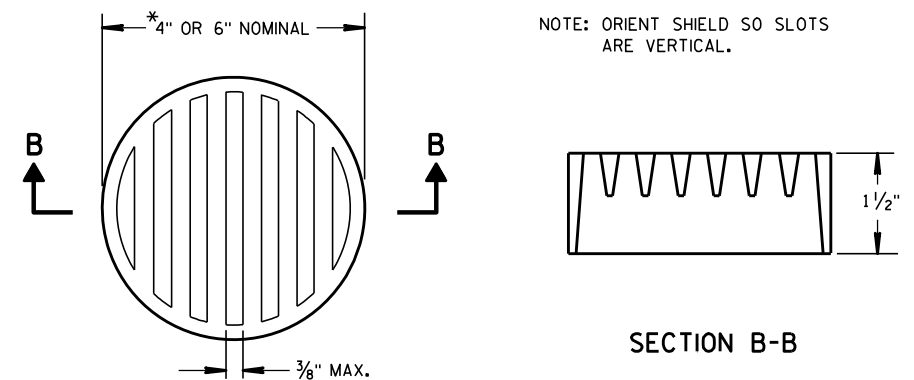
THE UNDERDRAIN PIPE SHALL BE FULLY INSERTED AND SEALED INTO THE ENDWALL WITH CEMENT MORTAR PRIOR TO BACKFILLING AROUND THE STRUCTURE.

THE UPPERMOST POINT OF THE ENDWALL SHALL BE PLACED FLUSH WITH THE ROADWAY SLOPE. ADJACENT EMBANKMENT SLOPES SHALL BE SHAPED TO FIT THE SIDES AND TOE OF THE ENDWALL. EXACT PLACEMENT OF THE OUTFALL PIPE AND ENDWALL SHALL BE DETERMINED BY THE ENGINEER TO MATCH THE ELEVATIONS AND FLOW DIRECTION OF THE ROADSIDE DITCH.

- ① THE OUTFALL PIPE UNDERDRAIN AND FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATION FOR POLY (VINYL CHORIDE) (PVC) PLASTIC DRAIN, WASTE AND VENT PIPE AND FITTINGS, ASTM DESIGNATION: D 2665, SCHEDULE 40 PVC OR THE STANDARD SPECIFICATION FOR TYPE PSM POLY (VINYL CHORIDE) (PVC) SEWER PIPE AND FITTINGS, ASTM DESIGNATION: D 3034, TYPE PSM SDR 23.5 PVC SEWER PIPE, ALL JOINTS SHALL BE SOLVENT WELDED.

THE OUTFALL PIPE INCLUDING ALL FITTINGS AND THE RODENT SHIELD SHALL BE MEASURED AND PAID FOR AS PIPE UNDERDRAIN UNPERFORATED.

- ② THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE OUTFALL PIPE. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.



② RODENT SHIELD

\*NOTE: DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

**REINFORCED  
CONCRETE APRON ENDWALL  
FOR PIPE UNDERDRAIN**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

3/10/98

DATE

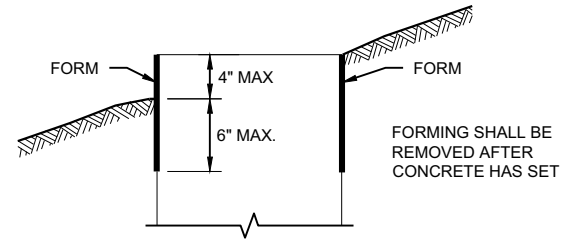
FHWA

/S/ Rory L. Rhin...  
CHIEF ROADWAY DEVELOPER

347 INEER



FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

| QUANTITY REQUIREMENTS           | CONCRETE BASE TYPE |      |       |
|---------------------------------|--------------------|------|-------|
|                                 | 1                  | 2    | 5 & 6 |
| APPROX. CUBIC YARDS OF CONCRETE | 0.40               | 0.57 | 0.40  |
| LBS. OF HOOP BAR STEEL          | NONE               | 23   | 16    |
| LBS. OF VERTICAL BAR STEEL      | NONE               | 60   | 18    |

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE SHOWN ON THE PLANS

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NON-METALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION.

WHEN REQUIRED TO CONNECT NON-METALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 2, TYPE 5 AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER ALL BASE TYPES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4 INCH "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND SHALL NOT BE THREADED.

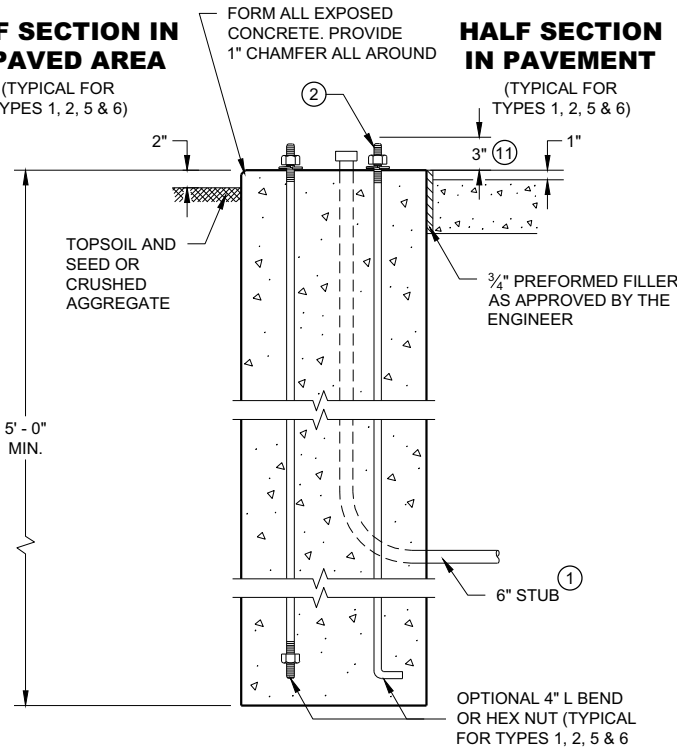
ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

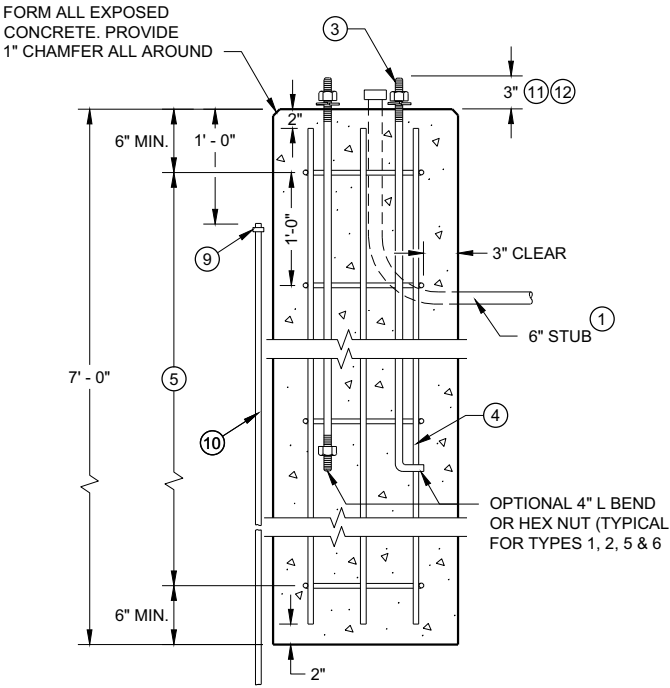
- 1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL OF THE ENGINEER.
- 2 (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- 3 (4) 1" DIA. X 5' - 0" ANCHOR RODS.
- 4 (6) NO. 6 X 6' - 8" BAR STEEL REINFORCEMENT.
- 5 (7) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- 6 (4) 1" DIA. X 3' - 6" ANCHOR RODS.
- 7 (6) NO. 4 X 4' - 8" BAR STEEL REINFORCEMENT.
- 8 (5) NO. 4 X 5' - 1" BAR STEEL REINFORCEMENT @ 1' - 0" C - C.
- 9 EXOTHERMIC CONNECTION TO EQUIPMENT GROUNDING CONDUCTOR
- 10 5/8" DIA. X 8' - 0" COPPERCLAD EQUIPMENT GROUNDING ELECTRODE REQUIRED
- 11 ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 1/2" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE.
- 12 FOR NON - BREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

HALF SECTION IN UNPAVED AREA



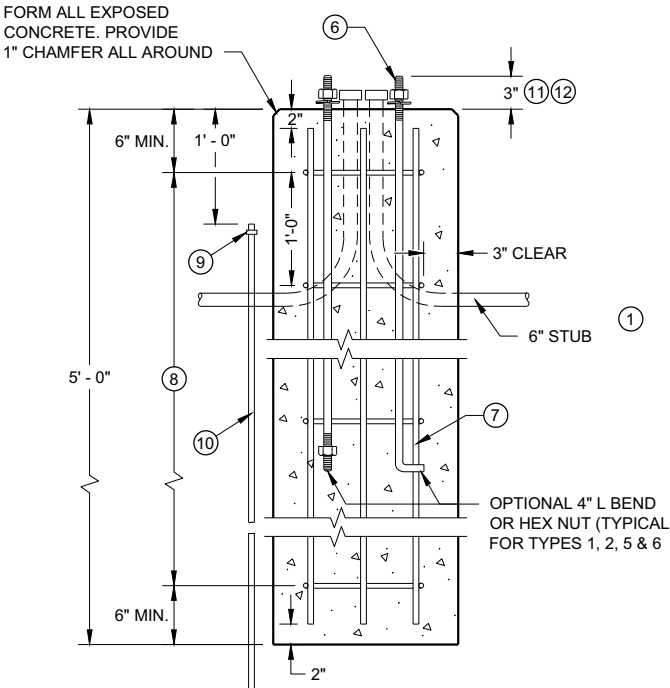
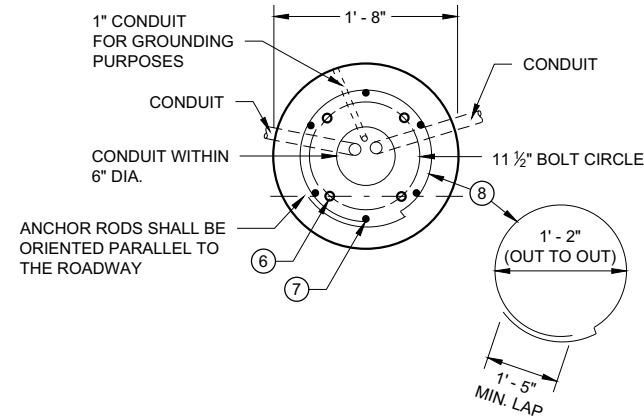
TYPE 1

HALF SECTION IN PAVEMENT



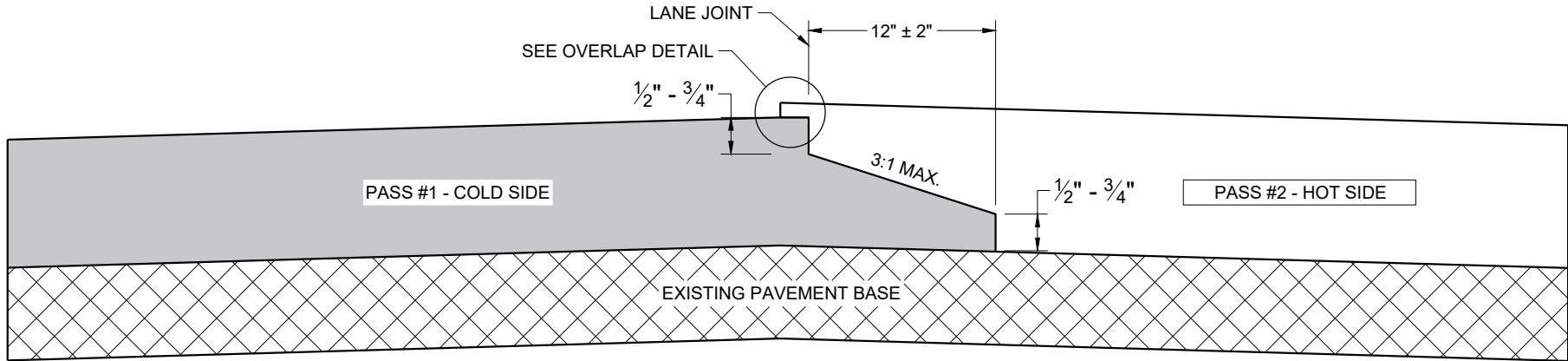
TYPE 2

CONCRETE BASES

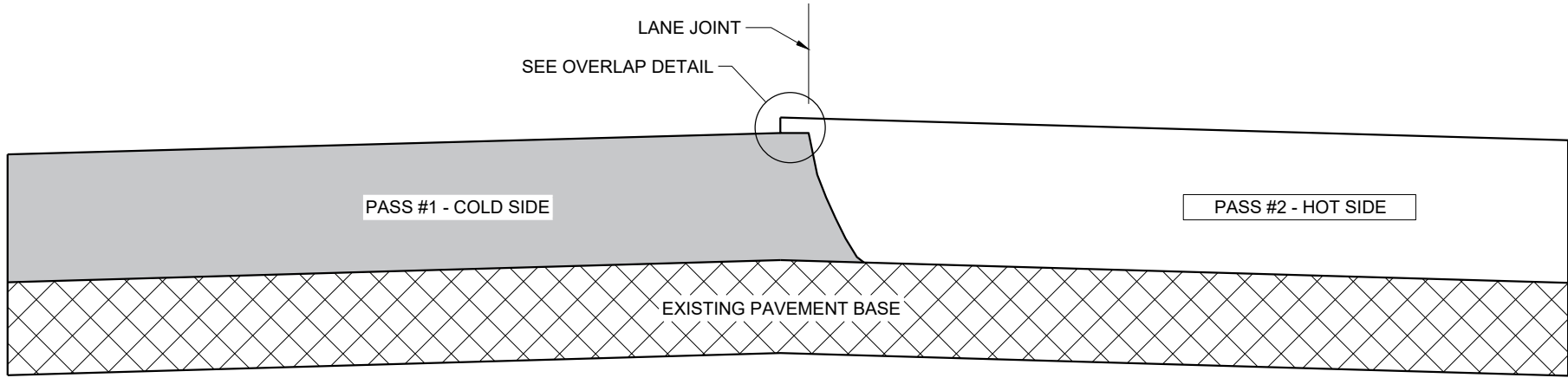


TYPE 5 & 6

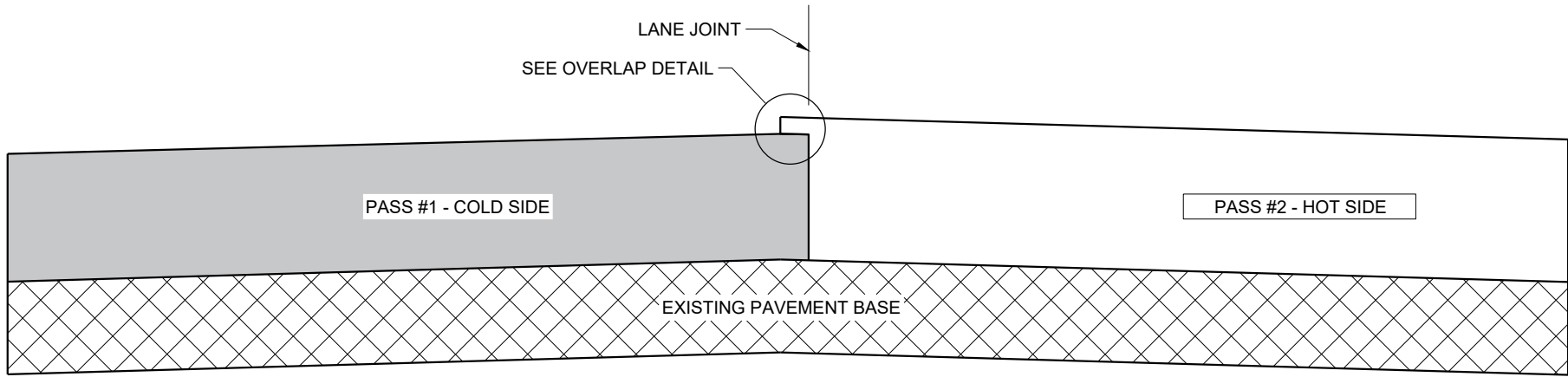




TYPICAL PAVEMENT CROSS SECTION  
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION  
VERTICAL JOINT (MILLED)

GENERAL NOTES

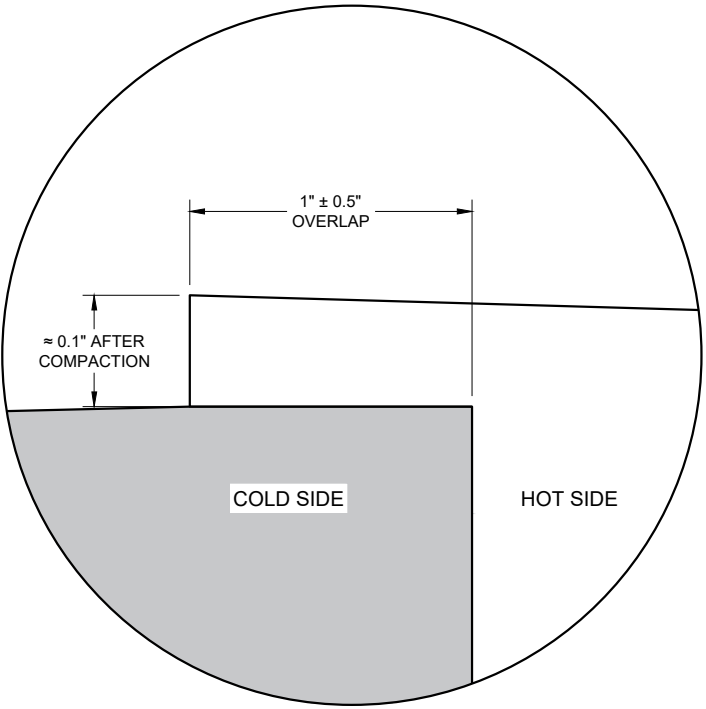
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY  $1" \pm 0.5"$  AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO 2" FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.

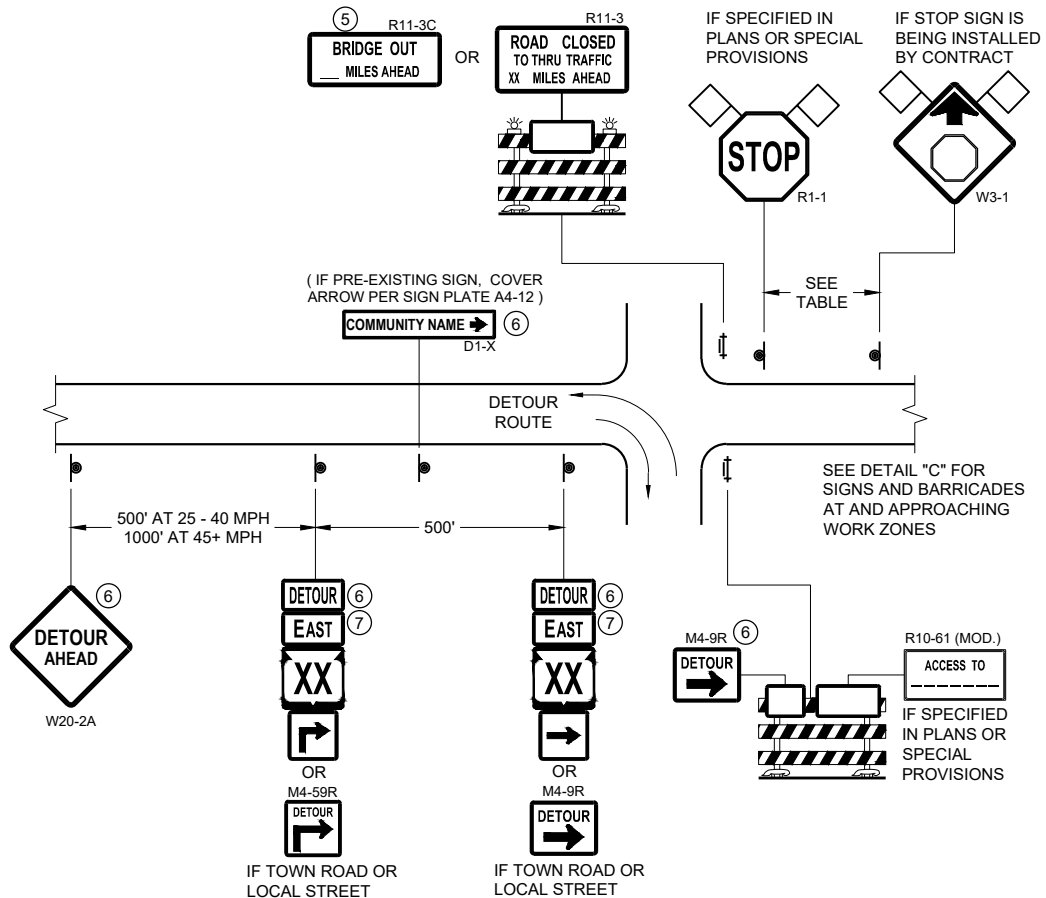


OVERLAP DETAIL (TYPICAL)

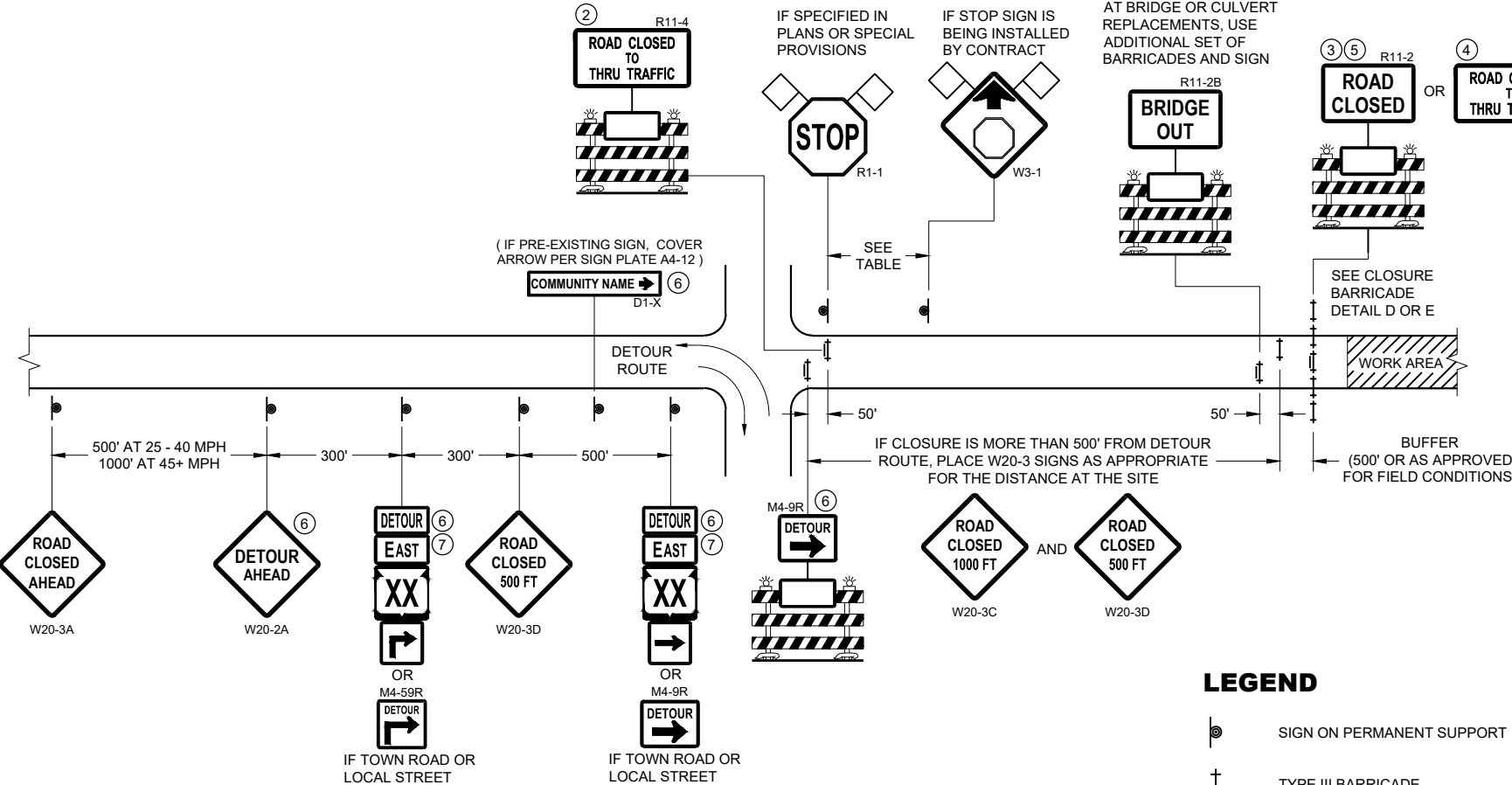
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

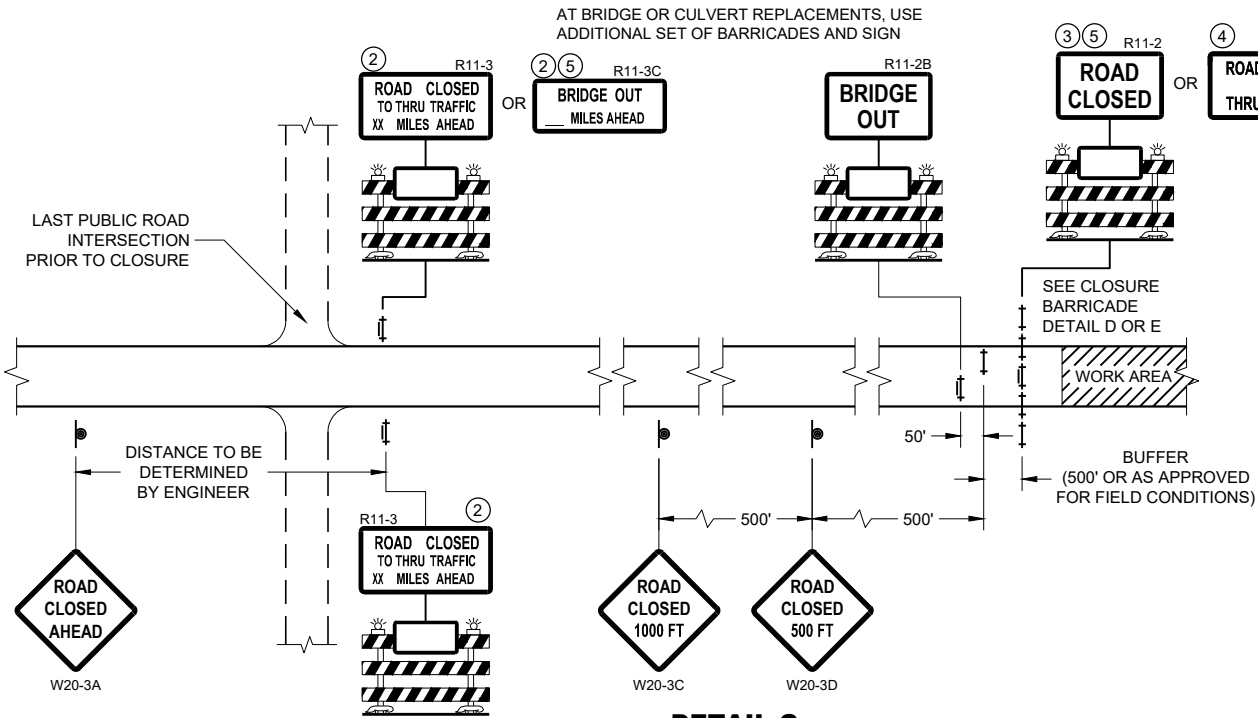
APPROVED  
November 2020 /S/ Steven Hefel  
DATE HMA PAVEMENT ENGIN 350  
FHWA



**DETAIL A**  
**MAINLINE CLOSURE WITH POSTED DETOUR**  
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )



**DETAIL B**  
**MAINLINE CLOSURE WITH POSTED DETOUR**  
WORK ZONE LESS THAN ½ MILE FROM  
DETOUR ROUTE ( 1000 FEET IF URBAN )



**DETAIL C**  
**MAINLINE CLOSURE, NO POSTED DETOUR**

| SPEED LIMIT (MPH) | "STOP AHEAD" ADVANCE WARNING DISTANCE (FT) |
|-------------------|--------------------------------------------|
| 25                | 200                                        |
| 30                | 200                                        |
| 35                | 350                                        |
| 40                | 350                                        |
| 45                | 500                                        |
| 50                | 550                                        |
| 55                | 750                                        |

SEE SDD 15C2-SHEET "b"  
FOR GENERAL NOTES  
AND FOOTNOTES ① THROUGH ⑦

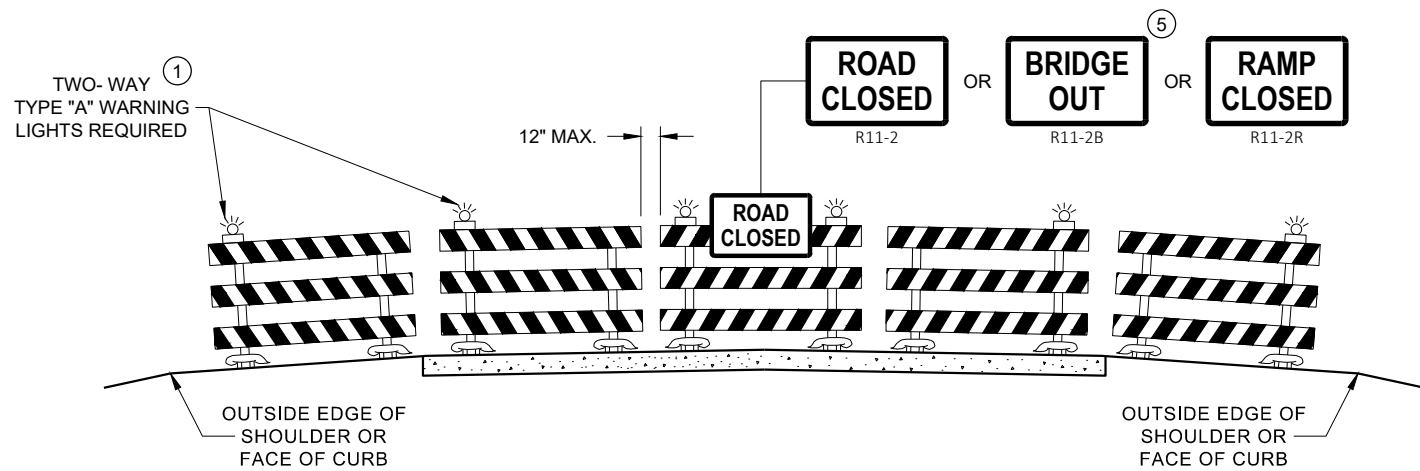
**LEGEND**

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR M4 - 8
- EAST M3 - X
- XX M1 - 4 OR XX M1 - 6 OR COUNTY M1 - 5A
- OR M05 - 1 OR M06 - 1

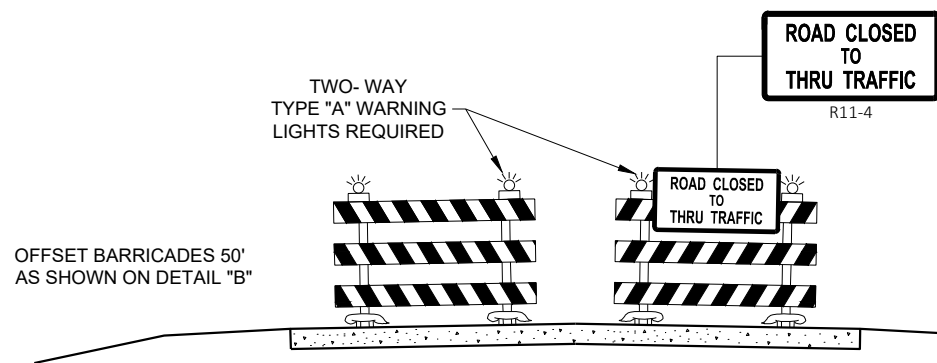
**BARRICADES AND SIGNS  
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 351  
FHWA



**DETAIL D  
ROAD CLOSURE BARRICADE DETAIL  
APPROACH VIEW**



**DETAIL E  
LANE CLOSURE BARRICADE DETAIL  
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

## GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE", SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

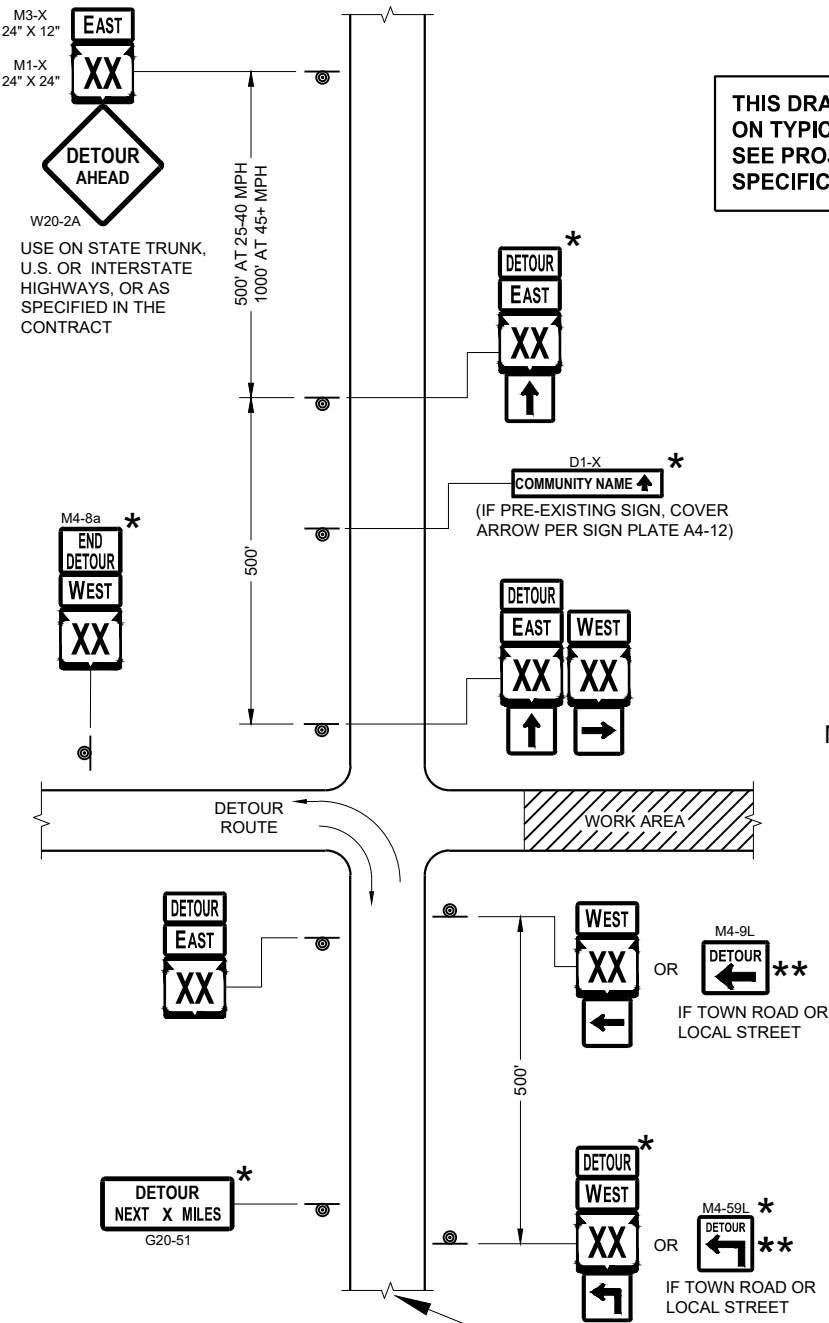
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

## BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

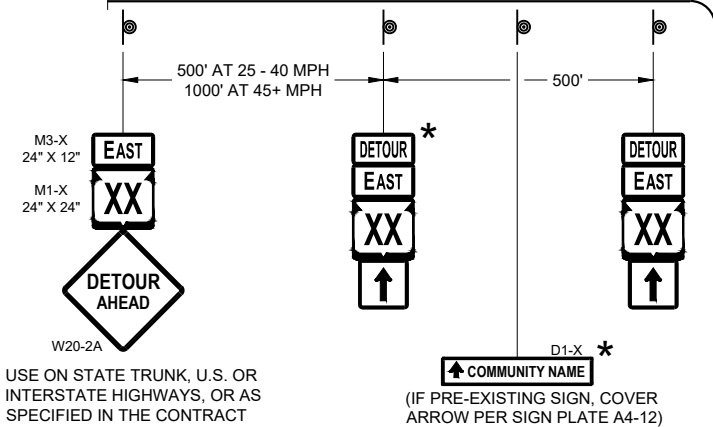
APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 352  
FHWA



SEE SPECIFIC PROJECT DETOUR  
SIGNING DETAIL SHEETS AND  
DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"

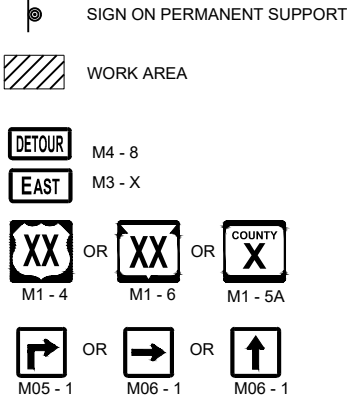
THIS DRAWING PROVIDES GENERAL GUIDANCE  
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.  
SEE PROJECT DETOUR SIGNING SHEETS FOR  
SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT



DETAIL F  
DETOUR SIGNING

LEGEND



GENERAL NOTES

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

THE SPACING BETWEEN TRAFFIC CONTROL AND DETOUR SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

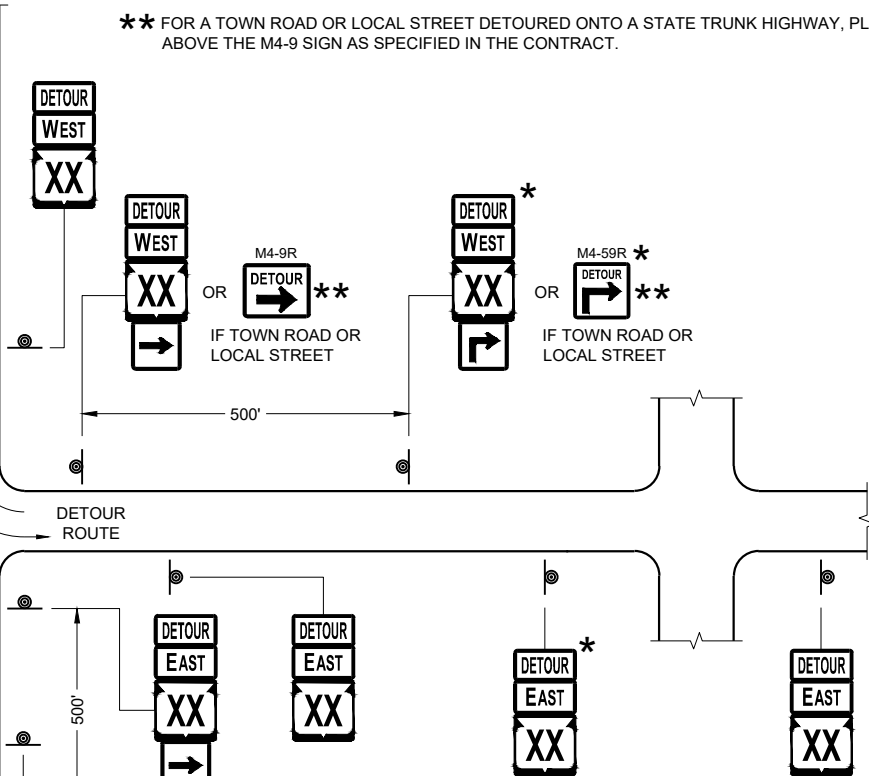
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)  
M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)  
M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)  
M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)  
M4-9 AND M4-59 SHALL BE 30" X 24"  
M4-8a SHALL BE 24" X 18"  
G20-51 SHALL BE 60" X 24"  
W20-2A SHALL BE 48" X 48"  
D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- \* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- \*\* FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



PLACE SIGNS BEYOND INTERSECTIONS  
WITH STATE OR COUNTY TRUNK  
HIGHWAYS OR AT 4 MILE MAXIMUM  
SPACING (4 BLOCKS IF URBAN AREA)

DETOUR SIGNING  
FOR MAINLINE CLOSURES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 353

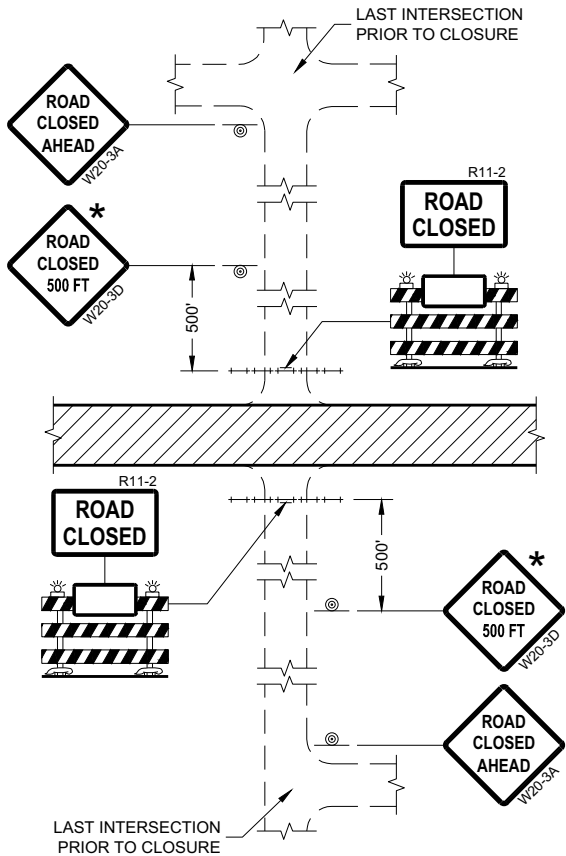
FHWA



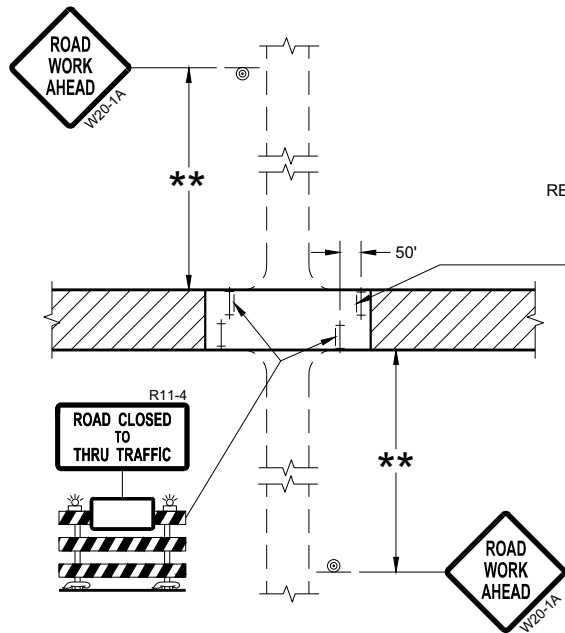


1-1/4" O.D. x 3/8" I.D. x .080 NYLON

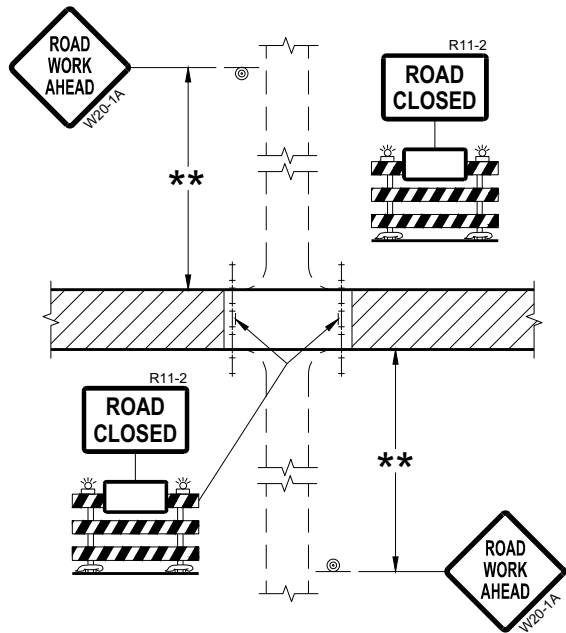
|                                                                            |                                                                                            |
|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <h1 style="margin: 0;">MODIFIED ROUTE ASSEMBLY<br/>FOR DETOUR SIGNING</h1> |                                                                                            |
| <p>STATE OF WISCONSIN</p> <p>DEPARTMENT OF TRANSPORTATION</p>              |                                                                                            |
| <p>APPROVED</p> <p><u>May 2023</u></p> <p>DATE</p>                         | <p><u>/S/ Andrew Heidtke</u></p> <p>ROADWAY STANDARDS DEVEL <b>354</b></p> <p>ENGINEER</p> |



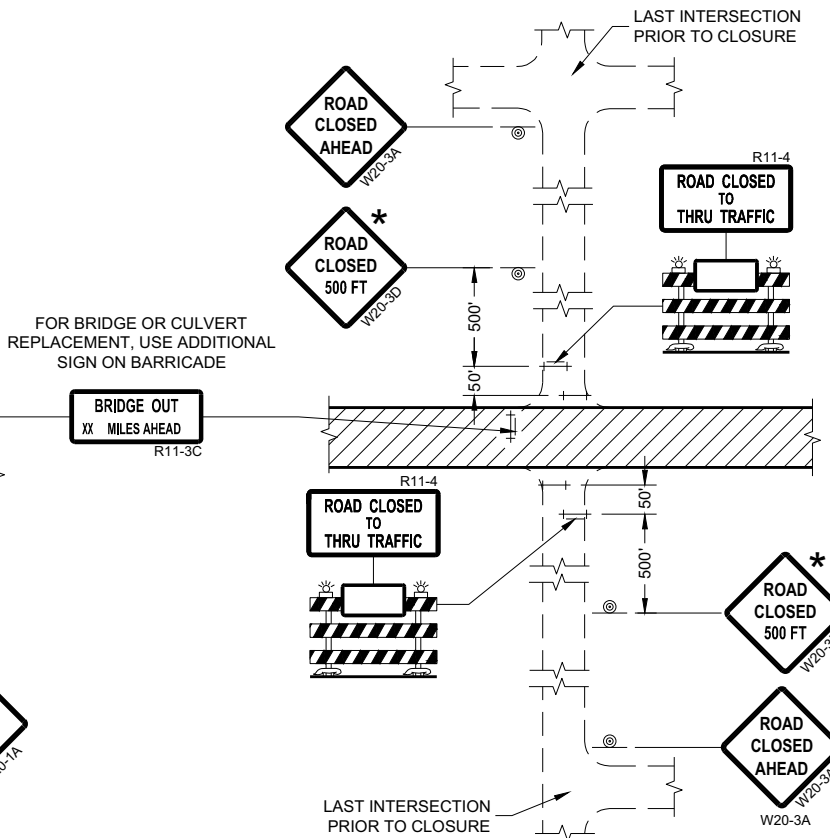
**DETAIL 1**  
(NO ACCESS TO PROJECT)



**DETAIL 3**  
(PUBLIC CROSS-TRAFFIC MAINTAINED.  
CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT ACCESS TO PROJECT)



**DETAIL 2**  
(PUBLIC CROSS-TRAFFIC MAINTAINED.  
NO ACCESS TO PROJECT)



**DETAIL 4**  
(CONTRACTOR, LOCAL BUSINESS AND  
RESIDENT ACCESS TO PROJECT)

### GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY REESTABLISHED UPON COMPLETION OF THE OPERATION OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW-INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:  
R11-2 SHALL BE 48" X 30".  
R11-4 AND R11-3 SHALL BE 60" X 30".

- \* OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- \*\* 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

### LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

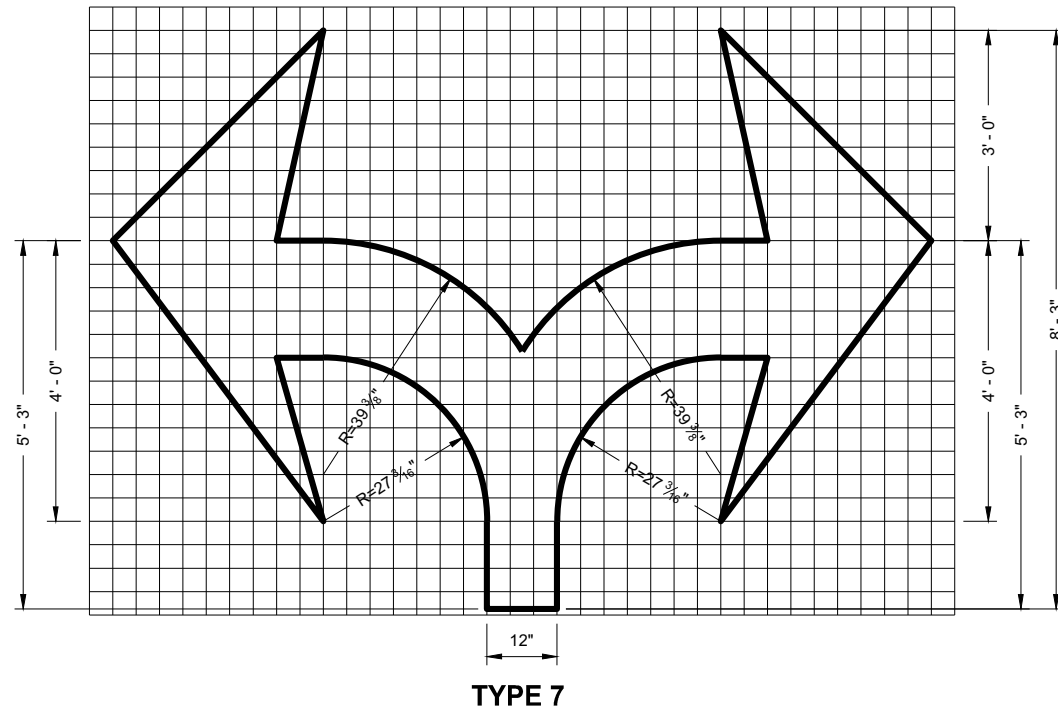
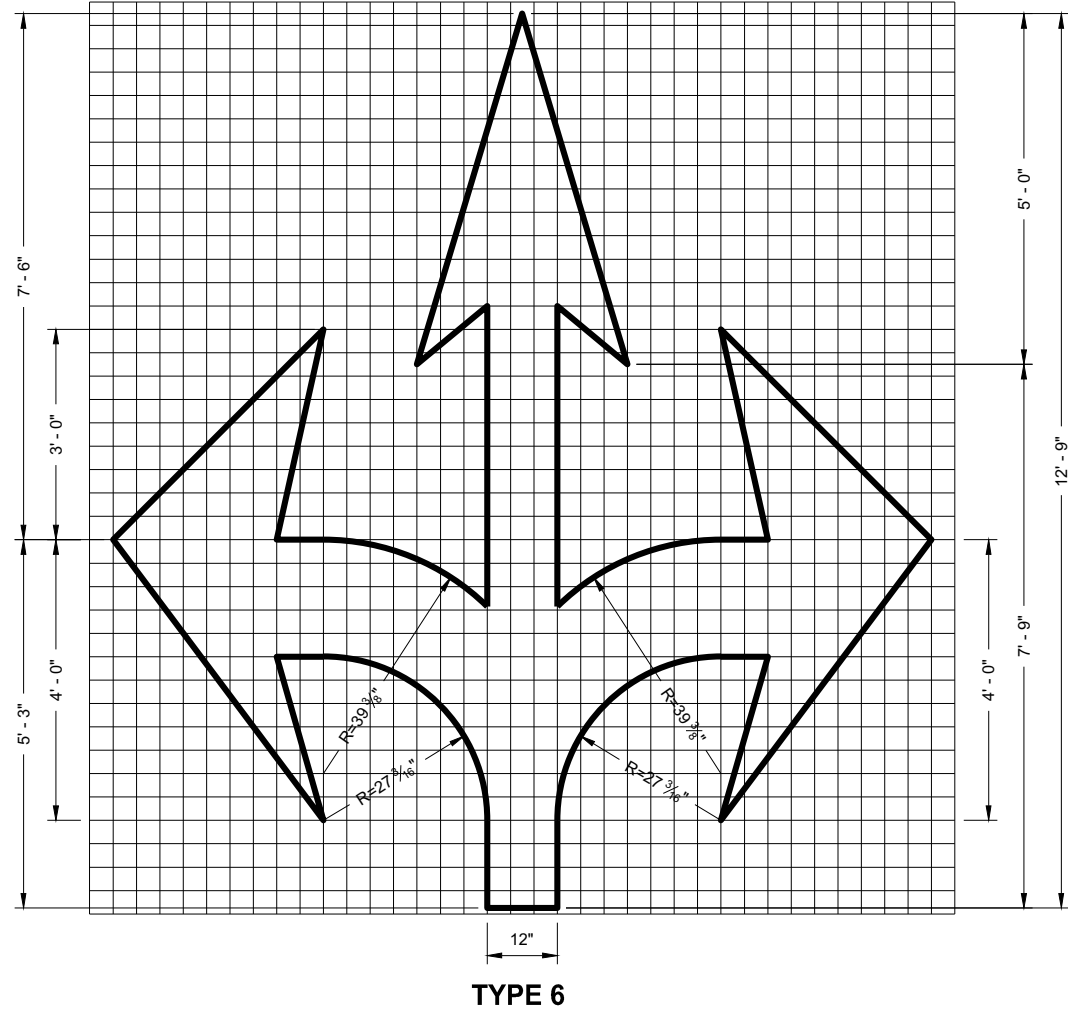
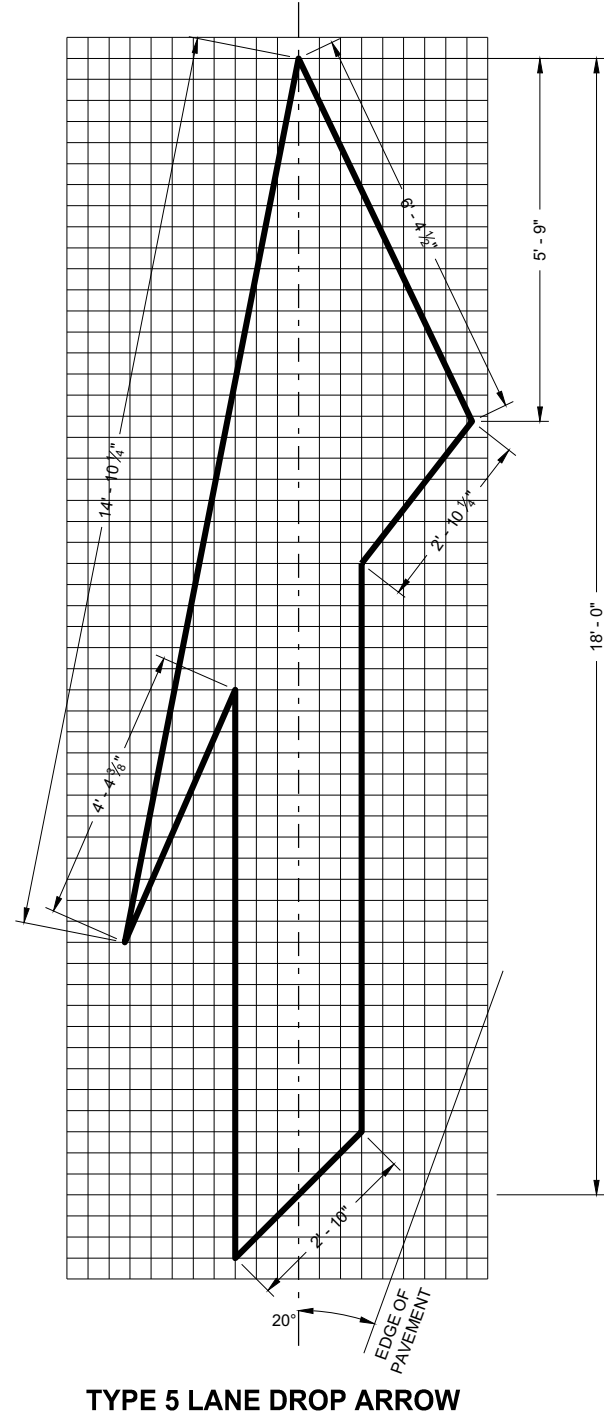
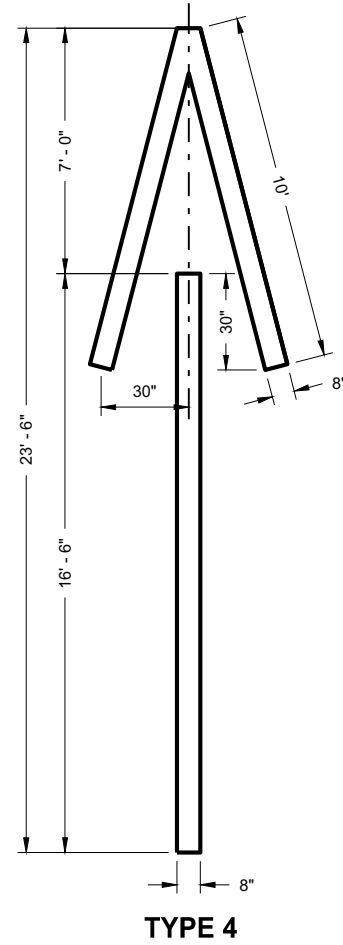
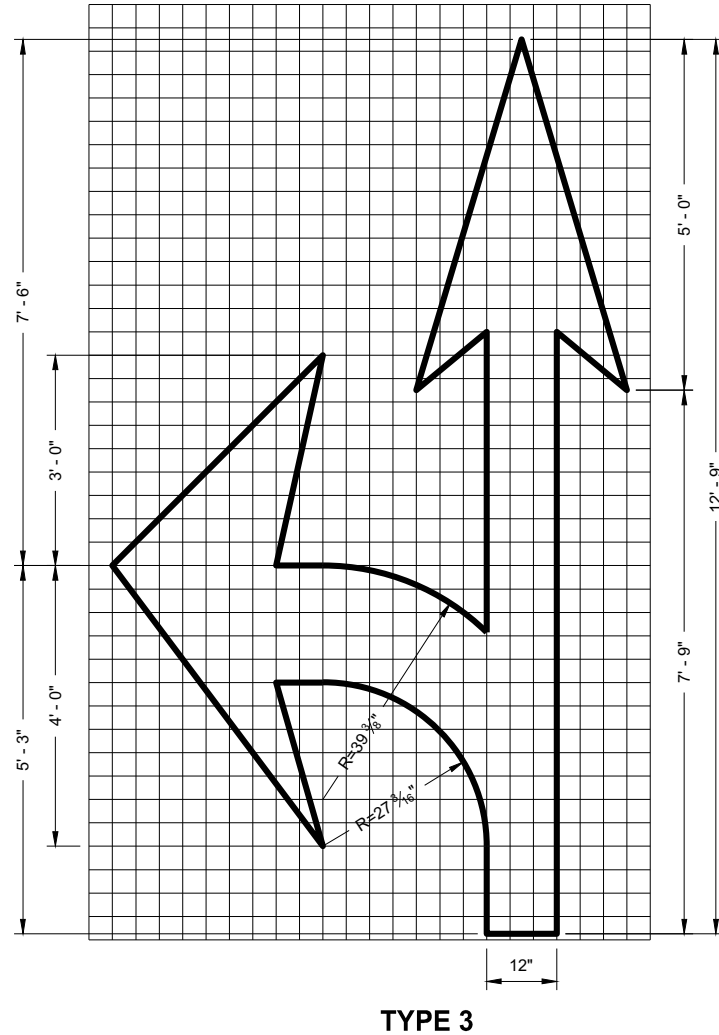
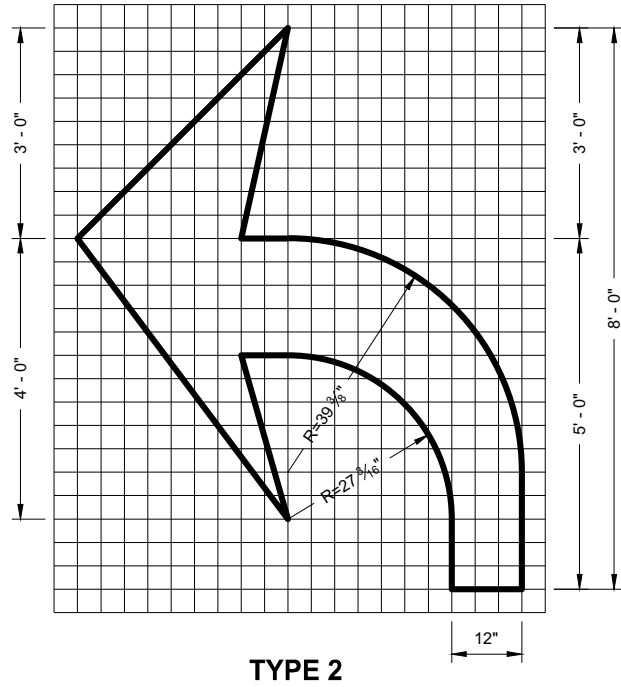
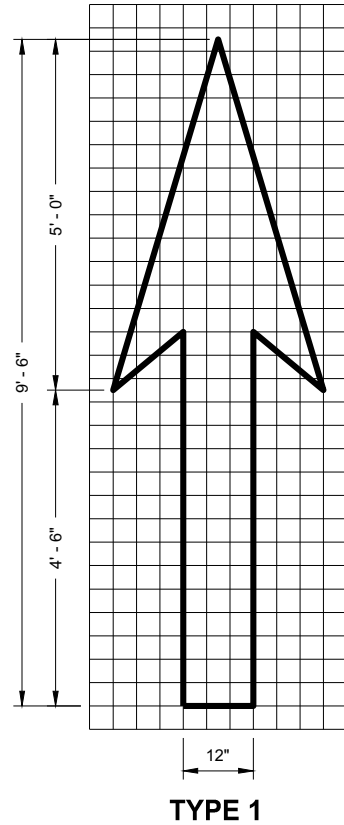
### BARRICADES AND SIGNS FOR SIDEROAD CLOSURES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
July 2018 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 355

FHWA





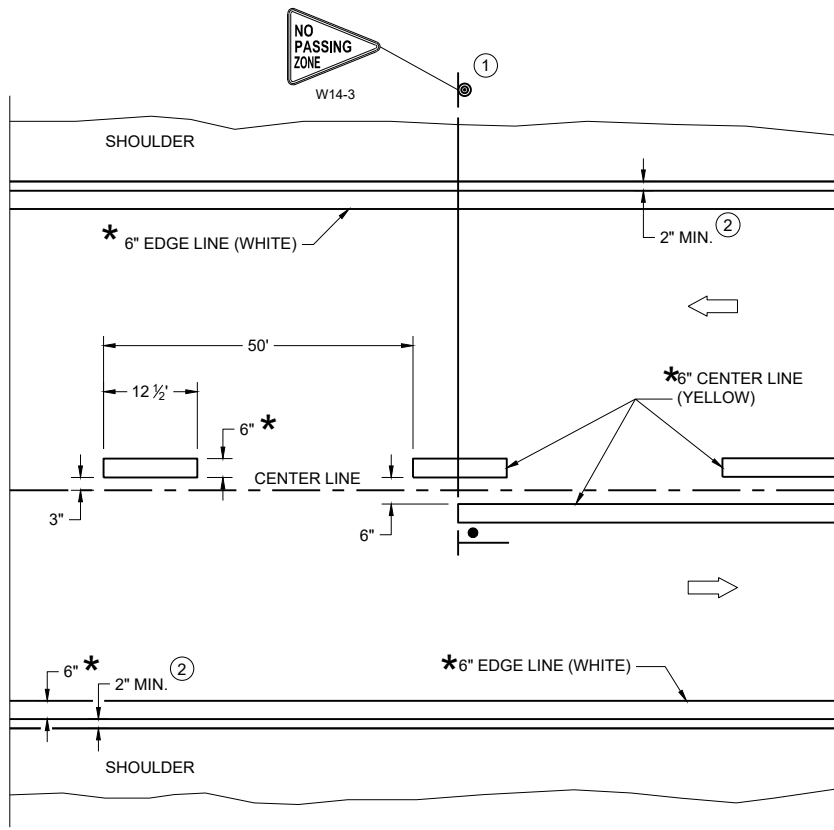
### GENERAL NOTES

DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

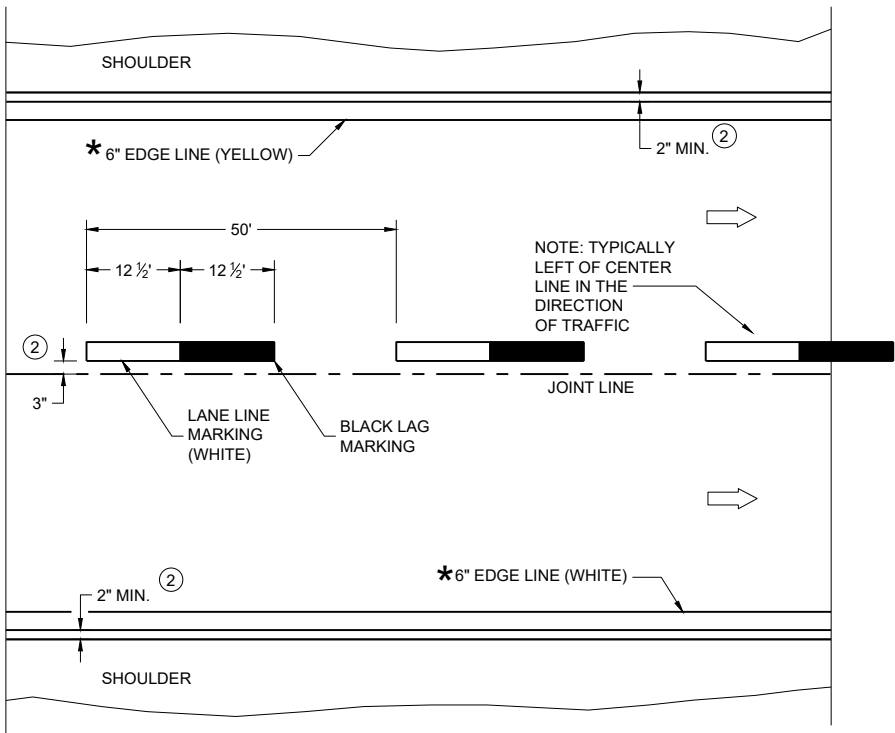
### PAVEMENT MARKING ARROWS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
November 2019  
DATE  
/S/ Matthew Rauch  
STATE SIGNING AND MAF 356  
ENGINEER  
FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

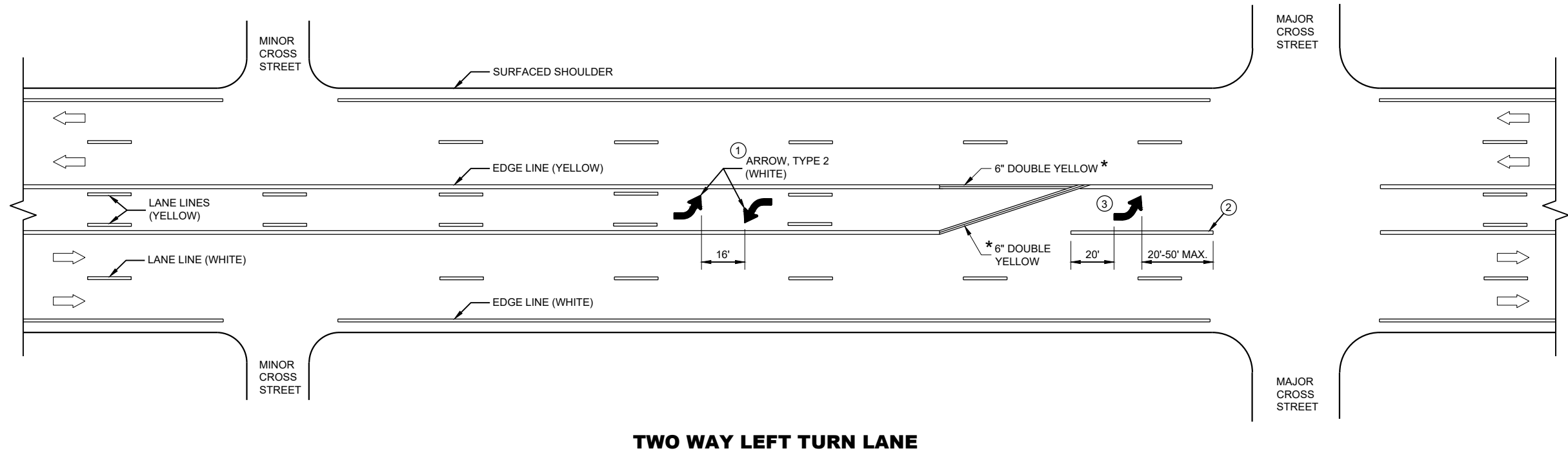
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

| PERMANENT LONGITUDINAL PAVEMENT MARKINGS           |                                                           |
|----------------------------------------------------|-----------------------------------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                           |
| APPROVED<br>May 2023<br>DATE                       | /S/ Jeannie Silver<br>Statewide Pavement Marking Engineer |
| FHWA                                               | 357                                                       |



**GENERAL NOTES**

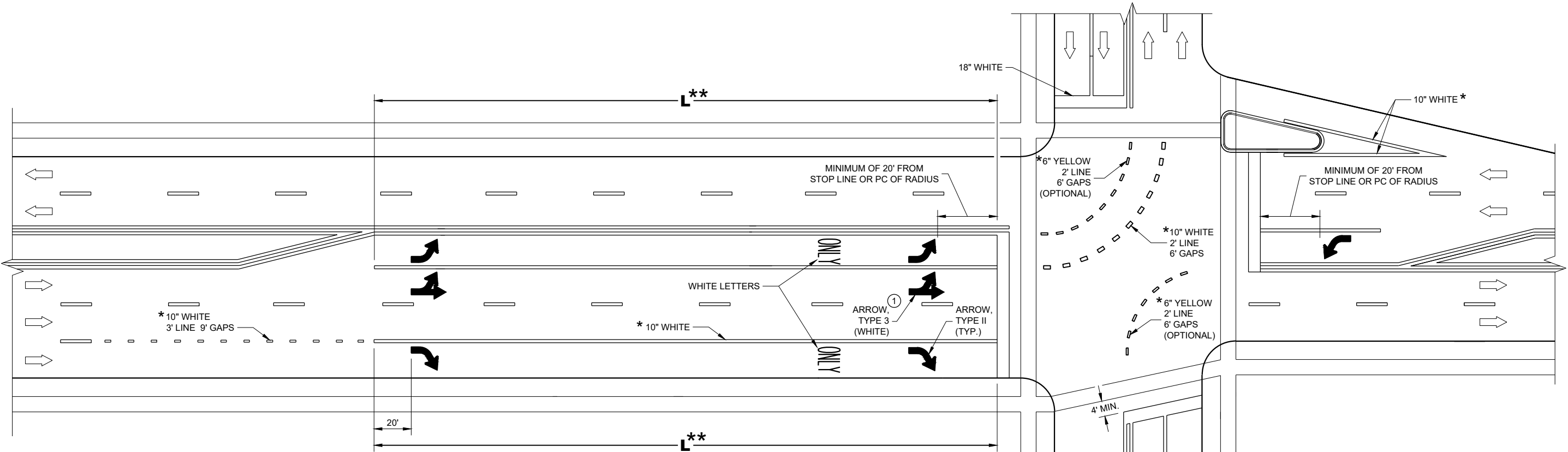
- ① A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ② 10" WHITE
- ③ TURN BAY LENGTH OF LESS THAN 48' DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT.

➡ DIRECTION OF TRAFFIC

\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

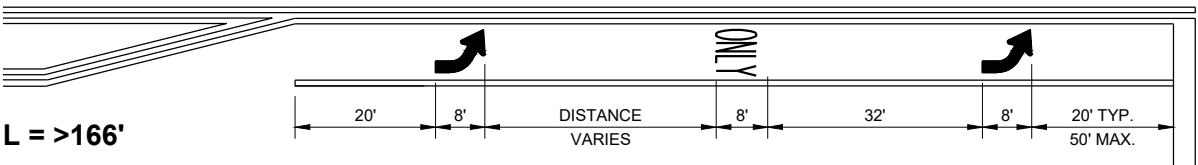
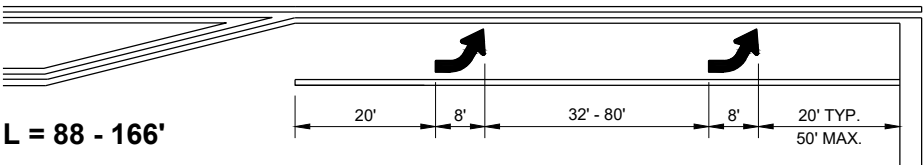
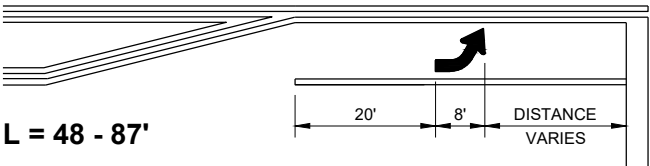
**PAVEMENT MARKING  
(TURN LANES)**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 358



TURN LANE OPTIONS

LENGTH OF TURN BAY ( **L** ) OF 0 - 47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



\*\* (SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

① QUANTITY AND LOCATION OF TYPE 3 ARROWS ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION IN THE SAME DIRECTION OF TRAVEL, THE ARROWS AND "ONLY" MARKING MAY BE ELIMINATED.

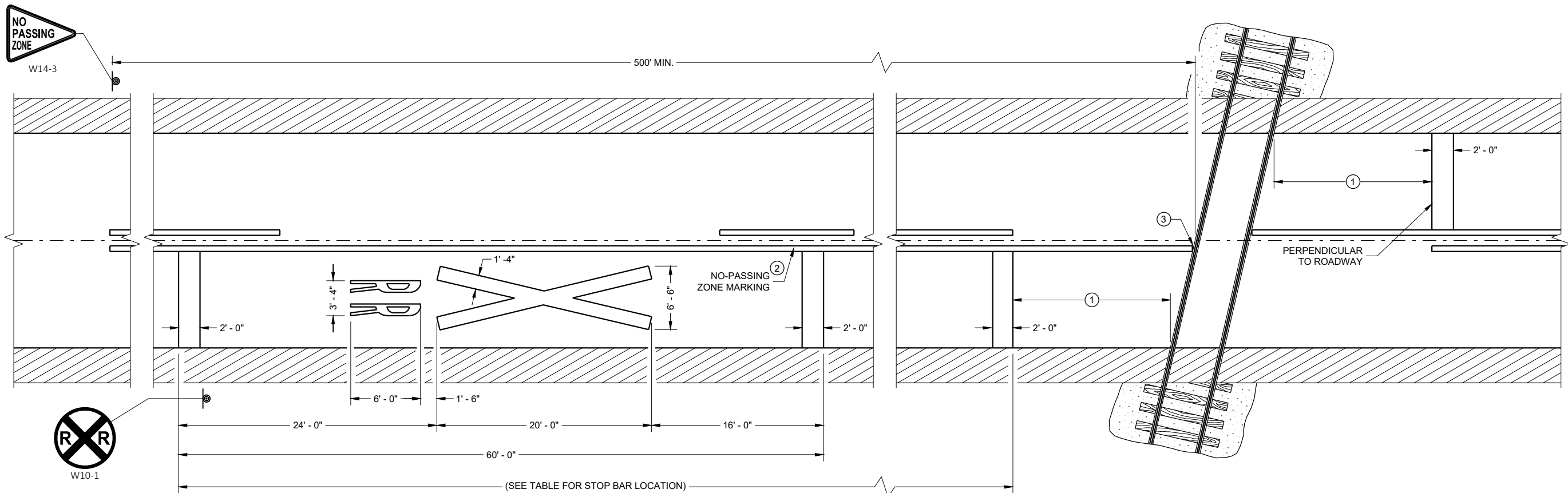
➡ DIRECTION OF TRAFFIC

**L** = LENGTH OF TURN BAY

\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

PAVEMENT MARKING  
(TURN LANES)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 359



PAVEMENT MARKING

LEGEND

SIGN ON PERMANENT SUPPORT

GENERAL NOTES

- DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- ON MULTI-LANE ROADS THE TRANSVERSE BANDS SHOULD EXTEND ACROSS ALL APPROACH LANES, AND INDIVIDUAL R X R SYMBOLS SHOULD BE USED IN EACH APPROACH LANE.
- CENTER OR LANE LINES AND NO-PASSING ZONE MARKINGS SHOWN ON THIS DRAWING ARE REQUIRED AND PAID FOR UNDER OTHER ITEMS IN THE CONTRACT.
- TRACE EXISTING SYMBOL WHERE EXISTING SYMBOLS ARE PLACED.

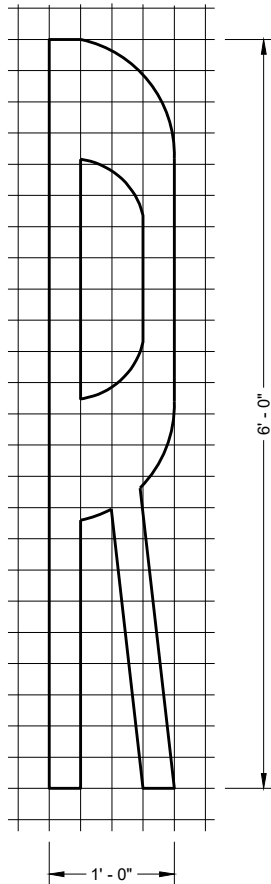
- ① PLACE STOP BAR APPROXIMATELY 8 FEET IN ADVANCE OF THE GATE (IF PRESENT), BUT NO CLOSER THAN 15 FEET IN ADVANCE OF THE NEAREST RAIL. FIELD-FIT STOP BAR TO MAXIMIZE VIEW OF APPROACHING TRAIN.
- ② 500' MINIMUM. MARKING LIMITS MAY BE EXTENDED AS DIRECTED BY THE ENGINEER TO MEET ADJACENT NO-PASSING ZONE MARKINGS.
- ③ FOR MULTIPLE TRACK CROSSINGS, THE BARRIER LINE SHALL EXTEND TO THE NEAR RAIL OF THE FURTHEST TRACK IN THE DIRECTION OF HIGHWAY TRAVEL.

DISTANCE TABLE

TABLE BASED UPON 2C-4 WISCONSIN SUPPLEMENT OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

| POSTED SPEED (M.P.H.) | DIMENSION RANGE (FEET) |
|-----------------------|------------------------|
| 25                    | 150* - 250'            |
| 30                    | 200* - 300'            |
| 35                    | 250* - 450'            |
| 40                    | 300* - 500'            |
| 45                    | 400* - 650'            |
| 50                    | 550* - 800'            |
| 55                    | 750* - 1000'           |
| 60                    | 1000* - 1250'          |
| 65                    | 1000* - 1250'          |

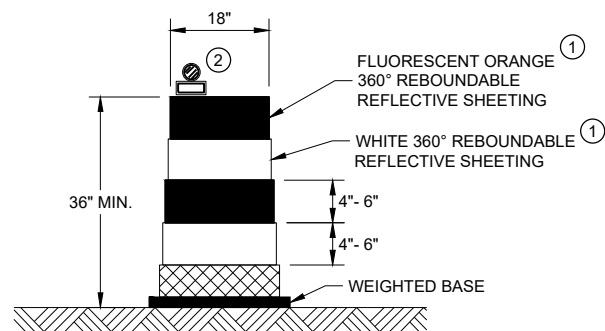
\* THE MINIMUM DISTANCES IN THE TABLE ARE DESIRABLE AND SHOULD BE USED. THE DISTANCES MAY BE INCREASED UP TO THE MAXIMUM TO ALLOW FOR FIELD CONDITIONS SUCH AS THE CLOSED PROXIMITY OF DRIVEWAYS, BRIDGES, SIDE ROADS OR OTHER FEATURES THAT WOULD PROHIBIT THE MINIMUM DISTANCES FROM BEING USED.



SIGNING AND PAVEMENT MARKING DETAILS FOR RAILROAD - HIGHWAY GRADE CROSSINGS

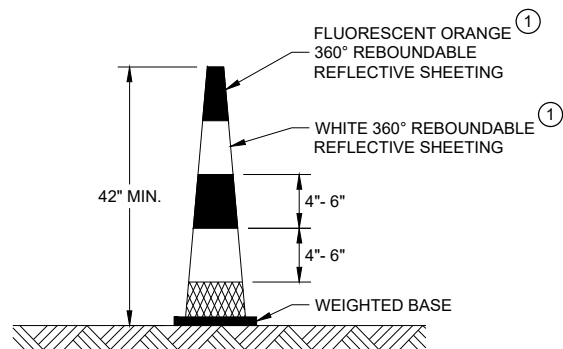
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2023  
DATE  
/S/ Matthew R. Rauch  
STATE SIGNING AND MAP ENGINEER 360  
FHWA



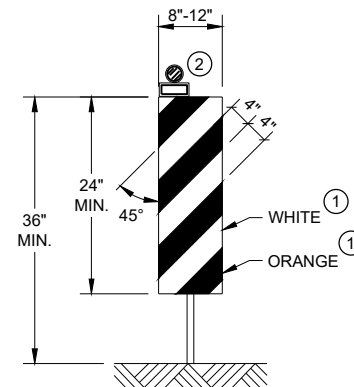
**DRUM**

BALLAST WIDTHS  
RANGE FROM 24"-36"



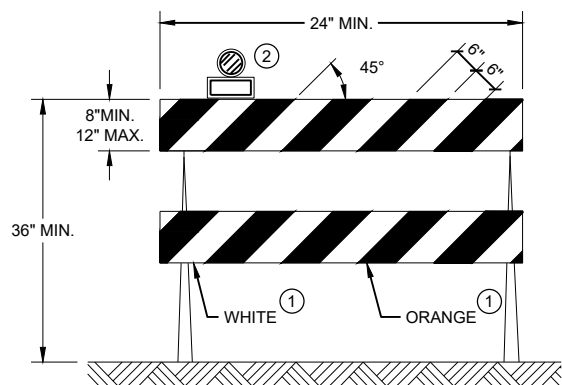
**42" CONE**

DO NOT USE IN TAPERS  
½ SPACING OF DRUMS  
BALLAST WIDTHS  
RANGE FROM 14"-20"



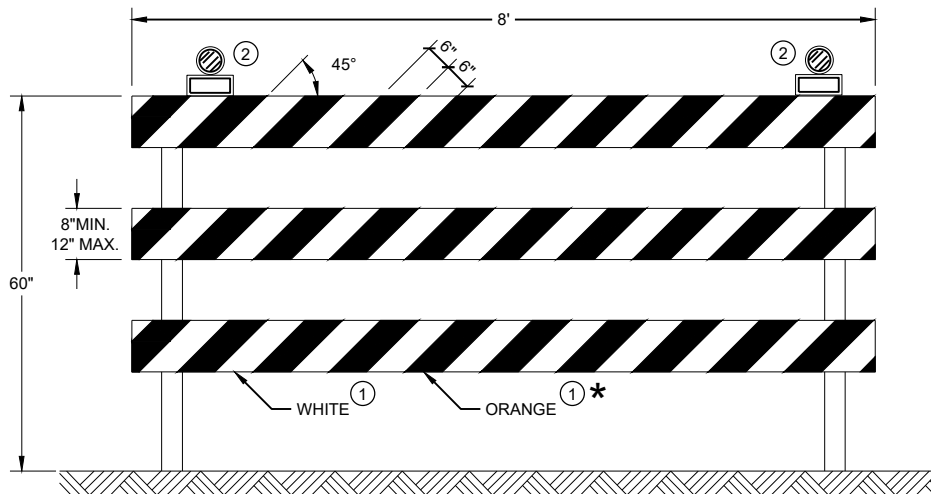
**VERTICAL PANEL**

THE STRIPES SHALL SLOPE DOWNWARD TO  
THE TRAFFIC SIDE FOR CHANNELIZATION.



**TYPE II BARRICADE**

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES  
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD  
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



**TYPE III BARRICADE**

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP  
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

\* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

**GENERAL NOTES**

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

| CHANNELIZING DEVICES<br>DRUMS, CONES, BARRICADES<br>AND VERTICAL PANELS |                                              |
|-------------------------------------------------------------------------|----------------------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION                      |                                              |
| APPROVED<br>November 2022<br>DATE                                       | /S/ Andrew Heidtke<br>WORK ZONE ENGINEER 361 |
| FHWA                                                                    |                                              |



LEGEND

-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  TEMPORARY PORTABLE RUMBLE STRIP ARRAY
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND LOCATION OF ALL FLAGGERS SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

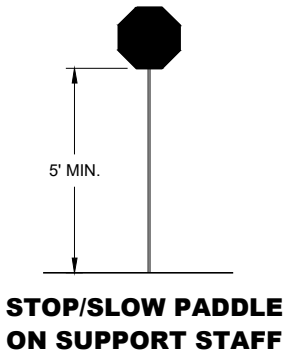
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

- UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.
- INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.
- PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.
- DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.

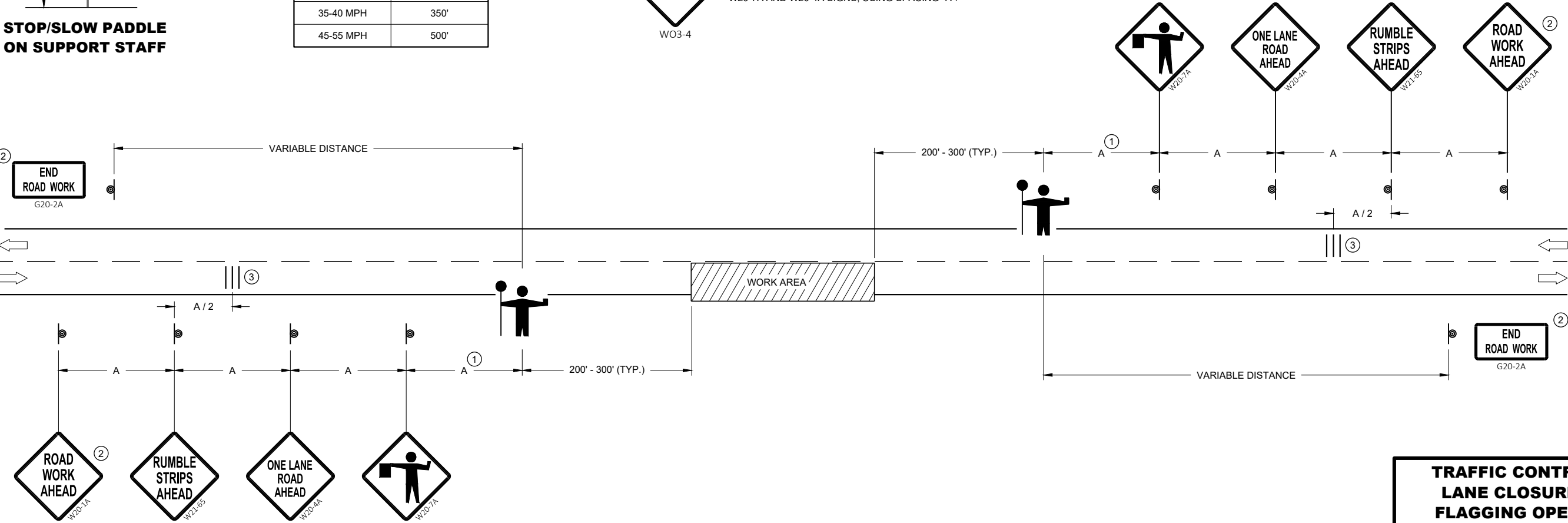


SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

| SPEED LIMIT | SPACING "A" |
|-------------|-------------|
| 25-30 MPH   | 200'        |
| 35-40 MPH   | 350'        |
| 45-55 MPH   | 500'        |



USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".

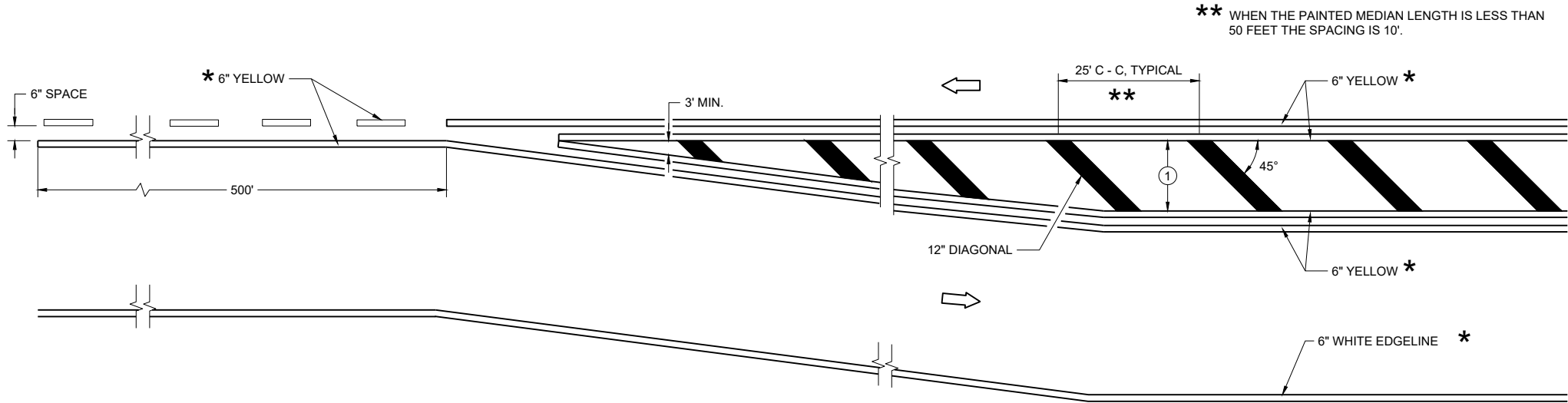


**TRAFFIC CONTROL FOR  
LANE CLOSURE WITH  
FLAGGING OPERATION**

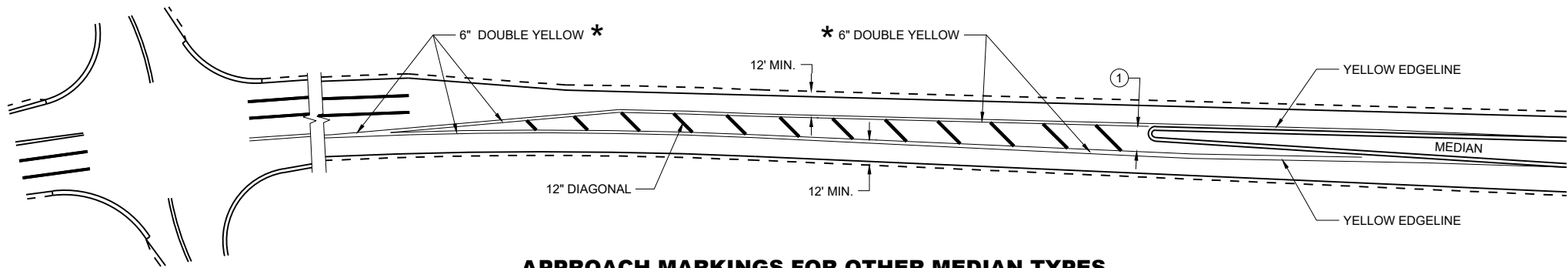
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
May 2022 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 362

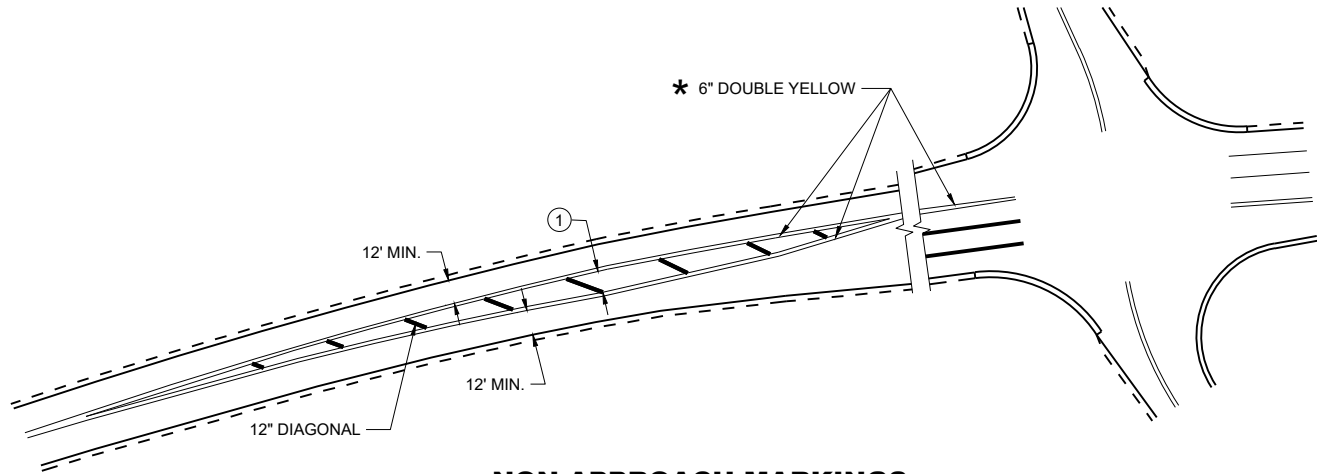
FHWA



MEDIAN ISLAND DETAIL



APPROACH MARKINGS FOR OTHER MEDIAN TYPES



NON-APPROACH MARKINGS

GENERAL NOTES

- ① DIAGONALS ARE OPTIONAL WHEN PAINTED ISLAND IS LESS THAN 6 FEET AT THE WIDEST POINT. OMIT DIAGONALS IF WIDTH IS LESS THAN 4 FEET.

➡ DIRECTION OF TRAVEL

\* CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

MEDIAN ISLAND  
PAVEMENT MARKINGS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
August 2024 /S/ Jeannie Silver  
DATE Statewide Pavement Marking Engineer



| REQUIREMENTS FOR EDGE LINES |                               |             |
|-----------------------------|-------------------------------|-------------|
| POSTED SPEED                | IS THERE CONTINUOUS LIGHTING? |             |
|                             | YES                           | NO          |
| ≤ 30 MPH                    | NO                            | OPTIONAL    |
| 35 OR 40 MPH                | OPTIONAL                      | RECOMMENDED |
| ≥ 45 MPH                    | RECOMMENDED                   | REQUIRED    |

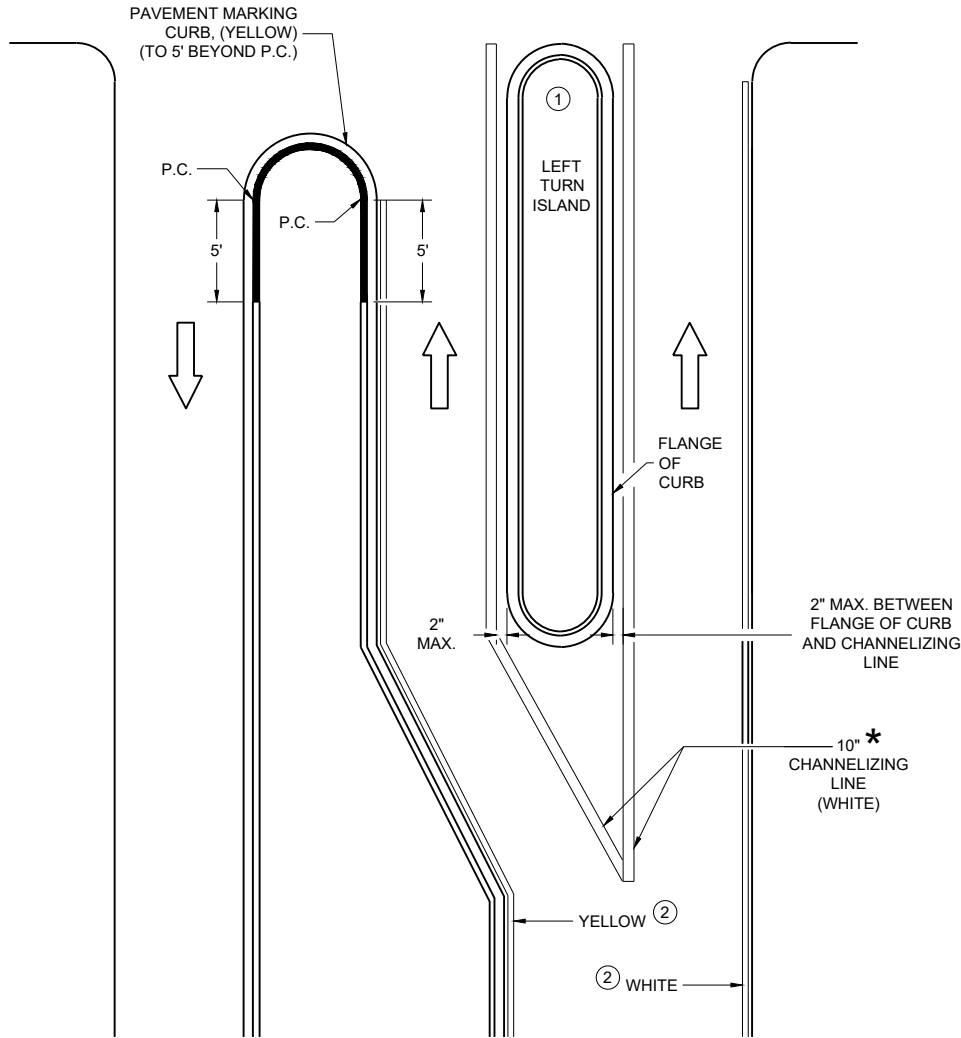
\*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

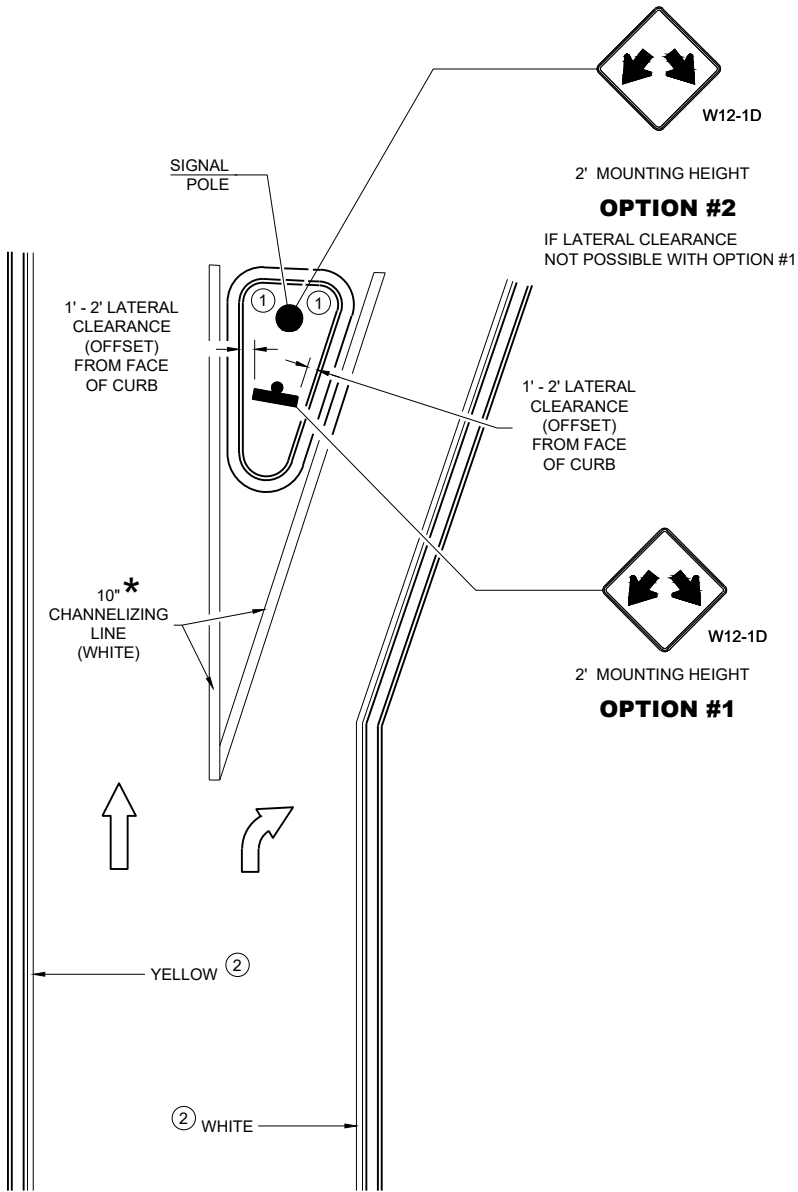
APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.  
SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

- ① MARK CURB NOSES YELLOW.
- ② MARK ACCORDING TO TABLE.
- ③ CHEVRON MAY BE OMITTED IF LESS THAN 4" WIDE

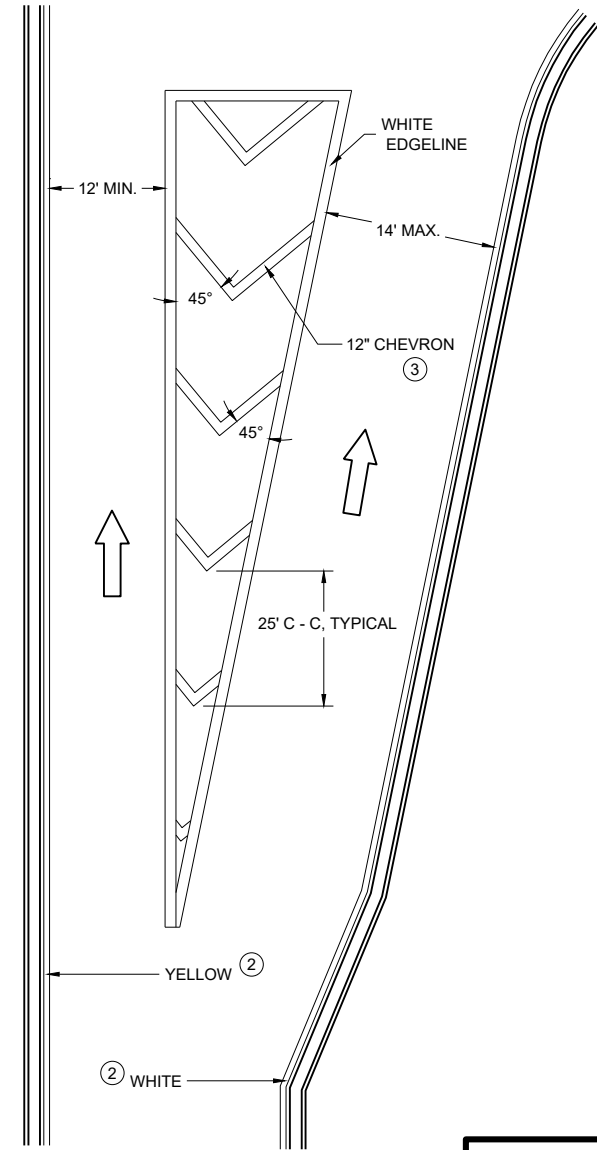
➡ DIRECTION OF TRAVEL



LEFT TURN & MEDIAN ISLAND



RIGHT TURN ISLAND



TURN LANE DETAIL

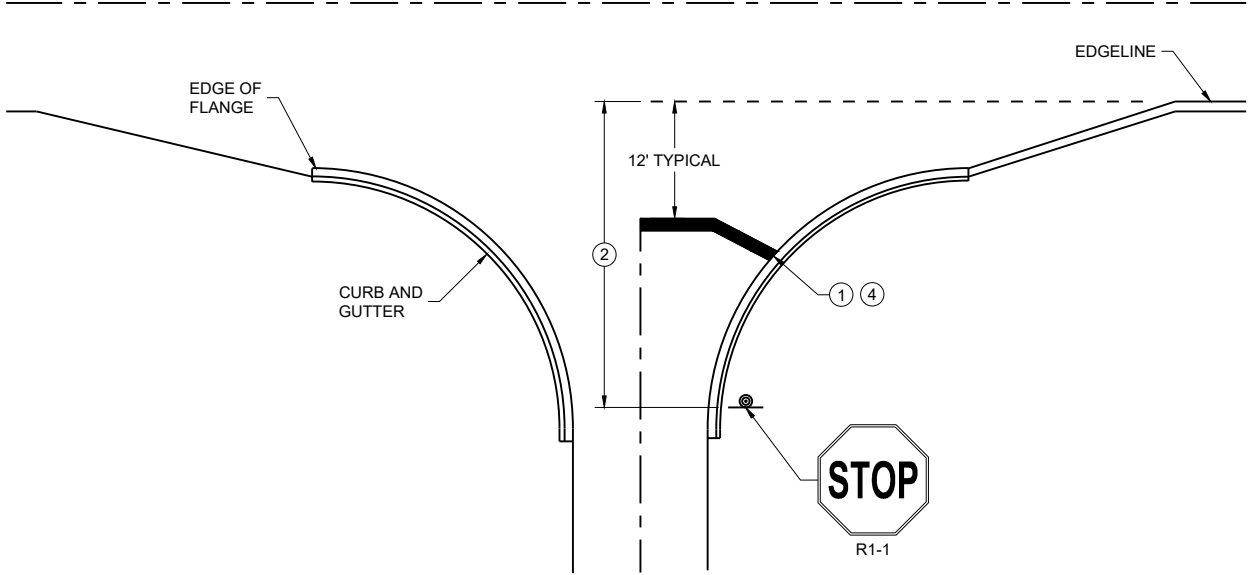
**MEDIAN PAVEMENT MARKINGS, DOUBLE ARROW WARNING SIGN PLACEMENT**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

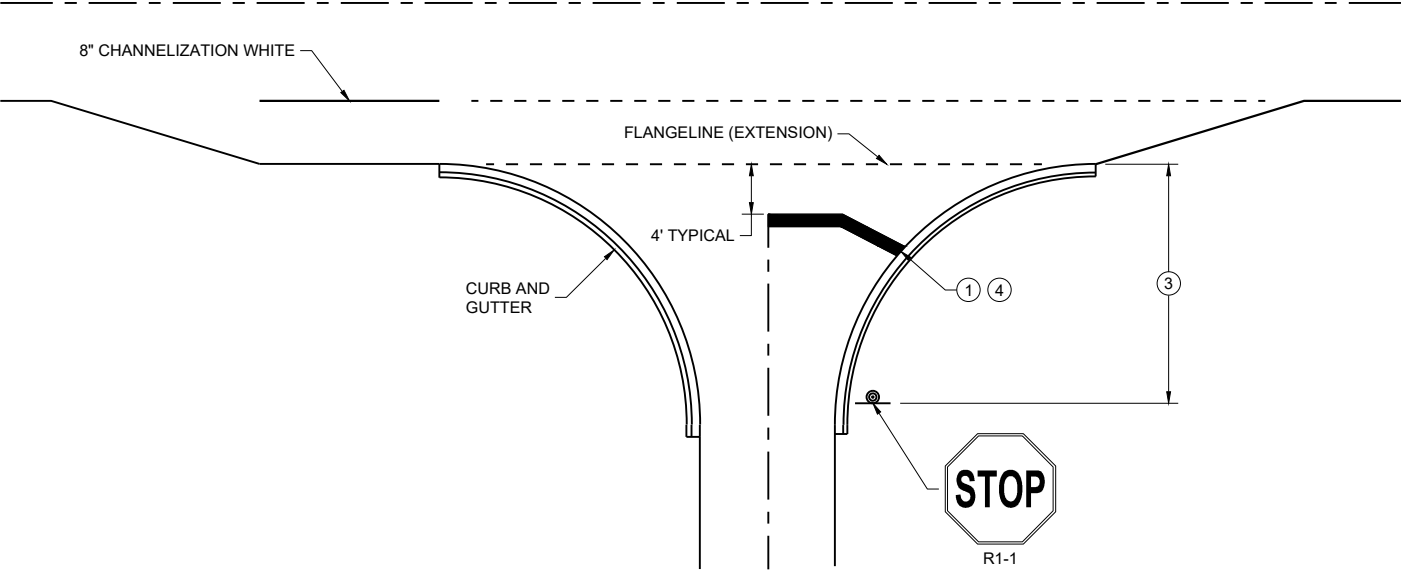
APPROVED  
August 2024  
DATE

/S/ Jeannie Silver  
Statewide Pavement Marking Engineer

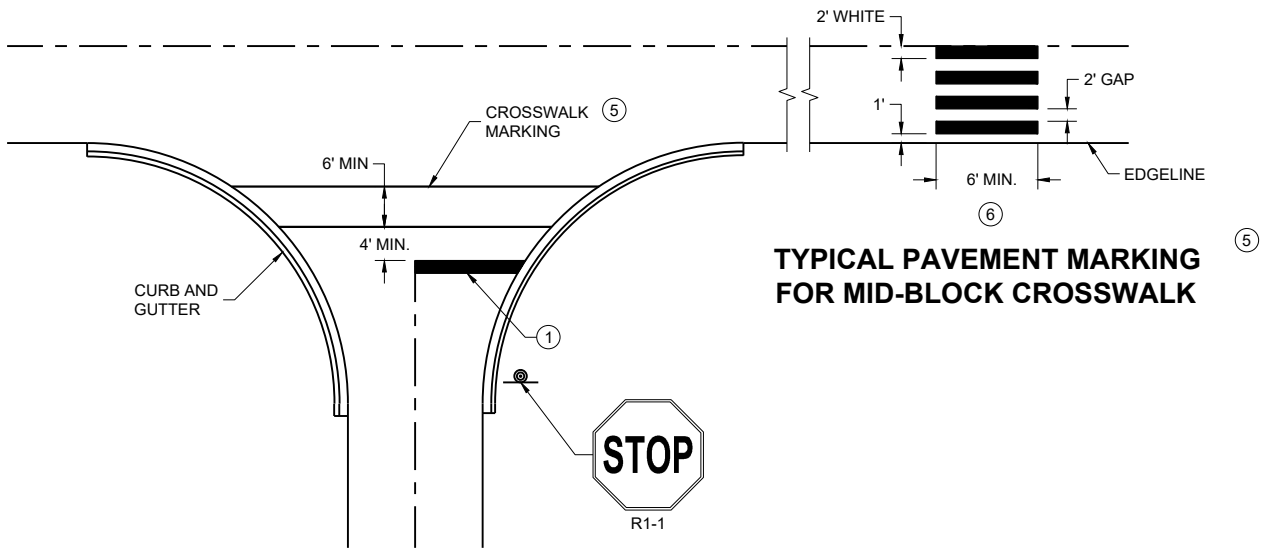
FHWA



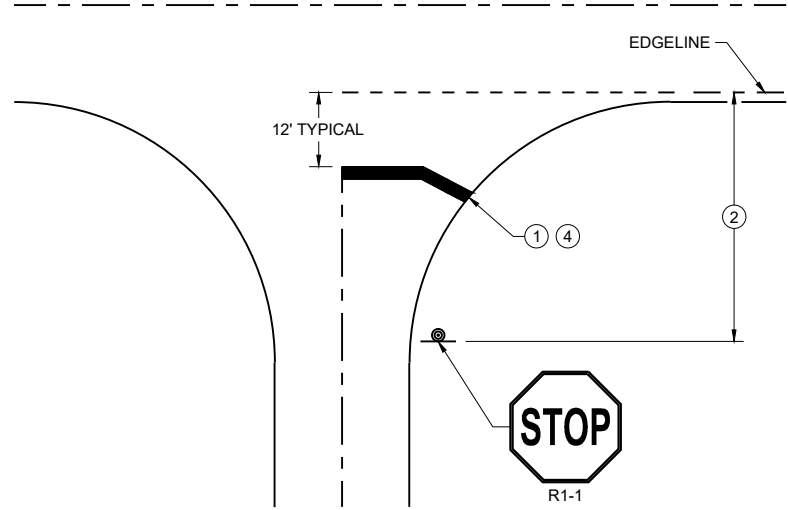
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDE ROADS WITH CROSSWALK MARKING



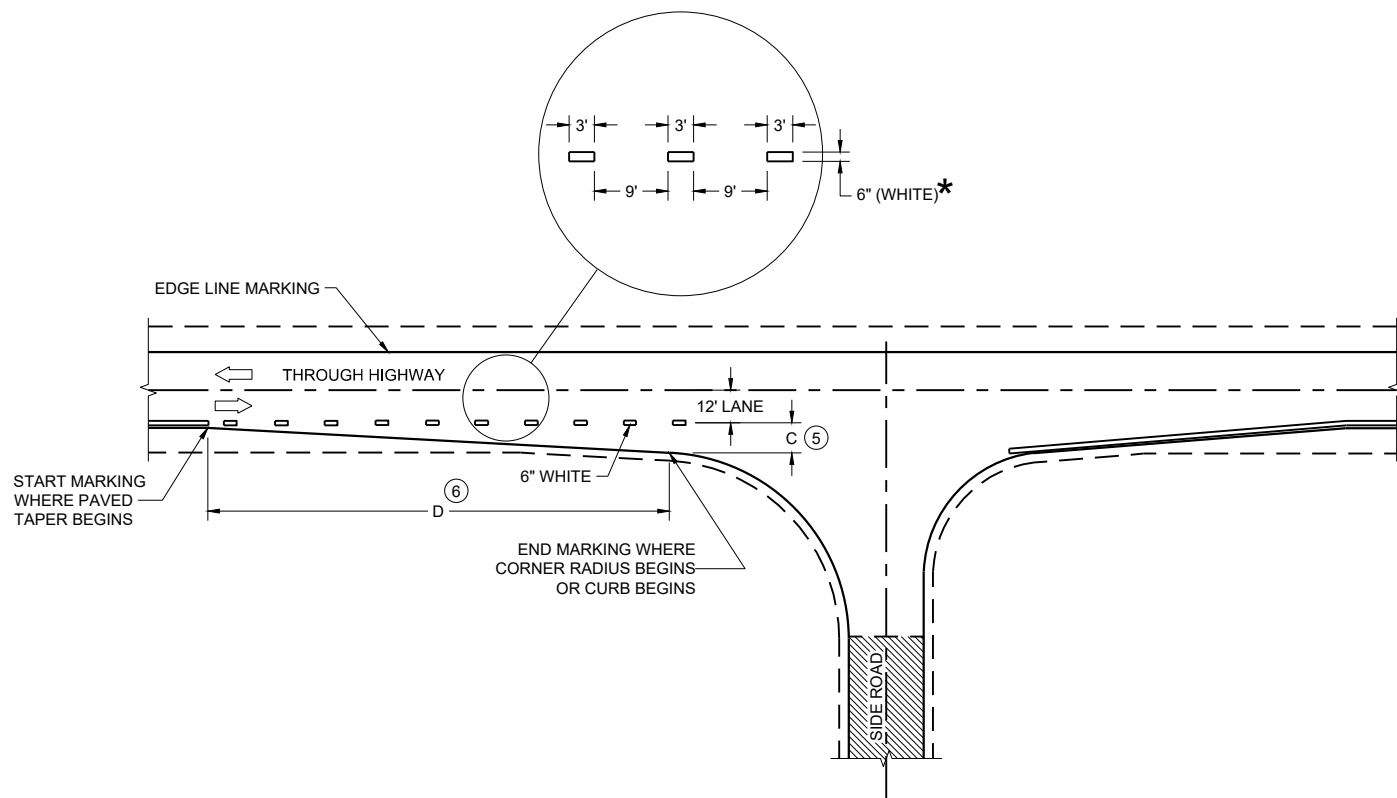
TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

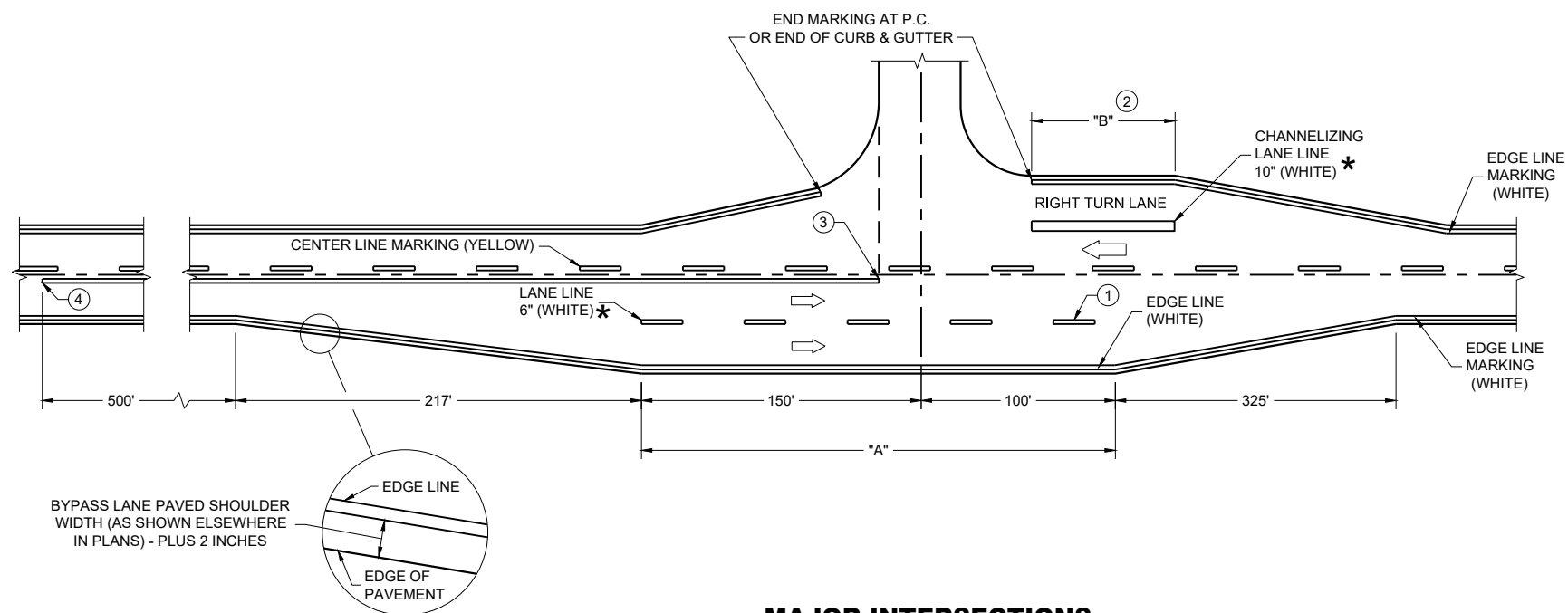
STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGELINE LOCATION.

- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- 3 NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE EXTENSION.
- 4 MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- 5 LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES.
- 6 POSTED SPEED LIMITS OF 40 MPH OR GREATER USE A MINIMUM WIDTH OF 8' FOR MIDBLOCK CROSSWALKS

|                                                    |                                                            |
|----------------------------------------------------|------------------------------------------------------------|
| STOP LINE AND CROSSWALK PAVEMENT MARKING           |                                                            |
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                                            |
| APPROVED<br>March 2024<br>DATE                     | /S/ Matthew Rauch<br>STATE SIGNING AND MARKING<br>ENGINEER |



MINOR INTERSECTION



MAJOR INTERSECTIONS  
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

\*CONFIRM MARKING LINE WIDTH WITH  
THE MISCELLANEOUS QUANTITIES

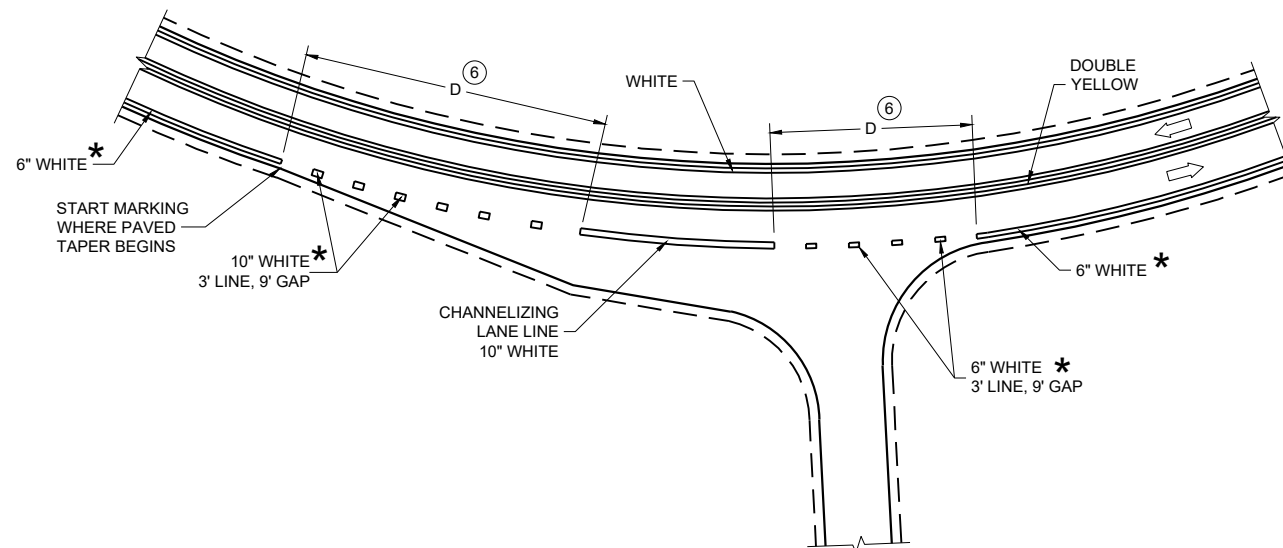
GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

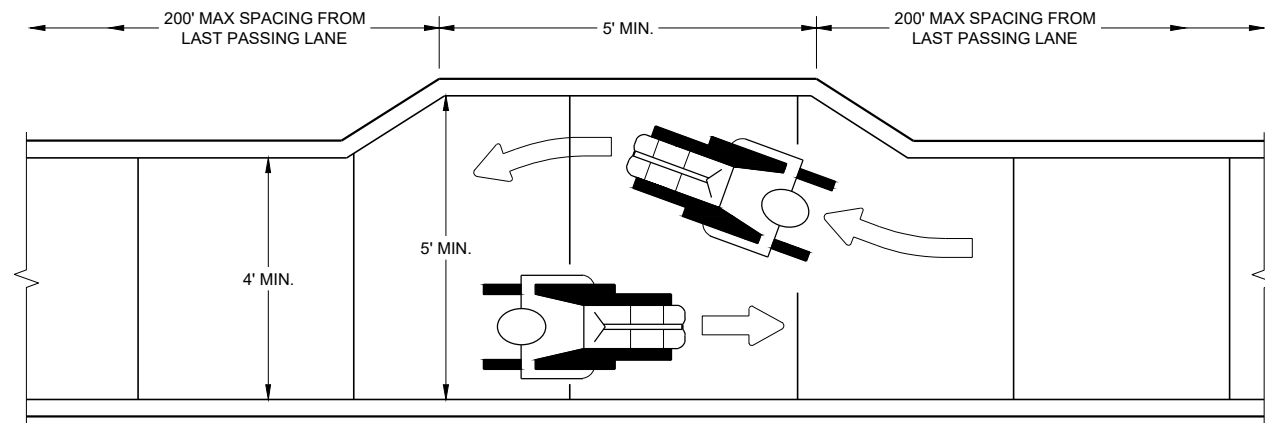
➡ DIRECTION OF TRAVEL



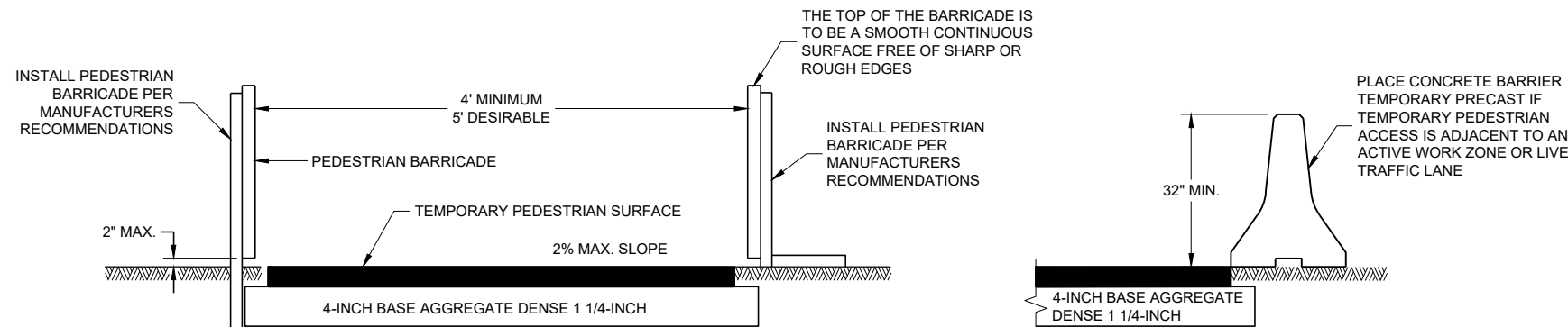
INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING  
(INTERSECTIONS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



NARROW SIDEWALK PASSING DETAIL



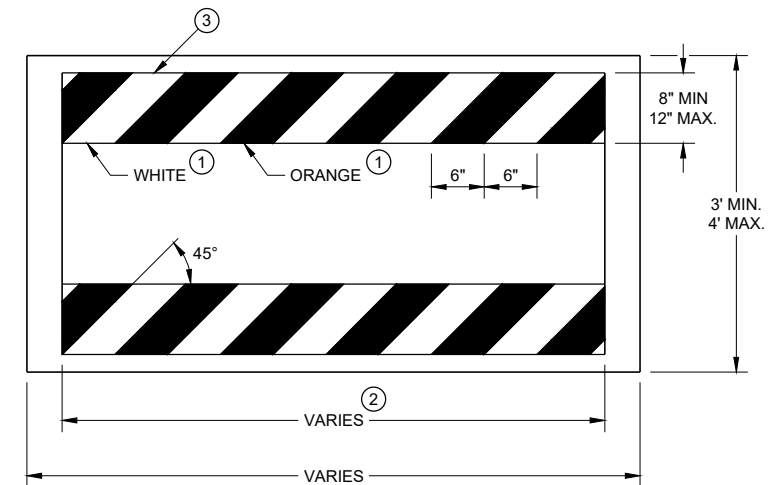
TEMPORARY PEDESTRIAN ACCESS

GENERAL NOTES

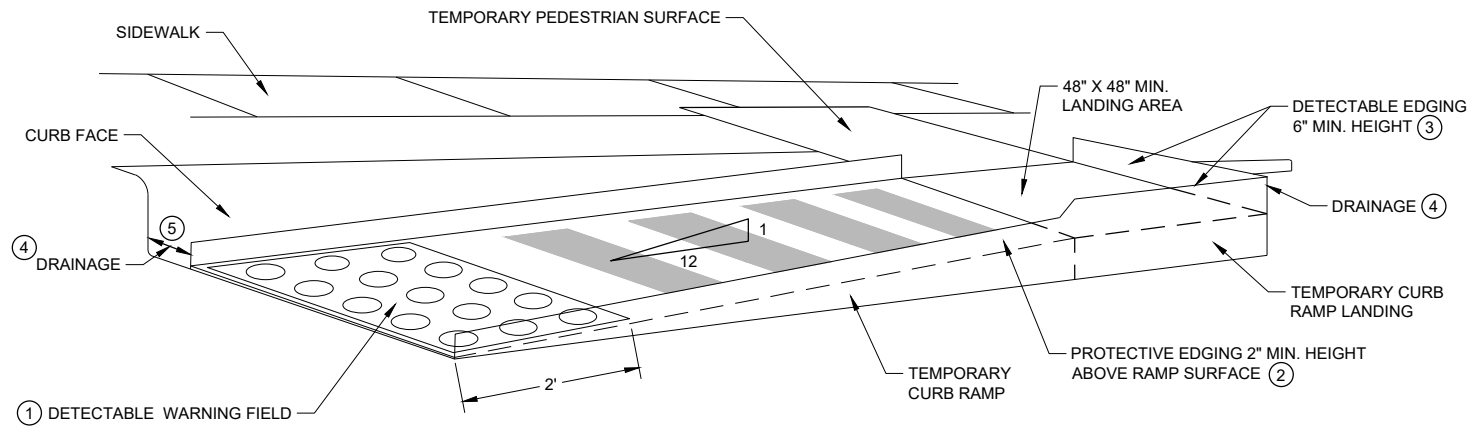
BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
- ③ PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

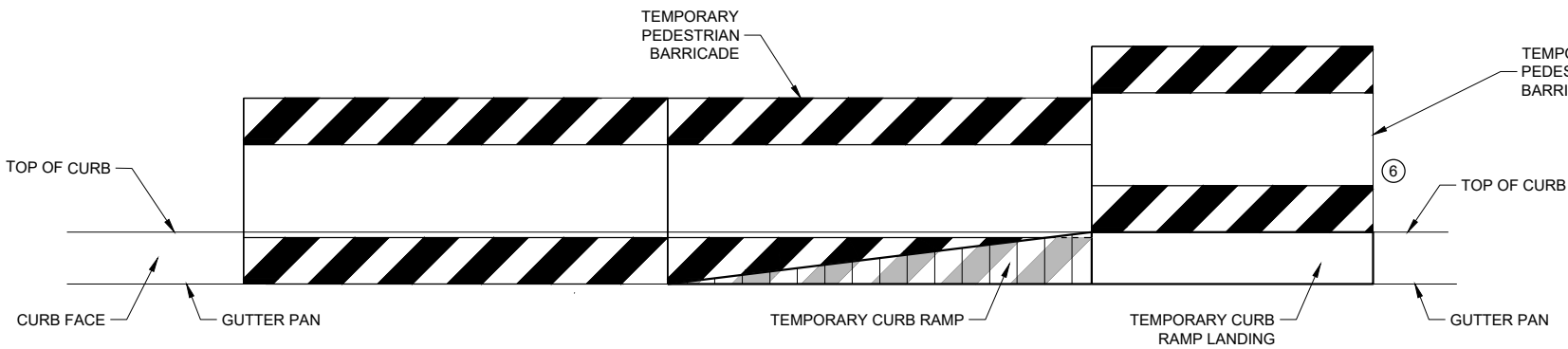
★ USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.



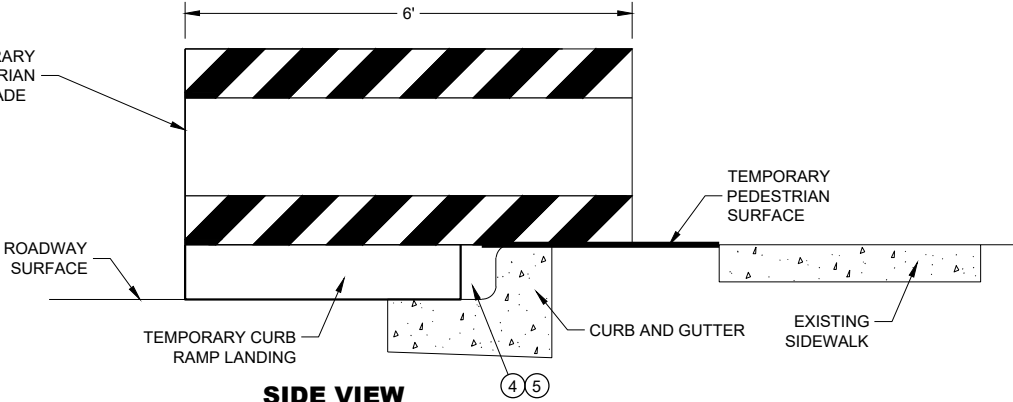
TEMPORARY PEDESTRIAN BARRICADE\*



PERSPECTIVE VIEW



FRONT VIEW



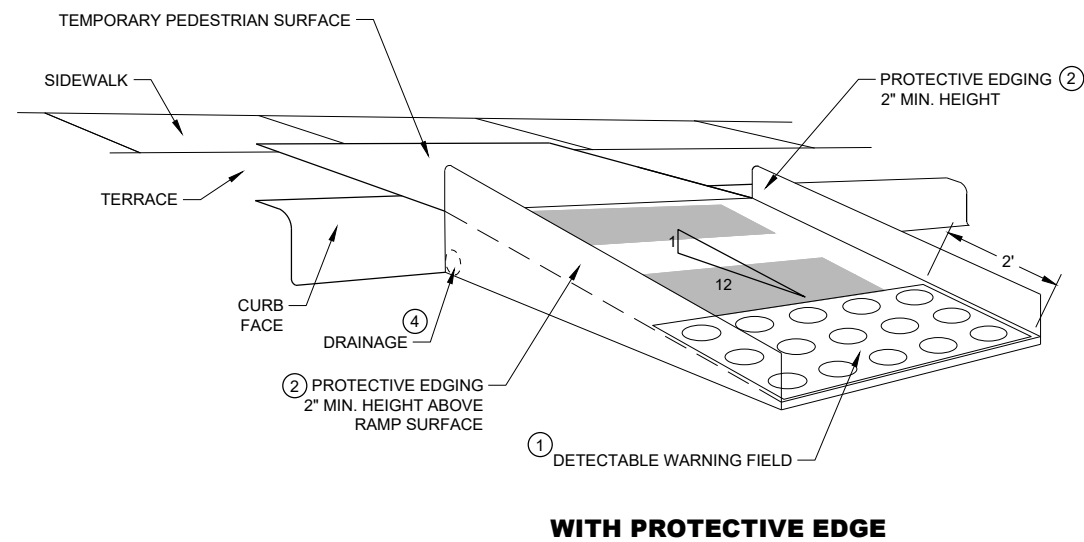
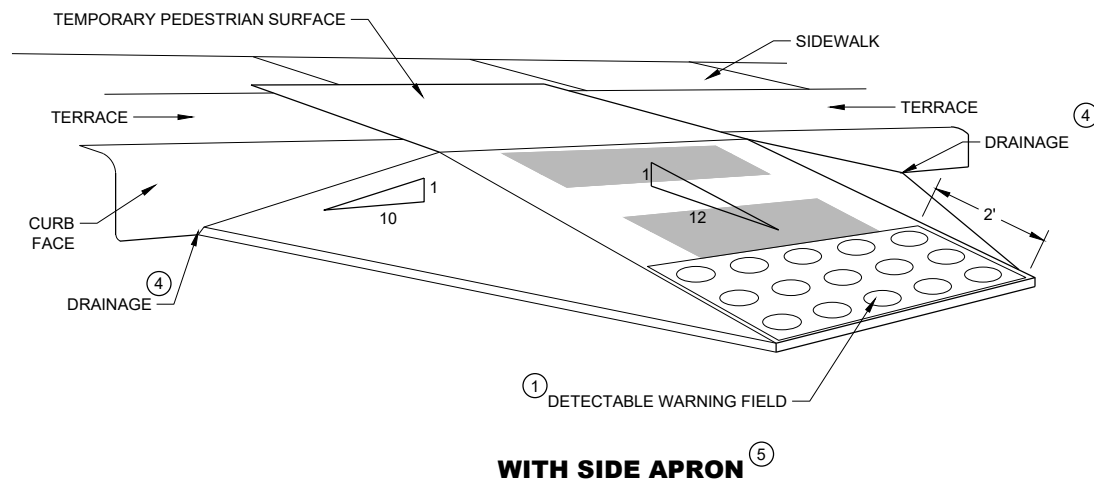
SIDE VIEW

TEMPORARY CURB RAMP PARALLEL TO CURB

GENERAL NOTES

- CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.
- CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.
- CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP. LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
- CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES MAY BE VERTICAL UP TO 1/4" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

- ① INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS.
- ② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- ③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- ④ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ⑤ ENSURE CURB RAMP IS OUT OF THE GUTTER PAN.
- ⑥ IF ONLY PART OF THE END PANEL OF TEMPORARY PEDESTRIAN BARRICADE PANEL IS NEEDED, EXTEND EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL HERE.



**TEMPORARY CURB RAMP PERPENDICULAR TO CURB**

## GENERAL NOTES

CURB RAMPS SHALL BE 48" MINIMUM WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.

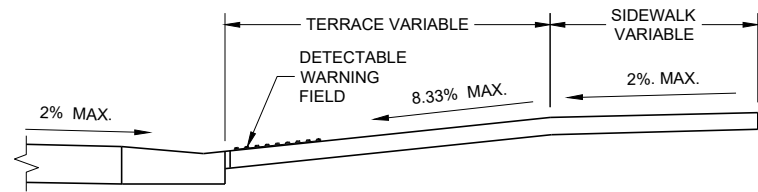
CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".

- (1) INSTALL CONTRASTING TEMPORARY DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS, AS SHOWN IN THE PLANS
- (2) PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- (3) DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- (4) DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- (5) CAN ONLY BE USED FOR RAMPS WITH 6" OR LESS OF VERTICAL CHANGE.

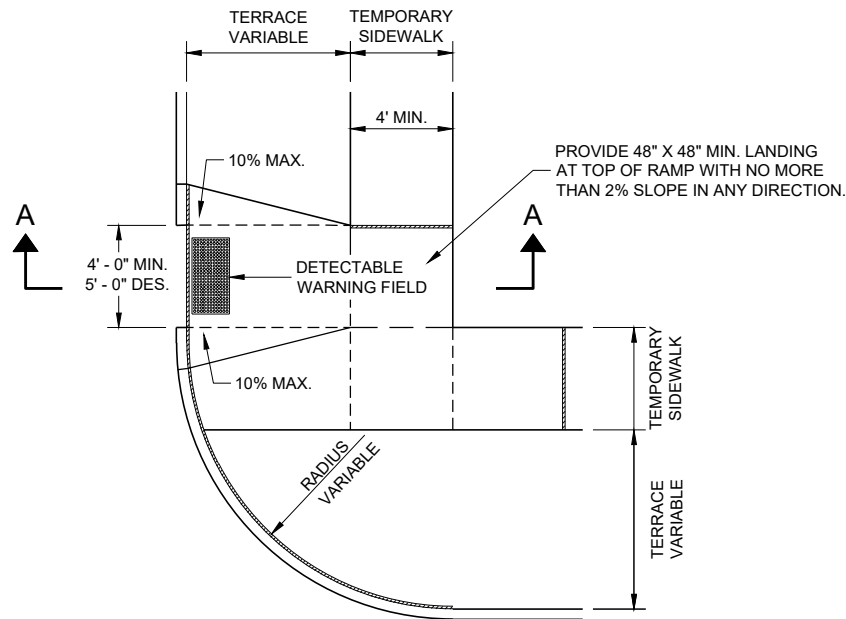
**TRAFFIC CONTROL,  
PEDESTRIAN ACCOMMODATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 369





SECTION A - A



PLAN VIEW  
TEMPORARY TYPE 3 RAMP  
(OUTSIDE OF CROSSWALK AREA)

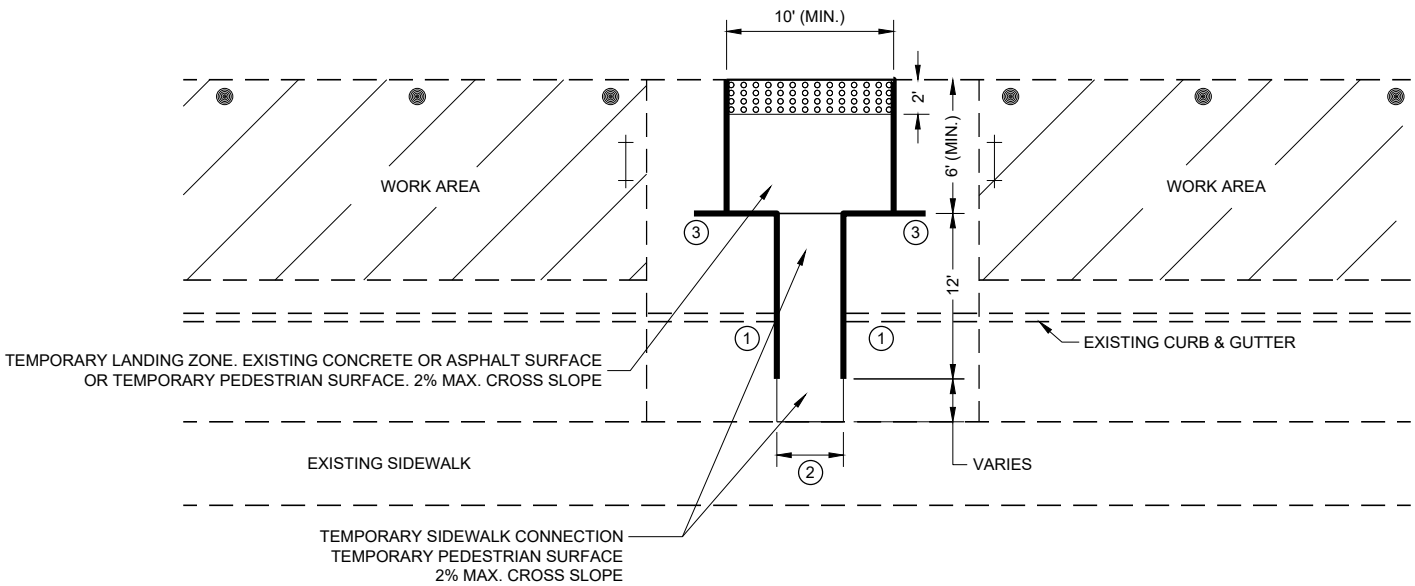
GENERAL NOTES

BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST

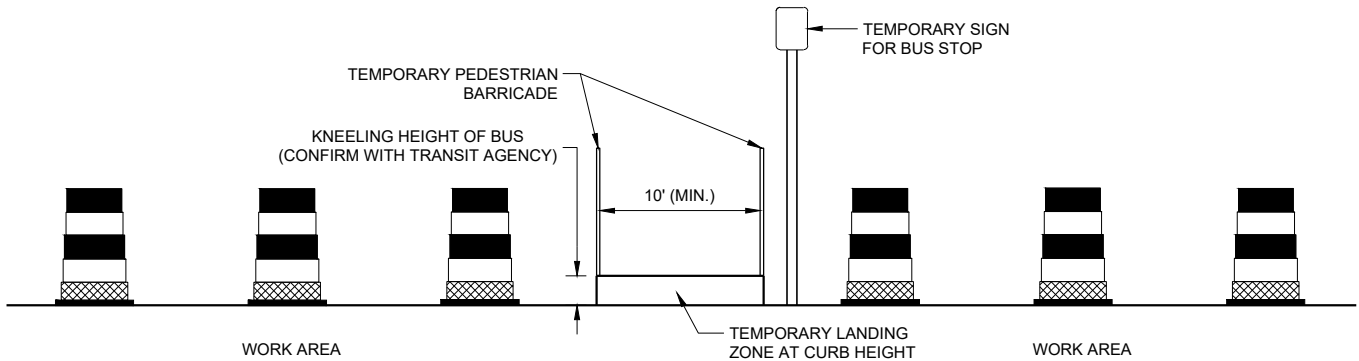
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
- ③ PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.

★ USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.

| TRAFFIC CONTROL,<br>PEDESTRIAN ACCOMMODATION       |                                              |
|----------------------------------------------------|----------------------------------------------|
| STATE OF WISCONSIN<br>DEPARTMENT OF TRANSPORTATION |                                              |
| APPROVED<br>May 2023<br>DATE                       | /S/ Andrew Heidtke<br>WORK ZONE ENGINEER 370 |
| FHWA                                               |                                              |



PLAN VIEW



PROFILE VIEW  
TEMPORARY BUS STOP PAD

GENERAL NOTES

- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
- NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.
- PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMP OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN ½" WIDTH.
- CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED ½". LATERAL EDGES MAY BE VERTICAL UP TO ¼" HIGH AND SHALL BE BEVELED AT 1:2 BETWEEN ¼" AND ½".
- CURB RAMP AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

- ① DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- ② 5' WIDE MIN. WITH TEMPORARY PEDESTRIAN BARRICADE, 10' WIDE MIN. WITHOUT TEMPORARY PEDESTRIAN BARRICADE.
- ③ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE INTO THIS SPACE.

LEGEND

- TRAFFIC CONTROL DRUM
- ⊥ TYPE III BARRICADE
- TEMPORARY PEDESTRIAN BARRICADE
- ⊞ TEMPORARY DETECTABLE WARNING FIELD
- ▨ WORK AREA



LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

GENERAL NOTES

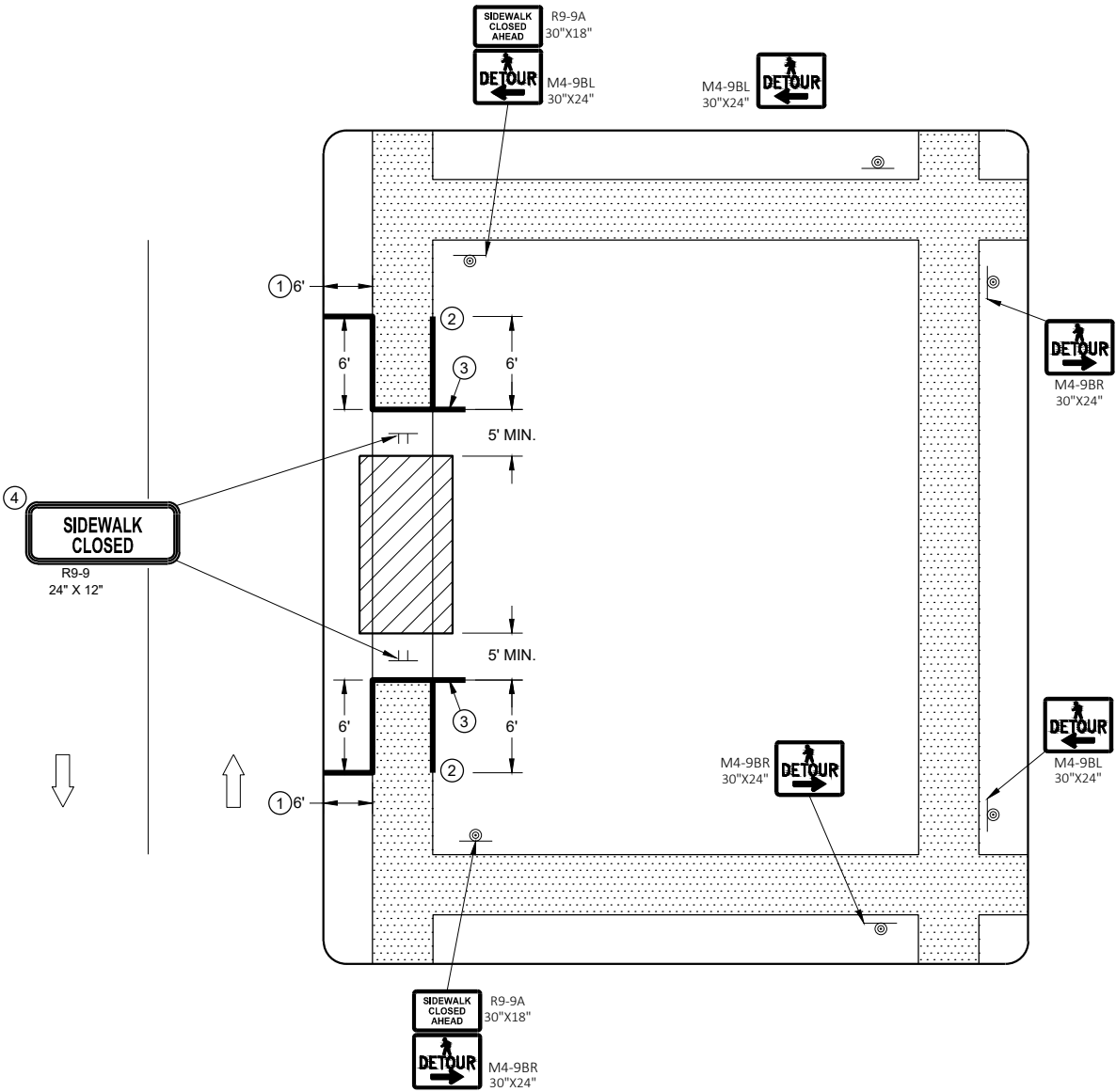
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICTS WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

- IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
- PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
- IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



SIDEWALK DETOUR, SIDEWALK ONLY ON ONE SIDE

LEGEND

- SIGN ON TEMPORARY SUPPORT
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY PEDESTRIAN SURFACE
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

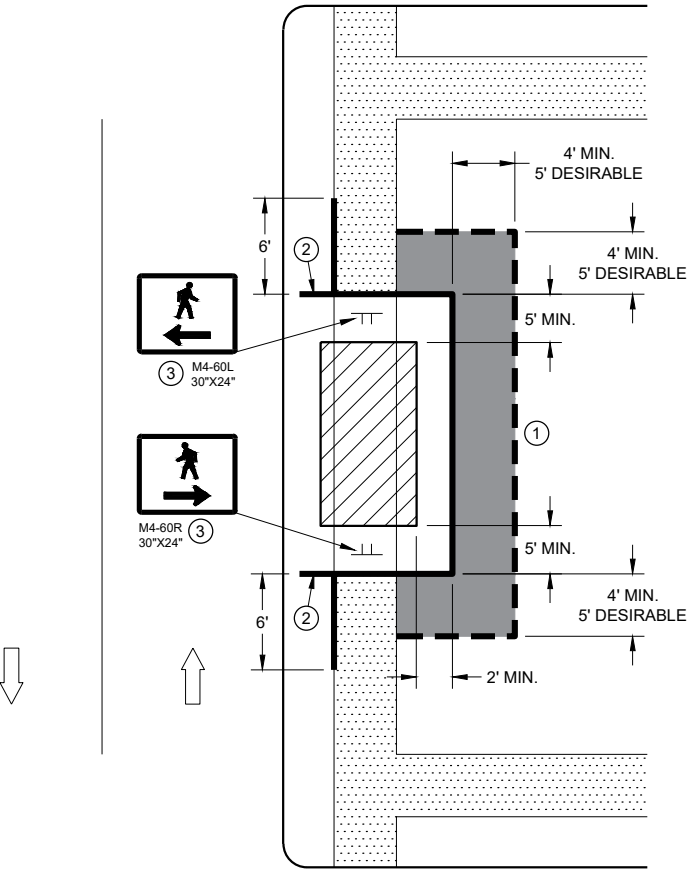
GENERAL NOTES

- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.
- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.
- ①

USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
- ②

IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ③

MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.



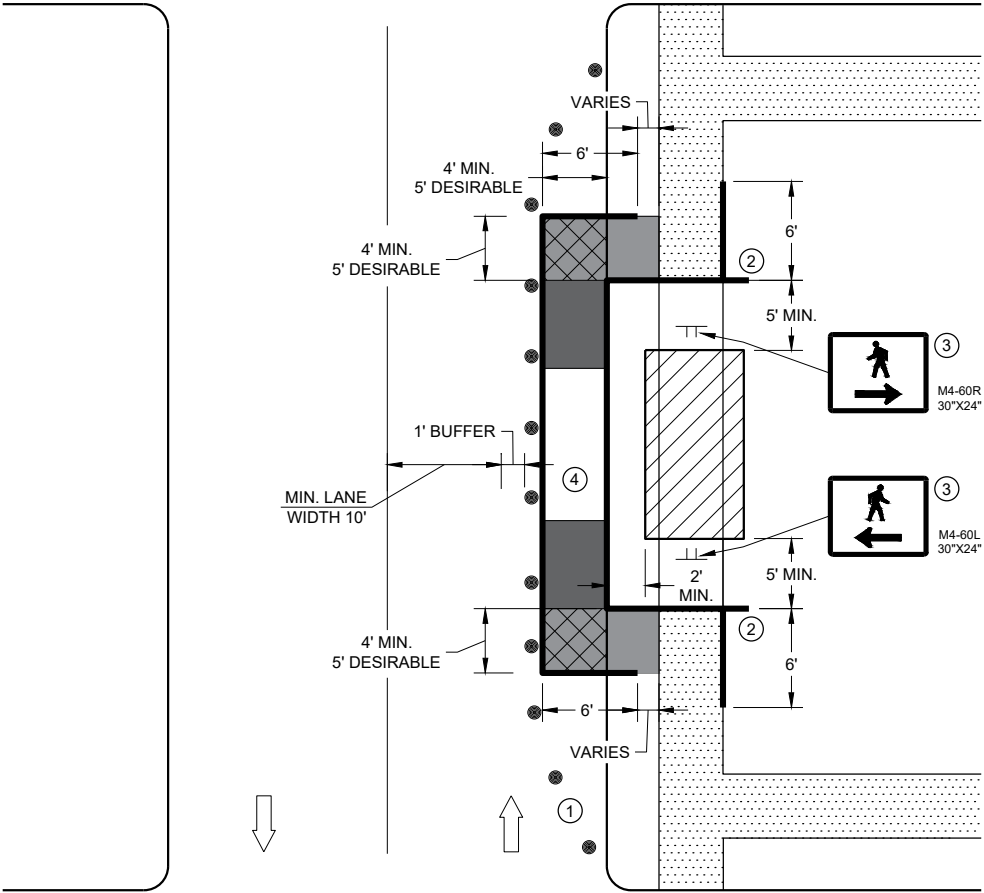
SIDEWALK DIVERSION  
SINGLE SIDE

LEGEND

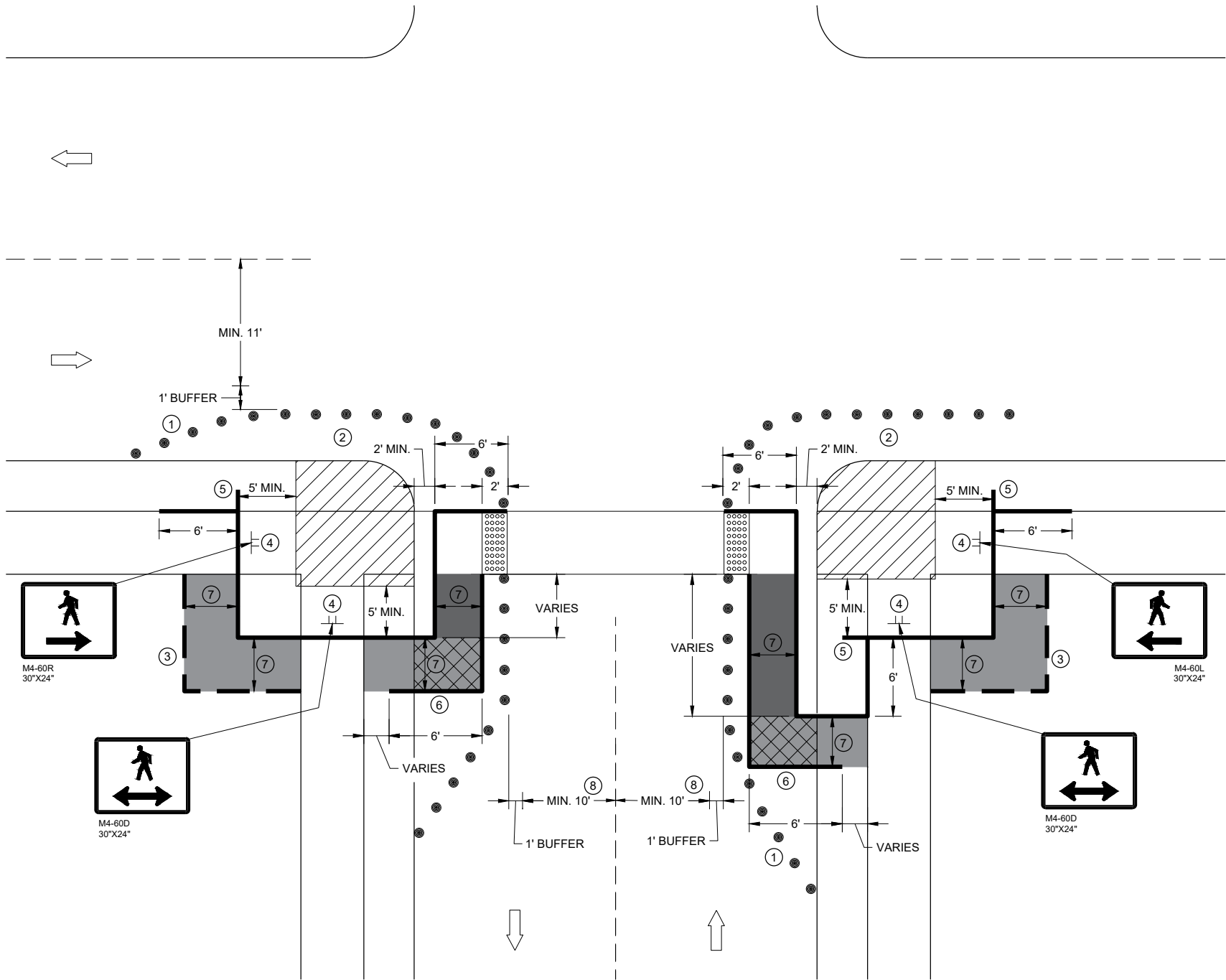
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- UNDER PEDESTRIAN TRAFFIC
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

GENERAL NOTES

- TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.
- SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.
- WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.
- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND BUFFER SPACE REQUIRED.
  - ② PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL PAST THE SIDEWALK ON THE SIDE AWAY FROM THE ROAD.
  - ③ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.
  - ④ USE EXISTING PAVEMENT SURFACE. IF EXISTING PAVEMENT SURACE HAS BEEN REMOVED, USE A TEMPORARY PEDESTRIAN SURFACE.



SIDEWALK DIVERSION, SINGLE SIDE



**CURB RAMP PEDESTRIAN TRAFFIC CONTROL  
SIDEWALK ON SINGLE SIDE**

**GENERAL NOTES**

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

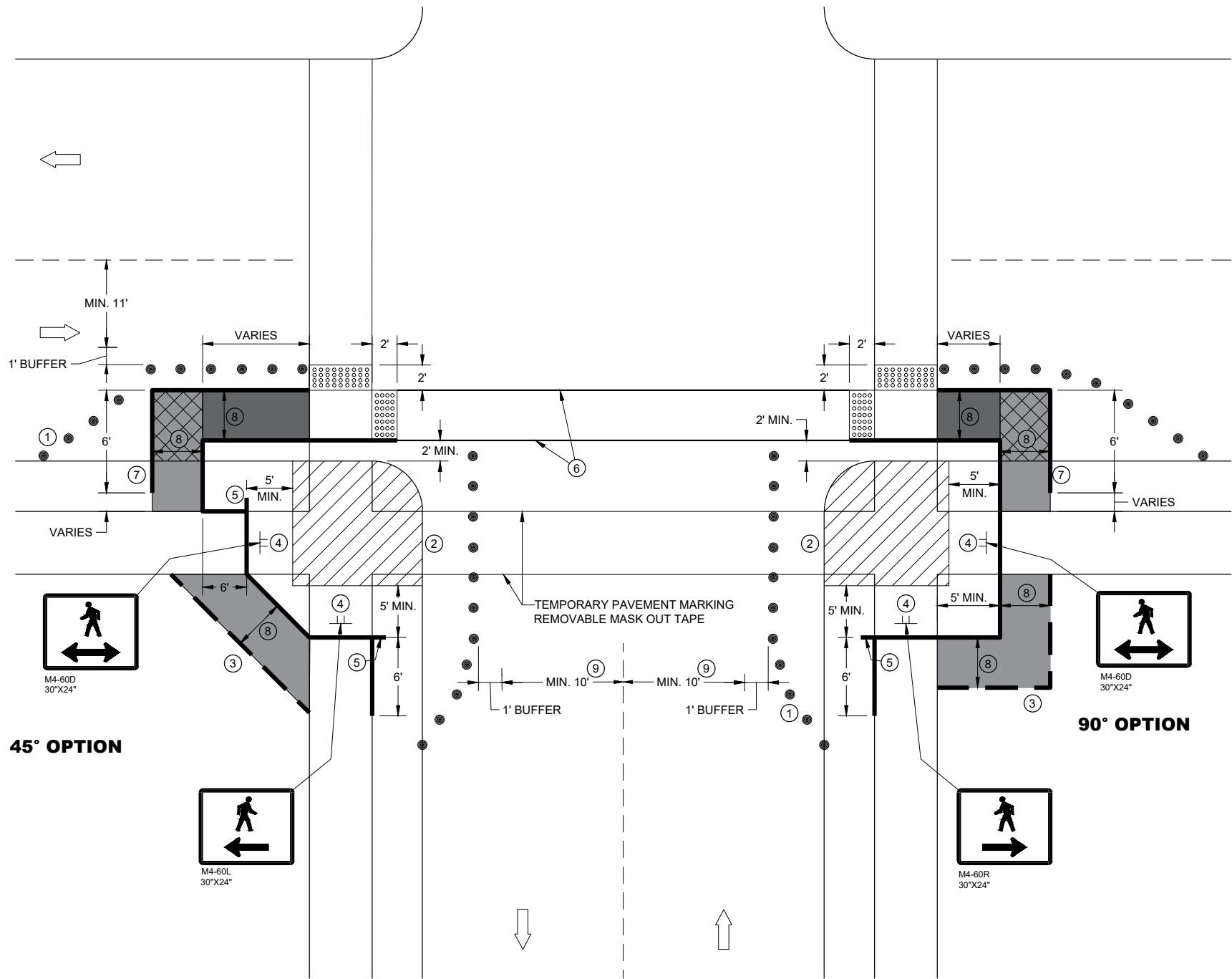
- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
- ② PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
- ③ USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
- ④ MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
- ⑤ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
- ⑥ IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
- ⑦ 4 FEET MINIMUM, 5 FEET DESIRABLE
- ⑧ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

**LEGEND**

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

**TRAFFIC CONTROL,  
PEDESTRIAN ACCOMMODATION**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION 375



CURB RAMP PEDESTRIAN TRAFFIC CONTROL

GENERAL NOTES

IF PEDESTRIAN PUSH BUTTONS ARE PRESENT ON THE EXISTING FACILITY, ENSURE THEY ARE MAINTAINED/ACCESSIBLE FOR PEDESTRIAN USE THROUGHOUT THE TEMPORARY PEDESTRIAN ACCOMMODATIONS.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG

WHEN TEMPORARY PEDESTRIAN BARRICADE RUNS PARALLEL ALONG THE SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

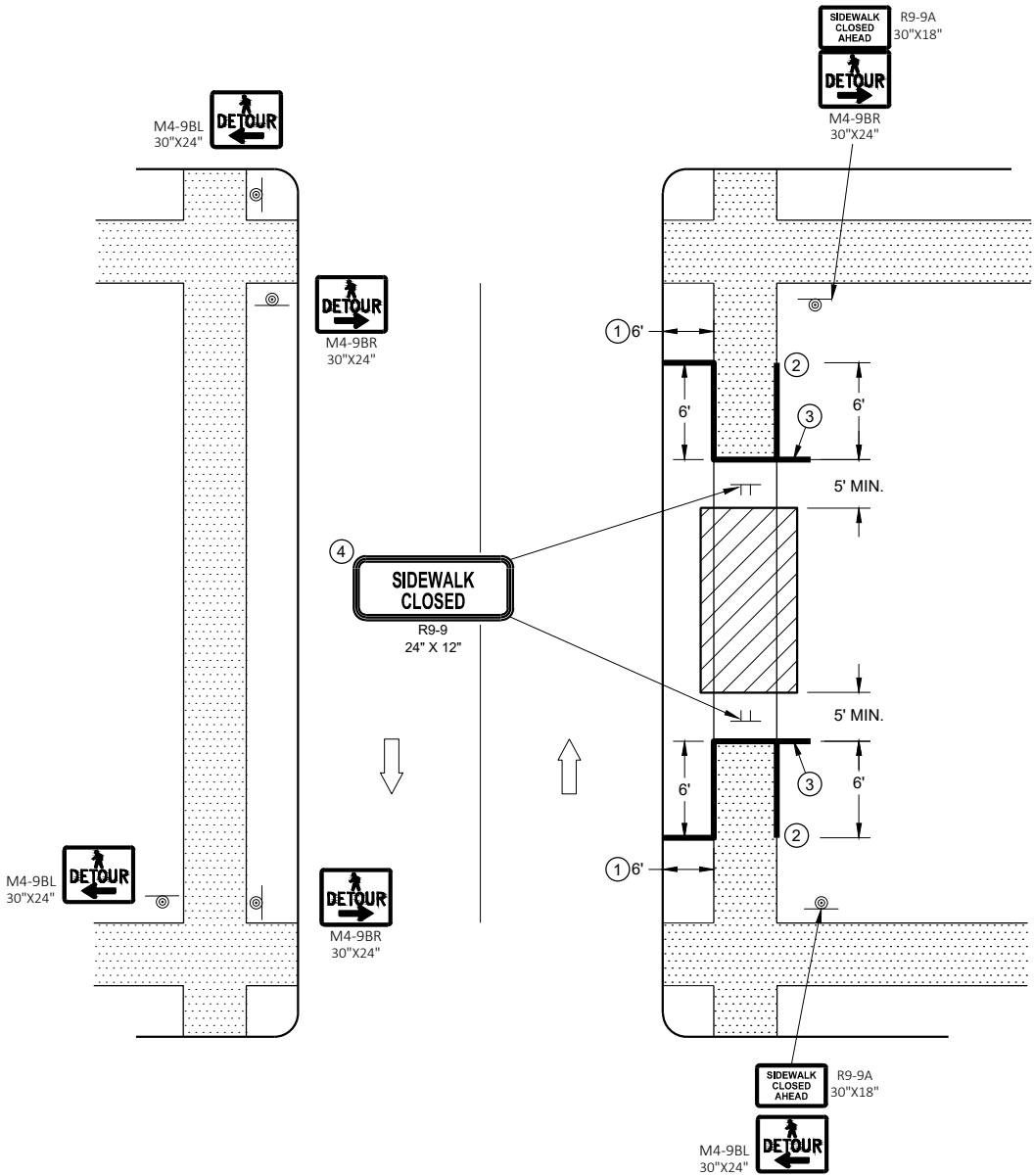
- ① SHOULDER OR LANE CLOSURE ADVANCE WARNING AND PROPER BUFFER SPACE REQUIRED.
- ② PROVIDE ADEQUATE SPACE FOR CONTRACTOR OPERATIONS
- ③ USE TEMPORARY PEDESTRIAN BARRICADE TO SEPARATE PEDESTRIANS FROM DROP OFFS OR FOR ADDITIONAL PEDESTRIAN CHANNELIZATION.
- ④ MOUNTING HEIGHT OF 5 FEET FROM SIDEWALK SURFACE TO BOTTOM OF SIGN.
- ⑤ PLACE EXCESS PORTION OF TEMPORARY PEDESTRIAN BARRICADE PANEL IN THE SIDEWALK TERRACE.
- ⑥ WHITE 6" TEMPORARY PAVEMENT MARKING
- ⑦ IF TEMPORARY PEDESTRIAN BARRICADE DOES NOT REACH THE FACE OF THE CURB, USE AN ADDITIONAL PANEL AND EXTEND INTO THE TERRACE.
- ⑧ 4 FEET MINIMUM, 5 FEET DESIRABLE
- ⑨ IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, CURB RAMPS MAY NEED TO BE CONSTRUCTED AT SEPARATE TIMES.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- WORK AREA
- TEMPORARY CURB RAMP
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN BARRICADE
- OPTIONAL TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

LEGEND

- SIGN ON PERMANENT SUPPORT
- SIGN ON TEMPORARY SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC



SIDEWALK DETOUR, SIDEWALK ON BOTH SIDES

GENERAL NOTES

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

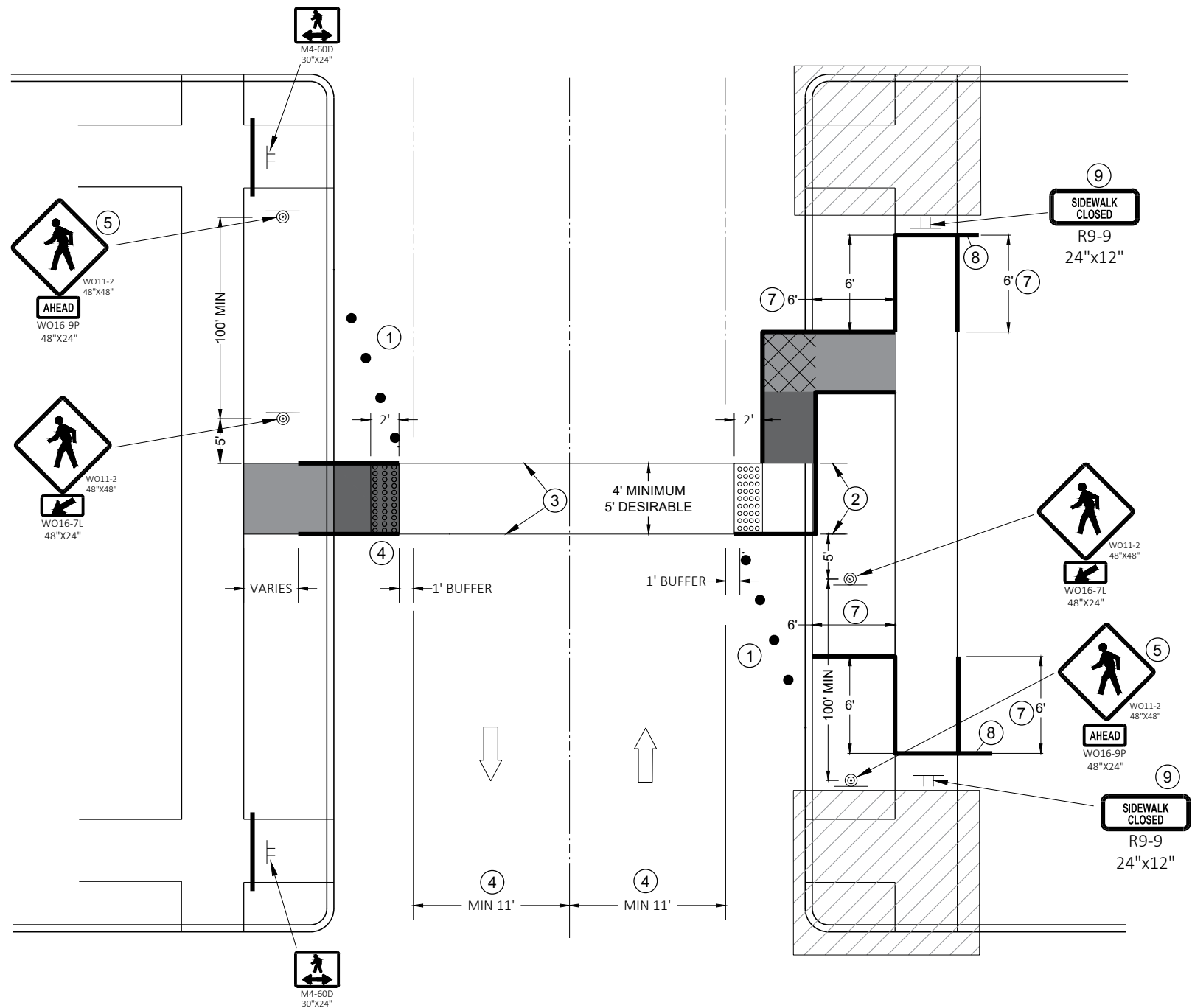
WHERE TEMPORARY BARRICADE RUNS PARALLEL ALONG SIDEWALK, PLACE THE FACE OF THE BARRICADE AT THE EDGE OF THE SIDEWALK.

SIGNS THAT REMAIN IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

PLACE TEMPORARY PEDESTRIAN BARRICADE TO FIT FIELD CONDITIONS, AVOIDING CONFLICT WITH DRIVEWAYS AND OTHER EXISTING FEATURES.

- ① IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
- ② PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
- ③ IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- ④ MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF SIGN.





TEMPORARY PEDESTRIAN CROSSING

GENERAL NOTES

TYPICAL TEMPORARY PEDESTRIAN BARRICADE PANEL IS 6 FEET LONG.

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISCONSIN STANDARD SIGN PLATES.

SEE OTHER PEDESTRIAN ACCOMMODATION DETAILS FOR SIGNING AND DEVICES FOR DIFFERENT PEDESTRIAN FACILITIES CLOSURES.

- 1 SHOULDER OR LANE CLOSURE ADVANCED WARNING AND PROPER BUFFER SPACE REQUIRED.
- 2 4 FEET MINIMUM, 5 FEET DESIRABLE.
- 3 WHITE 6" TEMPORARY PAVEMENT MARKING.
- 4 IF MINIMUM LANE WIDTHS CAN'T BE ATTAINED, PERPENDICULAR CURB RAMPS MAY NEED TO BE UTILIZED.
- 5 IF MINIMUM 100' SPACING FROM THE MID-BLOCK CROSSING CANNOT BE ATTAINED BEFORE THE INTERSECTION, REMOVE THIS SIGN ASSEMBLY.
- 6 IF TERRACE IS LESS THAN 6 FEET WIDE, OMIT TEMPORARY PEDESTRIAN BARRICADE FROM THE SIDEWALK TO THE CURB.
- 7 PLACE BARRICADE CLOSURE SO THAT THE TEMPORARY PEDESTRIAN BARRICADE END IS AT THE LAST OPEN SIDEWALK ACCESS TO RESIDENCES OR BUSINESSES BEFORE THE SIDEWALK CLOSURE.
- 8 IF TEMPORARY PEDESTRIAN BARRICADE PANEL IS WIDER THAN THE SIDEWALK WIDTH, THE PORTION OF THE EXCESS PANEL SHOULD EXTEND INTO THE TERRACE.
- 9 MOUNTING HEIGHT OF 5 FEET FROM THE SURFACE TO THE BOTTOM OF THE SIGN.

LEGEND

- TRAFFIC CONTROL DRUM
- ⊥ SIGN ON TEMPORARY SUPPORT
- TEMPORARY CURB RAMP
- TEMPORARY DETECTABLE WARNING FIELD
- TEMPORARY PEDESTRIAN SURFACE "A"
- TEMPORARY PEDESTRIAN SURFACE "B"
- ▨ WORK AREA
- TEMPORARY PEDESTRIAN BARRICADE
- DIRECTION OF TRAFFIC

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

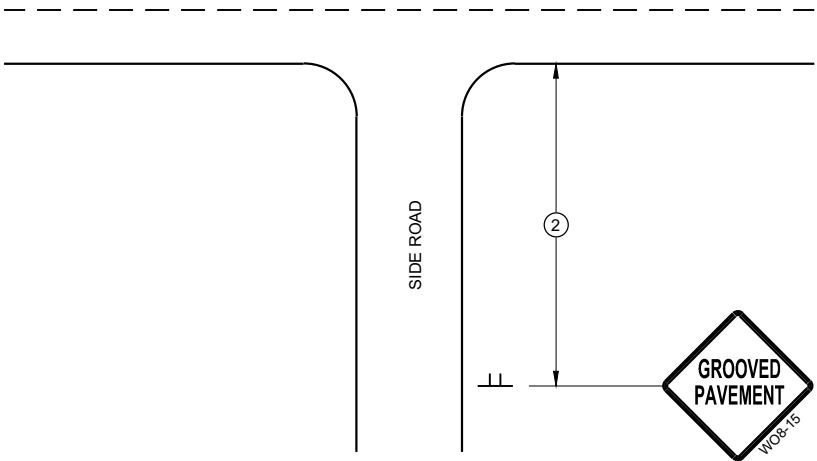
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

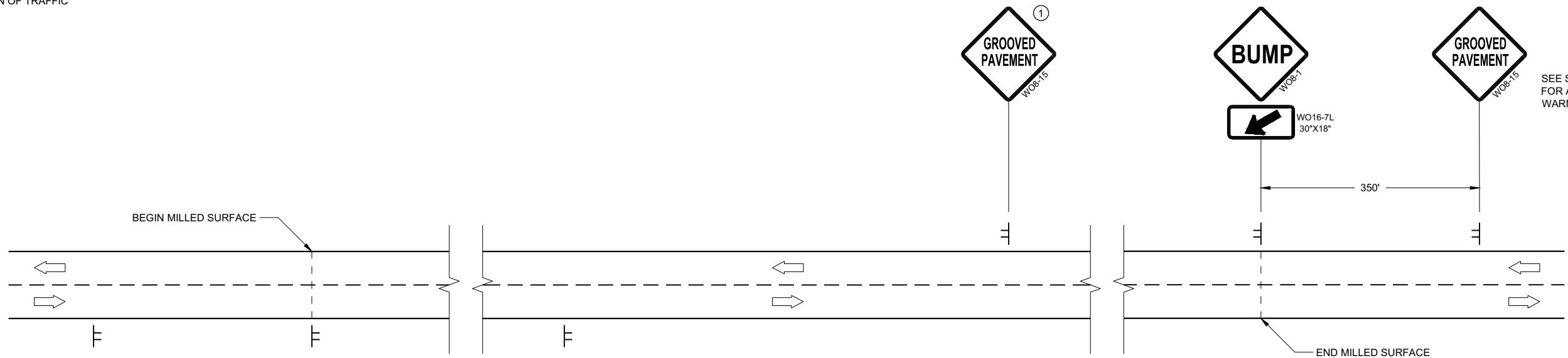
- 1 PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- 2 PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH  
SIGN DETAIL



SEE SDD15C04  
FOR ADVANCE  
WARNING SIGNS

SEE SDD15C04  
FOR ADVANCE  
WARNING SIGNS

DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL,  
SIGNING ON ROADWAYS  
WITH MILLED SURFACES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2020 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 379

FHWA



GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THAT THE BACKGROUND IS ORANGE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

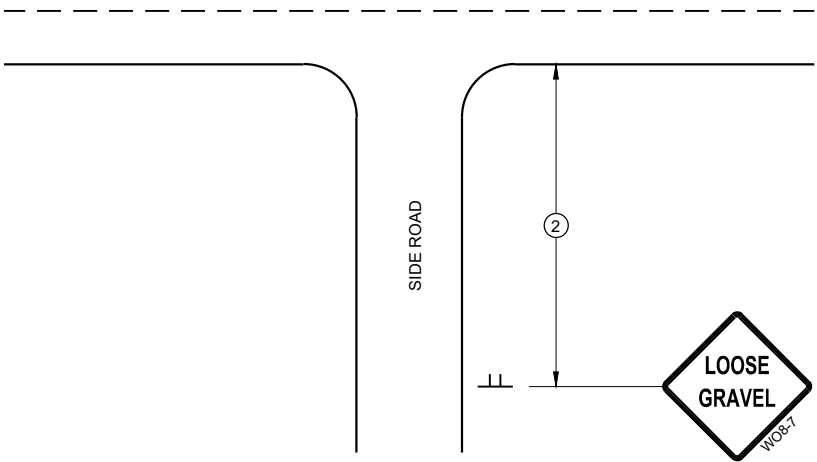
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

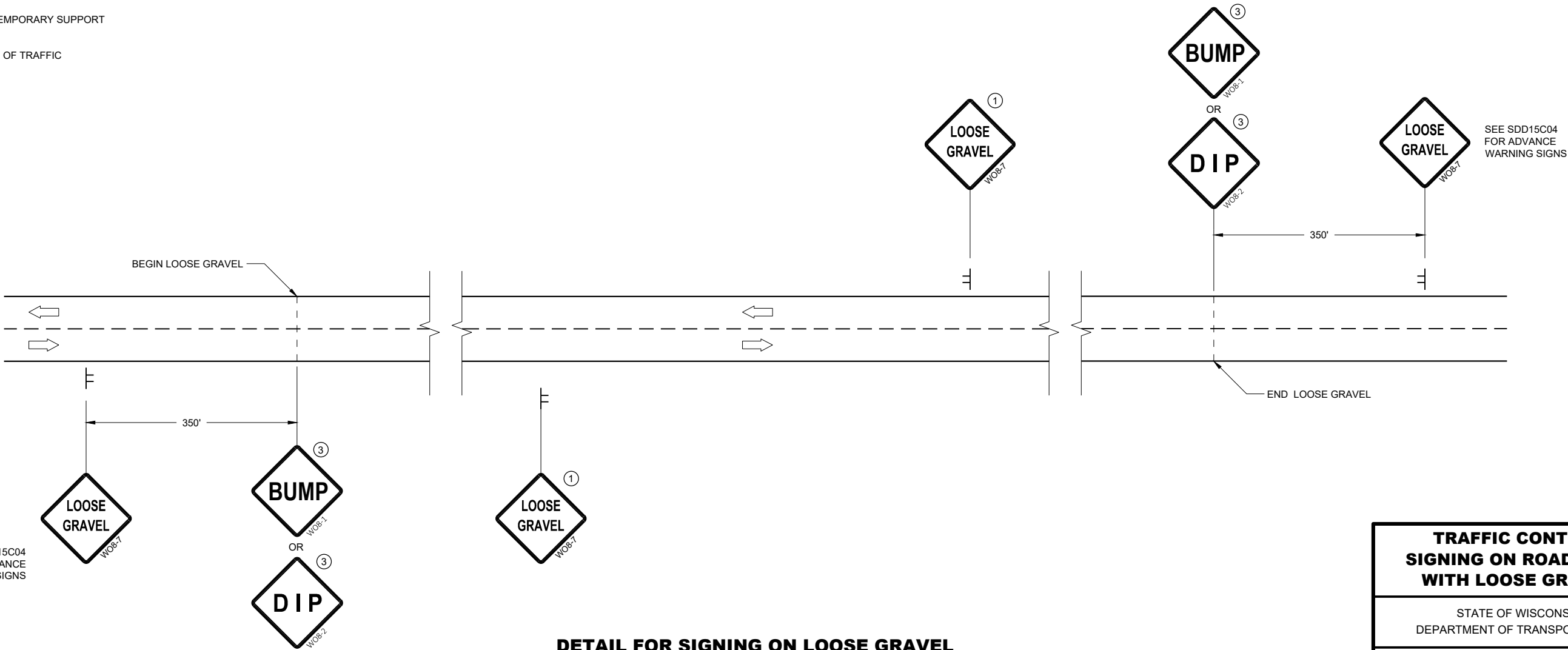
- 1 PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- 2 PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.
- 3 ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH  
SIGN DETAIL



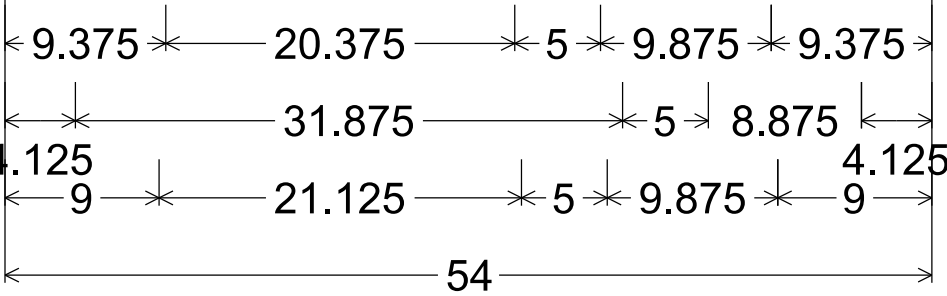
DETAIL FOR SIGNING ON LOOSE GRAVEL  
OR CHIP SEALED SURFACES

TRAFFIC CONTROL  
SIGNING ON ROADWAYS  
WITH LOOSE GRAVEL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
February 2021 /S/ Andrew Heidtke  
DATE WORK ZONE ENGINEER 380  
FHWA

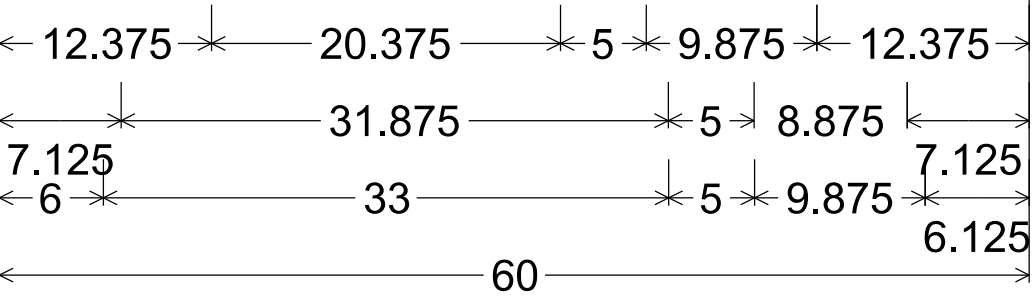
7



2.250" Radius, 0.625" Border, 0.500" Indent

NOTES

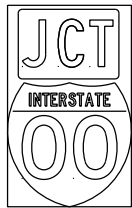
- 1. Fixed Message Signs Type II - Type F Reflective
- 2. Color:
  - Background - Orange
  - Message - Black
- 3. Message Series - D



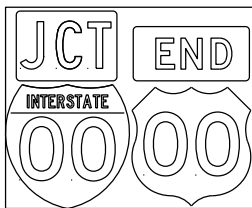
2.250" Radius, 0.625" Border, 0.500" Indent

7

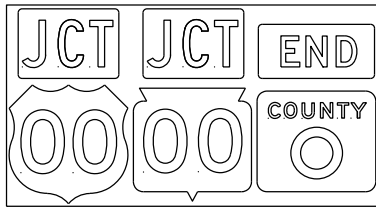
TYPICAL ASSEMBLIES



J1-1



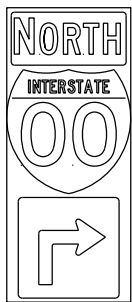
J1-2



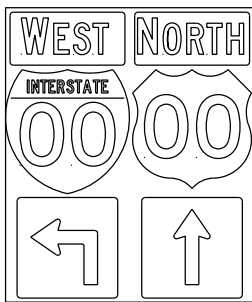
J1-3



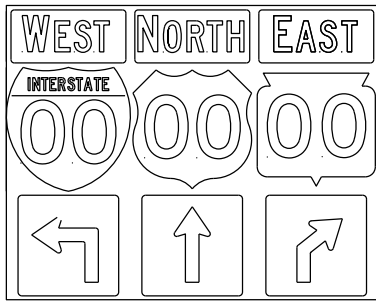
JR1-1



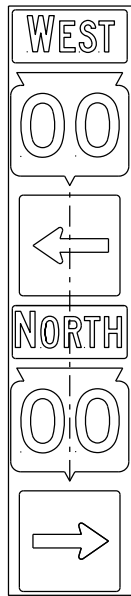
J2-1



J2-2

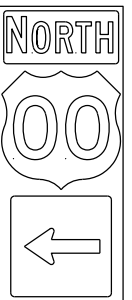


J2-3

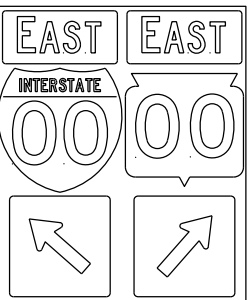


JV

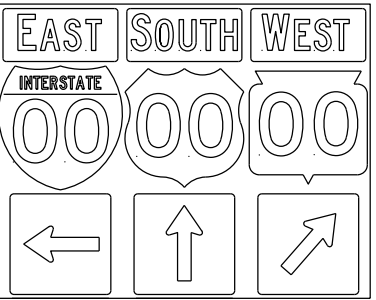
( Typical Vertical J-Assembly  
See Note 10 and 11)



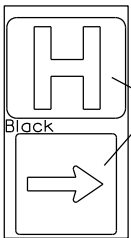
J3-1



J3-2



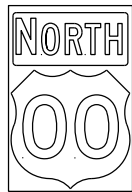
J3-3



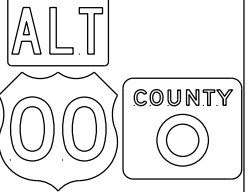
JH-1

Blue Background

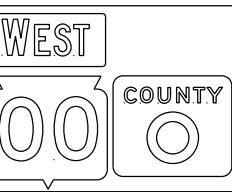
Black



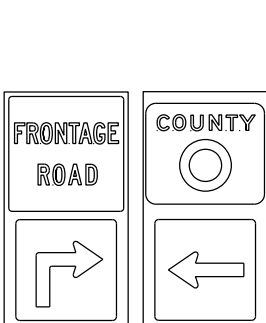
J4-1



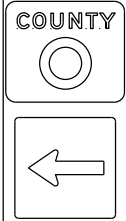
J4-2



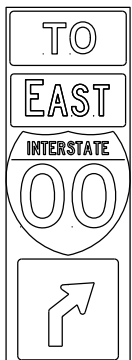
J4-2



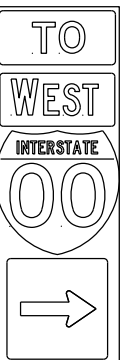
J12-1



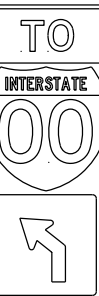
J13-1



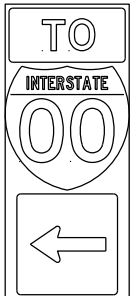
J32-1



J33-1



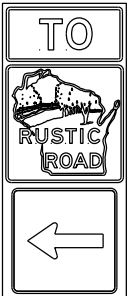
J22-1



J23-1



JR13-1

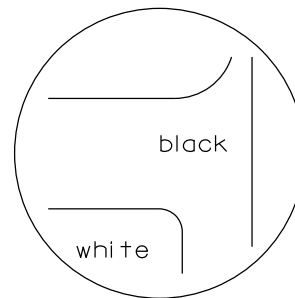
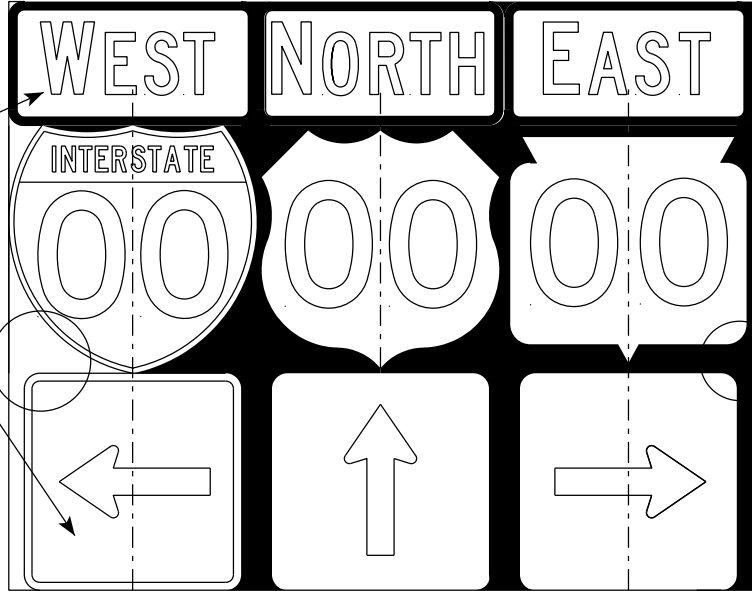
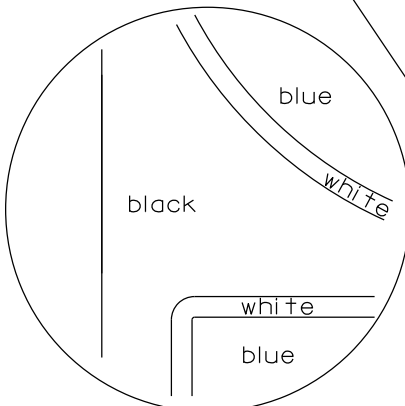


JR23-1



JR99-1

blue background  
with interstate



black background

ROUTE MARKERS & COMPONENTS  
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

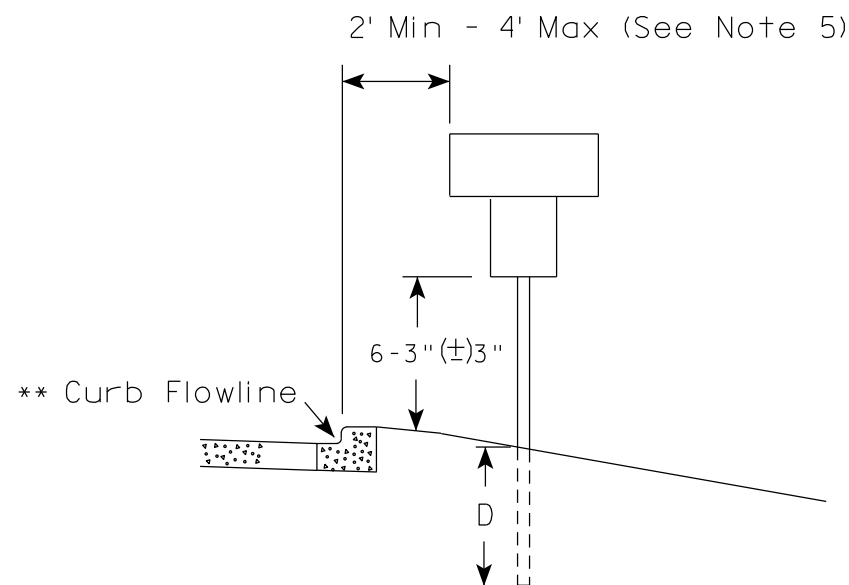
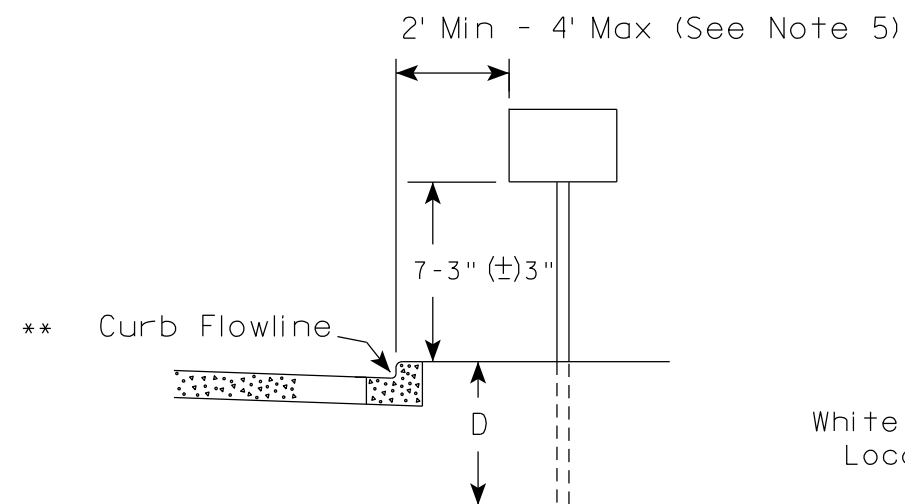
DATE 6/7/23 PLATE NO. A2-1S.10

PROJECT NO:

SHEET NO: 382

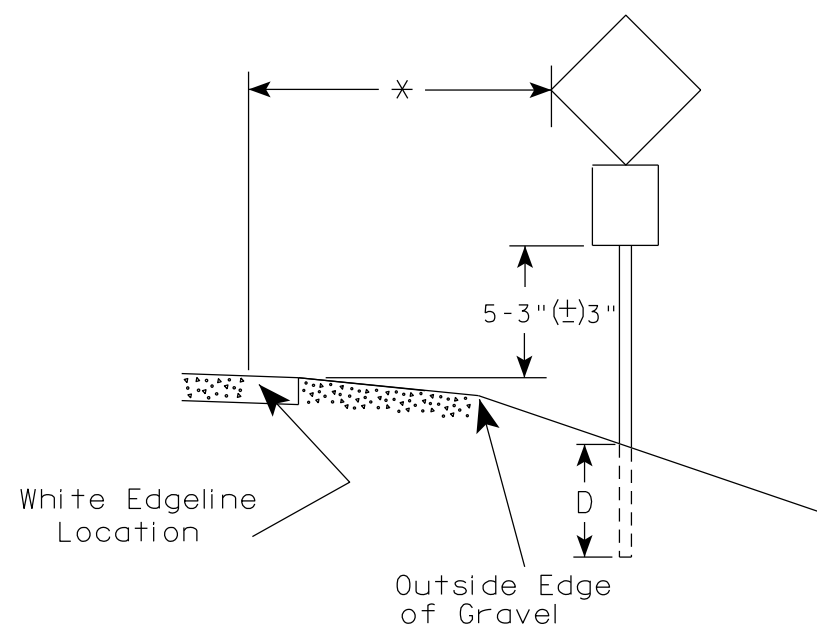
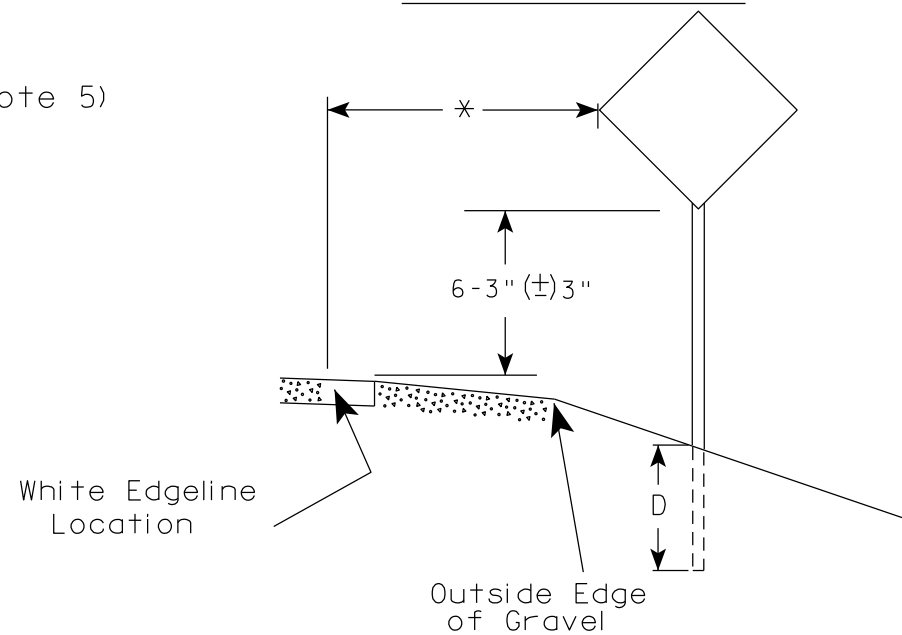
E

## URBAN AREA



\* \* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

## RURAL AREA (See Note 2)



\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

## GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.  
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 3". The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±) 3".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the Engineer.

### POST EMBEDMENT DEPTH

| Area of Sign Installation ( Sq. Ft. ) | D ( Min ) |
|---------------------------------------|-----------|
| 20 or Less                            | 4'        |
| Greater than 20                       | 5'        |

TYPICAL INSTALLATION  
OF PERMANENT TYPE II  
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Matthew R. Rauch*  
for State Traffic Engineer

DATE 12/6/23

PLATE NO. A4-3.23

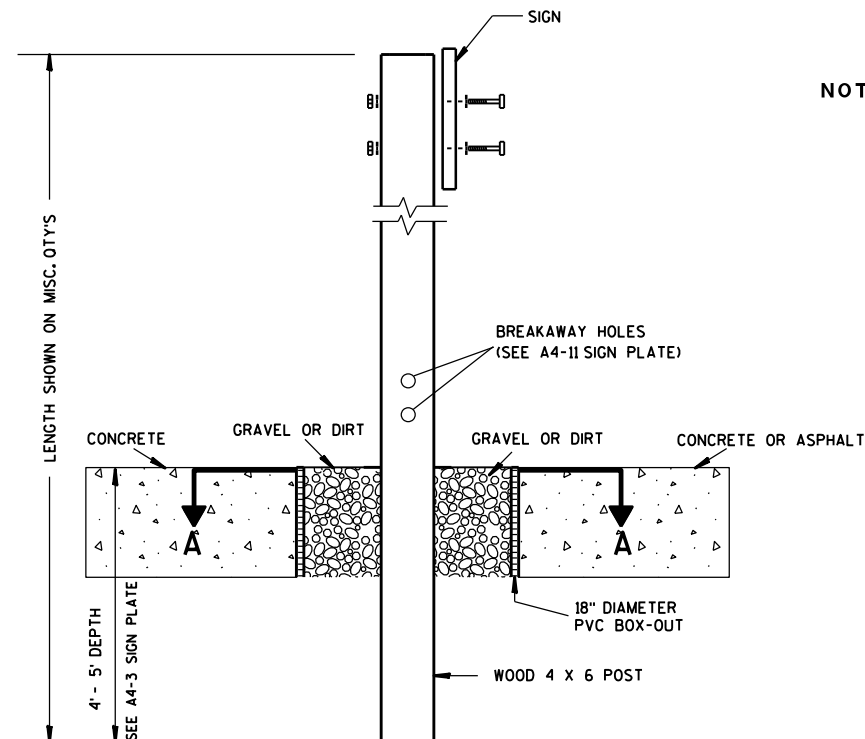
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 383

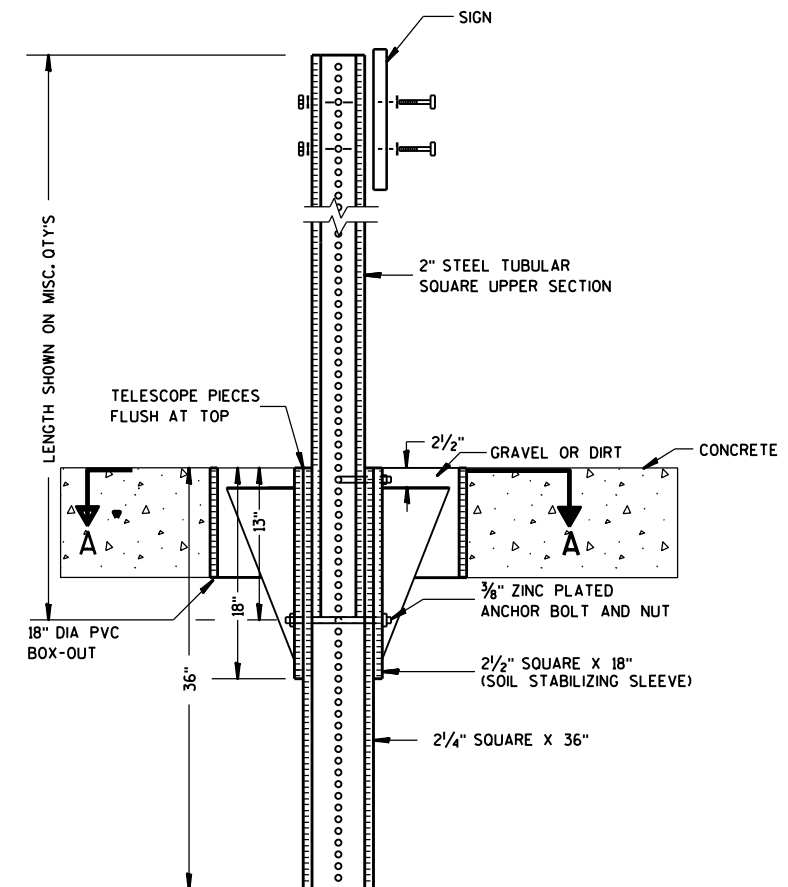
E



### ELEVATION VIEW

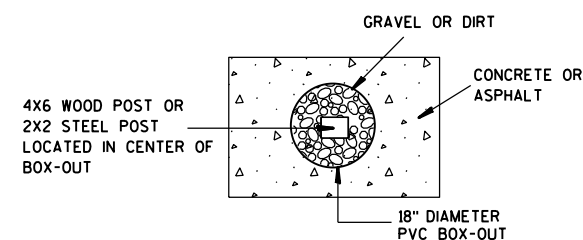
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES: 1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



### ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



### PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST  
BOX-OUTS  
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/27/14 PLAT 384 A4-3B.1

PROJECT NO:

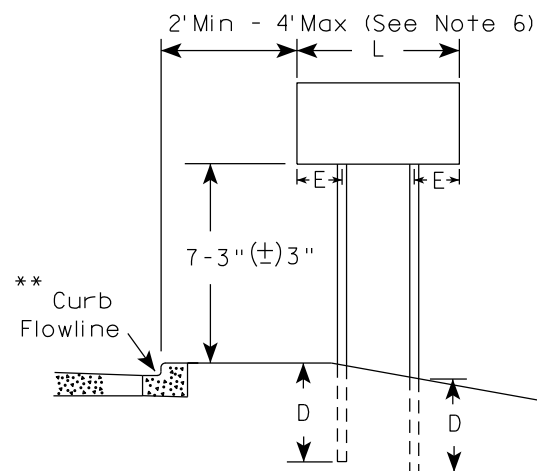
HWY:

COUNTY:

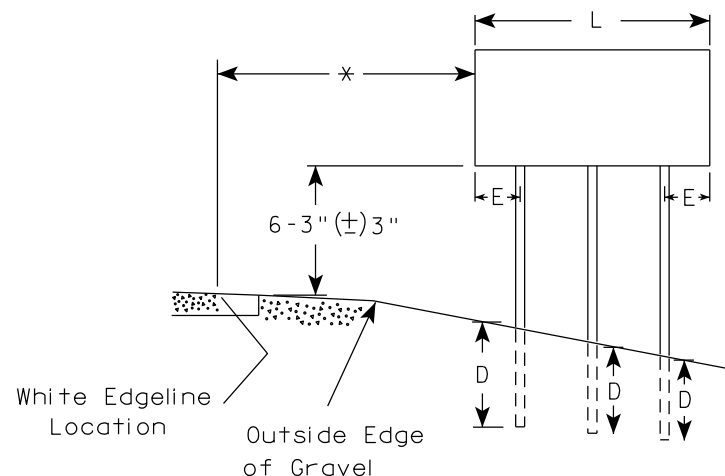
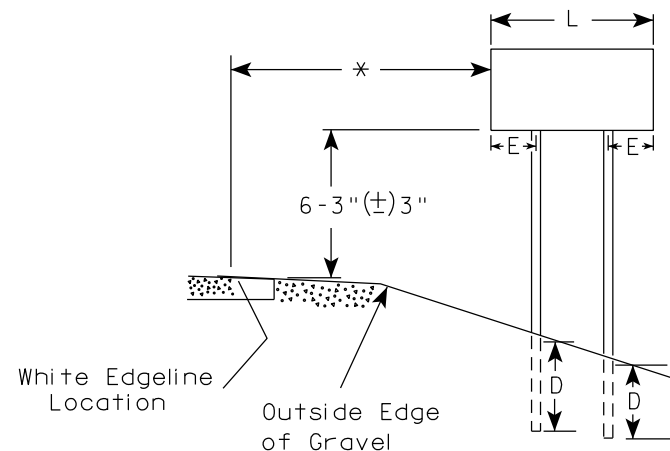
SHEET NO:

E

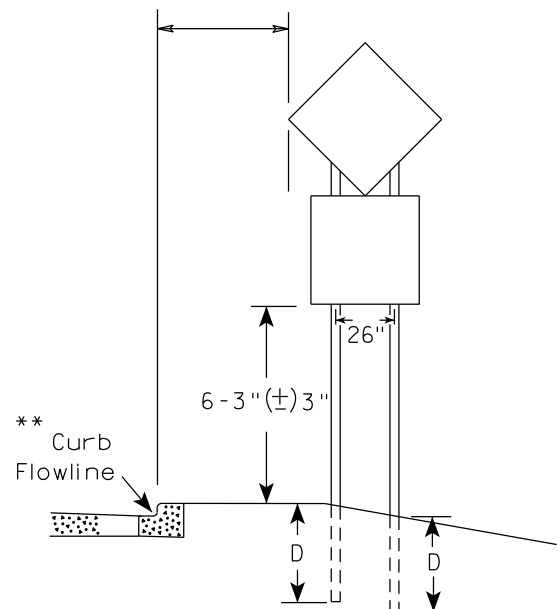
URBAN AREA



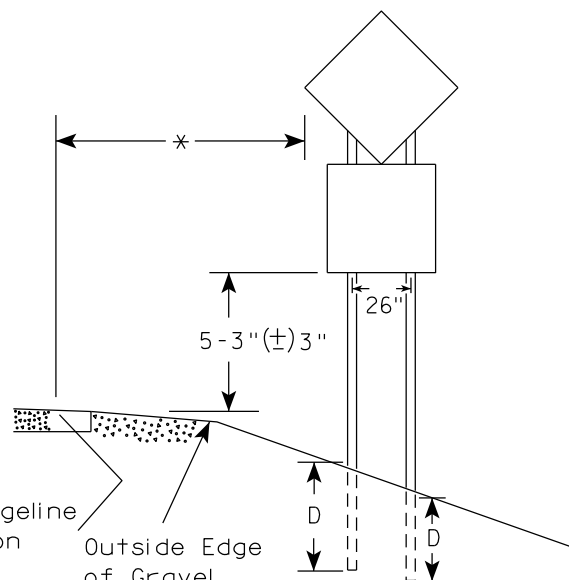
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

\*\*\*

| SIGN SHAPE OTHER THAN DIAMOND<br>(TWO POSTS REQUIRED) |     |
|-------------------------------------------------------|-----|
| L                                                     | E   |
| Greater than 48"<br>Less than 60"                     | 12" |
| 60" to 108"                                           | L/5 |

| SIGN SHAPE OTHER THAN DIAMOND<br>(THREE POSTS REQUIRED) |     |
|---------------------------------------------------------|-----|
| L                                                       | E   |
| Greater than 108"<br>to 144"                            | 12" |

POST EMBEDMENT DEPTH

| Area of Sign<br>Installation<br>( Sq.Ft. ) | D<br>( Min ) |
|--------------------------------------------|--------------|
| 20 or Less                                 | 4'           |
| Greater than 20                            | 5'           |

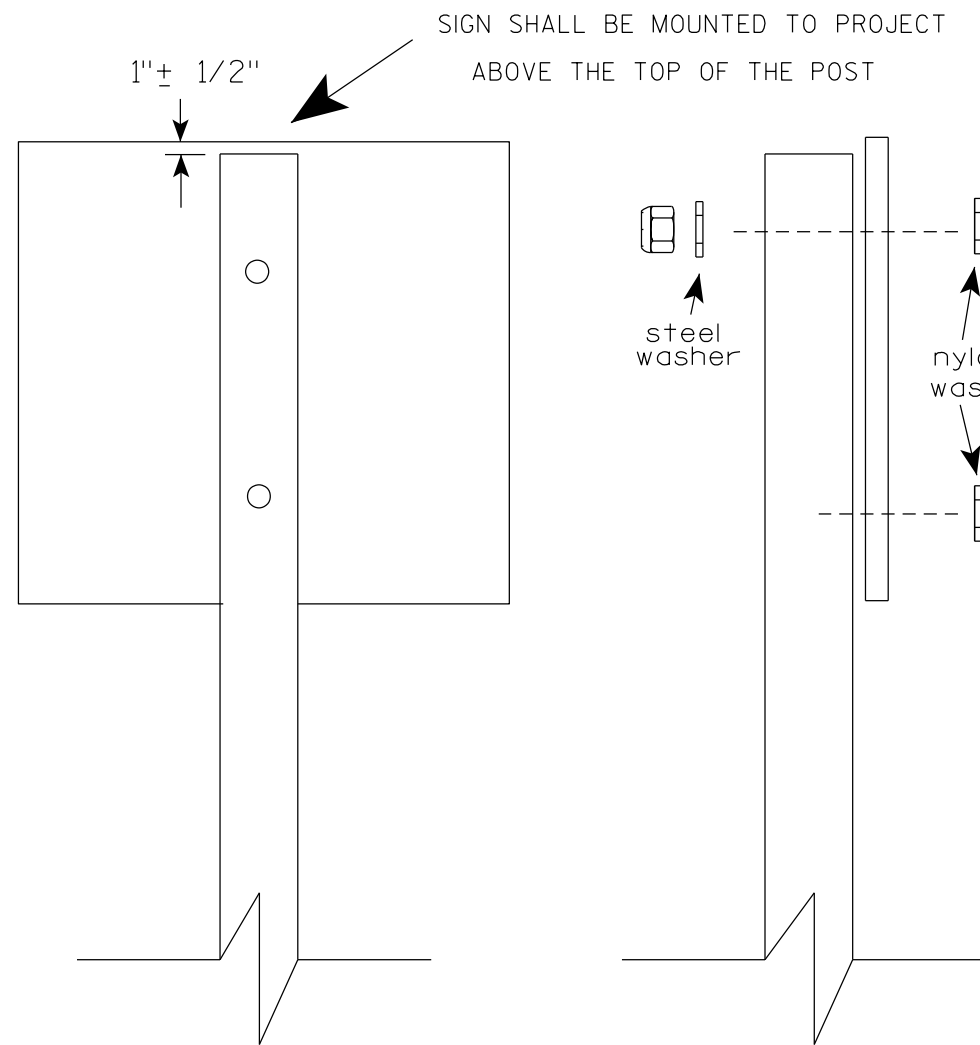
TYPICAL INSTALLATION  
OF TYPE II SIGNS  
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16





Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS -  $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS -  $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)  
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS -  $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)  
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS -  $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL  
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X  $\frac{1}{16}$ " STEEL
- 1-1/4" O.D. X  $\frac{3}{8}$ " I.D. X .080 NYLON

\* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| ATTACHMENT OF SIGNS<br>TO POSTS  |                                                       |
| WISCONSIN DEPT OF TRANSPORTATION |                                                       |
| APPROVED                         | <i>Matthew R. Rauch</i><br>For State Traffic Engineer |
| DATE 4/1/2020                    | PLATE NO. A4-8.9                                      |

**2 1/4 " SQUARE  
12 GAUGE  
PERFORATED  
GALVANIZED FINISH**

2 1/2" SQUARE  
12 GAUGE  
OMNI-DIRECTIONAL  
PERFORATED  
SOIL STABILIZING SLEEVE  
GALVANIZED FINISH

2 1/2" TELES PAR TUBE

4"

2 1/2"

10"

1 1/2"

12 1/2"

4" x 10" x 10 GA. STEEL PLATE (CUT AS SHOWN) WELDED TO ALL FOUR CORNERS OF TELES PAR TUBE

LENGTH SHOWN ON MISC. Q'TYS

TELESCOPE PIECES FLUSH AT TOP

18" DIA SCHEDULE 40 PVC BOX-OUT

36"

18"

13"

2 1/2"

2 1/4" SQUARE X 36"

2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

3/8" ZINC PLATED ANCHOR BOLT AND NUT

2 1/2" GRAVEL OR DIRT

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES

3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT

SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL

SIGN

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY.

**Side View Dimensions:**

- Overall height: LENGTH SHOWN ON MISC. QTY'S
- Section 1: 2" STEEL TUBULAR SQUARE UPPER SECTION
- Section 2: 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
- Section 3: 2 1/4" SQUARE X 36"
- Section 4: 36" (Total length of the bottom section)
- Section 5: 18"
- Section 6: 12"

**End View Details:**

- SIGN
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
- ALL HOLES 7/16" SPACED 1" C-C
- ALL FOUR SIDES
- 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT
- 1"
- 3/8" ZINC PLATED ANCHOR BOLT AND NUT

**Other Labels:**

- TELESCOPE PIECES FLUSH AT TOP
- A
- B

3/8" ZINC PLATED CORNER  
ANCHOR BOLT AND NUT

DIRECTION  
OF TRAFFIC

SECTION A-A

| Area of Sign Installation (Sq. Ft.)      | Number of Required Posts |
|------------------------------------------|--------------------------|
| 9 or less                                | 1                        |
| Greater than 9 less than or equal to 18  | 2                        |
| Greater than 18 less than or equal to 27 | 3                        |

**Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).**

TUBULAR STEEL  
SIGN POST  
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch

for State Traffic Engineer

DATE 2/05/15 PLATI<sub>387</sub> 14-9.9

PROJECT NO:

HWY:

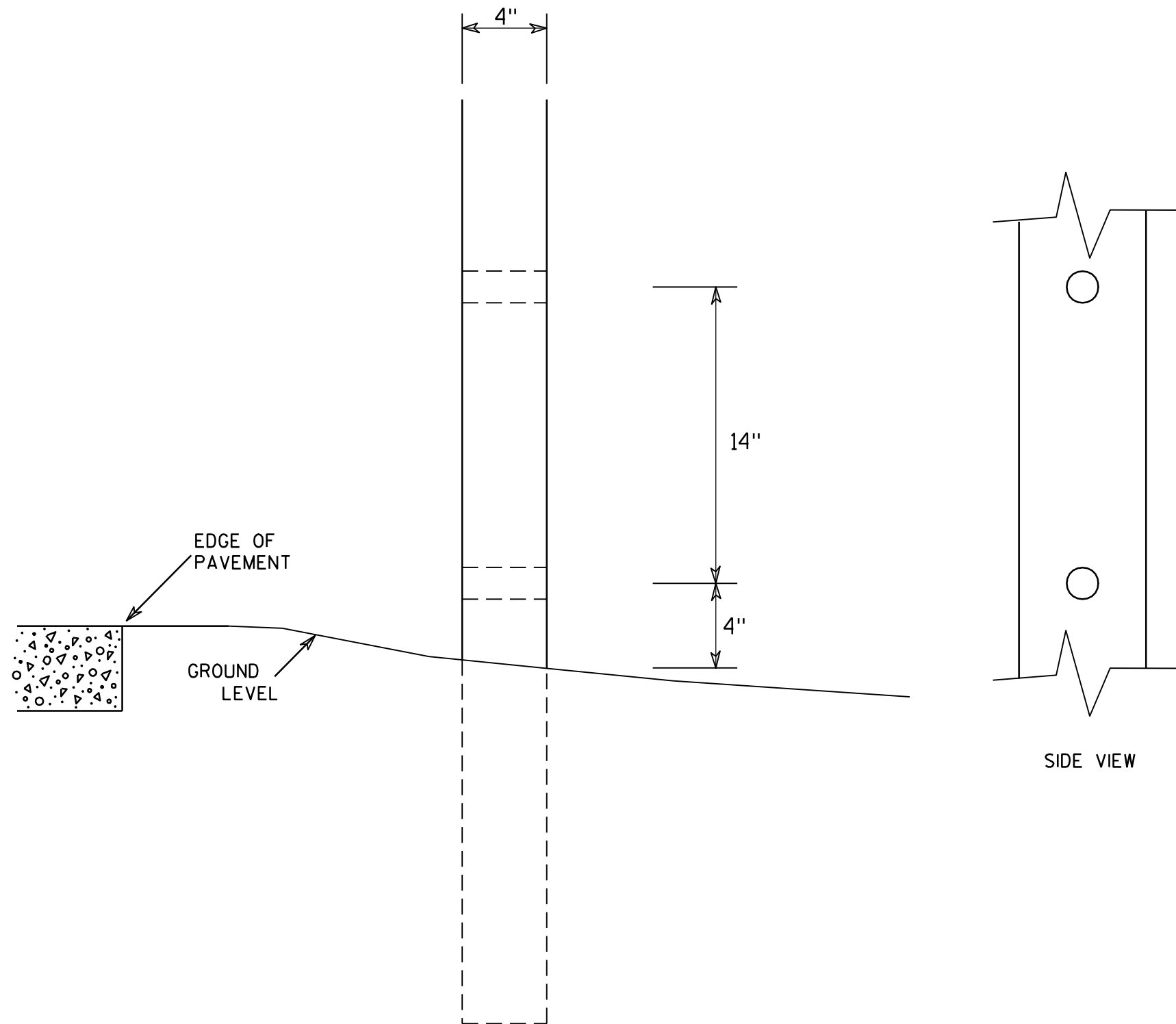
COUNTY:

SHEET NO:

**E**



7



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

4 X 6 WOOD POST  
MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

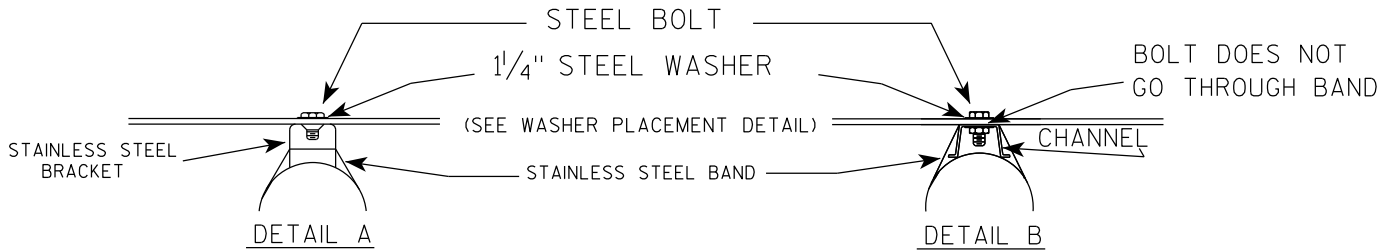
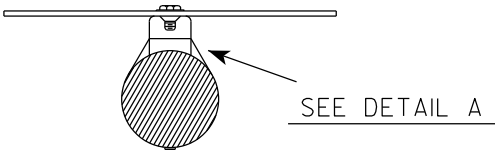
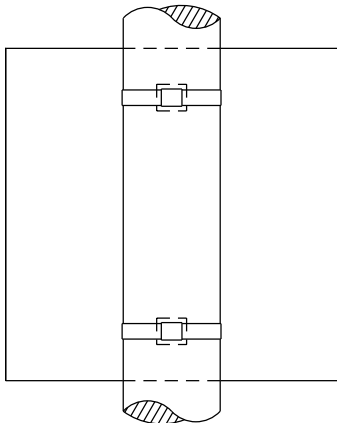
APPROVED *Chester J. Spang*  
for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

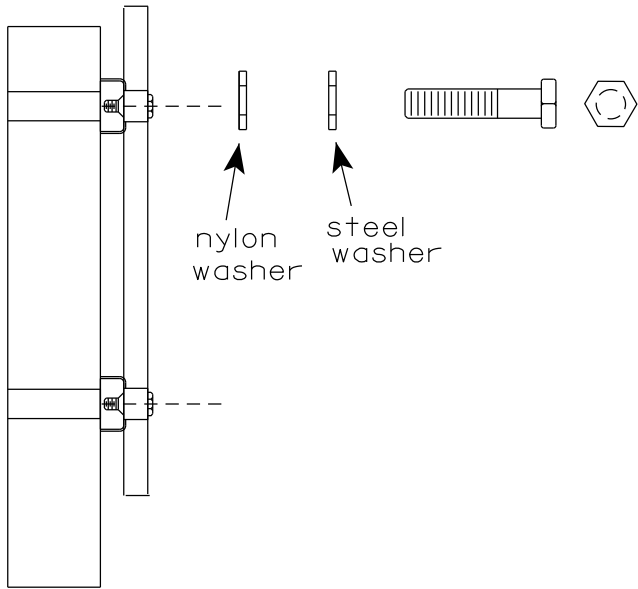
|             |      |         |               |   |
|-------------|------|---------|---------------|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: 388 | E |
|-------------|------|---------|---------------|---|

BANDING

SINGLE SIGN



WASHER PLACEMENT

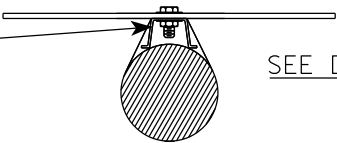
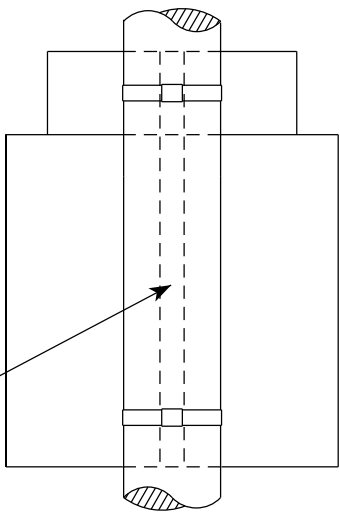


WASHERS (ALL POSTS) -  
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL  
1-1/4" O.D. X 3/8" I.D. X .080 NYLON  
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

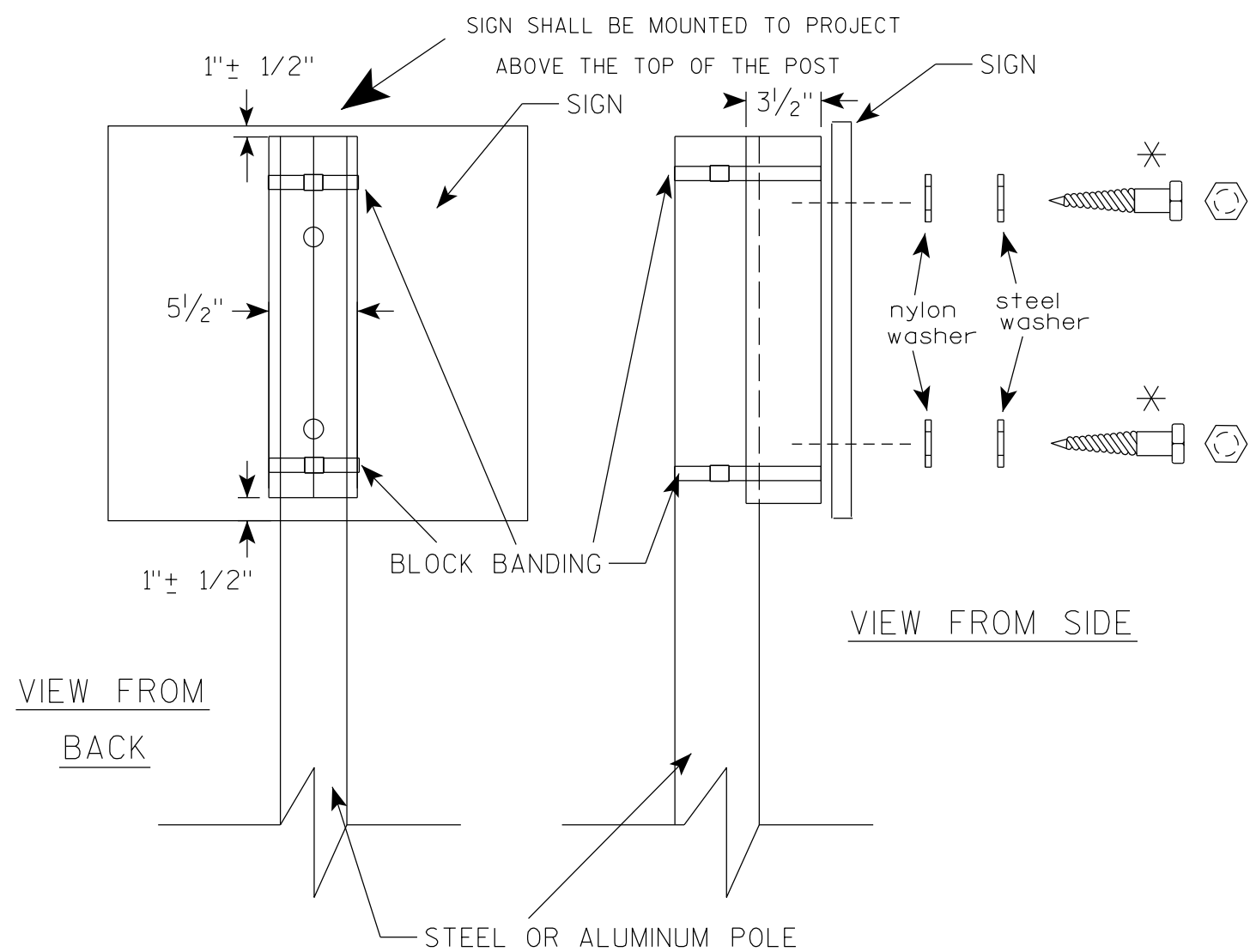
"J" ASSEMBLY



STANDARD SIGN  
SIGN BANDING DETAILS

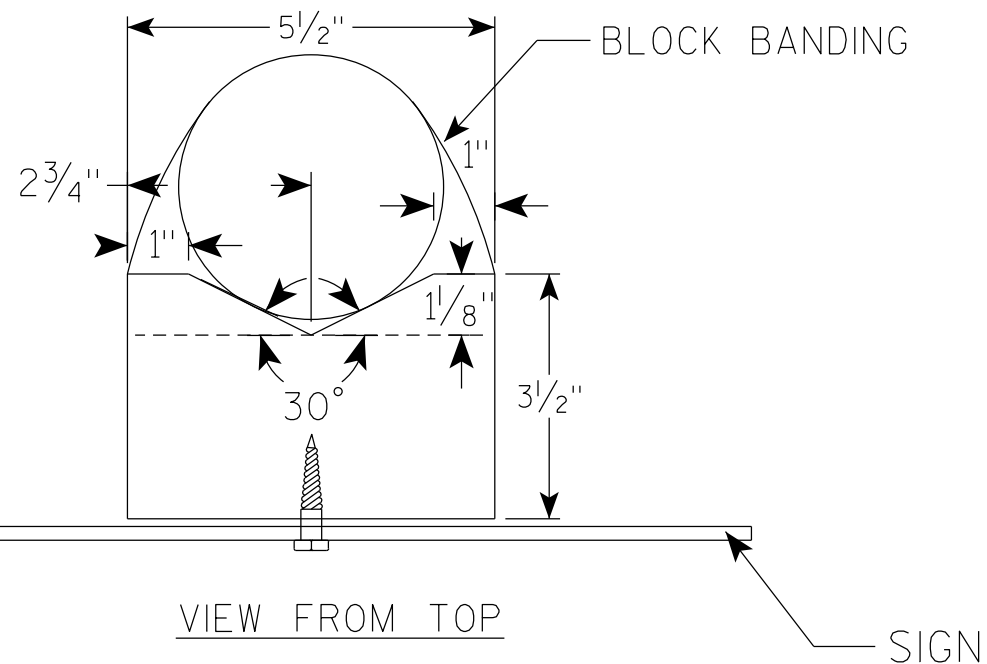
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer  
DATE 6/10/19 PLATE NO. A5-9.4



VIEW FROM  
BACK

VIEW FROM SIDE



## GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL,  $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
  - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
  - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE  $\frac{1}{4}$ " O.D. X  $\frac{3}{8}$ " I.D. X  $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE  $\frac{1}{4}$ " O.D. X  $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE  $\frac{3}{8}$ " X  $2\frac{1}{2}$ "

BLOCK BANDING DETAIL  
( V-BLOCK OPTION )

WISCONSIN DEPT OF TRANSPORTATION

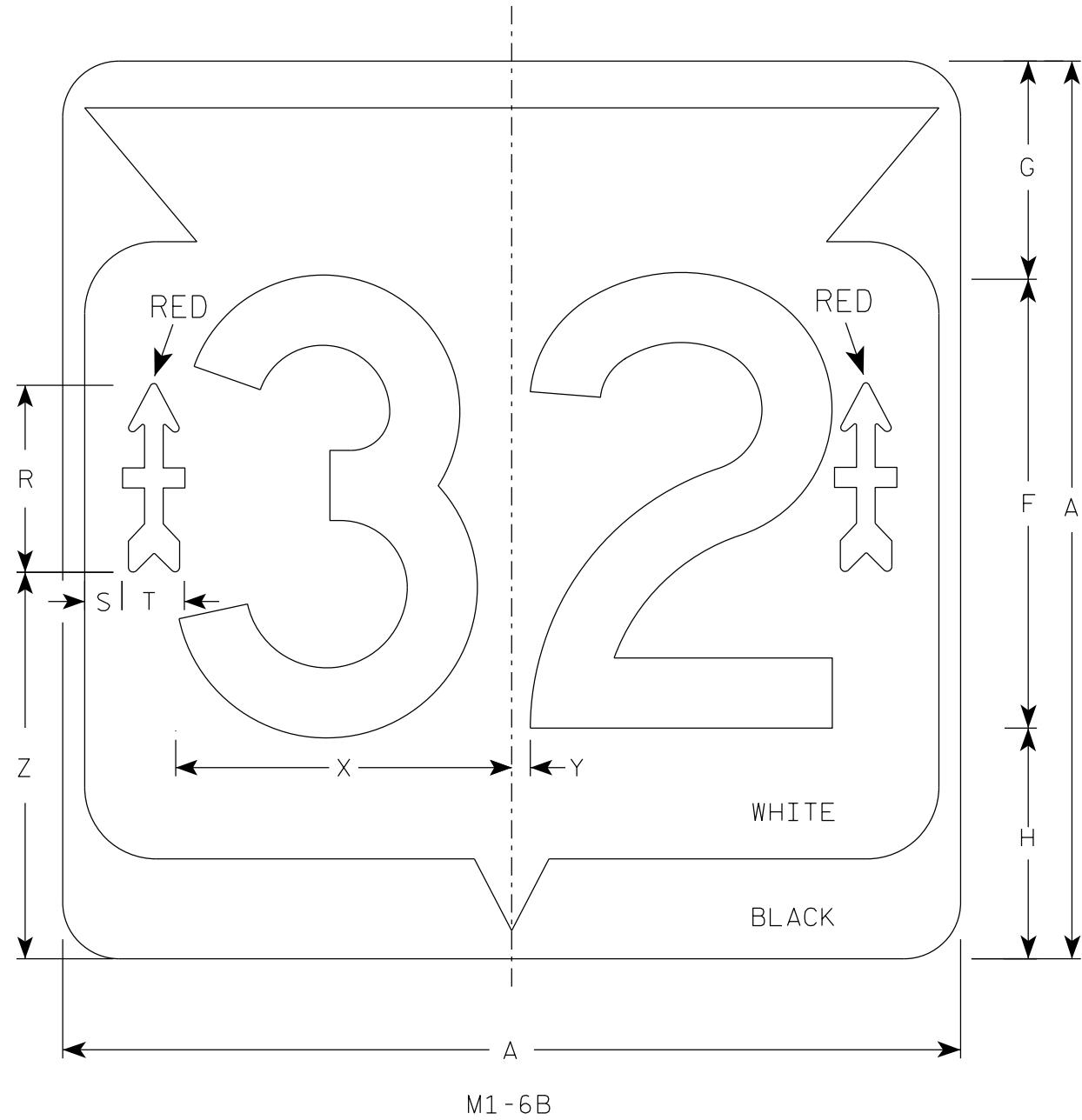
APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

SHEET NO: 390

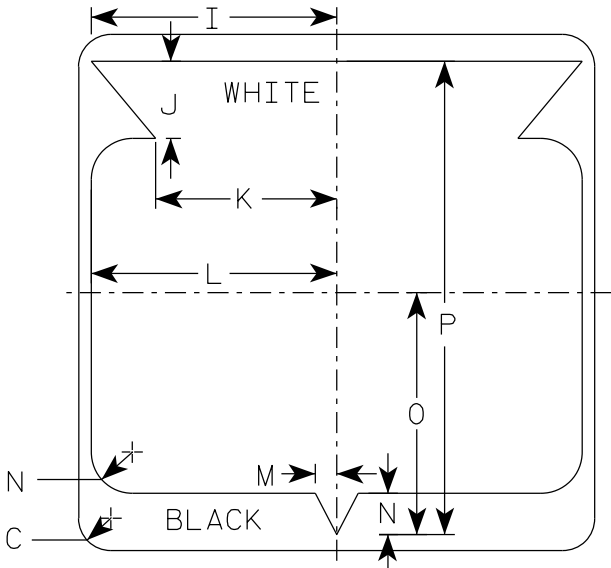
E



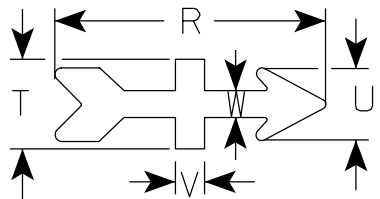
M1-6B

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
  - Background - White & Black
  - Message - Black
  - Arrow - Red
- 3. Message Series - D



32nd DIVISION ARROW  
DETAIL



| SIZE | A  | B | C     | D | E | F  | G     | H     | I      | J     | K      | L      | M     | N     | O      | P      | Q | R     | S     | T     | U     | v   | W   | X      | Y   | Z      | Area<br>sq. ft. |
|------|----|---|-------|---|---|----|-------|-------|--------|-------|--------|--------|-------|-------|--------|--------|---|-------|-------|-------|-------|-----|-----|--------|-----|--------|-----------------|
| 1    |    |   |       |   |   |    |       |       |        |       |        |        |       |       |        |        |   |       |       |       |       |     |     |        |     |        |                 |
| 2    | 24 |   | 1 1/2 |   |   | 12 | 5 1/2 | 6 1/2 | 10 1/4 | 2 1/2 | 8 7/8  | 11 1/2 | 1     | 1 7/8 | 11 1/4 | 21 7/8 |   | 5 1/8 | 3/4   | 1 7/8 | 1 1/2 | 5/8 | 5/8 | 9      | 1/2 | 10 1/2 | 4.0             |
| 2M   | 24 |   | 1 1/2 |   |   | 12 | 5 1/2 | 6 1/2 | 10 1/4 | 2 1/2 | 8 7/8  | 11 1/2 | 1     | 1 7/8 | 11 1/4 | 21 7/8 |   | 5 1/8 | 3/4   | 1 7/8 | 1 1/2 | 5/8 | 5/8 | 9      | 1/2 | 10 1/2 | 4.0             |
| 3    | 36 |   | 2 1/4 |   |   | 18 | 8 3/4 | 9 1/4 | 15 3/8 | 5 3/8 | 12 5/8 | 17 1/8 | 1 1/2 | 2 7/8 | 16 7/8 | 33     |   | 7 1/2 | 1 1/2 | 2 1/2 | 2     | 7/8 | 3/4 | 13 1/2 | 3/4 | 15 1/2 | 9.0             |
| 4    | 36 |   | 2 1/4 |   |   | 18 | 8 3/4 | 9 1/4 | 15 3/8 | 5 3/8 | 12 5/8 | 17 1/8 | 1 1/2 | 2 7/8 | 16 7/8 | 33     |   | 7 1/2 | 1 1/2 | 2 1/2 | 2     | 7/8 | 3/4 | 13 1/2 | 3/4 | 15 1/2 | 9.0             |
| 5    | 36 |   | 2 1/4 |   |   | 18 | 8 3/4 | 9 1/4 | 15 3/8 | 5 3/8 | 12 5/8 | 17 1/8 | 1 1/2 | 2 7/8 | 16 7/8 | 33     |   | 7 1/2 | 1 1/2 | 2 1/2 | 2     | 7/8 | 3/4 | 13 1/2 | 3/4 | 15 1/2 | 9.0             |

STATE ROUTE MARKER"32"  
M1-6B FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 11/8/2022 PLATE NO. M1-6B.3

7



NOTES

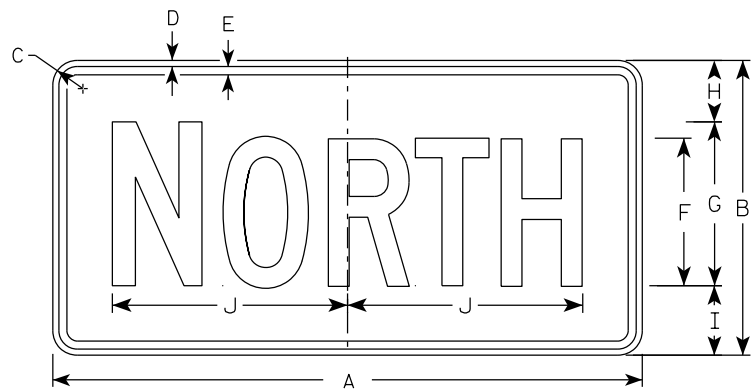
- 1. Sign is Type II - Type H Reflective
- 2. Color:
  - Background - Green
  - Message - White - Graphics - White
  - Circle Tour Message is Green
- 3. Message Series - Special

7

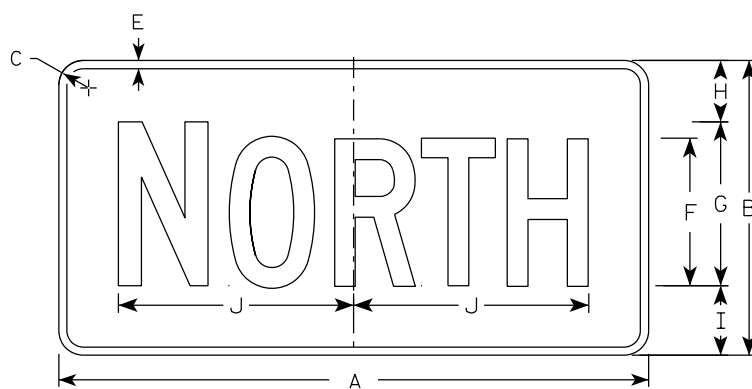
| SIZE | A  | B | C | D     | E   | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|---|-------|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |   |   |       |     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2    | 24 |   |   | 1 1/2 | 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2M   | 24 |   |   | 1 1/2 | 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 3    | 36 |   |   | 2 1/4 | 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 36 |   |   | 2 1/4 | 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 5    | 36 |   |   | 2 1/4 | 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| STANDARD SIGN                    |                                                       |
| M1-93                            |                                                       |
| WISCONSIN DEPT OF TRANSPORTATION |                                                       |
| APPROVED                         | <i>Matthew R. Rauch</i><br>For State Traffic Engineer |
| DATE 2/8/2023                    | PLATE NO. M1-93.4                                     |

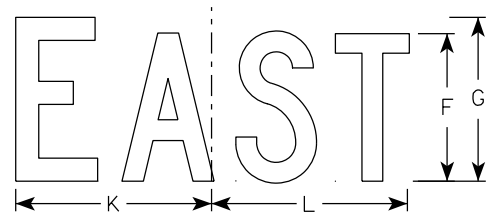
|             |      |         |               |  |   |
|-------------|------|---------|---------------|--|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: 392 |  | E |
|-------------|------|---------|---------------|--|---|



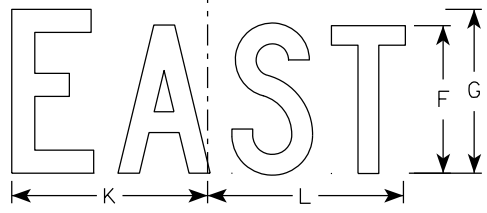
M3-1  
MM3-1  
MP3-1



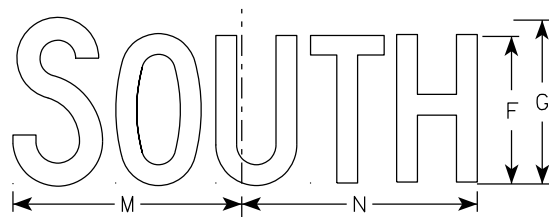
MB3-1  
MK3-1  
MN3-1



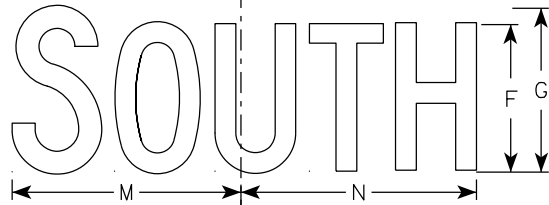
M3-2  
MM3-2  
MP3-2



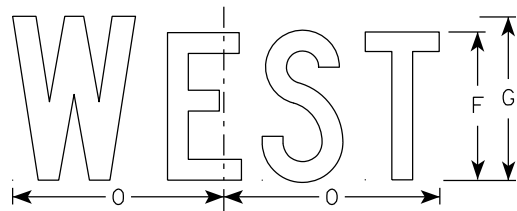
MB3-2  
MK3-2  
MN3-2



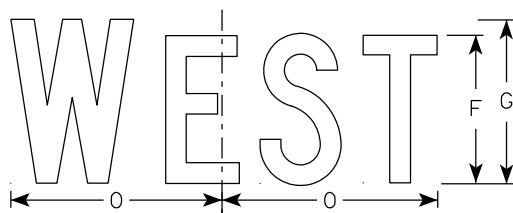
M3-3  
MM3-3  
MP3-3



MB3-3  
MK3-3  
MN3-3



M3-4  
MM3-4  
MP3-4



MB3-4  
MK3-4  
MN3-4

## NOTES

- All Signs Type II - Type H Reflective
- Color:
  - Background - See note 5
  - Message - See note 5
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M3-1 thru M3-4 Background - White  
Message - Black  
MB3-1 thru MB3-4 Background - Blue  
Message - White  
MK3-1 thru MK3-4 Background - Green  
Message - White  
MM3-1 thru MM3-4 Background - White  
Message - Green  
MN3-1 thru MN3-4 Background - Brown  
Message - White  
MP3-1 thru MP3-4 Background - White  
Message - Blue
- Note the first letter of each direction is larger than the remainder of the message.

7

7

| SIZE | A  | B  | C     | D   | E   | F | G  | H     | I     | J      | K     | L      | M      | N      | O     | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|----|-------|-------|--------|-------|--------|--------|--------|-------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |    |       |       |        |       |        |        |        |       |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 6 | 7  | 2 1/4 | 2 3/4 | 10 1/4 | 7 7/8 | 8 3/8  | 10 1/4 | 9 3/4  | 8 3/4 |   |   |   |   |   |   |   |   |   |   |   | 2.00            |
| 2M   | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 6 | 7  | 2 1/4 | 2 3/4 | 10 1/4 | 7 7/8 | 8 3/8  | 10 1/4 | 9 3/4  | 8 3/4 |   |   |   |   |   |   |   |   |   |   |   | 2.00            |
| 3    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12    | 12 1/8 | 14     | 14 1/8 | 13    |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 4    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12    | 12 1/8 | 14     | 14 1/8 | 13    |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 5    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 10 | 3 3/4 | 4 1/4 | 14 3/8 | 12    | 12 1/8 | 14     | 14 1/8 | 13    |   |   |   |   |   |   |   |   |   |   |   | 4.5             |

|             |      |         |               |   |
|-------------|------|---------|---------------|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: 393 | E |
|-------------|------|---------|---------------|---|

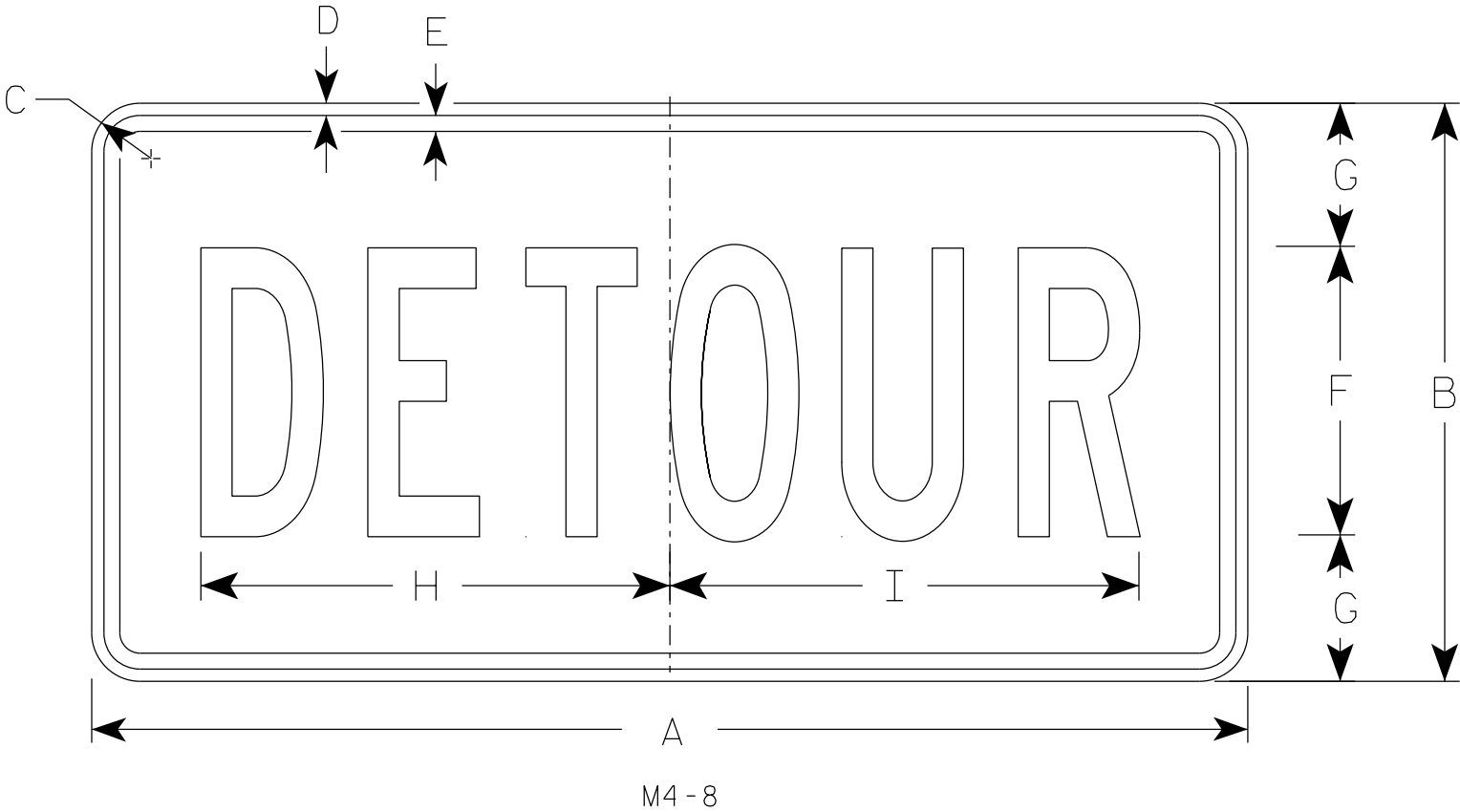


7

7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Orange  
Message - Black
- 3. Message Series - B
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



| SIZE | A  | B  | C     | D   | E   | F | G     | H      | I      | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |       |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2    | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 6 | 3     | 10     | 10 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.0             |
| 2M   | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 6 | 3     | 10     | 10 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.0             |
| 3    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 4 1/2 | 14 5/8 | 14 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 4    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 4 1/2 | 14 5/8 | 14 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 5    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 9 | 4 1/2 | 14 5/8 | 14 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |

STANDARD SIGN

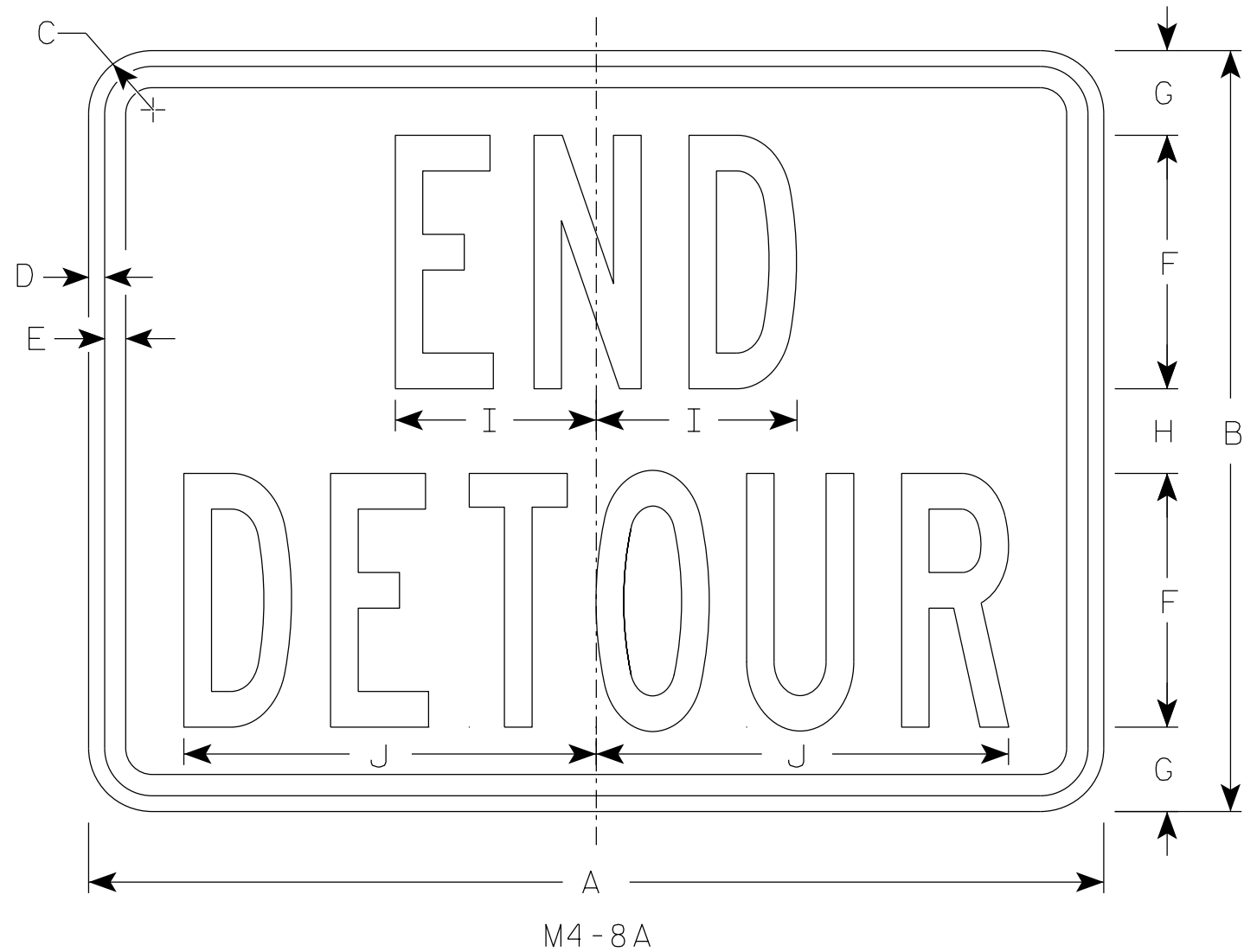
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-8.4

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Orange
  - Message - Black
- 3. Message Series - B
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

| SIZE | A  | B  | C     | D   | E   | F | G     | H | I     | J     | K | L | M | N | O | P | Q | R | S | T | U | v | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|---|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |       |   |       |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2    | 24 | 18 | 1 1/2 | 3/8 | 1/2 | 6 | 2     | 2 | 4 3/4 | 9 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.0             |
| 2M   | 24 | 18 | 1 1/2 | 3/8 | 1/2 | 6 | 2     | 2 | 4 3/4 | 9 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.0             |
| 3    | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 8 | 2 1/2 | 3 | 6 3/4 | 13    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.0             |
| 4    | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 8 | 2 1/2 | 3 | 6 3/4 | 13    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.0             |
| 5    | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 8 | 2 1/2 | 3 | 6 3/4 | 13    |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.0             |

STANDARD SIGN

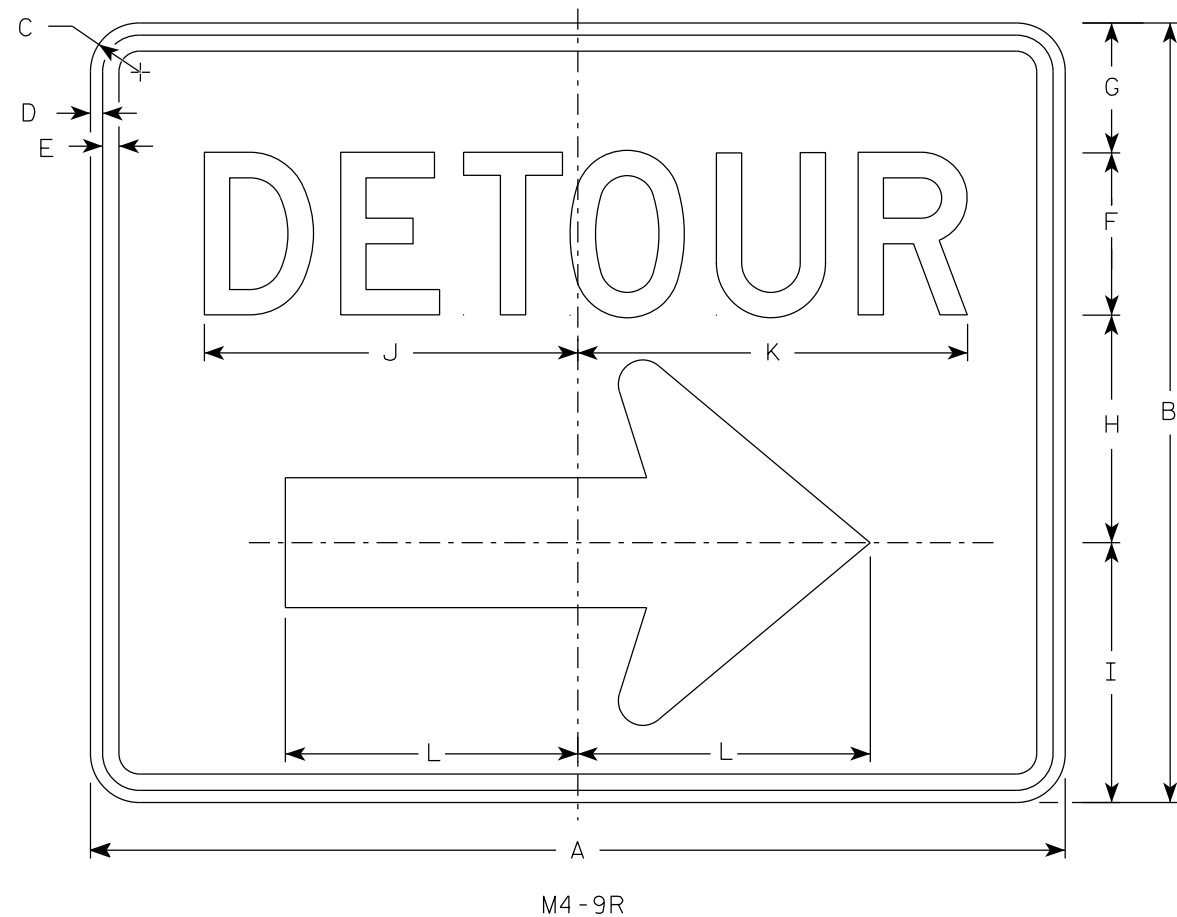
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

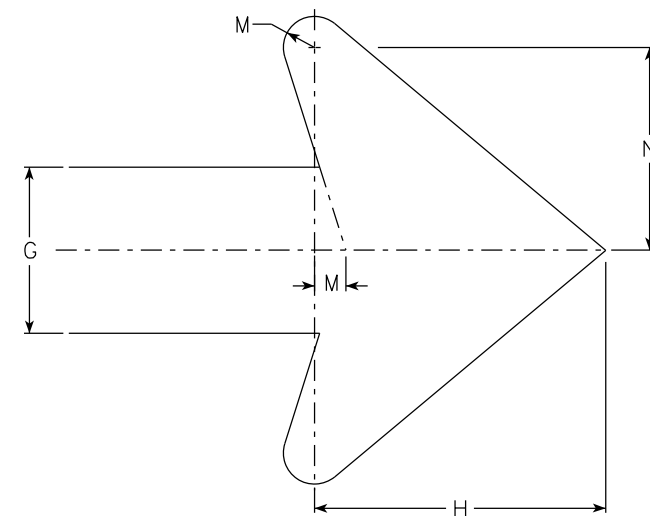
DATE 2/9/2023 PLATE NO. M4-8A.4





### NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

| SIZE | A  | B  | C     | D   | E   | F | G | H      | I      | J      | K      | L      | M     | N     | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|---|--------|--------|--------|--------|--------|-------|-------|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |   |        |        |        |        |        |       |       |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2    | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 5 | 4 | 7      | 8      | 11 1/2 | 12     | 9      | 3/4   | 4 7/8 |   |   |   |   |   |   |   |   |   |   |   |   | 5.00            |
| 2M   | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 5 | 4 | 7      | 8      | 11 1/2 | 12     | 9      | 3/4   | 4 7/8 |   |   |   |   |   |   |   |   |   |   |   |   | 5.00            |
| 3    | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 5 | 4 | 7      | 8      | 11 1/2 | 12     | 9      | 3/4   | 4 7/8 |   |   |   |   |   |   |   |   |   |   |   |   | 5.00            |
| 4    | 48 | 36 | 1 7/8 | 1/2 | 5/8 | 8 | 6 | 10 1/2 | 11 5/8 | 20 5/8 | 20 1/2 | 13 1/4 | 1 1/8 | 6 7/8 |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |
| 5    | 48 | 36 | 1 7/8 | 1/2 | 5/8 | 8 | 6 | 10 1/2 | 11 5/8 | 20 5/8 | 20 1/2 | 13 1/4 | 1 1/8 | 6 7/8 |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |

### STANDARD SIGN M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

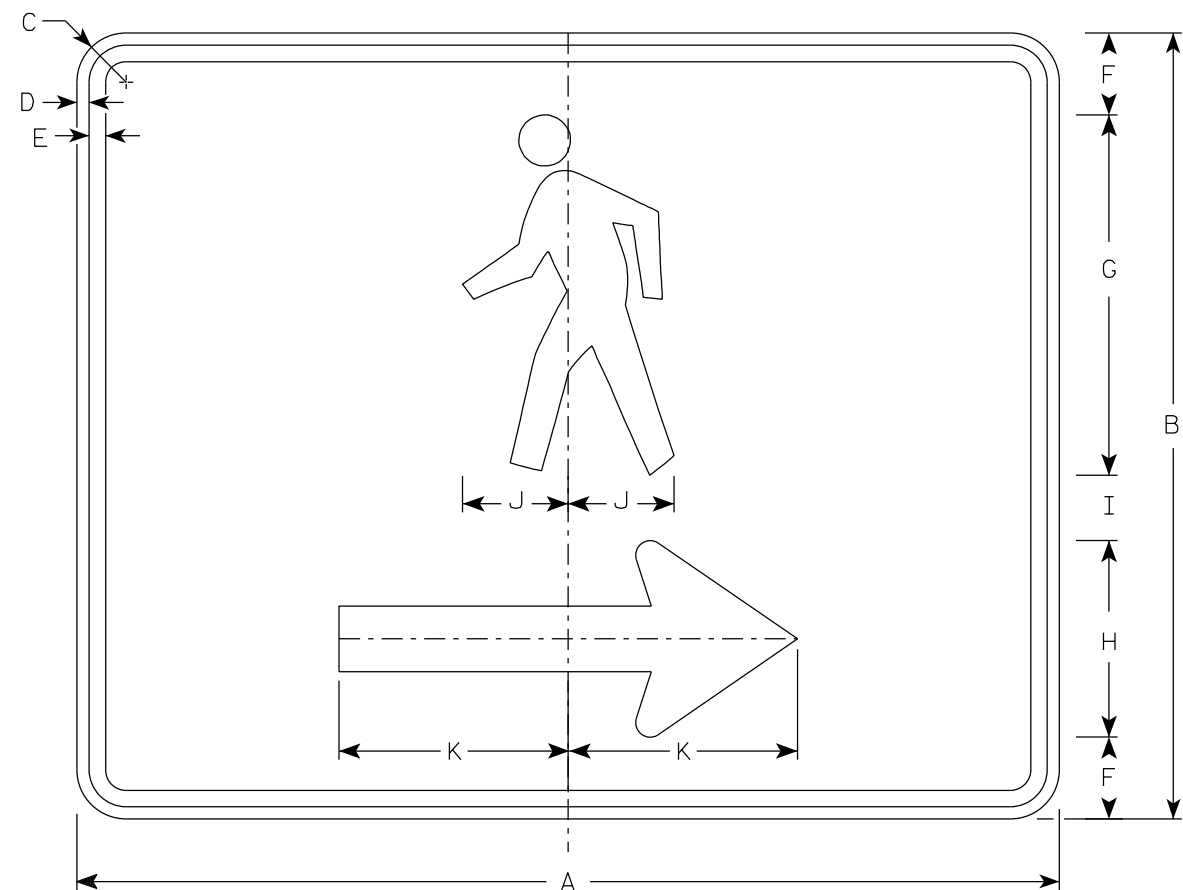
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-9R.6

PROJECT NO: HWY: COUNTY: SHEET NO: 396 E

FILE NAME : C:\CAEfiles\Projects\tr\_stdplate\M49R.dgn PLOT DATE : 21-MARCH 2023 1:40 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : \$\$.....plotscale.....\$\$ WISDOT/CADD'S SHEET 42

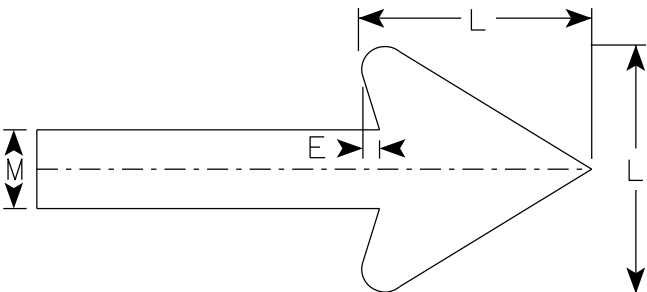
7



M4-60R

NOTES

1. Sign is Type II- Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M4-60L is the same as M4-60R except the arrow is reversed.



Arrow Detail

7

| SIZE | A  | B  | C     | D   | E   | F     | G  | H | I | J     | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|-------|----|---|---|-------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |       |    |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 2 1/2 | 11 | 6 | 2 | 3 1/4 | 7 | 6 | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.00            |
| 2M   | 30 | 24 | 1 1/2 | 3/8 | 1/2 | 2 1/2 | 11 | 6 | 2 | 3 1/4 | 7 | 6 | 2 |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.00            |
| 3    |    |    |       |     |     |       |    |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    |    |    |       |     |     |       |    |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |     |     |       |    |   |   |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

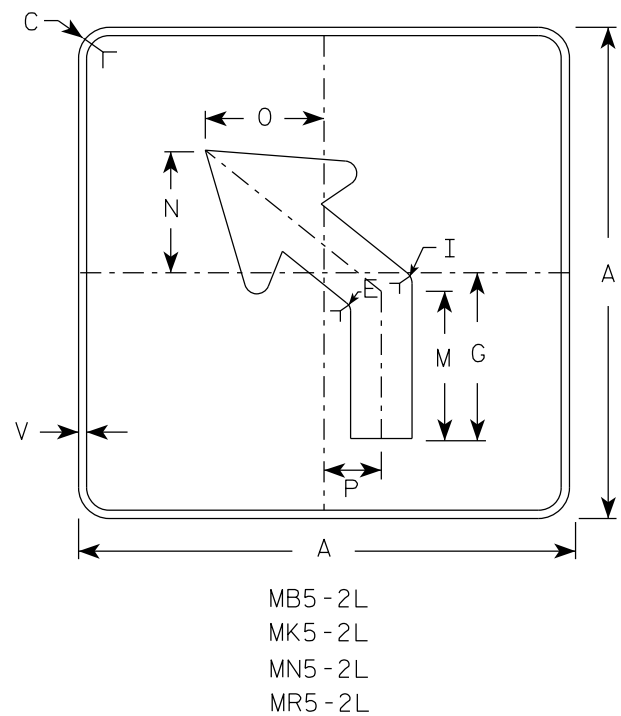
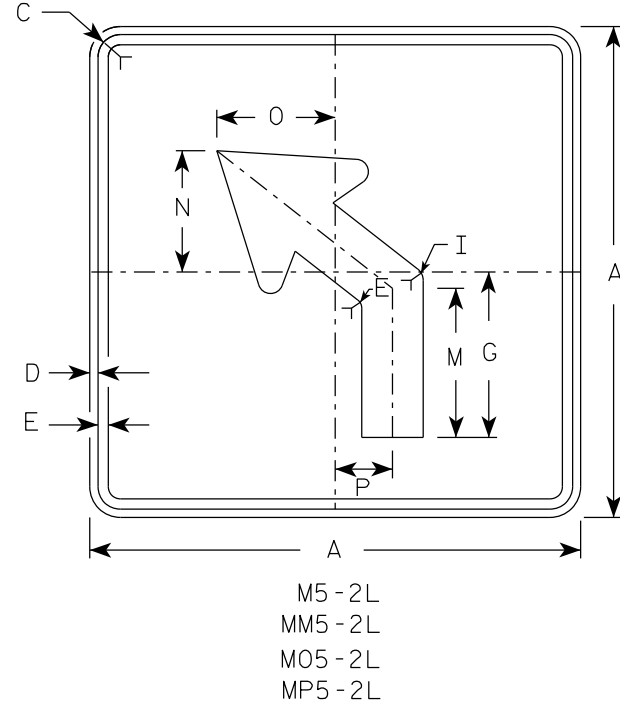
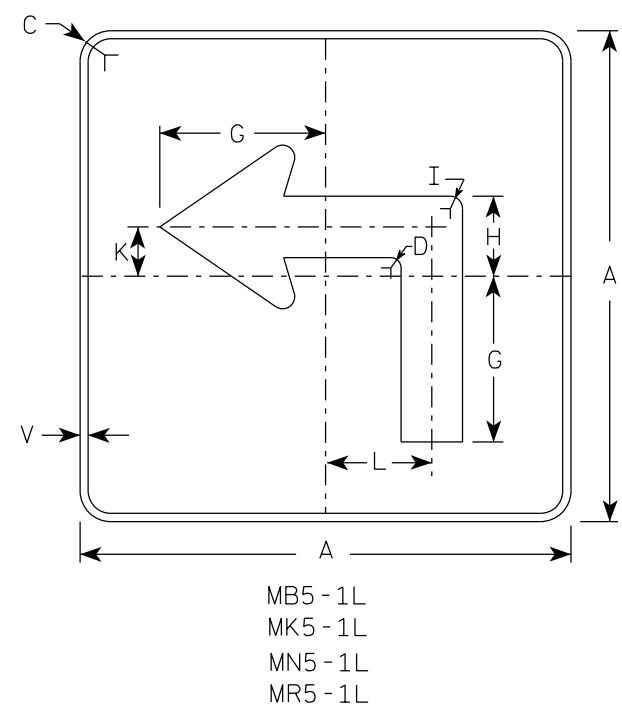
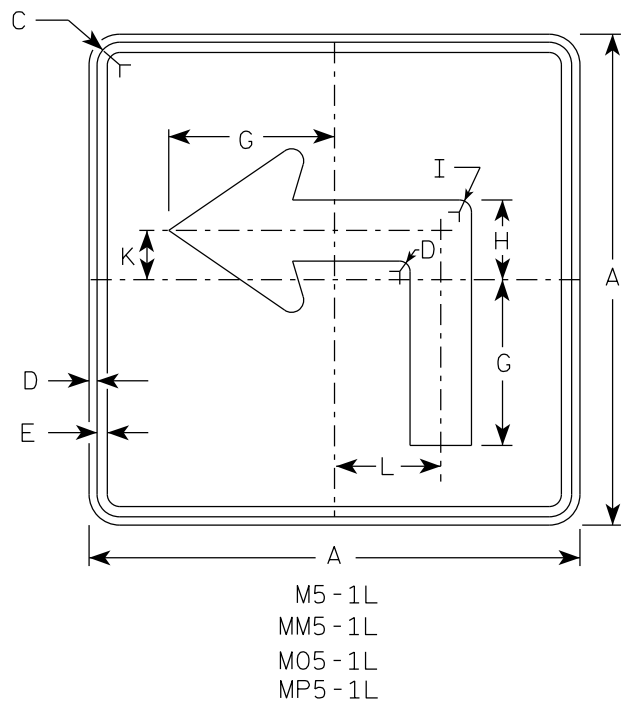
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 397

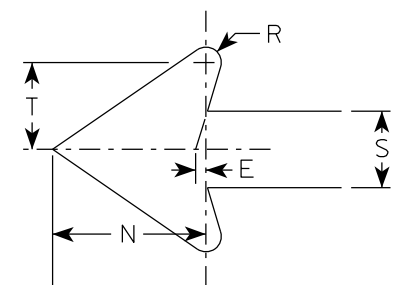
E



NOTES

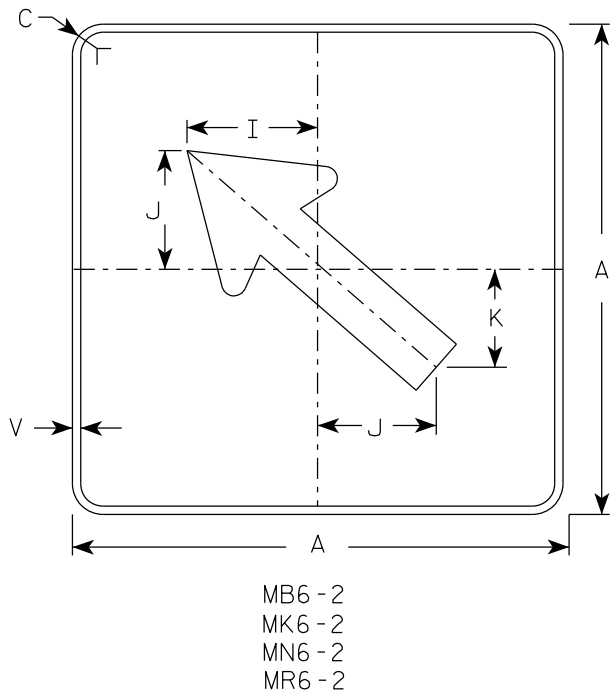
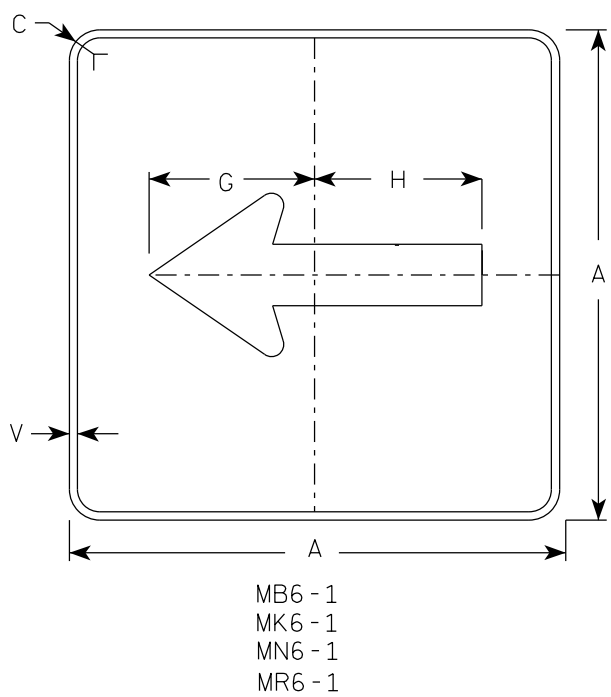
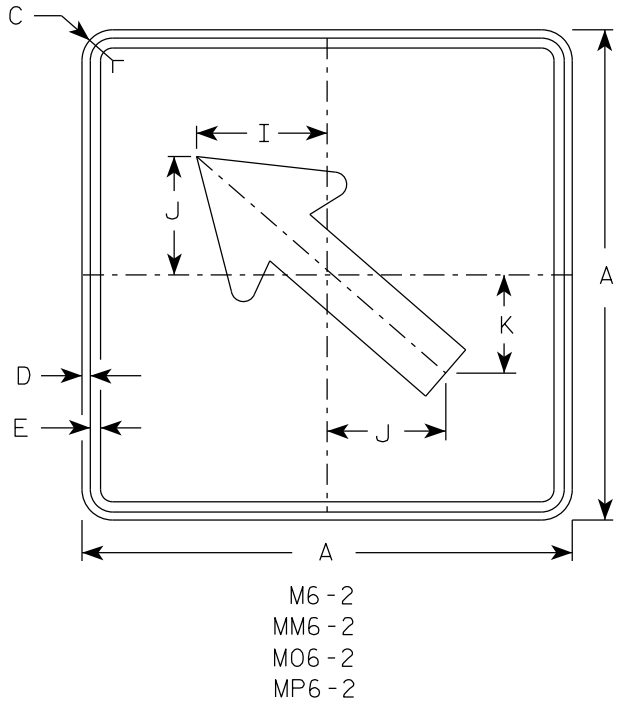
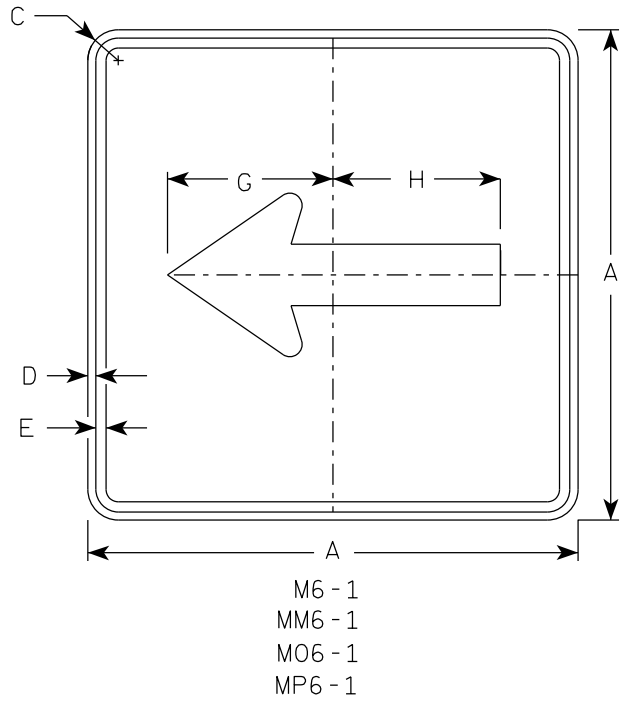
- Signs are Type II - Type H reflective except as shown
- Color:  
Background - See note 4  
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- |           |       |                                         |
|-----------|-------|-----------------------------------------|
| M5-1 and  | M5-2  | Background - White                      |
|           |       | Message - Black                         |
| MB5-1 and | MB5-2 | Background - Blue                       |
|           |       | Message - White                         |
| MK5-1 and | MK5-2 | Background - Green                      |
|           |       | Message - White                         |
| MM5-1 and | MM5-2 | Background - White                      |
|           |       | Message - Green                         |
| MN5-1 and | MN5-2 | Background - Brown                      |
|           |       | Message - White                         |
| M05-1 and | M05-2 | Background - Orange - Type F Reflective |
|           |       | Message - Black                         |
| MP5-1 and | MP5-2 | Background - White                      |
|           |       | Message - Blue                          |
| MR5-1 and | MR5-2 | Background - Brown                      |
|           |       | Message - Yellow                        |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

ARROW DETAIL

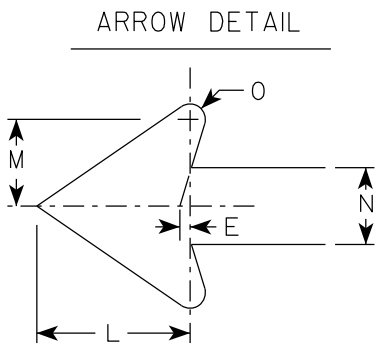


| SIZE | A  | B | C     | D   | E   | F | G      | H     | I   | J | K     | L     | M     | N     | O     | P     | Q | R   | S     | T     | U | V   | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|--------|-------|-----|---|-------|-------|-------|-------|-------|-------|---|-----|-------|-------|---|-----|---|---|---|---|-----------------|
| 1    |    |   |       |     |     |   |        |       |     |   |       |       |       |       |       |       |   |     |       |       |   |     |   |   |   |   |                 |
| 2S   | 21 |   | 1 1/2 | 3/8 | 3/8 |   | 7      | 3 3/8 | 5/8 |   | 2 1/8 | 4 1/2 | 6 3/8 | 5 1/4 | 5     | 2 1/2 |   | 1/2 | 2 5/8 | 3     |   | 1/2 |   |   |   |   | 3.06            |
| 2M   | 21 |   | 1 1/2 | 3/8 | 3/8 |   | 7      | 3 3/8 | 5/8 |   | 2 1/8 | 4 1/2 | 6 3/8 | 5 1/4 | 5     | 2 1/2 |   | 1/2 | 2 5/8 | 3     |   | 1/2 |   |   |   |   | 3.06            |
| 3    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 1/8 | 4 7/8 | 7/8 |   | 3     | 6 1/2 | 9 1/8 | 7 1/2 | 7 1/4 | 3 1/2 |   | 3/4 | 3 3/4 | 4 1/4 |   | 1/2 |   |   |   |   | 6.25            |
| 4    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 1/8 | 4 7/8 | 7/8 |   | 3     | 6 1/2 | 9 1/8 | 7 1/2 | 7 1/4 | 3 1/2 |   | 3/4 | 3 3/4 | 4 1/4 |   | 1/2 |   |   |   |   | 6.25            |
| 5    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 1/8 | 4 7/8 | 7/8 |   | 3     | 6 1/2 | 9 1/8 | 7 1/2 | 7 1/4 | 3 1/2 |   | 3/4 | 3 3/4 | 4 1/4 |   | 1/2 |   |   |   |   | 6.25            |

|             |      |         |               |   |
|-------------|------|---------|---------------|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: 398 | E |
|-------------|------|---------|---------------|---|



- NOTES**
- Signs are Type II - Type H Reflective except as Shown
  - Color:  
Background - See note 4  
Message - See note 4
  - Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
  - M6-1 and M6-2 Background - White  
Message - Black  
MB6-1 and MB6-2 Background - Blue  
Message - White  
MK6-1 and MK6-2 Background - Green  
Message - White  
MM6-1 and MM6-2 Background - White  
Message - Green  
MN6-1 and MN6-2 Background - Brown  
Message - White  
M06-1 and M06-2 Background - Orange - Type F Reflective  
Message - Black  
MP6-1 and MP6-2 Background - White  
Message - Blue  
MR6-1 and MR6-2 Background - Brown  
Message - Yellow



| SIZE | A  | B | C     | D   | E   | F | G      | H      | I     | J     | K     | L     | M     | N     | O   | P | Q | R | S | T | U | V   | W | X | Y | Z | Area<br>sq. ft. |      |
|------|----|---|-------|-----|-----|---|--------|--------|-------|-------|-------|-------|-------|-------|-----|---|---|---|---|---|---|-----|---|---|---|---|-----------------|------|
| 1    |    |   |       |     |     |   |        |        |       |       |       |       |       |       |     |   |   |   |   |   |   |     |   |   |   |   |                 |      |
| 2S   | 21 |   | 1 1/2 | 3/8 | 3/8 |   | 7 1/2  | 7 1/8  | 5 5/8 | 5     | 4 1/4 | 5 1/4 | 3     | 2 5/8 | 1/2 |   |   |   |   |   |   | 1/2 |   |   |   |   |                 | 3.06 |
| 2M   | 21 |   | 1 1/2 | 3/8 | 3/8 |   | 7 1/2  | 7 1/8  | 5 5/8 | 5     | 4 1/4 | 5 1/4 | 3     | 2 5/8 | 1/2 |   |   |   |   |   |   | 1/2 |   |   |   |   |                 | 3.06 |
| 3    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 3/4 | 10 1/4 | 8     | 7 1/4 | 6     | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 |   |   |   |   |   |   | 1/2 |   |   |   |   |                 | 6.25 |
| 4    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 3/4 | 10 1/4 | 8     | 7 1/4 | 6     | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 |   |   |   |   |   |   | 1/2 |   |   |   |   |                 | 6.25 |
| 5    | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 3/4 | 10 1/4 | 8     | 7 1/4 | 6     | 7 1/2 | 4 1/4 | 3 3/4 | 3/4 |   |   |   |   |   |   | 1/2 |   |   |   |   |                 | 6.25 |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 399

E

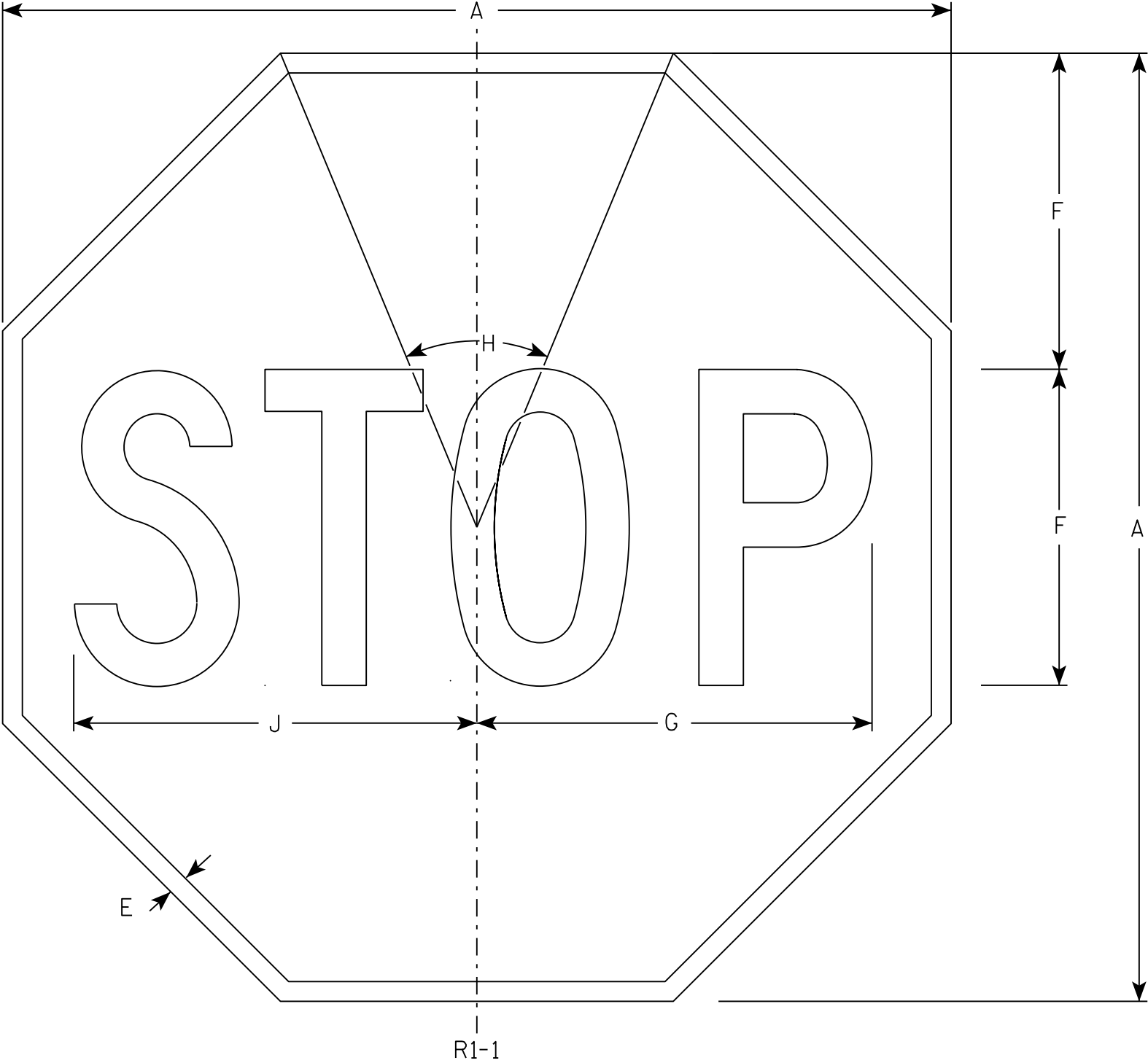
STANDARD SIGN  
M6-1 & M6-2  
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 2/13/2023 PLATE NO. M6-1.16

7



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:  
Background - Red  
Message - White
- 3. Message Series - C

7

R1-1

| SIZE | A  | B | C | D | E   | F  | G      | H   | I | J      | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|---|---|-----|----|--------|-----|---|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 30 |   |   |   | 5/8 | 10 | 12 1/2 | 45° |   | 12 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.18            |
| 2S   | 30 |   |   |   | 5/8 | 10 | 12 1/2 | 45° |   | 12 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.18            |
| 2M   | 36 |   |   |   | 3/4 | 12 | 15     | 45° |   | 15 3/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.46            |
| 3    | 36 |   |   |   | 3/4 | 12 | 15     | 45° |   | 15 3/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.46            |
| 4    | 48 |   |   |   | 1   | 16 | 20     | 45° |   | 20 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 13.25           |
| 5    | 48 |   |   |   | 1   | 16 | 20     | 45° |   | 20 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 13.25           |
| 6    | 18 |   |   |   | 3/8 | 6  | 7 3/4  | 45° |   | 7 3/4  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 1.86            |
| 7    | 12 |   |   |   | 1/4 | 4  | 5      | 45° |   | 5 1/8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 0.78            |

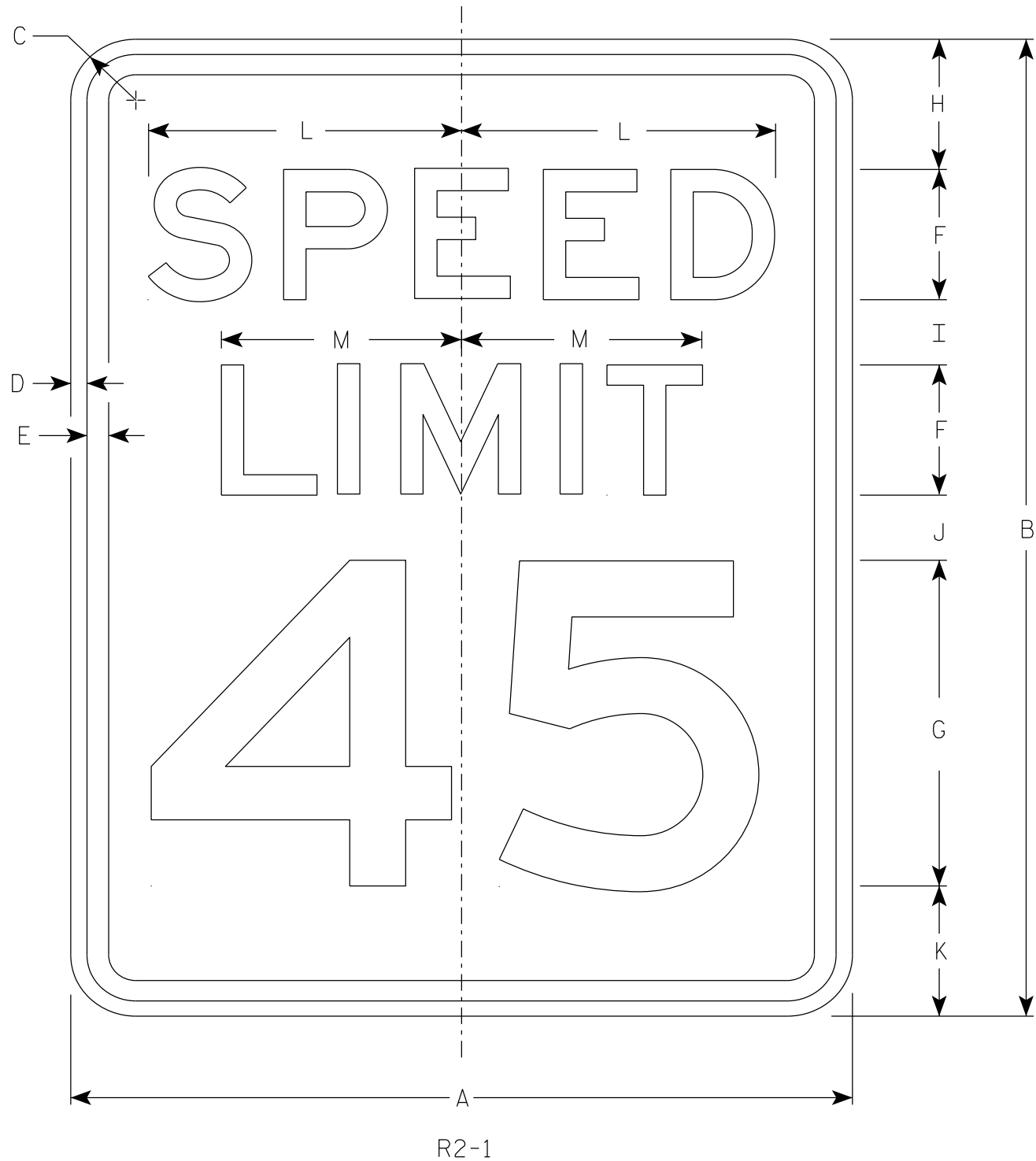
STANDARD SIGN  
R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
  - Background - White
  - Message - Black
- 3. Message Series - E
- 4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

7

| SIZE | A  | B  | C     | D   | E   | F | G  | H | I     | J     | K     | L      | M      | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|----|---|-------|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 18 | 24 | 1 1/2 | 3/8 | 1/2 | 3 | 8  | 3 | 2     | 2     | 3     | 7 1/4  | 5 1/2  |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.0             |
| 2S   | 24 | 30 | 1 1/2 | 3/8 | 1/2 | 4 | 10 | 3 | 2 1/4 | 3 3/8 | 3 3/8 | 9 5/8  | 7 3/8  |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.0             |
| 2M   | 30 | 36 | 1 7/8 | 1/2 | 5/8 | 5 | 12 | 5 | 2 1/2 | 2 1/2 | 4     | 12     | 9 1/4  |   |   |   |   |   |   |   |   |   |   |   |   |   | 7.5             |
| 3    | 36 | 48 | 1 7/8 | 1/2 | 5/8 | 6 | 14 | 6 | 5     | 5     | 6     | 14 3/8 | 11     |   |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |
| 4    | 36 | 48 | 1 7/8 | 1/2 | 5/8 | 6 | 14 | 6 | 5     | 5     | 6     | 14 3/8 | 11     |   |   |   |   |   |   |   |   |   |   |   |   |   | 12.0            |
| 5    | 48 | 60 | 3     | 3/4 | 1   | 8 | 20 | 6 | 4 1/2 | 6 3/4 | 6 3/4 | 19 1/4 | 14 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   | 20.0            |

STANDARD SIGN

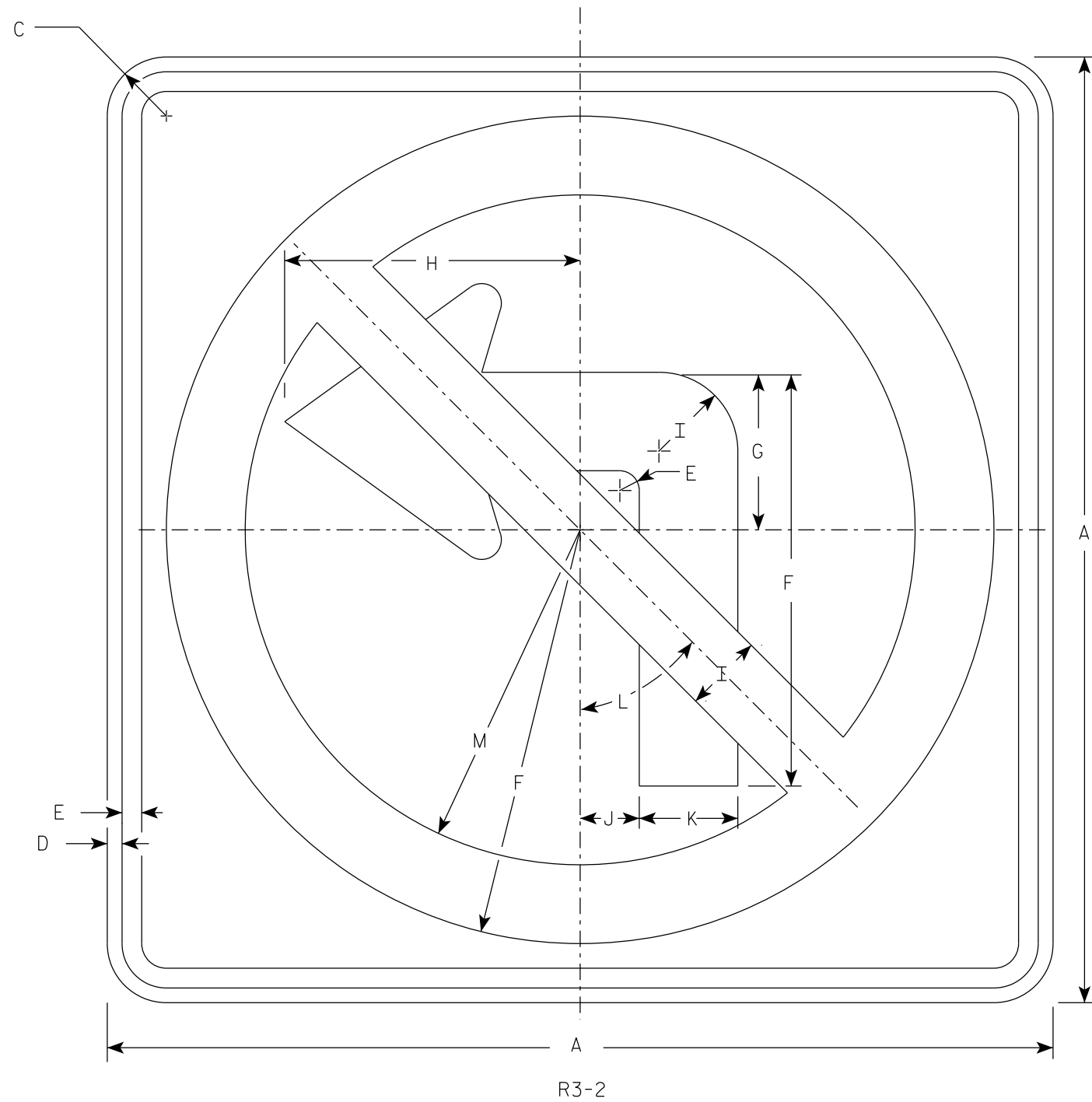
R2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

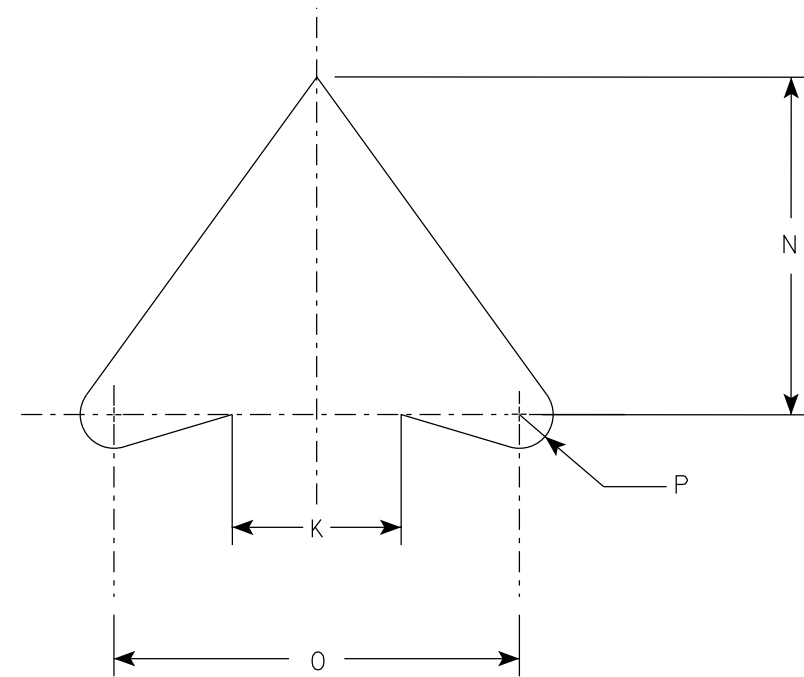
DATE 2/1/23 PLATE NO. R2-1.14





NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - White  
Message - See note 3
- 3. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

| SIZE | A  | B | C     | D   | E   | F      | G | H      | I | J     | K     | L   | M      | N     | O  | P   | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|--------|---|--------|---|-------|-------|-----|--------|-------|----|-----|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 24 |   | 1 1/2 | 3/8 | 1/2 | 10 1/2 | 4 | 7 1/2  | 2 | 1 1/2 | 2 1/2 | 45° | 8 1/2  | 5     | 6  | 1/2 |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2S   | 24 |   | 1 1/2 | 3/8 | 1/2 | 10 1/2 | 4 | 7 1/2  | 2 | 1 1/2 | 2 1/2 | 45° | 8 1/2  | 5     | 6  | 1/2 |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2M   | 36 |   | 2 1/4 | 5/8 | 3/4 | 15 3/4 | 6 | 11 1/4 | 3 | 2 1/4 | 3 3/4 | 45° | 12 3/4 | 7 1/2 | 9  | 3/4 |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 | 15 3/4 | 6 | 11 1/4 | 3 | 2 1/4 | 3 3/4 | 45° | 12 3/4 | 7 1/2 | 9  | 3/4 |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 36 |   | 2 1/4 | 5/8 | 3/4 | 15 3/4 | 6 | 11 1/4 | 3 | 2 1/4 | 3 3/4 | 45° | 12 3/4 | 7 1/2 | 9  | 3/4 |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 5    | 48 |   | 2 1/4 | 3/4 | 1   | 21     | 8 | 15     | 4 | 3     | 5     | 45° | 17     | 10    | 12 | 1   |   |   |   |   |   |   |   |   |   |   | 16.0            |

PROJECT NO:

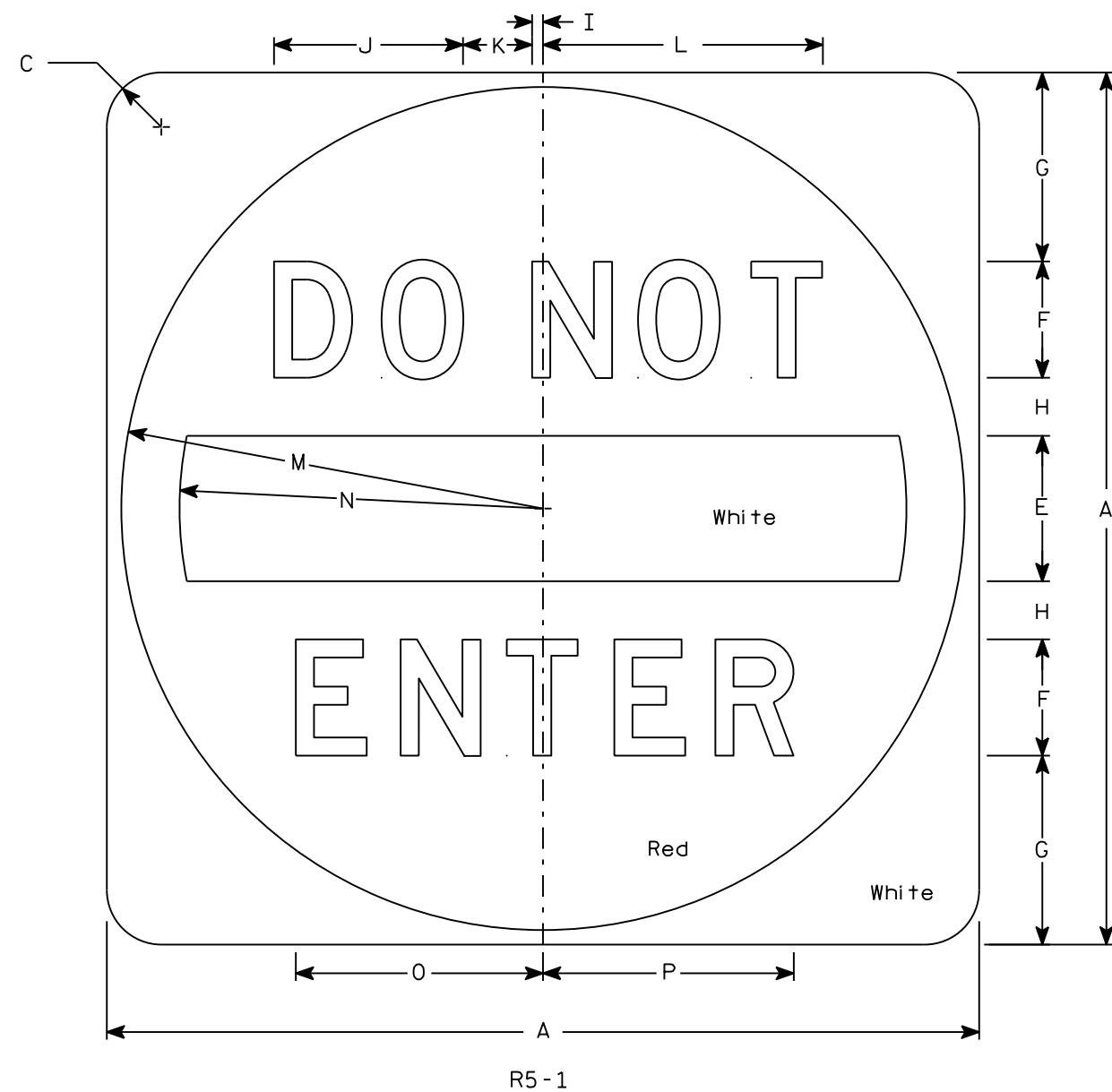
HWY:

COUNTY:

SHEET NO: 402

E

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:  
Background - See detail  
Message - White
3. Message Series - D

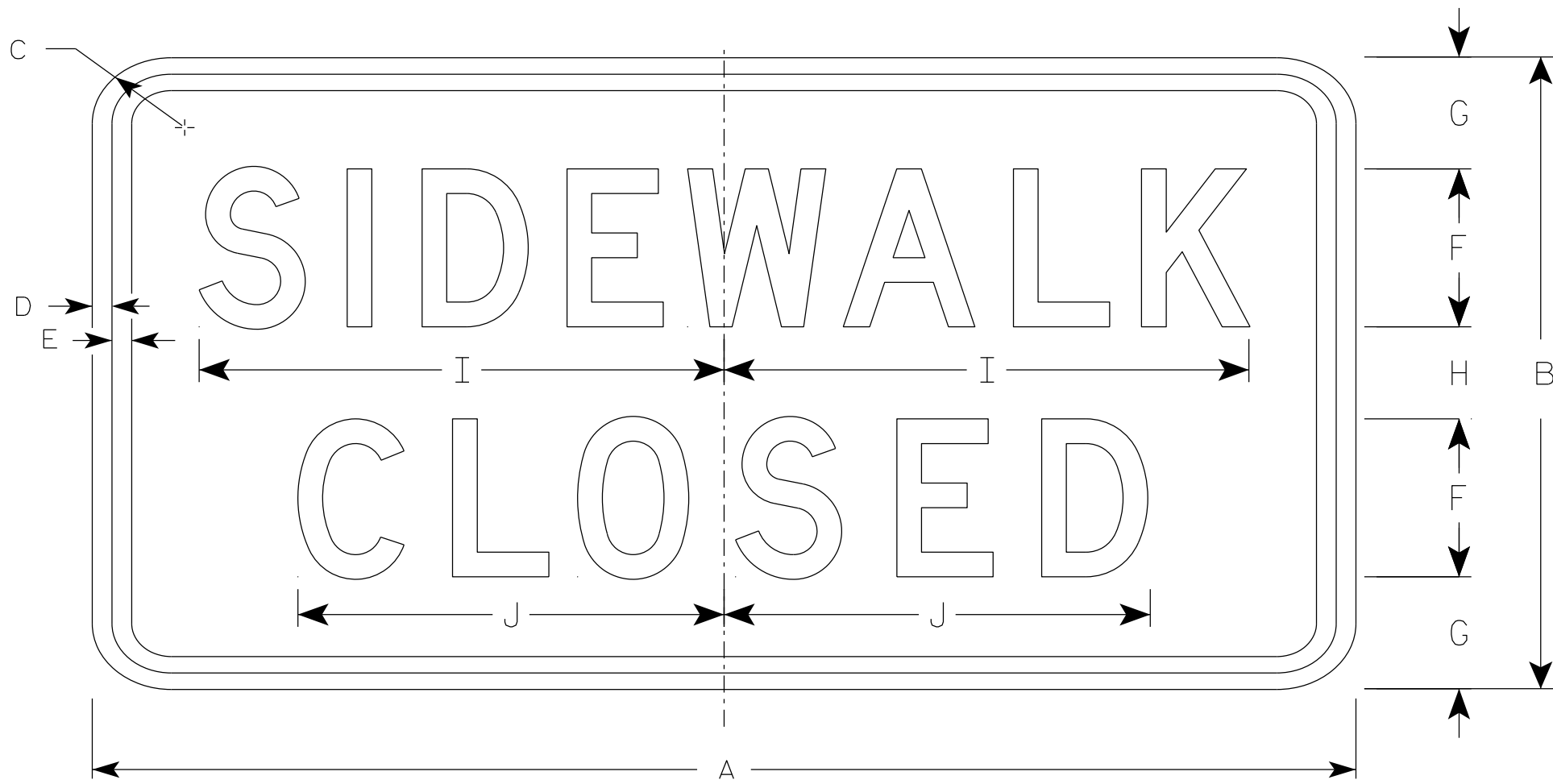
7

| SIZE | A  | B | C     | D | E | F | G     | H     | I   | J     | K     | L      | M      | N      | O      | P      | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|---|---|---|-------|-------|-----|-------|-------|--------|--------|--------|--------|--------|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |   |       |   |   |   |       |       |     |       |       |        |        |        |        |        |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 30 |   | 1 7⁄8 |   | 5 | 4 | 6 1⁄2 | 2     | 3⁄8 | 6 1⁄2 | 2 3⁄8 | 9 5⁄8  | 14 1⁄2 | 12 1⁄2 | 8 1⁄2  | 8 5⁄8  |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 2M   | 36 |   | 2 1⁄4 |   | 6 | 5 | 7 1⁄2 | 2 1⁄2 | 1⁄2 | 8 1⁄8 | 3     | 12 1⁄8 | 17 1⁄2 | 15     | 10 5⁄8 | 10 3⁄4 |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 3    | 36 |   | 2 1⁄4 |   | 6 | 5 | 7 1⁄2 | 2 1⁄2 | 1⁄2 | 8 1⁄8 | 3     | 12 1⁄8 | 17 1⁄2 | 15     | 10 5⁄8 | 10 3⁄4 |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 36 |   | 2 1⁄4 |   | 6 | 5 | 7 1⁄2 | 2 1⁄2 | 1⁄2 | 8 1⁄8 | 3     | 12 1⁄8 | 17 1⁄2 | 15     | 10 5⁄8 | 10 3⁄4 |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 5    | 48 |   | 3     |   | 8 | 6 | 11    | 3     | 5⁄8 | 9 3⁄4 | 3 5⁄8 | 14 1⁄2 | 23 1⁄2 | 20     | 12 3⁄4 | 12 7⁄8 |   |   |   |   |   |   |   |   |   |   | 16.0            |

|                                  |                                                       |
|----------------------------------|-------------------------------------------------------|
| STANDARD SIGN<br>R5-1            |                                                       |
| WISCONSIN DEPT OF TRANSPORTATION |                                                       |
| APPROVED                         | <i>Matthew R. Rauch</i><br>for State Traffic Engineer |
| DATE 3/15/18                     | PLATE NO. R5-1.16                                     |



7



R9-9

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
  - Background - White
  - Message - Black
- 3. Message Series - C
- 4. Use Size 2 for Sidewalks. Use Size 3 for Paths and Trails.

7

| SIZE | A  | B  | C     | D   | E   | F | G     | H     | I      | J      | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |       |       |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 24 | 12 | 1 1/2 | 1/2 | 1/2 | 3 | 2 1/8 | 1 3/4 | 10     | 8 1/8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.0             |
| 2M   | 24 | 12 | 1 1/2 | 1/2 | 1/2 | 3 | 2 1/8 | 1 3/4 | 10     | 8 1/8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.0             |
| 3    | 30 | 18 | 1 1/2 | 1/2 | 1/2 | 4 | 3 1/2 | 3     | 12 1/2 | 10 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.75            |
| 4    |    |    |       |     |     |   |       |       |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |     |     |   |       |       |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 404

E

STANDARD SIGN  
R9-9

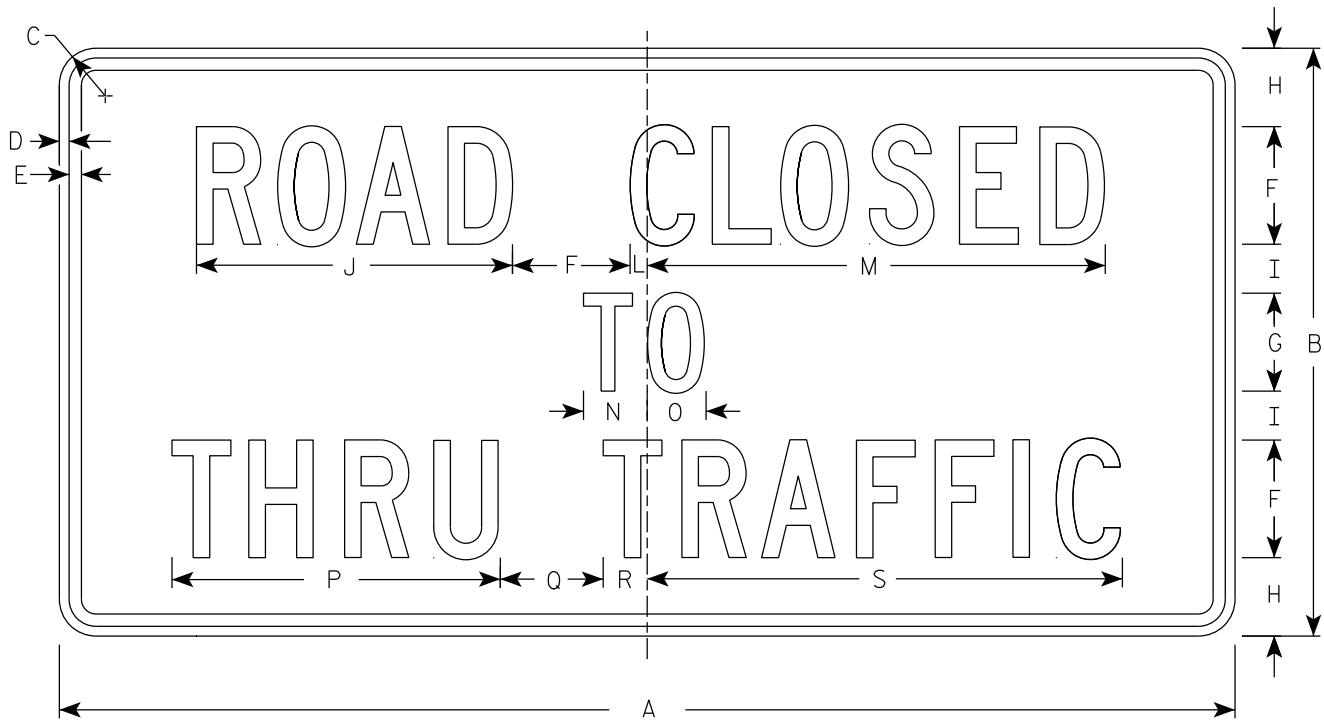
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 1/24/24 PLATE NO. R9-9.7

NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:  
Background - White  
Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



R11-4

| SIZE | A  | B  | C     | D   | E   | F | G | H | I     | J      | K | L   | M      | N     | O | P      | Q     | R     | S      | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|---|---|-------|--------|---|-----|--------|-------|---|--------|-------|-------|--------|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |   |   |       |        |   |     |        |       |   |        |       |       |        |   |   |   |   |   |   |   |                 |
| 2S   | 60 | 30 | 1 7⁄8 | 1⁄2 | 5⁄8 | 6 | 5 | 4 | 2 1⁄2 | 16 1⁄8 |   | 7⁄8 | 23 3⁄8 | 3 1⁄4 | 3 | 16 3⁄4 | 5 1⁄4 | 2 1⁄4 | 24 1⁄4 |   |   |   |   |   |   |   | 12.5            |
| 2M   | 60 | 30 | 1 7⁄8 | 1⁄2 | 5⁄8 | 6 | 5 | 4 | 2 1⁄2 | 16 1⁄8 |   | 7⁄8 | 23 3⁄8 | 3 1⁄4 | 3 | 16 3⁄4 | 5 1⁄4 | 2 1⁄4 | 24 1⁄4 |   |   |   |   |   |   |   | 12.5            |
| 3    |    |    |       |     |     |   |   |   |       |        |   |     |        |       |   |        |       |       |        |   |   |   |   |   |   |   |                 |
| 4    |    |    |       |     |     |   |   |   |       |        |   |     |        |       |   |        |       |       |        |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |     |     |   |   |   |       |        |   |     |        |       |   |        |       |       |        |   |   |   |   |   |   |   |                 |

PROJECT NO:

HWY:

COUNTY:

SHEET NO: 405

E

STANDARD SIGN

R11 - 4

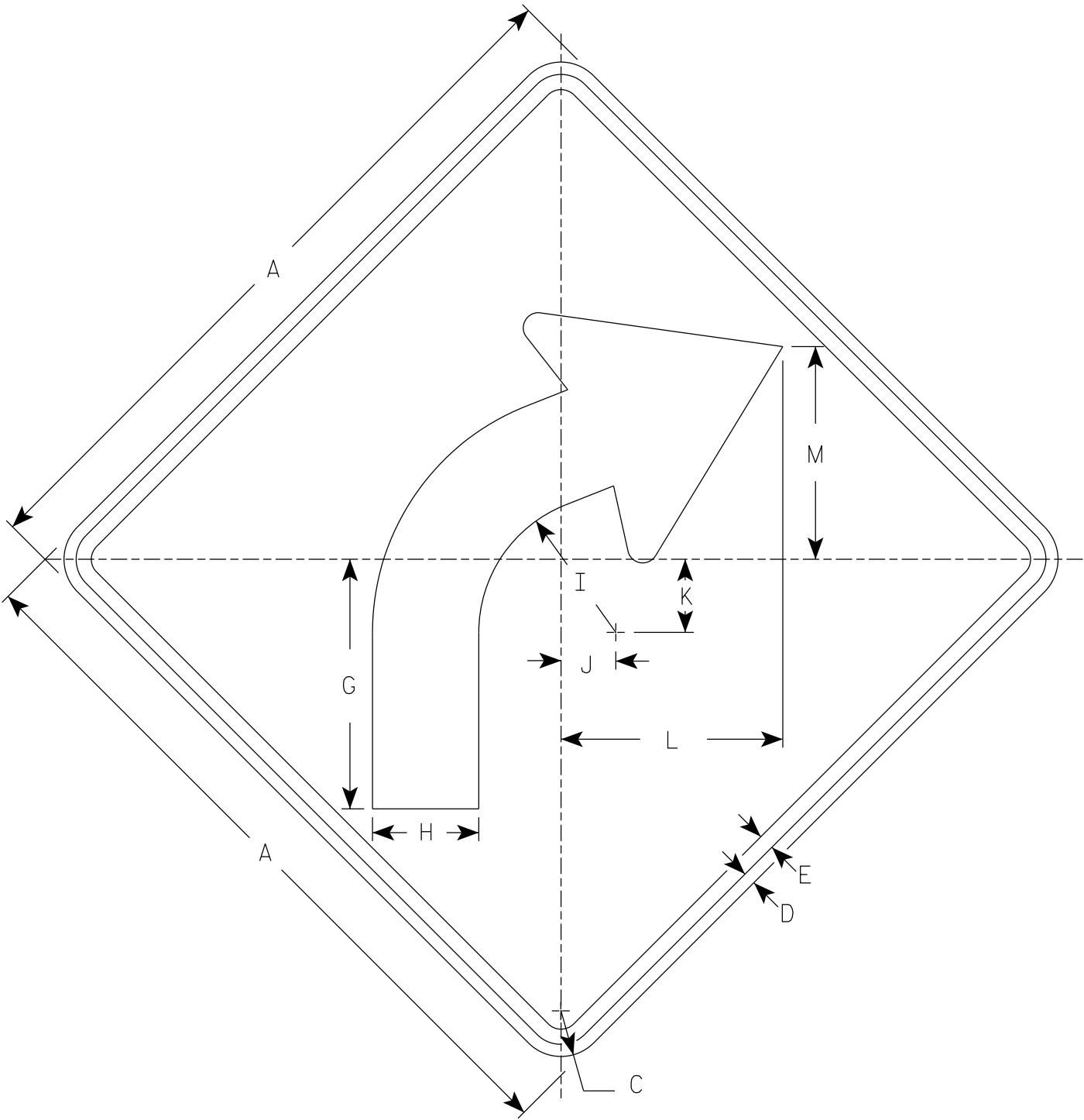
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Matthew R. Rauch*  
for State Traffic Engineer

DATE 2/5/24

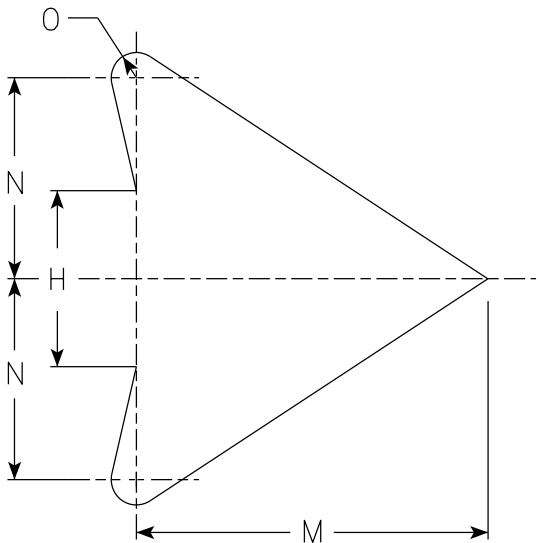
PLATE NO. R11-4.4



W1-2R

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Yellow  
Message - Black
- 3. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



ARROW DETAIL

| SIZE | A  | B | C     | D   | E   | F | G      | H     | I     | J     | K     | L      | M      | N | O   | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|--------|-------|-------|-------|-------|--------|--------|---|-----|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 24 |   | 1 1/2 | 3/8 | 1/2 |   | 8 1/4  | 3 1/2 | 4 1/2 | 1 3/4 | 2 3/8 | 7 1/4  | 7      | 4 | 1/2 |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2S   | 30 |   | 1 7/8 | 1/2 | 5/8 |   | 10 1/4 | 4 3/8 | 5 5/8 | 2 1/4 | 3     | 9 1/8  | 8 3/4  | 5 | 5/8 |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 2M   | 36 |   | 2 1/4 | 5/8 | 3/4 |   | 12 3/8 | 5 1/4 | 6 3/4 | 2 5/8 | 3 1/2 | 10 7/8 | 10 1/2 | 6 | 3/4 |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 |   | 12 3/8 | 5 1/4 | 6 3/4 | 2 5/8 | 3 1/2 | 10 7/8 | 10 1/2 | 6 | 3/4 |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 36 |   | 2 1/4 | 5/8 | 3/4 |   | 12 3/8 | 5 1/4 | 6 3/4 | 2 5/8 | 3 1/2 | 10 7/8 | 10 1/2 | 6 | 3/4 |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 5    | 48 |   | 3     | 3/4 | 1   |   | 16 1/2 | 7     | 9     | 3 1/2 | 4 5/8 | 14 1/2 | 14     | 8 | 1   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |

STANDARD SIGN

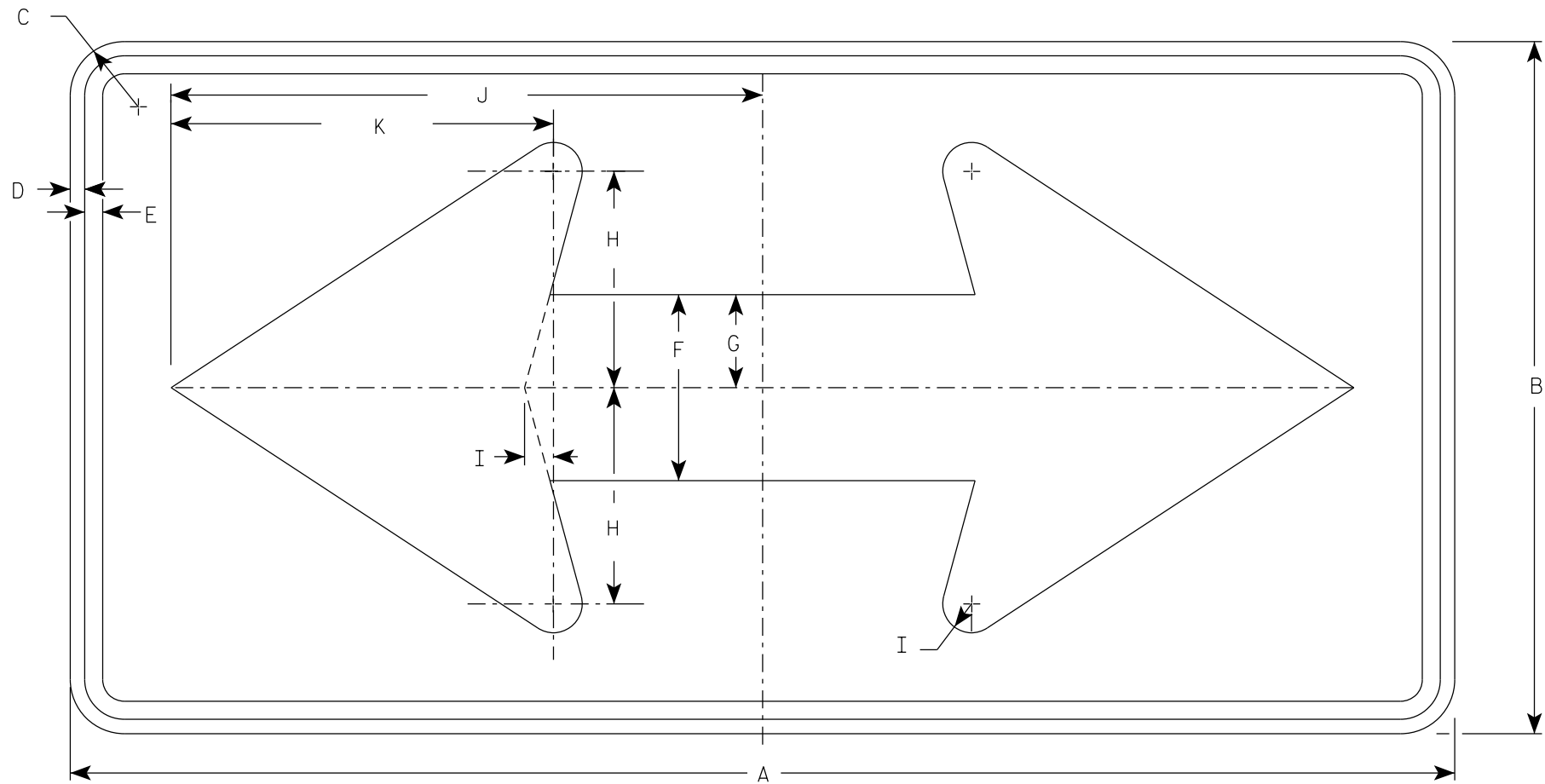
W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/23/2023 PLATE NO. W1-2.11

7



W1-7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Yellow
  - Message - Black

7

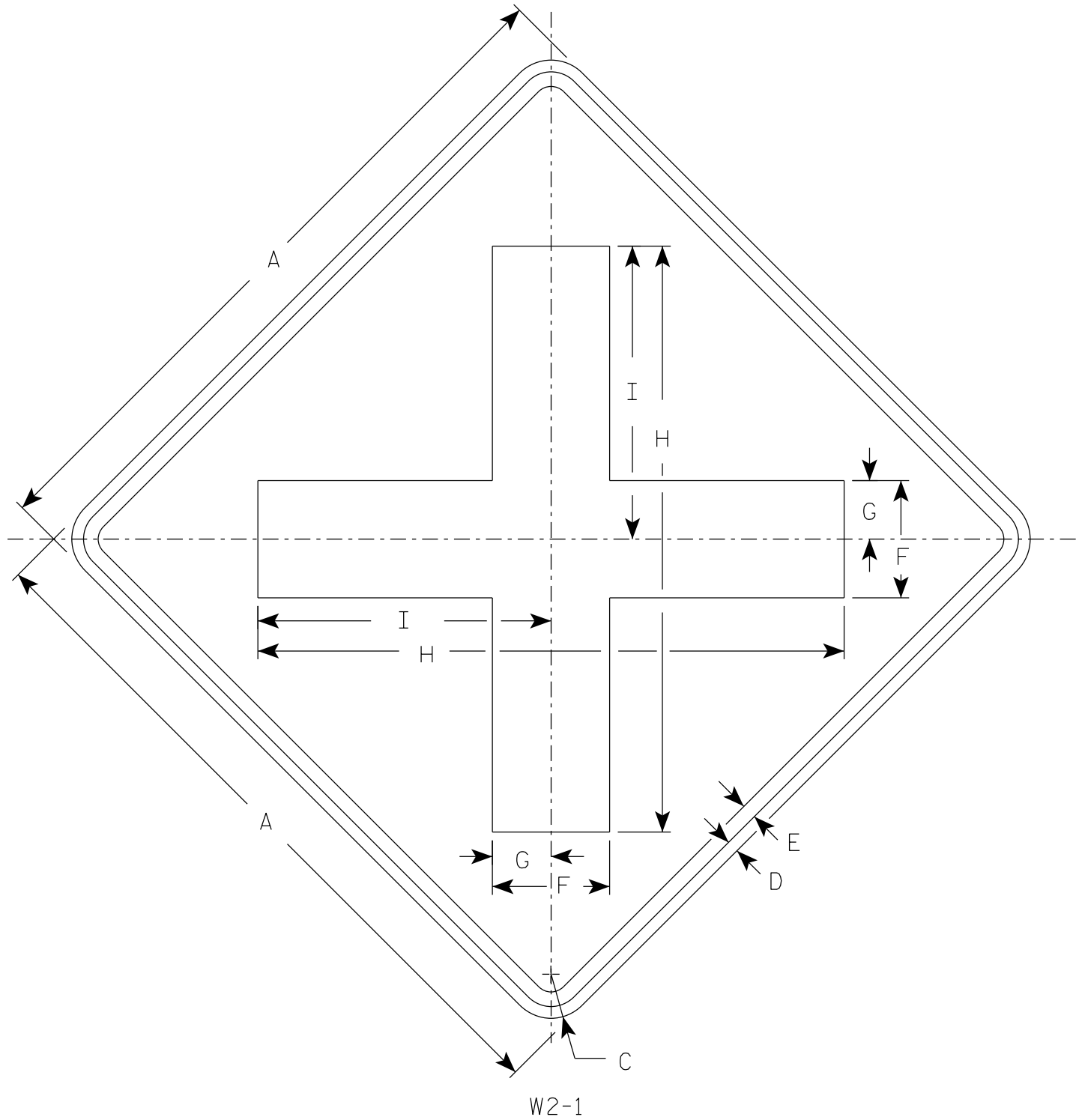
| SIZE | A  | B  | C     | D   | E   | F     | G     | H     | I     | J      | K      | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|-------|-------|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 36 | 18 | 1 1/2 | 3/8 | 1/2 | 5     | 2 1/2 | 5 3/4 | 3/4   | 15 5/8 | 10 1/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.5             |
| 2S   | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 1/2 | 3 1/4 | 7 1/2 | 1     | 20 1/2 | 13 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 2M   | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6 1/2 | 3 1/4 | 7 1/2 | 1     | 20 1/2 | 13 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 3    | 60 | 30 | 1 7/8 | 1/2 | 5/8 | 8     | 4     | 9 1/4 | 1 1/4 | 25 3/8 | 16 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 12.5            |
| 4    | 60 | 30 | 1 7/8 | 1/2 | 5/8 | 8     | 4     | 9 1/4 | 1 1/4 | 25 3/8 | 16 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 12.5            |
| 5    | 96 | 48 | 3     | 3/4 | 1   | 13    | 6 1/2 | 15    | 2     | 41     | 26 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 32.0            |

STANDARD SIGN  
W1-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/10/2023 PLATE NO. W1-7.8



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Yellow  
Message - Black

| SIZE | A  | B | C     | D   | E   | F | G     | H  | I      | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|----|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 24 |   | 1 1/2 | 3/8 | 1/2 | 4 | 2     | 20 | 10     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2S   | 30 |   | 1 7/8 | 1/2 | 5/8 | 5 | 2 1/2 | 25 | 12 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 2M   | 30 |   | 1 7/8 | 1/2 | 5/8 | 5 | 2 1/2 | 25 | 12 1/2 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 | 6 | 3     | 30 | 15     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 48 |   | 3     | 3/4 | 1   | 8 | 4     | 40 | 20     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    |    |   |       |     |     |   |       |    |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

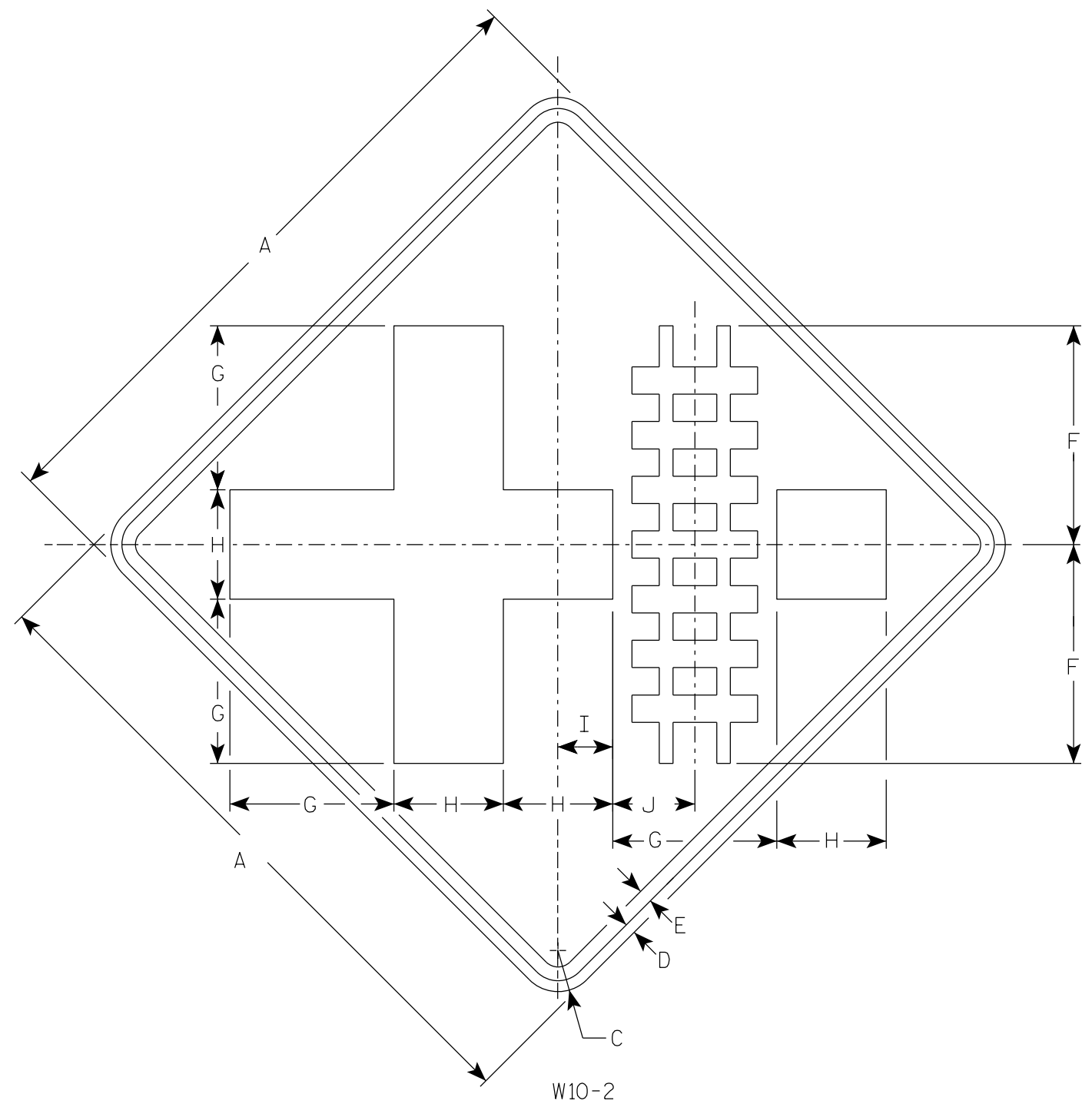
PROJECT NO:

HWY:

COUNTY:

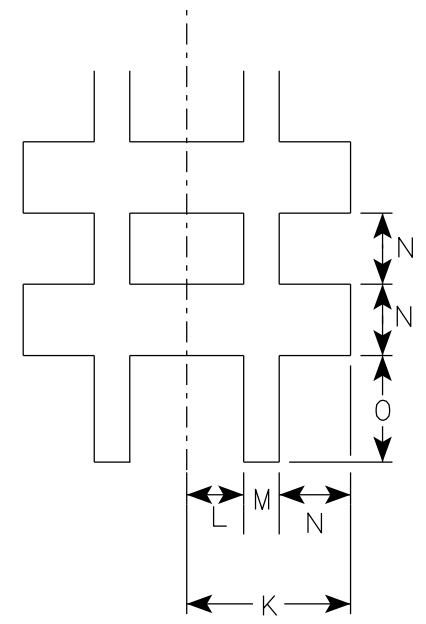
SHEET NO: 408

E



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Yellow
  - Message - Black



| SIZE | A  | B | C     | D   | E   | F  | G     | H | I     | J     | K     | L     | M   | N     | O     | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|----|-------|---|-------|-------|-------|-------|-----|-------|-------|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 30 |   | 1 7/8 | 1/2 | 5/8 | 10 | 7 1/2 | 5 | 2 1/2 | 3 3/4 | 2 7/8 | 1     | 5/8 | 1 1/4 | 1 7/8 |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 2S   | 36 |   | 2 1/4 | 5/8 | 3/4 | 12 | 9     | 6 | 3     | 4 1/2 | 3 3/8 | 1 1/8 | 3/4 | 1 1/2 | 2 1/4 |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 2M   | 36 |   | 2 1/4 | 5/8 | 3/4 | 12 | 9     | 6 | 3     | 4 1/2 | 3 3/8 | 1 1/8 | 3/4 | 1 1/2 | 2 1/4 |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 | 12 | 9     | 6 | 3     | 4 1/2 | 3 3/8 | 1 1/8 | 3/4 | 1 1/2 | 2 1/4 |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 48 |   | 3     | 3/4 | 1   | 16 | 12    | 8 | 4     | 6     | 4 1/2 | 1 1/2 | 1   | 2     | 3     |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    |    |   |       |     |     |    |       |   |       |       |       |       |     |       |       |   |   |   |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN  
W10-2

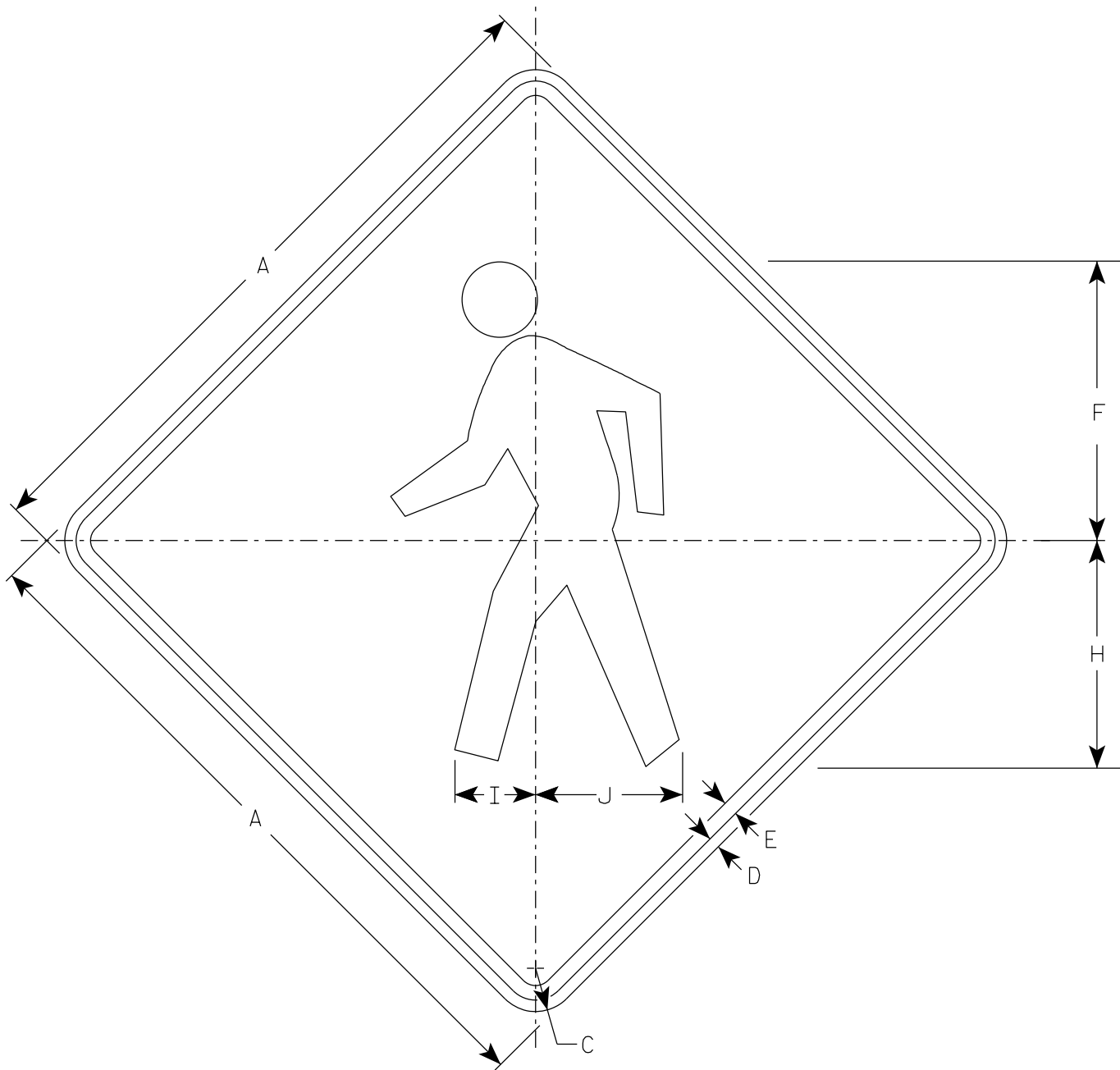
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 11/13/2023 PLATE NO. W10-2.9



7



W11-2

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Yellow  
Message - Black

7

| SIZE | A  | B | C     | D   | E   | F      | G | H      | I     | J      | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|--------|---|--------|-------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 24 |   | 1 1/2 | 3/8 | 1/2 | 9 3/4  |   | 7 7/8  | 2 7/8 | 5 1/8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2S   | 30 |   | 1 7/8 | 1/2 | 5/8 | 12 1/8 |   | 9 7/8  | 3 1/2 | 6 3/8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 2M   | 36 |   | 2 1/4 | 5/8 | 3/4 | 14 1/2 |   | 11 7/8 | 4 1/4 | 7 5/8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 | 14 1/2 |   | 11 7/8 | 4 1/4 | 7 5/8  |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    | 48 |   | 3     | 3/4 | 1   | 19 3/8 |   | 15 3/4 | 5 5/8 | 10 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 16.0            |
| 5    |    |   |       |     |     |        |   |        |       |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

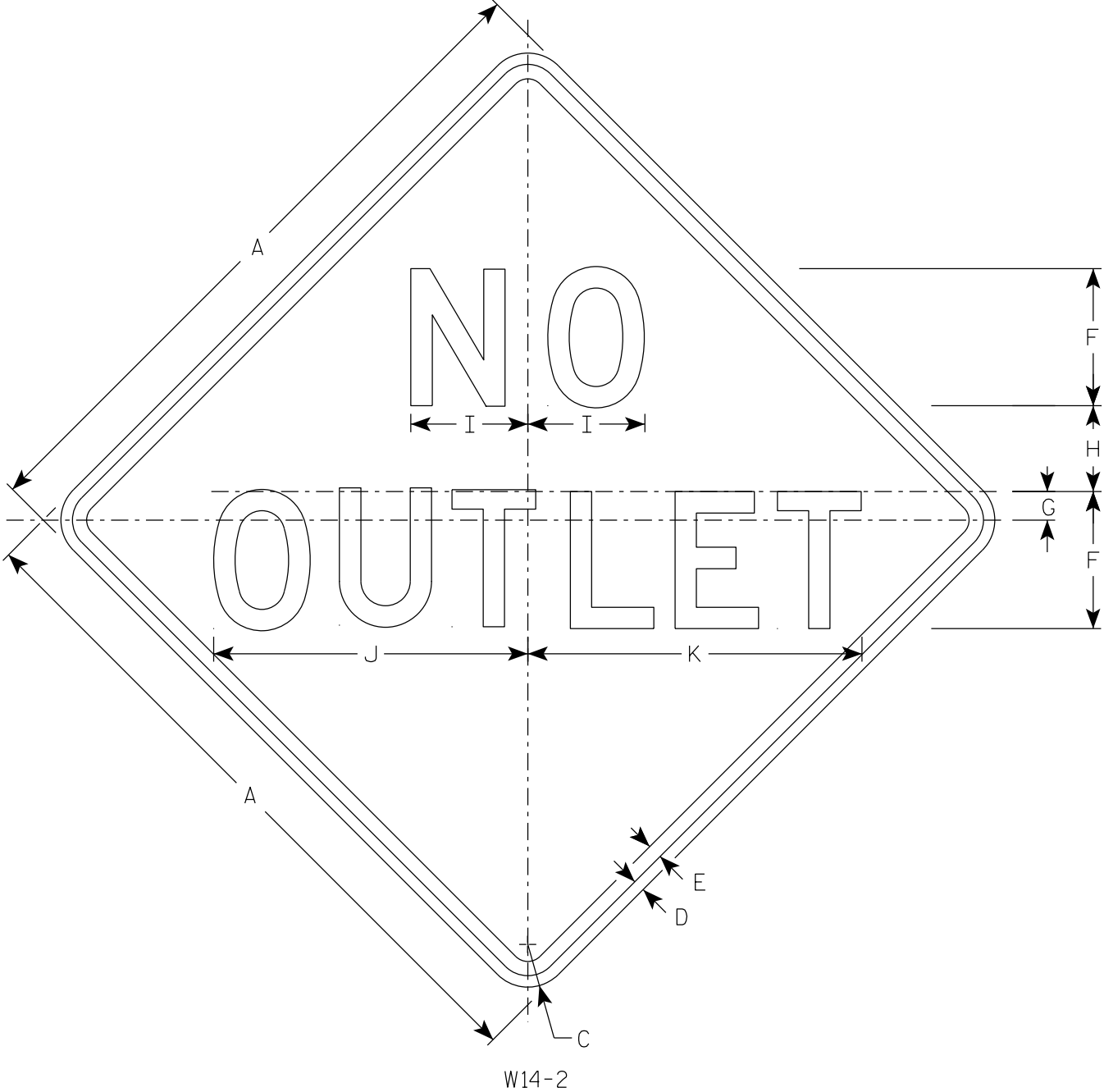
STANDARD SIGN  
W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 6/15/2023 PLATE NO. W11-2.9

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Yellow
  - Message - Black
- 3. Message Series - D

7

| SIZE | A  | B | C     | D   | E   | F | G     | H     | I     | J      | K      | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    | 24 |   | 1 1/2 | 3/8 | 1/2 | 5 | 1     | 2 3/4 | 4 1/8 | 11 3/4 | 12 3/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 4.0             |
| 2S   | 30 |   | 1 7/8 | 1/2 | 5/8 | 6 | 1 1/4 | 3 3/4 | 5 1/8 | 13 3/4 | 14 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 2M   | 30 |   | 1 7/8 | 1/2 | 5/8 | 6 | 1 1/4 | 3 3/4 | 5 1/8 | 13 3/4 | 14 5/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 6.25            |
| 3    | 36 |   | 2 1/4 | 5/8 | 3/4 | 7 | 1 3/8 | 4 5/8 | 6     | 16 1/8 | 17 1/8 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 9.0             |
| 4    |    |   |       |     |     |   |       |       |       |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |   |       |     |     |   |       |       |       |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN

W14-2

WISCONSIN DEPT OF TRANSPORTATION

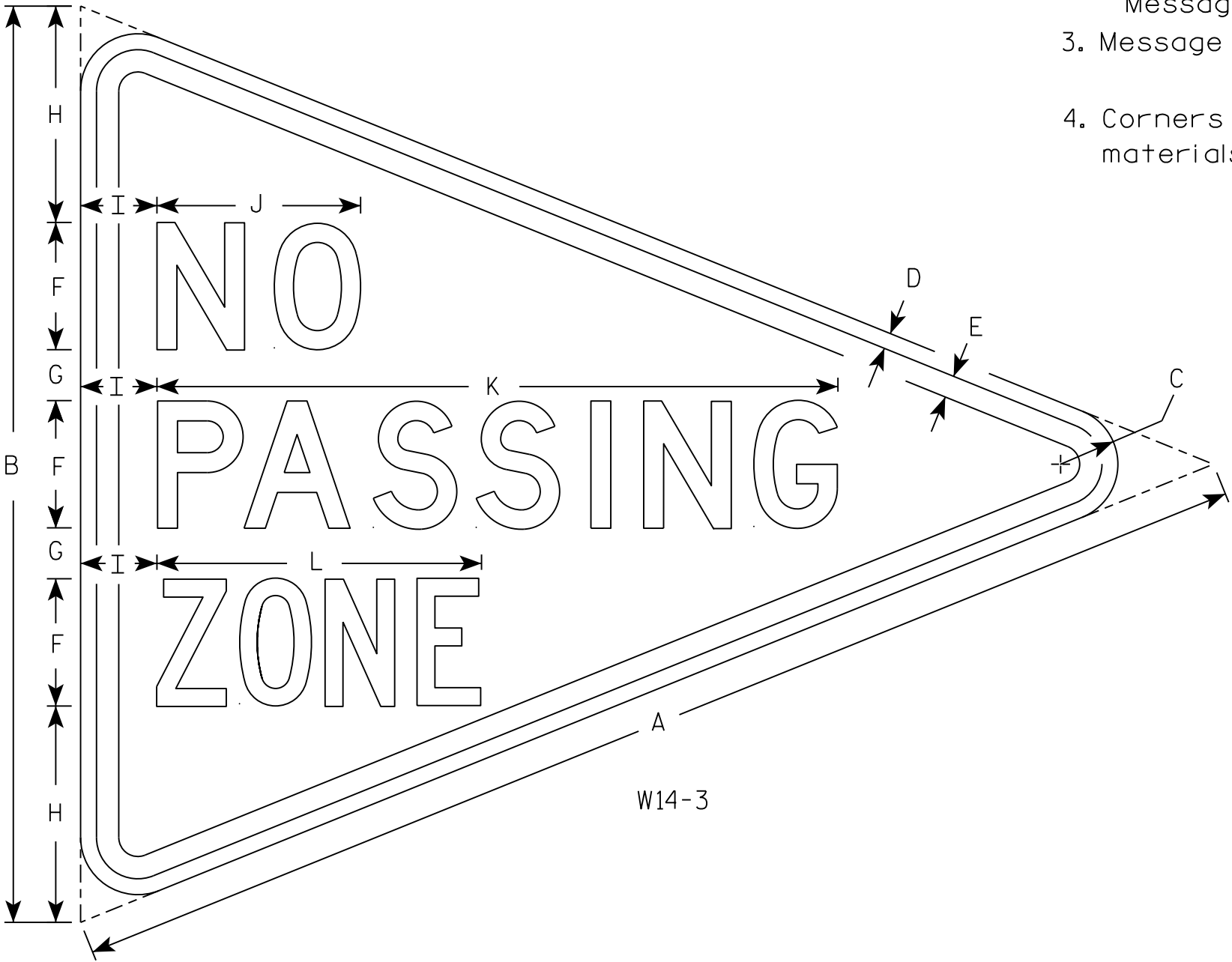
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

DATE 1/8/2024 PLATE NO. W14-2.4



NOTES

- 1. Sign is Type II- Type F Reflective
- 2. Color:  
Background - Yellow  
Message - Black
- 3. Message Series - Lines 1 and 2 are Series D.  
Line 3 is series C.
- 4. Corners and borders shall be rounded on all base materials for this sign.



| SIZE | A  | B  | C     | D   | E   | F | G | H     | I | J | K      | L      | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|---|-------|---|---|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |   |       |   |   |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 48 | 36 | 2 1/4 | 5/8 | 7/8 | 5 | 2 | 8 1/2 | 3 | 8 | 26 3/4 | 12 3/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 5.56            |
| 2M   |    |    |       |     |     |   |   |       |   |   |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 3    |    |    |       |     |     |   |   |       |   |   |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 4    |    |    |       |     |     |   |   |       |   |   |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 5    |    |    |       |     |     |   |   |       |   |   |        |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

STANDARD SIGN  
W14-3

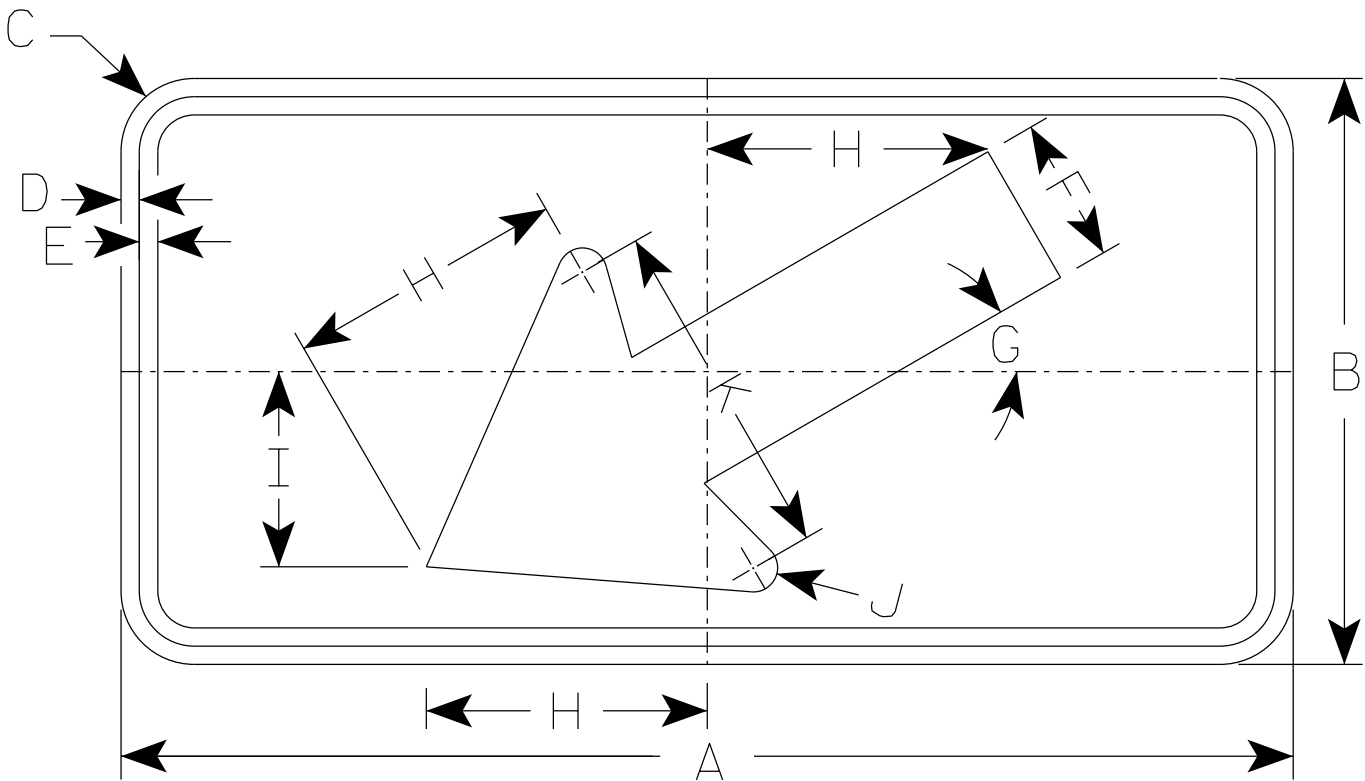
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W14-3.10

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:  
Background - Yellow  
Message - Black
- 3. W16-7R is the same as W16-7L  
except the arrow is reversed along  
the vertical centerline.



W16-7L

- \* For 36" x 36" Warning Signs, use 30" x 18" W16-7L signs.
- \* For 48" x 48" Warning Signs, use 48" x 24" W16-7L signs.

| SIZE | A  | B  | C     | D   | E   | F     | G   | H      | I | J   | K      | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|-------|-----|--------|---|-----|--------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |       |     |        |   |     |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 24 | 12 | 1 1/2 | 3/8 | 3/8 | 3     | 30° | 5 3/4  | 4 | 1/2 | 7      |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 2.0             |
| 2M   | 30 | 18 | 1 1/2 | 3/8 | 1/2 | 4 1/2 | 30° | 8 1/2  | 6 | 5/8 | 10 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.75            |
| 3    | 30 | 18 | 1 1/2 | 3/8 | 1/2 | 4 1/2 | 30° | 8 1/2  | 6 | 5/8 | 10 1/4 |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 3.75            |
| 4    | 48 | 24 | 1 7/8 | 1/2 | 5/8 | 6     | 30° | 11 1/2 | 8 | 1   | 14     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 5    |    |    |       |     |     |       |     |        |   |     |        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |                 |

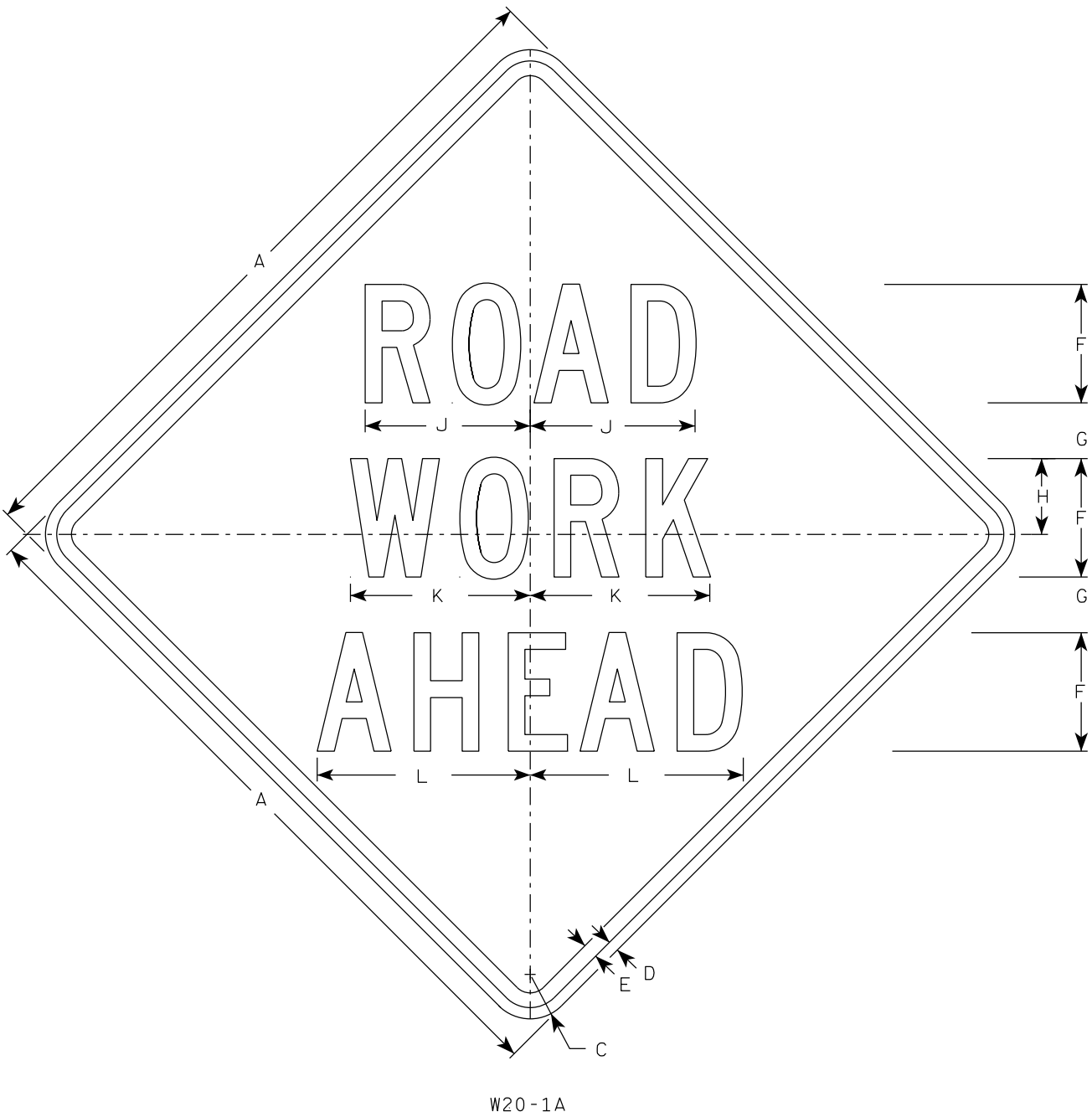
STANDARD SIGN

W16-7

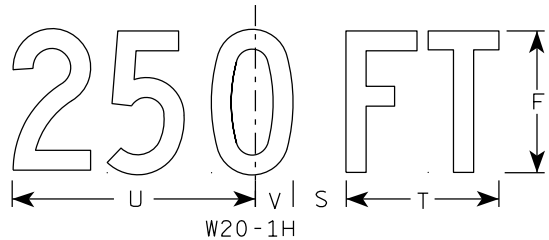
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

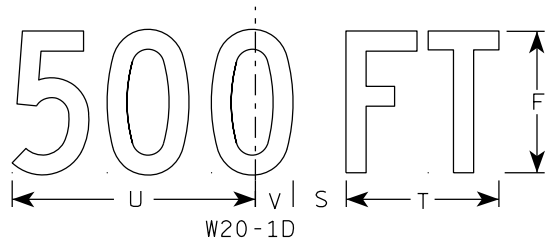
DATE 1/9/2024 PLATE NO. W16-7.9



W20-1A



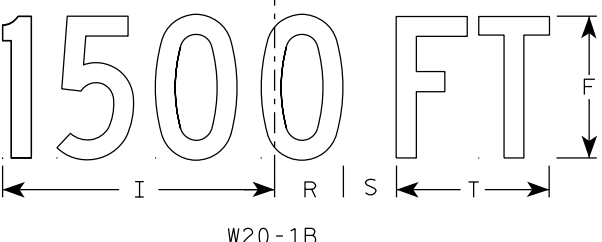
W20-1H



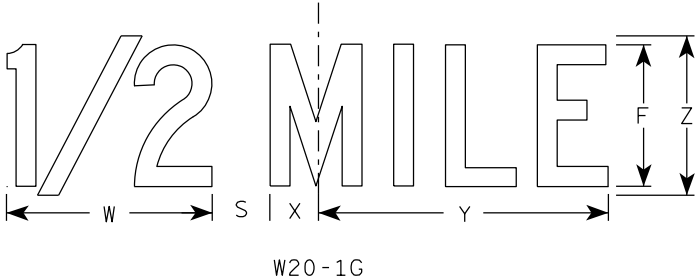
W20-1D



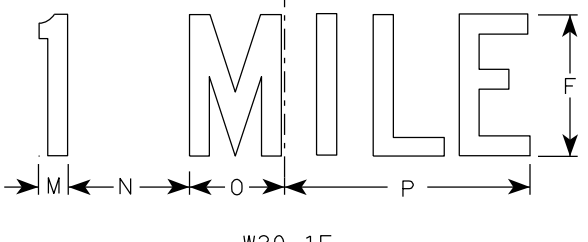
W20-1C



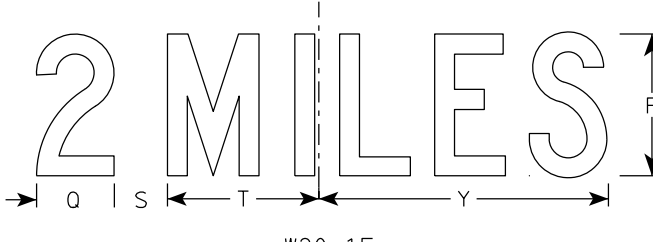
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:  
Background - Orange  
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

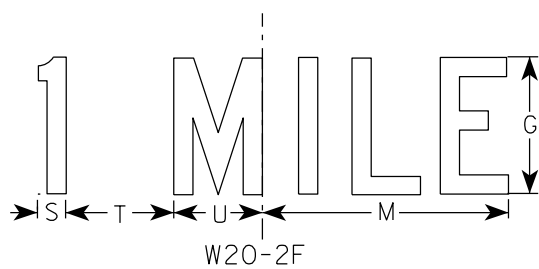
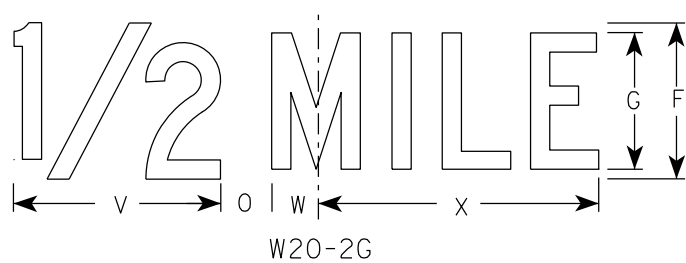
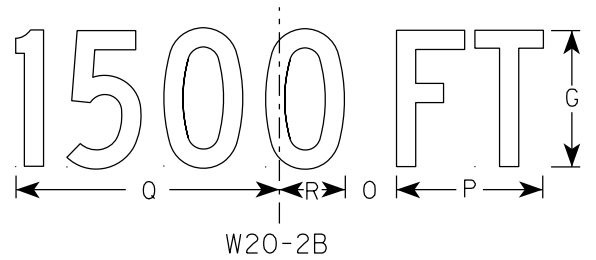
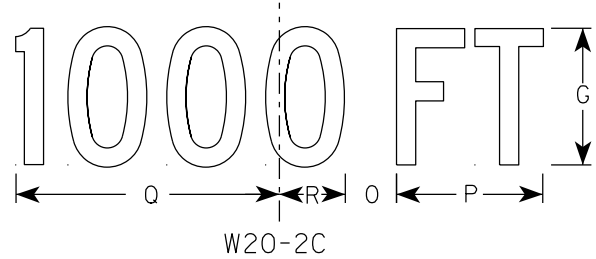
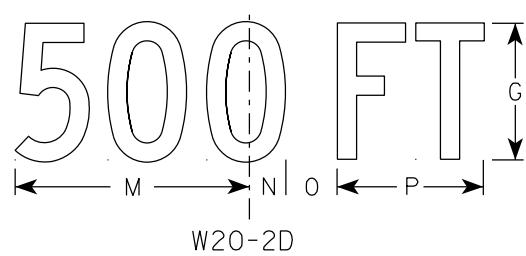
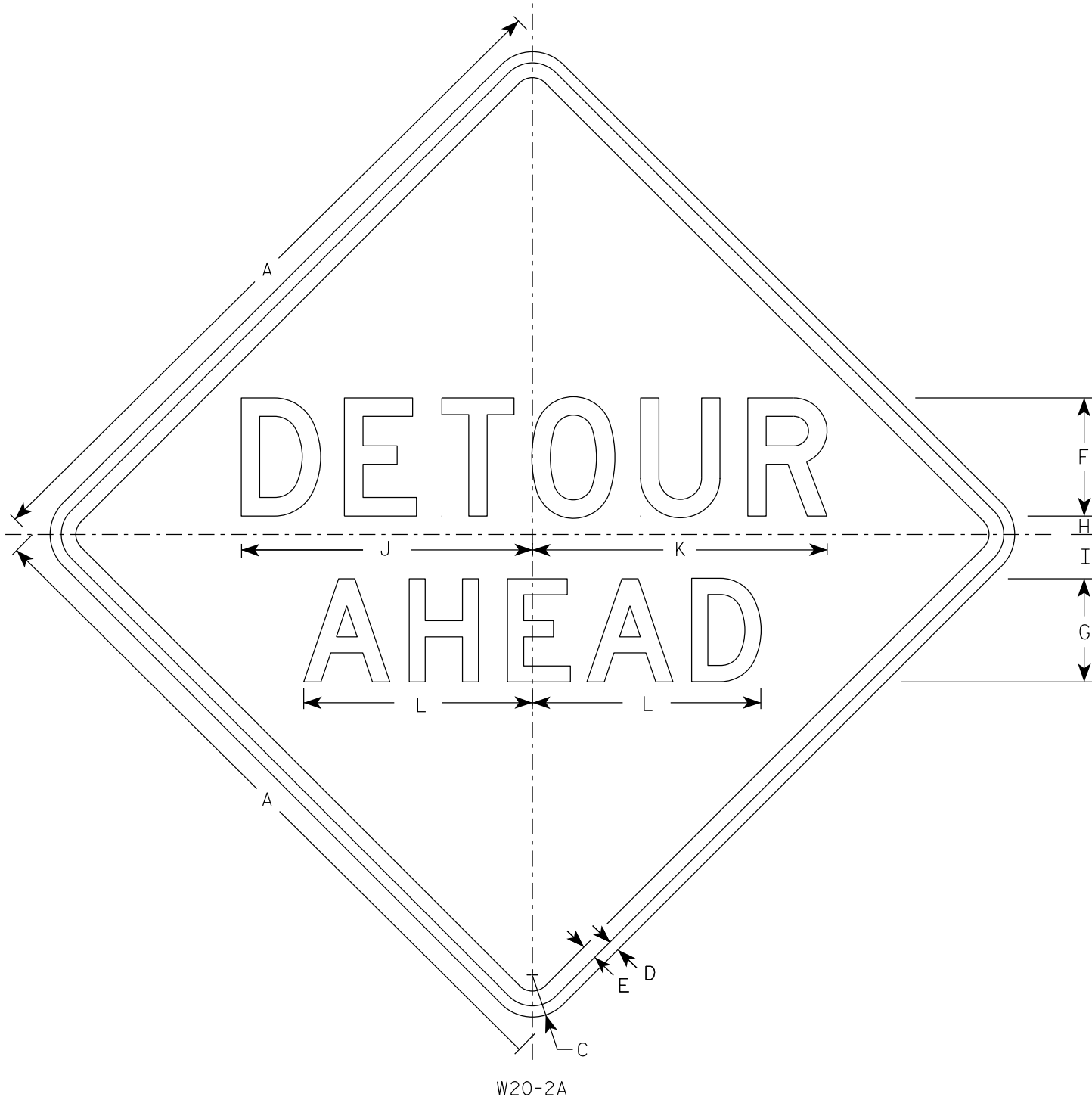
| SIZE | A  | B | C     | D   | E   | F | G     | H     | I      | J      | K      | L      | M     | N     | O     | P      | Q     | R     | S     | T     | U      | v     | W      | X     | Y      | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|-------|-------|--------|--------|--------|--------|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|--------|-------|--------|---|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 5 | 2 5/8 | 3 1/4 | 10 1/8 | 7      | 7 5/8  | 8 7/8  | 1 1/8 | 4 1/2 | 3 1/2 | 9      | 3 1/4 | 2 1/2 | 2 1/4 | 5 5/8 | 9      | 1 3/8 | 8      | 1 3/4 | 10 3/4 | 6 | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 8 | 3 3/4 | 5 1/8 | 15 3/8 | 11 1/8 | 12 1/8 | 14 3/8 | 1 5/8 | 6 7/8 | 5 3/8 | 13 7/8 | 4 3/8 | 3 7/8 | 3     | 8 5/8 | 13 3/4 | 2 1/8 | 11 7/8 | 2 3/4 | 16 3/8 | 9 | 16.0            |

STANDARD SIGN  
W20-1A, B, C, D, E, F, G & H

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-1.12



### NOTES

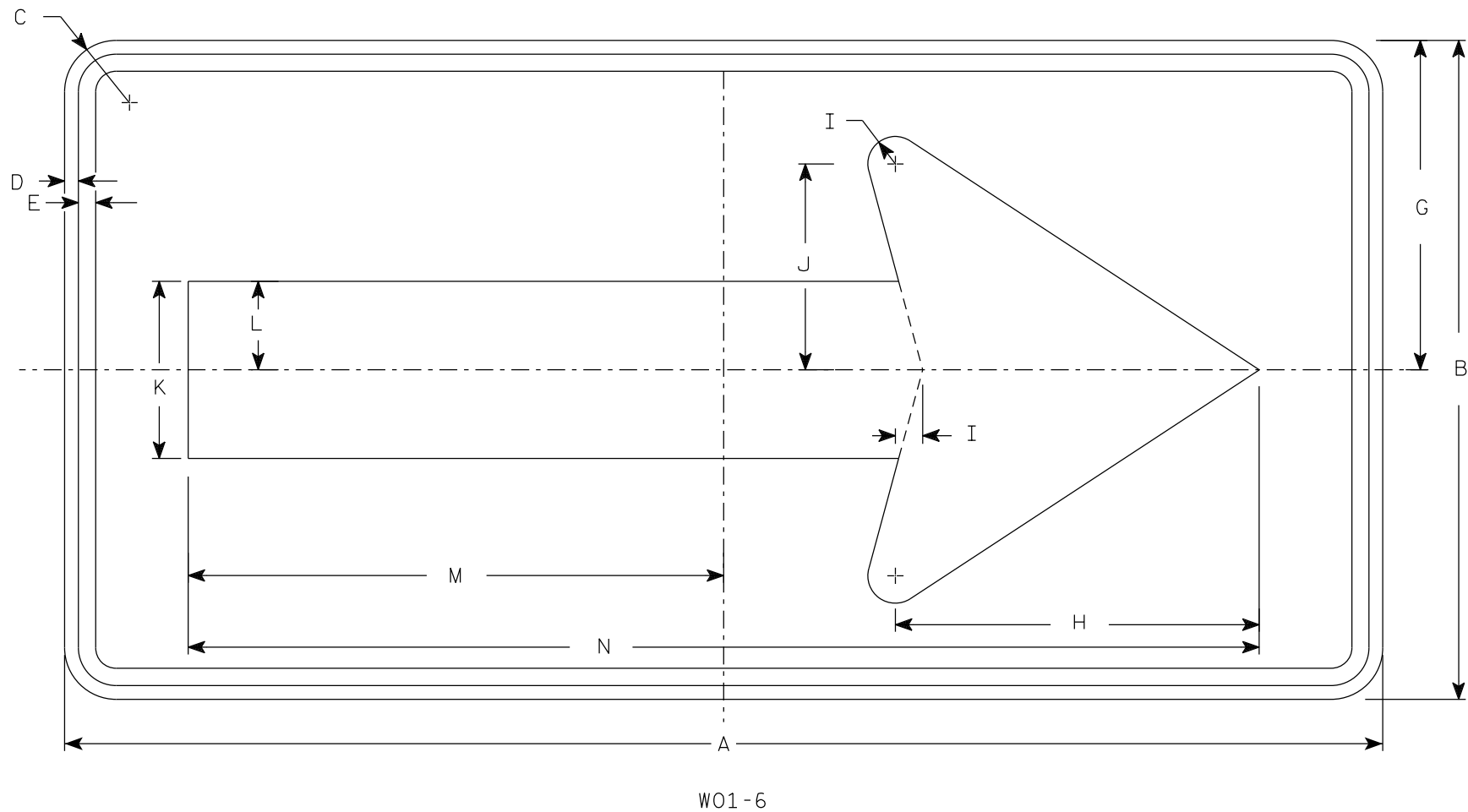
- Sign is Type II - Type F Reflective
- Color:  
Background - Orange  
Message - Black
- Message Series - See note 5
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- Line 1 is Series D.  
Line 2 is Series D for AHEAD and Series C for all other distances.

| SIZE | A  | B | C     | D   | E   | F | G | H     | I     | J      | K  | L      | M  | N     | O     | P     | Q      | R     | S     | T     | U     | v      | w     | X      | Y | Z | Area<br>sq. ft. |
|------|----|---|-------|-----|-----|---|---|-------|-------|--------|----|--------|----|-------|-------|-------|--------|-------|-------|-------|-------|--------|-------|--------|---|---|-----------------|
| 1    | 36 |   | 2 1/4 | 5/8 | 3/4 | 6 | 5 | 1     | 2 1/4 | 14 3/4 | 15 | 11 5/8 | 9  | 1 3/8 | 1 7/8 | 5 5/8 | 10 1/8 | 2 1/2 | 1 1/8 | 4 1/2 | 3 1/2 | 8      | 1 3/4 | 10 3/4 |   |   | 9.0             |
| 2S   | 48 |   | 3     | 3/4 | 1   | 8 | 7 | 1 1/4 | 3     | 19 3/4 | 20 | 15 1/2 | 12 | 1 7/8 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 1 1/2 | 6     | 4 5/8 | 10 5/8 | 2 3/8 | 14 3/8 |   |   | 16.0            |
| 2M   | 48 |   | 3     | 3/4 | 1   | 8 | 7 | 1 1/4 | 3     | 19 3/4 | 20 | 15 1/2 | 12 | 1 7/8 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 1 1/2 | 6     | 4 5/8 | 10 5/8 | 2 3/8 | 14 3/8 |   |   | 16.0            |
| 3    | 48 |   | 3     | 3/4 | 1   | 8 | 7 | 1 1/4 | 3     | 19 3/4 | 20 | 15 1/2 | 12 | 1 7/8 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 1 1/2 | 6     | 4 5/8 | 10 5/8 | 2 3/8 | 14 3/8 |   |   | 16.0            |
| 4    | 48 |   | 3     | 3/4 | 1   | 8 | 7 | 1 1/4 | 3     | 19 3/4 | 20 | 15 1/2 | 12 | 1 7/8 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 1 1/2 | 6     | 4 5/8 | 10 5/8 | 2 3/8 | 14 3/8 |   |   | 16.0            |
| 5    | 48 |   | 3     | 3/4 | 1   | 8 | 7 | 1 1/4 | 3     | 19 3/4 | 20 | 15 1/2 | 12 | 1 7/8 | 2 5/8 | 7 1/2 | 13 1/2 | 3 3/8 | 1 1/2 | 6     | 4 5/8 | 10 5/8 | 2 3/8 | 14 3/8 |   |   | 16.0            |

|                                     |                                                       |
|-------------------------------------|-------------------------------------------------------|
| STANDARD SIGN<br>W20-2A,B,C,D,F & G |                                                       |
| WISCONSIN DEPT OF TRANSPORTATION    |                                                       |
| APPROVED                            | <i>Matthew R. Rauch</i><br>For State Traffic Engineer |
| DATE 1/10/2024                      | PLATE NO. W20-2.7                                     |

|             |      |         |               |   |
|-------------|------|---------|---------------|---|
| PROJECT NO: | HWY: | COUNTY: | SHEET NO: 415 | E |
|-------------|------|---------|---------------|---|

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
  - Background - Orange
  - Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

7

| SIZE | A  | B  | C     | D   | E   | F | G  | H      | I     | J     | K     | L     | M      | N      | O | P | Q | R | S | T | U | V | W | X | Y | Z | Area<br>sq. ft. |
|------|----|----|-------|-----|-----|---|----|--------|-------|-------|-------|-------|--------|--------|---|---|---|---|---|---|---|---|---|---|---|---|-----------------|
| 1    |    |    |       |     |     |   |    |        |       |       |       |       |        |        |   |   |   |   |   |   |   |   |   |   |   |   |                 |
| 2S   | 48 | 24 | 1 7⁄8 | 1⁄2 | 5⁄8 |   | 12 | 13 1⁄4 | 1     | 7 1⁄2 | 6 1⁄2 | 3 1⁄4 | 19 1⁄2 | 39     |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 2M   | 48 | 24 | 1 7⁄8 | 1⁄2 | 5⁄8 |   | 12 | 13 1⁄4 | 1     | 7 1⁄2 | 6 1⁄2 | 3 1⁄4 | 19 1⁄2 | 39     |   |   |   |   |   |   |   |   |   |   |   |   | 8.0             |
| 3    | 60 | 30 | 1 7⁄8 | 1⁄2 | 5⁄8 |   | 15 | 16 1⁄4 | 1 1⁄4 | 9 1⁄4 | 8     | 4     | 24 3⁄8 | 48 3⁄4 |   |   |   |   |   |   |   |   |   |   |   |   | 12.5            |
| 4    | 60 | 30 | 1 7⁄8 | 1⁄2 | 5⁄8 |   | 15 | 16 1⁄4 | 1 1⁄4 | 9 1⁄4 | 8     | 4     | 24 3⁄8 | 48 3⁄4 |   |   |   |   |   |   |   |   |   |   |   |   | 12.5            |
| 5    | 60 | 30 | 1 7⁄8 | 1⁄2 | 5⁄8 |   | 15 | 16 1⁄4 | 1 1⁄4 | 9 1⁄4 | 8     | 4     | 24 3⁄8 | 48 3⁄4 |   |   |   |   |   |   |   |   |   |   |   |   | 12.5            |

STANDARD SIGN

W01-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch

for State Traffic Engineer

DATE 1/24/2024

PLATE NO. W01-6.2

DIVISION 1 - LAKEDR

| STATION   | REAL STATION | DISTANCE | AREA (SF) |                                        |      |           |          |        | INCREMENTAL VOL (CY) (UNADJUSTED) |                                        |      |           |          |     | CUMULATIVE VOL (CY) |                       |                                    |                       |                                  |                                  |                                |              |
|-----------|--------------|----------|-----------|----------------------------------------|------|-----------|----------|--------|-----------------------------------|----------------------------------------|------|-----------|----------|-----|---------------------|-----------------------|------------------------------------|-----------------------|----------------------------------|----------------------------------|--------------------------------|--------------|
|           |              |          | CUT       | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | MARSH EXC | ROCK EXC | EBS    | CUT                               | SALVAGED/UNUSABLE<br>PAVEMENT MATERIAL | FILL | MARSH EXC | ROCK EXC | EBS | CUT<br>1.00         | EXPANDED FILL<br>1.00 | EXPANDED MARSH<br>BACKFILL<br>1.00 | EXPANDED ROCK<br>1.00 | EXPANDED EBS<br>BACKFILL<br>1.00 | REDUCED MARSH<br>IN FILL<br>1.00 | REDUCED EBS<br>IN FILL<br>1.00 | MASS ORDNATE |
|           |              |          |           |                                        |      |           |          |        |                                   |                                        |      |           |          |     |                     |                       |                                    |                       |                                  |                                  |                                |              |
| NOTE 1    | NOTE 2       | NOTE 3   |           |                                        |      |           | NOTE 1   | NOTE 2 | NOTE 3                            |                                        |      |           | NOTE 1   |     |                     | NOTE 4                |                                    | NOTE 5                | NOTE 6                           | NOTE 7                           | NOTE 8                         |              |
| 215+04.93 | 21504.93     | 0.00     | 5.59      | 0.00                                   | 0.15 | 0.00      | 0.00     | 0.00   | 0                                 | 0                                      | 0    | 0         | 0        | 0   | 0                   | 0                     | 0                                  | 0                     | 0                                | 0                                | 0                              |              |
| 215+50.00 | 21550.00     | 45.07    | 7.38      | 0.00                                   | 0.00 | 0.00      | 0.00     | 0.00   | 11                                | 0                                      | 0    | 0         | 0        | 0   | 11                  | 0                     | 0                                  | 0                     | 0                                | 0                                | 11                             |              |
| 216+00.00 | 21600.00     | 50.00    | 10.67     | 0.00                                   | 1.04 | 0.00      | 0.00     | 0.00   | 17                                | 0                                      | 1    | 0         | 0        | 0   | 28                  | 1                     | 0                                  | 0                     | 0                                | 0                                | 27                             |              |
| 216+33.11 | 21633.11     | 33.11    | 15.01     | 0.00                                   | 0.58 | 0.00      | 0.00     | 0.00   | 16                                | 0                                      | 1    | 0         | 0        | 0   | 44                  | 2                     | 0                                  | 0                     | 0                                | 0                                | 42                             |              |
| 216+66.88 | 21666.88     | 0.00     | 15.52     | 0.00                                   | 1.32 | 0.00      | 0.00     | 0.00   | 0                                 | 0                                      | 0    | 0         | 0        | 0   | 44                  | 2                     | 0                                  | 0                     | 0                                | 0                                | 42                             |              |
| 217+00.00 | 21700.00     | 33.12    | 8.85      | 0.00                                   | 1.90 | 0.00      | 0.00     | 0.00   | 15                                | 0                                      | 2    | 0         | 0        | 0   | 59                  | 4                     | 0                                  | 0                     | 0                                | 0                                | 55                             |              |
| 217+50.00 | 21750.00     | 50.00    | 10.14     | 0.00                                   | 0.11 | 0.00      | 0.00     | 0.00   | 18                                | 0                                      | 2    | 0         | 0        | 0   | 77                  | 6                     | 0                                  | 0                     | 0                                | 0                                | 71                             |              |
| 218+00.00 | 21800.00     | 50.00    | 8.39      | 0.00                                   | 0.00 | 0.00      | 0.00     | 0.00   | 17                                | 0                                      | 0    | 0         | 0        | 0   | 94                  | 6                     | 0                                  | 0                     | 0                                | 0                                | 88                             |              |
| 218+50.00 | 21850.00     | 50.00    | 5.52      | 0.00                                   | 0.00 | 0.00      | 0.00     | 0.00   | 13                                | 0                                      | 0    | 0         | 0        | 0   | 107                 | 6                     | 0                                  | 0                     | 0                                | 0                                | 101                            |              |
| 219+00.00 | 21900.00     | 50.00    | 3.03      | 0.00                                   | 0.00 | 0.00      | 0.00     | 0.00   | 8                                 | 0                                      | 0    | 0         | 0        | 0   | 115                 | 6                     | 0                                  | 0                     | 0                                | 0                                | 109                            |              |
| 241+83.84 | 24183.84     | 0.00     | 4.40      | 0.00                                   | 0.00 | 0.00      | 0.00     | 0.00   | 0                                 | 0                                      | 0    | 0         | 0        | 0   | 115                 | 6                     | 0                                  | 0                     | 0                                | 0                                | 109                            |              |
| 242+00.00 | 24200.00     | 16.16    | 5.25      | 0.00                                   | 0.00 | 0.00      | 0.00     | 0.00   | 3                                 | 0                                      | 0    | 0         | 0        | 0   | 118                 | 6                     | 0                                  | 0                     | 0                                | 0                                | 112                            |              |
| 242+50.00 | 24250.00     | 50.00    | 7.93      | 0.00                                   | 0.00 | 0.00      | 0.00     | 0.00   | 12                                | 0                                      | 0    | 0         | 0        | 0   | 130                 | 6                     | 0                                  | 0                     | 0                                | 0                                | 124                            |              |
| 243+00.00 | 24300.00     | 50.00    | 9.64      | 0.00                                   | 1.35 | 0.00      | 0.00     | 0.00   | 16                                | 0                                      | 1    | 0         | 0        | 0   | 146                 | 7                     | 0                                  | 0                     | 0                                | 0                                | 139                            |              |
| 243+50.00 | 24350.00     | 50.00    | 9.41      | 0.00                                   | 0.79 | 0.00      | 0.00     | 0.00   | 18                                | 0                                      | 2    | 0         | 0        | 0   | 164                 | 9                     | 0                                  | 0                     | 0                                | 0                                | 155                            |              |
| 244+00.00 | 24400.00     | 50.00    | 9.28      | 0.00                                   | 0.11 | 0.00      | 0.00     | 0.00   | 17                                | 0                                      | 1    | 0         | 0        | 0   | 181                 | 10                    | 0                                  | 0                     | 0                                | 0                                | 171                            |              |
| 244+50.00 | 24450.00     | 50.00    | 9.69      | 0.00                                   | 0.00 | 0.00      | 0.00     | 0.00   | 18                                | 0                                      | 0    | 0         | 0        | 0   | 199                 | 10                    | 0                                  | 0                     | 0                                | 0                                | 189                            |              |
| 245+00.00 | 24500.00     | 50.00    | 6.67      | 0.00                                   | 0.01 | 0.00      | 0.00     | 0.00   | 15                                | 0                                      | 0    | 0         | 0        | 0   | 214                 | 10                    | 0                                  | 0                     | 0                                | 0                                | 204                            |              |
| 245+40.86 | 24540.86     | 40.86    | 4.65      | 0.00                                   | 0.00 | 0.00      | 0.00     | 0.00   | 9                                 | 0                                      | 0    | 0         | 0        | 0   | 223                 | 10                    | 0                                  | 0                     | 0                                | 0                                | 213                            |              |
| 268+70.70 | 26870.70     | 0.00     | 4.37      | 0.00                                   | 0.00 | 0.00      | 0.00     | 0.00   | 0                                 | 0                                      | 0    | 0         | 0        | 0   | 223                 | 10                    | 0                                  | 0                     | 0                                | 0                                | 213                            |              |
| 269+00.00 | 26900.00     | 29.30    | 5.91      | 0.00                                   | 0.00 | 0.00      | 0.00     | 0.00   | 6                                 | 0                                      | 0    | 0         | 0        | 0   | 229                 | 10                    | 0                                  | 0                     | 0                                | 0                                | 219                            |              |
| 269+50.00 | 26950.00     | 50.00    | 5.33      | 0.00                                   | 0.00 | 0.00      | 0.00     | 0.00   | 10                                | 0                                      | 0    | 0         | 0        | 0   | 239                 | 10                    | 0                                  | 0                     | 0                                | 0                                | 229                            |              |
| 269+51.67 | 26951.67     | 1.67     | 5.29      | 0.00                                   | 0.00 | 0.00      | 0.00     | 0.00   | 0                                 | 0                                      | 0    | 0         | 0        | 0   | 239                 | 10                    | 0                                  | 0                     | 0                                | 0                                | 229                            |              |

| NOTES:                                  |                                                              |
|-----------------------------------------|--------------------------------------------------------------|
| 1 - CUT                                 | CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL             |
| 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL | THIS DOES NOT SHOW UP IN CROSS SECTIONS                      |
| 3 - FILL                                | DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME                |
| 4 - EXPANDED MARSH BACKFILL             | WILL BE BACKFILLED WITH CUT MATERIAL                         |
| 5 - EXPANDED EBS                        | WILL BE BACKFILLED WITH GRANULAR BACKFILL                    |
| 6 - REDUCED MARSH IN FILL               | REDUCED MARSH EXCAVATION THAT CAN BE USED IN FILL            |
| 7 - REDUCED EBS IN FILL                 | REDUCED EBS EXCAVATION THAT CAN BE USED IN FILL              |
| 8 - MASS ORDNATE                        | CUT - SALVAGED PAVT - ((FILL - EXPANDED ROCK) * FILL FACTOR) |



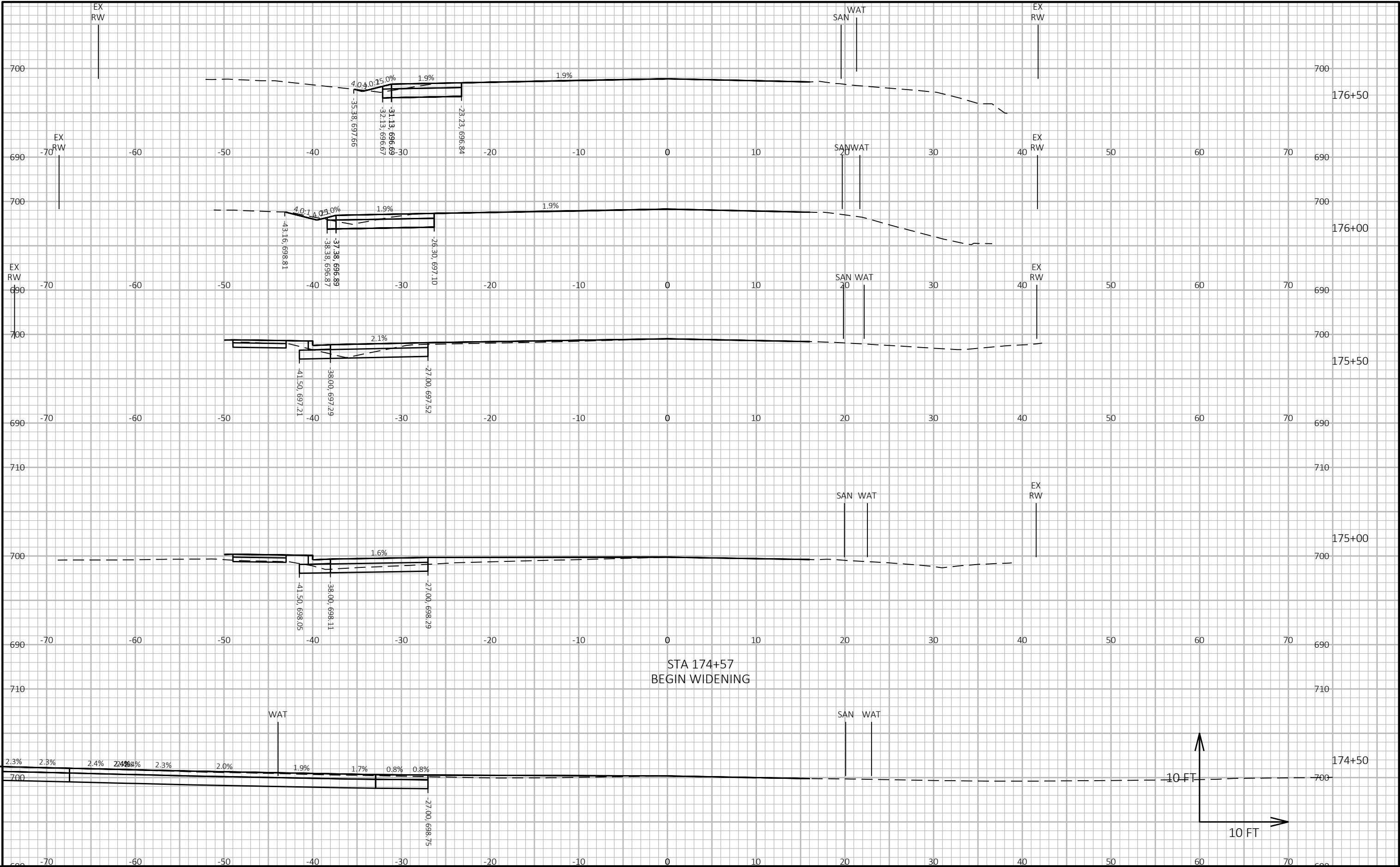
DIVISION 1 - LAKEDR

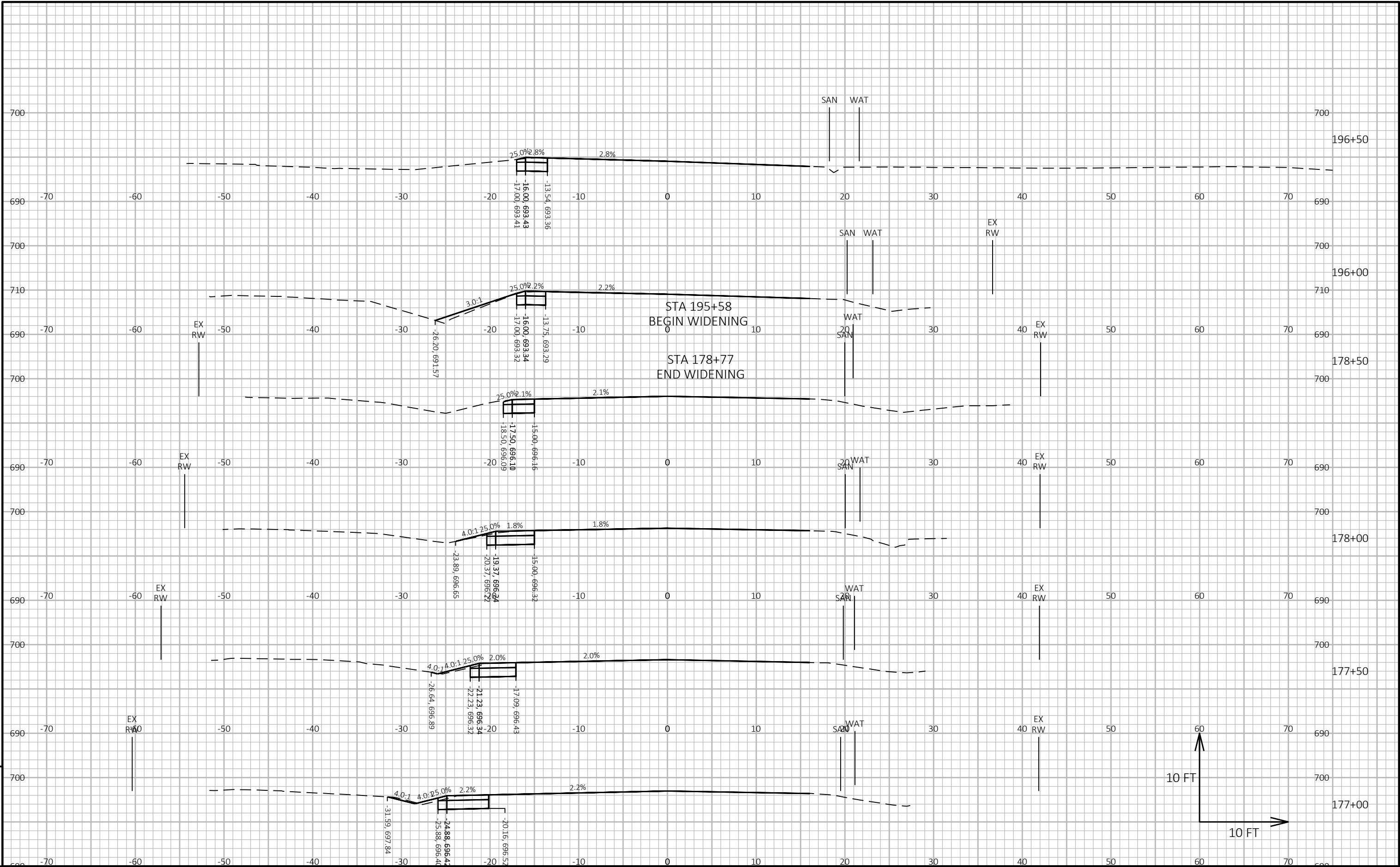
| STATION   | REAL STATION | DISTANCE | AREA (SF) |                                               |      |           |          |      | INCREMENTAL VOL (CY) (UNADJUSTED) |                                               |        |           |          |        | CUMULATIVE VOL (CY) |                  |                               |                  |                             |                             |                           |               |
|-----------|--------------|----------|-----------|-----------------------------------------------|------|-----------|----------|------|-----------------------------------|-----------------------------------------------|--------|-----------|----------|--------|---------------------|------------------|-------------------------------|------------------|-----------------------------|-----------------------------|---------------------------|---------------|
|           |              |          | CUT       | SALVAGED/<br>UNUSABLE<br>PAVEMENT<br>MATERIAL | FILL | MARSH EXC | ROCK EXC | EBS  | CUT                               | SALVAGED/<br>UNUSABLE<br>PAVEMENT<br>MATERIAL | FILL   | MARSH EXC | ROCK EXC | EBS    | CUT                 | EXPANDED<br>FILL | EXPANDED<br>MARSH<br>BACKFILL | EXPANDED<br>ROCK | EXPANDED<br>EBS<br>BACKFILL | REDUCED<br>MARSH<br>IN FILL | REDUCED<br>EBS<br>IN FILL | MASS ORDINATE |
|           |              |          |           |                                               |      |           |          |      |                                   |                                               |        |           |          |        |                     |                  |                               |                  |                             |                             |                           |               |
|           |              |          |           |                                               |      |           |          |      |                                   |                                               |        |           |          |        |                     |                  |                               |                  |                             |                             |                           |               |
|           |              |          |           |                                               |      |           |          |      | NOTE 1                            | NOTE 2                                        | NOTE 3 | NOTE 1    | NOTE 4   | NOTE 5 | NOTE 6              | NOTE 7           | NOTE 8                        |                  |                             |                             |                           |               |
| 170+32.34 | 17032.34     | 0.00     | 5.00      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 0                                 | 0                                             | 0      | 0         | 0        | 0      | 0                   | 0                | 0                             | 0                | 0                           | 0                           | 0                         |               |
| 170+50.00 | 17050.00     | 17.66    | 5.98      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 4                                 | 0                                             | 0      | 0         | 0        | 0      | 4                   | 0                | 0                             | 0                | 0                           | 0                           | 4                         |               |
| 171+00.00 | 17100.00     | 50.00    | 8.08      | 0.00                                          | 1.12 | 0.00      | 0.00     | 0.00 | 13                                | 0                                             | 1      | 0         | 0        | 0      | 17                  | 1                | 0                             | 0                | 0                           | 0                           | 16                        |               |
| 171+50.00 | 17150.00     | 50.00    | 10.43     | 0.00                                          | 1.82 | 0.00      | 0.00     | 0.00 | 17                                | 0                                             | 3      | 0         | 0        | 0      | 34                  | 4                | 0                             | 0                | 0                           | 0                           | 30                        |               |
| 172+00.00 | 17200.00     | 50.00    | 6.26      | 0.00                                          | 0.03 | 0.00      | 0.00     | 0.00 | 15                                | 0                                             | 2      | 0         | 0        | 0      | 49                  | 6                | 0                             | 0                | 0                           | 0                           | 43                        |               |
| 172+28.33 | 17228.33     | 28.33    | 2.92      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 5                                 | 0                                             | 0      | 0         | 0        | 0      | 54                  | 6                | 0                             | 0                | 0                           | 0                           | 48                        |               |
| 174+88.34 | 17488.34     | 0.00     | 13.00     | 0.00                                          | 2.31 | 0.00      | 0.00     | 0.00 | 0                                 | 0                                             | 0      | 0         | 0        | 0      | 54                  | 6                | 0                             | 0                | 0                           | 0                           | 48                        |               |
| 175+00.00 | 17500.00     | 11.66    | 10.19     | 0.00                                          | 0.86 | 0.00      | 0.00     | 0.00 | 5                                 | 0                                             | 1      | 0         | 0        | 0      | 59                  | 7                | 0                             | 0                | 0                           | 0                           | 52                        |               |
| 175+50.00 | 17550.00     | 50.00    | 6.95      | 0.00                                          | 0.05 | 0.00      | 0.00     | 0.00 | 16                                | 0                                             | 1      | 0         | 0        | 0      | 75                  | 8                | 0                             | 0                | 0                           | 0                           | 67                        |               |
| 176+00.00 | 17600.00     | 50.00    | 13.61     | 0.00                                          | 0.07 | 0.00      | 0.00     | 0.00 | 19                                | 0                                             | 0      | 0         | 0        | 0      | 94                  | 8                | 0                             | 0                | 0                           | 0                           | 86                        |               |
| 176+50.00 | 17650.00     | 50.00    | 11.16     | 0.00                                          | 0.65 | 0.00      | 0.00     | 0.00 | 23                                | 0                                             | 1      | 0         | 0        | 0      | 117                 | 9                | 0                             | 0                | 0                           | 0                           | 108                       |               |
| 177+00.00 | 17700.00     | 50.00    | 8.57      | 0.00                                          | 0.63 | 0.00      | 0.00     | 0.00 | 18                                | 0                                             | 1      | 0         | 0        | 0      | 135                 | 10               | 0                             | 0                | 0                           | 0                           | 125                       |               |
| 177+50.00 | 17750.00     | 50.00    | 7.43      | 0.00                                          | 0.66 | 0.00      | 0.00     | 0.00 | 15                                | 0                                             | 1      | 0         | 0        | 0      | 150                 | 11               | 0                             | 0                | 0                           | 0                           | 139                       |               |
| 178+00.00 | 17800.00     | 50.00    | 7.74      | 0.00                                          | 0.29 | 0.00      | 0.00     | 0.00 | 14                                | 0                                             | 1      | 0         | 0        | 0      | 164                 | 12               | 0                             | 0                | 0                           | 0                           | 152                       |               |
| 178+50.00 | 17850.00     | 50.00    | 5.28      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 12                                | 0                                             | 0      | 0         | 0        | 0      | 176                 | 12               | 0                             | 0                | 0                           | 0                           | 164                       |               |
| 178+77.39 | 17877.39     | 27.39    | 3.81      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 5                                 | 0                                             | 0      | 0         | 0        | 0      | 181                 | 12               | 0                             | 0                | 0                           | 0                           | 169                       |               |
| 195+58.35 | 19558.35     | 0.00     | 3.08      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 0                                 | 0                                             | 0      | 0         | 0        | 0      | 181                 | 12               | 0                             | 0                | 0                           | 0                           | 169                       |               |
| 196+00.00 | 19600.00     | 41.65    | 4.74      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 6                                 | 0                                             | 0      | 0         | 0        | 0      | 187                 | 12               | 0                             | 0                | 0                           | 0                           | 175                       |               |
| 196+50.00 | 19650.00     | 50.00    | 5.05      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 9                                 | 0                                             | 0      | 0         | 0        | 0      | 196                 | 12               | 0                             | 0                | 0                           | 0                           | 184                       |               |
| 197+00.00 | 19700.00     | 50.00    | 3.01      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 7                                 | 0                                             | 0      | 0         | 0        | 0      | 203                 | 12               | 0                             | 0                | 0                           | 0                           | 191                       |               |
| 197+50.00 | 19750.00     | 50.00    | 4.33      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 7                                 | 0                                             | 0      | 0         | 0        | 0      | 210                 | 12               | 0                             | 0                | 0                           | 0                           | 198                       |               |
| 198+00.00 | 19800.00     | 50.00    | 6.55      | 0.00                                          | 2.04 | 0.00      | 0.00     | 0.00 | 10                                | 0                                             | 2      | 0         | 0        | 0      | 220                 | 14               | 0                             | 0                | 0                           | 0                           | 206                       |               |
| 198+50.00 | 19850.00     | 50.00    | 8.21      | 0.00                                          | 3.51 | 0.00      | 0.00     | 0.00 | 14                                | 0                                             | 5      | 0         | 0        | 0      | 234                 | 19               | 0                             | 0                | 0                           | 0                           | 215                       |               |
| 199+00.00 | 19900.00     | 50.00    | 10.44     | 0.00                                          | 2.17 | 0.00      | 0.00     | 0.00 | 17                                | 0                                             | 5      | 0         | 0        | 0      | 251                 | 24               | 0                             | 0                | 0                           | 0                           | 227                       |               |
| 199+50.00 | 19950.00     | 50.00    | 1.51      | 0.00                                          | 2.11 | 0.00      | 0.00     | 0.00 | 11                                | 0                                             | 4      | 0         | 0        | 0      | 262                 | 28               | 0                             | 0                | 0                           | 0                           | 234                       |               |
| 200+00.00 | 20000.00     | 50.00    | 10.60     | 0.00                                          | 2.95 | 0.00      | 0.00     | 0.00 | 11                                | 0                                             | 5      | 0         | 0        | 0      | 273                 | 33               | 0                             | 0                | 0                           | 0                           | 240                       |               |
| 200+50.00 | 20050.00     | 50.00    | 11.30     | 0.00                                          | 1.52 | 0.00      | 0.00     | 0.00 | 20                                | 0                                             | 4      | 0         | 0        | 0      | 293                 | 37               | 0                             | 0                | 0                           | 0                           | 256                       |               |
| 200+64.24 | 20064.24     | 14.24    | 6.00      | 0.00                                          | 0.80 | 0.00      | 0.00     | 0.00 | 5                                 | 0                                             | 1      | 0         | 0        | 0      | 298                 | 38               | 0                             | 0                | 0                           | 0                           | 260                       |               |
| 201+66.80 | 20166.80     | 0.00     | 5.04      | 0.00                                          | 0.25 | 0.00      | 0.00     | 0.00 | 0                                 | 0                                             | 0      | 0         | 0        | 0      | 298                 | 38               | 0                             | 0                | 0                           | 0                           | 260                       |               |
| 202+00.00 | 20200.00     | 33.20    | 10.17     | 0.00                                          | 0.69 | 0.00      | 0.00     | 0.00 | 9                                 | 0                                             | 1      | 0         | 0        | 0      | 307                 | 39               | 0                             | 0                | 0                           | 0                           | 268                       |               |
| 202+50.00 | 20250.00     | 50.00    | 10.12     | 0.00                                          | 0.09 | 0.00      | 0.00     | 0.00 | 19                                | 0                                             | 1      | 0         | 0        | 0      | 326                 | 40               | 0                             | 0                | 0                           | 0                           | 286                       |               |
| 203+00.00 | 20300.00     | 50.00    | 8.10      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 17                                | 0                                             | 0      | 0         | 0        | 0      | 343                 | 40               | 0                             | 0                | 0                           | 0                           | 303                       |               |
| 203+50.00 | 20350.00     | 50.00    | 5.51      | 0.00                                          | 0.19 | 0.00      | 0.00     | 0.00 | 13                                | 0                                             | 0      | 0         | 0        | 0      | 356                 | 40               | 0                             | 0                | 0                           | 0                           | 316                       |               |
| 203+87.09 | 20387.09     | 37.09    | 3.67      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 6                                 | 0                                             | 0      | 0         | 0        | 0      | 362                 | 40               | 0                             | 0                | 0                           | 0                           | 322                       |               |
| 214+92.27 | 21492.27     | 0.00     | 11.39     | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 0                                 | 0                                             | 0      | 0         | 0        | 0      | 362                 | 40               | 0                             | 0                | 0                           | 0                           | 322                       |               |
| 215+00.00 | 21500.00     | 7.73     | 4.12      | 0.00                                          | 1.86 | 0.00      | 0.00     | 0.00 | 2                                 | 0                                             | 0      | 0         | 0        | 0      | 364                 | 40               | 0                             | 0                | 0                           | 0                           | 324                       |               |
| 215+50.00 | 21550.00     | 50.00    | 6.73      | 0.00                                          | 1.74 | 0.00      | 0.00     | 0.00 | 10                                | 0                                             | 3      | 0         | 0        | 0      | 374                 | 43               | 0                             | 0                | 0                           | 0                           | 331                       |               |
| 216+00.00 | 21600.00     | 50.00    | 9.48      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 15                                | 0                                             | 2      | 0         | 0        | 0      | 389                 | 45               | 0                             | 0                | 0                           | 0                           | 344                       |               |
| 216+50.00 | 21650.00     | 50.00    | 9.43      | 0.00                                          | 0.15 | 0.00      | 0.00     | 0.00 | 18                                | 0                                             | 0      | 0         | 0        | 0      | 407                 | 45               | 0                             | 0                | 0                           | 0                           | 362                       |               |
| 217+00.00 | 21700.00     | 50.00    | 9.80      | 0.00                                          | 0.20 | 0.00      | 0.00     | 0.00 | 18                                | 0                                             | 0      | 0         | 0        | 0      | 425                 | 45               | 0                             | 0                | 0                           | 0                           | 380                       |               |
| 217+21.06 | 21721.06     | 21.06    | 17.78     | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 11                                | 0                                             | 0      | 0         | 0        | 0      | 436                 | 45               | 0                             | 0                | 0                           | 0                           | 391                       |               |
| 217+74.88 | 21774.88     | 0.00     | 9.19      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 0                                 | 0                                             | 0      | 0         | 0        | 0      | 436                 | 45               | 0                             | 0                | 0                           | 0                           | 391                       |               |
| 218+00.00 | 21800.00     | 25.12    | 7.42      | 0.00                                          | 4.92 | 0.00      | 0.00     | 0.00 | 8                                 | 0                                             | 2      | 0         | 0        | 0      | 444                 | 47               | 0                             | 0                | 0                           | 0                           | 397                       |               |
| 218+50.00 | 21850.00     | 50.00    | 5.19      | 0.00                                          | 6.98 | 0.00      | 0.00     | 0.00 | 12                                | 0                                             | 11     | 0         | 0        | 0      | 456                 | 58               | 0                             | 0                | 0                           | 0                           | 398                       |               |
| 218+90.91 | 21890.91     | 40.91    | 4.19      | 0.00                                          | 0.70 | 0.00      | 0.00     | 0.00 | 7                                 | 0                                             | 6      | 0         | 0        | 0      | 463                 | 64               | 0                             | 0                | 0                           | 0                           | 399                       |               |
| 241+21.65 | 24121.65     | 0.00     | 3.05      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 0                                 | 0                                             | 0      | 0         | 0        | 0      | 463                 | 64               | 0                             | 0                | 0                           | 0                           | 399                       |               |
| 241+50.00 | 24150.00     | 28.35    | 3.02      | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 3                                 | 0                                             | 0      | 0         | 0        | 0      | 466                 | 64               | 0                             | 0                | 0                           | 0                           | 402                       |               |
| 242+00.00 | 24200.00     | 50.00    | 5.02      | 0.00                                          | 0.04 | 0.00      | 0.00     | 0.00 | 7                                 | 0                                             | 0      | 0         | 0        | 0      | 473                 | 64               | 0                             | 0                | 0                           | 0                           | 409                       |               |
| 242+50.00 | 24250.00     | 50.00    | 7.60      | 0.00                                          | 0.85 | 0.00      | 0.00     | 0.00 | 12                                | 0                                             | 1      | 0         | 0        | 0      | 485                 | 65               | 0                             | 0                | 0                           | 0                           | 420                       |               |
| 243+00.00 | 24300.00     | 50.00    | 9.56      | 0.00                                          | 0.72 | 0.00      | 0.00     | 0.00 | 16                                | 0                                             | 1      | 0         | 0        | 0      | 501                 | 66               | 0                             | 0                | 0                           | 0                           | 435                       |               |
| 243+50.00 | 24350.00     | 50.00    | 10.60     | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 19                                | 0                                             | 1      | 0         | 0        | 0      | 520                 | 67               | 0                             | 0                | 0                           | 0                           | 453                       |               |
| 243+67.17 | 24367.17     | 17.17    | 12.48     | 0.00                                          | 0.00 | 0.00      | 0.00     | 0.00 | 7                                 | 0                                             | 0      | 0         | 0        | 0      | 527                 | 67               | 0                             | 0                | 0                           | 0                           | 460                       |               |
| 244+75.00 | 24475.00     | 0.00     | 8.93      | 0.00                                          | 0.01 | 0.00      | 0.00     | 0.00 | 0                                 | 0                                             | 0      | 0         | 0        | 0      | 527                 | 67               | 0                             | 0                | 0                           | 0                           | 460                       |               |
| 245+00.00 | 24500.00     | 25.00    | 6.44      | 0.00                                          | 0.04 | 0.00      | 0.00     | 0.   |                                   |                                               |        |           |          |        |                     |                  |                               |                  |                             |                             |                           |               |

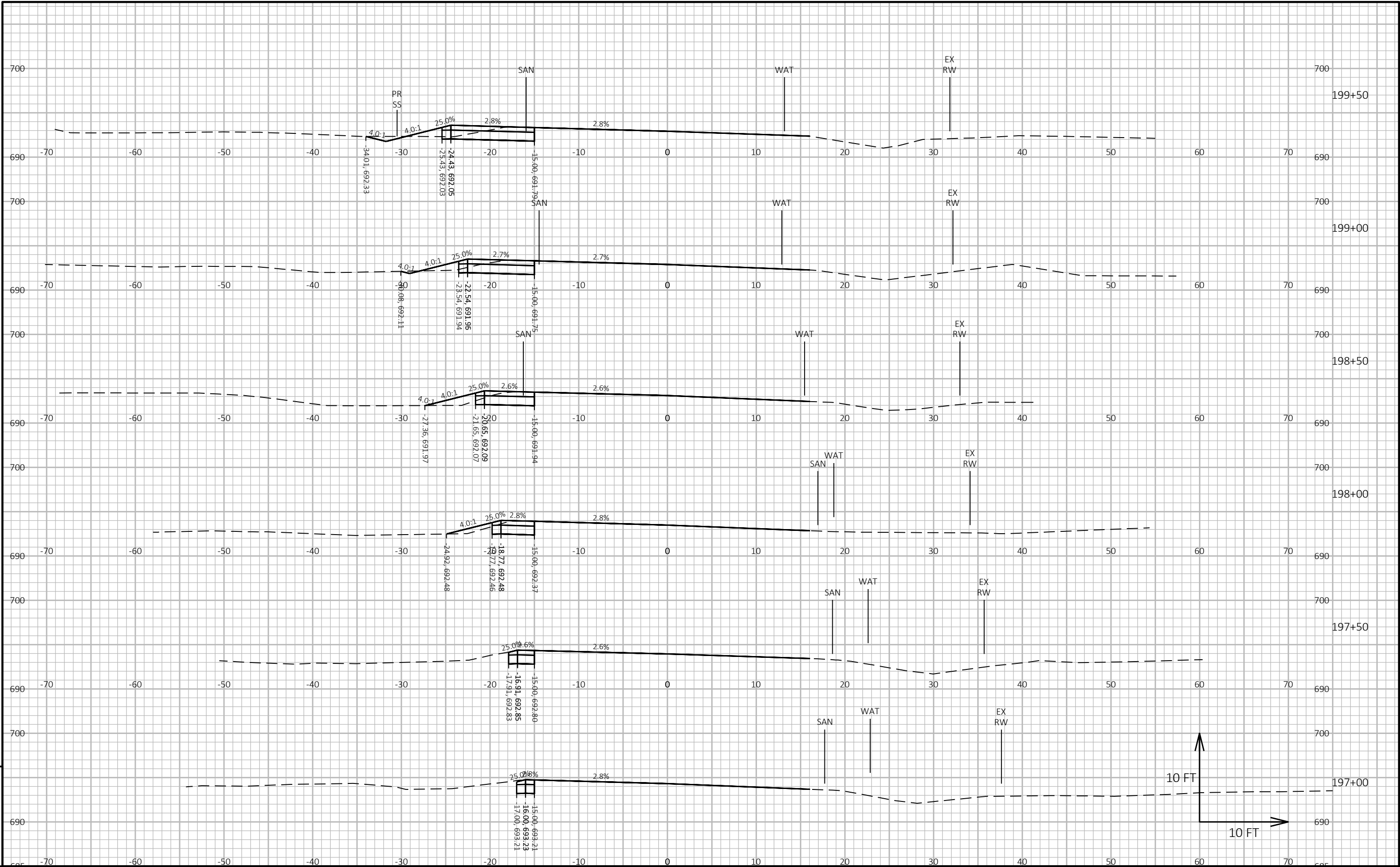


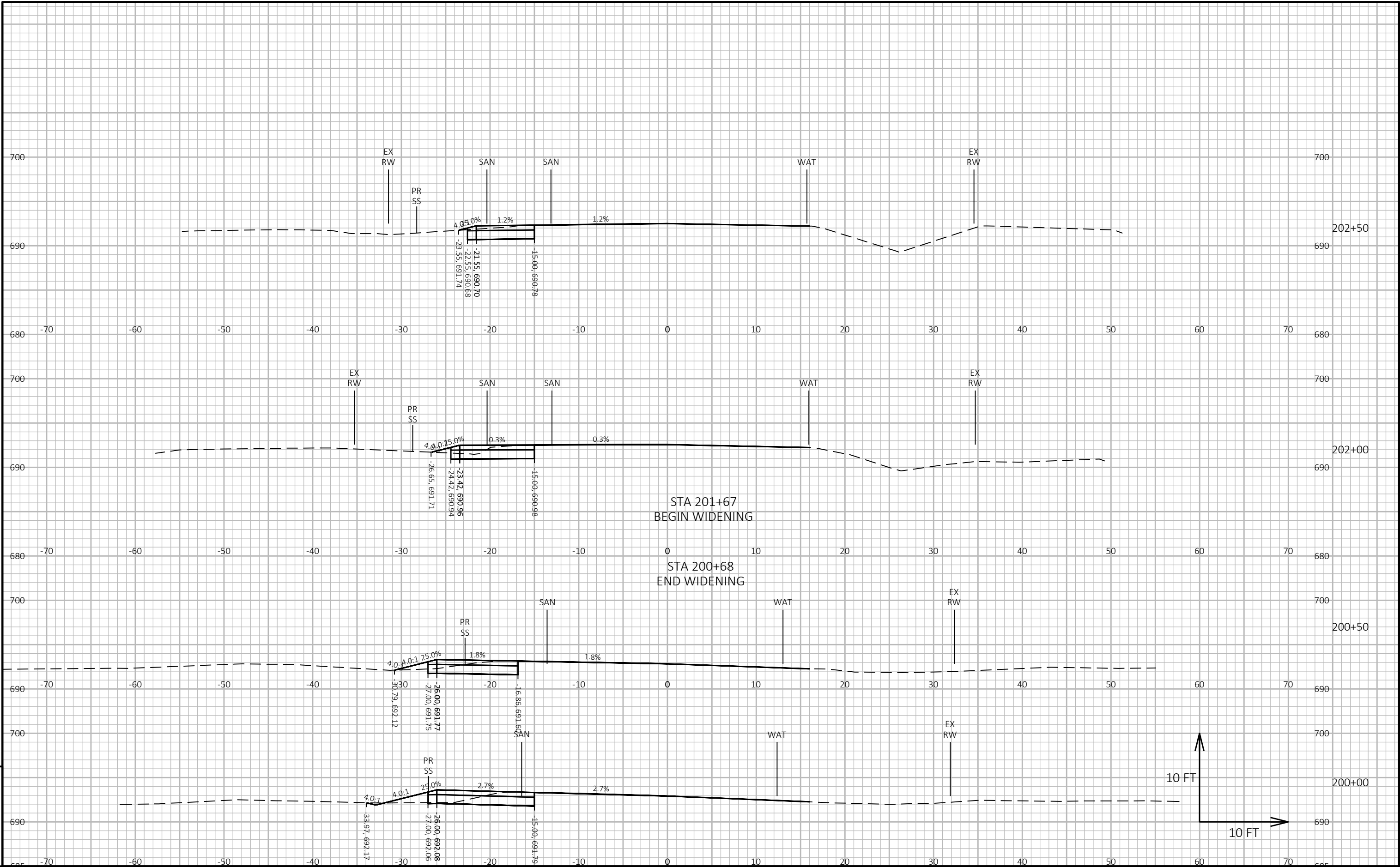


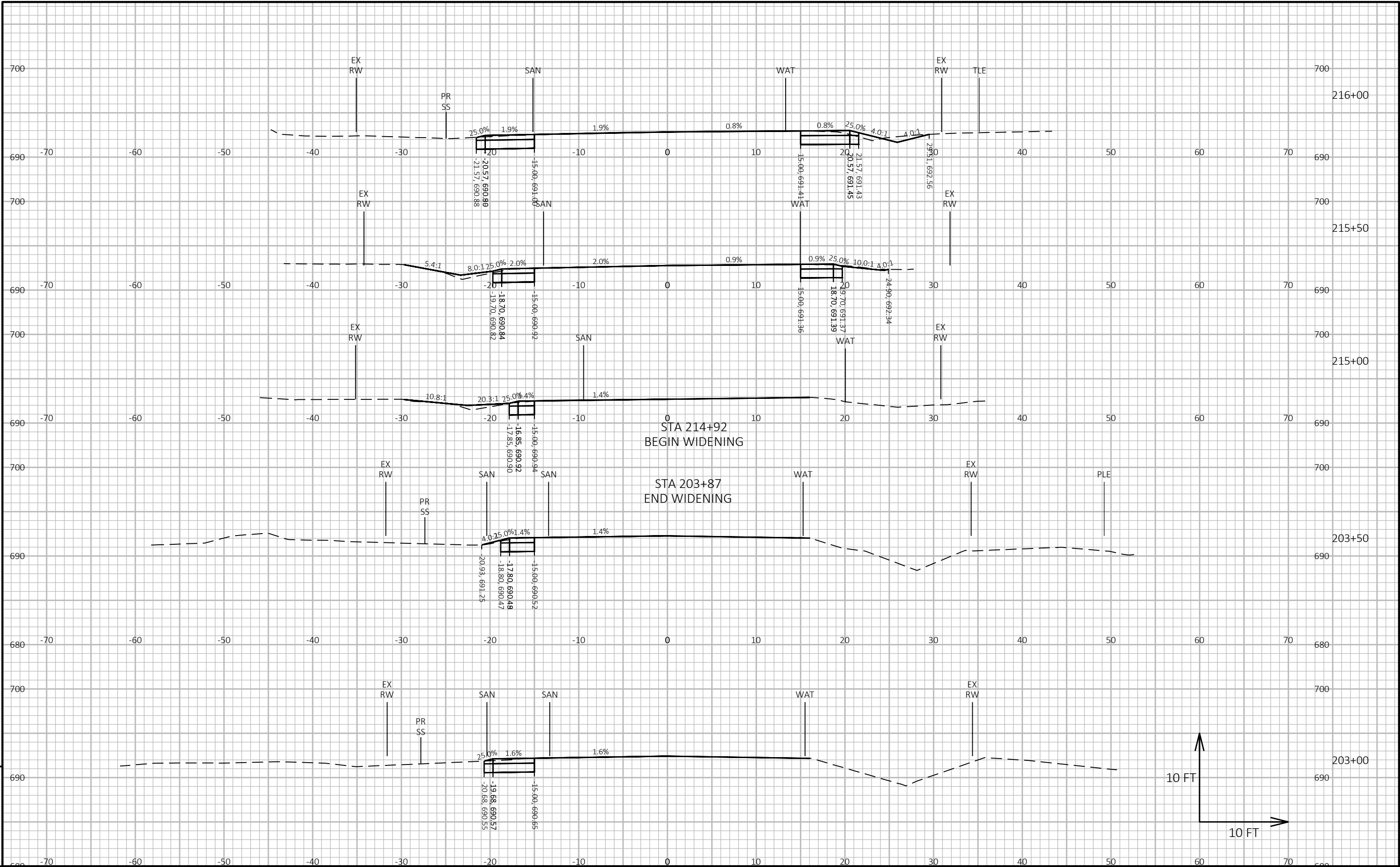




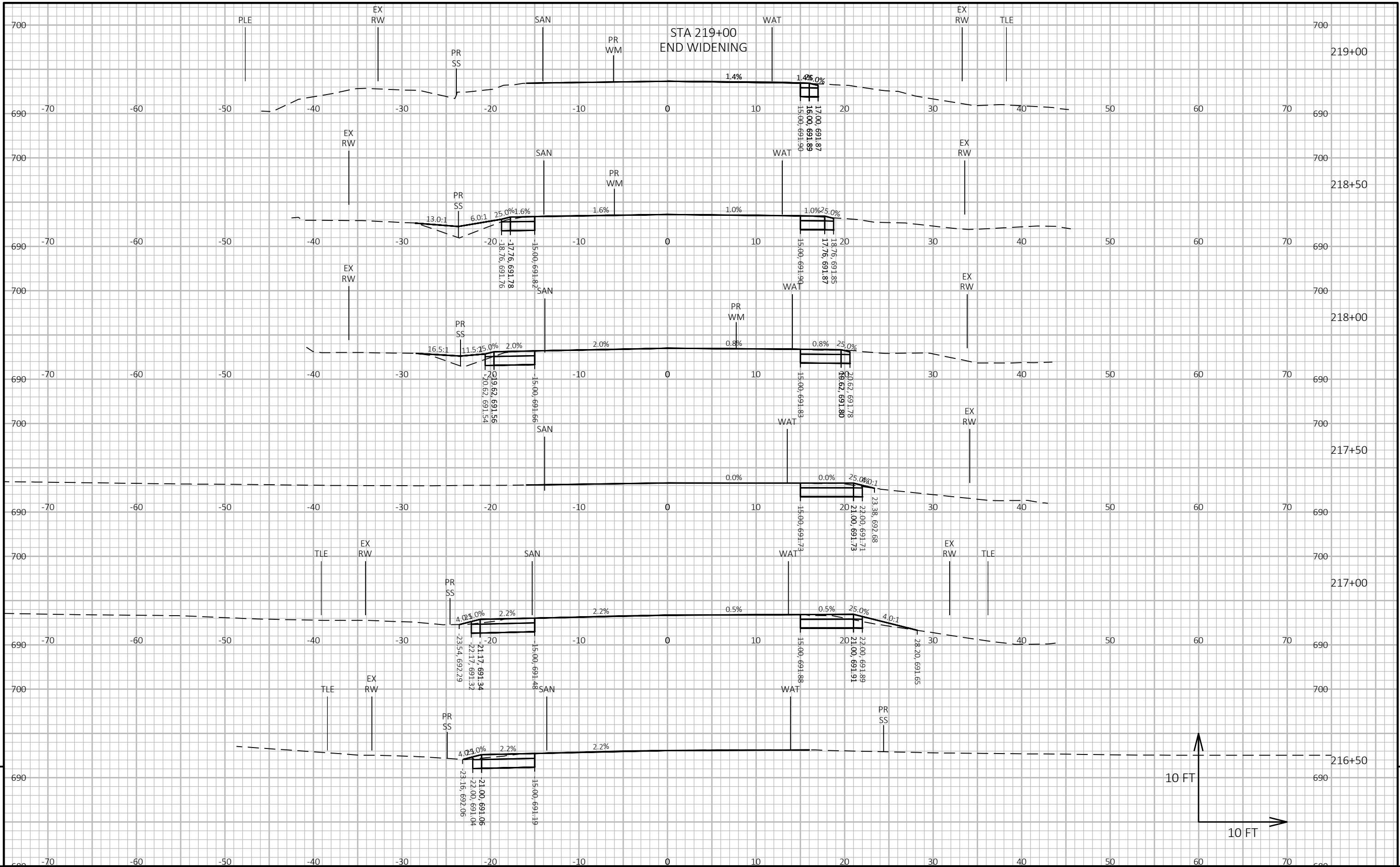


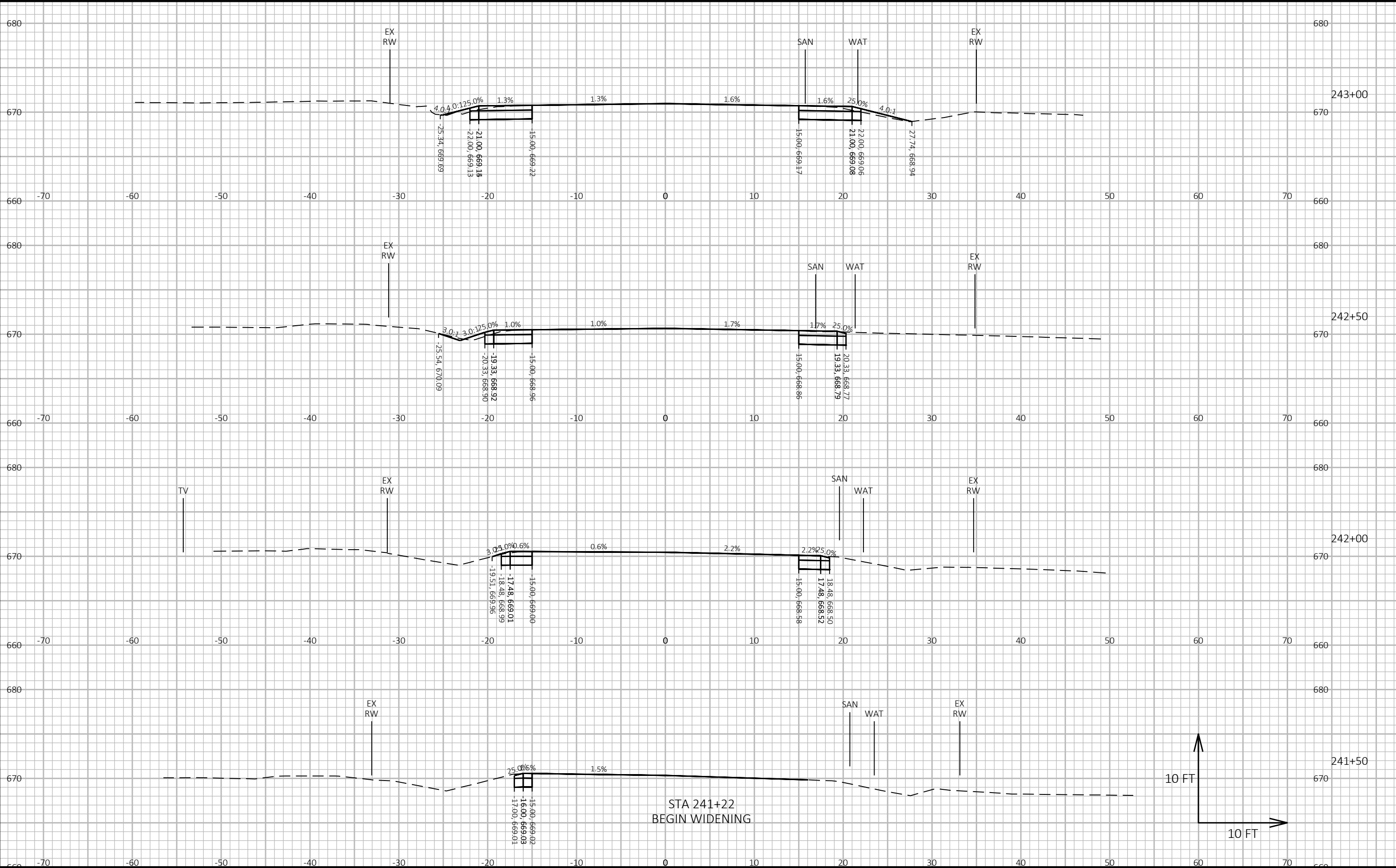




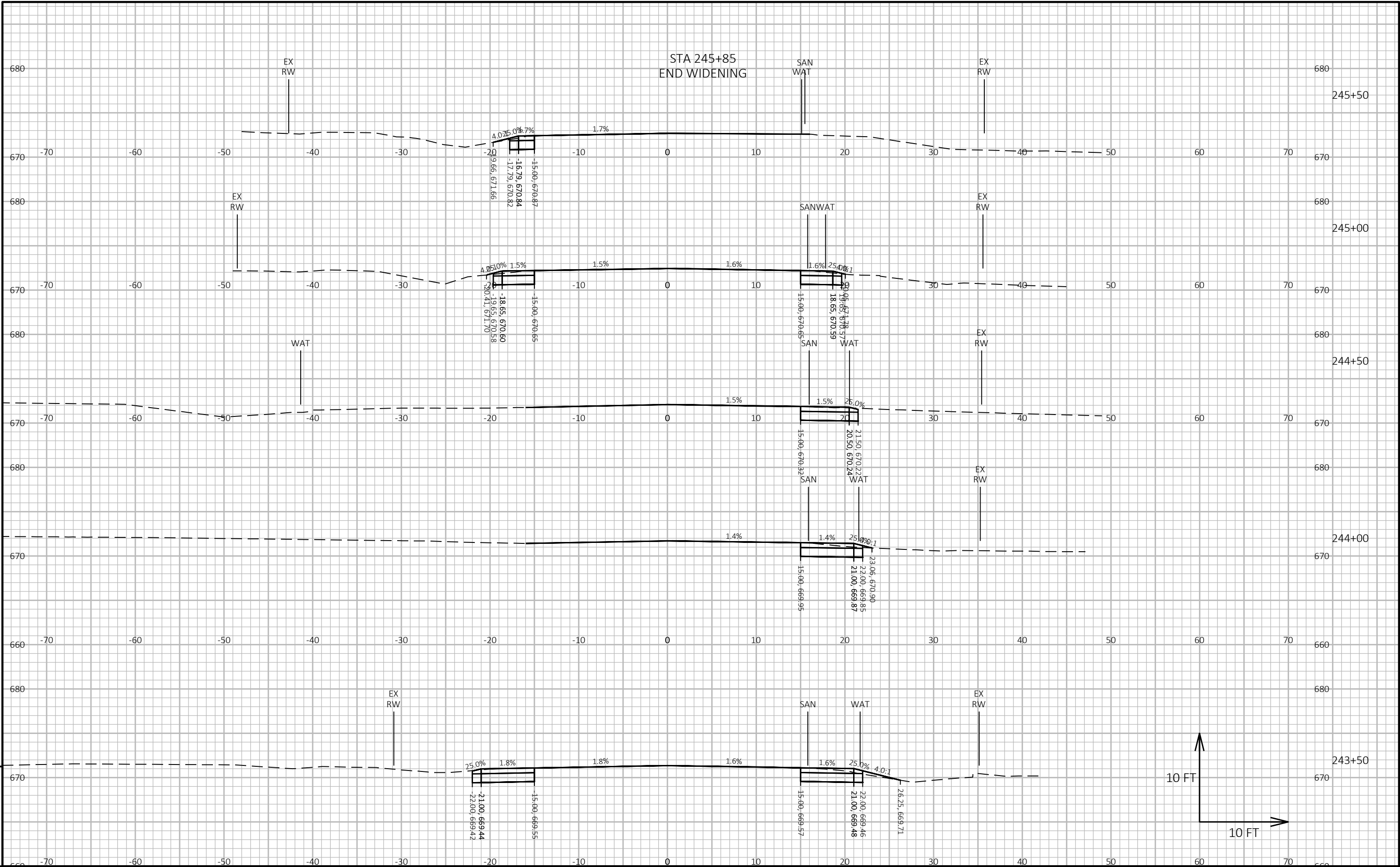


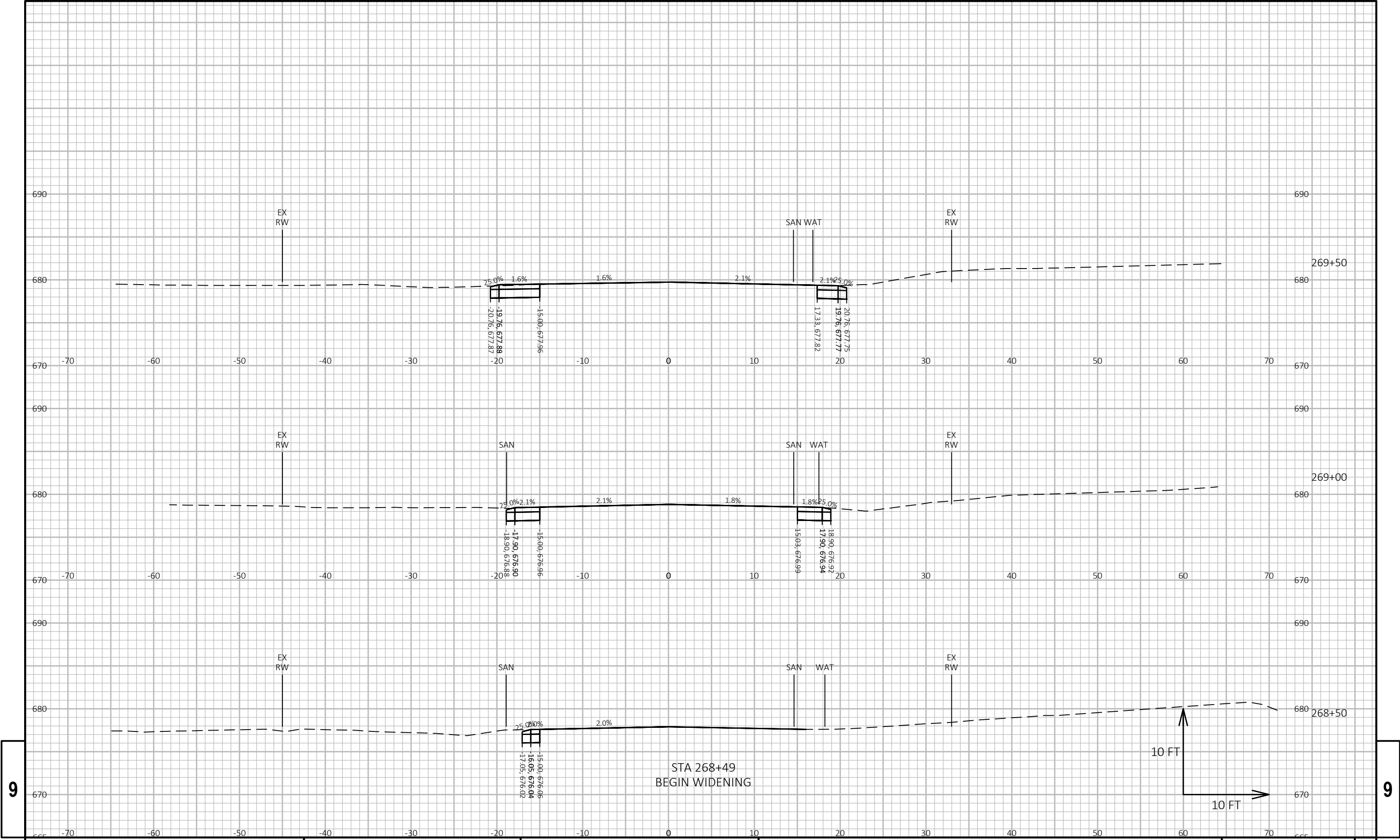






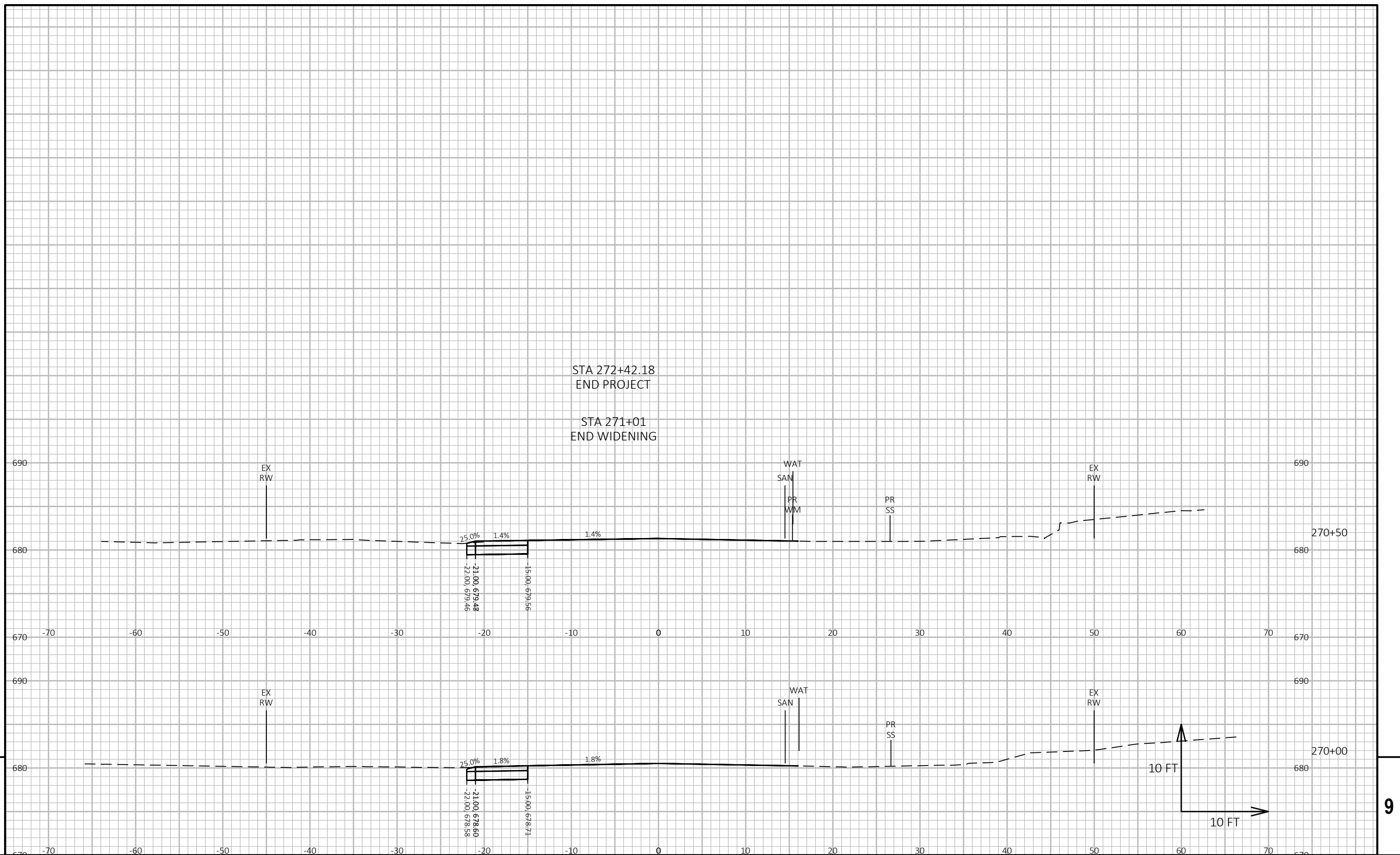




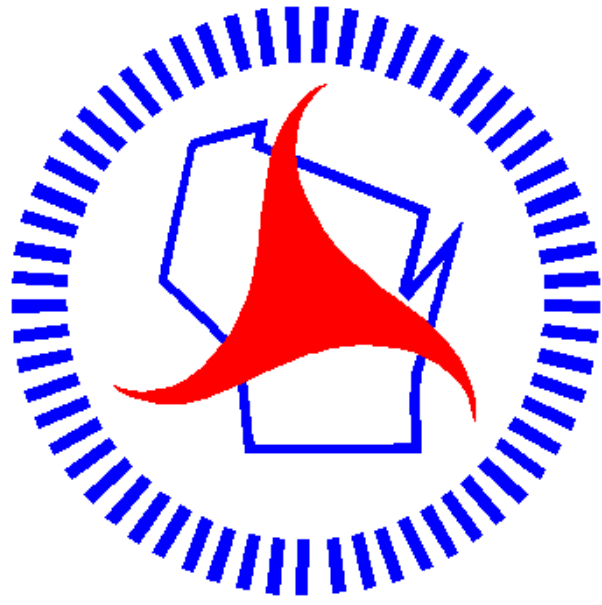


9

9



## Notes



## ***Wisconsin Department of Transportation***

Dedicated people creating transportation solutions through innovation and exceptional service.

<http://www.dot.wisconsin.gov>